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ANALYTICAL REPORT

PREPARED FOR

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Environmental Chemical Corp.
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Generated 7/18/2024 1:01 AM

JOB DESCRIPTION

TDSS MW Sampling 3Q-2024 / Baseline
410-179201

JOB NUMBER

410-179201-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

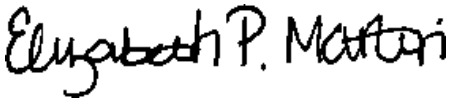
Eurofins Lancaster Laboratories Environment Testing, LLC

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Authorized for release by
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Eurofins Lancaster Laboratories Environment Testing, LLC

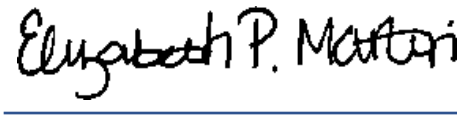
Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.



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Qualifiers

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TNTC	Too Numerous To Count

Job Narrative
410-179201-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Receipt
The samples were received on 7/10/2024 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.8°C.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

Client Sample ID: TDSS-MW01-3Q24 — Lab Sample ID: 410-179201-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	19	D M	7.5	5.0	2.5	mg/L	5		300.0	Total/NA
Chloride	100	D	75	60	30	mg/L	50		300.0	Total/NA
Calcium	15000		120	100	50	ug/L	1		6020B	Total Recoverable
Cobalt	0.84		0.50	0.40	0.16	ug/L	1		6020B	Total Recoverable
Copper	2.5		1.0	0.90	0.36	ug/L	1		6020B	Total Recoverable
Iron	140		50	40	20	ug/L	1		6020B	Total Recoverable
Magnesium	12000		50	32	16	ug/L	1		6020B	Total Recoverable
Potassium	5400		200	180	65	ug/L	1		6020B	Total Recoverable
Sodium	78000		200	180	90	ug/L	1		6020B	Total Recoverable
Turbidity	2.5	H H3	1.0	0.70	1.0	NTU	1		180.1	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	69	Q	8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Bicarbonate Alkalinity as CaCO3	69		8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Total Dissolved Solids	210		30	25	12	mg/L	1		2540C - 2015	Total/NA
pH	7.2	HF	0.01	0.01	0.01	S.U.	1		9040C	Total/NA
Total Organic Carbon	4.6		2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 1	4.5		2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 2	4.4		2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 3	4.9		2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA

Client Sample ID: TDSS-MW02-3Q24 — Lab Sample ID: 410-179201-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	25	D M	7.5	5.0	2.5	mg/L	5		300.0	Total/NA
Chloride	190	D	75	60	30	mg/L	50		300.0	Total/NA
Calcium	21000		120	100	50	ug/L	1		6020B	Total Recoverable
Cobalt	0.19	J	0.50	0.40	0.16	ug/L	1		6020B	Total Recoverable
Copper	0.72	J	1.0	0.90	0.36	ug/L	1		6020B	Total Recoverable
Iron	380		50	40	20	ug/L	1		6020B	Total Recoverable
Magnesium	17000		50	32	16	ug/L	1		6020B	Total Recoverable
Potassium	7600		200	180	65	ug/L	1		6020B	Total Recoverable
Sodium	130000	D	2000	1800	900	ug/L	10		6020B	Total Recoverable
Turbidity	18	H H3	1.0	0.70	1.0	NTU	1		180.1	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	67	Q	8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Bicarbonate Alkalinity as CaCO3	67		8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Total Dissolved Solids	350		60	50	24	mg/L	1		2540C - 2015	Total/NA
pH	7.5	HF	0.01	0.01	0.01	S.U.	1		9040C	Total/NA
Ammonia as N	0.050	J	0.10	0.090	0.050	mg/L	1		EPA 350.1	Total/NA
Total Organic Carbon	0.58	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: TDSS-MW02-3Q24 (Continued) — Lab Sample ID: 410-179201-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
TOC Result 1	0.64	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 2	0.67	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA

Client Sample ID: TDSS-ER-3Q24 — Lab Sample ID: 410-179201-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Calcium	300		120	100	50	ug/L	1		6020B	Total Recoverable
Copper	1.9		1.0	0.90	0.36	ug/L	1		6020B	Total Recoverable
Iron	75		50	40	20	ug/L	1		6020B	Total Recoverable
Magnesium	76		50	32	16	ug/L	1		6020B	Total Recoverable
Potassium	70	J	200	180	65	ug/L	1		6020B	Total Recoverable
Sodium	790		200	180	90	ug/L	1		6020B	Total Recoverable
Turbidity	3.0	H H3	1.0	0.70	1.0	NTU	1		180.1	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	2.8	J Q	8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Bicarbonate Alkalinity as CaCO3	2.8	J	8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Total Dissolved Solids	14000		3000	2500	1200	mg/L	1		2540C - 2015	Total/NA
pH	6.4	HF	0.01	0.01	0.01	S.U.	1		9040C	Total/NA
Ammonia as N	0.056	J	0.10	0.090	0.050	mg/L	1		EPA 350.1	Total/NA
Total Organic Carbon	0.86	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 1	0.86	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 2	0.86	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 3	0.85	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: TDSS-MW01-3Q24 — Lab Sample ID: 410-179201-1

Date Collected: 07/07/24 10:30 — **Matrix: Water**
Date Received: 07/10/24 09:35

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**19**	**D M**	7.5	5.0	2.5	mg/L		07/11/24 12:15	5
Chloride	**100**	**D**	75	60	30	mg/L		07/11/24 12:45	50

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	0.50	U	1.0	0.50	0.20	ug/L		07/17/24 09:05	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		07/17/24 09:05	1
Calcium	**15000**		120	100	50	ug/L		07/17/24 09:05	1
Cobalt	**0.84**		0.50	0.40	0.16	ug/L		07/17/24 09:05	1
Copper	**2.5**		1.0	0.90	0.36	ug/L		07/17/24 09:05	1
Iron	**140**		50	40	20	ug/L		07/17/24 09:05	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		07/17/24 09:05	1
Magnesium	**12000**		50	32	16	ug/L		07/17/24 09:05	1
Potassium	**5400**		200	180	65	ug/L		07/17/24 09:05	1
Sodium	**78000**		200	180	90	ug/L		07/17/24 09:05	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Turbidity (EPA 180.1)	**2.5**	**H H3**	1.0	0.70	1.0	NTU		07/10/24 23:54	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**69**	**Q**	8.0	6.0	2.6	mg/L		07/11/24 09:57	1
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		07/11/24 09:57	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**69**		8.0	6.0	2.6	mg/L		07/11/24 09:57	1
Total Dissolved Solids (SM 2540C - 2015)	**210**		30	25	12	mg/L		07/11/24 21:54	1
pH (SW846 9040C)	**7.2**	**HF**	0.01	0.01	0.01	S.U.		07/11/24 09:57	1
Ammonia as N (EPA 350.1)	0.090	U	0.10	0.090	0.050	mg/L		07/12/24 11:31	1
Total Organic Carbon (SM5310C)	**4.6**		2.0	1.0	0.50	mg/L		07/11/24 19:40	1
TOC Result 1 (SM5310C)	**4.5**		2.0	1.0	0.50	mg/L		07/11/24 19:40	1
TOC Result 2 (SM5310C)	**4.4**		2.0	1.0	0.50	mg/L		07/11/24 19:40	1
TOC Result 3 (SM5310C)	**4.9**		2.0	1.0	0.50	mg/L		07/11/24 19:40	1

Client Sample ID: TDSS-MW02-3Q24 — Lab Sample ID: 410-179201-2

Date Collected: 07/07/24 15:28 — **Matrix: Water**
Date Received: 07/10/24 09:35

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**25**	**D M**	7.5	5.0	2.5	mg/L		07/11/24 12:55	5
Chloride	**190**	**D**	75	60	30	mg/L		07/11/24 13:06	50

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	0.50	U	1.0	0.50	0.20	ug/L		07/17/24 09:03	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		07/17/24 09:03	1
Calcium	**21000**		120	100	50	ug/L		07/17/24 09:03	1
Cobalt	**0.19**	**J**	0.50	0.40	0.16	ug/L		07/17/24 09:03	1
Copper	**0.72**	**J**	1.0	0.90	0.36	ug/L		07/17/24 09:03	1
Iron	**380**		50	40	20	ug/L		07/17/24 09:03	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		07/17/24 09:03	1

Client Sample ID: TDSS-MW02-3Q24

Lab Sample ID: 410-179201-2

Date Collected: 07/07/24 15:28
Matrix: Water
Date Received: 07/10/24 09:35

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Magnesium	**17000**		50	32	16	ug/L		07/17/24 09:03	1
Potassium	**7600**		200	180	65	ug/L		07/17/24 09:03	1
Sodium	**130000**	**D**	2000	1800	900	ug/L		07/17/24 13:51	10

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Turbidity (EPA 180.1)	**18**	**H H3**	1.0	0.70	1.0	NTU		07/10/24 23:54	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**67**	**Q**	8.0	6.0	2.6	mg/L		07/11/24 10:11	1
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		07/11/24 10:11	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**67**		8.0	6.0	2.6	mg/L		07/11/24 10:11	1
Total Dissolved Solids (SM 2540C - 2015)	**350**		60	50	24	mg/L		07/11/24 21:54	1
pH (SW846 9040C)	**7.5**	**HF**	0.01	0.01	0.01	S.U.		07/11/24 10:11	1
Ammonia as N (EPA 350.1)	**0.050**	**J**	0.10	0.090	0.050	mg/L		07/12/24 11:33	1
Total Organic Carbon (SM5310C)	**0.58**	**J**	2.0	1.0	0.50	mg/L		07/11/24 20:00	1
TOC Result 1 (SM5310C)	**0.64**	**J**	2.0	1.0	0.50	mg/L		07/11/24 20:00	1
TOC Result 2 (SM5310C)	**0.67**	**J**	2.0	1.0	0.50	mg/L		07/11/24 20:00	1
TOC Result 3 (SM5310C)	1.0	U	2.0	1.0	0.50	mg/L		07/11/24 20:00	1

Client Sample ID: TDSS-ER-3Q24

Lab Sample ID: 410-179201-3

Date Collected: 07/07/24 17:10
Matrix: Water
Date Received: 07/10/24 09:35

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U M	1.5	1.0	0.50	mg/L		07/11/24 10:02	1
Chloride	1.2	U	1.5	1.2	0.60	mg/L		07/11/24 10:02	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	0.50	U	1.0	0.50	0.20	ug/L		07/17/24 11:31	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		07/17/24 11:31	1
Calcium	**300**		120	100	50	ug/L		07/17/24 11:31	1
Cobalt	0.40	U	0.50	0.40	0.16	ug/L		07/17/24 11:31	1
Copper	**1.9**		1.0	0.90	0.36	ug/L		07/17/24 11:31	1
Iron	**75**		50	40	20	ug/L		07/17/24 11:31	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		07/17/24 11:31	1
Magnesium	**76**		50	32	16	ug/L		07/17/24 11:31	1
Potassium	**70**	**J**	200	180	65	ug/L		07/17/24 11:31	1
Sodium	**790**		200	180	90	ug/L		07/17/24 11:31	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Turbidity (EPA 180.1)	**3.0**	**H H3**	1.0	0.70	1.0	NTU		07/10/24 23:54	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**2.8**	**J Q**	8.0	6.0	2.6	mg/L		07/11/24 10:04	1
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		07/11/24 10:04	1

Client Sample ID: TDSS-ER-3Q24
Lab Sample ID: 410-179201-3

Date Collected: 07/07/24 17:10
Matrix: Water
Date Received: 07/10/24 09:35

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	2.8	J	8.0	6.0	2.6	mg/L		07/11/24 10:04	1
Total Dissolved Solids (SM 2540C - 2015)	14000		3000	2500	1200	mg/L		07/11/24 21:54	1
pH (SW846 9040C)	6.4	HF	0.01	0.01	0.01	S.U.		07/11/24 10:04	1
Ammonia as N (EPA 350.1)	0.056	J	0.10	0.090	0.050	mg/L		07/12/24 11:50	1
Total Organic Carbon (SM5310C)	0.86	J	2.0	1.0	0.50	mg/L		07/11/24 20:20	1
TOC Result 1 (SM5310C)	0.86	J	2.0	1.0	0.50	mg/L		07/11/24 20:20	1
TOC Result 2 (SM5310C)	0.86	J	2.0	1.0	0.50	mg/L		07/11/24 20:20	1
TOC Result 3 (SM5310C)	0.85	J	2.0	1.0	0.50	mg/L		07/11/24 20:20	1

Default Detection Limits

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

Method: 300.0 - Anions, Ion Chromatography

Analyte	LOQ	DL	Units
Chloride	1.5	0.60	mg/L
Sulfate	1.5	0.50	mg/L

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Prep: 3005A

Analyte	LOQ	DL	Units
Antimony	1.0	0.20	ug/L
Arsenic	2.0	0.68	ug/L
Calcium	120	50	ug/L
Cobalt	0.50	0.16	ug/L
Copper	1.0	0.36	ug/L
Iron	50	20	ug/L
Lead	0.50	0.12	ug/L
Magnesium	50	16	ug/L
Potassium	200	65	ug/L
Sodium	200	90	ug/L

General Chemistry

Analyte	LOQ	DL	Units
Turbidity	1.0	1.0	NTU
Bicarbonate Alkalinity as CaCO3	8.0	2.6	mg/L
Carbonate Alkalinity as CaCO3	8.0	2.6	mg/L
Total Alkalinity as CaCO3 to pH 4.5	8.0	2.6	mg/L
Total Dissolved Solids	30	12	mg/L
pH	0.01	0.01	S.U.
Ammonia as N	0.10	0.050	mg/L
TOC Result 1	2.0	0.50	mg/L
TOC Result 2	2.0	0.50	mg/L
TOC Result 3	2.0	0.50	mg/L
Total Organic Carbon	2.0	0.50	mg/L

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 410-526874/5
Matrix: Water
Analysis Batch: 526874

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U M	1.5	1.0	0.50	mg/L		07/11/24 06:07	1
Chloride	1.2	U	1.5	1.2	0.60	mg/L		07/11/24 06:07	1

Lab Sample ID: LCS 410-526874/3
Matrix: Water
Analysis Batch: 526874

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	7.50	7.92	M	mg/L		106	87 - 112
Chloride	3.00	2.90		mg/L		97	87 - 111

Lab Sample ID: LCSD 410-526874/4
Matrix: Water
Analysis Batch: 526874

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	7.50	7.89	M	mg/L		105	87 - 112	0	15
Chloride	3.00	2.91		mg/L		97	87 - 111	0	15

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-526979/1-A
Matrix: Water
Analysis Batch: 529378

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 526979

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	0.50	U	1.0	0.50	0.20	ug/L		07/17/24 10:39	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		07/17/24 10:39	1
Calcium	100	U	120	100	50	ug/L		07/17/24 10:39	1
Cobalt	0.40	U	0.50	0.40	0.16	ug/L		07/17/24 10:39	1
Copper	0.90	U	1.0	0.90	0.36	ug/L		07/17/24 10:39	1
Iron	24.9	J	50	40	20	ug/L		07/17/24 10:39	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		07/17/24 10:39	1
Magnesium	19.6	J	50	32	16	ug/L		07/17/24 10:39	1
Potassium	180	U	200	180	65	ug/L		07/17/24 10:39	1
Sodium	180	U	200	180	90	ug/L		07/17/24 10:39	1

Lab Sample ID: LCS 410-526979/2-A
Matrix: Water
Analysis Batch: 529378

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 526979

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	94.1		ug/L		94	85 - 117
Arsenic	500	468		ug/L		94	84 - 116
Calcium	5000	4560		ug/L		91	87 - 118
Cobalt	500	465		ug/L		93	86 - 115
Copper	500	466		ug/L		93	85 - 118
Iron	5000	4540		ug/L		91	87 - 118
Lead	50.0	47.3		ug/L		95	88 - 115
Magnesium	5000	4530		ug/L		91	83 - 118

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 410-526979/2-A
Matrix: Water
Analysis Batch: 529378

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 526979

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Potassium	5000	4670		ug/L		93	87 - 115
Sodium	5000	4580		ug/L		92	85 - 117

Lab Sample ID: MB 410-526998/1-A
Matrix: Water
Analysis Batch: 529380

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 526998

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	0.50	U	1.0	0.50	0.20	ug/L		07/17/24 08:40	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		07/17/24 08:40	1
Calcium	100	U	120	100	50	ug/L		07/17/24 08:40	1
Cobalt	0.40	U	0.50	0.40	0.16	ug/L		07/17/24 08:40	1
Copper	0.90	U	1.0	0.90	0.36	ug/L		07/17/24 08:40	1
Iron	40	U	50	40	20	ug/L		07/17/24 08:40	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		07/17/24 08:40	1
Magnesium	32	U	50	32	16	ug/L		07/17/24 08:40	1
Potassium	180	U	200	180	65	ug/L		07/17/24 08:40	1
Sodium	180	U	200	180	90	ug/L		07/17/24 08:40	1

Lab Sample ID: LRC 410-529378/9
Matrix: Water
Analysis Batch: 529378

Client Sample ID: Lab Control Sample

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	2000	2140		ug/L		107	90 - 110
Arsenic	2000	2080		ug/L		104	90 - 110
Calcium	200000	200000		ug/L		100	90 - 110
Cobalt	2000	2070		ug/L		103	90 - 110
Copper	2000	2020		ug/L		101	90 - 110
Iron	160000	159000		ug/L		99	90 - 110
Lead	2000	2170		ug/L		108	90 - 110
Magnesium	200000	198000		ug/L		99	90 - 110
Potassium	200000	203000		ug/L		101	90 - 110
Sodium	200000	193000		ug/L		97	90 - 110

Lab Sample ID: LRC 410-529380/9
Matrix: Water
Analysis Batch: 529380

Client Sample ID: Lab Control Sample

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	2000	2190		ug/L		109	90 - 110
Arsenic	2000	2060		ug/L		103	90 - 110
Calcium	200000	197000		ug/L		98	90 - 110
Cobalt	2000	1940		ug/L		97	90 - 110
Copper	2000	2030		ug/L		102	90 - 110
Iron	160000	162000		ug/L		101	90 - 110
Lead	2000	2140		ug/L		107	90 - 110
Magnesium	200000	204000		ug/L		102	90 - 110
Potassium	200000	200000		ug/L		100	90 - 110

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LRC 410-529380/9
Matrix: Water
Analysis Batch: 529380

Client Sample ID: Lab Control Sample

Analyte			Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec Limits		
Sodium			200000	198000		ug/L		99	90 - 110		

Method: 180.1 - Turbidity, Nephelometric

Lab Sample ID: MB 410-526892/3
Matrix: Water
Analysis Batch: 526892

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Turbidity	0.70	U	1.0	0.70	1.0	NTU		07/10/24 23:54	1

Lab Sample ID: LCS 410-526892/4
Matrix: Water
Analysis Batch: 526892

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Turbidity			1.00	1.1		NTU		112	88 - 139		

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 410-527232/128
Matrix: Water
Analysis Batch: 527232

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	6.0	U	8.0	6.0	2.6	mg/L		07/11/24 08:11	1

Lab Sample ID: LCS 410-527232/131
Matrix: Water
Analysis Batch: 527232

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Alkalinity as CaCO3 to pH 4.5			189	208		mg/L		110	80 - 110		

Lab Sample ID: LCSD 410-527232/132
Matrix: Water
Analysis Batch: 527232

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Alkalinity as CaCO3 to pH 4.5			189	184	Q	mg/L		98	80 - 110	12	10

Method: 2540C - 2015 - Total Dissolved Solids (Dried at 180 °C)

Lab Sample ID: MB 410-527364/1
Matrix: Water
Analysis Batch: 527364

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Dissolved Solids	25	U	30	25	12	mg/L		07/11/24 21:54	1

Method: 2540C - 2015 - Total Dissolved Solids (Dried at 180 °C) (Continued)

Lab Sample ID: LCS 410-527364/2
Matrix: Water
Analysis Batch: 527364

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			200	197		mg/L		99	90 - 110		

Method: 9040C - pH

Lab Sample ID: LCS 410-527234/129
Matrix: Water
Analysis Batch: 527234

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
pH			7.00	7.0		S.U.		100	95 - 105		

Lab Sample ID: LCSD 410-527234/130
Matrix: Water
Analysis Batch: 527234

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
pH			7.00	7.0		S.U.		100	95 - 105	0	3

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 410-527694/17
Matrix: Water
Analysis Batch: 527694

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ammonia as N	0.090	U	0.10	0.090	0.050	mg/L		07/12/24 11:06	1

Lab Sample ID: LCS 410-527694/15
Matrix: Water
Analysis Batch: 527694

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia as N			2.00	2.04		mg/L		102	90 - 110		

Lab Sample ID: LCSD 410-527694/16
Matrix: Water
Analysis Batch: 527694

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia as N			2.00	1.99		mg/L		100	90 - 110	3	15

Method: SM5310C - TOC

Lab Sample ID: MB 410-527445/26
Matrix: Water
Analysis Batch: 527445

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	2.0	1.0	0.50	mg/L		07/11/24 18:02	1
TOC Result 1	1.0	U	2.0	1.0	0.50	mg/L		07/11/24 18:02	1
TOC Result 2	1.0	U	2.0	1.0	0.50	mg/L		07/11/24 18:02	1

Method: SM5310C - TOC (Continued)

Lab Sample ID: MB 410-527445/26
Matrix: Water
Analysis Batch: 527445

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
TOC Result 3	1.0	U	2.0	1.0	0.50	mg/L		07/11/24 18:02	1

Lab Sample ID: LCS 410-527445/25
Matrix: Water
Analysis Batch: 527445

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	50.0	49.2		mg/L		98	90 - 110
TOC Result 1	50.0	48.4		mg/L		97	90 - 110
TOC Result 2	50.0	51.1		mg/L		102	90 - 110
TOC Result 3	50.0	48.1		mg/L		96	90 - 110

Lab Sample ID: MRL 410-527445/3
Matrix: Water
Analysis Batch: 527445

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	1.00	0.633	J	mg/L		63	50 - 150
TOC Result 1	1.00	0.725	J	mg/L		72	
TOC Result 2	1.00	0.533	J	mg/L		53	
TOC Result 3	1.00	0.640	J	mg/L		64	

QC Association Summary

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

HPLC/IC

Analysis Batch: 526874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	300.0	
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	300.0	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	300.0	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	300.0	
410-179201-3	TDSS-ER-3Q24	Total/NA	Water	300.0	
MB 410-526874/5	Method Blank	Total/NA	Water	300.0	
LCS 410-526874/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 410-526874/4	Lab Control Sample Dup	Total/NA	Water	300.0	

Metals

Prep Batch: 526979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-3	TDSS-ER-3Q24	Total Recoverable	Water	3005A	
MB 410-526979/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-526979/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 526998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total Recoverable	Water	3005A	
410-179201-2	TDSS-MW02-3Q24	Total Recoverable	Water	3005A	
MB 410-526998/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-526998/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 529378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-3	TDSS-ER-3Q24	Total Recoverable	Water	6020B	526979
MB 410-526979/1-A	Method Blank	Total Recoverable	Water	6020B	526979
LCS 410-526979/2-A	Lab Control Sample	Total Recoverable	Water	6020B	526979
LRC 410-529378/9	Lab Control Sample		Water	6020B	

Analysis Batch: 529380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total Recoverable	Water	6020B	526998
410-179201-2	TDSS-MW02-3Q24	Total Recoverable	Water	6020B	526998
410-179201-2	TDSS-MW02-3Q24	Total Recoverable	Water	6020B	526998
MB 410-526998/1-A	Method Blank	Total Recoverable	Water	6020B	526998
LCS 410-526998/2-A	Lab Control Sample	Total Recoverable	Water	6020B	526998
LRC 410-529380/9	Lab Control Sample		Water	6020B	

General Chemistry

Analysis Batch: 526892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	180.1	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	180.1	
410-179201-3	TDSS-ER-3Q24	Total/NA	Water	180.1	
MB 410-526892/3	Method Blank	Total/NA	Water	180.1	
LCS 410-526892/4	Lab Control Sample	Total/NA	Water	180.1	

QC Association Summary

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

General Chemistry

Analysis Batch: 527232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	2320B-2011	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	2320B-2011	
410-179201-3	TDSS-ER-3Q24	Total/NA	Water	2320B-2011	
MB 410-527232/128	Method Blank	Total/NA	Water	2320B-2011	
LCS 410-527232/131	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 410-527232/132	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 527234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	9040C	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	9040C	
410-179201-3	TDSS-ER-3Q24	Total/NA	Water	9040C	
LCS 410-527234/129	Lab Control Sample	Total/NA	Water	9040C	
LCSD 410-527234/130	Lab Control Sample Dup	Total/NA	Water	9040C	

Analysis Batch: 527364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	2540C - 2015	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	2540C - 2015	
410-179201-3	TDSS-ER-3Q24	Total/NA	Water	2540C - 2015	
MB 410-527364/1	Method Blank	Total/NA	Water	2540C - 2015	
LCS 410-527364/2	Lab Control Sample	Total/NA	Water	2540C - 2015	

Analysis Batch: 527445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	SM5310C	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	SM5310C	
410-179201-3	TDSS-ER-3Q24	Total/NA	Water	SM5310C	
MB 410-527445/26	Method Blank	Total/NA	Water	SM5310C	
LCS 410-527445/25	Lab Control Sample	Total/NA	Water	SM5310C	
MRL 410-527445/3	Lab Control Sample	Total/NA	Water	SM5310C	

Analysis Batch: 527694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	EPA 350.1	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	EPA 350.1	
410-179201-3	TDSS-ER-3Q24	Total/NA	Water	EPA 350.1	
MB 410-527694/17	Method Blank	Total/NA	Water	EPA 350.1	
LCS 410-527694/15	Lab Control Sample	Total/NA	Water	EPA 350.1	
LCSD 410-527694/16	Lab Control Sample Dup	Total/NA	Water	EPA 350.1	

Lab Chronicle

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

Client Sample ID: TDSS-MW01-3Q24

Lab Sample ID: 410-179201-1

Date Collected: 07/07/24 10:30

Matrix: Water

Date Received: 07/10/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		5	526874	L4QM	ELLE	07/11/24 12:15
Total/NA	Analysis	300.0		50	526874	L4QM	ELLE	07/11/24 12:45
Total Recoverable	Prep	3005A			526998	UJL8	ELLE	07/11/24 07:50
Total Recoverable	Analysis	6020B		1	529380	F7JF	ELLE	07/17/24 09:05
Total/NA	Analysis	180.1		1	526892	UDS7	ELLE	07/10/24 23:54
Total/NA	Analysis	2320B-2011		1	527232	DI9Q	ELLE	07/11/24 09:57
Total/NA	Analysis	2540C - 2015		1	527364	UOCA	ELLE	07/11/24 21:54 - 07/12/24 10:25 [1]
Total/NA	Analysis	9040C		1	527234	DI9Q	ELLE	07/11/24 09:57
Total/NA	Analysis	EPA 350.1		1	527694	JCG7	ELLE	07/12/24 11:31
Total/NA	Analysis	SM5310C		1	527445	P684	ELLE	07/11/24 19:40

Client Sample ID: TDSS-MW02-3Q24

Lab Sample ID: 410-179201-2

Date Collected: 07/07/24 15:28

Matrix: Water

Date Received: 07/10/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		5	526874	L4QM	ELLE	07/11/24 12:55
Total/NA	Analysis	300.0		50	526874	L4QM	ELLE	07/11/24 13:06
Total Recoverable	Prep	3005A			526998	UJL8	ELLE	07/11/24 07:50
Total Recoverable	Analysis	6020B		1	529380	F7JF	ELLE	07/17/24 09:03
Total Recoverable	Prep	3005A			526998	UJL8	ELLE	07/11/24 07:50
Total Recoverable	Analysis	6020B		10	529380	F7JF	ELLE	07/17/24 13:51
Total/NA	Analysis	180.1		1	526892	UDS7	ELLE	07/10/24 23:54
Total/NA	Analysis	2320B-2011		1	527232	DI9Q	ELLE	07/11/24 10:11
Total/NA	Analysis	2540C - 2015		1	527364	UOCA	ELLE	07/11/24 21:54 - 07/12/24 10:25 [1]
Total/NA	Analysis	9040C		1	527234	DI9Q	ELLE	07/11/24 10:11
Total/NA	Analysis	EPA 350.1		1	527694	JCG7	ELLE	07/12/24 11:33
Total/NA	Analysis	SM5310C		1	527445	P684	ELLE	07/11/24 20:00

Client Sample ID: TDSS-ER-3Q24

Lab Sample ID: 410-179201-3

Date Collected: 07/07/24 17:10

Matrix: Water

Date Received: 07/10/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	526874	L4QM	ELLE	07/11/24 10:02
Total Recoverable	Prep	3005A			526979	UJL8	ELLE	07/11/24 07:35
Total Recoverable	Analysis	6020B		1	529378	F7JF	ELLE	07/17/24 11:31
Total/NA	Analysis	180.1		1	526892	UDS7	ELLE	07/10/24 23:54
Total/NA	Analysis	2320B-2011		1	527232	DI9Q	ELLE	07/11/24 10:04
Total/NA	Analysis	2540C - 2015		1	527364	UOCA	ELLE	07/11/24 21:54 - 07/12/24 10:25 [1]
Total/NA	Analysis	9040C		1	527234	DI9Q	ELLE	07/11/24 10:04
Total/NA	Analysis	EPA 350.1		1	527694	JCG7	ELLE	07/12/24 11:50

Lab Chronicle

Client: Environmental Chemical Corp.
Job ID: 410-179201-1
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline
SDG: 410-179201

Client Sample ID: TDSS-ER-3Q24
Lab Sample ID: 410-179201-3

Date Collected: 07/07/24 17:10
Matrix: Water
Date Received: 07/10/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM5310C		1	527445	P684	ELLE	07/11/24 20:20

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24

The following analytes are included in this report, but the laboratory is not certified by A2LA Dept. of Defense ELAP 0001.01. This list may include analytes for which the agency does not offer certification:

Analysis Method	Prep Method	Matrix	Analyte
180.1		Water	Turbidity
SM5310C		Water	TOC Result 3

Authority	Program	Identification Number	Expiration Date
Hawaii	State	N/A	01-31-25

The following analytes are included in this report, but the laboratory is not certified by Hawaii State N/A. This list may include analytes for which the agency does not offer certification:

Analysis Method	Prep Method	Matrix	Analyte
180.1		Water	Turbidity
2320B-2011		Water	Bicarbonate Alkalinity as CaCO3
2320B-2011		Water	Carbonate Alkalinity as CaCO3
2320B-2011		Water	Total Alkalinity as CaCO3 to pH 4.5
2540C - 2015		Water	Total Dissolved Solids
300.0		Water	Chloride
300.0		Water	Sulfate
6020B	3005A	Water	Antimony
6020B	3005A	Water	Arsenic
6020B	3005A	Water	Calcium
6020B	3005A	Water	Cobalt
6020B	3005A	Water	Copper
6020B	3005A	Water	Iron
6020B	3005A	Water	Lead
6020B	3005A	Water	Magnesium
6020B	3005A	Water	Potassium
6020B	3005A	Water	Sodium
9040C		Water	pH
EPA 350.1		Water	Ammonia as N
SM5310C		Water	TOC Result 1
SM5310C		Water	TOC Result 2
SM5310C		Water	TOC Result 3
SM5310C		Water	Total Organic Carbon

Method Summary

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
180.1	Turbidity, Nephelometric	EPA	ELLE
2320B-2011	Alkalinity, Total	SM	ELLE
2540C - 2015	Total Dissolved Solids (Dried at 180 °C)	SM	ELLE
9040C	pH	SW846	ELLE
EPA 350.1	Nitrogen, Ammonia	EPA	ELLE
SM5310C	TOC	SM	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-179201-1	TDSS-MW01-3Q24	Water	07/07/24 10:30	07/10/24 09:35
410-179201-2	TDSS-MW02-3Q24	Water	07/07/24 15:28	07/10/24 09:35
410-179201-3	TDSS-ER-3Q24	Water	07/07/24 17:10	07/10/24 09:35

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: D20 - 3394 Analysis Batch Number: 516687

Lab Sample ID: IC 410-516687/2 Client Sample ID:

Date Analyzed: 06/12/24 12:10 Lab File ID: 12_Jun_2024 12_10.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	1.77	Baseline Smoothing	UJE2	06/12/24 17:29

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: D20 - 3394 Analysis Batch Number: 526874

Lab Sample ID: CCV 410-526874/1 Client Sample ID:

Date Analyzed: 07/11/24 05:27 Lab File ID: 11_Jul_2024 05_27.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide	4.74	Split Peak	L4QM	07/11/24 15:03
Sulfate	6.18	Unspecified		

Lab Sample ID: CCB 410-526874/2 Client Sample ID:

Date Analyzed: 07/11/24 05:37 Lab File ID: 11_Jul_2024 05_37.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate		Unspecified		

Lab Sample ID: LCS 410-526874/3 Client Sample ID:

Date Analyzed: 07/11/24 05:47 Lab File ID: 11_Jul_2024 05_47.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	6.18	Unspecified		

Lab Sample ID: LCSD 410-526874/4 Client Sample ID:

Date Analyzed: 07/11/24 05:57 Lab File ID: 11_Jul_2024 05_57.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	6.19	Unspecified		

Lab Sample ID: MB 410-526874/5 Client Sample ID:

Date Analyzed: 07/11/24 06:07 Lab File ID: 11_Jul_2024 06_07.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	6.23	Baseline Smoothing	L4QM	07/11/24 15:04

300.0

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: D20 - 3394 Analysis Batch Number: 526874

Lab Sample ID: CCV 410-526874/6 Client Sample ID:

Date Analyzed: 07/11/24 06:18 Lab File ID: 11_Jul_2024 06_18.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide	4.74	Unspecified		
Sulfate	6.18	Unspecified		

Lab Sample ID: CCB 410-526874/7 Client Sample ID:

Date Analyzed: 07/11/24 06:28 Lab File ID: 11_Jul_2024 06_28.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	6.19	Baseline Smoothing	L4QM	07/11/24 15:05

Lab Sample ID: CCV 410-526874/18 Client Sample ID:

Date Analyzed: 07/11/24 08:20 Lab File ID: 11_Jul_2024 08_20.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide	4.74	Split Peak	L4QM	07/11/24 15:09
Sulfate	6.18	Unspecified		

Lab Sample ID: CCB 410-526874/19 Client Sample ID:

Date Analyzed: 07/11/24 08:30 Lab File ID: 11_Jul_2024 08_30.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate		Unspecified		

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: D20 - 3394 Analysis Batch Number: 526874

Lab Sample ID: 410-179201-3 Client Sample ID: TDSS-ER-3Q24

Date Analyzed: 07/11/24 10:02 Lab File ID: 11_Jul_2024 10_02.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	6.21	Unspecified		

Lab Sample ID: CCV 410-526874/30 Client Sample ID:

Date Analyzed: 07/11/24 10:22 Lab File ID: 11_Jul_2024 10_22.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide	4.74	Split Peak	L4QM	07/11/24 15:20
Sulfate	6.18	Unspecified		

Lab Sample ID: 410-179201-1 Client Sample ID: TDSS-MW01-3Q24

Date Analyzed: 07/11/24 12:15 Lab File ID: 11_Jul_2024 12_15.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	6.20	Split Peak	L4QM	07/11/24 15:33

Lab Sample ID: CCV 410-526874/42 Client Sample ID:

Date Analyzed: 07/11/24 12:25 Lab File ID: 11_Jul_2024 12_25.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide	4.74	Unspecified		
Sulfate	6.18	Unspecified		

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: D20 - 3394 Analysis Batch Number: 526874

Lab Sample ID: CCB 410-526874/43 Client Sample ID:

Date Analyzed: 07/11/24 12:35 Lab File ID: 11_Jul_2024 12_35.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate		Unspecified		

Lab Sample ID: 410-179201-2 Client Sample ID: TDSS-MW02-3Q24

Date Analyzed: 07/11/24 12:55 Lab File ID: 11_Jul_2024 12_55.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	6.19	Split Peak	L4QM	07/11/24 15:35

Lab Sample ID: CCV 410-526874/47 Client Sample ID:

Date Analyzed: 07/11/24 13:16 Lab File ID: 11_Jul_2024 13_16.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide	4.74	Unspecified		
Sulfate	6.18	Unspecified		

Lab Sample ID: CCB 410-526874/48 Client Sample ID:

Date Analyzed: 07/11/24 13:26 Lab File ID: 11_Jul_2024 13_26.d GC Column: IC17-AS14 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate		Unspecified		

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MP_1:1HCl_00037	11/29/24	05/29/24	DI Water, Lot DI05292024	20000 mL	MT_HCl_JT_00015	10000 mL	Hydrogen Chloride	188000 ug/mL
.MT_HCl_JT_00015	03/21/25	J.T.Baker, Lot 22L0562004			(Purchased Reagent)		Hydrogen Chloride	37.6 %
MP_1:1HNO3_00061	12/27/24	06/27/24	DI Water, Lot DI06062024	20000 mL	MT_HNO3_VWR_00002	10000 mL	Nitric acid	340000 ug/mL
.MT_HNO3_VWR_00002	05/01/25	VWR, Lot 1123120			(Purchased Reagent)		Nitric acid	68 %
MT_LCS-SPK-A_00040	10/11/24	Inorganic Ventures, Lot U2-MEB741401			(Purchased Reagent)		Ag	12.5 mg/L
							Al	1250 mg/L
							Arsenic	125 mg/L
							B	125 mg/L
							Ba	125 mg/L
							Be	12.5 mg/L
							Calcium	1250 mg/L
							Cd	12.5 mg/L
							Cobalt	125 mg/L
							Copper	125 mg/L
							Cr	125 mg/L
							Iron	1250 mg/L
							Lead	12.5 mg/L
							Li	125 mg/L
							Magnesium	1250 mg/L
							Mn	125 mg/L
							Ni	125 mg/L
							P	125 mg/L
							Potassium	1250 mg/L
							Se	25 mg/L
							Sodium	1250 mg/L
							Sr	12.5 mg/L
							Sulfur	1250 mg/L
							Th	125 mg/L
							Tl	25 mg/L
							U	12.5 mg/L
							V	125 mg/L
							Zn	125 mg/L
MT_LCS-SPK-B_00038	10/11/24	Inorganic Ventures, Lot U2-MEB741402			(Purchased Reagent)		Antimony	25 mg/L
							Mo	12.5 mg/L
							Si	1250 mg/L
							Sn	25 mg/L
							Ti	125 mg/L
							W	125 mg/L
							Zr	125 mg/L
MT_MJ_CCV_00192	07/24/24	06/24/24	DI Water, Lot DI06242024	5 L	MT_S_MSSPK-A_00007	5 mL	Arsenic	499.9 ppb
							Calcium	4998 ppb
							Cobalt	500.2 ppb

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Copper	500 ppb
							Iron	5000 ppb
							Lead	50 ppb
							Magnesium	5000 ppb
							Potassium	5001 ppb
							Sodium	5000 ppb
					MT_S_MSSPK-B_00003	5 mL	Antimony	49.97 ppb
.MT_S_MSSPK-A_00007	08/23/24	Inorganic Ventures, Lot U2-MEB728823			(Purchased Reagent)		Arsenic	499.9 ug/mL
							Calcium	4998 ug/mL
							Cobalt	500.2 ug/mL
							Copper	500 ug/mL
							Iron	5000 ug/mL
							Lead	50 ug/mL
							Magnesium	5000 ug/mL
							Potassium	5001 ug/mL
							Sodium	5000 ug/mL
.MT_S_MSSPK-B_00003	08/23/24	Inorganic Ventures, Lot U2-MEB728824			(Purchased Reagent)		Antimony	49.97 ug/mL
MT_MJ_CRI-V_00188	08/03/24	07/03/24	J, Lot 6148203	1 L	MT_S_MWLLC_SC_00007	1 mL	Antimony	1.01 ug/L
							Arsenic	2.02 ug/L
							Calcium	100.3 ug/L
							Cobalt	0.504 ug/L
							Copper	0.999 ug/L
							Iron	49.92 ug/L
							Lead	0.503 ug/L
							Magnesium	50.3 ug/L
							Potassium	199.5 ug/L
							Sodium	198.6 ug/L
.MT_S_MWLLC_SC_00007	12/11/24	HPS, Lot 2332517-500			(Purchased Reagent)		Antimony	1.01 ug/mL
							Arsenic	2.02 ug/mL
							Calcium	100.3 ug/mL
							Cobalt	0.504 ug/mL
							Copper	0.999 ug/mL
							Iron	49.92 ug/mL
							Lead	0.503 ug/mL
							Magnesium	50.3 ug/mL
							Potassium	199.5 ug/mL
							Sodium	198.6 ug/mL
MT_MJ_ICSA_00125	08/12/24	07/12/24	J, Lot 6038178	500 mL	MT_S_ICS2A_IV_00018	50 mL	Ag	0.0002 ug/mL
							Al	100 ug/mL
							Antimony	0.00014 ug/mL
							Arsenic	0.0085 ug/mL
							Ba	0.00039 ug/mL
							Be	0.00002 ug/mL
							Calcium	300 ug/mL
							Cd	0.00048 ug/mL
							Cobalt	0.00022 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Copper	0.00086 ug/mL
							Cr	0.0032 ug/mL
							Iron	250.1 ug/mL
							Lead	0.00012 ug/mL
							Magnesium	100 ug/mL
							Mn	0.0005 ug/mL
							Mo	2.001 ug/mL
							Ni	0.0012 ug/mL
							Potassium	100 ug/mL
							Se	0.00058 ug/mL
							Sn	0.00006 ug/mL
							Sodium	250.1 ug/mL
							Sr	0.0017 ug/mL
							Ti	2.001 ug/mL
							Tl	0.00001 ug/mL
							U	0.00012 ug/mL
							V	0.00046 ug/mL
							Zn	0.00045 ug/mL
.MT_S_ICS2A_IV_00018	07/12/25	Inorganic Ventures, Lot U2-MEB731104			(Purchased Reagent)		Ag	0.002 ug/mL
							Al	1000 ug/mL
							Antimony	0.0014 ug/mL
							Arsenic	0.085 ug/mL
							Ba	0.0039 ug/mL
							Be	0.0002 ug/mL
							Calcium	3000 ug/mL
							Cd	0.0048 ug/mL
							Cobalt	0.0022 ug/mL
							Copper	0.0086 ug/mL
							Cr	0.032 ug/mL
							Iron	2501 ug/mL
							Lead	0.0012 ug/mL
							Magnesium	1000 ug/mL
							Mn	0.005 ug/mL
							Mo	20.01 ug/mL
							Ni	0.012 ug/mL
							Potassium	1000 ug/mL
							Se	0.0058 ug/mL
							Sn	0.0006 ug/mL
							Sodium	2501 ug/mL
							Sr	0.017 ug/mL
							Ti	20.01 ug/mL
							Tl	0.0001 ug/mL
							U	0.0012 ug/mL
							V	0.0046 ug/mL
							Zn	0.0045 ug/mL
MT_MJ_ICSAB_00100	08/12/24	07/12/24	J, Lot 6038178	500 mL	MT_S_ICS2A_IV_00016	50 mL	Ag	0.05022 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Al	100 ug/mL
							Antimony	0.00014 ug/mL
							Arsenic	0.1085 ug/mL
							Ba	0.00039 ug/mL
							Be	0.00002 ug/mL
							Calcium	300 ug/mL
							Cd	0.10048 ug/mL
							Cobalt	0.20032 ug/mL
							Copper	0.20096 ug/mL
							Cr	0.2033 ug/mL
							Iron	250.1 ug/mL
							Lead	0.00012 ug/mL
							Magnesium	100 ug/mL
							Mn	0.2006 ug/mL
							Mo	2.001 ug/mL
							Ni	0.2013 ug/mL
							Potassium	100 ug/mL
							Se	0.10058 ug/mL
							Sn	0.00006 ug/mL
							Sodium	250.1 ug/mL
							Sr	0.0017 ug/mL
							Ti	2.001 ug/mL
							Tl	0.00001 ug/mL
							U	0.00012 ug/mL
							V	0.20056 ug/mL
							Zn	0.10045 ug/mL
					MT_S_ICS2B_IV_00006	5 mL	Ag	0.05022 ug/mL
							Arsenic	0.1085 ug/mL
							Cd	0.10048 ug/mL
							Cobalt	0.20032 ug/mL
							Copper	0.20096 ug/mL
							Cr	0.2033 ug/mL
							Mn	0.2006 ug/mL
							Ni	0.2013 ug/mL
							Se	0.10058 ug/mL
							V	0.20056 ug/mL
							Zn	0.10045 ug/mL
.MT_S_ICS2A_IV_00016	12/21/24	Inorganic Ventures, Lot U2-MEB731104			(Purchased Reagent)		Ag	0.002 ug/mL
							Al	1000 ug/mL
							Antimony	0.0014 ug/mL
							Arsenic	0.085 ug/mL
							Ba	0.0039 ug/mL
							Be	0.0002 ug/mL
							Calcium	3000 ug/mL
							Cd	0.0048 ug/mL
							Cobalt	0.0022 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Copper	0.0086 ug/mL
							Cr	0.032 ug/mL
							Iron	2501 ug/mL
							Lead	0.0012 ug/mL
							Magnesium	1000 ug/mL
							Mn	0.005 ug/mL
							Mo	20.01 ug/mL
							Ni	0.012 ug/mL
							Potassium	1000 ug/mL
							Se	0.0058 ug/mL
							Sn	0.0006 ug/mL
							Sodium	2501 ug/mL
							Sr	0.017 ug/mL
							Ti	20.01 ug/mL
							Tl	0.0001 ug/mL
							U	0.0012 ug/mL
							V	0.0046 ug/mL
							Zn	0.0045 ug/mL
.MT_S_ICS2B_IV_00006	10/16/24	Inorganic Ventures, Lot S2-MEB711470			(Purchased Reagent)		Ag	5.002 ug/mL
							Arsenic	10 ug/mL
							Cd	10 ug/mL
							Cobalt	20.01 ug/mL
							Copper	20.01 ug/mL
							Cr	20.01 ug/mL
							Mn	20.01 ug/mL
							Ni	20.01 ug/mL
							Se	10 ug/mL
							V	20.01 ug/mL
							Zn	10 ug/mL
MT_MJ_ICV_00111	08/09/24	07/09/24	J, Lot 6148204	1 L	MT_S_ICVSPK-A_00006	2 mL	Arsenic	500 ppb
							Calcium	5000 ppb
							Cobalt	500 ppb
							Copper	500 ppb
							Iron	5000 ppb
							Lead	50 ppb
							Magnesium	5000 ppb
							Potassium	5000 ppb
							Sodium	5000 ppb
					MT_S_ICVSPK-B_00007	2 mL	Antimony	50 ppb
.MT_S_ICVSPK-A_00006	04/03/25	High-Purity Standards, Lot U2-MEB728821			(Purchased Reagent)		Arsenic	250 ug/mL
							Calcium	2500 ug/mL
							Cobalt	250 ug/mL
							Copper	250 ug/mL
							Iron	2500 ug/mL
							Lead	25 ug/mL
							Magnesium	2500 ug/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Potassium	2500 ug/mL
							Sodium	2500 ug/mL
.MT_S_ICVSPK-B_00007	04/03/25	High-Purity Standards, Lot U2-MEB728822			(Purchased Reagent)		Antimony	25 ug/mL
MT_MJ_LRC_00109	07/24/24	07/07/24	J, Lot 6148204	0.5 L	MT_I_CCVSPK-A_00006	10 mL	Arsenic	2000 ppb
							Calcium	200000 ppb
							Cobalt	2000 ppb
							Copper	2000 ppb
							Iron	160000 ppb
							Lead	2000 ppb
							Magnesium	200000 ppb
							Potassium	200000 ppb
							Sodium	200000 ppb
					MT_I_CCVSPK-B_00005	10 mL	Antimony	2000 ppb
					MT_S_SOL2A_IV_00012	5 mL	Calcium	200000 ppb
							Iron	160000 ppb
							Magnesium	200000 ppb
							Potassium	200000 ppb
							Sodium	200000 ppb
.MT_I_CCVSPK-A_00006	08/23/24	Inorganic Ventures, Lot T2-MEB720690			(Purchased Reagent)		Arsenic	100 mg/L
							Calcium	5000 mg/L
							Cobalt	100 mg/L
							Copper	100 mg/L
							Iron	5000 mg/L
							Lead	100 mg/L
							Magnesium	5000 mg/L
							Potassium	5000 mg/L
							Sodium	5000 mg/L
.MT_I_CCVSPK-B_00005	08/23/24	Inorganic Ventures, Lot T2-MEB720691			(Purchased Reagent)		Antimony	100 mg/L
.MT_S_SOL2A_IV_00012	06/30/25	Inorganic Ventures, Lot U2-MEB728393			(Purchased Reagent)		Calcium	10000 ug/mL
							Iron	6000 ug/mL
							Magnesium	10000 ug/mL
							Potassium	10000 ug/mL
							Sodium	10000 ug/mL
MT_MJ_S1_00132	08/11/24	07/11/24	J, Lot 6148204	500 mL	MT_S_MSSPK-A_00004	1 mL	Arsenic	999.8 ppb
							Calcium	9996 ppb
							Cobalt	1000.4 ppb
							Copper	1000 ppb
							Iron	10000 ppb
							Lead	100 ppb
							Magnesium	10000 ppb
							Potassium	10002 ppb
							Sodium	10000 ppb
					MT_S_MSSPK-B_00004	1 mL	Antimony	99.94 ppb
.MT_S_MSSPK-A_00004	07/07/25	Inorganic Ventures, Lot U2-MEB728823			(Purchased Reagent)		Arsenic	499.9 ug/mL
							Calcium	4998 ug/mL
							Cobalt	500.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Copper	500 ug/mL
							Iron	5000 ug/mL
							Lead	50 ug/mL
							Magnesium	5000 ug/mL
							Potassium	5001 ug/mL
							Sodium	5000 ug/mL
.MT_S_MSSPK-B_00004	07/07/25	Inorganic Ventures, Lot U2-MEB728824			(Purchased Reagent)		Antimony	49.97 ug/mL
WC_4000_NTU_00003	09/30/24	HACH, Lot A2262			(Purchased Reagent)		Turbidity	4000 NTU
WC_Alk_LCS_00018	07/24/24	04/24/24	DI Water, Lot -	2 L	WC_Alk_Std_00019	40 mL	Total Alkalinity as CaCO3 to pH 4.5	188.869 mg/L
.WC_Alk_Std_00019	07/24/24	Fisher (Na2CO3), Lot 217690W			(Purchased Reagent)		Total Alkalinity as CaCO3 to pH 4.5	9443.43 mg/L
WC_FL_CCV_NH3_00764	07/13/24	07/12/24	DI Water, Lot 13347	50 mL	WC_FL_Q100NH3_00763	2 mL	Ammonia as N	1.9959 mg/L
.WC_FL_Q100NH3_00763	07/13/24	07/12/24	DI Water, Lot 36672	50 mL	WC_Fl_QC_NH3_00063	2.5 mL	Ammonia as N	49.8974 mg/L
..WC_Fl_QC_NH3_00063	07/21/24	06/21/24	DI Water, Lot 13347	500 mL	WC_FL_NH4Cl_00009	1.9055 g	Ammonia as N	997.948 mg/L
...WC_FL_NH4Cl_00009	05/08/27	Fisher Chemical, Lot 222776			(Purchased Reagent)		Ammonia as N	0.26186 g/g
WC_IC_C_Det_00192	06/13/24	06/11/24	DI Water, Lot DI	50 mL	WC_IC_C_Br_00008	2.5 mL	Bromide	50 ug/mL
					WC_IC_C_Cl_00010	2 mL	Chloride	40 ug/mL
					WC_IC_C_F_00009	0.5 mL	Fluoride	10 ug/mL
					WC_IC_C_SO4_00008	5 mL	Sulfate	100 ug/mL
.WC_IC_C_Br_00008	11/03/24	Inorganic Ventures, Lot T2-BR715284			(Purchased Reagent)		Bromide	1000 ug/mL
.WC_IC_C_Cl_00010	10/26/24	Inorganic Ventures, Lot U2-CL731103			(Purchased Reagent)		Chloride	1000 ug/mL
.WC_IC_C_F_00009	10/26/24	Inorganic Ventures, Lot T2-F724676			(Purchased Reagent)		Fluoride	1000 ug/mL
.WC_IC_C_SO4_00008	12/28/26	Inorganic Ventures, Lot S2-SOX712443			(Purchased Reagent)		Sulfate	1000 ug/mL
WC_IC_QC2_01119	06/13/24	06/12/24	DI Water, Lot IC	50 mL	WC_IC_C_SO4_00009	2.5 mL	Sulfate	50 ug/mL
					WC_IC_Q_CI_00012	1 mL	Chloride	20 ug/mL
.WC_IC_C_SO4_00009	10/26/24	Inorganic Ventures, Lot T2-SOX722793			(Purchased Reagent)		Sulfate	1000 ug/mL
.WC_IC_Q_CI_00012	10/23/24	RICCA, Lot 4308J59			(Purchased Reagent)		Chloride	1000 ug/mL
WC_IC_QC2_01138	07/11/24	07/10/24	DI Water, Lot IC	50 mL	WC_IC_Q_CI_00013	1 mL	Chloride	20 ug/mL
					WC_IC_Q_SO4_00016	2.5 mL	Sulfate	50 ug/mL
.WC_IC_Q_CI_00013	06/27/25	Inorganic Ventures, Lot U2-CL731103			(Purchased Reagent)		Chloride	1000 ug/mL
.WC_IC_Q_SO4_00016	06/10/27	Absolute Standards, Lot 061024			(Purchased Reagent)		Sulfate	1000 ug/mL
WC_pH7_CRM_00008	06/15/25	Control Company/FisherBrand, Lot CC779859			(Purchased Reagent)		pH	7 S.U.
WC_pHBuffer7_00029	03/31/26	Fisher Chemical, Lot 236275			(Purchased Reagent)		pH	7 PH Units
WC_TDS_LCS_00235	11/30/24	07/09/24	DI Water, Lot XXXX	2000 mL	WC_TDS_4000_00051	100 mg/L	Total Dissolved Solids	200 mg/L
.WC_TDS_4000_00051	12/30/24	05/30/24	DI, Lot xxxx	2000 mL	WC_Solids_KCL_00005	8 g	Total Dissolved Solids	4000 mg/L
..WC_Solids_KCL_00005	12/31/25	Fisher, Lot 191941			(Purchased Reagent)		Total Dissolved Solids	1 g/g
WC_TOC_QC_STD_00062	08/08/24	07/09/24	DI Water, Lot Flow	1 L	WC_FL_KHP_3_00007	1.0632 g	TOC Result 1	500.236 mg/L
							TOC Result 2	500.236 mg/L
							TOC Result 3	500.236 mg/L
							Total Organic Carbon	500.236 mg/L
.WC_FL_KHP_3_00007	12/24/25	Acros Organics, Lot A0414437			(Purchased Reagent)		TOC Result 1	0.4705 g/g
							TOC Result 2	0.4705 g/g

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							TOC Result 3	0.4705 g/g
							Total Organic Carbon	0.4705 g/g

Reagent

MT_HNO3_VWR_00002

Certificate of Analysis

Material Number: **87003-259** 0500mL HDPE | **87003-261** 2500mL HDPE
Material Description: Nitric acid
Grade: BDH Aristar® Plus
Lot Number: 1123120
Use By: 2026-Jan-09
Date of Certification: 2024-Jan-09
CAS Number: 7697-37-2
Molecular Weight: 63.01
Molecular Formula: HNO_3

Characteristics	Specifications	Measured Values
Assay (HNO_3)	67 - 70% w/w	68% w/w
Color	max. 10 APHA	< 7 APHA
Aluminum (Al)	max. 1 ppb	< 0.5 ppb
Antimony (Sb)	max. 0.5 ppb	< 0.1 ppb
Arsenic (As)	max. 0.5 ppb	< 0.5 ppb
Barium (Ba)	max. 0.1 ppb	< 0.1 ppb
Beryllium (Be)	max. 0.1 ppb	< 0.1 ppb
Bismuth (Bi)	max. 0.1 ppb	< 0.1 ppb
Boron (B)	max. 1 ppb	< 0.5 ppb
Cadmium (Cd)	max. 0.5 ppb	< 0.1 ppb
Calcium (Ca)	max. 1 ppb	< 0.5 ppb
Cerium (Ce)	max. 0.1 ppb	< 0.1 ppb
Cesium (Cs)	max. 0.1 ppb	< 0.1 ppb
Chromium (Cr)	max. 1 ppb	< 0.5 ppb
Cobalt (Co)	max. 0.5 ppb	< 0.1 ppb
Copper (Cu)	max. 0.5 ppb	< 0.2 ppb
Dysprosium (Dy)	max. 0.1 ppb	< 0.1 ppb
Erbium (Er)	max. 0.1 ppb	< 0.1 ppb
Europium (Eu)	max. 0.1 ppb	< 0.1 ppb
Gadolinium (Gd)	max. 0.1 ppb	< 0.1 ppb
Gallium (Ga)	max. 0.1 ppb	< 0.1 ppb
Germanium (Ge)	max. 0.1 ppb	< 0.1 ppb
Gold (Au)	max. 0.1 ppb	< 0.1 ppb
Hafnium (Hf)	max. 0.1 ppb	< 0.1 ppb
Holmium (Ho)	max. 0.1 ppb	< 0.1 ppb
Indium (In)	max. 0.1 ppb	< 0.1 ppb
Iron (Fe)	max. 1 ppb	< 0.5 ppb
Lanthanum (La)	max. 0.1 ppb	< 0.1 ppb
Lead (Pb)	max. 0.1 ppb	< 0.1 ppb
Lithium (Li)	max. 0.1 ppb	< 0.1 ppb
Lutetium (Lu)	max. 0.1 ppb	< 0.1 ppb
Magnesium (Mg)	max. 1 ppb	< 0.5 ppb
Manganese (Mn)	max. 0.1 ppb	< 0.1 ppb
Mercury (Hg)	max. 0.1 ppb	< 0.02 ppb
Molybdenum (Mo)	max. 0.1 ppb	< 0.1 ppb
Neodymium (Nd)	max. 0.1 ppb	< 0.1 ppb

Certificate of Analysis

Material Number: **87003-259** 0500mL HDPE | **87003-261** 2500mL HDPE
Material Description: Nitric acid
Grade: BDH Aristar® Plus
Lot Number: 1123120
Use By: 2026-Jan-09
Date of Certification: 2024-Jan-09
CAS Number: 7697-37-2
Molecular Weight: 63.01
Molecular Formula: HNO_3

Characteristics	Specifications	Measured Values
Nickel (Ni)	max. 0.5 ppb	< 0.5 ppb
Niobium (Nb)	max. 0.1 ppb	< 0.1 ppb
Palladium (Pd)	max. 0.5 ppb	< 0.1 ppb
Platinum (Pt)	max. 0.5 ppb	< 0.1 ppb
Potassium (K)	max. 1 ppb	< 0.1 ppb
Praseodymium (Pr)	max. 0.1 ppb	< 0.1 ppb
Rhenium (Re)	max. 0.1 ppb	< 0.1 ppb
Rhodium (Rh)	max. 0.5 ppb	< 0.1 ppb
Rubidium (Rb)	max. 0.1 ppb	< 0.1 ppb
Ruthenium (Ru)	max. 0.5 ppb	< 0.1 ppb
Samarium (Sm)	max. 0.1 ppb	< 0.1 ppb
Scandium (Sc)	max. 0.1 ppb	< 0.1 ppb
Selenium (Se)	max. 1 ppb	< 0.2 ppb
Silver (Ag)	max. 0.1 ppb	< 0.1 ppb
Sodium (Na)	max. 1 ppb	< 0.5 ppb
Strontium (Sr)	max. 0.1 ppb	< 0.1 ppb
Tantalum (Ta)	Information Only	< 0.1 ppb
Tellurium (Te)	max. 0.1 ppb	< 0.1 ppb
Terbium (Tb)	max. 0.1 ppb	< 0.1 ppb
Thallium (Tl)	max. 0.1 ppb	< 0.1 ppb
Thorium (Th)	max. 0.1 ppb	< 0.1 ppb
Thulium (Tm)	max. 0.1 ppb	< 0.1 ppb
Tin (Sn)	max. 0.5 ppb	< 0.1 ppb
Titanium (Ti)	max. 0.5 ppb	< 0.1 ppb
Tungsten (W)	max. 0.1 ppb	< 0.1 ppb
Uranium (U)	max. 0.1 ppb	< 0.1 ppb
Vanadium (V)	max. 0.5 ppb	< 0.1 ppb
Ytterbium (Yb)	max. 0.1 ppb	< 0.1 ppb
Yttrium (Y)	max. 0.1 ppb	< 0.1 ppb
Zinc (Zn)	max. 0.5 ppb	< 0.5 ppb
Zirconium (Zr)	max. 0.1 ppb	< 0.1 ppb
Chloride (Cl^-)	max. 0.2 ppm	< 0.2 ppm
Total Phosphorus (P)	max. 0.01 ppm	< 0.01 ppm
Total Sulfur (S)	max. 0.3 ppm	< 0.3 ppm

Signed on behalf of VWR:
Greg Henson
Quality Assurance Manager

Reagent

MT_I_CCVSPK-A_00006

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	35-TSPEURF-CCV-A
Lot Number:	T2-MEB720690
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,
Sulfur,

100 µg/mL ea:

Selenium, Strontium,
Thorium, Thallium,
Vanadium, Zinc,
Silver, Nickel,
Phosphorus, Lead,
Manganese, Lithium,
Cadmium, Cobalt,
Chromium, Copper,
Arsenic, Boron,
Barium, Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 000 ± 18 µg/mL	Arsenic, As	100.0 ± 0.9 µg/mL
Barium, Ba	100.0 ± 0.5 µg/mL	Beryllium, Be	100.0 ± 0.7 µg/mL
Boron, B	100.0 ± 0.6 µg/mL	Cadmium, Cd	100.0 ± 0.4 µg/mL
Calcium, Ca	4 999 ± 22 µg/mL	Chromium, Cr	100.0 ± 0.8 µg/mL
Cobalt, Co	100.0 ± 0.6 µg/mL	Copper, Cu	100.0 ± 0.5 µg/mL
Iron, Fe	5 000 ± 21 µg/mL	Lead, Pb	100.0 ± 0.6 µg/mL
Lithium, Li	100.0 ± 0.4 µg/mL	Magnesium, Mg	5 000 ± 20 µg/mL
Manganese, Mn	100.0 ± 0.5 µg/mL	Nickel, Ni	100.0 ± 0.6 µg/mL
Phosphorus, P	100.0 ± 0.4 µg/mL	Potassium, K	5 000 ± 22 µg/mL
Selenium, Se	100.0 ± 0.6 µg/mL	Silver, Ag	100.0 ± 0.4 µg/mL
Sodium, Na	5 000 ± 22 µg/mL	Strontium, Sr	100.1 ± 0.4 µg/mL
Sulfur, S	5 000 ± 25 µg/mL	Thallium, Tl	100.0 ± 0.7 µg/mL
Thorium, Th	100.0 ± 0.5 µg/mL	Vanadium, V	100.0 ± 0.6 µg/mL
Zinc, Zn	100.0 ± 0.5 µg/mL		

Density: 1.127 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Th	EDTA	928	928
Tl	ICP Assay	3158	151215
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

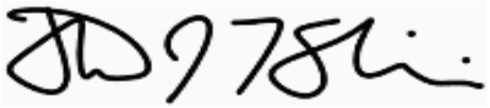
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_I_CCVSPK-B_00005

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	35-TSPEURF-CCV-B
Lot Number:	T2-MEB720691
Matrix:	5% (v/v) HNO3 2.9% (v/v) HF
Value / Analyte(s):	5 000 µg/mL ea: Silicon, 100 µg/mL ea: Tin, Titanium, Tungsten, Zirconium, Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**100.0 ± 0.8 µg/mL**	**Molybdenum, Mo**	**100.0 ± 0.6 µg/mL**
Silicon, Si	**5 000 ± 28 µg/mL**	**Tin, Sn**	**100.0 ± 0.6 µg/mL**
Titanium, Ti	**100.0 ± 0.7 µg/mL**	**Tungsten, W**	**100.0 ± 0.6 µg/mL**
Zirconium, Zr	**100.0 ± 0.6 µg/mL**		

Density: 1.049 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
W	ICP Assay	3163	140606
W	Calculated		See Sec. 4.2
Zr	ICP Assay	3169	130920
Zr	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 24, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 24, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

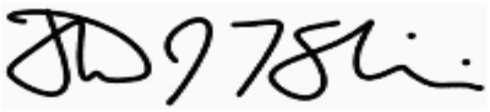
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_LCS-SPK-A_00040

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-62801-A
Lot Number:	V2-MEB741401
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,
Sulfur,

125 µg/mL ea:

Thorium, Vanadium,
Zinc, Nickel,
Phosphorus, Manganese,
Lithium, Cobalt,
Chromium, Copper,
Arsenic, Boron,
Barium,

25 µg/mL ea:

Thallium, Selenium,

12.5 µg/mL ea:

Strontium, Uranium,
Silver, Beryllium,
Cadmium, Lead

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 250 ± 5 µg/mL	Arsenic, As	125.0 ± 0.8 µg/mL
Barium, Ba	125.0 ± 0.5 µg/mL	Beryllium, Be	12.50 ± 0.07 µg/mL
Boron, B	125.0 ± 0.9 µg/mL	Cadmium, Cd	12.50 ± 0.05 µg/mL
Calcium, Ca	1 250 ± 4 µg/mL	Chromium, Cr	125.0 ± 0.7 µg/mL
Cobalt, Co	125.0 ± 0.6 µg/mL	Copper, Cu	125.0 ± 0.5 µg/mL
Iron, Fe	1 250 ± 5 µg/mL	Lead, Pb	12.50 ± 0.05 µg/mL
Lithium, Li	125.0 ± 0.5 µg/mL	Magnesium, Mg	1 250 ± 5 µg/mL
Manganese, Mn	125.0 ± 0.6 µg/mL	Nickel, Ni	125.0 ± 0.6 µg/mL
Phosphorus, P	125.0 ± 0.6 µg/mL	Potassium, K	1 250 ± 6 µg/mL
Selenium, Se	25.01 ± 0.16 µg/mL	Silver, Ag	12.49 ± 0.05 µg/mL
Sodium, Na	1 250 ± 6 µg/mL	Strontium, Sr	12.50 ± 0.06 µg/mL
Sulfur, S	1 250 ± 6 µg/mL	Thallium, Tl	25.00 ± 0.13 µg/mL
Thorium, Th	125.0 ± 0.6 µg/mL	Uranium, U	12.49 ± 0.06 µg/mL
Vanadium, V	125.0 ± 0.6 µg/mL	Zinc, Zn	125.0 ± 0.6 µg/mL

Density: 1.060 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	200413
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
S	Acidimetric	84L	84L
S	ICP Assay	Traceable to 3154	T2-S727797
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Th	EDTA	928	928
Tl	ICP Assay	3158	151215
U	ICP Assay	traceable to 3164	R2-U689597
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains “LOW” levels of Silver. Please store this entire bottle inside a sealed glass jar.

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information (https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver)

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 21, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_LCS-SPK-B_00038

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-62801-B
Lot Number:	V2-MEB741402
Matrix:	5% (v/v) HNO3 1% (v/v) HF
Value / Analyte(s):	1 250 µg/mL ea: Silicon, 125 µg/mL ea: Titanium, Tungsten, Zirconium, 25 µg/mL ea: Tin, Antimony, 12.5 µg/mL ea: Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**25.00 ± 0.17 µg/mL**	**Molybdenum, Mo**	**12.51 ± 0.07 µg/mL**
Silicon, Si	**1 250 ± 9 µg/mL**	**Tin, Sn**	**25.00 ± 0.13 µg/mL**
Titanium, Ti	**125.0 ± 0.8 µg/mL**	**Tungsten, W**	**125.0 ± 0.7 µg/mL**
Zirconium, Zr	**125.0 ± 0.9 µg/mL**		

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162	T2-TI725816
W	ICP Assay	3163	140606
Zr	ICP Assay	3169	130920

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

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X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

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u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 21, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_ICS2A_IV_00016

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-9A
Lot Number:	U2-MEB731104
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	21 215 µg/mL ea: Chloride,
	3 000 µg/mL ea: Calcium,
	2 500 µg/mL ea: Iron, Sodium,
	2 000 µg/mL ea: Carbon,
	1 000 µg/mL ea: Aluminum, Phosphorus, Sulfur, Potassium, Magnesium,
	20 µg/mL ea: Molybdenum, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**1 000 ± 3 µg/mL**	**Calcium, Ca**	**3 001 ± 13 µg/mL**
Carbon, C	**2 001 ± 4 µg/mL**	**Chloride, Cl**	**21 230.0 ± 100.0 µg/mL**
Iron, Fe	**2 501 ± 11 µg/mL**	**Magnesium, Mg**	**1 000 ± 4 µg/mL**
Molybdenum, Mo	**20.01 ± 0.11 µg/mL**	**Phosphorus, P**	**1 000 ± 4 µg/mL**
Potassium, K	**1 000 ± 4 µg/mL**	**Sodium, Na**	**2 501 ± 11 µg/mL**
Sulfur, S	**1 001 ± 4 µg/mL**	**Titanium, Ti**	**20.01 ± 0.15 µg/mL**

Density: 1.052 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Er	<	0.000100	M	Mn		0.005000	s	S	<		O	V	<	0.004600
s	Al	<		M	Eu	<	0.000100	s	Mo	<		M	Sb		0.001400	M	W		0.002300
O	As	<	0.085000	s	Fe	<		s	Na	<		M	Sc	<	0.000700	M	Y	<	0.000400
M	Au	<	0.002200	M	Ga		0.015000	M	Nb	<	0.000100	M	Se	<	0.005800	M	Yb	<	0.000100
M	B	<	0.003300	M	Gd	<	0.000100	M	Nd	<	0.000200	O	Si		0.044000	M	Zn		0.004500
M	Ba		0.003900	M	Ge	<	0.002400	M	Ni		0.012000	M	Sm	<	0.000100	M	Zr		0.001600
M	Be	<	0.000200	M	Hf	<	0.000100	M	Os	<	0.003900	M	Sn	<	0.000600				
M	Bi	<	0.001800	M	Hg	<	0.000200	s	P	<		M	Sr		0.017000				
s	Ca	<		M	Ho	<	0.000100	M	Pb	<	0.001200	M	Ta	<	0.000400				
O	Cd		0.004800	M	In	<	0.000100	M	Pd	<	0.000200	M	Tb	<	0.000100				
M	Ce	<	0.000600	M	Ir	<	0.000100	M	Pr	<	0.000100	M	Te	<	0.000600				
M	Co		0.002200	s	K	<		M	Pt	<	0.000100	M	Th	<	0.000100				
M	Cr		0.032000	M	La	<	0.000800	M	Rb		0.026000	s	Ti	<					
M	Cs		0.001900	O	Li		0.001400	M	Re	<	0.001000	M	Tl	<	0.000100				
M	Cu	<	0.008600	M	Lu	<	0.000100	M	Rh	<	0.000100	M	Tm	<	0.000100				
M	Dy	<	0.000100	s	Mg	<		M	Ru	<	0.000100	M	U	<	0.001200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 20, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 20, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

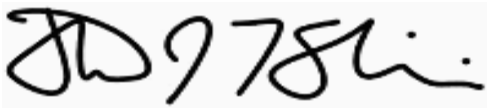
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-9A
Lot Number:	U2-MEB731104
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	21 215 µg/mL ea: Chloride,
	3 000 µg/mL ea: Calcium,
	2 500 µg/mL ea: Iron, Sodium,
	2 000 µg/mL ea: Carbon,
	1 000 µg/mL ea: Aluminum, Phosphorus, Sulfur, Potassium, Magnesium,
	20 µg/mL ea: Molybdenum, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**1 000 ± 3 µg/mL**	**Calcium, Ca**	**3 001 ± 13 µg/mL**
Carbon, C	**2 001 ± 4 µg/mL**	**Chloride, Cl**	**21 230.0 ± 100.0 µg/mL**
Iron, Fe	**2 501 ± 11 µg/mL**	**Magnesium, Mg**	**1 000 ± 4 µg/mL**
Molybdenum, Mo	**20.01 ± 0.11 µg/mL**	**Phosphorus, P**	**1 000 ± 4 µg/mL**
Potassium, K	**1 000 ± 4 µg/mL**	**Sodium, Na**	**2 501 ± 11 µg/mL**
Sulfur, S	**1 001 ± 4 µg/mL**	**Titanium, Ti**	**20.01 ± 0.15 µg/mL**

Density: 1.052 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Er	<	0.000100	M	Mn		0.005000	s	S	<		O	V	<	0.004600
s	Al	<		M	Eu	<	0.000100	s	Mo	<		M	Sb		0.001400	M	W		0.002300
O	As	<	0.085000	s	Fe	<		s	Na	<		M	Sc	<	0.000700	M	Y	<	0.000400
M	Au	<	0.002200	M	Ga		0.015000	M	Nb	<	0.000100	M	Se	<	0.005800	M	Yb	<	0.000100
M	B	<	0.003300	M	Gd	<	0.000100	M	Nd	<	0.000200	O	Si		0.044000	M	Zn		0.004500
M	Ba		0.003900	M	Ge	<	0.002400	M	Ni		0.012000	M	Sm	<	0.000100	M	Zr		0.001600
M	Be	<	0.000200	M	Hf	<	0.000100	M	Os	<	0.003900	M	Sn	<	0.000600				
M	Bi	<	0.001800	M	Hg	<	0.000200	s	P	<		M	Sr		0.017000				
s	Ca	<		M	Ho	<	0.000100	M	Pb	<	0.001200	M	Ta	<	0.000400				
O	Cd		0.004800	M	In	<	0.000100	M	Pd	<	0.000200	M	Tb	<	0.000100				
M	Ce	<	0.000600	M	Ir	<	0.000100	M	Pr	<	0.000100	M	Te	<	0.000600				
M	Co		0.002200	s	K	<		M	Pt	<	0.000100	M	Th	<	0.000100				
M	Cr		0.032000	M	La	<	0.000800	M	Rb		0.026000	s	Ti	<					
M	Cs		0.001900	O	Li		0.001400	M	Re	<	0.001000	M	Tl	<	0.000100				
M	Cu	<	0.008600	M	Lu	<	0.000100	M	Rh	<	0.000100	M	Tm	<	0.000100				
M	Dy	<	0.000100	s	Mg	<		M	Ru	<	0.000100	M	U	<	0.001200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 20, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 20, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

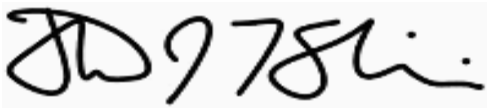
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_ICS2B_IV_00006

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-9B
Lot Number:	S2-MEB711470
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	20 µg/mL ea: Cobalt, Chromium, Copper, Manganese, Nickel, Vanadium, 10 µg/mL ea: Zinc, Arsenic, Cadmium, Selenium, 5 µg/mL ea: Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**10.00 ± 0.06 µg/mL**	**Cadmium, Cd**	**10.00 ± 0.04 µg/mL**
Chromium, Cr	**20.01 ± 0.10 µg/mL**	**Cobalt, Co**	**20.01 ± 0.09 µg/mL**
Copper, Cu	**20.01 ± 0.09 µg/mL**	**Manganese, Mn**	**20.01 ± 0.09 µg/mL**
Nickel, Ni	**20.01 ± 0.09 µg/mL**	**Selenium, Se**	**10.00 ± 0.07 µg/mL**
Silver, Ag	**5.002 ± 0.034 µg/mL**	**Vanadium, V**	**20.01 ± 0.09 µg/mL**
Zinc, Zn	**10.00 ± 0.04 µg/mL**		

Density: 1.015 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mn	Calculated		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains “LOW” levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_ICVSPK-A_00006

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
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2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-69496
Lot Number:	U2-MEB728821
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

250 µg/mL ea:

Nickel, Manganese,
Cobalt, Chromium,
Copper, Arsenic,
Barium, Vanadium,
Zinc,

25 µg/mL ea:

Silver, Beryllium,
Cadmium, Lead,
Selenium, Strontium,
Thallium, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 500 ± 9 µg/mL	Arsenic, As	250.0 ± 2.1 µg/mL
Barium, Ba	250.0 ± 1.2 µg/mL	Beryllium, Be	25.00 ± 0.16 µg/mL
Cadmium, Cd	25.00 ± 0.10 µg/mL	Calcium, Ca	2 500 ± 11 µg/mL
Chromium, Cr	250.0 ± 1.8 µg/mL	Cobalt, Co	250.0 ± 1.2 µg/mL
Copper, Cu	250.0 ± 1.0 µg/mL	Iron, Fe	2 500 ± 10 µg/mL
Lead, Pb	25.00 ± 0.11 µg/mL	Magnesium, Mg	2 500 ± 11 µg/mL
Manganese, Mn	250.0 ± 1.0 µg/mL	Nickel, Ni	250.0 ± 1.1 µg/mL
Potassium, K	2 500 ± 11 µg/mL	Selenium, Se	24.99 ± 0.20 µg/mL
Silver, Ag	25.00 ± 0.13 µg/mL	Sodium, Na	2 500 ± 11 µg/mL
Strontium, Sr	25.01 ± 0.10 µg/mL	Thallium, Tl	25.00 ± 0.13 µg/mL
Uranium, U	25.01 ± 0.15 µg/mL	Vanadium, V	250.0 ± 1.1 µg/mL
Zinc, Zn	250.0 ± 1.1 µg/mL		

Density: 1.074 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	EDTA	928	928
Co	ICP Assay	traceable to 3113	M2-CO661665
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	151215
U	ICP Assay	3164	891509
U	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.6 ± 0.1
Uranium 235U	0.42 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

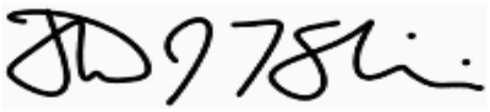
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_ICVSPK-B_00007

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-69497
Lot Number:	U2-MEB728822
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	2 500 µg/mL ea: Titanium, 25 µg/mL ea: Molybdenum, Antimony, Tin

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**25.01 ± 0.19 µg/mL**	**Molybdenum, Mo**	**25.00 ± 0.15 µg/mL**
Tin, Sn	**25.00 ± 0.13 µg/mL**	**Titanium, Ti**	**2 500 ± 18 µg/mL**

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

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X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

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Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

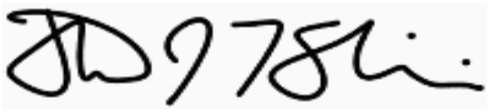
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_MSSPK-A_00004

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Certificate of Analysis

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Christiansburg, VA 24073 USA
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-66048-A
Lot Number:	U2-MEB728823
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

500 µg/mL ea:

Nickel, Manganese,
Cobalt, Chromium,
Copper, Arsenic,
Barium, Vanadium,
Zinc,

50 µg/mL ea:

Silver, Beryllium,
Cadmium, Lead,
Selenium, Strontium,
Thallium, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 008 ± 18 µg/mL	Arsenic, As	500.8 ± 3.7 µg/mL
Barium, Ba	500.8 ± 2.3 µg/mL	Beryllium, Be	50.07 ± 0.33 µg/mL
Cadmium, Cd	50.07 ± 0.23 µg/mL	Calcium, Ca	5 008 ± 22 µg/mL
Chromium, Cr	500.8 ± 2.9 µg/mL	Cobalt, Co	500.8 ± 2.4 µg/mL
Copper, Cu	500.8 ± 2.0 µg/mL	Iron, Fe	5 008 ± 21 µg/mL
Lead, Pb	50.08 ± 0.22 µg/mL	Magnesium, Mg	5 008 ± 22 µg/mL
Manganese, Mn	500.8 ± 2.0 µg/mL	Nickel, Ni	500.8 ± 2.2 µg/mL
Potassium, K	5 008 ± 22 µg/mL	Selenium, Se	50.09 ± 0.32 µg/mL
Silver, Ag	50.07 ± 0.22 µg/mL	Sodium, Na	5 008 ± 22 µg/mL
Strontium, Sr	50.07 ± 0.19 µg/mL	Thallium, Tl	50.07 ± 0.36 µg/mL
Uranium, U	50.08 ± 0.27 µg/mL	Vanadium, V	500.8 ± 2.2 µg/mL
Zinc, Zn	500.8 ± 2.2 µg/mL		

Density: 1.130 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
U	X_U_CRM		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 26, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 26, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

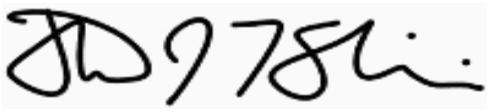
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-66048-A
Lot Number:	U2-MEB728823
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

500 µg/mL ea:

Nickel, Manganese,
Cobalt, Chromium,
Copper, Arsenic,
Barium, Vanadium,
Zinc,

50 µg/mL ea:

Silver, Beryllium,
Cadmium, Lead,
Selenium, Strontium,
Thallium, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 008 ± 18 µg/mL	Arsenic, As	500.8 ± 3.7 µg/mL
Barium, Ba	500.8 ± 2.3 µg/mL	Beryllium, Be	50.07 ± 0.33 µg/mL
Cadmium, Cd	50.07 ± 0.23 µg/mL	Calcium, Ca	5 008 ± 22 µg/mL
Chromium, Cr	500.8 ± 2.9 µg/mL	Cobalt, Co	500.8 ± 2.4 µg/mL
Copper, Cu	500.8 ± 2.0 µg/mL	Iron, Fe	5 008 ± 21 µg/mL
Lead, Pb	50.08 ± 0.22 µg/mL	Magnesium, Mg	5 008 ± 22 µg/mL
Manganese, Mn	500.8 ± 2.0 µg/mL	Nickel, Ni	500.8 ± 2.2 µg/mL
Potassium, K	5 008 ± 22 µg/mL	Selenium, Se	50.09 ± 0.32 µg/mL
Silver, Ag	50.07 ± 0.22 µg/mL	Sodium, Na	5 008 ± 22 µg/mL
Strontium, Sr	50.07 ± 0.19 µg/mL	Thallium, Tl	50.07 ± 0.36 µg/mL
Uranium, U	50.08 ± 0.27 µg/mL	Vanadium, V	500.8 ± 2.2 µg/mL
Zinc, Zn	500.8 ± 2.2 µg/mL		

Density: 1.130 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
U	X_U_CRM		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 26, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 26, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

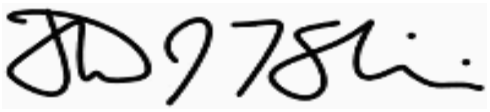
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-66048-B
Lot Number:	U2-MEB728824
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	5 000 µg/mL ea: Titanium, 50 µg/mL ea: Molybdenum, Antimony, Tin

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**49.99 ± 0.37 µg/mL**	**Molybdenum, Mo**	**50.00 ± 0.28 µg/mL**
Tin, Sn	**49.99 ± 0.32 µg/mL**	**Titanium, Ti**	**5 000 ± 37 µg/mL**

Density: 1.042 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 26, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 26, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

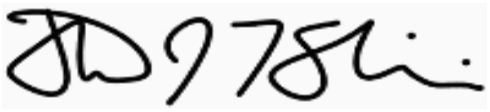
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_MSSPK-B_00004

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Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-66048-B
Lot Number:	U2-MEB728824
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	5 000 µg/mL ea: Titanium, 50 µg/mL ea: Molybdenum, Antimony, Tin

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**49.99 ± 0.37 µg/mL**	**Molybdenum, Mo**	**50.00 ± 0.28 µg/mL**
Tin, Sn	**49.99 ± 0.32 µg/mL**	**Titanium, Ti**	**5 000 ± 37 µg/mL**

Density: 1.042 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

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Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

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- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

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HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 26, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 26, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

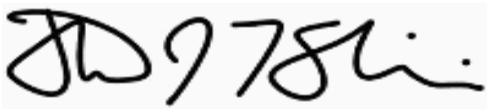
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_MWLLC_SC_00007

7221 Investment Drive • North Charleston, SC 29418
843.767.7900 • info@highpuritystandards.com • www.highpuritystandards.com

Certificate of Analysis

Certified Reference Material

Product Description: Custom Inorganic Standard

Product Number: **HPS-164-335-500**
Lot Number: **2332517-500**
Matrix: 2% HNO3 / Tr HF
Purity: 99.964%-99.9999%

ANAB
ACCREDITED
REFERENCE MATERIAL PRODUCER
ISO 17034:2016 (RMP)
Accreditation
Certificate Number
AR-1436

Certified Values:

Element	(µg/mL)	SRM ID	Element	(µg/mL)	SRM ID
Ag	0.500 ± 0.005	3151	Mo	0.500 ± 0.01	3134
Al	25.0 ± 0.3	3101a	Na	200 ± 2	3152a
As	2.00 ± 0.02	3103a	Ni	1.00 ± 0.01	3136
Ba	2.00 ± 0.02	3104a	Pb	0.500 ± 0.01	3128
Be	0.500 ± 0.01	3105a	Sb	1.00 ± 0.02	3102a
Ca	100 ± 1	3109a	Se	1.00 ± 0.02	3149
Cd	0.500 ± 0.005	3108	Sn	2.00 ± 0.02	*
Co	0.500 ± 0.005	3113	Sr	1.00 ± 0.01	3153a
Cr	2.00 ± 0.02	3112a	Ti	10.0 ± 0.1	*
Cu	1.00 ± 0.01	3114	Tl	0.500 ± 0.005	3158
Fe	50.0 ± 1	3126a	U	1.00 ± 0.01	3164
K	200 ± 3	3141a	V	0.500 ± 0.01	*
Mg	50.0 ± 0.5	3131a	Zn	10.0 ± 0.1	3168a
Mn	2.00 ± 0.04	3132			

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.
* Refer to Traceability Information, Section 4

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: November 2023
Expiration Date: November 30, 2024
Certificate Issue Date: November 27, 2023

Julio Soto, Quality Manager

Reagent

MT_S_SOL2A_IV_00012

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-53952
Lot Number:	U2-MEB728393
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum, Calcium, Potassium, Magnesium, Sodium, 6 000 µg/mL ea: Iron

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**10 000.0 ± 30.0 µg/mL**	**Calcium, Ca**	**10 000.0 ± 40.0 µg/mL**
Iron, Fe	**6 000 ± 25 µg/mL**	**Magnesium, Mg**	**10 000.0 ± 40.0 µg/mL**
Potassium, K	**10 000.0 ± 40.0 µg/mL**	**Sodium, Na**	**10 000.0 ± 40.0 µg/mL**

Density: 1.219 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

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- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

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7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

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- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 12, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 12, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

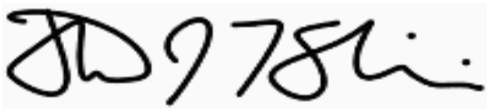
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

WC_4000_NTU_00003

Certificate of Analysis List

For request number 1624956

Catalog Number Entered	Lot Number Entered	Related Catalog Number	Related Lot Code	Description
246149	2262	N/A	N/A	Formazin Turbidity Standard 4000 NTU

Total Enclosures: 1

HACH COMPANY

P.O.Box 389
Loveland, CO 80539
(970) 669-3050

An ISO 9001 Certified Company

Certificate of Analysis

COMMODITY:**Formazin Turbidity Standard 4000 NTU**

COMMODITY NUMBER: **246149**	MANUFACTURE DATE:	DATE OF ANALYSIS:
LOT NUMBER: **A2262**	**9/23/2022**	**9/26/2022**

TEST	*SPECIFICATIONS*	*RESULTS*
Turbidity of 40 NTU formazin dilution of this lot compared to lab standard and measured on a Hach EPA Turbidimeter.	39.2 to 40.8 NTU	40.60 NTU
Turbidity of 100 NTU formazin dilution of this lot compared to lab standard and measured on a Hach EPA Turbidimeter.	98 to 102 NTU	102.0 NTU
Turbidity of 400 NTU formazin dilution of this lot compared to lab standard and measured on a Hach EPA Turbidimeter.	392 to 408 NTU	406.0 NTU
Turbidity of 1000 NTU formazin dilution of this lot compared to lab standard and measured on a Hach EPA Turbidimeter.	980 to 1020 NTU	1005.0 NTU
Turbidity of the standard undiluted.	3920 to 4080 NTU	3958.0 NTU

The expiration date is Sep 2024

Formazin and StablCal® solutions provided by Hach are not NIST traceable because the NIST does not carry turbidity standards. However, the use of Formazin and StablCal®

HACH COMPANY

P.O.Box 389
Loveland, CO 80539
(970) 669-3050

An ISO 9001 Certified Company

Certificate of Analysis

COMMODITY:**Formazin Turbidity Standard 4000 NTU**

COMMODITY NUMBER: **246149**	MANUFACTURE DATE:	DATE OF ANALYSIS:
LOT NUMBER: **A2262**	**9/23/2022**	**9/26/2022**

TEST	*SPECIFICATIONS*	*RESULTS*

as used in Hach method 8195 are accepted by the EPA as a primary standard to be used in the calibration of turbidity instruments.

Certified by _____

Scott Als
Analytical Services Chemist

Reagent

WC_IC_Q_SO4_00016

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

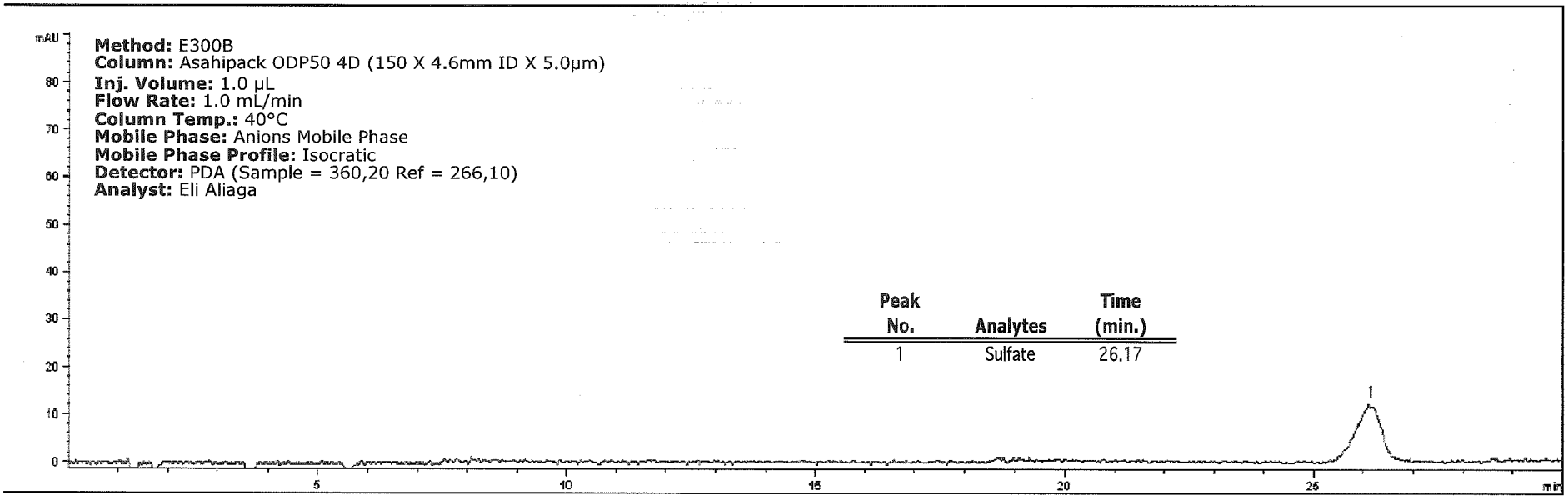
Part Number: 54506
Lot Number: 061024
Description: Sulfate (SO_4^{2-})

Expiration Date: 061027
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 4000.1 0.15 Flask Uncertainty

Lot #
Solvent: 061024 ASTM Type 1 Water

Formulated By:	Aleah O'Brady	061024
Reviewed By:	Pedro L. Rentas	061024

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium sulfate (SO4)	IN091	MKCS1079	1000	99.9	0.10	55.1	7.2669	7.2673	**1000.0**	**2.0**	7778-80-5	NA	orl-rat >2000 mg/kg	3181



Method: E300B
Column: Asahipack ODP50 4D (150 X 4.6mm ID X 5.0µm)
Inj. Volume: 1.0 µL
Flow Rate: 1.0 mL/min
Column Temp.: 40°C
Mobile Phase: Anions Mobile Phase
Mobile Phase Profile: Isocratic
Detector: PDA (Sample = 360,20 Ref = 266,10)
Analyst: Eli Aliaga

Peak No.	Analytes	Time (min.)
1	Sulfate	26.17

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Reagent

WC_pH7_CRM_00008

A2LA ACCREDITED
A2LA Certificate No. 1750.02
Reference Material Producer

CERTIFICATE OF ANALYSIS
Complies with ISO 17034, ISO Guide 31, ISO Guide 35, and ISO 9001
TRACEABLE® CERTIFIED REFERENCE MATERIAL

This certificate indicates traceability to standards provided by (NIST) National Institute of Standards and Technology and/or a National Standards Laboratory.

Certificate No. : 4881-14246033

Description : Buffer 7.000 pH Yellow

Catalog Number : 15-078-281,15508703 **Lot : CC779859**

Certificate Date : 15 Jun 2023 **Expiration Date : 15 Jun 2025**

Certified Value : 7.001 pH **U: ±0.011 pH (k=2) at 25°C**

Certification measurements are performed under ISO 17034, A2LA accreditation no. 1750.02. They are traceable to recognized national and international standards via an unbroken chain of comparisons. pH is defined as the negative logarithm of the hydrogen ion activity.

MEASUREMENT: Minimum twelve (12) 100 ml samples were measured from this lot. The pH of each sample was determined using a pH meter and electrode.

UNCERTAINTY: The certified value is given as the average of the measured samples. The reported expanded uncertainty (U) is determined from the measurement variation from sample to sample, change due to shelf life, repeated use, and uncertainty of the measurement process. The value of uncertainty is multiplied by k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%. Uncertainty is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement".

METHOD: The certified reference material is produced and analyzed by Control Company. The certified reference material is comprised of deionized water, 0.029 mol/kg H2O disodium hydrogen phosphate, 0.021 mol/kg H2O potassium dihydrogen phosphate, and germicide.
Issue Date : 15 Jun 2023

Jenny Ren, Technical Manager

Nicol Rodriguez, Quality Manager

Traceability: Standards and Equipment Used

Description	Serial Number	Due Date	Traceable Reference
pH/Ion Meter	658R067-N023		
Digital Thermometer	102008443	15 Jul 2023	4000-13511244
pH Electrode	23041-F1G		

Laboratory Environment Conditions: 46.00%RH 25.10°C 1009mBar

CONTROL COMPANY 12554 Galveston RD Suite B230 Webster TX USA 77598
Phone 281 482-1714 Fax 281 482-9448 sales@control3.com www.traceable.com

Note: PACKAGING: This reference material is available in a 500 mL bottle, 120 mL One-Shot™, 1 L bottle, and 3.8 L bottle.

INTENDED USE: The certified reference material is intended for the calibration of pH meters and electrodes used for pH measurement, for the validation of analytical methods, and for the preparation of working reference standards.

INSTRUCTIONS FOR USE: Open for a minimum period of time, quickly extract the sample. Remove a sample size of 100 ml. Return the cap to the sample. Rinse the electrode in a small amount of the certified reference material and discard. Sample should be stirred while being measured. Discard the reference material sample after use. Reference materials which have been opened are not protected from growth. Discard the reference material bottle of One-Shot™ under the following circumstances: if the expiration date is past due, or if any color, turbidity, or visible microbiological growth become evident.
pH buffers are sensitive to temperature. For measurements at a temperature other than 25°C, refer to the temperature correction table provided (reference page 3 of this certificate).

HOMOGENEITY: Minimum twelve (12) 100 ml samples were selected for analytical control. Results from different samples showed no statistically differences, nor was there any correlation between values obtained and the bottling sequence. Bottle-to-bottle (One-Shot™ to One-Shot™) variations of the samples measured are included as a part of the calculated measurement uncertainty stated on page 1 of this certificate. A minimum sample size of 100 ml should be used to maintain the certified value and the associated statement of uncertainty.

STABILITY STUDY: The expiration date stated on page 1 indicates the period of time over which the certified reference material stored under environmentally controlled and monitored conditions in an unused and unopened package remains within the specified uncertainty range. Stability tests take place at six month intervals over the certification period of the certified reference material. Each test, two (2) 100 ml samples are taken from each of three (3) bottles and then measured to study stability over time. The most significant contributor to instability is carbon dioxide absorption. The long-term stability of the certified reference material over the certification period is included in the uncertainty calculation.

EXPIRATION DATE: The date after which a certified reference material should be discarded.

STORAGE: Store below 40°C and above 4°C.

SHIPPING: Ship below 50°C and above 4°C.

MAINTENANCE OF CERTIFICATION: Control Company monitors representative samples from this lot over the period of its certification. If a change occurs that affects the certification before the expiration date, Control Company posts amended certificate(s) at www.traceable.com\crmupdate.htm.

MSDS INFORMATION: Please refer to the Material Safety Data sheet for information regarding this certified reference material at https://traceable.com/safety-data-sheets. Use only the first four digits of the certificate number to locate the MSDS.

QUALITY STANDARD DOCUMENTATION:
ISO 17034:2016 General Requirements for the Competence of Reference Material Producers, accredited A2LA Certificate Number 1750.02.
ISO Guide 31:2015 Reference Materials – Contents of Certificates, Labels and accompanying documentation.
ISO Guide 35:2006 Certification of Reference Materials – General and Statistical Principals.
ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories, accredited A2LA Certificate Number 1750.01.
ANSI/NCSL Z540-1: 1994 Calibration Laboratories and Measuring and Test Equipment-General Requirements.
ISO 9001:2015 Quality Management System Requirements - DNV GL Certificate Number CERT-01805-2006-AQ-HOU-RvA.

CONTROL COMPANY 12554 Galveston RD Suite B230 Webster TX USA 77598
Phone 281 482-1714 Fax 281 482-9448 sales@control3.com www.traceable.com

CERTIFICATE OF ANALYSIS
Complies with ISO 17034, ISO Guide 31, ISO Guide 35, and ISO 9001
TRACEABLE® CERTIFIED REFERENCE MATERIAL

Temperature Correction Information:

Use the chart below only for making absolute measurements. That is, measurements without any automatic temperature correction (temperature coefficient set to 0).

Temperature Correction Chart

°C	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
18	7.025	7.025	7.024	7.024	7.023	7.023	7.023	7.022	7.022	7.022
19	7.021	7.021	7.020	7.020	7.020	7.019	7.019	7.019	7.018	7.018
20	7.017	7.017	7.017	7.016	7.016	7.016	7.015	7.015	7.015	7.014
21	7.014	7.014	7.013	7.013	7.013	7.012	7.012	7.012	7.011	7.011
22	7.010	7.010	7.010	7.009	7.009	7.009	7.008	7.008	7.008	7.008
23	7.007	7.007	7.007	7.006	7.006	7.006	7.005	7.005	7.005	7.004
24	7.004	7.004	7.003	7.003	7.003	7.002	7.002	7.002	7.002	7.001
25	7.001	7.001	7.000	7.000	7.000	7.000	6.999	6.999	6.999	6.998
26	6.998	6.998	6.998	6.997	6.997	6.997	6.996	6.996	6.996	6.996
27	6.995	6.995	6.995	6.995	6.994	6.994	6.994	6.993	6.993	6.993
28	6.993	6.992	6.992	6.992	6.992	6.991	6.991	6.991	6.991	6.990

The above data are derived values based upon IUPAC data (Pure and Applied Chemistry 74, 2169-2200) and data/algorithm obtained using a temperature controlled calibration bath.

Shown on the chart is temperature (in the far left column) in whole degrees. Shown across the top row is temperature in tenths of a degree. Using a thermometer, measure the temperature of this certified reference material. Locate the measured temperature in whole numbers on the far left column. Follow across the row to the temperature in tenths of a degree. At the intersection is the certified reference material value at that specific temperature. Standardize the meter using that value.

Example: Measured temperature is 24.5°C. Find 24°C in the far left column, find the row 0.5°C. Where 24°C and 0.5°C intersect, read the value in pH.

CONTROL COMPANY 12554 Galveston RD Suite B230 Webster TX USA 77598
Phone 281 482-1714 Fax 281 482-9448 sales@control3.com www.traceable.com

LOT: CC779859

Reagent

WC_Solids_KCL_00005

ThermoFisher SCIENTIFIC

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	P217	Quality Test / Release Date	08/09/2019
Lot Number	191941		
Description	POTASSIUM CHLORIDE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Aug/2024
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		
Chemical Comment			

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	White crystals
ASSAY	%	Inclusive Between 99.0 - 100.5	99.6
SULFATE (SO4)	%	<= 0.001	<0.001
BROMIDE	%	<= 0.01	<0.0005
CALCIUM	%	<= 0.002	<0.001
CHLORATE & NITRATE	%	<= 0.003	<0.001
HEAVY METALS (as Pb)	ppm	<= 5	<5
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.005	0.001
IODIDE	%	<= 0.002	<0.002
IRON (Fe)	ppm	<= 2	<1
MAGNESIUM	%	<= 0.001	<0.0005
PH 5% SOLUTION @ 25 DEG C		Inclusive Between 5.4 - 8.6	5.7
PHOSPHATE (PO4)	ppm	<= 5	<3
SODIUM (Na)	%	<= 0.005	<0.0050
BARIUM (Ba)	PASS/FAIL	= P.T. (ABOUT 0.001%)	P.T. (ABOUT 0.001%)

Jerusa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis Fair Lawn

Rec'd 500g. on 12/1/20 by RH/355

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Sample Container Check Report

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

Sample Container Checks and Verifications

Lab Sample ID: 410-179201-1 — Client Sample ID: TDSS-MW01-3Q24

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
A	pH Check	T7ZN	07/10/2024 14:34	<2	<2	N/A	N/A	N/A	N/A	N/A
C	pH Check	T7ZN	07/10/2024 14:32	7	2-11	N/A	N/A	N/A	N/A	N/A
F	pH Check	T7ZN	07/10/2024 14:32	7	2-11	N/A	N/A	N/A	N/A	N/A
G	pH Check	T7ZN	07/10/2024 14:32	7	2-11	N/A	N/A	N/A	N/A	N/A
H	pH Check, 24hr Adjustment Confirmation Required	K9VH	07/10/2024 15:17	<2	<2	N/A	N/A	N/A	N/A	N/A
I	pH Check	T7ZN	07/10/2024 14:33	<2	<2	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-179201-2 — Client Sample ID: TDSS-MW02-3Q24

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
A	pH Check	T7ZN	07/10/2024 14:34	<2	<2	N/A	N/A	N/A	N/A	N/A
C	pH Check	T7ZN	07/10/2024 14:30	7	2-11	N/A	N/A	N/A	N/A	N/A
F	pH Check	T7ZN	07/10/2024 14:31	7	2-11	N/A	N/A	N/A	N/A	N/A
G	pH Check	T7ZN	07/10/2024 14:31	7	2-11	N/A	N/A	N/A	N/A	N/A
H	pH Check, 24hr Adjustment Confirmation Required	K9VH	07/10/2024 15:12	<2	<2	N/A	N/A	N/A	N/A	N/A
I	pH Check	T7ZN	07/10/2024 14:32	<2	<2	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-179201-3 — Client Sample ID: TDSS-ER-3Q24

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
A	pH Check	T7ZN	07/10/2024 14:34	<2	<2	N/A	N/A	N/A	N/A	N/A
C	pH Check	T7ZN	07/10/2024 14:29	7	2-11	N/A	N/A	N/A	N/A	N/A
F	pH Check	T7ZN	07/10/2024 14:29	7	2-11	N/A	N/A	N/A	N/A	N/A
G	pH Check	T7ZN	07/10/2024 14:29	7	2-11	N/A	N/A	N/A	N/A	N/A
H	pH Check, 24hr Adjustment Confirmation Required	K9VH	07/10/2024 15:11	<2	<2	N/A	N/A	N/A	N/A	N/A
I	pH Check	T7ZN	07/10/2024 14:30	<2	<2	N/A	N/A	N/A	N/A	N/A

300_ORFM_28D_D5

Anions, Ion Chromatography

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Matrix: Water Level: Low Lab File ID: 11_Jul_2024 05_47.d

Lab ID: LCS 410-526874/3 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Sulfate	7.50	7.92	106	87-112	M
Chloride	3.00	2.90	97	87-111	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Matrix: Water Level: Low Lab File ID: 11_Jul_2024 05_57.d

Lab ID: LCSD 410-526874/4 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Sulfate	7.50	7.89	105	0	15	87-112	M
Chloride	3.00	2.91	97	0	15	87-111	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab File ID: 11_Jul_2024 06_07.d Lab Sample ID: MB 410-526874/5

Matrix: Water Date Extracted:

Instrument ID: D20 - 3394 Date Analyzed: 07/11/2024 06:07

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 410-526874/3	11_Jul_2024 05_47.d	07/11/2024 05:47
	LCSD 410-526874/4	11_Jul_2024 05_57.d	07/11/2024 05:57
TDSS-ER-3Q24	410-179201-3	11_Jul_2024 10_02.d	07/11/2024 10:02
TDSS-MW01-3Q24	410-179201-1	11_Jul_2024 12_15.d	07/11/2024 12:15
TDSS-MW01-3Q24	410-179201-1	11_Jul_2024 12_45.d	07/11/2024 12:45
TDSS-MW02-3Q24	410-179201-2	11_Jul_2024 12_55.d	07/11/2024 12:55
TDSS-MW02-3Q24	410-179201-2	11_Jul_2024 13_06.d	07/11/2024 13:06

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID: TDSS-MW01-3Q24
Lab Sample ID: 410-179201-1

Matrix: Water
Lab File ID: 11_Jul_2024 12_15.d

Analysis Method: 300.0
Date Collected: 07/07/2024 10:30

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 07/11/2024 12:15

Con. Extract Vol.:
Dilution Factor: 5

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 526874
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14808-79-8	Sulfate	19	D M	7.5	5.0	2.5

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 12_15.d
Lims ID: 410-179201-C-1
Client ID: TDSS-MW01-3Q24
Sample Type: Client
Inject. Date: 11-Jul-2024 12:15:00 ALS Bottle#: 0 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 5.0000
Sample Info: 410-179201-C-1
Operator ID: Instrument ID: D20 - 3394

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:36:16 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:33:58

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1	Fluoride	1.770	1.767	0.003	345782	0.0850	
2	Chloride	2.707	2.710	-0.003	209750064	25.1	E
3	Nitrite as N		3.363			ND	
4	Bromide		4.740			ND	M
5	Nitrate as N	5.707	5.697	0.010	1821923	NC	M
6	Sulfate	6.197	6.183	0.014	20100557	3.73	M
S 7	Nitrate Nitrite as N		0.000			ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

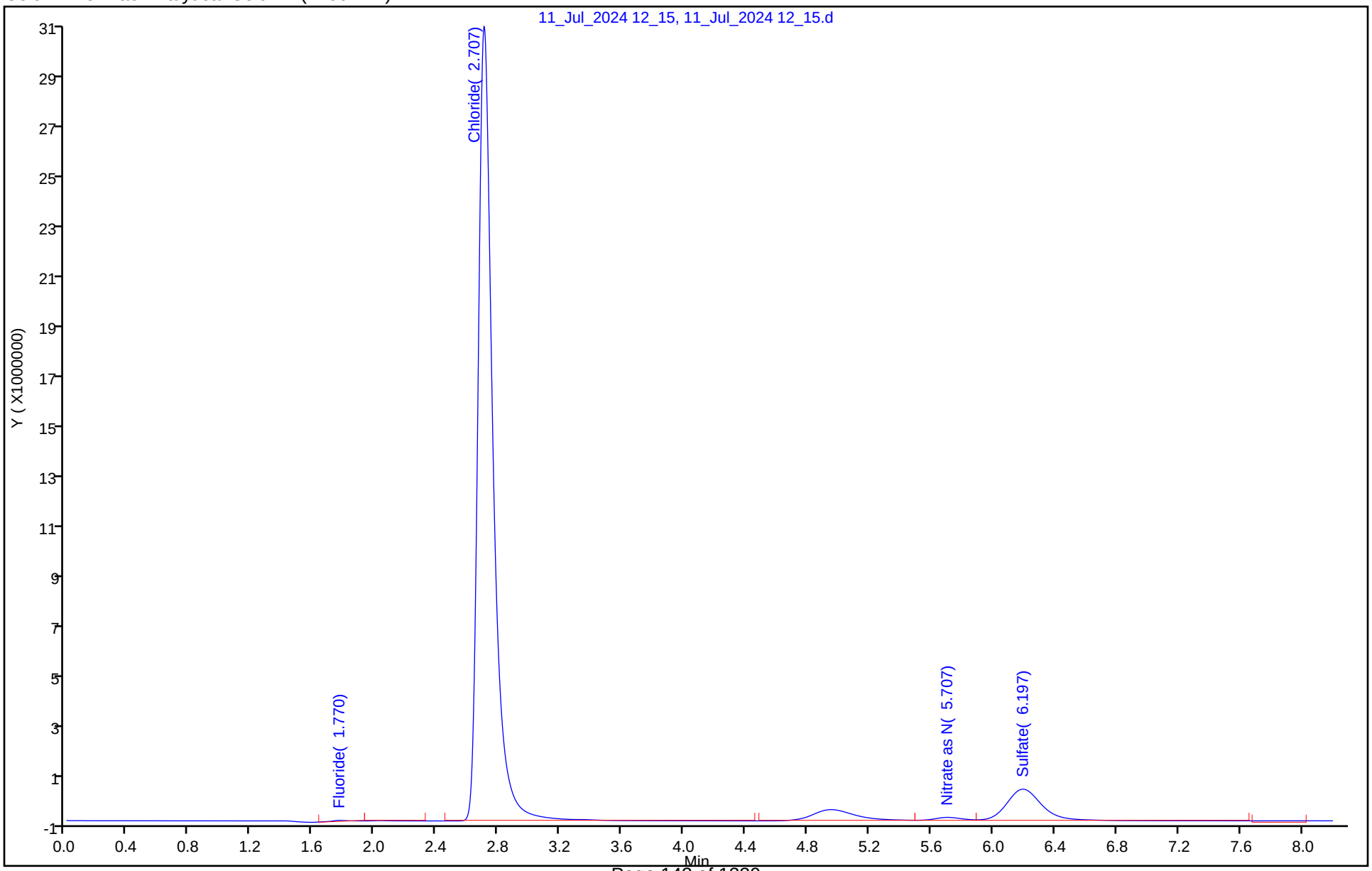
Report Date: 11-Jul-2024 15:36:25 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 12_15.d

Injection Date:	11-Jul-2024 12:15:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	410-179201-C-1	Lab Sample ID:	410-179201-1	Worklist Smp#:	41
Client ID:	TDSS-MW01-3Q24				
Injection Vol:	1.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

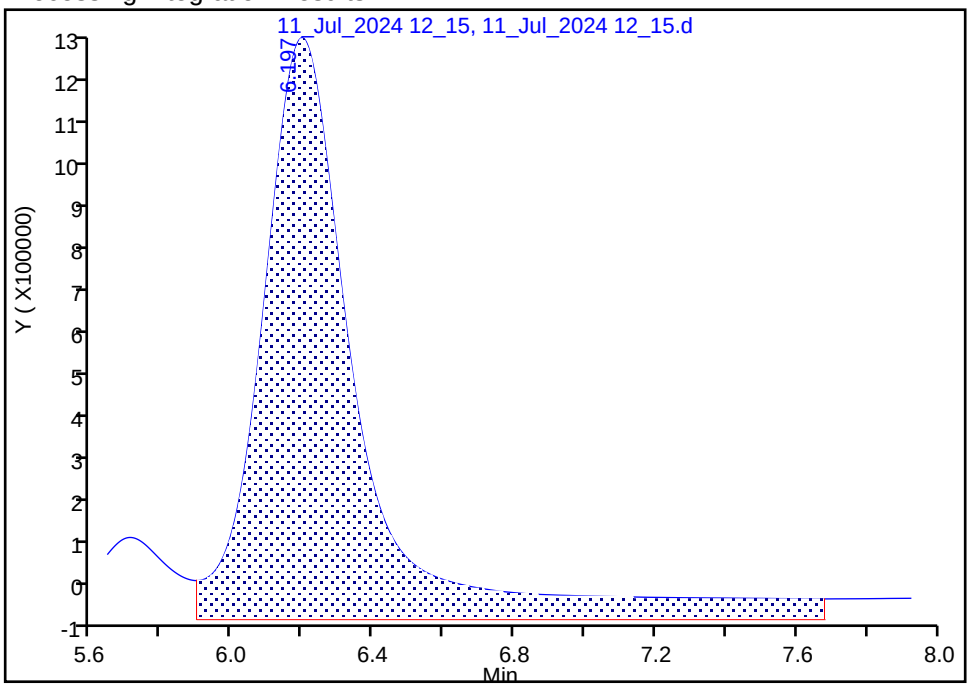
Data File:	\\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 12_15.d				
Injection Date:	11-Jul-2024 12:15:00	Instrument ID:	D20 - 3394		
Lims ID:	410-179201-C-1	Lab Sample ID:	410-179201-1		
Client ID:	TDSS-MW01-3Q24				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Method:	Anions-D20	Limit Group:	IC - 300 28D		
Column:	IonPac Analytical Column (4.00 mm)	Detector	det0		

6 Sulfate, CAS: 14808-79-8

Signal: 1

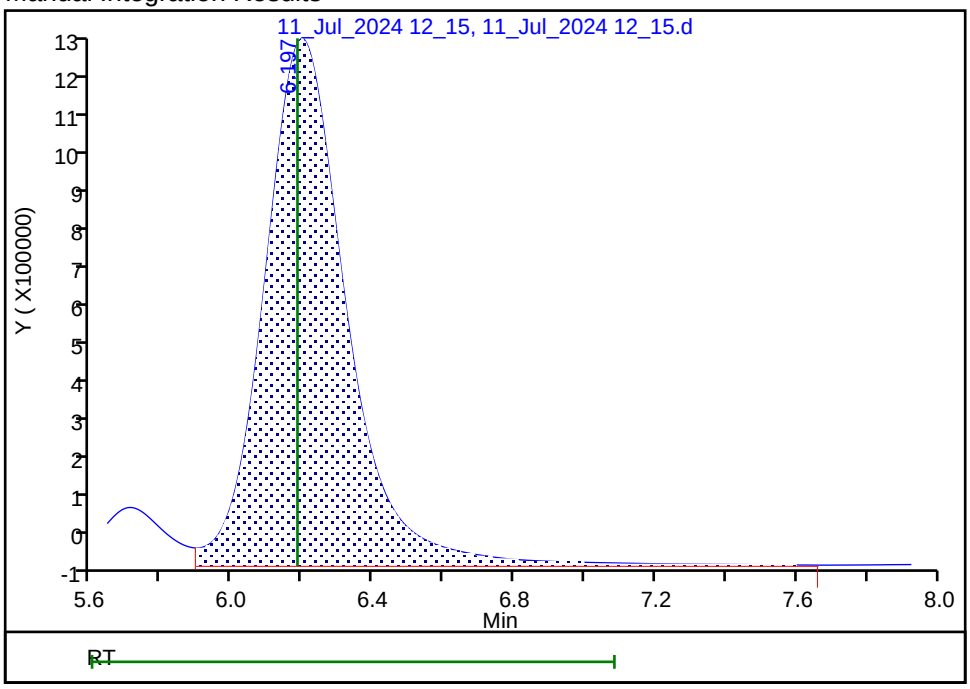
Processing Integration Results

RT: 6.20
Area: 25138240
Amount: 4.573137
Amount Units: ug/ml



Manual Integration Results

RT: 6.20
Area: 20100557
Amount: 3.725262
Amount Units: ug/ml



Reviewer: L4QM, 11-Jul-2024 15:33:46 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID: TDSS-MW01-3Q24
Lab Sample ID: 410-179201-1

Matrix: Water
Lab File ID: 11_Jul_2024 12_45.d

Analysis Method: 300.0
Date Collected: 07/07/2024 10:30

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 07/11/2024 12:45

Con. Extract Vol.:
Dilution Factor: 50

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 526874
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
16887-00-6	Chloride	100	D	75	60	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 12_45.d
Lims ID: 410-179201-C-1
Client ID: TDSS-MW01-3Q24
Sample Type: Client
Inject. Date: 11-Jul-2024 12:45:00 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 1.0 ul Dil. Factor: 50.0000
Sample Info: 410-179201-C-1
Operator ID: Instrument ID: D20 - 3394

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:36:25 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:35:03

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1	Fluoride	1.783	1.767	0.016	79513	0.0656	
2	Chloride	2.710	2.710	0.000	17609058	2.06	
3	Nitrite as N		3.363			ND	
4	Bromide		4.740			ND	M
5	Nitrate as N	5.710	5.697	0.013	314902	NC	Ma
6	Sulfate	6.210	6.183	0.027	2175576	0.7084	Ma
S 7	Nitrate Nitrite as N		0.000			ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

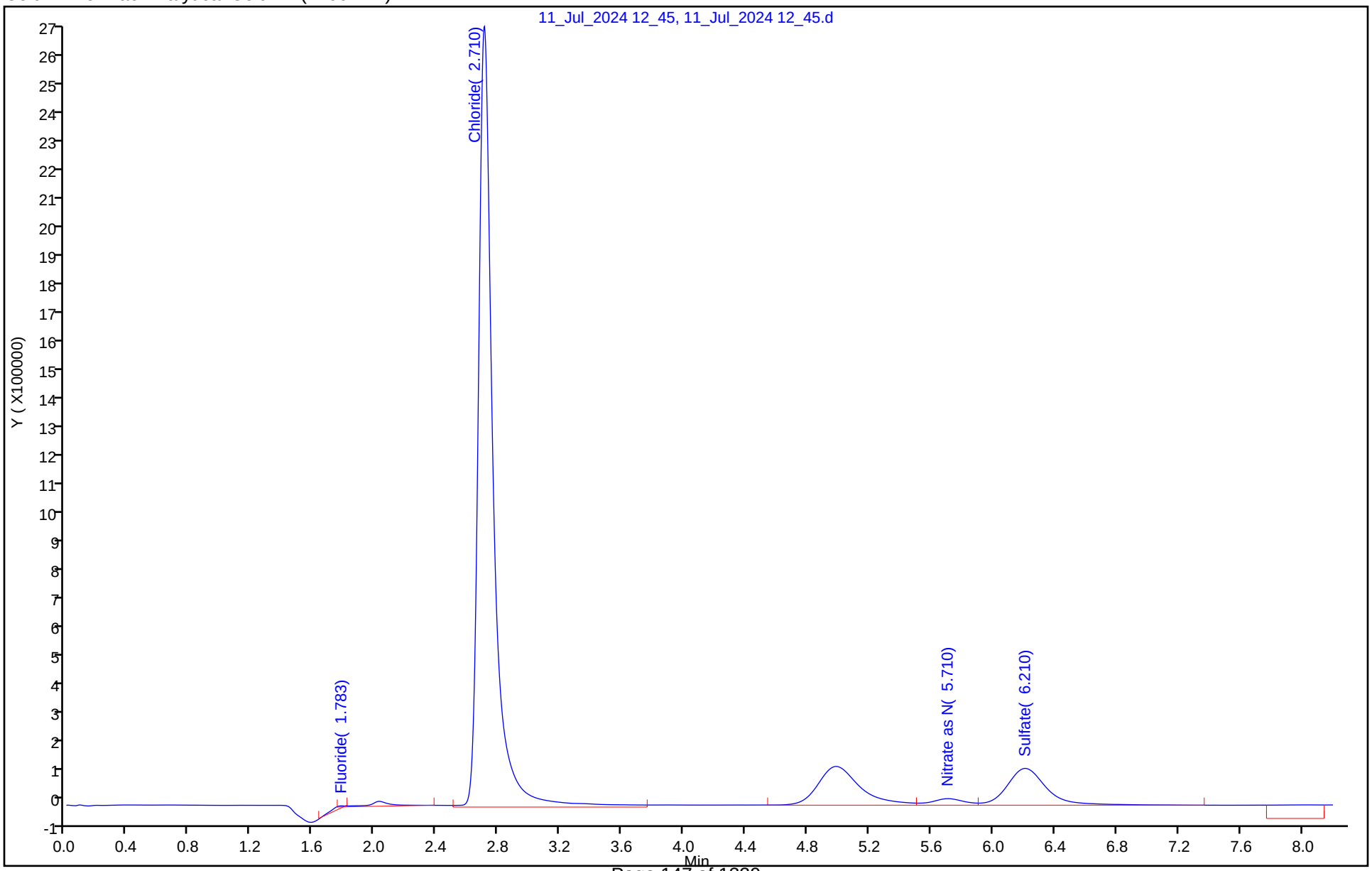
Report Date: 11-Jul-2024 15:36:27 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 12_45.d

Injection Date:	11-Jul-2024 12:45:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	410-179201-C-1	Lab Sample ID:	410-179201-1	Worklist Smp#:	44
Client ID:	TDSS-MW01-3Q24				
Injection Vol:	1.0 ul	Dil. Factor:	50.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID: TDSS-MW02-3Q24
Lab Sample ID: 410-179201-2

Matrix: Water
Lab File ID: 11_Jul_2024 12_55.d

Analysis Method: 300.0
Date Collected: 07/07/2024 15:28

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 07/11/2024 12:55

Con. Extract Vol.:
Dilution Factor: 5

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 526874
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14808-79-8	Sulfate	25	D M	7.5	5.0	2.5

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 12_55.d
Lims ID: 410-179201-C-2
Client ID: TDSS-MW02-3Q24
Sample Type: Client
Inject. Date: 11-Jul-2024 12:55:00 ALS Bottle#: 0 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 5.0000
Sample Info: 410-179201-C-2
Operator ID: Instrument ID: D20 - 3394

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:36:25 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:35:27

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1	Fluoride	1.770	1.767	0.003	374317	0.0871	
2	Chloride	2.707	2.710	-0.003	374902692	44.9	E
3	Nitrite as N		3.363			ND	
4	Bromide		4.740			ND	M
5	Nitrate as N	5.707	5.697	0.010	3305903	NC	M
6	Sulfate	6.193	6.183	0.010	27557889	4.98	M
S 7	Nitrate Nitrite as N		0.000			ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

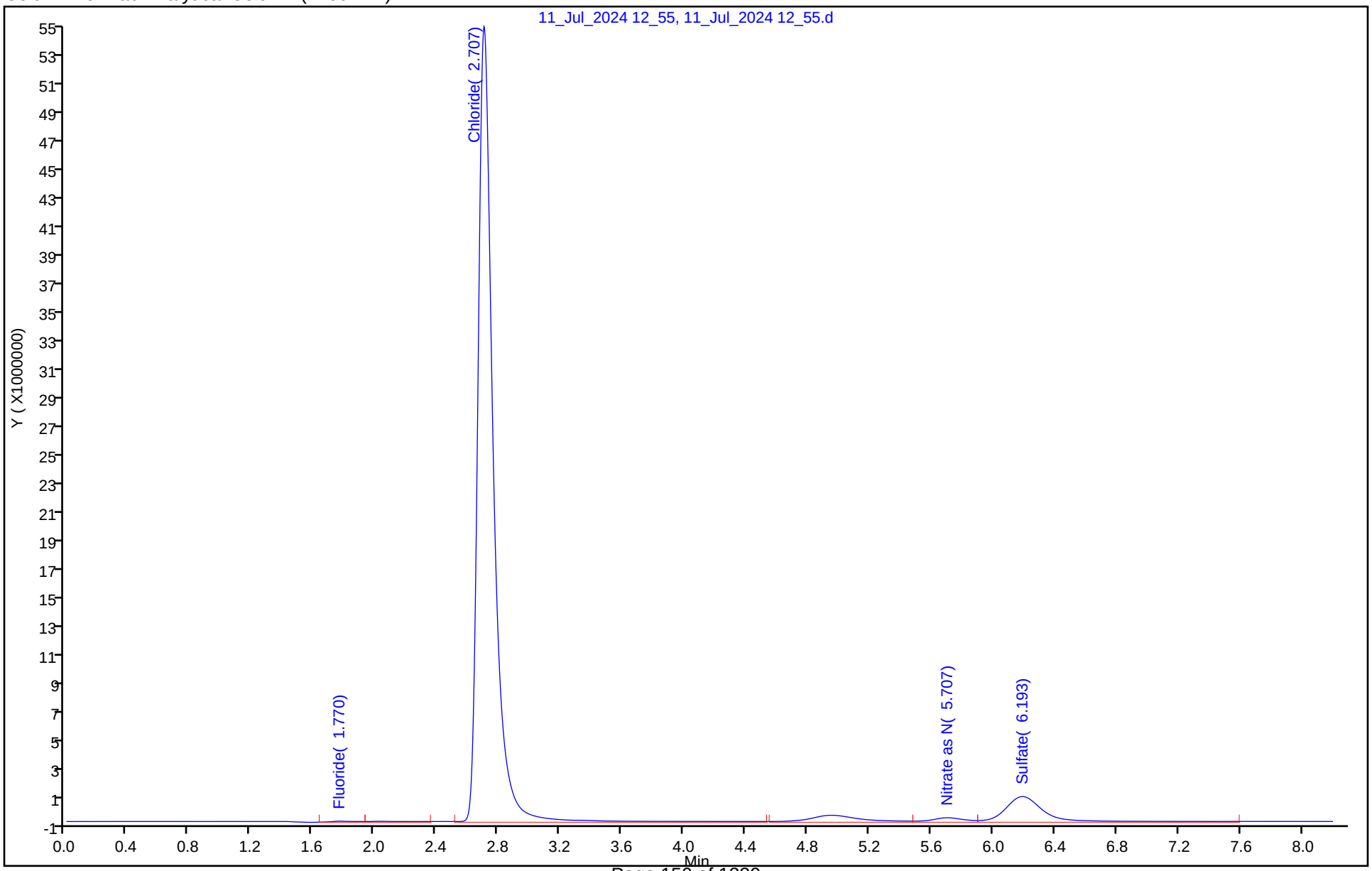
Report Date: 11-Jul-2024 15:36:27 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 12_55.d

Injection Date:	11-Jul-2024 12:55:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	410-179201-C-2	Lab Sample ID:	410-179201-2	Worklist Smp#:	45
Client ID:	TDSS-MW02-3Q24				
Injection Vol:	1.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

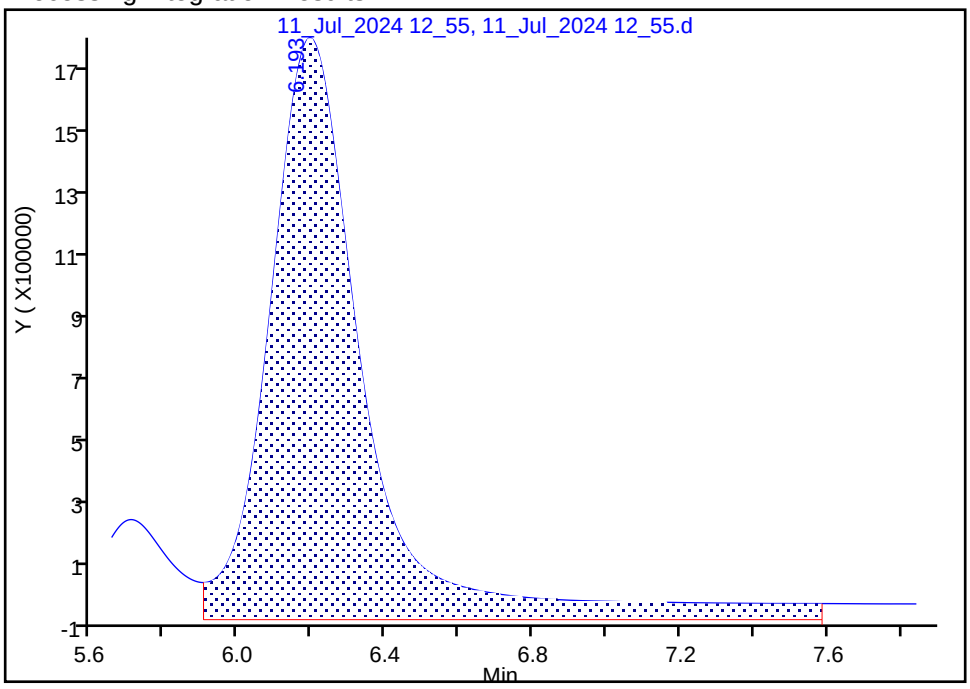
Data File:	\\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 12_55.d				
Injection Date:	11-Jul-2024 12:55:00	Instrument ID:	D20 - 3394		
Lims ID:	410-179201-C-2	Lab Sample ID:	410-179201-2		
Client ID:	TDSS-MW02-3Q24				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Method:	Anions-D20	Limit Group:	IC - 300 28D		
Column:	IonPac Analytical Column (4.00 mm)	Detector	det0		

6 Sulfate, CAS: 14808-79-8

Signal: 1

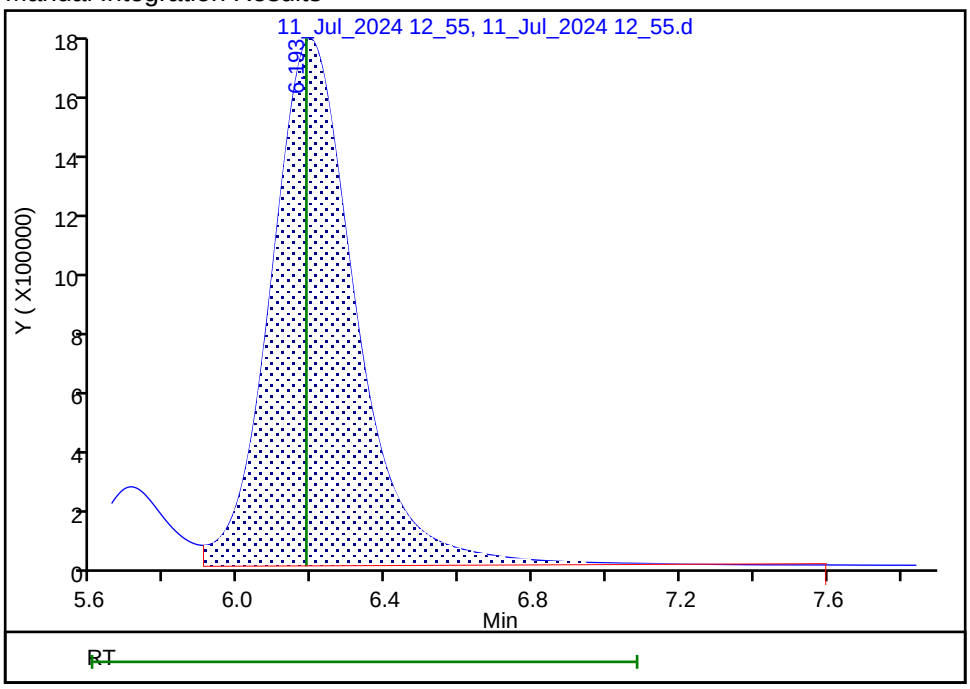
Processing Integration Results

RT: 6.19
Area: 32654920
Amount: 5.838243
Amount Units: ug/ml



Manual Integration Results

RT: 6.19
Area: 27557889
Amount: 4.980380
Amount Units: ug/ml



Reviewer: L4QM, 11-Jul-2024 15:35:19 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID: TDSS-MW02-3Q24
Lab Sample ID: 410-179201-2

Matrix: Water
Lab File ID: 11_Jul_2024 13_06.d

Analysis Method: 300.0
Date Collected: 07/07/2024 15:28

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 07/11/2024 13:06

Con. Extract Vol.:
Dilution Factor: 50

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 526874
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
16887-00-6	Chloride	190	D	75	60	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 13_06.d
Lims ID: 410-179201-C-2
Client ID: TDSS-MW02-3Q24
Sample Type: Client
Inject. Date: 11-Jul-2024 13:06:00 ALS Bottle#: 0 Worklist Smp#: 46
Injection Vol: 1.0 ul Dil. Factor: 50.0000
Sample Info: 410-179201-C-2
Operator ID: Instrument ID: D20 - 3394

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:36:25 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:35:49

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1	Fluoride	1.787	1.767	0.020	78640	0.0656	
2	Chloride	2.710	2.710	0.000	32164101	3.81	
3	Nitrite as N		3.363			ND	
4	Bromide		4.740			ND	M
5	Nitrate as N	5.710	5.697	0.013	406861	NC	M
6	Sulfate	6.213	6.183	0.030	2499297	0.7629	M
S 7	Nitrate Nitrite as N		0.000			ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

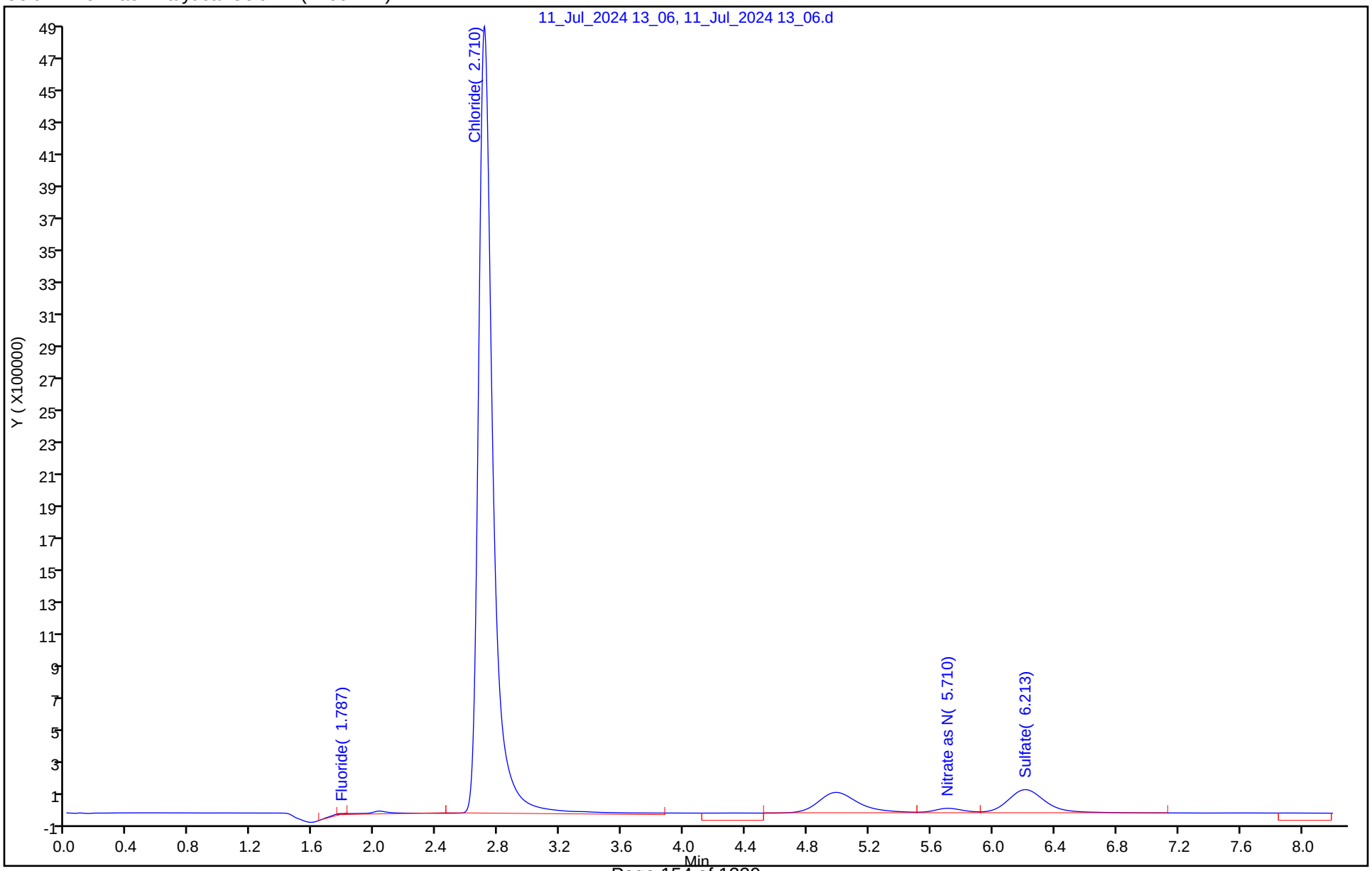
Report Date: 11-Jul-2024 15:36:28 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 13_06.d

Injection Date:	11-Jul-2024 13:06:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	410-179201-C-2	Lab Sample ID:	410-179201-2	Worklist Smp#:	46
Client ID:	TDSS-MW02-3Q24				
Injection Vol:	1.0 ul	Dil. Factor:	50.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID: TDSS-ER-3Q24
Lab Sample ID: 410-179201-3

Matrix: Water
Lab File ID: 11_Jul_2024 10_02.d

Analysis Method: 300.0
Date Collected: 07/07/2024 17:10

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 07/11/2024 10:02

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 526874
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14808-79-8	Sulfate	1.0	U M	1.5	1.0	0.50
16887-00-6	Chloride	1.2	U	1.5	1.2	0.60

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 10_02.d
Lims ID: 410-179201-C-3
Client ID: TDSS-ER-3Q24
Sample Type: Client
Inject. Date: 11-Jul-2024 10:02:00 ALS Bottle#: 0 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 410-179201-C-3
Operator ID: Instrument ID: D20 - 3394

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:24:12 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:19:44

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1	Fluoride	1.870	1.767	0.103	312734	0.0826	
2	Chloride	2.707	2.710	-0.003	1877203	0.1772	
3	Nitrite as N		3.363			ND	
4	Bromide		4.740			ND	M
5	Nitrate as N	5.710	5.697	0.013	438286	NC	M
6	Sulfate	6.213	6.183	0.030	638454	0.4497	M
S 7	Nitrate Nitrite as N		0.000			ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

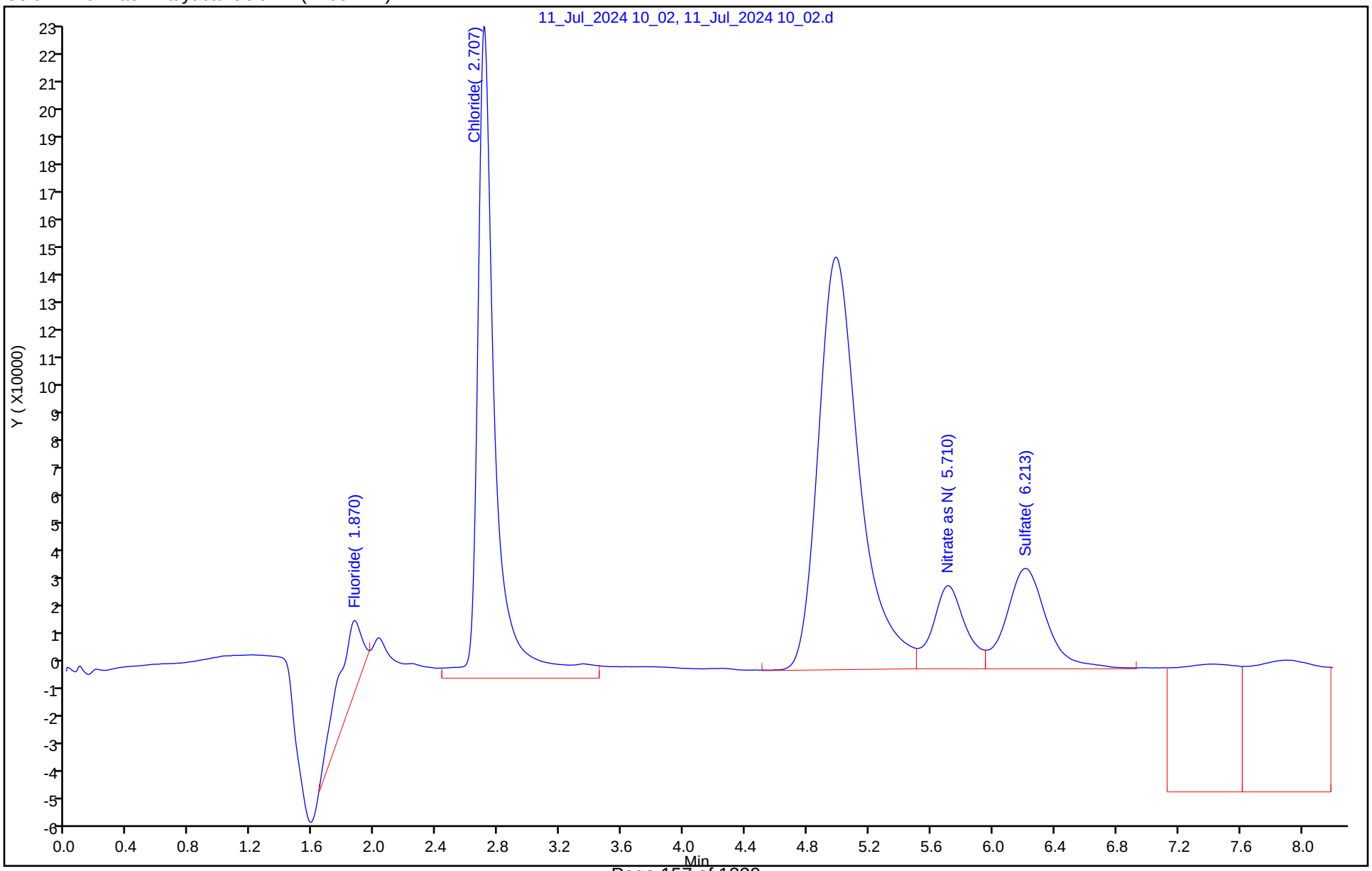
Report Date: 11-Jul-2024 15:24:22 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 10_02.d

Injection Date:	11-Jul-2024 10:02:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	410-179201-C-3	Lab Sample ID:	410-179201-3	Worklist Smp#:	28
Client ID:	TDSS-ER-3Q24				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1 Analy Batch No.: 516687

SDG No.: 410-179201

Instrument ID: D20 - 3394 GC Column: IC17-AS14 ID: 4(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/12/2024 11:58 Calibration End Date: 06/12/2024 12:59 Calibration ID: 62824

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-516687/2	12_Jun_2024 12_10.d
Level 2	IC 410-516687/3	12_Jun_2024 12_23.d
Level 3	IC 410-516687/4	12_Jun_2024 12_35.d
Level 4	IC 410-516687/5	12_Jun_2024 12_47.d
Level 5	IC 410-516687/6	12_Jun_2024 12_59.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5						RT WINDOW	AVG RT
Fluoride	1.773	1.770	1.777	1.780	1.783						1.523 - 2.023	1.777
Chloride	2.753	2.753	2.753	2.753	2.753						2.503 - 3.003	2.753
Bromide	4.880	4.877	4.870	4.863	4.857						4.630 - 5.130	4.869
Sulfate	6.480	6.470	6.443	6.410	6.370						5.580 - 7.380	6.435

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1 Analy Batch No.: 516687

SDG No.: 410-179201

Instrument ID: D20 - 3394 GC Column: IC17-AS14 ID: 4(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/12/2024 11:58 Calibration End Date: 06/12/2024 12:59 Calibration ID: 62824

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-516687/2	12_Jun_2024 12_10.d
Level 2	IC 410-516687/3	12_Jun_2024 12_23.d
Level 3	IC 410-516687/4	12_Jun_2024 12_35.d
Level 4	IC 410-516687/5	12_Jun_2024 12_47.d
Level 5	IC 410-516687/6	12_Jun_2024 12_59.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Fluoride	4634460 13284675	12301868	13469493	13321264	Lin1	-824079.56	13764713.2				5.1		10.0	0.9990		0.9900
Chloride	10064255 8526103	7700304	8656708	8219219	Lin1	398013.781	8348074.47				8.2		10.0	0.9980		0.9900
Bromide	2175756 3555341	3094400	3099731	3099208	Lin1	-692325.20	3401820.22				6.5		10.0	0.9950		0.9900
Sulfate	4453370 6208541	5162322	5470813	5498348	Lin1	-2033241.0	5941541.02				8.0		10.0	0.9960		0.9900

Note: The M1 coefficient is the same as Ave CF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC | Job No.: 410-179201-1 | Analy Batch No.: 516687

SDG No.: 410-179201

Instrument ID: D20 - 3394 | GC Column: IC17-AS14 | ID: 4(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 06/12/2024 11:58 | Calibration End Date: 06/12/2024 12:59 | Calibration ID: 62824

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-516687/2	12_Jun_2024 12_10.d
Level 2	IC 410-516687/3	12_Jun_2024 12_23.d
Level 3	IC 410-516687/4	12_Jun_2024 12_35.d
Level 4	IC 410-516687/5	12_Jun_2024 12_47.d
Level 5	IC 410-516687/6	12_Jun_2024 12_59.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Fluoride	Lin1	463446	4920747	13469493	26642527	39854025	0.100	0.400	1.00	2.00	3.00
Chloride	Lin1	4025702	12320486	34626831	65753753	102313233	0.400	1.60	4.00	8.00	12.0
Bromide	Lin1	1087878	6188799	15498653	30992080	53330121	0.500	2.00	5.00	10.0	15.0
Sulfate	Lin1	4453370	20649287	54708125	109966963	186256216	1.00	4.00	10.0	20.0	30.0

Curve Type Legend:
Lin1 = Linear 1/conc

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_10.d
Lims ID: IC CAL 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 12-Jun-2024 12:10:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: C1
Operator ID: Instrument ID: D20 - 3394
Sublist: chrom-Anions-D20*sub2

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 12-Jun-2024 17:31:04 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1659

First Level Reviewer: UJE2 Date: 12-Jun-2024 17:30:13

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Fluoride	1.773	1.773	0.000	463446	0.1000	0.0935	Ma
	2 Chloride	2.753	2.753	0.000	4025702	0.4000	0.4346	
	3 Nitrite as N	3.433	3.433	0.000	1342719	NC	NC	
	4 Bromide	4.880	4.880	0.000	1087878	0.5000	0.5233	
	5 Nitrate as N	5.887	5.887	0.000	1325510	NC	NC	
	6 Sulfate	6.480	6.480	0.000	4453370	1.00	1.09	
S	7 Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

WC_IC_C_Det_00192 Amount Added: 0.50 Units: mL

Report Date: 12-Jun-2024 17:31:04 Chrom Revision: 2.3 03-Jun-2024 20:58:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_10.d

Injection Date: 12-Jun-2024 12:10:00 Instrument ID: D20 - 3394 Operator ID:

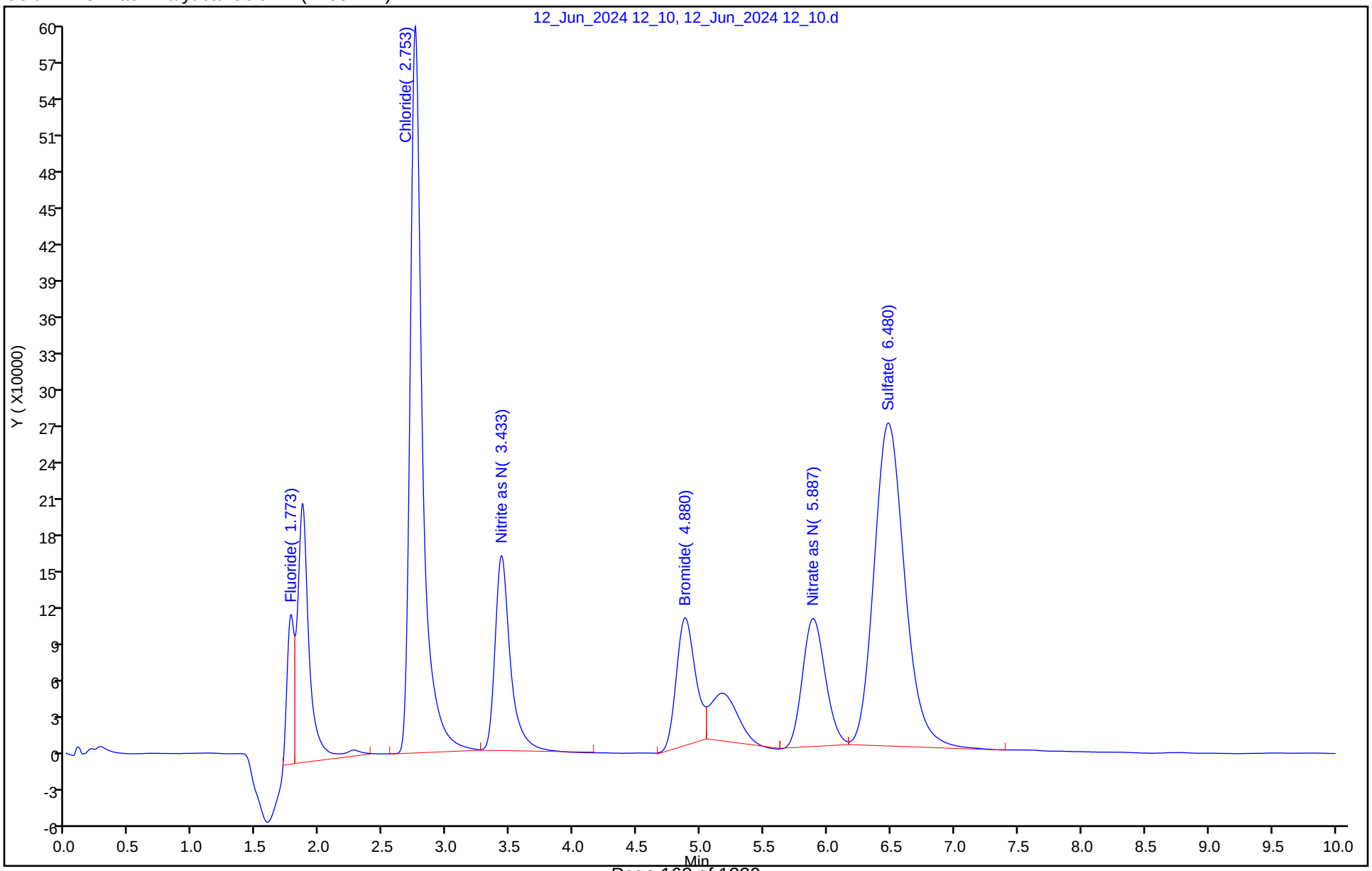
Lims ID: IC CAL 1 Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: Anions-D20 Limit Group: IC - 300 28D

Column: IonPac Analytical Column (4.00 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

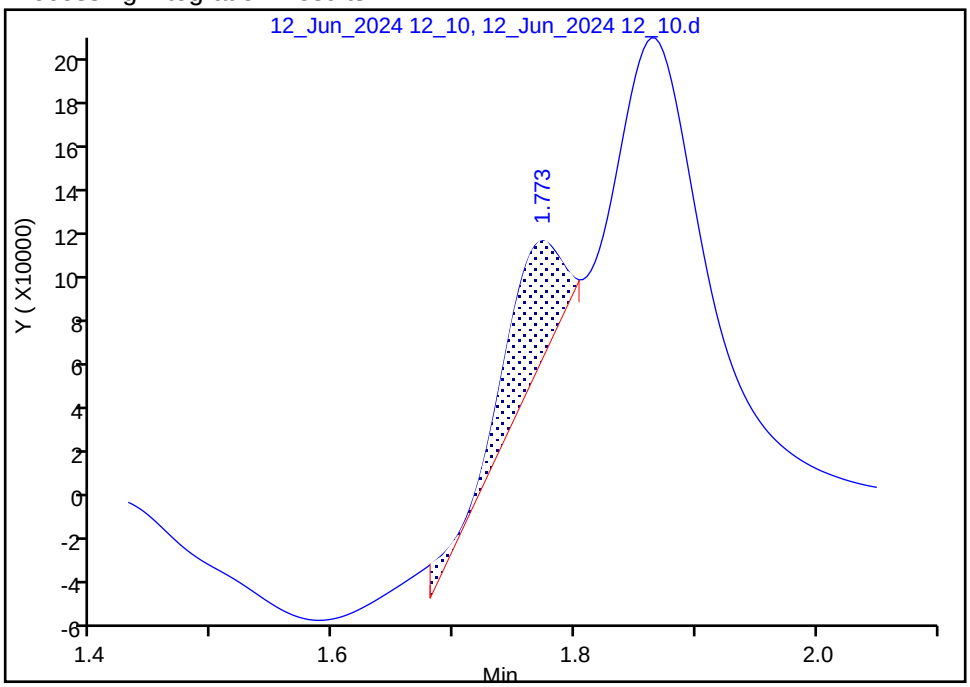
Data File:	\\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_10.d				
Injection Date:	12-Jun-2024 12:10:00	Instrument ID:	D20 - 3394		
Lims ID:	IC CAL 1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Anions-D20	Limit Group:	IC - 300 28D		
Column:	IonPac Analytical Column (4.00 mm)	Detector	det0		

1 Fluoride, CAS: 16984-48-8

Signal: 1

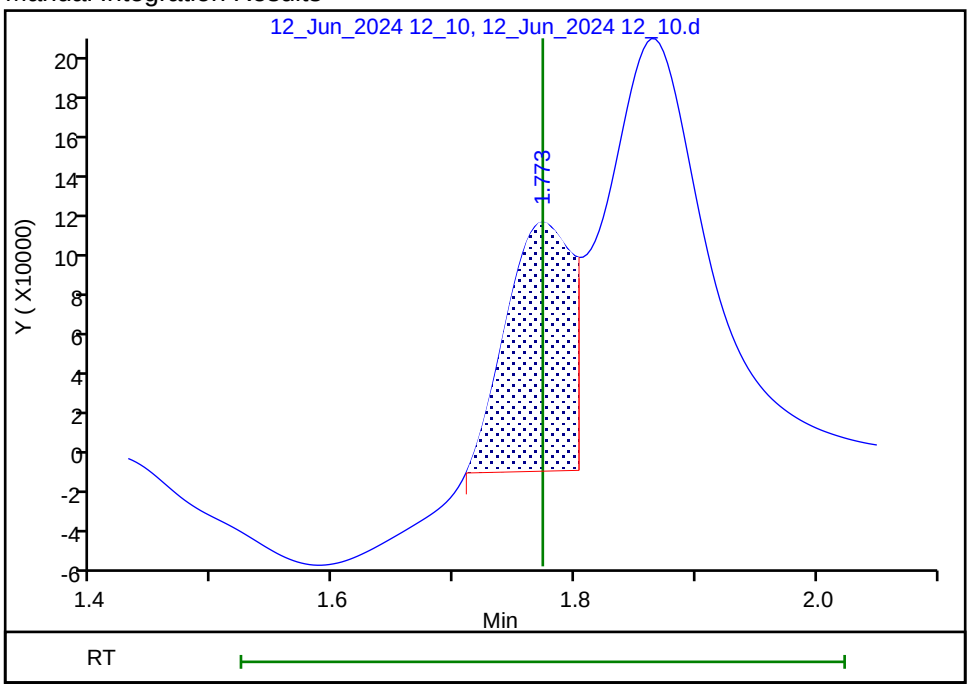
Processing Integration Results

RT: 1.77
Area: 186249
Amount: 0.090175
Amount Units: ug/ml



Manual Integration Results

RT: 1.77
Area: 463446
Amount: 0.093538
Amount Units: ug/ml



Reviewer: UJE2, 12-Jun-2024 17:29:48 -04:00:00 (UTC)

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_23.d
Lims ID: IC CAL 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 12-Jun-2024 12:23:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: C2
Operator ID: Instrument ID: D20 - 3394
Sublist: chrom-Anions-D20*sub2

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 12-Jun-2024 17:31:05 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1659

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Fluoride	1.770	1.773	-0.003	4920747	0.4000	0.4174	
	2 Chloride	2.753	2.753	0.000	12320486	1.60	1.43	
	3 Nitrite as N	3.433	3.433	0.000	6420392	NC	NC	
	4 Bromide	4.877	4.880	-0.003	6188799	2.00	2.02	
	5 Nitrate as N	5.880	5.887	-0.007	5898100	NC	NC	
	6 Sulfate	6.470	6.480	-0.010	20649287	4.00	3.82	
S	7 Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

WC_IC_C_Det_00192 Amount Added: 2.00 Units: mL

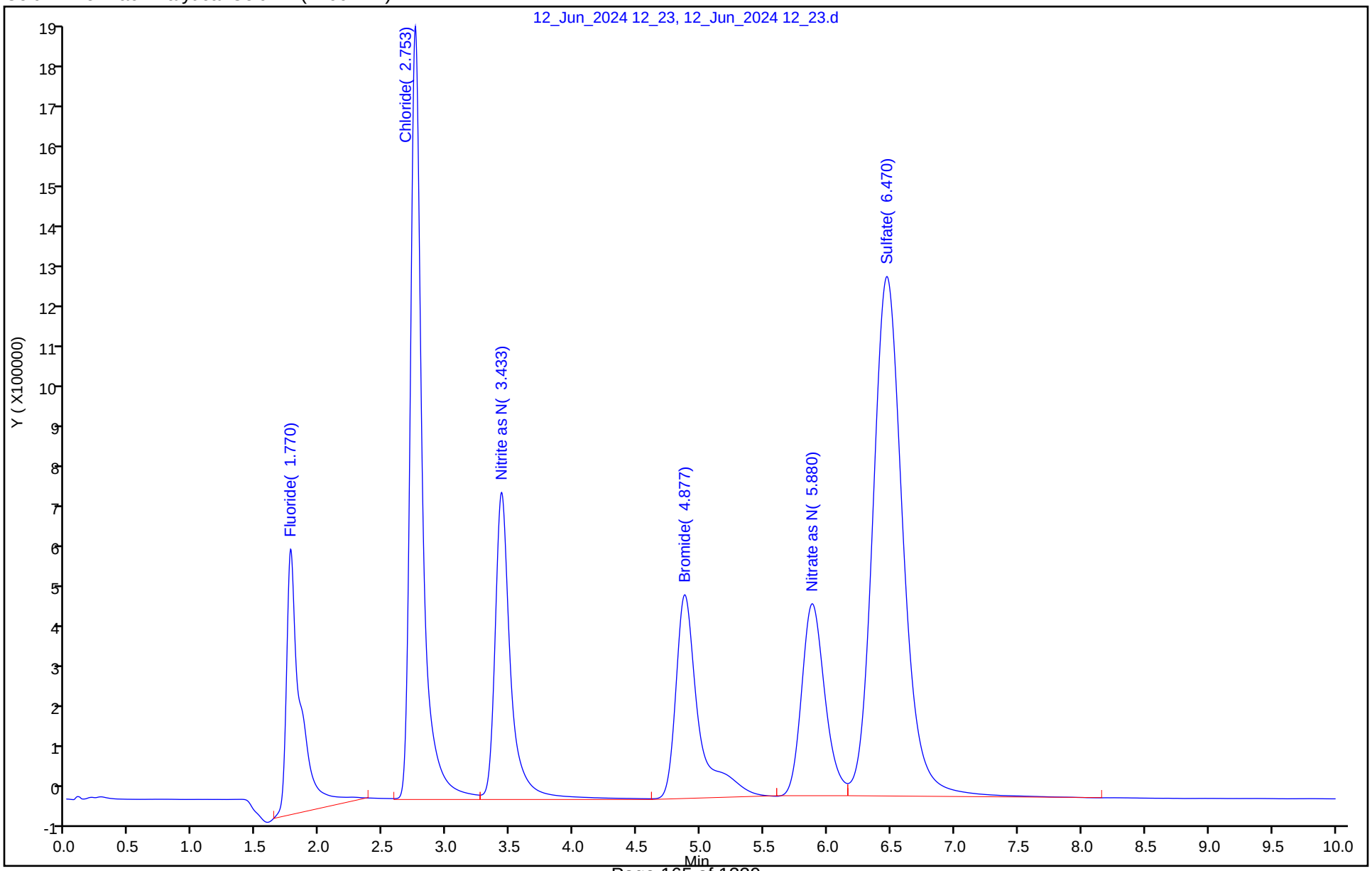
Report Date: 12-Jun-2024 17:31:05 Chrom Revision: 2.3 03-Jun-2024 20:58:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_23.d

Injection Date:	12-Jun-2024 12:23:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	IC CAL 2			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_35.d
Lims ID: IC CAL 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 12-Jun-2024 12:35:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: C3
Operator ID: Instrument ID: D20 - 3394
Sublist: chrom-Anions-D20*sub2

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 12-Jun-2024 17:31:05 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1659

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Fluoride	1.777	1.773	0.004	13469493	1.00	1.04	
	2 Chloride	2.753	2.753	0.000	34626831	4.00	4.10	
	3 Nitrite as N	3.433	3.433	0.000	17278001	NC	NC	
	4 Bromide	4.870	4.880	-0.010	15498653	5.00	4.76	
	5 Nitrate as N	5.867	5.887	-0.020	15896947	NC	NC	
	6 Sulfate	6.443	6.480	-0.037	54708125	10.0	9.55	
S	7 Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

WC_IC_C_Det_00192 Amount Added: 5.00 Units: mL

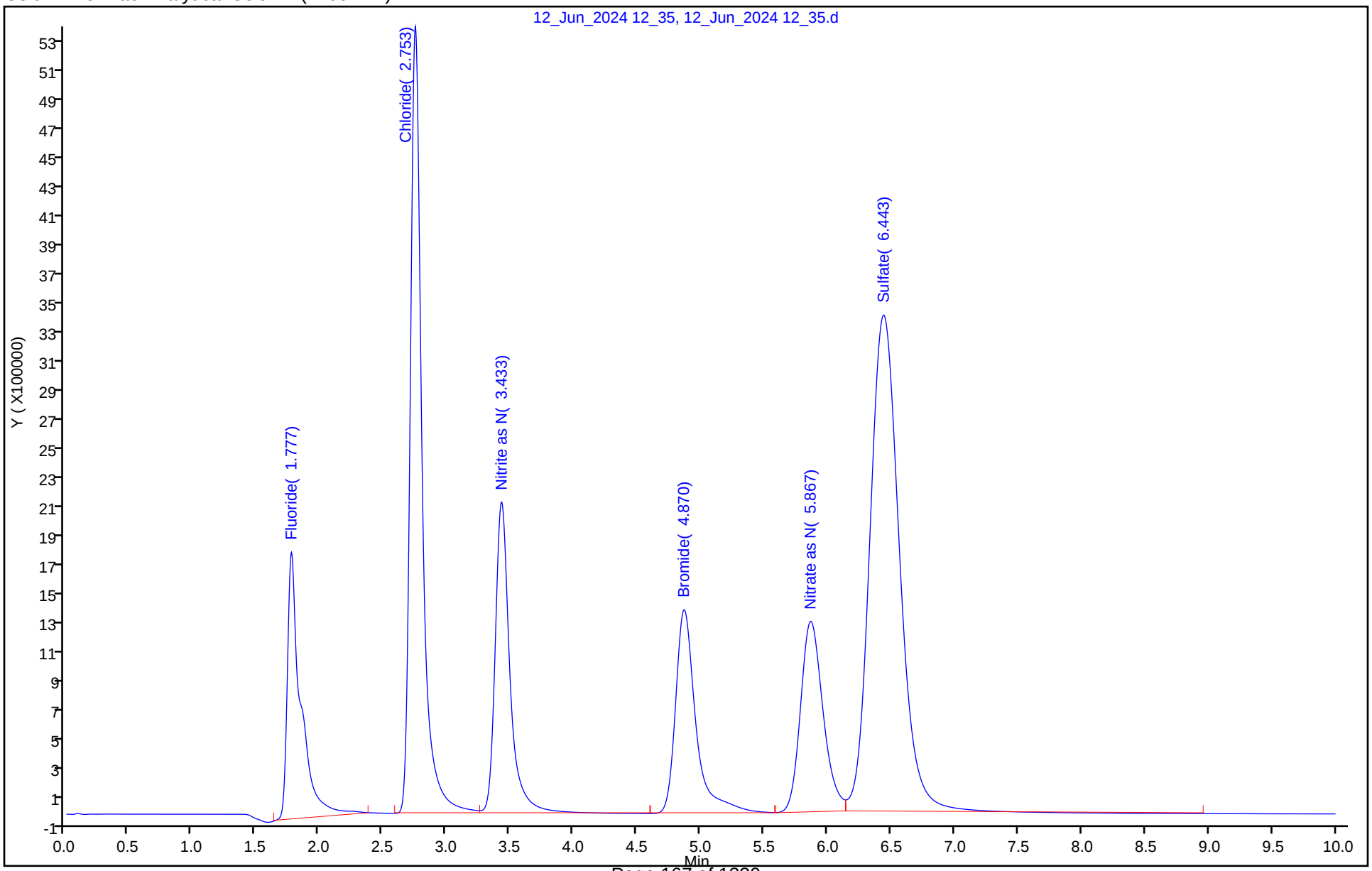
Report Date: 12-Jun-2024 17:31:06 Chrom Revision: 2.3 03-Jun-2024 20:58:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_35.d

Injection Date:	12-Jun-2024 12:35:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	IC CAL 3			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_47.d
Lims ID: IC CAL 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 12-Jun-2024 12:47:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: C4
Operator ID: Instrument ID: D20 - 3394
Sublist: chrom-Anions-D20*sub2

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 12-Jun-2024 17:31:06 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1659

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	Fluoride	1.780	1.773	0.007	26642527	2.00	2.00	
2	Chloride	2.753	2.753	0.000	65753753	8.00	7.83	
3	Nitrite as N	3.433	3.433	0.000	34861999	NC	NC	
4	Bromide	4.863	4.880	-0.017	30992080	10.0	9.31	
5	Nitrate as N	5.853	5.887	-0.034	32628803	NC	NC	
6	Sulfate	6.410	6.480	-0.070	109966963	20.0	18.9	
S 7	Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

WC_IC_C_Det_00192 Amount Added: 10.00 Units: mL

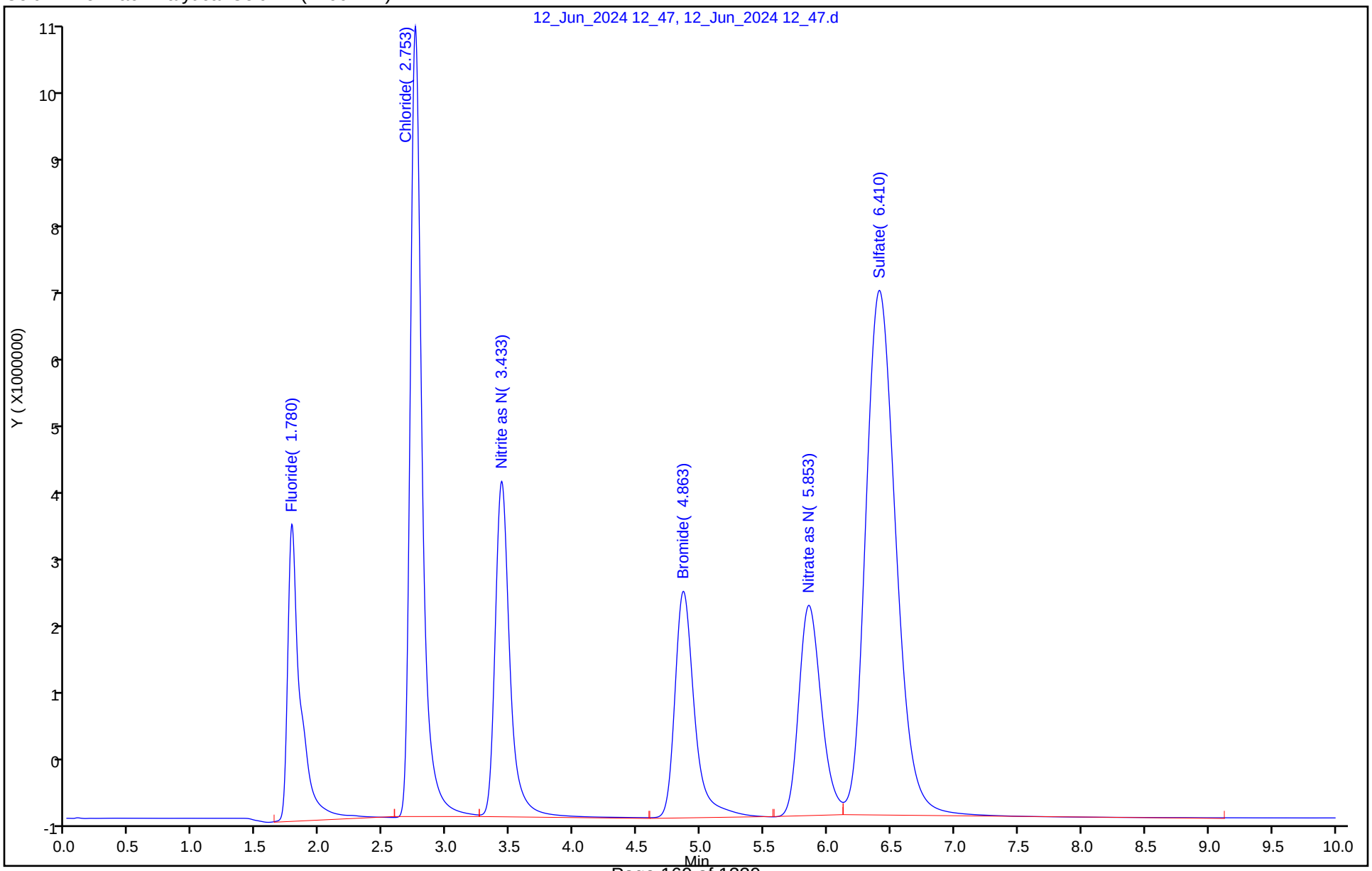
Report Date: 12-Jun-2024 17:31:06 Chrom Revision: 2.3 03-Jun-2024 20:58:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_47.d

Injection Date:	12-Jun-2024 12:47:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	IC CAL 4			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d
Lims ID: IC CAL 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 12-Jun-2024 12:59:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: C5
Operator ID: Instrument ID: D20 - 3394
Sublist: chrom-Anions-D20*sub2

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 12-Jun-2024 17:31:07 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1659

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	Fluoride	1.783	1.773	0.010	39854025	3.00	2.96	
2	Chloride	2.753	2.753	0.000	102313233	12.0	12.2	
3	Nitrite as N	3.433	3.433	0.000	59476005	NC	NC	
4	Bromide	4.857	4.880	-0.023	53330121	15.0	15.9	
5	Nitrate as N	5.837	5.887	-0.050	56405869	NC	NC	
6	Sulfate	6.370	6.480	-0.110	186256216	30.0	31.7	
S 7	Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

WC_IC_C_Det_00192 Amount Added: 15.00 Units: mL

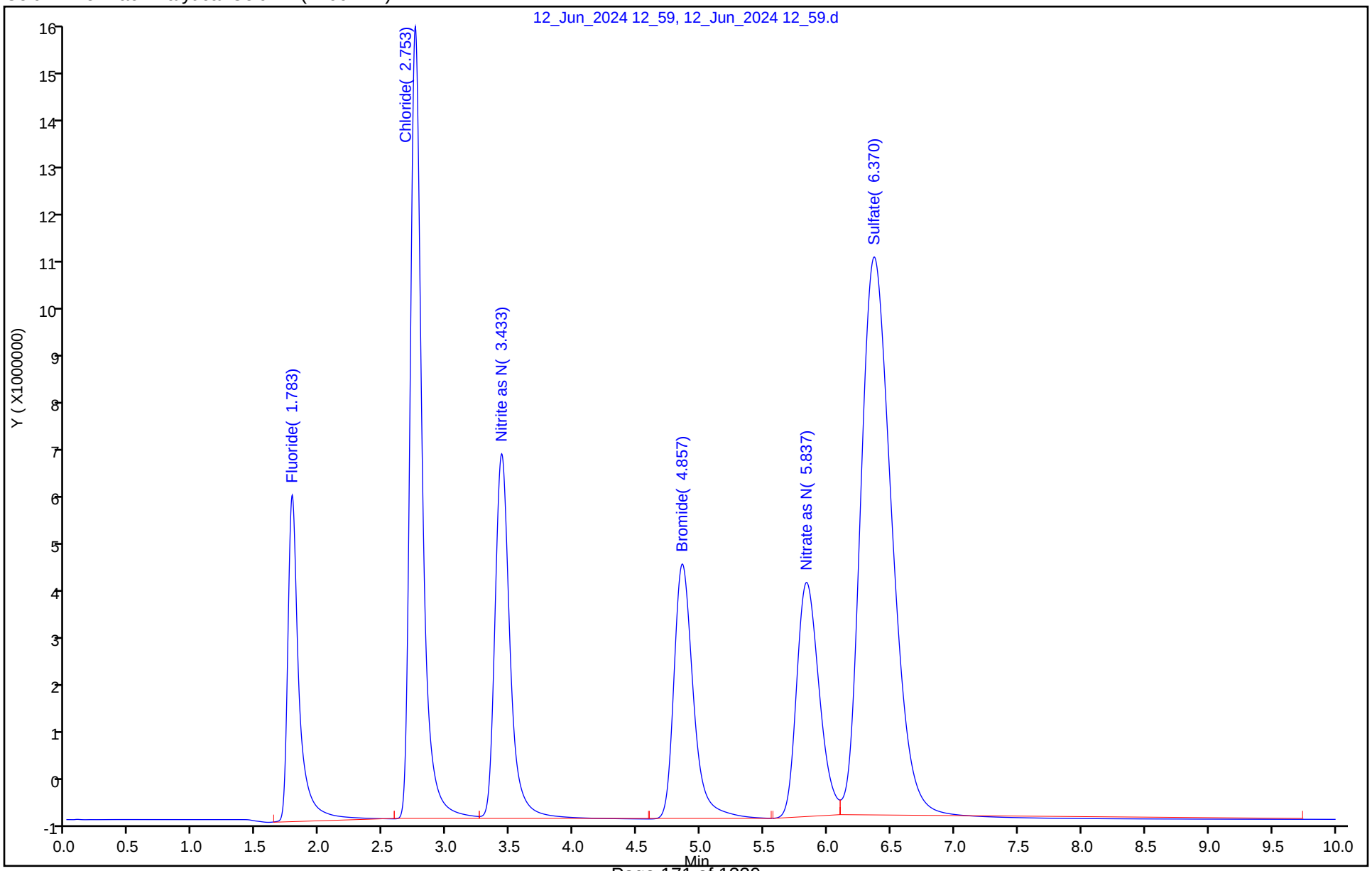
Report Date: 12-Jun-2024 17:31:07 Chrom Revision: 2.3 03-Jun-2024 20:58:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Injection Date:	12-Jun-2024 12:59:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	IC CAL 5			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



Calibration / Fluoride

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

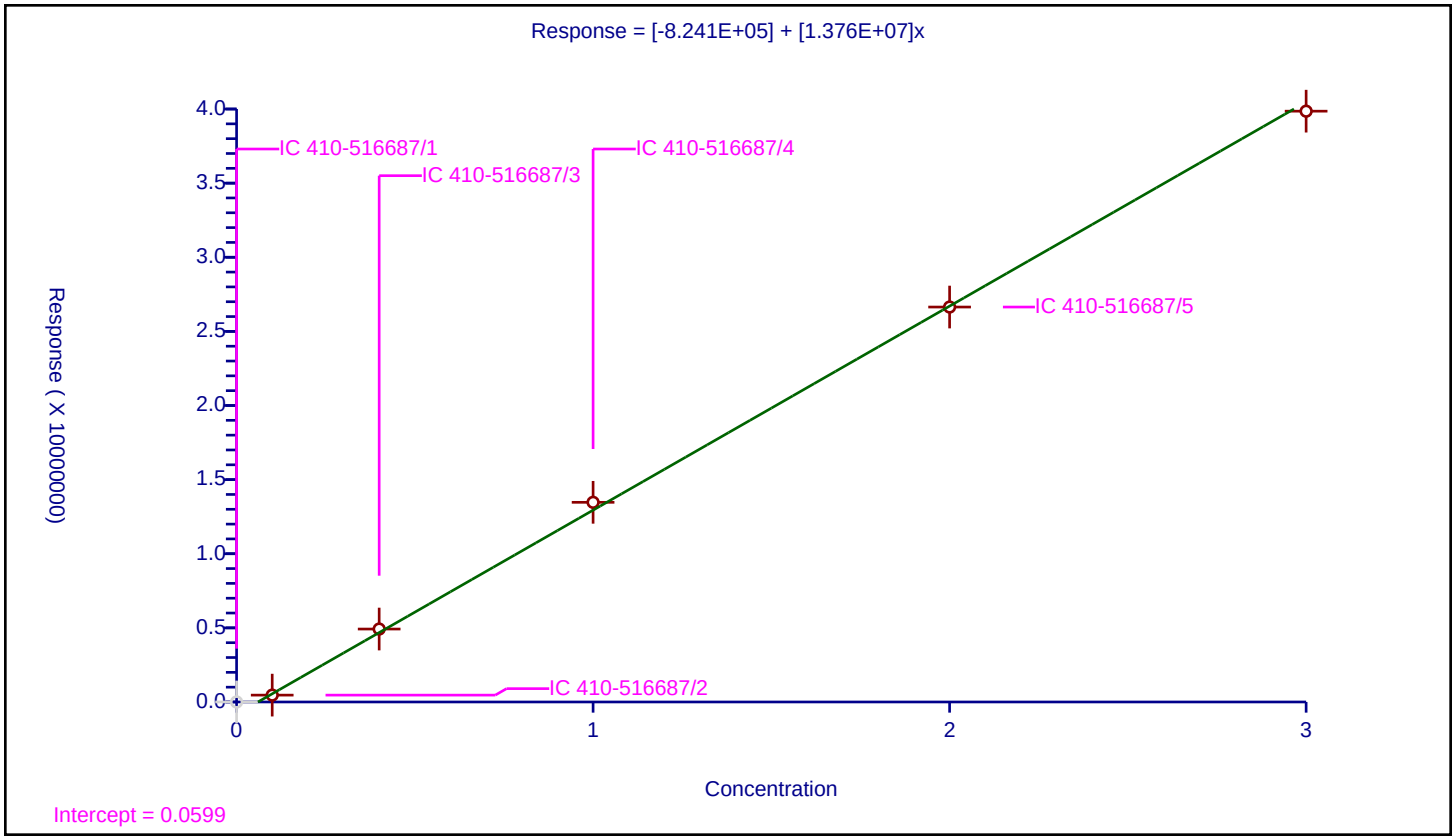
Curve Coefficients

Intercept:	-8.241E+05
Slope:	1.376E+07

Error Coefficients

Relative Standard Deviation:	5.1

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-516687/1	0.0	0.0			NaN	N
2	IC 410-516687/2	0.1	463446.0			4634460.0	Y
3	IC 410-516687/3	0.4	4920747.0			12301867.5	Y
4	IC 410-516687/4	1.0	13469493.0			13469493.0	Y
5	IC 410-516687/5	2.0	26642527.0			13321263.5	Y
6	IC 410-516687/6	3.0	39854025.0			13284675.0	Y



Calibration / Chloride

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

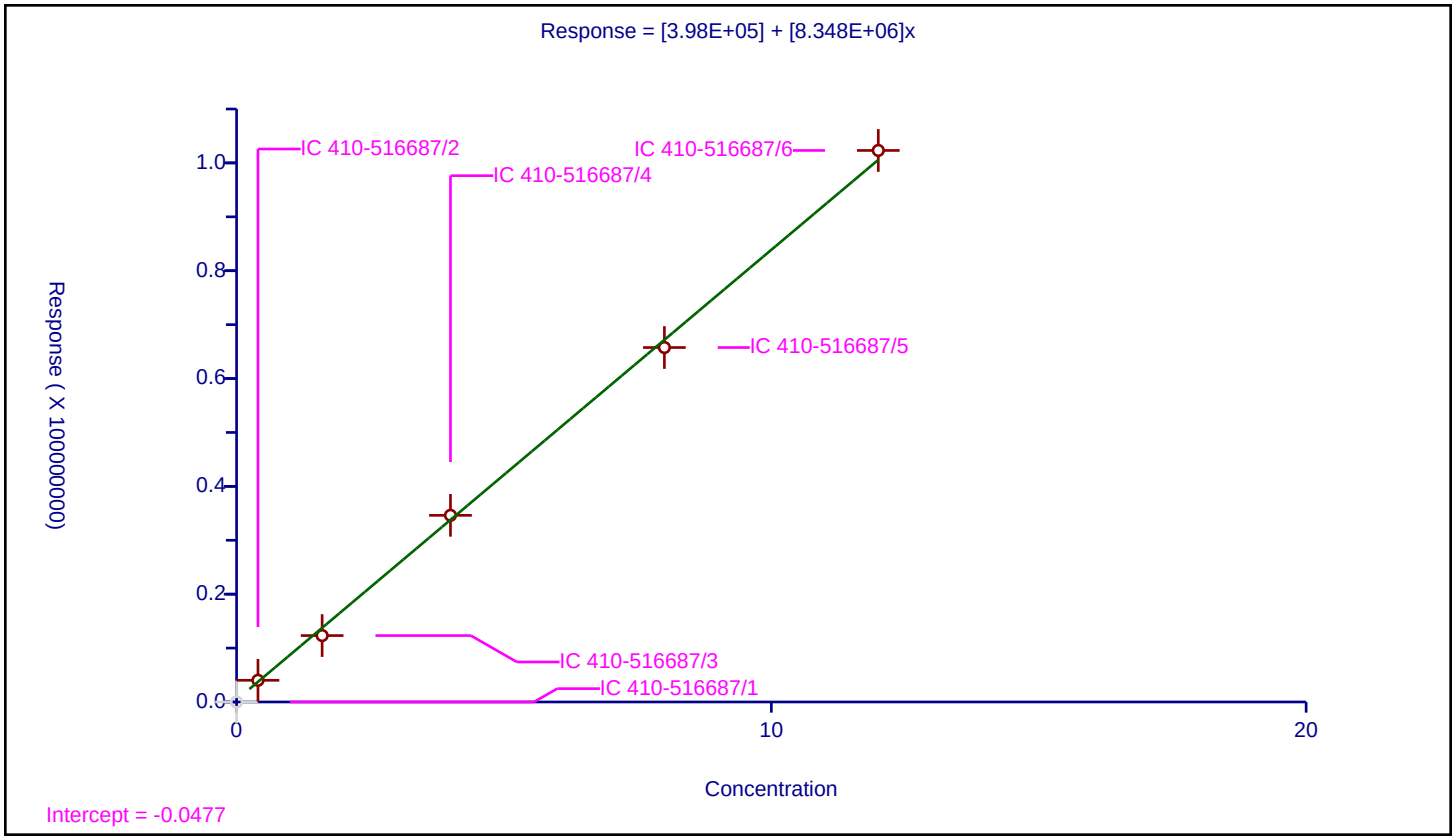
Curve Coefficients

Intercept:	3.98E+05
Slope:	8.348E+06

Error Coefficients

Relative Standard Deviation:	8.2

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-516687/1	0.0	0.0			NaN	N
2	IC 410-516687/2	0.4	4025702.0			10064255.0	Y
3	IC 410-516687/3	1.6	12320486.0			7700303.75	Y
4	IC 410-516687/4	4.0	34626831.0			8656707.75	Y
5	IC 410-516687/5	8.0	65753753.0			8219219.125	Y
6	IC 410-516687/6	12.0	102313233.0			8526102.75	Y



Calibration / Bromide

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

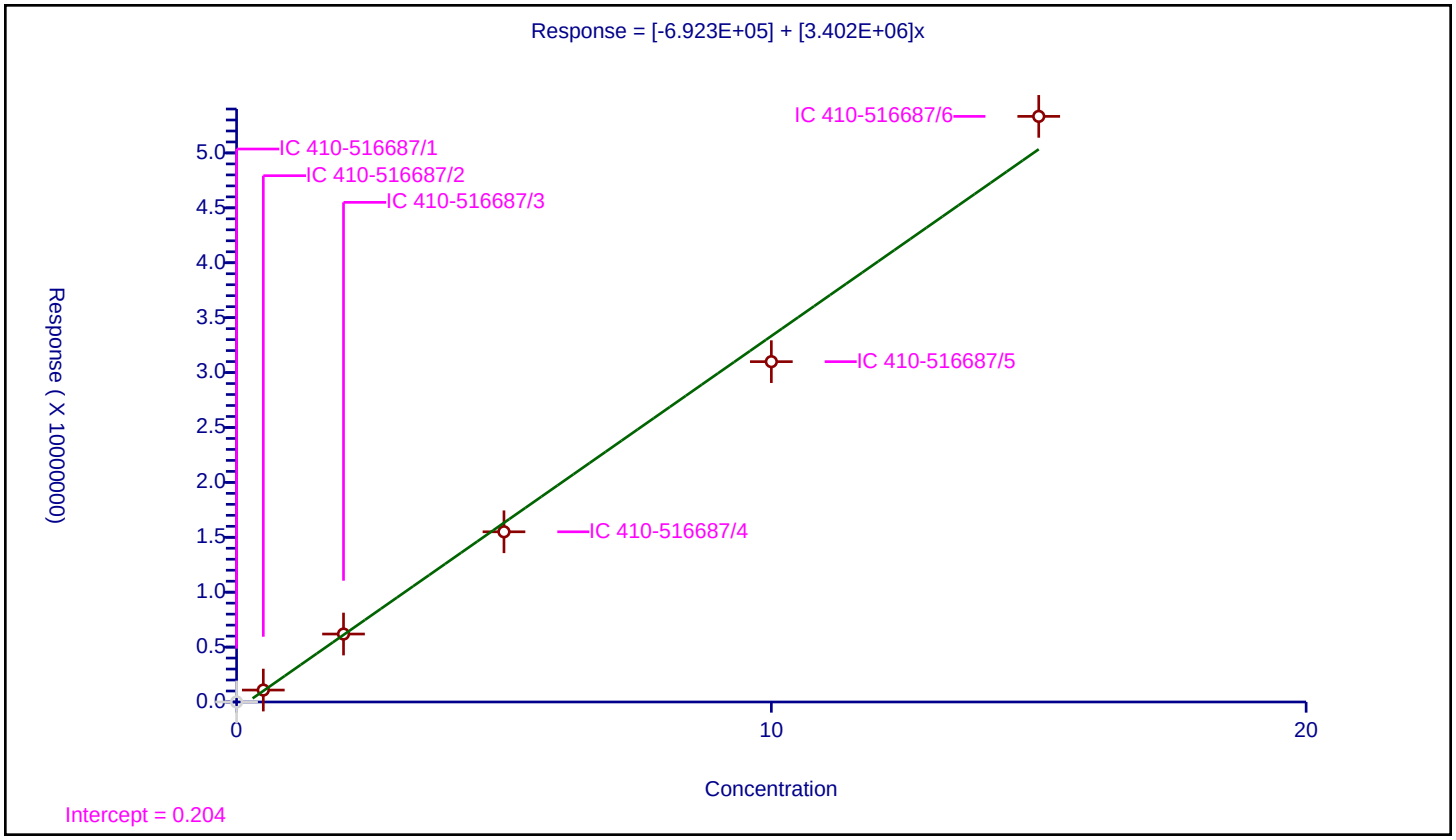
Curve Coefficients

Intercept:	-6.923E+05
Slope:	3.402E+06

Error Coefficients

Relative Standard Deviation:	6.5

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-516687/1	0.0	0.0			NaN	N
2	IC 410-516687/2	0.5	1087878.0			2175756.0	Y
3	IC 410-516687/3	2.0	6188799.0			3094399.5	Y
4	IC 410-516687/4	5.0	15498653.0			3099730.6	Y
5	IC 410-516687/5	10.0	30992080.0			3099208.0	Y
6	IC 410-516687/6	15.0	53330121.0			3555341.4	Y



Calibration / Sulfate

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

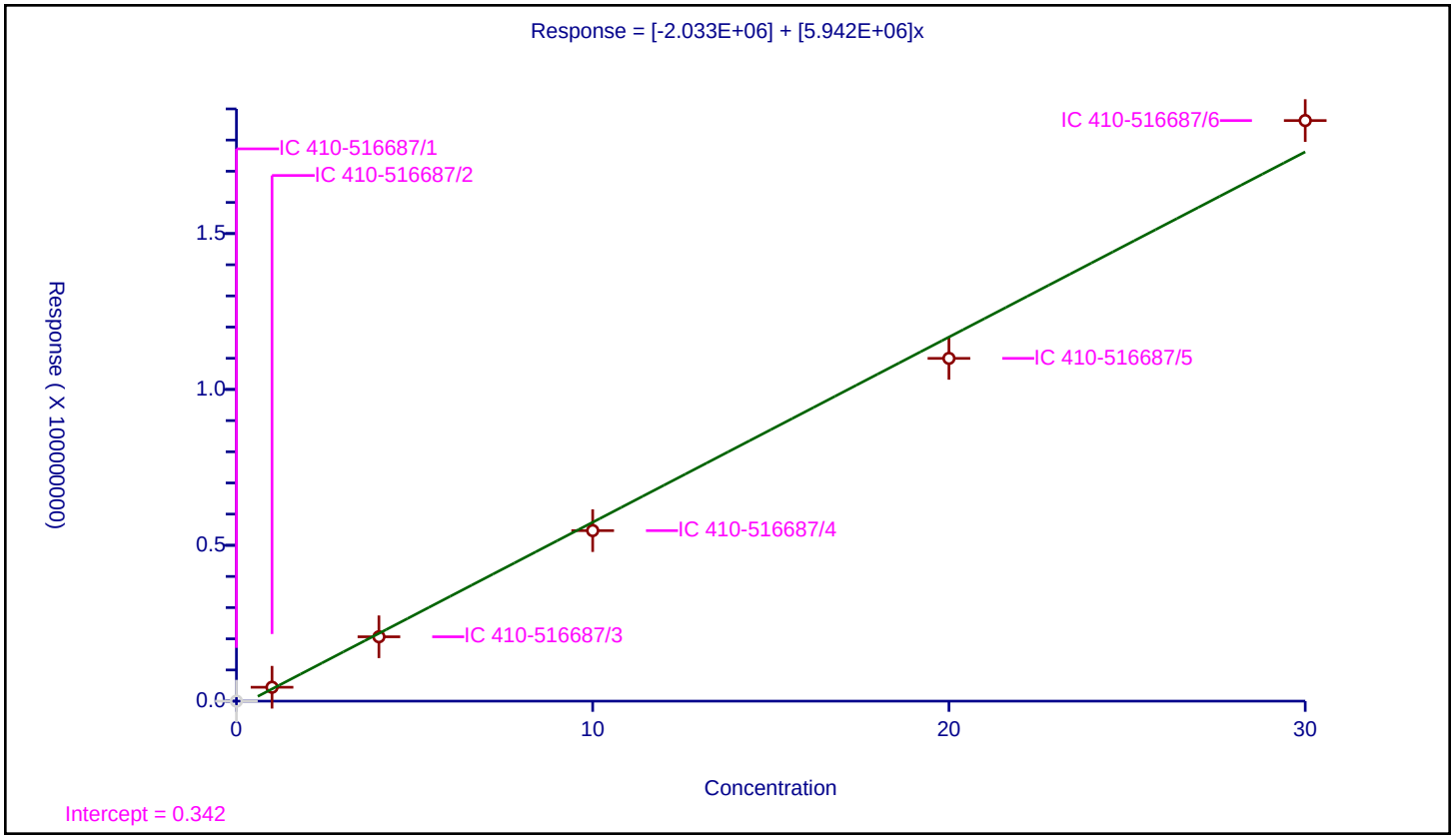
Curve Coefficients

Intercept:	-2.033E+06
Slope:	5.942E+06

Error Coefficients

Relative Standard Deviation:	8.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-516687/1	0.0	0.0			NaN	N
2	IC 410-516687/2	1.0	4453370.0			4453370.0	Y
3	IC 410-516687/3	4.0	20649287.0			5162321.75	Y
4	IC 410-516687/4	10.0	54708125.0			5470812.5	Y
5	IC 410-516687/5	20.0	109966963.0			5498348.15	Y
6	IC 410-516687/6	30.0	186256216.0			6208540.533333	Y



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: ICV 410-516687/7 Calibration Date: 06/12/2024 13:11

Instrument ID: D20 - 3394 Calib Start Date: 06/12/2024 11:58

GC Column: IC17-AS14 ID: 4.00(mm) Calib End Date: 06/12/2024 12:59

Lab File ID: 12_Jun_2024 13_11.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin1		12737375		0.754	0.750	0.5	10.0
Chloride	Lin1		7935801		2.80	3.00	-6.5	10.0
Bromide	Lin1		3544504		8.02	7.50	6.9	10.0
Sulfate	Lin1		5567760		7.37	7.50	-1.7	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: ICV 410-516687/7
Calibration Date: 06/12/2024 13:11

Instrument ID: D20 - 3394
Calib Start Date: 06/12/2024 11:58

GC Column: IC17-AS14 ID: 4.00(mm)
Calib End Date: 06/12/2024 12:59

Lab File ID: 12_Jun_2024 13_11.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	1.78	1.53	2.03
Chloride	2.75	2.50	3.00
Bromide	4.87	4.62	5.12
Sulfate	6.44	5.54	7.34

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 13_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 12-Jun-2024 13:11:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: Instrument ID: D20 - 3394
Sublist:

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 12-Jun-2024 17:31:26 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1659

First Level Reviewer: UJE2 Date: 12-Jun-2024 17:31:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.777	1.777	0.000	9553031	0.7500	0.7539	
2 Chloride	2.753	2.753	0.000	23807402	3.00	2.80	
3 Nitrite as N	3.433	3.433	0.000	13175118	NC	NC	
4 Bromide	4.867	4.867	0.000	26583781	7.50	8.02	
5 Nitrate as N	5.873	5.873	0.000	12165200	NC	NC	
6 Sulfate	6.443	6.443	0.000	41758200	7.50	7.37	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

WC_IC_QC2_01119 Amount Added: 7.50 Units: mL

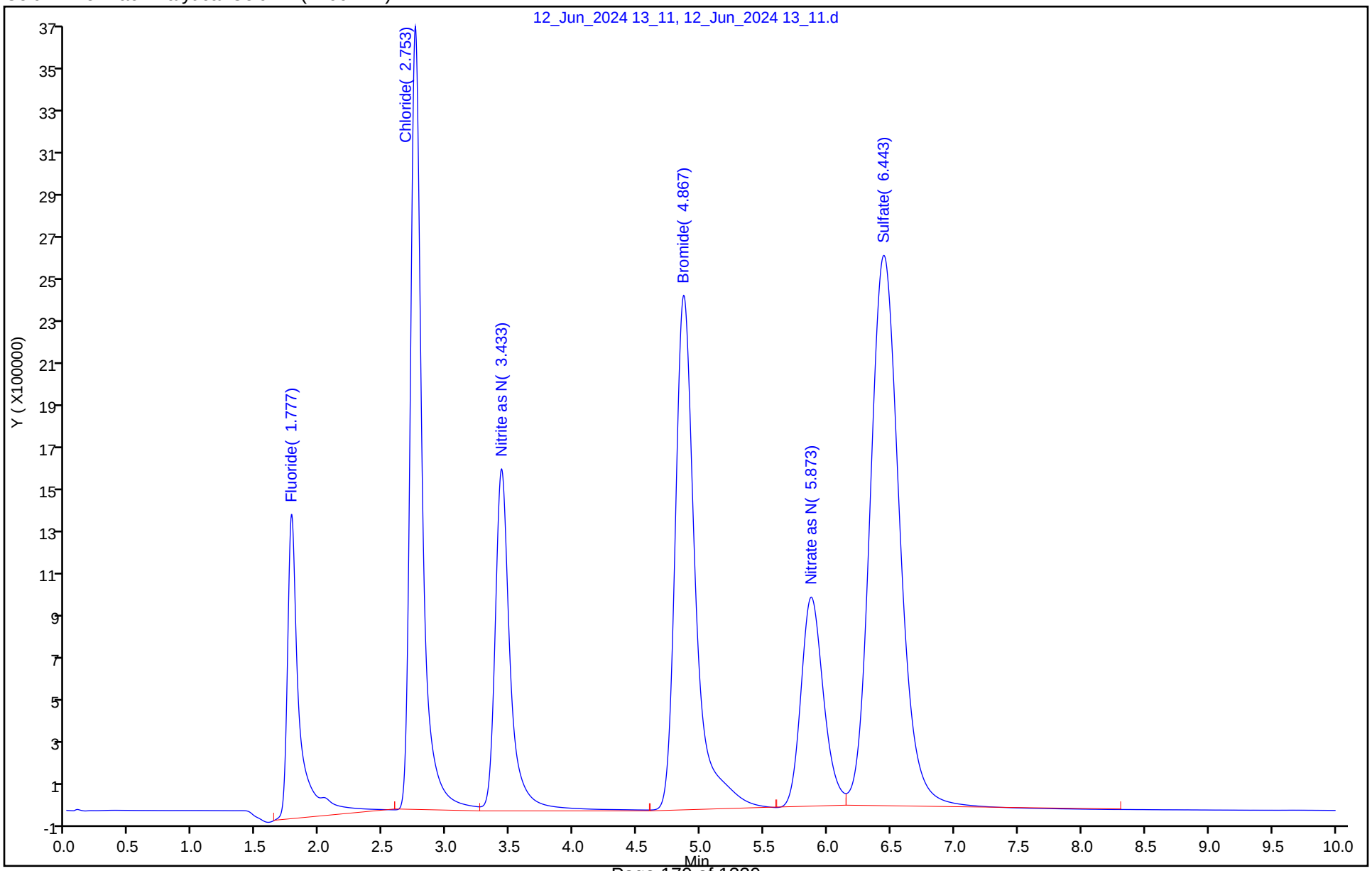
Report Date: 12-Jun-2024 17:31:26 Chrom Revision: 2.3 03-Jun-2024 20:58:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 13_11.d

Injection Date:	12-Jun-2024 13:11:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: CCV 410-526874/1 Calibration Date: 07/11/2024 05:27

Instrument ID: D20 - 3394 Calib Start Date: 06/12/2024 11:58

GC Column: IC17-AS14 ID: 4.00(mm) Calib End Date: 06/12/2024 12:59

Lab File ID: 11_Jul_2024 05_27.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin1		10395031		0.626	0.750	-16.5*	10.0
Chloride	Lin1		8193636		2.90	3.00	-3.4	10.0
Bromide	Lin1		3639749		8.23	7.50	9.7	10.0
Sulfate	Lin1		5972424		7.88	7.50	5.1	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: CCV 410-526874/1 Calibration Date: 07/11/2024 05:27

Instrument ID: D20 - 3394 Calib Start Date: 06/12/2024 11:58

GC Column: IC17-AS14 ID: 4.00(mm) Calib End Date: 06/12/2024 12:59

Lab File ID: 11_Jul_2024 05_27.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	1.77	1.52	2.02
Chloride	2.71	2.46	2.96
Bromide	4.74	4.49	4.99
Sulfate	6.18	5.28	7.08

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 05_27.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 11-Jul-2024 05:27:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: Instrument ID: D20 - 3394
Sublist: chrom-Anions-D20*sub1

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:11:41 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:03:26

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.767	1.767	0.000	7796273	0.7500	0.6263	
2 Chloride	2.710	2.710	0.000	24580909	3.00	2.90	
3 Nitrite as N	3.363	3.363	0.000	12969047	NC	NC	
4 Bromide	4.740	4.740	0.000	27298118	7.50	8.23	M
5 Nitrate as N	5.697	5.697	0.000	12406210	NC	NC	Ma
6 Sulfate	6.183	6.183	0.000	44793183	7.50	7.88	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

WC_IC_QC2_01138 Amount Added: 7.50 Units: mL

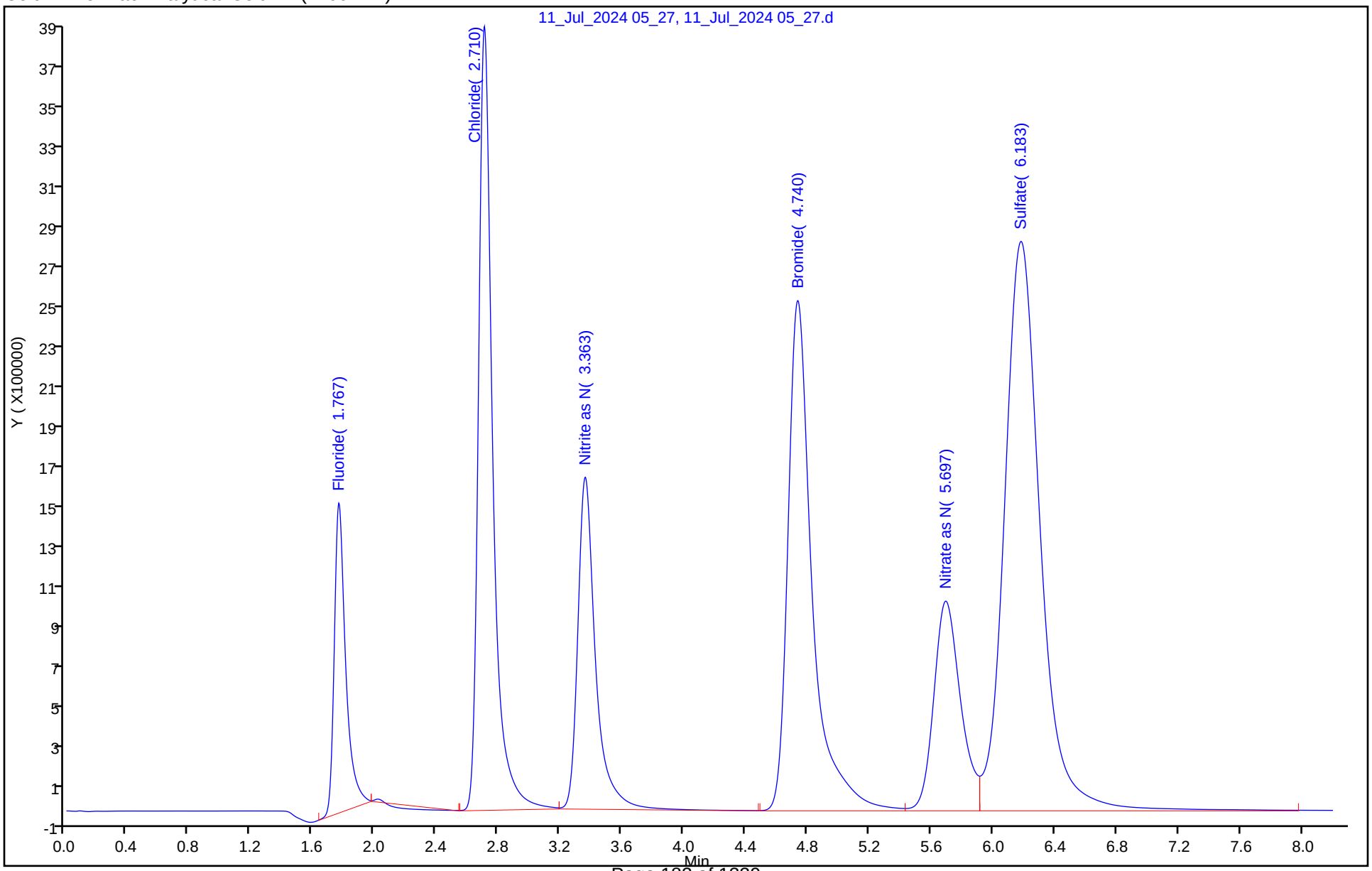
Report Date: 11-Jul-2024 15:11:41 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 05_27.d

Injection Date:	11-Jul-2024 05:27:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

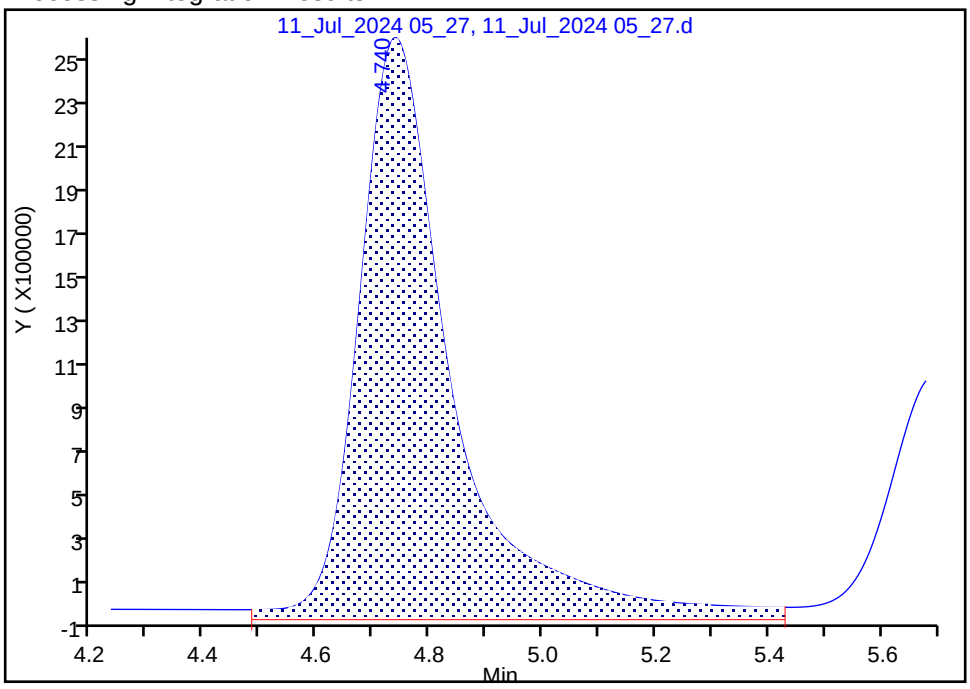
Data File:	\\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 05_27.d				
Injection Date:	11-Jul-2024 05:27:00	Instrument ID:	D20 - 3394		
Lims ID:	CCV				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Anions-D20	Limit Group:	IC - 300 28D		
Column:	IonPac Analytical Column (4.00 mm)	Detector	det0		

4 Bromide, CAS: 24959-67-9

Signal: 1

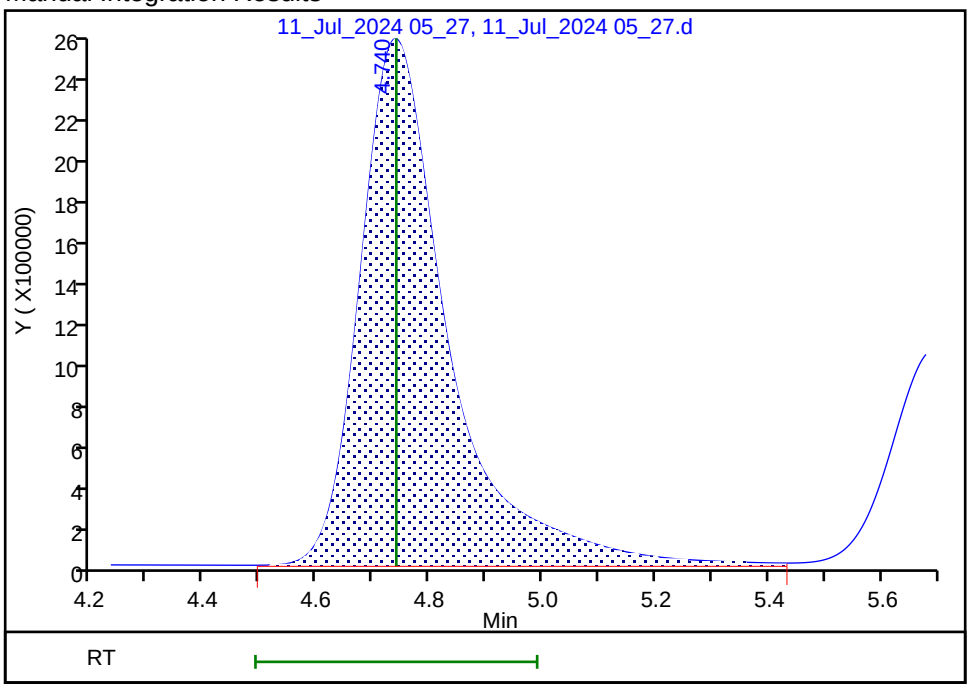
Processing Integration Results

RT: 4.74
Area: 29963930
Amount: 9.011721
Amount Units: ug/ml



Manual Integration Results

RT: 4.74
Area: 27298118
Amount: 8.228078
Amount Units: ug/ml



Reviewer: L4QM, 11-Jul-2024 15:03:11 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: CCV 410-526874/6 Calibration Date: 07/11/2024 06:18

Instrument ID: D20 - 3394 Calib Start Date: 06/12/2024 11:58

GC Column: IC17-AS14 ID: 4.00(mm) Calib End Date: 06/12/2024 12:59

Lab File ID: 11_Jul_2024 06_18.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin1		9945544		0.602	0.750	-19.8*	10.0
Chloride	Lin1		8187017		2.89	3.00	-3.5	10.0
Bromide	Lin1		3635294		8.22	7.50	9.6	10.0
Sulfate	Lin1		6001601		7.92	7.50	5.6	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: CCV 410-526874/6
Calibration Date: 07/11/2024 06:18

Instrument ID: D20 - 3394
Calib Start Date: 06/12/2024 11:58

GC Column: IC17-AS14 ID: 4.00(mm)
Calib End Date: 06/12/2024 12:59

Lab File ID: 11_Jul_2024 06_18.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	1.77	1.52	2.02
Chloride	2.71	2.46	2.96
Bromide	4.74	4.49	4.99
Sulfate	6.18	5.28	7.08

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 06_18.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 11-Jul-2024 06:18:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: Instrument ID: D20 - 3394
Sublist: chrom-Anions-D20*sub1

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:11:44 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:04:58

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	Fluoride	1.767	1.767	0.000	7459158	0.7500	0.6018	
2	Chloride	2.710	2.710	0.000	24561051	3.00	2.89	
3	Nitrite as N	3.363	3.363	0.000	12958512	NC	NC	
4	Bromide	4.737	4.740	-0.003	27264703	7.50	8.22	M
5	Nitrate as N	5.697	5.697	0.000	12435323	NC	NC	M
6	Sulfate	6.183	6.183	0.000	45012006	7.50	7.92	M
S 7	Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

WC_IC_QC2_01138 Amount Added: 7.50 Units: mL

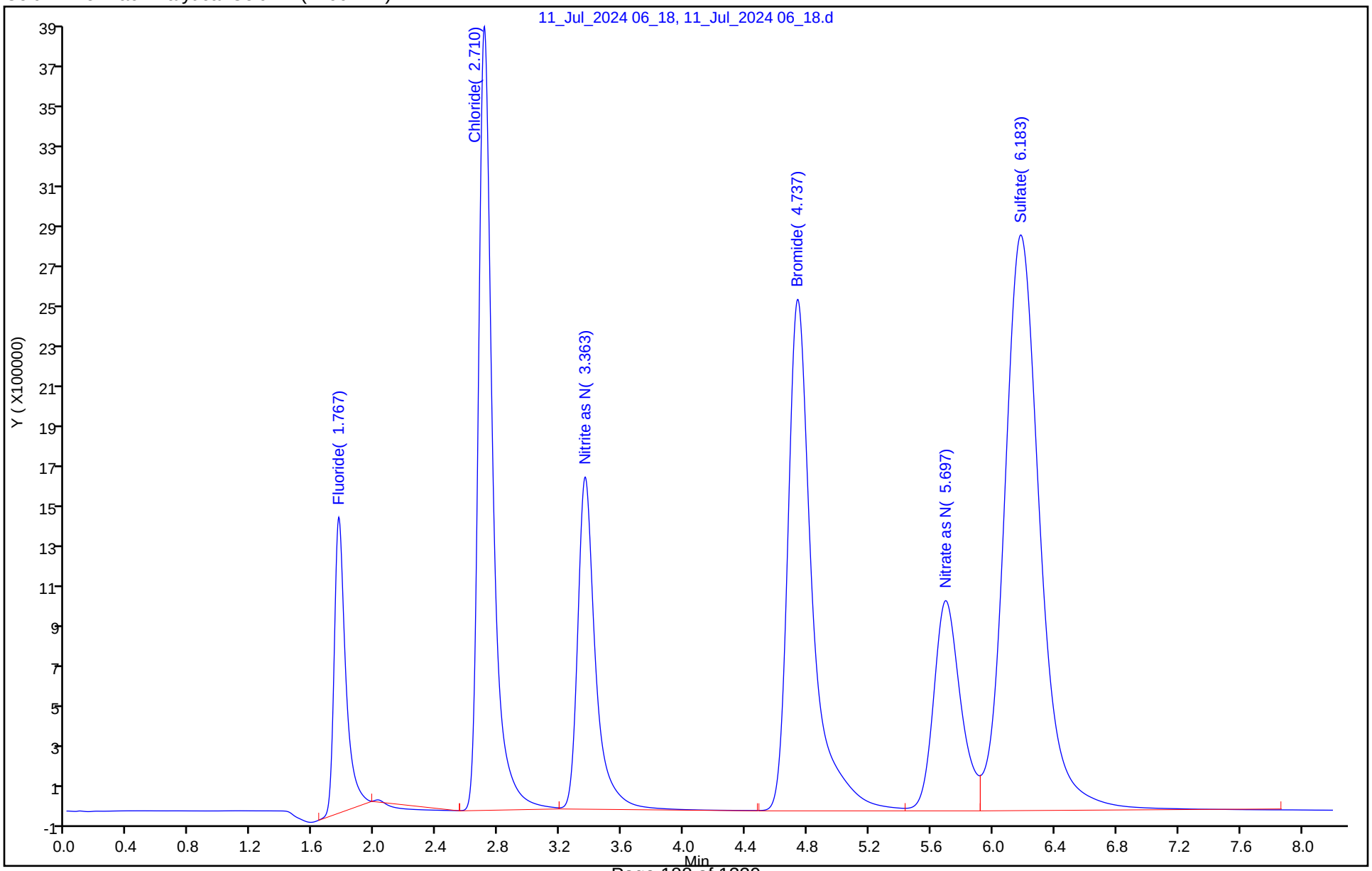
Report Date: 11-Jul-2024 15:11:44 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 06_18.d

Injection Date:	11-Jul-2024 06:18:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: CCV 410-526874/18 Calibration Date: 07/11/2024 08:20

Instrument ID: D20 - 3394 Calib Start Date: 06/12/2024 11:58

GC Column: IC17-AS14 ID: 4.00(mm) Calib End Date: 06/12/2024 12:59

Lab File ID: 11_Jul_2024 08_20.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin1		11104357		0.665	0.750	-11.3*	10.0
Chloride	Lin1		8189089		2.90	3.00	-3.5	10.0
Bromide	Lin1		3637827		8.22	7.50	9.7	10.0
Sulfate	Lin1		5990271		7.90	7.50	5.4	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: CCV 410-526874/18 Calibration Date: 07/11/2024 08:20

Instrument ID: D20 - 3394 Calib Start Date: 06/12/2024 11:58

GC Column: IC17-AS14 ID: 4.00(mm) Calib End Date: 06/12/2024 12:59

Lab File ID: 11_Jul_2024 08_20.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	1.77	1.52	2.02
Chloride	2.71	2.46	2.96
Bromide	4.74	4.49	4.99
Sulfate	6.18	5.28	7.08

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 08_20.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 11-Jul-2024 08:20:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: Instrument ID: D20 - 3394
Sublist: chrom-Anions-D20*sub1

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:11:50 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:09:48

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	Fluoride	1.767	1.767	0.000	8328268	0.7500	0.6649	
2	Chloride	2.710	2.710	0.000	24567266	3.00	2.90	
3	Nitrite as N	3.363	3.363	0.000	12939456	NC	NC	
4	Bromide	4.740	4.740	0.000	27283706	7.50	8.22	M
5	Nitrate as N	5.697	5.697	0.000	12397371	NC	NC	M
6	Sulfate	6.183	6.183	0.000	44927036	7.50	7.90	M
S 7	Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

WC_IC_QC2_01138 Amount Added: 7.50 Units: mL

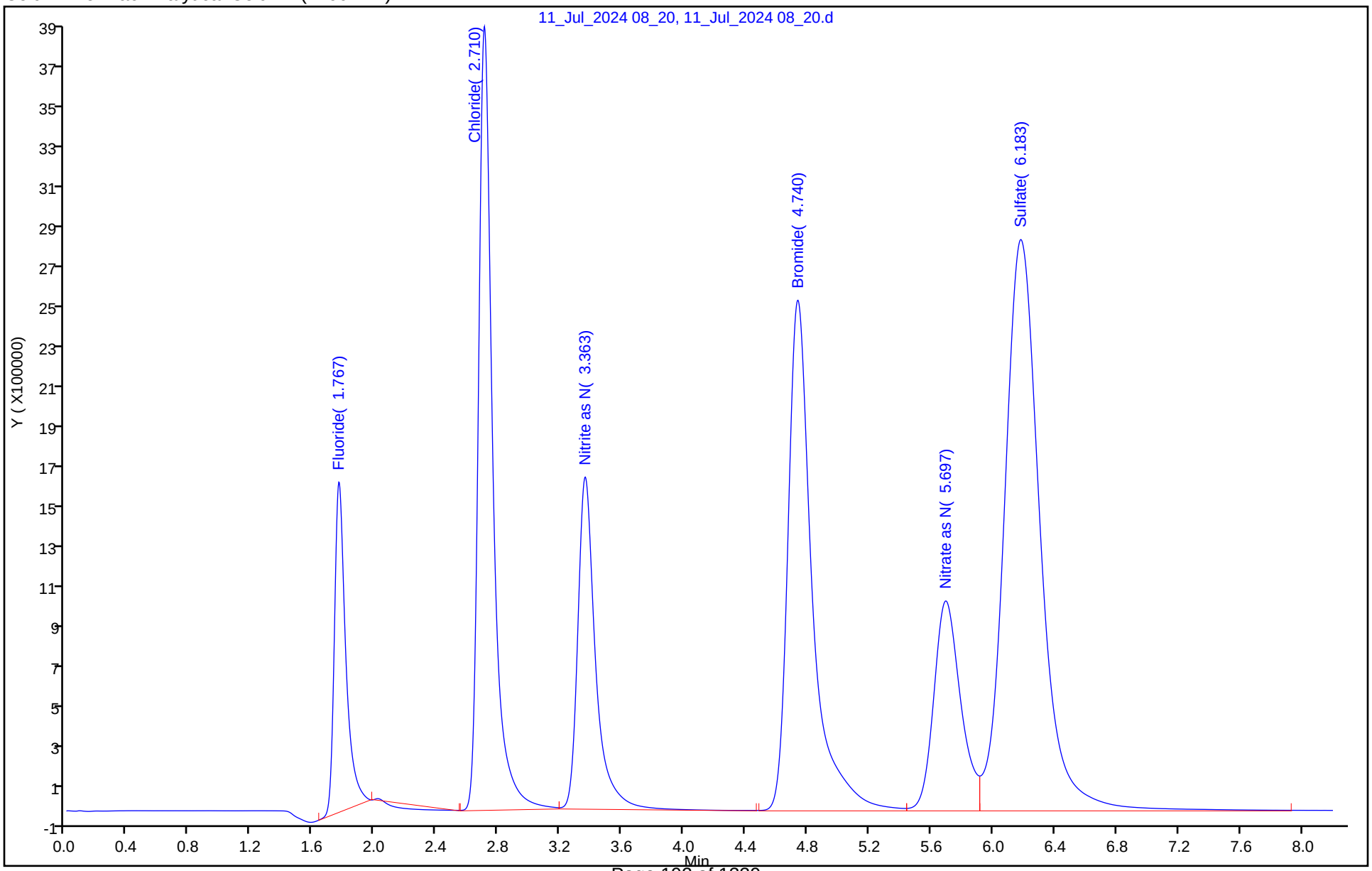
Report Date: 11-Jul-2024 15:11:50 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 08_20.d

Injection Date:	11-Jul-2024 08:20:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

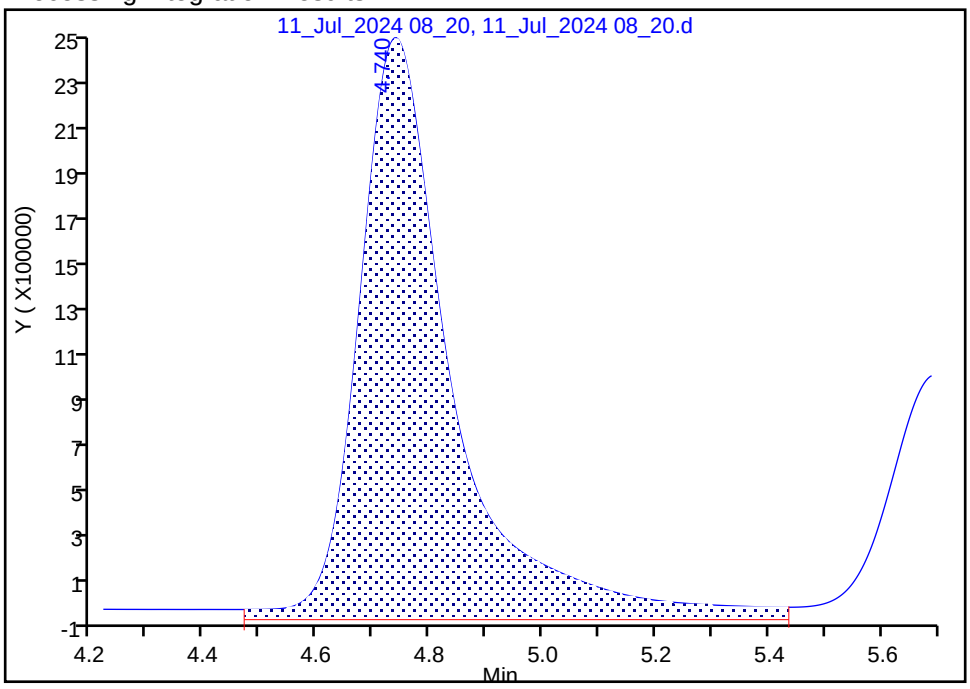
Data File:	\\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 08_20.d				
Injection Date:	11-Jul-2024 08:20:00	Instrument ID:	D20 - 3394		
Lims ID:	CCV				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Anions-D20	Limit Group:	IC - 300 28D		
Column:	IonPac Analytical Column (4.00 mm)	Detector	det0		

4 Bromide, CAS: 24959-67-9

Signal: 1

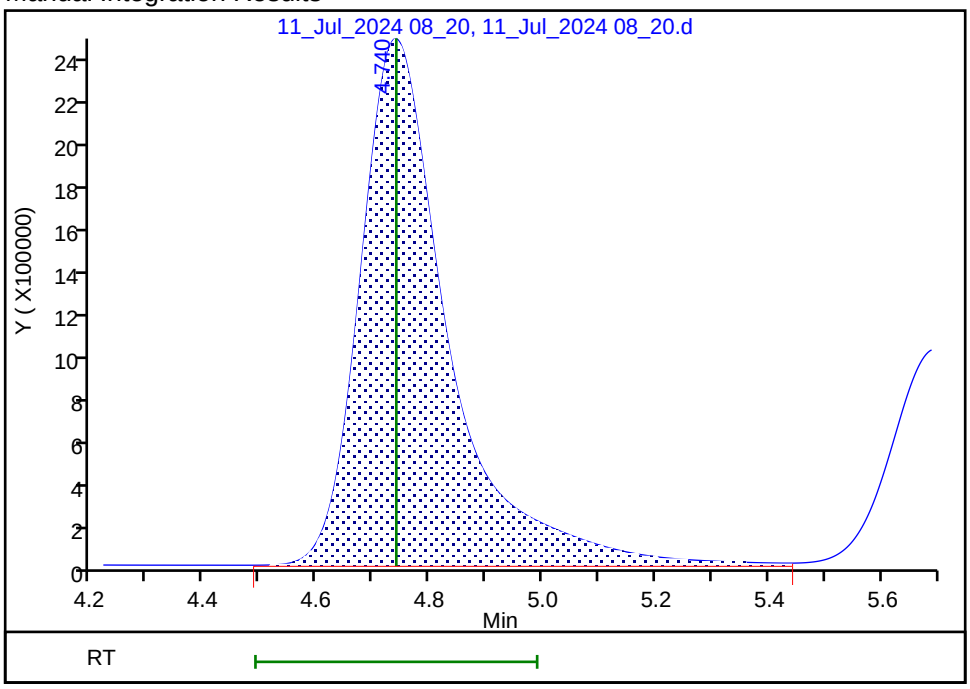
Processing Integration Results

RT: 4.74
Area: 30042354
Amount: 9.034775
Amount Units: ug/ml



Manual Integration Results

RT: 4.74
Area: 27283706
Amount: 8.223842
Amount Units: ug/ml



Reviewer: L4QM, 11-Jul-2024 15:09:37 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: CCV 410-526874/30 Calibration Date: 07/11/2024 10:22

Instrument ID: D20 - 3394 Calib Start Date: 06/12/2024 11:58

GC Column: IC17-AS14 ID: 4.00(mm) Calib End Date: 06/12/2024 12:59

Lab File ID: 11_Jul_2024 10_22.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin1		11012656		0.660	0.750	-12.0*	10.0
Chloride	Lin1		8197403		2.90	3.00	-3.4	10.0
Bromide	Lin1		3641905		8.23	7.50	9.8	10.0
Sulfate	Lin1		5983125		7.89	7.50	5.3	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: CCV 410-526874/30 Calibration Date: 07/11/2024 10:22

Instrument ID: D20 - 3394 Calib Start Date: 06/12/2024 11:58

GC Column: IC17-AS14 ID: 4.00(mm) Calib End Date: 06/12/2024 12:59

Lab File ID: 11_Jul_2024 10_22.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	1.77	1.52	2.02
Chloride	2.71	2.46	2.96
Bromide	4.74	4.49	4.99
Sulfate	6.18	5.28	7.08

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 10_22.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 11-Jul-2024 10:22:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: Instrument ID: D20 - 3394
Sublist: chrom-Anions-D20*sub1

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:24:22 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:21:01

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	Fluoride	1.767	1.767	0.000	8259492	0.7500	0.6599	
2	Chloride	2.710	2.710	0.000	24592209	3.00	2.90	
3	Nitrite as N	3.363	3.363	0.000	12962873	NC	NC	
4	Bromide	4.740	4.740	0.000	27314291	7.50	8.23	M
5	Nitrate as N	5.697	5.697	0.000	12379039	NC	NC	M
6	Sulfate	6.183	6.183	0.000	44873437	7.50	7.89	M
S 7	Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

WC_IC_QC2_01138 Amount Added: 7.50 Units: mL

Report Date: 11-Jul-2024 15:24:23 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 10_22.d

Injection Date: 11-Jul-2024 10:22:00 Instrument ID: D20 - 3394 Operator ID:

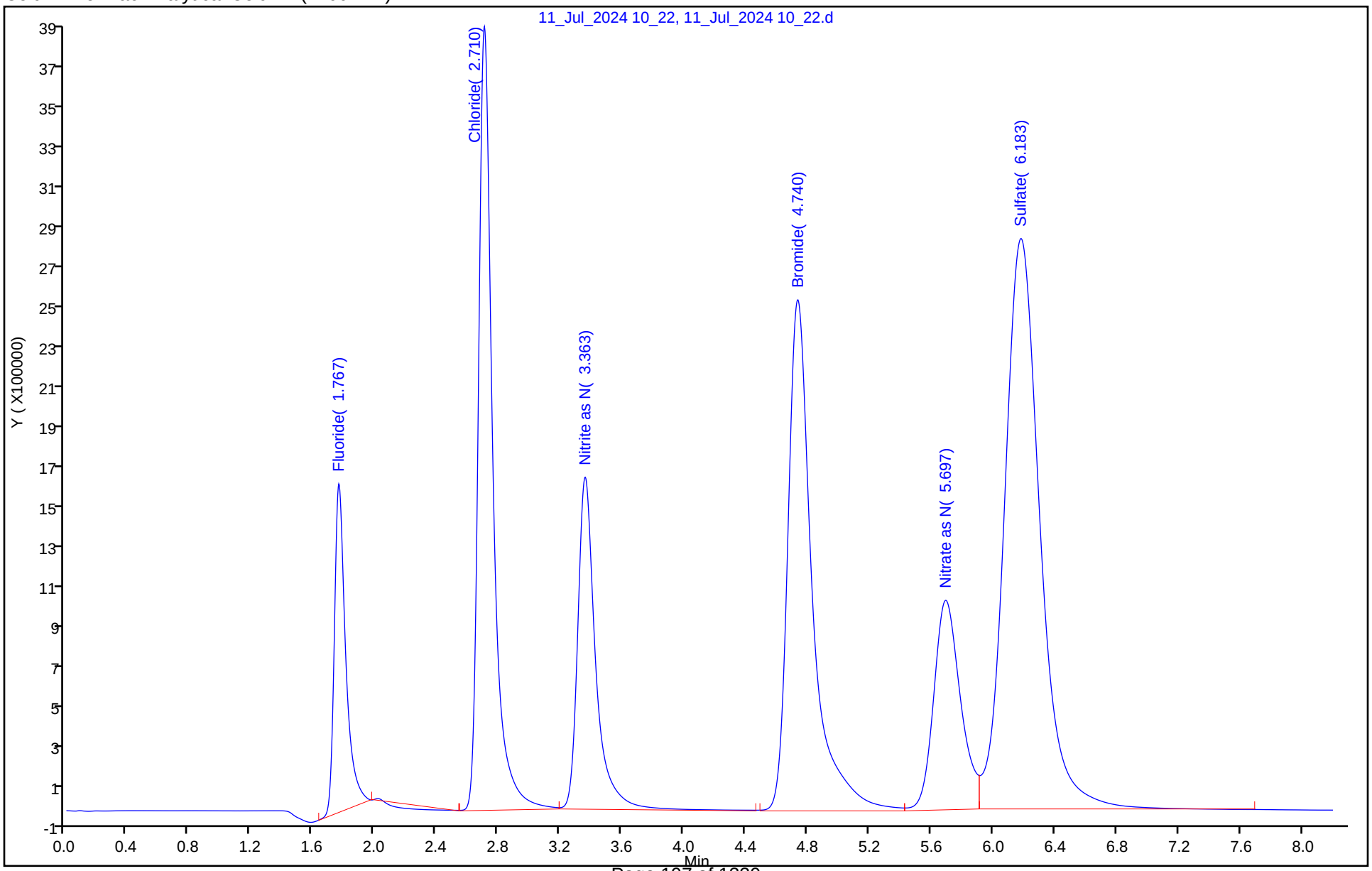
Lims ID: CCV Worklist Smp#: 30

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: Anions-D20 Limit Group: IC - 300 28D

Column: IonPac Analytical Column (4.00 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

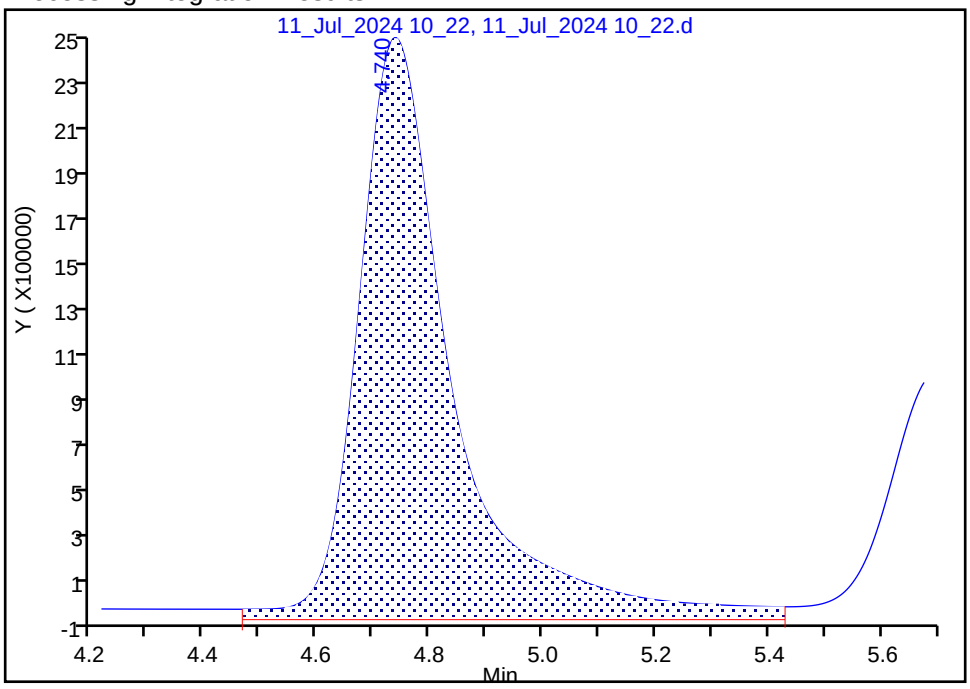
Data File:	\\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 10_22.d				
Injection Date:	11-Jul-2024 10:22:00	Instrument ID:	D20 - 3394		
Lims ID:	CCV				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	30
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Anions-D20	Limit Group:	IC - 300 28D		
Column:	IonPac Analytical Column (4.00 mm)	Detector	det0		

4 Bromide, CAS: 24959-67-9

Signal: 1

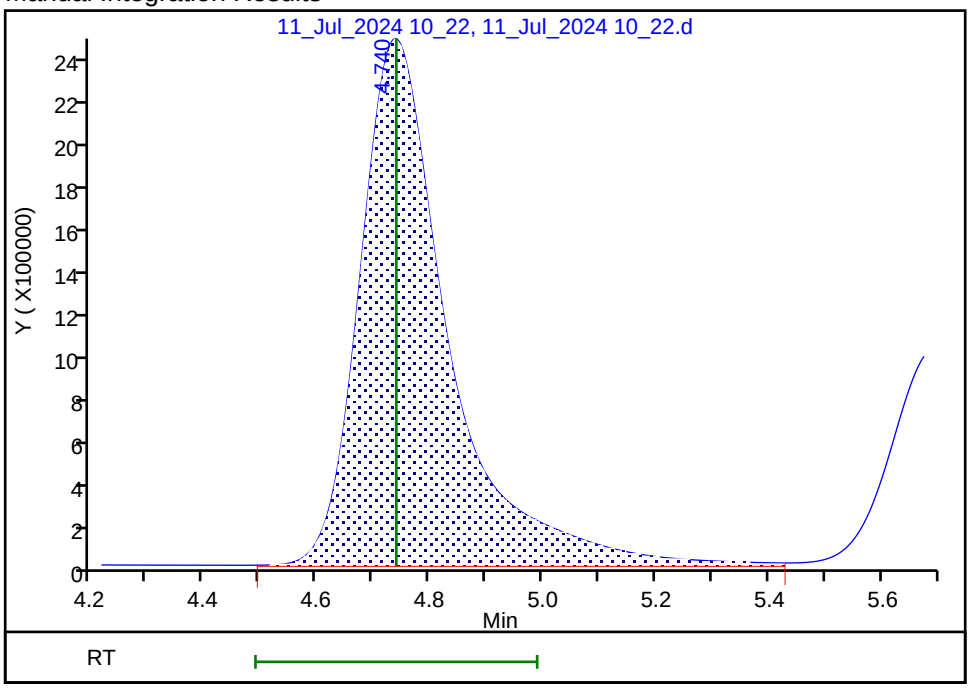
Processing Integration Results

RT: 4.74
Area: 30158059
Amount: 9.068787
Amount Units: ug/ml



Manual Integration Results

RT: 4.74
Area: 27314291
Amount: 8.232833
Amount Units: ug/ml



Reviewer: L4QM, 11-Jul-2024 15:20:26 -04:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: CCV 410-526874/42 Calibration Date: 07/11/2024 12:25

Instrument ID: D20 - 3394 Calib Start Date: 06/12/2024 11:58

GC Column: IC17-AS14 ID: 4.00(mm) Calib End Date: 06/12/2024 12:59

Lab File ID: 11_Jul_2024 12_25.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin1		11204331		0.670	0.750	-10.6*	10.0
Chloride	Lin1		8236947		2.91	3.00	-2.9	10.0
Bromide	Lin1		3661922		8.28	7.50	10.4*	10.0
Sulfate	Lin1		6053173		7.98	7.50	6.4	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: CCV 410-526874/42 Calibration Date: 07/11/2024 12:25

Instrument ID: D20 - 3394 Calib Start Date: 06/12/2024 11:58

GC Column: IC17-AS14 ID: 4.00(mm) Calib End Date: 06/12/2024 12:59

Lab File ID: 11_Jul_2024 12_25.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	1.77	1.52	2.02
Chloride	2.71	2.46	2.96
Bromide	4.74	4.49	4.99
Sulfate	6.18	5.28	7.08

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 12_25.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 11-Jul-2024 12:25:00 ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: Instrument ID: D20 - 3394
Sublist: chrom-Anions-D20*sub1

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:36:25 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:34:24

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	Fluoride	1.767	1.767	0.000	8403248	0.7500	0.6704	
2	Chloride	2.710	2.710	0.000	24710841	3.00	2.91	
3	Nitrite as N	3.360	3.363	-0.003	12994310	NC	NC	
4	Bromide	4.737	4.740	-0.003	27464416	7.50	8.28	M
5	Nitrate as N	5.697	5.697	0.000	12507754	NC	NC	M
6	Sulfate	6.180	6.183	-0.003	45398801	7.50	7.98	M
S 7	Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

WC_IC_QC2_01138 Amount Added: 7.50 Units: mL

Report Date: 11-Jul-2024 15:36:25 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 12_25.d

Injection Date: 11-Jul-2024 12:25:00 Instrument ID: D20 - 3394 Operator ID:

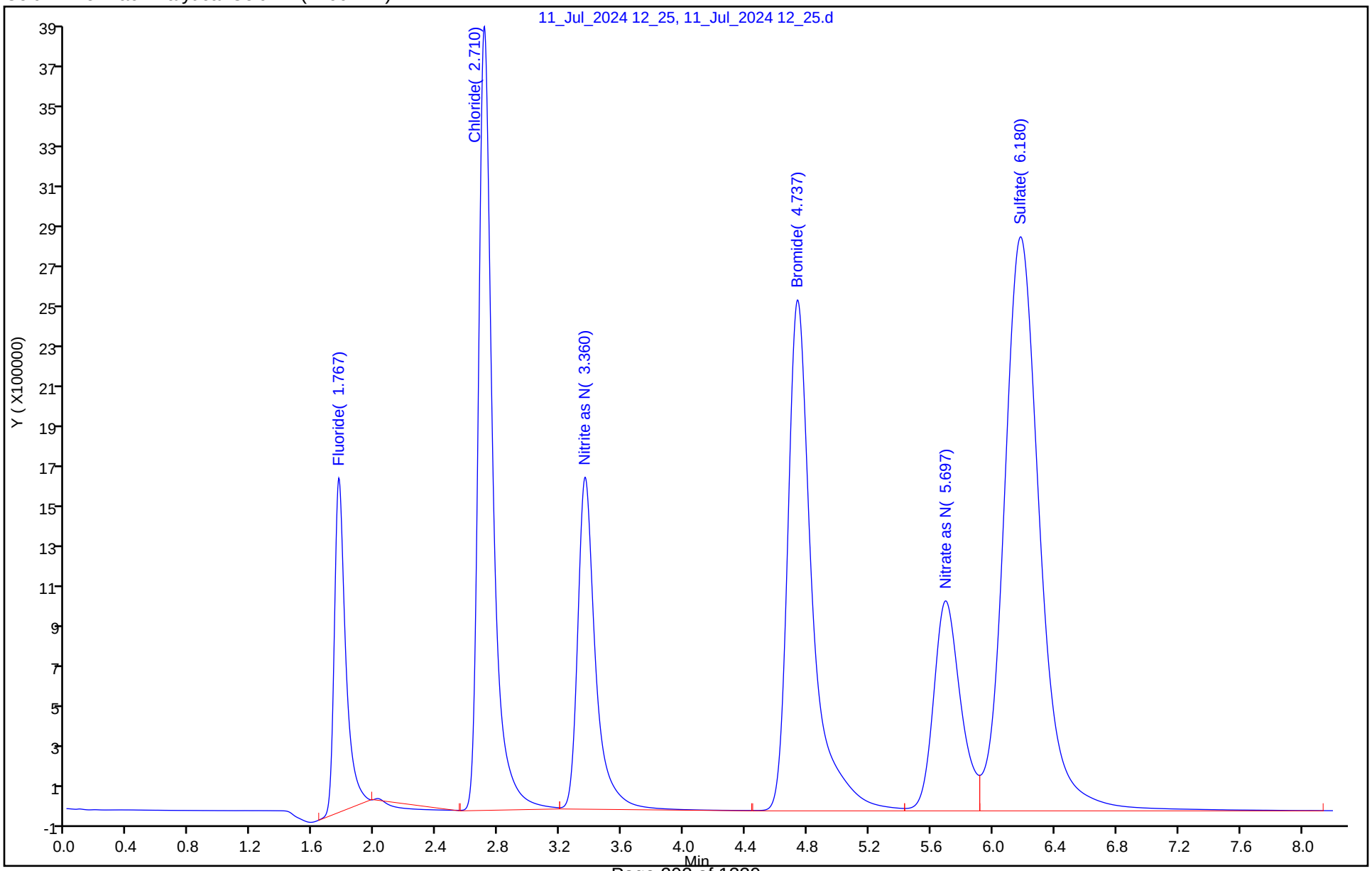
Lims ID: CCV Worklist Smp#: 42

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: Anions-D20 Limit Group: IC - 300 28D

Column: IonPac Analytical Column (4.00 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: CCV 410-526874/47 Calibration Date: 07/11/2024 13:16

Instrument ID: D20 - 3394 Calib Start Date: 06/12/2024 11:58

GC Column: IC17-AS14 ID: 4.00(mm) Calib End Date: 06/12/2024 12:59

Lab File ID: 11_Jul_2024 13_16.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin1		10906423		0.654	0.750	-12.8*	10.0
Chloride	Lin1		8204420		2.90	3.00	-3.3	10.0
Bromide	Lin1		3647394		8.24	7.50	9.9	10.0
Sulfate	Lin1		6025691		7.95	7.50	6.0	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: CCV 410-526874/47
Calibration Date: 07/11/2024 13:16

Instrument ID: D20 - 3394
Calib Start Date: 06/12/2024 11:58

GC Column: IC17-AS14 ID: 4.00(mm)
Calib End Date: 06/12/2024 12:59

Lab File ID: 11_Jul_2024 13_16.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	1.77	1.52	2.02
Chloride	2.71	2.46	2.96
Bromide	4.74	4.49	4.99
Sulfate	6.18	5.28	7.08

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 13_16.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 11-Jul-2024 13:16:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: Instrument ID: D20 - 3394
Sublist: chrom-Anions-D20*sub1

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:36:29 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:36:16

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	Fluoride	1.767	1.767	0.000	8179817	0.7500	0.6541	
2	Chloride	2.710	2.710	0.000	24613259	3.00	2.90	
3	Nitrite as N	3.363	3.363	0.000	12967681	NC	NC	
4	Bromide	4.740	4.740	0.000	27355457	7.50	8.24	M
5	Nitrate as N	5.697	5.697	0.000	12459353	NC	NC	M
6	Sulfate	6.183	6.183	0.000	45192680	7.50	7.95	M
S 7	Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

WC_IC_QC2_01138 Amount Added: 7.50 Units: mL

Report Date: 11-Jul-2024 15:36:29 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 13_16.d

Injection Date: 11-Jul-2024 13:16:00 Instrument ID: D20 - 3394 Operator ID:

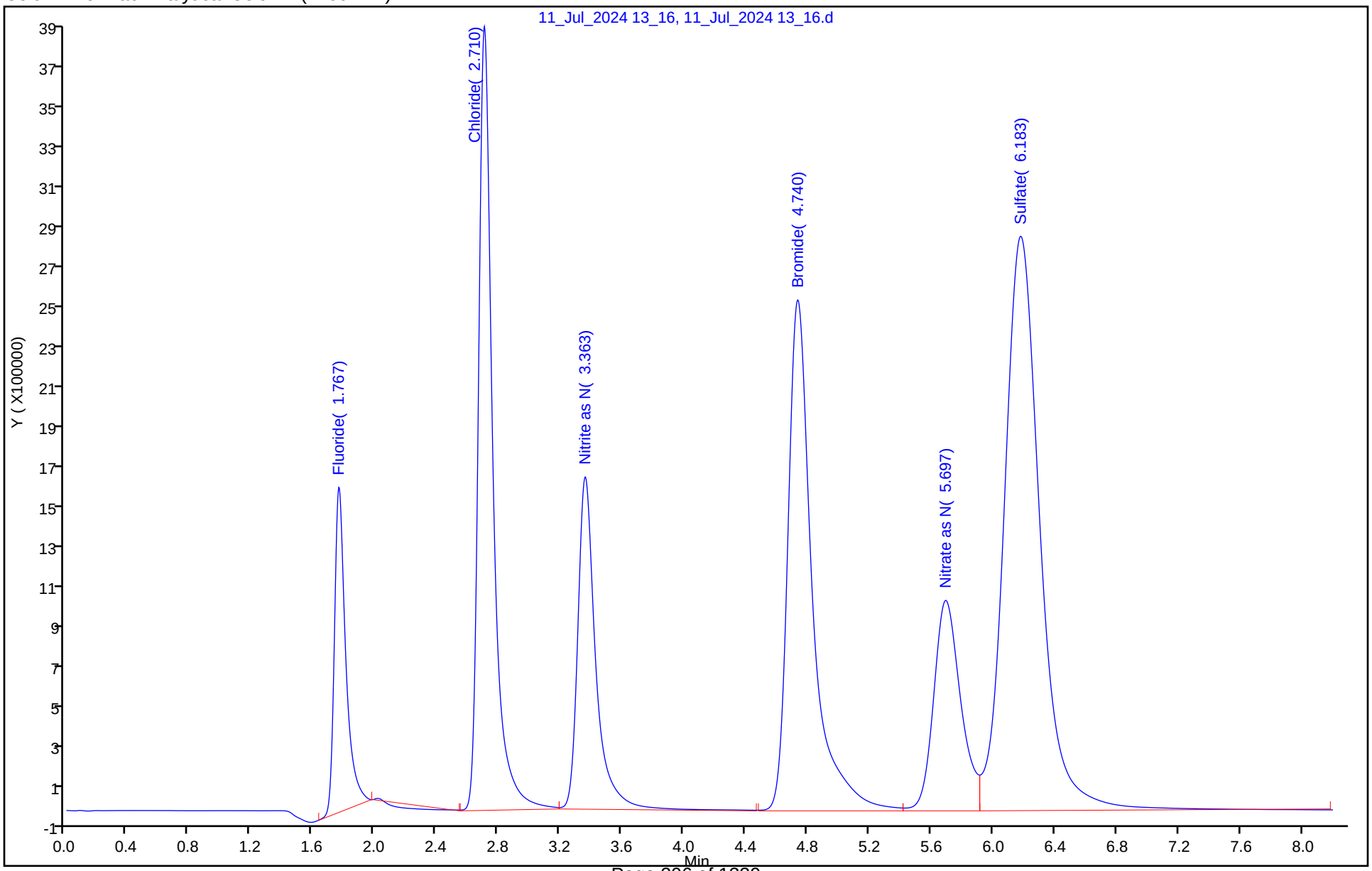
Lims ID: CCV Worklist Smp#: 47

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: Anions-D20 Limit Group: IC - 300 28D

Column: IonPac Analytical Column (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID:
Lab Sample ID: MB 410-526874/5

Matrix: Water
Lab File ID: 11_Jul_2024 06_07.d

Analysis Method: 300.0
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 07/11/2024 06:07

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 526874
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14808-79-8	Sulfate	1.0	U M	1.5	1.0	0.50
16887-00-6	Chloride	1.2	U	1.5	1.2	0.60

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 06_07.d
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 11-Jul-2024 06:07:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: MB
Operator ID: Instrument ID: D20 - 3394

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:11:41 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:04:38

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Fluoride	1.773	1.767	0.006	219912		0.0758	
	2 Chloride	2.550	2.710	-0.160	73665		-0.0389	
	3 Nitrite as N	3.363	3.363	0.000	64215		NC	
	4 Bromide		4.740				ND	U
	5 Nitrate as N		5.697				ND	
	6 Sulfate	6.227	6.183	0.044	15865		0.3449	M
S	7 Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

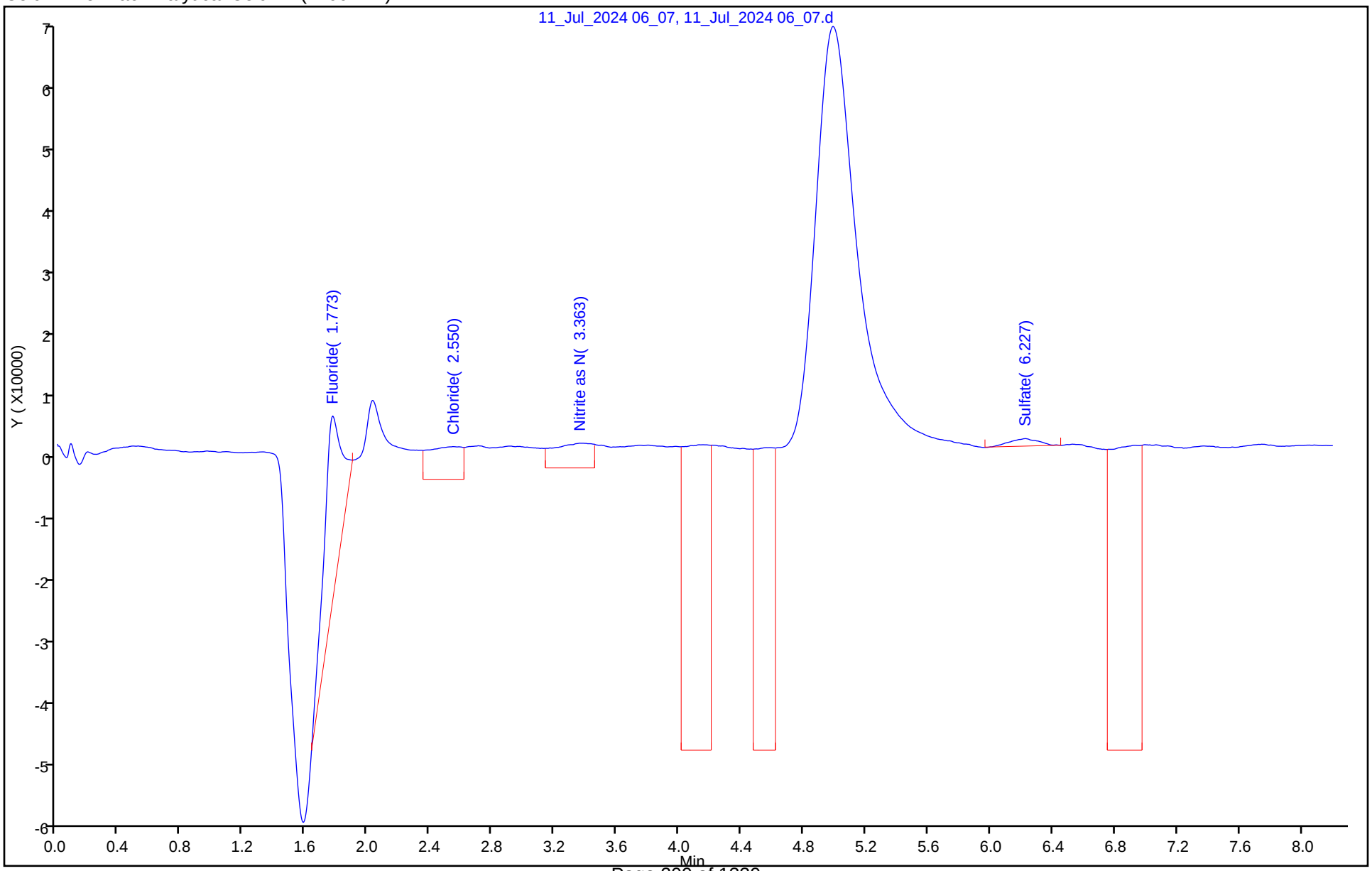
Report Date: 11-Jul-2024 15:11:44 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 06_07.d

Injection Date:	11-Jul-2024 06:07:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	MB			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

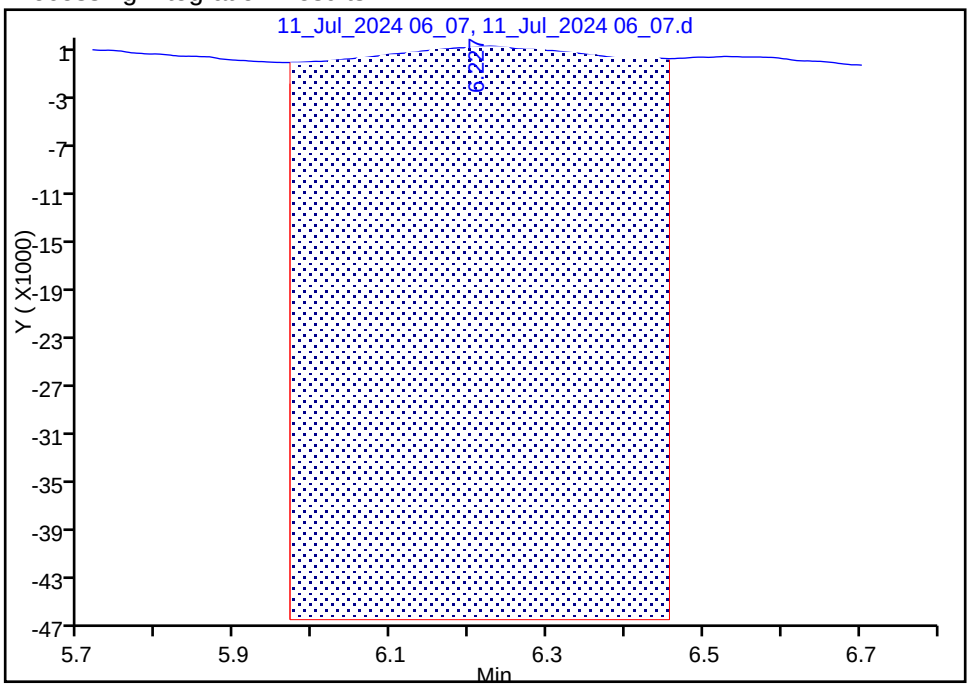
Data File:	\\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 06_07.d				
Injection Date:	11-Jul-2024 06:07:00	Instrument ID:	D20 - 3394		
Lims ID:	MB				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Anions-D20	Limit Group:	IC - 300 28D		
Column:	IonPac Analytical Column (4.00 mm)	Detector	det0		

6 Sulfate, CAS: 14808-79-8

Signal: 1

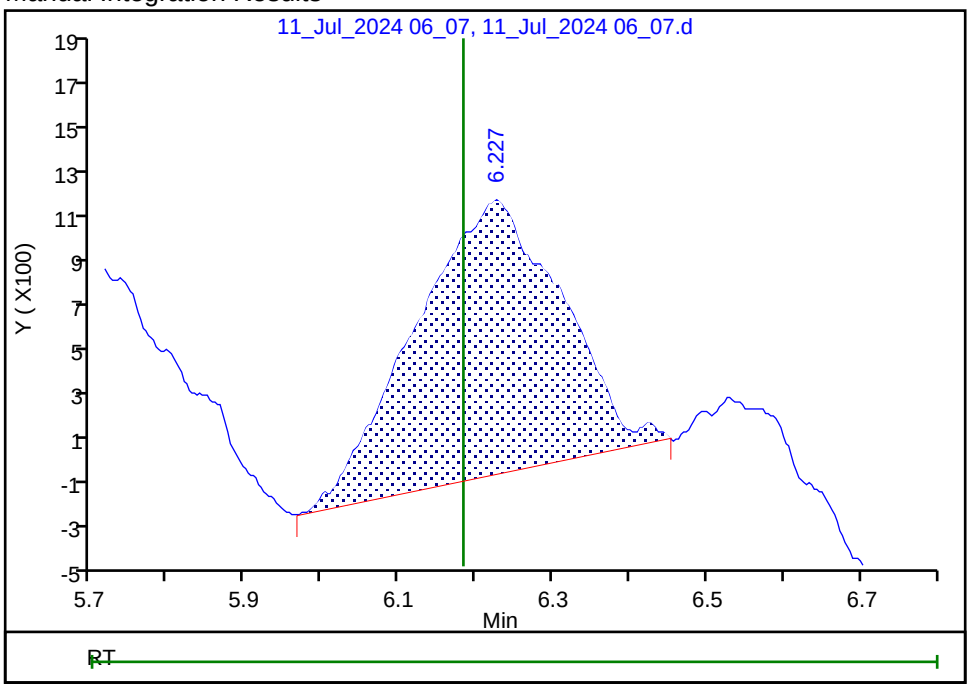
Processing Integration Results

RT: 6.23
Area: 1377934
Amount: 0.574123
Amount Units: ug/ml



Manual Integration Results

RT: 6.23
Area: 15865
Amount: 0.344878
Amount Units: ug/ml



Reviewer: L4QM, 11-Jul-2024 15:04:29 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID:
Lab Sample ID: CCB 410-526874/2

Matrix: Water
Lab File ID: 11_Jul_2024 05_37.d

Analysis Method: 300.0
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 07/11/2024 05:37

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 526874
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14808-79-8	Sulfate	1.0	U M	1.5	1.0	0.50
16887-00-6	Chloride	1.2	U	1.5	1.2	0.60

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 05_37.d				
Lims ID:	CCB				
Client ID:					
Sample Type:	CCB				
Inject. Date:	11-Jul-2024 05:37:00	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCB				
Operator ID:		Instrument ID:	D20 - 3394		
Method:	\\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m				
Limit Group:	IC - 300 28D				
Last Update:	11-Jul-2024 15:11:41	Calib Date:	12-Jun-2024 12:59:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d				
Column 1 :	IonPac Analytical Column (4.00 mm)		Det: det0		
Process Host:	CTX1619				
First Level Reviewer: L4QM		Date:	11-Jul-2024 15:03:33		

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Fluoride	1.777	1.767	0.010	159161		0.0714	
	2 Chloride	2.693	2.710	-0.017	91569		-0.0367	
	3 Nitrite as N		3.363				ND	
	4 Bromide	4.613	4.740	-0.127	361140		0.3097	
	5 Nitrate as N		5.697				ND	
	6 Sulfate		6.183				ND	U
S	7 Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

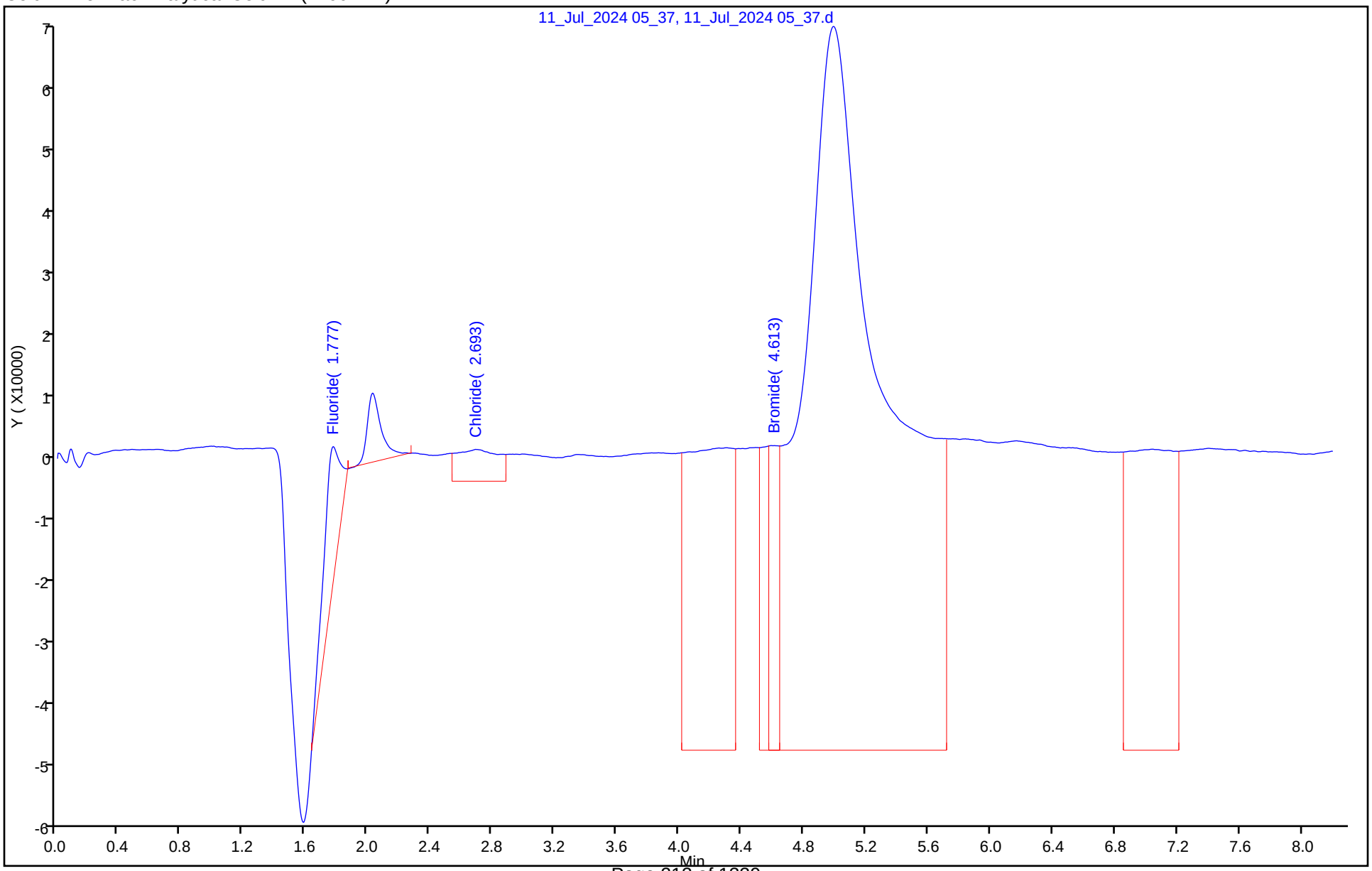
Report Date: 11-Jul-2024 15:11:42 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 05_37.d

Injection Date:	11-Jul-2024 05:37:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	CCB			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



User Disabled Compound Report

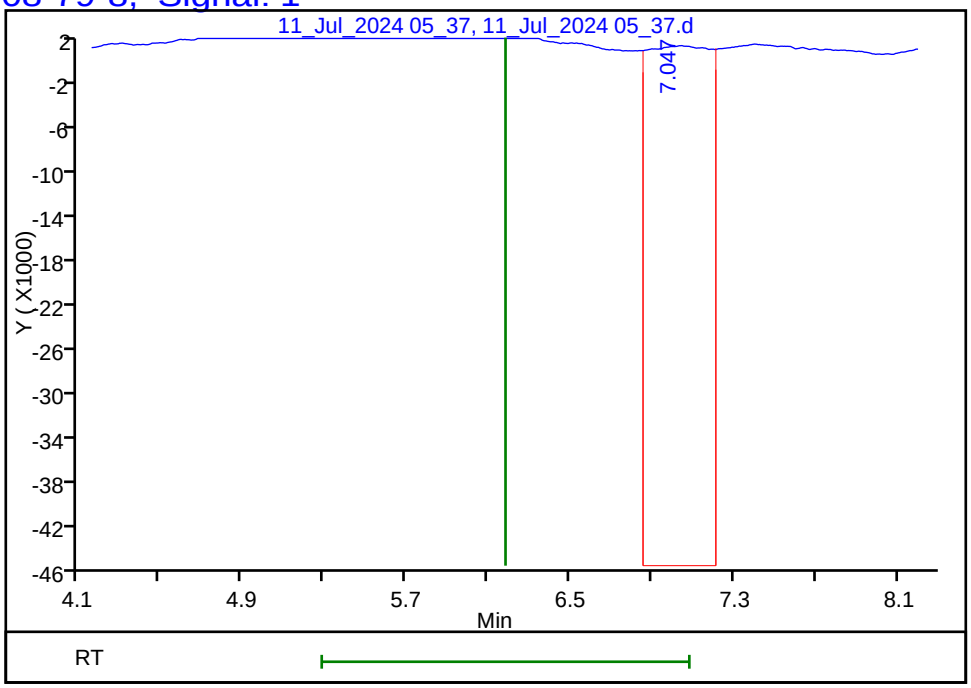
Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 05_37.d
Injection Date: 11-Jul-2024 05:37:00 Instrument ID: D20 - 3394
Lims ID: CCB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: Anions-D20 Limit Group: IC - 300 28D

Column: IonPac Analytical Column (4.00 mm) Detector det0

6 Sulfate, CAS: 14808-79-8, Signal: 1

RT: 7.05
Response: 977099
Amount: 0.506660



Reviewer: L4QM, 11-Jul-2024 15:03:33
Audit Action: Manually Integrated Audit Reason:

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID:
Lab Sample ID: CCB 410-526874/7

Matrix: Water
Lab File ID: 11_Jul_2024 06_28.d

Analysis Method: 300.0
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 07/11/2024 06:28

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 526874
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14808-79-8	Sulfate	1.0	U M	1.5	1.0	0.50
16887-00-6	Chloride	1.2	U	1.5	1.2	0.60

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 06_28.d				
Lims ID:	CCB				
Client ID:					
Sample Type:	CCB				
Inject. Date:	11-Jul-2024 06:28:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCB				
Operator ID:		Instrument ID:	D20 - 3394		
Method:	\\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m				
Limit Group:	IC - 300 28D				
Last Update:	11-Jul-2024 15:11:44	Calib Date:	12-Jun-2024 12:59:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d				
Column 1 :	IonPac Analytical Column (4.00 mm)		Det: det0		
Process Host:	CTX1619				
First Level Reviewer: L4QM		Date:	11-Jul-2024 15:05:10		

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Fluoride	1.773	1.767	0.006	223899		0.0761	
	2 Chloride	2.710	2.710	0.000	81494		-0.0379	
	3 Nitrite as N		3.363				ND	
	4 Bromide	4.560	4.740	-0.180	429952		0.3299	
	5 Nitrate as N		5.697				ND	
	6 Sulfate	6.187	6.183	0.004	22523		0.3460	M
S	7 Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

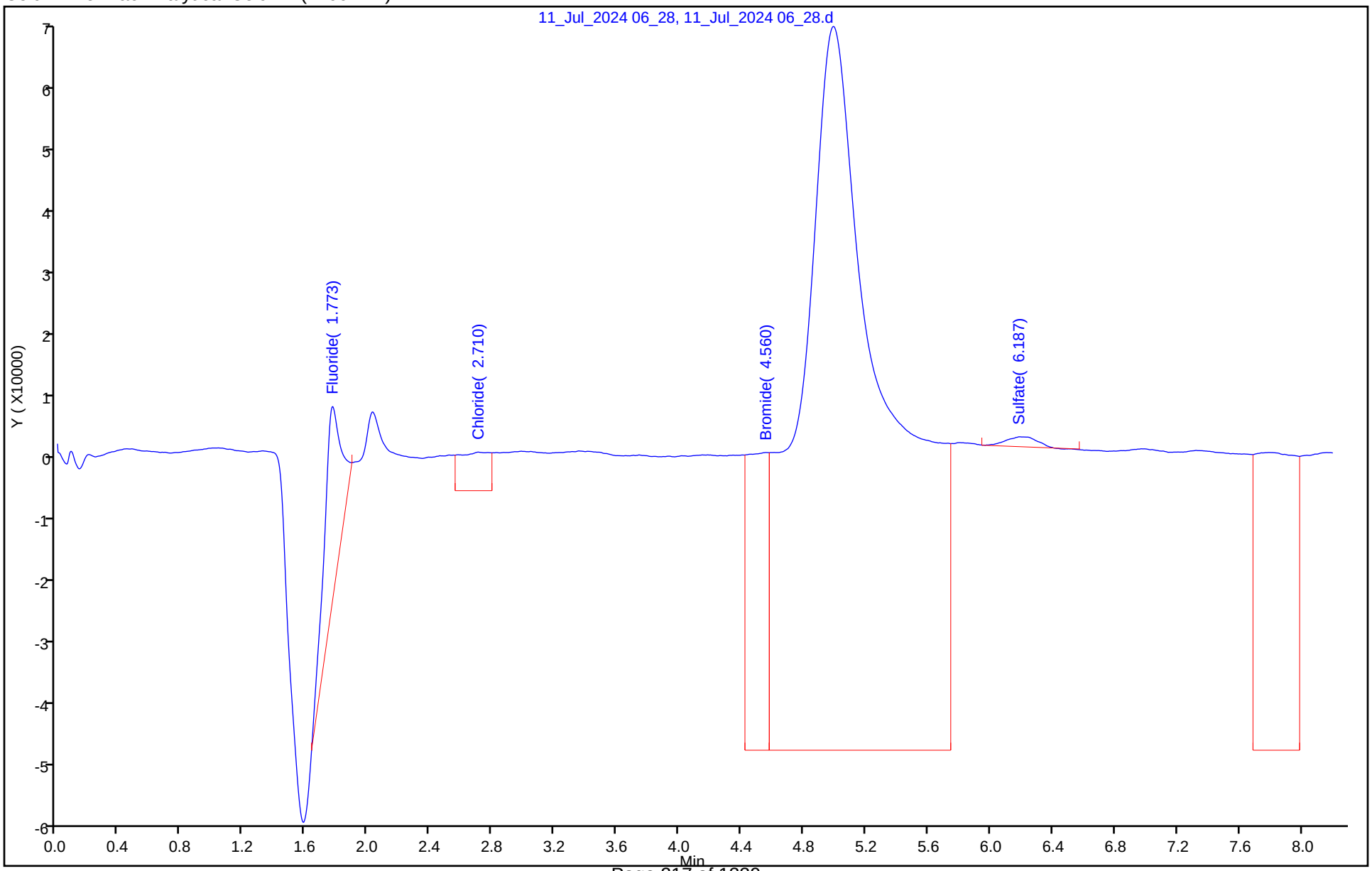
Report Date: 11-Jul-2024 15:11:45 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 06_28.d

Injection Date:	11-Jul-2024 06:28:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	CCB			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

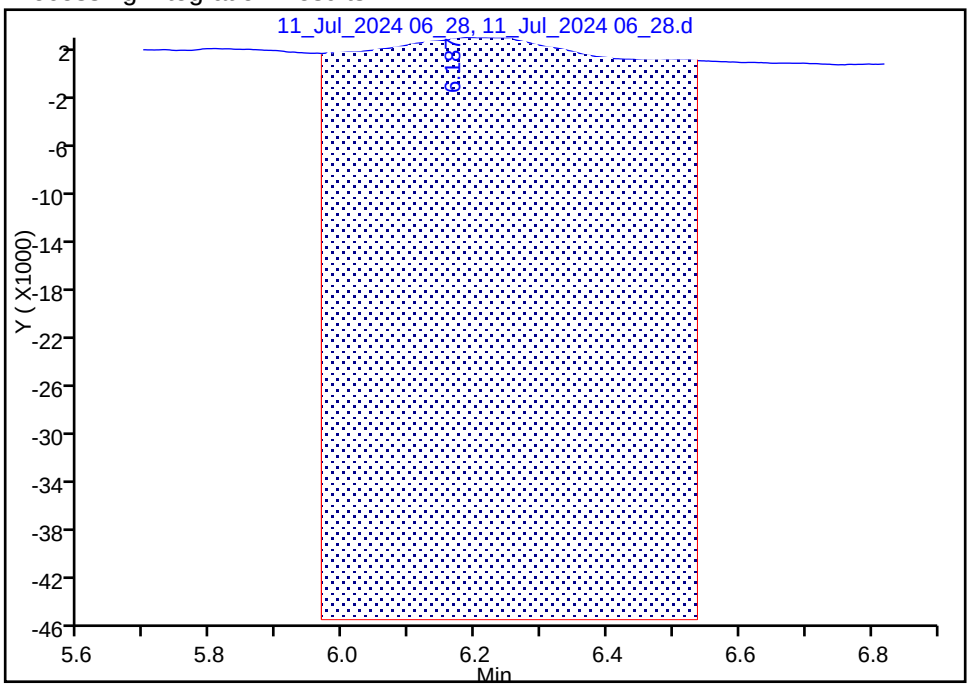
Data File:	\\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 06_28.d				
Injection Date:	11-Jul-2024 06:28:00	Instrument ID:	D20 - 3394		
Lims ID:	CCB				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Anions-D20	Limit Group:	IC - 300 28D		
Column:	IonPac Analytical Column (4.00 mm)	Detector	det0		

6 Sulfate, CAS: 14808-79-8

Signal: 1

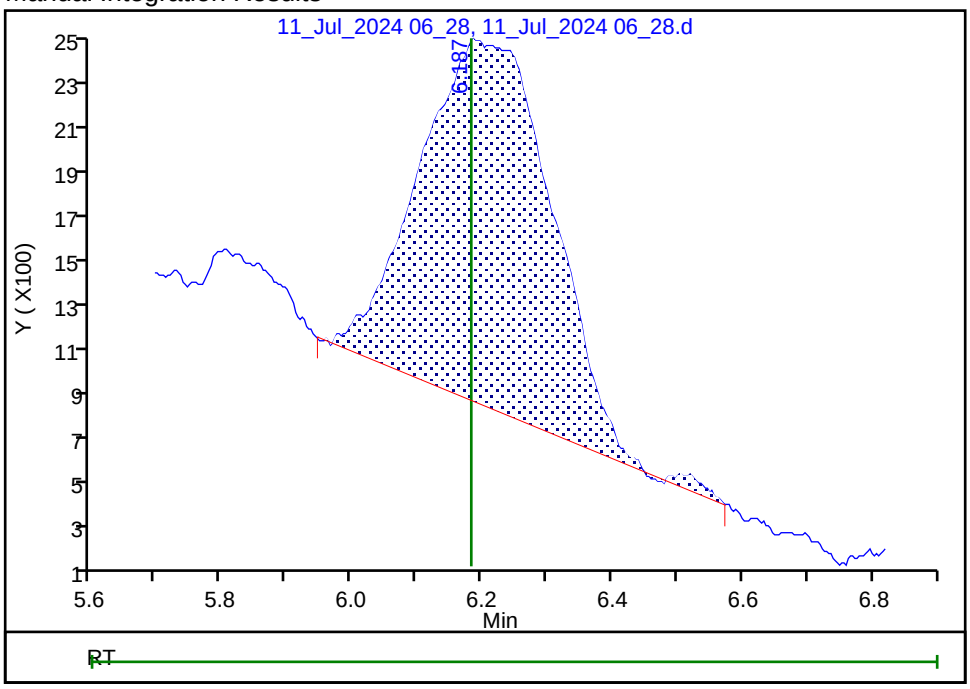
Processing Integration Results

RT: 6.19
Area: 1620101
Amount: 0.614881
Amount Units: ug/ml



Manual Integration Results

RT: 6.19
Area: 22523
Amount: 0.345998
Amount Units: ug/ml



Reviewer: L4QM, 11-Jul-2024 15:05:04 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID:
Lab Sample ID: CCB 410-526874/19

Matrix: Water
Lab File ID: 11_Jul_2024 08_30.d

Analysis Method: 300.0
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 07/11/2024 08:30

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 526874
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14808-79-8	Sulfate	1.0	U M	1.5	1.0	0.50
16887-00-6	Chloride	1.2	U	1.5	1.2	0.60

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 08_30.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 11-Jul-2024 08:30:00 ALS Bottle#: 0 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCB
Operator ID: Instrument ID: D20 - 3394

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:11:50 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:09:53

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Fluoride		1.767				ND	
	2 Chloride	2.703	2.710	-0.007	103342		-0.0353	
	3 Nitrite as N	3.360	3.363	-0.003	68801		NC	
	4 Bromide		4.740				ND	
	5 Nitrate as N		5.697				ND	
	6 Sulfate		6.183				ND	U
S	7 Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

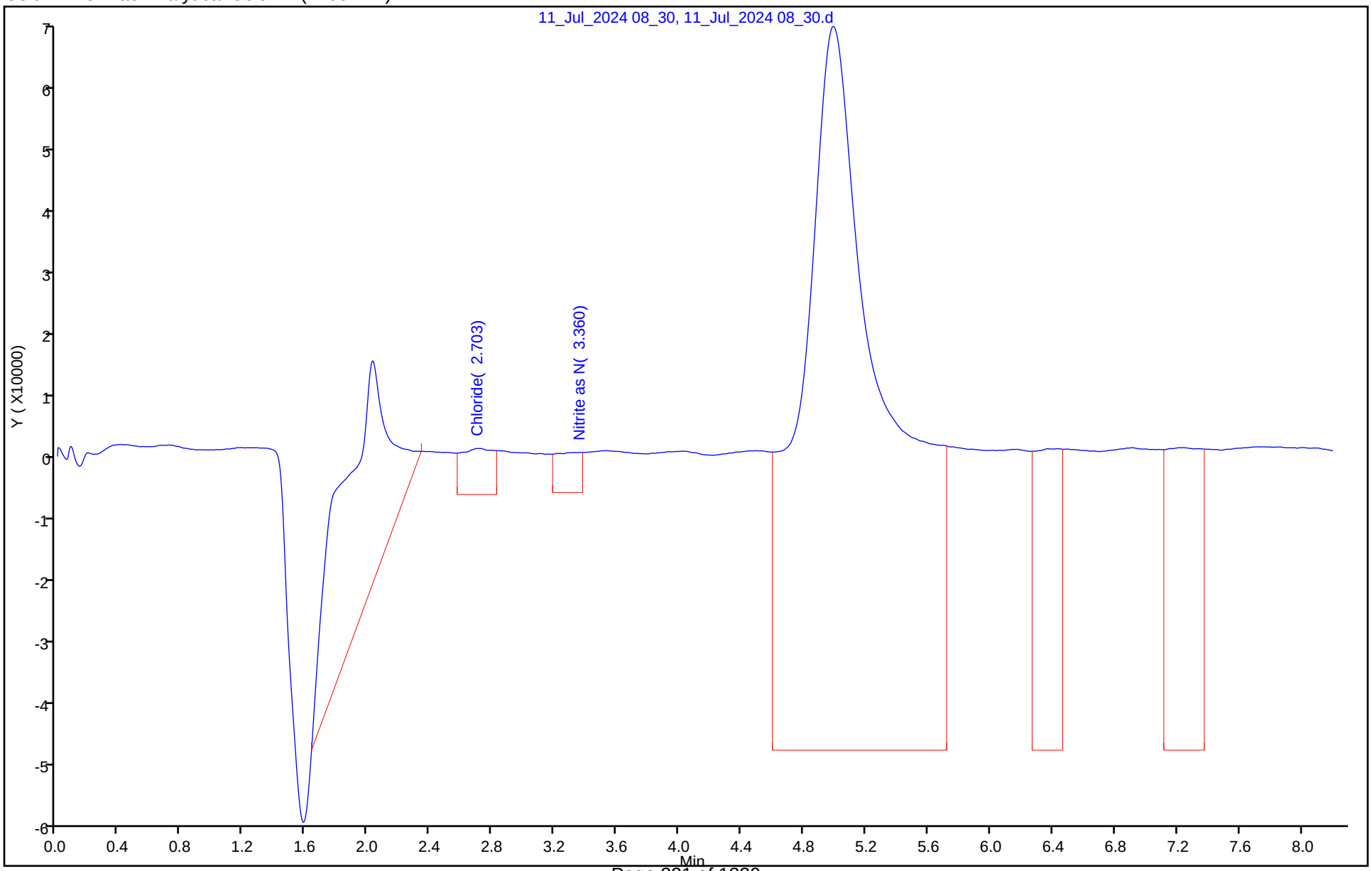
Report Date: 11-Jul-2024 15:11:51 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 08_30.d

Injection Date:	11-Jul-2024 08:30:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	CCB			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



User Disabled Compound Report

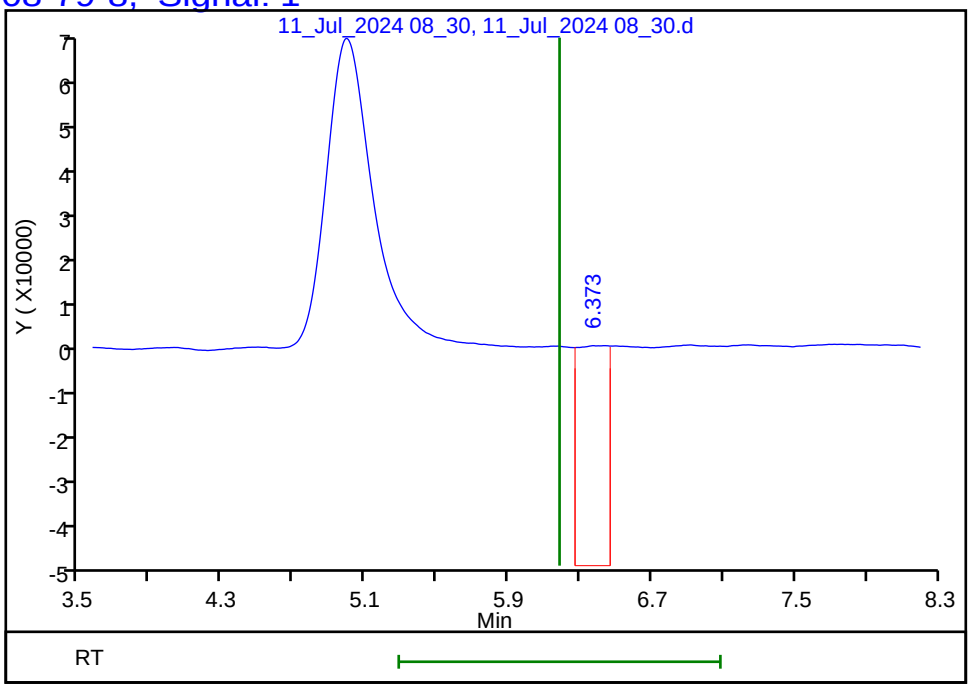
Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 08_30.d
Injection Date: 11-Jul-2024 08:30:00 Instrument ID: D20 - 3394
Lims ID: CCB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: Anions-D20 Limit Group: IC - 300 28D

Column: IonPac Analytical Column (4.00 mm) Detector det0

6 Sulfate, CAS: 14808-79-8, Signal: 1

RT: 6.37
Response: 543001
Amount: 0.433598



Reviewer: L4QM, 11-Jul-2024 15:09:53
Audit Action: Manually Integrated Audit Reason:

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID:
Lab Sample ID: CCB 410-526874/31

Matrix: Water
Lab File ID: 11_Jul_2024 10_33.d

Analysis Method: 300.0
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 07/11/2024 10:33

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 526874
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14808-79-8	Sulfate	1.0	U	1.5	1.0	0.50
16887-00-6	Chloride	1.2	U	1.5	1.2	0.60

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 10_33.d				
Lims ID:	CCB				
Client ID:					
Sample Type:	CCB				
Inject. Date:	11-Jul-2024 10:33:00	ALS Bottle#:	0	Worklist Smp#:	31
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCB				
Operator ID:		Instrument ID:	D20 - 3394		
Method:	\\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m				
Limit Group:	IC - 300 28D				
Last Update:	11-Jul-2024 15:24:22	Calib Date:	12-Jun-2024 12:59:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d				
Column 1 :	IonPac Analytical Column (4.00 mm)		Det: det0		
Process Host:	CTX1619				

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Fluoride		1.767				ND	
	2 Chloride		2.710				ND	
	3 Nitrite as N		3.363				ND	
	4 Bromide	4.530	4.740	-0.210	879011		0.4619	
	5 Nitrate as N		5.697				ND	
	6 Sulfate		6.183				ND	
S	7 Nitrate Nitrite as N		0.000				ND	

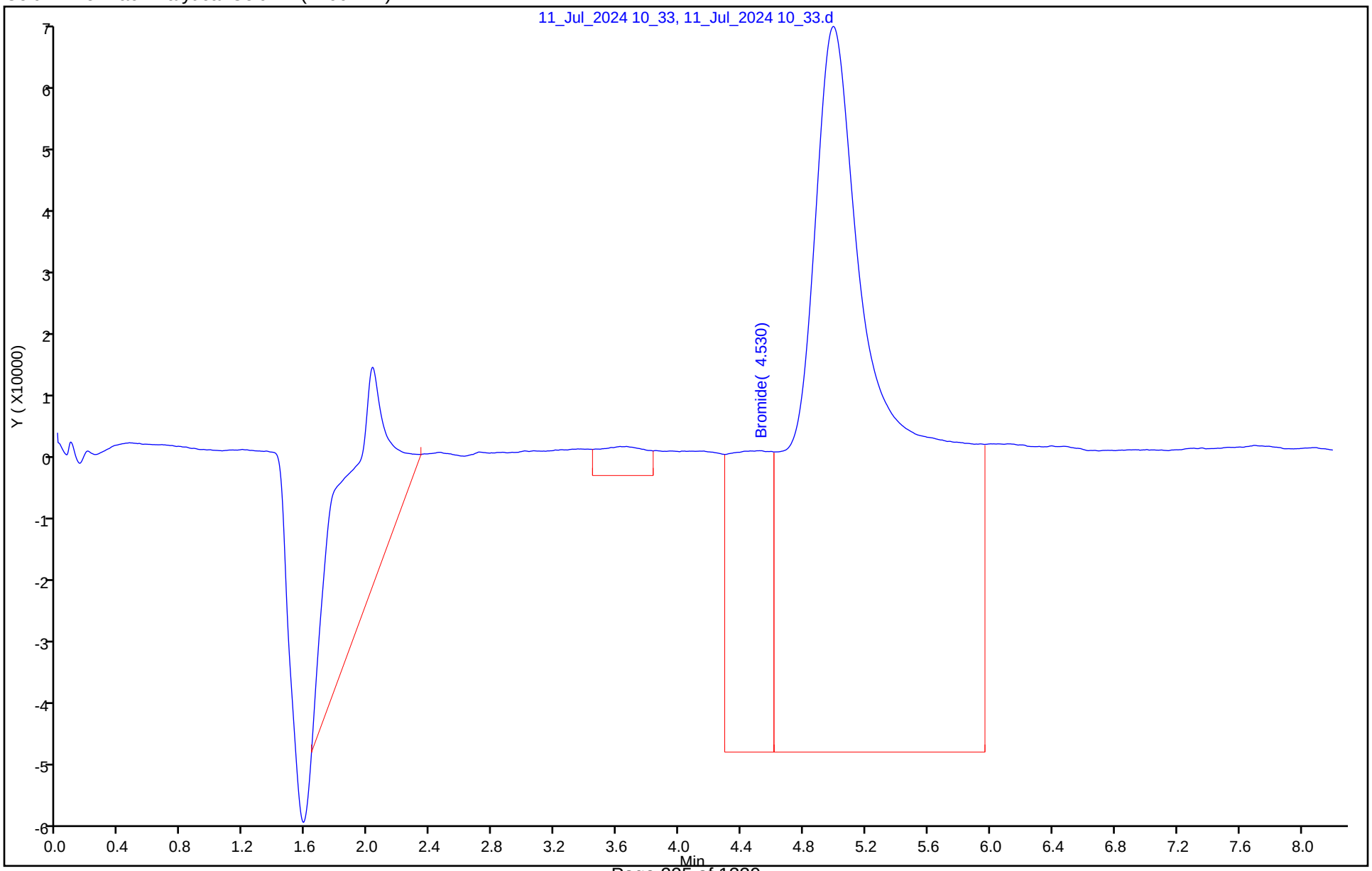
Report Date: 11-Jul-2024 15:24:23 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 10_33.d

Injection Date:	11-Jul-2024 10:33:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	CCB			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID:
Lab Sample ID: CCB 410-526874/43

Matrix: Water
Lab File ID: 11_Jul_2024 12_35.d

Analysis Method: 300.0
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 07/11/2024 12:35

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 526874
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14808-79-8	Sulfate	1.0	U M	1.5	1.0	0.50
16887-00-6	Chloride	1.2	U	1.5	1.2	0.60

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 12_35.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 11-Jul-2024 12:35:00 ALS Bottle#: 0 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCB
Operator ID: Instrument ID: D20 - 3394

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:36:25 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:34:36

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	Fluoride	1.773	1.767	0.006	255838		0.0785	
2	Chloride	2.837	2.710	0.127	270504		-0.0153	
3	Nitrite as N		3.363				ND	
4	Bromide		4.740				ND	U
5	Nitrate as N		5.697				ND	
6	Sulfate		6.183				ND	U
S 7	Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

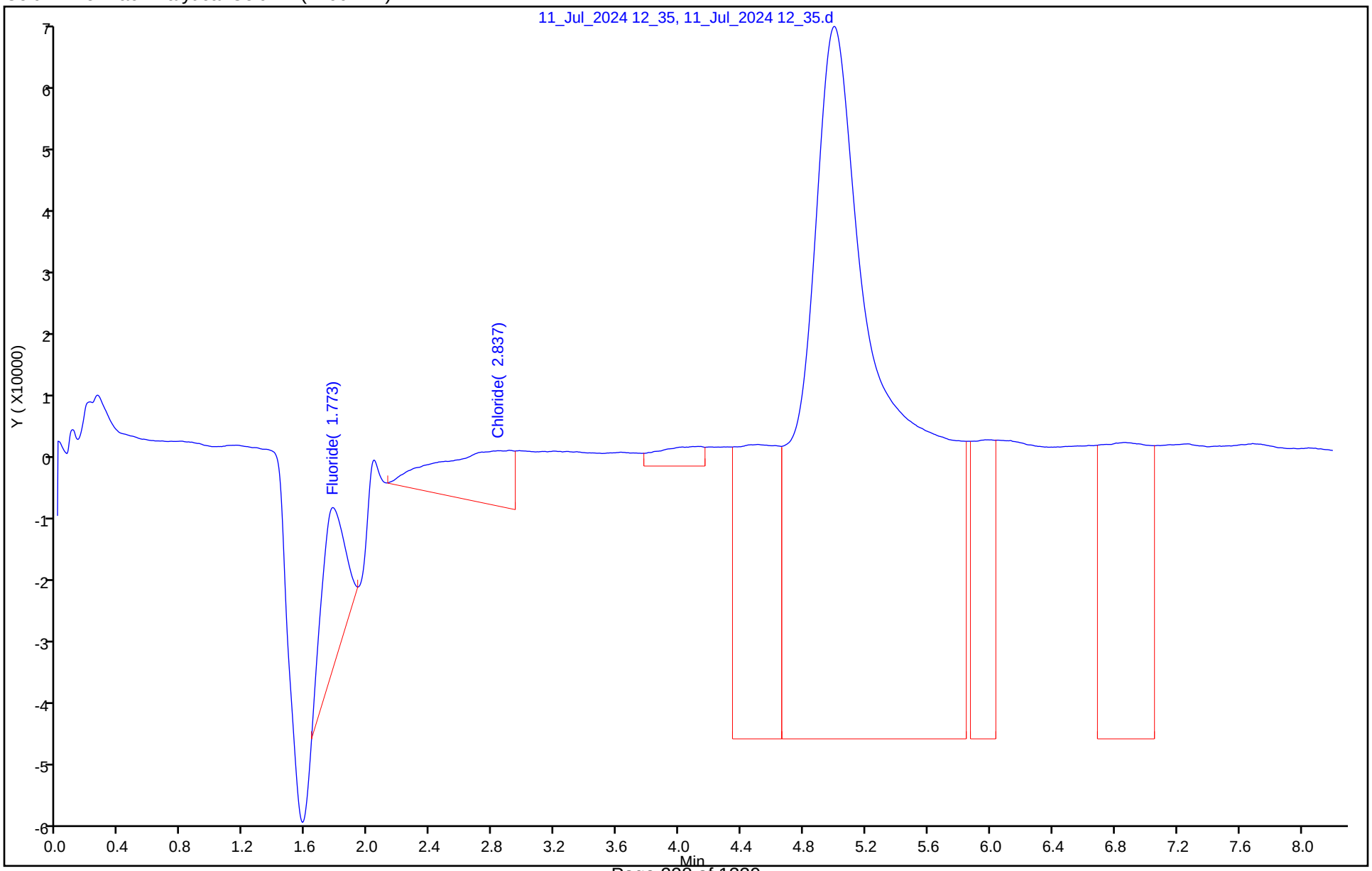
Report Date: 11-Jul-2024 15:36:26 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 12_35.d

Injection Date:	11-Jul-2024 12:35:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	CCB			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



User Disabled Compound Report

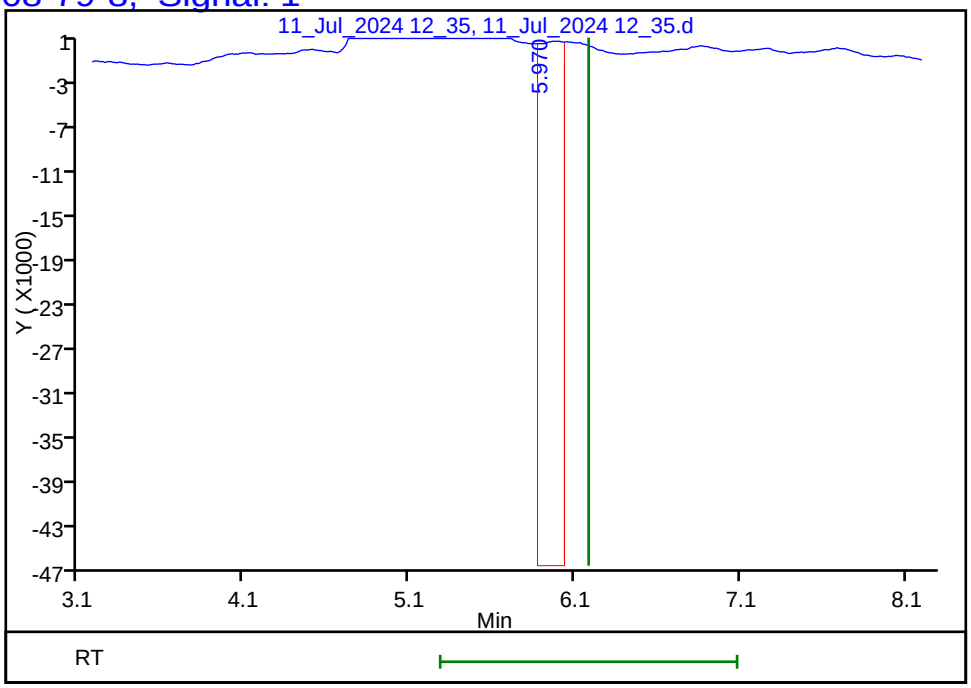
Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 12_35.d
Injection Date: 11-Jul-2024 12:35:00 Instrument ID: D20 - 3394
Lims ID: CCB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: Anions-D20 Limit Group: IC - 300 28D

Column: IonPac Analytical Column (4.00 mm) Detector det0

6 Sulfate, CAS: 14808-79-8, Signal: 1

RT: 5.97
Response: 456836
Amount: 0.419096



Reviewer: L4QM, 11-Jul-2024 15:34:36
Audit Action: Manually Integrated Audit Reason:

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID:
Lab Sample ID: CCB 410-526874/48

Matrix: Water
Lab File ID: 11_Jul_2024 13_26.d

Analysis Method: 300.0
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 07/11/2024 13:26

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 526874
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14808-79-8	Sulfate	1.0	U M	1.5	1.0	0.50
16887-00-6	Chloride	1.2	U	1.5	1.2	0.60

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 13_26.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 11-Jul-2024 13:26:00 ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCB
Operator ID: Instrument ID: D20 - 3394

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:36:29 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:36:21

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	Fluoride		1.767				ND	
2	Chloride		2.710				ND	
3	Nitrite as N	3.357	3.363	-0.006	64814		NC	
4	Bromide		4.740				ND	
5	Nitrate as N		5.697				ND	
6	Sulfate		6.183				ND	U
S 7	Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

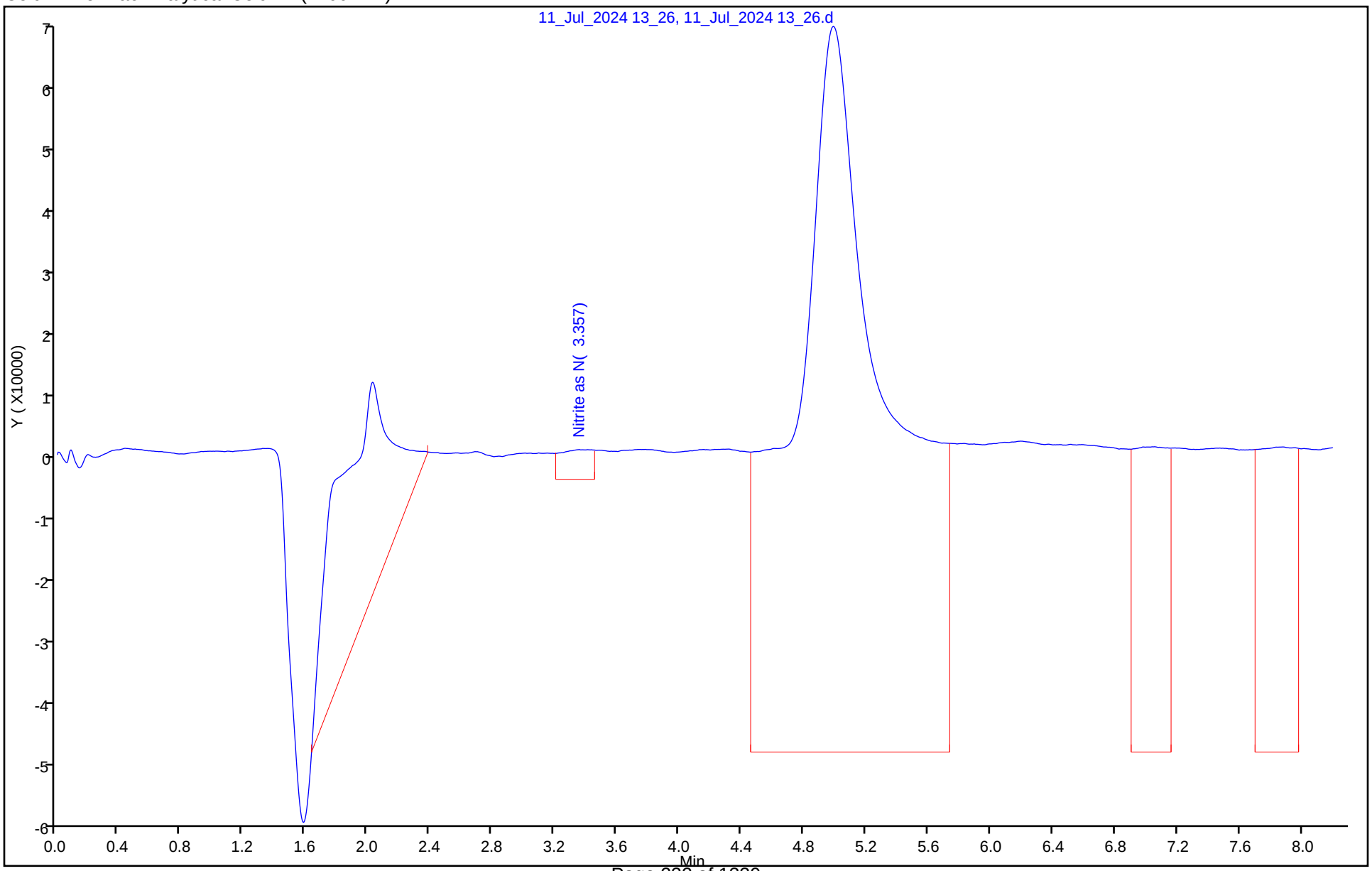
Report Date: 11-Jul-2024 15:36:30 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 13_26.d

Injection Date:	11-Jul-2024 13:26:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	CCB			Worklist Smp#:	48
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



User Disabled Compound Report

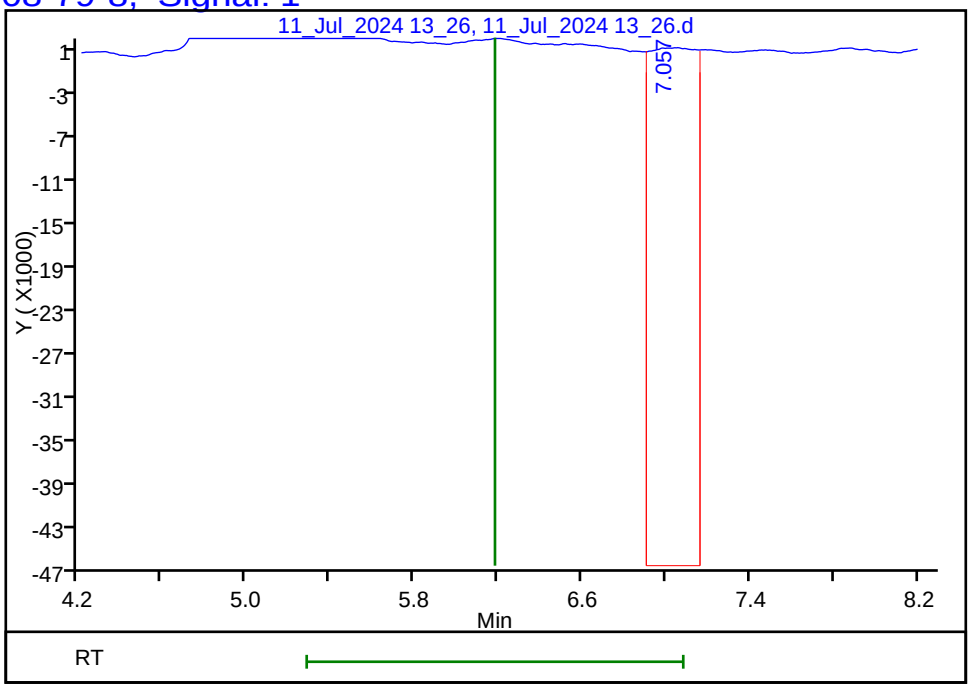
Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 13_26.d
Injection Date: 11-Jul-2024 13:26:00 Instrument ID: D20 - 3394
Lims ID: CCB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: Anions-D20 Limit Group: IC - 300 28D

Column: IonPac Analytical Column (4.00 mm) Detector det0

6 Sulfate, CAS: 14808-79-8, Signal: 1

RT: 7.06
Response: 730248
Amount: 0.465113



Reviewer: L4QM, 11-Jul-2024 15:36:21
Audit Action: Manually Integrated Audit Reason:

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID:
Lab Sample ID: ICB 410-516687/8

Matrix: Water
Lab File ID: 12_Jun_2024 13_23.d

Analysis Method: 300.0
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 06/12/2024 13:23

Con. Extract Vol.: 1.0(mL)
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 516687
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14808-79-8	Sulfate	1.0	U	1.5	1.0	0.50
16887-00-6	Chloride	1.2	U	1.5	1.2	0.60

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 13_23.d				
Lims ID:	ICB				
Client ID:					
Sample Type:	ICB				
Inject. Date:	12-Jun-2024 13:23:00	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	ICB				
Operator ID:		Instrument ID:	D20 - 3394		
Method:	\\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\Anions-D20.m				
Limit Group:	IC - 300 28D				
Last Update:	13-Jun-2024 16:39:02	Calib Date:	12-Jun-2024 12:59:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d				
Column 1 :	IonPac Analytical Column (4.00 mm)		Det: det0		
Process Host:	CTX1672				
First Level Reviewer: L4QM		Date:	13-Jun-2024 16:39:02		

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	Fluoride	1.780	1.777	0.003	396257		0.0887	M
2	Chloride	2.753	2.753	0.000	307479		-0.0108	
3	Nitrite as N		3.433				ND	
4	Bromide		4.867				ND	
5	Nitrate as N		5.873				ND	
6	Sulfate	6.480	6.443	0.037	148203		0.3672	
S 7	Nitrate Nitrite as N		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

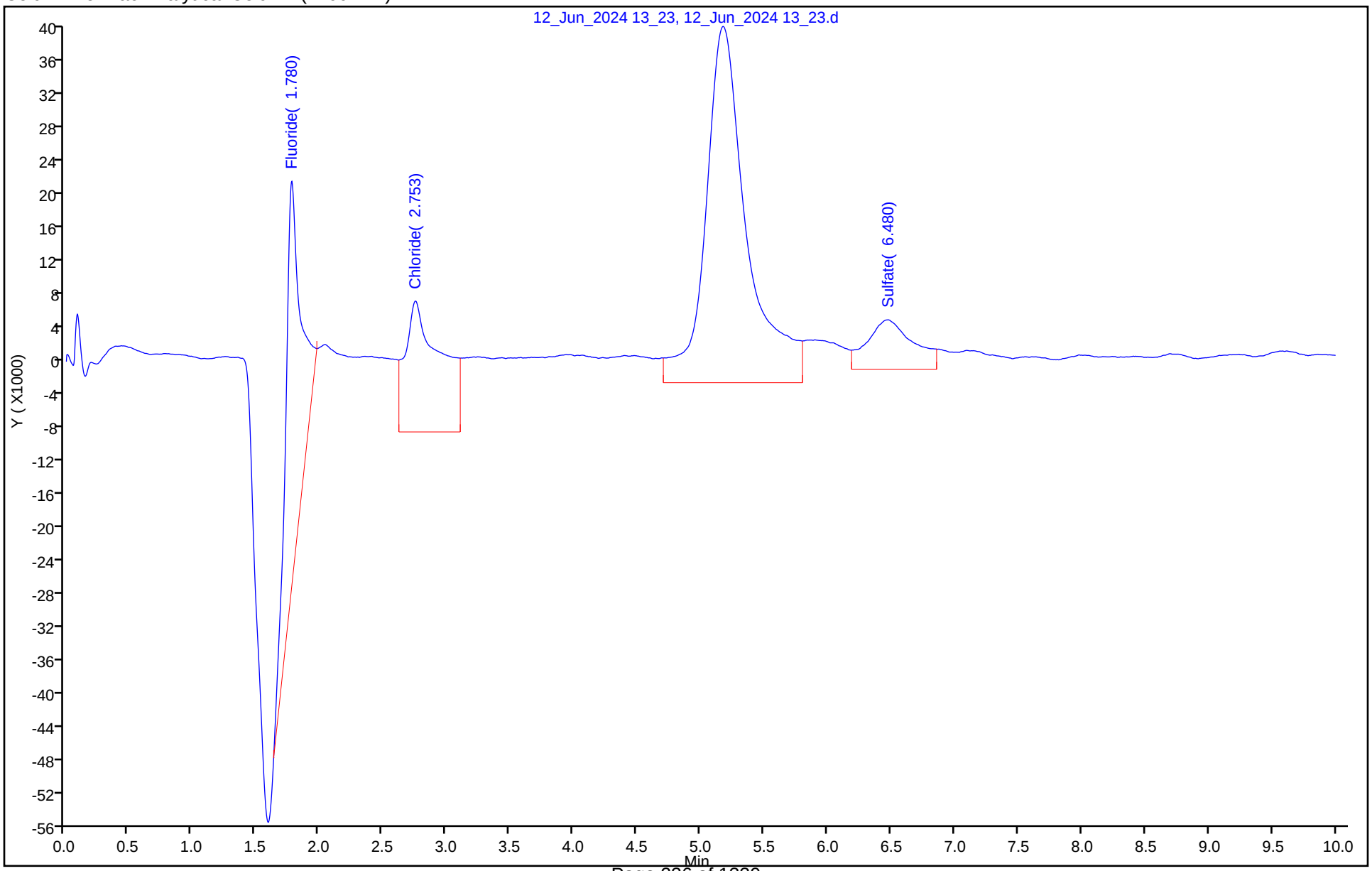
Report Date: 13-Jun-2024 16:39:08 Chrom Revision: 2.3 03-Jun-2024 20:58:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 13_23.d

Injection Date:	12-Jun-2024 13:23:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	ICB			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID:
Lab Sample ID: LCS 410-526874/3

Matrix: Water
Lab File ID: 11_Jul_2024 05_47.d

Analysis Method: 300.0
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 07/11/2024 05:47

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 526874
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14808-79-8	Sulfate	7.92	M	1.5	1.0	0.50
16887-00-6	Chloride	2.90		1.5	1.2	0.60

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 05_47.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 11-Jul-2024 05:47:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: Instrument ID: D20 - 3394

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:11:41 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:03:57

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.767	1.767	0.000	7635428	0.7500	0.6146	
2 Chloride	2.710	2.710	0.000	24586628	3.00	2.90	
3 Nitrite as N	3.363	3.363	0.000	12946136	NC	NC	
4 Bromide	4.737	4.740	-0.003	27280285	7.50	8.22	M
5 Nitrate as N	5.697	5.697	0.000	12372421	NC	NC	M
6 Sulfate	6.183	6.183	0.000	44998754	7.50	7.92	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

WC_IC_QC2_01138 Amount Added: 7.50 Units: mL

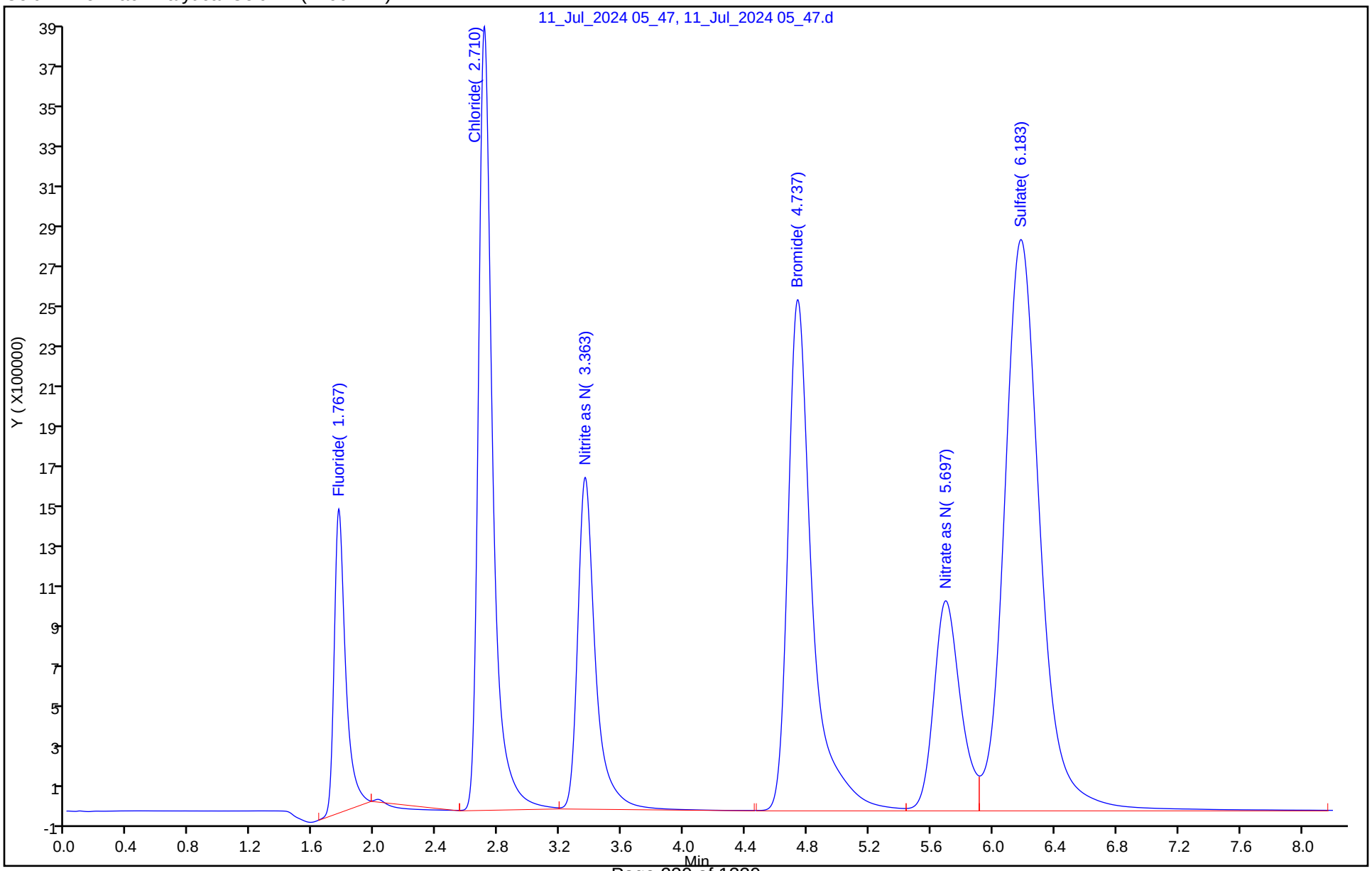
Report Date: 11-Jul-2024 15:11:42 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 05_47.d

Injection Date:	11-Jul-2024 05:47:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	LCS			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Client Sample ID:
Lab Sample ID: LCSD 410-526874/4

Matrix: Water
Lab File ID: 11_Jul_2024 05_57.d

Analysis Method: 300.0
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 07/11/2024 05:57

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 1(uL)
GC Column: IC17-AS14 ID: 4(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 526874
Units: mg/L

Preparation Batch No.:
Instrument ID: IC - D20

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14808-79-8	Sulfate	7.89	M	1.5	1.0	0.50
16887-00-6	Chloride	2.91		1.5	1.2	0.60

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 05_57.d
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 11-Jul-2024 05:57:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCSD
Operator ID: Instrument ID: D20 - 3394

Method: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\Anions-D20.m
Limit Group: IC - 300 28D
Last Update: 11-Jul-2024 15:11:41 Calib Date: 12-Jun-2024 12:59:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\D20-3394\20240612-116498.b\12_Jun_2024 12_59.d

Column 1 : IonPac Analytical Column (4.00 mm) Det: det0
Process Host: CTX1619

First Level Reviewer: L4QM Date: 11-Jul-2024 15:04:23

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	1.763	1.767	-0.004	7677617	0.7500	0.6176	
2 Chloride	2.710	2.710	0.000	24672998	3.00	2.91	
3 Nitrite as N	3.363	3.363	0.000	13056502	NC	NC	
4 Bromide	4.737	4.740	-0.003	27361656	7.50	8.25	M
5 Nitrate as N	5.697	5.697	0.000	12448656	NC	NC	M
6 Sulfate	6.190	6.183	0.007	44837421	7.50	7.89	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

WC_IC_QC2_01138 Amount Added: 7.50 Units: mL

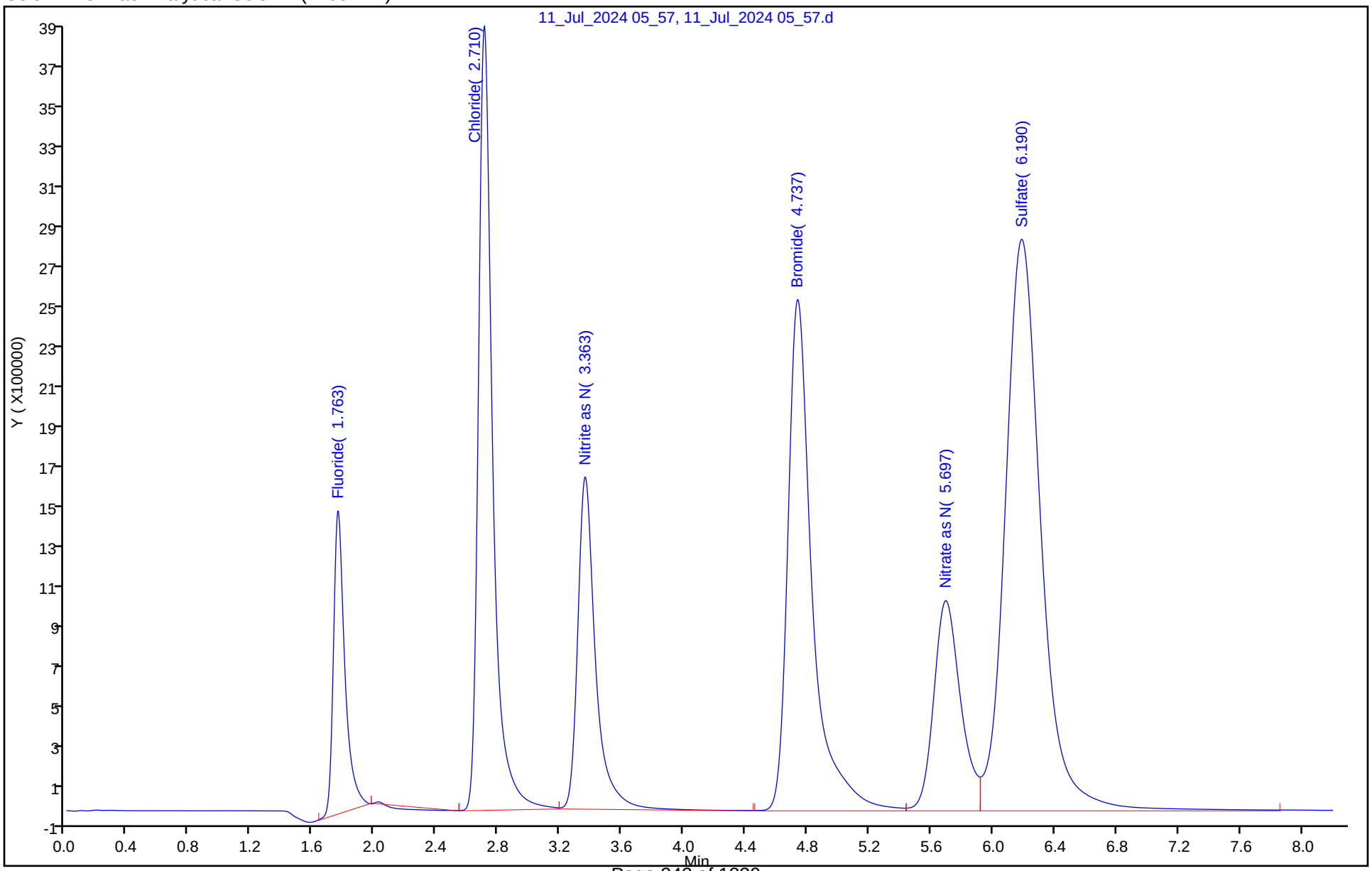
Report Date: 11-Jul-2024 15:11:43 Chrom Revision: 2.3 26-Jun-2024 16:13:32

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\D20-3394\20240710-119025.b\11_Jul_2024 05_57.d

Injection Date:	11-Jul-2024 05:57:00	Instrument ID:	D20 - 3394	Operator ID:	
Lims ID:	LCSD			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions-D20	Limit Group:	IC - 300 28D		

Column: IonPac Analytical Column (4.00 mm)



HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: D20 - 3394 Start Date: 06/12/2024 11:58

Analysis Batch Number: 516687 End Date: 06/12/2024 13:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 410-516687/1		06/12/2024 11:58	1		IC17-AS14 4(mm)
IC 410-516687/2		06/12/2024 12:10	1	12_Jun_2024 12_10.d	IC17-AS14 4(mm)
IC 410-516687/3		06/12/2024 12:23	1	12_Jun_2024 12_23.d	IC17-AS14 4(mm)
IC 410-516687/4		06/12/2024 12:35	1	12_Jun_2024 12_35.d	IC17-AS14 4(mm)
IC 410-516687/5		06/12/2024 12:47	1	12_Jun_2024 12_47.d	IC17-AS14 4(mm)
IC 410-516687/6		06/12/2024 12:59	1	12_Jun_2024 12_59.d	IC17-AS14 4(mm)
ICV 410-516687/7		06/12/2024 13:11	1	12_Jun_2024 13_11.d	IC17-AS14 4(mm)
ICB 410-516687/8		06/12/2024 13:23	1	12_Jun_2024 13_23.d	IC17-AS14 4(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: D20 - 3394 Start Date: 07/11/2024 05:27

Analysis Batch Number: 526874 End Date: 07/11/2024 13:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 410-526874/1		07/11/2024 05:27	1	11_Jul_2024 05_27.d	IC17-AS14 4(mm)
CCB 410-526874/2		07/11/2024 05:37	1	11_Jul_2024 05_37.d	IC17-AS14 4(mm)
LCS 410-526874/3		07/11/2024 05:47	1	11_Jul_2024 05_47.d	IC17-AS14 4(mm)
LCSD 410-526874/4		07/11/2024 05:57	1	11_Jul_2024 05_57.d	IC17-AS14 4(mm)
MB 410-526874/5		07/11/2024 06:07	1	11_Jul_2024 06_07.d	IC17-AS14 4(mm)
CCV 410-526874/6		07/11/2024 06:18	1	11_Jul_2024 06_18.d	IC17-AS14 4(mm)
CCB 410-526874/7		07/11/2024 06:28	1	11_Jul_2024 06_28.d	IC17-AS14 4(mm)
ZZZZZ		07/11/2024 06:38	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 06:48	50		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 06:58	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 07:09	50		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 07:19	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 07:29	50		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 07:39	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 07:49	50		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 08:00	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 08:10	50		IC17-AS14 4(mm)
CCV 410-526874/18		07/11/2024 08:20	1	11_Jul_2024 08_20.d	IC17-AS14 4(mm)
CCB 410-526874/19		07/11/2024 08:30	1	11_Jul_2024 08_30.d	IC17-AS14 4(mm)
ZZZZZ		07/11/2024 08:40	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 08:51	50		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 09:01	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 09:11	50		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 09:21	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 09:31	50		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 09:42	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 09:52	50		IC17-AS14 4(mm)
410-179201-3	TDSS-ER-3Q24	07/11/2024 10:02	1	11_Jul_2024 10_02.d	IC17-AS14 4(mm)
ZZZZZ		07/11/2024 10:12	5		IC17-AS14 4(mm)
CCV 410-526874/30		07/11/2024 10:22	1	11_Jul_2024 10_22.d	IC17-AS14 4(mm)
CCB 410-526874/31		07/11/2024 10:33	1	11_Jul_2024 10_33.d	IC17-AS14 4(mm)
ZZZZZ		07/11/2024 10:43	20		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 10:53	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 11:03	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 11:13	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 11:24	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 11:34	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 11:44	5		IC17-AS14 4(mm)
ZZZZZ		07/11/2024 11:54	5		IC17-AS14 4(mm)

300.0

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: D20 - 3394 Start Date: 07/11/2024 05:27

Analysis Batch Number: 526874 End Date: 07/11/2024 13:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		07/11/2024 12:04	5		IC17-AS14 4(mm)
410-179201-1	TDSS-MW01-3Q24	07/11/2024 12:15	5	11_Jul_2024 12_15.d	IC17-AS14 4(mm)
CCV 410-526874/42		07/11/2024 12:25	1	11_Jul_2024 12_25.d	IC17-AS14 4(mm)
CCB 410-526874/43		07/11/2024 12:35	1	11_Jul_2024 12_35.d	IC17-AS14 4(mm)
410-179201-1	TDSS-MW01-3Q24	07/11/2024 12:45	50	11_Jul_2024 12_45.d	IC17-AS14 4(mm)
410-179201-2	TDSS-MW02-3Q24	07/11/2024 12:55	5	11_Jul_2024 12_55.d	IC17-AS14 4(mm)
410-179201-2	TDSS-MW02-3Q24	07/11/2024 13:06	50	11_Jul_2024 13_06.d	IC17-AS14 4(mm)
CCV 410-526874/47		07/11/2024 13:16	1	11_Jul_2024 13_16.d	IC17-AS14 4(mm)
CCB 410-526874/48		07/11/2024 13:26	1	11_Jul_2024 13_26.d	IC17-AS14 4(mm)

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-179201-1

SDG No.: 410-179201

Batch Number: 516687 Batch Start Date: 06/12/24 11:58 Batch Analyst: McKenzie, Joseph E

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount	WC_IC_C_Det 00192	WC_IC_QC2 01119		
IC 410-516687/2		300.0			0 mL		0.5 mL			
IC 410-516687/3		300.0			0 mL		2 mL			
IC 410-516687/4		300.0			0 mL		5 mL			
IC 410-516687/5		300.0			0 mL		10 mL			
IC 410-516687/6		300.0			0 mL		15 mL			
ICV 410-516687/7		300.0			0 mL			7.5 mL		
ICB 410-516687/8		300.0			0 mL	1.0 mL				

Batch Notes	
Eluent 1 ID	wc_ic_d20kohw_00009

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-179201-1

SDG No.: 410-179201

Batch Number: 526874 Batch Start Date: 07/11/24 05:27 Batch Analyst: Schoener, Jacquelyn

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	WC_IC_QC2 01138				
CCV 410-526874/1		300.0			0 mL	7.5 mL				
CCB 410-526874/2		300.0			0 mL					
LCS 410-526874/3		300.0			0 mL	7.5 mL				
LCSD 410-526874/4		300.0			0 mL	7.5 mL				
MB 410-526874/5		300.0			0 mL					
CCV 410-526874/6		300.0			0 mL	7.5 mL				
CCB 410-526874/7		300.0			0 mL					
CCV 410-526874/18		300.0			0 mL	7.5 mL				
CCB 410-526874/19		300.0			0 mL					
410-179201-C-3	TDSS-ER-3Q24	300.0	Water	T	0 mL					
CCV 410-526874/30		300.0			0 mL	7.5 mL				
CCB 410-526874/31		300.0			0 mL					
410-179201-C-1	TDSS-MW01-3Q24	300.0	Water	T	0 mL					
CCV 410-526874/42		300.0			0 mL	7.5 mL				
CCB 410-526874/43		300.0			0 mL					
410-179201-C-1	TDSS-MW01-3Q24	300.0	Water	T	0 mL					
410-179201-C-2	TDSS-MW02-3Q24	300.0	Water	T	0 mL					
410-179201-C-2	TDSS-MW02-3Q24	300.0	Water	T	0 mL					
CCV 410-526874/47		300.0			0 mL	7.5 mL				
CCB 410-526874/48		300.0			0 mL					

Batch Notes	
Eluent 1 ID	WC_IC_D20KOHW_00009

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-179201-1

SDG No.: 410-179201

Batch Number: 526874 Batch Start Date: 07/11/24 05:27 Batch Analyst: Schoener, Jacquelyn

Batch Method: 300.0 Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG No.: 410-179201

Project: TDSS MW Sampling 3Q-2024 / Baseline

Client Sample ID	Lab Sample ID
TDSS-MW01-3Q24	410-179201-1
TDSS-MW02-3Q24	410-179201-2
TDSS-ER-3Q24	410-179201-3

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: TDSS-MW01-3Q24 Lab Sample ID: 410-179201-1

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG ID.: 410-179201

Matrix: Water Date Sampled: 07/07/2024 10:30

Reporting Basis: WET Date Received: 07/10/2024 09:35

Preparation Batch Number: 526998 Instrument ID: Agilent ICP/MS - E08

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Antimony	0.50	1.0	0.50	0.20	ug/L	U		1	6020B
Arsenic	1.7	2.0	1.7	0.68	ug/L	U		1	6020B
Calcium	15000	120	100	50	ug/L			1	6020B
Cobalt	0.84	0.50	0.40	0.16	ug/L			1	6020B
Copper	2.5	1.0	0.90	0.36	ug/L			1	6020B
Iron	140	50	40	20	ug/L			1	6020B
Lead	0.24	0.50	0.24	0.12	ug/L	U		1	6020B
Magnesium	12000	50	32	16	ug/L			1	6020B
Potassium	5400	200	180	65	ug/L			1	6020B
Sodium	78000	200	180	90	ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: TDSS-MW02-3Q24 Lab Sample ID: 410-179201-2

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG ID.: 410-179201

Matrix: Water Date Sampled: 07/07/2024 15:28

Reporting Basis: WET Date Received: 07/10/2024 09:35

Preparation Batch Number: 526998 Instrument ID: Agilent ICP/MS - E08

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Antimony	0.50	1.0	0.50	0.20	ug/L	U		1	6020B
Arsenic	1.7	2.0	1.7	0.68	ug/L	U		1	6020B
Calcium	21000	120	100	50	ug/L			1	6020B
Cobalt	0.19	0.50	0.40	0.16	ug/L	J		1	6020B
Copper	0.72	1.0	0.90	0.36	ug/L	J		1	6020B
Iron	380	50	40	20	ug/L			1	6020B
Lead	0.24	0.50	0.24	0.12	ug/L	U		1	6020B
Magnesium	17000	50	32	16	ug/L			1	6020B
Potassium	7600	200	180	65	ug/L			1	6020B
Sodium	130000	2000	1800	900	ug/L		D	10	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: TDSS-ER-3Q24 | Lab Sample ID: 410-179201-3

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC | Job No.: 410-179201-1

SDG ID.: 410-179201

Matrix: Water | Date Sampled: 07/07/2024 17:10

Reporting Basis: WET | Date Received: 07/10/2024 09:35

Preparation Batch Number: 526979 | Instrument ID: Agilent ICP/MS - E07

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Antimony	0.50	1.0	0.50	0.20	ug/L	U		1	6020B
Arsenic	1.7	2.0	1.7	0.68	ug/L	U		1	6020B
Calcium	300	120	100	50	ug/L			1	6020B
Cobalt	0.40	0.50	0.40	0.16	ug/L	U		1	6020B
Copper	1.9	1.0	0.90	0.36	ug/L			1	6020B
Iron	75	50	40	20	ug/L			1	6020B
Lead	0.24	0.50	0.24	0.12	ug/L	U		1	6020B
Magnesium	76	50	32	16	ug/L			1	6020B
Potassium	70	200	180	65	ug/L	J		1	6020B
Sodium	790	200	180	90	ug/L			1	6020B

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

ICV Source: MT_MJ_ICV_00111 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00192

Analyte	ICV 410-529378/4 07/17/2024 09:30				CCV 410-529378/10 07/17/2024 10:32				CCV 410-529378/21 07/17/2024 10:57			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	53.2		50.0	106	53.6		50.0	107	52.2		50.0	104
Arsenic	490		500	98	533		500	107	535		500	107
Calcium	4970		5000	99	5170		5000	103	5230		5000	105
Cobalt	501		500	100	526		500	105	530		500	106
Copper	502		500	100	526		500	105	530		500	106
Iron	4940		5000	99	5220		5000	104	5160		5000	103
Lead	49.5		50.0	99	52.3		50.0	105	51.8		50.0	104
Magnesium	4940		5000	99	5260		5000	105	5170		5000	103
Potassium	4930		5000	99	5270		5000	105	5130		5000	103
Sodium	4950		5000	99	5310		5000	106	5140		5000	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

ICV Source: MT_MJ_ICV_00111 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00192

Analyte	CCV 410-529378/31 07/17/2024 11:19				CCV 410-529378/39 07/17/2024 11:37							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	51.7		50.0	103	54.0		50.0	108				
Arsenic	530		500	106	545		500	109				
Calcium	4990		5000	100	5330		5000	107				
Cobalt	526		500	105	541		500	108				
Copper	523		500	105	537		500	107				
Iron	5110		5000	102	5260		5000	105				
Lead	52.0		50.0	104	52.2		50.0	104				
Magnesium	5040		5000	101	5200		5000	104				
Potassium	5070		5000	101	5260		5000	105				
Sodium	5120		5000	102	5270		5000	105				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

ICV Source: MT_MJ_ICV_00111 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00192

Analyte	ICV 410-529380/4 07/17/2024 07:37				CCV 410-529380/10 07/17/2024 08:31				CCV 410-529380/20 07/17/2024 08:59			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	54.0		50.0	108	51.4		50.0	103	51.3		50.0	103
Arsenic	494		500	99	533		500	107	525		500	105
Calcium	4750		5000	95	5040		5000	101	4860		5000	97
Cobalt	480		500	96	493		500	99	490		500	98
Copper	488		500	98	505		500	101	503		500	101
Iron	4990		5000	100	5100		5000	102	5120		5000	102
Lead	50.3		50.0	101	51.2		50.0	102	51.0		50.0	102
Magnesium	4950		5000	99	5070		5000	101	5020		5000	100
Potassium	4940		5000	99	5070		5000	101	4980		5000	100
Sodium	4720		5000	94	4880		5000	98	4810		5000	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

ICV Source: MT_MJ_ICV_00111 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00192

Analyte	CCV 410-529380/30 07/17/2024 09:21				CCV 410-529380/112 07/17/2024 13:32				CCV 410-529380/115 07/17/2024 13:55			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	52.4		50.0	105	50.7		50.0	101	50.6		50.0	101
Arsenic	517		500	103	517		500	103	517		500	103
Calcium	5010		5000	100	4930		5000	99	4930		5000	99
Cobalt	502		500	100	500		500	100	490		500	98
Copper	498		500	100	505		500	101	500		500	100
Iron	5200		5000	104	5130		5000	103	5040		5000	101
Lead	52.0		50.0	104	53.2		50.0	106	50.4		50.0	101
Magnesium	5150		5000	103	5050		5000	101	5010		5000	100
Potassium	5110		5000	102	5050		5000	101	4980		5000	100
Sodium	5040		5000	101	5030		5000	101	5020		5000	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Method: 6020B Instrument ID: E07 - 27813

Lab Sample ID: CRI 410-529378/6 Concentration Units: ug/L

CRQL Check Standard Source: MT_MJ_CRI-V_00188

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.01	1.09		108	80-120
Arsenic	2.02	2.09		103	80-120
Calcium	100	111	J	111	80-120
Cobalt	0.504	0.519		103	80-120
Copper	0.999	1.08		108	80-120
Iron	49.9	50.4		101	80-120
Lead	0.503	0.482	J	96	80-120
Magnesium	50.3	52.6		105	80-120
Potassium	200	190	J	95	80-120
Sodium	199	192	J	97	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Method: 6020B Instrument ID: E08 - 30647

Lab Sample ID: CRI 410-529380/6 Concentration Units: ug/L

CRQL Check Standard Source: MT_MJ_CRI-V_00188

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.01	1.00		99	80-120
Arsenic	2.02	2.12		105	80-120
Calcium	100	91.1	J	91	80-120
Cobalt	0.504	0.491	J	97	80-120
Copper	0.999	1.11		111	80-120
Iron	49.9	47.2	J	95	80-120
Lead	0.503	0.495	J	98	80-120
Magnesium	50.3	53.4		106	80-120
Potassium	200	187	J	94	80-120
Sodium	199	181	J	91	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Concentration Units: ug/L

Analyte	RL	ICB 410-529378/5 07/17/2024 09:45		CCB 410-529378/11 07/17/2024 10:34		CCB 410-529378/12 07/17/2024 10:37		CCB 410-529378/22 07/17/2024 10:59	
		Found	C	Found	C	Found	C	Found	C
Antimony	1.0	0.80	U	0.80	U	0.80	U	0.80	U
Arsenic	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Calcium	120	100	U	57.8	J	100	U	100	U
Cobalt	0.50	0.40	U			0.227	J	0.425	J
Copper	1.0	0.90	U	0.90	U	0.90	U	0.90	U
Iron	50	40	U			31.2	J	40	U
Lead	0.50	0.24	U	0.135	J	0.126	J	0.24	U
Magnesium	50	32	U			22.2	J	32	U
Potassium	200	180	U	180	U	180	U	180	U
Sodium	200	180	U	180	U	180	U	180	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Concentration Units: ug/L

Analyte	RL	CCB 410-529378/32 07/17/2024 11:21		CCB 410-529378/40 07/17/2024 11:39					
		Found	C	Found	C	Found	C	Found	C
Antimony	1.0	0.80	U	0.80	U				
Arsenic	2.0	1.7	U	1.7	U				
Calcium	120	100	U	100	U				
Cobalt	0.50	0.235	J	0.169	J				
Copper	1.0	0.90	U	0.90	U				
Iron	50	40	U	40	U				
Lead	0.50	0.24	U	0.24	U				
Magnesium	50	32	U	32	U				
Potassium	200	180	U	180	U				
Sodium	200	180	U	180	U				

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Concentration Units: ug/L

Analyte	RL	ICB 410-529380/5 07/17/2024 07:40		CCB 410-529380/11 07/17/2024 08:33		CCB 410-529380/21 07/17/2024 09:01		CCB 410-529380/31 07/17/2024 09:23	
		Found	C	Found	C	Found	C	Found	C
Antimony	1.0	0.80	U	0.80	U	0.80	U	0.80	U
Arsenic	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Calcium	120	100	U	100	U	100	U	100	U
Cobalt	0.50	0.40	U	0.346	J	0.216	J	0.217	J
Copper	1.0	0.90	U	0.382	J	0.90	U	0.90	U
Iron	50	40	U	40	U	40	U	40	U
Lead	0.50	0.24	U	0.24	U	0.24	U	0.24	U
Magnesium	50	32	U	32	U	32	U	32	U
Potassium	200	180	U	180	U	180	U	180	U
Sodium	200	180	U	180	U	180	U	180	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Concentration Units: ug/L

Analyte	RL	CCB 410-529380/113 07/17/2024 13:34		CCB 410-529380/116 07/17/2024 13:57					
		Found	C	Found	C	Found	C	Found	C
Antimony	1.0	0.80	U	0.80	U				
Arsenic	2.0	1.7	U	1.7	U				
Calcium	120	100	U	100	U				
Cobalt	0.50	0.203	J						
Copper	1.0	0.90	U	0.90	U				
Iron	50	40	U	40	U				
Lead	0.50			0.243	J				
Magnesium	50	32	U	32	U				
Potassium	200	180	U	180	U				
Sodium	200	180	U	180	U				

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Concentration Units: ug/L Lab Sample ID: MB 410-526979/1-A

Instrument Code: E07 - 27813 Batch No.: 529378

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	0.50	U		6020B_DOD5
7440-38-2	Arsenic	1.7	U		6020B_DOD5
7440-70-2	Calcium	100	U		6020B_DOD5
7440-48-4	Cobalt	0.40	U		6020B_DOD5
7440-50-8	Copper	0.90	U		6020B_DOD5
7439-89-6	Iron	24.9	J		6020B_DOD5
7439-92-1	Lead	0.24	U		6020B_DOD5
7439-95-4	Magnesium	19.6	J		6020B_DOD5
7440-09-7	Potassium	180	U		6020B_DOD5
7440-23-5	Sodium	180	U		6020B_DOD5

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Concentration Units: ug/L Lab Sample ID: MB 410-526998/1-A

Instrument Code: E08 - 30647 Batch No.: 529380

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	0.50	U		6020B_DOD5
7440-38-2	Arsenic	1.7	U		6020B_DOD5
7440-70-2	Calcium	100	U		6020B_DOD5
7440-48-4	Cobalt	0.40	U		6020B_DOD5
7440-50-8	Copper	0.90	U		6020B_DOD5
7439-89-6	Iron	40	U		6020B_DOD5
7439-92-1	Lead	0.24	U		6020B_DOD5
7439-95-4	Magnesium	32	U		6020B_DOD5
7440-09-7	Potassium	180	U		6020B_DOD5
7440-23-5	Sodium	180	U		6020B_DOD5

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: ICSA 410-529378/7 Instrument ID: E07 - 27813

Lab File ID: 039ICSA.d ICS Source: MT_MJ_ICSA_00125

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony	**0.140**	**0.119**	
Arsenic	**8.50**	**0.178**	
Calcium	**300000**	**298842**	**100**
Cobalt	**0.220**	**0.0830**	
Copper	**0.860**	**-0.0330**	
Iron	**250000**	**253039**	**101**
Lead	**0.120**	**0.0320**	
Magnesium	**100000**	**101427**	**101**
Potassium	**100000**	**100597**	**101**
Sodium	**250000**	**249241**	**100**
Aluminum	*100000*	*101373*	*101*
Barium	*0.390*	*0.535*	
Beryllium	*0.0200*	*-0.0090*	
Cadmium	*0.480*	*0.305*	
Chromium	*3.20*	*3.33*	
Manganese	*0.500*	*0.530*	
Molybdenum	*2000*	*2224*	*111*
Nickel	*1.20*	*0.372*	
Selenium	*0.580*	*0.0230*	
Silver	*0.200*	*0.0020*	
Thallium	*0.0100*	*-0.0130*	
Tin	*0.0600*	*0.0910*	
Titanium	*2000*	*2066*	*103*
Uranium	*0.120*	*0.0450*	
Vanadium	*0.460*	*-0.0720*	
Zinc	*0.450*	*1.48*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: ICSAB 410-529378/8 Instrument ID: E07 - 27813

Lab File ID: 040ICSB.d ICS Source: MT_MJ_ICSAB_00100

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**0.140**	**0.140**	
Arsenic	**109**	**98.7**	**91**
Calcium	**300000**	**301044**	**100**
Cobalt	**200**	**198**	**99**
Copper	**201**	**194**	**97**
Iron	**250000**	**254986**	**102**
Lead	**0.120**	**0.104**	
Magnesium	**100000**	**102357**	**102**
Potassium	**100000**	**101693**	**102**
Sodium	**250000**	**252325**	**101**
Aluminum	*100000*	*102050*	*102*
Barium	*0.390*	*0.477*	
Beryllium	*0.0200*	*-0.0050*	
Cadmium	*100*	*103*	*103*
Chromium	*203*	*205*	*101*
Manganese	*201*	*204*	*102*
Molybdenum	*2000*	*2164*	*108*
Nickel	*201*	*195*	*97*
Selenium	*101*	*102*	*102*
Silver	*50.2*	*51.8*	*103*
Thallium	*0.0100*	*-0.0100*	
Tin	*0.0600*	*0.108*	
Titanium	*2000*	*2051*	*103*
Uranium	*0.120*	*0.0480*	
Vanadium	*201*	*210*	*105*
Zinc	*100*	*101*	*101*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: ICSA 410-529380/7 Instrument ID: E08 - 30647

Lab File ID: 017ICSA.d ICS Source: MT_MJ_ICSA_00125

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony	**0.140**	**0.123**	
Arsenic	**8.50**	**0.170**	
Calcium	**300000**	**286429**	**95**
Cobalt	**0.220**	**0.187**	
Copper	**0.860**	**0.0830**	
Iron	**250000**	**253975**	**102**
Lead	**0.120**	**0.0630**	
Magnesium	**100000**	**100657**	**101**
Potassium	**100000**	**99899**	**100**
Sodium	**250000**	**247584**	**99**
Aluminum	*100000*	*101025*	*101*
Barium	*0.390*	*0.665*	
Beryllium	*0.0200*	*0.0120*	
Cadmium	*0.480*	*0.228*	
Chromium	*3.20*	*3.35*	
Manganese	*0.500*	*0.812*	
Molybdenum	*2000*	*2159*	*108*
Nickel	*1.20*	*0.715*	
Selenium	*0.580*	*0.0720*	
Silver	*0.200*	*0.0080*	
Strontium	*1.70*	*2.17*	
Thallium	*0.0100*	*0.0440*	
Tin	*0.0600*	*0.266*	
Titanium	*2000*	*2030*	*101*
Uranium	*0.120*	*0.0620*	
Vanadium	*0.460*	*0.0450*	
Zinc	*0.450*	*2.03*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Lab Sample ID: ICSAB 410-529380/8 Instrument ID: E08 - 30647

Lab File ID: 018ICSB.d ICS Source: MT_MJ_ICSAB_00100

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**0.140**	**0.112**	
Arsenic	**109**	**96.7**	**89**
Calcium	**300000**	**284879**	**95**
Cobalt	**200**	**197**	**99**
Copper	**201**	**189**	**94**
Iron	**250000**	**250565**	**100**
Lead	**0.120**	**0.136**	
Magnesium	**100000**	**100586**	**101**
Potassium	**100000**	**99222**	**99**
Sodium	**250000**	**248242**	**99**
Aluminum	*100000*	*101430*	*101*
Barium	*0.390*	*0.669*	
Beryllium	*0.0200*	*0.0080*	
Cadmium	*100*	*104*	*104*
Chromium	*203*	*208*	*102*
Manganese	*201*	*204*	*102*
Molybdenum	*2000*	*2184*	*109*
Nickel	*201*	*210*	*104*
Selenium	*101*	*104*	*103*
Silver	*50.2*	*53.0*	*106*
Strontium	*1.70*	*2.04*	
Thallium	*0.0100*	*0.0250*	
Tin	*0.0600*	*0.283*	
Titanium	*2000*	*1992*	*100*
Uranium	*0.120*	*0.0500*	
Vanadium	*201*	*206*	*103*
Zinc	*100*	*103*	*103*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LINEAR RANGE CHECK STANDARD
METALS

Lab ID: LRC 410-529378/9

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC

Job No.: 410-179201-1

Sample Matrix:

LCS Source: MT_MJ_LRC_00109

Analyte	(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	2000	2140		107	90	110		6020B
Arsenic	2000	2080		104	90	110		6020B
Calcium	200000	200000		100	90	110		6020B
Cobalt	2000	2070		103	90	110		6020B
Copper	2000	2020		101	90	110		6020B
Iron	160000	159000		99	90	110		6020B
Lead	2000	2170		108	90	110		6020B
Magnesium	200000	198000		99	90	110		6020B
Potassium	200000	203000		101	90	110		6020B
Sodium	200000	193000		97	90	110		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 410-526979/2-A

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC

Job No.: 410-179201-1

Sample Matrix: Water

LCS Source: MT_LCS-SPK-B_00038

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	94.1		94	85	117		6020B
Arsenic	500	468		94	84	116		6020B
Calcium	5000	4560		91	87	118		6020B
Cobalt	500	465		93	86	115		6020B
Copper	500	466		93	85	118		6020B
Iron	5000	4540		91	87	118		6020B
Lead	50.0	47.3		95	88	115		6020B
Magnesium	5000	4530		91	83	118		6020B
Potassium	5000	4670		93	87	115		6020B
Sodium	5000	4580		92	85	117		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LINEAR RANGE CHECK STANDARD
METALS

Lab ID: LRC 410-529380/9

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC

Job No.: 410-179201-1

Sample Matrix:

LCS Source: MT_MJ_LRC_00109

Analyte	(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	2000	2190		109	90	110		6020B
Arsenic	2000	2060		103	90	110		6020B
Calcium	200000	197000		98	90	110		6020B
Cobalt	2000	1940		97	90	110		6020B
Copper	2000	2030		102	90	110		6020B
Iron	160000	162000		101	90	110		6020B
Lead	2000	2140		107	90	110		6020B
Magnesium	200000	204000		102	90	110		6020B
Potassium	200000	200000		100	90	110		6020B
Sodium	200000	198000		99	90	110		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 410-526998/2-A

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC

Job No.: 410-179201-1

Sample Matrix: Water

LCS Source:

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony		107						6020B
Arsenic		521						6020B
Calcium		5120						6020B
Cobalt		510						6020B
Copper		501						6020B
Iron		5220						6020B
Lead		53.0						6020B
Magnesium		5160						6020B
Potassium		5210						6020B
Sodium		5000						6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: E07 - 27813

Method: 6020B DL Date: 07/31/2023 00:00

Prep Method: 3005A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Antimony	121	1	0.2
Arsenic	75	2	0.68
Calcium	44	120	50
Cobalt	59	0.5	0.156
Copper	63	1	0.362
Iron	57	50	20
Lead	208	0.5	0.12
Magnesium	24	50	16
Potassium	39	200	65
Sodium	23	200	90

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: E07 - 27813

Method: 6020B XMDL Date: 07/31/2023 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	1	0.2
Arsenic	75	2	0.68
Calcium	44	120	50
Cobalt	59	0.5	0.156
Copper	63	1	0.362
Iron	57	50	20
Lead	208	0.5	0.12
Magnesium	24	50	16
Potassium	39	200	65
Sodium	23	200	90

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: E08 - 30647

Method: 6020B DL Date: 07/31/2023 00:00

Prep Method: 3005A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Antimony	121	1	0.2
Arsenic	75	2	0.68
Calcium	44	120	50
Cobalt	59	0.5	0.156
Copper	63	1	0.362
Iron	57	50	20
Lead	208	0.5	0.12
Magnesium	24	50	16
Potassium	39	200	65
Sodium	23	200	90

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: E08 - 30647

Method: 6020B XMDL Date: 07/31/2023 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	1	0.2
Arsenic	75	2	0.68
Calcium	44	120	50
Cobalt	59	0.5	0.156
Copper	63	1	0.362
Iron	57	50	20
Lead	208	0.5	0.12
Magnesium	24	50	16
Potassium	39	200	65
Sodium	23	200	90

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No: 410-179201-1

SDG No.: 410-179201

Instrument ID: E07 - 27813 Date: 04/07/2022 16:18

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		1000	6020B
Arsenic		1000	6020B
Calcium		100000	6020B
Cobalt		1000	6020B
Copper		1000	6020B
Iron		100000	6020B
Lead		1000	6020B
Magnesium		100000	6020B
Potassium		100000	6020B
Sodium		100000	6020B

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No: 410-179201-1

SDG No.: 410-179201

Instrument ID: E08 - 30647 Date: 04/07/2022 16:22

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		1000	6020B
Arsenic		1000	6020B
Calcium		100000	6020B
Cobalt		1000	6020B
Copper		1000	6020B
Iron		100000	6020B
Lead		1000	6020B
Magnesium		100000	6020B
Potassium		100000	6020B
Sodium		100000	6020B

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 410-526979/1-A	07/11/2024 07:35	526979		50	50
LCS 410-526979/2-A	07/11/2024 07:35	526979		50	50
410-179201-3	07/11/2024 07:35	526979		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 410-526998/1-A	07/11/2024 07:50	526998		50	50
LCS 410-526998/2-A	07/11/2024 07:50	526998		50	50
410-179201-2	07/11/2024 07:50	526998		50	50
410-179201-1	07/11/2024 07:50	526998		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: E07 - 27813 Analysis Method: 6020B

Start Date: 07/17/2024 07:05 End Date: 07/17/2024 12:58

Lab Sample Id	D/F	Type	Time	Analytes																											
				As	Ca	Co	Cu	Fe	K	Mg	Na	Pb	Sb																		
ITUNE 410-529378/1	1		07:05																												
ICIS 410-529378/2			09:26	X	X	X	X	X	X	X	X	X	X																		
STD1 410-529378/3 IC	1		09:28	X	X	X	X	X	X	X	X	X	X																		
ICV 410-529378/4	1		09:30	X	X	X	X	X	X	X	X	X	X																		
ICB 410-529378/5	1		09:45	X	X	X	X	X	X	X	X	X	X																		
CRI 410-529378/6	1		09:48	X	X	X	X	X	X	X	X	X	X																		
ICSA 410-529378/7	1		10:14	X	X	X	X	X	X	X	X	X	X																		
ICSAB 410-529378/8	1		10:16	X	X	X	X	X	X	X	X	X	X																		
LRC 410-529378/9	1		10:18	X	X	X	X	X	X	X	X	X	X																		
CCV 410-529378/10	1		10:32	X	X	X	X	X	X	X	X	X	X																		
CCB 410-529378/11	1		10:34	X	X		X		X		X	X	X																		
CCB 410-529378/12	1		10:37	X	X	X	X	X	X	X	X	X	X																		
MB 410-526979/1-A	1	R	10:39	X	X	X	X	X	X	X	X	X	X																		
LCS 410-526979/2-A	1	R	10:41	X	X	X	X	X	X	X	X	X	X																		
ZZZZZZ			10:43																												
ZZZZZZ			10:45																												
ZZZZZZ			10:47																												
ZZZZZZ			10:49																												
ZZZZZZ			10:51																												
ZZZZZZ			10:53																												
CCV 410-529378/21	1		10:57	X	X	X	X	X	X	X	X	X	X																		
CCB 410-529378/22	1		10:59	X	X	X	X	X	X	X	X	X	X																		
ZZZZZZ			11:01																												
ZZZZZZ			11:03																												
ZZZZZZ			11:05																												
ZZZZZZ			11:07																												
ZZZZZZ			11:09																												
ZZZZZZ			11:11																												
ZZZZZZ			11:13																												
ZZZZZZ			11:15																												
CCV 410-529378/31	1		11:19	X	X	X	X	X	X	X	X	X	X																		
CCB 410-529378/32	1		11:21	X	X	X	X	X	X	X	X	X	X																		
ZZZZZZ			11:23																												
ZZZZZZ			11:25																												
ZZZZZZ			11:27																												
ZZZZZZ			11:29																												
410-179201-3	1	R	11:31	X	X	X	X	X	X	X	X	X	X																		
ZZZZZZ			11:33																												
CCV 410-529378/39	1		11:37	X	X	X	X	X	X	X	X	X	X																		
CCB 410-529378/40	1		11:39	X	X	X	X	X	X	X	X	X	X																		
CCV 410-529378/41			11:56																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: E07 - 27813 Analysis Method: 6020B

Start Date: 07/17/2024 07:05 End Date: 07/17/2024 12:58

Lab Sample Id	D/F	Type	Time	Analytes																										
				As	Ca	Co	Cu	Fe	K	Mg	Na	Pb	Sb																	
CCB 410-529378/42			11:58																											
ZZZZZZ			12:00																											
ZZZZZZ			12:02																											
ZZZZZZ			12:04																											
ZZZZZZ			12:06																											
CCV 410-529378/47			12:10																											
CCB 410-529378/48			12:12																											
ZZZZZZ			12:14																											
ZZZZZZ			12:16																											
ZZZZZZ			12:18																											
ZZZZZZ			12:20																											
ZZZZZZ			12:22																											
ZZZZZZ			12:24																											
ZZZZZZ			12:26																											
ZZZZZZ			12:28																											
CCV 410-529378/57			12:32																											
CCB 410-529378/58			12:34																											
ZZZZZZ			12:36																											
ZZZZZZ			12:38																											
ZZZZZZ			12:40																											
ZZZZZZ			12:42																											
ZZZZZZ			12:44																											
ZZZZZZ			12:46																											
ZZZZZZ			12:48																											
ZZZZZZ			12:50																											
ZZZZZZ			12:52																											
CCV 410-529378/68			12:56																											
CCB 410-529378/69			12:58																											

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: E08 - 30647 Analysis Method: 6020B

Start Date: 07/17/2024 07:05 End Date: 07/17/2024 13:57

Lab Sample Id	D/F	Type	Time	Analytes																											
				As	Ca	Co	Cu	Fe	K	Mg	Na	Pb	Sb																		
ITUNE 410-529380/1	1		07:05																												
ICIS 410-529380/2			07:33	X	X	X	X	X	X	X	X	X	X																		
STD1 410-529380/3 IC	1		07:35	X	X	X	X	X	X	X	X	X	X																		
ICV 410-529380/4	1		07:37	X	X	X	X	X	X	X	X	X	X																		
ICB 410-529380/5	1		07:40	X	X	X	X	X	X	X	X	X	X																		
CRI 410-529380/6	1		07:44	X	X	X	X	X	X	X	X	X	X																		
ICSA 410-529380/7	1		07:50	X	X	X	X	X	X	X	X	X	X																		
ICSAB 410-529380/8	1		07:52	X	X	X	X	X	X	X	X	X	X																		
LRC 410-529380/9	1		07:54	X	X	X	X	X	X	X	X	X	X																		
CCV 410-529380/10	1		08:31	X	X	X	X	X	X	X	X	X	X																		
CCB 410-529380/11	1		08:33	X	X	X	X	X	X	X	X	X	X																		
MB 410-526998/1-A	1	R	08:40	X	X	X	X	X	X	X	X	X	X																		
LCS 410-526998/2-A	1	R	08:43	X	X	X	X	X	X	X	X	X	X																		
ZZZZZZ			08:45																												
ZZZZZZ			08:47																												
ZZZZZZ			08:49																												
ZZZZZZ			08:51																												
ZZZZZZ			08:53																												
ZZZZZZ			08:55																												
CCV 410-529380/20	1		08:59	X	X	X	X	X	X	X	X	X	X																		
CCB 410-529380/21	1		09:01	X	X	X	X	X	X	X	X	X	X																		
410-179201-2	1	R	09:03	X	X	X	X	X	X	X		X	X																		
410-179201-1	1	R	09:05	X	X	X	X	X	X	X	X	X	X																		
ZZZZZZ			09:07																												
ZZZZZZ			09:09																												
ZZZZZZ			09:11																												
ZZZZZZ			09:13																												
ZZZZZZ			09:15																												
ZZZZZZ			09:17																												
CCV 410-529380/30	1		09:21	X	X	X	X	X	X	X	X	X	X																		
CCB 410-529380/31	1		09:23	X	X	X	X	X	X	X	X	X	X																		
ZZZZZZ			09:25																												
ZZZZZZ			09:27																												
ZZZZZZ			09:29																												
ZZZZZZ			09:31																												
ZZZZZZ			09:33																												
ZZZZZZ			09:35																												
ZZZZZZ			09:37																												
CCV 410-529380/39			09:41																												
CCB 410-529380/40			09:43																												
ZZZZZZ			09:46																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: E08 - 30647 Analysis Method: 6020B

Start Date: 07/17/2024 07:05 End Date: 07/17/2024 13:57

Lab Sample Id	D/F	Type	Time	Analytes																										
				As	Ca	Co	Cu	Fe	K	Mg	Na	Pb	Sb																	
ZZZZZZ			09:48																											
ZZZZZZ			09:50																											
ZZZZZZ			09:52																											
ZZZZZZ			09:54																											
ZZZZZZ			09:56																											
ZZZZZZ			09:58																											
ZZZZZZ			10:00																											
CCV 410-529380/49			10:04																											
CCB 410-529380/50			10:06																											
ZZZZZZ			10:08																											
ZZZZZZ			10:10																											
ZZZZZZ			10:12																											
ZZZZZZ			10:14																											
ZZZZZZ			10:16																											
ZZZZZZ			10:18																											
ZZZZZZ			10:20																											
ZZZZZZ			10:22																											
CCV 410-529380/59			10:26																											
CCB 410-529380/60			10:28																											
ZZZZZZ			10:30																											
ZZZZZZ			10:32																											
ZZZZZZ			10:34																											
ZZZZZZ			10:36																											
ZZZZZZ			10:38																											
ZZZZZZ			10:40																											
ZZZZZZ			10:42																											
CCV 410-529380/68			10:46																											
CCB 410-529380/69			10:48																											
ZZZZZZ			10:50																											
ZZZZZZ			10:52																											
ZZZZZZ			10:54																											
ZZZZZZ			10:56																											
ZZZZZZ			10:58																											
ZZZZZZ			11:00																											
CCV 410-529380/76			11:04																											
CCB 410-529380/77			11:06																											
ZZZZZZ			11:08																											
CCV 410-529380/79			11:12																											
CCB 410-529380/80			11:14																											
CCV 410-529380/81			11:28																											
CCB 410-529380/82			11:30																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: E08 - 30647 Analysis Method: 6020B

Start Date: 07/17/2024 07:05 End Date: 07/17/2024 13:57

Lab Sample Id	D/F	Type	Time	Analytes																											
				As	Ca	Co	Cu	Fe	K	Mg	Na	Pb	Sb																		
ZZZZZZ			11:32																												
ZZZZZZ			11:34																												
ZZZZZZ			11:36																												
ZZZZZZ			11:38																												
CCV 410-529380/87			11:42																												
CCB 410-529380/88			11:44																												
ZZZZZZ			12:06																												
ZZZZZZ			12:09																												
ZZZZZZ			12:11																												
ZZZZZZ			12:13																												
ZZZZZZ			12:15																												
ZZZZZZ			12:17																												
ZZZZZZ			12:19																												
ZZZZZZ			12:21																												
CCV 410-529380/97			12:25																												
CCB 410-529380/98			12:27																												
ZZZZZZ			12:29																												
ZZZZZZ			12:31																												
ZZZZZZ			12:33																												
ZZZZZZ			12:35																												
ZZZZZZ			12:37																												
ZZZZZZ			12:39																												
ZZZZZZ			12:41																												
CCV 410-529380/106			12:45																												
CCB 410-529380/107			12:47																												
CCV 410-529380/108			13:14																												
CCB 410-529380/109			13:16																												
ZZZZZZ			13:26																												
ZZZZZZ			13:28																												
CCV 410-529380/112	1		13:32	X	X	X	X	X	X	X	X	X	X																		
CCB 410-529380/113	1		13:34	X	X	X	X	X	X	X	X		X																		
410-179201-2	10	R	13:51								X																				
CCV 410-529380/115	1		13:55	X	X	X	X	X	X	X	X	X	X																		
CCB 410-529380/116	1		13:57	X	X		X	X	X	X	X	X	X																		

Prep Types:
R = Total Recoverable

FORM XIII-IN

14-IN
ICP-MS TUNE
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

ICP-MS Instrument ID: E07 - 27813 Analysis Date: 07/17/24

Lab ID: ITUNE 410-529378/1

Element - Mass	Avg. Measured Mass (amu)	Avg. Peak Width at Peak Height (amu)	% RSD	Q
Be-9	9	0.7730	0.26	
Mg-24	24	0.7851	0.359	
Co-59	59	0.8159	0.484	
In-115	115	0.7659	0.637	
Pb-208	208	0.7849	0.506	

14-IN
ICP-MS TUNE
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

ICP-MS Instrument ID: E08 - 30647 Analysis Date: 07/17/24

Lab ID: ITUNE 410-529380/1

Element - Mass	Avg. Measured Mass (amu)	Avg. Peak Width at Peak Height (amu)	% RSD	Q
Be-9	9	0.8003	0.547	
Mg-24	24	0.7860	0.612	
Co-59	59	0.7848	0.141	
In-115	115	0.7700	0.71	
Pb-208	208	0.8282	0.81	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201 Analysis Batch No.: 529378

ICP-MS Instrument ID: E07 - 27813 Start Date: 07/17/2024 End Date: 07/17/2024

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Sc-45/1	Q	Element Sc-45/2	Q	Element Sc-45/3	Q	Element Ge/1	Q	Element Ge/2	Q
STD1 410-529378/3	09:28	100		101		99		100		102	
IC ICV 410-529378/4	09:30	100		101		100		100		100	
ICB 410-529378/5	09:45	101		97		96		101		99	
CRI 410-529378/6	09:48	100		99		97		99		99	
ICSA 410-529378/7	10:14	98		100		98		101		101	
ICSAB 410-529378/8	10:16	97		100		97		101		103	
LRC 410-529378/9	10:18	105		100		103		99		101	
CCV 410-529378/10	10:32	99		100		97		99		98	
CCB 410-529378/11	10:34	98		97		95		98		96	
CCB 410-529378/12	10:37	97		98		95		98		98	
MB 410-526979/1-A	10:39	100		98		99		100		98	
LCS 410-526979/2-A	10:41	101		100		102		102		101	
CCV 410-529378/21	10:57	97		97		98		98		97	
CCB 410-529378/22	10:59	97		97		97		98		97	
CCV 410-529378/31	11:19	97		96		99		97		96	
CCB 410-529378/32	11:21	96		95		97		96		96	
410-179201-3	11:31	99		100		98		101		100	
CCV 410-529378/39	11:37	98		99		96		98		96	
CCB 410-529378/40	11:39	97		98		95		97		97	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201 Analysis Batch No.: 529378

ICP-MS Instrument ID: E07 - 27813 Start Date: 07/17/2024 End Date: 07/17/2024

Analyte	Mass	Internal Standard Used:				
		Element In-115/2 115	Element In-115/3 115	Element Tb-159 159	Element Bi-209 209	Element Sc-45/1 45
Antimony	121			X		
Arsenic	75					
Calcium	44					
Cobalt	59					
Copper	63					
Iron	57					
Lead	208				X	
Magnesium	24					
Potassium	39					
Sodium	23					
Aluminum	27					
Barium	137		X			
Beryllium	9					X
Cadmium	111		X			
Chromium	52					
Manganese	55					
Molybdenum	98		X			
Nickel	60					
Selenium	78					
Silver	107		X			
Thallium	205				X	
Tin	120		X			
Titanium	47					
Uranium	238				X	
Vanadium	51					
Zinc	66					
Internal Standard Name on Instrument		In-115 (IS)	In-115 (IS)	Tb-159 (IS)	Bi-209 (IS)	Sc-45 (IS)

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201 Analysis Batch No.: 529378

ICP-MS Instrument ID: E07 - 27813 Start Date: 07/17/2024 End Date: 07/17/2024

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In-115/2	Q	Element In-115/3	Q	Element Tb-159	Q	Element Bi-209	Q
STD1 410-529378/3	09:28	101		101		101		102		100	
IC ICV 410-529378/4	09:30	101		101		103		102		101	
ICB 410-529378/5	09:45	99		99		99		100		99	
CRI 410-529378/6	09:48	99		100		99		100		99	
ICSA 410-529378/7	10:14	100		94		94		98		92	
ICSAB 410-529378/8	10:16	102		96		96		99		93	
LRC 410-529378/9	10:18	100		124		99		100		94	
CCV 410-529378/10	10:32	99		101		102		102		101	
CCB 410-529378/11	10:34	98		99		99		99		100	
CCB 410-529378/12	10:37	97		100		98		99		100	
MB 410-526979/1-A	10:39	99		102		103		103		103	
LCS 410-526979/2-A	10:41	102		102		102		103		102	
CCV 410-529378/21	10:57	97		99		100		101		101	
CCB 410-529378/22	10:59	98		99		98		100		99	
CCV 410-529378/31	11:19	98		99		100		101		101	
CCB 410-529378/32	11:21	98		98		101		101		99	
410-179201-3	11:31	101		102		101		103		102	
CCV 410-529378/39	11:37	96		99		101		102		101	
CCB 410-529378/40	11:39	96		99		99		100		100	
IS Name on Instrument											

FORM XV - IN

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201 Analysis Batch No.: 529378

ICP-MS Instrument ID: E07 - 27813 Start Date: 07/17/2024 End Date: 07/17/2024

Analyte	Mass	Internal Standard Used:				
		Element Sc-45/2 45	Element Sc-45/3 45	Element Ge/1 72	Element Ge/2 72	Element Ge/3 72
Antimony	121					
Arsenic	75					X
Calcium	44		X			
Cobalt	59					X
Copper	63					X
Iron	57		X			
Lead	208					
Magnesium	24		X			
Potassium	39		X			
Sodium	23		X			
Aluminum	27		X			
Barium	137					
Beryllium	9					
Cadmium	111					
Chromium	52		X			
Manganese	55		X			
Molybdenum	98					
Nickel	60					X
Selenium	78				X	
Silver	107					
Thallium	205					
Tin	120					
Titanium	47		X			
Uranium	238					
Vanadium	51		X			
Zinc	66					X
Internal Standard Name on Instrument		Sc-45 (IS)	Sc-45 (IS)	Ge Internal Standard	Ge Internal Standard	Ge Internal Standard

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201 Analysis Batch No.: 529380

ICP-MS Instrument ID: E08 - 30647 Start Date: 07/17/2024 End Date: 07/17/2024

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Sc-45/1	Q	Element Sc-45/2	Q	Element Sc-45/3	Q	Element Ge/1	Q	Element Ge/2	Q
STD1 410-529380/3	07:35	101		101		99		102		102	
IC ICV 410-529380/4	07:37	101		101		100		100		99	
ICB 410-529380/5	07:40	100		100		97		100		99	
CRI 410-529380/6	07:44	100		99		100		100		98	
ICSA 410-529380/7	07:50	99		98		96		106		100	
ICSAB 410-529380/8	07:52	99		98		96		103		98	
LRC 410-529380/9	07:54	102		95		100		100		93	
CCV 410-529380/10	08:31	101		102		101		100		99	
CCB 410-529380/11	08:33	100		100		97		99		98	
MB 410-526998/1-A	08:40	104		99		98		101		98	
LCS 410-526998/2-A	08:43	102		101		102		104		103	
CCV 410-529380/20	08:59	101		101		99		99		99	
CCB 410-529380/21	09:01	101		98		96		97		96	
410-179201-2	09:03	100		102		99		102		103	
410-179201-1	09:05	101		100		100		103		102	
CCV 410-529380/30	09:21	100		98		97		99		95	
CCB 410-529380/31	09:23	99		97		96		98		93	
CCV 410-529380/112	13:32	100		99		96		100		97	
CCB 410-529380/113	13:34	110		111		106		110		107	
410-179201-2	13:51	98		90		97		103		93	
CCV 410-529380/115	13:55	98		92		98		98		92	
CCB 410-529380/116	13:57	98		92		94		97		90	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201 Analysis Batch No.: 529380

ICP-MS Instrument ID: E08 - 30647 Start Date: 07/17/2024 End Date: 07/17/2024

Analyte	Mass	Internal Standard Used:				
		Element In-115/2 115	Element In-115/3 115	Element Tb-159 159	Element Bi-209 209	Element Sc-45/1 45
Antimony	121		X			
Arsenic	75					
Calcium	44					
Cobalt	59					
Copper	63					
Iron	57					
Lead	208			X		
Magnesium	24					
Potassium	39					
Sodium	23					
Aluminum	27					
Barium	137		X			
Beryllium	9					X
Cadmium	111		X			
Chromium	52					
Manganese	55					
Molybdenum	98		X			
Nickel	60		X			
Selenium	78					
Silver	107		X			
Strontium	88		X			
Thallium	205			X		
Tin	120		X			
Titanium	47					
Uranium	238			X		
Vanadium	51					
Zinc	66					
Internal Standard Name on Instrument		In-115 (IS)	In-115 (IS)	Tb-159 (IS)	Bi-209 (IS)	Sc-45 (IS)

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201 Analysis Batch No.: 529380

ICP-MS Instrument ID: E08 - 30647 Start Date: 07/17/2024 End Date: 07/17/2024

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In-115/2	Q	Element In-115/3	Q	Element Tb-159	Q	Element Bi-209	Q
STD1 410-529380/3	07:35	102		102		101		101		102	
IC ICV 410-529380/4	07:37	100		100		100		101		101	
ICB 410-529380/5	07:40	100		101		101		99		100	
CRI 410-529380/6	07:44	99		99		102		101		101	
ICSA 410-529380/7	07:50	102		95		95		98		96	
ICSAB 410-529380/8	07:52	101		94		94		98		94	
LRC 410-529380/9	07:54	98		120		96		95		91	
CCV 410-529380/10	08:31	99		101		101		102		101	
CCB 410-529380/11	08:33	100		100		101		100		101	
MB 410-526998/1-A	08:40	100		101		102		101		101	
LCS 410-526998/2-A	08:43	105		103		101		102		101	
CCV 410-529380/20	08:59	98		101		100		101		101	
CCB 410-529380/21	09:01	98		99		99		99		100	
410-179201-2	09:03	102		101		98		101		102	
410-179201-1	09:05	102		100		101		101		101	
CCV 410-529380/30	09:21	99		98		98		100		100	
CCB 410-529380/31	09:23	95		97		96		98		98	
CCV 410-529380/112	13:32	96		99		98		99		99	
CCB 410-529380/113	13:34	107		111		108		111		112	
410-179201-2	13:51	102		97		95		95		96	
CCV 410-529380/115	13:55	97		96		96		95		95	
CCB 410-529380/116	13:57	96		95		95		95		94	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201 Analysis Batch No.: 529380

ICP-MS Instrument ID: E08 - 30647 Start Date: 07/17/2024 End Date: 07/17/2024

Analyte	Mass	Internal Standard Used:				
		Element Sc-45/2 45	Element Sc-45/3 45	Element Ge/1 72	Element Ge/2 72	Element Ge/3 72
Antimony	121					
Arsenic	75					X
Calcium	44		X			
Cobalt	59		X			
Copper	63					X
Iron	57		X			
Lead	208					
Magnesium	24		X			
Potassium	39		X			
Sodium	23		X			
Aluminum	27		X			
Barium	137					
Beryllium	9					
Cadmium	111					
Chromium	52		X			
Manganese	55		X			
Molybdenum	98					
Nickel	60					
Selenium	78				X	
Silver	107					
Strontium	88					
Thallium	205					
Tin	120					
Titanium	47		X			
Uranium	238					
Vanadium	51		X			
Zinc	66					X
Internal Standard Name on Instrument		Sc-45 (IS)	Sc-45 (IS)	Ge Internal Standard	Ge Internal Standard	Ge Internal Standard

METALS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-179201-1

SDG No.: 410-179201

Batch Number: 526979 Batch Start Date: 07/11/24 07:35 Batch Analyst: Mertz, James

Batch Method: 3005A Batch End Date: 07/11/24 12:15

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount	MP_1:1HCl 00037	MP_1:1HNO3 00061	MT_LCS-SPK-A 00040	MT_LCS-SPK-B 00038
MB 410-526979/1		3005A, 6020B			50 mL	50 mL	5 mL	2 mL		
LCS 410-526979/2		3005A, 6020B			50 mL	50 mL	5 mL	2 mL	0.2 mL	0.2 mL
410-179201-K-3	TDSS-ER-3Q24	3005A, 6020B	Water	R	50 mL	50 mL	5 mL	2 mL		

Batch Notes	
Digestion Tube/Cup ID	G20054G
Pipette/Syringe/Dispenser ID	G20054G
Pipette Tip Lot ID	L208595R
Digestion Unit ID	15
Thermometer ID	3906
Temperature - Uncorrected - Start	96 Degrees C
Temperature - Corrected - Start	95 Degrees C
Temperature - Uncorrected - End	96 Degrees C
Temperature - Corrected - End	95 Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-179201-1

SDG No.: 410-179201

Batch Number: 526998 Batch Start Date: 07/11/24 07:50 Batch Analyst: Mertz, James

Batch Method: 3005A Batch End Date: 07/11/24 12:30

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount				
MB 410-526998/1		3005A, 6020B			50 mL	50 mL				
LCS 410-526998/2		3005A, 6020B			50 mL	50 mL				
410-179201-K-2	TDSS-MW02-3Q24	3005A, 6020B	Water	R	50 mL	50 mL				
410-179201-K-1	TDSS-MW01-3Q24	3005A, 6020B	Water	R	50 mL	50 mL				

Batch Notes	
Digestion Tube/Cup ID	G20054G
Pipette/Syringe/Dispenser ID	G20054G
Pipette Tip Lot ID	2307074
Digestion Unit ID	16
Thermometer ID	3906
Temperature - Uncorrected - Start	96 Degrees C
Temperature - Corrected - Start	95 Degrees C
Temperature - Uncorrected - End	96 Degrees C
Temperature - Corrected - End	95 Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Quantitation Report

Data File Name	034CALB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 09:26:10
Sample Name	ICIS 6148203
Sample Type	CalBlk
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

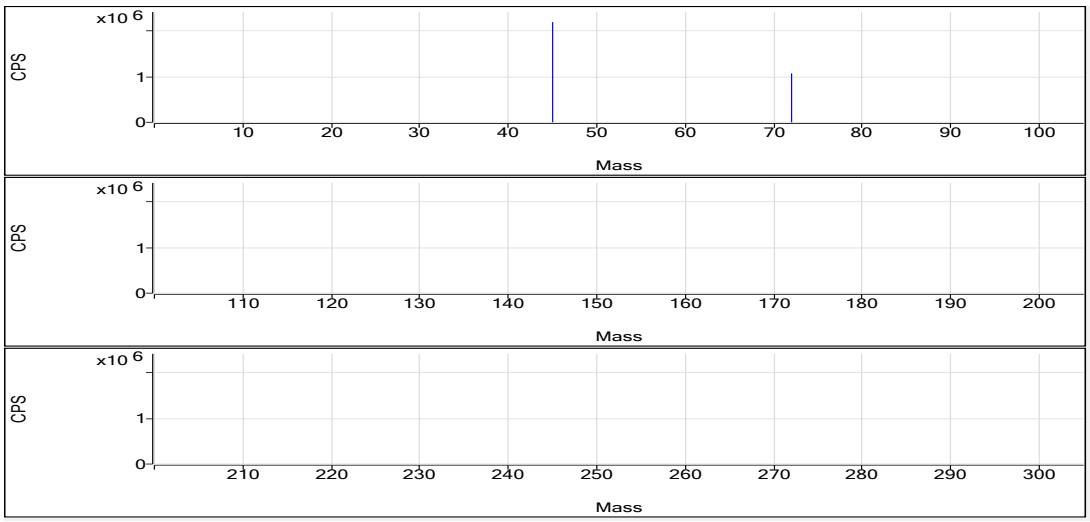
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.000	ppb	N/A	50.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.000	ppb	N/A	4.45	0.0000	Pulse	1.5000	3
Na	23	45	He	0.000	ppb	N/A	8549.39	0.2864	Pulse	0.1000	3
Mg	24	45	He	0.000	ppb	N/A	236.68	0.0080	Pulse	0.1000	3
Al	27	45	He	0.000	ppb	N/A	46.67	0.0016	Pulse	0.1000	3
K	39	45	He	0.000	ppb	N/A	10604.16	0.3552	Pulse	0.1000	3
Ca	44	45	He	0.000	ppb	N/A	60.00	0.0020	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	13.33	0.0004	Pulse	0.1000	3
V	51	45	He	0.000	ppb	N/A	790.03	0.0265	Pulse	0.5000	3
Cr	52	45	He	0.000	ppb	N/A	180.01	0.0061	Pulse	0.1000	3
Mn	55	45	He	0.000	ppb	N/A	100.00	0.0034	Pulse	0.1000	3
Fe	57	45	He	0.000	ppb	N/A	93.34	0.0031	Pulse	0.1000	3
Co	59	72	He	0.000	ppb	N/A	230.01	0.0044	Pulse	0.1000	3
Ni	60	72	He	0.000	ppb	N/A	550.03	0.0105	Pulse	0.1000	3
Cu	63	72	He	0.000	ppb	N/A	883.39	0.0169	Pulse	0.1000	3
Zn	66	72	He	0.000	ppb	N/A	200.01	0.0038	Pulse	0.1000	3
As	75	72	He	0.000	ppb	N/A	25.33	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.000	ppb	N/A	26.67	0.0005	Pulse	0.1000	3
Mo	98	115	He	0.000	ppb	N/A	16.67	0.0003	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	36.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.000	ppb	N/A	956.74	0.0187	Pulse	0.1000	3
Sb	121	159	He	0.000	ppb	N/A	23.33	0.0001	Pulse	0.1000	3
Ba	137	115	He	0.000	ppb	N/A	30.00	0.0006	Pulse	0.1000	3
Tl	205	209	He	0.000	ppb	N/A	236.68	0.0010	Pulse	0.1000	3
Pb	208	209	He	0.000	ppb	N/A	686.70	0.0029	Pulse	0.1000	3
U	238	209	He	0.000	ppb	N/A	196.68	0.0008	Pulse	0.1000	3

ISTD Table:

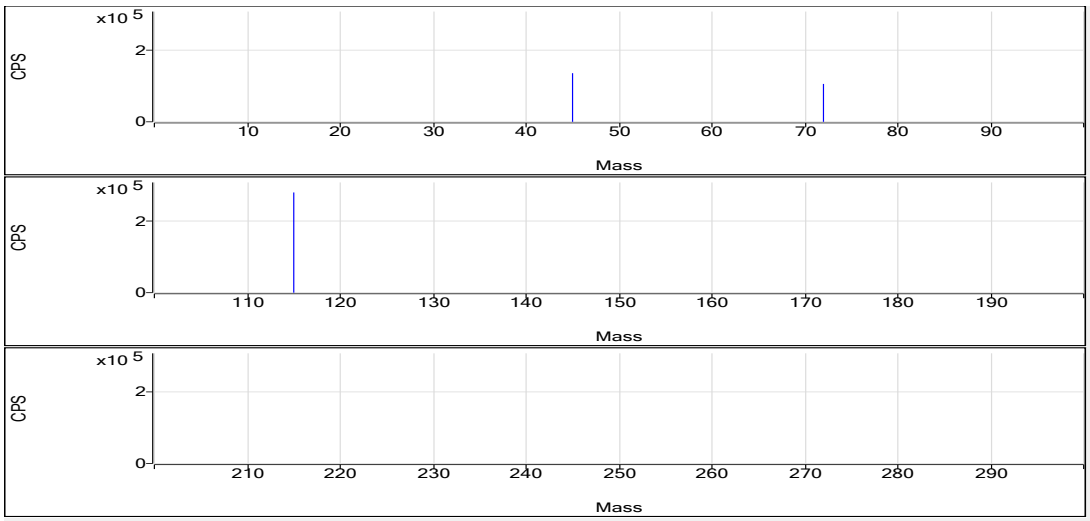
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2197867.94	0.4	100.0	Pulse	0.1000	3
No Gas	Ge	72	1073026.83	0.1	100.0	Pulse	0.1000	3
H2	Sc	45	135700.24	1.1	100.0	Pulse	0.1000	3
H2	Ge	72	105736.91	1.7	100.0	Pulse	0.1000	3
H2	In	115	279678.15	1.2	100.0	Pulse	0.1000	3
He	Sc	45	29851.21	2.4	100.0	Pulse	0.1000	3
He	Ge	72	52423.26	1.3	100.0	Pulse	0.1000	3
He	In	115	51244.26	0.9	100.0	Pulse	0.1000	3
He	Tb	159	278464.17	1.3	100.0	Pulse	0.1000	3
He	Bi	209	237467.20	0.0	100.0	Pulse	0.1000	3

No Gas

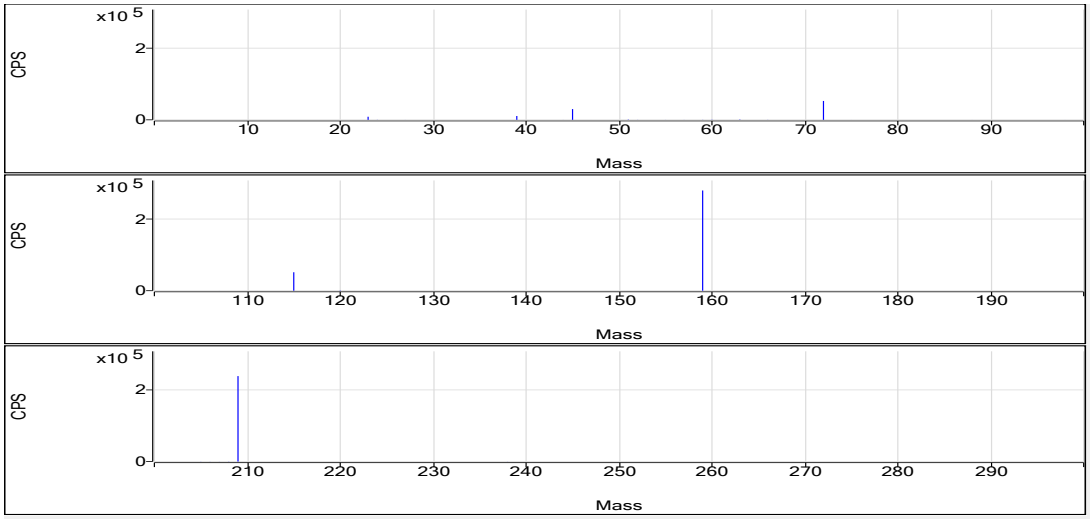


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.004	0	58.00	0.0007	2.306E-05
Be	9	1	No Gas	0	0	50.00	0.0007	2.306E-05
Be	9	1	No Gas	-0.004	0	44.00	0.0007	2.306E-05
Se	78	2	H2	0.006	0	4.67	0.0004	4.221E-05
Se	78	2	H2	-0.041	0	2.67	0.0004	4.221E-05
Se	78	2	H2	0.035	0.0001	6.00	0.0004	4.221E-05
Na	23	3	He	-0.028	0.2863	8612.80	0.0038	0.2864
Na	23	3	He	0.292	0.2875	8352.56	0.0038	0.2864
Na	23	3	He	-0.264	0.2854	8682.81	0.0038	0.2864
Mg	24	3	He	-1.206	0.0057	170.01	0.0019	0.007972
Mg	24	3	He	1.761	0.0114	330.01	0.0019	0.007972
Mg	24	3	He	-0.555	0.0069	210.01	0.0019	0.007972
Al	27	3	He	-0.46	0.0013	40.00	0.0005	0.00158
Al	27	3	He	2.154	0.0028	80.00	0.0005	0.00158
Al	27	3	He	-1.694	0.0007	20.00	0.0005	0.00158
K	39	3	He	12.009	0.3681	11074.56	0.0011	0.3552
K	39	3	He	-3.685	0.3513	10203.85	0.0011	0.3552
K	39	3	He	-8.324	0.3463	10534.06	0.0011	0.3552
Ca	44	3	He	-0.093	0.002	60.00	0.0001	0.002
Ca	44	3	He	-9.965	0.0014	40.00	0.0001	0.002
Ca	44	3	He	10.058	0.0026	80.00	0.0001	0.002
Ti	47	3	He	-0.219	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
Ti	47	3	He	1.119	0.001	30.00	0.0005	0.0004395
V	51	3	He	-0.028	0.0259	778.02	0.0218	0.02648
V	51	3	He	0.042	0.0274	796.03	0.0218	0.02648
V	51	3	He	-0.014	0.0262	796.03	0.0218	0.02648
Cr	52	3	He	0.02	0.0066	200.01	0.029	0.006056
Cr	52	3	He	0.052	0.0076	220.01	0.029	0.006056
Cr	52	3	He	-0.073	0.0039	120.00	0.029	0.006056
Mn	55	3	He	-0.03	0.003	90.00	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.008	0.0034	100.00	0.0119	0.00335
Mn	55	3	He	0.022	0.0036	110.01	0.0119	0.00335
Fe	57	3	He	-1.991	0.002	60.00	0.0006	0.003117
Fe	57	3	He	-0.644	0.0028	80.00	0.0006	0.003117
Fe	57	3	He	2.635	0.0046	140.01	0.0006	0.003117
Co	59	3	He	-0.028	0.0035	180.01	0.0317	0.004379
Co	59	3	He	-0.012	0.004	210.01	0.0317	0.004379
Co	59	3	He	0.04	0.0057	300.01	0.0317	0.004379
Ni	60	3	He	-0.048	0.0101	520.02	0.009	0.01049
Ni	60	3	He	0.04	0.0109	570.03	0.009	0.01049
Ni	60	3	He	0.008	0.0106	560.03	0.009	0.01049
Cu	63	3	He	0.021	0.0174	900.06	0.0259	0.01685
Cu	63	3	He	-0.055	0.0154	810.05	0.0259	0.01685
Cu	63	3	He	0.034	0.0177	940.06	0.0259	0.01685
Zn	66	3	He	0.018	0.0039	200.01	0.0028	0.003817
Zn	66	3	He	0.131	0.0042	220.01	0.0028	0.003817
Zn	66	3	He	-0.149	0.0034	180.01	0.0028	0.003817
As	75	3	He	0.011	0.0005	26.00	0.0019	0.0004832
As	75	3	He	-0.035	0.0004	22.00	0.0019	0.0004832
As	75	3	He	0.024	0.0005	28.00	0.0019	0.0004832
Sr	88	3	He	0.009	0.0006	30.00	0.008	0.0005203
Sr	88	3	He	-0.016	0.0004	20.00	0.008	0.0005203
Sr	88	3	He	0.007	0.0006	30.00	0.008	0.0005203
Mo	98	3	He	0.012	0.0006	30.00	0.0229	0.0003256
Mo	98	3	He	-0.014	0	0.00	0.0229	0.0003256
Mo	98	3	He	0.003	0.0004	20.00	0.0229	0.0003256
Ag	107	3	He	0.013	0.0014	70.00	0.05	0.000719
Ag	107	3	He	-0.003	0.0006	30.00	0.05	0.000719
Ag	107	3	He	-0.011	0.0002	10.00	0.05	0.000719
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Cd	111	3	He	0.002	0.0001	6.00	0.0055	0.000104
Cd	111	3	He	0.002	0.0001	6.00	0.0055	0.000104
Sn	120	3	He	0.051	0.0195	990.07	0.0159	0.01867
Sn	120	3	He	-0.043	0.018	920.07	0.0159	0.01867
Sn	120	3	He	-0.008	0.0185	960.07	0.0159	0.01867
Sb	121	3	He	0.01	0.0001	30.00	0.0026	8.342E-05
Sb	121	3	He	0.022	0.0001	40.00	0.0026	8.342E-05
Sb	121	3	He	-0.032	0	0.00	0.0026	8.342E-05
Ba	137	3	He	0.119	0.0012	60.00	0.005	0.0005882
Ba	137	3	He	-0.04	0.0004	20.00	0.005	0.0005882
Ba	137	3	He	-0.079	0.0002	10.00	0.005	0.0005882
Tl	205	3	He	0.002	0.0011	250.01	0.0313	0.0009967
Tl	205	3	He	-0.001	0.001	230.01	0.0313	0.0009967
Tl	205	3	He	-0.001	0.001	230.01	0.0313	0.0009967
Pb	208	3	He	-0.013	0.0024	310.01	0.041	0.002892
Pb	208	3	He	0.019	0.0037	400.02	0.041	0.002892
Pb	208	3	He	-0.006	0.0027	430.03	0.041	0.002892
U	238	3	He	-0.001	0.0008	190.01	0.0501	0.0008282
U	238	3	He	-0.001	0.0008	180.01	0.0501	0.0008282
U	238	3	He	0.002	0.0009	220.01	0.0501	0.0008282
Sc	45	1	No Gas			2198313.25		
Sc	45	1	No Gas			2188691.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2206598.72		
Ge	72	1	No Gas			1071759.36		
Ge	72	1	No Gas			1072946.16		
Ge	72	1	No Gas			1074374.98		
Sc	45	2	H2			134058.52		
Sc	45	2	H2			137156.19		
Sc	45	2	H2			135886.02		
Ge	72	2	H2			104517.74		
Ge	72	2	H2			107762.14		
Ge	72	2	H2			104930.84		
In	115	2	H2			282736.34		
In	115	2	H2			280186.66		
In	115	2	H2			276111.46		
Sc	45	3	He			30081.89		
Sc	45	3	He			29049.65		
Sc	45	3	He			30422.09		
Ge	72	3	He			51714.14		
Ge	72	3	He			52536.59		
Ge	72	3	He			53019.06		
In	115	3	He			50833.14		
In	115	3	He			51155.10		
In	115	3	He			51766.93		
Tb	159	3	He			275764.92		
Tb	159	3	He			282722.01		
Tb	159	3	He			276905.58		
Bi	209	3	He			237366.99		
Bi	209	3	He			237544.10		
Bi	209	3	He			237490.50		

Quantitation Report

Data File Name	035CALS.d
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Sample Type	CalStd
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

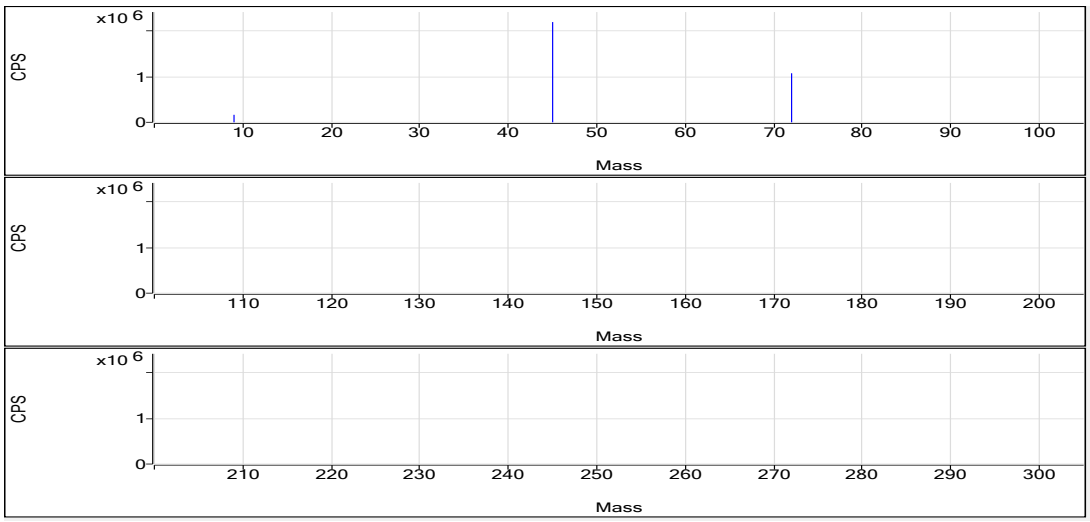
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	100.000	ppb	1.0	164043.45	0.0748	Pulse	0.5000	3
Se	78	72	H2	100.000	ppb	1.7	4612.52	0.0428	Pulse	1.5000	3
Na	23	45	He	10000.000	ppb	1.2	1134065.77	38.3403	Pulse	0.1000	3
Mg	24	45	He	10000.000	ppb	1.3	569403.84	19.2501	Pulse	0.1000	3
Al	27	45	He	10000.000	ppb	1.0	161232.16	5.4509	Pulse	0.1000	3
K	39	45	He	10000.000	ppb	1.7	328851.91	11.1181	Pulse	0.1000	3
Ca	44	45	He	10000.000	ppb	2.9	18562.31	0.6276	Pulse	0.1000	3
Ti	47	45	He	10000.000	ppb	2.2	144451.33	4.8838	Pulse	0.1000	3
V	51	45	He	1000.000	ppb	1.4	646652.25	21.8630	Pulse	0.5000	3
Cr	52	45	He	1000.000	ppb	1.2	857349.42	28.9857	Pulse	0.1000	3
Mn	55	45	He	1000.000	ppb	0.5	352366.20	11.9124	Pulse	0.1000	3
Fe	57	45	He	10000.000	ppb	0.9	166841.46	5.6406	Pulse	0.1000	3
Co	59	72	He	1000.000	ppb	1.1	1680172.58	31.6738	Pulse	0.1000	3
Ni	60	72	He	1000.000	ppb	1.6	480052.92	9.0500	Pulse	0.1000	3
Cu	63	72	He	1000.000	ppb	1.0	1374620.92	25.9138	Pulse	0.1000	3
Zn	66	72	He	1000.000	ppb	0.7	150082.02	2.8292	Pulse	0.1000	3
As	75	72	He	1000.000	ppb	1.6	98386.42	1.8548	Pulse	0.5000	3
Sr	88	115	He	100.000	ppb	2.8	41504.75	0.8022	Pulse	0.1000	3
Mo	98	115	He	100.000	ppb	1.0	118583.72	2.2918	Pulse	0.1000	3
Ag	107	115	He	100.000	ppb	1.6	258726.76	5.0006	Pulse	0.1000	3
Cd	111	115	He	100.000	ppb	0.7	28592.31	0.5526	Pulse	0.5000	3
Sn	120	115	He	100.000	ppb	3.2	83308.58	1.6102	Pulse	0.1000	3
Sb	121	159	He	100.000	ppb	0.5	74354.84	0.2610	Pulse	0.1000	3
Ba	137	115	He	1000.000	ppb	2.0	258275.84	4.9920	Pulse	0.1000	3
Tl	205	209	He	100.000	ppb	0.2	740814.96	3.1302	Pulse	0.1000	3
Pb	208	209	He	100.000	ppb	0.7	971515.66	4.1051	Pulse	0.1000	3
U	238	209	He	100.000	ppb	0.6	1186579.75	5.0137	Pulse	0.1000	3

ISTD Table:

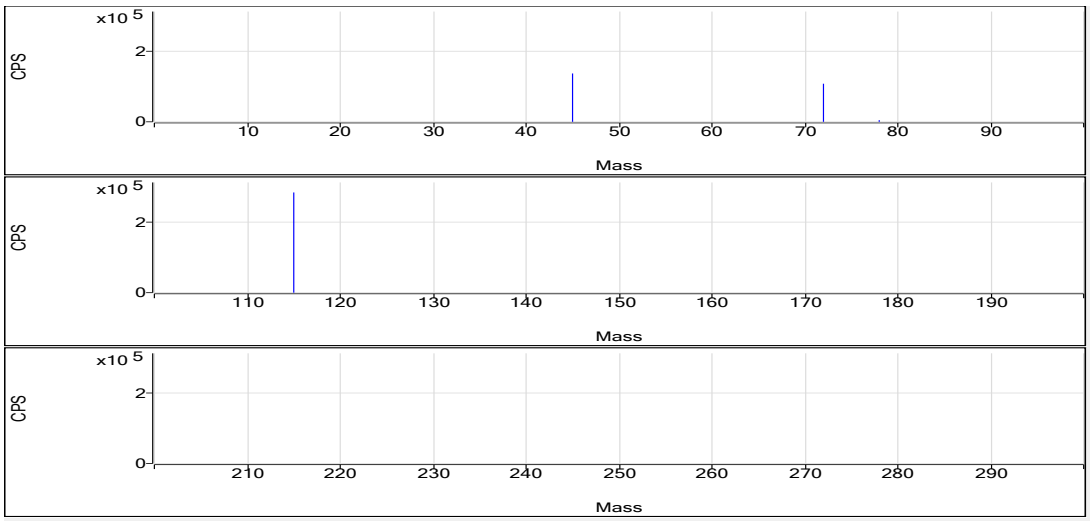
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2194018.51	0.8	99.8	Pulse	0.1000	3
No Gas	Ge	72	1073352.82	1.0	100.0	Pulse	0.1000	3
H2	Sc	45	136786.40	1.0	100.8	Pulse	0.1000	3
H2	Ge	72	107795.14	1.0	101.9	Pulse	0.1000	3
H2	In	115	283598.18	0.9	101.4	Pulse	0.1000	3
He	Sc	45	29580.61	1.1	99.1	Pulse	0.1000	3
He	Ge	72	53048.66	0.8	101.2	Pulse	0.1000	3
He	In	115	51745.75	1.1	101.0	Pulse	0.1000	3
He	Tb	159	284895.93	0.6	102.3	Pulse	0.1000	3
He	Bi	209	236668.42	0.7	99.7	Pulse	0.1000	3

No Gas

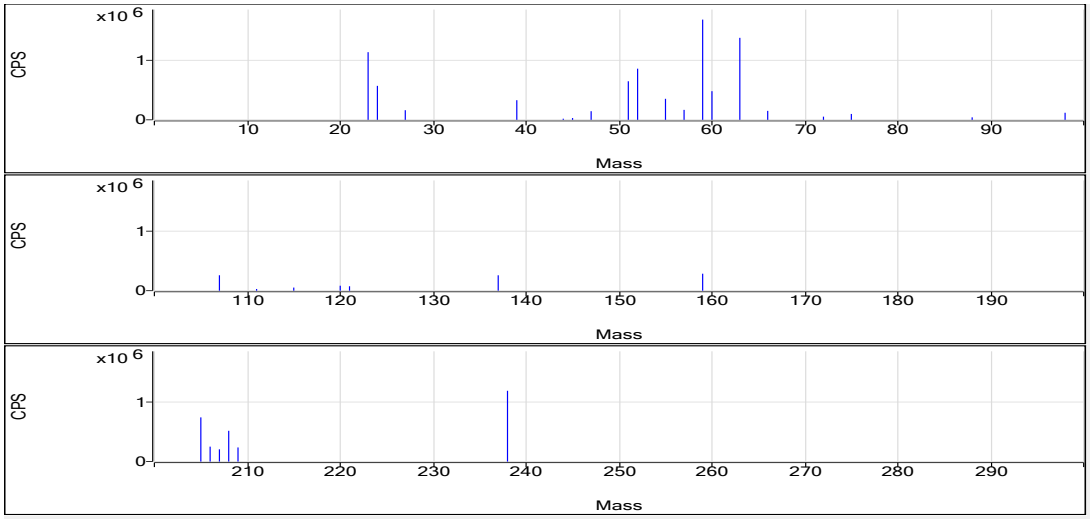


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	99.313	0.0743	163062.53	0.0007	2.306E-05
Be	9	1	No Gas	99.57	0.0744	161883.47	0.0007	2.306E-05
Be	9	1	No Gas	101.117	0.0756	167184.34	0.0007	2.306E-05
Se	78	2	H2	101.519	0.0434	4729.44	0.0004	4.221E-05
Se	78	2	H2	100.364	0.0429	4581.40	0.0004	4.221E-05
Se	78	2	H2	98.117	0.042	4526.72	0.0004	4.221E-05
Na	23	3	He	10004.066	38.3558	1145735.69	0.0038	0.2864
Na	23	3	He	10114.341	38.7754	1132622.80	0.0038	0.2864
Na	23	3	He	9881.592	37.8897	1123838.81	0.0038	0.2864
Mg	24	3	He	9857.951	18.9768	566861.20	0.0019	0.007972
Mg	24	3	He	10027.892	19.3038	563860.69	0.0019	0.007972
Mg	24	3	He	10114.157	19.4698	577489.64	0.0019	0.007972
Al	27	3	He	9887.61	5.3897	160996.35	0.0005	0.00158
Al	27	3	He	10062.019	5.4847	160207.48	0.0005	0.00158
Al	27	3	He	10050.371	5.4784	162492.66	0.0005	0.00158
K	39	3	He	9800.358	10.9033	325693.71	0.0011	0.3552
K	39	3	He	10085.592	11.2102	327449.02	0.0011	0.3552
K	39	3	He	10114.05	11.2409	333413.00	0.0011	0.3552
Ca	44	3	He	9691.396	0.6083	18171.76	0.0001	0.002
Ca	44	3	He	10256.757	0.6437	18802.57	0.0001	0.002
Ca	44	3	He	10051.847	0.6309	18712.61	0.0001	0.002
Ti	47	3	He	9756.202	4.7647	142327.42	0.0005	0.0004395
Ti	47	3	He	10062.804	4.9144	143549.20	0.0005	0.0004395
Ti	47	3	He	10180.995	4.9721	147477.37	0.0005	0.0004395
V	51	3	He	986.411	21.5663	644211.69	0.0218	0.02648
V	51	3	He	1014.688	22.1838	647983.19	0.0218	0.02648
V	51	3	He	998.901	21.839	647761.88	0.0218	0.02648
Cr	52	3	He	986.426	28.5924	854090.38	0.029	0.006056
Cr	52	3	He	1008.958	29.2454	854251.16	0.029	0.006056
Cr	52	3	He	1004.615	29.1195	863706.71	0.029	0.006056
Mn	55	3	He	994.259	11.844	353796.21	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1002.972	11.9478	348992.89	0.0119	0.00335
Mn	55	3	He	1002.769	11.9454	354309.49	0.0119	0.00335
Fe	57	3	He	9899.957	5.5842	166807.48	0.0006	0.003117
Fe	57	3	He	10086.861	5.6896	166191.54	0.0006	0.003117
Fe	57	3	He	10013.182	5.648	167525.37	0.0006	0.003117
Co	59	3	He	1010.158	31.9955	1693795.13	0.0317	0.004379
Co	59	3	He	987.54	31.2792	1673767.79	0.0317	0.004379
Co	59	3	He	1002.302	31.7467	1672954.82	0.0317	0.004379
Ni	60	3	He	1003.381	9.0806	480713.12	0.009	0.01049
Ni	60	3	He	983.009	8.8964	476053.39	0.009	0.01049
Ni	60	3	He	1013.61	9.1731	483392.26	0.009	0.01049
Cu	63	3	He	1001.315	25.9478	1373639.04	0.0259	0.01685
Cu	63	3	He	989.655	25.6459	1372324.67	0.0259	0.01685
Cu	63	3	He	1009.03	26.1476	1377899.04	0.0259	0.01685
Zn	66	3	He	998.805	2.8259	149596.36	0.0028	0.003817
Zn	66	3	He	994.074	2.8125	150497.63	0.0028	0.003817
Zn	66	3	He	1007.122	2.8494	150152.06	0.0028	0.003817
As	75	3	He	1008.092	1.8698	98984.46	0.0019	0.0004832
As	75	3	He	981.708	1.8209	97436.08	0.0019	0.0004832
As	75	3	He	1010.2	1.8737	98738.72	0.0019	0.0004832
Sr	88	3	He	101.279	0.8125	42153.51	0.008	0.0005203
Sr	88	3	He	96.791	0.7765	40578.62	0.008	0.0005203
Sr	88	3	He	101.929	0.8177	41782.13	0.008	0.0005203
Mo	98	3	He	98.91	2.2668	117605.62	0.0229	0.0003256
Mo	98	3	He	100.118	2.2945	119904.44	0.0229	0.0003256
Mo	98	3	He	100.972	2.314	118241.11	0.0229	0.0003256
Ag	107	3	He	99.603	4.9807	258408.77	0.05	0.000719
Ag	107	3	He	98.652	4.9331	257796.13	0.05	0.000719
Ag	107	3	He	101.746	5.0879	259975.39	0.05	0.000719
Cd	111	3	He	100.724	0.5566	28875.56	0.0055	0.000104
Cd	111	3	He	99.27	0.5485	28665.08	0.0055	0.000104
Cd	111	3	He	100.006	0.5526	28236.30	0.0055	0.000104
Sn	120	3	He	102.497	1.6499	85602.29	0.0159	0.01867
Sn	120	3	He	96.358	1.5522	81115.94	0.0159	0.01867
Sn	120	3	He	101.145	1.6284	83207.52	0.0159	0.01867
Sb	121	3	He	99.923	0.2608	74780.54	0.0026	8.342E-05
Sb	121	3	He	100.571	0.2625	74689.95	0.0026	8.342E-05
Sb	121	3	He	99.506	0.2597	73594.04	0.0026	8.342E-05
Ba	137	3	He	997.609	4.9801	258376.46	0.005	0.0005882
Ba	137	3	He	981.282	4.8986	255989.49	0.005	0.0005882
Ba	137	3	He	1021.109	5.0974	260461.56	0.005	0.0005882
Tl	205	3	He	100.008	3.1304	746312.57	0.0313	0.0009967
Tl	205	3	He	100.229	3.1373	740933.11	0.0313	0.0009967
Tl	205	3	He	99.763	3.1228	735199.21	0.0313	0.0009967
Pb	208	3	He	99.285	4.0757	515021.75	0.041	0.002892
Pb	208	3	He	100.588	4.1292	519707.61	0.041	0.002892
Pb	208	3	He	100.127	4.1103	513469.80	0.041	0.002892
U	238	3	He	99.805	5.004	1192981.62	0.0501	0.0008282
U	238	3	He	99.555	4.9914	1178804.59	0.0501	0.0008282
U	238	3	He	100.64	5.0458	1187953.03	0.0501	0.0008282
Sc	45	1	No Gas			2196059.97		
Sc	45	1	No Gas			2174574.50		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2211421.06		
Ge	72	1	No Gas			1068872.48		
Ge	72	1	No Gas			1065604.28		
Ge	72	1	No Gas			1085581.70		
Sc	45	2	H2			135228.79		
Sc	45	2	H2			137399.24		
Sc	45	2	H2			137731.18		
Ge	72	2	H2			108879.82		
Ge	72	2	H2			106683.55		
Ge	72	2	H2			107822.05		
In	115	2	H2			286606.85		
In	115	2	H2			282685.72		
In	115	2	H2			281501.97		
Sc	45	3	He			29871.25		
Sc	45	3	He			29209.80		
Sc	45	3	He			29660.77		
Ge	72	3	He			52938.49		
Ge	72	3	He			53510.56		
Ge	72	3	He			52696.93		
In	115	3	He			52549.76		
In	115	3	He			52890.64		
In	115	3	He			51746.28		
Tb	159	3	He			286747.93		
Tb	159	3	He			284557.53		
Tb	159	3	He			283382.34		
Bi	209	3	He			238407.01		
Bi	209	3	He			236166.31		
Bi	209	3	He			235431.93		

Quantitation Report

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Sample Type	ICV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

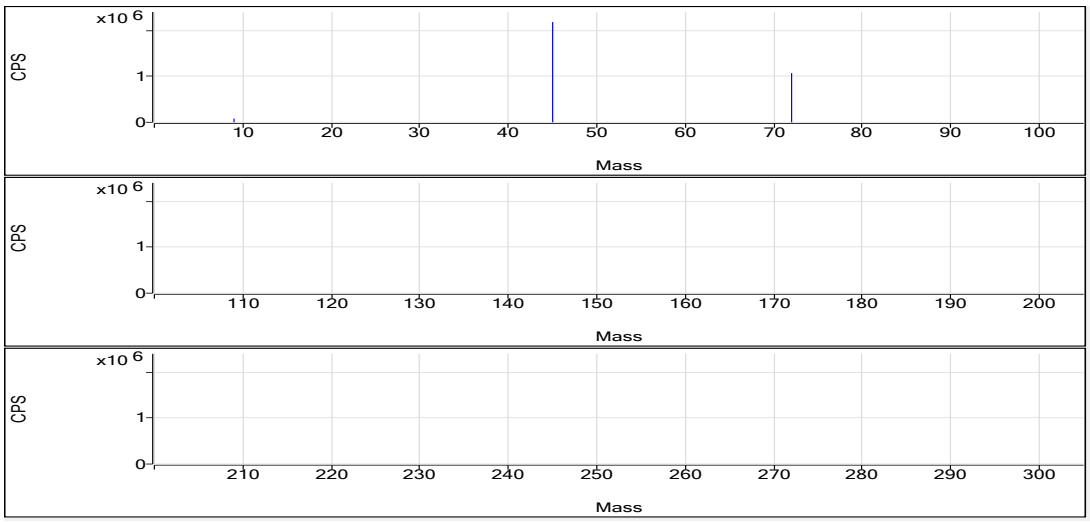
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.718	ppb	0.3	81420.71	0.0372	Pulse	0.5000	3
Se	78	72	H2	51.439	ppb	1.1	2323.53	0.0220	Pulse	1.5000	3
Na	23	45	He	4947.056	ppb	2.2	572569.78	19.1119	Pulse	0.1000	3
Mg	24	45	He	4943.995	ppb	2.7	285234.57	9.5213	Pulse	0.1000	3
Al	27	45	He	4866.993	ppb	1.5	79509.86	2.6538	Pulse	0.1000	3
K	39	45	He	4934.108	ppb	2.0	169745.21	5.6658	Pulse	0.1000	3
Ca	44	45	He	4965.746	ppb	3.3	9366.66	0.3127	Pulse	0.1000	3
Ti	47	45	He	4905.528	ppb	0.8	71789.57	2.3960	Pulse	0.1000	3
V	51	45	He	493.274	ppb	1.9	323499.69	10.7979	Pulse	0.5000	3
Cr	52	45	He	487.355	ppb	2.3	423296.53	14.1295	Pulse	0.1000	3
Mn	55	45	He	486.983	ppb	2.2	173850.39	5.8029	Pulse	0.1000	3
Fe	57	45	He	4939.431	ppb	1.2	83529.79	2.7877	Pulse	0.1000	3
Co	59	72	He	500.899	ppb	1.7	842492.38	15.8676	Pulse	0.1000	3
Ni	60	72	He	500.865	ppb	1.8	240947.56	4.5381	Pulse	0.1000	3
Cu	63	72	He	502.075	ppb	1.2	691273.11	13.0191	Pulse	0.1000	3
Zn	66	72	He	500.296	ppb	2.9	75249.74	1.4174	Pulse	0.1000	3
As	75	72	He	489.693	ppb	1.5	48238.86	0.9085	Pulse	0.5000	3
Sr	88	115	He	50.025	ppb	2.7	21106.28	0.4016	Pulse	0.1000	3
Mo	98	115	He	50.775	ppb	1.2	61162.41	1.1638	Pulse	0.1000	3
Ag	107	115	He	49.269	ppb	0.7	129485.33	2.4641	Pulse	0.1000	3
Cd	111	115	He	53.321	ppb	0.3	15485.22	0.2947	Pulse	0.5000	3
Sn	120	115	He	50.595	ppb	2.8	43291.43	0.8239	Pulse	0.1000	3
Sb	121	159	He	53.199	ppb	0.4	39359.54	0.1389	Pulse	0.1000	3
Ba	137	115	He	496.766	ppb	1.6	130324.46	2.4802	Pulse	0.1000	3
Tl	205	209	He	48.935	ppb	0.9	365843.79	1.5323	Pulse	0.1000	3
Pb	208	209	He	49.506	ppb	0.9	485570.57	2.0337	Pulse	0.1000	3
U	238	209	He	50.388	ppb	1.3	603269.56	2.5267	Pulse	0.1000	3

ISTD Table:

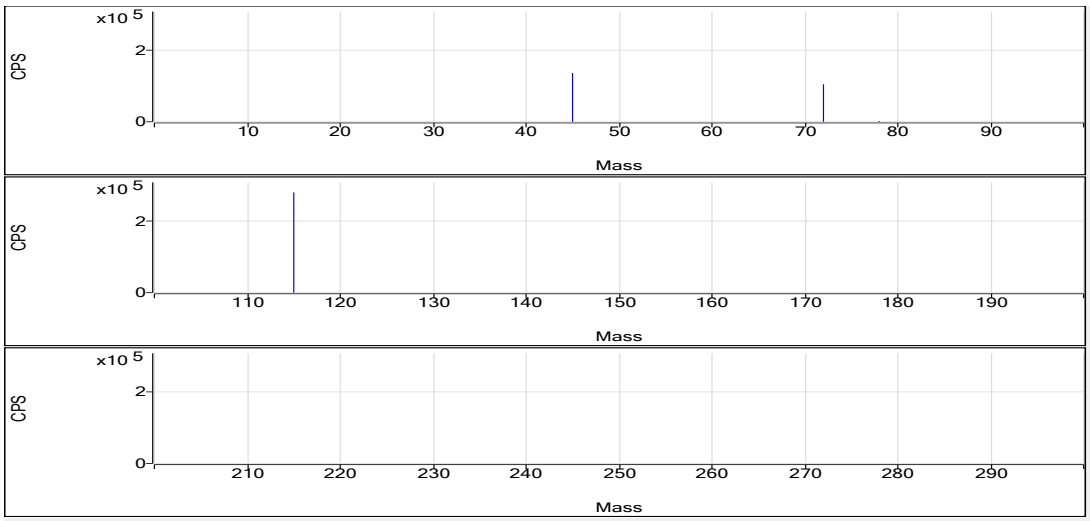
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2189631.74	1.4	99.6	Pulse	0.1000	3
No Gas	Ge	72	1074868.68	0.9	100.2	Pulse	0.1000	3
H2	Sc	45	136998.77	1.0	101.0	Pulse	0.1000	3
H2	Ge	72	105467.10	1.2	99.7	Pulse	0.1000	3
H2	In	115	281375.95	1.0	100.6	Pulse	0.1000	3
He	Sc	45	29964.93	1.4	100.4	Pulse	0.1000	3
He	Ge	72	53101.95	1.2	101.3	Pulse	0.1000	3
He	In	115	52549.82	1.0	102.5	Pulse	0.1000	3
He	Tb	159	283406.27	0.5	101.8	Pulse	0.1000	3
He	Bi	209	238764.83	0.5	100.5	Pulse	0.1000	3

No Gas

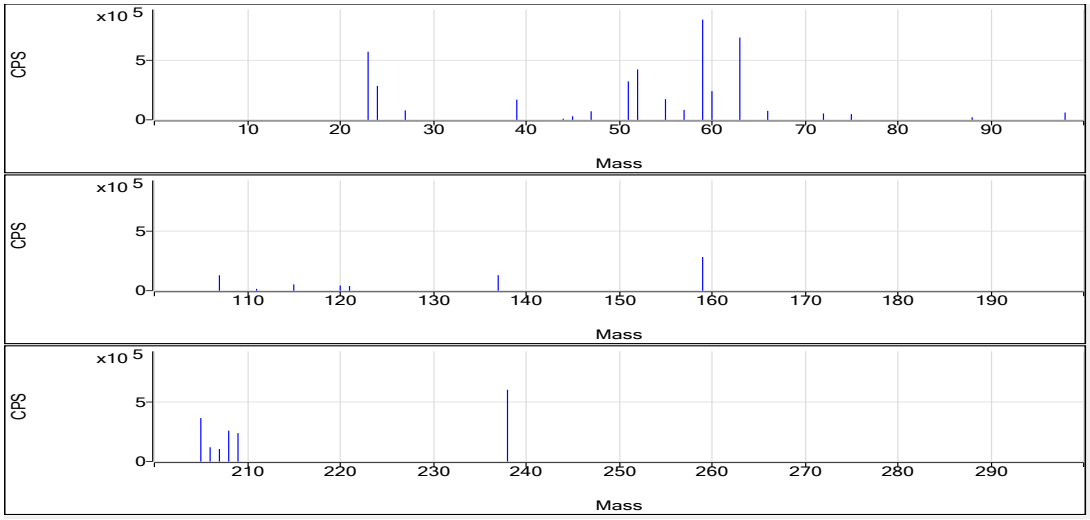


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.582	0.0371	80062.72	0.0007	2.306E-05
Be	9	1	No Gas	49.699	0.0372	81355.69	0.0007	2.306E-05
Be	9	1	No Gas	49.874	0.0373	82843.73	0.0007	2.306E-05
Se	78	2	H2	51.765	0.0222	2314.86	0.0004	4.221E-05
Se	78	2	H2	51.755	0.0222	2368.20	0.0004	4.221E-05
Se	78	2	H2	50.798	0.0218	2287.52	0.0004	4.221E-05
Na	23	3	He	5039.884	19.4651	577357.45	0.0038	0.2864
Na	23	3	He	4977.238	19.2268	572785.69	0.0038	0.2864
Na	23	3	He	4824.046	18.6438	567566.20	0.0038	0.2864
Mg	24	3	He	5064.079	9.7524	289265.68	0.0019	0.007972
Mg	24	3	He	4968.399	9.5683	285048.59	0.0019	0.007972
Mg	24	3	He	4799.508	9.2433	281389.43	0.0019	0.007972
Al	27	3	He	4889.691	2.6661	79080.60	0.0005	0.00158
Al	27	3	He	4925.967	2.6859	80016.09	0.0005	0.00158
Al	27	3	He	4785.321	2.6093	79432.88	0.0005	0.00158
K	39	3	He	4978.98	5.714	169484.92	0.0011	0.3552
K	39	3	He	5003.17	5.7401	171003.32	0.0011	0.3552
K	39	3	He	4820.174	5.5431	168747.40	0.0011	0.3552
Ca	44	3	He	5121.507	0.3224	9563.45	0.0001	0.002
Ca	44	3	He	4980.948	0.3136	9343.38	0.0001	0.002
Ca	44	3	He	4794.783	0.302	9193.15	0.0001	0.002
Ti	47	3	He	4934.413	2.4101	71485.20	0.0005	0.0004395
Ti	47	3	He	4920.452	2.4032	71595.39	0.0005	0.0004395
Ti	47	3	He	4861.72	2.3746	72288.11	0.0005	0.0004395
V	51	3	He	499.834	10.9411	324525.91	0.0218	0.02648
V	51	3	He	497.567	10.8916	324473.06	0.0218	0.02648
V	51	3	He	482.42	10.5609	321500.09	0.0218	0.02648
Cr	52	3	He	495.859	14.3759	426404.41	0.029	0.006056
Cr	52	3	He	491.715	14.2558	424695.93	0.029	0.006056
Cr	52	3	He	474.491	13.7567	418789.25	0.029	0.006056
Mn	55	3	He	497.919	5.9331	175982.24	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	486.159	5.793	172581.09	0.0119	0.00335
Mn	55	3	He	476.87	5.6824	172987.85	0.0119	0.00335
Fe	57	3	He	5005.457	2.8249	83790.85	0.0006	0.003117
Fe	57	3	He	4893.188	2.7617	82272.54	0.0006	0.003117
Fe	57	3	He	4919.647	2.7766	84525.98	0.0006	0.003117
Co	59	3	He	506.878	16.0569	848730.92	0.0317	0.004379
Co	59	3	He	491.448	15.5683	838054.28	0.0317	0.004379
Co	59	3	He	504.37	15.9775	840691.94	0.0317	0.004379
Ni	60	3	He	507.74	4.6002	243157.26	0.009	0.01049
Ni	60	3	He	490.436	4.4438	239214.57	0.009	0.01049
Ni	60	3	He	504.417	4.5702	240470.84	0.009	0.01049
Cu	63	3	He	504.169	13.0733	691022.96	0.0259	0.01685
Cu	63	3	He	495.53	12.8496	691704.05	0.0259	0.01685
Cu	63	3	He	506.527	13.1343	691092.33	0.0259	0.01685
Zn	66	3	He	496.573	1.4068	74362.29	0.0028	0.003817
Zn	66	3	He	488.094	1.3829	74441.92	0.0028	0.003817
Zn	66	3	He	516.221	1.4624	76945.02	0.0028	0.003817
As	75	3	He	492.425	0.9136	48290.37	0.0019	0.0004832
As	75	3	He	481.627	0.8936	48101.74	0.0019	0.0004832
As	75	3	He	495.026	0.9184	48324.47	0.0019	0.0004832
Sr	88	3	He	50.808	0.4079	21516.76	0.008	0.0005203
Sr	88	3	He	48.471	0.3891	20215.10	0.008	0.0005203
Sr	88	3	He	50.794	0.4077	21586.98	0.008	0.0005203
Mo	98	3	He	51.087	1.171	61774.96	0.0229	0.0003256
Mo	98	3	He	50.065	1.1475	59615.77	0.0229	0.0003256
Mo	98	3	He	51.172	1.1729	62096.49	0.0229	0.0003256
Ag	107	3	He	48.868	2.444	128936.53	0.05	0.000719
Ag	107	3	He	49.501	2.4757	128614.70	0.05	0.000719
Ag	107	3	He	49.439	2.4726	130904.75	0.05	0.000719
Cd	111	3	He	53.124	0.2936	15488.57	0.0055	0.000104
Cd	111	3	He	53.444	0.2954	15344.39	0.0055	0.000104
Cd	111	3	He	53.395	0.2951	15622.71	0.0055	0.000104
Sn	120	3	He	51.614	0.8401	44321.34	0.0159	0.01867
Sn	120	3	He	51.219	0.8338	43318.07	0.0159	0.01867
Sn	120	3	He	48.952	0.7977	42234.89	0.0159	0.01867
Sb	121	3	He	53.468	0.1396	39476.20	0.0026	8.342E-05
Sb	121	3	He	53.063	0.1385	39486.86	0.0026	8.342E-05
Sb	121	3	He	53.065	0.1385	39115.57	0.0026	8.342E-05
Ba	137	3	He	487.89	2.4359	128505.25	0.005	0.0005882
Ba	137	3	He	502.764	2.5101	130401.98	0.005	0.0005882
Ba	137	3	He	499.642	2.4945	132066.14	0.005	0.0005882
Tl	205	3	He	49.44	1.5481	367834.25	0.0313	0.0009967
Tl	205	3	He	48.659	1.5236	363642.14	0.0313	0.0009967
Tl	205	3	He	48.707	1.5251	366054.99	0.0313	0.0009967
Pb	208	3	He	49.966	2.0526	264074.35	0.041	0.002892
Pb	208	3	He	49.11	2.0175	257634.23	0.041	0.002892
Pb	208	3	He	49.442	2.0311	258931.05	0.041	0.002892
U	238	3	He	50.931	2.554	606844.87	0.0501	0.0008282
U	238	3	He	50.575	2.5361	605291.51	0.0501	0.0008282
U	238	3	He	49.657	2.4901	597672.30	0.0501	0.0008282
Sc	45	1	No Gas			2159097.16		
Sc	45	1	No Gas			2188791.53		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2221006.53		
Ge	72	1	No Gas			1063931.62		
Ge	72	1	No Gas			1077497.25		
Ge	72	1	No Gas			1083177.17		
Sc	45	2	H2			138065.02		
Sc	45	2	H2			137530.55		
Sc	45	2	H2			135400.74		
Ge	72	2	H2			104415.46		
Ge	72	2	H2			106842.37		
Ge	72	2	H2			105143.47		
In	115	2	H2			282628.55		
In	115	2	H2			283330.37		
In	115	2	H2			278168.94		
Sc	45	3	He			29661.09		
Sc	45	3	He			29791.08		
Sc	45	3	He			30442.63		
Ge	72	3	He			52857.66		
Ge	72	3	He			53830.95		
Ge	72	3	He			52617.23		
In	115	3	He			53101.49		
In	115	3	He			52288.88		
In	115	3	He			53272.11		
Tb	159	3	He			282812.98		
Tb	159	3	He			285048.20		
Tb	159	3	He			282357.63		
Bi	209	3	He			237608.94		
Bi	209	3	He			238667.16		
Bi	209	3	He			240018.39		

Quantitation Report

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Sample Type	ICB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

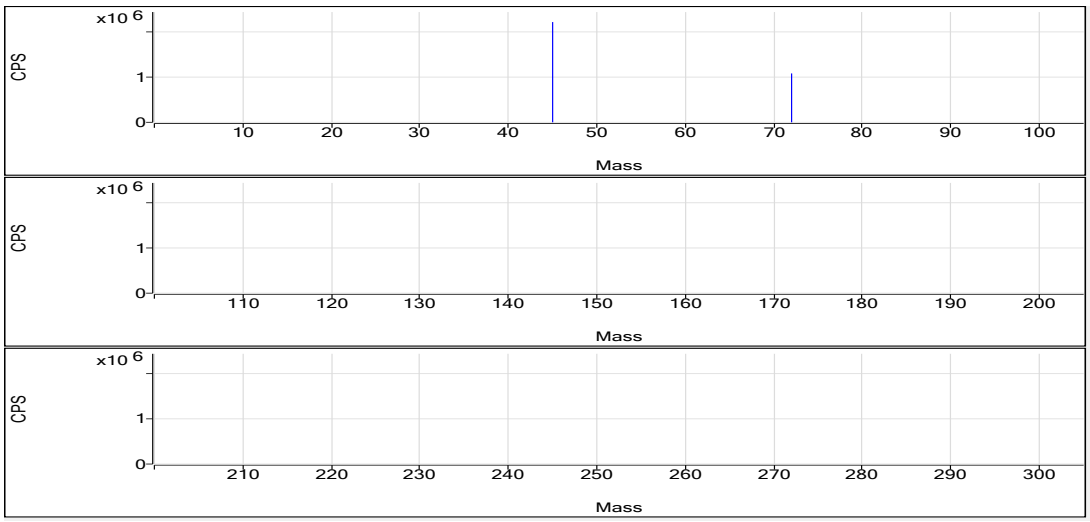
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.007	ppb	74.0	62.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.024	ppb	N/A	3.34	0.0000	Pulse	1.5000	3
Na	23	45	He	-1.786	ppb	N/A	8015.74	0.2796	Pulse	0.1000	3
Mg	24	45	He	0.868	ppb	13.7	276.68	0.0096	Pulse	0.1000	3
Al	27	45	He	0.515	ppb	82.4	53.33	0.0019	Pulse	0.1000	3
K	39	45	He	3.182	ppb	580.7	10283.92	0.3586	Pulse	0.1000	3
Ca	44	45	He	-3.864	ppb	N/A	50.00	0.0018	Pulse	0.1000	3
Ti	47	45	He	1.429	ppb	200.9	33.33	0.0011	Pulse	0.1000	3
V	51	45	He	0.032	ppb	330.0	779.36	0.0272	Pulse	0.5000	3
Cr	52	45	He	0.181	ppb	72.0	323.35	0.0113	Pulse	0.1000	3
Mn	55	45	He	-0.037	ppb	N/A	83.33	0.0029	Pulse	0.1000	3
Fe	57	45	He	0.236	ppb	280.5	93.33	0.0032	Pulse	0.1000	3
Co	59	72	He	0.049	ppb	97.5	306.68	0.0059	Pulse	0.1000	3
Ni	60	72	He	0.153	ppb	147.0	616.70	0.0119	Pulse	0.1000	3
Cu	63	72	He	-0.061	ppb	N/A	793.38	0.0153	Pulse	0.1000	3
Zn	66	72	He	-0.038	ppb	N/A	193.35	0.0037	Pulse	0.1000	3
As	75	72	He	0.162	ppb	55.3	40.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.049	ppb	102.0	46.67	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.020	ppb	171.4	40.00	0.0008	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	52.8	70.00	0.0014	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	337.6	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.108	ppb	N/A	863.39	0.0170	Pulse	0.1000	3
Sb	121	159	He	-0.014	ppb	N/A	13.33	0.0000	Pulse	0.1000	3
Ba	137	115	He	0.183	ppb	32.0	76.67	0.0015	Pulse	0.1000	3
Tl	205	209	He	0.007	ppb	102.0	286.68	0.0012	Pulse	0.1000	3
Pb	208	209	He	-0.001	ppb	N/A	666.70	0.0028	Pulse	0.1000	3
U	238	209	He	0.001	ppb	468.2	206.68	0.0009	Pulse	0.1000	3

ISTD Table:

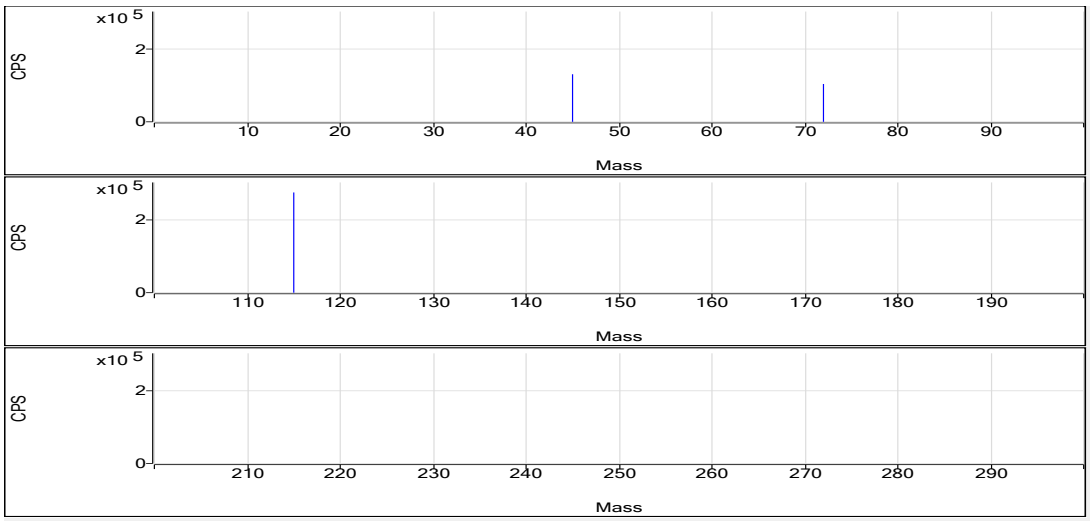
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2212758.19	0.7	100.7	Pulse	0.1000	3
No Gas	Ge	72	1078865.38	0.7	100.5	Pulse	0.1000	3
H2	Sc	45	131710.99	0.6	97.1	Pulse	0.1000	3
H2	Ge	72	104739.74	2.3	99.1	Pulse	0.1000	3
H2	In	115	277528.28	1.3	99.2	Pulse	0.1000	3
He	Sc	45	28702.27	2.7	96.2	Pulse	0.1000	3
He	Ge	72	51914.43	2.0	99.0	Pulse	0.1000	3
He	In	115	50943.46	0.6	99.4	Pulse	0.1000	3
He	Tb	159	277271.32	0.5	99.6	Pulse	0.1000	3
He	Bi	209	234420.69	0.7	98.7	Pulse	0.1000	3

No Gas

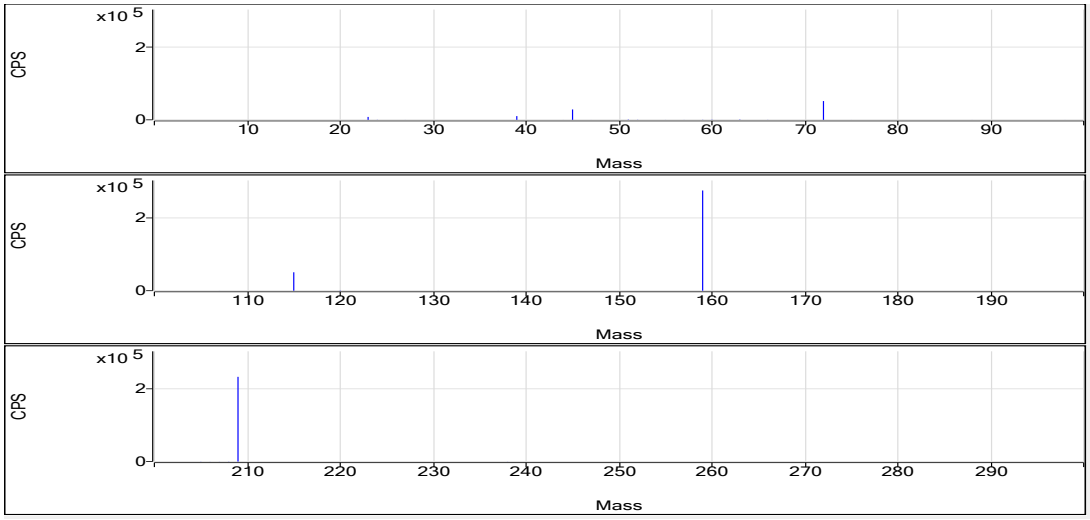


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.006	0	62.00	0.0007	2.306E-05
Be	9	1	No Gas	0.002	0	54.00	0.0007	2.306E-05
Be	9	1	No Gas	0.012	0	70.00	0.0007	2.306E-05
Se	78	2	H2	-0.04	0	2.67	0.0004	4.221E-05
Se	78	2	H2	0.008	0	4.67	0.0004	4.221E-05
Se	78	2	H2	-0.04	0	2.67	0.0004	4.221E-05
Na	23	3	He	0.389	0.2879	8132.49	0.0038	0.2864
Na	23	3	He	-7.819	0.2567	7592.16	0.0038	0.2864
Na	23	3	He	2.074	0.2943	8322.57	0.0038	0.2864
Mg	24	3	He	0.825	0.0096	270.01	0.0019	0.007972
Mg	24	3	He	0.777	0.0095	280.01	0.0019	0.007972
Mg	24	3	He	1.003	0.0099	280.01	0.0019	0.007972
Al	27	3	He	0.998	0.0021	60.00	0.0005	0.00158
Al	27	3	He	0.202	0.0017	50.00	0.0005	0.00158
Al	27	3	He	0.345	0.0018	50.00	0.0005	0.00158
K	39	3	He	15.781	0.3722	10514.12	0.0011	0.3552
K	39	3	He	-18.03	0.3358	9933.64	0.0011	0.3552
K	39	3	He	11.794	0.3679	10404.00	0.0011	0.3552
Ca	44	3	He	7.635	0.0025	70.00	0.0001	0.002
Ca	44	3	He	-21.167	0.0007	20.00	0.0001	0.002
Ca	44	3	He	1.94	0.0021	60.00	0.0001	0.002
Ti	47	3	He	0.55	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	4.638	0.0027	80.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
V	51	3	He	0	0.0265	748.03	0.0218	0.02648
V	51	3	He	-0.054	0.0253	748.03	0.0218	0.02648
V	51	3	He	0.151	0.0298	842.03	0.0218	0.02648
Cr	52	3	He	0.329	0.0156	440.02	0.029	0.006056
Cr	52	3	He	0.129	0.0098	290.01	0.029	0.006056
Cr	52	3	He	0.084	0.0085	240.01	0.029	0.006056
Mn	55	3	He	-0.044	0.0028	80.00	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.054	0.0027	80.00	0.0119	0.00335
Mn	55	3	He	-0.014	0.0032	90.00	0.0119	0.00335
Fe	57	3	He	0.751	0.0035	100.00	0.0006	0.003117
Fe	57	3	He	0.468	0.0034	100.00	0.0006	0.003117
Fe	57	3	He	-0.511	0.0028	80.00	0.0006	0.003117
Co	59	3	He	0.01	0.0047	250.01	0.0317	0.004379
Co	59	3	He	0.102	0.0076	390.02	0.0317	0.004379
Co	59	3	He	0.034	0.0055	280.01	0.0317	0.004379
Ni	60	3	He	0.256	0.0128	680.05	0.009	0.01049
Ni	60	3	He	0.306	0.0133	680.04	0.009	0.01049
Ni	60	3	He	-0.105	0.0095	490.02	0.009	0.01049
Cu	63	3	He	-0.047	0.0156	830.05	0.0259	0.01685
Cu	63	3	He	-0.048	0.0156	800.05	0.0259	0.01685
Cu	63	3	He	-0.087	0.0146	750.04	0.0259	0.01685
Zn	66	3	He	0.382	0.0049	260.02	0.0028	0.003817
Zn	66	3	He	-0.454	0.0025	130.01	0.0028	0.003817
Zn	66	3	He	-0.041	0.0037	190.01	0.0028	0.003817
As	75	3	He	0.125	0.0007	38.00	0.0019	0.0004832
As	75	3	He	0.097	0.0007	34.00	0.0019	0.0004832
As	75	3	He	0.264	0.001	50.00	0.0019	0.0004832
Sr	88	3	He	0.009	0.0006	30.00	0.008	0.0005203
Sr	88	3	He	0.105	0.0014	70.00	0.008	0.0005203
Sr	88	3	He	0.033	0.0008	40.00	0.008	0.0005203
Mo	98	3	He	0.055	0.0016	80.00	0.0229	0.0003256
Mo	98	3	He	0.02	0.0008	40.00	0.0229	0.0003256
Mo	98	3	He	-0.014	0	0.00	0.0229	0.0003256
Ag	107	3	He	0.017	0.0016	80.00	0.05	0.000719
Ag	107	3	He	0.005	0.001	50.00	0.05	0.000719
Ag	107	3	He	0.017	0.0016	80.00	0.05	0.000719
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Cd	111	3	He	0.024	0.0002	12.00	0.0055	0.000104
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Sn	120	3	He	-0.134	0.0165	840.05	0.0159	0.01867
Sn	120	3	He	-0.144	0.0164	840.05	0.0159	0.01867
Sn	120	3	He	-0.046	0.0179	910.06	0.0159	0.01867
Sb	121	3	He	-0.018	0	10.00	0.0026	8.342E-05
Sb	121	3	He	-0.004	0.0001	20.00	0.0026	8.342E-05
Sb	121	3	He	-0.018	0	10.00	0.0026	8.342E-05
Ba	137	3	He	0.198	0.0016	80.00	0.005	0.0005882
Ba	137	3	He	0.234	0.0018	90.00	0.005	0.0005882
Ba	137	3	He	0.119	0.0012	60.00	0.005	0.0005882
Tl	205	3	He	0.002	0.0011	250.01	0.0313	0.0009967
Tl	205	3	He	0.016	0.0015	350.02	0.0313	0.0009967
Tl	205	3	He	0.004	0.0011	260.01	0.0313	0.0009967
Pb	208	3	He	0.008	0.0032	360.02	0.041	0.002892
Pb	208	3	He	-0.013	0.0024	340.02	0.041	0.002892
Pb	208	3	He	0.001	0.0029	410.02	0.041	0.002892
U	238	3	He	0.005	0.0011	250.01	0.0501	0.0008282
U	238	3	He	0.003	0.001	230.01	0.0501	0.0008282
U	238	3	He	-0.005	0.0006	140.01	0.0501	0.0008282
Sc	45	1	No Gas			2230660.12		
Sc	45	1	No Gas			2206898.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2200715.90		
Ge	72	1	No Gas			1087905.30		
Ge	72	1	No Gas			1075621.39		
Ge	72	1	No Gas			1073069.44		
Sc	45	2	H2			131365.31		
Sc	45	2	H2			131101.03		
Sc	45	2	H2			132666.62		
Ge	72	2	H2			106281.03		
Ge	72	2	H2			101909.81		
Ge	72	2	H2			106028.38		
In	115	2	H2			273424.23		
In	115	2	H2			279137.65		
In	115	2	H2			280022.96		
Sc	45	3	He			28248.06		
Sc	45	3	He			29580.52		
Sc	45	3	He			28278.22		
Ge	72	3	He			53098.40		
Ge	72	3	He			51292.59		
Ge	72	3	He			51352.29		
In	115	3	He			50803.28		
In	115	3	He			51294.90		
In	115	3	He			50752.40		
Tb	159	3	He			277531.89		
Tb	159	3	He			275716.09		
Tb	159	3	He			278565.99		
Bi	209	3	He			235277.65		
Bi	209	3	He			235502.93		
Bi	209	3	He			232481.50		

Quantitation Report

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Sample Type	CRI
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

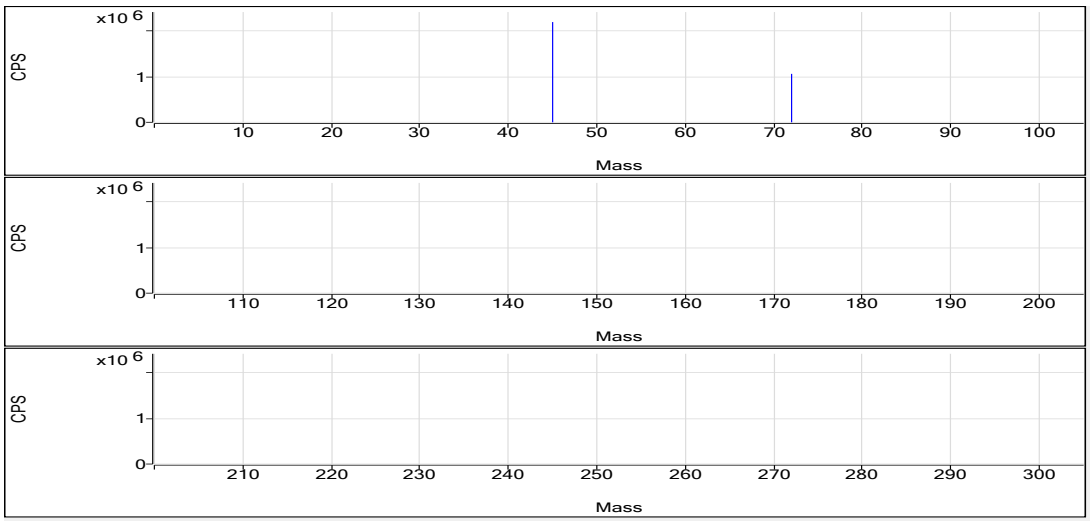
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.480	ppb	5.3	840.03	0.0004	Pulse	0.5000	3
Se	78	72	H2	1.078	ppb	17.7	52.66	0.0005	Pulse	1.5000	3
Na	23	45	He	191.775	ppb	4.5	29540.13	1.0162	Pulse	0.1000	3
Mg	24	45	He	52.633	ppb	5.2	3177.12	0.1092	Pulse	0.1000	3
Al	27	45	He	27.652	ppb	18.8	483.36	0.0166	Pulse	0.1000	3
K	39	45	He	190.370	ppb	2.9	16286.16	0.5601	Pulse	0.1000	3
Ca	44	45	He	110.980	ppb	13.3	260.01	0.0089	Pulse	0.1000	3
Ti	47	45	He	9.202	ppb	39.1	143.34	0.0049	Pulse	0.1000	3
V	51	45	He	2.026	ppb	2.8	2056.16	0.0707	Pulse	0.5000	3
Cr	52	45	He	2.039	ppb	3.1	1893.53	0.0651	Pulse	0.1000	3
Mn	55	45	He	1.780	ppb	6.5	713.37	0.0245	Pulse	0.1000	3
Fe	57	45	He	50.434	ppb	15.6	916.73	0.0315	Pulse	0.1000	3
Co	59	72	He	0.519	ppb	8.1	1073.41	0.0208	Pulse	0.1000	3
Ni	60	72	He	1.076	ppb	9.5	1043.41	0.0202	Pulse	0.1000	3
Cu	63	72	He	1.081	ppb	13.6	2316.94	0.0449	Pulse	0.1000	3
Zn	66	72	He	10.168	ppb	11.0	1680.16	0.0325	Pulse	0.1000	3
As	75	72	He	2.087	ppb	4.5	224.67	0.0044	Pulse	0.5000	3
Sr	88	115	He	0.975	ppb	4.9	423.35	0.0083	Pulse	0.1000	3
Mo	98	115	He	0.490	ppb	6.4	586.70	0.0116	Pulse	0.1000	3
Ag	107	115	He	0.527	ppb	10.4	1373.45	0.0271	Pulse	0.1000	3
Cd	111	115	He	0.449	ppb	23.1	130.67	0.0026	Pulse	0.5000	3
Sn	120	115	He	1.605	ppb	12.0	2243.59	0.0442	Pulse	0.1000	3
Sb	121	159	He	1.086	ppb	7.6	813.39	0.0029	Pulse	0.1000	3
Ba	137	115	He	1.696	ppb	5.1	460.02	0.0091	Pulse	0.1000	3
Tl	205	209	He	0.492	ppb	5.9	3867.37	0.0164	Pulse	0.1000	3
Pb	208	209	He	0.482	ppb	5.3	5347.31	0.0227	Pulse	0.1000	3
U	238	209	He	0.967	ppb	0.4	11629.01	0.0493	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2198781.68	0.2	100.0	Pulse	0.1000	3
No Gas	Ge	72	1062513.26	1.1	99.0	Pulse	0.1000	3
H2	Sc	45	134502.51	1.9	99.1	Pulse	0.1000	3
H2	Ge	72	104796.21	1.3	99.1	Pulse	0.1000	3
H2	In	115	279139.63	1.5	99.8	Pulse	0.1000	3
He	Sc	45	29076.18	1.3	97.4	Pulse	0.1000	3
He	Ge	72	51623.57	1.2	98.5	Pulse	0.1000	3
He	In	115	50772.47	2.9	99.1	Pulse	0.1000	3
He	Tb	159	279037.43	0.7	100.2	Pulse	0.1000	3
He	Bi	209	235907.40	0.6	99.3	Pulse	0.1000	3

No Gas



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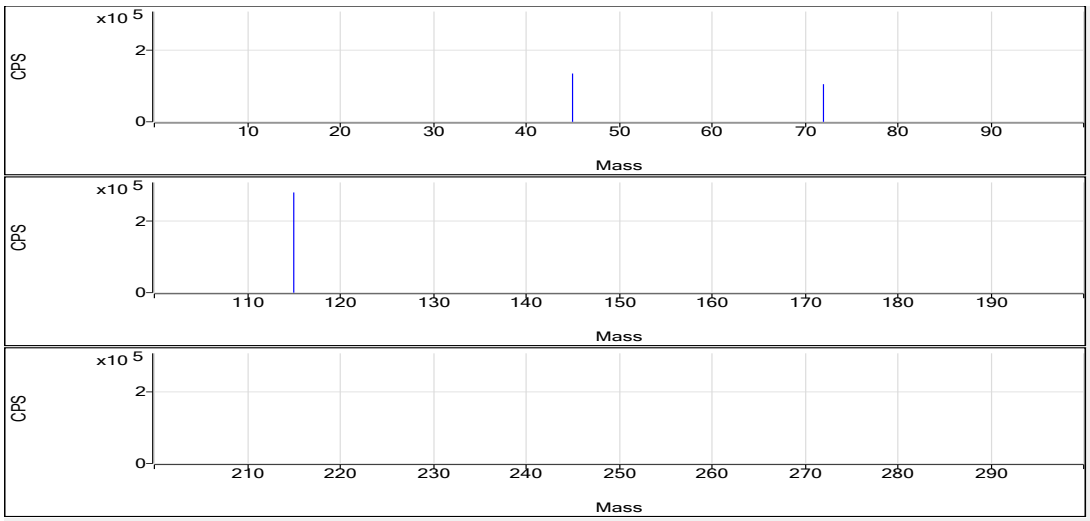
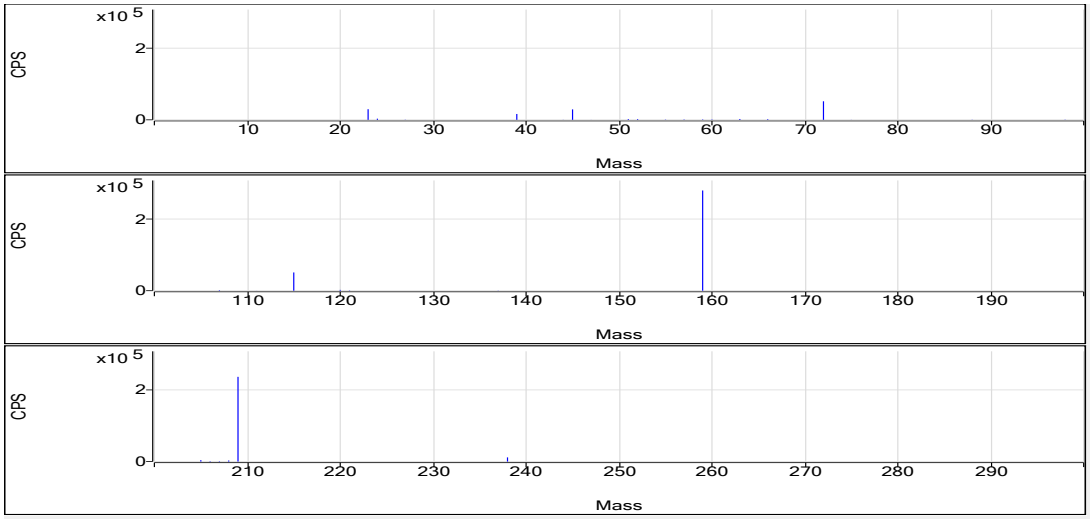


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.501	0.0004	872.03	0.0007	2.306E-05
Be	9	1	No Gas	0.452	0.0004	794.03	0.0007	2.306E-05
Be	9	1	No Gas	0.488	0.0004	854.03	0.0007	2.306E-05
Se	78	2	H2	1.288	0.0006	61.33	0.0004	4.221E-05
Se	78	2	H2	0.914	0.0004	45.33	0.0004	4.221E-05
Se	78	2	H2	1.032	0.0005	51.33	0.0004	4.221E-05
Na	23	3	He	193.74	1.0237	29439.83	0.0038	0.2864
Na	23	3	He	199.332	1.045	30271.61	0.0038	0.2864
Na	23	3	He	182.252	0.98	28908.95	0.0038	0.2864
Mg	24	3	He	53.692	0.1113	3200.47	0.0019	0.007972
Mg	24	3	He	49.503	0.1032	2990.40	0.0019	0.007972
Mg	24	3	He	54.705	0.1132	3340.50	0.0019	0.007972
Al	27	3	He	32.197	0.0191	550.03	0.0005	0.00158
Al	27	3	He	28.775	0.0173	500.03	0.0005	0.00158
Al	27	3	He	21.983	0.0136	400.02	0.0005	0.00158
K	39	3	He	194.283	0.5643	16229.48	0.0011	0.3552
K	39	3	He	184.052	0.5533	16029.16	0.0011	0.3552
K	39	3	He	192.774	0.5627	16599.85	0.0011	0.3552
Ca	44	3	He	101.418	0.0083	240.01	0.0001	0.002
Ca	44	3	He	128.037	0.01	290.01	0.0001	0.002
Ca	44	3	He	103.485	0.0085	250.01	0.0001	0.002
Ti	47	3	He	12.63	0.0066	190.01	0.0005	0.0004395
Ti	47	3	He	5.462	0.0031	90.00	0.0005	0.0004395
Ti	47	3	He	9.513	0.0051	150.01	0.0005	0.0004395
V	51	3	He	2.027	0.0707	2034.16	0.0218	0.02648
V	51	3	He	1.968	0.0695	2012.15	0.0218	0.02648
V	51	3	He	2.082	0.0719	2122.16	0.0218	0.02648
Cr	52	3	He	2.059	0.0657	1890.21	0.029	0.006056
Cr	52	3	He	2.09	0.0666	1930.20	0.029	0.006056
Cr	52	3	He	1.967	0.0631	1860.17	0.029	0.006056
Mn	55	3	He	1.909	0.0261	750.04	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.748	0.0242	700.04	0.0119	0.00335
Mn	55	3	He	1.683	0.0234	690.04	0.0119	0.00335
Fe	57	3	He	59.239	0.0365	1050.08	0.0006	0.003117
Fe	57	3	He	44.072	0.028	810.05	0.0006	0.003117
Fe	57	3	He	47.99	0.0302	890.06	0.0006	0.003117
Co	59	3	He	0.555	0.022	1120.08	0.0317	0.004379
Co	59	3	He	0.528	0.0211	1090.09	0.0317	0.004379
Co	59	3	He	0.473	0.0194	1010.07	0.0317	0.004379
Ni	60	3	He	1.118	0.0206	1050.07	0.009	0.01049
Ni	60	3	He	1.151	0.0209	1080.09	0.009	0.01049
Ni	60	3	He	0.959	0.0192	1000.06	0.009	0.01049
Cu	63	3	He	0.985	0.0424	2160.26	0.0259	0.01685
Cu	63	3	He	1.008	0.043	2220.25	0.0259	0.01685
Cu	63	3	He	1.251	0.0492	2570.31	0.0259	0.01685
Zn	66	3	He	9.547	0.0308	1570.13	0.0028	0.003817
Zn	66	3	He	11.456	0.0362	1870.21	0.0028	0.003817
Zn	66	3	He	9.499	0.0307	1600.14	0.0028	0.003817
As	75	3	He	2.193	0.0045	232.00	0.0019	0.0004832
As	75	3	He	2.014	0.0042	218.00	0.0019	0.0004832
As	75	3	He	2.054	0.0043	224.00	0.0019	0.0004832
Sr	88	3	He	1.02	0.0087	430.02	0.008	0.0005203
Sr	88	3	He	0.924	0.0079	400.02	0.008	0.0005203
Sr	88	3	He	0.983	0.0084	440.02	0.008	0.0005203
Mo	98	3	He	0.524	0.0123	610.04	0.0229	0.0003256
Mo	98	3	He	0.462	0.0109	550.03	0.0229	0.0003256
Mo	98	3	He	0.486	0.0115	600.04	0.0229	0.0003256
Ag	107	3	He	0.511	0.0263	1300.12	0.05	0.000719
Ag	107	3	He	0.588	0.0301	1520.14	0.05	0.000719
Ag	107	3	He	0.482	0.0248	1300.09	0.05	0.000719
Cd	111	3	He	0.559	0.0032	158.00	0.0055	0.000104
Cd	111	3	He	0.433	0.0025	126.00	0.0055	0.000104
Cd	111	3	He	0.354	0.0021	108.00	0.0055	0.000104
Sn	120	3	He	1.812	0.0475	2350.27	0.0159	0.01867
Sn	120	3	He	1.43	0.0414	2090.25	0.0159	0.01867
Sn	120	3	He	1.573	0.0437	2290.25	0.0159	0.01867
Sb	121	3	He	1.117	0.003	830.05	0.0026	8.342E-05
Sb	121	3	He	1.148	0.0031	860.06	0.0026	8.342E-05
Sb	121	3	He	0.992	0.0027	750.05	0.0026	8.342E-05
Ba	137	3	He	1.664	0.0089	440.02	0.005	0.0005882
Ba	137	3	He	1.629	0.0087	440.02	0.005	0.0005882
Ba	137	3	He	1.794	0.0095	500.02	0.005	0.0005882
Tl	205	3	He	0.516	0.0171	4030.79	0.0313	0.0009967
Tl	205	3	He	0.459	0.0154	3610.62	0.0313	0.0009967
Tl	205	3	He	0.501	0.0167	3960.71	0.0313	0.0009967
Pb	208	3	He	0.475	0.0224	2690.38	0.041	0.002892
Pb	208	3	He	0.511	0.0238	3190.48	0.041	0.002892
Pb	208	3	He	0.461	0.0218	2930.46	0.041	0.002892
U	238	3	He	0.964	0.0492	11565.70	0.0501	0.0008282
U	238	3	He	0.965	0.0492	11555.47	0.0501	0.0008282
U	238	3	He	0.972	0.0495	11765.85	0.0501	0.0008282
Sc	45	1	No Gas			2192758.87		
Sc	45	1	No Gas			2201673.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2201912.31		
Ge	72	1	No Gas			1050210.14		
Ge	72	1	No Gas			1064071.70		
Ge	72	1	No Gas			1073257.95		
Sc	45	2	H2			133634.13		
Sc	45	2	H2			132535.55		
Sc	45	2	H2			137337.86		
Ge	72	2	H2			103481.00		
Ge	72	2	H2			104678.32		
Ge	72	2	H2			106229.30		
In	115	2	H2			278596.05		
In	115	2	H2			275266.11		
In	115	2	H2			283556.73		
Sc	45	3	He			28758.99		
Sc	45	3	He			28969.31		
Sc	45	3	He			29500.23		
Ge	72	3	He			50990.95		
Ge	72	3	He			51684.15		
Ge	72	3	He			52195.62		
In	115	3	He			49478.71		
In	115	3	He			50471.96		
In	115	3	He			52419.24		
Tb	159	3	He			276820.27		
Tb	159	3	He			279436.89		
Tb	159	3	He			280855.13		
Bi	209	3	He			235286.56		
Bi	209	3	He			234888.71		
Bi	209	3	He			237546.93		

Quantitation Report

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Sample Type	ICSA
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Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
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Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

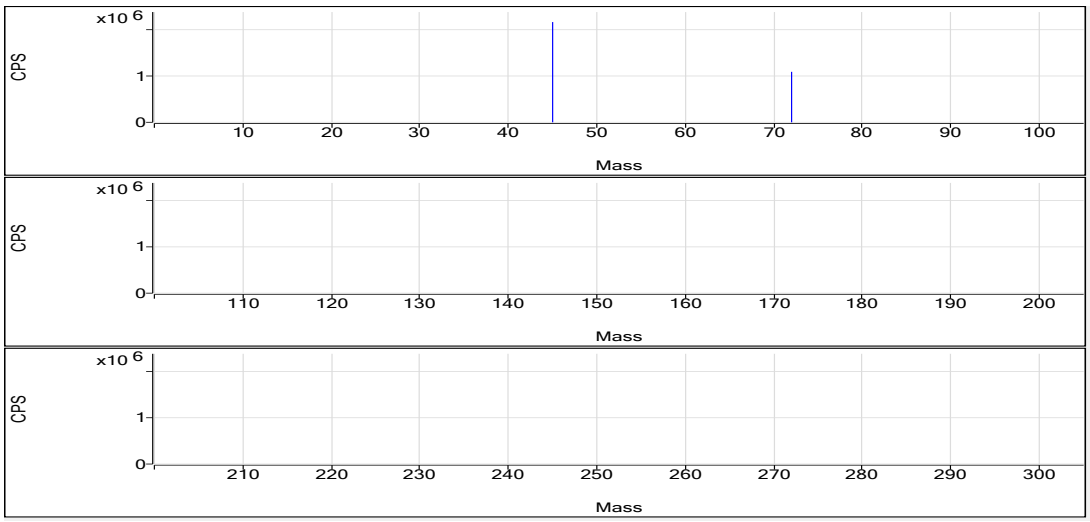
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.009	ppb	N/A	34.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.023	ppb	41.8	5.55	0.0001	Pulse	1.5000	3
Na	23	45	He	249241.022	ppb	2.1	27793647.08	948.7459	Analog	0.1000	3
Mg	24	45	He	101427.097	ppb	2.7	5717100.33	195.1758	Analog	0.1000	3
Al	27	45	He	101373.322	ppb	2.8	1618154.45	55.2434	Pulse	0.1000	3
K	39	45	He	100597.488	ppb	3.0	3181764.85	108.6273	Pulse	0.1000	3
Ca	44	45	He	298841.839	ppb	3.1	547695.60	18.6988	Pulse	0.1000	3
Ti	47	45	He	2065.969	ppb	3.7	29560.57	1.0093	Pulse	0.1000	3
V	51	45	He	-0.072	ppb	N/A	730.02	0.0249	Pulse	0.5000	3
Cr	52	45	He	3.333	ppb	3.3	3007.08	0.1026	Pulse	0.1000	3
Mn	55	45	He	0.530	ppb	34.4	283.35	0.0097	Pulse	0.1000	3
Fe	57	45	He	253039.156	ppb	2.9	4178571.81	142.6539	Pulse	0.1000	3
Co	59	72	He	0.083	ppb	60.8	366.69	0.0070	Pulse	0.1000	3
Ni	60	72	He	0.372	ppb	98.9	730.05	0.0139	Pulse	0.1000	3
Cu	63	72	He	-0.033	ppb	N/A	840.06	0.0160	Pulse	0.1000	3
Zn	66	72	He	1.481	ppb	42.1	420.02	0.0080	Pulse	0.1000	3
As	75	72	He	0.178	ppb	29.5	42.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	2.421	ppb	13.6	963.40	0.0199	Pulse	0.1000	3
Mo	98	115	He	2223.943	ppb	3.4	2453773.66	50.9607	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	632.8	40.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.305	ppb	10.0	86.00	0.0018	Pulse	0.5000	3
Sn	120	115	He	0.091	ppb	53.1	970.07	0.0201	Pulse	0.1000	3
Sb	121	159	He	0.119	ppb	79.3	106.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.535	ppb	19.3	156.68	0.0033	Pulse	0.1000	3
Tl	205	209	He	-0.013	ppb	N/A	130.01	0.0006	Pulse	0.1000	3
Pb	208	209	He	0.032	ppb	31.3	923.39	0.0042	Pulse	0.1000	3
U	238	209	He	0.045	ppb	10.8	676.71	0.0031	Pulse	0.1000	3

ISTD Table:

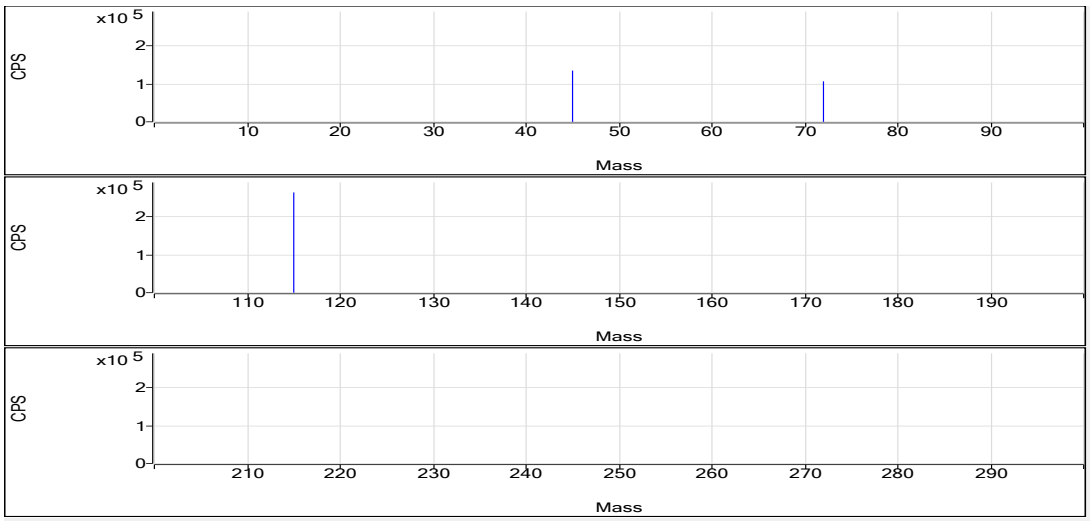
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2156722.78	0.4	98.1	Pulse	0.1000	3
No Gas	Ge	72	1086162.98	0.4	101.2	Pulse	0.1000	3
H2	Sc	45	134973.78	1.8	99.5	Pulse	0.1000	3
H2	Ge	72	106666.83	1.2	100.9	Pulse	0.1000	3
H2	In	115	263943.70	1.0	94.4	Pulse	0.1000	3
He	Sc	45	29303.29	2.2	98.2	Pulse	0.1000	3
He	Ge	72	52566.48	2.4	100.3	Pulse	0.1000	3
He	In	115	48189.69	3.6	94.0	Pulse	0.1000	3
He	Tb	159	271665.00	0.2	97.6	Pulse	0.1000	3
He	Bi	209	219474.64	1.0	92.4	Pulse	0.1000	3

No Gas

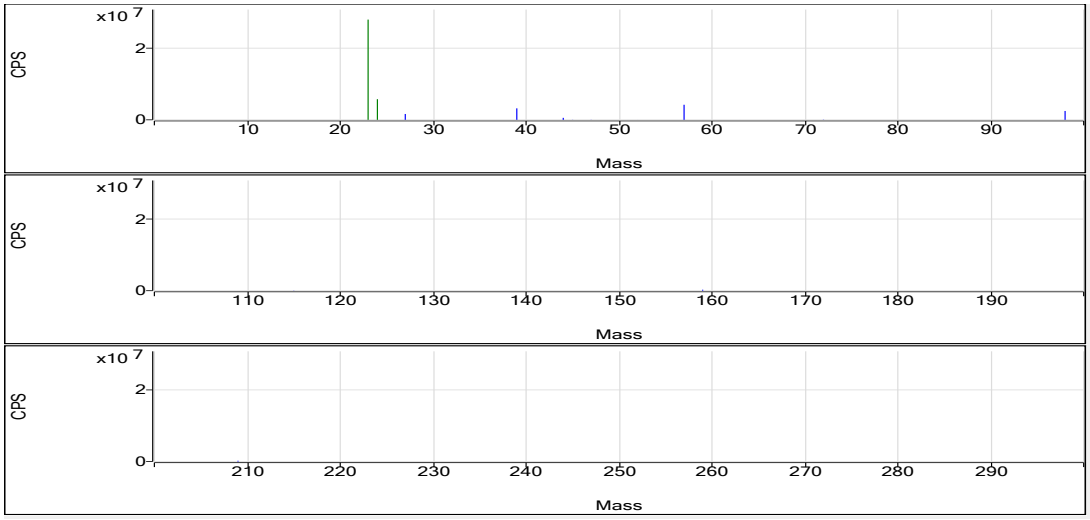


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.009	0	36.00	0.0007	2.306E-05
Be	9	1	No Gas	-0.007	0	38.00	0.0007	2.306E-05
Be	9	1	No Gas	-0.012	0	30.00	0.0007	2.306E-05
Se	78	2	H2	0.034	0.0001	6.00	0.0004	4.221E-05
Se	78	2	H2	0.019	0.0001	5.33	0.0004	4.221E-05
Se	78	2	H2	0.017	0	5.33	0.0004	4.221E-05
Na	23	3	He	243946.326	928.5975	27886787.08	0.0038	0.2864
Na	23	3	He	249280.831	948.8974	27517617.09	0.0038	0.2864
Na	23	3	He	254495.908	968.7428	27976537.08	0.0038	0.2864
Mg	24	3	He	98335.722	189.2273	5682700.54	0.0019	0.007972
Mg	24	3	He	102612.207	197.4562	5726144.91	0.0019	0.007972
Mg	24	3	He	103333.361	198.8439	5742455.54	0.0019	0.007972
Al	27	3	He	98111.296	53.4658	1605634.66	0.0005	0.00158
Al	27	3	He	102514.882	55.8654	1620073.41	0.0005	0.00158
Al	27	3	He	103493.787	56.3989	1628755.29	0.0005	0.00158
K	39	3	He	97170.948	104.9394	3151442.14	0.0011	0.3552
K	39	3	He	101602.676	109.7092	3181519.02	0.0011	0.3552
K	39	3	He	103018.842	111.2334	3212333.39	0.0011	0.3552
Ca	44	3	He	288107.662	18.0273	541378.23	0.0001	0.002
Ca	44	3	He	305169.808	19.0947	553739.44	0.0001	0.002
Ca	44	3	He	303248.046	18.9745	547969.13	0.0001	0.002
Ti	47	3	He	1979.276	0.967	29039.50	0.0005	0.0004395
Ti	47	3	He	2093.588	1.0228	29660.87	0.0005	0.0004395
Ti	47	3	He	2125.041	1.0382	29981.34	0.0005	0.0004395
V	51	3	He	-0.057	0.0252	758.02	0.0218	0.02648
V	51	3	He	-0.079	0.0248	718.02	0.0218	0.02648
V	51	3	He	-0.08	0.0247	714.02	0.0218	0.02648
Cr	52	3	He	3.262	0.1006	3020.41	0.029	0.006056
Cr	52	3	He	3.278	0.1011	2930.41	0.029	0.006056
Cr	52	3	He	3.46	0.1063	3070.41	0.029	0.006056
Mn	55	3	He	0.586	0.0103	310.01	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.327	0.0072	210.01	0.0119	0.00335
Mn	55	3	He	0.678	0.0114	330.02	0.0119	0.00335
Fe	57	3	He	245277.163	138.278	4152639.00	0.0006	0.003117
Fe	57	3	He	254115.333	143.2606	4154494.63	0.0006	0.003117
Fe	57	3	He	259724.973	146.423	4228581.81	0.0006	0.003117
Co	59	3	He	0.084	0.007	370.02	0.0317	0.004379
Co	59	3	He	0.133	0.0086	440.02	0.0317	0.004379
Co	59	3	He	0.032	0.0054	290.02	0.0317	0.004379
Ni	60	3	He	0.67	0.0165	870.06	0.009	0.01049
Ni	60	3	He	-0.039	0.0101	520.03	0.009	0.01049
Ni	60	3	He	0.484	0.0149	800.05	0.009	0.01049
Cu	63	3	He	-0.034	0.016	840.06	0.0259	0.01685
Cu	63	3	He	-0.011	0.0166	850.05	0.0259	0.01685
Cu	63	3	He	-0.055	0.0154	830.06	0.0259	0.01685
Zn	66	3	He	0.803	0.0061	320.01	0.0028	0.003817
Zn	66	3	He	2.03	0.0096	490.03	0.0028	0.003817
Zn	66	3	He	1.609	0.0084	450.03	0.0028	0.003817
As	75	3	He	0.191	0.0008	44.00	0.0019	0.0004832
As	75	3	He	0.223	0.0009	46.00	0.0019	0.0004832
As	75	3	He	0.12	0.0007	38.00	0.0019	0.0004832
Sr	88	3	He	2.259	0.0186	890.06	0.008	0.0005203
Sr	88	3	He	2.205	0.0182	850.05	0.008	0.0005203
Sr	88	3	He	2.799	0.023	1150.10	0.008	0.0005203
Mo	98	3	He	2230.878	51.1196	2441737.78	0.0229	0.0003256
Mo	98	3	He	2296.828	52.6308	2458454.18	0.0229	0.0003256
Mo	98	3	He	2144.123	49.1317	2461129.03	0.0229	0.0003256
Ag	107	3	He	0.019	0.0017	80.00	0.05	0.000719
Ag	107	3	He	-0.006	0.0004	20.00	0.05	0.000719
Ag	107	3	He	-0.006	0.0004	20.00	0.05	0.000719
Cd	111	3	He	0.3	0.0018	84.00	0.0055	0.000104
Cd	111	3	He	0.338	0.002	92.00	0.0055	0.000104
Cd	111	3	He	0.277	0.0016	82.00	0.0055	0.000104
Sn	120	3	He	0.05	0.0195	930.07	0.0159	0.01867
Sn	120	3	He	0.078	0.0199	930.07	0.0159	0.01867
Sn	120	3	He	0.144	0.021	1050.08	0.0159	0.01867
Sb	121	3	He	0.038	0.0002	50.00	0.0026	8.342E-05
Sb	121	3	He	0.222	0.0007	180.01	0.0026	8.342E-05
Sb	121	3	He	0.095	0.0003	90.00	0.0026	8.342E-05
Ba	137	3	He	0.469	0.0029	140.01	0.005	0.0005882
Ba	137	3	He	0.654	0.0039	180.01	0.005	0.0005882
Ba	137	3	He	0.482	0.003	150.01	0.005	0.0005882
Tl	205	3	He	-0.013	0.0006	130.01	0.0313	0.0009967
Tl	205	3	He	-0.016	0.0005	110.00	0.0313	0.0009967
Tl	205	3	He	-0.01	0.0007	150.01	0.0313	0.0009967
Pb	208	3	He	0.043	0.0047	470.03	0.041	0.002892
Pb	208	3	He	0.024	0.0039	430.03	0.041	0.002892
Pb	208	3	He	0.029	0.0041	520.03	0.041	0.002892
U	238	3	He	0.047	0.0032	700.04	0.0501	0.0008282
U	238	3	He	0.039	0.0028	610.04	0.0501	0.0008282
U	238	3	He	0.048	0.0032	720.04	0.0501	0.0008282
Sc	45	1	No Gas			2156158.09		
Sc	45	1	No Gas			2148798.72		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2165211.53		
Ge	72	1	No Gas			1080936.86		
Ge	72	1	No Gas			1090341.16		
Ge	72	1	No Gas			1087210.92		
Sc	45	2	H2			134373.10		
Sc	45	2	H2			132876.99		
Sc	45	2	H2			137671.24		
Ge	72	2	H2			105565.76		
Ge	72	2	H2			106341.76		
Ge	72	2	H2			108092.97		
In	115	2	H2			264655.00		
In	115	2	H2			261077.38		
In	115	2	H2			266098.71		
Sc	45	3	He			30031.08		
Sc	45	3	He			28999.57		
Sc	45	3	He			28879.22		
Ge	72	3	He			52576.60		
Ge	72	3	He			51301.99		
Ge	72	3	He			53820.84		
In	115	3	He			47772.46		
In	115	3	He			46718.57		
In	115	3	He			50100.72		
Tb	159	3	He			272134.41		
Tb	159	3	He			271556.66		
Tb	159	3	He			271303.92		
Bi	209	3	He			218811.07		
Bi	209	3	He			217641.09		
Bi	209	3	He			221971.77		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 10:16:44
Sample Name	ICSAB 6233895
Sample Type	ICSAB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

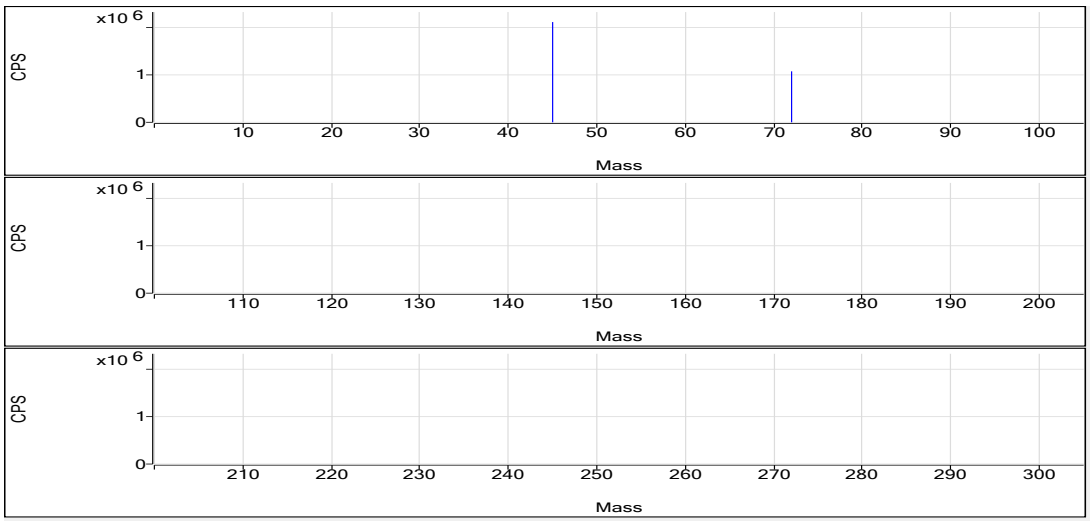
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.005	ppb	N/A	40.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	102.304	ppb	2.0	4785.02	0.0438	Pulse	1.5000	3
Na	23	45	He	252325.362	ppb	2.4	27751270.42	960.4830	Analog	0.1000	3
Mg	24	45	He	102356.829	ppb	2.1	5690937.42	196.9648	Analog	0.1000	3
Al	27	45	He	102050.432	ppb	1.2	1606963.94	55.6123	Pulse	0.1000	3
K	39	45	He	101693.294	ppb	1.2	3172954.43	109.8067	Pulse	0.1000	3
Ca	44	45	He	301044.154	ppb	1.8	544264.98	18.8366	Pulse	0.1000	3
Ti	47	45	He	2051.403	ppb	0.1	28962.59	1.0022	Pulse	0.1000	3
V	51	45	He	210.082	ppb	1.4	133321.46	4.6139	Pulse	0.5000	3
Cr	52	45	He	205.392	ppb	1.9	172155.60	5.9582	Pulse	0.1000	3
Mn	55	45	He	203.618	ppb	1.7	70163.03	2.4283	Pulse	0.1000	3
Fe	57	45	He	254986.099	ppb	1.8	4153578.59	143.7515	Pulse	0.1000	3
Co	59	72	He	198.044	ppb	0.2	336223.03	6.2763	Pulse	0.1000	3
Ni	60	72	He	194.502	ppb	1.4	94748.80	1.7687	Pulse	0.1000	3
Cu	63	72	He	194.484	ppb	1.7	270708.29	5.0534	Pulse	0.1000	3
Zn	66	72	He	101.114	ppb	0.4	15508.81	0.2895	Pulse	0.1000	3
As	75	72	He	98.652	ppb	1.6	9825.39	0.1834	Pulse	0.5000	3
Sr	88	115	He	2.236	ppb	4.7	910.06	0.0185	Pulse	0.1000	3
Mo	98	115	He	2163.833	ppb	1.6	2445907.46	49.5833	Pulse	0.1000	3
Ag	107	115	He	51.794	ppb	1.6	127783.31	2.5904	Pulse	0.1000	3
Cd	111	115	He	103.475	ppb	1.6	28204.83	0.5718	Pulse	0.5000	3
Sn	120	115	He	0.108	ppb	77.4	1006.74	0.0204	Pulse	0.1000	3
Sb	121	159	He	0.140	ppb	54.7	123.34	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.477	ppb	38.7	146.68	0.0030	Pulse	0.1000	3
Tl	205	209	He	-0.010	ppb	N/A	150.01	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.104	ppb	19.8	1583.43	0.0072	Pulse	0.1000	3
U	238	209	He	0.048	ppb	17.2	720.05	0.0033	Pulse	0.1000	3

ISTD Table:

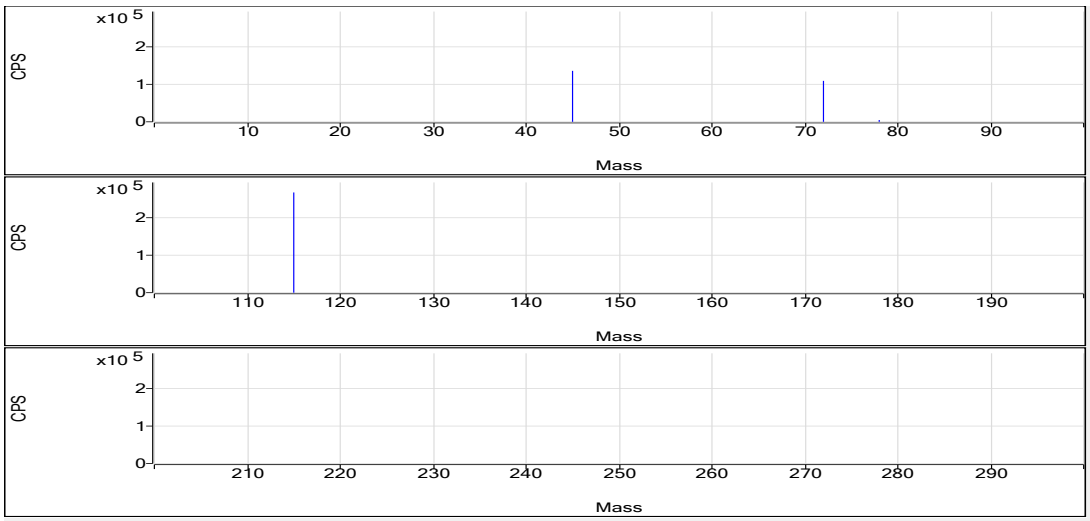
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2126093.14	0.7	96.7	Pulse	0.1000	3
No Gas	Ge	72	1081425.19	0.6	100.8	Pulse	0.1000	3
H2	Sc	45	136098.16	2.5	100.3	Pulse	0.1000	3
H2	Ge	72	109336.42	1.6	103.4	Pulse	0.1000	3
H2	In	115	267601.07	1.4	95.7	Pulse	0.1000	3
He	Sc	45	28899.26	1.5	96.8	Pulse	0.1000	3
He	Ge	72	53570.16	0.1	102.2	Pulse	0.1000	3
He	In	115	49339.98	2.0	96.3	Pulse	0.1000	3
He	Tb	159	274977.56	0.4	98.7	Pulse	0.1000	3
He	Bi	209	221285.85	0.6	93.2	Pulse	0.1000	3

No Gas

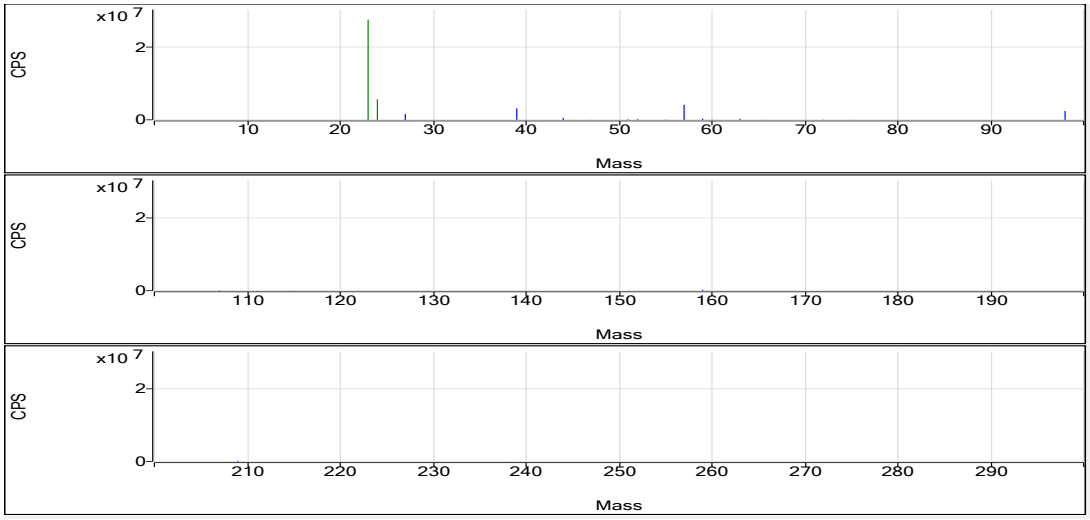


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.004	0	42.00	0.0007	2.306E-05
Be	9	1	No Gas	0.002	0	52.00	0.0007	2.306E-05
Be	9	1	No Gas	-0.013	0	28.00	0.0007	2.306E-05
Se	78	2	H2	104.479	0.0447	4820.81	0.0004	4.221E-05
Se	78	2	H2	102.011	0.0436	4755.46	0.0004	4.221E-05
Se	78	2	H2	100.421	0.043	4778.80	0.0004	4.221E-05
Na	23	3	He	258149.12	982.6447	27915069.58	0.0038	0.2864
Na	23	3	He	252632.445	961.6516	27964377.08	0.0038	0.2864
Na	23	3	He	246194.522	937.1528	27374364.59	0.0038	0.2864
Mg	24	3	He	104809.68	201.6846	5729476.79	0.0019	0.007972
Mg	24	3	He	101605.145	195.5184	5685583.04	0.0019	0.007972
Mg	24	3	He	100655.662	193.6914	5657752.42	0.0019	0.007972
Al	27	3	He	103409.317	56.3528	1600877.01	0.0005	0.00158
Al	27	3	He	101764.134	55.4563	1612643.73	0.0005	0.00158
Al	27	3	He	100977.846	55.0278	1607371.07	0.0005	0.00158
K	39	3	He	103131.143	111.3543	3163362.77	0.0011	0.3552
K	39	3	He	100928.367	108.9834	3169186.83	0.0011	0.3552
K	39	3	He	101020.373	109.0825	3186313.70	0.0011	0.3552
Ca	44	3	He	307305.485	19.2284	546241.28	0.0001	0.002
Ca	44	3	He	299147.423	18.718	544309.48	0.0001	0.002
Ca	44	3	He	296679.554	18.5636	542244.17	0.0001	0.002
Ti	47	3	He	2054.108	1.0035	28508.22	0.0005	0.0004395
Ti	47	3	He	2051.123	1.0021	29139.62	0.0005	0.0004395
Ti	47	3	He	2048.979	1.001	29239.92	0.0005	0.0004395
V	51	3	He	213.423	4.6869	133145.91	0.0218	0.02648
V	51	3	He	208.369	4.5765	133083.31	0.0218	0.02648
V	51	3	He	208.454	4.5784	133735.16	0.0218	0.02648
Cr	52	3	He	209.925	6.0896	172994.06	0.029	0.006056
Cr	52	3	He	203.779	5.9115	171903.51	0.029	0.006056
Cr	52	3	He	202.472	5.8736	171569.24	0.029	0.006056
Mn	55	3	He	207.398	2.4733	70260.64	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	202.92	2.4199	70370.62	0.0119	0.00335
Mn	55	3	He	200.537	2.3916	69857.82	0.0119	0.00335
Fe	57	3	He	260216.97	146.7004	4167478.38	0.0006	0.003117
Fe	57	3	He	252671.315	142.4465	4142277.13	0.0006	0.003117
Fe	57	3	He	252070.01	142.1075	4150980.25	0.0006	0.003117
Co	59	3	He	198.592	6.2937	336650.66	0.0317	0.004379
Co	59	3	He	197.807	6.2688	336261.13	0.0317	0.004379
Co	59	3	He	197.733	6.2665	335757.30	0.0317	0.004379
Ni	60	3	He	197.437	1.7952	96027.36	0.009	0.01049
Ni	60	3	He	193.808	1.7624	94537.06	0.009	0.01049
Ni	60	3	He	192.263	1.7485	93681.97	0.009	0.01049
Cu	63	3	He	197.741	5.1377	274818.28	0.0259	0.01685
Cu	63	3	He	194.594	5.0562	271219.18	0.0259	0.01685
Cu	63	3	He	191.117	4.9662	266087.40	0.0259	0.01685
Zn	66	3	He	101.069	0.2894	15478.86	0.0028	0.003817
Zn	66	3	He	101.509	0.2906	15589.00	0.0028	0.003817
Zn	66	3	He	100.763	0.2885	15458.58	0.0028	0.003817
As	75	3	He	100.493	0.1868	9993.52	0.0019	0.0004832
As	75	3	He	97.414	0.1811	9715.30	0.0019	0.0004832
As	75	3	He	98.048	0.1823	9767.35	0.0019	0.0004832
Sr	88	3	He	2.261	0.0186	900.06	0.008	0.0005203
Sr	88	3	He	2.326	0.0192	950.06	0.008	0.0005203
Sr	88	3	He	2.122	0.0175	880.05	0.008	0.0005203
Mo	98	3	He	2204.003	50.5038	2437648.71	0.0229	0.0003256
Mo	98	3	He	2151.508	49.3009	2443372.31	0.0229	0.0003256
Mo	98	3	He	2135.988	48.9452	2456701.37	0.0229	0.0003256
Ag	107	3	He	52.536	2.6274	126818.15	0.05	0.000719
Ag	107	3	He	51.921	2.5967	128694.23	0.05	0.000719
Ag	107	3	He	50.926	2.5469	127837.55	0.05	0.000719
Cd	111	3	He	105.414	0.5825	28114.01	0.0055	0.000104
Cd	111	3	He	102.632	0.5671	28105.92	0.0055	0.000104
Cd	111	3	He	102.379	0.5657	28394.56	0.0055	0.000104
Sn	120	3	He	0.011	0.0189	910.06	0.0159	0.01867
Sn	120	3	He	0.158	0.0212	1050.08	0.0159	0.01867
Sn	120	3	He	0.154	0.0211	1060.09	0.0159	0.01867
Sb	121	3	He	0.176	0.0005	150.01	0.0026	8.342E-05
Sb	121	3	He	0.192	0.0006	160.01	0.0026	8.342E-05
Sb	121	3	He	0.052	0.0002	60.00	0.0026	8.342E-05
Ba	137	3	He	0.38	0.0025	120.01	0.005	0.0005882
Ba	137	3	He	0.691	0.004	200.01	0.005	0.0005882
Ba	137	3	He	0.361	0.0024	120.01	0.005	0.0005882
Tl	205	3	He	-0.012	0.0006	140.01	0.0313	0.0009967
Tl	205	3	He	-0.016	0.0005	110.00	0.0313	0.0009967
Tl	205	3	He	-0.003	0.0009	200.01	0.0313	0.0009967
Pb	208	3	He	0.128	0.0081	880.06	0.041	0.002892
Pb	208	3	He	0.094	0.0067	760.05	0.041	0.002892
Pb	208	3	He	0.09	0.0066	790.07	0.041	0.002892
U	238	3	He	0.049	0.0033	720.05	0.0501	0.0008282
U	238	3	He	0.057	0.0037	810.05	0.0501	0.0008282
U	238	3	He	0.04	0.0028	630.04	0.0501	0.0008282
Sc	45	1	No Gas			2108632.62		
Sc	45	1	No Gas			2131991.69		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2137655.12		
Ge	72	1	No Gas			1074663.34		
Ge	72	1	No Gas			1081621.39		
Ge	72	1	No Gas			1087990.84		
Sc	45	2	H2			134707.86		
Sc	45	2	H2			133674.07		
Sc	45	2	H2			139912.55		
Ge	72	2	H2			107841.45		
Ge	72	2	H2			108950.85		
Ge	72	2	H2			111216.95		
In	115	2	H2			266499.98		
In	115	2	H2			264571.73		
In	115	2	H2			271731.50		
Sc	45	3	He			28408.10		
Sc	45	3	He			29079.53		
Sc	45	3	He			29210.14		
Ge	72	3	He			53490.23		
Ge	72	3	He			53640.39		
Ge	72	3	He			53579.86		
In	115	3	He			48273.77		
In	115	3	He			49568.62		
In	115	3	He			50201.12		
Tb	159	3	He			276308.04		
Tb	159	3	He			274392.96		
Tb	159	3	He			274231.68		
Bi	209	3	He			220112.50		
Bi	209	3	He			221067.48		
Bi	209	3	He			222677.56		

Quantitation Report

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Sample Type	LRC
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

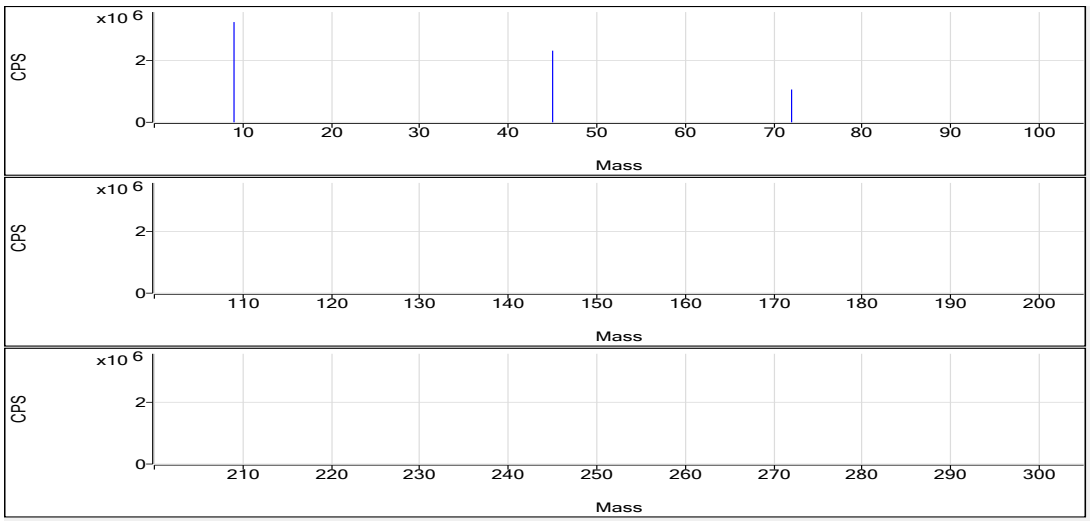
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	1872.058	ppb	0.5	3242106.67	1.3992	Pulse	0.5000	3
Se	78	72	H2	2123.137	ppb	1.0	96400.32	0.9076	Pulse	1.5000	3
Na	23	45	He	193038.838	ppb	1.8	22684664.66	734.8746	Analog	0.1000	3
Mg	24	45	He	198422.306	ppb	1.1	11786216.91	381.8157	Analog	0.1000	3
Al	27	45	He	200468.205	ppb	0.3	3372364.85	109.2435	Pulse	0.1000	3
K	39	45	He	202857.931	ppb	0.3	6750944.48	218.6892	Analog	0.1000	3
Ca	44	45	He	199774.257	ppb	0.8	385894.97	12.5007	Pulse	0.1000	3
Ti	47	45	He	2074.372	ppb	0.1	31284.23	1.0134	Pulse	0.1000	3
V	51	45	He	2003.331	ppb	0.3	1351242.25	43.7723	Pulse	0.5000	3
Cr	52	45	He	1941.528	ppb	0.8	1737060.39	56.2710	Pulse	0.1000	3
Mn	55	45	He	5919.596	ppb	1.0	2176316.01	70.5002	Pulse	0.1000	3
Fe	57	45	He	158593.155	ppb	0.8	2760031.52	89.4100	Pulse	0.1000	3
Co	59	72	He	2068.517	ppb	0.5	3435435.89	65.5132	Pulse	0.1000	3
Ni	60	72	He	2019.836	ppb	0.9	957993.29	18.2689	Pulse	0.1000	3
Cu	63	72	He	2019.827	ppb	1.0	2743800.58	52.3241	Pulse	0.1000	3
Zn	66	72	He	2052.609	ppb	1.2	304316.09	5.8033	Pulse	0.1000	3
As	75	72	He	2075.985	ppb	0.8	201891.95	3.8500	Pulse	0.5000	3
Sr	88	115	He	2171.914	ppb	1.0	883101.81	17.4130	Pulse	0.1000	3
Mo	98	115	He	2224.759	ppb	0.9	2585447.15	50.9794	Pulse	0.1000	3
Ag	107	115	He	2091.390	ppb	0.9	5303187.00	104.5670	Pulse	0.1000	3
Cd	111	115	He	2076.825	ppb	1.1	581903.08	11.4737	Pulse	0.5000	3
Sn	120	115	He	2150.270	ppb	0.9	1736539.19	34.2407	Pulse	0.1000	3
Sb	121	159	He	2138.083	ppb	1.1	1551686.49	5.5784	Pulse	0.1000	3
Ba	137	115	He	2133.373	ppb	1.3	540054.26	10.6491	Pulse	0.1000	3
Tl	205	209	He	2195.650	ppb	1.5	15286344.35	68.7067	Analog	0.1000	3
Pb	208	209	He	2169.921	ppb	1.3	19805402.93	89.0168	Analog	0.1000	3
U	238	209	He	220.214	ppb	0.9	2456379.49	11.0400	Pulse	0.1000	3

ISTD Table:

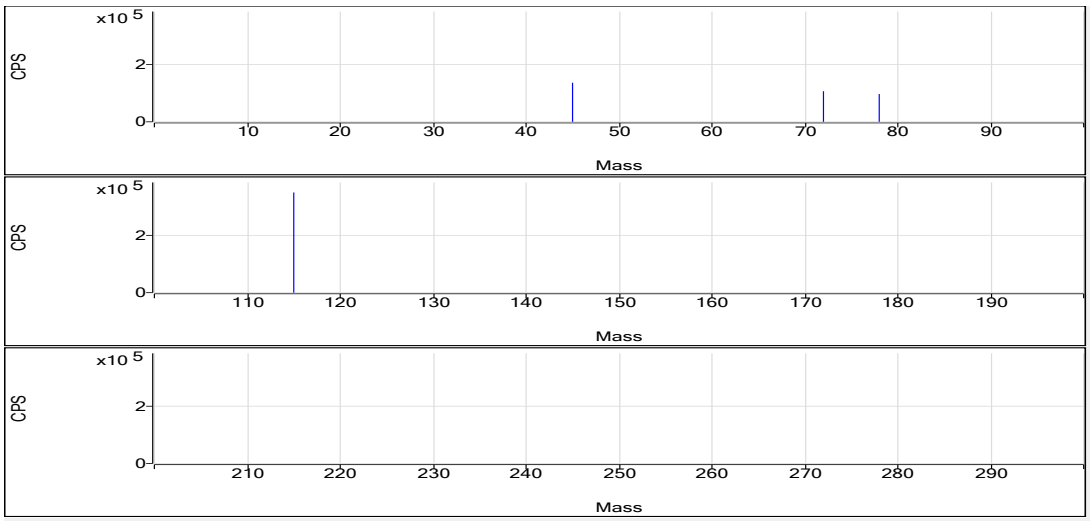
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2316981.84	0.8	105.4	Pulse	0.1000	3
No Gas	Ge	72	1060643.86	0.5	98.8	Pulse	0.1000	3
H2	Sc	45	135643.40	0.6	100.0	Pulse	0.1000	3
H2	Ge	72	106216.88	0.4	100.5	Pulse	0.1000	3
H2	In	115	347892.57	0.3	124.4	Pulse	0.1000	3
He	Sc	45	30870.01	0.5	103.4	Pulse	0.1000	3
He	Ge	72	52439.44	0.3	100.0	Pulse	0.1000	3
He	In	115	50719.81	1.4	99.0	Pulse	0.1000	3
He	Tb	159	278160.36	0.2	99.9	Pulse	0.1000	3
He	Bi	209	222512.22	1.2	93.7	Pulse	0.1000	3

No Gas

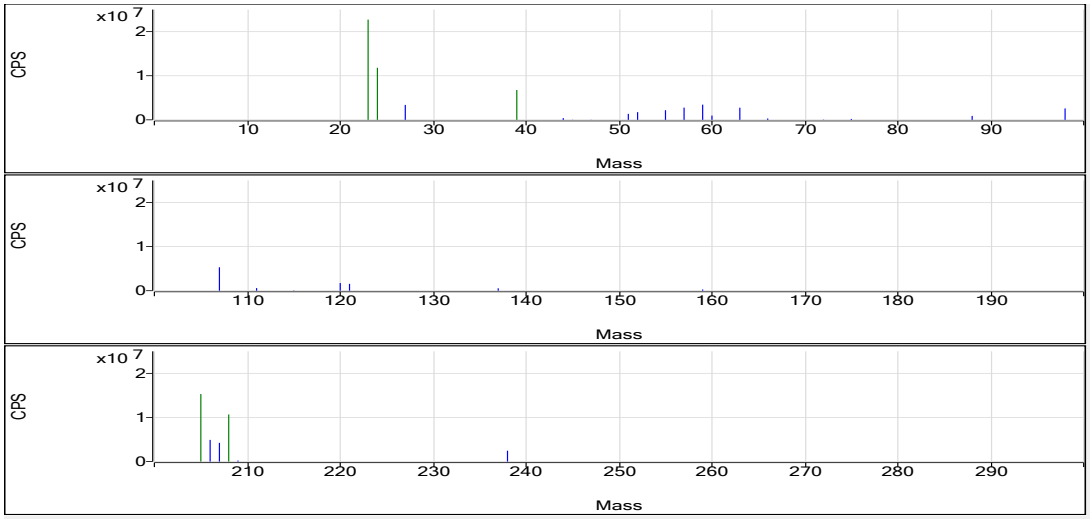


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1864.99	1.394	3218643.00	0.0007	2.306E-05
Be	9	1	No Gas	1868.839	1.3968	3216779.25	0.0007	2.306E-05
Be	9	1	No Gas	1882.345	1.4069	3290897.75	0.0007	2.306E-05
Se	78	2	H2	2120.518	0.9065	95930.15	0.0004	4.221E-05
Se	78	2	H2	2103.724	0.8993	95985.69	0.0004	4.221E-05
Se	78	2	H2	2145.168	0.917	97285.13	0.0004	4.221E-05
Na	23	3	He	191674.179	729.6816	22454557.17	0.0038	0.2864
Na	23	3	He	196900.511	749.5698	23066602.16	0.0038	0.2864
Na	23	3	He	190541.824	725.3725	22532834.66	0.0038	0.2864
Mg	24	3	He	198995.246	382.9182	11783574.82	0.0019	0.007972
Mg	24	3	He	200188.115	385.2135	11854221.07	0.0019	0.007972
Mg	24	3	He	196083.557	377.3154	11720854.83	0.0019	0.007972
Al	27	3	He	199806.745	108.8831	3350668.70	0.0005	0.00158
Al	27	3	He	200818.965	109.4347	3367646.20	0.0005	0.00158
Al	27	3	He	200778.905	109.4128	3398779.64	0.0005	0.00158
K	39	3	He	202273.619	218.0603	6710389.90	0.0011	0.3552
K	39	3	He	203374.353	219.245	6746853.65	0.0011	0.3552
K	39	3	He	202925.821	218.7623	6795589.90	0.0011	0.3552
Ca	44	3	He	198415.943	12.4158	382071.36	0.0001	0.002
Ca	44	3	He	201641.283	12.6176	388281.48	0.0001	0.002
Ca	44	3	He	199265.545	12.4689	387332.06	0.0001	0.002
Ti	47	3	He	2072.908	1.0127	31164.06	0.0005	0.0004395
Ti	47	3	He	2076.891	1.0146	31223.94	0.0005	0.0004395
Ti	47	3	He	2073.319	1.0129	31464.70	0.0005	0.0004395
V	51	3	He	1999.864	43.6966	1344679.13	0.0218	0.02648
V	51	3	He	2011.08	43.9415	1352217.50	0.0218	0.02648
V	51	3	He	1999.05	43.6788	1356830.13	0.0218	0.02648
Cr	52	3	He	1931.618	55.9837	1722792.94	0.029	0.006056
Cr	52	3	He	1960.126	56.8099	1748218.10	0.029	0.006056
Cr	52	3	He	1932.842	56.0192	1740170.13	0.029	0.006056
Mn	55	3	He	5876.846	69.9911	2153841.22	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5983.893	71.2659	2193073.72	0.0119	0.00335
Mn	55	3	He	5898.05	70.2436	2182033.09	0.0119	0.00335
Fe	57	3	He	158236.356	89.2088	2745230.90	0.0006	0.003117
Fe	57	3	He	159948.704	90.1742	2774939.96	0.0006	0.003117
Fe	57	3	He	157594.406	88.8469	2759923.71	0.0006	0.003117
Co	59	3	He	2059.124	65.2157	3424247.14	0.0317	0.004379
Co	59	3	He	2080.971	65.9076	3442696.51	0.0317	0.004379
Co	59	3	He	2065.457	65.4163	3439364.01	0.0317	0.004379
Ni	60	3	He	2003.092	18.1175	951288.03	0.009	0.01049
Ni	60	3	He	2039.46	18.4463	963545.53	0.009	0.01049
Ni	60	3	He	2016.954	18.2428	959146.31	0.009	0.01049
Cu	63	3	He	2000.316	51.8189	2720828.08	0.0259	0.01685
Cu	63	3	He	2040.111	52.8495	2760602.77	0.0259	0.01685
Cu	63	3	He	2019.052	52.3041	2749970.90	0.0259	0.01685
Zn	66	3	He	2025.865	5.7277	300742.65	0.0028	0.003817
Zn	66	3	He	2073.366	5.8619	306199.27	0.0028	0.003817
Zn	66	3	He	2058.596	5.8202	306006.36	0.0028	0.003817
As	75	3	He	2058.193	3.817	200418.14	0.0019	0.0004832
As	75	3	He	2081.092	3.8595	201600.61	0.0019	0.0004832
As	75	3	He	2088.671	3.8735	203657.11	0.0019	0.0004832
Sr	88	3	He	2196.769	17.6122	881109.36	0.008	0.0005203
Sr	88	3	He	2165.26	17.3596	879512.72	0.008	0.0005203
Sr	88	3	He	2153.714	17.2671	888683.35	0.008	0.0005203
Mo	98	3	He	2242.658	51.3895	2570927.62	0.0229	0.0003256
Mo	98	3	He	2228.154	51.0572	2586773.71	0.0229	0.0003256
Mo	98	3	He	2203.465	50.4914	2598640.12	0.0229	0.0003256
Ag	107	3	He	2104.398	105.2174	5263839.92	0.05	0.000719
Ag	107	3	He	2100.457	105.0204	5320777.42	0.05	0.000719
Ag	107	3	He	2069.316	103.4634	5324943.67	0.05	0.000719
Cd	111	3	He	2080.857	11.496	575124.81	0.0055	0.000104
Cd	111	3	He	2098.126	11.5914	587269.94	0.0055	0.000104
Cd	111	3	He	2051.491	11.3338	583314.50	0.0055	0.000104
Sn	120	3	He	2163.982	34.4589	1723917.32	0.0159	0.01867
Sn	120	3	He	2158.65	34.374	1741534.19	0.0159	0.01867
Sn	120	3	He	2128.178	33.8891	1744166.07	0.0159	0.01867
Sb	121	3	He	2111.708	5.5096	1534510.91	0.0026	8.342E-05
Sb	121	3	He	2145.484	5.5978	1557983.26	0.0026	8.342E-05
Sb	121	3	He	2157.057	5.6279	1562565.29	0.0026	8.342E-05
Ba	137	3	He	2161.672	10.7904	539824.52	0.005	0.0005882
Ba	137	3	He	2133.871	10.6516	539656.83	0.005	0.0005882
Ba	137	3	He	2104.577	10.5054	540681.44	0.005	0.0005882
Tl	205	3	He	2230.173	69.787	15314901.02	0.0313	0.0009967
Tl	205	3	He	2163.831	67.7111	15191111.02	0.0313	0.0009967
Tl	205	3	He	2192.946	68.6221	15353021.02	0.0313	0.0009967
Pb	208	3	He	2201.634	90.3177	10708004.84	0.041	0.002892
Pb	208	3	He	2162.762	88.7231	10729063.59	0.041	0.002892
Pb	208	3	He	2145.367	88.0095	10543368.59	0.041	0.002892
U	238	3	He	222.269	11.143	2445348.87	0.0501	0.0008282
U	238	3	He	220.081	11.0333	2475348.40	0.0501	0.0008282
U	238	3	He	218.291	10.9436	2448441.21	0.0501	0.0008282
Sc	45	1	No Gas			2308989.18		
Sc	45	1	No Gas			2302899.18		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2339057.15		
Ge	72	1	No Gas			1055278.81		
Ge	72	1	No Gas			1061389.44		
Ge	72	1	No Gas			1065263.34		
Sc	45	2	H2			136651.48		
Sc	45	2	H2			135067.37		
Sc	45	2	H2			135211.35		
Ge	72	2	H2			105827.51		
Ge	72	2	H2			106734.03		
Ge	72	2	H2			106089.09		
In	115	2	H2			348713.67		
In	115	2	H2			346719.76		
In	115	2	H2			348244.29		
Sc	45	3	He			30773.09		
Sc	45	3	He			30773.12		
Sc	45	3	He			31063.81		
Ge	72	3	He			52506.50		
Ge	72	3	He			52235.22		
Ge	72	3	He			52576.60		
In	115	3	He			63474.80		
In	115	3	He			64248.22		
In	115	3	He			65071.45		
Tb	159	3	He			278514.31		
Tb	159	3	He			278322.89		
Tb	159	3	He			277643.88		
Bi	209	3	He			219451.95		
Bi	209	3	He			224351.93		
Bi	209	3	He			223732.79		

Quantitation Report

Data File Name	048_CCV.d
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Sample Type	CCV
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

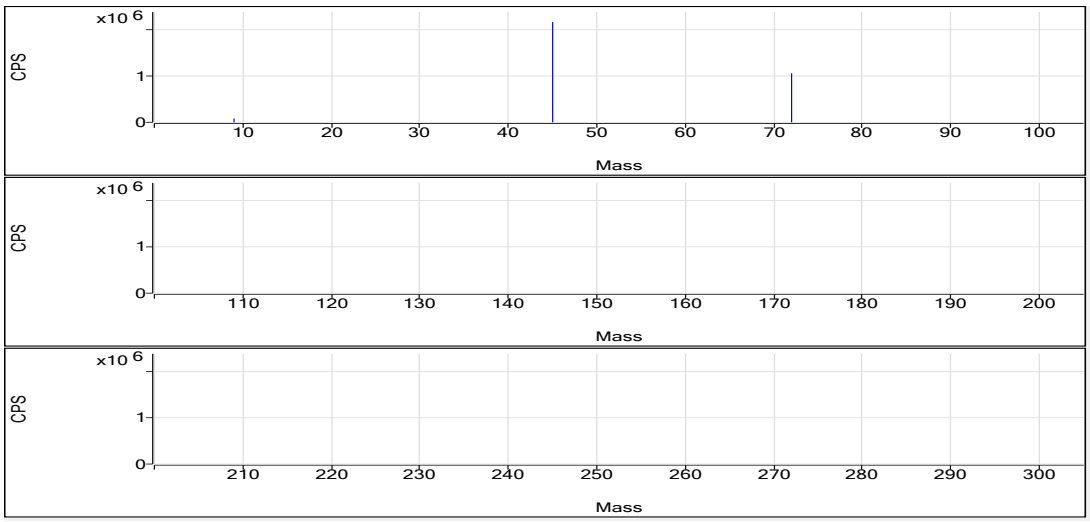
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.754	ppb	0.7	82447.99	0.0380	Pulse	0.5000	3
Se	78	72	H2	54.397	ppb	2.0	2422.87	0.0233	Pulse	1.5000	3
Na	23	45	He	5306.330	ppb	1.9	592861.50	20.4791	Pulse	0.1000	3
Mg	24	45	He	5262.070	ppb	2.1	293354.88	10.1333	Pulse	0.1000	3
Al	27	45	He	5249.313	ppb	3.2	82848.38	2.8621	Pulse	0.1000	3
K	39	45	He	5274.586	ppb	3.3	174604.89	6.0322	Pulse	0.1000	3
Ca	44	45	He	5167.070	ppb	1.5	9419.98	0.3253	Pulse	0.1000	3
Ti	47	45	He	5184.943	ppb	2.1	73310.46	2.5324	Pulse	0.1000	3
V	51	45	He	523.255	ppb	2.0	331541.82	11.4526	Pulse	0.5000	3
Cr	52	45	He	521.520	ppb	2.6	437677.86	15.1195	Pulse	0.1000	3
Mn	55	45	He	521.527	ppb	1.9	179903.23	6.2142	Pulse	0.1000	3
Fe	57	45	He	5221.016	ppb	2.5	85293.31	2.9465	Pulse	0.1000	3
Co	59	72	He	526.457	ppb	1.4	862953.27	16.6770	Pulse	0.1000	3
Ni	60	72	He	529.646	ppb	1.8	248278.86	4.7982	Pulse	0.1000	3
Cu	63	72	He	526.030	ppb	1.6	705758.37	13.6394	Pulse	0.1000	3
Zn	66	72	He	525.722	ppb	0.4	77068.74	1.4892	Pulse	0.1000	3
As	75	72	He	533.396	ppb	0.8	51207.62	0.9896	Pulse	0.5000	3
Sr	88	115	He	51.736	ppb	7.3	21717.26	0.4153	Pulse	0.1000	3
Mo	98	115	He	53.238	ppb	3.1	63874.89	1.2202	Pulse	0.1000	3
Ag	107	115	He	52.185	ppb	3.7	136595.55	2.6099	Pulse	0.1000	3
Cd	111	115	He	51.336	ppb	3.4	14849.87	0.2837	Pulse	0.5000	3
Sn	120	115	He	52.009	ppb	4.5	44291.53	0.8464	Pulse	0.1000	3
Sb	121	159	He	53.571	ppb	1.2	39550.18	0.1399	Pulse	0.1000	3
Ba	137	115	He	518.842	ppb	2.3	135614.63	2.5903	Pulse	0.1000	3
Tl	205	209	He	51.742	ppb	1.2	387412.22	1.6201	Pulse	0.1000	3
Pb	208	209	He	52.263	ppb	2.0	513335.29	2.1468	Pulse	0.1000	3
U	238	209	He	51.583	ppb	0.6	618573.80	2.5866	Pulse	0.1000	3

ISTD Table:

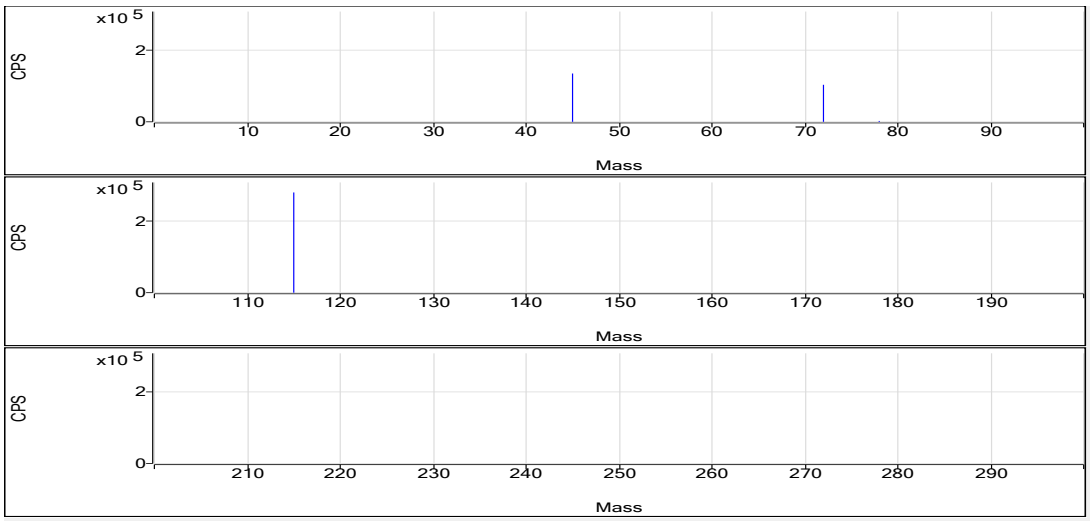
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2172091.58	0.6	98.8	Pulse	0.1000	3
No Gas	Ge	72	1061266.31	0.7	98.9	Pulse	0.1000	3
H2	Sc	45	135687.36	0.4	100.0	Pulse	0.1000	3
H2	Ge	72	104005.14	0.3	98.4	Pulse	0.1000	3
H2	In	115	281535.29	0.5	100.7	Pulse	0.1000	3
He	Sc	45	28956.03	1.8	97.0	Pulse	0.1000	3
He	Ge	72	51750.39	1.1	98.7	Pulse	0.1000	3
He	In	115	52381.35	3.4	102.2	Pulse	0.1000	3
He	Tb	159	282815.31	0.8	101.6	Pulse	0.1000	3
He	Bi	209	239150.03	1.0	100.7	Pulse	0.1000	3

No Gas

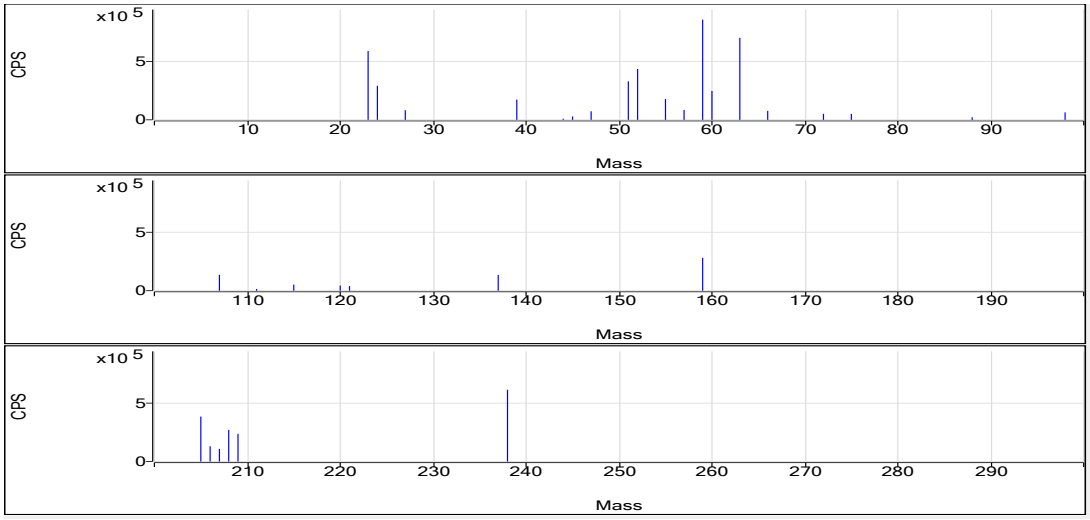


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.354	0.0377	81610.64	0.0007	2.306E-05
Be	9	1	No Gas	51.013	0.0382	82461.40	0.0007	2.306E-05
Be	9	1	No Gas	50.895	0.0381	83271.93	0.0007	2.306E-05
Se	78	2	H2	54.122	0.0232	2412.87	0.0004	4.221E-05
Se	78	2	H2	53.452	0.0229	2371.53	0.0004	4.221E-05
Se	78	2	H2	55.618	0.0238	2484.22	0.0004	4.221E-05
Na	23	3	He	5399.202	20.8325	592863.70	0.0038	0.2864
Na	23	3	He	5197.938	20.0666	591573.04	0.0038	0.2864
Na	23	3	He	5321.852	20.5381	594147.76	0.0038	0.2864
Mg	24	3	He	5331.636	10.2672	292190.27	0.0019	0.007972
Mg	24	3	He	5133.666	9.8863	291451.75	0.0019	0.007972
Mg	24	3	He	5320.909	10.2466	296422.63	0.0019	0.007972
Al	27	3	He	5440.108	2.9661	84410.53	0.0005	0.00158
Al	27	3	He	5143.128	2.8042	82670.51	0.0005	0.00158
Al	27	3	He	5164.701	2.816	81464.09	0.0005	0.00158
K	39	3	He	5445.135	6.2158	176892.09	0.0011	0.3552
K	39	3	He	5097.267	5.8414	172206.09	0.0011	0.3552
K	39	3	He	5281.357	6.0395	174716.48	0.0011	0.3552
Ca	44	3	He	5136.873	0.3234	9203.10	0.0001	0.002
Ca	44	3	He	5256.169	0.3308	9753.59	0.0001	0.002
Ca	44	3	He	5108.168	0.3216	9303.26	0.0001	0.002
Ti	47	3	He	5302.736	2.5899	73705.81	0.0005	0.0004395
Ti	47	3	He	5084.683	2.4834	73213.24	0.0005	0.0004395
Ti	47	3	He	5167.41	2.5238	73012.32	0.0005	0.0004395
V	51	3	He	533.955	11.6862	332573.47	0.0218	0.02648
V	51	3	He	512.753	11.2232	330866.00	0.0218	0.02648
V	51	3	He	523.057	11.4482	331186.00	0.0218	0.02648
Cr	52	3	He	536.568	15.5556	442691.91	0.029	0.006056
Cr	52	3	He	511.138	14.8187	436861.91	0.029	0.006056
Cr	52	3	He	516.852	14.9843	433479.76	0.029	0.006056
Mn	55	3	He	532.619	6.3463	180608.12	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	514.238	6.1274	180639.96	0.0119	0.00335
Mn	55	3	He	517.724	6.169	178461.60	0.0119	0.00335
Fe	57	3	He	5365.83	3.0281	86175.57	0.0006	0.003117
Fe	57	3	He	5107.613	2.8825	84978.44	0.0006	0.003117
Fe	57	3	He	5189.604	2.9288	84725.92	0.0006	0.003117
Co	59	3	He	534.021	16.9165	864797.17	0.0317	0.004379
Co	59	3	He	525.748	16.6545	863942.02	0.0317	0.004379
Co	59	3	He	519.604	16.4599	860120.61	0.0317	0.004379
Ni	60	3	He	539.412	4.8865	249806.27	0.009	0.01049
Ni	60	3	He	528.621	4.789	248425.48	0.009	0.01049
Ni	60	3	He	520.904	4.7192	246604.82	0.009	0.01049
Cu	63	3	He	535.331	13.8803	709579.52	0.0259	0.01685
Cu	63	3	He	524.604	13.6025	705620.30	0.0259	0.01685
Cu	63	3	He	518.155	13.4355	702075.30	0.0259	0.01685
Zn	66	3	He	524.054	1.4845	75889.01	0.0028	0.003817
Zn	66	3	He	524.864	1.4868	77125.47	0.0028	0.003817
Zn	66	3	He	528.249	1.4963	78191.75	0.0028	0.003817
As	75	3	He	537.483	0.9971	50975.49	0.0019	0.0004832
As	75	3	He	533.225	0.9892	51316.60	0.0019	0.0004832
As	75	3	He	529.481	0.9823	51330.76	0.0019	0.0004832
Sr	88	3	He	49.257	0.3954	21166.49	0.008	0.0005203
Sr	88	3	He	56.109	0.4503	22658.80	0.008	0.0005203
Sr	88	3	He	49.843	0.4001	21326.49	0.008	0.0005203
Mo	98	3	He	51.709	1.1852	63443.28	0.0229	0.0003256
Mo	98	3	He	55.006	1.2607	63432.99	0.0229	0.0003256
Mo	98	3	He	52.999	1.2148	64748.39	0.0229	0.0003256
Ag	107	3	He	51.318	2.5665	137386.17	0.05	0.000719
Ag	107	3	He	54.419	2.7216	136932.41	0.05	0.000719
Ag	107	3	He	50.819	2.5416	135468.07	0.05	0.000719
Cd	111	3	He	50.351	0.2783	14895.94	0.0055	0.000104
Cd	111	3	He	53.354	0.2949	14835.84	0.0055	0.000104
Cd	111	3	He	50.302	0.278	14817.84	0.0055	0.000104
Sn	120	3	He	50.698	0.8255	44190.80	0.0159	0.01867
Sn	120	3	He	54.703	0.8893	44743.39	0.0159	0.01867
Sn	120	3	He	50.626	0.8244	43940.39	0.0159	0.01867
Sb	121	3	He	53.356	0.1393	39526.79	0.0026	8.342E-05
Sb	121	3	He	53.087	0.1386	39426.35	0.0026	8.342E-05
Sb	121	3	He	54.271	0.1417	39697.39	0.0026	8.342E-05
Ba	137	3	He	509.545	2.5439	136176.09	0.005	0.0005882
Ba	137	3	He	532.471	2.6584	133752.96	0.005	0.0005882
Ba	137	3	He	514.511	2.5687	136914.83	0.005	0.0005882
Tl	205	3	He	51.101	1.6	387025.23	0.0313	0.0009967
Tl	205	3	He	52.333	1.6386	388541.24	0.0313	0.0009967
Tl	205	3	He	51.792	1.6217	386670.19	0.0313	0.0009967
Pb	208	3	He	51.101	2.0992	270692.57	0.041	0.002892
Pb	208	3	He	53.082	2.1804	274611.30	0.041	0.002892
Pb	208	3	He	52.604	2.1608	273761.64	0.041	0.002892
U	238	3	He	51.25	2.5699	621633.31	0.0501	0.0008282
U	238	3	He	51.721	2.5936	614986.51	0.0501	0.0008282
U	238	3	He	51.779	2.5964	619101.59	0.0501	0.0008282
Sc	45	1	No Gas			2167108.41		
Sc	45	1	No Gas			2161432.00		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2187734.34		
Ge	72	1	No Gas			1063951.00		
Ge	72	1	No Gas			1053399.83		
Ge	72	1	No Gas			1066448.11		
Sc	45	2	H2			136339.83		
Sc	45	2	H2			135159.77		
Sc	45	2	H2			135562.47		
Ge	72	2	H2			104106.24		
Ge	72	2	H2			103602.71		
Ge	72	2	H2			104306.48		
In	115	2	H2			279832.20		
In	115	2	H2			282197.32		
In	115	2	H2			282576.34		
Sc	45	3	He			28458.61		
Sc	45	3	He			29480.48		
Sc	45	3	He			28928.99		
Ge	72	3	He			51121.43		
Ge	72	3	He			51874.35		
Ge	72	3	He			52255.40		
In	115	3	He			53874.27		
In	115	3	He			50662.82		
In	115	3	He			53643.38		
Tb	159	3	He			283767.22		
Tb	159	3	He			284483.78		
Tb	159	3	He			280194.92		
Bi	209	3	He			241887.13		
Bi	209	3	He			237120.78		
Bi	209	3	He			238442.18		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 10:34:59
Sample Name	CCB 6148203
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

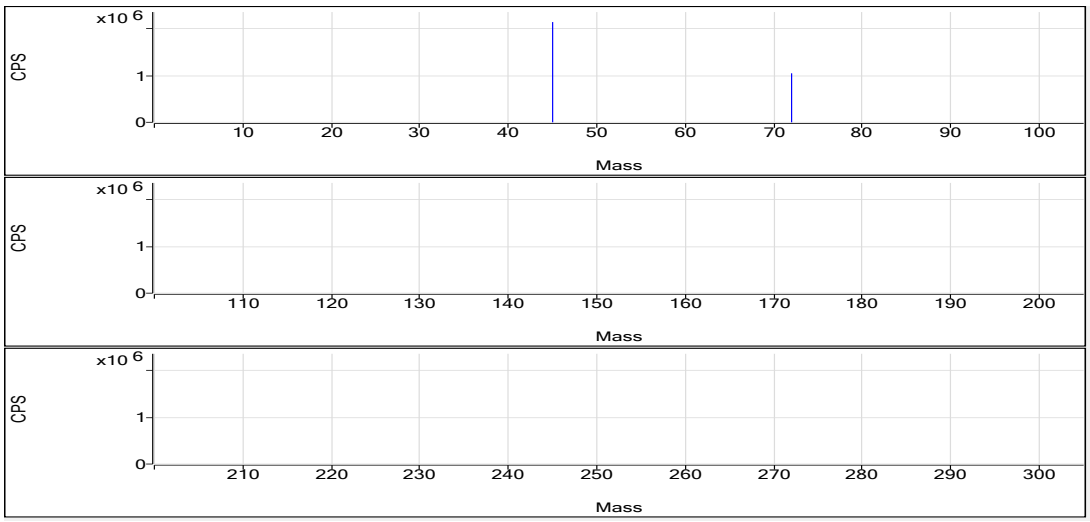
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.198	ppb	13.0	367.34	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.189	ppb	34.0	12.44	0.0001	Pulse	1.5000	3
Na	23	45	He	74.730	ppb	7.9	16219.37	0.5708	Pulse	0.1000	3
Mg	24	45	He	28.443	ppb	3.5	1783.51	0.0627	Pulse	0.1000	3
Al	27	45	He	24.007	ppb	7.3	416.69	0.0147	Pulse	0.1000	3
K	39	45	He	13.938	ppb	121.6	10520.69	0.3702	Pulse	0.1000	3
Ca	44	45	He	57.807	ppb	14.6	160.01	0.0056	Pulse	0.1000	3
Ti	47	45	He	2.948	ppb	16.7	53.33	0.0019	Pulse	0.1000	3
V	51	45	He	0.281	ppb	73.7	926.04	0.0326	Pulse	0.5000	3
Cr	52	45	He	0.329	ppb	7.8	443.36	0.0156	Pulse	0.1000	3
Mn	55	45	He	0.468	ppb	18.2	253.34	0.0089	Pulse	0.1000	3
Fe	57	45	He	38.020	ppb	10.2	696.72	0.0246	Pulse	0.1000	3
Co	59	72	He	0.328	ppb	27.0	756.71	0.0148	Pulse	0.1000	3
Ni	60	72	He	0.338	ppb	33.3	693.38	0.0135	Pulse	0.1000	3
Cu	63	72	He	0.209	ppb	19.8	1140.08	0.0223	Pulse	0.1000	3
Zn	66	72	He	0.422	ppb	23.2	256.68	0.0050	Pulse	0.1000	3
As	75	72	He	0.456	ppb	49.2	68.00	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.149	ppb	33.6	86.67	0.0017	Pulse	0.1000	3
Mo	98	115	He	0.375	ppb	12.5	450.02	0.0089	Pulse	0.1000	3
Ag	107	115	He	0.135	ppb	5.7	376.69	0.0075	Pulse	0.1000	3
Cd	111	115	He	0.144	ppb	29.2	45.33	0.0009	Pulse	0.5000	3
Sn	120	115	He	0.072	ppb	168.7	1000.07	0.0198	Pulse	0.1000	3
Sb	121	159	He	0.163	ppb	23.0	140.01	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.133	ppb	60.6	63.33	0.0013	Pulse	0.1000	3
Tl	205	209	He	0.283	ppb	7.6	2343.64	0.0098	Pulse	0.1000	3
Pb	208	209	He	0.135	ppb	22.6	2003.47	0.0084	Pulse	0.1000	3
U	238	209	He	0.019	ppb	20.2	420.02	0.0018	Pulse	0.1000	3

ISTD Table:

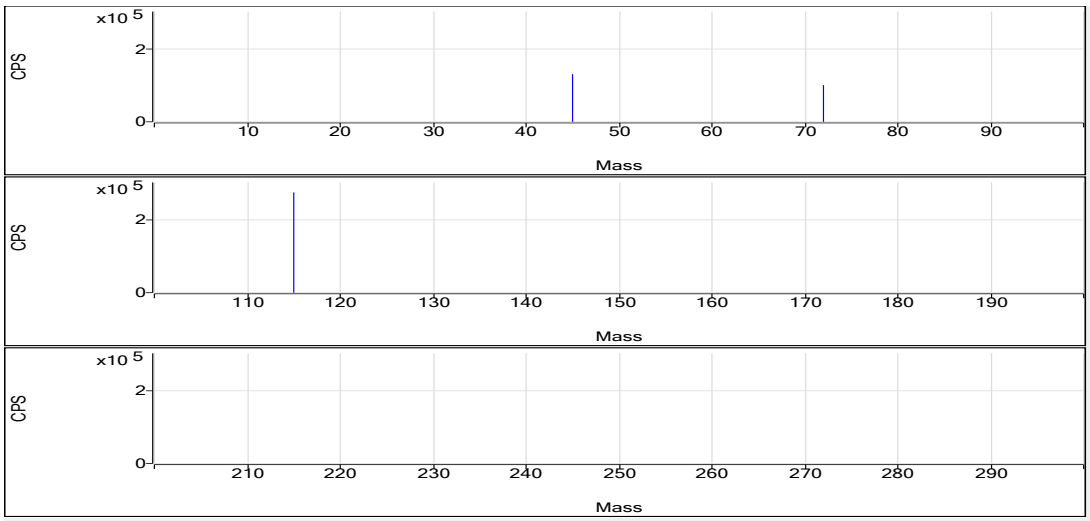
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2144985.85	0.7	97.6	Pulse	0.1000	3
No Gas	Ge	72	1048654.98	0.6	97.7	Pulse	0.1000	3
H2	Sc	45	131792.00	1.2	97.1	Pulse	0.1000	3
H2	Ge	72	101486.39	1.9	96.0	Pulse	0.1000	3
H2	In	115	277271.44	0.8	99.1	Pulse	0.1000	3
He	Sc	45	28434.92	3.6	95.3	Pulse	0.1000	3
He	Ge	72	51221.98	0.7	97.7	Pulse	0.1000	3
He	In	115	50497.35	1.0	98.5	Pulse	0.1000	3
He	Tb	159	275478.19	0.5	98.9	Pulse	0.1000	3
He	Bi	209	237926.97	0.2	100.2	Pulse	0.1000	3

No Gas

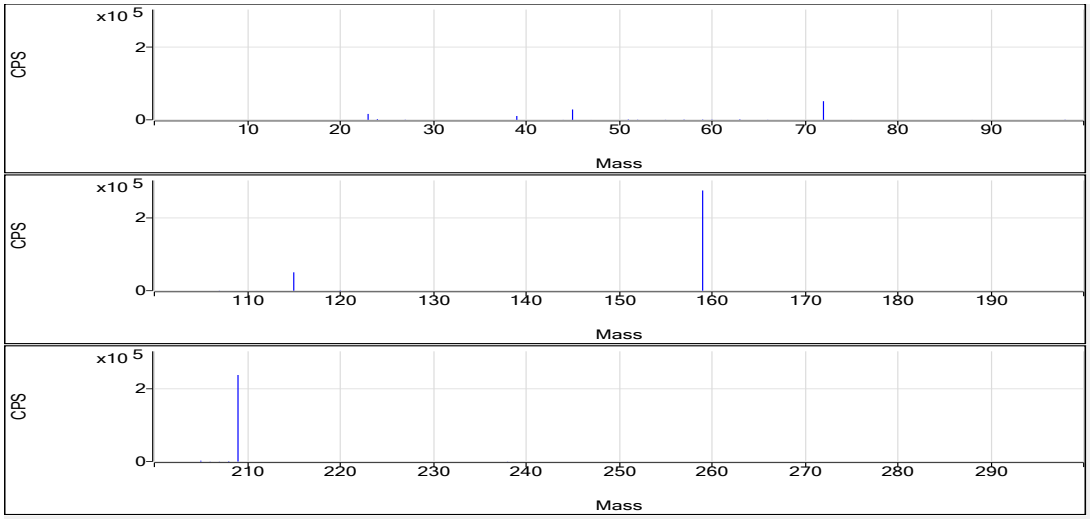


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.202	0.0002	372.01	0.0007	2.306E-05
Be	9	1	No Gas	0.222	0.0002	404.01	0.0007	2.306E-05
Be	9	1	No Gas	0.171	0.0002	326.01	0.0007	2.306E-05
Se	78	2	H2	0.262	0.0002	15.33	0.0004	4.221E-05
Se	78	2	H2	0.144	0.0001	10.67	0.0004	4.221E-05
Se	78	2	H2	0.16	0.0001	11.33	0.0004	4.221E-05
Na	23	3	He	70.186	0.5535	16389.57	0.0038	0.2864
Na	23	3	He	81.361	0.596	16549.83	0.0038	0.2864
Na	23	3	He	72.641	0.5628	15718.70	0.0038	0.2864
Mg	24	3	He	29.031	0.0638	1890.18	0.0019	0.007972
Mg	24	3	He	28.988	0.0638	1770.17	0.0019	0.007972
Mg	24	3	He	27.309	0.0605	1690.17	0.0019	0.007972
Al	27	3	He	23.13	0.0142	420.02	0.0005	0.00158
Al	27	3	He	22.876	0.014	390.02	0.0005	0.00158
Al	27	3	He	26.013	0.0158	440.02	0.0005	0.00158
K	39	3	He	4.89	0.3605	10674.18	0.0011	0.3552
K	39	3	He	33.489	0.3913	10864.25	0.0011	0.3552
K	39	3	He	3.436	0.3589	10023.64	0.0011	0.3552
Ca	44	3	He	65.194	0.0061	180.01	0.0001	0.002
Ca	44	3	He	48.621	0.005	140.01	0.0001	0.002
Ca	44	3	He	59.605	0.0057	160.01	0.0001	0.002
Ti	47	3	He	2.558	0.0017	50.00	0.0005	0.0004395
Ti	47	3	He	2.787	0.0018	50.00	0.0005	0.0004395
Ti	47	3	He	3.5	0.0021	60.00	0.0005	0.0004395
V	51	3	He	0.213	0.0311	922.03	0.0218	0.02648
V	51	3	He	0.513	0.0377	1046.05	0.0218	0.02648
V	51	3	He	0.116	0.029	810.03	0.0218	0.02648
Cr	52	3	He	0.35	0.0162	480.03	0.029	0.006056
Cr	52	3	He	0.301	0.0148	410.02	0.029	0.006056
Cr	52	3	He	0.335	0.0158	440.02	0.029	0.006056
Mn	55	3	He	0.428	0.0084	250.01	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.565	0.0101	280.01	0.0119	0.00335
Mn	55	3	He	0.41	0.0082	230.01	0.0119	0.00335
Fe	57	3	He	34.012	0.0223	660.05	0.0006	0.003117
Fe	57	3	He	41.748	0.0267	740.05	0.0006	0.003117
Fe	57	3	He	38.301	0.0247	690.05	0.0006	0.003117
Co	59	3	He	0.43	0.018	920.06	0.0317	0.004379
Co	59	3	He	0.284	0.0134	690.04	0.0317	0.004379
Co	59	3	He	0.271	0.013	660.04	0.0317	0.004379
Ni	60	3	He	0.377	0.0139	710.04	0.009	0.01049
Ni	60	3	He	0.211	0.0124	640.04	0.009	0.01049
Ni	60	3	He	0.425	0.0143	730.05	0.009	0.01049
Cu	63	3	He	0.173	0.0213	1090.07	0.0259	0.01685
Cu	63	3	He	0.254	0.0234	1210.09	0.0259	0.01685
Cu	63	3	He	0.198	0.022	1120.08	0.0259	0.01685
Zn	66	3	He	0.312	0.0047	240.01	0.0028	0.003817
Zn	66	3	He	0.5	0.0052	270.01	0.0028	0.003817
Zn	66	3	He	0.456	0.0051	260.01	0.0028	0.003817
As	75	3	He	0.711	0.0018	92.00	0.0019	0.0004832
As	75	3	He	0.366	0.0012	60.00	0.0019	0.0004832
As	75	3	He	0.29	0.001	52.00	0.0019	0.0004832
Sr	88	3	He	0.131	0.0016	80.00	0.008	0.0005203
Sr	88	3	He	0.11	0.0014	70.00	0.008	0.0005203
Sr	88	3	He	0.206	0.0022	110.01	0.008	0.0005203
Mo	98	3	He	0.372	0.0088	450.02	0.0229	0.0003256
Mo	98	3	He	0.423	0.01	500.03	0.0229	0.0003256
Mo	98	3	He	0.33	0.0079	400.02	0.0229	0.0003256
Ag	107	3	He	0.143	0.0079	400.02	0.05	0.000719
Ag	107	3	He	0.134	0.0074	370.02	0.05	0.000719
Ag	107	3	He	0.128	0.0071	360.02	0.05	0.000719
Cd	111	3	He	0.166	0.001	52.00	0.0055	0.000104
Cd	111	3	He	0.17	0.001	52.00	0.0055	0.000104
Cd	111	3	He	0.095	0.0006	32.00	0.0055	0.000104
Sn	120	3	He	0	0.0187	950.06	0.0159	0.01867
Sn	120	3	He	0.212	0.022	1100.08	0.0159	0.01867
Sn	120	3	He	0.003	0.0187	950.07	0.0159	0.01867
Sb	121	3	He	0.135	0.0004	120.00	0.0026	8.342E-05
Sb	121	3	He	0.206	0.0006	170.01	0.0026	8.342E-05
Sb	121	3	He	0.148	0.0005	130.01	0.0026	8.342E-05
Ba	137	3	He	0.158	0.0014	70.00	0.005	0.0005882
Ba	137	3	He	0.043	0.0008	40.00	0.005	0.0005882
Ba	137	3	He	0.198	0.0016	80.00	0.005	0.0005882
Tl	205	3	He	0.299	0.0104	2470.36	0.0313	0.0009967
Tl	205	3	He	0.259	0.0091	2160.24	0.0313	0.0009967
Tl	205	3	He	0.291	0.0101	2400.32	0.0313	0.0009967
Pb	208	3	He	0.17	0.0099	1340.12	0.041	0.002892
Pb	208	3	He	0.12	0.0078	990.07	0.041	0.002892
Pb	208	3	He	0.114	0.0076	1080.09	0.041	0.002892
U	238	3	He	0.022	0.0019	460.02	0.0501	0.0008282
U	238	3	He	0.02	0.0018	430.02	0.0501	0.0008282
U	238	3	He	0.015	0.0016	370.02	0.0501	0.0008282
Sc	45	1	No Gas			2134683.09		
Sc	45	1	No Gas			2136936.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2163338.41		
Ge	72	1	No Gas			1051224.20		
Ge	72	1	No Gas			1041771.23		
Ge	72	1	No Gas			1052969.52		
Sc	45	2	H2			130558.16		
Sc	45	2	H2			131183.56		
Sc	45	2	H2			133634.29		
Ge	72	2	H2			99280.79		
Ge	72	2	H2			102634.46		
Ge	72	2	H2			102543.92		
In	115	2	H2			275629.55		
In	115	2	H2			279707.81		
In	115	2	H2			276476.97		
Sc	45	3	He			29610.60		
Sc	45	3	He			27766.90		
Sc	45	3	He			27927.25		
Ge	72	3	He			51081.58		
Ge	72	3	He			51643.58		
Ge	72	3	He			50940.77		
In	115	3	He			50873.03		
In	115	3	He			49899.58		
In	115	3	He			50742.84		
Tb	159	3	He			275048.43		
Tb	159	3	He			274358.92		
Tb	159	3	He			277027.22		
Bi	209	3	He			238555.95		
Bi	209	3	He			237658.30		
Bi	209	3	He			237566.66		

Quantitation Report

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Sample Type	CCB
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

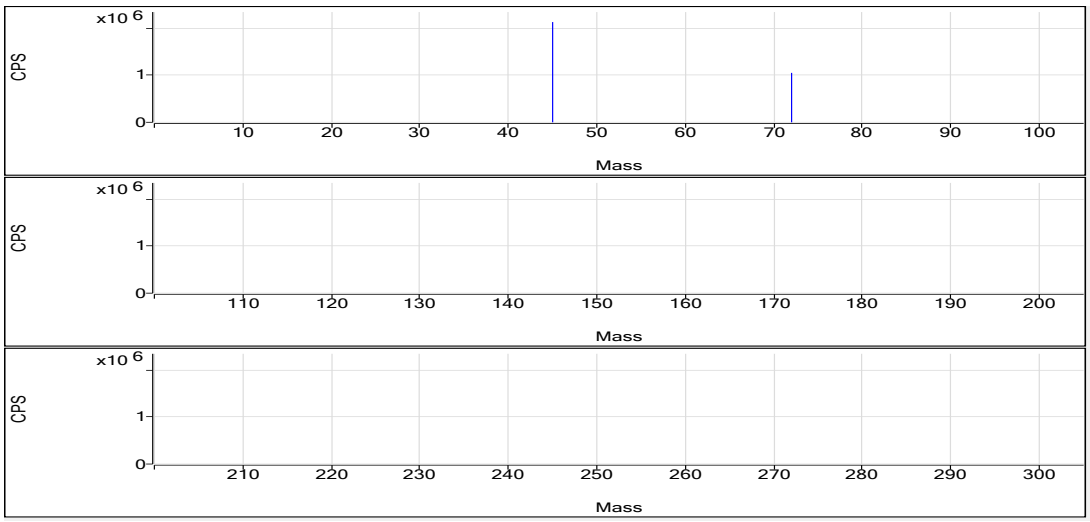
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.169	ppb	17.5	318.01	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.122	ppb	17.6	9.78	0.0001	Pulse	1.5000	3
Na	23	45	He	66.304	ppb	0.7	15258.31	0.5387	Pulse	0.1000	3
Mg	24	45	He	22.213	ppb	5.3	1436.79	0.0507	Pulse	0.1000	3
Al	27	45	He	15.398	ppb	29.9	283.35	0.0100	Pulse	0.1000	3
K	39	45	He	25.065	ppb	36.8	10827.68	0.3822	Pulse	0.1000	3
Ca	44	45	He	18.963	ppb	56.3	90.00	0.0032	Pulse	0.1000	3
Ti	47	45	He	0.766	ppb	211.3	23.33	0.0008	Pulse	0.1000	3
V	51	45	He	0.201	ppb	62.0	873.37	0.0309	Pulse	0.5000	3
Cr	52	45	He	0.168	ppb	60.5	310.01	0.0109	Pulse	0.1000	3
Mn	55	45	He	0.480	ppb	24.9	256.68	0.0091	Pulse	0.1000	3
Fe	57	45	He	31.222	ppb	11.6	586.70	0.0207	Pulse	0.1000	3
Co	59	72	He	0.227	ppb	30.0	586.70	0.0116	Pulse	0.1000	3
Ni	60	72	He	0.132	ppb	60.4	593.37	0.0117	Pulse	0.1000	3
Cu	63	72	He	0.216	ppb	15.8	1140.08	0.0224	Pulse	0.1000	3
Zn	66	72	He	-0.143	ppb	N/A	173.34	0.0034	Pulse	0.1000	3
As	75	72	He	0.135	ppb	84.1	37.33	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.159	ppb	29.4	90.00	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.392	ppb	6.6	466.69	0.0093	Pulse	0.1000	3
Ag	107	115	He	0.118	ppb	7.1	333.35	0.0066	Pulse	0.1000	3
Cd	111	115	He	0.137	ppb	1.8	43.33	0.0009	Pulse	0.5000	3
Sn	120	115	He	0.075	ppb	155.0	996.74	0.0199	Pulse	0.1000	3
Sb	121	159	He	0.144	ppb	19.5	126.67	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.190	ppb	83.0	76.67	0.0015	Pulse	0.1000	3
Tl	205	209	He	0.192	ppb	10.9	1660.18	0.0070	Pulse	0.1000	3
Pb	208	209	He	0.126	ppb	7.2	1906.80	0.0081	Pulse	0.1000	3
U	238	209	He	0.009	ppb	8.7	296.68	0.0013	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2127948.46	0.6	96.8	Pulse	0.1000	3
No Gas	Ge	72	1049515.40	0.9	97.8	Pulse	0.1000	3
H2	Sc	45	132393.26	0.4	97.6	Pulse	0.1000	3
H2	Ge	72	103819.95	1.7	98.2	Pulse	0.1000	3
H2	In	115	279717.79	0.6	100.0	Pulse	0.1000	3
He	Sc	45	28321.47	2.1	94.9	Pulse	0.1000	3
He	Ge	72	50773.75	1.5	96.9	Pulse	0.1000	3
He	In	115	50223.12	2.0	98.0	Pulse	0.1000	3
He	Tb	159	276298.97	0.5	99.2	Pulse	0.1000	3
He	Bi	209	236501.40	1.1	99.6	Pulse	0.1000	3

No Gas



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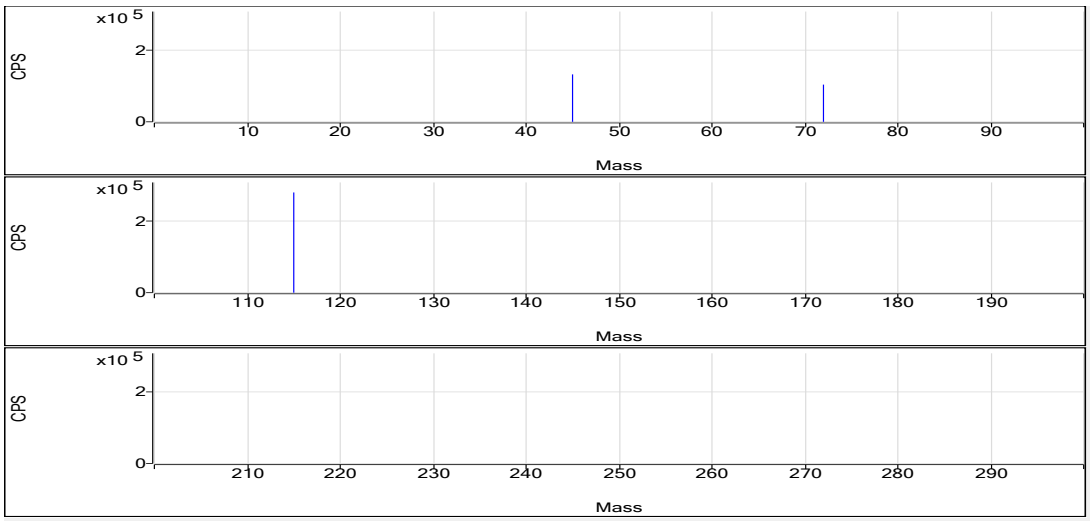
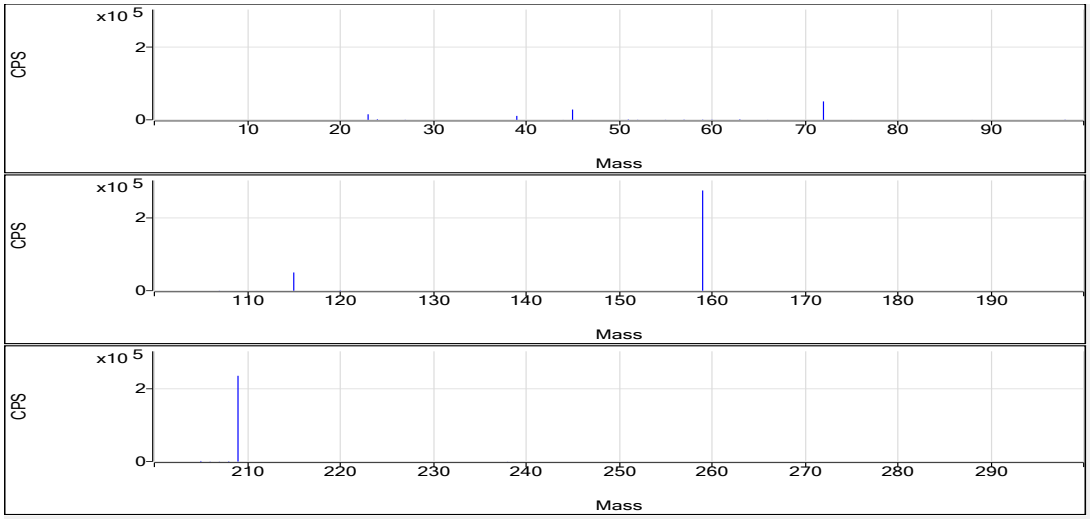


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.184	0.0002	342.01	0.0007	2.306E-05
Be	9	1	No Gas	0.135	0.0001	262.00	0.0007	2.306E-05
Be	9	1	No Gas	0.188	0.0002	350.01	0.0007	2.306E-05
Se	78	2	H2	0.109	0.0001	9.33	0.0004	4.221E-05
Se	78	2	H2	0.147	0.0001	10.67	0.0004	4.221E-05
Se	78	2	H2	0.11	0.0001	9.33	0.0004	4.221E-05
Na	23	3	He	66.033	0.5377	15178.24	0.0038	0.2864
Na	23	3	He	66.867	0.5409	15668.76	0.0038	0.2864
Na	23	3	He	66.012	0.5376	14927.94	0.0038	0.2864
Mg	24	3	He	23.291	0.0528	1490.12	0.0019	0.007972
Mg	24	3	He	22.41	0.0511	1480.14	0.0019	0.007972
Mg	24	3	He	20.939	0.0483	1340.11	0.0019	0.007972
Al	27	3	He	16.603	0.0106	300.01	0.0005	0.00158
Al	27	3	He	19.272	0.0121	350.02	0.0005	0.00158
Al	27	3	He	10.318	0.0072	200.01	0.0005	0.00158
K	39	3	He	30.186	0.3877	10944.42	0.0011	0.3552
K	39	3	He	30.599	0.3882	11244.62	0.0011	0.3552
K	39	3	He	14.409	0.3707	10293.99	0.0011	0.3552
Ca	44	3	He	24.649	0.0035	100.00	0.0001	0.002
Ca	44	3	He	6.648	0.0024	70.00	0.0001	0.002
Ca	44	3	He	25.59	0.0036	100.00	0.0001	0.002
Ti	47	3	He	-0.175	0.0004	10.00	0.0005	0.0004395
Ti	47	3	He	2.634	0.0017	50.00	0.0005	0.0004395
Ti	47	3	He	-0.163	0.0004	10.00	0.0005	0.0004395
V	51	3	He	0.089	0.0284	802.03	0.0218	0.02648
V	51	3	He	0.179	0.0304	880.03	0.0218	0.02648
V	51	3	He	0.335	0.0338	938.04	0.0218	0.02648
Cr	52	3	He	0.268	0.0138	390.02	0.029	0.006056
Cr	52	3	He	0.172	0.011	320.01	0.029	0.006056
Cr	52	3	He	0.064	0.0079	220.01	0.029	0.006056
Mn	55	3	He	0.343	0.0074	210.01	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.53	0.0097	280.01	0.0119	0.00335
Mn	55	3	He	0.565	0.0101	280.01	0.0119	0.00335
Fe	57	3	He	27.149	0.0184	520.03	0.0006	0.003117
Fe	57	3	He	32.437	0.0214	620.04	0.0006	0.003117
Fe	57	3	He	34.081	0.0223	620.03	0.0006	0.003117
Co	59	3	He	0.304	0.014	700.04	0.0317	0.004379
Co	59	3	He	0.175	0.0099	510.02	0.0317	0.004379
Co	59	3	He	0.203	0.0108	550.03	0.0317	0.004379
Ni	60	3	He	0.058	0.011	550.03	0.009	0.01049
Ni	60	3	He	0.216	0.0124	640.04	0.009	0.01049
Ni	60	3	He	0.121	0.0116	590.03	0.009	0.01049
Cu	63	3	He	0.177	0.0214	1070.08	0.0259	0.01685
Cu	63	3	He	0.235	0.0229	1180.08	0.0259	0.01685
Cu	63	3	He	0.236	0.023	1170.09	0.0259	0.01685
Zn	66	3	He	-0.146	0.0034	170.01	0.0028	0.003817
Zn	66	3	He	-0.044	0.0037	190.01	0.0028	0.003817
Zn	66	3	He	-0.239	0.0031	160.01	0.0028	0.003817
As	75	3	He	0.02	0.0005	26.00	0.0019	0.0004832
As	75	3	He	0.138	0.0007	38.00	0.0019	0.0004832
As	75	3	He	0.248	0.0009	48.00	0.0019	0.0004832
Sr	88	3	He	0.188	0.002	100.00	0.008	0.0005203
Sr	88	3	He	0.105	0.0014	70.00	0.008	0.0005203
Sr	88	3	He	0.184	0.002	100.00	0.008	0.0005203
Mo	98	3	He	0.42	0.0099	490.03	0.0229	0.0003256
Mo	98	3	He	0.386	0.0092	470.03	0.0229	0.0003256
Mo	98	3	He	0.369	0.0088	440.02	0.0229	0.0003256
Ag	107	3	He	0.12	0.0067	330.01	0.05	0.000719
Ag	107	3	He	0.126	0.007	360.02	0.05	0.000719
Ag	107	3	He	0.109	0.0062	310.02	0.05	0.000719
Cd	111	3	He	0.135	0.0009	42.00	0.0055	0.000104
Cd	111	3	He	0.136	0.0009	44.00	0.0055	0.000104
Cd	111	3	He	0.14	0.0009	44.00	0.0055	0.000104
Sn	120	3	He	0.204	0.0219	1080.08	0.0159	0.01867
Sn	120	3	He	0.039	0.0193	990.07	0.0159	0.01867
Sn	120	3	He	-0.019	0.0184	920.07	0.0159	0.01867
Sb	121	3	He	0.121	0.0004	110.00	0.0026	8.342E-05
Sb	121	3	He	0.175	0.0005	150.01	0.0026	8.342E-05
Sb	121	3	He	0.135	0.0004	120.00	0.0026	8.342E-05
Ba	137	3	He	0.37	0.0024	120.01	0.005	0.0005882
Ba	137	3	He	0.116	0.0012	60.00	0.005	0.0005882
Ba	137	3	He	0.082	0.001	50.00	0.005	0.0005882
Tl	205	3	He	0.212	0.0076	1800.21	0.0313	0.0009967
Tl	205	3	He	0.195	0.0071	1700.18	0.0313	0.0009967
Tl	205	3	He	0.17	0.0063	1480.14	0.0313	0.0009967
Pb	208	3	He	0.119	0.0078	820.05	0.041	0.002892
Pb	208	3	He	0.136	0.0085	1100.10	0.041	0.002892
Pb	208	3	He	0.122	0.0079	1000.08	0.041	0.002892
U	238	3	He	0.009	0.0013	300.02	0.0501	0.0008282
U	238	3	He	0.008	0.0012	290.02	0.0501	0.0008282
U	238	3	He	0.009	0.0013	300.01	0.0501	0.0008282
Sc	45	1	No Gas			2132801.69		
Sc	45	1	No Gas			2113441.53		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2137602.16		
Ge	72	1	No Gas			1051985.84		
Ge	72	1	No Gas			1039464.83		
Ge	72	1	No Gas			1057095.53		
Sc	45	2	H2			132342.84		
Sc	45	2	H2			131879.53		
Sc	45	2	H2			132957.40		
Ge	72	2	H2			105072.39		
Ge	72	2	H2			101737.70		
Ge	72	2	H2			104649.77		
In	115	2	H2			278790.07		
In	115	2	H2			278743.78		
In	115	2	H2			281619.53		
Sc	45	3	He			28228.26		
Sc	45	3	He			28969.36		
Sc	45	3	He			27766.78		
Ge	72	3	He			49937.54		
Ge	72	3	He			51442.91		
Ge	72	3	He			50940.80		
In	115	3	He			49277.34		
In	115	3	He			51314.80		
In	115	3	He			50100.53		
Tb	159	3	He			275720.07		
Tb	159	3	He			277761.95		
Tb	159	3	He			275414.88		
Bi	209	3	He			236102.36		
Bi	209	3	He			239209.70		
Bi	209	3	He			234192.14		

Quantitation Report

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Sample Type	Sample
Comment	C9
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Auto Dilution	1.0000
Total Dilution	1.0000
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Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

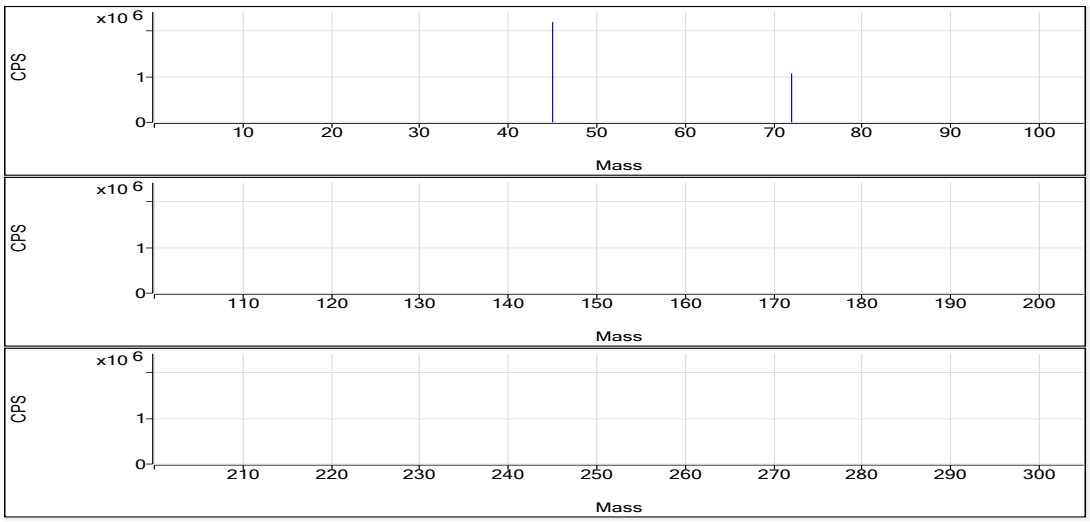
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.125	ppb	10.1	255.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.042	ppb	75.9	6.22	0.0001	Pulse	1.5000	3
Na	23	45	He	41.144	ppb	5.8	13102.82	0.4430	Pulse	0.1000	3
Mg	24	45	He	19.632	ppb	5.5	1353.44	0.0457	Pulse	0.1000	3
Al	27	45	He	13.444	ppb	22.1	263.34	0.0089	Pulse	0.1000	3
K	39	45	He	-2.204	ppb	N/A	10437.40	0.3529	Pulse	0.1000	3
Ca	44	45	He	31.127	ppb	23.1	116.67	0.0039	Pulse	0.1000	3
Ti	47	45	He	-0.207	ppb	N/A	10.00	0.0003	Pulse	0.1000	3
V	51	45	He	0.039	ppb	332.2	808.70	0.0273	Pulse	0.5000	3
Cr	52	45	He	0.200	ppb	33.4	350.02	0.0118	Pulse	0.1000	3
Mn	55	45	He	0.363	ppb	37.5	226.68	0.0077	Pulse	0.1000	3
Fe	57	45	He	24.864	ppb	8.6	506.69	0.0171	Pulse	0.1000	3
Co	59	72	He	0.136	ppb	22.5	450.02	0.0087	Pulse	0.1000	3
Ni	60	72	He	0.166	ppb	186.2	620.04	0.0120	Pulse	0.1000	3
Cu	63	72	He	0.150	ppb	17.0	1073.41	0.0207	Pulse	0.1000	3
Zn	66	72	He	-0.210	ppb	N/A	166.68	0.0032	Pulse	0.1000	3
As	75	72	He	0.169	ppb	82.4	41.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.061	ppb	61.2	53.33	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.281	ppb	26.3	356.69	0.0068	Pulse	0.1000	3
Ag	107	115	He	0.080	ppb	18.5	250.01	0.0047	Pulse	0.1000	3
Cd	111	115	He	0.070	ppb	22.2	26.00	0.0005	Pulse	0.5000	3
Sn	120	115	He	-0.038	ppb	N/A	953.40	0.0181	Pulse	0.1000	3
Sb	121	159	He	0.089	ppb	26.9	90.00	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.111	ppb	152.9	60.00	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.091	ppb	6.3	940.07	0.0039	Pulse	0.1000	3
Pb	208	209	He	0.074	ppb	41.5	1443.42	0.0059	Pulse	0.1000	3
U	238	209	He	0.000	ppb	727.9	206.68	0.0008	Pulse	0.1000	3

ISTD Table:

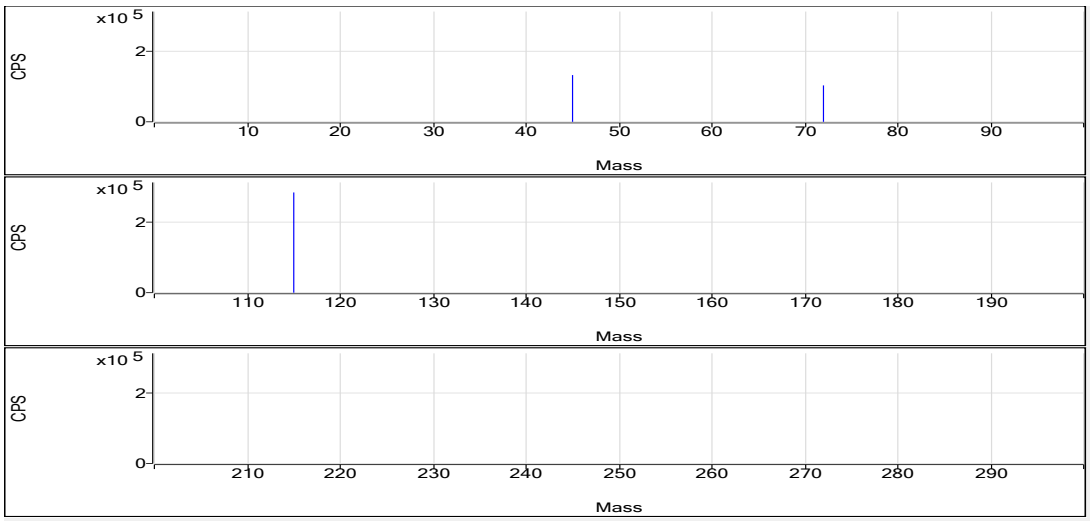
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2194341.74	0.2	99.8	Pulse	0.1000	3
No Gas	Ge	72	1071736.29	0.6	99.9	Pulse	0.1000	3
H2	Sc	45	133250.17	0.7	98.2	Pulse	0.1000	3
H2	Ge	72	103799.44	1.7	98.2	Pulse	0.1000	3
H2	In	115	285716.40	0.2	102.2	Pulse	0.1000	3
He	Sc	45	29583.89	1.4	99.1	Pulse	0.1000	3
He	Ge	72	51767.01	1.8	98.7	Pulse	0.1000	3
He	In	115	52799.76	2.8	103.0	Pulse	0.1000	3
He	Tb	159	285471.27	0.5	102.5	Pulse	0.1000	3
He	Bi	209	243782.45	1.0	102.7	Pulse	0.1000	3

No Gas

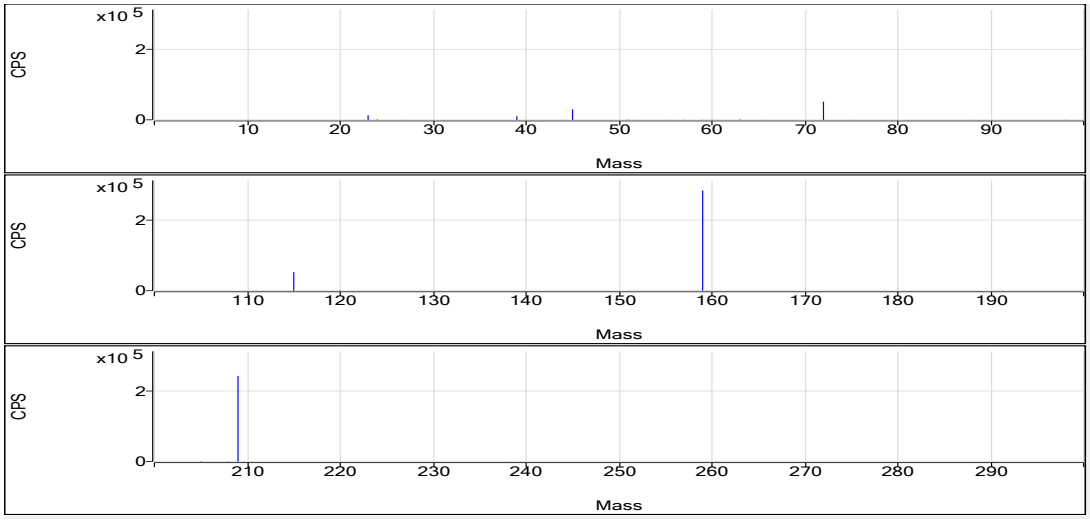


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.123	0.0001	252.00	0.0007	2.306E-05
Be	9	1	No Gas	0.113	0.0001	236.00	0.0007	2.306E-05
Be	9	1	No Gas	0.138	0.0001	278.00	0.0007	2.306E-05
Se	78	2	H2	0.055	0.0001	6.67	0.0004	4.221E-05
Se	78	2	H2	0.006	0	4.67	0.0004	4.221E-05
Se	78	2	H2	0.065	0.0001	7.33	0.0004	4.221E-05
Na	23	3	He	39.549	0.4369	13016.14	0.0038	0.2864
Na	23	3	He	40.021	0.4387	13096.04	0.0038	0.2864
Na	23	3	He	43.863	0.4533	13196.28	0.0038	0.2864
Mg	24	3	He	20.805	0.048	1430.13	0.0019	0.007972
Mg	24	3	He	18.665	0.0439	1310.10	0.0019	0.007972
Mg	24	3	He	19.425	0.0453	1320.10	0.0019	0.007972
Al	27	3	He	10.036	0.007	210.01	0.0005	0.00158
Al	27	3	He	15.543	0.0101	300.01	0.0005	0.00158
Al	27	3	He	14.752	0.0096	280.01	0.0005	0.00158
K	39	3	He	0.993	0.3563	10614.26	0.0011	0.3552
K	39	3	He	-9.955	0.3445	10283.95	0.0011	0.3552
K	39	3	He	2.351	0.3578	10414.00	0.0011	0.3552
Ca	44	3	He	27.044	0.0037	110.00	0.0001	0.002
Ca	44	3	He	26.925	0.0037	110.00	0.0001	0.002
Ca	44	3	He	39.413	0.0045	130.01	0.0001	0.002
Ti	47	3	He	0.475	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
Ti	47	3	He	-0.197	0.0003	10.00	0.0005	0.0004395
V	51	3	He	-0.047	0.0254	758.03	0.0218	0.02648
V	51	3	He	0.187	0.0306	912.04	0.0218	0.02648
V	51	3	He	-0.023	0.026	756.02	0.0218	0.02648
Cr	52	3	He	0.162	0.0107	320.01	0.029	0.006056
Cr	52	3	He	0.161	0.0107	320.02	0.029	0.006056
Cr	52	3	He	0.277	0.0141	410.02	0.029	0.006056
Mn	55	3	He	0.367	0.0077	230.01	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.225	0.006	180.01	0.0119	0.00335
Mn	55	3	He	0.498	0.0093	270.02	0.0119	0.00335
Fe	57	3	He	26.031	0.0178	530.03	0.0006	0.003117
Fe	57	3	He	22.401	0.0157	470.02	0.0006	0.003117
Fe	57	3	He	26.16	0.0179	520.03	0.0006	0.003117
Co	59	3	He	0.161	0.0095	500.03	0.0317	0.004379
Co	59	3	He	0.146	0.009	460.02	0.0317	0.004379
Co	59	3	He	0.102	0.0076	390.02	0.0317	0.004379
Ni	60	3	He	0.013	0.0106	560.03	0.009	0.01049
Ni	60	3	He	-0.036	0.0102	520.03	0.009	0.01049
Ni	60	3	He	0.522	0.0152	780.05	0.009	0.01049
Cu	63	3	He	0.175	0.0214	1130.08	0.0259	0.01685
Cu	63	3	He	0.149	0.0207	1060.08	0.0259	0.01685
Cu	63	3	He	0.125	0.0201	1030.07	0.0259	0.01685
Zn	66	3	He	-0.346	0.0028	150.01	0.0028	0.003817
Zn	66	3	He	-0.175	0.0033	170.01	0.0028	0.003817
Zn	66	3	He	-0.109	0.0035	180.01	0.0028	0.003817
As	75	3	He	0.311	0.0011	56.00	0.0019	0.0004832
As	75	3	He	0.161	0.0008	40.00	0.0019	0.0004832
As	75	3	He	0.034	0.0005	28.00	0.0019	0.0004832
Sr	88	3	He	0.103	0.0013	70.00	0.008	0.0005203
Sr	88	3	He	0.05	0.0009	50.00	0.008	0.0005203
Sr	88	3	He	0.031	0.0008	40.00	0.008	0.0005203
Mo	98	3	He	0.221	0.0054	280.02	0.0229	0.0003256
Mo	98	3	He	0.258	0.0062	340.02	0.0229	0.0003256
Mo	98	3	He	0.363	0.0087	450.02	0.0229	0.0003256
Ag	107	3	He	0.078	0.0046	240.01	0.05	0.000719
Ag	107	3	He	0.096	0.0055	300.01	0.05	0.000719
Ag	107	3	He	0.066	0.004	210.01	0.05	0.000719
Cd	111	3	He	0.065	0.0005	24.00	0.0055	0.000104
Cd	111	3	He	0.088	0.0006	32.00	0.0055	0.000104
Cd	111	3	He	0.058	0.0004	22.00	0.0055	0.000104
Sn	120	3	He	0.085	0.02	1040.08	0.0159	0.01867
Sn	120	3	He	-0.066	0.0176	960.07	0.0159	0.01867
Sn	120	3	He	-0.134	0.0165	860.05	0.0159	0.01867
Sb	121	3	He	0.117	0.0004	110.00	0.0026	8.342E-05
Sb	121	3	He	0.075	0.0003	80.00	0.0026	8.342E-05
Sb	121	3	He	0.075	0.0003	80.00	0.0026	8.342E-05
Ba	137	3	He	0.307	0.0021	110.00	0.005	0.0005882
Ba	137	3	He	0.029	0.0007	40.00	0.005	0.0005882
Ba	137	3	He	-0.002	0.0006	30.00	0.005	0.0005882
Tl	205	3	He	0.086	0.0037	910.07	0.0313	0.0009967
Tl	205	3	He	0.098	0.0041	990.06	0.0313	0.0009967
Tl	205	3	He	0.09	0.0038	920.07	0.0313	0.0009967
Pb	208	3	He	0.057	0.0052	670.05	0.041	0.002892
Pb	208	3	He	0.109	0.0074	980.08	0.041	0.002892
Pb	208	3	He	0.055	0.0051	680.05	0.041	0.002892
U	238	3	He	0.003	0.001	240.01	0.0501	0.0008282
U	238	3	He	0.001	0.0009	210.01	0.0501	0.0008282
U	238	3	He	-0.002	0.0007	170.01	0.0501	0.0008282
Sc	45	1	No Gas			2193654.97		
Sc	45	1	No Gas			2190192.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2199177.47		
Ge	72	1	No Gas			1067458.03		
Ge	72	1	No Gas			1069202.02		
Ge	72	1	No Gas			1078548.81		
Sc	45	2	H2			133313.60		
Sc	45	2	H2			134171.41		
Sc	45	2	H2			132265.50		
Ge	72	2	H2			101738.21		
Ge	72	2	H2			104709.16		
Ge	72	2	H2			104950.96		
In	115	2	H2			285876.75		
In	115	2	H2			284963.04		
In	115	2	H2			286309.41		
Sc	45	3	He			29791.01		
Sc	45	3	He			29851.17		
Sc	45	3	He			29109.48		
Ge	72	3	He			52817.57		
Ge	72	3	He			51181.40		
Ge	72	3	He			51302.06		
In	115	3	He			51927.52		
In	115	3	He			54486.76		
In	115	3	He			52007.30		
Tb	159	3	He			283789.98		
Tb	159	3	He			286885.00		
Tb	159	3	He			285738.82		
Bi	209	3	He			245993.79		
Bi	209	3	He			244267.44		
Bi	209	3	He			241086.11		

Quantitation Report

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Acq Time	2024-07-17 10:41:03
Sample Name	LCS 410-526979/2-A
Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

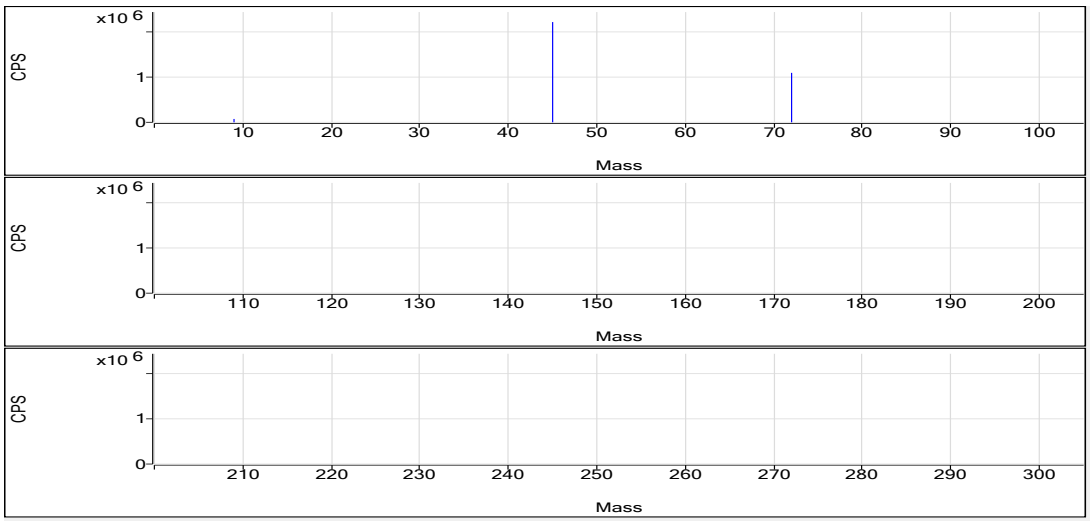
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	44.584	ppb	2.3	73959.86	0.0333	Pulse	0.5000	3
Se	78	72	H2	96.735	ppb	1.0	4410.68	0.0414	Pulse	1.5000	3
Na	23	45	He	4583.722	ppb	2.0	538076.02	17.7293	Pulse	0.1000	3
Mg	24	45	He	4529.032	ppb	1.7	264754.53	8.7228	Pulse	0.1000	3
Al	27	45	He	4436.619	ppb	2.1	73421.88	2.4192	Pulse	0.1000	3
K	39	45	He	4671.919	ppb	1.5	163398.08	5.3836	Pulse	0.1000	3
Ca	44	45	He	4564.455	ppb	0.6	8729.56	0.2876	Pulse	0.1000	3
Ti	47	45	He	458.347	ppb	3.6	6805.16	0.2243	Pulse	0.1000	3
V	51	45	He	452.785	ppb	1.1	300900.94	9.9137	Pulse	0.5000	3
Cr	52	45	He	451.446	ppb	0.8	397293.99	13.0888	Pulse	0.1000	3
Mn	55	45	He	451.216	ppb	1.3	163197.15	5.3769	Pulse	0.1000	3
Fe	57	45	He	4541.089	ppb	2.0	77805.34	2.5632	Pulse	0.1000	3
Co	59	72	He	464.819	ppb	0.4	785366.53	14.7249	Pulse	0.1000	3
Ni	60	72	He	465.758	ppb	1.1	225107.26	4.2207	Pulse	0.1000	3
Cu	63	72	He	466.111	ppb	0.9	644675.80	12.0877	Pulse	0.1000	3
Zn	66	72	He	461.655	ppb	2.3	69765.82	1.3082	Pulse	0.1000	3
As	75	72	He	468.123	ppb	1.6	46319.32	0.8685	Pulse	0.5000	3
Sr	88	115	He	49.224	ppb	2.7	20552.13	0.3952	Pulse	0.1000	3
Mo	98	115	He	48.023	ppb	1.5	57259.48	1.1007	Pulse	0.1000	3
Ag	107	115	He	49.681	ppb	2.8	129233.03	2.4847	Pulse	0.1000	3
Cd	111	115	He	46.887	ppb	2.7	13477.83	0.2591	Pulse	0.5000	3
Sn	120	115	He	95.491	ppb	2.6	80016.35	1.5384	Pulse	0.1000	3
Sb	121	159	He	94.058	ppb	1.7	70247.53	0.2455	Pulse	0.1000	3
Ba	137	115	He	473.575	ppb	0.9	122998.51	2.3644	Pulse	0.1000	3
Tl	205	209	He	92.754	ppb	0.5	701321.74	2.9034	Pulse	0.1000	3
Pb	208	209	He	47.259	ppb	0.8	468974.86	1.9415	Pulse	0.1000	3
U	238	209	He	46.751	ppb	0.9	566270.60	2.3444	Pulse	0.1000	3

ISTD Table:

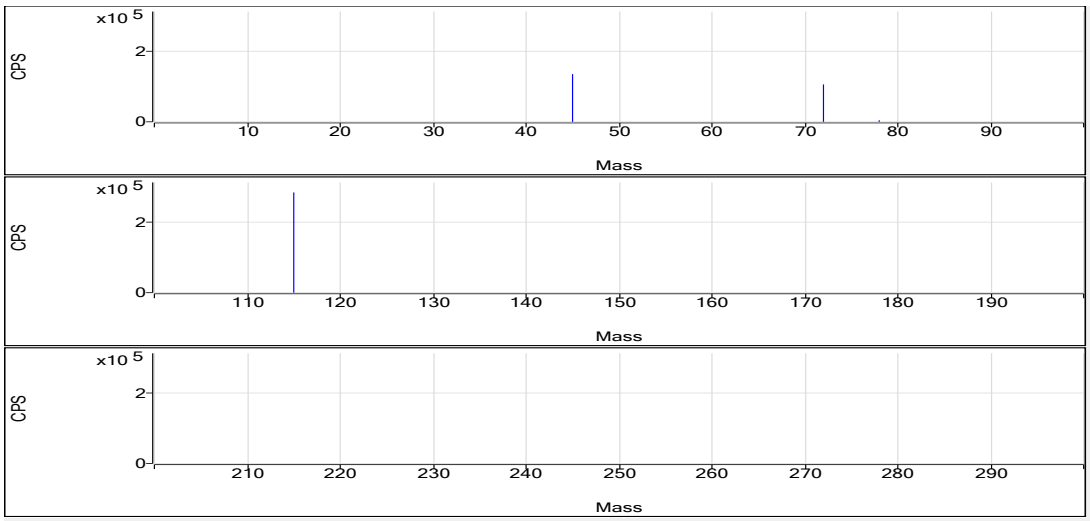
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2217970.33	0.4	100.9	Pulse	0.1000	3
No Gas	Ge	72	1094307.35	0.2	102.0	Pulse	0.1000	3
H2	Sc	45	135896.06	1.2	100.1	Pulse	0.1000	3
H2	Ge	72	106549.32	1.2	100.8	Pulse	0.1000	3
H2	In	115	285661.19	0.5	102.1	Pulse	0.1000	3
He	Sc	45	30355.49	1.6	101.7	Pulse	0.1000	3
He	Ge	72	53335.96	1.0	101.7	Pulse	0.1000	3
He	In	115	52022.39	1.3	101.5	Pulse	0.1000	3
He	Tb	159	286153.96	0.7	102.8	Pulse	0.1000	3
He	Bi	209	241551.44	0.7	101.7	Pulse	0.1000	3

No Gas

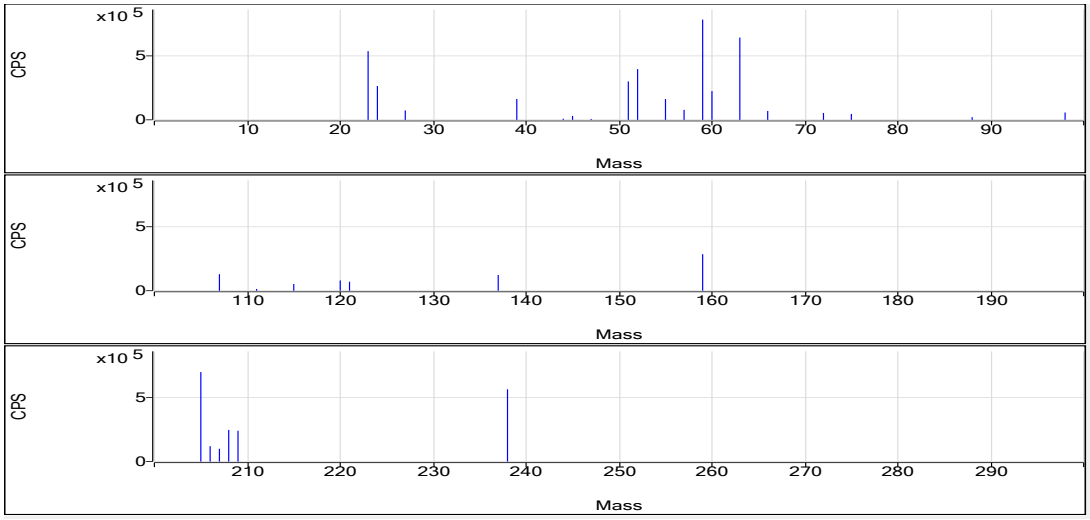


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	43.433	0.0325	72070.75	0.0007	2.306E-05
Be	9	1	No Gas	44.922	0.0336	74811.88	0.0007	2.306E-05
Be	9	1	No Gas	45.397	0.034	74996.96	0.0007	2.306E-05
Se	78	2	H2	97.264	0.0416	4462.69	0.0004	4.221E-05
Se	78	2	H2	95.593	0.0409	4299.98	0.0004	4.221E-05
Se	78	2	H2	97.347	0.0417	4469.37	0.0004	4.221E-05
Na	23	3	He	4566.603	17.6641	534374.60	0.0038	0.2864
Na	23	3	He	4683.755	18.1099	542237.57	0.0038	0.2864
Na	23	3	He	4500.808	17.4137	537615.89	0.0038	0.2864
Mg	24	3	He	4604.416	8.8679	268270.58	0.0019	0.007972
Mg	24	3	He	4530.42	8.7255	261253.65	0.0019	0.007972
Mg	24	3	He	4452.26	8.5751	264739.35	0.0019	0.007972
Al	27	3	He	4430.775	2.4161	73090.59	0.0005	0.00158
Al	27	3	He	4532.134	2.4713	73994.12	0.0005	0.00158
Al	27	3	He	4346.949	2.3704	73180.93	0.0005	0.00158
K	39	3	He	4706.123	5.4204	163977.05	0.0011	0.3552
K	39	3	He	4716.795	5.4319	162637.76	0.0011	0.3552
K	39	3	He	4592.84	5.2985	163579.42	0.0011	0.3552
Ca	44	3	He	4534.459	0.2857	8642.86	0.0001	0.002
Ca	44	3	He	4576.453	0.2883	8632.81	0.0001	0.002
Ca	44	3	He	4582.453	0.2887	8913.01	0.0001	0.002
Ti	47	3	He	464.946	0.2275	6881.94	0.0005	0.0004395
Ti	47	3	He	470.456	0.2302	6891.85	0.0005	0.0004395
Ti	47	3	He	439.639	0.2151	6641.69	0.0005	0.0004395
V	51	3	He	453.701	9.9337	300515.19	0.0218	0.02648
V	51	3	He	457.415	10.0148	299858.44	0.0218	0.02648
V	51	3	He	447.24	9.7927	302329.19	0.0218	0.02648
Cr	52	3	He	449.156	13.0225	393955.31	0.029	0.006056
Cr	52	3	He	455.586	13.2088	395490.27	0.029	0.006056
Cr	52	3	He	449.595	13.0352	402436.40	0.029	0.006056
Mn	55	3	He	453.568	5.4049	163509.30	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	455.472	5.4276	162509.92	0.0119	0.00335
Mn	55	3	He	444.608	5.2982	163572.24	0.0119	0.00335
Fe	57	3	He	4438.924	2.5056	75798.09	0.0006	0.003117
Fe	57	3	He	4611.876	2.6031	77939.39	0.0006	0.003117
Fe	57	3	He	4572.466	2.5808	79678.55	0.0006	0.003117
Co	59	3	He	463.132	14.6715	779032.88	0.0317	0.004379
Co	59	3	He	466.465	14.7771	782412.57	0.0317	0.004379
Co	59	3	He	464.86	14.7262	794654.13	0.0317	0.004379
Ni	60	3	He	471.758	4.275	226993.81	0.009	0.01049
Ni	60	3	He	463.788	4.2029	222535.39	0.009	0.01049
Ni	60	3	He	461.729	4.1843	225792.59	0.009	0.01049
Cu	63	3	He	465.511	12.0722	641011.32	0.0259	0.01685
Cu	63	3	He	470.347	12.1974	645824.05	0.0259	0.01685
Cu	63	3	He	462.475	11.9935	647192.02	0.0259	0.01685
Zn	66	3	He	456.469	1.2935	68684.28	0.0028	0.003817
Zn	66	3	He	473.752	1.3424	71075.13	0.0028	0.003817
Zn	66	3	He	454.743	1.2887	69538.05	0.0028	0.003817
As	75	3	He	467.796	0.8679	46085.23	0.0019	0.0004832
As	75	3	He	475.666	0.8825	46727.27	0.0019	0.0004832
As	75	3	He	460.908	0.8552	46145.47	0.0019	0.0004832
Sr	88	3	He	50.503	0.4054	20805.90	0.008	0.0005203
Sr	88	3	He	49.283	0.3956	20595.71	0.008	0.0005203
Sr	88	3	He	47.886	0.3844	20254.78	0.008	0.0005203
Mo	98	3	He	48.093	1.1024	56573.42	0.0229	0.0003256
Mo	98	3	He	48.7	1.1163	58109.89	0.0229	0.0003256
Mo	98	3	He	47.276	1.0836	57095.14	0.0229	0.0003256
Ag	107	3	He	51.261	2.5637	131571.30	0.05	0.000719
Ag	107	3	He	48.736	2.4375	126889.10	0.05	0.000719
Ag	107	3	He	49.045	2.4529	129238.68	0.05	0.000719
Cd	111	3	He	48.148	0.2661	13656.67	0.0055	0.000104
Cd	111	3	He	46.861	0.259	13482.50	0.0055	0.000104
Cd	111	3	He	45.653	0.2523	13294.31	0.0055	0.000104
Sn	120	3	He	97.191	1.5655	80341.58	0.0159	0.01867
Sn	120	3	He	96.634	1.5566	81034.65	0.0159	0.01867
Sn	120	3	He	92.647	1.4932	78672.82	0.0159	0.01867
Sb	121	3	He	92.26	0.2408	68668.84	0.0026	8.342E-05
Sb	121	3	He	94.505	0.2467	71153.19	0.0026	8.342E-05
Sb	121	3	He	95.409	0.249	70920.57	0.0026	8.342E-05
Ba	137	3	He	477.184	2.3824	122266.95	0.005	0.0005882
Ba	137	3	He	468.768	2.3404	121836.43	0.005	0.0005882
Ba	137	3	He	474.773	2.3704	124892.15	0.005	0.0005882
Tl	205	3	He	92.558	2.8973	705449.05	0.0313	0.0009967
Tl	205	3	He	92.428	2.8932	697401.01	0.0313	0.0009967
Tl	205	3	He	93.277	2.9198	701115.15	0.0313	0.0009967
Pb	208	3	He	47.335	1.9447	250265.29	0.041	0.002892
Pb	208	3	He	46.829	1.9239	244704.86	0.041	0.002892
Pb	208	3	He	47.612	1.956	249102.87	0.041	0.002892
U	238	3	He	46.325	2.3231	565627.49	0.0501	0.0008282
U	238	3	He	46.802	2.347	565727.57	0.0501	0.0008282
U	238	3	He	47.125	2.3632	567456.75	0.0501	0.0008282
Sc	45	1	No Gas			2218504.50		
Sc	45	1	No Gas			2226614.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2208792.47		
Ge	72	1	No Gas			1092836.94		
Ge	72	1	No Gas			1093654.51		
Ge	72	1	No Gas			1096430.61		
Sc	45	2	H2			135230.52		
Sc	45	2	H2			137782.98		
Sc	45	2	H2			134674.67		
Ge	72	2	H2			107228.27		
Ge	72	2	H2			105122.43		
Ge	72	2	H2			107297.26		
In	115	2	H2			285501.30		
In	115	2	H2			284455.03		
In	115	2	H2			287027.24		
Sc	45	3	He			30251.97		
Sc	45	3	He			29941.44		
Sc	45	3	He			30873.07		
Ge	72	3	He			53098.34		
Ge	72	3	He			52947.77		
Ge	72	3	He			53961.78		
In	115	3	He			51947.27		
In	115	3	He			52689.94		
In	115	3	He			53302.33		
Tb	159	3	He			285174.94		
Tb	159	3	He			288476.28		
Tb	159	3	He			284810.66		
Bi	209	3	He			243484.14		
Bi	209	3	He			241045.23		
Bi	209	3	He			240124.94		

Quantitation Report

Data File Name	053SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 10:43:04
Sample Name	410-178873-T-2-A
Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

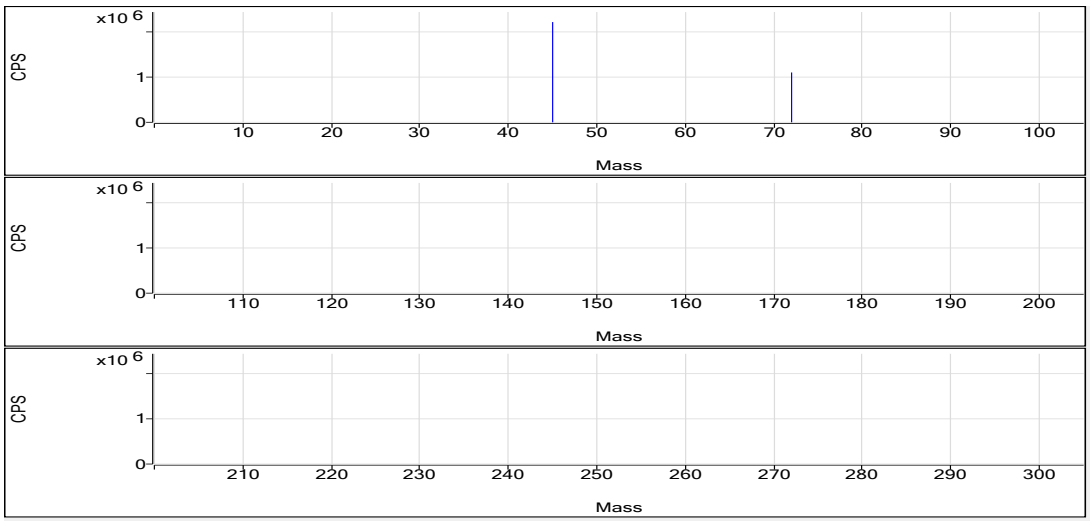
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.162	ppb	15.4	318.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.252	ppb	12.5	16.00	0.0001	Pulse	1.5000	3
Na	23	45	He	20773.065	ppb	3.7	2337035.54	79.3360	Pulse	0.1000	3
Mg	24	45	He	2997.839	ppb	4.2	170143.36	5.7765	Pulse	0.1000	3
Al	27	45	He	28.298	ppb	26.6	500.03	0.0170	Pulse	0.1000	3
K	39	45	He	981.764	ppb	7.3	41579.42	1.4119	Pulse	0.1000	3
Ca	44	45	He	3916.706	ppb	6.4	7275.37	0.2470	Pulse	0.1000	3
Ti	47	45	He	-0.438	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	1.182	ppb	10.3	1541.43	0.0523	Pulse	0.5000	3
Cr	52	45	He	0.296	ppb	22.1	430.02	0.0146	Pulse	0.1000	3
Mn	55	45	He	3.631	ppb	3.9	1373.45	0.0466	Pulse	0.1000	3
Fe	57	45	He	38.585	ppb	7.4	733.38	0.0249	Pulse	0.1000	3
Co	59	72	He	0.211	ppb	20.7	590.03	0.0111	Pulse	0.1000	3
Ni	60	72	He	0.142	ppb	159.2	626.70	0.0118	Pulse	0.1000	3
Cu	63	72	He	0.452	ppb	13.3	1523.47	0.0286	Pulse	0.1000	3
Zn	66	72	He	0.554	ppb	41.5	286.68	0.0054	Pulse	0.1000	3
As	75	72	He	1.039	ppb	18.3	128.67	0.0024	Pulse	0.5000	3
Sr	88	115	He	35.275	ppb	3.2	14991.75	0.2833	Pulse	0.1000	3
Mo	98	115	He	0.263	ppb	4.7	336.68	0.0064	Pulse	0.1000	3
Ag	107	115	He	0.106	ppb	22.0	320.02	0.0060	Pulse	0.1000	3
Cd	111	115	He	0.079	ppb	23.8	28.67	0.0005	Pulse	0.5000	3
Sn	120	115	He	-0.142	ppb	N/A	870.06	0.0164	Pulse	0.1000	3
Sb	121	159	He	0.164	ppb	54.3	146.67	0.0005	Pulse	0.1000	3
Ba	137	115	He	1.346	ppb	4.7	386.69	0.0073	Pulse	0.1000	3
Tl	205	209	He	0.297	ppb	3.1	2527.01	0.0103	Pulse	0.1000	3
Pb	208	209	He	0.054	ppb	31.5	1250.07	0.0051	Pulse	0.1000	3
U	238	209	He	0.017	ppb	18.8	410.02	0.0017	Pulse	0.1000	3

ISTD Table:

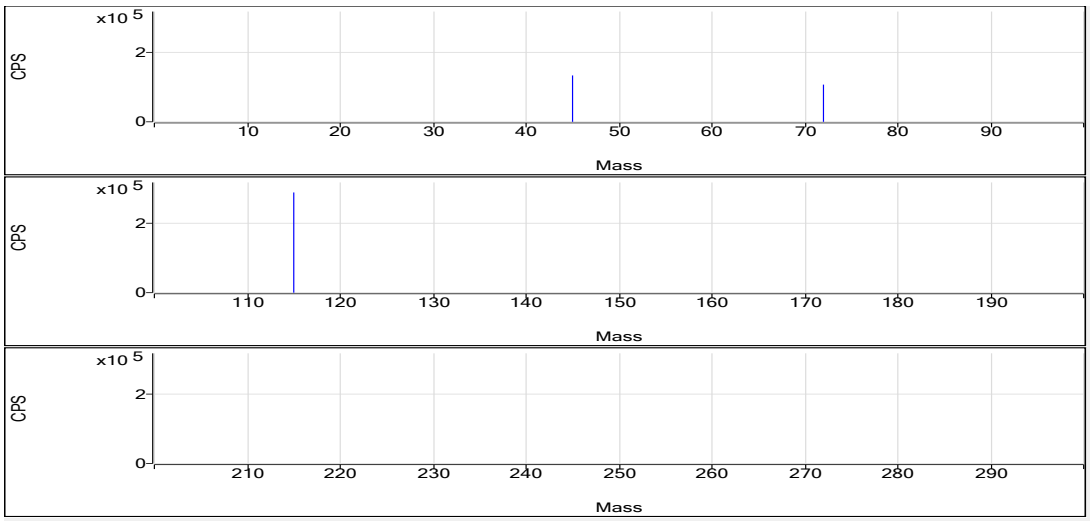
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2214671.22	0.5	100.8	Pulse	0.1000	3
No Gas	Ge	72	1101060.32	0.2	102.6	Pulse	0.1000	3
H2	Sc	45	133281.28	1.3	98.2	Pulse	0.1000	3
H2	Ge	72	106901.91	1.2	101.1	Pulse	0.1000	3
H2	In	115	288038.81	1.5	103.0	Pulse	0.1000	3
He	Sc	45	29480.35	3.2	98.8	Pulse	0.1000	3
He	Ge	72	53319.77	1.4	101.7	Pulse	0.1000	3
He	In	115	52950.72	3.2	103.3	Pulse	0.1000	3
He	Tb	159	287281.88	0.1	103.2	Pulse	0.1000	3
He	Bi	209	245601.89	0.8	103.4	Pulse	0.1000	3

No Gas

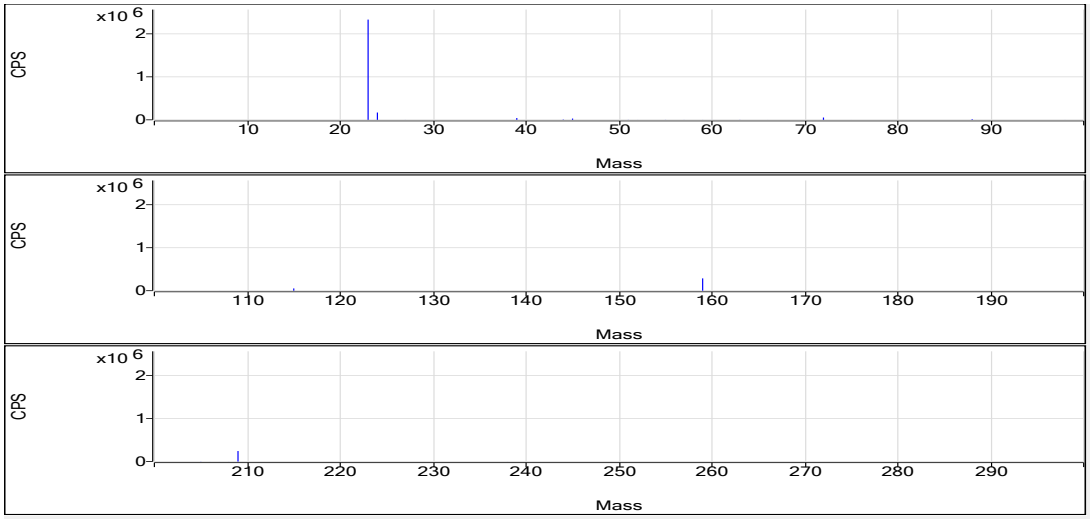


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.157	0.0001	312.01	0.0007	2.306E-05
Be	9	1	No Gas	0.188	0.0002	364.01	0.0007	2.306E-05
Be	9	1	No Gas	0.139	0.0001	280.00	0.0007	2.306E-05
Se	78	2	H2	0.223	0.0001	14.67	0.0004	4.221E-05
Se	78	2	H2	0.285	0.0002	17.33	0.0004	4.221E-05
Se	78	2	H2	0.247	0.0001	16.00	0.0004	4.221E-05
Na	23	3	He	21536.626	82.2417	2355282.93	0.0038	0.2864
Na	23	3	He	19987.387	76.3462	2327228.72	0.0038	0.2864
Na	23	3	He	20795.181	79.4202	2328594.97	0.0038	0.2864
Mg	24	3	He	3092.198	5.958	170629.43	0.0019	0.007972
Mg	24	3	He	2853.468	5.4987	167613.38	0.0019	0.007972
Mg	24	3	He	3047.853	5.8727	172187.26	0.0019	0.007972
Al	27	3	He	26.577	0.0161	460.02	0.0005	0.00158
Al	27	3	He	21.784	0.0135	410.02	0.0005	0.00158
Al	27	3	He	36.533	0.0215	630.04	0.0005	0.00158
K	39	3	He	1062.186	1.4984	42913.23	0.0011	0.3552
K	39	3	He	924.778	1.3506	41168.27	0.0011	0.3552
K	39	3	He	958.326	1.3867	40656.75	0.0011	0.3552
Ca	44	3	He	3981.964	0.2511	7191.98	0.0001	0.002
Ca	44	3	He	3639.487	0.2297	7001.92	0.0001	0.002
Ca	44	3	He	4128.665	0.2603	7632.20	0.0001	0.002
Ti	47	3	He	-0.185	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	-0.228	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
V	51	3	He	1.077	0.05	1432.08	0.0218	0.02648
V	51	3	He	1.152	0.0516	1574.10	0.0218	0.02648
V	51	3	He	1.315	0.0552	1618.10	0.0218	0.02648
Cr	52	3	He	0.321	0.0154	440.02	0.029	0.006056
Cr	52	3	He	0.221	0.0125	380.02	0.029	0.006056
Cr	52	3	He	0.344	0.016	470.02	0.029	0.006056
Mn	55	3	He	3.736	0.0478	1370.10	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3.686	0.0472	1440.13	0.0119	0.00335
Mn	55	3	He	3.471	0.0447	1310.11	0.0119	0.00335
Fe	57	3	He	35.973	0.0234	670.05	0.0006	0.003117
Fe	57	3	He	38.117	0.0246	750.04	0.0006	0.003117
Fe	57	3	He	41.664	0.0266	780.05	0.0006	0.003117
Co	59	3	He	0.163	0.0095	510.03	0.0317	0.004379
Co	59	3	He	0.248	0.0122	660.04	0.0317	0.004379
Co	59	3	He	0.223	0.0114	600.03	0.0317	0.004379
Ni	60	3	He	-0.023	0.0103	550.03	0.009	0.01049
Ni	60	3	He	0.049	0.0109	590.03	0.009	0.01049
Ni	60	3	He	0.399	0.0141	740.04	0.009	0.01049
Cu	63	3	He	0.505	0.0299	1600.14	0.0259	0.01685
Cu	63	3	He	0.465	0.0289	1560.14	0.0259	0.01685
Cu	63	3	He	0.386	0.0269	1410.13	0.0259	0.01685
Zn	66	3	He	0.701	0.0058	310.01	0.0028	0.003817
Zn	66	3	He	0.289	0.0046	250.01	0.0028	0.003817
Zn	66	3	He	0.671	0.0057	300.02	0.0028	0.003817
As	75	3	He	1.091	0.0025	134.00	0.0019	0.0004832
As	75	3	He	1.198	0.0027	146.00	0.0019	0.0004832
As	75	3	He	0.828	0.002	106.00	0.0019	0.0004832
Sr	88	3	He	35.483	0.285	15088.38	0.008	0.0005203
Sr	88	3	He	36.301	0.2915	14938.47	0.008	0.0005203
Sr	88	3	He	34.041	0.2734	14948.41	0.008	0.0005203
Mo	98	3	He	0.274	0.0066	350.02	0.0229	0.0003256
Mo	98	3	He	0.25	0.0061	310.01	0.0229	0.0003256
Mo	98	3	He	0.265	0.0064	350.02	0.0229	0.0003256
Ag	107	3	He	0.08	0.0047	250.01	0.05	0.000719
Ag	107	3	He	0.114	0.0064	330.02	0.05	0.000719
Ag	107	3	He	0.125	0.007	380.03	0.05	0.000719
Cd	111	3	He	0.07	0.0005	26.00	0.0055	0.000104
Cd	111	3	He	0.066	0.0005	24.00	0.0055	0.000104
Cd	111	3	He	0.1	0.0007	36.00	0.0055	0.000104
Sn	120	3	He	-0.105	0.017	900.06	0.0159	0.01867
Sn	120	3	He	-0.217	0.0152	780.05	0.0159	0.01867
Sn	120	3	He	-0.104	0.017	930.07	0.0159	0.01867
Sb	121	3	He	0.088	0.0003	90.00	0.0026	8.342E-05
Sb	121	3	He	0.141	0.0005	130.01	0.0026	8.342E-05
Sb	121	3	He	0.262	0.0008	220.01	0.0026	8.342E-05
Ba	137	3	He	1.396	0.0076	400.02	0.005	0.0005882
Ba	137	3	He	1.368	0.0074	380.02	0.005	0.0005882
Ba	137	3	He	1.275	0.007	380.02	0.005	0.0005882
Tl	205	3	He	0.306	0.0106	2590.35	0.0313	0.0009967
Tl	205	3	He	0.297	0.0103	2510.36	0.0313	0.0009967
Tl	205	3	He	0.288	0.01	2480.33	0.0313	0.0009967
Pb	208	3	He	0.056	0.0052	660.04	0.041	0.002892
Pb	208	3	He	0.069	0.0057	760.05	0.041	0.002892
Pb	208	3	He	0.036	0.0044	510.03	0.041	0.002892
U	238	3	He	0.016	0.0016	400.02	0.0501	0.0008282
U	238	3	He	0.02	0.0018	450.02	0.0501	0.0008282
U	238	3	He	0.014	0.0015	380.02	0.0501	0.0008282
Sc	45	1	No Gas			2221190.44		
Sc	45	1	No Gas			2221009.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2201813.56		
Ge	72	1	No Gas			1099338.89		
Ge	72	1	No Gas			1099631.31		
Ge	72	1	No Gas			1104210.76		
Sc	45	2	H2			131868.14		
Sc	45	2	H2			132806.81		
Sc	45	2	H2			135168.90		
Ge	72	2	H2			106824.56		
Ge	72	2	H2			105686.35		
Ge	72	2	H2			108194.81		
In	115	2	H2			284258.98		
In	115	2	H2			292702.05		
In	115	2	H2			287155.39		
Sc	45	3	He			28638.55		
Sc	45	3	He			30482.56		
Sc	45	3	He			29319.93		
Ge	72	3	He			53479.97		
Ge	72	3	He			53972.82		
Ge	72	3	He			52506.53		
In	115	3	He			52950.97		
In	115	3	He			51244.45		
In	115	3	He			54677.10		
Tb	159	3	He			286895.00		
Tb	159	3	He			287739.41		
Tb	159	3	He			287211.23		
Bi	209	3	He			244779.96		
Bi	209	3	He			244169.92		
Bi	209	3	He			247855.80		

Quantitation Report

Data File Name	054SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 10:45:05
Sample Name	410-178873-T-2-A PDS
Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

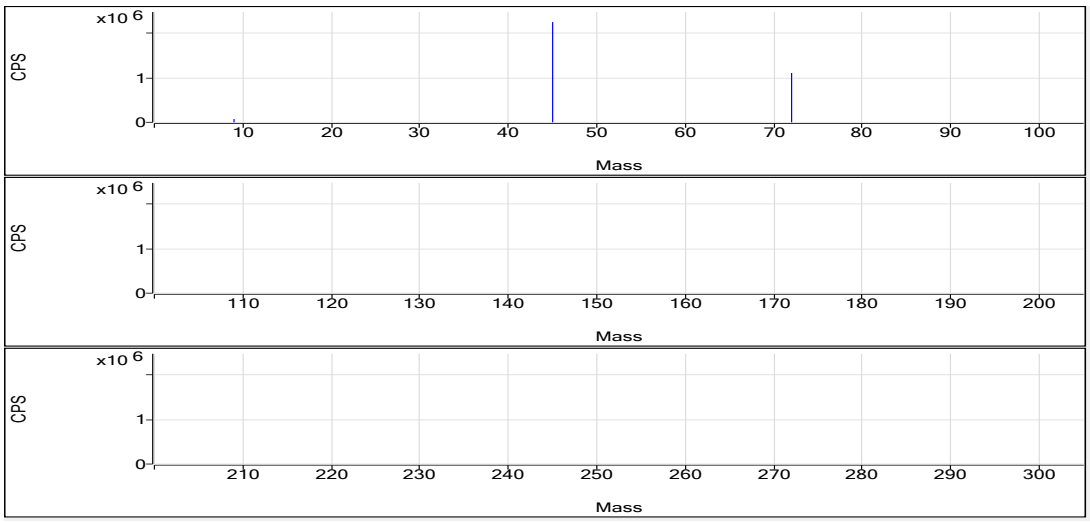
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	43.983	ppb	1.8	74216.52	0.0329	Pulse	0.5000	3
Se	78	72	H2	94.474	ppb	1.7	4381.12	0.0404	Pulse	1.5000	3
Na	23	45	He	25595.893	ppb	1.9	2844805.69	97.6888	Pulse	0.1000	3
Mg	24	45	He	7591.761	ppb	1.3	425654.65	14.6162	Pulse	0.1000	3
Al	27	45	He	4630.030	ppb	3.4	73509.06	2.5246	Pulse	0.1000	3
K	39	45	He	5826.851	ppb	1.9	192969.69	6.6266	Pulse	0.1000	3
Ca	44	45	He	8534.914	ppb	4.0	15612.15	0.5360	Pulse	0.1000	3
Ti	47	45	He	451.660	ppb	8.5	6431.64	0.2210	Pulse	0.1000	3
V	51	45	He	466.673	ppb	2.3	297507.53	10.2170	Pulse	0.5000	3
Cr	52	45	He	463.167	ppb	2.9	390993.95	13.4285	Pulse	0.1000	3
Mn	55	45	He	467.246	ppb	1.9	162140.52	5.5678	Pulse	0.1000	3
Fe	57	45	He	4724.708	ppb	1.3	77661.50	2.6667	Pulse	0.1000	3
Co	59	72	He	446.853	ppb	1.7	774379.05	14.1560	Pulse	0.1000	3
Ni	60	72	He	445.489	ppb	2.0	220862.26	4.0375	Pulse	0.1000	3
Cu	63	72	He	449.260	ppb	1.5	637377.11	11.6513	Pulse	0.1000	3
Zn	66	72	He	447.049	ppb	1.5	69306.40	1.2669	Pulse	0.1000	3
As	75	72	He	455.050	ppb	1.3	46186.94	0.8443	Pulse	0.5000	3
Sr	88	115	He	81.448	ppb	1.7	34699.83	0.6535	Pulse	0.1000	3
Mo	98	115	He	45.929	ppb	1.7	55897.82	1.0528	Pulse	0.1000	3
Ag	107	115	He	52.682	ppb	1.4	139896.95	2.6347	Pulse	0.1000	3
Cd	111	115	He	45.615	ppb	1.3	13386.43	0.2521	Pulse	0.5000	3
Sn	120	115	He	91.977	ppb	2.1	78718.96	1.4825	Pulse	0.1000	3
Sb	121	159	He	92.015	ppb	1.1	68770.21	0.2402	Pulse	0.1000	3
Ba	137	115	He	467.219	ppb	1.7	123866.15	2.3327	Pulse	0.1000	3
Tl	205	209	He	91.857	ppb	0.5	695683.97	2.8754	Pulse	0.1000	3
Pb	208	209	He	46.470	ppb	0.3	461915.46	1.9092	Pulse	0.1000	3
U	238	209	He	45.645	ppb	0.4	553811.64	2.2890	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2256078.77	0.1	102.6	Pulse	0.1000	3
No Gas	Ge	72	1110680.48	0.3	103.5	Pulse	0.1000	3
H2	Sc	45	137691.27	1.2	101.5	Pulse	0.1000	3
H2	Ge	72	108390.11	1.7	102.5	Pulse	0.1000	3
H2	In	115	291910.84	0.6	104.4	Pulse	0.1000	3
He	Sc	45	29126.40	1.7	97.6	Pulse	0.1000	3
He	Ge	72	54711.15	1.3	104.4	Pulse	0.1000	3
He	In	115	53103.21	1.3	103.6	Pulse	0.1000	3
He	Tb	159	286349.64	1.0	102.8	Pulse	0.1000	3
He	Bi	209	241942.41	0.6	101.9	Pulse	0.1000	3

No Gas



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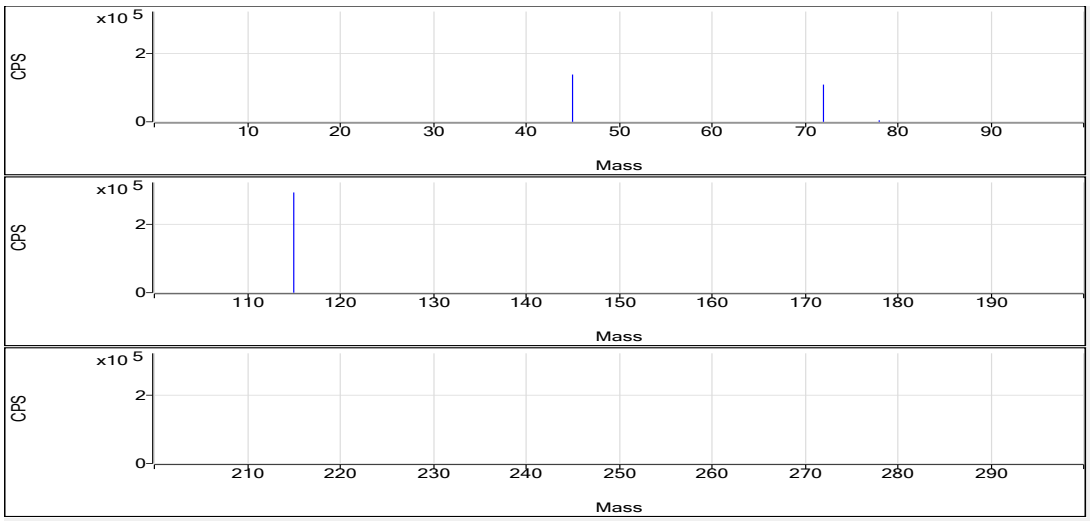
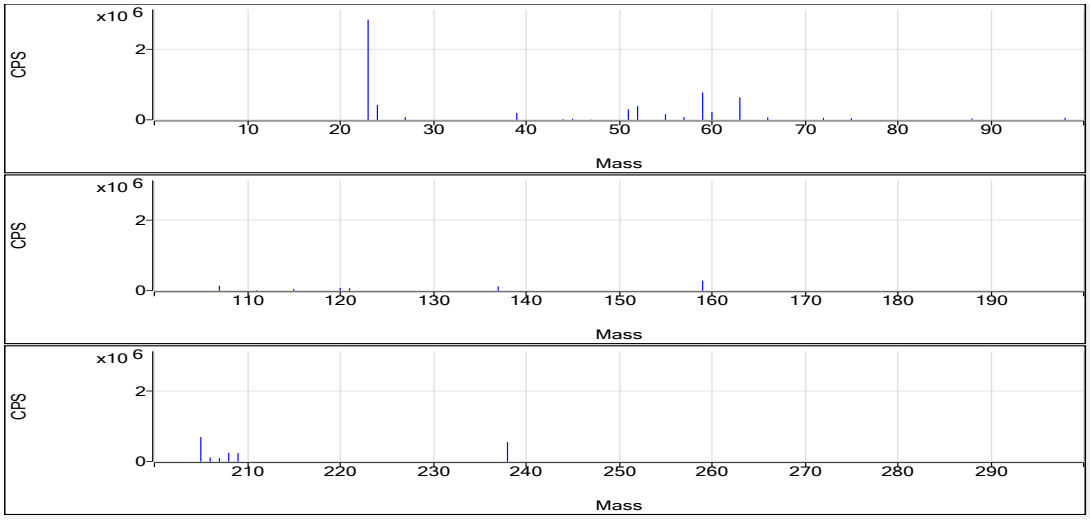


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	43.097	0.0322	72804.29	0.0007	2.306E-05
Be	9	1	No Gas	44.161	0.033	74524.75	0.0007	2.306E-05
Be	9	1	No Gas	44.69	0.0334	75320.52	0.0007	2.306E-05
Se	78	2	H2	95.322	0.0408	4437.36	0.0004	4.221E-05
Se	78	2	H2	92.611	0.0396	4360.00	0.0004	4.221E-05
Se	78	2	H2	95.491	0.0409	4345.99	0.0004	4.221E-05
Na	23	3	He	25074.225	95.7036	2842469.96	0.0038	0.2864
Na	23	3	He	25650.561	97.8968	2813439.33	0.0038	0.2864
Na	23	3	He	26062.894	99.4659	2878507.77	0.0038	0.2864
Mg	24	3	He	7478.843	14.3989	427657.96	0.0019	0.007972
Mg	24	3	He	7644.138	14.717	422948.00	0.0019	0.007972
Mg	24	3	He	7652.301	14.7327	426358.00	0.0019	0.007972
Al	27	3	He	4496.919	2.4521	72829.35	0.0005	0.00158
Al	27	3	He	4801.508	2.6181	75240.69	0.0005	0.00158
Al	27	3	He	4591.662	2.5037	72457.14	0.0005	0.00158
K	39	3	He	5700.484	6.4906	192775.60	0.0011	0.3552
K	39	3	He	5895.569	6.7006	192566.31	0.0011	0.3552
K	39	3	He	5884.5	6.6887	193567.17	0.0011	0.3552
Ca	44	3	He	8508.014	0.5343	15869.07	0.0001	0.002
Ca	44	3	He	8209.296	0.5156	14818.01	0.0001	0.002
Ca	44	3	He	8887.432	0.558	16149.38	0.0001	0.002
Ti	47	3	He	420.47	0.2058	6111.46	0.0005	0.0004395
Ti	47	3	He	494.462	0.2419	6951.94	0.0005	0.0004395
Ti	47	3	He	440.047	0.2153	6231.52	0.0005	0.0004395
V	51	3	He	454.241	9.9455	295389.63	0.0218	0.02648
V	51	3	He	471.989	10.3331	296960.69	0.0218	0.02648
V	51	3	He	473.788	10.3724	300172.28	0.0218	0.02648
Cr	52	3	He	447.536	12.9755	385382.77	0.029	0.006056
Cr	52	3	He	470.77	13.6488	392251.24	0.029	0.006056
Cr	52	3	He	471.194	13.6611	395347.85	0.029	0.006056
Mn	55	3	He	457.755	5.4548	162011.05	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	468.688	5.585	160505.86	0.0119	0.00335
Mn	55	3	He	475.296	5.6637	163904.65	0.0119	0.00335
Fe	57	3	He	4662.499	2.6316	78160.47	0.0006	0.003117
Fe	57	3	He	4727.538	2.6683	76682.79	0.0006	0.003117
Fe	57	3	He	4784.088	2.7001	78141.23	0.0006	0.003117
Co	59	3	He	455.317	14.424	777621.32	0.0317	0.004379
Co	59	3	He	440.915	13.9679	771121.16	0.0317	0.004379
Co	59	3	He	444.328	14.076	774394.68	0.0317	0.004379
Ni	60	3	He	454.285	4.117	221955.35	0.009	0.01049
Ni	60	3	He	436.238	3.9539	218280.47	0.009	0.01049
Ni	60	3	He	445.945	4.0416	222350.97	0.009	0.01049
Cu	63	3	He	456.528	11.8395	638287.22	0.0259	0.01685
Cu	63	3	He	442.983	11.4887	634254.40	0.0259	0.01685
Cu	63	3	He	448.271	11.6257	639589.72	0.0259	0.01685
Zn	66	3	He	454.438	1.2878	69426.93	0.0028	0.003817
Zn	66	3	He	445.618	1.2629	69718.86	0.0028	0.003817
Zn	66	3	He	441.09	1.2501	68773.41	0.0028	0.003817
As	75	3	He	461.738	0.8567	46185.55	0.0019	0.0004832
As	75	3	He	451.156	0.8371	46211.68	0.0019	0.0004832
As	75	3	He	452.255	0.8391	46163.58	0.0019	0.0004832
Sr	88	3	He	82.441	0.6615	34592.87	0.008	0.0005203
Sr	88	3	He	79.903	0.6411	34262.29	0.008	0.0005203
Sr	88	3	He	82	0.6579	35244.34	0.008	0.0005203
Mo	98	3	He	46.784	1.0723	56081.88	0.0229	0.0003256
Mo	98	3	He	45.331	1.0391	55529.36	0.0229	0.0003256
Mo	98	3	He	45.674	1.0469	56082.23	0.0229	0.0003256
Ag	107	3	He	53.504	2.6758	139941.18	0.05	0.000719
Ag	107	3	He	52.037	2.6025	139081.66	0.05	0.000719
Ag	107	3	He	52.505	2.6259	140668.01	0.05	0.000719
Cd	111	3	He	46.264	0.2557	13372.41	0.0055	0.000104
Cd	111	3	He	45.172	0.2497	13342.38	0.0055	0.000104
Cd	111	3	He	45.41	0.251	13444.49	0.0055	0.000104
Sn	120	3	He	93.249	1.5028	78591.15	0.0159	0.01867
Sn	120	3	He	89.715	1.4465	77304.61	0.0159	0.01867
Sn	120	3	He	92.968	1.4983	80261.13	0.0159	0.01867
Sb	121	3	He	90.825	0.2371	67693.99	0.0026	8.342E-05
Sb	121	3	He	92.452	0.2413	68539.09	0.0026	8.342E-05
Sb	121	3	He	92.767	0.2421	70077.54	0.0026	8.342E-05
Ba	137	3	He	471.125	2.3522	123014.26	0.005	0.0005882
Ba	137	3	He	457.829	2.2858	122158.37	0.005	0.0005882
Ba	137	3	He	472.703	2.36	126425.82	0.005	0.0005882
Tl	205	3	He	91.777	2.8729	694428.58	0.0313	0.0009967
Tl	205	3	He	91.457	2.8628	688777.65	0.0313	0.0009967
Tl	205	3	He	92.336	2.8904	703845.69	0.0313	0.0009967
Pb	208	3	He	46.358	1.9046	243922.98	0.041	0.002892
Pb	208	3	He	46.438	1.9079	244868.59	0.041	0.002892
Pb	208	3	He	46.614	1.9151	250550.35	0.041	0.002892
U	238	3	He	45.474	2.2804	551223.66	0.0501	0.0008282
U	238	3	He	45.598	2.2866	550137.61	0.0501	0.0008282
U	238	3	He	45.864	2.3	560073.66	0.0501	0.0008282
Sc	45	1	No Gas			2258577.47		
Sc	45	1	No Gas			2256250.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2253408.72		
Ge	72	1	No Gas			1110985.30		
Ge	72	1	No Gas			1114000.30		
Ge	72	1	No Gas			1107055.84		
Sc	45	2	H2			136247.74		
Sc	45	2	H2			139396.78		
Sc	45	2	H2			137429.29		
Ge	72	2	H2			108789.82		
Ge	72	2	H2			110018.87		
Ge	72	2	H2			106361.64		
In	115	2	H2			289994.35		
In	115	2	H2			293485.33		
In	115	2	H2			292252.85		
Sc	45	3	He			29700.75		
Sc	45	3	He			28738.82		
Sc	45	3	He			28939.64		
Ge	72	3	He			53911.62		
Ge	72	3	He			55206.59		
Ge	72	3	He			55015.25		
In	115	3	He			52911.20		
In	115	3	He			54045.20		
In	115	3	He			54195.27		
Tb	159	3	He			285567.38		
Tb	159	3	He			284045.93		
Tb	159	3	He			289435.62		
Bi	209	3	He			241720.76		
Bi	209	3	He			240591.81		
Bi	209	3	He			243514.66		

Quantitation Report

Data File Name	055SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 10:47:06
Sample Name	410-178873-T-2-A SD @5
Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

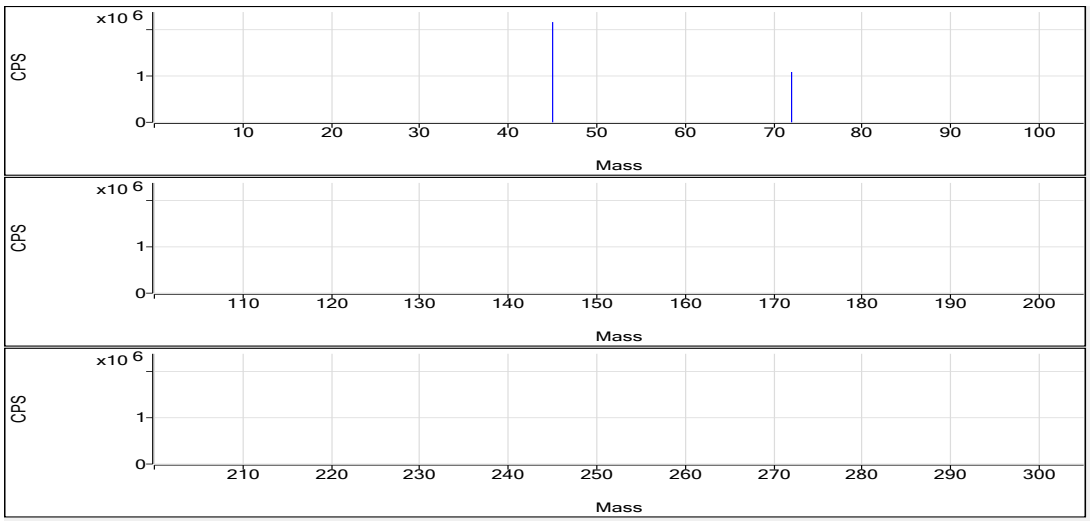
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.137	ppb	6.4	270.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.141	ppb	30.6	10.89	0.0001	Pulse	1.5000	3
Na	23	45	He	4401.930	ppb	1.7	489235.44	17.0375	Pulse	0.1000	3
Mg	24	45	He	651.151	ppb	2.0	36208.19	1.2609	Pulse	0.1000	3
Al	27	45	He	16.313	ppb	25.6	300.01	0.0105	Pulse	0.1000	3
K	39	45	He	206.679	ppb	7.6	16586.55	0.5777	Pulse	0.1000	3
Ca	44	45	He	901.868	ppb	6.4	1676.83	0.0584	Pulse	0.1000	3
Ti	47	45	He	-0.433	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	0.405	ppb	12.6	1014.04	0.0353	Pulse	0.5000	3
Cr	52	45	He	0.360	ppb	18.2	473.36	0.0165	Pulse	0.1000	3
Mn	55	45	He	1.393	ppb	11.4	573.37	0.0199	Pulse	0.1000	3
Fe	57	45	He	21.204	ppb	10.5	433.36	0.0151	Pulse	0.1000	3
Co	59	72	He	0.268	ppb	22.8	680.04	0.0129	Pulse	0.1000	3
Ni	60	72	He	0.111	ppb	174.4	610.04	0.0115	Pulse	0.1000	3
Cu	63	72	He	0.359	ppb	21.9	1386.78	0.0261	Pulse	0.1000	3
Zn	66	72	He	0.495	ppb	26.3	276.68	0.0052	Pulse	0.1000	3
As	75	72	He	0.465	ppb	10.4	71.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	7.311	ppb	1.7	3070.44	0.0591	Pulse	0.1000	3
Mo	98	115	He	0.266	ppb	16.4	333.35	0.0064	Pulse	0.1000	3
Ag	107	115	He	0.101	ppb	15.8	300.01	0.0058	Pulse	0.1000	3
Cd	111	115	He	0.058	ppb	24.2	22.00	0.0004	Pulse	0.5000	3
Sn	120	115	He	-0.043	ppb	N/A	933.40	0.0180	Pulse	0.1000	3
Sb	121	159	He	0.164	ppb	20.8	143.34	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.358	ppb	24.0	123.34	0.0024	Pulse	0.1000	3
Tl	205	209	He	0.271	ppb	11.7	2266.95	0.0095	Pulse	0.1000	3
Pb	208	209	He	0.062	ppb	28.3	1303.41	0.0054	Pulse	0.1000	3
U	238	209	He	0.024	ppb	16.5	483.36	0.0020	Pulse	0.1000	3

ISTD Table:

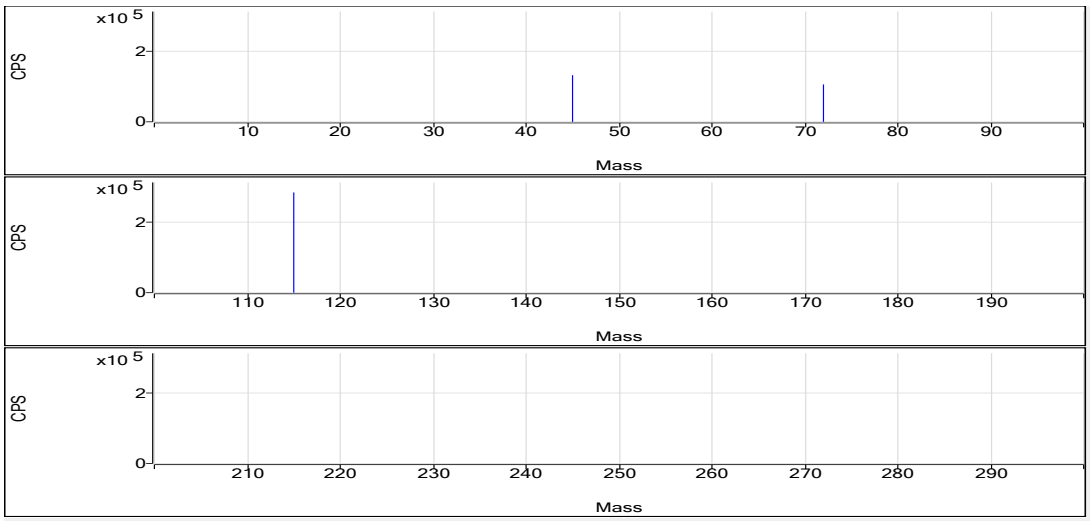
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2157622.73	0.7	98.2	Pulse	0.1000	3
No Gas	Ge	72	1083008.48	0.7	100.9	Pulse	0.1000	3
H2	Sc	45	132336.61	1.1	97.5	Pulse	0.1000	3
H2	Ge	72	106052.27	0.9	100.3	Pulse	0.1000	3
H2	In	115	284500.92	1.0	101.7	Pulse	0.1000	3
He	Sc	45	28722.26	2.2	96.2	Pulse	0.1000	3
He	Ge	72	53008.45	1.9	101.1	Pulse	0.1000	3
He	In	115	51913.11	1.8	101.3	Pulse	0.1000	3
He	Tb	159	280614.83	0.4	100.8	Pulse	0.1000	3
He	Bi	209	239081.82	1.1	100.7	Pulse	0.1000	3

No Gas

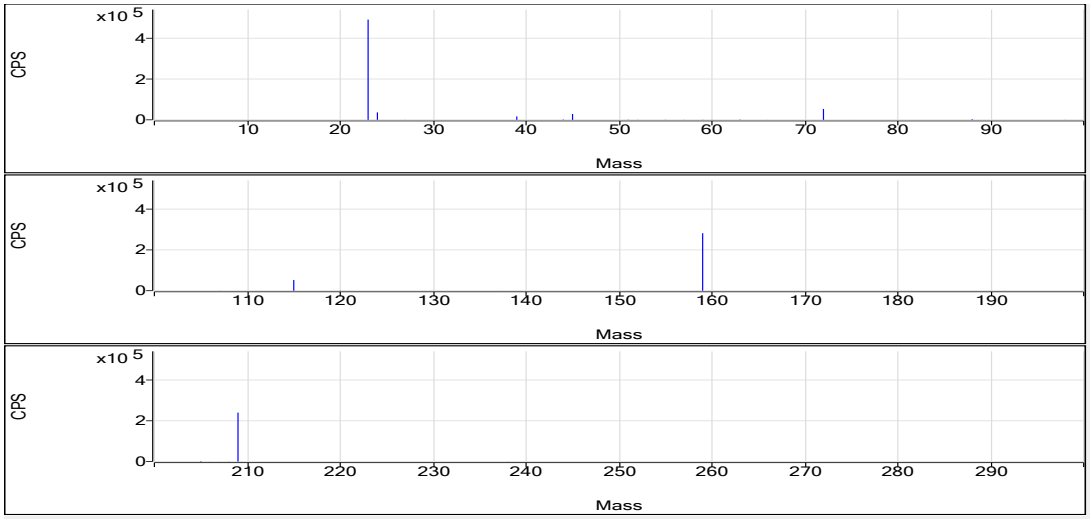


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.145	0.0001	282.01	0.0007	2.306E-05
Be	9	1	No Gas	0.128	0.0001	256.00	0.0007	2.306E-05
Be	9	1	No Gas	0.137	0.0001	272.00	0.0007	2.306E-05
Se	78	2	H2	0.15	0.0001	11.33	0.0004	4.221E-05
Se	78	2	H2	0.094	0.0001	8.67	0.0004	4.221E-05
Se	78	2	H2	0.179	0.0001	12.67	0.0004	4.221E-05
Na	23	3	He	4380.065	16.9543	489793.59	0.0038	0.2864
Na	23	3	He	4485.516	17.3556	486438.47	0.0038	0.2864
Na	23	3	He	4340.21	16.8026	491474.25	0.0038	0.2864
Mg	24	3	He	657.071	1.2723	36756.17	0.0019	0.007972
Mg	24	3	He	660.293	1.2785	35834.11	0.0019	0.007972
Mg	24	3	He	636.09	1.2319	36034.28	0.0019	0.007972
Al	27	3	He	12.346	0.0083	240.01	0.0005	0.00158
Al	27	3	He	20.672	0.0128	360.02	0.0005	0.00158
Al	27	3	He	15.922	0.0103	300.01	0.0005	0.00158
K	39	3	He	214.782	0.5864	16940.28	0.0011	0.3552
K	39	3	He	216.59	0.5883	16489.78	0.0011	0.3552
K	39	3	He	188.664	0.5583	16329.58	0.0011	0.3552
Ca	44	3	He	853.352	0.0554	1600.16	0.0001	0.002
Ca	44	3	He	966.098	0.0624	1750.16	0.0001	0.002
Ca	44	3	He	886.153	0.0574	1680.17	0.0001	0.002
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
Ti	47	3	He	0.5	0.0007	20.00	0.0005	0.0004395
V	51	3	He	0.36	0.0343	992.04	0.0218	0.02648
V	51	3	He	0.461	0.0365	1024.04	0.0218	0.02648
V	51	3	He	0.394	0.0351	1026.04	0.0218	0.02648
Cr	52	3	He	0.412	0.018	520.03	0.029	0.006056
Cr	52	3	He	0.382	0.0171	480.02	0.029	0.006056
Cr	52	3	He	0.287	0.0144	420.02	0.029	0.006056
Mn	55	3	He	1.434	0.0204	590.03	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.217	0.0178	500.03	0.0119	0.00335
Mn	55	3	He	1.527	0.0215	630.04	0.0119	0.00335
Fe	57	3	He	20.875	0.0149	430.02	0.0006	0.003117
Fe	57	3	He	19.155	0.0139	390.02	0.0006	0.003117
Fe	57	3	He	23.582	0.0164	480.03	0.0006	0.003117
Co	59	3	He	0.328	0.0148	770.05	0.0317	0.004379
Co	59	3	He	0.206	0.0109	590.03	0.0317	0.004379
Co	59	3	He	0.268	0.0129	680.04	0.0317	0.004379
Ni	60	3	He	-0.099	0.0096	500.03	0.009	0.01049
Ni	60	3	He	0.149	0.0118	640.04	0.009	0.01049
Ni	60	3	He	0.284	0.0131	690.04	0.009	0.01049
Cu	63	3	He	0.32	0.0251	1310.11	0.0259	0.01685
Cu	63	3	He	0.449	0.0285	1540.13	0.0259	0.01685
Cu	63	3	He	0.307	0.0248	1310.10	0.0259	0.01685
Zn	66	3	He	0.347	0.0048	250.01	0.0028	0.003817
Zn	66	3	He	0.547	0.0054	290.01	0.0028	0.003817
Zn	66	3	He	0.592	0.0055	290.02	0.0028	0.003817
As	75	3	He	0.422	0.0013	66.00	0.0019	0.0004832
As	75	3	He	0.517	0.0014	78.00	0.0019	0.0004832
As	75	3	He	0.454	0.0013	70.00	0.0019	0.0004832
Sr	88	3	He	7.172	0.058	2950.40	0.008	0.0005203
Sr	88	3	He	7.413	0.0599	3150.45	0.008	0.0005203
Sr	88	3	He	7.349	0.0594	3110.47	0.008	0.0005203
Mo	98	3	He	0.303	0.0073	370.02	0.0229	0.0003256
Mo	98	3	He	0.218	0.0053	280.02	0.0229	0.0003256
Mo	98	3	He	0.278	0.0067	350.02	0.0229	0.0003256
Ag	107	3	He	0.119	0.0067	340.02	0.05	0.000719
Ag	107	3	He	0.088	0.0051	270.01	0.05	0.000719
Ag	107	3	He	0.096	0.0055	290.01	0.05	0.000719
Cd	111	3	He	0.059	0.0004	22.00	0.0055	0.000104
Cd	111	3	He	0.043	0.0003	18.00	0.0055	0.000104
Cd	111	3	He	0.071	0.0005	26.00	0.0055	0.000104
Sn	120	3	He	0.013	0.0189	960.07	0.0159	0.01867
Sn	120	3	He	0.022	0.019	1000.08	0.0159	0.01867
Sn	120	3	He	-0.165	0.0161	840.06	0.0159	0.01867
Sb	121	3	He	0.2	0.0006	170.01	0.0026	8.342E-05
Sb	121	3	He	0.159	0.0005	140.01	0.0026	8.342E-05
Sb	121	3	He	0.133	0.0004	120.00	0.0026	8.342E-05
Ba	137	3	He	0.315	0.0022	110.00	0.005	0.0005882
Ba	137	3	He	0.302	0.0021	110.00	0.005	0.0005882
Ba	137	3	He	0.456	0.0029	150.01	0.005	0.0005882
Tl	205	3	He	0.237	0.0084	1990.22	0.0313	0.0009967
Tl	205	3	He	0.275	0.0096	2320.29	0.0313	0.0009967
Tl	205	3	He	0.3	0.0104	2490.33	0.0313	0.0009967
Pb	208	3	He	0.042	0.0046	590.04	0.041	0.002892
Pb	208	3	He	0.072	0.0058	760.05	0.041	0.002892
Pb	208	3	He	0.073	0.0059	760.05	0.041	0.002892
U	238	3	He	0.02	0.0018	430.03	0.0501	0.0008282
U	238	3	He	0.024	0.002	490.03	0.0501	0.0008282
U	238	3	He	0.028	0.0022	530.03	0.0501	0.0008282
Sc	45	1	No Gas			2142232.16		
Sc	45	1	No Gas			2159945.28		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2170690.75		
Ge	72	1	No Gas			1077315.77		
Ge	72	1	No Gas			1080675.61		
Ge	72	1	No Gas			1091034.05		
Sc	45	2	H2			133938.38		
Sc	45	2	H2			131000.75		
Sc	45	2	H2			132070.70		
Ge	72	2	H2			106602.83		
Ge	72	2	H2			105011.38		
Ge	72	2	H2			106542.59		
In	115	2	H2			282133.63		
In	115	2	H2			283874.21		
In	115	2	H2			287494.92		
Sc	45	3	He			28889.09		
Sc	45	3	He			28027.82		
Sc	45	3	He			29249.87		
Ge	72	3	He			52115.03		
Ge	72	3	He			54072.82		
Ge	72	3	He			52837.50		
In	115	3	He			50862.99		
In	115	3	He			52559.91		
In	115	3	He			52338.27		
Tb	159	3	He			280791.50		
Tb	159	3	He			281626.60		
Tb	159	3	He			279426.38		
Bi	209	3	He			236354.27		
Bi	209	3	He			241327.20		
Bi	209	3	He			239564.00		

Quantitation Report

Data File Name	056SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 10:49:07
Sample Name	410-178873-W-2-A DU
Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

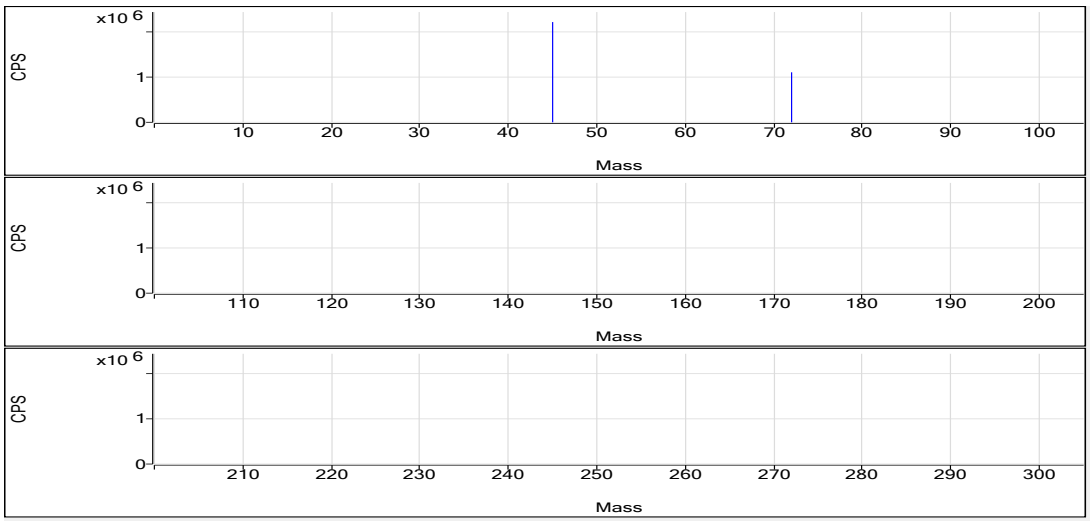
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.103	ppb	9.0	220.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.111	ppb	62.2	9.56	0.0001	Pulse	1.5000	3
Na	23	45	He	20896.533	ppb	2.6	2336297.36	79.8059	Pulse	0.1000	3
Mg	24	45	He	3029.187	ppb	3.0	170858.70	5.8368	Pulse	0.1000	3
Al	27	45	He	21.749	ppb	5.8	393.35	0.0134	Pulse	0.1000	3
K	39	45	He	993.497	ppb	1.2	41716.63	1.4245	Pulse	0.1000	3
Ca	44	45	He	3917.474	ppb	5.3	7238.70	0.2471	Pulse	0.1000	3
Ti	47	45	He	-0.450	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	1.080	ppb	9.1	1465.42	0.0501	Pulse	0.5000	3
Cr	52	45	He	0.299	ppb	26.5	430.02	0.0147	Pulse	0.1000	3
Mn	55	45	He	3.040	ppb	6.9	1160.09	0.0396	Pulse	0.1000	3
Fe	57	45	He	32.851	ppb	10.0	633.37	0.0216	Pulse	0.1000	3
Co	59	72	He	0.173	ppb	35.4	526.70	0.0099	Pulse	0.1000	3
Ni	60	72	He	0.219	ppb	82.6	666.71	0.0125	Pulse	0.1000	3
Cu	63	72	He	0.276	ppb	21.1	1283.44	0.0240	Pulse	0.1000	3
Zn	66	72	He	0.722	ppb	45.4	313.35	0.0059	Pulse	0.1000	3
As	75	72	He	0.977	ppb	11.8	122.67	0.0023	Pulse	0.5000	3
Sr	88	115	He	36.412	ppb	1.0	15318.69	0.2924	Pulse	0.1000	3
Mo	98	115	He	0.155	ppb	21.1	203.34	0.0039	Pulse	0.1000	3
Ag	107	115	He	0.044	ppb	33.8	153.34	0.0029	Pulse	0.1000	3
Cd	111	115	He	0.041	ppb	26.9	17.33	0.0003	Pulse	0.5000	3
Sn	120	115	He	-0.006	ppb	N/A	973.43	0.0186	Pulse	0.1000	3
Sb	121	159	He	0.116	ppb	20.1	110.00	0.0004	Pulse	0.1000	3
Ba	137	115	He	1.476	ppb	5.1	416.69	0.0080	Pulse	0.1000	3
Tl	205	209	He	0.102	ppb	12.7	1023.42	0.0042	Pulse	0.1000	3
Pb	208	209	He	0.039	ppb	25.6	1096.72	0.0045	Pulse	0.1000	3
U	238	209	He	0.010	ppb	67.1	320.01	0.0013	Pulse	0.1000	3

ISTD Table:

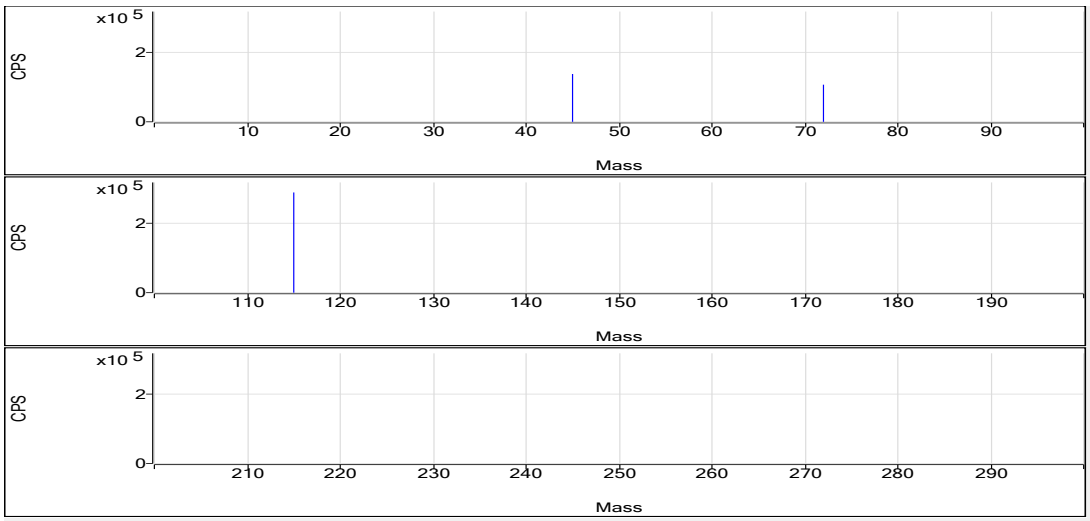
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2213052.10	0.0	100.7	Pulse	0.1000	3
No Gas	Ge	72	1103747.80	0.2	102.9	Pulse	0.1000	3
H2	Sc	45	137395.46	1.9	101.2	Pulse	0.1000	3
H2	Ge	72	106676.92	0.3	100.9	Pulse	0.1000	3
H2	In	115	287986.56	1.4	103.0	Pulse	0.1000	3
He	Sc	45	29289.93	3.0	98.1	Pulse	0.1000	3
He	Ge	72	53476.91	0.4	102.0	Pulse	0.1000	3
He	In	115	52381.35	1.1	102.2	Pulse	0.1000	3
He	Tb	159	284679.25	0.2	102.2	Pulse	0.1000	3
He	Bi	209	244499.93	0.8	103.0	Pulse	0.1000	3

No Gas

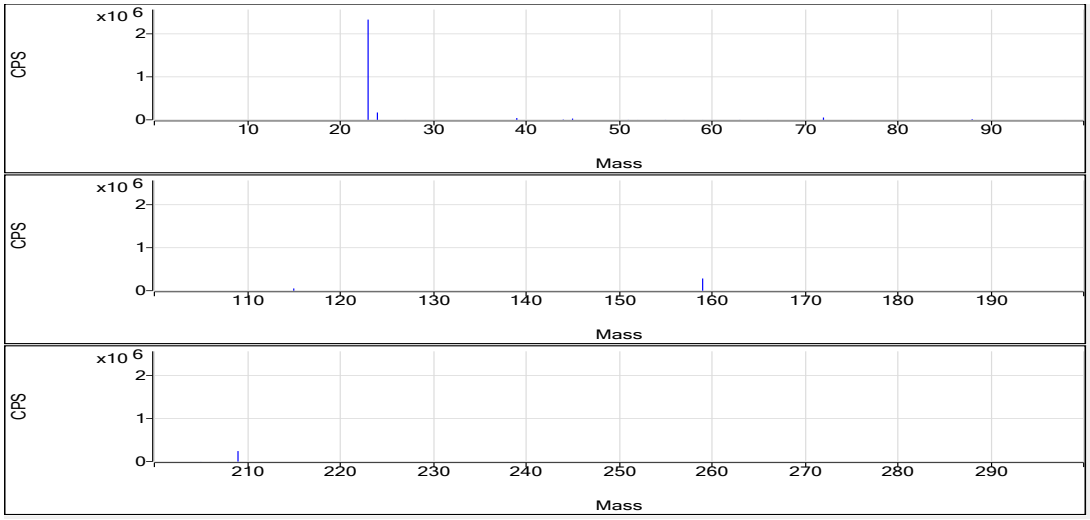


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.105	0.0001	224.00	0.0007	2.306E-05
Be	9	1	No Gas	0.111	0.0001	234.00	0.0007	2.306E-05
Be	9	1	No Gas	0.092	0.0001	204.00	0.0007	2.306E-05
Se	78	2	H2	0.136	0.0001	10.67	0.0004	4.221E-05
Se	78	2	H2	0.033	0.0001	6.00	0.0004	4.221E-05
Se	78	2	H2	0.164	0.0001	12.00	0.0004	4.221E-05
Na	23	3	He	20272.562	77.4314	2346329.81	0.0038	0.2864
Na	23	3	He	21253.549	81.1645	2329308.56	0.0038	0.2864
Na	23	3	He	21163.486	80.8218	2333253.72	0.0038	0.2864
Mg	24	3	He	2928.618	5.6433	171002.52	0.0019	0.007972
Mg	24	3	He	3101.817	5.9765	171518.53	0.0019	0.007972
Mg	24	3	He	3057.127	5.8906	170055.06	0.0019	0.007972
Al	27	3	He	21.325	0.0132	400.02	0.0005	0.00158
Al	27	3	He	20.76	0.0129	370.02	0.0005	0.00158
Al	27	3	He	23.163	0.0142	410.02	0.0005	0.00158
K	39	3	He	980.535	1.4106	42742.91	0.0011	0.3552
K	39	3	He	1003.428	1.4352	41188.31	0.0011	0.3552
K	39	3	He	996.529	1.4278	41218.66	0.0011	0.3552
Ca	44	3	He	3935.795	0.2482	7522.20	0.0001	0.002
Ca	44	3	He	3700.559	0.2335	6701.80	0.0001	0.002
Ca	44	3	He	4116.068	0.2595	7492.10	0.0001	0.002
Ti	47	3	He	0.452	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
V	51	3	He	0.973	0.0477	1446.08	0.0218	0.02648
V	51	3	He	1.101	0.0505	1450.08	0.0218	0.02648
V	51	3	He	1.167	0.052	1500.09	0.0218	0.02648
Cr	52	3	He	0.212	0.0122	370.02	0.029	0.006056
Cr	52	3	He	0.368	0.0167	480.03	0.029	0.006056
Cr	52	3	He	0.317	0.0152	440.02	0.029	0.006056
Mn	55	3	He	3.266	0.0422	1280.10	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.85	0.0373	1070.08	0.0119	0.00335
Mn	55	3	He	3.006	0.0391	1130.08	0.0119	0.00335
Fe	57	3	He	31.938	0.0211	640.04	0.0006	0.003117
Fe	57	3	He	36.504	0.0237	680.04	0.0006	0.003117
Fe	57	3	He	30.111	0.0201	580.03	0.0006	0.003117
Co	59	3	He	0.12	0.0082	440.02	0.0317	0.004379
Co	59	3	He	0.24	0.012	640.04	0.0317	0.004379
Co	59	3	He	0.158	0.0094	500.03	0.0317	0.004379
Ni	60	3	He	0.014	0.0106	570.03	0.009	0.01049
Ni	60	3	He	0.289	0.0131	700.04	0.009	0.01049
Ni	60	3	He	0.355	0.0137	730.05	0.009	0.01049
Cu	63	3	He	0.291	0.0244	1310.10	0.0259	0.01685
Cu	63	3	He	0.325	0.0253	1350.11	0.0259	0.01685
Cu	63	3	He	0.212	0.0223	1190.10	0.0259	0.01685
Zn	66	3	He	1.021	0.0067	360.02	0.0028	0.003817
Zn	66	3	He	0.371	0.0049	260.01	0.0028	0.003817
Zn	66	3	He	0.775	0.006	320.02	0.0028	0.003817
As	75	3	He	0.844	0.002	110.00	0.0019	0.0004832
As	75	3	He	1.031	0.0024	128.00	0.0019	0.0004832
As	75	3	He	1.055	0.0024	130.00	0.0019	0.0004832
Sr	88	3	He	36.589	0.2939	15268.69	0.008	0.0005203
Sr	88	3	He	36.654	0.2944	15608.95	0.008	0.0005203
Sr	88	3	He	35.992	0.2891	15078.43	0.008	0.0005203
Mo	98	3	He	0.129	0.0033	170.01	0.0229	0.0003256
Mo	98	3	He	0.192	0.0047	250.01	0.0229	0.0003256
Mo	98	3	He	0.145	0.0036	190.01	0.0229	0.0003256
Ag	107	3	He	0.028	0.0021	110.00	0.05	0.000719
Ag	107	3	He	0.057	0.0036	190.01	0.05	0.000719
Ag	107	3	He	0.047	0.0031	160.01	0.05	0.000719
Cd	111	3	He	0.044	0.0003	18.00	0.0055	0.000104
Cd	111	3	He	0.029	0.0003	14.00	0.0055	0.000104
Cd	111	3	He	0.051	0.0004	20.00	0.0055	0.000104
Sn	120	3	He	0.024	0.0191	990.07	0.0159	0.01867
Sn	120	3	He	0.036	0.0192	1020.15	0.0159	0.01867
Sn	120	3	He	-0.077	0.0174	910.06	0.0159	0.01867
Sb	121	3	He	0.089	0.0003	90.00	0.0026	8.342E-05
Sb	121	3	He	0.129	0.0004	120.00	0.0026	8.342E-05
Sb	121	3	He	0.13	0.0004	120.01	0.0026	8.342E-05
Ba	137	3	He	1.54	0.0083	430.02	0.005	0.0005882
Ba	137	3	He	1.394	0.0075	400.02	0.005	0.0005882
Ba	137	3	He	1.495	0.0081	420.02	0.005	0.0005882
Tl	205	3	He	0.09	0.0038	940.08	0.0313	0.0009967
Tl	205	3	He	0.116	0.0046	1130.09	0.0313	0.0009967
Tl	205	3	He	0.1	0.0041	1000.08	0.0313	0.0009967
Pb	208	3	He	0.027	0.004	520.03	0.041	0.002892
Pb	208	3	He	0.044	0.0047	650.04	0.041	0.002892
Pb	208	3	He	0.045	0.0047	670.04	0.041	0.002892
U	238	3	He	0.007	0.0012	290.01	0.0501	0.0008282
U	238	3	He	0.017	0.0017	410.02	0.0501	0.0008282
U	238	3	He	0.005	0.0011	260.01	0.0501	0.0008282
Sc	45	1	No Gas			2213064.97		
Sc	45	1	No Gas			2212328.25		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2213763.09		
Ge	72	1	No Gas			1102278.26		
Ge	72	1	No Gas			1105593.97		
Ge	72	1	No Gas			1103371.16		
Sc	45	2	H2			135360.17		
Sc	45	2	H2			136561.07		
Sc	45	2	H2			140265.13		
Ge	72	2	H2			106361.09		
Ge	72	2	H2			106684.02		
Ge	72	2	H2			106985.66		
In	115	2	H2			283680.76		
In	115	2	H2			288421.54		
In	115	2	H2			291857.38		
Sc	45	3	He			30302.03		
Sc	45	3	He			28698.62		
Sc	45	3	He			28869.13		
Ge	72	3	He			53711.23		
Ge	72	3	He			53430.04		
Ge	72	3	He			53289.47		
In	115	3	He			51967.01		
In	115	3	He			53031.63		
In	115	3	He			52168.18		
Tb	159	3	He			284698.90		
Tb	159	3	He			285291.25		
Tb	159	3	He			284047.59		
Bi	209	3	He			246469.20		
Bi	209	3	He			244698.49		
Bi	209	3	He			242332.11		

Quantitation Report

Data File Name	057SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 10:51:08
Sample Name	410-178873-U-2-A MS
Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

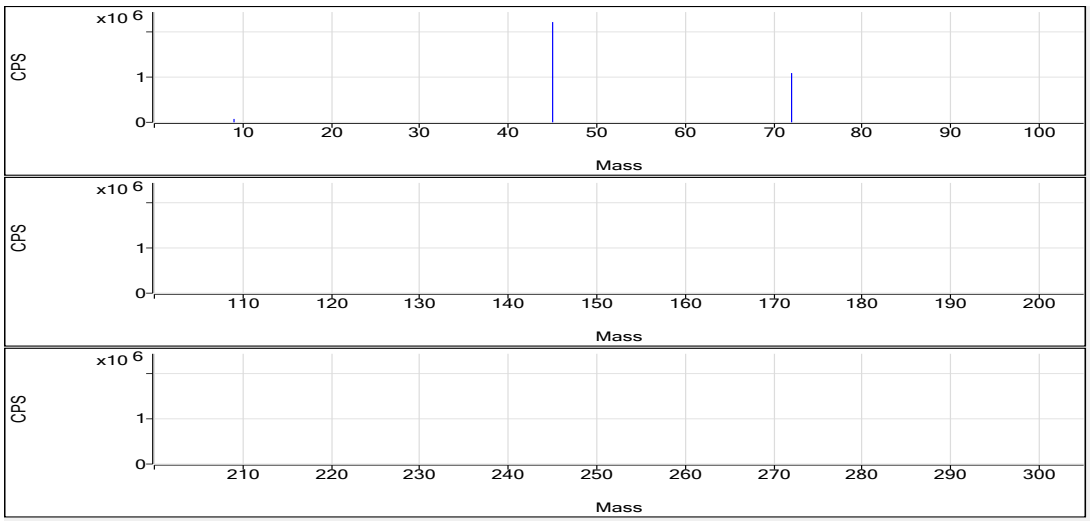
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	44.898	ppb	0.7	74652.45	0.0336	Pulse	0.5000	3
Se	78	72	H2	96.261	ppb	1.0	4390.23	0.0412	Pulse	1.5000	3
Na	23	45	He	24971.972	ppb	1.1	2883349.54	95.3145	Pulse	0.1000	3
Mg	24	45	He	7454.681	ppb	1.7	434139.84	14.3524	Pulse	0.1000	3
Al	27	45	He	4558.685	ppb	0.4	75210.90	2.4858	Pulse	0.1000	3
K	39	45	He	5670.200	ppb	3.1	195319.15	6.4580	Pulse	0.1000	3
Ca	44	45	He	8118.779	ppb	2.0	15425.31	0.5099	Pulse	0.1000	3
Ti	47	45	He	450.301	ppb	3.6	6665.07	0.2203	Pulse	0.1000	3
V	51	45	He	456.046	ppb	2.2	302010.74	9.9849	Pulse	0.5000	3
Cr	52	45	He	453.189	ppb	2.5	397410.70	13.1393	Pulse	0.1000	3
Mn	55	45	He	458.154	ppb	2.4	165127.94	5.4595	Pulse	0.1000	3
Fe	57	45	He	4589.076	ppb	2.5	78344.67	2.5902	Pulse	0.1000	3
Co	59	72	He	461.367	ppb	1.4	785567.23	14.6156	Pulse	0.1000	3
Ni	60	72	He	458.604	ppb	1.6	223375.47	4.1561	Pulse	0.1000	3
Cu	63	72	He	466.250	ppb	1.5	649879.90	12.0913	Pulse	0.1000	3
Zn	66	72	He	464.072	ppb	1.4	70680.06	1.3150	Pulse	0.1000	3
As	75	72	He	464.937	ppb	1.7	46366.18	0.8626	Pulse	0.5000	3
Sr	88	115	He	84.452	ppb	2.3	35221.14	0.6776	Pulse	0.1000	3
Mo	98	115	He	48.442	ppb	2.5	57715.00	1.1103	Pulse	0.1000	3
Ag	107	115	He	48.684	ppb	1.3	126589.34	2.4349	Pulse	0.1000	3
Cd	111	115	He	47.229	ppb	3.0	13567.26	0.2610	Pulse	0.5000	3
Sn	120	115	He	94.187	ppb	3.1	78883.19	1.5177	Pulse	0.1000	3
Sb	121	159	He	93.619	ppb	1.8	70344.42	0.2443	Pulse	0.1000	3
Ba	137	115	He	476.557	ppb	2.5	123684.40	2.3793	Pulse	0.1000	3
Tl	205	209	He	91.882	ppb	1.1	695773.71	2.8762	Pulse	0.1000	3
Pb	208	209	He	46.970	ppb	0.5	466826.57	1.9297	Pulse	0.1000	3
U	238	209	He	46.248	ppb	0.4	561064.39	2.3192	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2222985.23	0.7	101.1	Pulse	0.1000	3
No Gas	Ge	72	1091810.27	0.3	101.8	Pulse	0.1000	3
H2	Sc	45	134831.41	1.2	99.4	Pulse	0.1000	3
H2	Ge	72	106585.54	0.3	100.8	Pulse	0.1000	3
H2	In	115	286140.72	0.4	102.3	Pulse	0.1000	3
He	Sc	45	30255.26	2.0	101.4	Pulse	0.1000	3
He	Ge	72	53758.06	1.9	102.5	Pulse	0.1000	3
He	In	115	51994.28	1.7	101.5	Pulse	0.1000	3
He	Tb	159	287922.64	0.8	103.4	Pulse	0.1000	3
He	Bi	209	241919.82	0.6	101.9	Pulse	0.1000	3

No Gas



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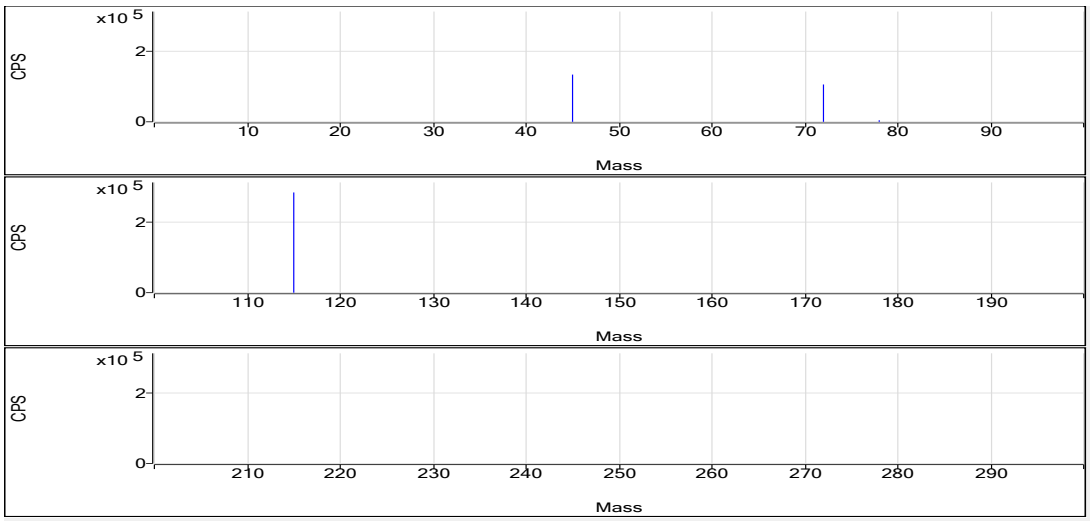
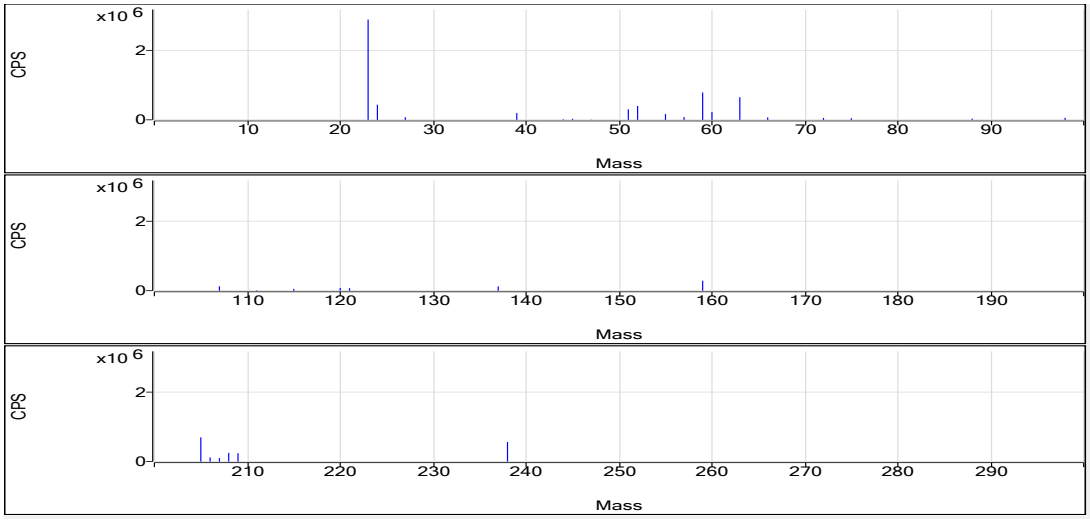


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	44.697	0.0334	73764.77	0.0007	2.306E-05
Be	9	1	No Gas	44.731	0.0335	74484.16	0.0007	2.306E-05
Be	9	1	No Gas	45.268	0.0339	75708.42	0.0007	2.306E-05
Se	78	2	H2	96.789	0.0414	4430.02	0.0004	4.221E-05
Se	78	2	H2	96.819	0.0414	4401.34	0.0004	4.221E-05
Se	78	2	H2	95.174	0.0407	4339.32	0.0004	4.221E-05
Na	23	3	He	25180.221	96.107	2855405.27	0.0038	0.2864
Na	23	3	He	24645.71	94.073	2905301.83	0.0038	0.2864
Na	23	3	He	25089.985	95.7636	2889341.52	0.0038	0.2864
Mg	24	3	He	7560.418	14.5559	432464.68	0.0019	0.007972
Mg	24	3	He	7313.325	14.0804	434851.91	0.0019	0.007972
Mg	24	3	He	7490.302	14.4209	435102.92	0.0019	0.007972
Al	27	3	He	4546.327	2.479	73653.65	0.0005	0.00158
Al	27	3	He	4577.768	2.4962	77090.20	0.0005	0.00158
Al	27	3	He	4551.959	2.4821	74888.86	0.0005	0.00158
K	39	3	He	5774.934	6.5707	195220.82	0.0011	0.3552
K	39	3	He	5466.33	6.2386	192669.08	0.0011	0.3552
K	39	3	He	5769.336	6.5647	198067.56	0.0011	0.3552
Ca	44	3	He	8176.611	0.5136	15258.36	0.0001	0.002
Ca	44	3	He	7937.45	0.4986	15398.56	0.0001	0.002
Ca	44	3	He	8242.276	0.5177	15619.02	0.0001	0.002
Ti	47	3	He	466.531	0.2283	6781.79	0.0005	0.0004395
Ti	47	3	He	450.105	0.2202	6801.77	0.0005	0.0004395
Ti	47	3	He	434.267	0.2125	6411.64	0.0005	0.0004395
V	51	3	He	464.139	10.1617	301910.00	0.0218	0.02648
V	51	3	He	444.626	9.7356	300668.41	0.0218	0.02648
V	51	3	He	459.373	10.0576	303453.81	0.0218	0.02648
Cr	52	3	He	460.895	13.3627	397014.02	0.029	0.006056
Cr	52	3	He	440.245	12.7642	394203.47	0.029	0.006056
Cr	52	3	He	458.427	13.2911	401014.60	0.029	0.006056
Mn	55	3	He	469.272	5.5919	166140.29	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	447.038	5.3272	164521.21	0.0119	0.00335
Mn	55	3	He	458.152	5.4595	164722.32	0.0119	0.00335
Fe	57	3	He	4645.94	2.6223	77909.28	0.0006	0.003117
Fe	57	3	He	4455.978	2.5152	77677.32	0.0006	0.003117
Fe	57	3	He	4665.311	2.6332	79447.40	0.0006	0.003117
Co	59	3	He	468.358	14.837	780380.61	0.0317	0.004379
Co	59	3	He	455.964	14.4445	788887.49	0.0317	0.004379
Co	59	3	He	459.778	14.5653	787433.58	0.0317	0.004379
Ni	60	3	He	467.12	4.233	222644.84	0.009	0.01049
Ni	60	3	He	453.313	4.1082	224371.36	0.009	0.01049
Ni	60	3	He	455.379	4.1269	223110.21	0.009	0.01049
Cu	63	3	He	473.933	12.2903	646429.29	0.0259	0.01685
Cu	63	3	He	460.473	11.9417	652195.11	0.0259	0.01685
Cu	63	3	He	464.345	12.0419	651015.30	0.0259	0.01685
Zn	66	3	He	470.702	1.3337	70150.83	0.0028	0.003817
Zn	66	3	He	457.819	1.2973	70854.45	0.0028	0.003817
Zn	66	3	He	463.695	1.3139	71034.91	0.0028	0.003817
As	75	3	He	468.905	0.87	45758.23	0.0019	0.0004832
As	75	3	He	455.809	0.8457	46187.70	0.0019	0.0004832
As	75	3	He	470.097	0.8722	47152.60	0.0019	0.0004832
Sr	88	3	He	86.699	0.6956	35455.14	0.008	0.0005203
Sr	88	3	He	83.583	0.6706	35314.75	0.008	0.0005203
Sr	88	3	He	83.073	0.6665	34893.53	0.008	0.0005203
Mo	98	3	He	49.825	1.142	58210.74	0.0229	0.0003256
Mo	98	3	He	47.618	1.0915	57477.20	0.0229	0.0003256
Mo	98	3	He	47.883	1.0975	57457.07	0.0229	0.0003256
Ag	107	3	He	49.166	2.4589	125334.79	0.05	0.000719
Ag	107	3	He	48.933	2.4473	128876.08	0.05	0.000719
Ag	107	3	He	47.954	2.3984	125557.16	0.05	0.000719
Cd	111	3	He	48.849	0.27	13760.79	0.0055	0.000104
Cd	111	3	He	46.262	0.2557	13464.50	0.0055	0.000104
Cd	111	3	He	46.577	0.2574	13476.50	0.0055	0.000104
Sn	120	3	He	97.53	1.5709	80069.61	0.0159	0.01867
Sn	120	3	He	92.348	1.4884	78380.21	0.0159	0.01867
Sn	120	3	He	92.683	1.4937	78199.74	0.0159	0.01867
Sb	121	3	He	91.675	0.2393	69473.40	0.0026	8.342E-05
Sb	121	3	He	94.508	0.2467	70980.98	0.0026	8.342E-05
Sb	121	3	He	94.673	0.2471	70578.87	0.0026	8.342E-05
Ba	137	3	He	487.64	2.4346	124093.89	0.005	0.0005882
Ba	137	3	He	477.867	2.3858	125638.50	0.005	0.0005882
Ba	137	3	He	464.165	2.3174	121320.82	0.005	0.0005882
Tl	205	3	He	90.847	2.8438	692356.86	0.0313	0.0009967
Tl	205	3	He	92.856	2.9066	701024.52	0.0313	0.0009967
Tl	205	3	He	91.943	2.8781	693939.76	0.0313	0.0009967
Pb	208	3	He	46.778	1.9218	250172.71	0.041	0.002892
Pb	208	3	He	46.913	1.9274	248059.45	0.041	0.002892
Pb	208	3	He	47.22	1.9399	250383.57	0.041	0.002892
U	238	3	He	46.211	2.3173	564186.05	0.0501	0.0008282
U	238	3	He	46.094	2.3115	557490.19	0.0501	0.0008282
U	238	3	He	46.44	2.3289	561516.94	0.0501	0.0008282
Sc	45	1	No Gas			2206511.53		
Sc	45	1	No Gas			2226348.72		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2236095.44		
Ge	72	1	No Gas			1087900.37		
Ge	72	1	No Gas			1092467.80		
Ge	72	1	No Gas			1095062.64		
Sc	45	2	H2			135359.70		
Sc	45	2	H2			132997.32		
Sc	45	2	H2			136137.22		
Ge	72	2	H2			106964.66		
Ge	72	2	H2			106240.19		
Ge	72	2	H2			106551.76		
In	115	2	H2			286361.48		
In	115	2	H2			287177.94		
In	115	2	H2			284882.75		
Sc	45	3	He			29710.69		
Sc	45	3	He			30883.49		
Sc	45	3	He			30171.60		
Ge	72	3	He			52596.87		
Ge	72	3	He			54615.03		
Ge	72	3	He			54062.29		
In	115	3	He			51595.44		
In	115	3	He			53271.85		
In	115	3	He			52961.41		
Tb	159	3	He			290358.92		
Tb	159	3	He			287768.78		
Tb	159	3	He			285640.23		
Bi	209	3	He			243464.25		
Bi	209	3	He			241181.95		
Bi	209	3	He			241113.26		

Quantitation Report

Data File Name	058SMPL.d
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Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

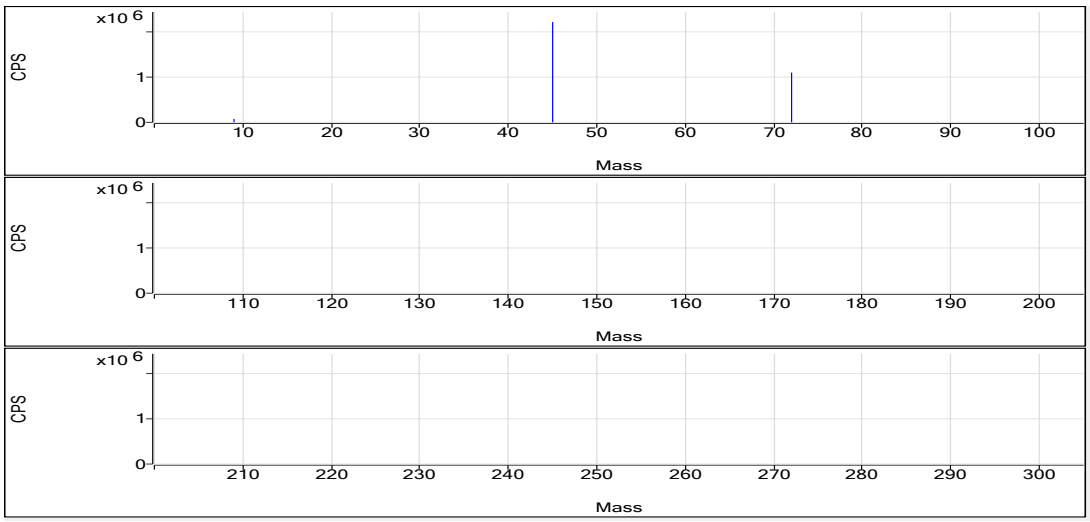
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	44.567	ppb	1.2	73655.70	0.0333	Pulse	0.5000	3
Se	78	72	H2	97.673	ppb	1.2	4424.24	0.0418	Pulse	1.5000	3
Na	23	45	He	25977.635	ppb	2.6	2858886.63	99.1415	Pulse	0.1000	3
Mg	24	45	He	7782.433	ppb	2.6	432059.24	14.9831	Pulse	0.1000	3
Al	27	45	He	4671.929	ppb	1.9	73469.22	2.5475	Pulse	0.1000	3
K	39	45	He	5928.380	ppb	2.8	194237.17	6.7359	Pulse	0.1000	3
Ca	44	45	He	8898.025	ppb	6.3	16106.01	0.5587	Pulse	0.1000	3
Ti	47	45	He	483.066	ppb	1.5	6818.48	0.2363	Pulse	0.1000	3
V	51	45	He	475.396	ppb	2.7	300109.33	10.4075	Pulse	0.5000	3
Cr	52	45	He	469.035	ppb	2.9	392109.50	13.5986	Pulse	0.1000	3
Mn	55	45	He	483.320	ppb	2.6	166075.69	5.7592	Pulse	0.1000	3
Fe	57	45	He	4797.344	ppb	3.4	78066.38	2.7076	Pulse	0.1000	3
Co	59	72	He	462.474	ppb	0.4	779995.85	14.6507	Pulse	0.1000	3
Ni	60	72	He	468.264	ppb	1.4	225899.05	4.2434	Pulse	0.1000	3
Cu	63	72	He	467.439	ppb	1.0	645358.25	12.1221	Pulse	0.1000	3
Zn	66	72	He	469.307	ppb	1.2	70800.53	1.3298	Pulse	0.1000	3
As	75	72	He	472.563	ppb	1.6	46673.77	0.8768	Pulse	0.5000	3
Sr	88	115	He	83.308	ppb	1.4	34646.24	0.6684	Pulse	0.1000	3
Mo	98	115	He	48.936	ppb	2.6	58140.55	1.1217	Pulse	0.1000	3
Ag	107	115	He	49.579	ppb	0.7	128526.99	2.4796	Pulse	0.1000	3
Cd	111	115	He	47.151	ppb	0.9	13507.19	0.2606	Pulse	0.5000	3
Sn	120	115	He	96.064	ppb	1.1	80213.87	1.5476	Pulse	0.1000	3
Sb	121	159	He	95.816	ppb	2.0	71641.29	0.2501	Pulse	0.1000	3
Ba	137	115	He	483.586	ppb	0.9	125144.26	2.4144	Pulse	0.1000	3
Tl	205	209	He	93.242	ppb	0.7	703133.56	2.9187	Pulse	0.1000	3
Pb	208	209	He	47.605	ppb	1.6	471137.10	1.9557	Pulse	0.1000	3
U	238	209	He	46.929	ppb	0.9	566931.58	2.3533	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2209641.79	0.3	100.5	Pulse	0.1000	3
No Gas	Ge	72	1094319.96	0.8	102.0	Pulse	0.1000	3
H2	Sc	45	135071.30	1.0	99.5	Pulse	0.1000	3
H2	Ge	72	105867.85	1.1	100.1	Pulse	0.1000	3
H2	In	115	287452.68	0.9	102.8	Pulse	0.1000	3
He	Sc	45	28849.49	2.6	96.6	Pulse	0.1000	3
He	Ge	72	53239.50	0.9	101.6	Pulse	0.1000	3
He	In	115	51833.15	0.1	101.1	Pulse	0.1000	3
He	Tb	159	286504.75	0.7	102.9	Pulse	0.1000	3
He	Bi	209	240913.74	0.7	101.5	Pulse	0.1000	3

No Gas



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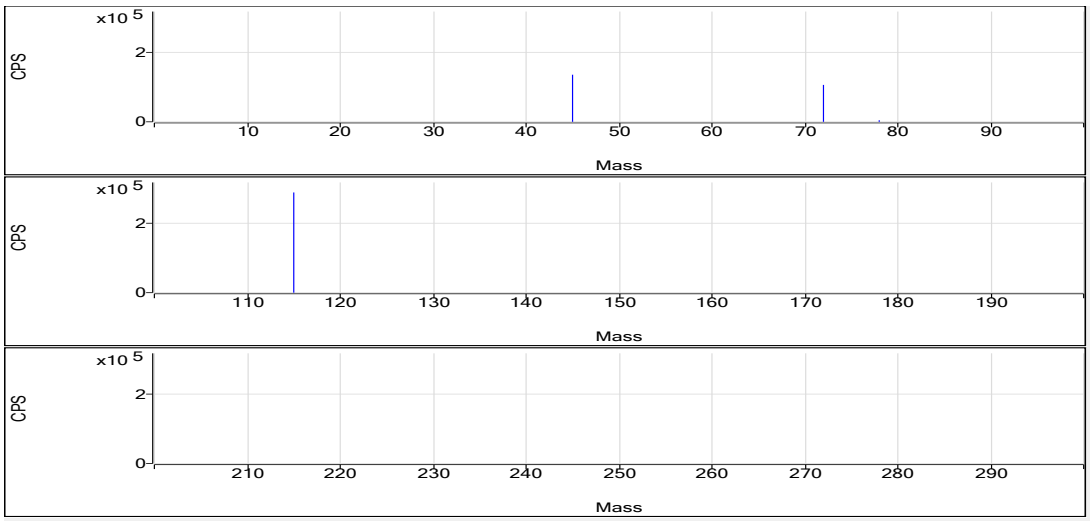
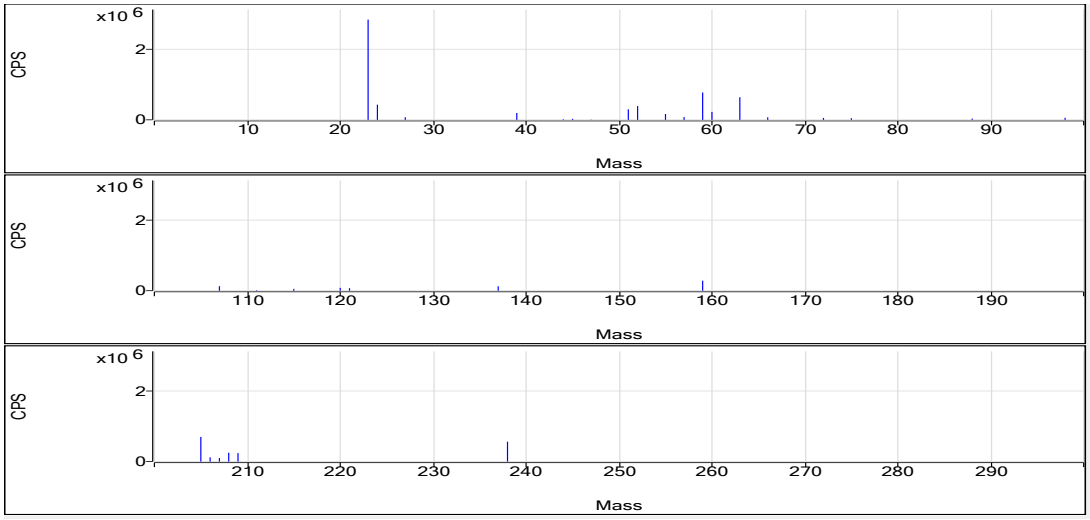


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	43.982	0.0329	72617.16	0.0007	2.306E-05
Be	9	1	No Gas	44.749	0.0335	73752.76	0.0007	2.306E-05
Be	9	1	No Gas	44.969	0.0336	74597.19	0.0007	2.306E-05
Se	78	2	H2	96.429	0.0413	4404.01	0.0004	4.221E-05
Se	78	2	H2	97.779	0.0418	4446.69	0.0004	4.221E-05
Se	78	2	H2	98.812	0.0423	4422.01	0.0004	4.221E-05
Na	23	3	He	25718.637	98.1559	2856349.96	0.0038	0.2864
Na	23	3	He	26742.336	102.0515	2857199.96	0.0038	0.2864
Na	23	3	He	25471.932	97.2171	2863109.96	0.0038	0.2864
Mg	24	3	He	7693.569	14.8121	431033.39	0.0019	0.007972
Mg	24	3	He	8012.672	15.4261	431894.33	0.0019	0.007972
Mg	24	3	He	7641.058	14.711	433249.99	0.0019	0.007972
Al	27	3	He	4618.95	2.5186	73291.71	0.0005	0.00158
Al	27	3	He	4775.942	2.6042	72910.15	0.0005	0.00158
Al	27	3	He	4620.894	2.5197	74205.81	0.0005	0.00158
K	39	3	He	5897.774	6.7029	195056.42	0.0011	0.3552
K	39	3	He	6107.483	6.9286	193985.72	0.0011	0.3552
K	39	3	He	5779.885	6.5761	193669.37	0.0011	0.3552
Ca	44	3	He	8321.395	0.5226	15208.40	0.0001	0.002
Ca	44	3	He	9439.054	0.5925	16589.96	0.0001	0.002
Ca	44	3	He	8933.626	0.5609	16519.68	0.0001	0.002
Ti	47	3	He	491.123	0.2403	6991.90	0.0005	0.0004395
Ti	47	3	He	479.766	0.2347	6571.72	0.0005	0.0004395
Ti	47	3	He	478.309	0.234	6891.83	0.0005	0.0004395
V	51	3	He	471.462	10.3216	300359.03	0.0218	0.02648
V	51	3	He	489.686	10.7195	300121.28	0.0218	0.02648
V	51	3	He	465.04	10.1813	299847.69	0.0218	0.02648
Cr	52	3	He	465.058	13.4833	392365.85	0.029	0.006056
Cr	52	3	He	484.371	14.043	393170.50	0.029	0.006056
Cr	52	3	He	457.676	13.2694	390792.14	0.029	0.006056
Mn	55	3	He	478.01	5.696	165754.55	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	497.67	5.9301	166029.82	0.0119	0.00335
Mn	55	3	He	474.279	5.6516	166442.71	0.0119	0.00335
Fe	57	3	He	4729.404	2.6693	77677.49	0.0006	0.003117
Fe	57	3	He	4985.945	2.8139	78783.73	0.0006	0.003117
Fe	57	3	He	4676.683	2.6396	77737.91	0.0006	0.003117
Co	59	3	He	463.895	14.6957	777218.35	0.0317	0.004379
Co	59	3	He	462.957	14.666	789065.69	0.0317	0.004379
Co	59	3	He	460.568	14.5903	773703.50	0.0317	0.004379
Ni	60	3	He	475.77	4.3112	228010.47	0.009	0.01049
Ni	60	3	He	462.553	4.1918	225526.97	0.009	0.01049
Ni	60	3	He	466.469	4.2272	224159.70	0.009	0.01049
Cu	63	3	He	472.468	12.2523	647994.76	0.0259	0.01685
Cu	63	3	He	465.981	12.0843	650166.44	0.0259	0.01685
Cu	63	3	He	463.869	12.0296	637913.55	0.0259	0.01685
Zn	66	3	He	462.997	1.312	69387.12	0.0028	0.003817
Zn	66	3	He	471.491	1.336	71878.59	0.0028	0.003817
Zn	66	3	He	473.434	1.3415	71135.89	0.0028	0.003817
As	75	3	He	478.397	0.8876	46941.98	0.0019	0.0004832
As	75	3	He	463.983	0.8609	46315.96	0.0019	0.0004832
As	75	3	He	475.308	0.8819	46763.36	0.0019	0.0004832
Sr	88	3	He	84.103	0.6748	34993.71	0.008	0.0005203
Sr	88	3	He	83.848	0.6727	34903.34	0.008	0.0005203
Sr	88	3	He	81.975	0.6577	34041.66	0.008	0.0005203
Mo	98	3	He	49.867	1.143	59275.00	0.0229	0.0003256
Mo	98	3	He	49.464	1.1338	58823.20	0.0229	0.0003256
Mo	98	3	He	47.477	1.0882	56323.44	0.0229	0.0003256
Ag	107	3	He	49.561	2.4787	128544.44	0.05	0.000719
Ag	107	3	He	49.932	2.4972	129563.48	0.05	0.000719
Ag	107	3	He	49.245	2.4629	127473.04	0.05	0.000719
Cd	111	3	He	46.928	0.2594	13450.47	0.0055	0.000104
Cd	111	3	He	46.907	0.2592	13450.48	0.0055	0.000104
Cd	111	3	He	47.616	0.2632	13620.62	0.0055	0.000104
Sn	120	3	He	95.072	1.5318	79436.17	0.0159	0.01867
Sn	120	3	He	95.99	1.5464	80230.32	0.0159	0.01867
Sn	120	3	He	97.13	1.5645	80975.13	0.0159	0.01867
Sb	121	3	He	94.807	0.2474	70810.63	0.0026	8.342E-05
Sb	121	3	He	97.989	0.2557	72769.96	0.0026	8.342E-05
Sb	121	3	He	94.653	0.247	71343.27	0.0026	8.342E-05
Ba	137	3	He	478.547	2.3892	123903.62	0.005	0.0005882
Ba	137	3	He	487.023	2.4315	126154.19	0.005	0.0005882
Ba	137	3	He	485.189	2.4224	125374.97	0.005	0.0005882
Tl	205	3	He	92.498	2.8954	702754.13	0.0313	0.0009967
Tl	205	3	He	93.751	2.9346	702801.16	0.0313	0.0009967
Tl	205	3	He	93.477	2.926	703845.38	0.0313	0.0009967
Pb	208	3	He	47.22	1.94	248915.39	0.041	0.002892
Pb	208	3	He	48.462	1.9909	254614.25	0.041	0.002892
Pb	208	3	He	47.132	1.9363	249500.93	0.041	0.002892
U	238	3	He	46.428	2.3282	565089.37	0.0501	0.0008282
U	238	3	He	47.105	2.3622	565706.32	0.0501	0.0008282
U	238	3	He	47.254	2.3696	569999.05	0.0501	0.0008282
Sc	45	1	No Gas			2207456.06		
Sc	45	1	No Gas			2203573.72		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2217895.59		
Ge	72	1	No Gas			1089472.33		
Ge	72	1	No Gas			1088954.05		
Ge	72	1	No Gas			1104533.50		
Sc	45	2	H2			135642.02		
Sc	45	2	H2			136027.05		
Sc	45	2	H2			133544.82		
Ge	72	2	H2			106733.69		
Ge	72	2	H2			106281.36		
Ge	72	2	H2			104588.50		
In	115	2	H2			289587.73		
In	115	2	H2			288174.84		
In	115	2	H2			284595.48		
Sc	45	3	He			29100.14		
Sc	45	3	He			27997.64		
Sc	45	3	He			29450.69		
Ge	72	3	He			52887.53		
Ge	72	3	He			53802.44		
Ge	72	3	He			53028.53		
In	115	3	He			52479.09		
In	115	3	He			52508.60		
In	115	3	He			52388.77		
Tb	159	3	He			286173.43		
Tb	159	3	He			284545.25		
Tb	159	3	He			288795.56		
Bi	209	3	He			242712.01		
Bi	209	3	He			239484.18		
Bi	209	3	He			240545.04		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

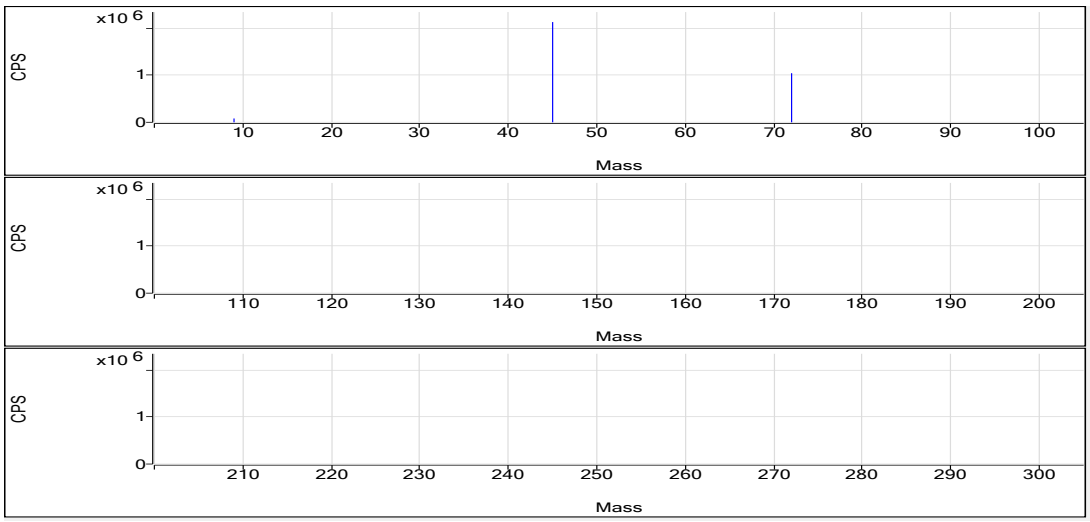
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.937	ppb	1.2	81350.16	0.0381	Pulse	0.5000	3
Se	78	72	H2	54.749	ppb	1.5	2399.32	0.0234	Pulse	1.5000	3
Na	23	45	He	5139.998	ppb	3.0	581491.88	19.8461	Pulse	0.1000	3
Mg	24	45	He	5171.665	ppb	2.1	291851.40	9.9594	Pulse	0.1000	3
Al	27	45	He	5055.338	ppb	2.8	80763.39	2.7564	Pulse	0.1000	3
K	39	45	He	5129.210	ppb	3.0	172162.46	5.8757	Pulse	0.1000	3
Ca	44	45	He	5234.472	ppb	5.7	9650.20	0.3295	Pulse	0.1000	3
Ti	47	45	He	5140.915	ppb	2.1	73578.40	2.5109	Pulse	0.1000	3
V	51	45	He	514.247	ppb	2.7	329807.24	11.2558	Pulse	0.5000	3
Cr	52	45	He	514.527	ppb	3.0	437058.69	14.9169	Pulse	0.1000	3
Mn	55	45	He	509.305	ppb	1.9	177845.81	6.0687	Pulse	0.1000	3
Fe	57	45	He	5156.393	ppb	2.7	85280.04	2.9100	Pulse	0.1000	3
Co	59	72	He	529.817	ppb	1.8	857218.74	16.7834	Pulse	0.1000	3
Ni	60	72	He	535.352	ppb	1.3	247721.31	4.8498	Pulse	0.1000	3
Cu	63	72	He	530.477	ppb	1.0	702582.49	13.7546	Pulse	0.1000	3
Zn	66	72	He	526.680	ppb	0.1	76214.90	1.4919	Pulse	0.1000	3
As	75	72	He	534.993	ppb	1.1	50697.29	0.9925	Pulse	0.5000	3
Sr	88	115	He	52.676	ppb	1.1	21603.80	0.4228	Pulse	0.1000	3
Mo	98	115	He	53.405	ppb	1.3	62542.78	1.2241	Pulse	0.1000	3
Ag	107	115	He	52.992	ppb	0.8	135410.06	2.6502	Pulse	0.1000	3
Cd	111	115	He	52.081	ppb	0.6	14706.38	0.2878	Pulse	0.5000	3
Sn	120	115	He	53.109	ppb	1.3	44140.62	0.8639	Pulse	0.1000	3
Sb	121	159	He	52.180	ppb	1.9	38477.14	0.1362	Pulse	0.1000	3
Ba	137	115	He	525.703	ppb	1.2	134101.39	2.6246	Pulse	0.1000	3
Tl	205	209	He	51.878	ppb	1.3	387825.93	1.6243	Pulse	0.1000	3
Pb	208	209	He	51.837	ppb	1.1	508390.81	2.1293	Pulse	0.1000	3
U	238	209	He	51.453	ppb	1.1	616018.90	2.5801	Pulse	0.1000	3

ISTD Table:

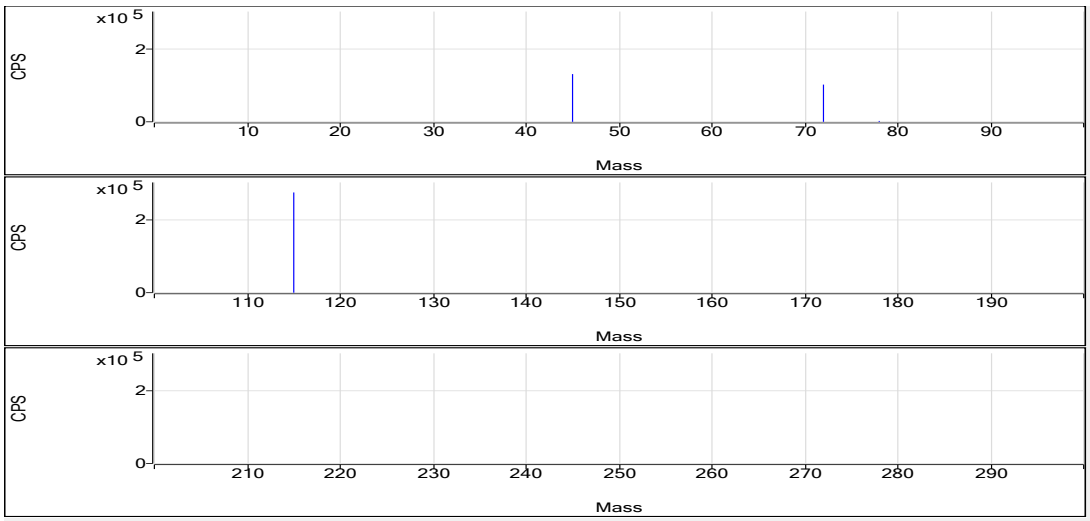
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2135360.33	0.8	97.2	Pulse	0.1000	3
No Gas	Ge	72	1045922.67	1.6	97.5	Pulse	0.1000	3
H2	Sc	45	131237.13	0.9	96.7	Pulse	0.1000	3
H2	Ge	72	102342.43	1.3	96.8	Pulse	0.1000	3
H2	In	115	275638.31	0.2	98.6	Pulse	0.1000	3
He	Sc	45	29313.33	2.4	98.2	Pulse	0.1000	3
He	Ge	72	51084.98	1.6	97.4	Pulse	0.1000	3
He	In	115	51094.41	0.3	99.7	Pulse	0.1000	3
He	Tb	159	282463.71	0.7	101.4	Pulse	0.1000	3
He	Bi	209	238785.82	1.7	100.6	Pulse	0.1000	3

No Gas

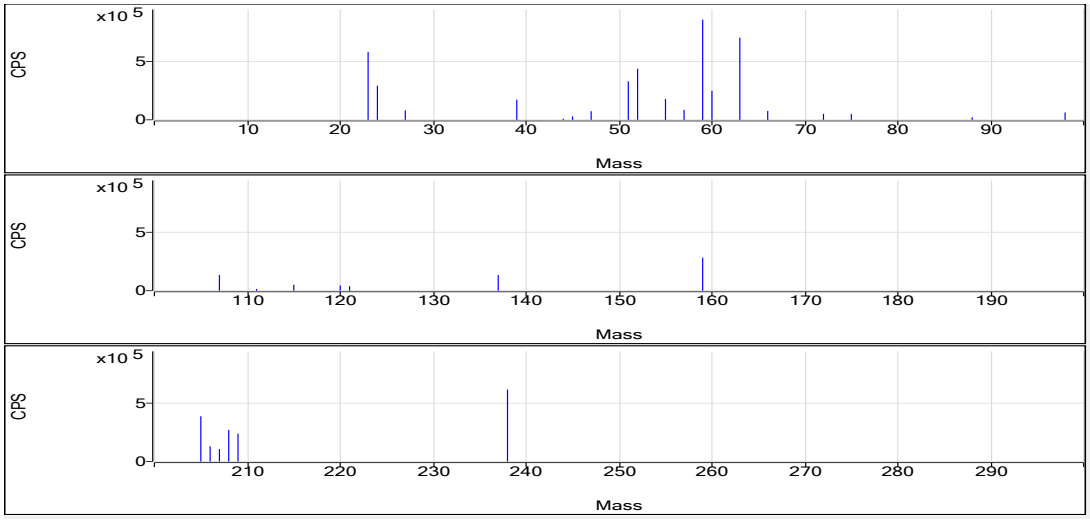


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.251	0.0376	79517.69	0.0007	2.306E-05
Be	9	1	No Gas	51.351	0.0384	82483.68	0.0007	2.306E-05
Be	9	1	No Gas	51.208	0.0383	82049.10	0.0007	2.306E-05
Se	78	2	H2	55.684	0.0238	2432.88	0.0004	4.221E-05
Se	78	2	H2	54.104	0.0232	2406.21	0.0004	4.221E-05
Se	78	2	H2	54.461	0.0233	2358.87	0.0004	4.221E-05
Na	23	3	He	5172.385	19.9694	585101.79	0.0038	0.2864
Na	23	3	He	4973.798	19.2137	576628.12	0.0038	0.2864
Na	23	3	He	5273.81	20.3553	582745.73	0.0038	0.2864
Mg	24	3	He	5222.438	10.0571	294672.10	0.0019	0.007972
Mg	24	3	He	5044.16	9.714	291531.38	0.0019	0.007972
Mg	24	3	He	5248.397	10.107	289350.72	0.0019	0.007972
Al	27	3	He	5063.931	2.7611	80899.82	0.0005	0.00158
Al	27	3	He	4907.65	2.6759	80308.17	0.0005	0.00158
Al	27	3	He	5194.432	2.8322	81082.18	0.0005	0.00158
K	39	3	He	5165.054	5.9143	173289.35	0.0011	0.3552
K	39	3	He	4960.543	5.6942	170890.86	0.0011	0.3552
K	39	3	He	5262.032	6.0187	172307.17	0.0011	0.3552
Ca	44	3	He	5152.287	0.3243	9503.44	0.0001	0.002
Ca	44	3	He	4986.755	0.314	9423.37	0.0001	0.002
Ca	44	3	He	5564.372	0.3501	10023.80	0.0001	0.002
Ti	47	3	He	5152.548	2.5166	73735.97	0.0005	0.0004395
Ti	47	3	He	5025.602	2.4546	73665.80	0.0005	0.0004395
Ti	47	3	He	5244.596	2.5615	73333.42	0.0005	0.0004395
V	51	3	He	511.558	11.1971	328075.47	0.0218	0.02648
V	51	3	He	501.745	10.9829	329610.47	0.0218	0.02648
V	51	3	He	529.437	11.5875	331735.78	0.0218	0.02648
Cr	52	3	He	513.892	14.8985	436525.07	0.029	0.006056
Cr	52	3	He	499.507	14.4816	434613.04	0.029	0.006056
Cr	52	3	He	530.181	15.3705	440037.96	0.029	0.006056
Mn	55	3	He	504.759	6.0146	176226.25	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	502.813	5.9914	179809.39	0.0119	0.00335
Mn	55	3	He	520.343	6.2001	177501.79	0.0119	0.00335
Fe	57	3	He	5029.516	2.8385	83168.11	0.0006	0.003117
Fe	57	3	He	5130.701	2.8955	86899.34	0.0006	0.003117
Fe	57	3	He	5308.962	2.996	85772.68	0.0006	0.003117
Co	59	3	He	526.97	16.6932	853887.57	0.0317	0.004379
Co	59	3	He	540.376	17.1178	859975.85	0.0317	0.004379
Co	59	3	He	522.103	16.5391	857792.80	0.0317	0.004379
Ni	60	3	He	533.269	4.831	247113.88	0.009	0.01049
Ni	60	3	He	542.843	4.9175	247050.86	0.009	0.01049
Ni	60	3	He	529.945	4.801	248999.18	0.009	0.01049
Cu	63	3	He	527.254	13.6711	699300.46	0.0259	0.01685
Cu	63	3	He	536.883	13.9205	699345.54	0.0259	0.01685
Cu	63	3	He	527.296	13.6722	709101.47	0.0259	0.01685
Zn	66	3	He	527.225	1.4934	76392.29	0.0028	0.003817
Zn	66	3	He	525.785	1.4894	74824.27	0.0028	0.003817
Zn	66	3	He	527.029	1.4929	77428.14	0.0028	0.003817
As	75	3	He	532.976	0.9888	50578.17	0.0019	0.0004832
As	75	3	He	541.827	1.0052	50499.89	0.0019	0.0004832
As	75	3	He	530.177	0.9836	51013.82	0.0019	0.0004832
Sr	88	3	He	52.068	0.418	21376.64	0.008	0.0005203
Sr	88	3	He	52.801	0.4238	21717.24	0.008	0.0005203
Sr	88	3	He	53.157	0.4267	21717.51	0.008	0.0005203
Mo	98	3	He	52.646	1.2067	61715.87	0.0229	0.0003256
Mo	98	3	He	54.02	1.2382	63443.59	0.0229	0.0003256
Mo	98	3	He	53.548	1.2273	62468.87	0.0229	0.0003256
Ag	107	3	He	52.846	2.6429	135174.38	0.05	0.000719
Ag	107	3	He	52.662	2.6337	134952.78	0.05	0.000719
Ag	107	3	He	53.468	2.674	136103.01	0.05	0.000719
Cd	111	3	He	51.75	0.286	14627.62	0.0055	0.000104
Cd	111	3	He	52.22	0.2886	14787.78	0.0055	0.000104
Cd	111	3	He	52.272	0.2889	14703.73	0.0055	0.000104
Sn	120	3	He	52.327	0.8515	43548.76	0.0159	0.01867
Sn	120	3	He	53.274	0.8665	44401.43	0.0159	0.01867
Sn	120	3	He	53.727	0.8737	44471.68	0.0159	0.01867
Sb	121	3	He	51.525	0.1345	37822.14	0.0026	8.342E-05
Sb	121	3	He	53.294	0.1391	39175.78	0.0026	8.342E-05
Sb	121	3	He	51.721	0.135	38433.50	0.0026	8.342E-05
Ba	137	3	He	518.717	2.5897	132452.29	0.005	0.0005882
Ba	137	3	He	529.837	2.6452	135541.46	0.005	0.0005882
Ba	137	3	He	528.555	2.6388	134310.42	0.005	0.0005882
Tl	205	3	He	52.386	1.6403	390969.56	0.0313	0.0009967
Tl	205	3	He	52.102	1.6314	383372.81	0.0313	0.0009967
Tl	205	3	He	51.145	1.6014	389135.42	0.0313	0.0009967
Pb	208	3	He	51.615	2.1202	269391.81	0.041	0.002892
Pb	208	3	He	52.507	2.1568	270008.04	0.041	0.002892
Pb	208	3	He	51.387	2.1109	272436.01	0.041	0.002892
U	238	3	He	51.563	2.5856	616313.19	0.0501	0.0008282
U	238	3	He	51.936	2.6043	612024.72	0.0501	0.0008282
U	238	3	He	50.859	2.5503	619718.78	0.0501	0.0008282
Sc	45	1	No Gas			2115849.97		
Sc	45	1	No Gas			2147782.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2142448.25		
Ge	72	1	No Gas			1028433.34		
Ge	72	1	No Gas			1061869.52		
Ge	72	1	No Gas			1047465.14		
Sc	45	2	H2			132404.06		
Sc	45	2	H2			131295.54		
Sc	45	2	H2			130011.78		
Ge	72	2	H2			102030.32		
Ge	72	2	H2			103853.04		
Ge	72	2	H2			101143.92		
In	115	2	H2			276397.75		
In	115	2	H2			275313.12		
In	115	2	H2			275204.06		
Sc	45	3	He			29299.97		
Sc	45	3	He			30011.36		
Sc	45	3	He			28628.66		
Ge	72	3	He			51151.72		
Ge	72	3	He			50238.69		
Ge	72	3	He			51864.53		
In	115	3	He			51485.11		
In	115	3	He			51586.39		
In	115	3	He			51244.63		
Tb	159	3	He			281175.23		
Tb	159	3	He			281577.93		
Tb	159	3	He			284637.96		
Bi	209	3	He			238359.41		
Bi	209	3	He			235002.98		
Bi	209	3	He			242995.07		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 10:59:15
Sample Name	CCB 6148203
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

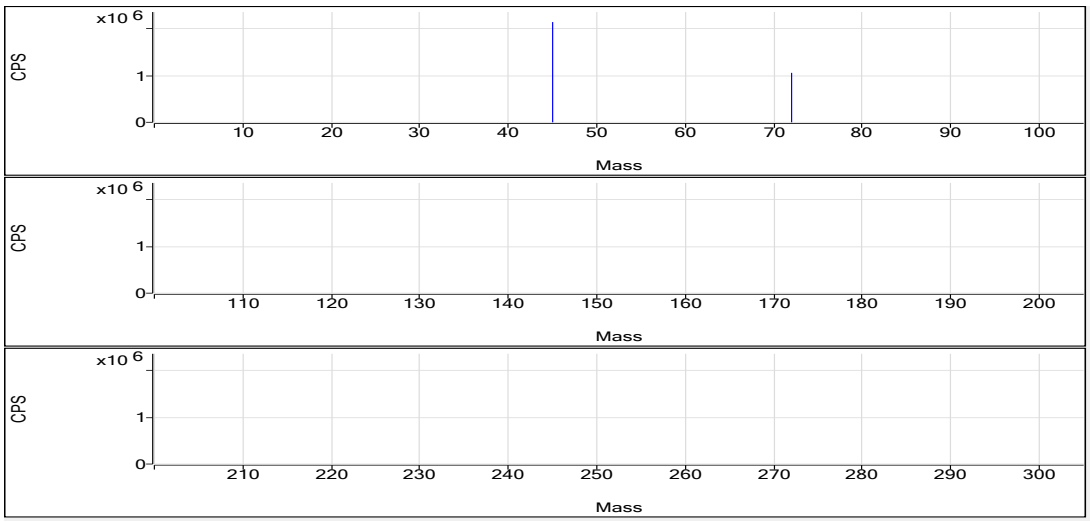
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.121	ppb	22.3	242.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.110	ppb	70.3	9.11	0.0001	Pulse	1.5000	3
Na	23	45	He	20.745	ppb	14.6	10520.73	0.3654	Pulse	0.1000	3
Mg	24	45	He	9.709	ppb	23.7	766.71	0.0267	Pulse	0.1000	3
Al	27	45	He	8.803	ppb	30.6	183.34	0.0064	Pulse	0.1000	3
K	39	45	He	4.643	ppb	582.5	10373.95	0.3602	Pulse	0.1000	3
Ca	44	45	He	14.332	ppb	48.3	83.33	0.0029	Pulse	0.1000	3
Ti	47	45	He	2.398	ppb	132.0	46.67	0.0016	Pulse	0.1000	3
V	51	45	He	0.291	ppb	22.7	945.37	0.0328	Pulse	0.5000	3
Cr	52	45	He	0.335	ppb	46.0	453.36	0.0158	Pulse	0.1000	3
Mn	55	45	He	0.321	ppb	13.6	206.68	0.0072	Pulse	0.1000	3
Fe	57	45	He	3.910	ppb	30.9	153.34	0.0053	Pulse	0.1000	3
Co	59	72	He	0.425	ppb	19.4	920.06	0.0178	Pulse	0.1000	3
Ni	60	72	He	0.299	ppb	32.5	680.04	0.0132	Pulse	0.1000	3
Cu	63	72	He	0.274	ppb	46.5	1233.43	0.0239	Pulse	0.1000	3
Zn	66	72	He	0.295	ppb	176.1	240.01	0.0047	Pulse	0.1000	3
As	75	72	He	0.556	ppb	8.7	78.00	0.0015	Pulse	0.5000	3
Sr	88	115	He	0.118	ppb	33.1	73.33	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.134	ppb	47.4	170.01	0.0034	Pulse	0.1000	3
Ag	107	115	He	0.059	ppb	19.3	183.34	0.0037	Pulse	0.1000	3
Cd	111	115	He	0.063	ppb	34.8	22.67	0.0005	Pulse	0.5000	3
Sn	120	115	He	0.062	ppb	175.5	986.74	0.0197	Pulse	0.1000	3
Sb	121	159	He	0.092	ppb	25.8	90.00	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.257	ppb	92.7	93.34	0.0019	Pulse	0.1000	3
Tl	205	209	He	0.214	ppb	11.0	1816.86	0.0077	Pulse	0.1000	3
Pb	208	209	He	0.061	ppb	30.4	1270.07	0.0054	Pulse	0.1000	3
U	238	209	He	0.029	ppb	53.0	540.04	0.0023	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2139329.29	0.8	97.3	Pulse	0.1000	3
No Gas	Ge	72	1055513.06	0.2	98.4	Pulse	0.1000	3
H2	Sc	45	131758.48	1.5	97.1	Pulse	0.1000	3
H2	Ge	72	102440.57	1.8	96.9	Pulse	0.1000	3
H2	In	115	276759.34	1.0	99.0	Pulse	0.1000	3
He	Sc	45	28799.10	1.2	96.5	Pulse	0.1000	3
He	Ge	72	51509.44	1.1	98.3	Pulse	0.1000	3
He	In	115	50156.46	1.8	97.9	Pulse	0.1000	3
He	Tb	159	277454.73	0.5	99.6	Pulse	0.1000	3
He	Bi	209	235651.10	0.9	99.2	Pulse	0.1000	3

No Gas



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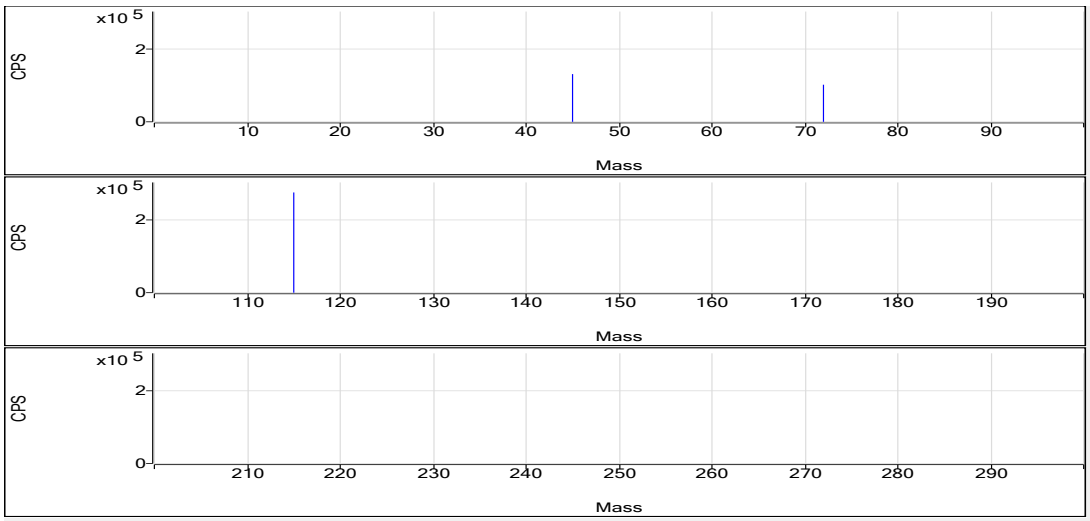
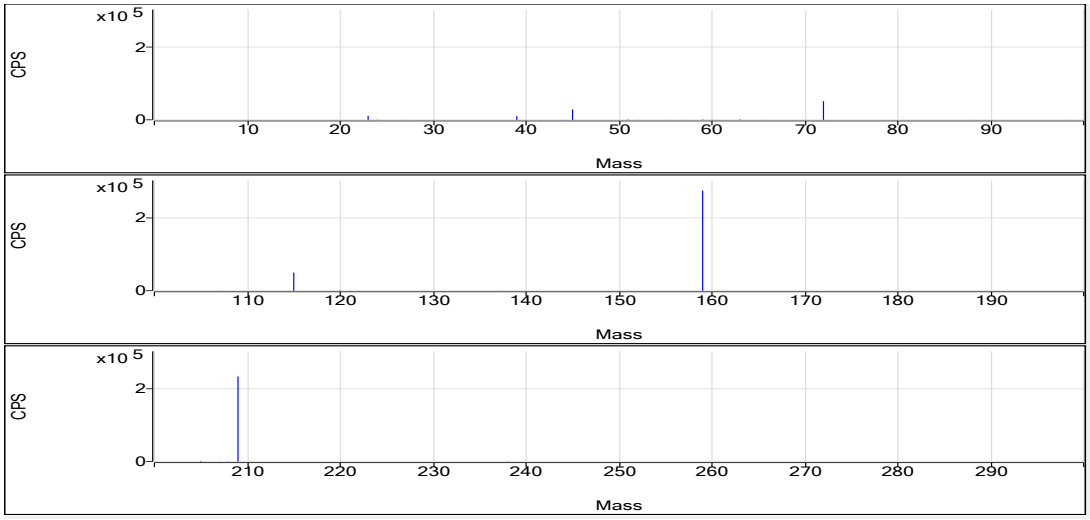


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.117	0.0001	234.00	0.0007	2.306E-05
Be	9	1	No Gas	0.15	0.0001	290.01	0.0007	2.306E-05
Be	9	1	No Gas	0.096	0.0001	204.00	0.0007	2.306E-05
Se	78	2	H2	0.022	0.0001	5.33	0.0004	4.221E-05
Se	78	2	H2	0.165	0.0001	11.33	0.0004	4.221E-05
Se	78	2	H2	0.143	0.0001	10.67	0.0004	4.221E-05
Na	23	3	He	24.252	0.3787	10834.28	0.0038	0.2864
Na	23	3	He	19.08	0.359	10263.93	0.0038	0.2864
Na	23	3	He	18.905	0.3584	10463.97	0.0038	0.2864
Mg	24	3	He	9.664	0.0266	760.05	0.0019	0.007972
Mg	24	3	He	12.037	0.0311	890.05	0.0019	0.007972
Mg	24	3	He	7.426	0.0223	650.04	0.0019	0.007972
Al	27	3	He	11.212	0.0077	220.01	0.0005	0.00158
Al	27	3	He	9.297	0.0066	190.01	0.0005	0.00158
Al	27	3	He	5.899	0.0048	140.01	0.0005	0.00158
K	39	3	He	32.219	0.3899	11154.56	0.0011	0.3552
K	39	3	He	-21.838	0.3317	9483.35	0.0011	0.3552
K	39	3	He	3.548	0.359	10483.95	0.0011	0.3552
Ca	44	3	He	18.309	0.0031	90.00	0.0001	0.002
Ca	44	3	He	18.345	0.0031	90.00	0.0001	0.002
Ca	44	3	He	6.344	0.0024	70.00	0.0001	0.002
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
Ti	47	3	He	2.681	0.0017	50.00	0.0005	0.0004395
Ti	47	3	He	5.412	0.0031	90.00	0.0005	0.0004395
V	51	3	He	0.366	0.0345	986.04	0.0218	0.02648
V	51	3	He	0.268	0.0323	924.04	0.0218	0.02648
V	51	3	He	0.24	0.0317	926.04	0.0218	0.02648
Cr	52	3	He	0.418	0.0182	520.03	0.029	0.006056
Cr	52	3	He	0.431	0.0185	530.03	0.029	0.006056
Cr	52	3	He	0.157	0.0106	310.02	0.029	0.006056
Mn	55	3	He	0.364	0.0077	220.01	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.277	0.0066	190.01	0.0119	0.00335
Mn	55	3	He	0.323	0.0072	210.01	0.0119	0.00335
Fe	57	3	He	2.532	0.0045	130.01	0.0006	0.003117
Fe	57	3	He	4.399	0.0056	160.01	0.0006	0.003117
Fe	57	3	He	4.799	0.0058	170.01	0.0006	0.003117
Co	59	3	He	0.333	0.0149	760.05	0.0317	0.004379
Co	59	3	He	0.45	0.0186	970.06	0.0317	0.004379
Co	59	3	He	0.492	0.02	1030.08	0.0317	0.004379
Ni	60	3	He	0.187	0.0122	620.04	0.009	0.01049
Ni	60	3	He	0.349	0.0136	710.04	0.009	0.01049
Ni	60	3	He	0.362	0.0138	710.04	0.009	0.01049
Cu	63	3	He	0.336	0.0255	1300.10	0.0259	0.01685
Cu	63	3	He	0.359	0.0261	1360.11	0.0259	0.01685
Cu	63	3	He	0.128	0.0202	1040.09	0.0259	0.01685
Zn	66	3	He	0.04	0.0039	200.01	0.0028	0.003817
Zn	66	3	He	0.894	0.0063	330.02	0.0028	0.003817
Zn	66	3	He	-0.048	0.0037	190.01	0.0028	0.003817
As	75	3	He	0.502	0.0014	72.00	0.0019	0.0004832
As	75	3	He	0.569	0.0015	80.00	0.0019	0.0004832
As	75	3	He	0.596	0.0016	82.00	0.0019	0.0004832
Sr	88	3	He	0.082	0.0012	60.00	0.008	0.0005203
Sr	88	3	He	0.159	0.0018	90.00	0.008	0.0005203
Sr	88	3	He	0.112	0.0014	70.00	0.008	0.0005203
Mo	98	3	He	0.105	0.0027	140.01	0.0229	0.0003256
Mo	98	3	He	0.09	0.0024	120.01	0.0229	0.0003256
Mo	98	3	He	0.207	0.0051	250.01	0.0229	0.0003256
Ag	107	3	He	0.048	0.0031	160.01	0.05	0.000719
Ag	107	3	He	0.057	0.0036	180.01	0.05	0.000719
Ag	107	3	He	0.071	0.0043	210.01	0.05	0.000719
Cd	111	3	He	0.088	0.0006	30.00	0.0055	0.000104
Cd	111	3	He	0.046	0.0004	18.00	0.0055	0.000104
Cd	111	3	He	0.055	0.0004	20.00	0.0055	0.000104
Sn	120	3	He	0.119	0.0206	1050.08	0.0159	0.01867
Sn	120	3	He	0.13	0.0207	1040.07	0.0159	0.01867
Sn	120	3	He	-0.063	0.0177	870.06	0.0159	0.01867
Sb	121	3	He	0.12	0.0004	110.00	0.0026	8.342E-05
Sb	121	3	He	0.079	0.0003	80.00	0.0026	8.342E-05
Sb	121	3	He	0.078	0.0003	80.00	0.0026	8.342E-05
Ba	137	3	He	0.118	0.0012	60.00	0.005	0.0005882
Ba	137	3	He	0.122	0.0012	60.00	0.005	0.0005882
Ba	137	3	He	0.533	0.0032	160.01	0.005	0.0005882
Tl	205	3	He	0.239	0.0085	2010.24	0.0313	0.0009967
Tl	205	3	He	0.213	0.0077	1810.18	0.0313	0.0009967
Tl	205	3	He	0.192	0.007	1630.17	0.0313	0.0009967
Pb	208	3	He	0.045	0.0047	540.03	0.041	0.002892
Pb	208	3	He	0.057	0.0052	700.04	0.041	0.002892
Pb	208	3	He	0.081	0.0062	730.05	0.041	0.002892
U	238	3	He	0.028	0.0022	530.03	0.0501	0.0008282
U	238	3	He	0.045	0.0031	730.06	0.0501	0.0008282
U	238	3	He	0.014	0.0015	360.02	0.0501	0.0008282
Sc	45	1	No Gas			2119573.56		
Sc	45	1	No Gas			2149217.16		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2149197.16		
Ge	72	1	No Gas			1056977.80		
Ge	72	1	No Gas			1053773.50		
Ge	72	1	No Gas			1055787.87		
Sc	45	2	H2			132695.79		
Sc	45	2	H2			129558.71		
Sc	45	2	H2			133020.94		
Ge	72	2	H2			103501.22		
Ge	72	2	H2			100369.51		
Ge	72	2	H2			103450.97		
In	115	2	H2			274860.35		
In	115	2	H2			275403.78		
In	115	2	H2			280013.90		
Sc	45	3	He			28608.87		
Sc	45	3	He			28588.56		
Sc	45	3	He			29199.86		
Ge	72	3	He			50900.28		
Ge	72	3	He			52025.06		
Ge	72	3	He			51602.97		
In	115	3	He			51074.22		
In	115	3	He			50160.77		
In	115	3	He			49257.49		
Tb	159	3	He			277773.43		
Tb	159	3	He			275850.74		
Tb	159	3	He			278740.02		
Bi	209	3	He			237426.85		
Bi	209	3	He			236375.84		
Bi	209	3	He			233150.60		

Quantitation Report

Data File Name	062SMPL.d
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Sample Type	Sample
Comment	C9
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

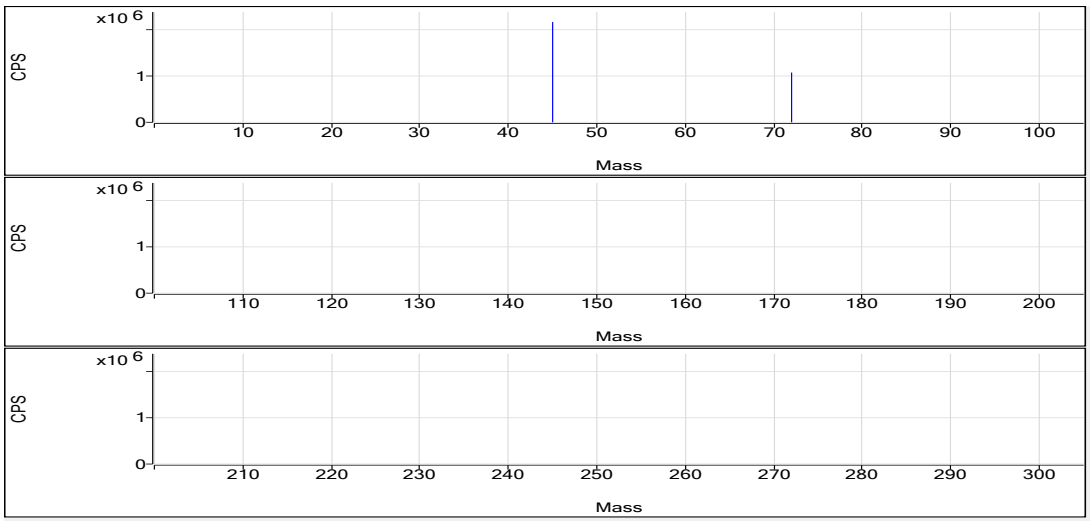
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.075	ppb	10.4	172.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.042	ppb	168.9	6.22	0.0001	Pulse	1.5000	3
Na	23	45	He	365.957	ppb	3.7	50101.82	1.6790	Pulse	0.1000	3
Mg	24	45	He	29.014	ppb	3.5	1903.53	0.0638	Pulse	0.1000	3
Al	27	45	He	29.410	ppb	20.3	523.36	0.0176	Pulse	0.1000	3
K	39	45	He	-2.217	ppb	N/A	10514.13	0.3528	Pulse	0.1000	3
Ca	44	45	He	95.031	ppb	24.5	236.68	0.0079	Pulse	0.1000	3
Ti	47	45	He	0.710	ppb	148.4	23.33	0.0008	Pulse	0.1000	3
V	51	45	He	0.224	ppb	54.0	935.37	0.0314	Pulse	0.5000	3
Cr	52	45	He	0.335	ppb	13.1	470.03	0.0158	Pulse	0.1000	3
Mn	55	45	He	0.488	ppb	17.9	273.35	0.0092	Pulse	0.1000	3
Fe	57	45	He	18.244	ppb	5.7	400.02	0.0134	Pulse	0.1000	3
Co	59	72	He	0.198	ppb	29.6	556.70	0.0106	Pulse	0.1000	3
Ni	60	72	He	0.158	ppb	54.2	623.37	0.0119	Pulse	0.1000	3
Cu	63	72	He	0.274	ppb	7.3	1253.44	0.0240	Pulse	0.1000	3
Zn	66	72	He	0.632	ppb	46.6	293.35	0.0056	Pulse	0.1000	3
As	75	72	He	0.282	ppb	41.8	52.67	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.362	ppb	23.5	180.01	0.0034	Pulse	0.1000	3
Mo	98	115	He	0.143	ppb	11.3	190.01	0.0036	Pulse	0.1000	3
Ag	107	115	He	0.035	ppb	48.2	130.00	0.0025	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	129.1	8.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.037	ppb	364.0	1013.41	0.0193	Pulse	0.1000	3
Sb	121	159	He	0.062	ppb	109.1	70.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.452	ppb	43.6	150.01	0.0028	Pulse	0.1000	3
Tl	205	209	He	0.083	ppb	28.7	870.07	0.0036	Pulse	0.1000	3
Pb	208	209	He	0.022	ppb	117.0	916.72	0.0038	Pulse	0.1000	3
U	238	209	He	0.007	ppb	92.3	290.02	0.0012	Pulse	0.1000	3

ISTD Table:

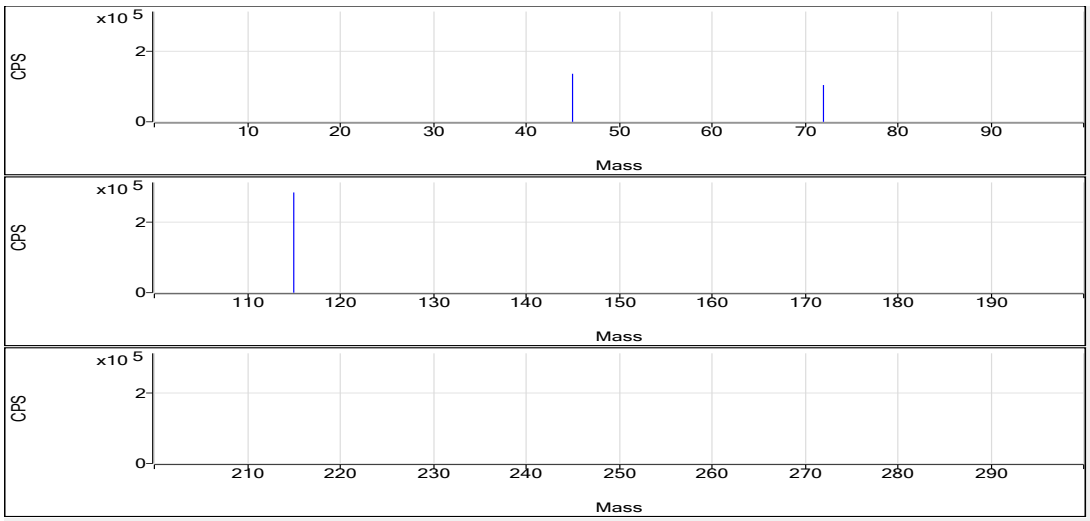
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2177186.17	0.6	99.1	Pulse	0.1000	3
No Gas	Ge	72	1080625.92	0.6	100.7	Pulse	0.1000	3
H2	Sc	45	135165.55	0.5	99.6	Pulse	0.1000	3
H2	Ge	72	103467.06	1.0	97.9	Pulse	0.1000	3
H2	In	115	281961.13	0.5	100.8	Pulse	0.1000	3
He	Sc	45	29854.58	3.6	100.0	Pulse	0.1000	3
He	Ge	72	52319.00	0.7	99.8	Pulse	0.1000	3
He	In	115	52642.04	1.3	102.7	Pulse	0.1000	3
He	Tb	159	286393.55	0.7	102.8	Pulse	0.1000	3
He	Bi	209	242454.90	1.5	102.1	Pulse	0.1000	3

No Gas

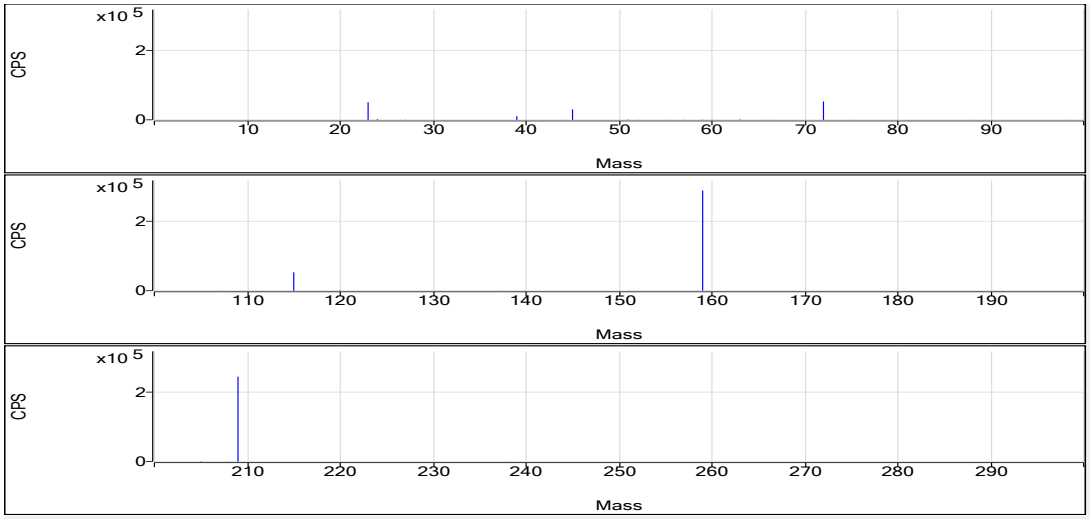


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.077	0.0001	176.00	0.0007	2.306E-05
Be	9	1	No Gas	0.082	0.0001	184.00	0.0007	2.306E-05
Be	9	1	No Gas	0.067	0.0001	158.00	0.0007	2.306E-05
Se	78	2	H2	-0.038	0	2.67	0.0004	4.221E-05
Se	78	2	H2	0.068	0.0001	7.33	0.0004	4.221E-05
Se	78	2	H2	0.095	0.0001	8.67	0.0004	4.221E-05
Na	23	3	He	380.758	1.7353	49924.28	0.0038	0.2864
Na	23	3	He	354.28	1.6346	48811.01	0.0038	0.2864
Na	23	3	He	362.832	1.6671	51570.17	0.0038	0.2864
Mg	24	3	He	30.182	0.066	1900.17	0.0019	0.007972
Mg	24	3	He	28.405	0.0626	1870.19	0.0019	0.007972
Mg	24	3	He	28.454	0.0627	1940.22	0.0019	0.007972
Al	27	3	He	36.012	0.0212	610.03	0.0005	0.00158
Al	27	3	He	27.829	0.0167	500.03	0.0005	0.00158
Al	27	3	He	24.39	0.0149	460.02	0.0005	0.00158
K	39	3	He	23.74	0.3808	10954.47	0.0011	0.3552
K	39	3	He	-3.524	0.3514	10494.13	0.0011	0.3552
K	39	3	He	-26.866	0.3263	10093.78	0.0011	0.3552
Ca	44	3	He	95.816	0.008	230.01	0.0001	0.002
Ca	44	3	He	117.905	0.0094	280.01	0.0001	0.002
Ca	44	3	He	71.373	0.0065	200.01	0.0001	0.002
Ti	47	3	He	0.524	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	1.843	0.0013	40.00	0.0005	0.0004395
Ti	47	3	He	-0.238	0.0003	10.00	0.0005	0.0004395
V	51	3	He	0.214	0.0311	896.04	0.0218	0.02648
V	51	3	He	0.349	0.0341	1018.04	0.0218	0.02648
V	51	3	He	0.108	0.0288	892.03	0.0218	0.02648
Cr	52	3	He	0.331	0.0156	450.03	0.029	0.006056
Cr	52	3	He	0.38	0.0171	510.03	0.029	0.006056
Cr	52	3	He	0.293	0.0145	450.02	0.029	0.006056
Mn	55	3	He	0.565	0.0101	290.02	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.394	0.008	240.01	0.0119	0.00335
Mn	55	3	He	0.506	0.0094	290.01	0.0119	0.00335
Fe	57	3	He	17.902	0.0132	380.02	0.0006	0.003117
Fe	57	3	He	19.421	0.0141	420.02	0.0006	0.003117
Fe	57	3	He	17.41	0.0129	400.02	0.0006	0.003117
Co	59	3	He	0.156	0.0093	490.03	0.0317	0.004379
Co	59	3	He	0.172	0.0098	510.03	0.0317	0.004379
Co	59	3	He	0.265	0.0128	670.04	0.0317	0.004379
Ni	60	3	He	0.25	0.0128	670.04	0.009	0.01049
Ni	60	3	He	0.14	0.0118	610.04	0.009	0.01049
Ni	60	3	He	0.082	0.0112	590.03	0.009	0.01049
Cu	63	3	He	0.298	0.0246	1290.12	0.0259	0.01685
Cu	63	3	He	0.264	0.0237	1230.09	0.0259	0.01685
Cu	63	3	He	0.261	0.0236	1240.10	0.0259	0.01685
Zn	66	3	He	0.603	0.0055	290.02	0.0028	0.003817
Zn	66	3	He	0.354	0.0048	250.01	0.0028	0.003817
Zn	66	3	He	0.941	0.0065	340.02	0.0028	0.003817
As	75	3	He	0.15	0.0008	40.00	0.0019	0.0004832
As	75	3	He	0.321	0.0011	56.00	0.0019	0.0004832
As	75	3	He	0.376	0.0012	62.00	0.0019	0.0004832
Sr	88	3	He	0.309	0.003	160.01	0.008	0.0005203
Sr	88	3	He	0.317	0.0031	160.01	0.008	0.0005203
Sr	88	3	He	0.46	0.0042	220.01	0.008	0.0005203
Mo	98	3	He	0.125	0.0032	170.01	0.0229	0.0003256
Mo	98	3	He	0.153	0.0038	200.01	0.0229	0.0003256
Mo	98	3	He	0.153	0.0038	200.01	0.0229	0.0003256
Ag	107	3	He	0.027	0.0021	110.00	0.05	0.000719
Ag	107	3	He	0.055	0.0034	180.01	0.05	0.000719
Ag	107	3	He	0.024	0.0019	100.00	0.05	0.000719
Cd	111	3	He	0.022	0.0002	12.00	0.0055	0.000104
Cd	111	3	He	0.016	0.0002	10.00	0.0055	0.000104
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Sn	120	3	He	-0.114	0.0169	900.07	0.0159	0.01867
Sn	120	3	He	0.077	0.0199	1040.07	0.0159	0.01867
Sn	120	3	He	0.149	0.0211	1100.10	0.0159	0.01867
Sb	121	3	He	-0.005	0.0001	20.00	0.0026	8.342E-05
Sb	121	3	He	0.13	0.0004	120.01	0.0026	8.342E-05
Sb	121	3	He	0.061	0.0002	70.00	0.0026	8.342E-05
Ba	137	3	He	0.595	0.0036	190.01	0.005	0.0005882
Ba	137	3	He	0.227	0.0017	90.00	0.005	0.0005882
Ba	137	3	He	0.534	0.0033	170.01	0.005	0.0005882
Tl	205	3	He	0.081	0.0035	870.06	0.0313	0.0009967
Tl	205	3	He	0.06	0.0029	690.04	0.0313	0.0009967
Tl	205	3	He	0.107	0.0044	1050.10	0.0313	0.0009967
Pb	208	3	He	-0.006	0.0026	370.02	0.041	0.002892
Pb	208	3	He	0.028	0.004	520.03	0.041	0.002892
Pb	208	3	He	0.044	0.0047	650.04	0.041	0.002892
U	238	3	He	0.009	0.0013	310.02	0.0501	0.0008282
U	238	3	He	0.013	0.0015	360.02	0.0501	0.0008282
U	238	3	He	0	0.0008	200.01	0.0501	0.0008282
Sc	45	1	No Gas			2192445.28		
Sc	45	1	No Gas			2174615.44		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2164497.78		
Ge	72	1	No Gas			1086259.83		
Ge	72	1	No Gas			1081928.89		
Ge	72	1	No Gas			1073689.05		
Sc	45	2	H2			134482.83		
Sc	45	2	H2			135926.61		
Sc	45	2	H2			135087.21		
Ge	72	2	H2			103258.02		
Ge	72	2	H2			102553.95		
Ge	72	2	H2			104589.22		
In	115	2	H2			280372.44		
In	115	2	H2			282413.04		
In	115	2	H2			283097.91		
Sc	45	3	He			28769.00		
Sc	45	3	He			29861.33		
Sc	45	3	He			30933.40		
Ge	72	3	He			52536.56		
Ge	72	3	He			51904.18		
Ge	72	3	He			52516.26		
In	115	3	He			53422.74		
In	115	3	He			52258.85		
In	115	3	He			52268.25		
Tb	159	3	He			286950.44		
Tb	159	3	He			284220.37		
Tb	159	3	He			288009.84		
Bi	209	3	He			246669.76		
Bi	209	3	He			239839.55		
Bi	209	3	He			240855.39		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

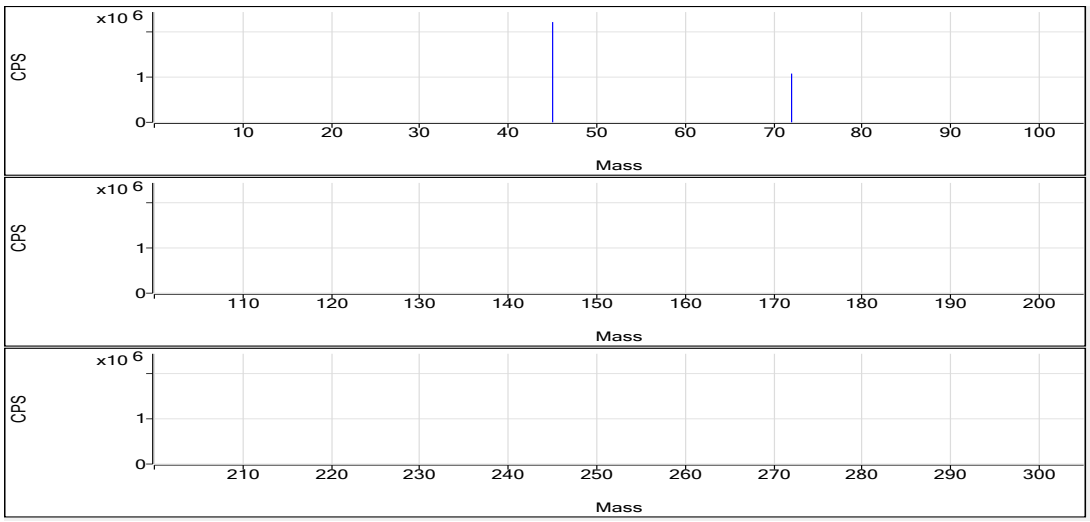
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.075	ppb	10.8	175.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.192	ppb	55.4	13.11	0.0001	Pulse	1.5000	3
Na	23	45	He	200720.940	ppb	0.3	22799072.16	764.1081	Analog	0.1000	3
Mg	24	45	He	42948.106	ppb	1.7	2465911.89	82.6495	Pulse	0.1000	3
Al	27	45	He	4.471	ppb	39.9	120.01	0.0040	Pulse	0.1000	3
K	39	45	He	13575.742	ppb	1.8	446549.97	14.9667	Pulse	0.1000	3
Ca	44	45	He	113249.365	ppb	1.2	211458.49	7.0874	Pulse	0.1000	3
Ti	47	45	He	-0.443	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	0.647	ppb	14.1	1211.39	0.0406	Pulse	0.5000	3
Cr	52	45	He	0.481	ppb	3.9	596.70	0.0200	Pulse	0.1000	3
Mn	55	45	He	5563.504	ppb	1.0	1976939.40	66.2594	Pulse	0.1000	3
Fe	57	45	He	34274.679	ppb	1.0	576605.66	19.3255	Pulse	0.1000	3
Co	59	72	He	53.970	ppb	1.5	91115.93	1.7136	Pulse	0.1000	3
Ni	60	72	He	41.260	ppb	3.2	20388.29	0.3835	Pulse	0.1000	3
Cu	63	72	He	2.381	ppb	6.6	4174.09	0.0785	Pulse	0.1000	3
Zn	66	72	He	182.194	ppb	3.7	27570.49	0.5186	Pulse	0.1000	3
As	75	72	He	9.270	ppb	3.6	940.04	0.0177	Pulse	0.5000	3
Sr	88	115	He	611.783	ppb	1.3	249398.31	4.9052	Pulse	0.1000	3
Mo	98	115	He	0.778	ppb	5.3	923.40	0.0182	Pulse	0.1000	3
Ag	107	115	He	0.054	ppb	26.3	173.34	0.0034	Pulse	0.1000	3
Cd	111	115	He	0.966	ppb	2.6	276.67	0.0054	Pulse	0.5000	3
Sn	120	115	He	-0.012	ppb	N/A	940.07	0.0185	Pulse	0.1000	3
Sb	121	159	He	0.109	ppb	38.7	103.34	0.0004	Pulse	0.1000	3
Ba	137	115	He	278.412	ppb	2.6	70681.74	1.3903	Pulse	0.1000	3
Tl	205	209	He	0.082	ppb	34.1	826.73	0.0036	Pulse	0.1000	3
Pb	208	209	He	0.019	ppb	18.2	856.71	0.0037	Pulse	0.1000	3
U	238	209	He	1.218	ppb	1.6	14358.49	0.0619	Pulse	0.1000	3

ISTD Table:

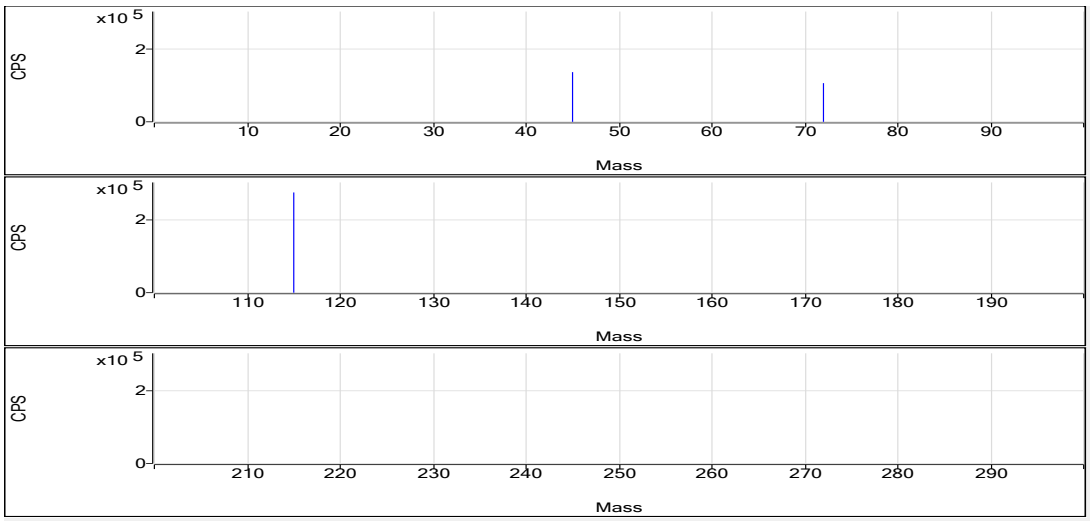
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2223011.69	1.1	101.1	Pulse	0.1000	3
No Gas	Ge	72	1080309.80	0.8	100.7	Pulse	0.1000	3
H2	Sc	45	135898.78	0.8	100.1	Pulse	0.1000	3
H2	Ge	72	105774.23	1.7	100.0	Pulse	0.1000	3
H2	In	115	274217.91	1.9	98.0	Pulse	0.1000	3
He	Sc	45	29837.98	0.8	100.0	Pulse	0.1000	3
He	Ge	72	53178.99	1.1	101.4	Pulse	0.1000	3
He	In	115	50845.82	0.7	99.2	Pulse	0.1000	3
He	Tb	159	281490.00	0.4	101.1	Pulse	0.1000	3
He	Bi	209	232107.46	0.9	97.7	Pulse	0.1000	3

No Gas

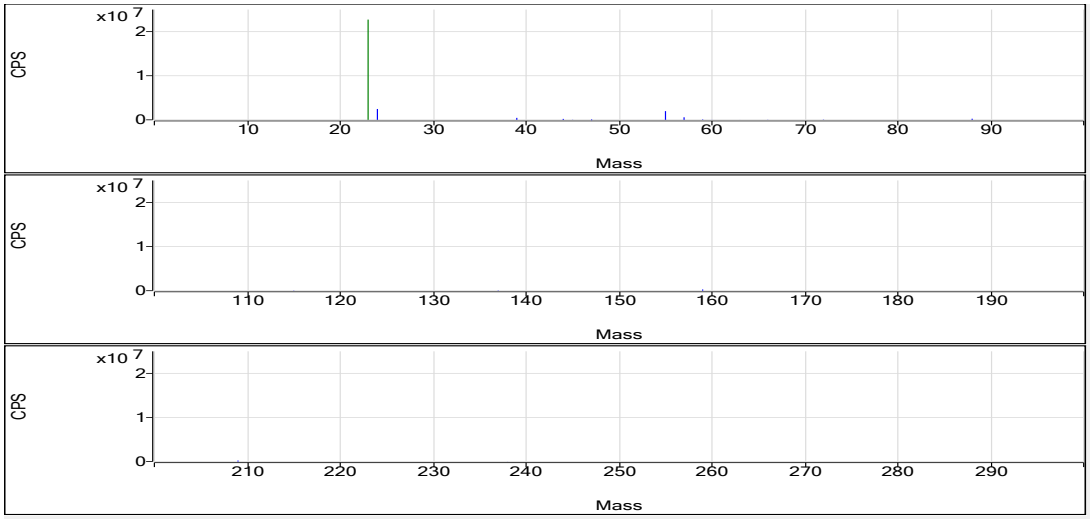


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.08	0.0001	182.00	0.0007	2.306E-05
Be	9	1	No Gas	0.079	0.0001	182.00	0.0007	2.306E-05
Be	9	1	No Gas	0.065	0.0001	162.00	0.0007	2.306E-05
Se	78	2	H2	0.185	0.0001	12.67	0.0004	4.221E-05
Se	78	2	H2	0.302	0.0002	18.00	0.0004	4.221E-05
Se	78	2	H2	0.089	0.0001	8.67	0.0004	4.221E-05
Na	23	3	He	200312.149	762.5524	22946522.16	0.0038	0.2864
Na	23	3	He	201478.623	766.9913	22696002.16	0.0038	0.2864
Na	23	3	He	200372.047	762.7804	22754692.16	0.0038	0.2864
Mg	24	3	He	42110.479	81.0377	2438564.65	0.0019	0.007972
Mg	24	3	He	43216.649	83.1662	2460967.31	0.0019	0.007972
Mg	24	3	He	43517.19	83.7445	2498203.71	0.0019	0.007972
Al	27	3	He	6.248	0.005	150.01	0.0005	0.00158
Al	27	3	He	2.681	0.003	90.00	0.0005	0.00158
Al	27	3	He	4.482	0.004	120.01	0.0005	0.00158
K	39	3	He	13324.425	14.6962	442233.16	0.0011	0.3552
K	39	3	He	13591.483	14.9836	443378.98	0.0011	0.3552
K	39	3	He	13811.317	15.2202	454037.77	0.0011	0.3552
Ca	44	3	He	111982.47	7.0081	210886.13	0.0001	0.002
Ca	44	3	He	114737.97	7.1805	212477.97	0.0001	0.002
Ca	44	3	He	113027.654	7.0735	211011.36	0.0001	0.002
Ti	47	3	He	-0.22	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	-0.208	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
V	51	3	He	0.568	0.0389	1170.06	0.0218	0.02648
V	51	3	He	0.626	0.0401	1188.06	0.0218	0.02648
V	51	3	He	0.746	0.0428	1276.06	0.0218	0.02648
Cr	52	3	He	0.468	0.0196	590.03	0.029	0.006056
Cr	52	3	He	0.502	0.0206	610.04	0.029	0.006056
Cr	52	3	He	0.474	0.0198	590.03	0.029	0.006056
Mn	55	3	He	5496.658	65.4634	1969906.38	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5604.718	66.7503	1975203.88	0.0119	0.00335
Mn	55	3	He	5589.135	66.5647	1985707.94	0.0119	0.00335
Fe	57	3	He	33870.469	19.0976	574679.33	0.0006	0.003117
Fe	57	3	He	34431.686	19.414	574477.80	0.0006	0.003117
Fe	57	3	He	34521.882	19.4648	580659.84	0.0006	0.003117
Co	59	3	He	53.054	1.6846	90734.16	0.0317	0.004379
Co	59	3	He	54.311	1.7244	91025.14	0.0317	0.004379
Co	59	3	He	54.544	1.7317	91588.48	0.0317	0.004379
Ni	60	3	He	39.926	0.3714	20004.35	0.009	0.01049
Ni	60	3	He	41.329	0.3841	20274.96	0.009	0.01049
Ni	60	3	He	42.526	0.3949	20885.56	0.009	0.01049
Cu	63	3	He	2.217	0.0743	4000.70	0.0259	0.01685
Cu	63	3	He	2.393	0.0788	4160.74	0.0259	0.01685
Cu	63	3	He	2.533	0.0825	4360.82	0.0259	0.01685
Zn	66	3	He	174.463	0.4967	26755.63	0.0028	0.003817
Zn	66	3	He	187.38	0.5332	28148.29	0.0028	0.003817
Zn	66	3	He	184.739	0.5258	27807.55	0.0028	0.003817
As	75	3	He	9.532	0.0182	978.04	0.0019	0.0004832
As	75	3	He	8.893	0.017	896.03	0.0019	0.0004832
As	75	3	He	9.386	0.0179	946.04	0.0019	0.0004832
Sr	88	3	He	615.862	4.9379	249342.55	0.008	0.0005203
Sr	88	3	He	602.539	4.8311	247388.86	0.008	0.0005203
Sr	88	3	He	616.948	4.9467	251463.53	0.008	0.0005203
Mo	98	3	He	0.79	0.0184	930.08	0.0229	0.0003256
Mo	98	3	He	0.813	0.0189	970.07	0.0229	0.0003256
Mo	98	3	He	0.733	0.0171	870.06	0.0229	0.0003256
Ag	107	3	He	0.069	0.0042	210.01	0.05	0.000719
Ag	107	3	He	0.052	0.0033	170.01	0.05	0.000719
Ag	107	3	He	0.041	0.0028	140.01	0.05	0.000719
Cd	111	3	He	0.963	0.0054	274.01	0.0055	0.000104
Cd	111	3	He	0.992	0.0056	286.00	0.0055	0.000104
Cd	111	3	He	0.943	0.0053	270.00	0.0055	0.000104
Sn	120	3	He	-0.103	0.017	860.05	0.0159	0.01867
Sn	120	3	He	-0.069	0.0176	900.06	0.0159	0.01867
Sn	120	3	He	0.137	0.0209	1060.09	0.0159	0.01867
Sb	121	3	He	0.063	0.0002	70.00	0.0026	8.342E-05
Sb	121	3	He	0.146	0.0005	130.01	0.0026	8.342E-05
Sb	121	3	He	0.118	0.0004	110.00	0.0026	8.342E-05
Ba	137	3	He	281.794	1.4071	71053.66	0.005	0.0005882
Ba	137	3	He	270.047	1.3485	69053.28	0.005	0.0005882
Ba	137	3	He	283.395	1.4151	71938.28	0.005	0.0005882
Tl	205	3	He	0.063	0.003	680.05	0.0313	0.0009967
Tl	205	3	He	0.114	0.0046	1060.09	0.0313	0.0009967
Tl	205	3	He	0.069	0.0032	740.05	0.0313	0.0009967
Pb	208	3	He	0.015	0.0035	440.02	0.041	0.002892
Pb	208	3	He	0.022	0.0038	420.02	0.041	0.002892
Pb	208	3	He	0.021	0.0038	500.03	0.041	0.002892
U	238	3	He	1.215	0.0618	14198.41	0.0501	0.0008282
U	238	3	He	1.238	0.0629	14608.72	0.0501	0.0008282
U	238	3	He	1.199	0.0609	14268.35	0.0501	0.0008282
Sc	45	1	No Gas			2204296.69		
Sc	45	1	No Gas			2212719.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2252018.72		
Ge	72	1	No Gas			1071845.14		
Ge	72	1	No Gas			1080930.37		
Ge	72	1	No Gas			1088153.89		
Sc	45	2	H2			136955.82		
Sc	45	2	H2			135855.17		
Sc	45	2	H2			134885.35		
Ge	72	2	H2			104337.38		
Ge	72	2	H2			105142.77		
Ge	72	2	H2			107842.53		
In	115	2	H2			273869.92		
In	115	2	H2			269177.01		
In	115	2	H2			279606.81		
Sc	45	3	He			30091.73		
Sc	45	3	He			29590.95		
Sc	45	3	He			29831.25		
Ge	72	3	He			53861.81		
Ge	72	3	He			52787.14		
Ge	72	3	He			52888.01		
In	115	3	He			50501.89		
In	115	3	He			51214.22		
In	115	3	He			50843.35		
Tb	159	3	He			282637.75		
Tb	159	3	He			280533.22		
Tb	159	3	He			281299.04		
Bi	209	3	He			229897.15		
Bi	209	3	He			232308.79		
Bi	209	3	He			234116.44		

Quantitation Report

Data File Name	064SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 11:05:19
Sample Name	180-176516-Q-2-A
Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

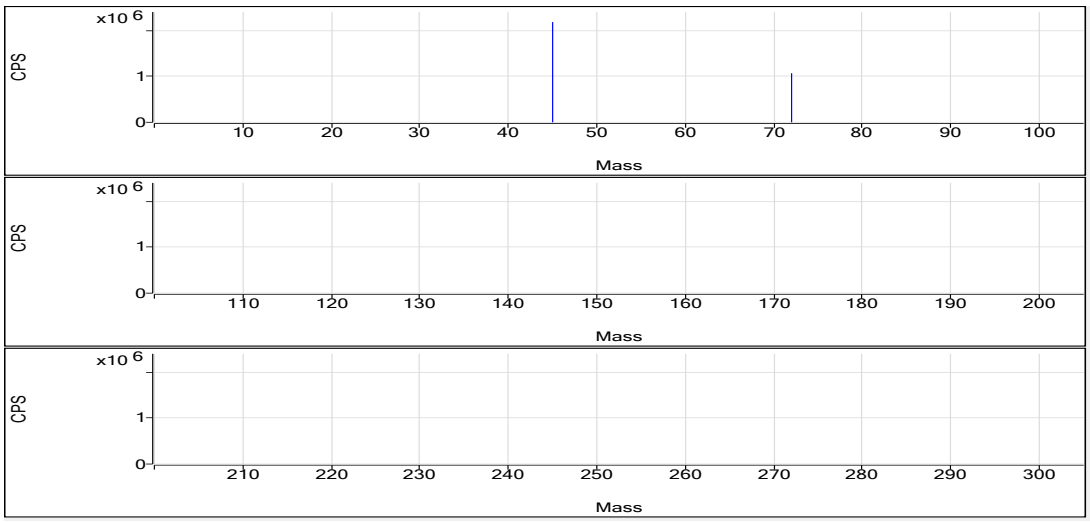
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.062	ppb	15.3	151.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.041	ppb	52.4	6.22	0.0001	Pulse	1.5000	3
Na	23	45	He	111.289	ppb	0.4	20714.94	0.7099	Pulse	0.1000	3
Mg	24	45	He	39.313	ppb	4.1	2440.28	0.0836	Pulse	0.1000	3
Al	27	45	He	18.704	ppb	9.5	343.35	0.0118	Pulse	0.1000	3
K	39	45	He	-4.204	ppb	N/A	10230.58	0.3507	Pulse	0.1000	3
Ca	44	45	He	146.970	ppb	4.2	326.68	0.0112	Pulse	0.1000	3
Ti	47	45	He	0.030	ppb	2690.6	13.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.104	ppb	55.0	838.70	0.0288	Pulse	0.5000	3
Cr	52	45	He	0.393	ppb	24.5	510.03	0.0175	Pulse	0.1000	3
Mn	55	45	He	3.693	ppb	11.7	1380.11	0.0473	Pulse	0.1000	3
Fe	57	45	He	58.245	ppb	17.2	1050.07	0.0360	Pulse	0.1000	3
Co	59	72	He	0.192	ppb	19.9	546.69	0.0104	Pulse	0.1000	3
Ni	60	72	He	0.163	ppb	150.1	626.71	0.0120	Pulse	0.1000	3
Cu	63	72	He	0.182	ppb	22.2	1130.08	0.0216	Pulse	0.1000	3
Zn	66	72	He	3.132	ppb	11.0	663.37	0.0127	Pulse	0.1000	3
As	75	72	He	0.221	ppb	50.9	46.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.530	ppb	23.2	246.68	0.0048	Pulse	0.1000	3
Mo	98	115	He	0.211	ppb	16.0	266.68	0.0052	Pulse	0.1000	3
Ag	107	115	He	0.028	ppb	23.6	110.00	0.0021	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	127.4	8.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.011	ppb	N/A	956.73	0.0185	Pulse	0.1000	3
Sb	121	159	He	0.035	ppb	65.3	50.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.914	ppb	14.6	266.68	0.0052	Pulse	0.1000	3
Tl	205	209	He	0.044	ppb	36.0	580.04	0.0024	Pulse	0.1000	3
Pb	208	209	He	0.154	ppb	3.4	2240.17	0.0092	Pulse	0.1000	3
U	238	209	He	0.008	ppb	30.5	296.68	0.0012	Pulse	0.1000	3

ISTD Table:

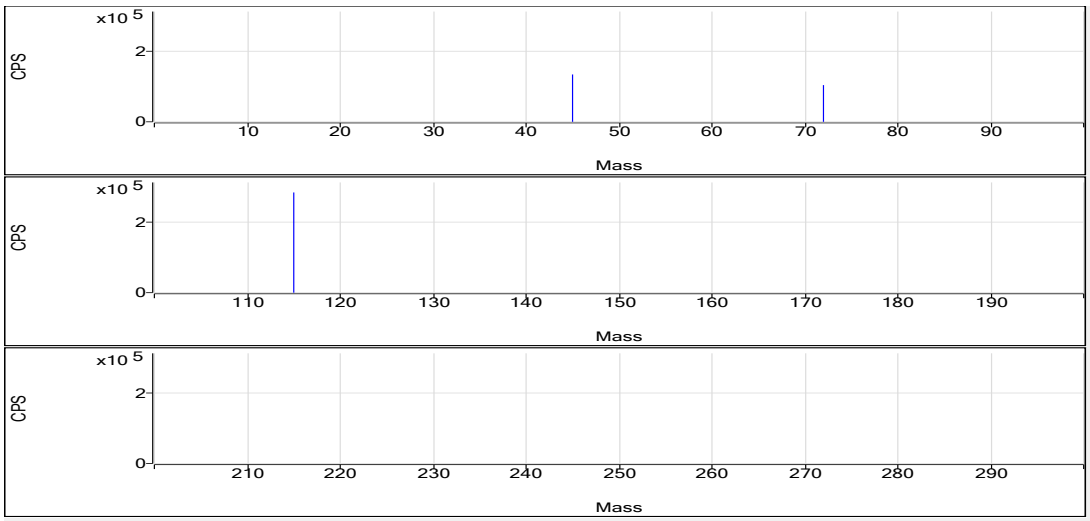
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2183611.01	1.1	99.4	Pulse	0.1000	3
No Gas	Ge	72	1069880.82	0.7	99.7	Pulse	0.1000	3
H2	Sc	45	134018.31	0.5	98.8	Pulse	0.1000	3
H2	Ge	72	103886.69	1.4	98.3	Pulse	0.1000	3
H2	In	115	283666.12	1.1	101.4	Pulse	0.1000	3
He	Sc	45	29179.82	1.1	97.8	Pulse	0.1000	3
He	Ge	72	52382.79	1.6	99.9	Pulse	0.1000	3
He	In	115	51749.34	0.8	101.0	Pulse	0.1000	3
He	Tb	159	285206.88	0.7	102.4	Pulse	0.1000	3
He	Bi	209	242943.32	0.1	102.3	Pulse	0.1000	3

No Gas

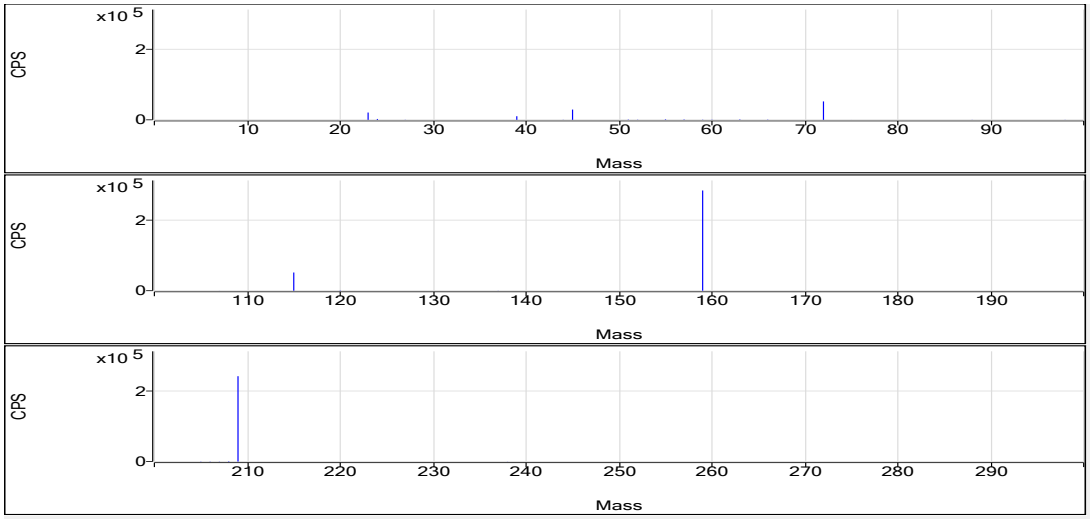


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.072	0.0001	166.00	0.0007	2.306E-05
Be	9	1	No Gas	0.053	0.0001	136.00	0.0007	2.306E-05
Be	9	1	No Gas	0.061	0.0001	152.00	0.0007	2.306E-05
Se	78	2	H2	0.023	0.0001	5.33	0.0004	4.221E-05
Se	78	2	H2	0.065	0.0001	7.33	0.0004	4.221E-05
Se	78	2	H2	0.035	0.0001	6.00	0.0004	4.221E-05
Na	23	3	He	111.429	0.7104	20474.56	0.0038	0.2864
Na	23	3	He	111.701	0.7115	20825.04	0.0038	0.2864
Na	23	3	He	110.736	0.7078	20845.22	0.0038	0.2864
Mg	24	3	He	38.059	0.0812	2340.25	0.0019	0.007972
Mg	24	3	He	41.138	0.0871	2550.30	0.0019	0.007972
Mg	24	3	He	38.743	0.0825	2430.30	0.0019	0.007972
Al	27	3	He	20.661	0.0128	370.02	0.0005	0.00158
Al	27	3	He	17.164	0.0109	320.02	0.0005	0.00158
Al	27	3	He	18.287	0.0115	340.02	0.0005	0.00158
K	39	3	He	11.507	0.3676	10594.14	0.0011	0.3552
K	39	3	He	-17.576	0.3363	9843.63	0.0011	0.3552
K	39	3	He	-6.545	0.3482	10253.96	0.0011	0.3552
Ca	44	3	He	145.509	0.0111	320.01	0.0001	0.002
Ca	44	3	He	153.697	0.0116	340.01	0.0001	0.002
Ca	44	3	He	141.705	0.0109	320.01	0.0001	0.002
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
Ti	47	3	He	0.499	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	0.491	0.0007	20.00	0.0005	0.0004395
V	51	3	He	0.17	0.0302	870.03	0.0218	0.02648
V	51	3	He	0.077	0.0282	824.03	0.0218	0.02648
V	51	3	He	0.066	0.0279	822.03	0.0218	0.02648
Cr	52	3	He	0.282	0.0142	410.02	0.029	0.006056
Cr	52	3	He	0.451	0.0191	560.03	0.029	0.006056
Cr	52	3	He	0.447	0.019	560.03	0.029	0.006056
Mn	55	3	He	4.119	0.0524	1510.13	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3.707	0.0475	1390.11	0.0119	0.00335
Mn	55	3	He	3.255	0.0421	1240.10	0.0119	0.00335
Fe	57	3	He	47.408	0.0298	860.06	0.0006	0.003117
Fe	57	3	He	67.2	0.041	1200.09	0.0006	0.003117
Fe	57	3	He	60.128	0.037	1090.07	0.0006	0.003117
Co	59	3	He	0.236	0.0118	610.03	0.0317	0.004379
Co	59	3	He	0.17	0.0098	520.03	0.0317	0.004379
Co	59	3	He	0.169	0.0097	510.02	0.0317	0.004379
Ni	60	3	He	-0.001	0.0105	540.03	0.009	0.01049
Ni	60	3	He	0.046	0.0109	580.03	0.009	0.01049
Ni	60	3	He	0.444	0.0145	760.06	0.009	0.01049
Cu	63	3	He	0.136	0.0204	1050.07	0.0259	0.01685
Cu	63	3	He	0.213	0.0224	1190.10	0.0259	0.01685
Cu	63	3	He	0.197	0.0219	1150.08	0.0259	0.01685
Zn	66	3	He	3.046	0.0124	640.04	0.0028	0.003817
Zn	66	3	He	2.84	0.0118	630.04	0.0028	0.003817
Zn	66	3	He	3.511	0.0137	720.04	0.0028	0.003817
As	75	3	He	0.346	0.0011	58.00	0.0019	0.0004832
As	75	3	He	0.185	0.0008	44.00	0.0019	0.0004832
As	75	3	He	0.13	0.0007	38.00	0.0019	0.0004832
Sr	88	3	He	0.567	0.0051	260.01	0.008	0.0005203
Sr	88	3	He	0.629	0.0056	290.01	0.008	0.0005203
Sr	88	3	He	0.392	0.0037	190.01	0.008	0.0005203
Mo	98	3	He	0.25	0.006	310.01	0.0229	0.0003256
Mo	98	3	He	0.187	0.0046	240.01	0.0229	0.0003256
Mo	98	3	He	0.196	0.0048	250.01	0.0229	0.0003256
Ag	107	3	He	0.025	0.0019	100.00	0.05	0.000719
Ag	107	3	He	0.024	0.0019	100.00	0.05	0.000719
Ag	107	3	He	0.036	0.0025	130.01	0.05	0.000719
Cd	111	3	He	0.024	0.0002	12.00	0.0055	0.000104
Cd	111	3	He	0.016	0.0002	10.00	0.0055	0.000104
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Sn	120	3	He	0.199	0.0218	1120.09	0.0159	0.01867
Sn	120	3	He	-0.149	0.0163	850.05	0.0159	0.01867
Sn	120	3	He	-0.082	0.0174	900.06	0.0159	0.01867
Sb	121	3	He	0.049	0.0002	60.00	0.0026	8.342E-05
Sb	121	3	He	0.009	0.0001	30.00	0.0026	8.342E-05
Sb	121	3	He	0.048	0.0002	60.00	0.0026	8.342E-05
Ba	137	3	He	0.937	0.0053	270.01	0.005	0.0005882
Ba	137	3	He	1.035	0.0058	300.01	0.005	0.0005882
Ba	137	3	He	0.771	0.0044	230.01	0.005	0.0005882
Tl	205	3	He	0.034	0.0021	500.03	0.0313	0.0009967
Tl	205	3	He	0.037	0.0021	520.03	0.0313	0.0009967
Tl	205	3	He	0.063	0.003	720.05	0.0313	0.0009967
Pb	208	3	He	0.15	0.0091	1100.10	0.041	0.002892
Pb	208	3	He	0.152	0.0091	1140.10	0.041	0.002892
Pb	208	3	He	0.16	0.0095	1300.11	0.041	0.002892
U	238	3	He	0.011	0.0014	330.02	0.0501	0.0008282
U	238	3	He	0.006	0.0012	280.01	0.0501	0.0008282
U	238	3	He	0.006	0.0012	280.01	0.0501	0.0008282
Sc	45	1	No Gas			2165394.97		
Sc	45	1	No Gas			2175024.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2210413.72		
Ge	72	1	No Gas			1066174.05		
Ge	72	1	No Gas			1064698.89		
Ge	72	1	No Gas			1078769.52		
Sc	45	2	H2			133231.90		
Sc	45	2	H2			134341.75		
Sc	45	2	H2			134481.27		
Ge	72	2	H2			102221.98		
Ge	72	2	H2			104638.60		
Ge	72	2	H2			104799.50		
In	115	2	H2			282048.67		
In	115	2	H2			281607.20		
In	115	2	H2			287342.48		
Sc	45	3	He			28819.17		
Sc	45	3	He			29269.95		
Sc	45	3	He			29450.34		
Ge	72	3	He			51523.07		
Ge	72	3	He			53208.75		
Ge	72	3	He			52416.56		
In	115	3	He			51305.14		
In	115	3	He			52138.37		
In	115	3	He			51826.90		
Tb	159	3	He			285310.15		
Tb	159	3	He			283199.53		
Tb	159	3	He			287110.95		
Bi	209	3	He			242750.88		
Bi	209	3	He			243137.16		
Bi	209	3	He			242941.93		

Quantitation Report

Data File Name	065SMPL.d
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Sample Type	Sample
Comment	C9
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

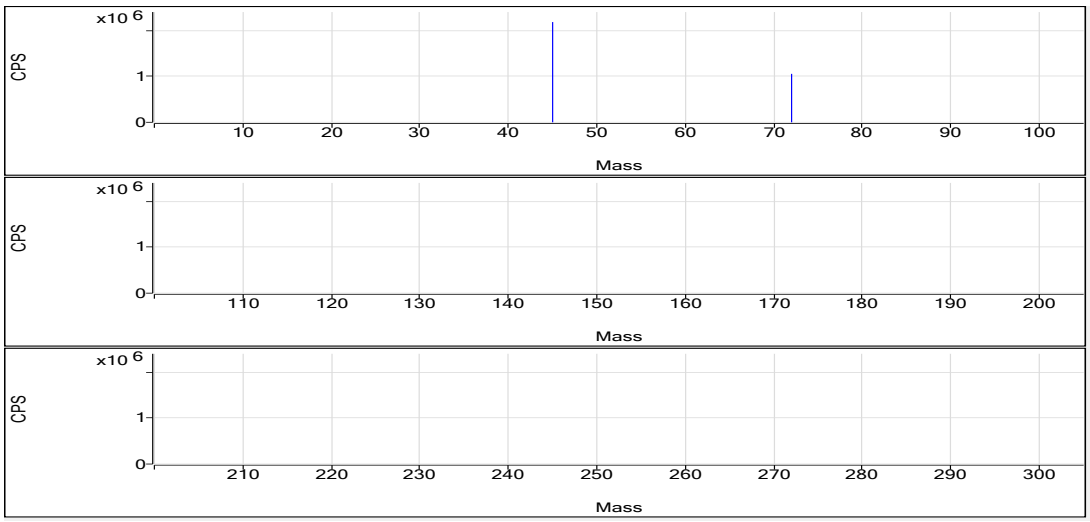
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.049	ppb	7.0	130.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.162	ppb	52.5	11.56	0.0001	Pulse	1.5000	3
Na	23	45	He	289998.703	ppb	2.5	32120402.02	1 103.8448	Analog	0.1000	3
Mg	24	45	He	44066.218	ppb	0.9	2468004.23	84.8010	Pulse	0.1000	3
Al	27	45	He	3.828	ppb	11.1	106.67	0.0037	Pulse	0.1000	3
K	39	45	He	12459.043	ppb	1.0	400607.51	13.7648	Pulse	0.1000	3
Ca	44	45	He	112249.772	ppb	1.5	204445.50	7.0248	Pulse	0.1000	3
Ti	47	45	He	0.507	ppb	137.5	20.00	0.0007	Pulse	0.1000	3
V	51	45	He	0.311	ppb	42.1	967.37	0.0333	Pulse	0.5000	3
Cr	52	45	He	0.423	ppb	2.1	533.36	0.0183	Pulse	0.1000	3
Mn	55	45	He	6698.754	ppb	1.3	2321891.79	79.7792	Pulse	0.1000	3
Fe	57	45	He	482.057	ppb	6.3	7995.82	0.2749	Pulse	0.1000	3
Co	59	72	He	18.049	ppb	1.4	30452.71	0.5760	Pulse	0.1000	3
Ni	60	72	He	27.355	ppb	4.4	13626.80	0.2578	Pulse	0.1000	3
Cu	63	72	He	2.880	ppb	4.4	4834.30	0.0914	Pulse	0.1000	3
Zn	66	72	He	4.719	ppb	20.9	906.73	0.0171	Pulse	0.1000	3
As	75	72	He	0.543	ppb	42.6	78.67	0.0015	Pulse	0.5000	3
Sr	88	115	He	535.971	ppb	1.0	222848.43	4.2975	Pulse	0.1000	3
Mo	98	115	He	1.013	ppb	5.0	1220.10	0.0235	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	96.8	63.33	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.060	ppb	46.9	22.67	0.0004	Pulse	0.5000	3
Sn	120	115	He	-0.071	ppb	N/A	910.07	0.0175	Pulse	0.1000	3
Sb	121	159	He	0.055	ppb	50.9	63.33	0.0002	Pulse	0.1000	3
Ba	137	115	He	346.607	ppb	0.8	89744.34	1.7306	Pulse	0.1000	3
Tl	205	209	He	0.066	ppb	22.9	700.05	0.0031	Pulse	0.1000	3
Pb	208	209	He	0.048	ppb	24.5	1116.73	0.0049	Pulse	0.1000	3
U	238	209	He	2.610	ppb	0.3	30145.91	0.1317	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2188548.82	0.3	99.6	Pulse	0.1000	3
No Gas	Ge	72	1057812.15	0.5	98.6	Pulse	0.1000	3
H2	Sc	45	135310.34	1.9	99.7	Pulse	0.1000	3
H2	Ge	72	103554.78	1.4	97.9	Pulse	0.1000	3
H2	In	115	276306.00	1.6	98.8	Pulse	0.1000	3
He	Sc	45	29106.12	1.6	97.5	Pulse	0.1000	3
He	Ge	72	52874.11	0.7	100.9	Pulse	0.1000	3
He	In	115	51856.01	0.1	101.2	Pulse	0.1000	3
He	Tb	159	278238.72	1.0	99.9	Pulse	0.1000	3
He	Bi	209	228951.44	1.1	96.4	Pulse	0.1000	3

No Gas



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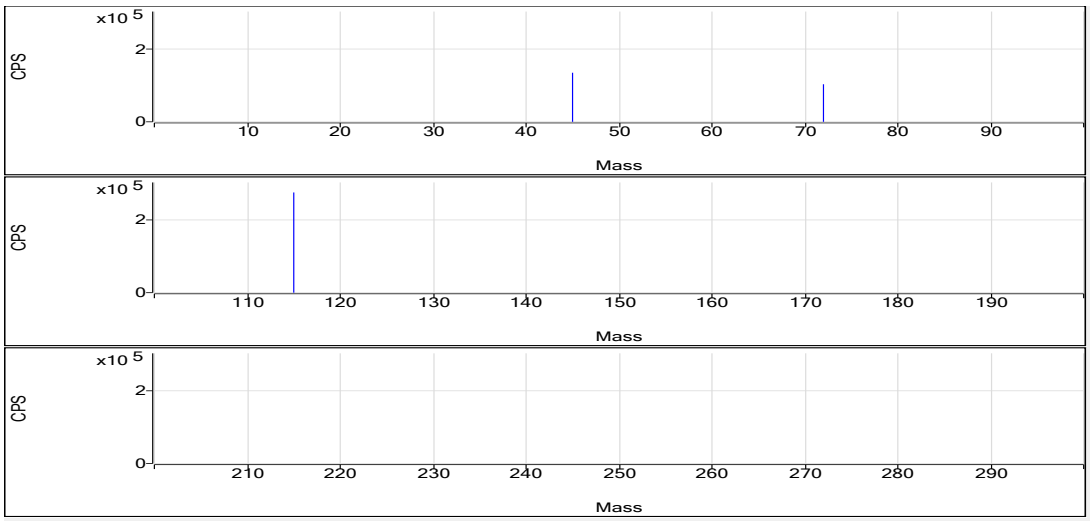
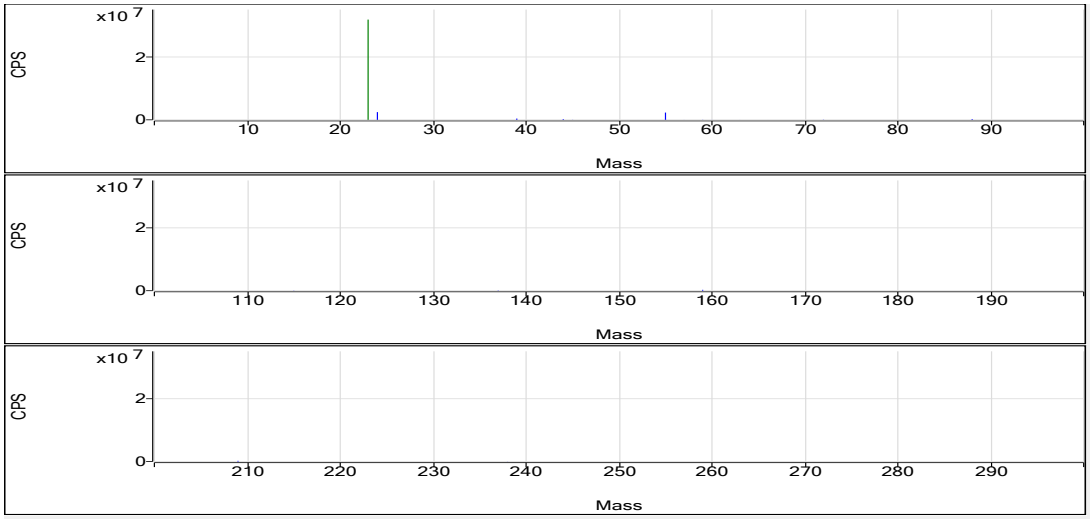


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.053	0.0001	136.00	0.0007	2.306E-05
Be	9	1	No Gas	0.047	0.0001	128.00	0.0007	2.306E-05
Be	9	1	No Gas	0.046	0.0001	126.00	0.0007	2.306E-05
Se	78	2	H2	0.1	0.0001	8.67	0.0004	4.221E-05
Se	78	2	H2	0.126	0.0001	10.00	0.0004	4.221E-05
Se	78	2	H2	0.259	0.0002	16.00	0.0004	4.221E-05
Na	23	3	He	298204.949	1135.0728	32438962.02	0.0038	0.2864
Na	23	3	He	287868.422	1095.7383	32181559.52	0.0038	0.2864
Na	23	3	He	283922.738	1080.7234	31740684.53	0.0038	0.2864
Mg	24	3	He	44505.134	85.6455	2447642.46	0.0019	0.007972
Mg	24	3	He	43695.92	84.0884	2469656.37	0.0019	0.007972
Mg	24	3	He	43997.6	84.6689	2486713.87	0.0019	0.007972
Al	27	3	He	4.163	0.0038	110.00	0.0005	0.00158
Al	27	3	He	3.973	0.0037	110.00	0.0005	0.00158
Al	27	3	He	3.348	0.0034	100.00	0.0005	0.00158
K	39	3	He	12569.742	13.8839	396784.84	0.0011	0.3552
K	39	3	He	12330.499	13.6264	400204.45	0.0011	0.3552
K	39	3	He	12476.888	13.784	404833.24	0.0011	0.3552
Ca	44	3	He	113467.931	7.101	202939.02	0.0001	0.002
Ca	44	3	He	112998.887	7.0717	207694.08	0.0001	0.002
Ca	44	3	He	110282.499	6.9018	202703.41	0.0001	0.002
Ti	47	3	He	0.533	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	1.192	0.001	30.00	0.0005	0.0004395
Ti	47	3	He	-0.203	0.0003	10.00	0.0005	0.0004395
V	51	3	He	0.454	0.0364	1040.04	0.0218	0.02648
V	51	3	He	0.281	0.0326	958.04	0.0218	0.02648
V	51	3	He	0.197	0.0308	904.04	0.0218	0.02648
Cr	52	3	He	0.431	0.0185	530.03	0.029	0.006056
Cr	52	3	He	0.426	0.0184	540.03	0.029	0.006056
Cr	52	3	He	0.414	0.018	530.03	0.029	0.006056
Mn	55	3	He	6753.298	80.4288	2298554.03	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	6740.786	80.2798	2357797.00	0.0119	0.00335
Mn	55	3	He	6602.178	78.6291	2309324.34	0.0119	0.00335
Fe	57	3	He	514.151	0.293	8372.70	0.0006	0.003117
Fe	57	3	He	454.226	0.2592	7612.25	0.0006	0.003117
Fe	57	3	He	477.794	0.2725	8002.50	0.0006	0.003117
Co	59	3	He	17.882	0.5707	30342.43	0.0317	0.004379
Co	59	3	He	18.345	0.5854	30723.32	0.0317	0.004379
Co	59	3	He	17.92	0.5719	30292.38	0.0317	0.004379
Ni	60	3	He	26.026	0.2458	13066.24	0.009	0.01049
Ni	60	3	He	28.384	0.2671	14017.19	0.009	0.01049
Ni	60	3	He	27.655	0.2605	13796.96	0.009	0.01049
Cu	63	3	He	2.742	0.0879	4670.93	0.0259	0.01685
Cu	63	3	He	2.911	0.0922	4840.96	0.0259	0.01685
Cu	63	3	He	2.988	0.0942	4991.02	0.0259	0.01685
Zn	66	3	He	5.44	0.0192	1020.08	0.0028	0.003817
Zn	66	3	He	5.123	0.0183	960.07	0.0028	0.003817
Zn	66	3	He	3.594	0.014	740.04	0.0028	0.003817
As	75	3	He	0.328	0.0011	58.00	0.0019	0.0004832
As	75	3	He	0.787	0.0019	102.00	0.0019	0.0004832
As	75	3	He	0.513	0.0014	76.00	0.0019	0.0004832
Sr	88	3	He	533.975	4.2815	222375.88	0.008	0.0005203
Sr	88	3	He	531.74	4.2635	220891.01	0.008	0.0005203
Sr	88	3	He	542.199	4.3474	225278.41	0.008	0.0005203
Mo	98	3	He	1.011	0.0235	1220.10	0.0229	0.0003256
Mo	98	3	He	1.064	0.0247	1280.10	0.0229	0.0003256
Mo	98	3	He	0.963	0.0224	1160.10	0.0229	0.0003256
Ag	107	3	He	0.001	0.0008	40.00	0.05	0.000719
Ag	107	3	He	0.02	0.0017	90.00	0.05	0.000719
Ag	107	3	He	0.009	0.0012	60.00	0.05	0.000719
Cd	111	3	He	0.044	0.0003	18.00	0.0055	0.000104
Cd	111	3	He	0.093	0.0006	32.00	0.0055	0.000104
Cd	111	3	He	0.044	0.0003	18.00	0.0055	0.000104
Sn	120	3	He	-0.048	0.0179	930.07	0.0159	0.01867
Sn	120	3	He	-0.13	0.0166	860.08	0.0159	0.01867
Sn	120	3	He	-0.033	0.0181	940.07	0.0159	0.01867
Sb	121	3	He	0.024	0.0001	40.00	0.0026	8.342E-05
Sb	121	3	He	0.065	0.0003	70.00	0.0026	8.342E-05
Sb	121	3	He	0.077	0.0003	80.00	0.0026	8.342E-05
Ba	137	3	He	346.343	1.7293	89820.47	0.005	0.0005882
Ba	137	3	He	349.399	1.7446	90385.73	0.005	0.0005882
Ba	137	3	He	344.078	1.718	89026.82	0.005	0.0005882
Tl	205	3	He	0.062	0.0029	680.05	0.0313	0.0009967
Tl	205	3	He	0.053	0.0027	610.04	0.0313	0.0009967
Tl	205	3	He	0.083	0.0036	810.06	0.0313	0.0009967
Pb	208	3	He	0.035	0.0043	530.03	0.041	0.002892
Pb	208	3	He	0.057	0.0052	560.04	0.041	0.002892
Pb	208	3	He	0.053	0.0051	600.04	0.041	0.002892
U	238	3	He	2.602	0.1313	30356.55	0.0501	0.0008282
U	238	3	He	2.617	0.132	30286.19	0.0501	0.0008282
U	238	3	He	2.611	0.1317	29795.00	0.0501	0.0008282
Sc	45	1	No Gas			2182018.56		
Sc	45	1	No Gas			2195820.28		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2187807.62		
Ge	72	1	No Gas			1058434.91		
Ge	72	1	No Gas			1062873.42		
Ge	72	1	No Gas			1052128.11		
Sc	45	2	H2			133421.34		
Sc	45	2	H2			134342.21		
Sc	45	2	H2			138167.46		
Ge	72	2	H2			101960.44		
Ge	72	2	H2			103933.67		
Ge	72	2	H2			104770.23		
In	115	2	H2			271278.41		
In	115	2	H2			279609.82		
In	115	2	H2			278029.78		
Sc	45	3	He			28578.75		
Sc	45	3	He			29369.75		
Sc	45	3	He			29369.85		
Ge	72	3	He			53168.51		
Ge	72	3	He			52486.08		
Ge	72	3	He			52967.73		
In	115	3	He			51946.63		
In	115	3	He			51816.05		
In	115	3	He			51826.63		
Tb	159	3	He			276247.87		
Tb	159	3	He			277103.75		
Tb	159	3	He			281364.53		
Bi	209	3	He			231276.62		
Bi	209	3	He			229374.08		
Bi	209	3	He			226203.61		

Quantitation Report

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Sample Type	Sample
Comment	C9
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

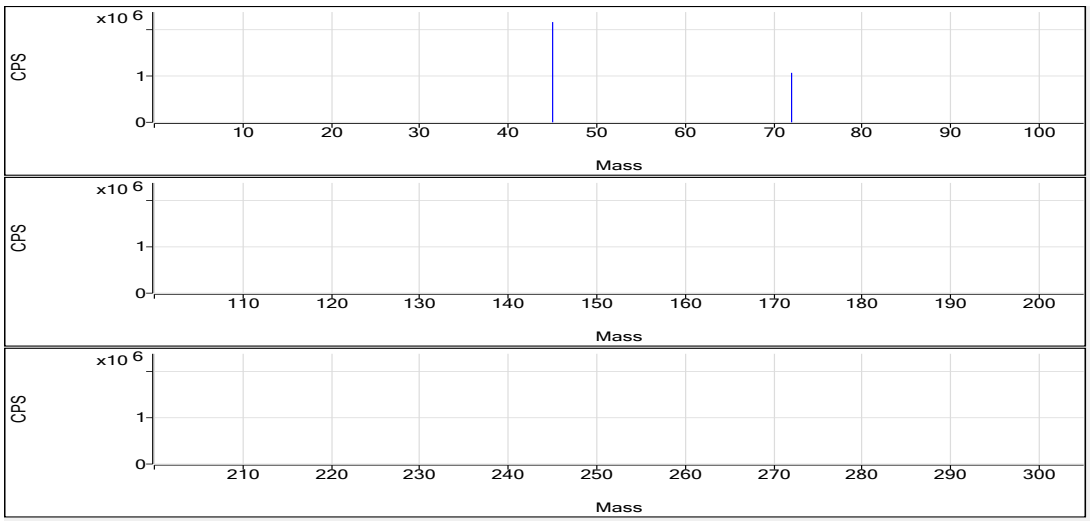
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.051	ppb	4.4	133.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	1.135	ppb	23.3	54.89	0.0005	Pulse	1.5000	3
Na	23	45	He	10063.684	ppb	3.8	1113143.01	38.5827	Pulse	0.1000	3
Mg	24	45	He	4180.592	ppb	3.4	232338.79	8.0523	Pulse	0.1000	3
Al	27	45	He	6.099	ppb	87.2	140.00	0.0049	Pulse	0.1000	3
K	39	45	He	2878.127	ppb	4.3	99616.08	3.4529	Pulse	0.1000	3
Ca	44	45	He	21348.172	ppb	2.1	38611.59	1.3376	Pulse	0.1000	3
Ti	47	45	He	0.055	ppb	816.7	13.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.712	ppb	4.6	1213.39	0.0420	Pulse	0.5000	3
Cr	52	45	He	0.183	ppb	37.4	326.68	0.0114	Pulse	0.1000	3
Mn	55	45	He	49.896	ppb	2.9	17244.07	0.5976	Pulse	0.1000	3
Fe	57	45	He	199.512	ppb	6.3	3333.82	0.1156	Pulse	0.1000	3
Co	59	72	He	0.226	ppb	15.8	610.03	0.0115	Pulse	0.1000	3
Ni	60	72	He	0.075	ppb	325.0	590.03	0.0112	Pulse	0.1000	3
Cu	63	72	He	0.125	ppb	55.7	1063.41	0.0201	Pulse	0.1000	3
Zn	66	72	He	0.256	ppb	137.8	240.01	0.0045	Pulse	0.1000	3
As	75	72	He	1.072	ppb	5.2	130.67	0.0025	Pulse	0.5000	3
Sr	88	115	He	79.052	ppb	2.6	32732.12	0.6343	Pulse	0.1000	3
Mo	98	115	He	0.679	ppb	4.6	820.05	0.0159	Pulse	0.1000	3
Ag	107	115	He	0.015	ppb	13.1	76.67	0.0015	Pulse	0.1000	3
Cd	111	115	He	0.023	ppb	28.6	12.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.190	ppb	N/A	806.72	0.0156	Pulse	0.1000	3
Sb	121	159	He	0.045	ppb	126.1	56.67	0.0002	Pulse	0.1000	3
Ba	137	115	He	17.312	ppb	4.6	4487.57	0.0870	Pulse	0.1000	3
Tl	205	209	He	0.057	ppb	4.9	666.71	0.0028	Pulse	0.1000	3
Pb	208	209	He	0.010	ppb	94.4	793.38	0.0033	Pulse	0.1000	3
U	238	209	He	0.060	ppb	5.7	916.73	0.0038	Pulse	0.1000	3

ISTD Table:

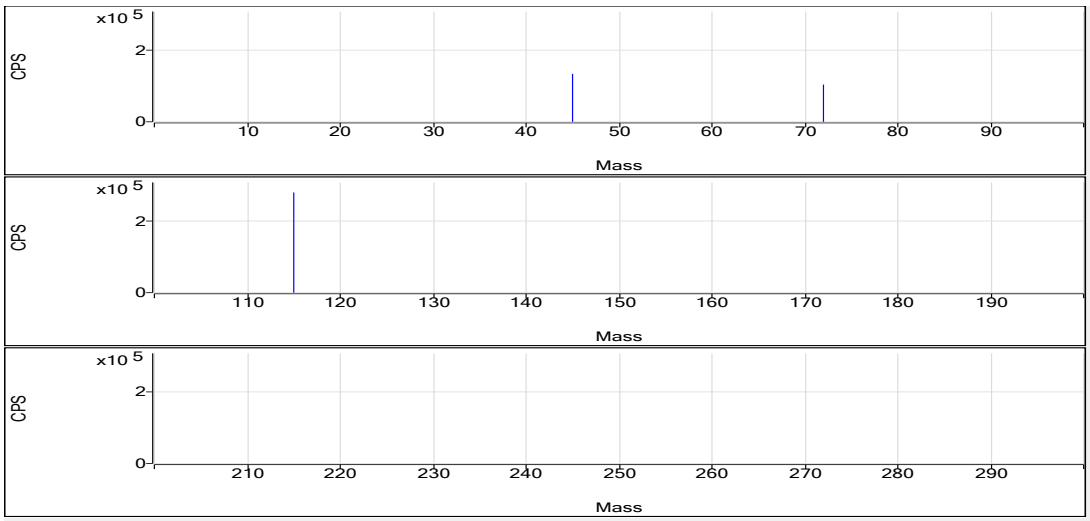
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2171126.90	0.7	98.8	Pulse	0.1000	3
No Gas	Ge	72	1071769.99	0.5	99.9	Pulse	0.1000	3
H2	Sc	45	134281.71	2.1	99.0	Pulse	0.1000	3
H2	Ge	72	104296.72	1.6	98.6	Pulse	0.1000	3
H2	In	115	280656.08	1.8	100.3	Pulse	0.1000	3
He	Sc	45	28879.21	4.0	96.7	Pulse	0.1000	3
He	Ge	72	52897.83	1.2	100.9	Pulse	0.1000	3
He	In	115	51596.52	1.2	100.7	Pulse	0.1000	3
He	Tb	159	283285.97	0.5	101.7	Pulse	0.1000	3
He	Bi	209	239914.95	0.6	101.0	Pulse	0.1000	3

No Gas

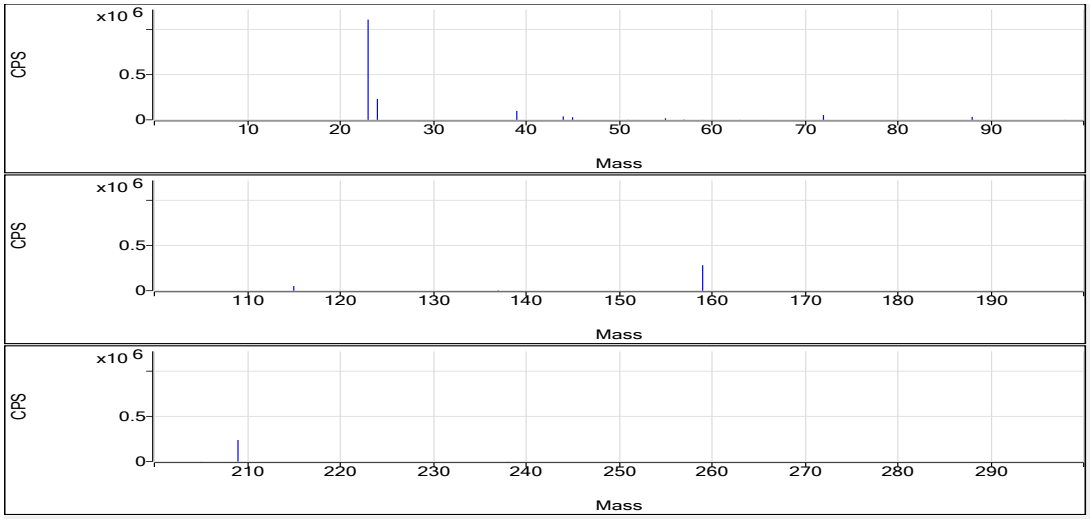


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.051	0.0001	132.00	0.0007	2.306E-05
Be	9	1	No Gas	0.054	0.0001	138.00	0.0007	2.306E-05
Be	9	1	No Gas	0.049	0.0001	130.00	0.0007	2.306E-05
Se	78	2	H2	0.871	0.0004	44.00	0.0004	4.221E-05
Se	78	2	H2	1.4	0.0006	66.00	0.0004	4.221E-05
Se	78	2	H2	1.134	0.0005	54.67	0.0004	4.221E-05
Na	23	3	He	10424.533	39.9558	1114266.86	0.0038	0.2864
Na	23	3	He	9668.131	37.0774	1117202.41	0.0038	0.2864
Na	23	3	He	10098.387	38.7147	1107959.75	0.0038	0.2864
Mg	24	3	He	4283.628	8.2506	230088.40	0.0019	0.007972
Mg	24	3	He	4017.665	7.7388	233183.45	0.0019	0.007972
Mg	24	3	He	4240.484	8.1676	233744.53	0.0019	0.007972
Al	27	3	He	12.235	0.0082	230.01	0.0005	0.00158
Al	27	3	He	3.19	0.0033	100.00	0.0005	0.00158
Al	27	3	He	2.871	0.0031	90.00	0.0005	0.00158
K	39	3	He	2986.174	3.5692	99536.26	0.0011	0.3552
K	39	3	He	2743.209	3.3077	99666.63	0.0011	0.3552
K	39	3	He	2904.998	3.4818	99645.34	0.0011	0.3552
Ca	44	3	He	21862.506	1.3698	38200.62	0.0001	0.002
Ca	44	3	He	21018.917	1.317	39684.37	0.0001	0.002
Ca	44	3	He	21163.092	1.3261	37949.79	0.0001	0.002
Ti	47	3	He	0.569	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	-0.22	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	-0.184	0.0003	10.00	0.0005	0.0004395
V	51	3	He	0.715	0.0421	1174.05	0.0218	0.02648
V	51	3	He	0.678	0.0413	1244.06	0.0218	0.02648
V	51	3	He	0.743	0.0427	1222.06	0.0218	0.02648
Cr	52	3	He	0.261	0.0136	380.02	0.029	0.006056
Cr	52	3	He	0.135	0.01	300.01	0.029	0.006056
Cr	52	3	He	0.153	0.0105	300.01	0.029	0.006056
Mn	55	3	He	51.299	0.6143	17130.56	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	48.378	0.5795	17460.98	0.0119	0.00335
Mn	55	3	He	50.011	0.5989	17140.66	0.0119	0.00335
Fe	57	3	He	213.948	0.1237	3450.52	0.0006	0.003117
Fe	57	3	He	191.124	0.1109	3340.48	0.0006	0.003117
Fe	57	3	He	193.463	0.1122	3210.47	0.0006	0.003117
Co	59	3	He	0.267	0.0128	670.04	0.0317	0.004379
Co	59	3	He	0.207	0.0109	580.03	0.0317	0.004379
Co	59	3	He	0.204	0.0109	580.03	0.0317	0.004379
Ni	60	3	He	0.303	0.0132	690.04	0.009	0.01049
Ni	60	3	He	-0.181	0.0089	470.02	0.009	0.01049
Ni	60	3	He	0.102	0.0114	610.04	0.009	0.01049
Cu	63	3	He	0.127	0.0201	1050.07	0.0259	0.01685
Cu	63	3	He	0.055	0.0183	970.07	0.0259	0.01685
Cu	63	3	He	0.195	0.0219	1170.09	0.0259	0.01685
Zn	66	3	He	0.481	0.0052	270.01	0.0028	0.003817
Zn	66	3	He	-0.151	0.0034	180.01	0.0028	0.003817
Zn	66	3	He	0.437	0.0051	270.01	0.0028	0.003817
As	75	3	He	1.083	0.0025	130.00	0.0019	0.0004832
As	75	3	He	1.121	0.0026	136.00	0.0019	0.0004832
As	75	3	He	1.011	0.0024	126.00	0.0019	0.0004832
Sr	88	3	He	78.873	0.6328	32317.68	0.008	0.0005203
Sr	88	3	He	77.052	0.6183	31796.43	0.008	0.0005203
Sr	88	3	He	81.23	0.6518	34082.26	0.008	0.0005203
Mo	98	3	He	0.661	0.0155	790.05	0.0229	0.0003256
Mo	98	3	He	0.716	0.0167	860.05	0.0229	0.0003256
Mo	98	3	He	0.662	0.0155	810.05	0.0229	0.0003256
Ag	107	3	He	0.013	0.0014	70.00	0.05	0.000719
Ag	107	3	He	0.017	0.0016	80.00	0.05	0.000719
Ag	107	3	He	0.016	0.0015	80.00	0.05	0.000719
Cd	111	3	He	0.024	0.0002	12.00	0.0055	0.000104
Cd	111	3	He	0.016	0.0002	10.00	0.0055	0.000104
Cd	111	3	He	0.03	0.0003	14.00	0.0055	0.000104
Sn	120	3	He	-0.078	0.0174	890.07	0.0159	0.01867
Sn	120	3	He	-0.184	0.0158	810.06	0.0159	0.01867
Sn	120	3	He	-0.308	0.0138	720.04	0.0159	0.01867
Sb	121	3	He	0.09	0.0003	90.00	0.0026	8.342E-05
Sb	121	3	He	-0.019	0	10.00	0.0026	8.342E-05
Sb	121	3	He	0.063	0.0002	70.00	0.0026	8.342E-05
Ba	137	3	He	17.501	0.0879	4490.92	0.005	0.0005882
Ba	137	3	He	18	0.0904	4650.96	0.005	0.0005882
Ba	137	3	He	16.436	0.0826	4320.82	0.005	0.0005882
Tl	205	3	He	0.055	0.0027	660.04	0.0313	0.0009967
Tl	205	3	He	0.055	0.0027	650.04	0.0313	0.0009967
Tl	205	3	He	0.06	0.0029	690.05	0.0313	0.0009967
Pb	208	3	He	0.003	0.003	390.02	0.041	0.002892
Pb	208	3	He	0.006	0.0031	490.03	0.041	0.002892
Pb	208	3	He	0.021	0.0038	420.02	0.041	0.002892
U	238	3	He	0.056	0.0036	880.06	0.0501	0.0008282
U	238	3	He	0.063	0.004	950.07	0.0501	0.0008282
U	238	3	He	0.06	0.0038	920.07	0.0501	0.0008282
Sc	45	1	No Gas			2153825.28		
Sc	45	1	No Gas			2184888.72		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2174666.69		
Ge	72	1	No Gas			1065269.44		
Ge	72	1	No Gas			1074133.19		
Ge	72	1	No Gas			1075907.33		
Sc	45	2	H2			136117.21		
Sc	45	2	H2			130962.15		
Sc	45	2	H2			135765.78		
Ge	72	2	H2			106179.35		
Ge	72	2	H2			102997.70		
Ge	72	2	H2			103713.11		
In	115	2	H2			285966.77		
In	115	2	H2			275740.39		
In	115	2	H2			280261.09		
Sc	45	3	He			27887.46		
Sc	45	3	He			30131.60		
Sc	45	3	He			28618.56		
Ge	72	3	He			52165.30		
Ge	72	3	He			53078.39		
Ge	72	3	He			53449.79		
In	115	3	He			51073.87		
In	115	3	He			51435.65		
In	115	3	He			52298.92		
Tb	159	3	He			282137.67		
Tb	159	3	He			284809.18		
Tb	159	3	He			282911.05		
Bi	209	3	He			241490.99		
Bi	209	3	He			238555.47		
Bi	209	3	He			239698.39		

Quantitation Report

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Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

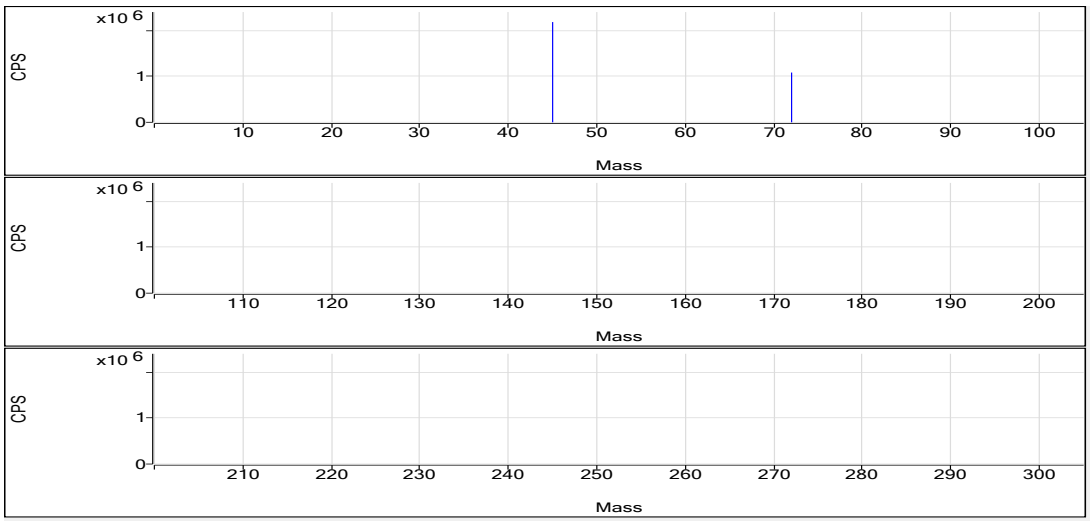
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.055	ppb	15.3	139.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.939	ppb	12.5	46.89	0.0004	Pulse	1.5000	3
Na	23	45	He	9502.784	ppb	1.4	1074240.64	36.4482	Pulse	0.1000	3
Mg	24	45	He	4026.869	ppb	1.4	228610.26	7.7565	Pulse	0.1000	3
Al	27	45	He	3.726	ppb	66.2	106.67	0.0036	Pulse	0.1000	3
K	39	45	He	2876.015	ppb	2.0	101697.09	3.4506	Pulse	0.1000	3
Ca	44	45	He	19383.525	ppb	1.5	35801.16	1.2147	Pulse	0.1000	3
Ti	47	45	He	-0.670	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.279	ppb	40.6	960.04	0.0326	Pulse	0.5000	3
Cr	52	45	He	0.209	ppb	20.7	356.68	0.0121	Pulse	0.1000	3
Mn	55	45	He	50.017	ppb	2.1	17654.48	0.5990	Pulse	0.1000	3
Fe	57	45	He	879.594	ppb	2.2	14707.88	0.4990	Pulse	0.1000	3
Co	59	72	He	0.188	ppb	6.8	553.37	0.0103	Pulse	0.1000	3
Ni	60	72	He	0.044	ppb	319.2	583.37	0.0109	Pulse	0.1000	3
Cu	63	72	He	0.064	ppb	112.0	990.07	0.0185	Pulse	0.1000	3
Zn	66	72	He	0.279	ppb	32.4	246.68	0.0046	Pulse	0.1000	3
As	75	72	He	1.244	ppb	21.0	149.33	0.0028	Pulse	0.5000	3
Sr	88	115	He	72.864	ppb	2.1	30446.53	0.5847	Pulse	0.1000	3
Mo	98	115	He	0.479	ppb	14.5	590.03	0.0113	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	64.4	70.00	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.098	ppb	N/A	893.40	0.0171	Pulse	0.1000	3
Sb	121	159	He	0.071	ppb	44.1	76.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	23.490	ppb	3.5	6134.91	0.1178	Pulse	0.1000	3
Tl	205	209	He	0.045	ppb	30.4	576.70	0.0024	Pulse	0.1000	3
Pb	208	209	He	-0.002	ppb	N/A	676.70	0.0028	Pulse	0.1000	3
U	238	209	He	0.034	ppb	13.3	606.70	0.0025	Pulse	0.1000	3

ISTD Table:

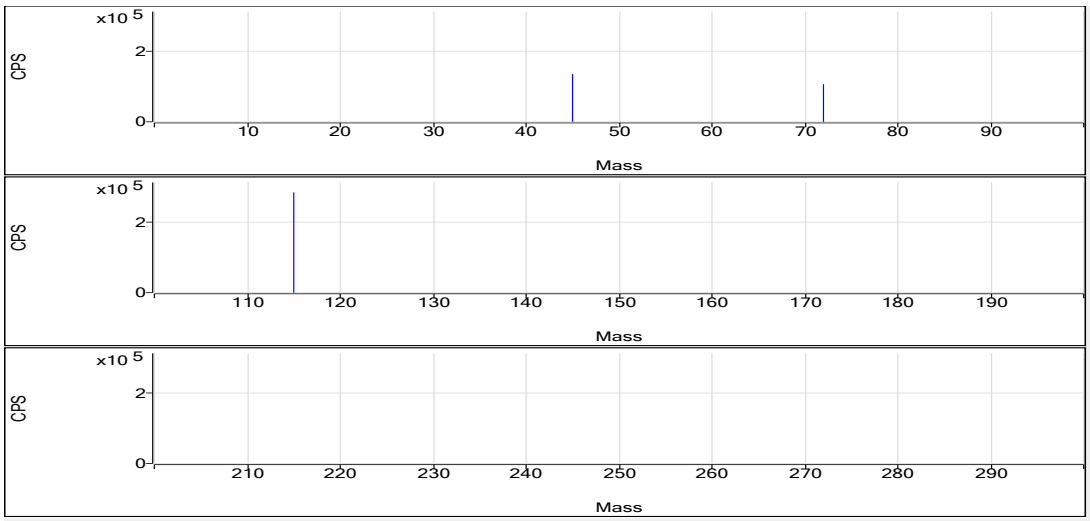
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2181434.08	0.5	99.3	Pulse	0.1000	3
No Gas	Ge	72	1082924.46	1.1	100.9	Pulse	0.1000	3
H2	Sc	45	134069.39	0.5	98.8	Pulse	0.1000	3
H2	Ge	72	105810.31	1.7	100.1	Pulse	0.1000	3
H2	In	115	281889.82	0.3	100.8	Pulse	0.1000	3
He	Sc	45	29477.08	1.5	98.7	Pulse	0.1000	3
He	Ge	72	53540.74	0.8	102.1	Pulse	0.1000	3
He	In	115	52090.90	2.4	101.7	Pulse	0.1000	3
He	Tb	159	285047.39	0.5	102.4	Pulse	0.1000	3
He	Bi	209	240555.95	1.2	101.3	Pulse	0.1000	3

No Gas

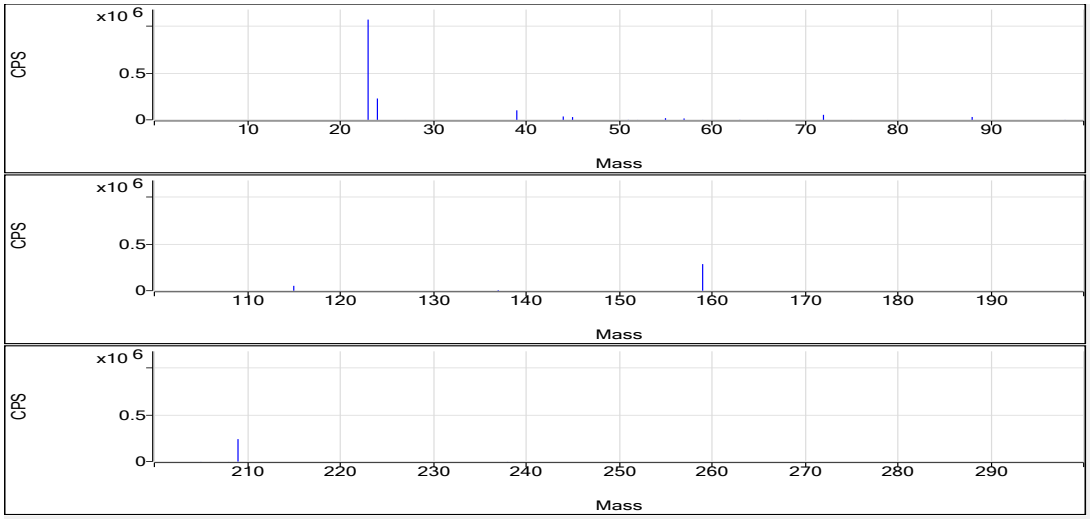


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.055	0.0001	140.00	0.0007	2.306E-05
Be	9	1	No Gas	0.063	0.0001	152.00	0.0007	2.306E-05
Be	9	1	No Gas	0.046	0.0001	126.00	0.0007	2.306E-05
Se	78	2	H2	0.854	0.0004	43.33	0.0004	4.221E-05
Se	78	2	H2	1.073	0.0005	52.00	0.0004	4.221E-05
Se	78	2	H2	0.89	0.0004	45.33	0.0004	4.221E-05
Na	23	3	He	9442.756	36.2198	1072853.11	0.0038	0.2864
Na	23	3	He	9653.31	37.021	1072858.89	0.0038	0.2864
Na	23	3	He	9412.287	36.1038	1077009.91	0.0038	0.2864
Mg	24	3	He	4027.702	7.7581	229801.21	0.0019	0.007972
Mg	24	3	He	4081.556	7.8618	227831.93	0.0019	0.007972
Mg	24	3	He	3971.348	7.6497	228197.65	0.0019	0.007972
Al	27	3	He	6.393	0.0051	150.01	0.0005	0.00158
Al	27	3	He	1.533	0.0024	70.00	0.0005	0.00158
Al	27	3	He	3.252	0.0034	100.00	0.0005	0.00158
K	39	3	He	2846.119	3.4185	101257.28	0.0011	0.3552
K	39	3	He	2942.198	3.5219	102063.09	0.0011	0.3552
K	39	3	He	2839.729	3.4116	101770.89	0.0011	0.3552
Ca	44	3	He	19396.662	1.2155	36005.05	0.0001	0.002
Ca	44	3	He	19671.459	1.2327	35724.22	0.0001	0.002
Ca	44	3	He	19082.455	1.1959	35674.21	0.0001	0.002
Ti	47	3	He	-0.209	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
V	51	3	He	0.395	0.0351	1040.04	0.0218	0.02648
V	51	3	He	0.273	0.0324	940.04	0.0218	0.02648
V	51	3	He	0.169	0.0302	900.03	0.0218	0.02648
Cr	52	3	He	0.245	0.0132	390.02	0.029	0.006056
Cr	52	3	He	0.22	0.0124	360.02	0.029	0.006056
Cr	52	3	He	0.161	0.0107	320.01	0.029	0.006056
Mn	55	3	He	48.877	0.5854	17340.77	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	51.009	0.6108	17701.21	0.0119	0.00335
Mn	55	3	He	50.165	0.6008	17921.47	0.0119	0.00335
Fe	57	3	He	898.631	0.5097	15098.23	0.0006	0.003117
Fe	57	3	He	880.035	0.4992	14467.72	0.0006	0.003117
Fe	57	3	He	860.116	0.488	14557.69	0.0006	0.003117
Co	59	3	He	0.195	0.0106	560.03	0.0317	0.004379
Co	59	3	He	0.173	0.0099	530.03	0.0317	0.004379
Co	59	3	He	0.196	0.0106	570.04	0.0317	0.004379
Ni	60	3	He	-0.118	0.0094	500.03	0.009	0.01049
Ni	60	3	He	0.137	0.0117	630.03	0.009	0.01049
Ni	60	3	He	0.114	0.0115	620.04	0.009	0.01049
Cu	63	3	He	0.113	0.0198	1050.09	0.0259	0.01685
Cu	63	3	He	-0.018	0.0164	880.05	0.0259	0.01685
Cu	63	3	He	0.095	0.0193	1040.08	0.0259	0.01685
Zn	66	3	He	0.183	0.0043	230.01	0.0028	0.003817
Zn	66	3	He	0.362	0.0048	260.01	0.0028	0.003817
Zn	66	3	He	0.293	0.0046	250.01	0.0028	0.003817
As	75	3	He	1.426	0.0031	166.00	0.0019	0.0004832
As	75	3	He	0.944	0.0022	120.00	0.0019	0.0004832
As	75	3	He	1.362	0.003	162.00	0.0019	0.0004832
Sr	88	3	He	72.939	0.5853	30182.56	0.008	0.0005203
Sr	88	3	He	71.266	0.5719	30603.41	0.008	0.0005203
Sr	88	3	He	74.386	0.5969	30553.61	0.008	0.0005203
Mo	98	3	He	0.494	0.0116	600.03	0.0229	0.0003256
Mo	98	3	He	0.54	0.0127	680.04	0.0229	0.0003256
Mo	98	3	He	0.404	0.0096	490.02	0.0229	0.0003256
Ag	107	3	He	0.021	0.0017	90.00	0.05	0.000719
Ag	107	3	He	0.004	0.0009	50.00	0.05	0.000719
Ag	107	3	He	0.013	0.0014	70.00	0.05	0.000719
Cd	111	3	He	-0.019	0	0.00	0.0055	0.000104
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Cd	111	3	He	0.024	0.0002	12.00	0.0055	0.000104
Sn	120	3	He	-0.162	0.0161	830.05	0.0159	0.01867
Sn	120	3	He	0.083	0.02	1070.08	0.0159	0.01867
Sn	120	3	He	-0.216	0.0152	780.06	0.0159	0.01867
Sb	121	3	He	0.089	0.0003	90.00	0.0026	8.342E-05
Sb	121	3	He	0.09	0.0003	90.00	0.0026	8.342E-05
Sb	121	3	He	0.035	0.0002	50.00	0.0026	8.342E-05
Ba	137	3	He	24.014	0.1205	6211.63	0.005	0.0005882
Ba	137	3	He	22.537	0.1131	6051.54	0.005	0.0005882
Ba	137	3	He	23.919	0.12	6141.57	0.005	0.0005882
Tl	205	3	He	0.057	0.0028	660.05	0.0313	0.0009967
Tl	205	3	He	0.03	0.0019	470.03	0.0313	0.0009967
Tl	205	3	He	0.047	0.0025	600.03	0.0313	0.0009967
Pb	208	3	He	0.002	0.003	370.02	0.041	0.002892
Pb	208	3	He	-0.01	0.0025	360.02	0.041	0.002892
Pb	208	3	He	0.002	0.003	400.02	0.041	0.002892
U	238	3	He	0.03	0.0023	550.03	0.0501	0.0008282
U	238	3	He	0.039	0.0028	670.04	0.0501	0.0008282
U	238	3	He	0.033	0.0025	600.04	0.0501	0.0008282
Sc	45	1	No Gas			2178219.34		
Sc	45	1	No Gas			2173172.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2192910.12		
Ge	72	1	No Gas			1076660.37		
Ge	72	1	No Gas			1075681.47		
Ge	72	1	No Gas			1096431.55		
Sc	45	2	H2			133504.25		
Sc	45	2	H2			133907.82		
Sc	45	2	H2			134796.11		
Ge	72	2	H2			106420.85		
Ge	72	2	H2			103781.99		
Ge	72	2	H2			107228.09		
In	115	2	H2			280940.43		
In	115	2	H2			281892.42		
In	115	2	H2			282836.60		
Sc	45	3	He			29620.63		
Sc	45	3	He			28979.71		
Sc	45	3	He			29830.89		
Ge	72	3	He			53079.39		
Ge	72	3	He			53711.26		
Ge	72	3	He			53831.57		
In	115	3	He			51575.63		
In	115	3	He			53523.25		
In	115	3	He			51194.73		
Tb	159	3	He			285139.23		
Tb	159	3	He			283649.33		
Tb	159	3	He			286353.61		
Bi	209	3	He			237293.14		
Bi	209	3	He			242479.27		
Bi	209	3	He			241895.43		

Quantitation Report

Data File Name	068SMPL.d
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Acq Time	2024-07-17 11:13:23
Sample Name	410-178682-G-2-A
Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

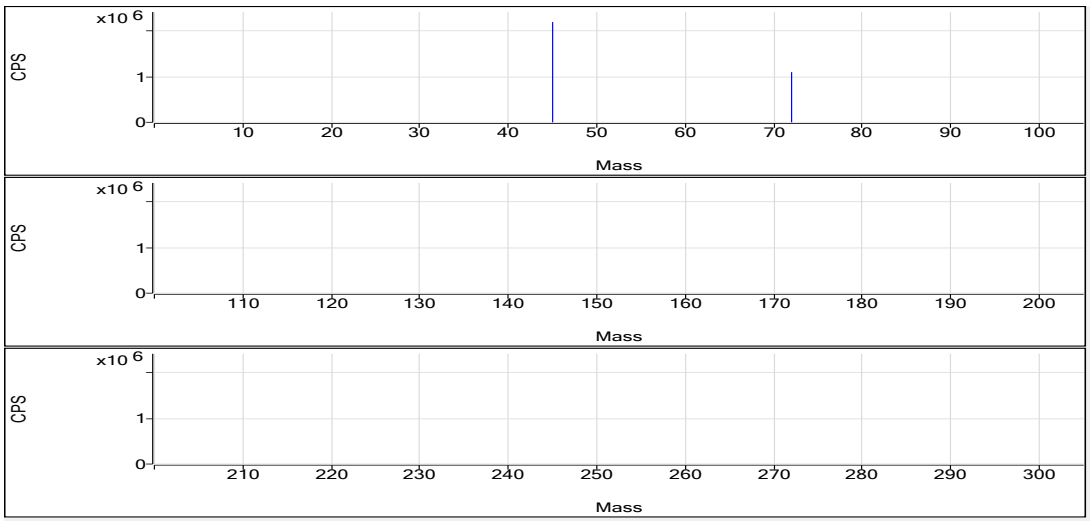
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.051	ppb	18.6	134.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	1.067	ppb	6.2	53.56	0.0005	Pulse	1.5000	3
Na	23	45	He	6897.492	ppb	1.5	779788.40	26.5341	Pulse	0.1000	3
Mg	24	45	He	3937.601	ppb	2.0	222896.74	7.5848	Pulse	0.1000	3
Al	27	45	He	9.176	ppb	8.7	193.34	0.0066	Pulse	0.1000	3
K	39	45	He	2320.246	ppb	2.6	83829.50	2.8525	Pulse	0.1000	3
Ca	44	45	He	10218.801	ppb	1.3	18849.33	0.6413	Pulse	0.1000	3
Ti	47	45	He	0.031	ppb	3445.4	13.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.221	ppb	38.1	920.03	0.0313	Pulse	0.5000	3
Cr	52	45	He	0.214	ppb	10.4	360.02	0.0122	Pulse	0.1000	3
Mn	55	45	He	76.356	ppb	4.7	26818.86	0.9127	Pulse	0.1000	3
Fe	57	45	He	23.448	ppb	18.2	480.03	0.0163	Pulse	0.1000	3
Co	59	72	He	0.570	ppb	3.4	1206.77	0.0224	Pulse	0.1000	3
Ni	60	72	He	0.422	ppb	56.9	770.05	0.0143	Pulse	0.1000	3
Cu	63	72	He	0.647	ppb	25.8	1806.85	0.0336	Pulse	0.1000	3
Zn	66	72	He	1.019	ppb	32.5	360.02	0.0067	Pulse	0.1000	3
As	75	72	He	0.367	ppb	47.5	62.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	61.548	ppb	0.9	25814.07	0.4940	Pulse	0.1000	3
Mo	98	115	He	0.350	ppb	8.4	436.69	0.0084	Pulse	0.1000	3
Ag	107	115	He	0.020	ppb	39.2	90.00	0.0017	Pulse	0.1000	3
Cd	111	115	He	0.039	ppb	19.4	16.67	0.0003	Pulse	0.5000	3
Sn	120	115	He	-0.144	ppb	N/A	856.73	0.0164	Pulse	0.1000	3
Sb	121	159	He	0.111	ppb	38.8	106.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	30.994	ppb	6.0	8112.69	0.1553	Pulse	0.1000	3
Tl	205	209	He	0.048	ppb	16.1	606.70	0.0025	Pulse	0.1000	3
Pb	208	209	He	0.001	ppb	577.0	706.71	0.0029	Pulse	0.1000	3
U	238	209	He	0.018	ppb	11.1	423.36	0.0017	Pulse	0.1000	3

ISTD Table:

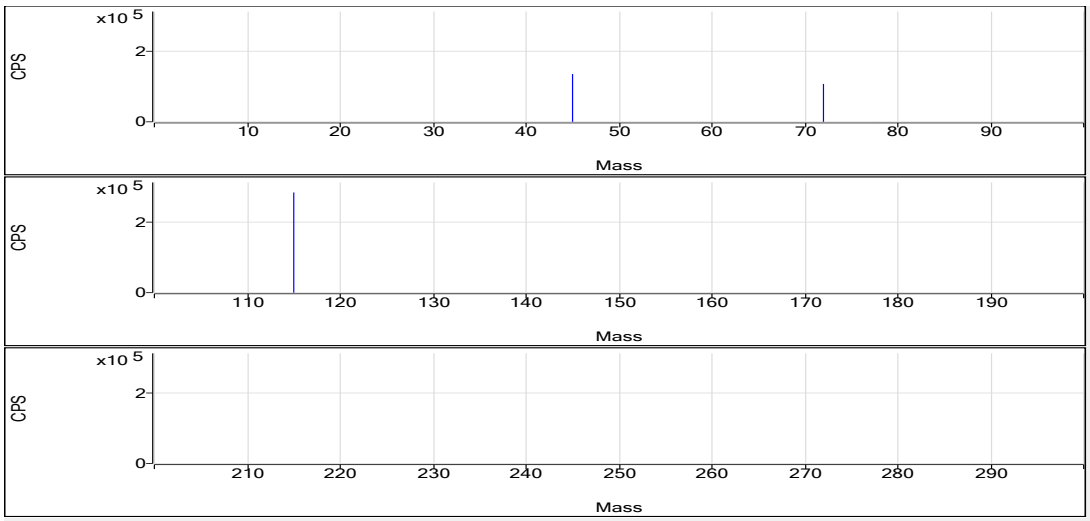
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2198122.83	0.7	100.0	Pulse	0.1000	3
No Gas	Ge	72	1099823.70	0.5	102.5	Pulse	0.1000	3
H2	Sc	45	135424.03	0.8	99.8	Pulse	0.1000	3
H2	Ge	72	107443.10	0.6	101.6	Pulse	0.1000	3
H2	In	115	284334.39	0.5	101.7	Pulse	0.1000	3
He	Sc	45	29390.26	0.7	98.5	Pulse	0.1000	3
He	Ge	72	53774.23	1.3	102.6	Pulse	0.1000	3
He	In	115	52261.54	1.1	102.0	Pulse	0.1000	3
He	Tb	159	285458.04	0.6	102.5	Pulse	0.1000	3
He	Bi	209	242325.95	0.7	102.0	Pulse	0.1000	3

No Gas

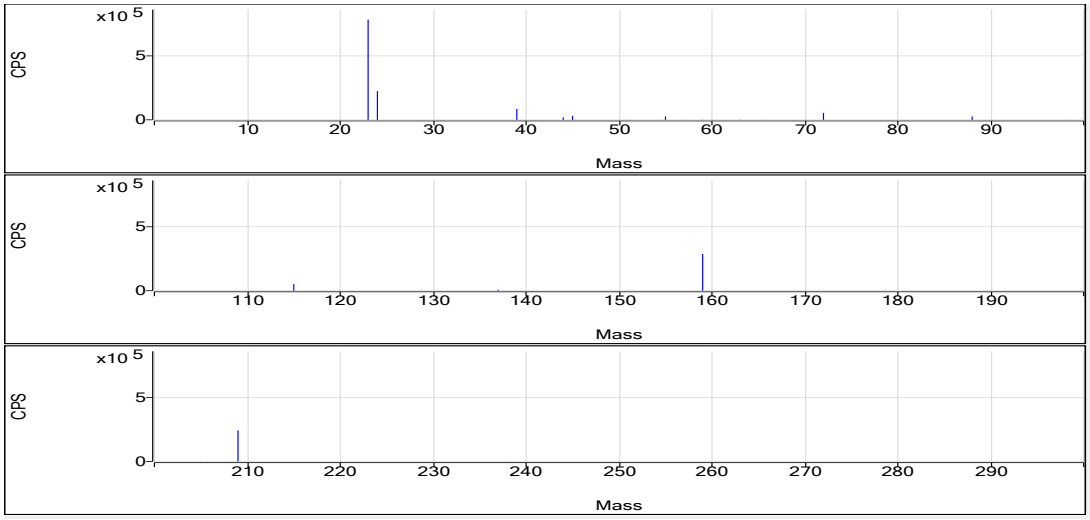


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.04	0.0001	116.00	0.0007	2.306E-05
Be	9	1	No Gas	0.059	0.0001	148.00	0.0007	2.306E-05
Be	9	1	No Gas	0.053	0.0001	138.00	0.0007	2.306E-05
Se	78	2	H2	1.078	0.0005	54.00	0.0004	4.221E-05
Se	78	2	H2	1.127	0.0005	56.67	0.0004	4.221E-05
Se	78	2	H2	0.996	0.0005	50.00	0.0004	4.221E-05
Na	23	3	He	6922.414	26.6289	782359.68	0.0038	0.2864
Na	23	3	He	6785.674	26.1086	773091.16	0.0038	0.2864
Na	23	3	He	6984.389	26.8647	783914.36	0.0038	0.2864
Mg	24	3	He	3951.004	7.6106	223599.06	0.0019	0.007972
Mg	24	3	He	3852.902	7.4218	219764.08	0.0019	0.007972
Mg	24	3	He	4008.895	7.722	225327.07	0.0019	0.007972
Al	27	3	He	9.593	0.0068	200.01	0.0005	0.00158
Al	27	3	He	8.256	0.0061	180.01	0.0005	0.00158
Al	27	3	He	9.678	0.0069	200.01	0.0005	0.00158
K	39	3	He	2267.268	2.7955	82130.87	0.0011	0.3552
K	39	3	He	2308.543	2.8399	84090.78	0.0011	0.3552
K	39	3	He	2384.927	2.9221	85266.85	0.0011	0.3552
Ca	44	3	He	10077.334	0.6325	18582.38	0.0001	0.002
Ca	44	3	He	10328.245	0.6482	19193.03	0.0001	0.002
Ca	44	3	He	10250.823	0.6433	18772.58	0.0001	0.002
Ti	47	3	He	1.191	0.001	30.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
Ti	47	3	He	-0.198	0.0003	10.00	0.0005	0.0004395
V	51	3	He	0.318	0.0334	982.04	0.0218	0.02648
V	51	3	He	0.176	0.0303	898.03	0.0218	0.02648
V	51	3	He	0.169	0.0302	880.03	0.0218	0.02648
Cr	52	3	He	0.237	0.0129	380.02	0.029	0.006056
Cr	52	3	He	0.211	0.0122	360.02	0.029	0.006056
Cr	52	3	He	0.193	0.0117	340.02	0.029	0.006056
Mn	55	3	He	78.793	0.9417	27667.19	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	72.268	0.864	25583.25	0.0119	0.00335
Mn	55	3	He	78.008	0.9324	27206.14	0.0119	0.00335
Fe	57	3	He	28.284	0.0191	560.04	0.0006	0.003117
Fe	57	3	He	20.232	0.0145	430.02	0.0006	0.003117
Fe	57	3	He	21.828	0.0154	450.02	0.0006	0.003117
Co	59	3	He	0.586	0.0229	1240.11	0.0317	0.004379
Co	59	3	He	0.577	0.0226	1200.10	0.0317	0.004379
Co	59	3	He	0.549	0.0218	1180.09	0.0317	0.004379
Ni	60	3	He	0.619	0.0161	870.06	0.009	0.01049
Ni	60	3	He	0.155	0.0119	630.03	0.009	0.01049
Ni	60	3	He	0.492	0.0149	810.07	0.009	0.01049
Cu	63	3	He	0.456	0.0287	1550.14	0.0259	0.01685
Cu	63	3	He	0.763	0.0366	1940.19	0.0259	0.01685
Cu	63	3	He	0.724	0.0356	1930.21	0.0259	0.01685
Zn	66	3	He	1.332	0.0076	410.02	0.0028	0.003817
Zn	66	3	He	1.053	0.0068	360.02	0.0028	0.003817
Zn	66	3	He	0.672	0.0057	310.01	0.0028	0.003817
As	75	3	He	0.377	0.0012	64.00	0.0019	0.0004832
As	75	3	He	0.187	0.0008	44.00	0.0019	0.0004832
As	75	3	He	0.535	0.0015	80.00	0.0019	0.0004832
Sr	88	3	He	62.142	0.4987	25803.85	0.008	0.0005203
Sr	88	3	He	61.125	0.4906	25573.82	0.008	0.0005203
Sr	88	3	He	61.378	0.4926	26064.54	0.008	0.0005203
Mo	98	3	He	0.323	0.0077	400.03	0.0229	0.0003256
Mo	98	3	He	0.346	0.0082	430.02	0.0229	0.0003256
Mo	98	3	He	0.382	0.0091	480.03	0.0229	0.0003256
Ag	107	3	He	0.02	0.0017	90.00	0.05	0.000719
Ag	107	3	He	0.028	0.0021	110.01	0.05	0.000719
Ag	107	3	He	0.012	0.0013	70.00	0.05	0.000719
Cd	111	3	He	0.03	0.0003	14.00	0.0055	0.000104
Cd	111	3	He	0.044	0.0003	18.00	0.0055	0.000104
Cd	111	3	He	0.043	0.0003	18.00	0.0055	0.000104
Sn	120	3	He	-0.177	0.0158	820.06	0.0159	0.01867
Sn	120	3	He	-0.197	0.0155	810.06	0.0159	0.01867
Sn	120	3	He	-0.057	0.0178	940.07	0.0159	0.01867
Sb	121	3	He	0.128	0.0004	120.00	0.0026	8.342E-05
Sb	121	3	He	0.143	0.0005	130.01	0.0026	8.342E-05
Sb	121	3	He	0.062	0.0002	70.00	0.0026	8.342E-05
Ba	137	3	He	33.116	0.1659	8582.94	0.005	0.0005882
Ba	137	3	He	30.291	0.1518	7912.62	0.005	0.0005882
Ba	137	3	He	29.576	0.1482	7842.52	0.005	0.0005882
Tl	205	3	He	0.043	0.0023	570.03	0.0313	0.0009967
Tl	205	3	He	0.057	0.0028	670.04	0.0313	0.0009967
Tl	205	3	He	0.045	0.0024	580.03	0.0313	0.0009967
Pb	208	3	He	-0.003	0.0028	340.02	0.041	0.002892
Pb	208	3	He	0.004	0.0031	370.02	0.041	0.002892
Pb	208	3	He	0	0.0029	320.02	0.041	0.002892
U	238	3	He	0.018	0.0017	420.03	0.0501	0.0008282
U	238	3	He	0.017	0.0017	400.02	0.0501	0.0008282
U	238	3	He	0.021	0.0019	450.02	0.0501	0.0008282
Sc	45	1	No Gas			2181228.87		
Sc	45	1	No Gas			2211559.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2201580.59		
Ge	72	1	No Gas			1093087.01		
Ge	72	1	No Gas			1104304.12		
Ge	72	1	No Gas			1102079.98		
Sc	45	2	H2			134975.93		
Sc	45	2	H2			136590.94		
Sc	45	2	H2			134705.22		
Ge	72	2	H2			107339.16		
Ge	72	2	H2			108153.89		
Ge	72	2	H2			106836.25		
In	115	2	H2			285309.21		
In	115	2	H2			282604.29		
In	115	2	H2			285089.68		
Sc	45	3	He			29380.09		
Sc	45	3	He			29610.64		
Sc	45	3	He			29180.04		
Ge	72	3	He			54091.82		
Ge	72	3	He			52998.16		
Ge	72	3	He			54232.70		
In	115	3	He			51746.58		
In	115	3	He			52137.55		
In	115	3	He			52920.53		
Tb	159	3	He			287306.87		
Tb	159	3	He			284220.41		
Tb	159	3	He			284846.83		
Bi	209	3	He			244310.93		
Bi	209	3	He			240748.81		
Bi	209	3	He			241918.10		

Quantitation Report

Data File Name	069SMPL.d
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Acq Time	2024-07-17 11:15:24
Sample Name	410-178682-G-3-A
Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

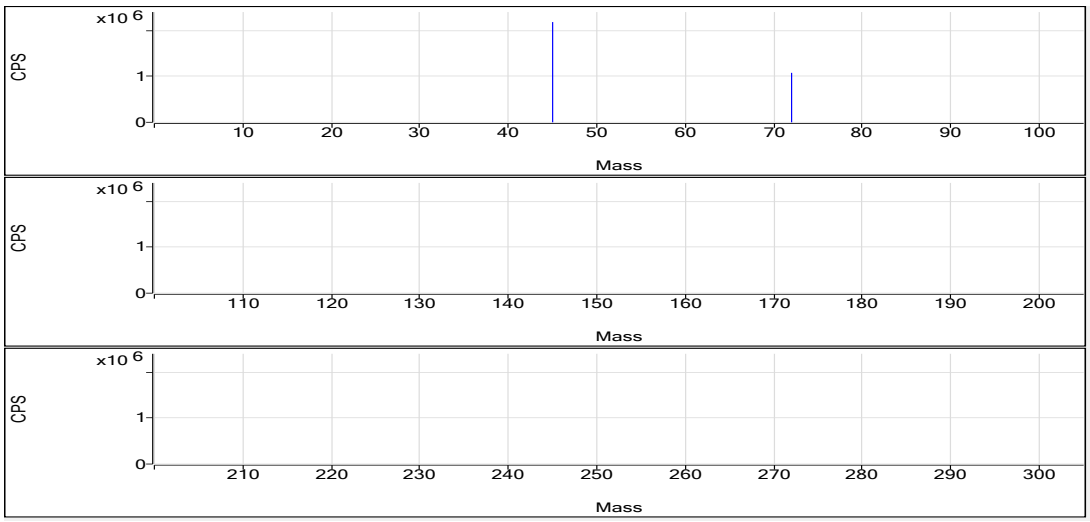
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.102	ppb	10.4	217.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	1.707	ppb	8.7	81.33	0.0008	Pulse	1.5000	3
Na	23	45	He	62890.796	ppb	0.9	7157544.89	239.6105	Analog	0.1000	3
Mg	24	45	He	2606.668	ppb	1.2	150068.08	5.0238	Pulse	0.1000	3
Al	27	45	He	82.872	ppb	12.4	1396.78	0.0467	Pulse	0.1000	3
K	39	45	He	2157.235	ppb	2.9	79954.11	2.6770	Pulse	0.1000	3
Ca	44	45	He	12003.707	ppb	2.9	22487.81	0.7530	Pulse	0.1000	3
Ti	47	45	He	0.019	ppb	2237.0	13.33	0.0004	Pulse	0.1000	3
V	51	45	He	0.336	ppb	32.9	1009.38	0.0338	Pulse	0.5000	3
Cr	52	45	He	0.339	ppb	49.7	473.36	0.0159	Pulse	0.1000	3
Mn	55	45	He	12.146	ppb	9.2	4417.49	0.1480	Pulse	0.1000	3
Fe	57	45	He	7.143	ppb	38.7	213.34	0.0071	Pulse	0.1000	3
Co	59	72	He	0.803	ppb	6.8	1566.80	0.0298	Pulse	0.1000	3
Ni	60	72	He	0.271	ppb	18.0	680.04	0.0129	Pulse	0.1000	3
Cu	63	72	He	0.370	ppb	25.8	1390.11	0.0264	Pulse	0.1000	3
Zn	66	72	He	4.038	ppb	9.7	800.05	0.0152	Pulse	0.1000	3
As	75	72	He	0.116	ppb	72.6	36.67	0.0007	Pulse	0.5000	3
Sr	88	115	He	68.652	ppb	2.3	29127.33	0.5509	Pulse	0.1000	3
Mo	98	115	He	0.068	ppb	32.5	100.00	0.0019	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	22.5	63.33	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.068	ppb	16.1	25.33	0.0005	Pulse	0.5000	3
Sn	120	115	He	-0.140	ppb	N/A	870.10	0.0165	Pulse	0.1000	3
Sb	121	159	He	0.017	ppb	45.0	36.67	0.0001	Pulse	0.1000	3
Ba	137	115	He	41.742	ppb	1.6	11044.83	0.2089	Pulse	0.1000	3
Tl	205	209	He	0.042	ppb	14.2	556.70	0.0023	Pulse	0.1000	3
Pb	208	209	He	0.190	ppb	3.3	2580.20	0.0107	Pulse	0.1000	3
U	238	209	He	0.007	ppb	78.3	290.02	0.0012	Pulse	0.1000	3

ISTD Table:

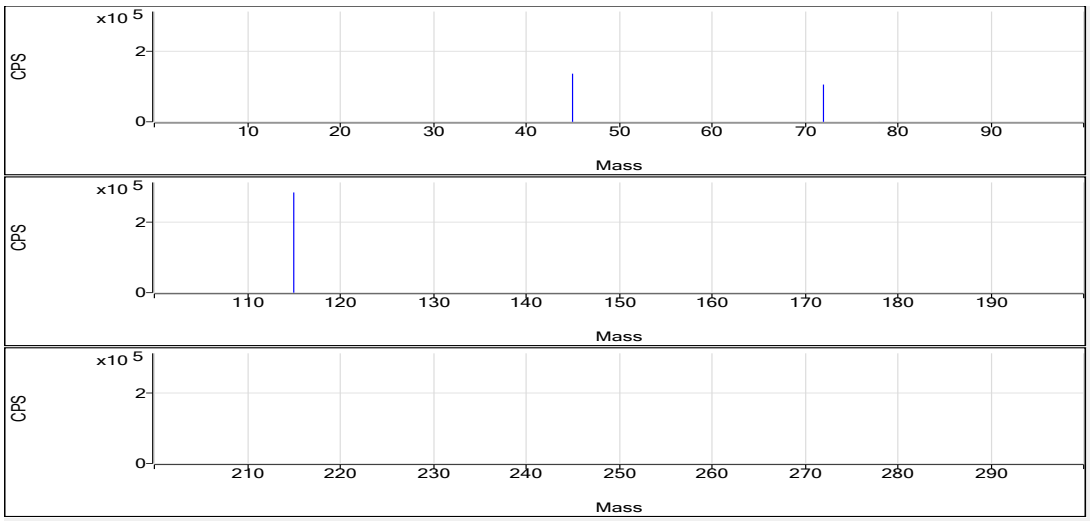
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2185845.70	0.2	99.5	Pulse	0.1000	3
No Gas	Ge	72	1078838.47	0.7	100.5	Pulse	0.1000	3
H2	Sc	45	136317.48	0.5	100.5	Pulse	0.1000	3
H2	Ge	72	105494.39	1.9	99.8	Pulse	0.1000	3
H2	In	115	283806.77	1.8	101.5	Pulse	0.1000	3
He	Sc	45	29874.50	1.9	100.1	Pulse	0.1000	3
He	Ge	72	52563.05	0.7	100.3	Pulse	0.1000	3
He	In	115	52864.05	1.0	103.2	Pulse	0.1000	3
He	Tb	159	285922.12	0.0	102.7	Pulse	0.1000	3
He	Bi	209	241840.96	0.1	101.8	Pulse	0.1000	3

No Gas

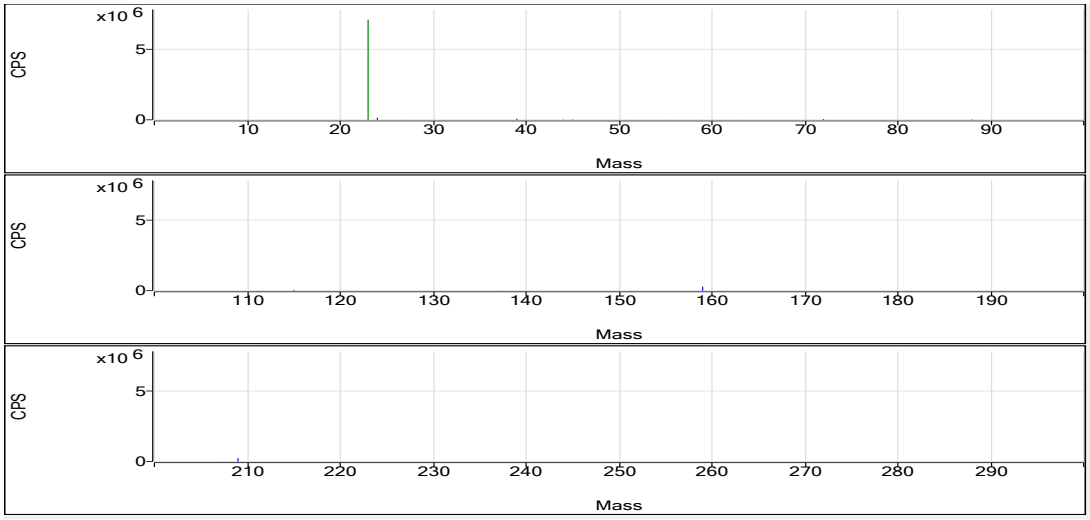


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.114	0.0001	236.00	0.0007	2.306E-05
Be	9	1	No Gas	0.093	0.0001	202.00	0.0007	2.306E-05
Be	9	1	No Gas	0.1	0.0001	214.00	0.0007	2.306E-05
Se	78	2	H2	1.551	0.0007	76.00	0.0004	4.221E-05
Se	78	2	H2	1.723	0.0008	81.33	0.0004	4.221E-05
Se	78	2	H2	1.847	0.0008	86.67	0.0004	4.221E-05
Na	23	3	He	62604.467	238.5209	7256332.39	0.0038	0.2864
Na	23	3	He	63558.579	242.1517	7095077.39	0.0038	0.2864
Na	23	3	He	62509.342	238.1589	7121224.89	0.0038	0.2864
Mg	24	3	He	2602.062	5.0149	152564.48	0.0019	0.007972
Mg	24	3	He	2640.309	5.0885	149093.78	0.0019	0.007972
Mg	24	3	He	2577.634	4.9679	148545.97	0.0019	0.007972
Al	27	3	He	91.208	0.0513	1560.14	0.0005	0.00158
Al	27	3	He	86.043	0.0485	1420.12	0.0005	0.00158
Al	27	3	He	71.365	0.0405	1210.09	0.0005	0.00158
K	39	3	He	2127.863	2.6454	80479.52	0.0011	0.3552
K	39	3	He	2228.734	2.754	80692.20	0.0011	0.3552
K	39	3	He	2115.108	2.6317	78690.62	0.0011	0.3552
Ca	44	3	He	11740.83	0.7366	22407.71	0.0001	0.002
Ca	44	3	He	12399.223	0.7777	22788.17	0.0001	0.002
Ca	44	3	He	11871.067	0.7447	22267.56	0.0001	0.002
Ti	47	3	He	-0.227	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	0.498	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	-0.215	0.0003	10.00	0.0005	0.0004395
V	51	3	He	0.326	0.0336	1022.04	0.0218	0.02648
V	51	3	He	0.451	0.0363	1064.05	0.0218	0.02648
V	51	3	He	0.23	0.0315	942.04	0.0218	0.02648
Cr	52	3	He	0.154	0.0105	320.01	0.029	0.006056
Cr	52	3	He	0.38	0.0171	500.03	0.029	0.006056
Cr	52	3	He	0.484	0.0201	600.04	0.029	0.006056
Mn	55	3	He	10.872	0.1328	4040.67	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	12.646	0.154	4510.83	0.0119	0.00335
Mn	55	3	He	12.92	0.1572	4700.97	0.0119	0.00335
Fe	57	3	He	8.465	0.0079	240.01	0.0006	0.003117
Fe	57	3	He	9.001	0.0082	240.01	0.0006	0.003117
Fe	57	3	He	3.963	0.0054	160.01	0.0006	0.003117
Co	59	3	He	0.834	0.0308	1630.14	0.0317	0.004379
Co	59	3	He	0.74	0.0278	1460.12	0.0317	0.004379
Co	59	3	He	0.836	0.0308	1610.13	0.0317	0.004379
Ni	60	3	He	0.218	0.0125	660.04	0.009	0.01049
Ni	60	3	He	0.314	0.0133	700.04	0.009	0.01049
Ni	60	3	He	0.281	0.013	680.04	0.009	0.01049
Cu	63	3	He	0.479	0.0293	1550.14	0.0259	0.01685
Cu	63	3	He	0.327	0.0253	1330.11	0.0259	0.01685
Cu	63	3	He	0.304	0.0247	1290.09	0.0259	0.01685
Zn	66	3	He	3.728	0.0143	760.04	0.0028	0.003817
Zn	66	3	He	3.906	0.0149	780.05	0.0028	0.003817
Zn	66	3	He	4.48	0.0165	860.06	0.0028	0.003817
As	75	3	He	0.126	0.0007	38.00	0.0019	0.0004832
As	75	3	He	0.027	0.0005	28.00	0.0019	0.0004832
As	75	3	He	0.194	0.0008	44.00	0.0019	0.0004832
Sr	88	3	He	69.789	0.56	29661.52	0.008	0.0005203
Sr	88	3	He	66.849	0.5365	28058.26	0.008	0.0005203
Sr	88	3	He	69.318	0.5563	29662.20	0.008	0.0005203
Mo	98	3	He	0.085	0.0023	120.00	0.0229	0.0003256
Mo	98	3	He	0.078	0.0021	110.00	0.0229	0.0003256
Mo	98	3	He	0.043	0.0013	70.00	0.0229	0.0003256
Ag	107	3	He	0.012	0.0013	70.00	0.05	0.000719
Ag	107	3	He	0.009	0.0011	60.00	0.05	0.000719
Ag	107	3	He	0.008	0.0011	60.00	0.05	0.000719
Cd	111	3	He	0.056	0.0004	22.00	0.0055	0.000104
Cd	111	3	He	0.078	0.0005	28.00	0.0055	0.000104
Cd	111	3	He	0.069	0.0005	26.00	0.0055	0.000104
Sn	120	3	He	-0.153	0.0162	860.08	0.0159	0.01867
Sn	120	3	He	-0.224	0.0151	790.05	0.0159	0.01867
Sn	120	3	He	-0.042	0.018	960.17	0.0159	0.01867
Sb	121	3	He	0.022	0.0001	40.00	0.0026	8.342E-05
Sb	121	3	He	0.008	0.0001	30.00	0.0026	8.342E-05
Sb	121	3	He	0.022	0.0001	40.00	0.0026	8.342E-05
Ba	137	3	He	40.979	0.2051	10864.68	0.005	0.0005882
Ba	137	3	He	42.304	0.2117	11074.85	0.005	0.0005882
Ba	137	3	He	41.942	0.2099	11194.97	0.005	0.0005882
Tl	205	3	He	0.047	0.0025	600.04	0.0313	0.0009967
Tl	205	3	He	0.036	0.0021	510.03	0.0313	0.0009967
Tl	205	3	He	0.042	0.0023	560.04	0.0313	0.0009967
Pb	208	3	He	0.194	0.0109	1220.10	0.041	0.002892
Pb	208	3	He	0.182	0.0104	1310.11	0.041	0.002892
Pb	208	3	He	0.192	0.0108	1460.14	0.041	0.002892
U	238	3	He	0.007	0.0012	290.02	0.0501	0.0008282
U	238	3	He	0.002	0.0009	220.01	0.0501	0.0008282
U	238	3	He	0.013	0.0015	360.02	0.0501	0.0008282
Sc	45	1	No Gas			2185539.50		
Sc	45	1	No Gas			2190920.28		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2181077.31		
Ge	72	1	No Gas			1087192.87		
Ge	72	1	No Gas			1073112.17		
Ge	72	1	No Gas			1076210.37		
Sc	45	2	H2			136663.50		
Sc	45	2	H2			136715.29		
Sc	45	2	H2			135573.64		
Ge	72	2	H2			107790.52		
Ge	72	2	H2			104466.84		
Ge	72	2	H2			104225.81		
In	115	2	H2			288788.61		
In	115	2	H2			283791.87		
In	115	2	H2			278839.82		
Sc	45	3	He			30422.21		
Sc	45	3	He			29300.14		
Sc	45	3	He			29901.15		
Ge	72	3	He			52967.43		
Ge	72	3	He			52516.54		
Ge	72	3	He			52205.19		
In	115	3	He			52971.14		
In	115	3	He			52308.94		
In	115	3	He			53332.44		
Tb	159	3	He			286045.48		
Tb	159	3	He			285821.91		
Tb	159	3	He			285898.96		
Bi	209	3	He			242089.57		
Bi	209	3	He			241925.58		
Bi	209	3	He			241507.73		

Quantitation Report

Data File Name	071_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 11:19:28
Sample Name	CCV 6148199
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

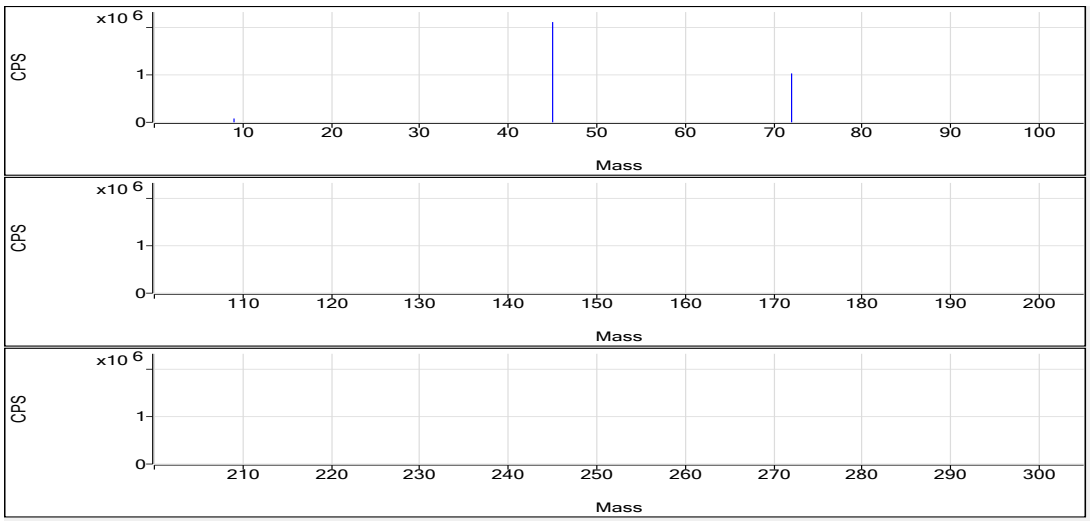
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.825	ppb	1.6	80722.76	0.0380	Pulse	0.5000	3
Se	78	72	H2	54.987	ppb	1.7	2383.98	0.0235	Pulse	1.5000	3
Na	23	45	He	5118.485	ppb	1.8	580989.49	19.7643	Pulse	0.1000	3
Mg	24	45	He	5043.971	ppb	1.2	285566.25	9.7137	Pulse	0.1000	3
Al	27	45	He	4937.872	ppb	0.5	79154.58	2.6924	Pulse	0.1000	3
K	39	45	He	5069.042	ppb	2.4	170821.08	5.8110	Pulse	0.1000	3
Ca	44	45	He	4989.424	ppb	5.2	9233.17	0.3142	Pulse	0.1000	3
Ti	47	45	He	5033.541	ppb	3.0	72268.99	2.4585	Pulse	0.1000	3
V	51	45	He	507.593	ppb	1.2	326623.59	11.1105	Pulse	0.5000	3
Cr	52	45	He	504.168	ppb	0.4	429718.94	14.6167	Pulse	0.1000	3
Mn	55	45	He	510.261	ppb	1.8	178729.27	6.0801	Pulse	0.1000	3
Fe	57	45	He	5113.041	ppb	1.9	84824.11	2.8856	Pulse	0.1000	3
Co	59	72	He	525.718	ppb	2.1	853627.44	16.6536	Pulse	0.1000	3
Ni	60	72	He	526.642	ppb	1.6	244571.05	4.7711	Pulse	0.1000	3
Cu	63	72	He	522.511	ppb	1.8	694481.79	13.5483	Pulse	0.1000	3
Zn	66	72	He	523.232	ppb	1.9	75976.70	1.4822	Pulse	0.1000	3
As	75	72	He	529.930	ppb	1.9	50394.77	0.9831	Pulse	0.5000	3
Sr	88	115	He	52.187	ppb	1.3	21406.72	0.4189	Pulse	0.1000	3
Mo	98	115	He	53.295	ppb	3.4	62401.41	1.2216	Pulse	0.1000	3
Ag	107	115	He	52.207	ppb	2.2	133404.89	2.6110	Pulse	0.1000	3
Cd	111	115	He	52.183	ppb	2.8	14733.74	0.2884	Pulse	0.5000	3
Sn	120	115	He	52.855	ppb	3.7	43923.09	0.8599	Pulse	0.1000	3
Sb	121	159	He	51.654	ppb	1.2	37889.00	0.1349	Pulse	0.1000	3
Ba	137	115	He	526.201	ppb	3.1	134204.45	2.6271	Pulse	0.1000	3
Tl	205	209	He	51.775	ppb	0.8	387151.66	1.6211	Pulse	0.1000	3
Pb	208	209	He	51.959	ppb	0.6	509721.92	2.1344	Pulse	0.1000	3
U	238	209	He	51.323	ppb	0.6	614618.25	2.5736	Pulse	0.1000	3

ISTD Table:

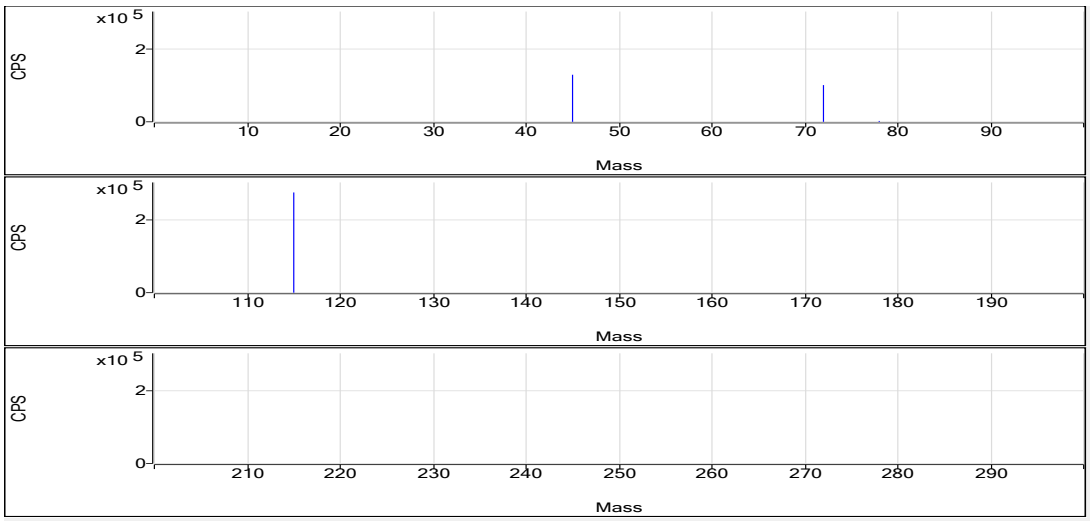
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2123748.67	0.4	96.6	Pulse	0.1000	3
No Gas	Ge	72	1035697.98	0.5	96.5	Pulse	0.1000	3
H2	Sc	45	129803.87	0.8	95.7	Pulse	0.1000	3
H2	Ge	72	101248.01	1.0	95.8	Pulse	0.1000	3
H2	In	115	276391.75	1.1	98.8	Pulse	0.1000	3
He	Sc	45	29400.14	1.2	98.5	Pulse	0.1000	3
He	Ge	72	51272.19	2.0	97.8	Pulse	0.1000	3
He	In	115	51112.93	2.6	99.7	Pulse	0.1000	3
He	Tb	159	280962.26	0.4	100.9	Pulse	0.1000	3
He	Bi	209	238823.97	0.7	100.6	Pulse	0.1000	3

No Gas

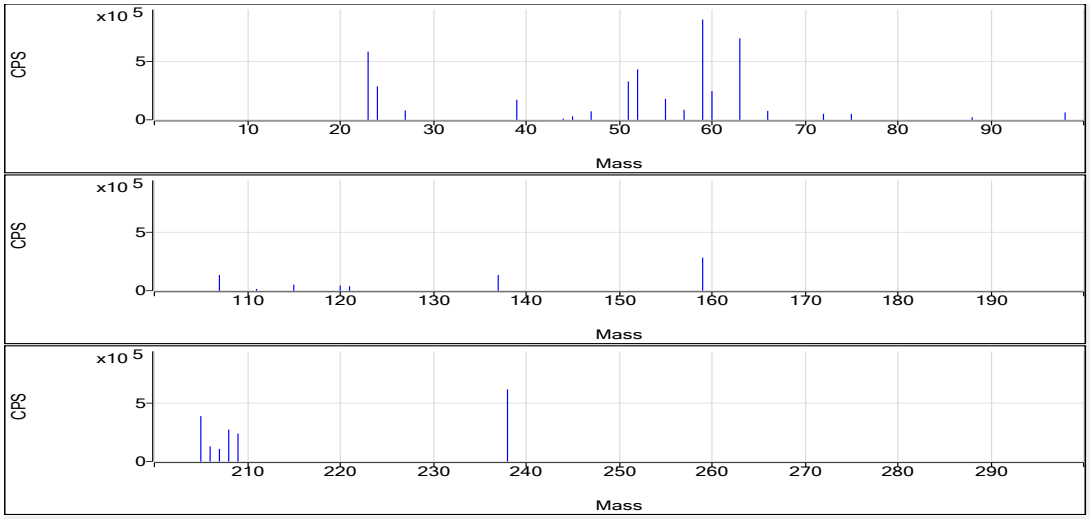


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.975	0.0374	79726.91	0.0007	2.306E-05
Be	9	1	No Gas	51.64	0.0386	81831.85	0.0007	2.306E-05
Be	9	1	No Gas	50.86	0.038	80609.51	0.0007	2.306E-05
Se	78	2	H2	55.384	0.0237	2374.20	0.0004	4.221E-05
Se	78	2	H2	55.665	0.0238	2428.21	0.0004	4.221E-05
Se	78	2	H2	53.911	0.0231	2349.53	0.0004	4.221E-05
Na	23	3	He	5090.808	19.6589	579157.06	0.0038	0.2864
Na	23	3	He	5045.896	19.488	579398.62	0.0038	0.2864
Na	23	3	He	5218.75	20.1458	584412.80	0.0038	0.2864
Mg	24	3	He	4984.917	9.6	282819.51	0.0019	0.007972
Mg	24	3	He	5044.155	9.714	288807.73	0.0019	0.007972
Mg	24	3	He	5102.84	9.8269	285071.50	0.0019	0.007972
Al	27	3	He	4958.769	2.7038	79654.10	0.0005	0.00158
Al	27	3	He	4907.97	2.6761	79563.17	0.0005	0.00158
Al	27	3	He	4946.877	2.6973	78246.47	0.0005	0.00158
K	39	3	He	4960.015	5.6936	167735.99	0.0011	0.3552
K	39	3	He	5049.953	5.7904	172155.54	0.0011	0.3552
K	39	3	He	5197.156	5.9489	172571.72	0.0011	0.3552
Ca	44	3	He	4776.608	0.3008	8862.99	0.0001	0.002
Ca	44	3	He	4910.285	0.3092	9193.10	0.0001	0.002
Ca	44	3	He	5281.379	0.3324	9643.41	0.0001	0.002
Ti	47	3	He	4880.732	2.3839	70228.89	0.0005	0.0004395
Ti	47	3	He	5039.783	2.4615	73183.54	0.0005	0.0004395
Ti	47	3	He	5180.108	2.53	73394.55	0.0005	0.0004395
V	51	3	He	503.175	11.0141	324477.72	0.0218	0.02648
V	51	3	He	505.016	11.0543	328655.09	0.0218	0.02648
V	51	3	He	514.587	11.2633	326737.97	0.0218	0.02648
Cr	52	3	He	503.753	14.6047	430257.26	0.029	0.006056
Cr	52	3	He	502.491	14.5681	433123.94	0.029	0.006056
Cr	52	3	He	506.259	14.6773	425775.62	0.029	0.006056
Mn	55	3	He	505.699	6.0258	177520.15	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	504.126	6.007	178594.55	0.0119	0.00335
Mn	55	3	He	520.957	6.2075	180073.10	0.0119	0.00335
Fe	57	3	He	5126.244	2.893	85229.54	0.0006	0.003117
Fe	57	3	He	5011.143	2.8281	84083.68	0.0006	0.003117
Fe	57	3	He	5201.736	2.9356	85159.12	0.0006	0.003117
Co	59	3	He	538.184	17.0484	853577.96	0.0317	0.004379
Co	59	3	He	519.893	16.4691	854491.94	0.0317	0.004379
Co	59	3	He	519.077	16.4433	852812.41	0.0317	0.004379
Ni	60	3	He	536.444	4.8597	243315.29	0.009	0.01049
Ni	60	3	He	520.932	4.7195	244868.10	0.009	0.01049
Ni	60	3	He	522.551	4.7341	245529.76	0.009	0.01049
Cu	63	3	He	533.336	13.8286	692371.01	0.0259	0.01685
Cu	63	3	He	518.758	13.4511	697903.58	0.0259	0.01685
Cu	63	3	He	515.44	13.3652	693170.77	0.0259	0.01685
Zn	66	3	He	533.268	1.5105	75628.66	0.0028	0.003817
Zn	66	3	He	522.98	1.4815	76864.42	0.0028	0.003817
Zn	66	3	He	513.447	1.4545	75437.03	0.0028	0.003817
As	75	3	He	541.512	1.0046	50299.14	0.0019	0.0004832
As	75	3	He	525.297	0.9745	50563.99	0.0019	0.0004832
As	75	3	He	522.981	0.9703	50321.17	0.0019	0.0004832
Sr	88	3	He	52.604	0.4222	21196.43	0.008	0.0005203
Sr	88	3	He	51.383	0.4125	21717.23	0.008	0.0005203
Sr	88	3	He	52.575	0.422	21306.49	0.008	0.0005203
Mo	98	3	He	54.022	1.2382	62156.92	0.0229	0.0003256
Mo	98	3	He	51.238	1.1744	61835.87	0.0229	0.0003256
Mo	98	3	He	54.625	1.252	63211.43	0.0229	0.0003256
Ag	107	3	He	52.729	2.6371	132379.65	0.05	0.000719
Ag	107	3	He	50.872	2.5442	133961.56	0.05	0.000719
Ag	107	3	He	53.02	2.6516	133873.47	0.05	0.000719
Cd	111	3	He	52.791	0.2918	14645.66	0.0055	0.000104
Cd	111	3	He	50.536	0.2793	14705.71	0.0055	0.000104
Cd	111	3	He	53.222	0.2941	14849.86	0.0055	0.000104
Sn	120	3	He	53.9	0.8765	43999.82	0.0159	0.01867
Sn	120	3	He	50.58	0.8237	43367.80	0.0159	0.01867
Sn	120	3	He	54.086	0.8795	44401.64	0.0159	0.01867
Sb	121	3	He	51.29	0.1339	37651.64	0.0026	8.342E-05
Sb	121	3	He	52.378	0.1367	38554.09	0.0026	8.342E-05
Sb	121	3	He	51.295	0.1339	37461.26	0.0026	8.342E-05
Ba	137	3	He	539.612	2.694	135237.01	0.005	0.0005882
Ba	137	3	He	507.698	2.5347	133460.07	0.005	0.0005882
Ba	137	3	He	531.292	2.6525	133916.28	0.005	0.0005882
Tl	205	3	He	51.864	1.6239	386579.92	0.0313	0.0009967
Tl	205	3	He	51.313	1.6067	386679.76	0.0313	0.0009967
Tl	205	3	He	52.149	1.6328	388195.31	0.0313	0.0009967
Pb	208	3	He	52.224	2.1452	273409.64	0.041	0.002892
Pb	208	3	He	51.613	2.1201	272336.19	0.041	0.002892
Pb	208	3	He	52.041	2.1377	269917.57	0.041	0.002892
U	238	3	He	51.61	2.588	616088.90	0.0501	0.0008282
U	238	3	He	50.965	2.5556	615072.96	0.0501	0.0008282
U	238	3	He	51.393	2.5771	612692.88	0.0501	0.0008282
Sc	45	1	No Gas			2133133.09		
Sc	45	1	No Gas			2118875.75		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2119237.16		
Ge	72	1	No Gas			1041524.44		
Ge	72	1	No Gas			1033741.16		
Ge	72	1	No Gas			1031828.34		
Sc	45	2	H2			128559.60		
Sc	45	2	H2			130415.65		
Sc	45	2	H2			130436.36		
Ge	72	2	H2			100106.23		
Ge	72	2	H2			101869.14		
Ge	72	2	H2			101768.67		
In	115	2	H2			273157.14		
In	115	2	H2			279126.30		
In	115	2	H2			276891.81		
Sc	45	3	He			29460.25		
Sc	45	3	He			29731.01		
Sc	45	3	He			29009.16		
Ge	72	3	He			50068.02		
Ge	72	3	He			51884.58		
Ge	72	3	He			51863.98		
In	115	3	He			50542.20		
In	115	3	He			52991.08		
In	115	3	He			50833.32		
Tb	159	3	He			281190.74		
Tb	159	3	He			281953.92		
Tb	159	3	He			279742.12		
Bi	209	3	He			238055.97		
Bi	209	3	He			240673.06		
Bi	209	3	He			237742.87		

Quantitation Report

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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

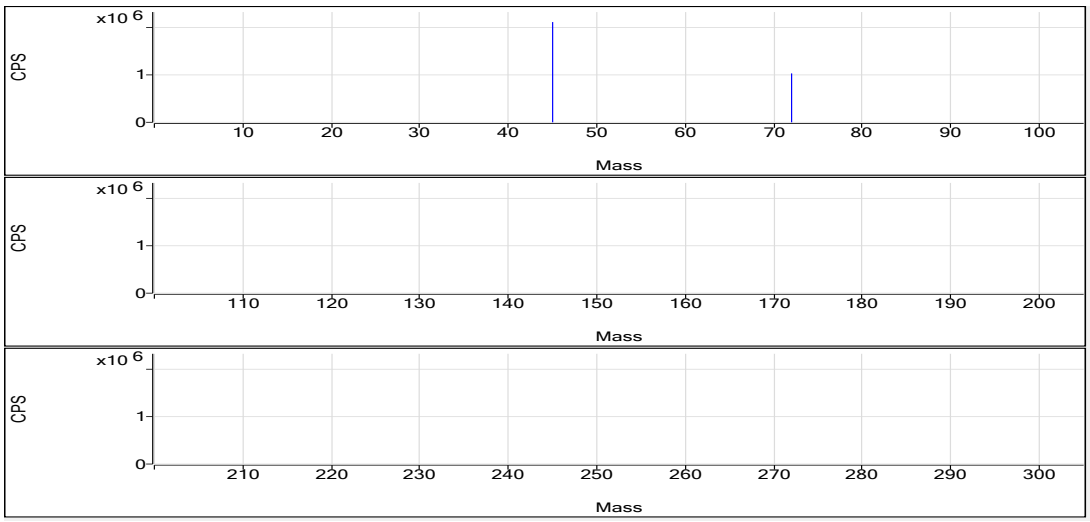
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.049	ppb	29.1	125.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	-0.006	ppb	N/A	4.00	0.0000	Pulse	1.5000	3
Na	23	45	He	53.567	ppb	18.5	14127.13	0.4903	Pulse	0.1000	3
Mg	24	45	He	12.117	ppb	14.4	903.39	0.0313	Pulse	0.1000	3
Al	27	45	He	2.191	ppb	5.5	80.00	0.0028	Pulse	0.1000	3
K	39	45	He	-2.526	ppb	N/A	10157.20	0.3525	Pulse	0.1000	3
Ca	44	45	He	14.300	ppb	50.6	83.33	0.0029	Pulse	0.1000	3
Ti	47	45	He	1.691	ppb	62.4	36.67	0.0013	Pulse	0.1000	3
V	51	45	He	0.201	ppb	6.9	890.03	0.0309	Pulse	0.5000	3
Cr	52	45	He	0.189	ppb	26.7	333.35	0.0115	Pulse	0.1000	3
Mn	55	45	He	1.055	ppb	25.0	460.03	0.0159	Pulse	0.1000	3
Fe	57	45	He	3.035	ppb	135.4	140.00	0.0048	Pulse	0.1000	3
Co	59	72	He	0.235	ppb	23.8	606.70	0.0118	Pulse	0.1000	3
Ni	60	72	He	0.017	ppb	1020.1	546.69	0.0106	Pulse	0.1000	3
Cu	63	72	He	0.074	ppb	91.8	963.40	0.0188	Pulse	0.1000	3
Zn	66	72	He	-0.042	ppb	N/A	190.01	0.0037	Pulse	0.1000	3
As	75	72	He	0.383	ppb	8.0	61.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.169	ppb	22.6	96.67	0.0019	Pulse	0.1000	3
Mo	98	115	He	0.073	ppb	37.9	103.34	0.0020	Pulse	0.1000	3
Ag	107	115	He	0.031	ppb	18.7	116.67	0.0023	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	131.4	8.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.174	ppb	N/A	820.06	0.0159	Pulse	0.1000	3
Sb	121	159	He	0.078	ppb	17.6	80.00	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.206	ppb	44.6	83.33	0.0016	Pulse	0.1000	3
Tl	205	209	He	0.117	ppb	11.3	1096.76	0.0047	Pulse	0.1000	3
Pb	208	209	He	0.015	ppb	121.6	826.71	0.0035	Pulse	0.1000	3
U	238	209	He	0.012	ppb	50.4	340.02	0.0014	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2111854.24	0.6	96.1	Pulse	0.1000	3
No Gas	Ge	72	1030318.14	0.3	96.0	Pulse	0.1000	3
H2	Sc	45	129487.89	2.7	95.4	Pulse	0.1000	3
H2	Ge	72	101322.23	2.3	95.8	Pulse	0.1000	3
H2	In	115	275323.11	2.1	98.4	Pulse	0.1000	3
He	Sc	45	28845.84	2.3	96.6	Pulse	0.1000	3
He	Ge	72	51356.02	0.4	98.0	Pulse	0.1000	3
He	In	115	51602.97	0.8	100.7	Pulse	0.1000	3
He	Tb	159	279792.26	1.7	100.5	Pulse	0.1000	3
He	Bi	209	235472.97	0.3	99.2	Pulse	0.1000	3

No Gas



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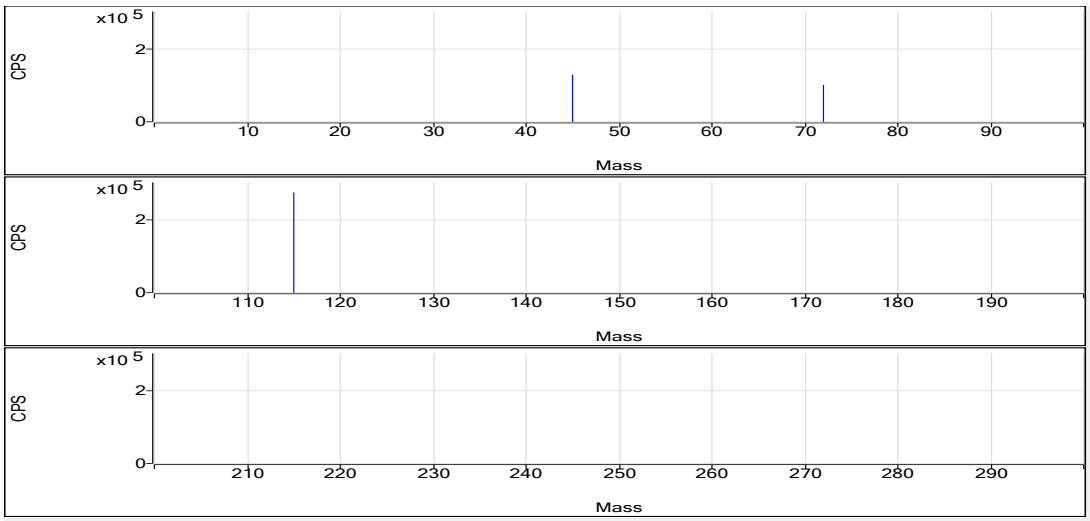
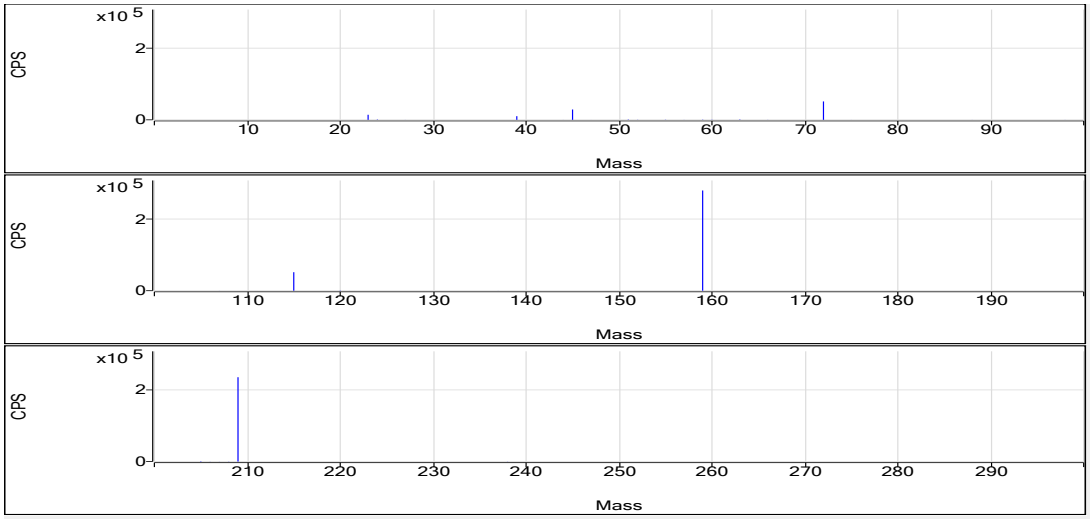


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.04	0.0001	112.00	0.0007	2.306E-05
Be	9	1	No Gas	0.04	0.0001	112.00	0.0007	2.306E-05
Be	9	1	No Gas	0.065	0.0001	152.00	0.0007	2.306E-05
Se	78	2	H2	0.012	0	4.67	0.0004	4.221E-05
Se	78	2	H2	-0.038	0	2.67	0.0004	4.221E-05
Se	78	2	H2	0.008	0	4.67	0.0004	4.221E-05
Na	23	3	He	64.991	0.5337	15018.02	0.0038	0.2864
Na	23	3	He	47.102	0.4657	13466.50	0.0038	0.2864
Na	23	3	He	48.608	0.4714	13896.87	0.0038	0.2864
Mg	24	3	He	11.742	0.0306	860.06	0.0019	0.007972
Mg	24	3	He	10.594	0.0284	820.05	0.0019	0.007972
Mg	24	3	He	14.016	0.0349	1030.07	0.0019	0.007972
Al	27	3	He	2.317	0.0028	80.00	0.0005	0.00158
Al	27	3	He	2.176	0.0028	80.00	0.0005	0.00158
Al	27	3	He	2.08	0.0027	80.00	0.0005	0.00158
K	39	3	He	17.47	0.374	10524.18	0.0011	0.3552
K	39	3	He	4.539	0.3601	10414.05	0.0011	0.3552
K	39	3	He	-29.587	0.3234	9533.37	0.0011	0.3552
Ca	44	3	He	19.151	0.0032	90.00	0.0001	0.002
Ca	44	3	He	17.769	0.0031	90.00	0.0001	0.002
Ca	44	3	He	5.979	0.0024	70.00	0.0001	0.002
Ti	47	3	He	0.556	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	2.64	0.0017	50.00	0.0005	0.0004395
Ti	47	3	He	1.878	0.0014	40.00	0.0005	0.0004395
V	51	3	He	0.216	0.0312	878.03	0.0218	0.02648
V	51	3	He	0.191	0.0306	886.03	0.0218	0.02648
V	51	3	He	0.195	0.0307	906.03	0.0218	0.02648
Cr	52	3	He	0.159	0.0107	300.01	0.029	0.006056
Cr	52	3	He	0.161	0.0107	310.02	0.029	0.006056
Cr	52	3	He	0.248	0.0132	390.02	0.029	0.006056
Mn	55	3	He	1.002	0.0153	430.03	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.822	0.0131	380.02	0.0119	0.00335
Mn	55	3	He	1.342	0.0193	570.04	0.0119	0.00335
Fe	57	3	He	1.406	0.0039	110.00	0.0006	0.003117
Fe	57	3	He	-0.008	0.0031	90.00	0.0006	0.003117
Fe	57	3	He	7.709	0.0075	220.01	0.0006	0.003117
Co	59	3	He	0.297	0.0138	710.04	0.0317	0.004379
Co	59	3	He	0.188	0.0103	530.03	0.0317	0.004379
Co	59	3	He	0.219	0.0113	580.03	0.0317	0.004379
Ni	60	3	He	-0.066	0.0099	510.02	0.009	0.01049
Ni	60	3	He	0.221	0.0125	640.03	0.009	0.01049
Ni	60	3	He	-0.103	0.0096	490.03	0.009	0.01049
Cu	63	3	He	0.098	0.0194	1000.08	0.0259	0.01685
Cu	63	3	He	0.126	0.0201	1030.07	0.0259	0.01685
Cu	63	3	He	-0.003	0.0168	860.05	0.0259	0.01685
Zn	66	3	He	0.434	0.005	260.01	0.0028	0.003817
Zn	66	3	He	0.169	0.0043	220.01	0.0028	0.003817
Zn	66	3	He	-0.73	0.0018	90.00	0.0028	0.003817
As	75	3	He	0.409	0.0012	64.00	0.0019	0.0004832
As	75	3	He	0.392	0.0012	62.00	0.0019	0.0004832
As	75	3	He	0.35	0.0011	58.00	0.0019	0.0004832
Sr	88	3	He	0.179	0.002	100.00	0.008	0.0005203
Sr	88	3	He	0.127	0.0015	80.00	0.008	0.0005203
Sr	88	3	He	0.201	0.0021	110.00	0.008	0.0005203
Mo	98	3	He	0.105	0.0027	140.01	0.0229	0.0003256
Mo	98	3	He	0.061	0.0017	90.00	0.0229	0.0003256
Mo	98	3	He	0.054	0.0016	80.00	0.0229	0.0003256
Ag	107	3	He	0.025	0.002	100.00	0.05	0.000719
Ag	107	3	He	0.032	0.0023	120.00	0.05	0.000719
Ag	107	3	He	0.036	0.0025	130.00	0.05	0.000719
Cd	111	3	He	0.017	0.0002	10.00	0.0055	0.000104
Cd	111	3	He	0.016	0.0002	10.00	0.0055	0.000104
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Sn	120	3	He	-0.02	0.0183	940.07	0.0159	0.01867
Sn	120	3	He	-0.243	0.0148	770.05	0.0159	0.01867
Sn	120	3	He	-0.259	0.0146	750.06	0.0159	0.01867
Sb	121	3	He	0.065	0.0003	70.00	0.0026	8.342E-05
Sb	121	3	He	0.075	0.0003	80.00	0.0026	8.342E-05
Sb	121	3	He	0.092	0.0003	90.00	0.0026	8.342E-05
Ba	137	3	He	0.312	0.0021	110.00	0.005	0.0005882
Ba	137	3	He	0.152	0.0013	70.00	0.005	0.0005882
Ba	137	3	He	0.154	0.0014	70.00	0.005	0.0005882
Tl	205	3	He	0.13	0.0051	1190.11	0.0313	0.0009967
Tl	205	3	He	0.117	0.0047	1100.10	0.0313	0.0009967
Tl	205	3	He	0.104	0.0042	1000.08	0.0313	0.0009967
Pb	208	3	He	0.007	0.0032	370.02	0.041	0.002892
Pb	208	3	He	0.002	0.003	340.02	0.041	0.002892
Pb	208	3	He	0.036	0.0044	520.03	0.041	0.002892
U	238	3	He	0.019	0.0018	420.02	0.0501	0.0008282
U	238	3	He	0.011	0.0014	320.02	0.0501	0.0008282
U	238	3	He	0.007	0.0012	280.01	0.0501	0.0008282
Sc	45	1	No Gas			2109006.84		
Sc	45	1	No Gas			2100485.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2126070.75		
Ge	72	1	No Gas			1031776.16		
Ge	72	1	No Gas			1026885.84		
Ge	72	1	No Gas			1032292.41		
Sc	45	2	H2			127328.44		
Sc	45	2	H2			133564.04		
Sc	45	2	H2			127571.19		
Ge	72	2	H2			98697.45		
Ge	72	2	H2			102956.34		
Ge	72	2	H2			102312.89		
In	115	2	H2			271831.56		
In	115	2	H2			281848.98		
In	115	2	H2			272288.79		
Sc	45	3	He			28137.65		
Sc	45	3	He			28919.27		
Sc	45	3	He			29480.61		
Ge	72	3	He			51563.31		
Ge	72	3	He			51242.21		
Ge	72	3	He			51262.53		
In	115	3	He			51244.37		
In	115	3	He			52028.04		
In	115	3	He			51555.70		
Tb	159	3	He			276281.05		
Tb	159	3	He			285354.00		
Tb	159	3	He			277741.73		
Bi	209	3	He			234702.81		
Bi	209	3	He			235970.62		
Bi	209	3	He			235745.48		

Quantitation Report

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Sample Type	Sample
Comment	C9
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
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Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

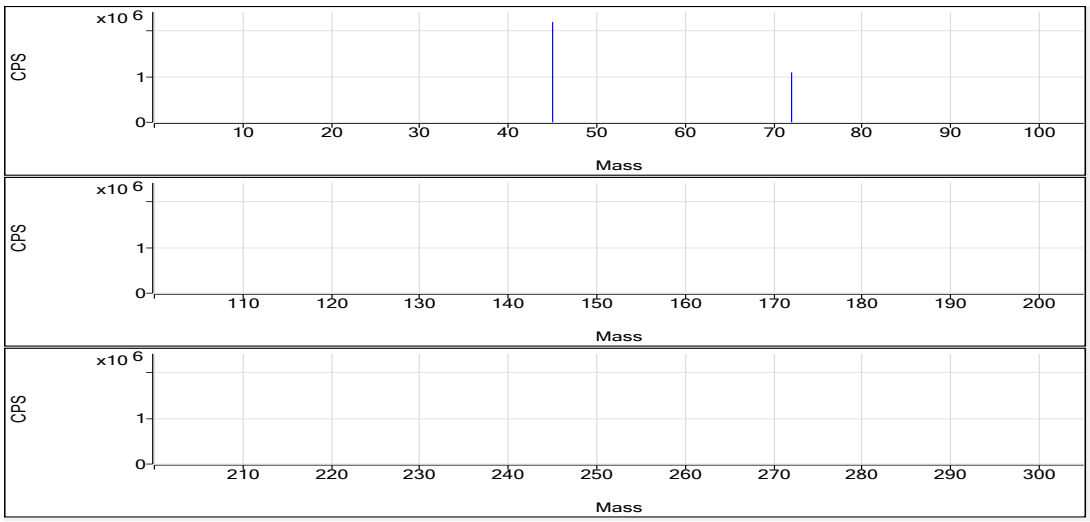
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.027	ppb	54.6	94.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.029	ppb	144.1	5.78	0.0001	Pulse	1.5000	3
Na	23	45	He	28708.776	ppb	1.9	3184854.95	109.5345	Pulse	0.1000	3
Mg	24	45	He	4423.550	ppb	2.6	247703.80	8.5198	Pulse	0.1000	3
Al	27	45	He	25.546	ppb	25.5	450.03	0.0155	Pulse	0.1000	3
K	39	45	He	1183.372	ppb	2.7	47360.31	1.6289	Pulse	0.1000	3
Ca	44	45	He	3798.011	ppb	5.8	6965.26	0.2396	Pulse	0.1000	3
Ti	47	45	He	0.503	ppb	241.6	20.00	0.0007	Pulse	0.1000	3
V	51	45	He	0.314	ppb	15.4	969.37	0.0333	Pulse	0.5000	3
Cr	52	45	He	0.239	ppb	49.6	376.69	0.0130	Pulse	0.1000	3
Mn	55	45	He	13.701	ppb	5.2	4841.00	0.1665	Pulse	0.1000	3
Fe	57	45	He	526.098	ppb	3.6	8712.92	0.2997	Pulse	0.1000	3
Co	59	72	He	0.141	ppb	5.4	473.36	0.0088	Pulse	0.1000	3
Ni	60	72	He	0.091	ppb	46.1	606.70	0.0113	Pulse	0.1000	3
Cu	63	72	He	0.477	ppb	19.1	1566.81	0.0292	Pulse	0.1000	3
Zn	66	72	He	0.671	ppb	59.2	306.68	0.0057	Pulse	0.1000	3
As	75	72	He	0.222	ppb	56.0	48.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	41.115	ppb	4.9	17457.91	0.3301	Pulse	0.1000	3
Mo	98	115	He	0.041	ppb	47.6	66.67	0.0013	Pulse	0.1000	3
Ag	107	115	He	0.011	ppb	72.7	66.67	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.011	ppb	159.2	8.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.192	ppb	N/A	826.72	0.0156	Pulse	0.1000	3
Sb	121	159	He	0.017	ppb	44.8	36.67	0.0001	Pulse	0.1000	3
Ba	137	115	He	2.120	ppb	13.3	590.03	0.0112	Pulse	0.1000	3
Tl	205	209	He	0.026	ppb	31.8	443.36	0.0018	Pulse	0.1000	3
Pb	208	209	He	0.010	ppb	70.4	803.37	0.0033	Pulse	0.1000	3
U	238	209	He	0.000	ppb	N/A	200.01	0.0008	Pulse	0.1000	3

ISTD Table:

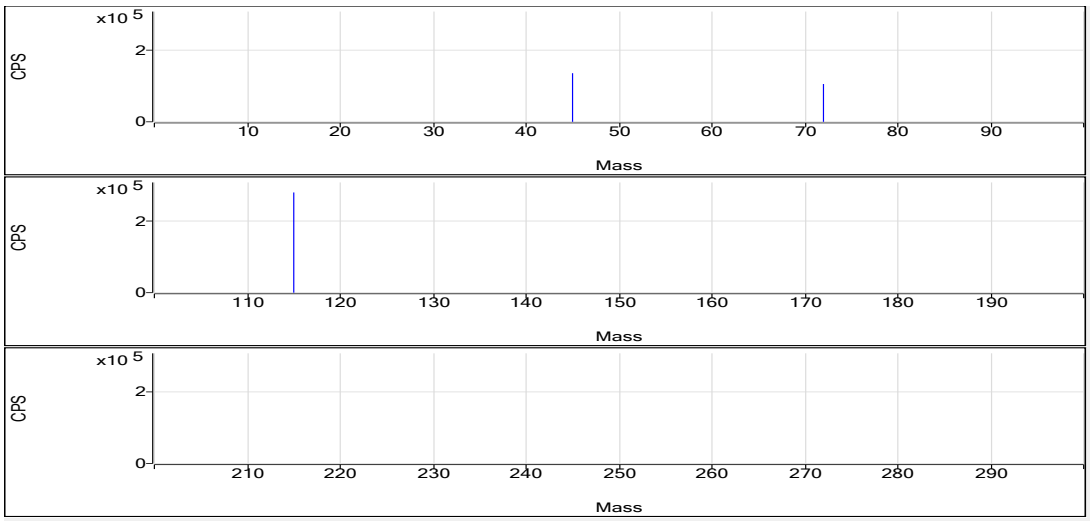
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2200797.78	0.6	100.1	Pulse	0.1000	3
No Gas	Ge	72	1095141.63	0.4	102.1	Pulse	0.1000	3
H2	Sc	45	136107.63	0.4	100.3	Pulse	0.1000	3
H2	Ge	72	105810.43	0.6	100.1	Pulse	0.1000	3
H2	In	115	280607.65	0.3	100.3	Pulse	0.1000	3
He	Sc	45	29082.82	1.8	97.4	Pulse	0.1000	3
He	Ge	72	53627.35	1.5	102.3	Pulse	0.1000	3
He	In	115	52864.40	1.0	103.2	Pulse	0.1000	3
He	Tb	159	286589.83	0.3	102.9	Pulse	0.1000	3
He	Bi	209	244759.89	0.7	103.1	Pulse	0.1000	3

No Gas

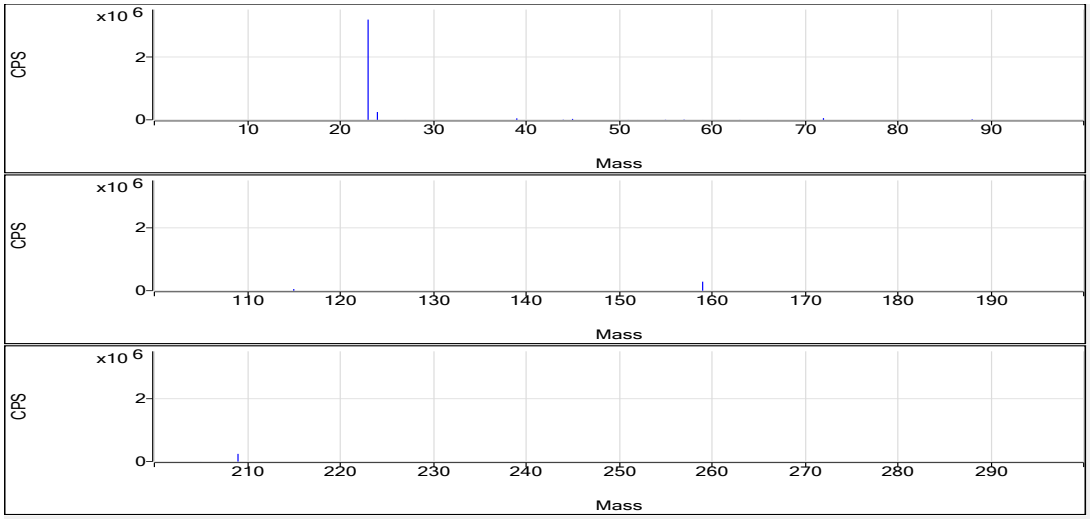


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.043	0.0001	122.00	0.0007	2.306E-05
Be	9	1	No Gas	0.015	0	76.00	0.0007	2.306E-05
Be	9	1	No Gas	0.022	0	86.00	0.0007	2.306E-05
Se	78	2	H2	0.077	0.0001	8.00	0.0004	4.221E-05
Se	78	2	H2	0.005	0	4.67	0.0004	4.221E-05
Se	78	2	H2	0.005	0	4.67	0.0004	4.221E-05
Na	23	3	He	28926.155	110.3617	3184928.39	0.0038	0.2864
Na	23	3	He	29097.186	111.0126	3185919.02	0.0038	0.2864
Na	23	3	He	28102.988	107.2293	3183717.45	0.0038	0.2864
Mg	24	3	He	4474.265	8.6174	248690.35	0.0019	0.007972
Mg	24	3	He	4502.57	8.6719	248872.36	0.0019	0.007972
Mg	24	3	He	4293.816	8.2702	245548.69	0.0019	0.007972
Al	27	3	He	32.711	0.0194	560.03	0.0005	0.00158
Al	27	3	He	23.958	0.0146	420.03	0.0005	0.00158
Al	27	3	He	19.97	0.0125	370.02	0.0005	0.00158
K	39	3	He	1190.104	1.6361	47216.75	0.0011	0.3552
K	39	3	He	1211.259	1.6589	47607.97	0.0011	0.3552
K	39	3	He	1148.753	1.5916	47256.21	0.0011	0.3552
Ca	44	3	He	3701.977	0.2336	6741.81	0.0001	0.002
Ca	44	3	He	4051.615	0.2555	7332.15	0.0001	0.002
Ca	44	3	He	3640.44	0.2298	6821.81	0.0001	0.002
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
Ti	47	3	He	1.241	0.001	30.00	0.0005	0.0004395
Ti	47	3	He	1.169	0.001	30.00	0.0005	0.0004395
V	51	3	He	0.273	0.0324	936.04	0.0218	0.02648
V	51	3	He	0.367	0.0345	990.04	0.0218	0.02648
V	51	3	He	0.302	0.0331	982.04	0.0218	0.02648
Cr	52	3	He	0.353	0.0163	470.03	0.029	0.006056
Cr	52	3	He	0.248	0.0132	380.02	0.029	0.006056
Cr	52	3	He	0.116	0.0094	280.01	0.029	0.006056
Mn	55	3	He	14.503	0.1761	5081.09	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	13.444	0.1635	4690.94	0.0119	0.00335
Mn	55	3	He	13.155	0.16	4750.98	0.0119	0.00335
Fe	57	3	He	542.933	0.3092	8923.06	0.0006	0.003117
Fe	57	3	He	529.912	0.3019	8662.84	0.0006	0.003117
Fe	57	3	He	505.45	0.2881	8552.85	0.0006	0.003117
Co	59	3	He	0.137	0.0087	470.03	0.0317	0.004379
Co	59	3	He	0.135	0.0087	470.02	0.0317	0.004379
Co	59	3	He	0.149	0.0091	480.03	0.0317	0.004379
Ni	60	3	He	0.112	0.0115	620.04	0.009	0.01049
Ni	60	3	He	0.043	0.0109	590.04	0.009	0.01049
Ni	60	3	He	0.119	0.0116	610.03	0.009	0.01049
Cu	63	3	He	0.581	0.0319	1720.18	0.0259	0.01685
Cu	63	3	He	0.41	0.0275	1490.13	0.0259	0.01685
Cu	63	3	He	0.441	0.0283	1490.13	0.0259	0.01685
Zn	66	3	He	0.422	0.005	270.01	0.0028	0.003817
Zn	66	3	He	1.129	0.007	380.02	0.0028	0.003817
Zn	66	3	He	0.462	0.0051	270.01	0.0028	0.003817
As	75	3	He	0.36	0.0012	62.00	0.0019	0.0004832
As	75	3	He	0.117	0.0007	38.00	0.0019	0.0004832
As	75	3	He	0.189	0.0008	44.00	0.0019	0.0004832
Sr	88	3	He	42.587	0.3419	18272.24	0.008	0.0005203
Sr	88	3	He	38.843	0.3119	16339.89	0.008	0.0005203
Sr	88	3	He	41.915	0.3366	17761.61	0.008	0.0005203
Mo	98	3	He	0.018	0.0007	40.00	0.0229	0.0003256
Mo	98	3	He	0.052	0.0015	80.00	0.0229	0.0003256
Mo	98	3	He	0.052	0.0015	80.00	0.0229	0.0003256
Ag	107	3	He	0.008	0.0011	60.00	0.05	0.000719
Ag	107	3	He	0.005	0.001	50.00	0.05	0.000719
Ag	107	3	He	0.02	0.0017	90.00	0.05	0.000719
Cd	111	3	He	0.008	0.0001	8.00	0.0055	0.000104
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Cd	111	3	He	0.029	0.0003	14.00	0.0055	0.000104
Sn	120	3	He	0.003	0.0187	1000.07	0.0159	0.01867
Sn	120	3	He	-0.406	0.0122	640.03	0.0159	0.01867
Sn	120	3	He	-0.173	0.0159	840.05	0.0159	0.01867
Sb	121	3	He	0.022	0.0001	40.00	0.0026	8.342E-05
Sb	121	3	He	0.021	0.0001	40.00	0.0026	8.342E-05
Sb	121	3	He	0.008	0.0001	30.00	0.0026	8.342E-05
Ba	137	3	He	1.944	0.0103	550.03	0.005	0.0005882
Ba	137	3	He	2.445	0.0128	670.04	0.005	0.0005882
Ba	137	3	He	1.97	0.0104	550.03	0.005	0.0005882
Tl	205	3	He	0.035	0.0021	510.03	0.0313	0.0009967
Tl	205	3	He	0.024	0.0017	430.02	0.0313	0.0009967
Tl	205	3	He	0.019	0.0016	390.02	0.0313	0.0009967
Pb	208	3	He	0.003	0.003	360.02	0.041	0.002892
Pb	208	3	He	0.01	0.0033	410.02	0.041	0.002892
Pb	208	3	He	0.016	0.0036	440.02	0.041	0.002892
U	238	3	He	-0.001	0.0008	190.01	0.0501	0.0008282
U	238	3	He	-0.002	0.0007	180.01	0.0501	0.0008282
U	238	3	He	0.002	0.0009	230.01	0.0501	0.0008282
Sc	45	1	No Gas			2208648.40		
Sc	45	1	No Gas			2208450.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2185294.81		
Ge	72	1	No Gas			1100014.75		
Ge	72	1	No Gas			1092869.91		
Ge	72	1	No Gas			1092540.22		
Sc	45	2	H2			136712.51		
Sc	45	2	H2			136067.80		
Sc	45	2	H2			135542.59		
Ge	72	2	H2			106522.09		
Ge	72	2	H2			105404.28		
Ge	72	2	H2			105504.91		
In	115	2	H2			281397.34		
In	115	2	H2			280638.08		
In	115	2	H2			279787.52		
Sc	45	3	He			28858.99		
Sc	45	3	He			28698.72		
Sc	45	3	He			29690.75		
Ge	72	3	He			53911.68		
Ge	72	3	He			54242.80		
Ge	72	3	He			52727.56		
In	115	3	He			53443.45		
In	115	3	He			52388.71		
In	115	3	He			52780.37		
Tb	159	3	He			286140.89		
Tb	159	3	He			287606.52		
Tb	159	3	He			286022.07		
Bi	209	3	He			243069.74		
Bi	209	3	He			246276.97		
Bi	209	3	He			244932.95		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 11:25:32
Sample Name	410-178682-G-8-A
Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

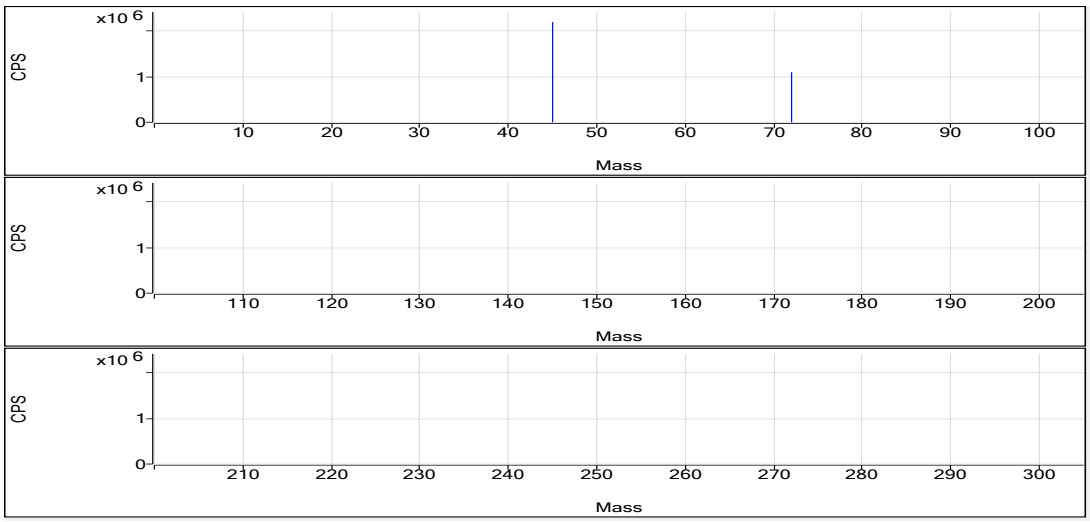
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.028	ppb	36.0	96.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.015	ppb	264.3	5.11	0.0000	Pulse	1.5000	3
Na	23	45	He	1251.498	ppb	2.9	151126.24	5.0489	Pulse	0.1000	3
Mg	24	45	He	114.478	ppb	5.1	6831.80	0.2283	Pulse	0.1000	3
Al	27	45	He	65.944	ppb	1.3	1123.41	0.0375	Pulse	0.1000	3
K	39	45	He	-5.545	ppb	N/A	10460.75	0.3493	Pulse	0.1000	3
Ca	44	45	He	649.407	ppb	4.7	1276.77	0.0426	Pulse	0.1000	3
Ti	47	45	He	2.271	ppb	89.2	46.67	0.0015	Pulse	0.1000	3
V	51	45	He	0.004	ppb	2192.3	795.36	0.0266	Pulse	0.5000	3
Cr	52	45	He	0.644	ppb	2.8	740.04	0.0247	Pulse	0.1000	3
Mn	55	45	He	1.186	ppb	21.8	523.36	0.0175	Pulse	0.1000	3
Fe	57	45	He	8.311	ppb	30.4	233.35	0.0078	Pulse	0.1000	3
Co	59	72	He	0.054	ppb	109.7	323.35	0.0061	Pulse	0.1000	3
Ni	60	72	He	0.052	ppb	504.2	583.36	0.0110	Pulse	0.1000	3
Cu	63	72	He	0.135	ppb	98.8	1083.41	0.0203	Pulse	0.1000	3
Zn	66	72	He	0.378	ppb	3.4	260.01	0.0049	Pulse	0.1000	3
As	75	72	He	0.016	ppb	399.6	27.33	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.997	ppb	6.8	446.69	0.0085	Pulse	0.1000	3
Mo	98	115	He	0.111	ppb	34.0	150.01	0.0029	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	171.5	46.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	363.8	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.045	ppb	200.8	1016.74	0.0194	Pulse	0.1000	3
Sb	121	159	He	0.031	ppb	24.2	46.67	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.366	ppb	14.6	126.67	0.0024	Pulse	0.1000	3
Tl	205	209	He	0.017	ppb	24.4	376.69	0.0015	Pulse	0.1000	3
Pb	208	209	He	-0.014	ppb	N/A	570.03	0.0023	Pulse	0.1000	3
U	238	209	He	-0.004	ppb	N/A	153.34	0.0006	Pulse	0.1000	3

ISTD Table:

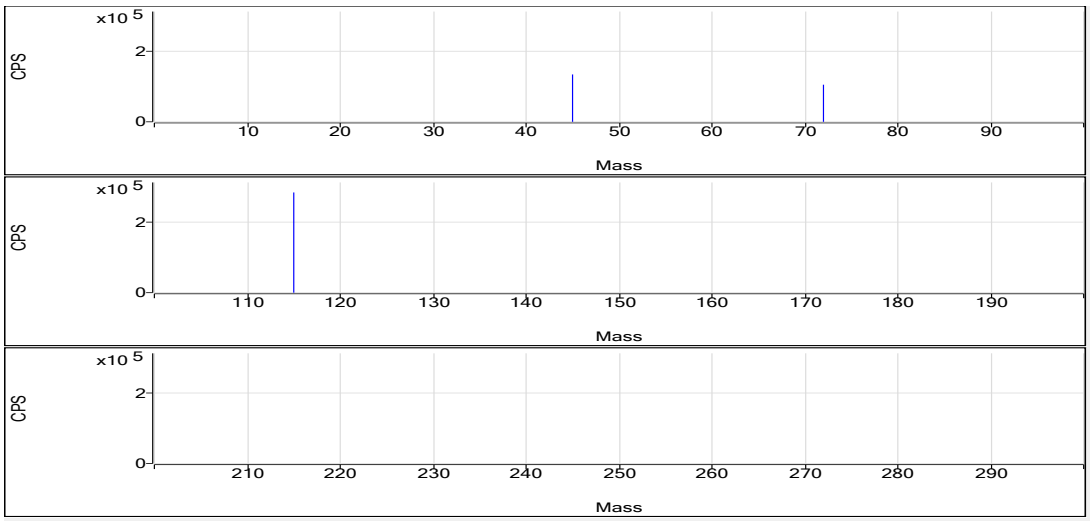
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2203458.15	0.9	100.3	Pulse	0.1000	3
No Gas	Ge	72	1099861.13	0.6	102.5	Pulse	0.1000	3
H2	Sc	45	134940.00	1.6	99.4	Pulse	0.1000	3
H2	Ge	72	105726.43	1.8	100.0	Pulse	0.1000	3
H2	In	115	285521.75	1.3	102.1	Pulse	0.1000	3
He	Sc	45	29941.36	1.6	100.3	Pulse	0.1000	3
He	Ge	72	53235.59	0.7	101.5	Pulse	0.1000	3
He	In	115	52434.19	1.1	102.3	Pulse	0.1000	3
He	Tb	159	285905.43	0.8	102.7	Pulse	0.1000	3
He	Bi	209	247805.44	0.3	104.4	Pulse	0.1000	3

No Gas

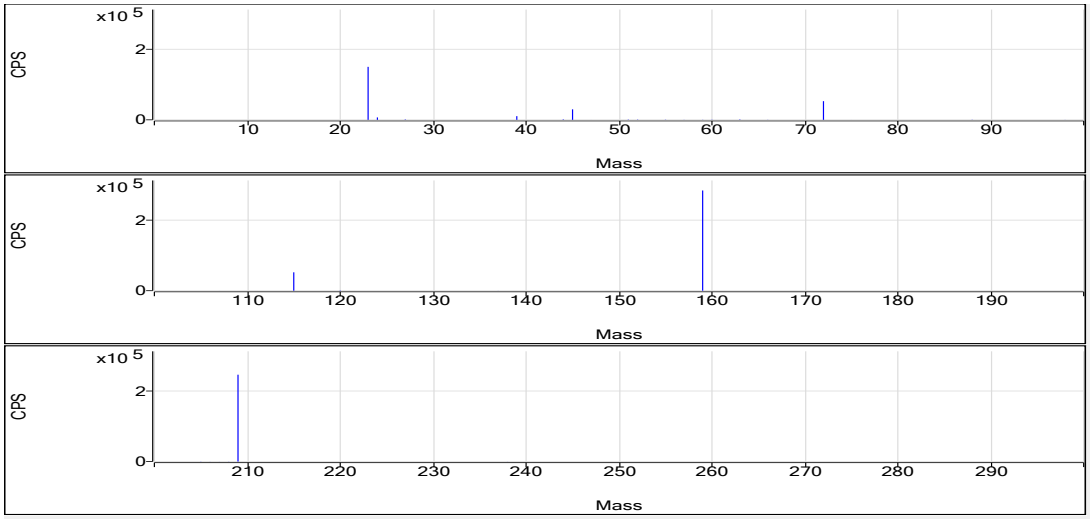


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.037	0.0001	112.00	0.0007	2.306E-05
Be	9	1	No Gas	0.017	0	78.00	0.0007	2.306E-05
Be	9	1	No Gas	0.03	0	100.00	0.0007	2.306E-05
Se	78	2	H2	0.052	0.0001	6.67	0.0004	4.221E-05
Se	78	2	H2	0.017	0	5.33	0.0004	4.221E-05
Se	78	2	H2	-0.025	0	3.33	0.0004	4.221E-05
Na	23	3	He	1210.814	4.894	149280.54	0.0038	0.2864
Na	23	3	He	1279.885	5.1569	152957.72	0.0038	0.2864
Na	23	3	He	1263.796	5.0957	151140.45	0.0038	0.2864
Mg	24	3	He	110.04	0.2197	6701.78	0.0019	0.007972
Mg	24	3	He	121.168	0.2411	7151.97	0.0019	0.007972
Mg	24	3	He	112.227	0.2239	6641.66	0.0019	0.007972
Al	27	3	He	66.892	0.038	1160.08	0.0005	0.00158
Al	27	3	He	65.779	0.0374	1110.07	0.0005	0.00158
Al	27	3	He	65.161	0.0371	1100.08	0.0005	0.00158
K	39	3	He	6.375	0.3621	11044.45	0.0011	0.3552
K	39	3	He	-22.321	0.3312	9823.65	0.0011	0.3552
K	39	3	He	-0.688	0.3545	10514.16	0.0011	0.3552
Ca	44	3	He	670.254	0.0439	1340.11	0.0001	0.002
Ca	44	3	He	614.726	0.0405	1200.09	0.0001	0.002
Ca	44	3	He	663.242	0.0435	1290.11	0.0001	0.002
Ti	47	3	He	4.471	0.0026	80.00	0.0005	0.0004395
Ti	47	3	He	1.862	0.0013	40.00	0.0005	0.0004395
Ti	47	3	He	0.481	0.0007	20.00	0.0005	0.0004395
V	51	3	He	0.013	0.0268	816.03	0.0218	0.02648
V	51	3	He	0.084	0.0283	840.03	0.0218	0.02648
V	51	3	He	-0.085	0.0246	730.03	0.0218	0.02648
Cr	52	3	He	0.64	0.0246	750.05	0.029	0.006056
Cr	52	3	He	0.629	0.0243	720.04	0.029	0.006056
Cr	52	3	He	0.664	0.0253	750.04	0.029	0.006056
Mn	55	3	He	1.233	0.018	550.03	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.908	0.0142	420.02	0.0119	0.00335
Mn	55	3	He	1.417	0.0202	600.03	0.0119	0.00335
Fe	57	3	He	6.684	0.0069	210.01	0.0006	0.003117
Fe	57	3	He	11.217	0.0094	280.02	0.0006	0.003117
Fe	57	3	He	7.031	0.0071	210.01	0.0006	0.003117
Co	59	3	He	0.089	0.0072	380.02	0.0317	0.004379
Co	59	3	He	0.086	0.0071	380.02	0.0317	0.004379
Co	59	3	He	-0.014	0.0039	210.01	0.0317	0.004379
Ni	60	3	He	0.013	0.0106	560.03	0.009	0.01049
Ni	60	3	He	-0.187	0.0088	470.02	0.009	0.01049
Ni	60	3	He	0.328	0.0135	720.04	0.009	0.01049
Cu	63	3	He	0.125	0.0201	1060.06	0.0259	0.01685
Cu	63	3	He	0.007	0.017	910.06	0.0259	0.01685
Cu	63	3	He	0.273	0.0239	1280.11	0.0259	0.01685
Zn	66	3	He	0.392	0.0049	260.01	0.0028	0.003817
Zn	66	3	He	0.372	0.0049	260.01	0.0028	0.003817
Zn	66	3	He	0.369	0.0049	260.01	0.0028	0.003817
As	75	3	He	0.046	0.0006	30.00	0.0019	0.0004832
As	75	3	He	-0.059	0.0004	20.00	0.0019	0.0004832
As	75	3	He	0.062	0.0006	32.00	0.0019	0.0004832
Sr	88	3	He	1.053	0.009	470.02	0.008	0.0005203
Sr	88	3	He	1.018	0.0087	460.02	0.008	0.0005203
Sr	88	3	He	0.921	0.0079	410.03	0.008	0.0005203
Mo	98	3	He	0.094	0.0025	130.01	0.0229	0.0003256
Mo	98	3	He	0.085	0.0023	120.00	0.0229	0.0003256
Mo	98	3	He	0.154	0.0039	200.01	0.0229	0.0003256
Ag	107	3	He	0.008	0.0011	60.00	0.05	0.000719
Ag	107	3	He	-0.003	0.0006	30.00	0.05	0.000719
Ag	107	3	He	0.005	0.001	50.00	0.05	0.000719
Cd	111	3	He	0.009	0.0002	8.00	0.0055	0.000104
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Cd	111	3	He	0.002	0.0001	6.00	0.0055	0.000104
Sn	120	3	He	0.144	0.021	1100.08	0.0159	0.01867
Sn	120	3	He	-0.035	0.0181	960.07	0.0159	0.01867
Sn	120	3	He	0.026	0.0191	990.07	0.0159	0.01867
Sb	121	3	He	0.034	0.0002	50.00	0.0026	8.342E-05
Sb	121	3	He	0.035	0.0002	50.00	0.0026	8.342E-05
Sb	121	3	He	0.022	0.0001	40.00	0.0026	8.342E-05
Ba	137	3	He	0.379	0.0025	130.01	0.005	0.0005882
Ba	137	3	He	0.412	0.0026	140.01	0.005	0.0005882
Ba	137	3	He	0.307	0.0021	110.00	0.005	0.0005882
Tl	205	3	He	0.018	0.0016	390.02	0.0313	0.0009967
Tl	205	3	He	0.02	0.0016	400.02	0.0313	0.0009967
Tl	205	3	He	0.012	0.0014	340.02	0.0313	0.0009967
Pb	208	3	He	0.001	0.0029	330.02	0.041	0.002892
Pb	208	3	He	-0.018	0.0021	360.02	0.041	0.002892
Pb	208	3	He	-0.026	0.0018	260.01	0.041	0.002892
U	238	3	He	0	0.0008	200.01	0.0501	0.0008282
U	238	3	He	-0.004	0.0006	150.01	0.0501	0.0008282
U	238	3	He	-0.008	0.0004	110.01	0.0501	0.0008282
Sc	45	1	No Gas			2224556.53		
Sc	45	1	No Gas			2187921.69		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2197896.22		
Ge	72	1	No Gas			1102269.05		
Ge	72	1	No Gas			1092899.51		
Ge	72	1	No Gas			1104414.83		
Sc	45	2	H2			132474.17		
Sc	45	2	H2			135662.87		
Sc	45	2	H2			136682.96		
Ge	72	2	H2			103822.54		
Ge	72	2	H2			107539.53		
Ge	72	2	H2			105817.21		
In	115	2	H2			281453.04		
In	115	2	H2			289024.47		
In	115	2	H2			286087.73		
Sc	45	3	He			30502.53		
Sc	45	3	He			29660.91		
Sc	45	3	He			29660.65		
Ge	72	3	He			52787.78		
Ge	72	3	He			53419.33		
Ge	72	3	He			53499.65		
In	115	3	He			52468.65		
In	115	3	He			52991.03		
In	115	3	He			51866.68		
Tb	159	3	He			288466.79		
Tb	159	3	He			285293.71		
Tb	159	3	He			283955.80		
Bi	209	3	He			248596.81		
Bi	209	3	He			247524.61		
Bi	209	3	He			247294.90		

Quantitation Report

Data File Name	075SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 11:27:33
Sample Name	410-178682-G-1-A
Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

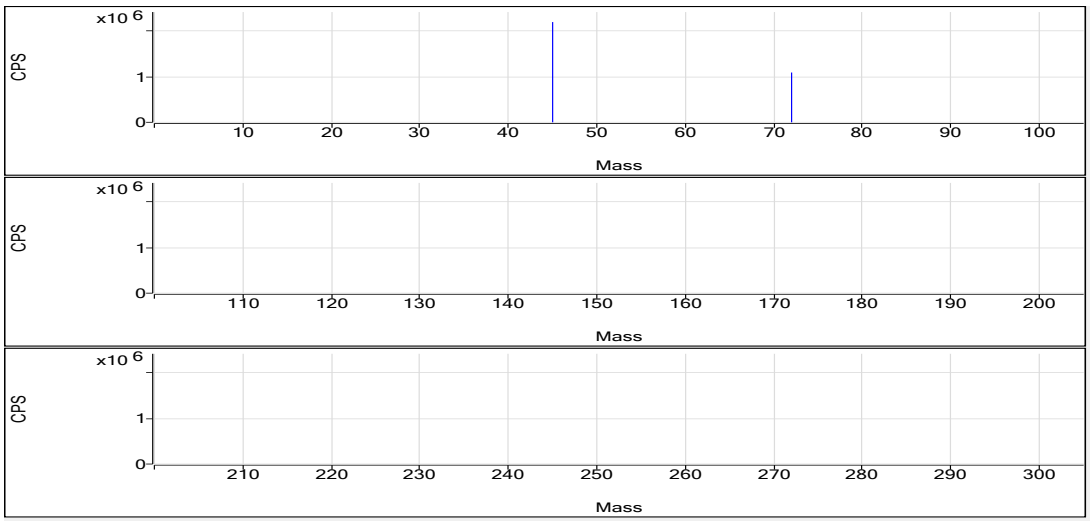
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.025	ppb	20.1	91.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.617	ppb	10.7	78.22	0.0007	Pulse	1.5000	3
Na	23	45	He	12602.585	ppb	0.2	1441257.17	48.2442	Pulse	0.1000	3
Mg	24	45	He	3321.728	ppb	0.5	191183.83	6.3997	Pulse	0.1000	3
Al	27	45	He	2.005	ppb	132.6	80.00	0.0027	Pulse	0.1000	3
K	39	45	He	2227.356	ppb	1.4	82232.84	2.7525	Pulse	0.1000	3
Ca	44	45	He	25328.169	ppb	1.7	47397.15	1.5866	Pulse	0.1000	3
Ti	47	45	He	0.245	ppb	428.1	16.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.501	ppb	12.1	1118.05	0.0374	Pulse	0.5000	3
Cr	52	45	He	0.346	ppb	27.0	480.02	0.0161	Pulse	0.1000	3
Mn	55	45	He	2.267	ppb	2.7	906.73	0.0304	Pulse	0.1000	3
Fe	57	45	He	6.753	ppb	44.2	206.68	0.0069	Pulse	0.1000	3
Co	59	72	He	0.290	ppb	15.0	720.05	0.0136	Pulse	0.1000	3
Ni	60	72	He	0.131	ppb	67.3	620.03	0.0117	Pulse	0.1000	3
Cu	63	72	He	0.355	ppb	16.5	1383.44	0.0260	Pulse	0.1000	3
Zn	66	72	He	1.514	ppb	17.5	430.02	0.0081	Pulse	0.1000	3
As	75	72	He	0.079	ppb	96.0	33.33	0.0006	Pulse	0.5000	3
Sr	88	115	He	108.402	ppb	3.4	46326.51	0.8696	Pulse	0.1000	3
Mo	98	115	He	0.411	ppb	18.4	520.03	0.0098	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	111.3	43.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.029	ppb	88.2	14.00	0.0003	Pulse	0.5000	3
Sn	120	115	He	-0.195	ppb	N/A	830.05	0.0156	Pulse	0.1000	3
Sb	121	159	He	0.052	ppb	15.7	63.33	0.0002	Pulse	0.1000	3
Ba	137	115	He	42.445	ppb	4.5	11315.05	0.2124	Pulse	0.1000	3
Tl	205	209	He	0.024	ppb	39.2	423.36	0.0017	Pulse	0.1000	3
Pb	208	209	He	-0.006	ppb	N/A	650.03	0.0027	Pulse	0.1000	3
U	238	209	He	0.026	ppb	31.1	513.36	0.0021	Pulse	0.1000	3

ISTD Table:

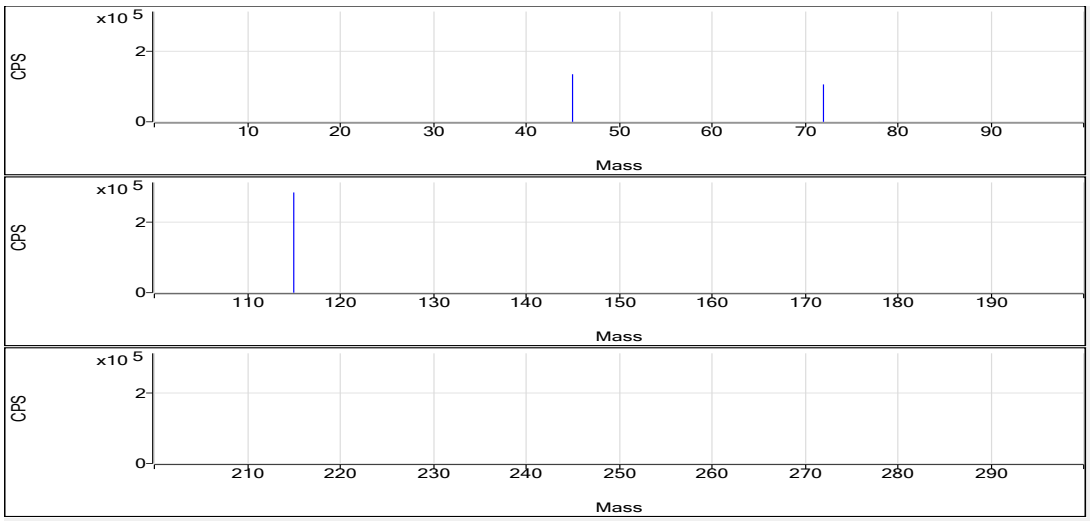
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2192258.09	1.1	99.7	Pulse	0.1000	3
No Gas	Ge	72	1088843.47	1.4	101.5	Pulse	0.1000	3
H2	Sc	45	135673.63	1.3	100.0	Pulse	0.1000	3
H2	Ge	72	106660.41	1.2	100.9	Pulse	0.1000	3
H2	In	115	285839.57	1.2	102.2	Pulse	0.1000	3
He	Sc	45	29874.46	0.6	100.1	Pulse	0.1000	3
He	Ge	72	53098.74	1.3	101.3	Pulse	0.1000	3
He	In	115	53292.19	2.0	104.0	Pulse	0.1000	3
He	Tb	159	289209.04	1.0	103.9	Pulse	0.1000	3
He	Bi	209	243878.05	1.4	102.7	Pulse	0.1000	3

No Gas

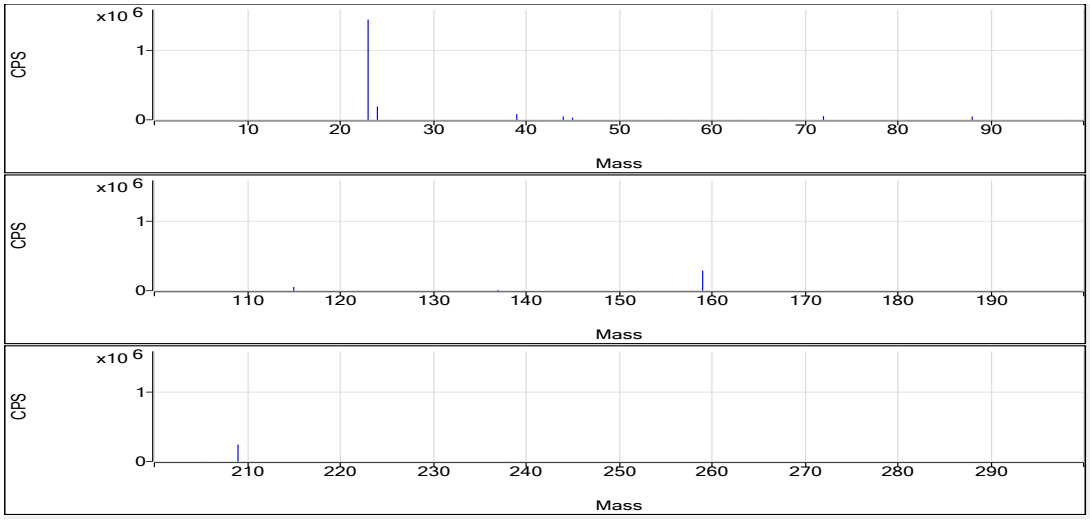


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.028	0	96.00	0.0007	2.306E-05
Be	9	1	No Gas	0.027	0	96.00	0.0007	2.306E-05
Be	9	1	No Gas	0.019	0	82.00	0.0007	2.306E-05
Se	78	2	H2	1.694	0.0008	82.67	0.0004	4.221E-05
Se	78	2	H2	1.42	0.0006	69.33	0.0004	4.221E-05
Se	78	2	H2	1.738	0.0008	82.67	0.0004	4.221E-05
Na	23	3	He	12580.275	48.1593	1446294.51	0.0038	0.2864
Na	23	3	He	12593.727	48.2105	1441059.20	0.0038	0.2864
Na	23	3	He	12633.753	48.3628	1436417.79	0.0038	0.2864
Mg	24	3	He	3303.983	6.3656	191167.03	0.0019	0.007972
Mg	24	3	He	3321.994	6.4002	191308.73	0.0019	0.007972
Mg	24	3	He	3339.207	6.4333	191075.72	0.0019	0.007972
Al	27	3	He	3.822	0.0037	110.01	0.0005	0.00158
Al	27	3	He	3.239	0.0033	100.00	0.0005	0.00158
Al	27	3	He	-1.046	0.001	30.00	0.0005	0.00158
K	39	3	He	2263.444	2.7913	83828.22	0.0011	0.3552
K	39	3	He	2213.147	2.7372	81817.94	0.0011	0.3552
K	39	3	He	2205.476	2.729	81052.37	0.0011	0.3552
Ca	44	3	He	25028.669	1.5679	47086.43	0.0001	0.002
Ca	44	3	He	25124.834	1.5739	47046.01	0.0001	0.002
Ca	44	3	He	25831.004	1.6181	48059.01	0.0001	0.002
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
Ti	47	3	He	1.155	0.001	30.00	0.0005	0.0004395
Ti	47	3	He	0.479	0.0007	20.00	0.0005	0.0004395
V	51	3	He	0.535	0.0382	1146.05	0.0218	0.02648
V	51	3	He	0.537	0.0382	1142.05	0.0218	0.02648
V	51	3	He	0.431	0.0359	1066.05	0.0218	0.02648
Cr	52	3	He	0.285	0.0143	430.02	0.029	0.006056
Cr	52	3	He	0.299	0.0147	440.02	0.029	0.006056
Cr	52	3	He	0.453	0.0192	570.03	0.029	0.006056
Mn	55	3	He	2.207	0.0296	890.06	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.331	0.0311	930.06	0.0119	0.00335
Mn	55	3	He	2.263	0.0303	900.06	0.0119	0.00335
Fe	57	3	He	3.332	0.005	150.01	0.0006	0.003117
Fe	57	3	He	8.121	0.0077	230.01	0.0006	0.003117
Fe	57	3	He	8.805	0.0081	240.01	0.0006	0.003117
Co	59	3	He	0.3	0.0139	730.05	0.0317	0.004379
Co	59	3	He	0.328	0.0148	780.05	0.0317	0.004379
Co	59	3	He	0.242	0.0121	650.04	0.0317	0.004379
Ni	60	3	He	0.039	0.0108	570.03	0.009	0.01049
Ni	60	3	He	0.138	0.0117	620.03	0.009	0.01049
Ni	60	3	He	0.214	0.0124	670.04	0.009	0.01049
Cu	63	3	He	0.29	0.0244	1280.11	0.0259	0.01685
Cu	63	3	He	0.402	0.0273	1440.11	0.0259	0.01685
Cu	63	3	He	0.374	0.0265	1430.11	0.0259	0.01685
Zn	66	3	He	1.208	0.0072	380.02	0.0028	0.003817
Zn	66	3	He	1.665	0.0085	450.02	0.0028	0.003817
Zn	66	3	He	1.669	0.0085	460.03	0.0028	0.003817
As	75	3	He	0.15	0.0008	40.00	0.0019	0.0004832
As	75	3	He	0.087	0.0006	34.00	0.0019	0.0004832
As	75	3	He	-0.001	0.0005	26.00	0.0019	0.0004832
Sr	88	3	He	104.931	0.8418	45132.60	0.008	0.0005203
Sr	88	3	He	112.212	0.9001	46898.73	0.008	0.0005203
Sr	88	3	He	108.064	0.8669	46948.21	0.008	0.0005203
Mo	98	3	He	0.499	0.0118	630.04	0.0229	0.0003256
Mo	98	3	He	0.371	0.0088	460.02	0.0229	0.0003256
Mo	98	3	He	0.365	0.0087	470.02	0.0229	0.0003256
Ag	107	3	He	0.004	0.0009	50.00	0.05	0.000719
Ag	107	3	He	0.001	0.0008	40.00	0.05	0.000719
Ag	107	3	He	0	0.0007	40.00	0.05	0.000719
Cd	111	3	He	0.022	0.0002	12.00	0.0055	0.000104
Cd	111	3	He	0.058	0.0004	22.00	0.0055	0.000104
Cd	111	3	He	0.008	0.0001	8.00	0.0055	0.000104
Sn	120	3	He	-0.306	0.0138	740.04	0.0159	0.01867
Sn	120	3	He	-0.22	0.0152	790.05	0.0159	0.01867
Sn	120	3	He	-0.059	0.0177	960.07	0.0159	0.01867
Sb	121	3	He	0.061	0.0002	70.00	0.0026	8.342E-05
Sb	121	3	He	0.047	0.0002	60.00	0.0026	8.342E-05
Sb	121	3	He	0.048	0.0002	60.00	0.0026	8.342E-05
Ba	137	3	He	42.124	0.2108	11305.01	0.005	0.0005882
Ba	137	3	He	44.507	0.2227	11605.32	0.005	0.0005882
Ba	137	3	He	40.703	0.2038	11034.81	0.005	0.0005882
Tl	205	3	He	0.017	0.0015	370.02	0.0313	0.0009967
Tl	205	3	He	0.034	0.0021	510.03	0.0313	0.0009967
Tl	205	3	He	0.02	0.0016	390.02	0.0313	0.0009967
Pb	208	3	He	-0.002	0.0028	300.01	0.041	0.002892
Pb	208	3	He	-0.004	0.0027	270.01	0.041	0.002892
Pb	208	3	He	-0.011	0.0025	300.01	0.041	0.002892
U	238	3	He	0.028	0.0023	550.03	0.0501	0.0008282
U	238	3	He	0.017	0.0017	410.02	0.0501	0.0008282
U	238	3	He	0.032	0.0024	580.03	0.0501	0.0008282
Sc	45	1	No Gas			2168664.03		
Sc	45	1	No Gas			2214757.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2193353.09		
Ge	72	1	No Gas			1072507.09		
Ge	72	1	No Gas			1101784.75		
Ge	72	1	No Gas			1092238.58		
Sc	45	2	H2			137088.43		
Sc	45	2	H2			136307.79		
Sc	45	2	H2			133624.68		
Ge	72	2	H2			107851.94		
Ge	72	2	H2			106815.54		
Ge	72	2	H2			105313.74		
In	115	2	H2			287329.47		
In	115	2	H2			288337.50		
In	115	2	H2			281851.73		
Sc	45	3	He			30031.48		
Sc	45	3	He			29891.00		
Sc	45	3	He			29700.89		
Ge	72	3	He			52566.84		
Ge	72	3	He			52817.60		
Ge	72	3	He			53911.79		
In	115	3	He			53622.75		
In	115	3	He			52107.88		
In	115	3	He			54165.36		
Tb	159	3	He			287361.69		
Tb	159	3	He			292700.05		
Tb	159	3	He			287565.37		
Bi	209	3	He			243852.63		
Bi	209	3	He			247344.68		
Bi	209	3	He			240436.83		

Quantitation Report

Data File Name	076SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 11:29:34
Sample Name	410-178682-G-7-A
Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

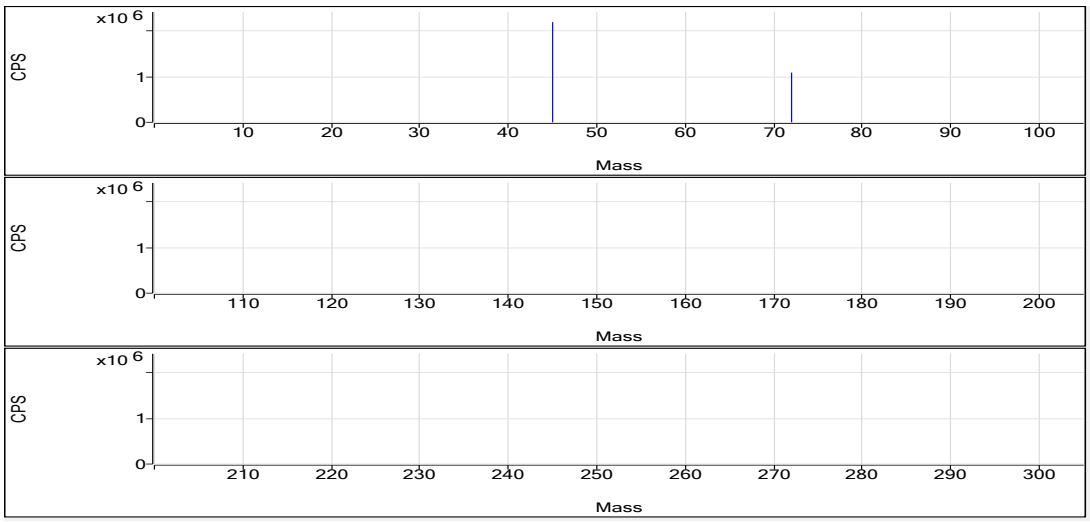
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.017	ppb	33.1	79.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.730	ppb	18.9	38.22	0.0004	Pulse	1.5000	3
Na	23	45	He	5698.308	ppb	3.8	653373.78	21.9707	Pulse	0.1000	3
Mg	24	45	He	1714.413	ppb	3.3	98350.38	3.3069	Pulse	0.1000	3
Al	27	45	He	7.349	ppb	16.5	166.68	0.0056	Pulse	0.1000	3
K	39	45	He	1601.963	ppb	7.3	61803.50	2.0794	Pulse	0.1000	3
Ca	44	45	He	9353.394	ppb	2.4	17467.63	0.5872	Pulse	0.1000	3
Ti	47	45	He	0.719	ppb	114.5	23.33	0.0008	Pulse	0.1000	3
V	51	45	He	0.896	ppb	7.7	1371.41	0.0460	Pulse	0.5000	3
Cr	52	45	He	0.333	ppb	14.5	466.69	0.0157	Pulse	0.1000	3
Mn	55	45	He	302.633	ppb	3.4	107291.00	3.6074	Pulse	0.1000	3
Fe	57	45	He	21072.477	ppb	3.2	353416.71	11.8827	Pulse	0.1000	3
Co	59	72	He	1.519	ppb	6.0	2777.02	0.0525	Pulse	0.1000	3
Ni	60	72	He	-0.017	ppb	N/A	546.70	0.0103	Pulse	0.1000	3
Cu	63	72	He	0.075	ppb	92.0	993.40	0.0188	Pulse	0.1000	3
Zn	66	72	He	0.523	ppb	16.2	280.01	0.0053	Pulse	0.1000	3
As	75	72	He	11.834	ppb	4.5	1186.06	0.0224	Pulse	0.5000	3
Sr	88	115	He	51.864	ppb	3.2	21653.66	0.4163	Pulse	0.1000	3
Mo	98	115	He	0.808	ppb	15.7	980.07	0.0189	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	964.5	40.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	-0.014	ppb	N/A	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.135	ppb	N/A	860.06	0.0165	Pulse	0.1000	3
Sb	121	159	He	0.190	ppb	15.4	166.68	0.0006	Pulse	0.1000	3
Ba	137	115	He	18.022	ppb	7.7	4707.67	0.0905	Pulse	0.1000	3
Tl	205	209	He	0.014	ppb	73.6	350.02	0.0014	Pulse	0.1000	3
Pb	208	209	He	-0.019	ppb	N/A	520.02	0.0021	Pulse	0.1000	3
U	238	209	He	0.003	ppb	50.5	243.34	0.0010	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2198187.26	0.1	100.0	Pulse	0.1000	3
No Gas	Ge	72	1089449.96	0.2	101.5	Pulse	0.1000	3
H2	Sc	45	136770.58	0.5	100.8	Pulse	0.1000	3
H2	Ge	72	107962.02	0.5	102.1	Pulse	0.1000	3
H2	In	115	285464.47	0.3	102.1	Pulse	0.1000	3
He	Sc	45	29764.24	3.5	99.7	Pulse	0.1000	3
He	Ge	72	52898.06	0.9	100.9	Pulse	0.1000	3
He	In	115	52017.72	1.0	101.5	Pulse	0.1000	3
He	Tb	159	287456.91	1.2	103.2	Pulse	0.1000	3
He	Bi	209	244067.08	0.5	102.8	Pulse	0.1000	3

No Gas



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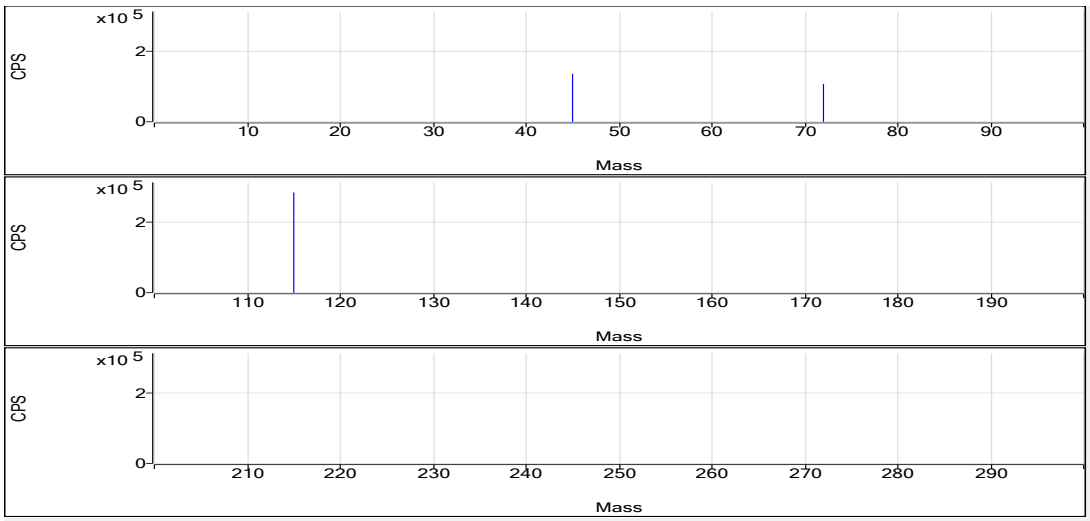
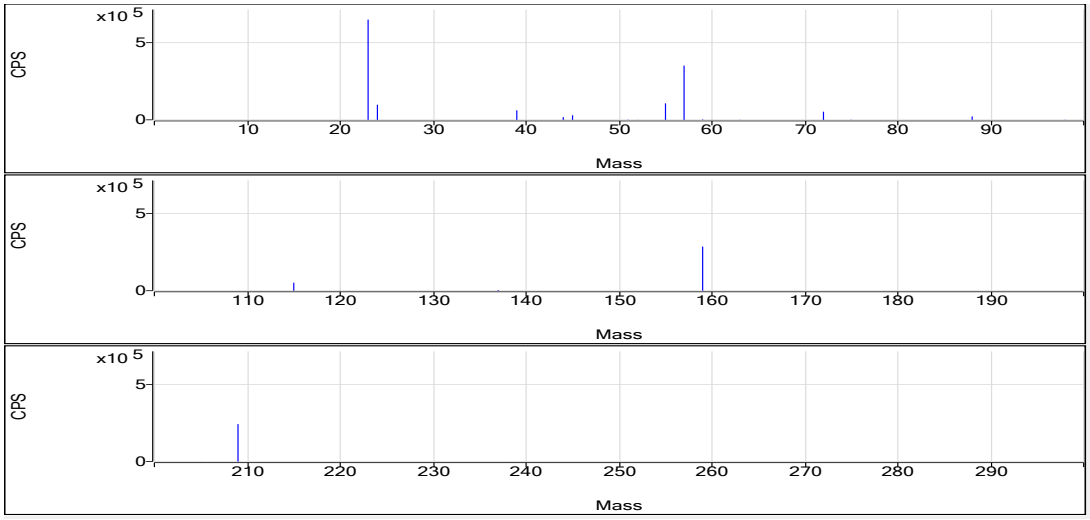


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.015	0	76.00	0.0007	2.306E-05
Be	9	1	No Gas	0.024	0	90.00	0.0007	2.306E-05
Be	9	1	No Gas	0.013	0	72.00	0.0007	2.306E-05
Se	78	2	H2	0.884	0.0004	45.33	0.0004	4.221E-05
Se	78	2	H2	0.62	0.0003	33.33	0.0004	4.221E-05
Se	78	2	H2	0.685	0.0003	36.00	0.0004	4.221E-05
Na	23	3	He	5949.414	22.9263	654968.27	0.0038	0.2864
Na	23	3	He	5563.9	21.4592	647895.58	0.0038	0.2864
Na	23	3	He	5581.609	21.5266	657257.49	0.0038	0.2864
Mg	24	3	He	1778.605	3.4304	98001.16	0.0019	0.007972
Mg	24	3	He	1693.146	3.266	98605.41	0.0019	0.007972
Mg	24	3	He	1671.486	3.2243	98444.58	0.0019	0.007972
Al	27	3	He	6.093	0.0049	140.01	0.0005	0.00158
Al	27	3	He	7.433	0.0056	170.01	0.0005	0.00158
Al	27	3	He	8.52	0.0062	190.01	0.0005	0.00158
K	39	3	He	1735.051	2.2226	63497.44	0.0011	0.3552
K	39	3	He	1556.624	2.0306	61307.78	0.0011	0.3552
K	39	3	He	1514.214	1.985	60605.27	0.0011	0.3552
Ca	44	3	He	9597.06	0.6024	17210.62	0.0001	0.002
Ca	44	3	He	9301.938	0.584	17631.18	0.0001	0.002
Ca	44	3	He	9161.185	0.5752	17561.08	0.0001	0.002
Ti	47	3	He	1.25	0.0011	30.00	0.0005	0.0004395
Ti	47	3	He	1.135	0.001	30.00	0.0005	0.0004395
Ti	47	3	He	-0.229	0.0003	10.00	0.0005	0.0004395
V	51	3	He	0.817	0.0443	1266.06	0.0218	0.02648
V	51	3	He	0.923	0.0466	1408.08	0.0218	0.02648
V	51	3	He	0.947	0.0472	1440.08	0.0218	0.02648
Cr	52	3	He	0.359	0.0165	470.02	0.029	0.006056
Cr	52	3	He	0.363	0.0166	500.02	0.029	0.006056
Cr	52	3	He	0.277	0.0141	430.02	0.029	0.006056
Mn	55	3	He	313.188	3.7331	106649.53	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	301.852	3.5981	108634.27	0.0119	0.00335
Mn	55	3	He	292.859	3.491	106589.20	0.0119	0.00335
Fe	57	3	He	21860.586	12.327	352163.98	0.0006	0.003117
Fe	57	3	He	20642.742	11.6405	351447.85	0.0006	0.003117
Fe	57	3	He	20714.102	11.6807	356638.31	0.0006	0.003117
Co	59	3	He	1.619	0.0556	2970.40	0.0317	0.004379
Co	59	3	He	1.497	0.0518	2740.34	0.0317	0.004379
Co	59	3	He	1.441	0.05	2620.32	0.0317	0.004379
Ni	60	3	He	0.021	0.0107	570.03	0.009	0.01049
Ni	60	3	He	-0.178	0.0089	470.02	0.009	0.01049
Ni	60	3	He	0.107	0.0115	600.04	0.009	0.01049
Cu	63	3	He	0.008	0.017	910.06	0.0259	0.01685
Cu	63	3	He	0.145	0.0206	1090.08	0.0259	0.01685
Cu	63	3	He	0.072	0.0187	980.07	0.0259	0.01685
Zn	66	3	He	0.439	0.0051	270.01	0.0028	0.003817
Zn	66	3	He	0.522	0.0053	280.01	0.0028	0.003817
Zn	66	3	He	0.609	0.0055	290.02	0.0028	0.003817
As	75	3	He	11.275	0.0214	1142.05	0.0019	0.0004832
As	75	3	He	11.888	0.0225	1192.06	0.0019	0.0004832
As	75	3	He	12.34	0.0234	1224.06	0.0019	0.0004832
Sr	88	3	He	50.124	0.4024	20935.84	0.008	0.0005203
Sr	88	3	He	53.439	0.4289	22077.56	0.008	0.0005203
Sr	88	3	He	52.028	0.4176	21947.59	0.008	0.0005203
Mo	98	3	He	0.682	0.016	830.05	0.0229	0.0003256
Mo	98	3	He	0.936	0.0218	1120.09	0.0229	0.0003256
Mo	98	3	He	0.808	0.0188	990.07	0.0229	0.0003256
Ag	107	3	He	0.005	0.001	50.00	0.05	0.000719
Ag	107	3	He	0.009	0.0012	60.00	0.05	0.000719
Ag	107	3	He	-0.011	0.0002	10.00	0.05	0.000719
Cd	111	3	He	-0.019	0	0.00	0.0055	0.000104
Cd	111	3	He	-0.019	0	0.00	0.0055	0.000104
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Sn	120	3	He	-0.147	0.0163	850.06	0.0159	0.01867
Sn	120	3	He	-0.197	0.0155	800.05	0.0159	0.01867
Sn	120	3	He	-0.061	0.0177	930.06	0.0159	0.01867
Sb	121	3	He	0.223	0.0007	190.01	0.0026	8.342E-05
Sb	121	3	He	0.183	0.0006	160.01	0.0026	8.342E-05
Sb	121	3	He	0.165	0.0005	150.01	0.0026	8.342E-05
Ba	137	3	He	18.753	0.0942	4901.05	0.005	0.0005882
Ba	137	3	He	18.882	0.0948	4881.09	0.005	0.0005882
Ba	137	3	He	16.431	0.0826	4340.86	0.005	0.0005882
Tl	205	3	He	0.002	0.0011	260.01	0.0313	0.0009967
Tl	205	3	He	0.021	0.0016	400.03	0.0313	0.0009967
Tl	205	3	He	0.019	0.0016	390.02	0.0313	0.0009967
Pb	208	3	He	-0.018	0.0022	310.01	0.041	0.002892
Pb	208	3	He	-0.021	0.002	290.02	0.041	0.002892
Pb	208	3	He	-0.017	0.0022	290.02	0.041	0.002892
U	238	3	He	0.001	0.0009	220.01	0.0501	0.0008282
U	238	3	He	0.004	0.001	250.01	0.0501	0.0008282
U	238	3	He	0.005	0.0011	260.01	0.0501	0.0008282
Sc	45	1	No Gas			2198961.69		
Sc	45	1	No Gas			2196769.97		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2198830.12		
Ge	72	1	No Gas			1091833.11		
Ge	72	1	No Gas			1089692.56		
Ge	72	1	No Gas			1086824.20		
Sc	45	2	H2			136479.34		
Sc	45	2	H2			137509.63		
Sc	45	2	H2			136322.76		
Ge	72	2	H2			107880.86		
Ge	72	2	H2			108535.93		
Ge	72	2	H2			107469.27		
In	115	2	H2			284941.30		
In	115	2	H2			285106.50		
In	115	2	H2			286345.60		
Sc	45	3	He			28568.47		
Sc	45	3	He			30191.93		
Sc	45	3	He			30532.31		
Ge	72	3	He			53389.78		
Ge	72	3	He			52918.17		
Ge	72	3	He			52386.23		
In	115	3	He			52037.65		
In	115	3	He			51475.77		
In	115	3	He			52559.86		
Tb	159	3	He			285925.62		
Tb	159	3	He			284983.82		
Tb	159	3	He			291461.28		
Bi	209	3	He			244366.91		
Bi	209	3	He			242780.82		
Bi	209	3	He			245053.51		

Quantitation Report

Data File Name	077SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 11:31:34
Sample Name	410-179201-K-3-A
Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

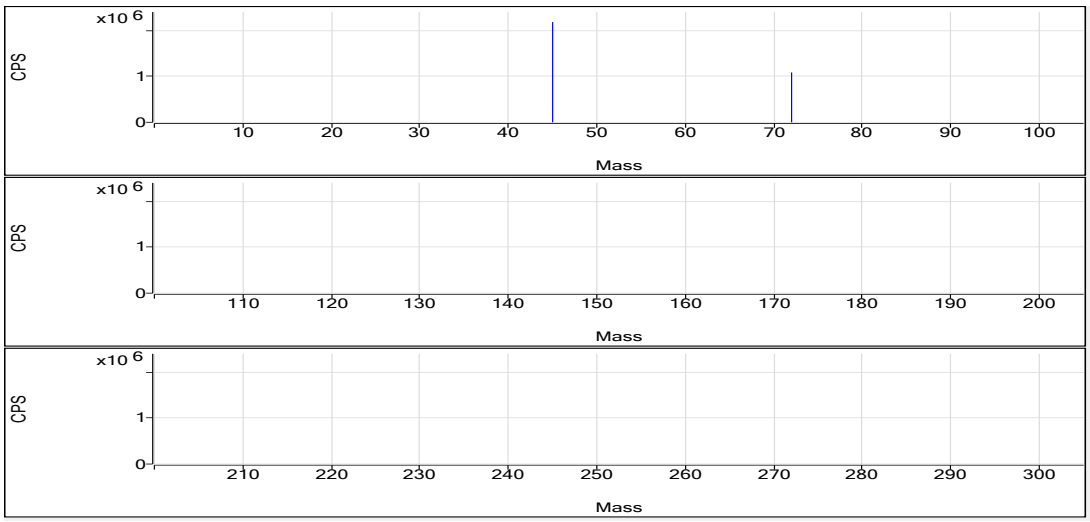
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.018	ppb	20.9	79.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.034	ppb	45.8	6.00	0.0001	Pulse	1.5000	3
Na	23	45	He	793.308	ppb	1.3	96797.11	3.3053	Pulse	0.1000	3
Mg	24	45	He	76.268	ppb	8.4	4530.86	0.1547	Pulse	0.1000	3
Al	27	45	He	41.192	ppb	28.4	703.38	0.0240	Pulse	0.1000	3
K	39	45	He	69.875	ppb	20.7	12605.73	0.4304	Pulse	0.1000	3
Ca	44	45	He	304.624	ppb	7.6	616.70	0.0211	Pulse	0.1000	3
Ti	47	45	He	1.663	ppb	87.2	36.67	0.0013	Pulse	0.1000	3
V	51	45	He	0.344	ppb	4.2	995.37	0.0340	Pulse	0.5000	3
Cr	52	45	He	1.688	ppb	8.3	1610.15	0.0550	Pulse	0.1000	3
Mn	55	45	He	4.545	ppb	3.6	1683.49	0.0575	Pulse	0.1000	3
Fe	57	45	He	75.231	ppb	1.9	1333.44	0.0455	Pulse	0.1000	3
Co	59	72	He	0.065	ppb	44.6	340.02	0.0064	Pulse	0.1000	3
Ni	60	72	He	1.709	ppb	4.3	1373.45	0.0259	Pulse	0.1000	3
Cu	63	72	He	1.868	ppb	0.6	3453.86	0.0652	Pulse	0.1000	3
Zn	66	72	He	10.153	ppb	7.1	1720.17	0.0325	Pulse	0.1000	3
As	75	72	He	0.466	ppb	24.8	71.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	2.192	ppb	12.1	933.40	0.0181	Pulse	0.1000	3
Mo	98	115	He	0.386	ppb	5.4	473.36	0.0092	Pulse	0.1000	3
Ag	107	115	He	0.557	ppb	13.1	1476.80	0.0286	Pulse	0.1000	3
Cd	111	115	He	0.014	ppb	72.0	9.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	16.773	ppb	3.6	14738.20	0.2856	Pulse	0.1000	3
Sb	121	159	He	0.084	ppb	24.6	86.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	1.020	ppb	2.7	293.34	0.0057	Pulse	0.1000	3
Tl	205	209	He	-0.004	ppb	N/A	210.01	0.0009	Pulse	0.1000	3
Pb	208	209	He	0.033	ppb	19.8	1033.39	0.0043	Pulse	0.1000	3
U	238	209	He	0.009	ppb	34.0	310.01	0.0013	Pulse	0.1000	3

ISTD Table:

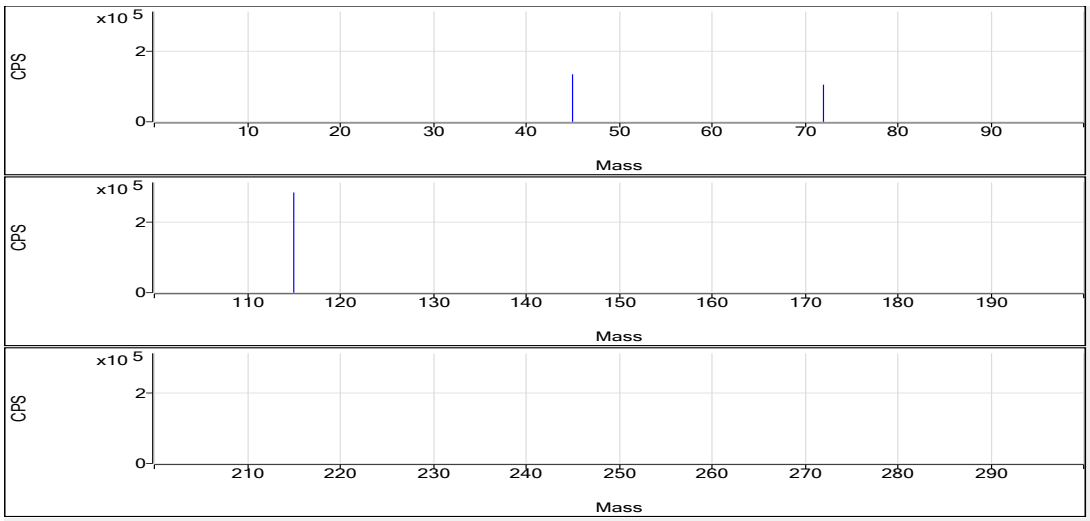
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2184734.86	0.1	99.4	Pulse	0.1000	3
No Gas	Ge	72	1086132.12	0.1	101.2	Pulse	0.1000	3
H2	Sc	45	135286.56	0.9	99.7	Pulse	0.1000	3
H2	Ge	72	105884.67	1.5	100.1	Pulse	0.1000	3
H2	In	115	285478.49	0.6	102.1	Pulse	0.1000	3
He	Sc	45	29286.60	0.4	98.1	Pulse	0.1000	3
He	Ge	72	52941.49	0.8	101.0	Pulse	0.1000	3
He	In	115	51631.42	2.8	100.8	Pulse	0.1000	3
He	Tb	159	287119.69	0.2	103.1	Pulse	0.1000	3
He	Bi	209	242574.73	0.5	102.2	Pulse	0.1000	3

No Gas

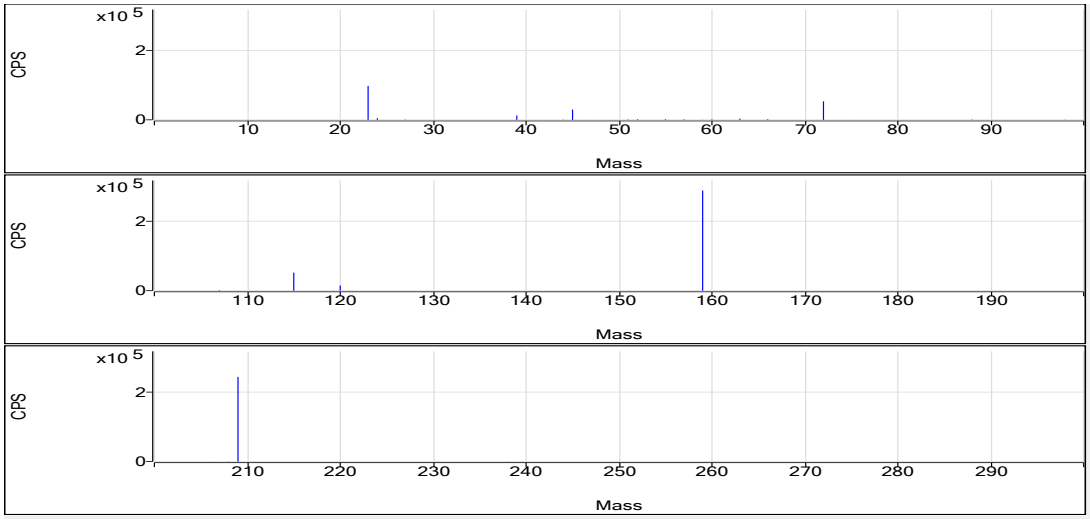


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.014	0	74.00	0.0007	2.306E-05
Be	9	1	No Gas	0.022	0	86.00	0.0007	2.306E-05
Be	9	1	No Gas	0.017	0	78.00	0.0007	2.306E-05
Se	78	2	H2	0.017	0	5.33	0.0004	4.221E-05
Se	78	2	H2	0.036	0.0001	6.00	0.0004	4.221E-05
Se	78	2	H2	0.048	0.0001	6.67	0.0004	4.221E-05
Na	23	3	He	804.233	3.3468	97559.11	0.0038	0.2864
Na	23	3	He	792.149	3.3009	96913.99	0.0038	0.2864
Na	23	3	He	783.541	3.2681	95918.23	0.0038	0.2864
Mg	24	3	He	80.916	0.1637	4770.97	0.0019	0.007972
Mg	24	3	He	78.889	0.1598	4690.91	0.0019	0.007972
Mg	24	3	He	68.999	0.1407	4130.71	0.0019	0.007972
Al	27	3	He	48.725	0.0281	820.05	0.0005	0.00158
Al	27	3	He	27.728	0.0167	490.03	0.0005	0.00158
Al	27	3	He	47.123	0.0273	800.05	0.0005	0.00158
K	39	3	He	69.518	0.43	12535.62	0.0011	0.3552
K	39	3	He	55.566	0.415	12185.32	0.0011	0.3552
K	39	3	He	84.54	0.4462	13096.25	0.0011	0.3552
Ca	44	3	He	313.495	0.0216	630.04	0.0001	0.002
Ca	44	3	He	278.347	0.0194	570.03	0.0001	0.002
Ca	44	3	He	322.03	0.0221	650.04	0.0001	0.002
Ti	47	3	He	1.207	0.001	30.00	0.0005	0.0004395
Ti	47	3	He	0.495	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	3.286	0.002	60.00	0.0005	0.0004395
V	51	3	He	0.327	0.0336	980.04	0.0218	0.02648
V	51	3	He	0.354	0.0342	1004.04	0.0218	0.02648
V	51	3	He	0.351	0.0341	1002.04	0.0218	0.02648
Cr	52	3	He	1.733	0.0563	1640.17	0.029	0.006056
Cr	52	3	He	1.801	0.0582	1710.16	0.029	0.006056
Cr	52	3	He	1.531	0.0504	1480.13	0.029	0.006056
Mn	55	3	He	4.501	0.057	1660.15	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	4.409	0.0559	1640.15	0.0119	0.00335
Mn	55	3	He	4.726	0.0596	1750.18	0.0119	0.00335
Fe	57	3	He	73.586	0.0446	1300.10	0.0006	0.003117
Fe	57	3	He	76.039	0.046	1350.10	0.0006	0.003117
Fe	57	3	He	76.069	0.046	1350.11	0.0006	0.003117
Co	59	3	He	0.071	0.0066	350.02	0.0317	0.004379
Co	59	3	He	0.033	0.0054	290.01	0.0317	0.004379
Co	59	3	He	0.09	0.0072	380.02	0.0317	0.004379
Ni	60	3	He	1.779	0.0266	1400.12	0.009	0.01049
Ni	60	3	He	1.717	0.026	1390.11	0.009	0.01049
Ni	60	3	He	1.633	0.0253	1330.11	0.009	0.01049
Cu	63	3	He	1.856	0.0649	3420.51	0.0259	0.01685
Cu	63	3	He	1.878	0.0655	3500.54	0.0259	0.01685
Cu	63	3	He	1.871	0.0653	3440.53	0.0259	0.01685
Zn	66	3	He	10.269	0.0328	1730.16	0.0028	0.003817
Zn	66	3	He	9.377	0.0303	1620.15	0.0028	0.003817
Zn	66	3	He	10.812	0.0344	1810.19	0.0028	0.003817
As	75	3	He	0.517	0.0014	76.00	0.0019	0.0004832
As	75	3	He	0.547	0.0015	80.00	0.0019	0.0004832
As	75	3	He	0.333	0.0011	58.00	0.0019	0.0004832
Sr	88	3	He	2.214	0.0183	970.08	0.008	0.0005203
Sr	88	3	He	1.917	0.0159	820.06	0.008	0.0005203
Sr	88	3	He	2.446	0.0201	1010.07	0.008	0.0005203
Mo	98	3	He	0.38	0.009	480.02	0.0229	0.0003256
Mo	98	3	He	0.409	0.0097	500.03	0.0229	0.0003256
Mo	98	3	He	0.368	0.0088	440.02	0.0229	0.0003256
Ag	107	3	He	0.611	0.0313	1660.17	0.05	0.000719
Ag	107	3	He	0.474	0.0244	1260.09	0.05	0.000719
Ag	107	3	He	0.587	0.0301	1510.14	0.05	0.000719
Cd	111	3	He	0.022	0.0002	12.00	0.0055	0.000104
Cd	111	3	He	0.016	0.0002	10.00	0.0055	0.000104
Cd	111	3	He	0.003	0.0001	6.00	0.0055	0.000104
Sn	120	3	He	16.089	0.2747	14588.05	0.0159	0.01867
Sn	120	3	He	17.038	0.2898	14958.44	0.0159	0.01867
Sn	120	3	He	17.191	0.2923	14668.11	0.0159	0.01867
Sb	121	3	He	0.061	0.0002	70.00	0.0026	8.342E-05
Sb	121	3	He	0.102	0.0003	100.00	0.0026	8.342E-05
Sb	121	3	He	0.088	0.0003	90.00	0.0026	8.342E-05
Ba	137	3	He	1.052	0.0058	310.01	0.005	0.0005882
Ba	137	3	He	1.008	0.0056	290.01	0.005	0.0005882
Ba	137	3	He	1	0.0056	280.01	0.005	0.0005882
Tl	205	3	He	0.002	0.0011	260.01	0.0313	0.0009967
Tl	205	3	He	-0.007	0.0008	190.01	0.0313	0.0009967
Tl	205	3	He	-0.008	0.0007	180.01	0.0313	0.0009967
Pb	208	3	He	0.032	0.0042	580.04	0.041	0.002892
Pb	208	3	He	0.041	0.0046	630.04	0.041	0.002892
Pb	208	3	He	0.028	0.004	550.03	0.041	0.002892
U	238	3	He	0.01	0.0013	320.01	0.0501	0.0008282
U	238	3	He	0.012	0.0014	340.02	0.0501	0.0008282
U	238	3	He	0.006	0.0011	270.01	0.0501	0.0008282
Sc	45	1	No Gas			2185433.40		
Sc	45	1	No Gas			2187336.22		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2181434.97		
Ge	72	1	No Gas			1086177.48		
Ge	72	1	No Gas			1084680.53		
Ge	72	1	No Gas			1087538.34		
Sc	45	2	H2			135291.33		
Sc	45	2	H2			134048.08		
Sc	45	2	H2			136520.27		
Ge	72	2	H2			107318.80		
Ge	72	2	H2			104215.20		
Ge	72	2	H2			106120.00		
In	115	2	H2			286545.78		
In	115	2	H2			283448.14		
In	115	2	H2			286441.54		
Sc	45	3	He			29149.64		
Sc	45	3	He			29360.29		
Sc	45	3	He			29349.86		
Ge	72	3	He			52697.41		
Ge	72	3	He			53449.97		
Ge	72	3	He			52677.09		
In	115	3	He			53212.07		
In	115	3	He			51726.07		
In	115	3	He			50300.99		
Tb	159	3	He			287877.65		
Tb	159	3	He			286783.88		
Tb	159	3	He			286697.53		
Bi	209	3	He			243202.81		
Bi	209	3	He			241259.70		
Bi	209	3	He			243261.68		

Quantitation Report

Data File Name	078SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 11:33:35
Sample Name	410-173013-H-29-A
Sample Type	Sample
Comment	C9
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

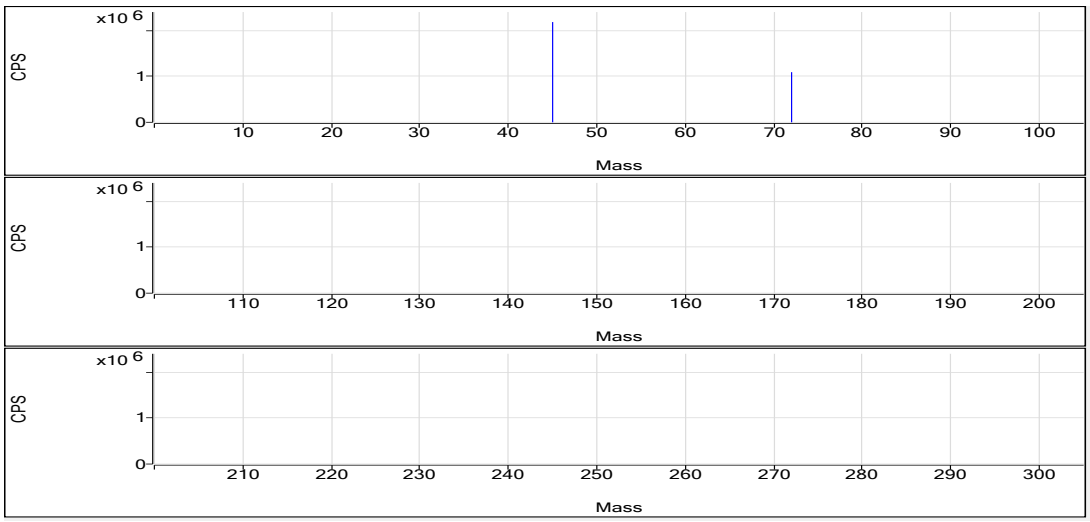
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.014	ppb	45.4	73.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.041	ppb	N/A	2.67	0.0000	Pulse	1.5000	3
Na	23	45	He	22973.460	ppb	2.4	2599210.38	87.7094	Pulse	0.1000	3
Mg	24	45	He	802.181	ppb	1.9	45981.95	1.5515	Pulse	0.1000	3
Al	27	45	He	64.097	ppb	8.5	1083.41	0.0365	Pulse	0.1000	3
K	39	45	He	821.400	ppb	1.0	36736.52	1.2393	Pulse	0.1000	3
Ca	44	45	He	361.680	ppb	2.4	730.05	0.0246	Pulse	0.1000	3
Ti	47	45	He	1.871	ppb	75.9	40.00	0.0014	Pulse	0.1000	3
V	51	45	He	2.348	ppb	3.8	2304.20	0.0778	Pulse	0.5000	3
Cr	52	45	He	0.436	ppb	20.4	553.37	0.0187	Pulse	0.1000	3
Mn	55	45	He	1.293	ppb	18.5	556.70	0.0188	Pulse	0.1000	3
Fe	57	45	He	28.984	ppb	3.0	576.70	0.0195	Pulse	0.1000	3
Co	59	72	He	0.094	ppb	11.6	396.69	0.0074	Pulse	0.1000	3
Ni	60	72	He	1.740	ppb	22.0	1413.46	0.0262	Pulse	0.1000	3
Cu	63	72	He	1.032	ppb	4.1	2350.28	0.0436	Pulse	0.1000	3
Zn	66	72	He	1.319	ppb	26.6	406.69	0.0075	Pulse	0.1000	3
As	75	72	He	0.632	ppb	12.9	89.33	0.0017	Pulse	0.5000	3
Sr	88	115	He	5.185	ppb	8.5	2263.59	0.0421	Pulse	0.1000	3
Mo	98	115	He	1.825	ppb	12.2	2263.60	0.0421	Pulse	0.1000	3
Ag	107	115	He	-0.007	ppb	N/A	20.00	0.0004	Pulse	0.1000	3
Cd	111	115	He	-0.001	ppb	N/A	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.010	ppb	N/A	996.74	0.0185	Pulse	0.1000	3
Sb	121	159	He	0.146	ppb	29.8	133.34	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.515	ppb	23.9	170.01	0.0032	Pulse	0.1000	3
Tl	205	209	He	0.003	ppb	99.3	270.02	0.0011	Pulse	0.1000	3
Pb	208	209	He	1.273	ppb	1.7	13506.59	0.0551	Pulse	0.1000	3
U	238	209	He	0.438	ppb	4.7	5591.41	0.0228	Pulse	0.1000	3

ISTD Table:

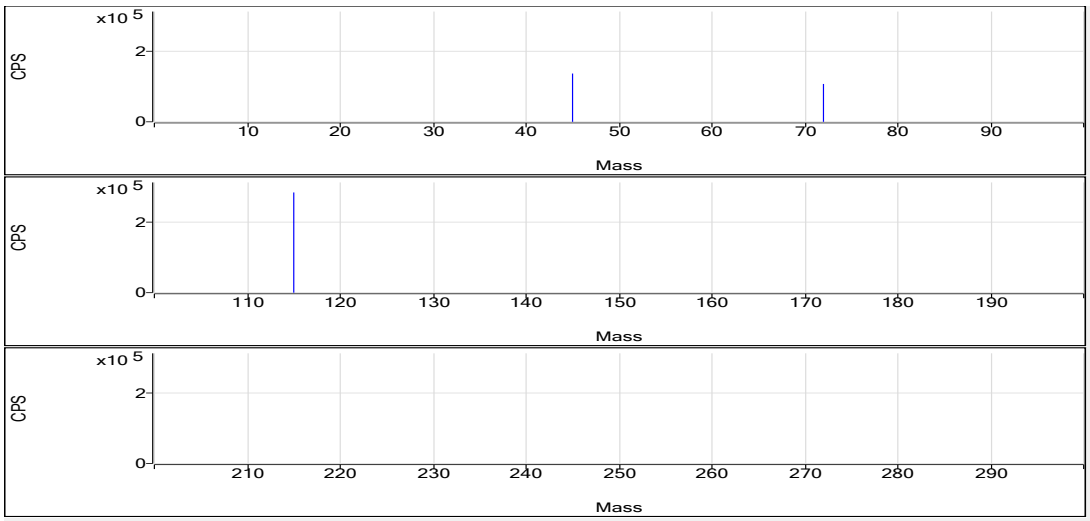
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2189032.36	0.8	99.6	Pulse	0.1000	3
No Gas	Ge	72	1094700.22	0.5	102.0	Pulse	0.1000	3
H2	Sc	45	137706.50	1.1	101.5	Pulse	0.1000	3
H2	Ge	72	108003.66	1.3	102.1	Pulse	0.1000	3
H2	In	115	285901.69	1.5	102.2	Pulse	0.1000	3
He	Sc	45	29644.06	2.1	99.3	Pulse	0.1000	3
He	Ge	72	53938.50	1.5	102.9	Pulse	0.1000	3
He	In	115	53766.31	1.2	104.9	Pulse	0.1000	3
He	Tb	159	286797.63	0.4	103.0	Pulse	0.1000	3
He	Bi	209	245150.82	0.4	103.2	Pulse	0.1000	3

No Gas

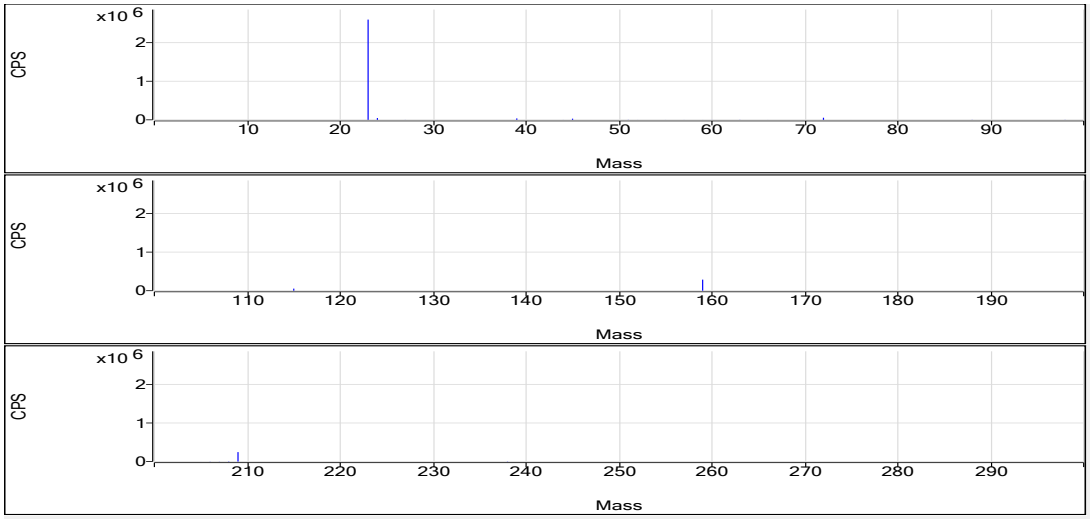


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.019	0	82.00	0.0007	2.306E-05
Be	9	1	No Gas	0.016	0	76.00	0.0007	2.306E-05
Be	9	1	No Gas	0.007	0	62.00	0.0007	2.306E-05
Se	78	2	H2	-0.04	0	2.67	0.0004	4.221E-05
Se	78	2	H2	-0.042	0	2.67	0.0004	4.221E-05
Se	78	2	H2	-0.041	0	2.67	0.0004	4.221E-05
Na	23	3	He	23037.453	87.9529	2599061.84	0.0038	0.2864
Na	23	3	He	23484.357	89.6536	2607100.90	0.0038	0.2864
Na	23	3	He	22398.57	85.5217	2591468.40	0.0038	0.2864
Mg	24	3	He	800.992	1.5493	45781.40	0.0019	0.007972
Mg	24	3	He	818.327	1.5826	46021.86	0.0019	0.007972
Mg	24	3	He	787.225	1.5228	46142.59	0.0019	0.007972
Al	27	3	He	61.068	0.0349	1030.08	0.0005	0.00158
Al	27	3	He	60.841	0.0347	1010.07	0.0005	0.00158
Al	27	3	He	70.383	0.0399	1210.09	0.0005	0.00158
K	39	3	He	830.991	1.2496	36926.71	0.0011	0.3552
K	39	3	He	817.772	1.2354	35924.57	0.0011	0.3552
K	39	3	He	815.438	1.2329	37358.27	0.0011	0.3552
Ca	44	3	He	352.084	0.024	710.05	0.0001	0.002
Ca	44	3	He	369.296	0.0251	730.05	0.0001	0.002
Ca	44	3	He	363.661	0.0248	750.05	0.0001	0.002
Ti	47	3	He	0.486	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	3.325	0.0021	60.00	0.0005	0.0004395
Ti	47	3	He	1.803	0.0013	40.00	0.0005	0.0004395
V	51	3	He	2.306	0.0768	2270.19	0.0218	0.02648
V	51	3	He	2.451	0.08	2326.20	0.0218	0.02648
V	51	3	He	2.288	0.0764	2316.20	0.0218	0.02648
Cr	52	3	He	0.433	0.0186	550.03	0.029	0.006056
Cr	52	3	He	0.527	0.0213	620.04	0.029	0.006056
Cr	52	3	He	0.349	0.0162	490.04	0.029	0.006056
Mn	55	3	He	1.452	0.0206	610.04	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.018	0.0155	450.03	0.0119	0.00335
Mn	55	3	He	1.409	0.0201	610.04	0.0119	0.00335
Fe	57	3	He	28.088	0.019	560.03	0.0006	0.003117
Fe	57	3	He	29.853	0.0199	580.04	0.0006	0.003117
Fe	57	3	He	29.011	0.0195	590.03	0.0006	0.003117
Co	59	3	He	0.098	0.0075	410.02	0.0317	0.004379
Co	59	3	He	0.081	0.007	370.02	0.0317	0.004379
Co	59	3	He	0.102	0.0076	410.02	0.0317	0.004379
Ni	60	3	He	1.77	0.0265	1450.14	0.009	0.01049
Ni	60	3	He	2.106	0.0295	1570.15	0.009	0.01049
Ni	60	3	He	1.344	0.0226	1220.10	0.009	0.01049
Cu	63	3	He	1.028	0.0435	2380.28	0.0259	0.01685
Cu	63	3	He	0.991	0.0425	2260.27	0.0259	0.01685
Cu	63	3	He	1.076	0.0447	2410.30	0.0259	0.01685
Zn	66	3	He	1.365	0.0077	420.02	0.0028	0.003817
Zn	66	3	He	1.645	0.0085	450.02	0.0028	0.003817
Zn	66	3	He	0.947	0.0065	350.02	0.0028	0.003817
As	75	3	He	0.725	0.0018	100.00	0.0019	0.0004832
As	75	3	He	0.571	0.0015	82.00	0.0019	0.0004832
As	75	3	He	0.6	0.0016	86.00	0.0019	0.0004832
Sr	88	3	He	4.967	0.0403	2190.24	0.008	0.0005203
Sr	88	3	He	4.894	0.0398	2110.24	0.008	0.0005203
Sr	88	3	He	5.695	0.0462	2490.30	0.008	0.0005203
Mo	98	3	He	1.65	0.0381	2070.23	0.0229	0.0003256
Mo	98	3	He	2.075	0.0479	2540.33	0.0229	0.0003256
Mo	98	3	He	1.75	0.0404	2180.25	0.0229	0.0003256
Ag	107	3	He	-0.007	0.0004	20.00	0.05	0.000719
Ag	107	3	He	-0.007	0.0004	20.00	0.05	0.000719
Ag	107	3	He	-0.007	0.0004	20.00	0.05	0.000719
Cd	111	3	He	0.001	0.0001	6.00	0.0055	0.000104
Cd	111	3	He	-0.012	0	2.00	0.0055	0.000104
Cd	111	3	He	0.008	0.0001	8.00	0.0055	0.000104
Sn	120	3	He	0.019	0.019	1030.08	0.0159	0.01867
Sn	120	3	He	-0.214	0.0153	810.05	0.0159	0.01867
Sn	120	3	He	0.167	0.0213	1150.09	0.0159	0.01867
Sb	121	3	He	0.128	0.0004	120.00	0.0026	8.342E-05
Sb	121	3	He	0.115	0.0004	110.00	0.0026	8.342E-05
Sb	121	3	He	0.196	0.0006	170.01	0.0026	8.342E-05
Ba	137	3	He	0.657	0.0039	210.01	0.005	0.0005882
Ba	137	3	He	0.448	0.0028	150.01	0.005	0.0005882
Ba	137	3	He	0.439	0.0028	150.01	0.005	0.0005882
Tl	205	3	He	0.006	0.0012	290.02	0.0313	0.0009967
Tl	205	3	He	0.005	0.0011	280.02	0.0313	0.0009967
Tl	205	3	He	0	0.001	240.01	0.0313	0.0009967
Pb	208	3	He	1.25	0.0542	7132.14	0.041	0.002892
Pb	208	3	He	1.274	0.0552	7312.24	0.041	0.002892
Pb	208	3	He	1.294	0.056	7702.57	0.041	0.002892
U	238	3	He	0.45	0.0234	5761.53	0.0501	0.0008282
U	238	3	He	0.414	0.0216	5291.23	0.0501	0.0008282
U	238	3	He	0.451	0.0234	5721.47	0.0501	0.0008282
Sc	45	1	No Gas			2197936.53		
Sc	45	1	No Gas			2169802.00		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2199358.56		
Ge	72	1	No Gas			1100272.41		
Ge	72	1	No Gas			1088689.44		
Ge	72	1	No Gas			1095138.81		
Sc	45	2	H2			135946.03		
Sc	45	2	H2			138592.74		
Sc	45	2	H2			138580.73		
Ge	72	2	H2			106643.97		
Ge	72	2	H2			109443.51		
Ge	72	2	H2			107923.50		
In	115	2	H2			283592.14		
In	115	2	H2			290925.05		
In	115	2	H2			283187.89		
Sc	45	3	He			29550.60		
Sc	45	3	He			29079.72		
Sc	45	3	He			30301.87		
Ge	72	3	He			54744.52		
Ge	72	3	He			53168.99		
Ge	72	3	He			53901.99		
In	115	3	He			54306.01		
In	115	3	He			53081.22		
In	115	3	He			53935.03		
Tb	159	3	He			288109.49		
Tb	159	3	He			286631.73		
Tb	159	3	He			285651.66		
Bi	209	3	He			246346.29		
Bi	209	3	He			244930.17		
Bi	209	3	He			244176.01		

Quantitation Report

Data File Name	080_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 11:37:38
Sample Name	CCV 6148199
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

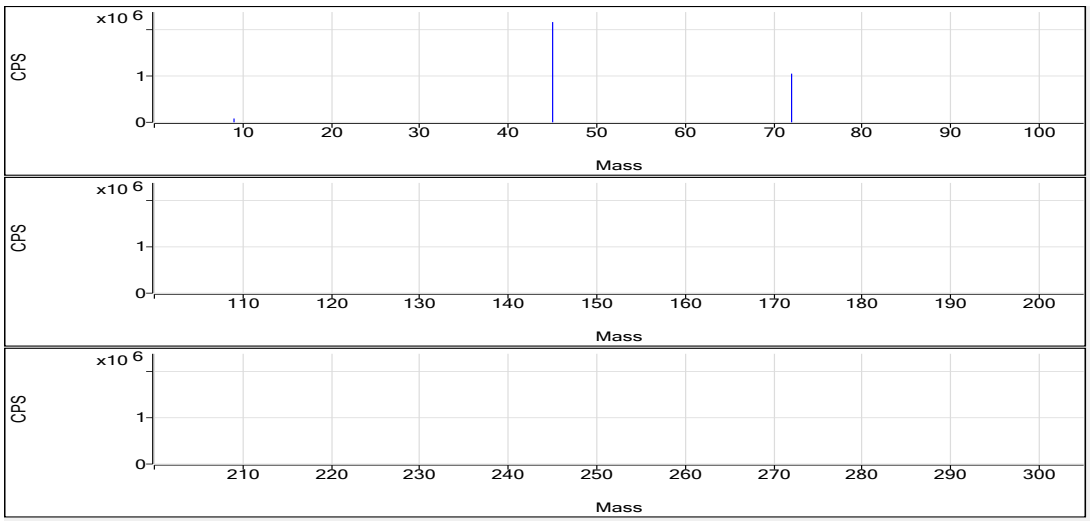
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.718	ppb	0.6	81764.92	0.0379	Pulse	0.5000	3
Se	78	72	H2	54.002	ppb	2.1	2355.98	0.0231	Pulse	1.5000	3
Na	23	45	He	5272.498	ppb	2.9	584890.49	20.3503	Pulse	0.1000	3
Mg	24	45	He	5199.020	ppb	3.0	287742.77	10.0120	Pulse	0.1000	3
Al	27	45	He	5213.260	ppb	2.6	81705.19	2.8425	Pulse	0.1000	3
K	39	45	He	5257.044	ppb	3.8	172807.89	6.0133	Pulse	0.1000	3
Ca	44	45	He	5333.993	ppb	4.9	9653.49	0.3357	Pulse	0.1000	3
Ti	47	45	He	5297.158	ppb	3.5	74349.48	2.5872	Pulse	0.1000	3
V	51	45	He	527.758	ppb	2.4	332007.90	11.5509	Pulse	0.5000	3
Cr	52	45	He	526.198	ppb	2.5	438475.62	15.2551	Pulse	0.1000	3
Mn	55	45	He	530.070	ppb	2.4	181543.25	6.3160	Pulse	0.1000	3
Fe	57	45	He	5262.026	ppb	2.1	85360.87	2.9696	Pulse	0.1000	3
Co	59	72	He	540.722	ppb	2.3	865538.06	17.1287	Pulse	0.1000	3
Ni	60	72	He	540.156	ppb	1.8	247291.95	4.8933	Pulse	0.1000	3
Cu	63	72	He	537.314	ppb	1.4	704071.94	13.9316	Pulse	0.1000	3
Zn	66	72	He	531.618	ppb	1.4	76103.70	1.5059	Pulse	0.1000	3
As	75	72	He	545.235	ppb	2.7	51110.76	1.0115	Pulse	0.5000	3
Sr	88	115	He	52.798	ppb	1.5	21904.15	0.4238	Pulse	0.1000	3
Mo	98	115	He	52.943	ppb	0.5	62706.24	1.2135	Pulse	0.1000	3
Ag	107	115	He	51.693	ppb	2.5	133567.22	2.5853	Pulse	0.1000	3
Cd	111	115	He	51.913	ppb	2.3	14823.18	0.2869	Pulse	0.5000	3
Sn	120	115	He	52.405	ppb	1.4	44060.34	0.8527	Pulse	0.1000	3
Sb	121	159	He	54.040	ppb	1.3	39954.84	0.1411	Pulse	0.1000	3
Ba	137	115	He	524.057	ppb	2.6	135171.74	2.6164	Pulse	0.1000	3
Tl	205	209	He	51.674	ppb	0.6	386966.58	1.6180	Pulse	0.1000	3
Pb	208	209	He	52.209	ppb	0.9	512912.32	2.1446	Pulse	0.1000	3
U	238	209	He	51.500	ppb	1.2	617625.91	2.5825	Pulse	0.1000	3

ISTD Table:

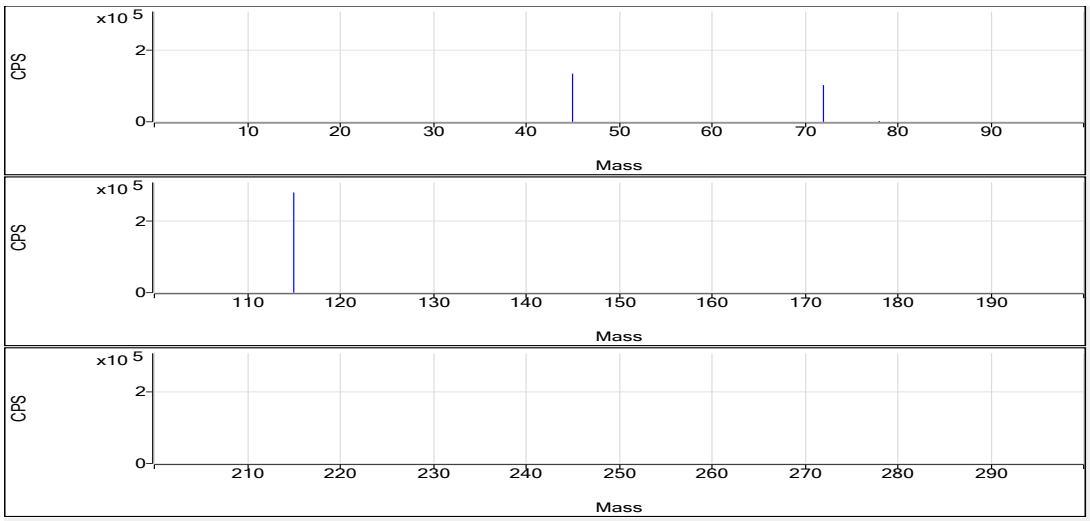
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2155619.19	0.5	98.1	Pulse	0.1000	3
No Gas	Ge	72	1046203.40	0.8	97.5	Pulse	0.1000	3
H2	Sc	45	133632.16	0.6	98.5	Pulse	0.1000	3
H2	Ge	72	101891.92	1.2	96.4	Pulse	0.1000	3
H2	In	115	278075.47	1.0	99.4	Pulse	0.1000	3
He	Sc	45	28755.66	2.7	96.3	Pulse	0.1000	3
He	Ge	72	50546.37	1.9	96.4	Pulse	0.1000	3
He	In	115	51676.98	1.5	100.8	Pulse	0.1000	3
He	Tb	159	283215.45	0.0	101.7	Pulse	0.1000	3
He	Bi	209	239178.25	0.9	100.7	Pulse	0.1000	3

No Gas

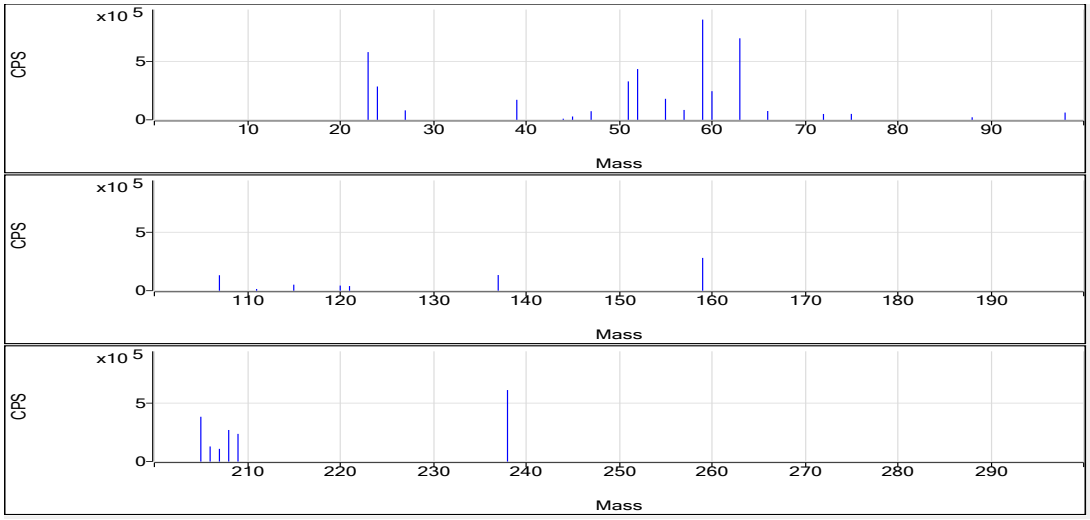


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.36	0.0377	81289.21	0.0007	2.306E-05
Be	9	1	No Gas	50.857	0.038	81514.25	0.0007	2.306E-05
Be	9	1	No Gas	50.938	0.0381	82491.30	0.0007	2.306E-05
Se	78	2	H2	53.422	0.0229	2358.20	0.0004	4.221E-05
Se	78	2	H2	53.269	0.0228	2326.86	0.0004	4.221E-05
Se	78	2	H2	55.314	0.0237	2382.87	0.0004	4.221E-05
Na	23	3	He	5442.12	20.9958	585935.97	0.0038	0.2864
Na	23	3	He	5155.509	19.9051	586412.14	0.0038	0.2864
Na	23	3	He	5219.863	20.15	582323.35	0.0038	0.2864
Mg	24	3	He	5373.885	10.3485	288798.37	0.0019	0.007972
Mg	24	3	He	5065.222	9.7546	287372.61	0.0019	0.007972
Mg	24	3	He	5157.953	9.933	287057.34	0.0019	0.007972
Al	27	3	He	5301.659	2.8906	80669.75	0.0005	0.00158
Al	27	3	He	5058.336	2.758	81252.77	0.0005	0.00158
Al	27	3	He	5279.785	2.8787	83193.05	0.0005	0.00158
K	39	3	He	5482.047	6.2555	174573.86	0.0011	0.3552
K	39	3	He	5111.967	5.8572	172554.51	0.0011	0.3552
K	39	3	He	5177.117	5.9273	171295.29	0.0011	0.3552
Ca	44	3	He	5451.072	0.343	9573.40	0.0001	0.002
Ca	44	3	He	5514.934	0.347	10223.87	0.0001	0.002
Ca	44	3	He	5035.972	0.3171	9163.20	0.0001	0.002
Ti	47	3	He	5487.963	2.6804	74802.18	0.0005	0.0004395
Ti	47	3	He	5116.121	2.4988	73615.48	0.0005	0.0004395
Ti	47	3	He	5287.391	2.5824	74630.79	0.0005	0.0004395
V	51	3	He	540.475	11.8286	330103.34	0.0218	0.02648
V	51	3	He	514.665	11.265	331870.06	0.0218	0.02648
V	51	3	He	528.134	11.5591	334050.31	0.0218	0.02648
Cr	52	3	He	539.087	15.6286	436152.65	0.029	0.006056
Cr	52	3	He	512.895	14.8696	438062.96	0.029	0.006056
Cr	52	3	He	526.614	15.2672	441211.24	0.029	0.006056
Mn	55	3	He	544.277	6.4852	180983.69	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	520.62	6.2034	182755.45	0.0119	0.00335
Mn	55	3	He	525.312	6.2593	180890.62	0.0119	0.00335
Fe	57	3	He	5384.365	3.0386	84797.70	0.0006	0.003117
Fe	57	3	He	5180.169	2.9234	86125.38	0.0006	0.003117
Fe	57	3	He	5221.543	2.9468	85159.52	0.0006	0.003117
Co	59	3	He	542.79	17.1942	864494.05	0.0317	0.004379
Co	59	3	He	552.036	17.4871	869578.58	0.0317	0.004379
Co	59	3	He	527.339	16.7049	862541.55	0.0317	0.004379
Ni	60	3	He	535.664	4.8526	243982.26	0.009	0.01049
Ni	60	3	He	551.051	4.9917	248224.04	0.009	0.01049
Ni	60	3	He	533.753	4.8354	249669.55	0.009	0.01049
Cu	63	3	He	536.467	13.9097	699353.97	0.0259	0.01685
Cu	63	3	He	545.305	14.1386	703068.74	0.0259	0.01685
Cu	63	3	He	530.17	13.7466	709793.11	0.0259	0.01685
Zn	66	3	He	529.684	1.5004	75436.94	0.0028	0.003817
Zn	66	3	He	539.644	1.5285	76009.29	0.0028	0.003817
Zn	66	3	He	525.527	1.4886	76864.87	0.0028	0.003817
As	75	3	He	552.446	1.0249	51529.57	0.0019	0.0004832
As	75	3	He	555.242	1.0301	51222.52	0.0019	0.0004832
As	75	3	He	528.017	0.9796	50580.19	0.0019	0.0004832
Sr	88	3	He	52.424	0.4208	21667.23	0.008	0.0005203
Sr	88	3	He	53.718	0.4312	22648.55	0.008	0.0005203
Sr	88	3	He	52.251	0.4194	21396.66	0.008	0.0005203
Mo	98	3	He	52.856	1.2115	62378.83	0.0229	0.0003256
Mo	98	3	He	52.729	1.2086	63482.55	0.0229	0.0003256
Mo	98	3	He	53.244	1.2204	62257.33	0.0229	0.0003256
Ag	107	3	He	52.066	2.6039	134075.22	0.05	0.000719
Ag	107	3	He	50.234	2.5124	131965.52	0.05	0.000719
Ag	107	3	He	52.78	2.6397	134660.93	0.05	0.000719
Cd	111	3	He	51.77	0.2861	14731.74	0.0055	0.000104
Cd	111	3	He	50.809	0.2808	14749.79	0.0055	0.000104
Cd	111	3	He	53.161	0.2938	14988.02	0.0055	0.000104
Sn	120	3	He	53.095	0.8637	44471.40	0.0159	0.01867
Sn	120	3	He	51.592	0.8398	44110.70	0.0159	0.01867
Sn	120	3	He	52.526	0.8546	43598.92	0.0159	0.01867
Sb	121	3	He	53.8	0.1405	39767.90	0.0026	8.342E-05
Sb	121	3	He	53.496	0.1397	39556.77	0.0026	8.342E-05
Sb	121	3	He	54.823	0.1431	40539.86	0.0026	8.342E-05
Ba	137	3	He	529.587	2.644	136137.56	0.005	0.0005882
Ba	137	3	He	508.579	2.5391	133371.47	0.005	0.0005882
Ba	137	3	He	534.004	2.666	136006.18	0.005	0.0005882
Tl	205	3	He	51.992	1.6279	386625.97	0.0313	0.0009967
Tl	205	3	He	51.643	1.617	385746.09	0.0313	0.0009967
Tl	205	3	He	51.386	1.6089	388527.69	0.0313	0.0009967
Pb	208	3	He	52.697	2.1646	274771.27	0.041	0.002892
Pb	208	3	He	52.203	2.1444	272205.39	0.041	0.002892
Pb	208	3	He	51.726	2.1248	271197.28	0.041	0.002892
U	238	3	He	51.98	2.6065	619045.69	0.0501	0.0008282
U	238	3	He	51.688	2.5919	618318.27	0.0501	0.0008282
U	238	3	He	50.83	2.5489	615513.78	0.0501	0.0008282
Sc	45	1	No Gas			2158303.72		
Sc	45	1	No Gas			2143148.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2165404.97		
Ge	72	1	No Gas			1036798.89		
Ge	72	1	No Gas			1053234.83		
Ge	72	1	No Gas			1048576.47		
Sc	45	2	H2			133040.67		
Sc	45	2	H2			133392.84		
Sc	45	2	H2			134462.96		
Ge	72	2	H2			103076.68		
Ge	72	2	H2			101999.32		
Ge	72	2	H2			100599.76		
In	115	2	H2			277038.18		
In	115	2	H2			275917.50		
In	115	2	H2			281270.72		
Sc	45	3	He			27907.28		
Sc	45	3	He			29460.33		
Sc	45	3	He			28899.37		
Ge	72	3	He			50278.15		
Ge	72	3	He			49726.96		
Ge	72	3	He			51633.99		
In	115	3	He			51836.51		
In	115	3	He			52870.75		
In	115	3	He			51354.69		
Tb	159	3	He			283144.14		
Tb	159	3	He			283243.86		
Tb	159	3	He			283258.34		
Bi	209	3	He			237496.85		
Bi	209	3	He			238557.28		
Bi	209	3	He			241480.62		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

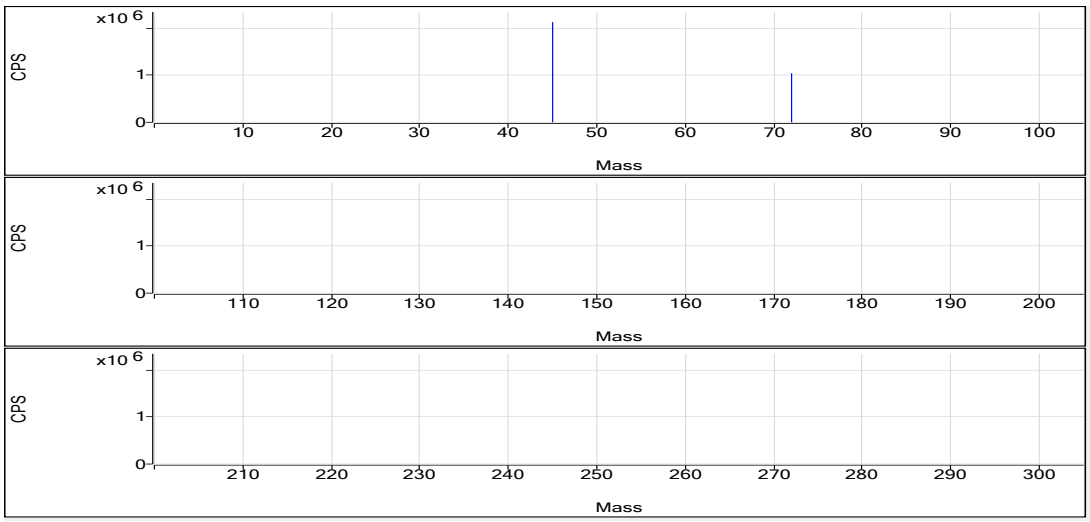
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.047	ppb	17.1	124.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	-0.003	ppb	N/A	4.22	0.0000	Pulse	1.5000	3
Na	23	45	He	22.554	ppb	15.4	10570.80	0.3722	Pulse	0.1000	3
Mg	24	45	He	4.275	ppb	5.4	460.02	0.0162	Pulse	0.1000	3
Al	27	45	He	1.631	ppb	82.2	70.00	0.0025	Pulse	0.1000	3
K	39	45	He	0.218	ppb	5967.4	10093.78	0.3555	Pulse	0.1000	3
Ca	44	45	He	20.445	ppb	94.9	93.34	0.0033	Pulse	0.1000	3
Ti	47	45	He	2.464	ppb	60.5	46.67	0.0016	Pulse	0.1000	3
V	51	45	He	0.140	ppb	21.2	838.70	0.0295	Pulse	0.5000	3
Cr	52	45	He	0.245	ppb	40.2	373.35	0.0131	Pulse	0.1000	3
Mn	55	45	He	0.714	ppb	13.6	336.68	0.0119	Pulse	0.1000	3
Fe	57	45	He	4.073	ppb	89.6	153.34	0.0054	Pulse	0.1000	3
Co	59	72	He	0.169	ppb	32.8	490.03	0.0097	Pulse	0.1000	3
Ni	60	72	He	0.179	ppb	70.1	610.03	0.0121	Pulse	0.1000	3
Cu	63	72	He	0.126	ppb	70.4	1013.41	0.0201	Pulse	0.1000	3
Zn	66	72	He	-0.133	ppb	N/A	173.34	0.0034	Pulse	0.1000	3
As	75	72	He	0.275	ppb	6.9	50.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.066	ppb	151.7	53.33	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.054	ppb	31.1	80.00	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.016	ppb	48.5	76.67	0.0015	Pulse	0.1000	3
Cd	111	115	He	0.014	ppb	147.9	9.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.002	ppb	N/A	946.74	0.0186	Pulse	0.1000	3
Sb	121	159	He	0.088	ppb	64.6	86.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.263	ppb	50.9	96.67	0.0019	Pulse	0.1000	3
Tl	205	209	He	0.113	ppb	14.5	1070.09	0.0045	Pulse	0.1000	3
Pb	208	209	He	-0.001	ppb	N/A	673.37	0.0028	Pulse	0.1000	3
U	238	209	He	0.021	ppb	16.4	446.69	0.0019	Pulse	0.1000	3

ISTD Table:

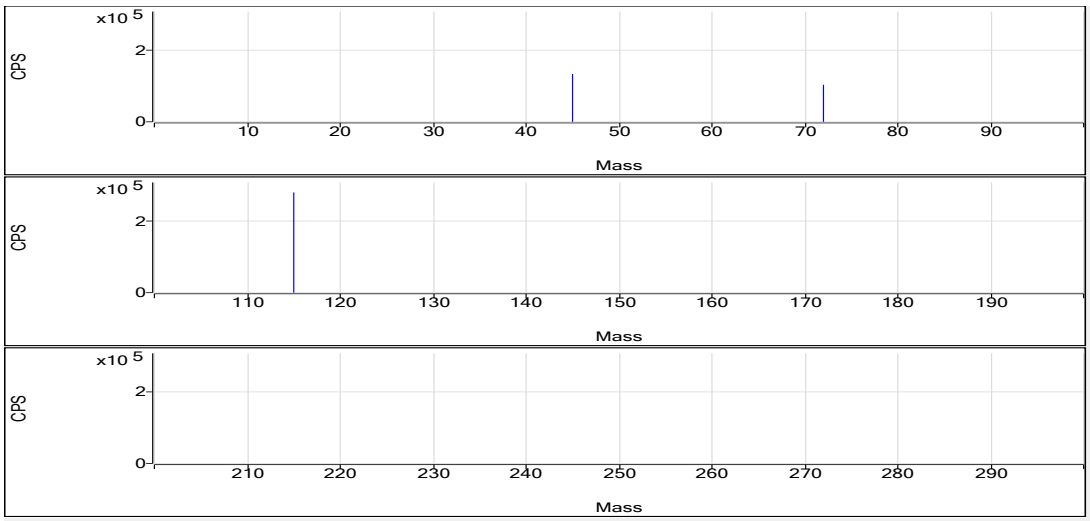
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2133473.25	0.1	97.1	Pulse	0.1000	3
No Gas	Ge	72	1043447.25	0.4	97.2	Pulse	0.1000	3
H2	Sc	45	132542.34	0.4	97.7	Pulse	0.1000	3
H2	Ge	72	102718.21	0.8	97.1	Pulse	0.1000	3
H2	In	115	277796.90	1.0	99.3	Pulse	0.1000	3
He	Sc	45	28404.85	1.2	95.2	Pulse	0.1000	3
He	Ge	72	50368.89	0.6	96.1	Pulse	0.1000	3
He	In	115	50782.05	1.9	99.1	Pulse	0.1000	3
He	Tb	159	277638.71	0.7	99.7	Pulse	0.1000	3
He	Bi	209	236822.04	0.3	99.7	Pulse	0.1000	3

No Gas

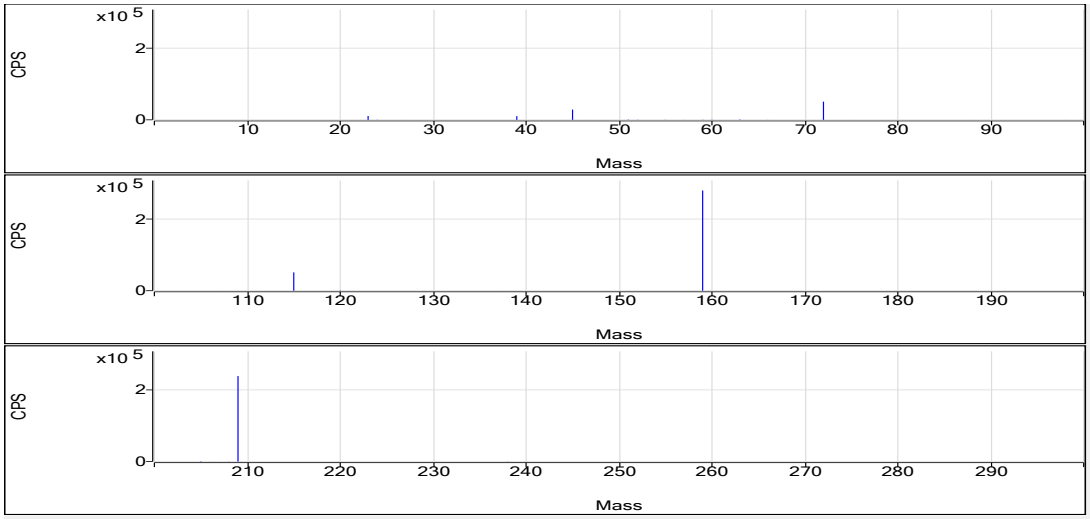


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.053	0.0001	134.00	0.0007	2.306E-05
Be	9	1	No Gas	0.051	0.0001	130.00	0.0007	2.306E-05
Be	9	1	No Gas	0.038	0.0001	110.00	0.0007	2.306E-05
Se	78	2	H2	-0.007	0	4.00	0.0004	4.221E-05
Se	78	2	H2	-0.053	0	2.00	0.0004	4.221E-05
Se	78	2	H2	0.052	0.0001	6.67	0.0004	4.221E-05
Na	23	3	He	25.545	0.3836	10744.32	0.0038	0.2864
Na	23	3	He	23.369	0.3753	10704.23	0.0038	0.2864
Na	23	3	He	18.749	0.3578	10263.86	0.0038	0.2864
Mg	24	3	He	4.393	0.0164	460.03	0.0019	0.007972
Mg	24	3	He	4.422	0.0165	470.02	0.0019	0.007972
Mg	24	3	He	4.009	0.0157	450.02	0.0019	0.007972
Al	27	3	He	2.997	0.0032	90.00	0.0005	0.00158
Al	27	3	He	0.317	0.0018	50.00	0.0005	0.00158
Al	27	3	He	1.577	0.0024	70.00	0.0005	0.00158
K	39	3	He	14.77	0.3711	10394.02	0.0011	0.3552
K	39	3	He	-10.323	0.3441	9813.53	0.0011	0.3552
K	39	3	He	-3.793	0.3511	10073.80	0.0011	0.3552
Ca	44	3	He	2.268	0.0021	60.00	0.0001	0.002
Ca	44	3	He	40.893	0.0046	130.01	0.0001	0.002
Ca	44	3	He	18.174	0.0031	90.01	0.0001	0.002
Ti	47	3	He	2.025	0.0014	40.00	0.0005	0.0004395
Ti	47	3	He	4.126	0.0025	70.00	0.0005	0.0004395
Ti	47	3	He	1.241	0.001	30.00	0.0005	0.0004395
V	51	3	He	0.174	0.0303	848.03	0.0218	0.02648
V	51	3	He	0.124	0.0292	832.03	0.0218	0.02648
V	51	3	He	0.122	0.0291	836.03	0.0218	0.02648
Cr	52	3	He	0.235	0.0129	360.02	0.029	0.006056
Cr	52	3	He	0.348	0.0161	460.02	0.029	0.006056
Cr	52	3	He	0.152	0.0105	300.01	0.029	0.006056
Mn	55	3	He	0.768	0.0125	350.02	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.602	0.0105	300.01	0.0119	0.00335
Mn	55	3	He	0.772	0.0125	360.02	0.0119	0.00335
Fe	57	3	He	7.139	0.0071	200.01	0.0006	0.003117
Fe	57	3	He	5.046	0.006	170.01	0.0006	0.003117
Fe	57	3	He	0.036	0.0031	90.00	0.0006	0.003117
Co	59	3	He	0.13	0.0085	430.02	0.0317	0.004379
Co	59	3	He	0.233	0.0117	590.04	0.0317	0.004379
Co	59	3	He	0.145	0.009	450.02	0.0317	0.004379
Ni	60	3	He	0.323	0.0134	680.04	0.009	0.01049
Ni	60	3	He	0.117	0.0115	580.03	0.009	0.01049
Ni	60	3	He	0.097	0.0114	570.03	0.009	0.01049
Cu	63	3	He	0.058	0.0183	930.06	0.0259	0.01685
Cu	63	3	He	0.095	0.0193	970.08	0.0259	0.01685
Cu	63	3	He	0.227	0.0227	1140.08	0.0259	0.01685
Zn	66	3	He	-0.094	0.0036	180.01	0.0028	0.003817
Zn	66	3	He	-0.506	0.0024	120.01	0.0028	0.003817
Zn	66	3	He	0.202	0.0044	220.01	0.0028	0.003817
As	75	3	He	0.293	0.001	52.00	0.0019	0.0004832
As	75	3	He	0.255	0.001	48.00	0.0019	0.0004832
As	75	3	He	0.277	0.001	50.00	0.0019	0.0004832
Sr	88	3	He	-0.04	0.0002	10.00	0.008	0.0005203
Sr	88	3	He	0.079	0.0012	60.00	0.008	0.0005203
Sr	88	3	He	0.16	0.0018	90.00	0.008	0.0005203
Mo	98	3	He	0.072	0.002	100.00	0.0229	0.0003256
Mo	98	3	He	0.053	0.0015	80.00	0.0229	0.0003256
Mo	98	3	He	0.038	0.0012	60.00	0.0229	0.0003256
Ag	107	3	He	0.009	0.0012	60.00	0.05	0.000719
Ag	107	3	He	0.024	0.0019	100.00	0.05	0.000719
Ag	107	3	He	0.014	0.0014	70.00	0.05	0.000719
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Cd	111	3	He	0.037	0.0003	16.00	0.0055	0.000104
Cd	111	3	He	0.01	0.0002	8.00	0.0055	0.000104
Sn	120	3	He	-0.105	0.017	860.06	0.0159	0.01867
Sn	120	3	He	0.014	0.0189	980.08	0.0159	0.01867
Sn	120	3	He	0.086	0.02	1000.07	0.0159	0.01867
Sb	121	3	He	0.149	0.0005	130.01	0.0026	8.342E-05
Sb	121	3	He	0.037	0.0002	50.00	0.0026	8.342E-05
Sb	121	3	He	0.078	0.0003	80.00	0.0026	8.342E-05
Ba	137	3	He	0.12	0.0012	60.00	0.005	0.0005882
Ba	137	3	He	0.385	0.0025	130.01	0.005	0.0005882
Ba	137	3	He	0.284	0.002	100.00	0.005	0.0005882
Tl	205	3	He	0.13	0.0051	1200.10	0.0313	0.0009967
Tl	205	3	He	0.098	0.0041	960.07	0.0313	0.0009967
Tl	205	3	He	0.109	0.0044	1050.09	0.0313	0.0009967
Pb	208	3	He	-0.005	0.0027	340.02	0.041	0.002892
Pb	208	3	He	-0.002	0.0028	350.02	0.041	0.002892
Pb	208	3	He	0.003	0.003	370.02	0.041	0.002892
U	238	3	He	0.024	0.002	480.03	0.0501	0.0008282
U	238	3	He	0.017	0.0017	400.02	0.0501	0.0008282
U	238	3	He	0.022	0.0019	460.02	0.0501	0.0008282
Sc	45	1	No Gas			2134734.81		
Sc	45	1	No Gas			2130951.22		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2134733.72		
Ge	72	1	No Gas			1041808.66		
Ge	72	1	No Gas			1039856.16		
Ge	72	1	No Gas			1048676.94		
Sc	45	2	H2			132223.72		
Sc	45	2	H2			132262.83		
Sc	45	2	H2			133140.48		
Ge	72	2	H2			101828.21		
Ge	72	2	H2			102876.80		
Ge	72	2	H2			103449.62		
In	115	2	H2			275316.44		
In	115	2	H2			280925.64		
In	115	2	H2			277148.61		
Sc	45	3	He			28007.29		
Sc	45	3	He			28518.42		
Sc	45	3	He			28688.83		
Ge	72	3	He			50700.09		
Ge	72	3	He			50248.51		
Ge	72	3	He			50158.07		
In	115	3	He			50602.52		
In	115	3	He			51856.38		
In	115	3	He			49909.39		
Tb	159	3	He			275404.08		
Tb	159	3	He			279353.77		
Tb	159	3	He			278158.28		
Bi	209	3	He			236590.91		
Bi	209	3	He			236195.97		
Bi	209	3	He			237679.23		

Quantitation Report

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Total Dilution	1.0000
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Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

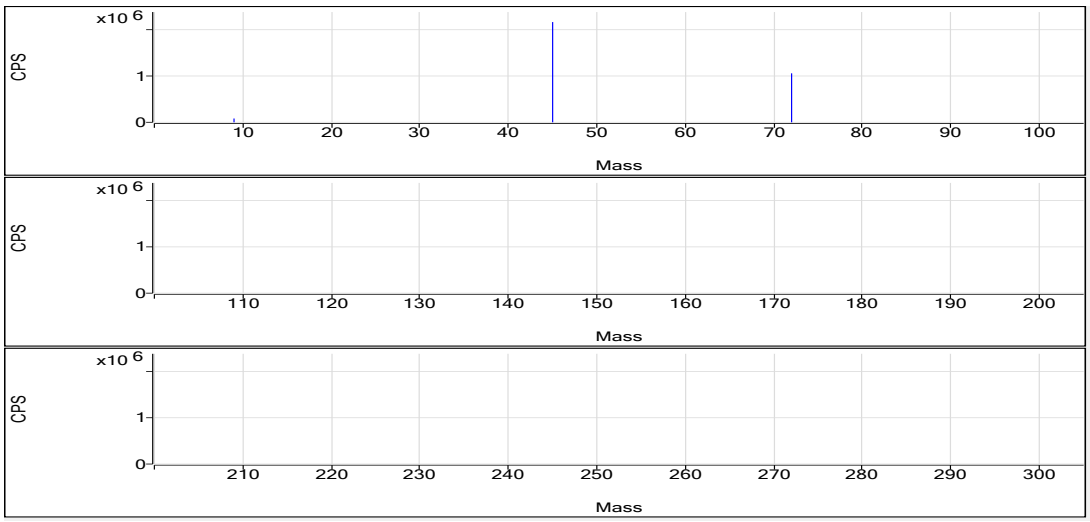
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.554	ppb	1.7	81374.94	0.0378	Pulse	0.5000	3
Se	78	72	H2	54.895	ppb	2.6	2425.10	0.0235	Pulse	1.5000	3
Na	23	45	He	5228.619	ppb	0.8	585499.93	20.1834	Pulse	0.1000	3
Mg	24	45	He	5267.742	ppb	1.1	294276.64	10.1443	Pulse	0.1000	3
Al	27	45	He	5271.371	ppb	0.6	83377.66	2.8741	Pulse	0.1000	3
K	39	45	He	5233.437	ppb	1.2	173704.87	5.9879	Pulse	0.1000	3
Ca	44	45	He	5218.709	ppb	2.0	9530.08	0.3285	Pulse	0.1000	3
Ti	47	45	He	5228.826	ppb	0.4	74084.81	2.5538	Pulse	0.1000	3
V	51	45	He	523.760	ppb	0.9	332546.20	11.4636	Pulse	0.5000	3
Cr	52	45	He	527.520	ppb	1.2	443650.42	15.2934	Pulse	0.1000	3
Mn	55	45	He	526.793	ppb	1.2	182086.77	6.2770	Pulse	0.1000	3
Fe	57	45	He	5248.298	ppb	2.7	85920.12	2.9618	Pulse	0.1000	3
Co	59	72	He	523.371	ppb	2.7	865782.36	16.5792	Pulse	0.1000	3
Ni	60	72	He	528.038	ppb	2.4	249802.09	4.7837	Pulse	0.1000	3
Cu	63	72	He	527.946	ppb	2.3	714842.75	13.6890	Pulse	0.1000	3
Zn	66	72	He	521.630	ppb	1.2	77182.87	1.4776	Pulse	0.1000	3
As	75	72	He	525.053	ppb	2.5	50867.21	0.9741	Pulse	0.5000	3
Sr	88	115	He	53.172	ppb	1.7	21767.19	0.4268	Pulse	0.1000	3
Mo	98	115	He	53.652	ppb	2.3	62706.49	1.2297	Pulse	0.1000	3
Ag	107	115	He	53.477	ppb	2.4	136370.25	2.6745	Pulse	0.1000	3
Cd	111	115	He	52.474	ppb	1.7	14789.14	0.2900	Pulse	0.5000	3
Sn	120	115	He	52.703	ppb	2.0	43729.30	0.8575	Pulse	0.1000	3
Sb	121	159	He	52.856	ppb	1.2	39272.80	0.1380	Pulse	0.1000	3
Ba	137	115	He	535.250	ppb	1.8	136270.75	2.6722	Pulse	0.1000	3
Tl	205	209	He	51.587	ppb	1.6	387081.82	1.6152	Pulse	0.1000	3
Pb	208	209	He	51.842	ppb	1.0	510347.33	2.1296	Pulse	0.1000	3
U	238	209	He	51.933	ppb	0.9	624095.93	2.6042	Pulse	0.1000	3

ISTD Table:

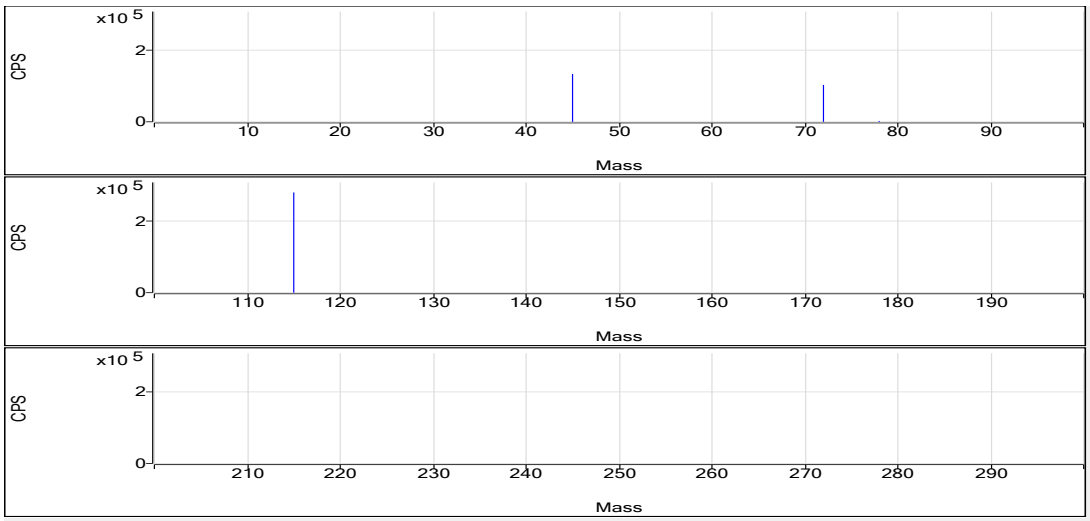
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2152349.76	0.5	97.9	Pulse	0.1000	3
No Gas	Ge	72	1051683.82	0.4	98.0	Pulse	0.1000	3
H2	Sc	45	133938.78	1.0	98.7	Pulse	0.1000	3
H2	Ge	72	103205.40	2.4	97.6	Pulse	0.1000	3
H2	In	115	280567.92	0.3	100.3	Pulse	0.1000	3
He	Sc	45	29009.46	0.4	97.2	Pulse	0.1000	3
He	Ge	72	52242.07	2.7	99.7	Pulse	0.1000	3
He	In	115	51007.35	2.3	99.5	Pulse	0.1000	3
He	Tb	159	284626.60	0.7	102.2	Pulse	0.1000	3
He	Bi	209	239663.84	1.0	100.9	Pulse	0.1000	3

No Gas

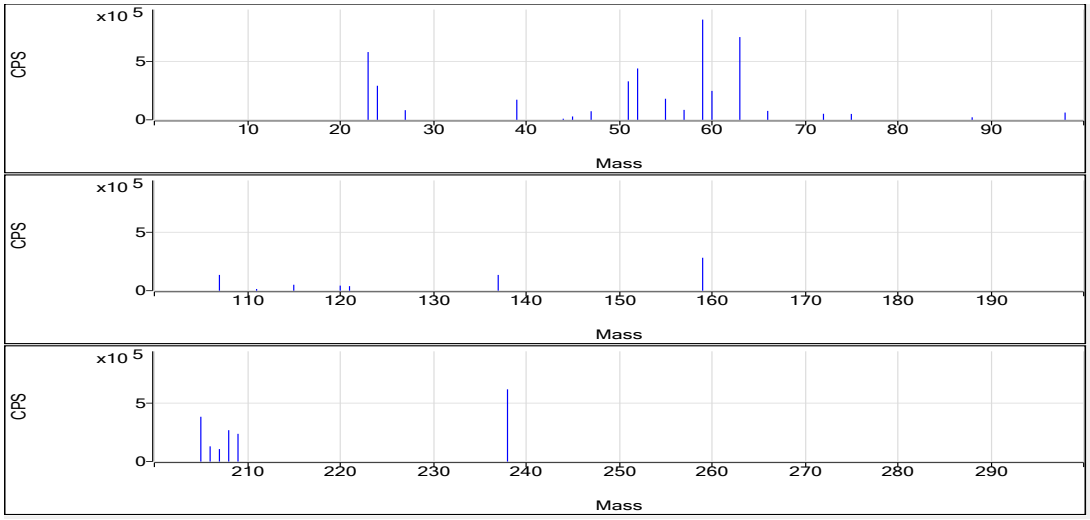


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.573	0.0371	79841.64	0.0007	2.306E-05
Be	9	1	No Gas	50.893	0.0381	82340.70	0.0007	2.306E-05
Be	9	1	No Gas	51.194	0.0383	81942.47	0.0007	2.306E-05
Se	78	2	H2	53.308	0.0228	2416.21	0.0004	4.221E-05
Se	78	2	H2	55.236	0.0237	2432.88	0.0004	4.221E-05
Se	78	2	H2	56.141	0.024	2426.21	0.0004	4.221E-05
Na	23	3	He	5182.971	20.0096	581270.89	0.0038	0.2864
Na	23	3	He	5232.352	20.1976	587537.73	0.0038	0.2864
Na	23	3	He	5270.534	20.3429	587691.16	0.0038	0.2864
Mg	24	3	He	5199.416	10.0128	290866.54	0.0019	0.007972
Mg	24	3	He	5301.394	10.209	296975.37	0.0019	0.007972
Mg	24	3	He	5302.416	10.211	294988.00	0.0019	0.007972
Al	27	3	He	5253.78	2.8645	83213.65	0.0005	0.00158
Al	27	3	He	5304.892	2.8924	84138.49	0.0005	0.00158
Al	27	3	He	5255.441	2.8654	82780.84	0.0005	0.00158
K	39	3	He	5163.315	5.9124	171753.81	0.0011	0.3552
K	39	3	He	5270.093	6.0274	175333.45	0.0011	0.3552
K	39	3	He	5266.902	6.0239	174027.36	0.0011	0.3552
Ca	44	3	He	5329.122	0.3354	9743.60	0.0001	0.002
Ca	44	3	He	5206.246	0.3277	9533.39	0.0001	0.002
Ca	44	3	He	5120.761	0.3224	9313.26	0.0001	0.002
Ti	47	3	He	5228.128	2.5535	74177.89	0.0005	0.0004395
Ti	47	3	He	5209.708	2.5445	74018.39	0.0005	0.0004395
Ti	47	3	He	5248.64	2.5635	74058.14	0.0005	0.0004395
V	51	3	He	519.843	11.378	330526.81	0.0218	0.02648
V	51	3	He	522.692	11.4403	332792.22	0.0218	0.02648
V	51	3	He	528.745	11.5724	334319.56	0.0218	0.02648
Cr	52	3	He	520.492	15.0897	438349.95	0.029	0.006056
Cr	52	3	He	531.485	15.4083	448221.05	0.029	0.006056
Cr	52	3	He	530.582	15.3822	444380.27	0.029	0.006056
Mn	55	3	He	521.369	6.2124	180466.36	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	525.472	6.2612	182136.19	0.0119	0.00335
Mn	55	3	He	533.538	6.3573	183657.77	0.0119	0.00335
Fe	57	3	He	5083.36	2.8689	83339.03	0.0006	0.003117
Fe	57	3	He	5344.35	3.016	87733.84	0.0006	0.003117
Fe	57	3	He	5317.182	3.0007	86687.48	0.0006	0.003117
Co	59	3	He	523.175	16.573	850566.71	0.0317	0.004379
Co	59	3	He	509.239	16.1317	869197.17	0.0317	0.004379
Co	59	3	He	537.698	17.033	877583.19	0.0317	0.004379
Ni	60	3	He	536.319	4.8586	249353.00	0.009	0.01049
Ni	60	3	He	513.423	4.6516	250634.33	0.009	0.01049
Ni	60	3	He	534.372	4.841	249418.94	0.009	0.01049
Cu	63	3	He	534.248	13.8522	710928.74	0.0259	0.01685
Cu	63	3	He	513.733	13.3209	717750.30	0.0259	0.01685
Cu	63	3	He	535.857	13.8939	715849.21	0.0259	0.01685
Zn	66	3	He	520.267	1.4738	75638.06	0.0028	0.003817
Zn	66	3	He	516.161	1.4622	78784.44	0.0028	0.003817
Zn	66	3	He	528.461	1.4969	77126.10	0.0028	0.003817
As	75	3	He	528.189	0.9799	50291.26	0.0019	0.0004832
As	75	3	He	510.542	0.9472	51035.73	0.0019	0.0004832
As	75	3	He	536.428	0.9952	51274.65	0.0019	0.0004832
Sr	88	3	He	52.609	0.4223	21266.34	0.008	0.0005203
Sr	88	3	He	54.224	0.4352	21887.46	0.008	0.0005203
Sr	88	3	He	52.682	0.4229	22147.78	0.008	0.0005203
Mo	98	3	He	54.913	1.2586	63383.14	0.0229	0.0003256
Mo	98	3	He	53.595	1.2284	61775.39	0.0229	0.0003256
Mo	98	3	He	52.448	1.2021	62960.95	0.0229	0.0003256
Ag	107	3	He	53.668	2.684	135165.57	0.05	0.000719
Ag	107	3	He	54.663	2.7338	137477.99	0.05	0.000719
Ag	107	3	He	52.099	2.6056	136467.18	0.05	0.000719
Cd	111	3	He	52.328	0.2892	14563.58	0.0055	0.000104
Cd	111	3	He	53.454	0.2954	14855.85	0.0055	0.000104
Cd	111	3	He	51.642	0.2854	14947.99	0.0055	0.000104
Sn	120	3	He	52.098	0.8478	42695.92	0.0159	0.01867
Sn	120	3	He	53.941	0.8772	44110.83	0.0159	0.01867
Sn	120	3	He	52.07	0.8474	44381.16	0.0159	0.01867
Sb	121	3	He	53.466	0.1396	39436.70	0.0026	8.342E-05
Sb	121	3	He	52.214	0.1363	39045.45	0.0026	8.342E-05
Sb	121	3	He	52.888	0.1381	39336.26	0.0026	8.342E-05
Ba	137	3	He	535.442	2.6732	134620.89	0.005	0.0005882
Ba	137	3	He	544.649	2.7192	136741.98	0.005	0.0005882
Ba	137	3	He	525.658	2.6244	137449.37	0.005	0.0005882
Tl	205	3	He	50.662	1.5863	384255.19	0.0313	0.0009967
Tl	205	3	He	51.804	1.622	385561.05	0.0313	0.0009967
Tl	205	3	He	52.295	1.6374	391429.21	0.0313	0.0009967
Pb	208	3	He	51.262	2.1058	271999.55	0.041	0.002892
Pb	208	3	He	52.137	2.1416	269824.16	0.041	0.002892
Pb	208	3	He	52.128	2.1413	271079.90	0.041	0.002892
U	238	3	He	51.49	2.582	625443.08	0.0501	0.0008282
U	238	3	He	52.381	2.6266	624356.16	0.0501	0.0008282
U	238	3	He	51.929	2.604	622488.55	0.0501	0.0008282
Sc	45	1	No Gas			2153492.94		
Sc	45	1	No Gas			2163326.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2140229.97		
Ge	72	1	No Gas			1049853.27		
Ge	72	1	No Gas			1056523.66		
Ge	72	1	No Gas			1048674.52		
Sc	45	2	H2			135451.59		
Sc	45	2	H2			133545.33		
Sc	45	2	H2			132819.43		
Ge	72	2	H2			105837.85		
Ge	72	2	H2			102855.42		
Ge	72	2	H2			100922.93		
In	115	2	H2			281506.97		
In	115	2	H2			279895.46		
In	115	2	H2			280301.32		
Sc	45	3	He			29049.53		
Sc	45	3	He			29089.54		
Sc	45	3	He			28889.31		
Ge	72	3	He			51322.33		
Ge	72	3	He			53881.32		
Ge	72	3	He			51522.56		
In	115	3	He			50692.44		
In	115	3	He			50632.38		
In	115	3	He			52720.50		
Tb	159	3	He			282539.72		
Tb	159	3	He			286442.67		
Tb	159	3	He			284897.40		
Bi	209	3	He			242233.94		
Bi	209	3	He			237703.26		
Bi	209	3	He			239054.31		

Quantitation Report

Data File Name	089_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 11:58:09
Sample Name	CCB 6148203
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

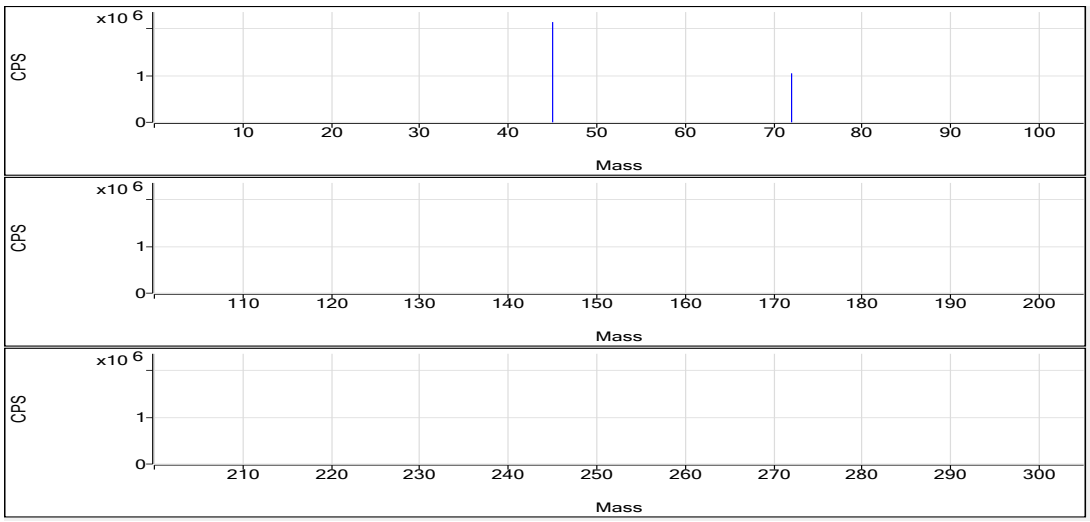
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.042	ppb	19.7	116.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.029	ppb	164.8	5.55	0.0001	Pulse	1.5000	3
Na	23	45	He	5.952	ppb	67.2	8712.82	0.3091	Pulse	0.1000	3
Mg	24	45	He	2.243	ppb	51.3	346.68	0.0123	Pulse	0.1000	3
Al	27	45	He	0.999	ppb	169.7	60.00	0.0021	Pulse	0.1000	3
K	39	45	He	2.529	ppb	564.4	10087.14	0.3579	Pulse	0.1000	3
Ca	44	45	He	-7.333	ppb	N/A	43.33	0.0015	Pulse	0.1000	3
Ti	47	45	He	1.766	ppb	103.3	36.67	0.0013	Pulse	0.1000	3
V	51	45	He	0.181	ppb	52.4	857.36	0.0304	Pulse	0.5000	3
Cr	52	45	He	0.171	ppb	33.3	310.01	0.0110	Pulse	0.1000	3
Mn	55	45	He	0.305	ppb	16.1	196.68	0.0070	Pulse	0.1000	3
Fe	57	45	He	1.610	ppb	215.9	113.34	0.0040	Pulse	0.1000	3
Co	59	72	He	0.199	ppb	15.9	546.70	0.0107	Pulse	0.1000	3
Ni	60	72	He	-0.108	ppb	N/A	486.69	0.0095	Pulse	0.1000	3
Cu	63	72	He	0.139	ppb	21.3	1046.74	0.0205	Pulse	0.1000	3
Zn	66	72	He	0.127	ppb	259.0	213.34	0.0042	Pulse	0.1000	3
As	75	72	He	0.246	ppb	45.9	48.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.091	ppb	87.8	63.33	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.058	ppb	40.2	83.33	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.018	ppb	36.4	83.33	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.024	ppb	76.6	12.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.086	ppb	N/A	880.07	0.0173	Pulse	0.1000	3
Sb	121	159	He	0.081	ppb	35.8	83.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.211	ppb	76.4	83.34	0.0016	Pulse	0.1000	3
Tl	205	209	He	0.102	ppb	5.4	993.41	0.0042	Pulse	0.1000	3
Pb	208	209	He	0.011	ppb	39.3	796.71	0.0034	Pulse	0.1000	3
U	238	209	He	0.018	ppb	19.9	410.02	0.0017	Pulse	0.1000	3

ISTD Table:

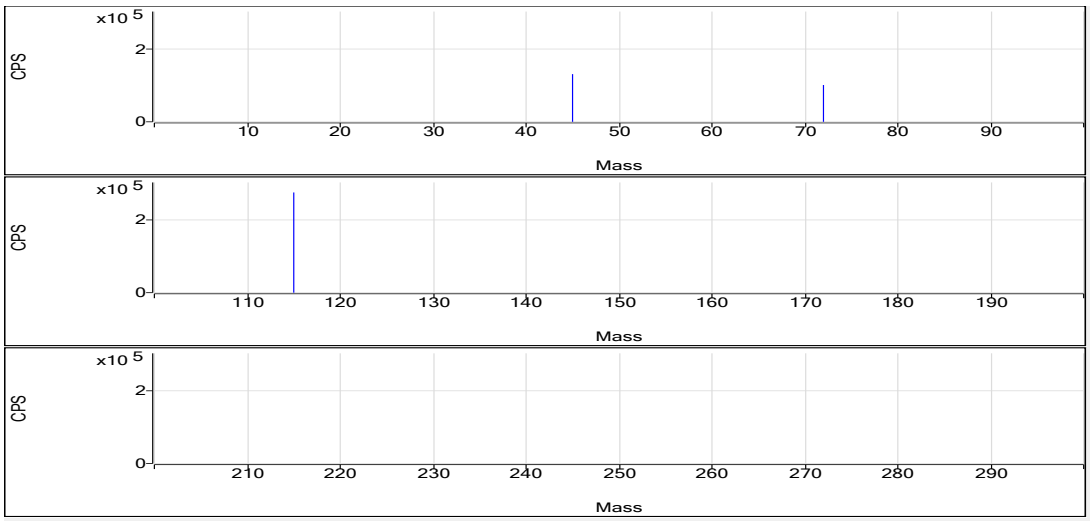
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2139957.26	0.7	97.4	Pulse	0.1000	3
No Gas	Ge	72	1046027.74	0.2	97.5	Pulse	0.1000	3
H2	Sc	45	132071.56	1.1	97.3	Pulse	0.1000	3
H2	Ge	72	101908.96	1.2	96.4	Pulse	0.1000	3
H2	In	115	277557.26	0.2	99.2	Pulse	0.1000	3
He	Sc	45	28187.76	0.9	94.4	Pulse	0.1000	3
He	Ge	72	51144.98	1.8	97.6	Pulse	0.1000	3
He	In	115	50843.16	2.3	99.2	Pulse	0.1000	3
He	Tb	159	283314.91	0.8	101.7	Pulse	0.1000	3
He	Bi	209	237599.00	0.6	100.1	Pulse	0.1000	3

No Gas

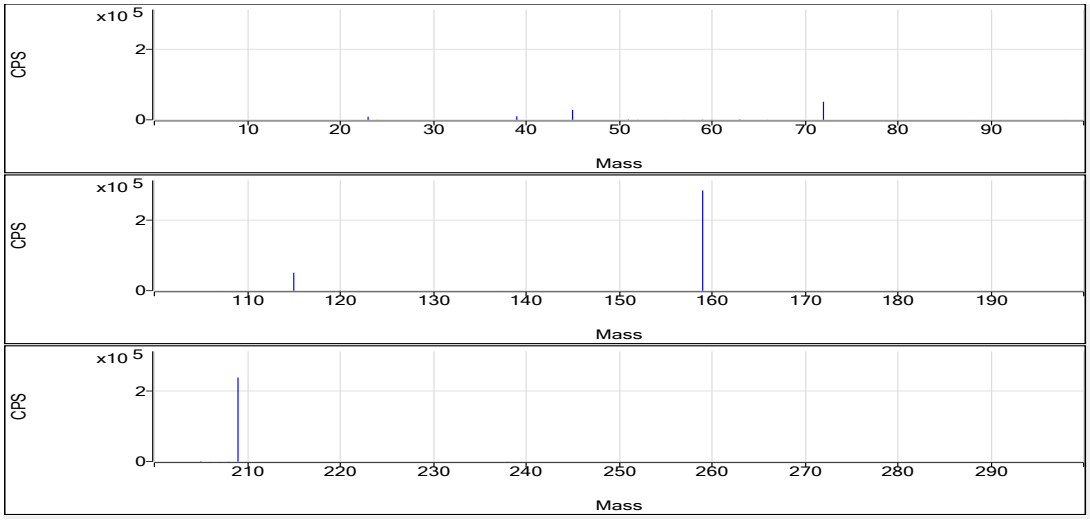


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.05	0.0001	130.00	0.0007	2.306E-05
Be	9	1	No Gas	0.043	0.0001	118.00	0.0007	2.306E-05
Be	9	1	No Gas	0.033	0	102.00	0.0007	2.306E-05
Se	78	2	H2	0.037	0.0001	6.00	0.0004	4.221E-05
Se	78	2	H2	0.072	0.0001	7.33	0.0004	4.221E-05
Se	78	2	H2	-0.022	0	3.33	0.0004	4.221E-05
Na	23	3	He	3.669	0.3004	8382.67	0.0038	0.2864
Na	23	3	He	10.568	0.3266	9243.10	0.0038	0.2864
Na	23	3	He	3.618	0.3002	8512.68	0.0038	0.2864
Mg	24	3	He	1.072	0.01	280.01	0.0019	0.007972
Mg	24	3	He	2.285	0.0124	350.02	0.0019	0.007972
Mg	24	3	He	3.371	0.0145	410.02	0.0019	0.007972
Al	27	3	He	-0.27	0.0014	40.00	0.0005	0.00158
Al	27	3	He	0.342	0.0018	50.00	0.0005	0.00158
Al	27	3	He	2.924	0.0032	90.00	0.0005	0.00158
K	39	3	He	19.008	0.3757	10484.16	0.0011	0.3552
K	39	3	He	-5.861	0.3489	9873.62	0.0011	0.3552
K	39	3	He	-5.561	0.3492	9903.64	0.0011	0.3552
Ca	44	3	He	8.118	0.0025	70.00	0.0001	0.002
Ca	44	3	He	-26.325	0.0004	10.00	0.0001	0.002
Ca	44	3	He	-3.792	0.0018	50.00	0.0001	0.002
Ti	47	3	He	2.035	0.0014	40.00	0.0005	0.0004395
Ti	47	3	He	3.442	0.0021	60.00	0.0005	0.0004395
Ti	47	3	He	-0.178	0.0004	10.00	0.0005	0.0004395
V	51	3	He	0.248	0.0319	890.03	0.0218	0.02648
V	51	3	He	0.072	0.0281	794.03	0.0218	0.02648
V	51	3	He	0.222	0.0313	888.03	0.0218	0.02648
Cr	52	3	He	0.236	0.0129	360.01	0.029	0.006056
Cr	52	3	He	0.145	0.0102	290.01	0.029	0.006056
Cr	52	3	He	0.132	0.0099	280.01	0.029	0.006056
Mn	55	3	He	0.351	0.0075	210.01	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.253	0.0064	180.01	0.0119	0.00335
Mn	55	3	He	0.311	0.0071	200.01	0.0119	0.00335
Fe	57	3	He	3.37	0.005	140.00	0.0006	0.003117
Fe	57	3	He	-2.395	0.0018	50.00	0.0006	0.003117
Fe	57	3	He	3.854	0.0053	150.01	0.0006	0.003117
Co	59	3	He	0.183	0.0102	510.03	0.0317	0.004379
Co	59	3	He	0.236	0.0118	610.03	0.0317	0.004379
Co	59	3	He	0.179	0.01	520.03	0.0317	0.004379
Ni	60	3	He	-0.145	0.0092	460.02	0.009	0.01049
Ni	60	3	He	-0.087	0.0097	500.03	0.009	0.01049
Ni	60	3	He	-0.093	0.0097	500.03	0.009	0.01049
Cu	63	3	He	0.12	0.02	1000.07	0.0259	0.01685
Cu	63	3	He	0.174	0.0213	1100.08	0.0259	0.01685
Cu	63	3	He	0.125	0.0201	1040.08	0.0259	0.01685
Zn	66	3	He	0.345	0.0048	240.01	0.0028	0.003817
Zn	66	3	He	-0.252	0.0031	160.01	0.0028	0.003817
Zn	66	3	He	0.289	0.0046	240.01	0.0028	0.003817
As	75	3	He	0.299	0.001	52.00	0.0019	0.0004832
As	75	3	He	0.116	0.0007	36.00	0.0019	0.0004832
As	75	3	He	0.322	0.0011	56.00	0.0019	0.0004832
Sr	88	3	He	0.035	0.0008	40.00	0.008	0.0005203
Sr	88	3	He	0.182	0.002	100.00	0.008	0.0005203
Sr	88	3	He	0.055	0.001	50.00	0.008	0.0005203
Mo	98	3	He	0.082	0.0022	110.00	0.0229	0.0003256
Mo	98	3	He	0.055	0.0016	80.00	0.0229	0.0003256
Mo	98	3	He	0.036	0.0012	60.00	0.0229	0.0003256
Ag	107	3	He	0.026	0.002	100.00	0.05	0.000719
Ag	107	3	He	0.017	0.0016	80.00	0.05	0.000719
Ag	107	3	He	0.012	0.0013	70.00	0.05	0.000719
Cd	111	3	He	0.003	0.0001	6.00	0.0055	0.000104
Cd	111	3	He	0.031	0.0003	14.00	0.0055	0.000104
Cd	111	3	He	0.037	0.0003	16.00	0.0055	0.000104
Sn	120	3	He	-0.051	0.0179	890.07	0.0159	0.01867
Sn	120	3	He	-0.204	0.0154	780.06	0.0159	0.01867
Sn	120	3	He	-0.004	0.0186	970.07	0.0159	0.01867
Sb	121	3	He	0.09	0.0003	90.00	0.0026	8.342E-05
Sb	121	3	He	0.104	0.0004	100.00	0.0026	8.342E-05
Sb	121	3	He	0.048	0.0002	60.00	0.0026	8.342E-05
Ba	137	3	He	0.123	0.0012	60.00	0.005	0.0005882
Ba	137	3	He	0.397	0.0026	130.01	0.005	0.0005882
Ba	137	3	He	0.113	0.0012	60.00	0.005	0.0005882
Tl	205	3	He	0.101	0.0042	990.08	0.0313	0.0009967
Tl	205	3	He	0.108	0.0044	1030.08	0.0313	0.0009967
Tl	205	3	He	0.097	0.004	960.07	0.0313	0.0009967
Pb	208	3	He	0.009	0.0033	420.02	0.041	0.002892
Pb	208	3	He	0.016	0.0036	390.02	0.041	0.002892
Pb	208	3	He	0.008	0.0032	420.02	0.041	0.002892
U	238	3	He	0.015	0.0016	380.02	0.0501	0.0008282
U	238	3	He	0.016	0.0017	390.02	0.0501	0.0008282
U	238	3	He	0.022	0.0019	460.03	0.0501	0.0008282
Sc	45	1	No Gas			2157917.16		
Sc	45	1	No Gas			2133242.00		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2128712.62		
Ge	72	1	No Gas			1048049.05		
Ge	72	1	No Gas			1045132.48		
Ge	72	1	No Gas			1044901.70		
Sc	45	2	H2			132354.31		
Sc	45	2	H2			130516.64		
Sc	45	2	H2			133343.73		
Ge	72	2	H2			103026.69		
Ge	72	2	H2			100629.52		
Ge	72	2	H2			102070.67		
In	115	2	H2			277823.69		
In	115	2	H2			277876.89		
In	115	2	H2			276971.21		
Sc	45	3	He			27907.14		
Sc	45	3	He			28298.15		
Sc	45	3	He			28357.98		
Ge	72	3	He			50098.67		
Ge	72	3	He			51532.78		
Ge	72	3	He			51803.50		
In	115	3	He			49819.80		
In	115	3	He			50582.27		
In	115	3	He			52148.00		
Tb	159	3	He			282565.37		
Tb	159	3	He			281420.39		
Tb	159	3	He			285958.96		
Bi	209	3	He			238440.70		
Bi	209	3	He			235816.66		
Bi	209	3	He			238539.63		

Quantitation Report

Data File Name	090SMPL.d
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Acq Time	2024-07-17 12:00:11
Sample Name	MB 410-525237/1-A
Sample Type	Sample
Comment	D24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

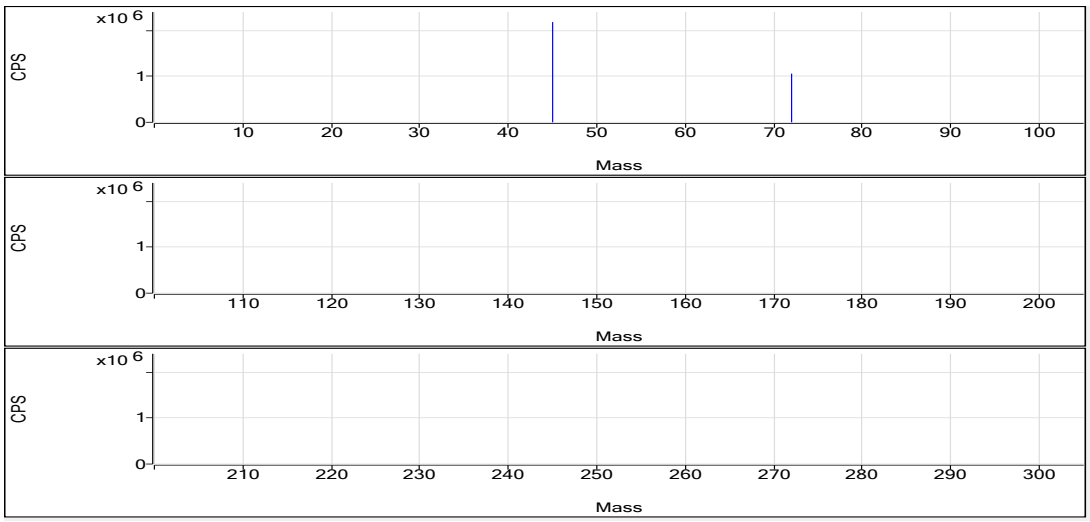
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.013	ppb	26.9	71.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.049	ppb	N/A	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	-2.294	ppb	N/A	8315.95	0.2777	Pulse	0.1000	3
Mg	24	45	He	2.051	ppb	28.2	356.69	0.0119	Pulse	0.1000	3
Al	27	45	He	1.186	ppb	29.5	66.67	0.0022	Pulse	0.1000	3
K	39	45	He	-20.823	ppb	N/A	9960.36	0.3328	Pulse	0.1000	3
Ca	44	45	He	41.054	ppb	59.7	136.67	0.0046	Pulse	0.1000	3
Ti	47	45	He	1.387	ppb	126.0	33.33	0.0011	Pulse	0.1000	3
V	51	45	He	-0.020	ppb	N/A	779.36	0.0260	Pulse	0.5000	3
Cr	52	45	He	0.164	ppb	40.3	323.35	0.0108	Pulse	0.1000	3
Mn	55	45	He	0.291	ppb	71.8	203.34	0.0068	Pulse	0.1000	3
Fe	57	45	He	0.583	ppb	402.2	103.34	0.0034	Pulse	0.1000	3
Co	59	72	He	0.040	ppb	82.1	296.68	0.0056	Pulse	0.1000	3
Ni	60	72	He	-0.061	ppb	N/A	523.36	0.0099	Pulse	0.1000	3
Cu	63	72	He	0.011	ppb	192.9	903.40	0.0171	Pulse	0.1000	3
Zn	66	72	He	-0.055	ppb	N/A	193.34	0.0037	Pulse	0.1000	3
As	75	72	He	0.033	ppb	135.0	28.67	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.069	ppb	19.0	56.67	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.033	ppb	77.8	56.67	0.0011	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	26.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	652.6	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.165	ppb	71.5	1120.09	0.0213	Pulse	0.1000	3
Sb	121	159	He	0.017	ppb	91.2	36.67	0.0001	Pulse	0.1000	3
Ba	137	115	He	0.034	ppb	189.4	40.00	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.008	ppb	129.0	306.68	0.0013	Pulse	0.1000	3
Pb	208	209	He	-0.022	ppb	N/A	483.35	0.0020	Pulse	0.1000	3
U	238	209	He	-0.005	ppb	N/A	140.01	0.0006	Pulse	0.1000	3

ISTD Table:

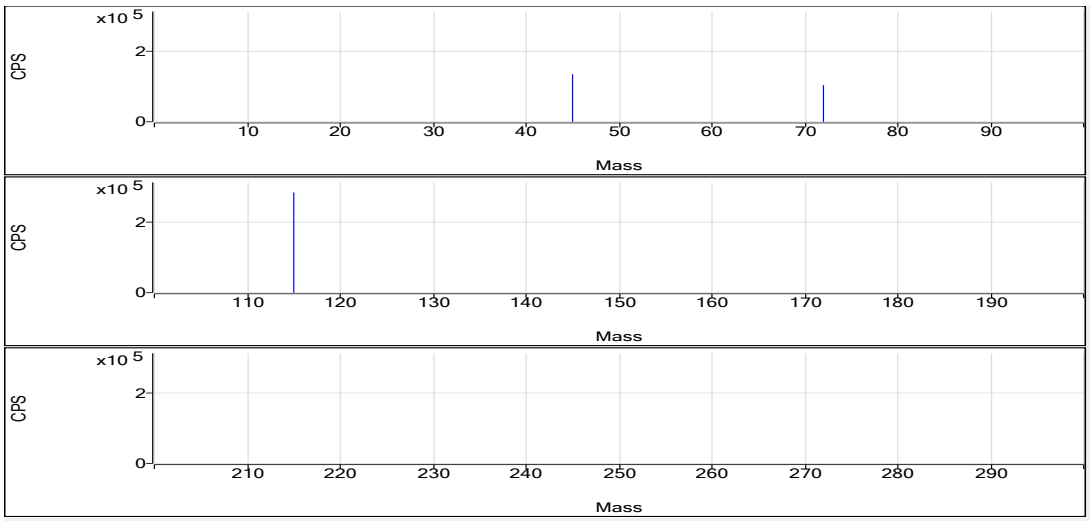
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2182288.56	1.3	99.3	Pulse	0.1000	3
No Gas	Ge	72	1059490.48	0.8	98.7	Pulse	0.1000	3
H2	Sc	45	135245.95	1.4	99.7	Pulse	0.1000	3
H2	Ge	72	104490.81	0.5	98.8	Pulse	0.1000	3
H2	In	115	285287.82	0.8	102.0	Pulse	0.1000	3
He	Sc	45	29941.18	1.3	100.3	Pulse	0.1000	3
He	Ge	72	52680.36	1.2	100.5	Pulse	0.1000	3
He	In	115	52584.06	0.6	102.6	Pulse	0.1000	3
He	Tb	159	287885.15	0.6	103.4	Pulse	0.1000	3
He	Bi	209	244871.71	0.2	103.1	Pulse	0.1000	3

No Gas

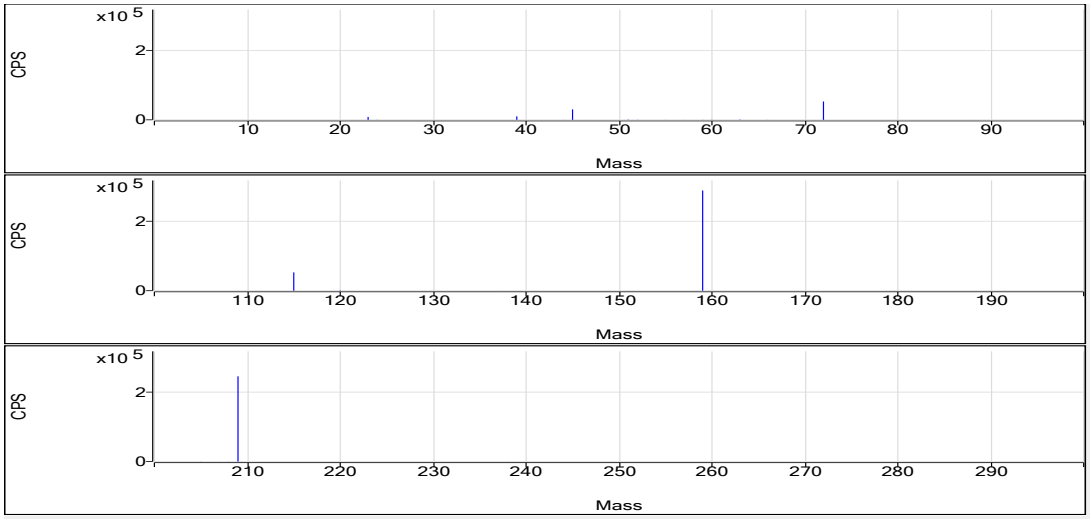


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	66.00	0.0007	2.306E-05
Be	9	1	No Gas	0.014	0	72.00	0.0007	2.306E-05
Be	9	1	No Gas	0.016	0	76.00	0.0007	2.306E-05
Se	78	2	H2	-0.039	0	2.67	0.0004	4.221E-05
Se	78	2	H2	-0.039	0	2.67	0.0004	4.221E-05
Se	78	2	H2	-0.069	0	1.33	0.0004	4.221E-05
Na	23	3	He	-5.822	0.2643	7822.29	0.0038	0.2864
Na	23	3	He	-1.415	0.281	8532.73	0.0038	0.2864
Na	23	3	He	0.353	0.2878	8592.84	0.0038	0.2864
Mg	24	3	He	2.705	0.0132	390.02	0.0019	0.007972
Mg	24	3	He	1.848	0.0115	350.02	0.0019	0.007972
Mg	24	3	He	1.601	0.0111	330.02	0.0019	0.007972
Al	27	3	He	1.44	0.0024	70.00	0.0005	0.00158
Al	27	3	He	1.331	0.0023	70.00	0.0005	0.00158
Al	27	3	He	0.787	0.002	60.00	0.0005	0.00158
K	39	3	He	9.405	0.3653	10814.37	0.0011	0.3552
K	39	3	He	-29.432	0.3235	9823.49	0.0011	0.3552
K	39	3	He	-42.443	0.3095	9243.22	0.0011	0.3552
Ca	44	3	He	65.228	0.0061	180.01	0.0001	0.002
Ca	44	3	He	41.732	0.0046	140.01	0.0001	0.002
Ca	44	3	He	16.2	0.003	90.00	0.0001	0.002
Ti	47	3	He	3.251	0.002	60.00	0.0005	0.0004395
Ti	47	3	He	1.123	0.001	30.00	0.0005	0.0004395
Ti	47	3	He	-0.214	0.0003	10.00	0.0005	0.0004395
V	51	3	He	0.013	0.0268	792.03	0.0218	0.02648
V	51	3	He	-0.051	0.0254	770.03	0.0218	0.02648
V	51	3	He	-0.022	0.026	776.03	0.0218	0.02648
Cr	52	3	He	0.164	0.0108	320.02	0.029	0.006056
Cr	52	3	He	0.098	0.0089	270.01	0.029	0.006056
Cr	52	3	He	0.23	0.0127	380.02	0.029	0.006056
Mn	55	3	He	0.428	0.0084	250.01	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.051	0.004	120.01	0.0119	0.00335
Mn	55	3	He	0.394	0.008	240.01	0.0119	0.00335
Fe	57	3	He	1.063	0.0037	110.00	0.0006	0.003117
Fe	57	3	He	2.651	0.0046	140.01	0.0006	0.003117
Fe	57	3	He	-1.965	0.002	60.00	0.0006	0.003117
Co	59	3	He	0.068	0.0065	340.01	0.0317	0.004379
Co	59	3	He	0.047	0.0059	310.02	0.0317	0.004379
Co	59	3	He	0.004	0.0045	240.01	0.0317	0.004379
Ni	60	3	He	-0.013	0.0104	540.03	0.009	0.01049
Ni	60	3	He	0.015	0.0106	560.03	0.009	0.01049
Ni	60	3	He	-0.184	0.0088	470.03	0.009	0.01049
Cu	63	3	He	-0.013	0.0165	860.06	0.0259	0.01685
Cu	63	3	He	0.03	0.0176	930.07	0.0259	0.01685
Cu	63	3	He	0.016	0.0173	920.06	0.0259	0.01685
Zn	66	3	He	-0.399	0.0027	140.01	0.0028	0.003817
Zn	66	3	He	-0.075	0.0036	190.01	0.0028	0.003817
Zn	66	3	He	0.31	0.0047	250.01	0.0028	0.003817
As	75	3	He	0.05	0.0006	30.00	0.0019	0.0004832
As	75	3	He	0.067	0.0006	32.00	0.0019	0.0004832
As	75	3	He	-0.018	0.0005	24.00	0.0019	0.0004832
Sr	88	3	He	0.054	0.001	50.00	0.008	0.0005203
Sr	88	3	He	0.078	0.0011	60.00	0.008	0.0005203
Sr	88	3	He	0.077	0.0011	60.00	0.008	0.0005203
Mo	98	3	He	0.061	0.0017	90.00	0.0229	0.0003256
Mo	98	3	He	0.011	0.0006	30.00	0.0229	0.0003256
Mo	98	3	He	0.027	0.0009	50.00	0.0229	0.0003256
Ag	107	3	He	-0.003	0.0006	30.00	0.05	0.000719
Ag	107	3	He	-0.014	0	0.00	0.05	0.000719
Ag	107	3	He	0.005	0.0009	50.00	0.05	0.000719
Cd	111	3	He	0.009	0.0002	8.00	0.0055	0.000104
Cd	111	3	He	-0.012	0	2.00	0.0055	0.000104
Cd	111	3	He	0.009	0.0002	8.00	0.0055	0.000104
Sn	120	3	He	0.16	0.0212	1110.09	0.0159	0.01867
Sn	120	3	He	0.286	0.0232	1220.10	0.0159	0.01867
Sn	120	3	He	0.05	0.0195	1030.07	0.0159	0.01867
Sb	121	3	He	0.008	0.0001	30.00	0.0026	8.342E-05
Sb	121	3	He	0.035	0.0002	50.00	0.0026	8.342E-05
Sb	121	3	He	0.008	0.0001	30.00	0.0026	8.342E-05
Ba	137	3	He	-0.003	0.0006	30.00	0.005	0.0005882
Ba	137	3	He	-0.003	0.0006	30.00	0.005	0.0005882
Ba	137	3	He	0.109	0.0011	60.00	0.005	0.0005882
Tl	205	3	He	0.007	0.0012	300.01	0.0313	0.0009967
Tl	205	3	He	0.019	0.0016	390.02	0.0313	0.0009967
Tl	205	3	He	-0.002	0.0009	230.01	0.0313	0.0009967
Pb	208	3	He	-0.02	0.0021	340.02	0.041	0.002892
Pb	208	3	He	-0.021	0.002	330.02	0.041	0.002892
Pb	208	3	He	-0.027	0.0018	230.01	0.041	0.002892
U	238	3	He	-0.008	0.0004	110.00	0.0501	0.0008282
U	238	3	He	-0.004	0.0006	150.01	0.0501	0.0008282
U	238	3	He	-0.004	0.0007	160.01	0.0501	0.0008282
Sc	45	1	No Gas			2212562.62		
Sc	45	1	No Gas			2154077.47		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2180225.59		
Ge	72	1	No Gas			1068921.86		
Ge	72	1	No Gas			1054730.37		
Ge	72	1	No Gas			1054819.20		
Sc	45	2	H2			133895.31		
Sc	45	2	H2			134463.45		
Sc	45	2	H2			137379.10		
Ge	72	2	H2			104819.81		
Ge	72	2	H2			103852.94		
Ge	72	2	H2			104799.68		
In	115	2	H2			285267.22		
In	115	2	H2			283127.11		
In	115	2	H2			287469.12		
Sc	45	3	He			29600.46		
Sc	45	3	He			30362.07		
Sc	45	3	He			29861.01		
Ge	72	3	He			52044.56		
Ge	72	3	He			52727.30		
Ge	72	3	He			53269.21		
In	115	3	He			52337.92		
In	115	3	He			52529.53		
In	115	3	He			52910.93		
Tb	159	3	He			286202.52		
Tb	159	3	He			287997.75		
Tb	159	3	He			289455.19		
Bi	209	3	He			244858.20		
Bi	209	3	He			244276.75		
Bi	209	3	He			245480.19		

Quantitation Report

Data File Name	091SMPL.d
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Sample Type	Sample
Comment	D24
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

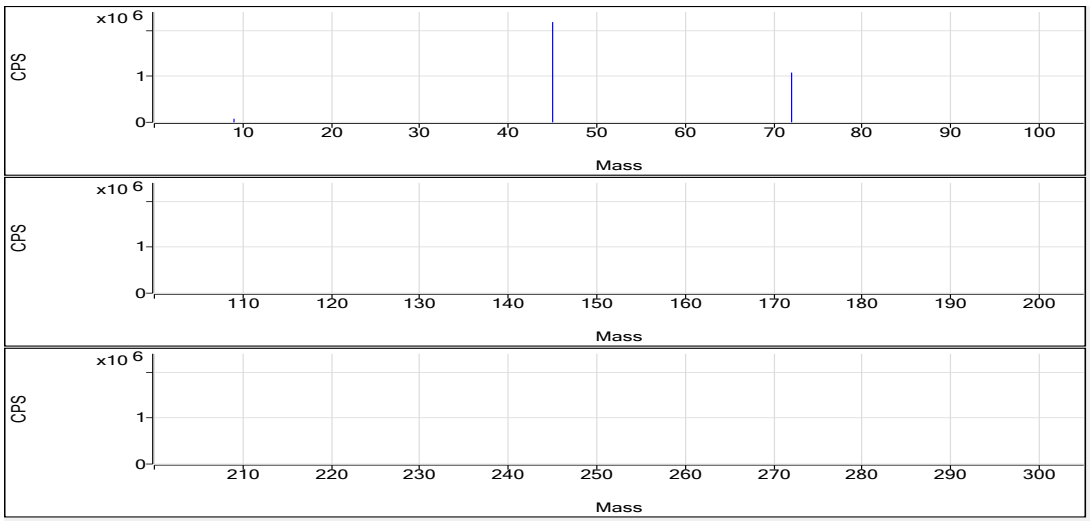
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.878	ppb	1.0	78335.70	0.0358	Pulse	0.5000	3
Se	78	72	H2	101.530	ppb	1.6	4602.07	0.0434	Pulse	1.5000	3
Na	23	45	He	4865.962	ppb	1.9	566843.22	18.8033	Pulse	0.1000	3
Mg	24	45	He	4743.067	ppb	1.0	275408.93	9.1347	Pulse	0.1000	3
Al	27	45	He	4701.144	ppb	0.6	77294.74	2.5634	Pulse	0.1000	3
K	39	45	He	4904.224	ppb	1.7	169836.37	5.6336	Pulse	0.1000	3
Ca	44	45	He	4820.406	ppb	6.8	9156.47	0.3036	Pulse	0.1000	3
Ti	47	45	He	459.396	ppb	3.2	6778.48	0.2248	Pulse	0.1000	3
V	51	45	He	479.368	ppb	2.0	316358.82	10.4942	Pulse	0.5000	3
Cr	52	45	He	477.408	ppb	1.9	417253.37	13.8412	Pulse	0.1000	3
Mn	55	45	He	479.069	ppb	0.7	172111.55	5.7086	Pulse	0.1000	3
Fe	57	45	He	4838.861	ppb	2.1	82333.42	2.7310	Pulse	0.1000	3
Co	59	72	He	494.233	ppb	1.4	830594.65	15.6565	Pulse	0.1000	3
Ni	60	72	He	495.173	ppb	1.5	238016.57	4.4866	Pulse	0.1000	3
Cu	63	72	He	493.747	ppb	1.1	679252.65	12.8034	Pulse	0.1000	3
Zn	66	72	He	496.561	ppb	0.7	74636.55	1.4068	Pulse	0.1000	3
As	75	72	He	494.918	ppb	1.6	48711.78	0.9182	Pulse	0.5000	3
Sr	88	115	He	48.831	ppb	3.0	20308.41	0.3920	Pulse	0.1000	3
Mo	98	115	He	49.777	ppb	0.8	59097.12	1.1409	Pulse	0.1000	3
Ag	107	115	He	52.146	ppb	2.6	135050.74	2.6079	Pulse	0.1000	3
Cd	111	115	He	49.499	ppb	2.0	14167.86	0.2736	Pulse	0.5000	3
Sn	120	115	He	98.334	ppb	0.6	82040.70	1.5837	Pulse	0.1000	3
Sb	121	159	He	95.847	ppb	0.8	71912.01	0.2502	Pulse	0.1000	3
Ba	137	115	He	501.195	ppb	1.5	129601.00	2.5023	Pulse	0.1000	3
Tl	205	209	He	97.255	ppb	1.1	741675.23	3.0443	Pulse	0.1000	3
Pb	208	209	He	48.999	ppb	1.0	490414.06	2.0129	Pulse	0.1000	3
U	238	209	He	48.551	ppb	0.8	593161.50	2.4346	Pulse	0.1000	3

ISTD Table:

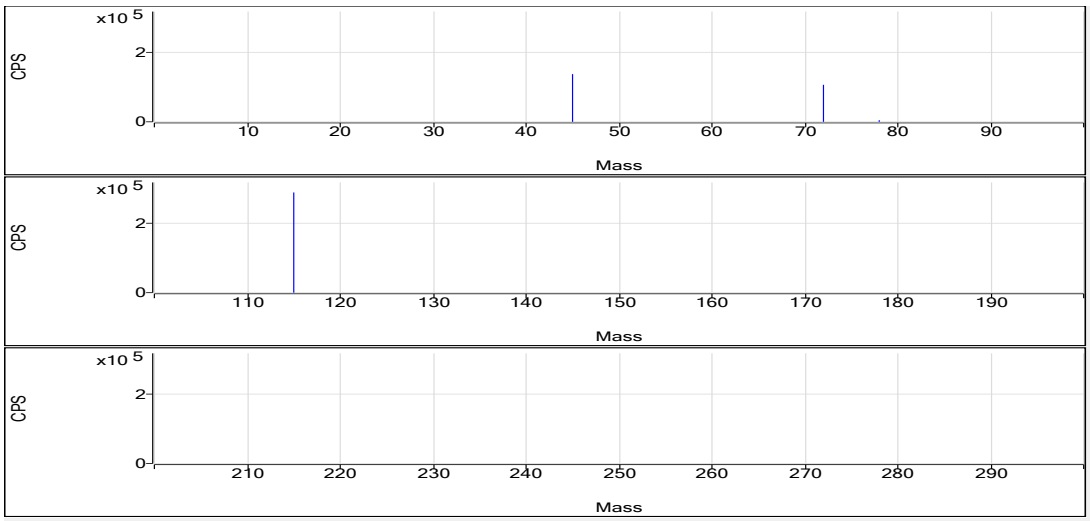
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2187675.96	0.3	99.5	Pulse	0.1000	3
No Gas	Ge	72	1085093.00	0.4	101.1	Pulse	0.1000	3
H2	Sc	45	136527.81	0.6	100.6	Pulse	0.1000	3
H2	Ge	72	105948.16	1.3	100.2	Pulse	0.1000	3
H2	In	115	286885.93	0.4	102.6	Pulse	0.1000	3
He	Sc	45	30151.68	1.6	101.0	Pulse	0.1000	3
He	Ge	72	53055.43	1.0	101.2	Pulse	0.1000	3
He	In	115	51802.78	2.0	101.1	Pulse	0.1000	3
He	Tb	159	287479.74	1.1	103.2	Pulse	0.1000	3
He	Bi	209	243650.97	1.3	102.6	Pulse	0.1000	3

No Gas

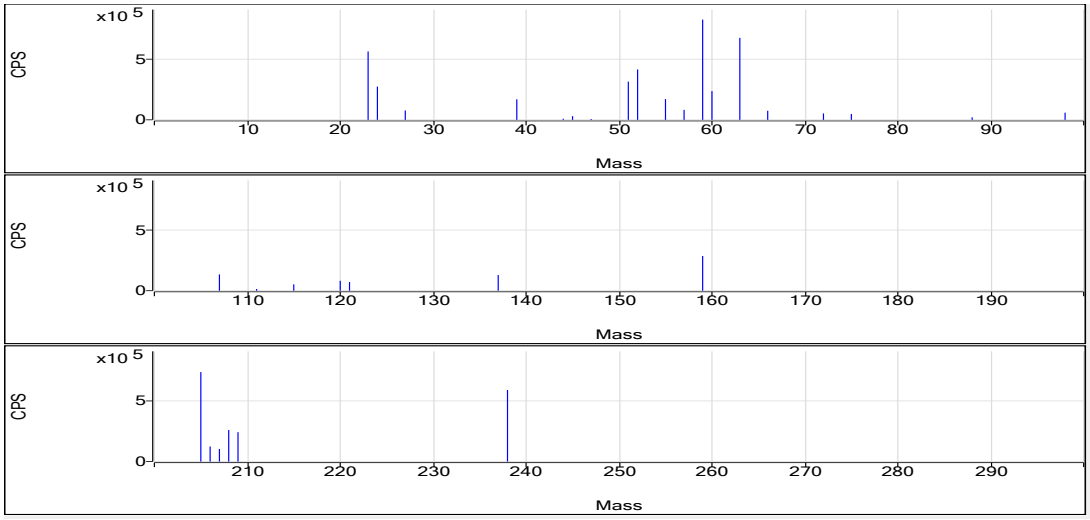


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.451	0.0355	77873.26	0.0007	2.306E-05
Be	9	1	No Gas	47.82	0.0358	78241.21	0.0007	2.306E-05
Be	9	1	No Gas	48.363	0.0362	78892.62	0.0007	2.306E-05
Se	78	2	H2	102.877	0.044	4645.42	0.0004	4.221E-05
Se	78	2	H2	99.745	0.0427	4585.40	0.0004	4.221E-05
Se	78	2	H2	101.967	0.0436	4575.40	0.0004	4.221E-05
Na	23	3	He	4823.701	18.6425	566022.61	0.0038	0.2864
Na	23	3	He	4969.416	19.197	568435.46	0.0038	0.2864
Na	23	3	He	4804.769	18.5704	566071.59	0.0038	0.2864
Mg	24	3	He	4774.632	9.1954	279190.54	0.0019	0.007972
Mg	24	3	He	4768.251	9.1831	271918.41	0.0019	0.007972
Mg	24	3	He	4686.317	9.0255	275117.85	0.0019	0.007972
Al	27	3	He	4724.479	2.5761	78215.77	0.0005	0.00158
Al	27	3	He	4671.913	2.5475	75432.12	0.0005	0.00158
Al	27	3	He	4707.041	2.5666	78236.34	0.0005	0.00158
K	39	3	He	4904.131	5.6335	171043.86	0.0011	0.3552
K	39	3	He	4986.795	5.7225	169445.82	0.0011	0.3552
K	39	3	He	4821.747	5.5448	169019.43	0.0011	0.3552
Ca	44	3	He	4570.605	0.288	8742.95	0.0001	0.002
Ca	44	3	He	4698.117	0.2959	8762.83	0.0001	0.002
Ca	44	3	He	5192.494	0.3269	9963.64	0.0001	0.002
Ti	47	3	He	476.075	0.2329	7071.96	0.0005	0.0004395
Ti	47	3	He	449.43	0.2199	6511.69	0.0005	0.0004395
Ti	47	3	He	452.682	0.2215	6751.79	0.0005	0.0004395
V	51	3	He	471.757	10.328	313578.84	0.0218	0.02648
V	51	3	He	489.807	10.7222	317490.13	0.0218	0.02648
V	51	3	He	476.542	10.4325	318007.50	0.0218	0.02648
Cr	52	3	He	472	13.6845	415487.14	0.029	0.006056
Cr	52	3	He	487.846	14.1437	418803.86	0.029	0.006056
Cr	52	3	He	472.378	13.6954	417469.10	0.029	0.006056
Mn	55	3	He	478.921	5.7068	173271.17	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	482.699	5.7518	170315.97	0.0119	0.00335
Mn	55	3	He	475.585	5.6671	172747.50	0.0119	0.00335
Fe	57	3	He	4724.721	2.6667	80965.57	0.0006	0.003117
Fe	57	3	He	4924.891	2.7795	82303.51	0.0006	0.003117
Fe	57	3	He	4866.97	2.7469	83731.18	0.0006	0.003117
Co	59	3	He	501.505	15.8868	833364.52	0.0317	0.004379
Co	59	3	He	487.911	15.4563	823659.52	0.0317	0.004379
Co	59	3	He	493.282	15.6263	834759.91	0.0317	0.004379
Ni	60	3	He	503.404	4.561	239255.68	0.009	0.01049
Ni	60	3	He	493.676	4.4731	238369.80	0.009	0.01049
Ni	60	3	He	488.439	4.4258	236424.23	0.009	0.01049
Cu	63	3	He	498.815	12.9346	678505.85	0.0259	0.01685
Cu	63	3	He	488.069	12.6563	674452.18	0.0259	0.01685
Cu	63	3	He	494.356	12.8192	684799.91	0.0259	0.01685
Zn	66	3	He	498.748	1.413	74120.37	0.0028	0.003817
Zn	66	3	He	498.21	1.4115	75216.66	0.0028	0.003817
Zn	66	3	He	492.725	1.396	74572.61	0.0028	0.003817
As	75	3	He	502.382	0.9321	48892.45	0.0019	0.0004832
As	75	3	He	495.7	0.9197	49008.75	0.0019	0.0004832
As	75	3	He	486.671	0.9029	48234.15	0.0019	0.0004832
Sr	88	3	He	47.632	0.3824	19433.79	0.008	0.0005203
Sr	88	3	He	50.431	0.4048	20936.04	0.008	0.0005203
Sr	88	3	He	48.429	0.3888	20555.40	0.008	0.0005203
Mo	98	3	He	50.118	1.1487	58380.90	0.0229	0.0003256
Mo	98	3	He	49.853	1.1427	59093.83	0.0229	0.0003256
Mo	98	3	He	49.359	1.1314	59816.64	0.0229	0.0003256
Ag	107	3	He	53.592	2.6802	136213.79	0.05	0.000719
Ag	107	3	He	52.002	2.6008	134499.50	0.05	0.000719
Ag	107	3	He	50.842	2.5428	134438.93	0.05	0.000719
Cd	111	3	He	50.597	0.2796	14211.25	0.0055	0.000104
Cd	111	3	He	49.217	0.272	14067.07	0.0055	0.000104
Cd	111	3	He	48.682	0.2691	14225.25	0.0055	0.000104
Sn	120	3	He	97.795	1.5751	80048.96	0.0159	0.01867
Sn	120	3	He	98.993	1.5942	82443.20	0.0159	0.01867
Sn	120	3	He	98.214	1.5818	83629.93	0.0159	0.01867
Sb	121	3	He	95.091	0.2482	72106.50	0.0026	8.342E-05
Sb	121	3	He	95.844	0.2501	71060.91	0.0026	8.342E-05
Sb	121	3	He	96.606	0.2521	72568.63	0.0026	8.342E-05
Ba	137	3	He	505.905	2.5258	128363.11	0.005	0.0005882
Ba	137	3	He	504.892	2.5207	130360.28	0.005	0.0005882
Ba	137	3	He	492.789	2.4603	130079.60	0.005	0.0005882
Tl	205	3	He	96.021	3.0057	742984.21	0.0313	0.0009967
Tl	205	3	He	97.767	3.0603	740145.15	0.0313	0.0009967
Tl	205	3	He	97.978	3.0669	741896.32	0.0313	0.0009967
Pb	208	3	He	48.49	1.992	263978.10	0.041	0.002892
Pb	208	3	He	49.07	2.0158	260477.65	0.041	0.002892
Pb	208	3	He	49.438	2.0309	259687.85	0.041	0.002892
U	238	3	He	48.13	2.4136	596619.13	0.0501	0.0008282
U	238	3	He	48.867	2.4505	592652.73	0.0501	0.0008282
U	238	3	He	48.655	2.4399	590212.65	0.0501	0.0008282
Sc	45	1	No Gas			2194266.06		
Sc	45	1	No Gas			2187634.97		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2181126.84		
Ge	72	1	No Gas			1080039.20		
Ge	72	1	No Gas			1086598.73		
Ge	72	1	No Gas			1088641.08		
Sc	45	2	H2			137510.95		
Sc	45	2	H2			136279.15		
Sc	45	2	H2			135793.34		
Ge	72	2	H2			105534.89		
Ge	72	2	H2			107438.96		
Ge	72	2	H2			104870.62		
In	115	2	H2			288147.73		
In	115	2	H2			286655.74		
In	115	2	H2			285854.31		
Sc	45	3	He			30361.97		
Sc	45	3	He			29610.66		
Sc	45	3	He			30482.40		
Ge	72	3	He			52456.53		
Ge	72	3	He			53289.73		
Ge	72	3	He			53420.04		
In	115	3	He			51445.75		
In	115	3	He			52358.69		
In	115	3	He			53523.65		
Tb	159	3	He			290541.28		
Tb	159	3	He			284079.47		
Tb	159	3	He			287818.47		
Bi	209	3	He			247195.29		
Bi	209	3	He			241853.02		
Bi	209	3	He			241904.61		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 12:04:13
Sample Name	410-178423-Y-8-A
Sample Type	Sample
Comment	D24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

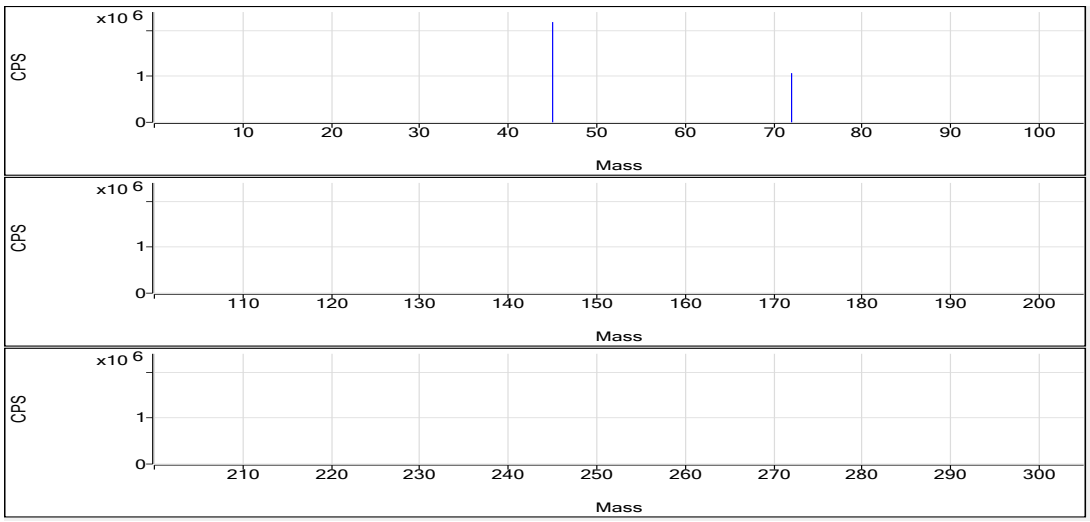
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.044	ppb	31.3	122.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	-0.005	ppb	N/A	4.22	0.0000	Pulse	1.5000	3
Na	23	45	He	267.518	ppb	1.7	38524.02	1.3044	Pulse	0.1000	3
Mg	24	45	He	14.162	ppb	5.5	1040.08	0.0352	Pulse	0.1000	3
Al	27	45	He	2.897	ppb	32.0	93.33	0.0032	Pulse	0.1000	3
K	39	45	He	79.263	ppb	28.8	13006.20	0.4405	Pulse	0.1000	3
Ca	44	45	He	352.518	ppb	10.2	710.04	0.0241	Pulse	0.1000	3
Ti	47	45	He	-0.667	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.162	ppb	34.3	886.03	0.0300	Pulse	0.5000	3
Cr	52	45	He	0.372	ppb	30.3	496.69	0.0168	Pulse	0.1000	3
Mn	55	45	He	0.524	ppb	14.0	283.35	0.0096	Pulse	0.1000	3
Fe	57	45	He	5.487	ppb	23.6	183.34	0.0062	Pulse	0.1000	3
Co	59	72	He	0.315	ppb	16.9	750.05	0.0144	Pulse	0.1000	3
Ni	60	72	He	0.115	ppb	91.5	603.37	0.0115	Pulse	0.1000	3
Cu	63	72	He	0.308	ppb	31.5	1296.77	0.0248	Pulse	0.1000	3
Zn	66	72	He	6.203	ppb	9.4	1116.75	0.0213	Pulse	0.1000	3
As	75	72	He	0.352	ppb	29.2	59.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.277	ppb	35.8	143.34	0.0027	Pulse	0.1000	3
Mo	98	115	He	0.105	ppb	45.7	143.34	0.0027	Pulse	0.1000	3
Ag	107	115	He	0.011	ppb	100.2	66.67	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.023	ppb	84.3	12.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	1.156	ppb	6.5	1940.20	0.0371	Pulse	0.1000	3
Sb	121	159	He	0.066	ppb	11.3	73.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	0.311	ppb	79.0	113.34	0.0021	Pulse	0.1000	3
Tl	205	209	He	0.235	ppb	15.7	2026.90	0.0083	Pulse	0.1000	3
Pb	208	209	He	-0.006	ppb	N/A	646.70	0.0027	Pulse	0.1000	3
U	238	209	He	0.017	ppb	50.2	413.35	0.0017	Pulse	0.1000	3

ISTD Table:

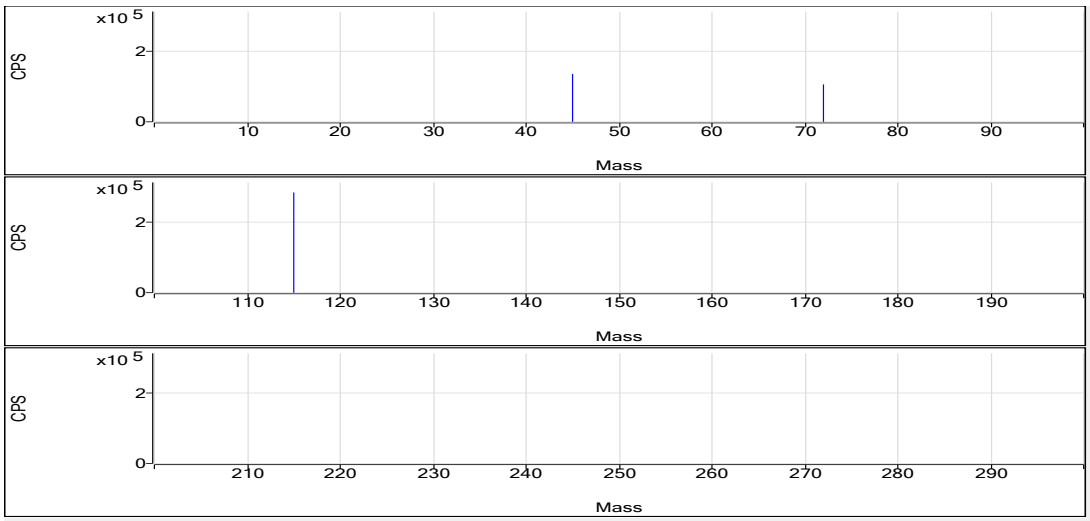
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2190289.55	0.6	99.7	Pulse	0.1000	3
No Gas	Ge	72	1074466.75	1.0	100.1	Pulse	0.1000	3
H2	Sc	45	134490.24	1.5	99.1	Pulse	0.1000	3
H2	Ge	72	105190.11	1.6	99.5	Pulse	0.1000	3
H2	In	115	281901.50	0.9	100.8	Pulse	0.1000	3
He	Sc	45	29533.92	0.9	98.9	Pulse	0.1000	3
He	Ge	72	52279.05	1.8	99.7	Pulse	0.1000	3
He	In	115	52366.97	2.7	102.2	Pulse	0.1000	3
He	Tb	159	286021.30	0.7	102.7	Pulse	0.1000	3
He	Bi	209	242803.53	0.6	102.2	Pulse	0.1000	3

No Gas

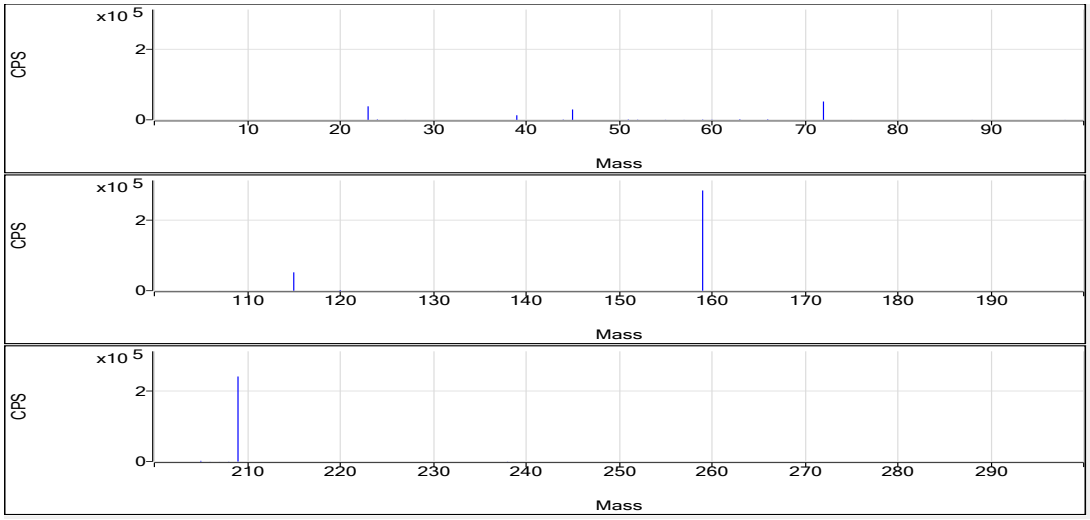


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.054	0.0001	140.00	0.0007	2.306E-05
Be	9	1	No Gas	0.048	0.0001	130.00	0.0007	2.306E-05
Be	9	1	No Gas	0.028	0	96.00	0.0007	2.306E-05
Se	78	2	H2	0.05	0.0001	6.67	0.0004	4.221E-05
Se	78	2	H2	-0.008	0	4.00	0.0004	4.221E-05
Se	78	2	H2	-0.055	0	2.00	0.0004	4.221E-05
Na	23	3	He	270.567	1.316	38480.78	0.0038	0.2864
Na	23	3	He	269.589	1.3123	39081.93	0.0038	0.2864
Na	23	3	He	262.397	1.2849	38009.34	0.0038	0.2864
Mg	24	3	He	14.343	0.0356	1040.08	0.0019	0.007972
Mg	24	3	He	13.309	0.0336	1000.07	0.0019	0.007972
Mg	24	3	He	14.833	0.0365	1080.10	0.0019	0.007972
Al	27	3	He	2.121	0.0027	80.00	0.0005	0.00158
Al	27	3	He	2.646	0.003	90.00	0.0005	0.00158
Al	27	3	He	3.924	0.0037	110.00	0.0005	0.00158
K	39	3	He	102	0.465	13596.72	0.0011	0.3552
K	39	3	He	56.368	0.4159	12385.66	0.0011	0.3552
K	39	3	He	79.42	0.4407	13036.22	0.0011	0.3552
Ca	44	3	He	388.961	0.0263	770.05	0.0001	0.002
Ca	44	3	He	316.904	0.0218	650.04	0.0001	0.002
Ca	44	3	He	351.688	0.024	710.04	0.0001	0.002
Ti	47	3	He	-0.2	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
V	51	3	He	0.194	0.0307	898.03	0.0218	0.02648
V	51	3	He	0.098	0.0286	852.03	0.0218	0.02648
V	51	3	He	0.193	0.0307	908.04	0.0218	0.02648
Cr	52	3	He	0.381	0.0171	500.03	0.029	0.006056
Cr	52	3	He	0.255	0.0134	400.02	0.029	0.006056
Cr	52	3	He	0.479	0.0199	590.03	0.029	0.006056
Mn	55	3	He	0.523	0.0096	280.01	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.452	0.0087	260.01	0.0119	0.00335
Mn	55	3	He	0.599	0.0105	310.02	0.0119	0.00335
Fe	57	3	He	6.605	0.0068	200.01	0.0006	0.003117
Fe	57	3	He	5.789	0.0064	190.01	0.0006	0.003117
Fe	57	3	He	4.066	0.0054	160.01	0.0006	0.003117
Co	59	3	He	0.287	0.0135	700.04	0.0317	0.004379
Co	59	3	He	0.377	0.0163	840.06	0.0317	0.004379
Co	59	3	He	0.282	0.0133	710.04	0.0317	0.004379
Ni	60	3	He	0.095	0.0114	590.03	0.009	0.01049
Ni	60	3	He	0.021	0.0107	550.03	0.009	0.01049
Ni	60	3	He	0.229	0.0126	670.04	0.009	0.01049
Cu	63	3	He	0.404	0.0273	1420.13	0.0259	0.01685
Cu	63	3	He	0.309	0.0249	1280.10	0.0259	0.01685
Cu	63	3	He	0.211	0.0223	1190.08	0.0259	0.01685
Zn	66	3	He	5.868	0.0204	1060.07	0.0028	0.003817
Zn	66	3	He	5.865	0.0204	1050.07	0.0028	0.003817
Zn	66	3	He	6.875	0.0232	1240.11	0.0028	0.003817
As	75	3	He	0.466	0.0013	70.00	0.0019	0.0004832
As	75	3	He	0.326	0.0011	56.00	0.0019	0.0004832
As	75	3	He	0.265	0.001	52.00	0.0019	0.0004832
Sr	88	3	He	0.228	0.0023	120.00	0.008	0.0005203
Sr	88	3	He	0.212	0.0022	120.00	0.008	0.0005203
Sr	88	3	He	0.391	0.0037	190.01	0.008	0.0005203
Mo	98	3	He	0.114	0.0029	150.01	0.0229	0.0003256
Mo	98	3	He	0.148	0.0037	200.01	0.0229	0.0003256
Mo	98	3	He	0.053	0.0015	80.00	0.0229	0.0003256
Ag	107	3	He	0.009	0.0012	60.00	0.05	0.000719
Ag	107	3	He	0.023	0.0019	100.00	0.05	0.000719
Ag	107	3	He	0.001	0.0008	40.00	0.05	0.000719
Cd	111	3	He	0.045	0.0004	18.00	0.0055	0.000104
Cd	111	3	He	0.008	0.0001	8.00	0.0055	0.000104
Cd	111	3	He	0.016	0.0002	10.00	0.0055	0.000104
Sn	120	3	He	1.147	0.0369	1890.19	0.0159	0.01867
Sn	120	3	He	1.086	0.036	1940.20	0.0159	0.01867
Sn	120	3	He	1.234	0.0383	1990.22	0.0159	0.01867
Sb	121	3	He	0.061	0.0002	70.00	0.0026	8.342E-05
Sb	121	3	He	0.075	0.0003	80.00	0.0026	8.342E-05
Sb	121	3	He	0.063	0.0002	70.00	0.0026	8.342E-05
Ba	137	3	He	0.117	0.0012	60.00	0.005	0.0005882
Ba	137	3	He	0.588	0.0035	190.01	0.005	0.0005882
Ba	137	3	He	0.229	0.0017	90.00	0.005	0.0005882
Tl	205	3	He	0.278	0.0097	2350.29	0.0313	0.0009967
Tl	205	3	He	0.214	0.0077	1860.21	0.0313	0.0009967
Tl	205	3	He	0.213	0.0077	1870.21	0.0313	0.0009967
Pb	208	3	He	-0.009	0.0025	390.02	0.041	0.002892
Pb	208	3	He	-0.002	0.0028	350.02	0.041	0.002892
Pb	208	3	He	-0.006	0.0027	360.02	0.041	0.002892
U	238	3	He	0.024	0.002	490.03	0.0501	0.0008282
U	238	3	He	0.007	0.0012	290.01	0.0501	0.0008282
U	238	3	He	0.021	0.0019	460.02	0.0501	0.0008282
Sc	45	1	No Gas			2198122.31		
Sc	45	1	No Gas			2198743.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2174002.47		
Ge	72	1	No Gas			1085605.53		
Ge	72	1	No Gas			1074515.53		
Ge	72	1	No Gas			1063279.20		
Sc	45	2	H2			136754.10		
Sc	45	2	H2			133988.54		
Sc	45	2	H2			132728.07		
Ge	72	2	H2			105223.47		
Ge	72	2	H2			103461.13		
Ge	72	2	H2			106885.72		
In	115	2	H2			284455.43		
In	115	2	H2			281660.72		
In	115	2	H2			279588.34		
Sc	45	3	He			29240.02		
Sc	45	3	He			29781.08		
Sc	45	3	He			29580.67		
Ge	72	3	He			51974.41		
Ge	72	3	He			51503.18		
Ge	72	3	He			53359.57		
In	115	3	He			51204.22		
In	115	3	He			53984.33		
In	115	3	He			51957.74		
Tb	159	3	He			287377.22		
Tb	159	3	He			286944.55		
Tb	159	3	He			283742.12		
Bi	209	3	He			242714.14		
Bi	209	3	He			241406.48		
Bi	209	3	He			244289.96		

Quantitation Report

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Sample Type	Sample
Comment	D24
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

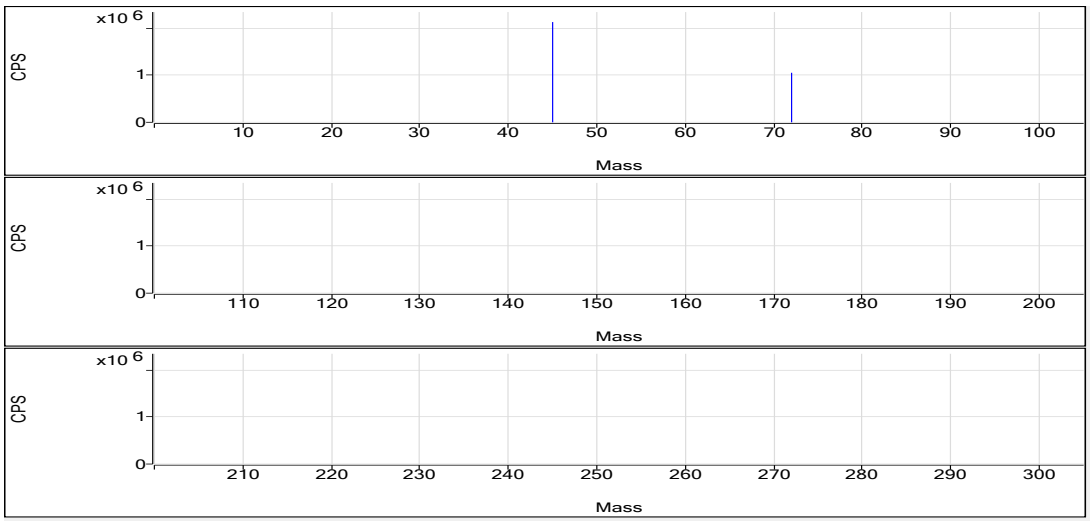
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.012	ppb	59.5	68.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.022	ppb	64.4	5.33	0.0001	Pulse	1.5000	3
Na	23	45	He	1249.166	ppb	0.4	140788.09	5.0400	Pulse	0.1000	3
Mg	24	45	He	52.669	ppb	10.9	3053.75	0.1093	Pulse	0.1000	3
Al	27	45	He	1.910	ppb	168.7	73.33	0.0026	Pulse	0.1000	3
K	39	45	He	25.114	ppb	67.2	10677.54	0.3823	Pulse	0.1000	3
Ca	44	45	He	143.432	ppb	13.3	306.68	0.0110	Pulse	0.1000	3
Ti	47	45	He	-0.413	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	0.092	ppb	105.5	796.03	0.0285	Pulse	0.5000	3
Cr	52	45	He	0.733	ppb	19.2	763.38	0.0273	Pulse	0.1000	3
Mn	55	45	He	0.530	ppb	19.4	270.01	0.0097	Pulse	0.1000	3
Fe	57	45	He	5.272	ppb	73.6	170.01	0.0061	Pulse	0.1000	3
Co	59	72	He	0.084	ppb	67.2	366.69	0.0070	Pulse	0.1000	3
Ni	60	72	He	0.008	ppb	3677.9	550.03	0.0106	Pulse	0.1000	3
Cu	63	72	He	0.146	ppb	15.8	1073.41	0.0206	Pulse	0.1000	3
Zn	66	72	He	0.642	ppb	48.6	293.35	0.0056	Pulse	0.1000	3
As	75	72	He	0.188	ppb	49.4	43.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	1.000	ppb	7.7	436.69	0.0085	Pulse	0.1000	3
Mo	98	115	He	0.029	ppb	105.9	50.00	0.0010	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	86.2	63.33	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	506.1	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.004	ppb	N/A	953.40	0.0186	Pulse	0.1000	3
Sb	121	159	He	0.009	ppb	303.8	30.00	0.0001	Pulse	0.1000	3
Ba	137	115	He	0.507	ppb	26.5	160.01	0.0031	Pulse	0.1000	3
Tl	205	209	He	0.058	ppb	7.9	670.04	0.0028	Pulse	0.1000	3
Pb	208	209	He	-0.020	ppb	N/A	493.36	0.0021	Pulse	0.1000	3
U	238	209	He	0.003	ppb	131.2	236.68	0.0010	Pulse	0.1000	3

ISTD Table:

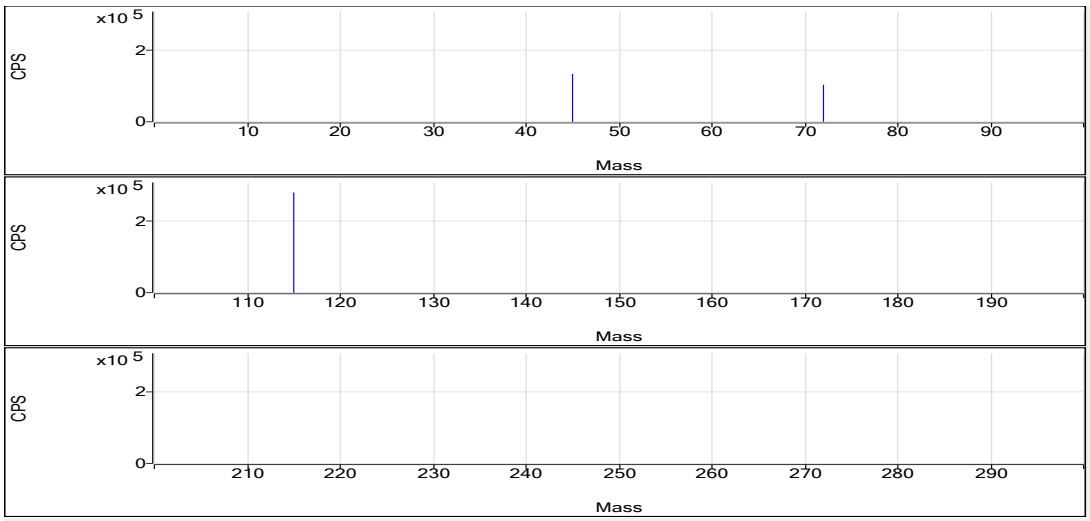
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2130410.38	0.4	96.9	Pulse	0.1000	3
No Gas	Ge	72	1052808.76	0.7	98.1	Pulse	0.1000	3
H2	Sc	45	133167.78	2.0	98.1	Pulse	0.1000	3
H2	Ge	72	103084.95	1.3	97.5	Pulse	0.1000	3
H2	In	115	278705.48	1.0	99.7	Pulse	0.1000	3
He	Sc	45	27934.00	0.7	93.6	Pulse	0.1000	3
He	Ge	72	52061.58	0.6	99.3	Pulse	0.1000	3
He	In	115	51180.02	1.5	99.9	Pulse	0.1000	3
He	Tb	159	280411.03	0.5	100.7	Pulse	0.1000	3
He	Bi	209	238233.06	0.3	100.3	Pulse	0.1000	3

No Gas

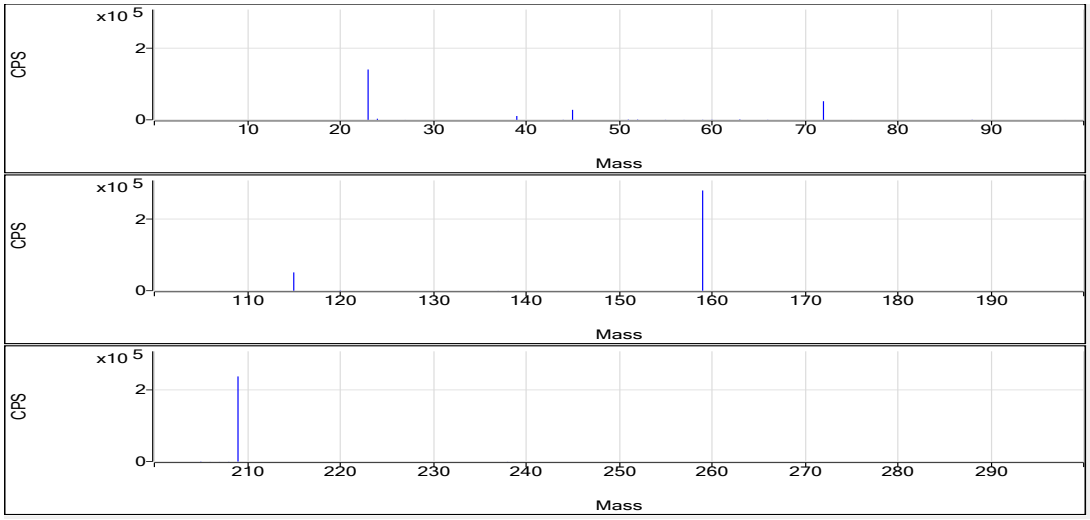


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.021	0	82.00	0.0007	2.306E-05
Be	9	1	No Gas	0.008	0	62.00	0.0007	2.306E-05
Be	9	1	No Gas	0.008	0	62.00	0.0007	2.306E-05
Se	78	2	H2	0.037	0.0001	6.00	0.0004	4.221E-05
Se	78	2	H2	0.009	0	4.67	0.0004	4.221E-05
Se	78	2	H2	0.021	0.0001	5.33	0.0004	4.221E-05
Na	23	3	He	1245.339	5.0254	140801.22	0.0038	0.2864
Na	23	3	He	1247.431	5.0334	139408.76	0.0038	0.2864
Na	23	3	He	1254.729	5.0611	142154.28	0.0038	0.2864
Mg	24	3	He	58.932	0.1214	3400.52	0.0019	0.007972
Mg	24	3	He	51.404	0.1069	2960.37	0.0019	0.007972
Mg	24	3	He	47.671	0.0997	2800.36	0.0019	0.007972
Al	27	3	He	5.615	0.0046	130.00	0.0005	0.00158
Al	27	3	He	-0.25	0.0014	40.00	0.0005	0.00158
Al	27	3	He	0.367	0.0018	50.00	0.0005	0.00158
K	39	3	He	42.515	0.401	11234.59	0.0011	0.3552
K	39	3	He	24.006	0.3811	10554.15	0.0011	0.3552
K	39	3	He	8.82	0.3647	10243.87	0.0011	0.3552
Ca	44	3	He	161.995	0.0121	340.01	0.0001	0.002
Ca	44	3	He	123.852	0.0097	270.02	0.0001	0.002
Ca	44	3	He	144.448	0.011	310.02	0.0001	0.002
Ti	47	3	He	-0.169	0.0004	10.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
Ti	47	3	He	-0.171	0.0004	10.00	0.0005	0.0004395
V	51	3	He	0.18	0.0304	852.03	0.0218	0.02648
V	51	3	He	-0.012	0.0262	726.02	0.0218	0.02648
V	51	3	He	0.108	0.0288	810.03	0.0218	0.02648
Cr	52	3	He	0.776	0.0286	800.05	0.029	0.006056
Cr	52	3	He	0.576	0.0227	630.03	0.029	0.006056
Cr	52	3	He	0.848	0.0306	860.05	0.029	0.006056
Mn	55	3	He	0.558	0.01	280.01	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.416	0.0083	230.01	0.0119	0.00335
Mn	55	3	He	0.616	0.0107	300.01	0.0119	0.00335
Fe	57	3	He	0.802	0.0036	100.00	0.0006	0.003117
Fe	57	3	He	7.281	0.0072	200.01	0.0006	0.003117
Fe	57	3	He	7.734	0.0075	210.01	0.0006	0.003117
Co	59	3	He	0.147	0.009	470.03	0.0317	0.004379
Co	59	3	He	0.067	0.0065	340.02	0.0317	0.004379
Co	59	3	He	0.038	0.0056	290.02	0.0317	0.004379
Ni	60	3	He	0.266	0.0129	670.04	0.009	0.01049
Ni	60	3	He	0.064	0.0111	580.03	0.009	0.01049
Ni	60	3	He	-0.306	0.0077	400.03	0.009	0.01049
Cu	63	3	He	0.144	0.0206	1070.08	0.0259	0.01685
Cu	63	3	He	0.123	0.02	1050.07	0.0259	0.01685
Cu	63	3	He	0.169	0.0212	1100.07	0.0259	0.01685
Zn	66	3	He	0.761	0.006	310.01	0.0028	0.003817
Zn	66	3	He	0.878	0.0063	330.02	0.0028	0.003817
Zn	66	3	He	0.289	0.0046	240.01	0.0028	0.003817
As	75	3	He	0.279	0.001	52.00	0.0019	0.0004832
As	75	3	He	0.192	0.0008	44.00	0.0019	0.0004832
As	75	3	He	0.093	0.0007	34.00	0.0019	0.0004832
Sr	88	3	He	0.922	0.0079	410.02	0.008	0.0005203
Sr	88	3	He	1.076	0.0091	470.02	0.008	0.0005203
Sr	88	3	He	1.001	0.0085	430.03	0.008	0.0005203
Mo	98	3	He	0.011	0.0006	30.00	0.0229	0.0003256
Mo	98	3	He	0.011	0.0006	30.00	0.0229	0.0003256
Mo	98	3	He	0.064	0.0018	90.00	0.0229	0.0003256
Ag	107	3	He	0.005	0.001	50.00	0.05	0.000719
Ag	107	3	He	0.021	0.0018	90.00	0.05	0.000719
Ag	107	3	He	0.005	0.001	50.00	0.05	0.000719
Cd	111	3	He	0.009	0.0002	8.00	0.0055	0.000104
Cd	111	3	He	-0.012	0	2.00	0.0055	0.000104
Cd	111	3	He	0.01	0.0002	8.00	0.0055	0.000104
Sn	120	3	He	0.221	0.0222	1150.09	0.0159	0.01867
Sn	120	3	He	-0.085	0.0173	890.06	0.0159	0.01867
Sn	120	3	He	-0.149	0.0163	820.05	0.0159	0.01867
Sb	121	3	He	-0.018	0	10.00	0.0026	8.342E-05
Sb	121	3	He	0.009	0.0001	30.00	0.0026	8.342E-05
Sb	121	3	He	0.036	0.0002	50.00	0.0026	8.342E-05
Ba	137	3	He	0.539	0.0033	170.01	0.005	0.0005882
Ba	137	3	He	0.623	0.0037	190.01	0.005	0.0005882
Ba	137	3	He	0.36	0.0024	120.01	0.005	0.0005882
Tl	205	3	He	0.054	0.0027	640.03	0.0313	0.0009967
Tl	205	3	He	0.057	0.0028	660.04	0.0313	0.0009967
Tl	205	3	He	0.063	0.003	710.05	0.0313	0.0009967
Pb	208	3	He	-0.016	0.0022	340.02	0.041	0.002892
Pb	208	3	He	-0.033	0.0016	180.01	0.041	0.002892
Pb	208	3	He	-0.011	0.0024	280.02	0.041	0.002892
U	238	3	He	0.007	0.0012	280.01	0.0501	0.0008282
U	238	3	He	-0.001	0.0008	180.01	0.0501	0.0008282
U	238	3	He	0.004	0.001	250.01	0.0501	0.0008282
Sc	45	1	No Gas			2127248.56		
Sc	45	1	No Gas			2139844.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2124138.56		
Ge	72	1	No Gas			1047261.94		
Ge	72	1	No Gas			1060750.37		
Ge	72	1	No Gas			1050413.97		
Sc	45	2	H2			135683.37		
Sc	45	2	H2			130487.62		
Sc	45	2	H2			133332.36		
Ge	72	2	H2			103220.47		
Ge	72	2	H2			101646.94		
Ge	72	2	H2			104387.45		
In	115	2	H2			275675.50		
In	115	2	H2			278968.53		
In	115	2	H2			281472.40		
Sc	45	3	He			28017.81		
Sc	45	3	He			27696.85		
Sc	45	3	He			28087.35		
Ge	72	3	He			51964.85		
Ge	72	3	He			52405.73		
Ge	72	3	He			51814.16		
In	115	3	He			51856.40		
In	115	3	He			51395.17		
In	115	3	He			50310.80		
Tb	159	3	He			278959.80		
Tb	159	3	He			281473.22		
Tb	159	3	He			280800.07		
Bi	209	3	He			237402.73		
Bi	209	3	He			238453.57		
Bi	209	3	He			238842.89		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

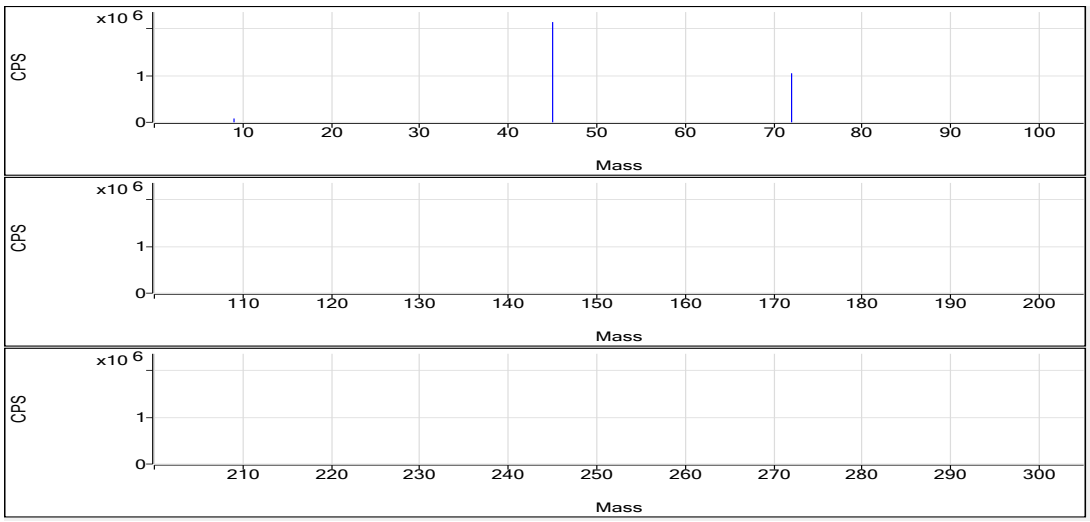
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.982	ppb	0.6	81963.46	0.0381	Pulse	0.5000	3
Se	78	72	H2	54.789	ppb	1.1	2430.88	0.0235	Pulse	1.5000	3
Na	23	45	He	5108.539	ppb	1.7	585243.69	19.7264	Pulse	0.1000	3
Mg	24	45	He	5115.409	ppb	2.1	292253.85	9.8511	Pulse	0.1000	3
Al	27	45	He	5066.926	ppb	1.4	81969.55	2.7627	Pulse	0.1000	3
K	39	45	He	5110.791	ppb	1.8	173734.27	5.8559	Pulse	0.1000	3
Ca	44	45	He	5132.828	ppb	3.9	9586.83	0.3231	Pulse	0.1000	3
Ti	47	45	He	5140.621	ppb	2.7	74483.28	2.5108	Pulse	0.1000	3
V	51	45	He	513.883	ppb	1.9	333691.91	11.2479	Pulse	0.5000	3
Cr	52	45	He	512.922	ppb	2.1	441151.85	14.8704	Pulse	0.1000	3
Mn	55	45	He	514.069	ppb	1.8	181724.84	6.1254	Pulse	0.1000	3
Fe	57	45	He	5172.566	ppb	0.8	86617.64	2.9191	Pulse	0.1000	3
Co	59	72	He	530.699	ppb	0.6	869804.65	16.8113	Pulse	0.1000	3
Ni	60	72	He	533.544	ppb	0.3	250084.04	4.8335	Pulse	0.1000	3
Cu	63	72	He	528.132	ppb	0.8	708504.78	13.6938	Pulse	0.1000	3
Zn	66	72	He	532.029	ppb	0.3	77973.41	1.5070	Pulse	0.1000	3
As	75	72	He	534.129	ppb	1.3	51267.87	0.9909	Pulse	0.5000	3
Sr	88	115	He	53.278	ppb	4.5	21520.36	0.4277	Pulse	0.1000	3
Mo	98	115	He	54.457	ppb	1.9	62826.69	1.2482	Pulse	0.1000	3
Ag	107	115	He	53.793	ppb	2.3	135407.62	2.6903	Pulse	0.1000	3
Cd	111	115	He	54.053	ppb	2.3	15036.74	0.2987	Pulse	0.5000	3
Sn	120	115	He	54.660	ppb	5.2	44715.99	0.8886	Pulse	0.1000	3
Sb	121	159	He	52.255	ppb	1.5	38737.80	0.1364	Pulse	0.1000	3
Ba	137	115	He	544.743	ppb	2.3	136890.08	2.7196	Pulse	0.1000	3
Tl	205	209	He	51.804	ppb	1.2	388700.42	1.6220	Pulse	0.1000	3
Pb	208	209	He	52.370	ppb	0.3	515539.10	2.1512	Pulse	0.1000	3
U	238	209	He	51.850	ppb	0.9	623082.01	2.6000	Pulse	0.1000	3

ISTD Table:

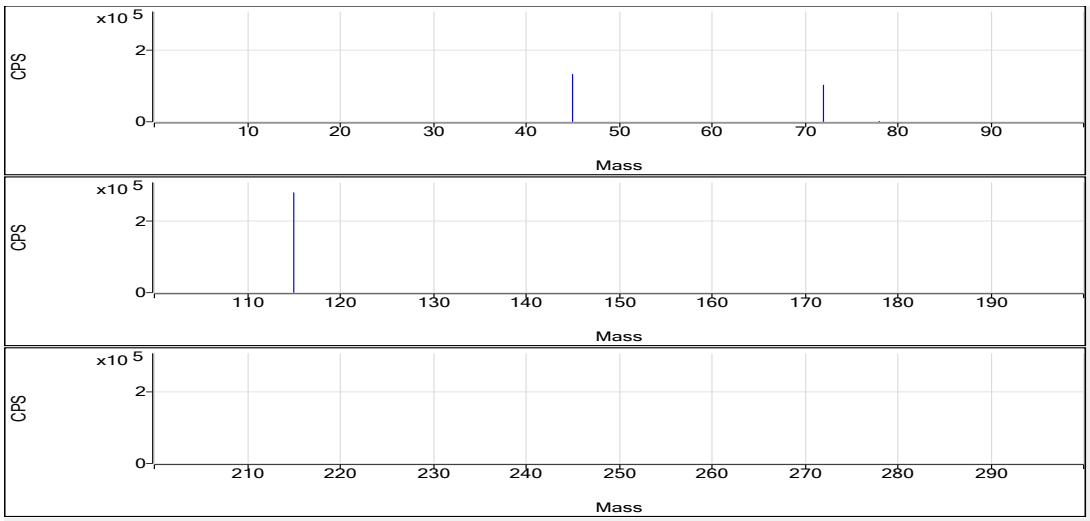
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2149603.87	1.0	97.8	Pulse	0.1000	3
No Gas	Ge	72	1051696.42	1.1	98.0	Pulse	0.1000	3
H2	Sc	45	133597.68	0.3	98.5	Pulse	0.1000	3
H2	Ge	72	103615.12	1.0	98.0	Pulse	0.1000	3
H2	In	115	280823.66	0.8	100.4	Pulse	0.1000	3
He	Sc	45	29674.18	1.9	99.4	Pulse	0.1000	3
He	Ge	72	51740.57	0.7	98.7	Pulse	0.1000	3
He	In	115	50343.69	1.5	98.2	Pulse	0.1000	3
He	Tb	159	283989.06	1.1	102.0	Pulse	0.1000	3
He	Bi	209	239652.51	0.8	100.9	Pulse	0.1000	3

No Gas

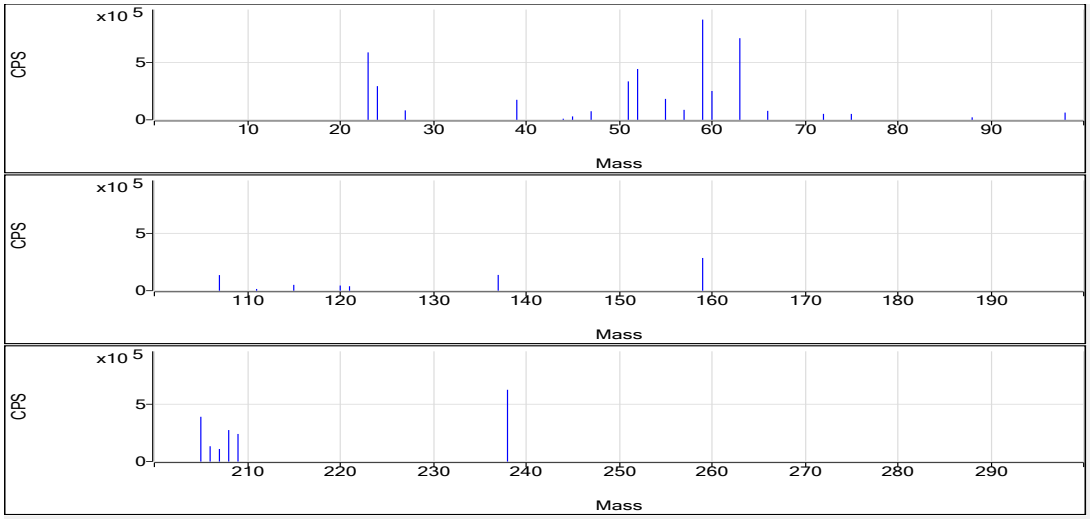


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.821	0.038	80816.44	0.0007	2.306E-05
Be	9	1	No Gas	50.803	0.038	81787.95	0.0007	2.306E-05
Be	9	1	No Gas	51.322	0.0384	83285.98	0.0007	2.306E-05
Se	78	2	H2	55.251	0.0237	2443.54	0.0004	4.221E-05
Se	78	2	H2	54.985	0.0235	2420.21	0.0004	4.221E-05
Se	78	2	H2	54.13	0.0232	2428.88	0.0004	4.221E-05
Na	23	3	He	5108.243	19.7253	589810.89	0.0038	0.2864
Na	23	3	He	5196.849	20.0625	582201.75	0.0038	0.2864
Na	23	3	He	5020.526	19.3915	583718.43	0.0038	0.2864
Mg	24	3	He	5126.703	9.8729	295211.21	0.0019	0.007972
Mg	24	3	He	5214.72	10.0422	291420.02	0.0019	0.007972
Mg	24	3	He	5004.804	9.6383	290130.31	0.0019	0.007972
Al	27	3	He	4997.884	2.7251	81483.88	0.0005	0.00158
Al	27	3	He	5140.31	2.8027	81333.14	0.0005	0.00158
Al	27	3	He	5062.584	2.7604	83091.64	0.0005	0.00158
K	39	3	He	5120.196	5.866	175402.01	0.0011	0.3552
K	39	3	He	5199.733	5.9516	172713.49	0.0011	0.3552
K	39	3	He	5012.443	5.7501	173087.32	0.0011	0.3552
Ca	44	3	He	4903.617	0.3088	9233.27	0.0001	0.002
Ca	44	3	He	5257.528	0.3309	9603.53	0.0001	0.002
Ca	44	3	He	5237.338	0.3297	9923.69	0.0001	0.002
Ti	47	3	He	5013.213	2.4485	73214.67	0.0005	0.0004395
Ti	47	3	He	5286.728	2.5821	74931.53	0.0005	0.0004395
Ti	47	3	He	5121.921	2.5016	75303.65	0.0005	0.0004395
V	51	3	He	510.05	11.1642	333824.13	0.0218	0.02648
V	51	3	He	524.753	11.4853	333296.50	0.0218	0.02648
V	51	3	He	506.844	11.0942	333955.13	0.0218	0.02648
Cr	52	3	He	511.95	14.8422	443801.09	0.029	0.006056
Cr	52	3	He	524.075	15.1936	440909.95	0.029	0.006056
Cr	52	3	He	502.742	14.5754	438744.52	0.029	0.006056
Mn	55	3	He	511.03	6.0892	182075.93	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	524.453	6.2491	181345.43	0.0119	0.00335
Mn	55	3	He	506.723	6.0379	181753.16	0.0119	0.00335
Fe	57	3	He	5130.526	2.8954	86577.61	0.0006	0.003117
Fe	57	3	He	5208.469	2.9394	85299.51	0.0006	0.003117
Fe	57	3	He	5178.704	2.9226	87975.81	0.0006	0.003117
Co	59	3	He	534.227	16.9231	868534.91	0.0317	0.004379
Co	59	3	He	527.515	16.7105	867678.35	0.0317	0.004379
Co	59	3	He	530.355	16.8004	873200.69	0.0317	0.004379
Ni	60	3	He	535.22	4.8486	248844.31	0.009	0.01049
Ni	60	3	He	533.121	4.8297	250776.13	0.009	0.01049
Ni	60	3	He	532.292	4.8222	250631.68	0.009	0.01049
Cu	63	3	He	532.311	13.8021	708357.49	0.0259	0.01685
Cu	63	3	He	524.409	13.5974	706035.69	0.0259	0.01685
Cu	63	3	He	527.675	13.682	711121.16	0.0259	0.01685
Zn	66	3	He	533.017	1.5098	77487.32	0.0028	0.003817
Zn	66	3	He	529.983	1.5012	77950.57	0.0028	0.003817
Zn	66	3	He	533.086	1.51	78482.34	0.0028	0.003817
As	75	3	He	542.378	1.0062	51641.88	0.0019	0.0004832
As	75	3	He	529.983	0.9832	51053.79	0.0019	0.0004832
As	75	3	He	530.027	0.9833	51107.93	0.0019	0.0004832
Sr	88	3	He	50.706	0.407	20796.02	0.008	0.0005203
Sr	88	3	He	53.683	0.4309	21697.53	0.008	0.0005203
Sr	88	3	He	55.446	0.445	22067.54	0.008	0.0005203
Mo	98	3	He	53.816	1.2335	63020.93	0.0229	0.0003256
Mo	98	3	He	53.9	1.2354	62207.51	0.0229	0.0003256
Mo	98	3	He	55.654	1.2756	63251.63	0.0229	0.0003256
Ag	107	3	He	52.44	2.6226	133995.11	0.05	0.000719
Ag	107	3	He	54.094	2.7054	136224.19	0.05	0.000719
Ag	107	3	He	54.843	2.7428	136003.56	0.05	0.000719
Cd	111	3	He	52.719	0.2914	14885.92	0.0055	0.000104
Cd	111	3	He	55.162	0.3049	15350.40	0.0055	0.000104
Cd	111	3	He	54.277	0.3	14873.89	0.0055	0.000104
Sn	120	3	He	53.05	0.863	44090.51	0.0159	0.01867
Sn	120	3	He	53.006	0.8623	43418.31	0.0159	0.01867
Sn	120	3	He	57.926	0.9406	46639.15	0.0159	0.01867
Sb	121	3	He	51.794	0.1352	38804.63	0.0026	8.342E-05
Sb	121	3	He	53.152	0.1388	38924.66	0.0026	8.342E-05
Sb	121	3	He	51.82	0.1353	38484.12	0.0026	8.342E-05
Ba	137	3	He	538.74	2.6897	137419.69	0.005	0.0005882
Ba	137	3	He	536.065	2.6763	134761.68	0.005	0.0005882
Ba	137	3	He	559.425	2.7929	138488.87	0.005	0.0005882
Tl	205	3	He	51.134	1.6011	386973.51	0.0313	0.0009967
Tl	205	3	He	51.896	1.6249	389077.92	0.0313	0.0009967
Tl	205	3	He	52.382	1.6401	390049.84	0.0313	0.0009967
Pb	208	3	He	52.323	2.1493	275272.09	0.041	0.002892
Pb	208	3	He	52.227	2.1453	272448.34	0.041	0.002892
Pb	208	3	He	52.562	2.1591	272314.31	0.041	0.002892
U	238	3	He	51.575	2.5862	625076.32	0.0501	0.0008282
U	238	3	He	51.617	2.5883	619766.87	0.0501	0.0008282
U	238	3	He	52.359	2.6256	624402.84	0.0501	0.0008282
Sc	45	1	No Gas			2126292.62		
Sc	45	1	No Gas			2152637.16		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2169881.84		
Ge	72	1	No Gas			1045607.72		
Ge	72	1	No Gas			1044461.86		
Ge	72	1	No Gas			1065019.67		
Sc	45	2	H2			133846.54		
Sc	45	2	H2			133069.84		
Sc	45	2	H2			133876.66		
Ge	72	2	H2			103278.67		
Ge	72	2	H2			102786.55		
Ge	72	2	H2			104780.14		
In	115	2	H2			280839.61		
In	115	2	H2			282965.11		
In	115	2	H2			278666.27		
Sc	45	3	He			29901.27		
Sc	45	3	He			29019.46		
Sc	45	3	He			30101.80		
Ge	72	3	He			51322.59		
Ge	72	3	He			51924.17		
Ge	72	3	He			51974.94		
In	115	3	He			51435.64		
In	115	3	He			50692.14		
In	115	3	He			49949.65		
Tb	159	3	He			286979.62		
Tb	159	3	He			280518.43		
Tb	159	3	He			284469.14		
Bi	209	3	He			241694.61		
Bi	209	3	He			239445.62		
Bi	209	3	He			237817.30		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 12:12:21
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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

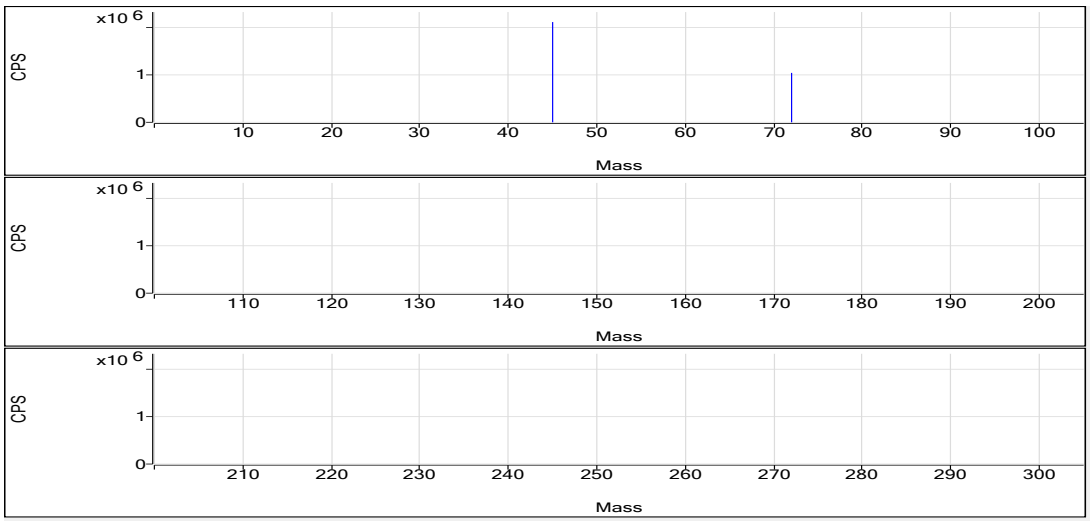
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.043	ppb	38.7	118.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.070	ppb	58.2	7.33	0.0001	Pulse	1.5000	3
Na	23	45	He	-0.167	ppb	N/A	8362.63	0.2858	Pulse	0.1000	3
Mg	24	45	He	2.959	ppb	15.3	400.02	0.0137	Pulse	0.1000	3
Al	27	45	He	2.949	ppb	32.0	93.34	0.0032	Pulse	0.1000	3
K	39	45	He	-10.864	ppb	N/A	10057.09	0.3435	Pulse	0.1000	3
Ca	44	45	He	-11.939	ppb	N/A	36.67	0.0013	Pulse	0.1000	3
Ti	47	45	He	2.347	ppb	67.2	46.67	0.0016	Pulse	0.1000	3
V	51	45	He	0.199	ppb	32.7	902.03	0.0308	Pulse	0.5000	3
Cr	52	45	He	0.224	ppb	25.8	366.68	0.0125	Pulse	0.1000	3
Mn	55	45	He	0.351	ppb	47.2	220.01	0.0075	Pulse	0.1000	3
Fe	57	45	He	1.351	ppb	117.5	113.34	0.0039	Pulse	0.1000	3
Co	59	72	He	0.274	ppb	32.3	670.04	0.0131	Pulse	0.1000	3
Ni	60	72	He	0.129	ppb	112.9	600.03	0.0117	Pulse	0.1000	3
Cu	63	72	He	0.154	ppb	30.1	1070.08	0.0208	Pulse	0.1000	3
Zn	66	72	He	-0.205	ppb	N/A	166.68	0.0032	Pulse	0.1000	3
As	75	72	He	0.301	ppb	62.6	53.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.040	ppb	125.8	43.33	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.053	ppb	15.2	80.00	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.021	ppb	116.3	90.00	0.0018	Pulse	0.1000	3
Cd	111	115	He	0.019	ppb	58.0	10.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.032	ppb	N/A	936.74	0.0182	Pulse	0.1000	3
Sb	121	159	He	0.036	ppb	1.0	50.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.206	ppb	62.1	83.34	0.0016	Pulse	0.1000	3
Tl	205	209	He	0.131	ppb	16.9	1216.77	0.0051	Pulse	0.1000	3
Pb	208	209	He	0.016	ppb	19.9	850.05	0.0036	Pulse	0.1000	3
U	238	209	He	0.027	ppb	30.1	523.37	0.0022	Pulse	0.1000	3

ISTD Table:

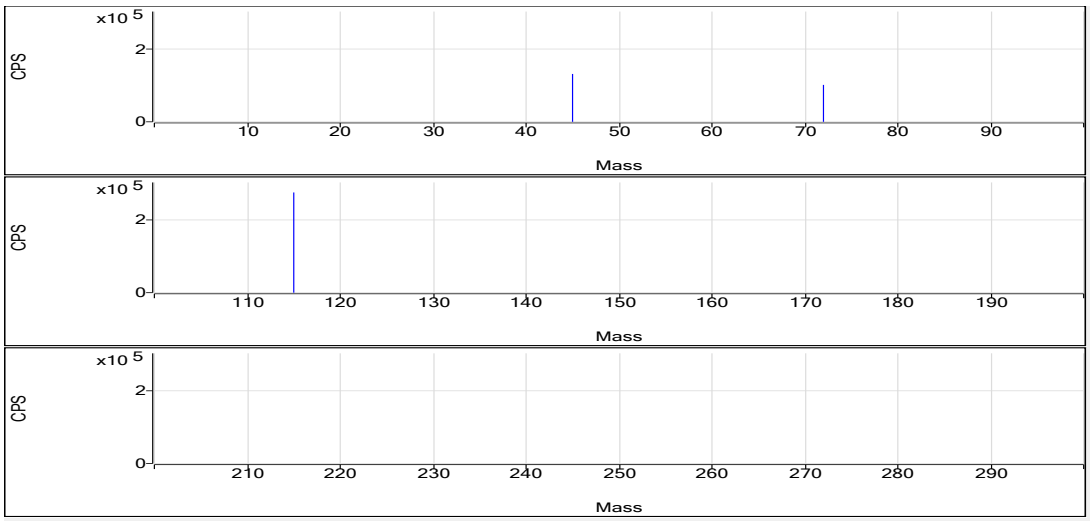
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2124074.86	1.1	96.6	Pulse	0.1000	3
No Gas	Ge	72	1047218.97	1.0	97.6	Pulse	0.1000	3
H2	Sc	45	132101.22	1.1	97.3	Pulse	0.1000	3
H2	Ge	72	101919.33	0.7	96.4	Pulse	0.1000	3
H2	In	115	276638.56	0.2	98.9	Pulse	0.1000	3
He	Sc	45	29273.49	2.1	98.1	Pulse	0.1000	3
He	Ge	72	51406.10	1.6	98.1	Pulse	0.1000	3
He	In	115	51588.43	1.0	100.7	Pulse	0.1000	3
He	Tb	159	282169.88	0.5	101.3	Pulse	0.1000	3
He	Bi	209	238251.76	0.5	100.3	Pulse	0.1000	3

No Gas

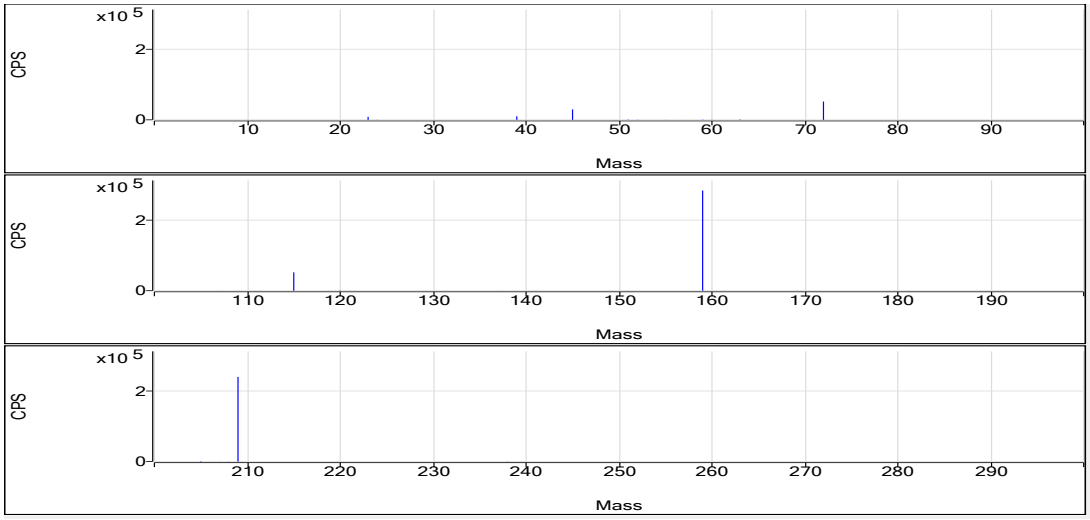


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.061	0.0001	148.00	0.0007	2.306E-05
Be	9	1	No Gas	0.041	0.0001	112.00	0.0007	2.306E-05
Be	9	1	No Gas	0.028	0	94.00	0.0007	2.306E-05
Se	78	2	H2	0.099	0.0001	8.67	0.0004	4.221E-05
Se	78	2	H2	0.086	0.0001	8.00	0.0004	4.221E-05
Se	78	2	H2	0.023	0.0001	5.33	0.0004	4.221E-05
Na	23	3	He	3.506	0.2998	8752.85	0.0038	0.2864
Na	23	3	He	-3.692	0.2724	8152.47	0.0038	0.2864
Na	23	3	He	-0.315	0.2852	8182.57	0.0038	0.2864
Mg	24	3	He	2.443	0.0127	370.02	0.0019	0.007972
Mg	24	3	He	3.15	0.014	420.03	0.0019	0.007972
Mg	24	3	He	3.285	0.0143	410.02	0.0019	0.007972
Al	27	3	He	4.014	0.0038	110.01	0.0005	0.00158
Al	27	3	He	2.618	0.003	90.00	0.0005	0.00158
Al	27	3	He	2.217	0.0028	80.00	0.0005	0.00158
K	39	3	He	-14.278	0.3399	9923.68	0.0011	0.3552
K	39	3	He	-7.711	0.3469	10384.02	0.0011	0.3552
K	39	3	He	-10.602	0.3438	9863.58	0.0011	0.3552
Ca	44	3	He	-4.604	0.0017	50.00	0.0001	0.002
Ca	44	3	He	-15.953	0.001	30.00	0.0001	0.002
Ca	44	3	He	-15.259	0.001	30.00	0.0001	0.002
Ti	47	3	He	3.308	0.0021	60.00	0.0005	0.0004395
Ti	47	3	He	3.205	0.002	60.00	0.0005	0.0004395
Ti	47	3	He	0.528	0.0007	20.00	0.0005	0.0004395
V	51	3	He	0.13	0.0293	856.03	0.0218	0.02648
V	51	3	He	0.207	0.031	928.03	0.0218	0.02648
V	51	3	He	0.259	0.0321	922.04	0.0218	0.02648
Cr	52	3	He	0.24	0.013	380.02	0.029	0.006056
Cr	52	3	He	0.16	0.0107	320.01	0.029	0.006056
Cr	52	3	He	0.272	0.0139	400.02	0.029	0.006056
Mn	55	3	He	0.179	0.0055	160.01	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.364	0.0077	230.01	0.0119	0.00335
Mn	55	3	He	0.509	0.0094	270.01	0.0119	0.00335
Fe	57	3	He	2.976	0.0048	140.01	0.0006	0.003117
Fe	57	3	He	-0.195	0.003	90.00	0.0006	0.003117
Fe	57	3	He	1.272	0.0038	110.00	0.0006	0.003117
Co	59	3	He	0.302	0.0139	710.04	0.0317	0.004379
Co	59	3	He	0.346	0.0153	780.05	0.0317	0.004379
Co	59	3	He	0.175	0.0099	520.02	0.0317	0.004379
Ni	60	3	He	0.033	0.0108	550.03	0.009	0.01049
Ni	60	3	He	0.057	0.011	560.03	0.009	0.01049
Ni	60	3	He	0.297	0.0132	690.04	0.009	0.01049
Cu	63	3	He	0.19	0.0218	1110.08	0.0259	0.01685
Cu	63	3	He	0.169	0.0212	1080.08	0.0259	0.01685
Cu	63	3	He	0.101	0.0195	1020.08	0.0259	0.01685
Zn	66	3	He	-0.101	0.0035	180.01	0.0028	0.003817
Zn	66	3	He	-0.446	0.0026	130.01	0.0028	0.003817
Zn	66	3	He	-0.067	0.0036	190.01	0.0028	0.003817
As	75	3	He	0.268	0.001	50.00	0.0019	0.0004832
As	75	3	He	0.503	0.0014	72.00	0.0019	0.0004832
As	75	3	He	0.131	0.0007	38.00	0.0019	0.0004832
Sr	88	3	He	0.08	0.0012	60.00	0.008	0.0005203
Sr	88	3	He	0.055	0.001	50.00	0.008	0.0005203
Sr	88	3	He	-0.016	0.0004	20.00	0.008	0.0005203
Mo	98	3	He	0.045	0.0014	70.00	0.0229	0.0003256
Mo	98	3	He	0.061	0.0017	90.00	0.0229	0.0003256
Mo	98	3	He	0.054	0.0016	80.00	0.0229	0.0003256
Ag	107	3	He	0.009	0.0012	60.00	0.05	0.000719
Ag	107	3	He	0.005	0.001	50.00	0.05	0.000719
Ag	107	3	He	0.048	0.0031	160.01	0.05	0.000719
Cd	111	3	He	0.03	0.0003	14.00	0.0055	0.000104
Cd	111	3	He	0.009	0.0002	8.00	0.0055	0.000104
Cd	111	3	He	0.017	0.0002	10.00	0.0055	0.000104
Sn	120	3	He	0.142	0.0209	1080.10	0.0159	0.01867
Sn	120	3	He	-0.124	0.0167	870.06	0.0159	0.01867
Sn	120	3	He	-0.115	0.0168	860.05	0.0159	0.01867
Sb	121	3	He	0.036	0.0002	50.00	0.0026	8.342E-05
Sb	121	3	He	0.036	0.0002	50.00	0.0026	8.342E-05
Sb	121	3	He	0.036	0.0002	50.00	0.0026	8.342E-05
Ba	137	3	He	0.115	0.0012	60.00	0.005	0.0005882
Ba	137	3	He	0.151	0.0013	70.00	0.005	0.0005882
Ba	137	3	He	0.353	0.0024	120.01	0.005	0.0005882
Tl	205	3	He	0.148	0.0056	1350.13	0.0313	0.0009967
Tl	205	3	He	0.139	0.0054	1270.10	0.0313	0.0009967
Tl	205	3	He	0.106	0.0043	1030.07	0.0313	0.0009967
Pb	208	3	He	0.013	0.0034	500.03	0.041	0.002892
Pb	208	3	He	0.017	0.0036	490.03	0.041	0.002892
Pb	208	3	He	0.02	0.0037	430.03	0.041	0.002892
U	238	3	He	0.032	0.0024	580.04	0.0501	0.0008282
U	238	3	He	0.032	0.0024	580.03	0.0501	0.0008282
U	238	3	He	0.018	0.0017	410.03	0.0501	0.0008282
Sc	45	1	No Gas			2144584.81		
Sc	45	1	No Gas			2099736.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2127903.72		
Ge	72	1	No Gas			1054139.59		
Ge	72	1	No Gas			1034723.11		
Ge	72	1	No Gas			1052794.20		
Sc	45	2	H2			133675.75		
Sc	45	2	H2			131717.20		
Sc	45	2	H2			130910.71		
Ge	72	2	H2			102563.33		
Ge	72	2	H2			101114.76		
Ge	72	2	H2			102079.90		
In	115	2	H2			277132.16		
In	115	2	H2			276477.42		
In	115	2	H2			276306.09		
Sc	45	3	He			29199.76		
Sc	45	3	He			29931.75		
Sc	45	3	He			28688.96		
Ge	72	3	He			50981.40		
Ge	72	3	He			50870.97		
Ge	72	3	He			52365.94		
In	115	3	He			51615.84		
In	115	3	He			52117.78		
In	115	3	He			51053.60		
Tb	159	3	He			282669.00		
Tb	159	3	He			283355.19		
Tb	159	3	He			280485.46		
Bi	209	3	He			239390.74		
Bi	209	3	He			237091.27		
Bi	209	3	He			238273.26		

Quantitation Report

Data File Name	097SMPL.d
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Acq Time	2024-07-17 12:14:22
Sample Name	MB 410-526993/1-A
Sample Type	Sample
Comment	A5
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

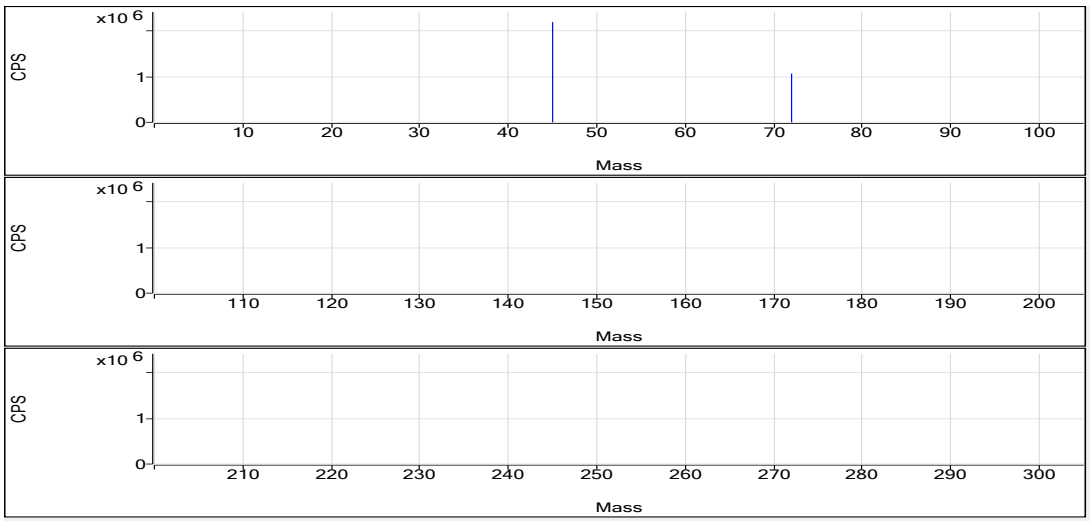
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.014	ppb	59.5	74.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.043	ppb	N/A	2.44	0.0000	Pulse	1.5000	3
Na	23	45	He	-8.452	ppb	N/A	7495.45	0.2543	Pulse	0.1000	3
Mg	24	45	He	1.488	ppb	81.1	320.02	0.0108	Pulse	0.1000	3
Al	27	45	He	-0.416	ppb	N/A	40.00	0.0014	Pulse	0.1000	3
K	39	45	He	-12.093	ppb	N/A	10093.78	0.3422	Pulse	0.1000	3
Ca	44	45	He	13.201	ppb	22.9	83.33	0.0028	Pulse	0.1000	3
Ti	47	45	He	0.024	ppb	1647.5	13.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.029	ppb	305.4	799.36	0.0271	Pulse	0.5000	3
Cr	52	45	He	0.088	ppb	53.7	253.34	0.0086	Pulse	0.1000	3
Mn	55	45	He	0.146	ppb	42.6	150.01	0.0051	Pulse	0.1000	3
Fe	57	45	He	1.288	ppb	22.5	113.34	0.0038	Pulse	0.1000	3
Co	59	72	He	0.079	ppb	20.7	356.69	0.0069	Pulse	0.1000	3
Ni	60	72	He	-0.092	ppb	N/A	500.03	0.0097	Pulse	0.1000	3
Cu	63	72	He	0.042	ppb	203.7	930.07	0.0179	Pulse	0.1000	3
Zn	66	72	He	-0.052	ppb	N/A	190.01	0.0037	Pulse	0.1000	3
As	75	72	He	0.107	ppb	50.3	35.33	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.030	ppb	157.0	40.00	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.027	ppb	31.2	50.00	0.0010	Pulse	0.1000	3
Ag	107	115	He	0.012	ppb	111.3	70.00	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.016	ppb	116.9	10.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.215	ppb	N/A	800.05	0.0152	Pulse	0.1000	3
Sb	121	159	He	0.013	ppb	163.2	33.33	0.0001	Pulse	0.1000	3
Ba	137	115	He	0.073	ppb	89.7	50.00	0.0010	Pulse	0.1000	3
Tl	205	209	He	0.016	ppb	63.5	370.02	0.0015	Pulse	0.1000	3
Pb	208	209	He	-0.027	ppb	N/A	436.69	0.0018	Pulse	0.1000	3
U	238	209	He	0.004	ppb	101.2	256.68	0.0010	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2202895.59	0.5	100.2	Pulse	0.1000	3
No Gas	Ge	72	1070478.65	0.3	99.8	Pulse	0.1000	3
H2	Sc	45	134276.45	1.5	99.0	Pulse	0.1000	3
H2	Ge	72	103248.79	0.3	97.6	Pulse	0.1000	3
H2	In	115	283413.89	0.4	101.3	Pulse	0.1000	3
He	Sc	45	29483.84	1.3	98.8	Pulse	0.1000	3
He	Ge	72	51851.00	1.2	98.9	Pulse	0.1000	3
He	In	115	52486.34	0.6	102.4	Pulse	0.1000	3
He	Tb	159	286814.68	0.8	103.0	Pulse	0.1000	3
He	Bi	209	244909.20	0.6	103.1	Pulse	0.1000	3

No Gas



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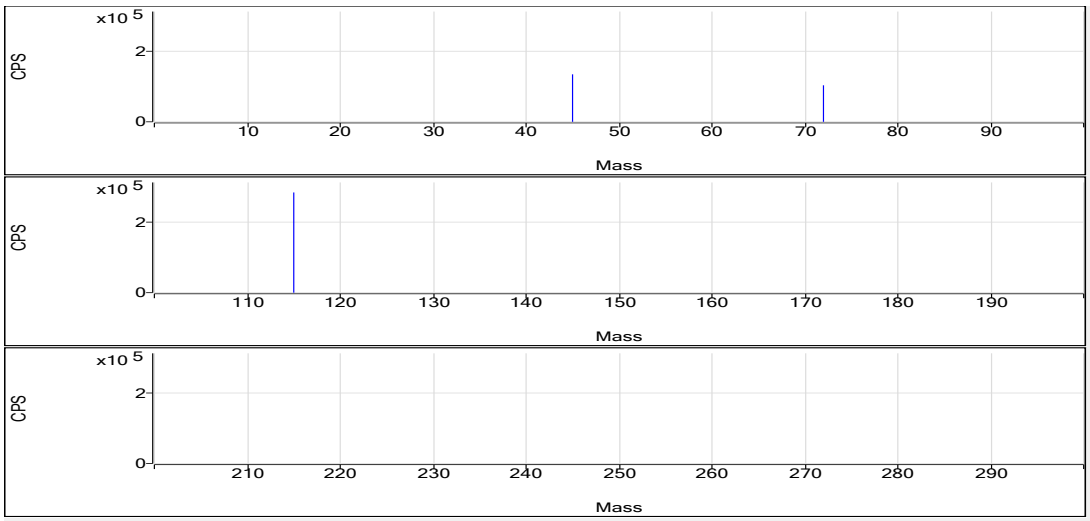
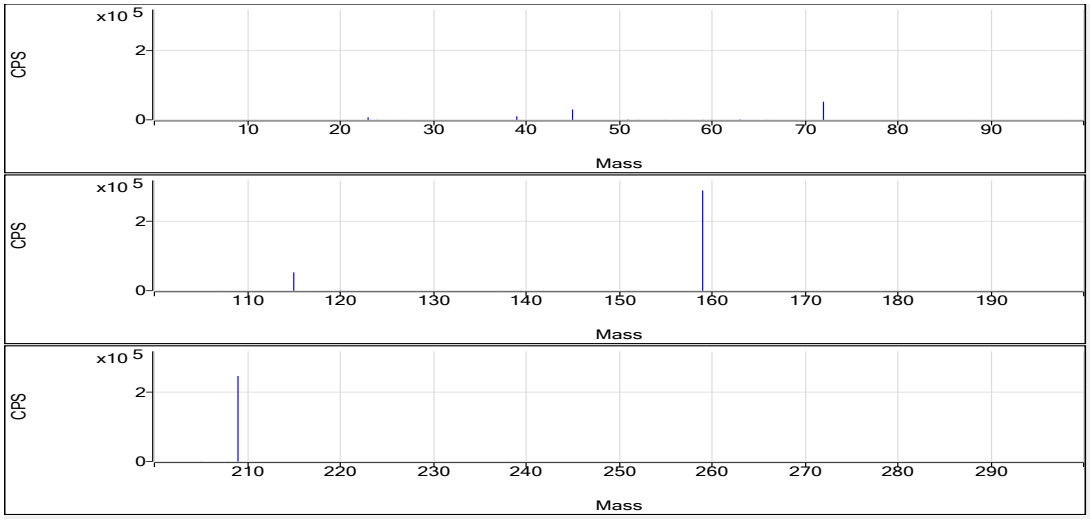


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.014	0	74.00	0.0007	2.306E-05
Be	9	1	No Gas	0.006	0	60.00	0.0007	2.306E-05
Be	9	1	No Gas	0.023	0	88.00	0.0007	2.306E-05
Se	78	2	H2	-0.069	0	1.33	0.0004	4.221E-05
Se	78	2	H2	-0.023	0	3.33	0.0004	4.221E-05
Se	78	2	H2	-0.038	0	2.67	0.0004	4.221E-05
Na	23	3	He	-9.443	0.2505	7462.11	0.0038	0.2864
Na	23	3	He	-8.465	0.2542	7522.12	0.0038	0.2864
Na	23	3	He	-7.448	0.2581	7502.13	0.0038	0.2864
Mg	24	3	He	2.486	0.0128	380.02	0.0019	0.007972
Mg	24	3	He	1.829	0.0115	340.02	0.0019	0.007972
Mg	24	3	He	0.148	0.0083	240.01	0.0019	0.007972
Al	27	3	He	-1.052	0.001	30.00	0.0005	0.00158
Al	27	3	He	1.441	0.0024	70.00	0.0005	0.00158
Al	27	3	He	-1.638	0.0007	20.00	0.0005	0.00158
K	39	3	He	-7.127	0.3476	10353.90	0.0011	0.3552
K	39	3	He	3.546	0.359	10624.25	0.0011	0.3552
K	39	3	He	-32.698	0.32	9303.18	0.0011	0.3552
Ca	44	3	He	10.949	0.0027	80.00	0.0001	0.002
Ca	44	3	He	16.64	0.003	90.00	0.0001	0.002
Ca	44	3	He	12.013	0.0028	80.00	0.0001	0.002
Ti	47	3	He	0.475	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	-0.208	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	-0.196	0.0003	10.00	0.0005	0.0004395
V	51	3	He	-0.066	0.025	746.03	0.0218	0.02648
V	51	3	He	0.112	0.0289	856.03	0.0218	0.02648
V	51	3	He	0.041	0.0274	796.03	0.0218	0.02648
Cr	52	3	He	0.034	0.007	210.01	0.029	0.006056
Cr	52	3	He	0.106	0.0091	270.01	0.029	0.006056
Cr	52	3	He	0.123	0.0096	280.01	0.029	0.006056
Mn	55	3	He	0.085	0.0044	130.01	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.144	0.0051	150.01	0.0119	0.00335
Mn	55	3	He	0.21	0.0058	170.01	0.0119	0.00335
Fe	57	3	He	1.617	0.004	120.01	0.0006	0.003117
Fe	57	3	He	1.065	0.0037	110.00	0.0006	0.003117
Fe	57	3	He	1.183	0.0038	110.00	0.0006	0.003117
Co	59	3	He	0.092	0.0073	380.02	0.0317	0.004379
Co	59	3	He	0.084	0.007	360.02	0.0317	0.004379
Co	59	3	He	0.061	0.0063	330.02	0.0317	0.004379
Ni	60	3	He	-0.352	0.0073	380.02	0.009	0.01049
Ni	60	3	He	0.159	0.0119	610.03	0.009	0.01049
Ni	60	3	He	-0.083	0.0097	510.03	0.009	0.01049
Cu	63	3	He	-0.057	0.0154	800.06	0.0259	0.01685
Cu	63	3	He	0.089	0.0192	980.07	0.0259	0.01685
Cu	63	3	He	0.094	0.0193	1010.07	0.0259	0.01685
Zn	66	3	He	0.078	0.004	210.01	0.0028	0.003817
Zn	66	3	He	0.102	0.0041	210.01	0.0028	0.003817
Zn	66	3	He	-0.337	0.0029	150.01	0.0028	0.003817
As	75	3	He	0.154	0.0008	40.00	0.0019	0.0004832
As	75	3	He	0.119	0.0007	36.00	0.0019	0.0004832
As	75	3	He	0.048	0.0006	30.00	0.0019	0.0004832
Sr	88	3	He	0.03	0.0008	40.00	0.008	0.0005203
Sr	88	3	He	-0.017	0.0004	20.00	0.008	0.0005203
Sr	88	3	He	0.077	0.0011	60.00	0.008	0.0005203
Mo	98	3	He	0.027	0.0009	50.00	0.0229	0.0003256
Mo	98	3	He	0.036	0.0012	60.00	0.0229	0.0003256
Mo	98	3	He	0.019	0.0008	40.00	0.0229	0.0003256
Ag	107	3	He	0.027	0.0021	110.01	0.05	0.000719
Ag	107	3	He	0.001	0.0008	40.00	0.05	0.000719
Ag	107	3	He	0.008	0.0011	60.00	0.05	0.000719
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Cd	111	3	He	0.03	0.0003	14.00	0.0055	0.000104
Cd	111	3	He	0.022	0.0002	12.00	0.0055	0.000104
Sn	120	3	He	-0.194	0.0156	820.06	0.0159	0.01867
Sn	120	3	He	-0.221	0.0152	790.06	0.0159	0.01867
Sn	120	3	He	-0.231	0.015	790.04	0.0159	0.01867
Sb	121	3	He	0.008	0.0001	30.00	0.0026	8.342E-05
Sb	121	3	He	0.035	0.0002	50.00	0.0026	8.342E-05
Sb	121	3	He	-0.005	0.0001	20.00	0.0026	8.342E-05
Ba	137	3	He	0.034	0.0008	40.00	0.005	0.0005882
Ba	137	3	He	0.036	0.0008	40.00	0.005	0.0005882
Ba	137	3	He	0.148	0.0013	70.00	0.005	0.0005882
Tl	205	3	He	0.005	0.0011	280.01	0.0313	0.0009967
Tl	205	3	He	0.024	0.0018	430.03	0.0313	0.0009967
Tl	205	3	He	0.021	0.0016	400.02	0.0313	0.0009967
Pb	208	3	He	-0.026	0.0018	260.01	0.041	0.002892
Pb	208	3	He	-0.024	0.0019	180.01	0.041	0.002892
Pb	208	3	He	-0.031	0.0016	230.01	0.041	0.002892
U	238	3	He	0.001	0.0009	220.01	0.0501	0.0008282
U	238	3	He	0.009	0.0013	320.02	0.0501	0.0008282
U	238	3	He	0.002	0.0009	230.01	0.0501	0.0008282
Sc	45	1	No Gas			2211429.03		
Sc	45	1	No Gas			2191488.40		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2205769.34		
Ge	72	1	No Gas			1074090.37		
Ge	72	1	No Gas			1067853.89		
Ge	72	1	No Gas			1069491.70		
Sc	45	2	H2			132866.54		
Sc	45	2	H2			133311.67		
Sc	45	2	H2			136651.14		
Ge	72	2	H2			102906.63		
Ge	72	2	H2			103238.72		
Ge	72	2	H2			103601.01		
In	115	2	H2			282838.10		
In	115	2	H2			284752.28		
In	115	2	H2			282651.30		
Sc	45	3	He			29790.95		
Sc	45	3	He			29590.83		
Sc	45	3	He			29069.74		
Ge	72	3	He			52025.01		
Ge	72	3	He			51162.20		
Ge	72	3	He			52365.78		
In	115	3	He			52640.34		
In	115	3	He			52147.38		
In	115	3	He			52690.03		
Tb	159	3	He			285321.30		
Tb	159	3	He			285698.20		
Tb	159	3	He			289424.53		
Bi	209	3	He			245886.29		
Bi	209	3	He			245655.31		
Bi	209	3	He			243185.99		

Quantitation Report

Data File Name	098SMPL.d
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Sample Name	LCS 410-526993/2-A
Sample Type	Sample
Comment	A5
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

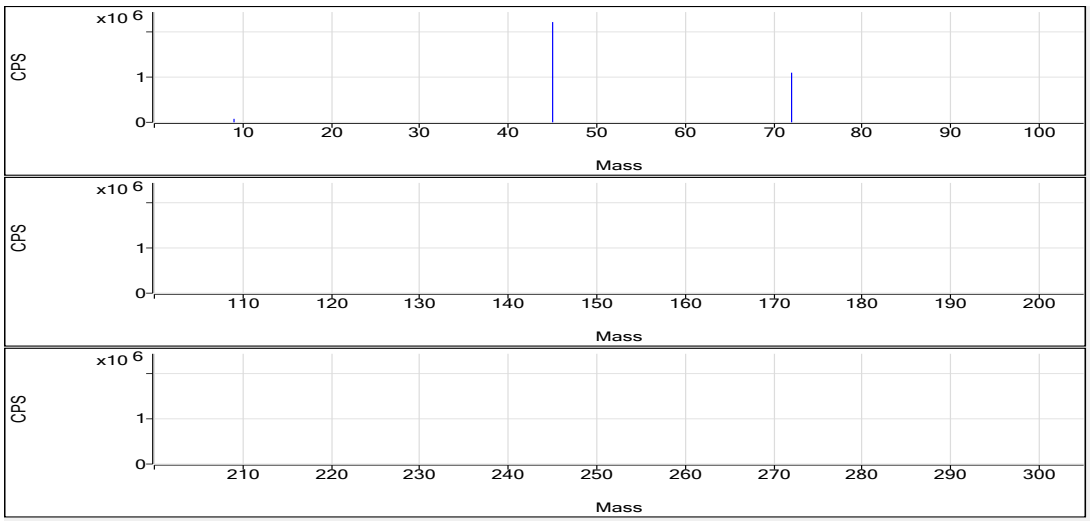
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.309	ppb	1.6	76895.89	0.0346	Pulse	0.5000	3
Se	78	72	H2	100.190	ppb	0.3	4564.51	0.0429	Pulse	1.5000	3
Na	23	45	He	4780.690	ppb	2.6	553596.41	18.4788	Pulse	0.1000	3
Mg	24	45	He	4693.747	ppb	2.6	270819.81	9.0398	Pulse	0.1000	3
Al	27	45	He	4681.367	ppb	2.7	76470.89	2.5526	Pulse	0.1000	3
K	39	45	He	4874.742	ppb	2.4	167830.16	5.6019	Pulse	0.1000	3
Ca	44	45	He	4669.736	ppb	7.5	8809.61	0.2942	Pulse	0.1000	3
Ti	47	45	He	479.062	ppb	3.7	7021.95	0.2344	Pulse	0.1000	3
V	51	45	He	471.551	ppb	2.5	309277.93	10.3235	Pulse	0.5000	3
Cr	52	45	He	475.443	ppb	1.9	412993.81	13.7842	Pulse	0.1000	3
Mn	55	45	He	473.596	ppb	2.8	169062.92	5.6434	Pulse	0.1000	3
Fe	57	45	He	4831.964	ppb	2.2	81706.25	2.7271	Pulse	0.1000	3
Co	59	72	He	479.833	ppb	1.8	816265.48	15.2004	Pulse	0.1000	3
Ni	60	72	He	477.813	ppb	2.2	232491.44	4.3297	Pulse	0.1000	3
Cu	63	72	He	477.349	ppb	2.7	664639.60	12.3787	Pulse	0.1000	3
Zn	66	72	He	474.834	ppb	3.0	72233.86	1.3454	Pulse	0.1000	3
As	75	72	He	477.945	ppb	2.5	47613.46	0.8867	Pulse	0.5000	3
Sr	88	115	He	48.437	ppb	0.6	20502.12	0.3888	Pulse	0.1000	3
Mo	98	115	He	49.558	ppb	1.8	59893.75	1.1359	Pulse	0.1000	3
Ag	107	115	He	49.927	ppb	0.8	131655.83	2.4970	Pulse	0.1000	3
Cd	111	115	He	48.653	ppb	1.5	14177.84	0.2689	Pulse	0.5000	3
Sn	120	115	He	96.514	ppb	1.0	81974.34	1.5547	Pulse	0.1000	3
Sb	121	159	He	97.748	ppb	0.6	73148.93	0.2551	Pulse	0.1000	3
Ba	137	115	He	482.591	ppb	1.8	127037.89	2.4094	Pulse	0.1000	3
Tl	205	209	He	95.144	ppb	2.0	723486.97	2.9782	Pulse	0.1000	3
Pb	208	209	He	48.270	ppb	1.4	481746.51	1.9830	Pulse	0.1000	3
U	238	209	He	48.059	ppb	1.8	585452.22	2.4100	Pulse	0.1000	3

ISTD Table:

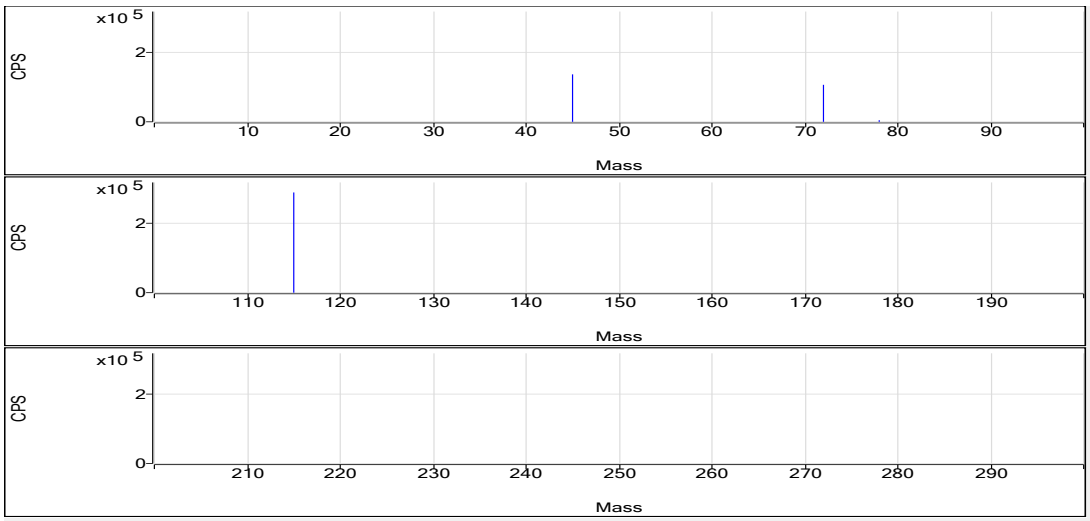
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2220189.13	0.5	101.0	Pulse	0.1000	3
No Gas	Ge	72	1099074.07	0.8	102.4	Pulse	0.1000	3
H2	Sc	45	136586.51	0.8	100.7	Pulse	0.1000	3
H2	Ge	72	106475.63	0.5	100.7	Pulse	0.1000	3
H2	In	115	288443.38	0.7	103.1	Pulse	0.1000	3
He	Sc	45	29968.15	1.9	100.4	Pulse	0.1000	3
He	Ge	72	53717.58	2.7	102.5	Pulse	0.1000	3
He	In	115	52726.15	0.2	102.9	Pulse	0.1000	3
He	Tb	159	286728.93	0.4	103.0	Pulse	0.1000	3
He	Bi	209	242962.56	1.2	102.3	Pulse	0.1000	3

No Gas

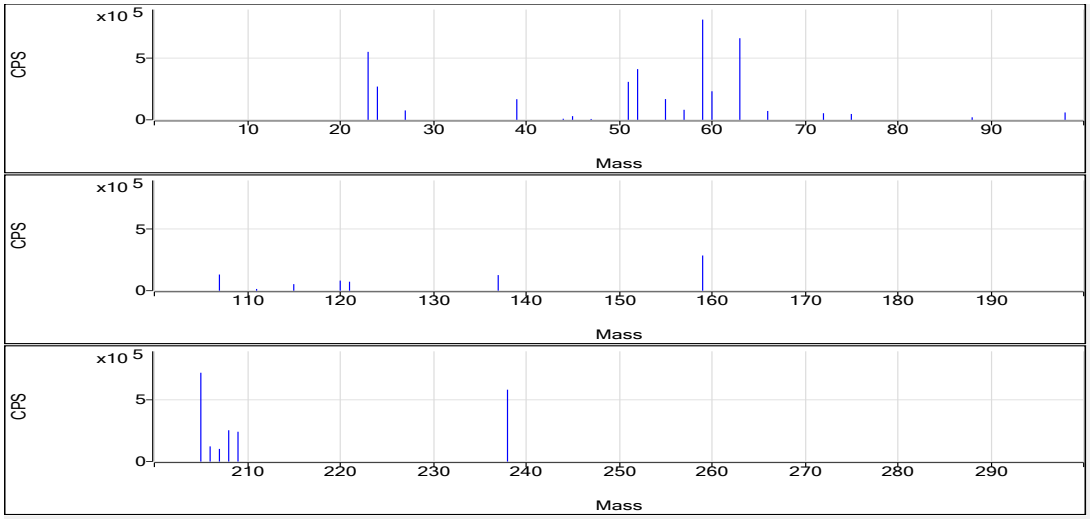


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	45.484	0.034	75710.57	0.0007	2.306E-05
Be	9	1	No Gas	46.589	0.0348	77606.21	0.0007	2.306E-05
Be	9	1	No Gas	46.855	0.035	77370.90	0.0007	2.306E-05
Se	78	2	H2	100.069	0.0428	4564.06	0.0004	4.221E-05
Se	78	2	H2	99.937	0.0428	4571.40	0.0004	4.221E-05
Se	78	2	H2	100.565	0.043	4558.06	0.0004	4.221E-05
Na	23	3	He	4803.641	18.5661	555521.98	0.0038	0.2864
Na	23	3	He	4646.911	17.9697	549208.62	0.0038	0.2864
Na	23	3	He	4891.518	18.9006	556058.62	0.0038	0.2864
Mg	24	3	He	4667.854	8.9899	268990.02	0.0019	0.007972
Mg	24	3	He	4588.895	8.838	270115.86	0.0019	0.007972
Mg	24	3	He	4824.493	9.2913	273353.55	0.0019	0.007972
Al	27	3	He	4704.822	2.5654	76759.86	0.0005	0.00158
Al	27	3	He	4544.348	2.4779	75733.56	0.0005	0.00158
Al	27	3	He	4794.932	2.6145	76919.25	0.0005	0.00158
K	39	3	He	4900.173	5.6292	168433.47	0.0011	0.3552
K	39	3	He	4748.494	5.466	167056.66	0.0011	0.3552
K	39	3	He	4975.56	5.7104	168000.35	0.0011	0.3552
Ca	44	3	He	4397.878	0.2772	8292.69	0.0001	0.002
Ca	44	3	He	4545.51	0.2864	8752.85	0.0001	0.002
Ca	44	3	He	5065.82	0.3189	9383.29	0.0001	0.002
Ti	47	3	He	496.113	0.2427	7262.09	0.0005	0.0004395
Ti	47	3	He	460.874	0.2255	6891.91	0.0005	0.0004395
Ti	47	3	He	480.198	0.2349	6911.84	0.0005	0.0004395
V	51	3	He	472.678	10.3481	309628.59	0.0218	0.02648
V	51	3	He	459.136	10.0524	307231.94	0.0218	0.02648
V	51	3	He	482.841	10.57	310973.25	0.0218	0.02648
Cr	52	3	He	479.203	13.8932	415701.75	0.029	0.006056
Cr	52	3	He	465.226	13.4882	412238.47	0.029	0.006056
Cr	52	3	He	481.9	13.9714	411041.20	0.029	0.006056
Mn	55	3	He	473.457	5.6418	168808.85	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	460.348	5.4857	167658.30	0.0119	0.00335
Mn	55	3	He	486.983	5.8029	170721.60	0.0119	0.00335
Fe	57	3	He	4787.814	2.7022	80854.52	0.0006	0.003117
Fe	57	3	He	4753.751	2.683	82001.80	0.0006	0.003117
Fe	57	3	He	4954.328	2.7961	82262.43	0.0006	0.003117
Co	59	3	He	479.265	15.1824	811499.83	0.0317	0.004379
Co	59	3	He	488.913	15.488	811818.43	0.0317	0.004379
Co	59	3	He	471.321	14.9309	825478.19	0.0317	0.004379
Ni	60	3	He	482.075	4.3682	233481.34	0.009	0.01049
Ni	60	3	He	485.46	4.3988	230569.10	0.009	0.01049
Ni	60	3	He	465.905	4.2221	233423.88	0.009	0.01049
Cu	63	3	He	482.231	12.5051	668399.05	0.0259	0.01685
Cu	63	3	He	486.953	12.6274	661880.62	0.0259	0.01685
Cu	63	3	He	462.863	12.0036	663639.13	0.0259	0.01685
Zn	66	3	He	475.943	1.3486	72079.96	0.0028	0.003817
Zn	66	3	He	488.475	1.384	72541.71	0.0028	0.003817
Zn	66	3	He	460.085	1.3037	72079.90	0.0028	0.003817
As	75	3	He	475.224	0.8817	47126.60	0.0019	0.0004832
As	75	3	He	491.084	0.9111	47756.59	0.0019	0.0004832
As	75	3	He	467.529	0.8674	47957.20	0.0019	0.0004832
Sr	88	3	He	48.55	0.3897	20505.38	0.008	0.0005203
Sr	88	3	He	48.649	0.3905	20585.63	0.008	0.0005203
Sr	88	3	He	48.112	0.3862	20415.36	0.008	0.0005203
Mo	98	3	He	49.819	1.1419	60077.84	0.0229	0.0003256
Mo	98	3	He	48.554	1.1129	58661.88	0.0229	0.0003256
Mo	98	3	He	50.302	1.153	60941.53	0.0229	0.0003256
Ag	107	3	He	49.697	2.4855	130765.22	0.05	0.000719
Ag	107	3	He	50.4	2.5207	132863.47	0.05	0.000719
Ag	107	3	He	49.683	2.4848	131338.80	0.05	0.000719
Cd	111	3	He	47.903	0.2647	13928.93	0.0055	0.000104
Cd	111	3	He	49.319	0.2726	14367.37	0.0055	0.000104
Cd	111	3	He	48.737	0.2694	14237.23	0.0055	0.000104
Sn	120	3	He	96.771	1.5588	82011.46	0.0159	0.01867
Sn	120	3	He	95.474	1.5382	81076.20	0.0159	0.01867
Sn	120	3	He	97.297	1.5672	82835.36	0.0159	0.01867
Sb	121	3	He	97.976	0.2557	73131.85	0.0026	8.342E-05
Sb	121	3	He	97.095	0.2534	72549.62	0.0026	8.342E-05
Sb	121	3	He	98.173	0.2562	73765.33	0.0026	8.342E-05
Ba	137	3	He	477.925	2.3861	125537.69	0.005	0.0005882
Ba	137	3	He	492.839	2.4606	129695.63	0.005	0.0005882
Ba	137	3	He	477.01	2.3815	125880.36	0.005	0.0005882
Tl	205	3	He	93.022	2.9118	717078.19	0.0313	0.0009967
Tl	205	3	He	96.681	3.0263	729560.30	0.0313	0.0009967
Tl	205	3	He	95.73	2.9966	723822.41	0.0313	0.0009967
Pb	208	3	He	47.498	1.9513	254109.16	0.041	0.002892
Pb	208	3	He	48.468	1.9911	253162.67	0.041	0.002892
Pb	208	3	He	48.845	2.0066	257685.84	0.041	0.002892
U	238	3	He	47.068	2.3603	581262.10	0.0501	0.0008282
U	238	3	He	48.687	2.4414	588562.53	0.0501	0.0008282
U	238	3	He	48.422	2.4282	586532.02	0.0501	0.0008282
Sc	45	1	No Gas			2225543.72		
Sc	45	1	No Gas			2227185.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2207837.78		
Ge	72	1	No Gas			1097525.84		
Ge	72	1	No Gas			1108863.73		
Ge	72	1	No Gas			1090832.64		
Sc	45	2	H2			135300.70		
Sc	45	2	H2			137159.33		
Sc	45	2	H2			137299.50		
Ge	72	2	H2			106593.17		
Ge	72	2	H2			106905.01		
Ge	72	2	H2			105928.70		
In	115	2	H2			286247.57		
In	115	2	H2			289666.75		
In	115	2	H2			289415.82		
Sc	45	3	He			29921.23		
Sc	45	3	He			30562.99		
Sc	45	3	He			29420.23		
Ge	72	3	He			53449.93		
Ge	72	3	He			52416.08		
Ge	72	3	He			55286.72		
In	115	3	He			53251.55		
In	115	3	He			53342.33		
In	115	3	He			53502.76		
Tb	159	3	He			285997.11		
Tb	159	3	He			286294.33		
Tb	159	3	He			287895.35		
Bi	209	3	He			246265.31		
Bi	209	3	He			241071.29		
Bi	209	3	He			241551.09		

Quantitation Report

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Acq Time	2024-07-17 12:18:25
Sample Name	410-179193-H-6-A
Sample Type	Sample
Comment	A5
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

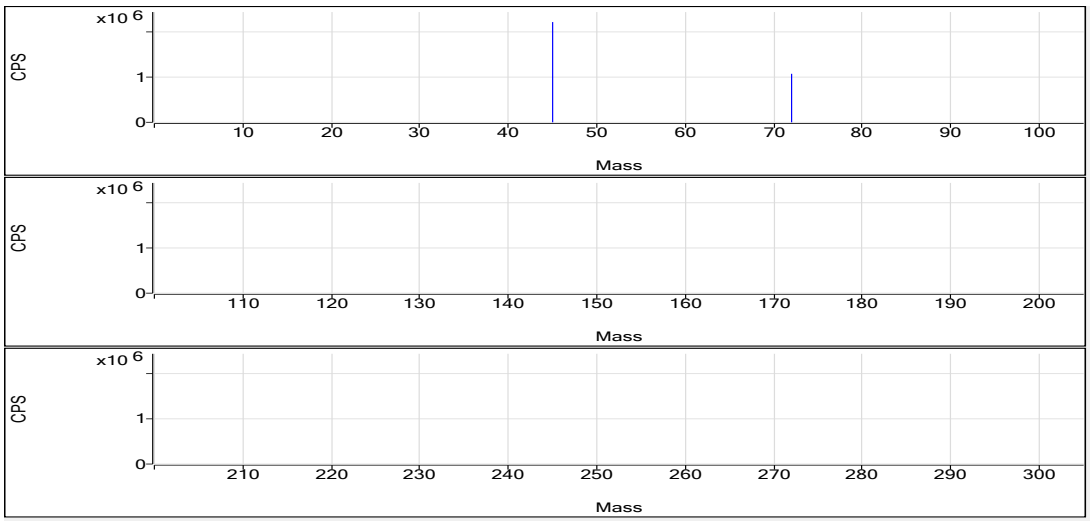
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.043	ppb	21.3	121.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.394	ppb	2.0	21.78	0.0002	Pulse	1.5000	3
Na	23	45	He	81924.534	ppb	1.9	9262160.07	312.0413	Analog	0.1000	3
Mg	24	45	He	217879.502	ppb	2.3	12443752.31	419.2556	Analog	0.1000	3
Al	27	45	He	23.394	ppb	31.5	426.69	0.0143	Pulse	0.1000	3
K	39	45	He	12838.789	ppb	2.2	420683.24	14.1735	Pulse	0.1000	3
Ca	44	45	He	418807.637	ppb	2.3	777763.43	26.2044	Pulse	0.1000	3
Ti	47	45	He	1.393	ppb	73.1	33.33	0.0011	Pulse	0.1000	3
V	51	45	He	1.017	ppb	1.5	1445.41	0.0487	Pulse	0.5000	3
Cr	52	45	He	1.276	ppb	15.6	1276.77	0.0430	Pulse	0.1000	3
Mn	55	45	He	466.859	ppb	2.4	165139.52	5.5632	Pulse	0.1000	3
Fe	57	45	He	72381.409	ppb	2.3	1211193.05	40.8081	Pulse	0.1000	3
Co	59	72	He	1.806	ppb	5.4	3197.12	0.0616	Pulse	0.1000	3
Ni	60	72	He	0.882	ppb	41.0	956.73	0.0185	Pulse	0.1000	3
Cu	63	72	He	0.349	ppb	20.1	1343.44	0.0259	Pulse	0.1000	3
Zn	66	72	He	6.394	ppb	12.3	1136.75	0.0219	Pulse	0.1000	3
As	75	72	He	3.060	ppb	18.8	319.34	0.0062	Pulse	0.5000	3
Sr	88	115	He	1950.903	ppb	1.9	793147.85	15.6411	Pulse	0.1000	3
Mo	98	115	He	0.137	ppb	31.7	176.67	0.0035	Pulse	0.1000	3
Ag	107	115	He	0.033	ppb	35.4	120.01	0.0024	Pulse	0.1000	3
Cd	111	115	He	0.043	ppb	44.9	17.33	0.0003	Pulse	0.5000	3
Sn	120	115	He	-0.044	ppb	N/A	910.07	0.0180	Pulse	0.1000	3
Sb	121	159	He	0.063	ppb	37.8	70.00	0.0002	Pulse	0.1000	3
Ba	137	115	He	697.971	ppb	1.6	176703.29	3.4845	Pulse	0.1000	3
Tl	205	209	He	0.237	ppb	9.6	1950.23	0.0084	Pulse	0.1000	3
Pb	208	209	He	0.143	ppb	13.9	2026.81	0.0088	Pulse	0.1000	3
U	238	209	He	0.018	ppb	28.8	396.69	0.0017	Pulse	0.1000	3

ISTD Table:

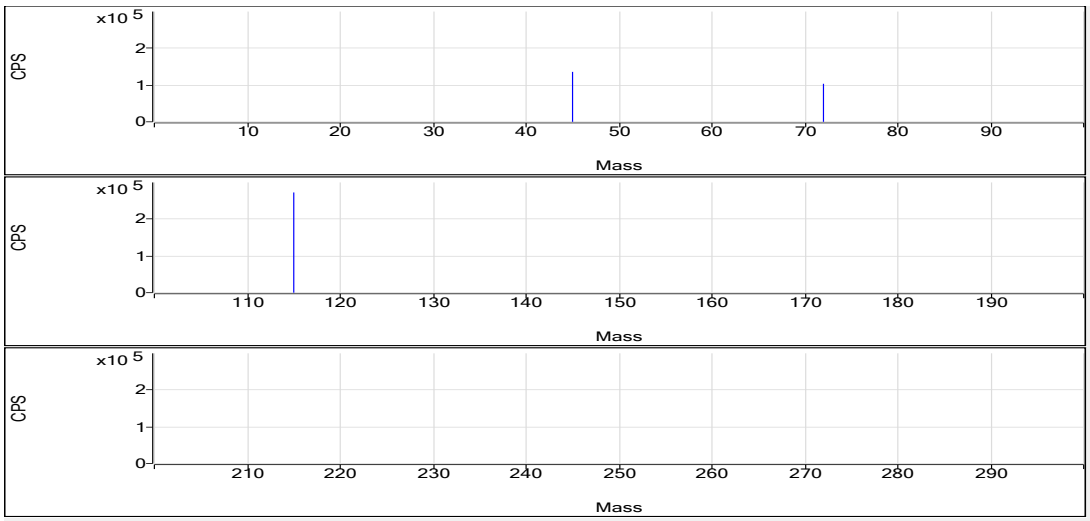
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2204867.47	0.2	100.3	Pulse	0.1000	3
No Gas	Ge	72	1066736.57	0.4	99.4	Pulse	0.1000	3
H2	Sc	45	135656.94	1.3	100.0	Pulse	0.1000	3
H2	Ge	72	103319.02	0.4	97.7	Pulse	0.1000	3
H2	In	115	272212.78	1.5	97.3	Pulse	0.1000	3
He	Sc	45	29690.87	2.3	99.5	Pulse	0.1000	3
He	Ge	72	51904.54	1.4	99.0	Pulse	0.1000	3
He	In	115	50725.83	2.7	99.0	Pulse	0.1000	3
He	Tb	159	282634.31	0.3	101.5	Pulse	0.1000	3
He	Bi	209	231523.77	0.5	97.5	Pulse	0.1000	3

No Gas

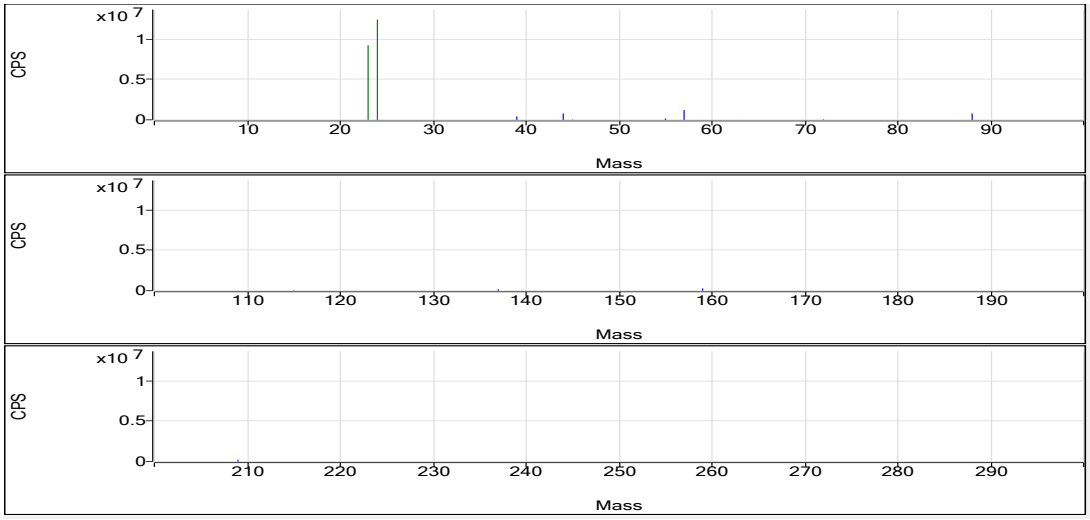


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.032	0	104.00	0.0007	2.306E-05
Be	9	1	No Gas	0.049	0.0001	132.00	0.0007	2.306E-05
Be	9	1	No Gas	0.047	0.0001	128.00	0.0007	2.306E-05
Se	78	2	H2	0.397	0.0002	22.00	0.0004	4.221E-05
Se	78	2	H2	0.401	0.0002	22.00	0.0004	4.221E-05
Se	78	2	H2	0.385	0.0002	21.33	0.0004	4.221E-05
Na	23	3	He	80296.387	305.8456	9252433.61	0.0038	0.2864
Na	23	3	He	83460.014	317.8844	9196211.11	0.0038	0.2864
Na	23	3	He	82017.2	312.3939	9337835.49	0.0038	0.2864
Mg	24	3	He	213675.575	411.1663	12438594.81	0.0019	0.007972
Mg	24	3	He	223292.146	429.6707	12430123.56	0.0019	0.007972
Mg	24	3	He	216670.784	416.9297	12462538.56	0.0019	0.007972
Al	27	3	He	23.185	0.0142	430.02	0.0005	0.00158
Al	27	3	He	16.131	0.0104	300.01	0.0005	0.00158
Al	27	3	He	30.867	0.0184	550.03	0.0005	0.00158
K	39	3	He	12580.23	13.8952	420357.30	0.0011	0.3552
K	39	3	He	13147.154	14.5054	419632.06	0.0011	0.3552
K	39	3	He	12788.982	14.1199	422060.35	0.0011	0.3552
Ca	44	3	He	410265.112	25.67	776567.25	0.0001	0.002
Ca	44	3	He	429001.602	26.8422	776529.29	0.0001	0.002
Ca	44	3	He	417156.198	26.1011	780193.74	0.0001	0.002
Ti	47	3	He	2.485	0.0017	50.00	0.0005	0.0004395
Ti	47	3	He	1.224	0.001	30.00	0.0005	0.0004395
Ti	47	3	He	0.47	0.0007	20.00	0.0005	0.0004395
V	51	3	He	1.004	0.0484	1464.08	0.0218	0.02648
V	51	3	He	1.013	0.0486	1406.08	0.0218	0.02648
V	51	3	He	1.034	0.049	1466.08	0.0218	0.02648
Cr	52	3	He	1.354	0.0453	1370.11	0.029	0.006056
Cr	52	3	He	1.425	0.0474	1370.12	0.029	0.006056
Cr	52	3	He	1.049	0.0365	1090.09	0.029	0.006056
Mn	55	3	He	454.158	5.4119	163721.98	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	471.737	5.6213	162620.83	0.0119	0.00335
Mn	55	3	He	474.682	5.6564	169075.74	0.0119	0.00335
Fe	57	3	He	70903.942	39.9752	1209328.73	0.0006	0.003117
Fe	57	3	He	74236.83	41.8541	1210815.06	0.0006	0.003117
Fe	57	3	He	72003.455	40.595	1213435.37	0.0006	0.003117
Co	59	3	He	1.898	0.0645	3360.52	0.0317	0.004379
Co	59	3	He	1.704	0.0583	2980.38	0.0317	0.004379
Co	59	3	He	1.816	0.0619	3250.46	0.0317	0.004379
Ni	60	3	He	0.771	0.0175	910.06	0.009	0.01049
Ni	60	3	He	1.286	0.0221	1130.08	0.009	0.01049
Ni	60	3	He	0.588	0.0158	830.06	0.009	0.01049
Cu	63	3	He	0.276	0.024	1250.10	0.0259	0.01685
Cu	63	3	He	0.415	0.0276	1410.12	0.0259	0.01685
Cu	63	3	He	0.357	0.0261	1370.11	0.0259	0.01685
Zn	66	3	He	7.003	0.0236	1230.10	0.0028	0.003817
Zn	66	3	He	5.508	0.0194	990.07	0.0028	0.003817
Zn	66	3	He	6.671	0.0227	1190.09	0.0028	0.003817
As	75	3	He	3.506	0.007	364.01	0.0019	0.0004832
As	75	3	He	3.265	0.0065	334.01	0.0019	0.0004832
As	75	3	He	2.41	0.005	260.00	0.0019	0.0004832
Sr	88	3	He	1962.684	15.7356	793300.61	0.008	0.0005203
Sr	88	3	He	1979.834	15.8731	786691.55	0.008	0.0005203
Sr	88	3	He	1910.191	15.3147	799451.39	0.008	0.0005203
Mo	98	3	He	0.142	0.0036	180.01	0.0229	0.0003256
Mo	98	3	He	0.091	0.0024	120.00	0.0229	0.0003256
Mo	98	3	He	0.178	0.0044	230.01	0.0229	0.0003256
Ag	107	3	He	0.045	0.003	150.01	0.05	0.000719
Ag	107	3	He	0.022	0.0018	90.00	0.05	0.000719
Ag	107	3	He	0.032	0.0023	120.01	0.05	0.000719
Cd	111	3	He	0.046	0.0004	18.00	0.0055	0.000104
Cd	111	3	He	0.062	0.0004	22.00	0.0055	0.000104
Cd	111	3	He	0.023	0.0002	12.00	0.0055	0.000104
Sn	120	3	He	0.036	0.0192	970.07	0.0159	0.01867
Sn	120	3	He	0.006	0.0188	930.07	0.0159	0.01867
Sn	120	3	He	-0.174	0.0159	830.06	0.0159	0.01867
Sb	121	3	He	0.049	0.0002	60.00	0.0026	8.342E-05
Sb	121	3	He	0.091	0.0003	90.01	0.0026	8.342E-05
Sb	121	3	He	0.049	0.0002	60.00	0.0026	8.342E-05
Ba	137	3	He	700.793	3.4985	176377.15	0.005	0.0005882
Ba	137	3	He	707.124	3.5301	174958.81	0.005	0.0005882
Ba	137	3	He	685.998	3.4247	178773.92	0.005	0.0005882
Tl	205	3	He	0.247	0.0087	2020.22	0.0313	0.0009967
Tl	205	3	He	0.254	0.0089	2060.26	0.0313	0.0009967
Tl	205	3	He	0.211	0.0076	1770.21	0.0313	0.0009967
Pb	208	3	He	0.136	0.0085	1130.10	0.041	0.002892
Pb	208	3	He	0.127	0.0081	1130.09	0.041	0.002892
Pb	208	3	He	0.165	0.0097	1190.10	0.041	0.002892
U	238	3	He	0.012	0.0014	330.02	0.0501	0.0008282
U	238	3	He	0.022	0.0019	440.03	0.0501	0.0008282
U	238	3	He	0.019	0.0018	420.03	0.0501	0.0008282
Sc	45	1	No Gas			2200642.94		
Sc	45	1	No Gas			2204133.72		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2209825.75		
Ge	72	1	No Gas			1061712.33		
Ge	72	1	No Gas			1068112.64		
Ge	72	1	No Gas			1070384.75		
Sc	45	2	H2			137057.28		
Sc	45	2	H2			133634.45		
Sc	45	2	H2			136279.09		
Ge	72	2	H2			103832.16		
Ge	72	2	H2			103056.21		
Ge	72	2	H2			103068.70		
In	115	2	H2			276516.01		
In	115	2	H2			271740.07		
In	115	2	H2			268382.26		
Sc	45	3	He			30251.98		
Sc	45	3	He			28929.42		
Sc	45	3	He			29891.22		
Ge	72	3	He			52115.48		
Ge	72	3	He			51091.71		
Ge	72	3	He			52506.42		
In	115	3	He			50422.09		
In	115	3	He			49568.70		
In	115	3	He			52207.98		
Tb	159	3	He			283034.21		
Tb	159	3	He			281670.99		
Tb	159	3	He			283197.73		
Bi	209	3	He			231493.36		
Bi	209	3	He			230405.52		
Bi	209	3	He			232672.44		

Quantitation Report

Data File Name	100SMPL.d
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Sample Type	Sample
Comment	A5
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

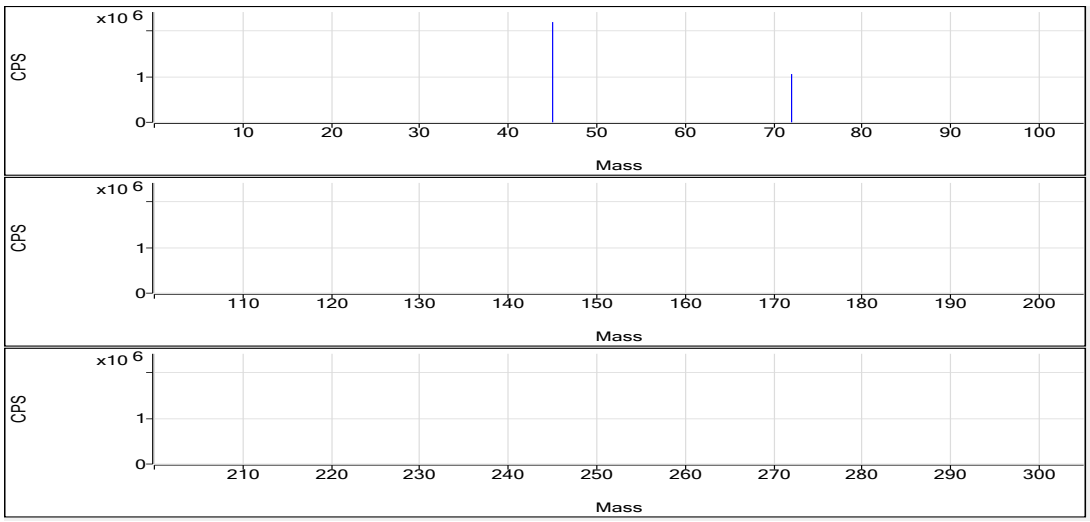
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.053	ppb	5.7	138.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.305	ppb	25.8	18.00	0.0002	Pulse	1.5000	3
Na	23	45	He	83856.385	ppb	2.2	9319777.15	319.3927	Analog	0.1000	3
Mg	24	45	He	222722.453	ppb	1.7	12506279.39	428.5745	Analog	0.1000	3
Al	27	45	He	29.329	ppb	15.5	513.36	0.0176	Pulse	0.1000	3
K	39	45	He	13039.907	ppb	2.2	419895.11	14.3899	Pulse	0.1000	3
Ca	44	45	He	427867.468	ppb	1.9	781196.58	26.7712	Pulse	0.1000	3
Ti	47	45	He	1.221	ppb	155.7	30.00	0.0010	Pulse	0.1000	3
V	51	45	He	0.789	ppb	17.1	1275.40	0.0437	Pulse	0.5000	3
Cr	52	45	He	1.234	ppb	1.5	1220.09	0.0418	Pulse	0.1000	3
Mn	55	45	He	472.244	ppb	2.2	164204.15	5.6273	Pulse	0.1000	3
Fe	57	45	He	73737.988	ppb	1.6	1213150.68	41.5729	Pulse	0.1000	3
Co	59	72	He	1.811	ppb	5.4	3197.13	0.0617	Pulse	0.1000	3
Ni	60	72	He	0.413	ppb	17.0	736.71	0.0142	Pulse	0.1000	3
Cu	63	72	He	0.202	ppb	6.4	1143.42	0.0221	Pulse	0.1000	3
Zn	66	72	He	5.960	ppb	6.6	1070.07	0.0207	Pulse	0.1000	3
As	75	72	He	2.947	ppb	8.4	308.01	0.0059	Pulse	0.5000	3
Sr	88	115	He	1979.736	ppb	1.1	790009.15	15.8723	Pulse	0.1000	3
Mo	98	115	He	0.132	ppb	34.7	166.67	0.0034	Pulse	0.1000	3
Ag	107	115	He	0.020	ppb	30.5	86.67	0.0017	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	278.2	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.075	ppb	N/A	870.07	0.0175	Pulse	0.1000	3
Sb	121	159	He	0.081	ppb	19.5	83.33	0.0003	Pulse	0.1000	3
Ba	137	115	He	710.518	ppb	1.5	176546.79	3.5471	Pulse	0.1000	3
Tl	205	209	He	0.065	ppb	20.6	696.71	0.0030	Pulse	0.1000	3
Pb	208	209	He	0.157	ppb	5.2	2143.49	0.0093	Pulse	0.1000	3
U	238	209	He	0.005	ppb	19.0	250.01	0.0011	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2200681.22	1.1	100.1	Pulse	0.1000	3
No Gas	Ge	72	1059310.98	0.8	98.7	Pulse	0.1000	3
H2	Sc	45	133564.41	0.3	98.4	Pulse	0.1000	3
H2	Ge	72	104343.10	0.4	98.7	Pulse	0.1000	3
H2	In	115	269089.52	0.2	96.2	Pulse	0.1000	3
He	Sc	45	29186.35	1.6	97.8	Pulse	0.1000	3
He	Ge	72	51797.25	0.4	98.8	Pulse	0.1000	3
He	In	115	49775.96	0.9	97.1	Pulse	0.1000	3
He	Tb	159	282697.94	0.8	101.5	Pulse	0.1000	3
He	Bi	209	230050.36	1.1	96.9	Pulse	0.1000	3

No Gas



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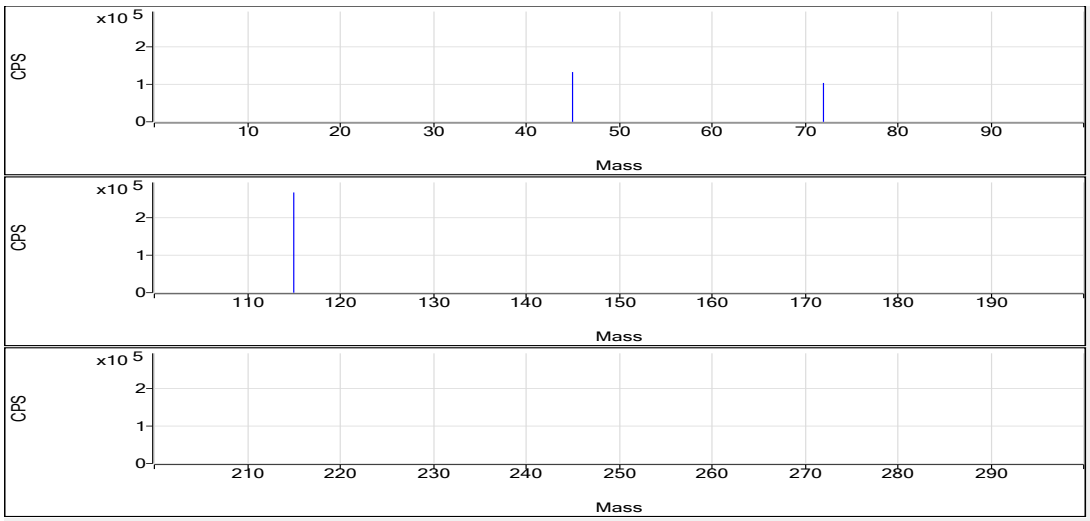
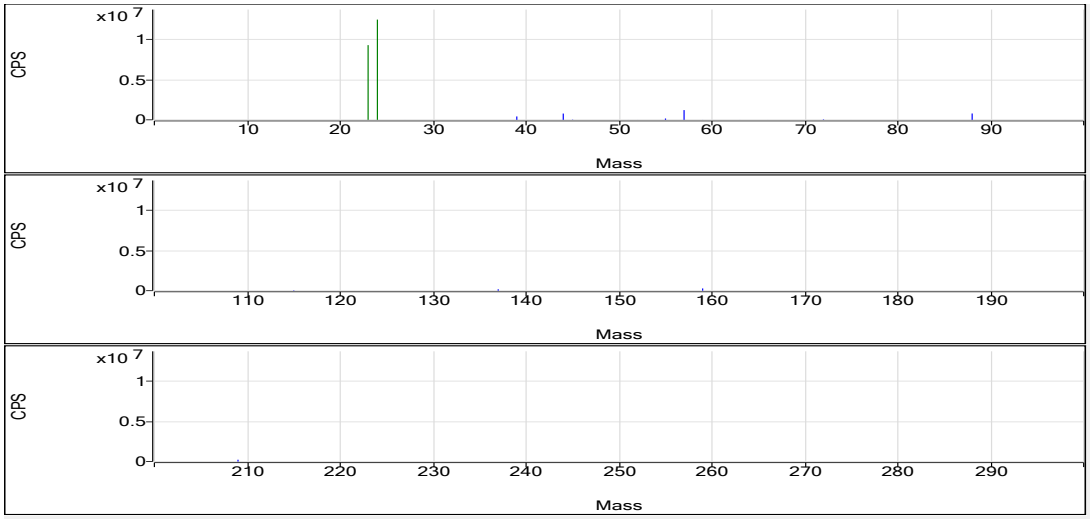


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.057	0.0001	146.00	0.0007	2.306E-05
Be	9	1	No Gas	0.051	0.0001	134.00	0.0007	2.306E-05
Be	9	1	No Gas	0.052	0.0001	136.00	0.0007	2.306E-05
Se	78	2	H2	0.363	0.0002	20.67	0.0004	4.221E-05
Se	78	2	H2	0.336	0.0002	19.33	0.0004	4.221E-05
Se	78	2	H2	0.215	0.0001	14.00	0.0004	4.221E-05
Na	23	3	He	83112.99	316.5638	9253141.74	0.0038	0.2864
Na	23	3	He	85979.8	327.4732	9398031.11	0.0038	0.2864
Na	23	3	He	82476.367	314.1412	9308158.61	0.0038	0.2864
Mg	24	3	He	222789.994	428.7044	12531004.81	0.0019	0.007972
Mg	24	3	He	226451.912	435.7508	12505449.81	0.0019	0.007972
Mg	24	3	He	218925.453	421.2682	12482383.56	0.0019	0.007972
Al	27	3	He	29.749	0.0178	520.04	0.0005	0.00158
Al	27	3	He	24.597	0.015	430.02	0.0005	0.00158
Al	27	3	He	33.642	0.0199	590.03	0.0005	0.00158
K	39	3	He	13096.747	14.4511	422405.42	0.0011	0.3552
K	39	3	He	13299.415	14.6693	420987.42	0.0011	0.3552
K	39	3	He	12723.56	14.0495	416292.49	0.0011	0.3552
Ca	44	3	He	427504.478	26.7485	781858.04	0.0001	0.002
Ca	44	3	He	436174.866	27.291	783214.05	0.0001	0.002
Ca	44	3	He	419923.059	26.2742	778517.64	0.0001	0.002
Ti	47	3	He	-0.199	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	3.381	0.0021	60.00	0.0005	0.0004395
Ti	47	3	He	0.482	0.0007	20.00	0.0005	0.0004395
V	51	3	He	0.921	0.0466	1362.07	0.0218	0.02648
V	51	3	He	0.795	0.0438	1258.06	0.0218	0.02648
V	51	3	He	0.651	0.0407	1206.06	0.0218	0.02648
Cr	52	3	He	1.243	0.0421	1230.09	0.029	0.006056
Cr	52	3	He	1.246	0.0422	1210.09	0.029	0.006056
Cr	52	3	He	1.212	0.0412	1220.09	0.029	0.006056
Mn	55	3	He	473.447	5.6417	164905.49	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	481.773	5.7408	164753.51	0.0119	0.00335
Mn	55	3	He	461.512	5.4995	162953.44	0.0119	0.00335
Fe	57	3	He	73755.307	41.5826	1215458.34	0.0006	0.003117
Fe	57	3	He	74931.148	42.2455	1212388.81	0.0006	0.003117
Fe	57	3	He	72527.508	40.8905	1211604.90	0.0006	0.003117
Co	59	3	He	1.738	0.0594	3090.45	0.0317	0.004379
Co	59	3	He	1.922	0.0653	3380.49	0.0317	0.004379
Co	59	3	He	1.772	0.0605	3120.44	0.0317	0.004379
Ni	60	3	He	0.435	0.0144	750.04	0.009	0.01049
Ni	60	3	He	0.334	0.0135	700.04	0.009	0.01049
Ni	60	3	He	0.47	0.0147	760.04	0.009	0.01049
Cu	63	3	He	0.188	0.0217	1130.09	0.0259	0.01685
Cu	63	3	He	0.214	0.0224	1160.10	0.0259	0.01685
Cu	63	3	He	0.203	0.0221	1140.08	0.0259	0.01685
Zn	66	3	He	6.339	0.0217	1130.08	0.0028	0.003817
Zn	66	3	He	5.55	0.0195	1010.06	0.0028	0.003817
Zn	66	3	He	5.993	0.0207	1070.07	0.0028	0.003817
As	75	3	He	2.808	0.0057	296.01	0.0019	0.0004832
As	75	3	He	2.8	0.0057	294.00	0.0019	0.0004832
As	75	3	He	3.232	0.0065	334.01	0.0019	0.0004832
Sr	88	3	He	2005.537	16.0791	792558.89	0.008	0.0005203
Sr	88	3	He	1970.672	15.7996	791947.41	0.008	0.0005203
Sr	88	3	He	1962.997	15.7381	785521.16	0.008	0.0005203
Mo	98	3	He	0.172	0.0043	210.01	0.0229	0.0003256
Mo	98	3	He	0.143	0.0036	180.01	0.0229	0.0003256
Mo	98	3	He	0.082	0.0022	110.00	0.0229	0.0003256
Ag	107	3	He	0.022	0.0018	90.00	0.05	0.000719
Ag	107	3	He	0.014	0.0014	70.00	0.05	0.000719
Ag	107	3	He	0.026	0.002	100.00	0.05	0.000719
Cd	111	3	He	0.011	0.0002	8.00	0.0055	0.000104
Cd	111	3	He	0.017	0.0002	10.00	0.0055	0.000104
Cd	111	3	He	-0.012	0	2.00	0.0055	0.000104
Sn	120	3	He	-0.115	0.0168	830.07	0.0159	0.01867
Sn	120	3	He	-0.195	0.0156	780.05	0.0159	0.01867
Sn	120	3	He	0.086	0.02	1000.08	0.0159	0.01867
Sb	121	3	He	0.091	0.0003	90.00	0.0026	8.342E-05
Sb	121	3	He	0.063	0.0002	70.00	0.0026	8.342E-05
Sb	121	3	He	0.089	0.0003	90.00	0.0026	8.342E-05
Ba	137	3	He	721.995	3.6044	177663.47	0.005	0.0005882
Ba	137	3	He	708.437	3.5367	177274.96	0.005	0.0005882
Ba	137	3	He	701.123	3.5002	174701.93	0.005	0.0005882
Tl	205	3	He	0.068	0.0031	710.05	0.0313	0.0009967
Tl	205	3	He	0.077	0.0034	790.06	0.0313	0.0009967
Tl	205	3	He	0.05	0.0026	590.03	0.0313	0.0009967
Pb	208	3	He	0.161	0.0095	1150.10	0.041	0.002892
Pb	208	3	He	0.162	0.0095	1270.11	0.041	0.002892
Pb	208	3	He	0.147	0.0089	1180.10	0.041	0.002892
U	238	3	He	0.006	0.0011	260.01	0.0501	0.0008282
U	238	3	He	0.005	0.0011	250.01	0.0501	0.0008282
U	238	3	He	0.004	0.001	240.01	0.0501	0.0008282
Sc	45	1	No Gas			2227908.09		
Sc	45	1	No Gas			2190895.28		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2183240.28		
Ge	72	1	No Gas			1068604.52		
Ge	72	1	No Gas			1055762.41		
Ge	72	1	No Gas			1053566.00		
Sc	45	2	H2			133191.01		
Sc	45	2	H2			133614.61		
Sc	45	2	H2			133887.60		
Ge	72	2	H2			104829.38		
Ge	72	2	H2			103932.88		
Ge	72	2	H2			104267.03		
In	115	2	H2			269089.21		
In	115	2	H2			269527.09		
In	115	2	H2			268652.26		
Sc	45	3	He			29229.94		
Sc	45	3	He			28698.63		
Sc	45	3	He			29630.49		
Ge	72	3	He			52014.65		
Ge	72	3	He			51803.96		
Ge	72	3	He			51573.14		
In	115	3	He			49297.66		
In	115	3	He			50130.60		
In	115	3	He			49919.96		
Tb	159	3	He			280293.45		
Tb	159	3	He			282978.18		
Tb	159	3	He			284822.18		
Bi	209	3	He			227817.50		
Bi	209	3	He			232856.09		
Bi	209	3	He			229477.50		

Quantitation Report

Data File Name	101SMPL.d
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Sample Name	410-179193-H-6-B MS
Sample Type	Sample
Comment	A5
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

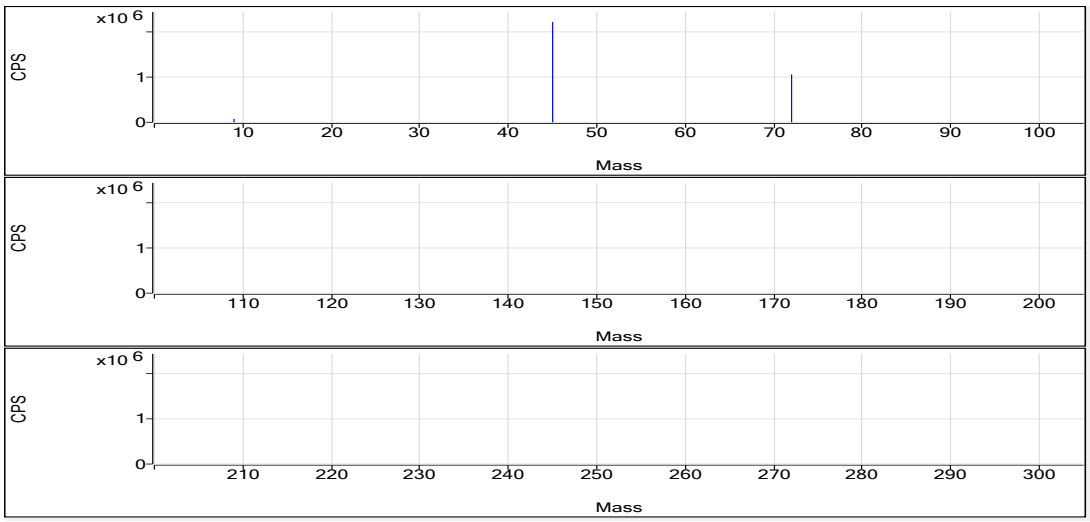
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.456	ppb	0.8	77106.09	0.0347	Pulse	0.5000	3
Se	78	72	H2	102.154	ppb	0.9	4564.73	0.0437	Pulse	1.5000	3
Na	23	45	He	88379.498	ppb	2.9	9940005.48	336.6050	Analog	0.1000	3
Mg	24	45	He	208280.790	ppb	1.9	11836686.90	400.7856	Analog	0.1000	3
Al	27	45	He	4689.819	ppb	3.8	75512.71	2.5572	Pulse	0.1000	3
K	39	45	He	18078.883	ppb	2.5	585119.95	19.8133	Pulse	0.1000	3
Ca	44	45	He	436389.575	ppb	1.5	806460.04	27.3044	Pulse	0.1000	3
Ti	47	45	He	493.685	ppb	6.9	7128.63	0.2415	Pulse	0.1000	3
V	51	45	He	485.140	ppb	2.1	313652.41	10.6203	Pulse	0.5000	3
Cr	52	45	He	473.016	ppb	1.7	405037.21	13.7139	Pulse	0.1000	3
Mn	55	45	He	951.611	ppb	2.3	334782.65	11.3361	Pulse	0.1000	3
Fe	57	45	He	78818.153	ppb	2.0	1312407.14	44.4368	Pulse	0.1000	3
Co	59	72	He	467.334	ppb	2.0	785829.08	14.8046	Pulse	0.1000	3
Ni	60	72	He	459.955	ppb	1.9	221251.77	4.1683	Pulse	0.1000	3
Cu	63	72	He	459.168	ppb	1.3	632090.52	11.9079	Pulse	0.1000	3
Zn	66	72	He	469.666	ppb	1.9	70639.55	1.3308	Pulse	0.1000	3
As	75	72	He	490.167	ppb	1.0	48273.66	0.9094	Pulse	0.5000	3
Sr	88	115	He	2050.951	ppb	0.8	818903.87	16.4432	Pulse	0.1000	3
Mo	98	115	He	51.429	ppb	2.2	58712.44	1.1788	Pulse	0.1000	3
Ag	107	115	He	50.456	ppb	1.7	125668.13	2.5234	Pulse	0.1000	3
Cd	111	115	He	49.606	ppb	1.8	13652.67	0.2742	Pulse	0.5000	3
Sn	120	115	He	100.118	ppb	2.3	80281.07	1.6121	Pulse	0.1000	3
Sb	121	159	He	100.177	ppb	0.5	73256.29	0.2615	Pulse	0.1000	3
Ba	137	115	He	1218.338	ppb	0.8	302885.35	6.0818	Pulse	0.1000	3
Tl	205	209	He	99.284	ppb	0.5	707948.87	3.1078	Pulse	0.1000	3
Pb	208	209	He	49.589	ppb	0.6	464051.78	2.0371	Pulse	0.1000	3
U	238	209	He	50.203	ppb	0.4	573477.64	2.5175	Pulse	0.1000	3

ISTD Table:

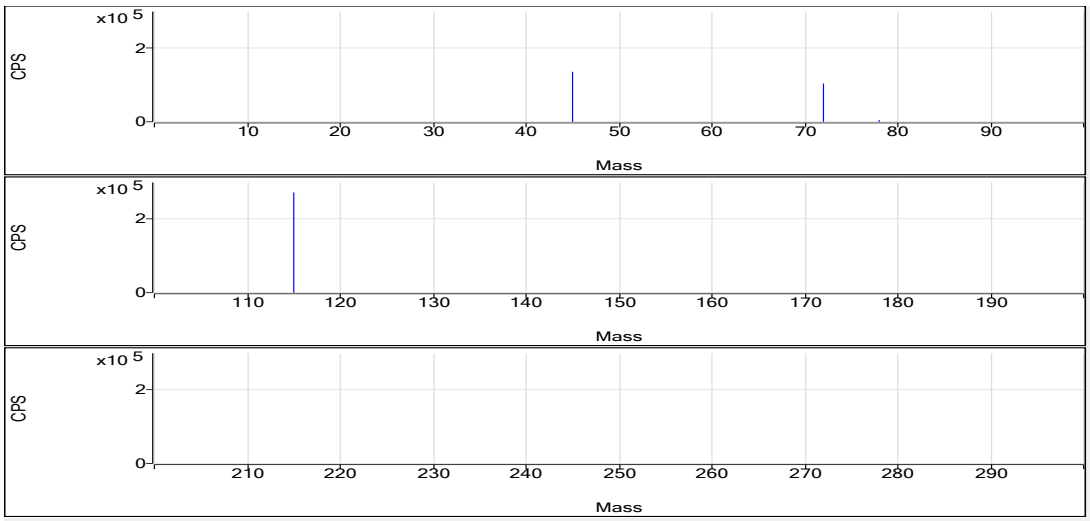
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2219255.13	0.9	101.0	Pulse	0.1000	3
No Gas	Ge	72	1060247.02	1.1	98.8	Pulse	0.1000	3
H2	Sc	45	136457.96	1.0	100.6	Pulse	0.1000	3
H2	Ge	72	104441.10	0.9	98.8	Pulse	0.1000	3
H2	In	115	273266.24	1.5	97.7	Pulse	0.1000	3
He	Sc	45	29540.65	1.9	99.0	Pulse	0.1000	3
He	Ge	72	53085.24	0.8	101.3	Pulse	0.1000	3
He	In	115	49805.43	1.3	97.2	Pulse	0.1000	3
He	Tb	159	280186.67	0.9	100.6	Pulse	0.1000	3
He	Bi	209	227796.72	0.5	95.9	Pulse	0.1000	3

No Gas

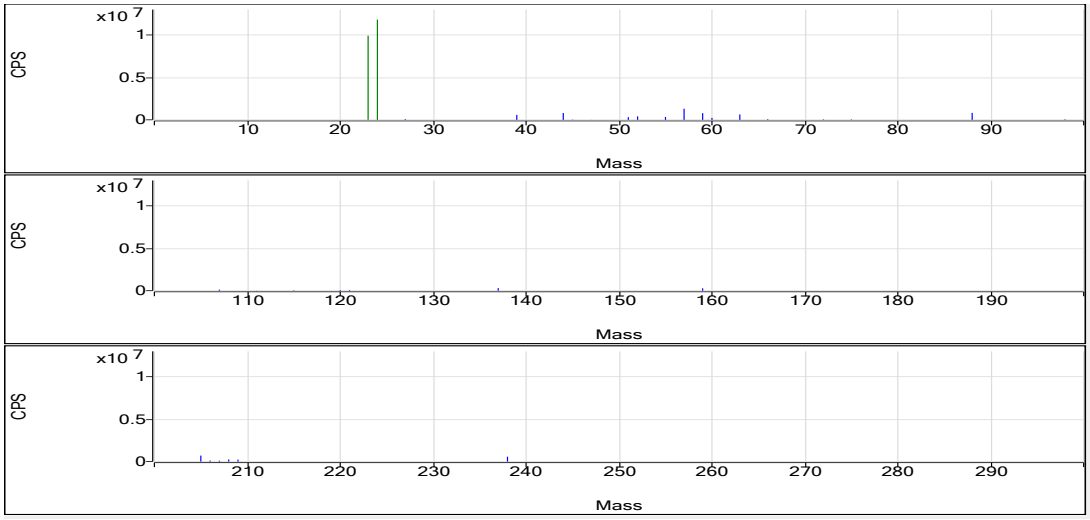


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.149	0.0345	77298.52	0.0007	2.306E-05
Be	9	1	No Gas	46.384	0.0347	77032.95	0.0007	2.306E-05
Be	9	1	No Gas	46.836	0.035	76986.79	0.0007	2.306E-05
Se	78	2	H2	103.192	0.0442	4566.73	0.0004	4.221E-05
Se	78	2	H2	101.924	0.0436	4562.06	0.0004	4.221E-05
Se	78	2	H2	101.344	0.0434	4565.40	0.0004	4.221E-05
Na	23	3	He	89143.639	339.5128	9995457.35	0.0038	0.2864
Na	23	3	He	90459.602	344.5206	10008215.48	0.0038	0.2864
Na	23	3	He	85535.253	325.7815	9816343.60	0.0038	0.2864
Mg	24	3	He	209061.351	402.2875	11843582.32	0.0019	0.007972
Mg	24	3	He	211788.741	407.5356	11838783.57	0.0019	0.007972
Mg	24	3	He	203992.279	392.5335	11827694.82	0.0019	0.007972
Al	27	3	He	4606.158	2.5116	73943.95	0.0005	0.00158
Al	27	3	He	4892.393	2.6676	77493.29	0.0005	0.00158
Al	27	3	He	4570.907	2.4924	75100.89	0.0005	0.00158
K	39	3	He	18196.485	19.9399	587043.00	0.0011	0.3552
K	39	3	He	18465.431	20.2294	587657.30	0.0011	0.3552
K	39	3	He	17574.732	19.2707	580659.56	0.0011	0.3552
Ca	44	3	He	434149.733	27.1643	799732.72	0.0001	0.002
Ca	44	3	He	443602.972	27.7557	806295.22	0.0001	0.002
Ca	44	3	He	431416.021	26.9933	813352.18	0.0001	0.002
Ti	47	3	He	502.832	0.246	7242.03	0.0005	0.0004395
Ti	47	3	He	522.303	0.2555	7422.09	0.0005	0.0004395
Ti	47	3	He	455.92	0.2231	6721.76	0.0005	0.0004395
V	51	3	He	483.784	10.5906	311794.63	0.0218	0.02648
V	51	3	He	495.762	10.8522	315252.94	0.0218	0.02648
V	51	3	He	475.874	10.4179	313909.66	0.0218	0.02648
Cr	52	3	He	471.93	13.6824	402819.06	0.029	0.006056
Cr	52	3	He	481.461	13.9587	405494.53	0.029	0.006056
Cr	52	3	He	465.658	13.5007	406798.04	0.029	0.006056
Mn	55	3	He	951.411	11.3338	333672.50	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	973.687	11.5991	336948.82	0.0119	0.00335
Mn	55	3	He	929.734	11.0756	333726.64	0.0119	0.00335
Fe	57	3	He	78242.407	44.1123	1298690.68	0.0006	0.003117
Fe	57	3	He	80591.362	45.4365	1319915.45	0.0006	0.003117
Fe	57	3	He	77620.691	43.7618	1318615.29	0.0006	0.003117
Co	59	3	He	457.288	14.4864	773577.80	0.0317	0.004379
Co	59	3	He	468.773	14.8502	790906.71	0.0317	0.004379
Co	59	3	He	475.94	15.0771	793002.72	0.0317	0.004379
Ni	60	3	He	452.072	4.097	218781.25	0.009	0.01049
Ni	60	3	He	458.406	4.1543	221253.06	0.009	0.01049
Ni	60	3	He	469.388	4.2535	223721.01	0.009	0.01049
Cu	63	3	He	454.796	11.7947	629837.41	0.0259	0.01685
Cu	63	3	He	456.915	11.8496	631097.10	0.0259	0.01685
Cu	63	3	He	465.794	12.0795	635337.06	0.0259	0.01685
Zn	66	3	He	461.869	1.3088	69889.49	0.0028	0.003817
Zn	66	3	He	467.702	1.3253	70582.59	0.0028	0.003817
Zn	66	3	He	479.426	1.3584	71446.58	0.0028	0.003817
As	75	3	He	485.353	0.9005	48085.71	0.0019	0.0004832
As	75	3	He	490.173	0.9094	48434.82	0.0019	0.0004832
As	75	3	He	494.976	0.9183	48300.46	0.0019	0.0004832
Sr	88	3	He	2065.646	16.561	814163.50	0.008	0.0005203
Sr	88	3	He	2053.936	16.4671	819749.13	0.008	0.0005203
Sr	88	3	He	2033.272	16.3015	822798.97	0.008	0.0005203
Mo	98	3	He	50.51	1.1577	56915.29	0.0229	0.0003256
Mo	98	3	He	52.662	1.207	60087.92	0.0229	0.0003256
Mo	98	3	He	51.114	1.1716	59134.10	0.0229	0.0003256
Ag	107	3	He	50.689	2.5351	124628.41	0.05	0.000719
Ag	107	3	He	51.173	2.5593	127402.90	0.05	0.000719
Ag	107	3	He	49.507	2.476	124973.07	0.05	0.000719
Cd	111	3	He	50.632	0.2798	13756.75	0.0055	0.000104
Cd	111	3	He	49.165	0.2717	13526.56	0.0055	0.000104
Cd	111	3	He	49.021	0.2709	13674.70	0.0055	0.000104
Sn	120	3	He	100.071	1.6113	79215.13	0.0159	0.01867
Sn	120	3	He	102.492	1.6499	82131.44	0.0159	0.01867
Sn	120	3	He	97.789	1.575	79496.63	0.0159	0.01867
Sb	121	3	He	99.845	0.2606	73272.39	0.0026	8.342E-05
Sb	121	3	He	100.778	0.263	74197.96	0.0026	8.342E-05
Sb	121	3	He	99.909	0.2608	72298.51	0.0026	8.342E-05
Ba	137	3	He	1227.401	6.1271	301215.15	0.005	0.0005882
Ba	137	3	He	1220.546	6.0928	303307.16	0.005	0.0005882
Ba	137	3	He	1207.067	6.0256	304133.73	0.005	0.0005882
Tl	205	3	He	98.961	3.0977	705275.07	0.0313	0.0009967
Tl	205	3	He	99.831	3.1249	715911.16	0.0313	0.0009967
Tl	205	3	He	99.059	3.1007	702660.38	0.0313	0.0009967
Pb	208	3	He	49.254	2.0234	245347.98	0.041	0.002892
Pb	208	3	He	49.722	2.0426	247620.31	0.041	0.002892
Pb	208	3	He	49.793	2.0455	246067.77	0.041	0.002892
U	238	3	He	50.425	2.5286	575708.86	0.0501	0.0008282
U	238	3	He	50.166	2.5156	576326.40	0.0501	0.0008282
U	238	3	He	50.019	2.5082	568397.65	0.0501	0.0008282
Sc	45	1	No Gas			2239480.44		
Sc	45	1	No Gas			2220489.97		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2197794.97		
Ge	72	1	No Gas			1073546.70		
Ge	72	1	No Gas			1052624.91		
Ge	72	1	No Gas			1054569.44		
Sc	45	2	H2			138095.05		
Sc	45	2	H2			135825.87		
Sc	45	2	H2			135452.95		
Ge	72	2	H2			103430.88		
Ge	72	2	H2			104608.69		
Ge	72	2	H2			105283.74		
In	115	2	H2			277487.85		
In	115	2	H2			272735.50		
In	115	2	H2			269575.37		
Sc	45	3	He			29440.59		
Sc	45	3	He			29049.69		
Sc	45	3	He			30131.68		
Ge	72	3	He			53400.17		
Ge	72	3	He			53259.15		
Ge	72	3	He			52596.41		
In	115	3	He			49779.33		
In	115	3	He			50421.54		
In	115	3	He			51093.99		
Tb	159	3	He			281186.32		
Tb	159	3	He			282102.89		
Tb	159	3	He			277270.80		
Bi	209	3	He			227679.22		
Bi	209	3	He			229099.61		
Bi	209	3	He			226611.34		

Quantitation Report

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Acq Time	2024-07-17 12:24:26
Sample Name	410-179193-E-6-A MSD
Sample Type	Sample
Comment	A5
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

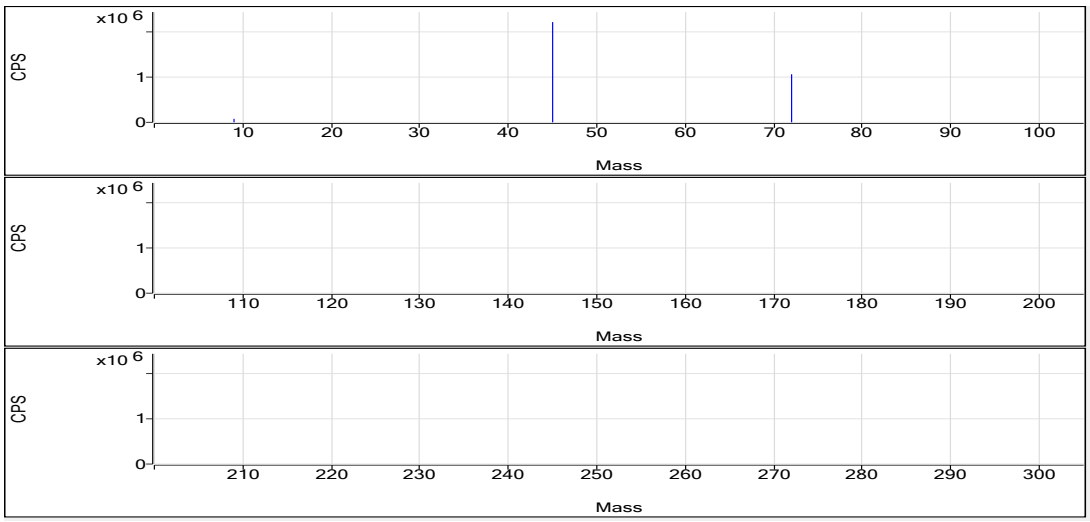
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	46.075	ppb	1.0	76661.23	0.0345	Pulse	0.5000	3
Se	78	72	H2	105.378	ppb	1.1	4646.53	0.0451	Pulse	1.5000	3
Na	23	45	He	86915.404	ppb	1.5	9960907.77	331.0335	Analog	0.1000	3
Mg	24	45	He	203539.381	ppb	1.8	11784917.74	391.6621	Analog	0.1000	3
Al	27	45	He	4663.089	ppb	1.3	76513.86	2.5427	Pulse	0.1000	3
K	39	45	He	17487.425	ppb	1.3	577053.99	19.1768	Pulse	0.1000	3
Ca	44	45	He	427039.594	ppb	1.7	803998.69	26.7194	Pulse	0.1000	3
Ti	47	45	He	493.847	ppb	3.3	7268.71	0.2416	Pulse	0.1000	3
V	51	45	He	475.855	ppb	1.1	313479.78	10.4175	Pulse	0.5000	3
Cr	52	45	He	461.995	ppb	1.8	403036.35	13.3945	Pulse	0.1000	3
Mn	55	45	He	930.048	ppb	1.0	333397.96	11.0793	Pulse	0.1000	3
Fe	57	45	He	77172.917	ppb	1.6	1309207.01	43.5093	Pulse	0.1000	3
Co	59	72	He	475.036	ppb	0.7	779999.21	15.0485	Pulse	0.1000	3
Ni	60	72	He	470.133	ppb	0.1	220828.79	4.2603	Pulse	0.1000	3
Cu	63	72	He	471.952	ppb	0.2	634392.69	12.2390	Pulse	0.1000	3
Zn	66	72	He	480.085	ppb	1.5	70502.19	1.3603	Pulse	0.1000	3
As	75	72	He	502.605	ppb	0.5	48332.51	0.9325	Pulse	0.5000	3
Sr	88	115	He	2066.425	ppb	0.5	825814.78	16.5673	Pulse	0.1000	3
Mo	98	115	He	52.559	ppb	2.6	60044.98	1.2047	Pulse	0.1000	3
Ag	107	115	He	50.199	ppb	0.5	125143.79	2.5106	Pulse	0.1000	3
Cd	111	115	He	49.082	ppb	1.5	13521.22	0.2713	Pulse	0.5000	3
Sn	120	115	He	100.467	ppb	1.9	80636.03	1.6176	Pulse	0.1000	3
Sb	121	159	He	97.030	ppb	2.1	71305.56	0.2532	Pulse	0.1000	3
Ba	137	115	He	1229.675	ppb	0.4	305981.02	6.1384	Pulse	0.1000	3
Tl	205	209	He	98.537	ppb	0.7	707479.73	3.0844	Pulse	0.1000	3
Pb	208	209	He	49.264	ppb	0.1	464203.21	2.0238	Pulse	0.1000	3
U	238	209	He	50.310	ppb	0.4	578682.13	2.5228	Pulse	0.1000	3

ISTD Table:

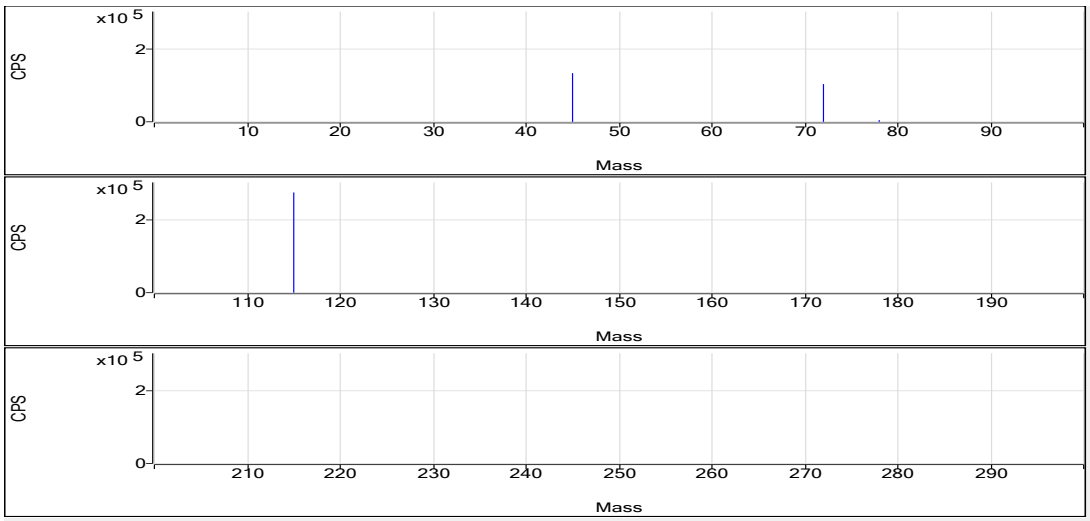
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2224553.61	0.3	101.2	Pulse	0.1000	3
No Gas	Ge	72	1066027.41	0.6	99.3	Pulse	0.1000	3
H2	Sc	45	132968.75	1.3	98.0	Pulse	0.1000	3
H2	Ge	72	103057.25	0.1	97.5	Pulse	0.1000	3
H2	In	115	273879.31	0.6	97.9	Pulse	0.1000	3
He	Sc	45	30094.95	1.5	100.8	Pulse	0.1000	3
He	Ge	72	51834.26	0.9	98.9	Pulse	0.1000	3
He	In	115	49846.35	0.5	97.3	Pulse	0.1000	3
He	Tb	159	281571.87	0.4	101.1	Pulse	0.1000	3
He	Bi	209	229375.70	0.2	96.6	Pulse	0.1000	3

No Gas

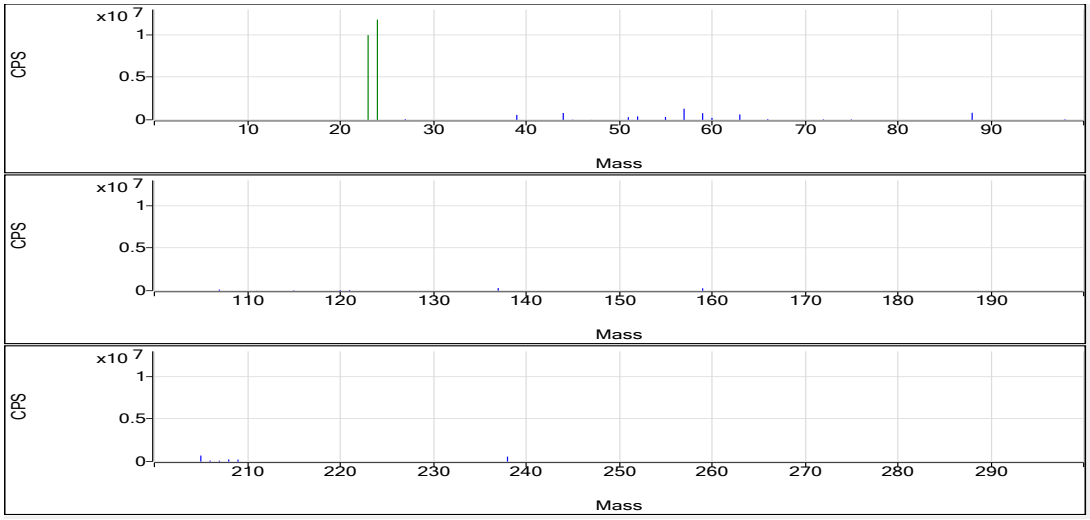


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	45.564	0.0341	75573.90	0.0007	2.306E-05
Be	9	1	No Gas	46.453	0.0347	77310.49	0.0007	2.306E-05
Be	9	1	No Gas	46.208	0.0346	77099.30	0.0007	2.306E-05
Se	78	2	H2	105.211	0.045	4638.75	0.0004	4.221E-05
Se	78	2	H2	104.332	0.0446	4604.07	0.0004	4.221E-05
Se	78	2	H2	106.592	0.0456	4696.77	0.0004	4.221E-05
Na	23	3	He	88211.289	335.9649	9968258.60	0.0038	0.2864
Na	23	3	He	86955.736	331.187	9946028.60	0.0038	0.2864
Na	23	3	He	85579.187	325.9487	9968436.10	0.0038	0.2864
Mg	24	3	He	207559.562	399.3978	11850347.32	0.0019	0.007972
Mg	24	3	He	202913.378	390.4575	11726008.58	0.0019	0.007972
Mg	24	3	He	200145.202	385.1309	11778397.32	0.0019	0.007972
Al	27	3	He	4676.136	2.5498	75652.94	0.0005	0.00158
Al	27	3	He	4713.842	2.5703	77190.26	0.0005	0.00158
Al	27	3	He	4599.288	2.5079	76698.37	0.0005	0.00158
K	39	3	He	17751.463	19.4609	577416.79	0.0011	0.3552
K	39	3	He	17403.017	19.0859	573177.96	0.0011	0.3552
K	39	3	He	17307.795	18.9834	580567.22	0.0011	0.3552
Ca	44	3	He	435531.238	27.2507	808543.66	0.0001	0.002
Ca	44	3	He	423572.927	26.5026	795910.54	0.0001	0.002
Ca	44	3	He	422014.618	26.4051	807541.86	0.0001	0.002
Ti	47	3	He	503.758	0.2464	7312.01	0.0005	0.0004395
Ti	47	3	He	502.473	0.2458	7382.11	0.0005	0.0004395
Ti	47	3	He	475.311	0.2325	7112.00	0.0005	0.0004395
V	51	3	He	480.308	10.5147	311978.25	0.0218	0.02648
V	51	3	He	477.127	10.4453	313687.03	0.0218	0.02648
V	51	3	He	470.131	10.2925	314774.06	0.0218	0.02648
Cr	52	3	He	471.204	13.6614	405341.13	0.029	0.006056
Cr	52	3	He	460.165	13.3415	400664.49	0.029	0.006056
Cr	52	3	He	454.617	13.1807	403103.43	0.029	0.006056
Mn	55	3	He	937.056	11.1628	331206.48	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	934.156	11.1283	334198.20	0.0119	0.00335
Mn	55	3	He	918.932	10.947	334789.21	0.0119	0.00335
Fe	57	3	He	78446.762	44.2275	1312252.48	0.0006	0.003117
Fe	57	3	He	77032.414	43.4301	1304269.82	0.0006	0.003117
Fe	57	3	He	76039.575	42.8704	1311098.73	0.0006	0.003117
Co	59	3	He	472.532	14.9692	777269.52	0.0317	0.004379
Co	59	3	He	479.073	15.1764	779338.50	0.0317	0.004379
Co	59	3	He	473.503	15	783389.60	0.0317	0.004379
Ni	60	3	He	470.654	4.265	221457.52	0.009	0.01049
Ni	60	3	He	469.793	4.2572	218616.68	0.009	0.01049
Ni	60	3	He	469.952	4.2586	222412.16	0.009	0.01049
Cu	63	3	He	472.831	12.2617	636684.09	0.0259	0.01685
Cu	63	3	He	472.23	12.2462	628866.36	0.0259	0.01685
Cu	63	3	He	470.794	12.209	637627.61	0.0259	0.01685
Zn	66	3	He	475.167	1.3464	69909.14	0.0028	0.003817
Zn	66	3	He	488.581	1.3843	71084.71	0.0028	0.003817
Zn	66	3	He	476.506	1.3501	70512.71	0.0028	0.003817
As	75	3	He	501.717	0.9308	48332.57	0.0019	0.0004832
As	75	3	He	505.542	0.9379	48163.94	0.0019	0.0004832
As	75	3	He	500.558	0.9287	48501.02	0.0019	0.0004832
Sr	88	3	He	2056.741	16.4896	820609.44	0.008	0.0005203
Sr	88	3	He	2076.177	16.6454	826696.86	0.008	0.0005203
Sr	88	3	He	2066.356	16.5667	830138.03	0.008	0.0005203
Mo	98	3	He	53.709	1.231	61262.84	0.0229	0.0003256
Mo	98	3	He	52.945	1.2135	60269.86	0.0229	0.0003256
Mo	98	3	He	51.024	1.1695	58602.25	0.0229	0.0003256
Ag	107	3	He	50.487	2.525	125657.31	0.05	0.000719
Ag	107	3	He	50.106	2.506	124458.64	0.05	0.000719
Ag	107	3	He	50.004	2.5009	125315.43	0.05	0.000719
Cd	111	3	He	48.314	0.267	13288.33	0.0055	0.000104
Cd	111	3	He	49.82	0.2753	13674.69	0.0055	0.000104
Cd	111	3	He	49.111	0.2714	13600.64	0.0055	0.000104
Sn	120	3	He	98.601	1.5879	79023.84	0.0159	0.01867
Sn	120	3	He	100.392	1.6164	80280.44	0.0159	0.01867
Sn	120	3	He	102.406	1.6485	82603.81	0.0159	0.01867
Sb	121	3	He	95.574	0.2494	70458.03	0.0026	8.342E-05
Sb	121	3	He	96.211	0.2511	70357.48	0.0026	8.342E-05
Sb	121	3	He	99.304	0.2592	73101.16	0.0026	8.342E-05
Ba	137	3	He	1226.402	6.1221	304666.15	0.005	0.0005882
Ba	137	3	He	1227.274	6.1264	304269.16	0.005	0.0005882
Ba	137	3	He	1235.35	6.1667	309007.75	0.005	0.0005882
Tl	205	3	He	97.894	3.0643	704056.01	0.0313	0.0009967
Tl	205	3	He	98.525	3.084	705951.32	0.0313	0.0009967
Tl	205	3	He	99.19	3.1048	712431.86	0.0313	0.0009967
Pb	208	3	He	49.225	2.0222	247037.05	0.041	0.002892
Pb	208	3	He	49.347	2.0272	247896.25	0.041	0.002892
Pb	208	3	He	49.219	2.0219	246877.52	0.041	0.002892
U	238	3	He	50.32	2.5233	579769.37	0.0501	0.0008282
U	238	3	He	50.088	2.5117	574940.97	0.0501	0.0008282
U	238	3	He	50.523	2.5335	581336.05	0.0501	0.0008282
Sc	45	1	No Gas			2217607.00		
Sc	45	1	No Gas			2225176.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2230877.00		
Ge	72	1	No Gas			1063624.28		
Ge	72	1	No Gas			1061296.16		
Ge	72	1	No Gas			1073161.78		
Sc	45	2	H2			132504.88		
Sc	45	2	H2			131546.45		
Sc	45	2	H2			134854.91		
Ge	72	2	H2			103047.45		
Ge	72	2	H2			103137.86		
Ge	72	2	H2			102986.43		
In	115	2	H2			274655.99		
In	115	2	H2			275123.16		
In	115	2	H2			271858.79		
Sc	45	3	He			29670.54		
Sc	45	3	He			30031.46		
Sc	45	3	He			30582.84		
Ge	72	3	He			51924.53		
Ge	72	3	He			51352.13		
Ge	72	3	He			52226.13		
In	115	3	He			50381.59		
In	115	3	He			50291.25		
In	115	3	He			50753.11		
Tb	159	3	He			282465.00		
Tb	159	3	He			280194.82		
Tb	159	3	He			282055.80		
Bi	209	3	He			229762.38		
Bi	209	3	He			228906.23		
Bi	209	3	He			229458.49		

Quantitation Report

Data File Name	103SMPL.d
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Acq Time	2024-07-17 12:26:28
Sample Name	410-178873-U-1-A
Sample Type	Sample
Comment	A5
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

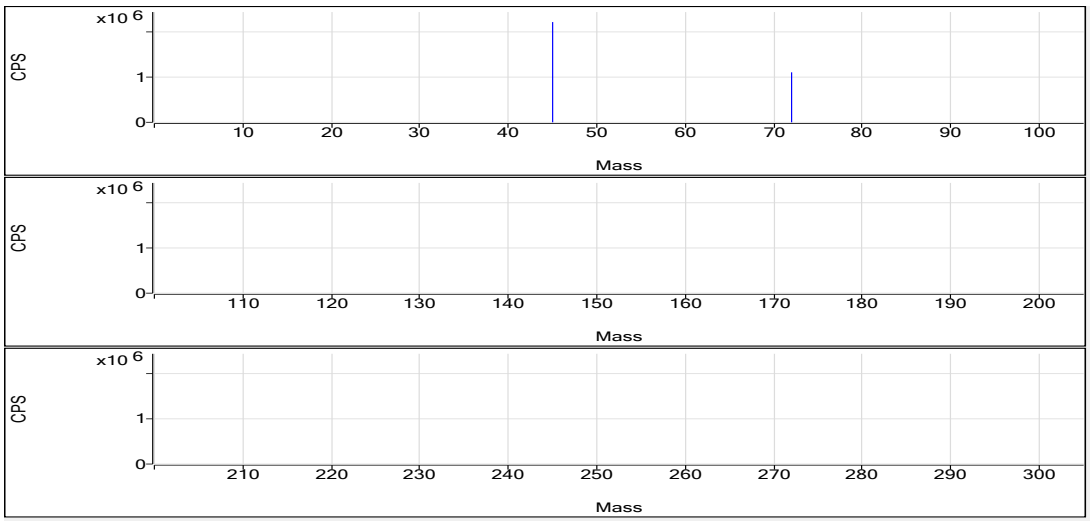
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.092	ppb	16.0	202.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.164	ppb	45.1	12.00	0.0001	Pulse	1.5000	3
Na	23	45	He	20774.641	ppb	1.6	2365671.63	79.3420	Pulse	0.1000	3
Mg	24	45	He	3151.276	ppb	1.6	181033.59	6.0717	Pulse	0.1000	3
Al	27	45	He	24.398	ppb	23.6	443.36	0.0149	Pulse	0.1000	3
K	39	45	He	965.123	ppb	2.2	41562.83	1.3940	Pulse	0.1000	3
Ca	44	45	He	4103.275	ppb	3.6	7712.28	0.2587	Pulse	0.1000	3
Ti	47	45	He	0.013	ppb	8199.2	13.33	0.0004	Pulse	0.1000	3
V	51	45	He	1.342	ppb	5.3	1662.77	0.0558	Pulse	0.5000	3
Cr	52	45	He	0.571	ppb	7.3	673.37	0.0226	Pulse	0.1000	3
Mn	55	45	He	3.062	ppb	15.9	1186.76	0.0398	Pulse	0.1000	3
Fe	57	45	He	122.483	ppb	8.8	2150.23	0.0722	Pulse	0.1000	3
Co	59	72	He	0.459	ppb	6.1	1016.73	0.0189	Pulse	0.1000	3
Ni	60	72	He	0.165	ppb	5.6	643.37	0.0120	Pulse	0.1000	3
Cu	63	72	He	0.615	ppb	3.2	1760.17	0.0328	Pulse	0.1000	3
Zn	66	72	He	0.495	ppb	37.8	280.01	0.0052	Pulse	0.1000	3
As	75	72	He	1.228	ppb	19.1	148.00	0.0028	Pulse	0.5000	3
Sr	88	115	He	37.664	ppb	5.1	15926.18	0.3025	Pulse	0.1000	3
Mo	98	115	He	0.113	ppb	26.2	153.34	0.0029	Pulse	0.1000	3
Ag	107	115	He	0.050	ppb	6.4	170.01	0.0032	Pulse	0.1000	3
Cd	111	115	He	0.022	ppb	31.2	12.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.039	ppb	155.9	1016.74	0.0193	Pulse	0.1000	3
Sb	121	159	He	0.165	ppb	9.1	146.67	0.0005	Pulse	0.1000	3
Ba	137	115	He	2.395	ppb	14.0	660.04	0.0125	Pulse	0.1000	3
Tl	205	209	He	0.241	ppb	5.6	2093.57	0.0085	Pulse	0.1000	3
Pb	208	209	He	0.037	ppb	4.9	1086.73	0.0044	Pulse	0.1000	3
U	238	209	He	0.032	ppb	29.7	600.03	0.0024	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2212670.54	1.0	100.7	Pulse	0.1000	3
No Gas	Ge	72	1103188.68	1.2	102.8	Pulse	0.1000	3
H2	Sc	45	134664.26	1.7	99.2	Pulse	0.1000	3
H2	Ge	72	106817.45	2.3	101.0	Pulse	0.1000	3
H2	In	115	285950.83	1.4	102.2	Pulse	0.1000	3
He	Sc	45	29821.08	1.6	99.9	Pulse	0.1000	3
He	Ge	72	53704.32	1.9	102.4	Pulse	0.1000	3
He	In	115	52658.60	1.2	102.8	Pulse	0.1000	3
He	Tb	159	285658.08	0.3	102.6	Pulse	0.1000	3
He	Bi	209	245339.65	1.0	103.3	Pulse	0.1000	3

No Gas



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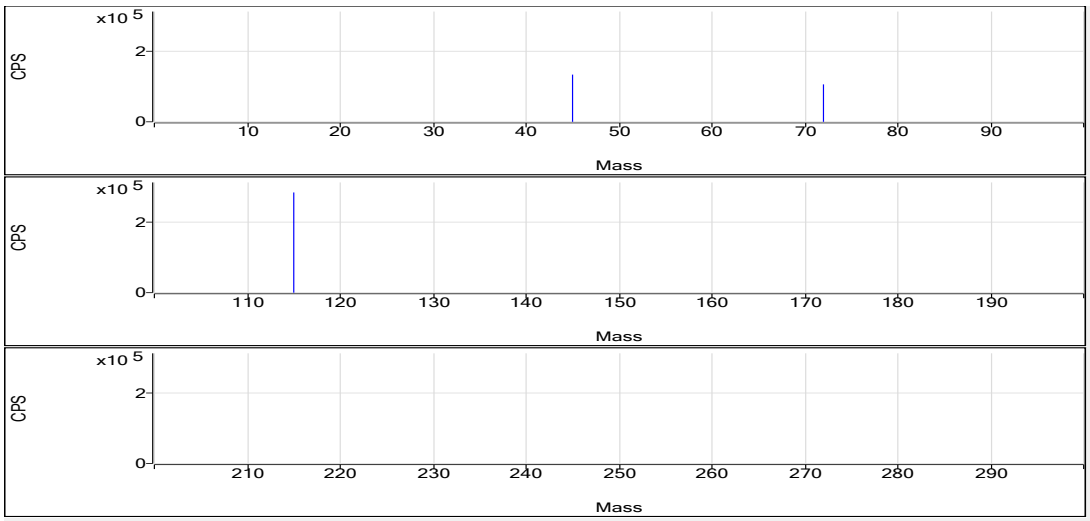
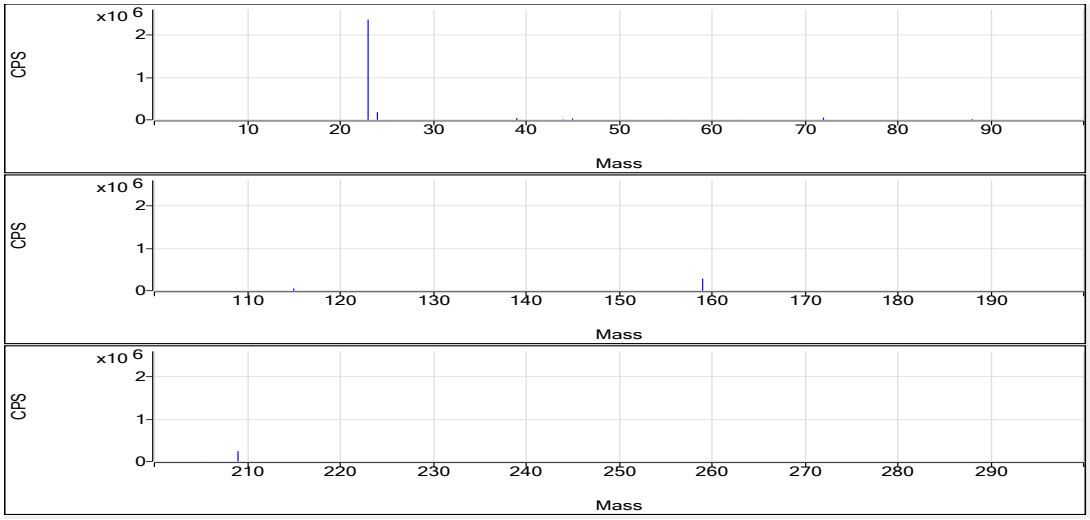


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.09	0.0001	202.00	0.0007	2.306E-05
Be	9	1	No Gas	0.107	0.0001	226.00	0.0007	2.306E-05
Be	9	1	No Gas	0.078	0.0001	180.00	0.0007	2.306E-05
Se	78	2	H2	0.141	0.0001	10.67	0.0004	4.221E-05
Se	78	2	H2	0.246	0.0001	16.00	0.0004	4.221E-05
Se	78	2	H2	0.104	0.0001	9.33	0.0004	4.221E-05
Na	23	3	He	21135.875	80.7167	2361778.25	0.0038	0.2864
Na	23	3	He	20515.121	78.3545	2361751.06	0.0038	0.2864
Na	23	3	He	20672.928	78.955	2373485.59	0.0038	0.2864
Mg	24	3	He	3208.973	6.1827	180907.40	0.0019	0.007972
Mg	24	3	He	3116.962	6.0057	181022.63	0.0019	0.007972
Mg	24	3	He	3127.894	6.0267	181170.74	0.0019	0.007972
Al	27	3	He	26.578	0.0161	470.03	0.0005	0.00158
Al	27	3	He	28.76	0.0173	520.03	0.0005	0.00158
Al	27	3	He	17.856	0.0113	340.02	0.0005	0.00158
K	39	3	He	988.673	1.4193	41529.48	0.0011	0.3552
K	39	3	He	957.204	1.3855	41760.09	0.0011	0.3552
K	39	3	He	949.494	1.3772	41398.93	0.0011	0.3552
Ca	44	3	He	4273.792	0.2694	7882.30	0.0001	0.002
Ca	44	3	He	4015.234	0.2532	7632.25	0.0001	0.002
Ca	44	3	He	4020.799	0.2536	7622.30	0.0001	0.002
Ti	47	3	He	-0.2	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	1.138	0.001	30.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
V	51	3	He	1.423	0.0576	1684.11	0.0218	0.02648
V	51	3	He	1.313	0.0551	1662.11	0.0218	0.02648
V	51	3	He	1.289	0.0546	1642.10	0.0218	0.02648
Cr	52	3	He	0.617	0.0239	700.05	0.029	0.006056
Cr	52	3	He	0.535	0.0216	650.03	0.029	0.006056
Cr	52	3	He	0.56	0.0223	670.04	0.029	0.006056
Mn	55	3	He	3.163	0.041	1200.10	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.533	0.0335	1010.07	0.0119	0.00335
Mn	55	3	He	3.49	0.0449	1350.10	0.0119	0.00335
Fe	57	3	He	134.526	0.079	2310.26	0.0006	0.003117
Fe	57	3	He	119.245	0.0703	2120.22	0.0006	0.003117
Fe	57	3	He	113.679	0.0672	2020.22	0.0006	0.003117
Co	59	3	He	0.428	0.0179	950.06	0.0317	0.004379
Co	59	3	He	0.471	0.0193	1060.07	0.0317	0.004379
Co	59	3	He	0.479	0.0196	1040.07	0.0317	0.004379
Ni	60	3	He	0.154	0.0119	630.03	0.009	0.01049
Ni	60	3	He	0.17	0.012	660.03	0.009	0.01049
Ni	60	3	He	0.171	0.012	640.04	0.009	0.01049
Cu	63	3	He	0.595	0.0323	1710.18	0.0259	0.01685
Cu	63	3	He	0.616	0.0328	1800.17	0.0259	0.01685
Cu	63	3	He	0.634	0.0333	1770.15	0.0259	0.01685
Zn	66	3	He	0.385	0.0049	260.01	0.0028	0.003817
Zn	66	3	He	0.39	0.0049	270.01	0.0028	0.003817
Zn	66	3	He	0.712	0.0058	310.02	0.0028	0.003817
As	75	3	He	1.265	0.0028	150.00	0.0019	0.0004832
As	75	3	He	0.977	0.0023	126.00	0.0019	0.0004832
As	75	3	He	1.442	0.0032	168.00	0.0019	0.0004832
Sr	88	3	He	36.296	0.2915	15228.80	0.008	0.0005203
Sr	88	3	He	36.825	0.2957	15779.26	0.008	0.0005203
Sr	88	3	He	39.87	0.3202	16770.49	0.008	0.0005203
Mo	98	3	He	0.145	0.0036	190.01	0.0229	0.0003256
Mo	98	3	He	0.108	0.0028	150.01	0.0229	0.0003256
Mo	98	3	He	0.086	0.0023	120.00	0.0229	0.0003256
Ag	107	3	He	0.051	0.0033	170.01	0.05	0.000719
Ag	107	3	He	0.053	0.0034	180.01	0.05	0.000719
Ag	107	3	He	0.047	0.0031	160.01	0.05	0.000719
Cd	111	3	He	0.03	0.0003	14.00	0.0055	0.000104
Cd	111	3	He	0.022	0.0002	12.00	0.0055	0.000104
Cd	111	3	He	0.016	0.0002	10.00	0.0055	0.000104
Sn	120	3	He	0.006	0.0188	980.07	0.0159	0.01867
Sn	120	3	He	0.111	0.0204	1090.09	0.0159	0.01867
Sn	120	3	He	0.002	0.0187	980.06	0.0159	0.01867
Sb	121	3	He	0.182	0.0006	160.01	0.0026	8.342E-05
Sb	121	3	He	0.156	0.0005	140.01	0.0026	8.342E-05
Sb	121	3	He	0.156	0.0005	140.00	0.0026	8.342E-05
Ba	137	3	He	2.759	0.0144	750.05	0.005	0.0005882
Ba	137	3	He	2.098	0.0111	590.04	0.005	0.0005882
Ba	137	3	He	2.33	0.0122	640.04	0.005	0.0005882
Tl	205	3	He	0.239	0.0085	2060.22	0.0313	0.0009967
Tl	205	3	He	0.255	0.009	2230.28	0.0313	0.0009967
Tl	205	3	He	0.228	0.0081	1990.22	0.0313	0.0009967
Pb	208	3	He	0.036	0.0044	570.03	0.041	0.002892
Pb	208	3	He	0.038	0.0044	570.04	0.041	0.002892
Pb	208	3	He	0.039	0.0045	560.04	0.041	0.002892
U	238	3	He	0.038	0.0028	670.04	0.0501	0.0008282
U	238	3	He	0.021	0.0019	470.02	0.0501	0.0008282
U	238	3	He	0.037	0.0027	660.04	0.0501	0.0008282
Sc	45	1	No Gas			2233995.44		
Sc	45	1	No Gas			2190145.75		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2213870.44		
Ge	72	1	No Gas			1116670.06		
Ge	72	1	No Gas			1089225.92		
Ge	72	1	No Gas			1103670.06		
Sc	45	2	H2			132030.10		
Sc	45	2	H2			135451.92		
Sc	45	2	H2			136510.76		
Ge	72	2	H2			104044.78		
Ge	72	2	H2			108597.14		
Ge	72	2	H2			107810.44		
In	115	2	H2			284289.59		
In	115	2	H2			290367.48		
In	115	2	H2			283195.41		
Sc	45	3	He			29260.10		
Sc	45	3	He			30141.88		
Sc	45	3	He			30061.25		
Ge	72	3	He			53017.89		
Ge	72	3	He			54895.18		
Ge	72	3	He			53199.88		
In	115	3	He			52248.28		
In	115	3	He			53362.31		
In	115	3	He			52389.00		
Tb	159	3	He			286547.79		
Tb	159	3	He			285569.70		
Tb	159	3	He			284856.75		
Bi	209	3	He			243512.50		
Bi	209	3	He			248208.96		
Bi	209	3	He			244297.50		

Quantitation Report

Data File Name	104SMPL.d
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Sample Name	410-179113-P-5-A
Sample Type	Sample
Comment	A5
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

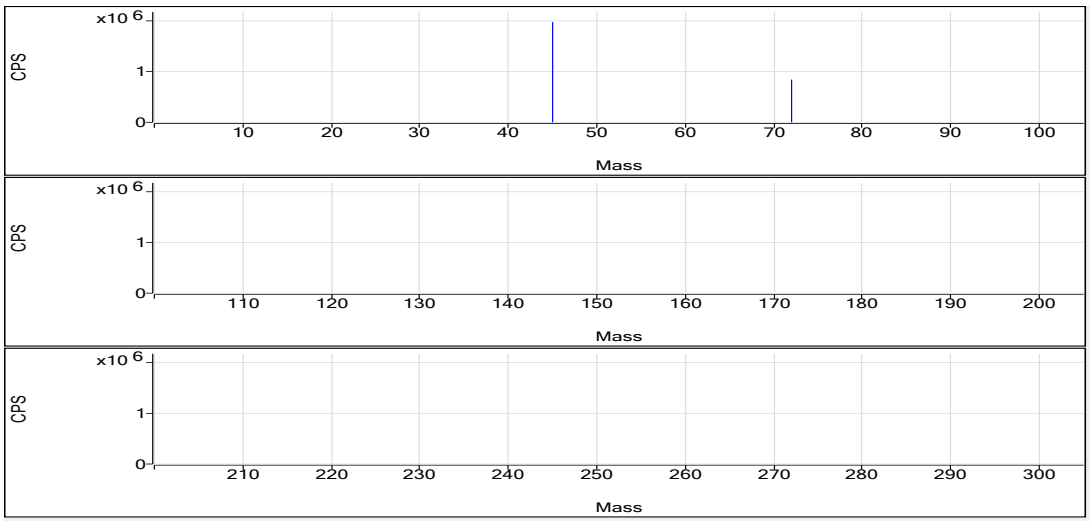
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.794	ppb	6.8	1222.72	0.0006	Pulse	0.5000	3
Se	78	72	H2	57.729	ppb	0.5	2284.19	0.0247	Pulse	1.5000	3
Na	23	45	He	16734188.495	ppb	0.3	1970093197.31	63 680.4147	Analog	0.1000	3
Mg	24	45	He	20234.330	ppb	0.9	1204786.18	38.9432	Pulse	0.1000	3
Al	27	45	He	1825.454	ppb	2.0	30826.43	0.9963	Pulse	0.1000	3
K	39	45	He	29331.847	ppb	0.9	987707.95	31.9248	Pulse	0.1000	3
Ca	44	45	He	63228.777	ppb	0.8	122448.12	3.9579	Pulse	0.1000	3
Ti	47	45	He	13.242	ppb	24.6	213.34	0.0069	Pulse	0.1000	3
V	51	45	He	1984.603	ppb	0.6	1341530.08	43.3633	Pulse	0.5000	3
Cr	52	45	He	2489.949	ppb	0.3	2232509.66	72.1640	Pulse	0.1000	3
Mn	55	45	He	3041.067	ppb	1.1	1120523.89	36.2196	Pulse	0.1000	3
Fe	57	45	He	42009.372	ppb	1.2	732812.86	23.6859	Pulse	0.1000	3
Co	59	72	He	744.962	ppb	0.9	1142996.16	23.5969	Pulse	0.1000	3
Ni	60	72	He	18.871	ppb	2.4	8769.62	0.1811	Pulse	0.1000	3
Cu	63	72	He	182.371	ppb	1.5	229560.52	4.7397	Pulse	0.1000	3
Zn	66	72	He	33.791	ppb	4.0	4807.63	0.0993	Pulse	0.1000	3
As	75	72	He	122.673	ppb	1.1	11041.61	0.2280	Pulse	0.5000	3
Sr	88	115	He	501.205	ppb	2.6	180443.60	4.0187	Pulse	0.1000	3
Mo	98	115	He	110.439	ppb	2.5	113643.11	2.5310	Pulse	0.1000	3
Ag	107	115	He	0.077	ppb	33.2	206.68	0.0046	Pulse	0.1000	3
Cd	111	115	He	0.208	ppb	25.2	56.00	0.0013	Pulse	0.5000	3
Sn	120	115	He	0.013	ppb	1425.3	846.72	0.0189	Pulse	0.1000	3
Sb	121	159	He	5.115	ppb	2.7	3350.51	0.0134	Pulse	0.1000	3
Ba	137	115	He	24.199	ppb	10.4	5437.92	0.1214	Pulse	0.1000	3
Tl	205	209	He	0.239	ppb	13.3	1460.14	0.0085	Pulse	0.1000	3
Pb	208	209	He	0.406	ppb	13.4	3360.32	0.0195	Pulse	0.1000	3
U	238	209	He	173.997	ppb	0.4	1501087.11	8.7232	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1983243.56	1.6	90.2	Pulse	0.1000	3
No Gas	Ge	72	845615.64	1.6	78.8	Pulse	0.1000	3
H2	Sc	45	143410.06	1.4	105.7	Pulse	0.1000	3
H2	Ge	72	92405.38	0.5	87.4	Pulse	0.1000	3
H2	In	115	216908.25	1.5	77.6	Pulse	0.1000	3
He	Sc	45	30936.71	1.2	103.6	Pulse	0.1000	3
He	Ge	72	48442.14	1.9	92.4	Pulse	0.1000	3
He	In	115	44933.16	4.3	87.7	Pulse	0.1000	3
He	Tb	159	249541.41	0.9	89.6	Pulse	0.1000	3
He	Bi	209	172082.24	0.3	72.5	Pulse	0.1000	3

No Gas



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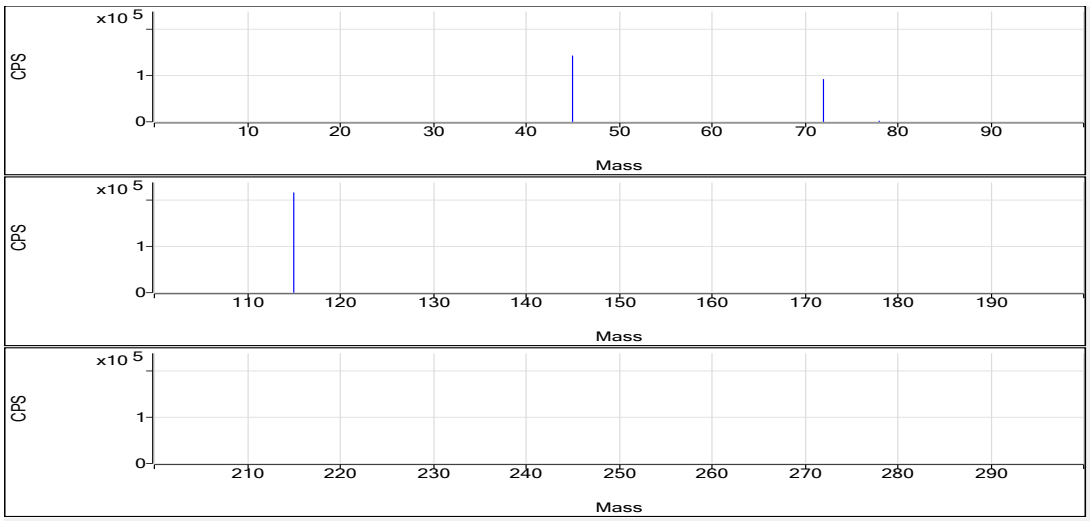
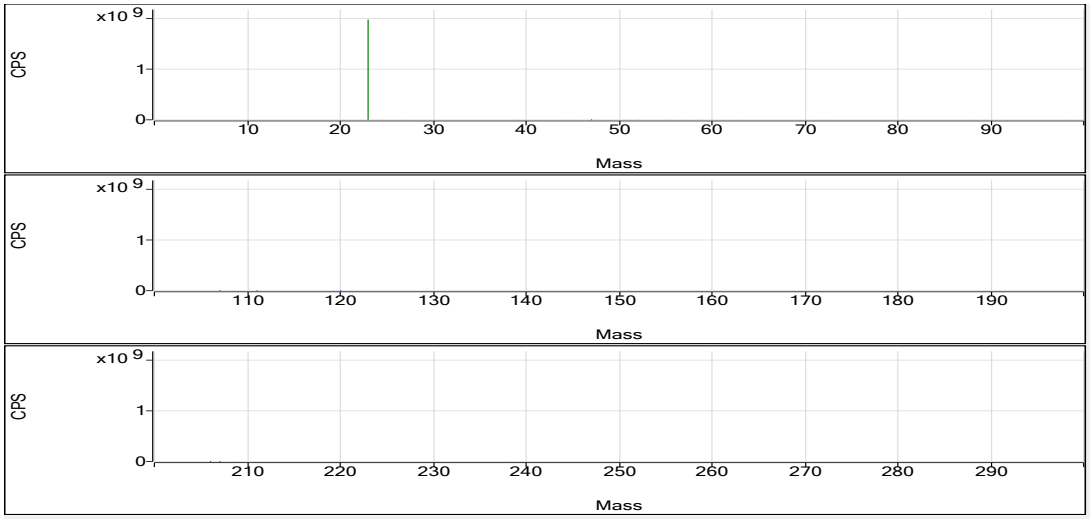


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.855	0.0007	1308.06	0.0007	2.306E-05
Be	9	1	No Gas	0.752	0.0006	1144.05	0.0007	2.306E-05
Be	9	1	No Gas	0.775	0.0006	1216.06	0.0007	2.306E-05
Se	78	2	H2	57.811	0.0248	2298.85	0.0004	4.221E-05
Se	78	2	H2	57.963	0.0248	2294.19	0.0004	4.221E-05
Se	78	2	H2	57.412	0.0246	2259.52	0.0004	4.221E-05
Na	23	3	He	16701910.468	63557.5842	1939923651.09	0.0038	0.2864
Na	23	3	He	16709207.483	63585.3522	1977112130.54	0.0038	0.2864
Na	23	3	He	16791447.534	63898.3077	1993243810.30	0.0038	0.2864
Mg	24	3	He	20237.487	38.9493	1188822.33	0.0019	0.007972
Mg	24	3	He	20044.834	38.5786	1199556.31	0.0019	0.007972
Mg	24	3	He	20420.669	39.3018	1225979.90	0.0019	0.007972
Al	27	3	He	1802.054	0.9836	30021.15	0.0005	0.00158
Al	27	3	He	1807.357	0.9865	30673.16	0.0005	0.00158
Al	27	3	He	1866.95	1.0189	31784.97	0.0005	0.00158
K	39	3	He	29090.264	31.6648	966482.09	0.0011	0.3552
K	39	3	He	29290.392	31.8802	991276.94	0.0011	0.3552
K	39	3	He	29614.884	32.2294	1005364.83	0.0011	0.3552
Ca	44	3	He	62938.771	3.9397	120249.40	0.0001	0.002
Ca	44	3	He	62901.375	3.9374	122428.32	0.0001	0.002
Ca	44	3	He	63846.185	3.9965	124666.65	0.0001	0.002
Ti	47	3	He	15.874	0.0082	250.01	0.0005	0.0004395
Ti	47	3	He	14.248	0.0074	230.01	0.0005	0.0004395
Ti	47	3	He	9.604	0.0051	160.01	0.0005	0.0004395
V	51	3	He	1984.047	43.3512	1323178.38	0.0218	0.02648
V	51	3	He	1973.497	43.1208	1340791.75	0.0218	0.02648
V	51	3	He	1996.266	43.618	1360620.13	0.0218	0.02648
Cr	52	3	He	2492.104	72.2265	2204517.94	0.029	0.006056
Cr	52	3	He	2482.841	71.958	2237450.75	0.029	0.006056
Cr	52	3	He	2494.9	72.3075	2255560.28	0.029	0.006056
Mn	55	3	He	3042.979	36.2424	1106200.30	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3006.786	35.8113	1113511.86	0.0119	0.00335
Mn	55	3	He	3073.437	36.6051	1141859.51	0.0119	0.00335
Fe	57	3	He	41646.212	23.4812	716698.90	0.0006	0.003117
Fe	57	3	He	41819.618	23.5789	733158.74	0.0006	0.003117
Fe	57	3	He	42562.287	23.9976	748580.93	0.0006	0.003117
Co	59	3	He	749.987	23.7561	1125765.69	0.0317	0.004379
Co	59	3	He	737.794	23.3699	1145689.98	0.0317	0.004379
Co	59	3	He	747.106	23.6648	1157532.80	0.0317	0.004379
Ni	60	3	He	19.343	0.1853	8782.96	0.009	0.01049
Ni	60	3	He	18.839	0.1808	8862.98	0.009	0.01049
Ni	60	3	He	18.432	0.1771	8662.92	0.009	0.01049
Cu	63	3	He	185.327	4.8162	228235.13	0.0259	0.01685
Cu	63	3	He	179.953	4.6771	229289.55	0.0259	0.01685
Cu	63	3	He	181.835	4.7258	231156.89	0.0259	0.01685
Zn	66	3	He	35.328	0.1036	4910.98	0.0028	0.003817
Zn	66	3	He	33.166	0.0975	4780.99	0.0028	0.003817
Zn	66	3	He	32.881	0.0967	4730.92	0.0028	0.003817
As	75	3	He	123.806	0.2301	10902.17	0.0019	0.0004832
As	75	3	He	121.253	0.2253	11046.29	0.0019	0.0004832
As	75	3	He	122.961	0.2285	11176.36	0.0019	0.0004832
Sr	88	3	He	515.814	4.1359	177181.05	0.008	0.0005203
Sr	88	3	He	496.297	3.9794	180490.66	0.008	0.0005203
Sr	88	3	He	491.502	3.9409	183659.10	0.008	0.0005203
Mo	98	3	He	113.545	2.6021	111476.32	0.0229	0.0003256
Mo	98	3	He	109.649	2.5129	113975.21	0.0229	0.0003256
Mo	98	3	He	108.124	2.4779	115477.80	0.0229	0.0003256
Ag	107	3	He	0.07	0.0042	180.01	0.05	0.000719
Ag	107	3	He	0.056	0.0035	160.01	0.05	0.000719
Ag	107	3	He	0.106	0.006	280.01	0.05	0.000719
Cd	111	3	He	0.268	0.0016	68.00	0.0055	0.000104
Cd	111	3	He	0.173	0.0011	48.00	0.0055	0.000104
Cd	111	3	He	0.183	0.0011	52.00	0.0055	0.000104
Sn	120	3	He	0.044	0.0194	830.05	0.0159	0.01867
Sn	120	3	He	0.184	0.0216	980.07	0.0159	0.01867
Sn	120	3	He	-0.189	0.0157	730.04	0.0159	0.01867
Sb	121	3	He	5.275	0.0138	3420.52	0.0026	8.342E-05
Sb	121	3	He	5.054	0.0133	3320.50	0.0026	8.342E-05
Sb	121	3	He	5.016	0.0132	3310.51	0.0026	8.342E-05
Ba	137	3	He	26.732	0.134	5741.37	0.005	0.0005882
Ba	137	3	He	24.182	0.1213	5501.30	0.005	0.0005882
Ba	137	3	He	21.683	0.1088	5071.09	0.005	0.0005882
Tl	205	3	He	0.274	0.0096	1650.16	0.0313	0.0009967
Tl	205	3	He	0.212	0.0076	1310.12	0.0313	0.0009967
Tl	205	3	He	0.231	0.0082	1420.15	0.0313	0.0009967
Pb	208	3	He	0.386	0.0187	1770.20	0.041	0.002892
Pb	208	3	He	0.467	0.022	1960.22	0.041	0.002892
Pb	208	3	He	0.364	0.0178	1630.16	0.041	0.002892
U	238	3	He	173.981	8.7224	1501549.82	0.0501	0.0008282
U	238	3	He	174.698	8.7583	1501627.63	0.0501	0.0008282
U	238	3	He	173.312	8.6888	1500083.88	0.0501	0.0008282
Sc	45	1	No Gas			1975271.06		
Sc	45	1	No Gas			1956454.19		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2018005.44		
Ge	72	1	No Gas			837936.24		
Ge	72	1	No Gas			837549.44		
Ge	72	1	No Gas			861361.24		
Sc	45	2	H2			142083.93		
Sc	45	2	H2			142458.71		
Sc	45	2	H2			145687.54		
Ge	72	2	H2			92867.97		
Ge	72	2	H2			92436.27		
Ge	72	2	H2			91911.91		
In	115	2	H2			213140.91		
In	115	2	H2			219497.07		
In	115	2	H2			218086.77		
Sc	45	3	He			30522.30		
Sc	45	3	He			31093.83		
Sc	45	3	He			31194.00		
Ge	72	3	He			47388.57		
Ge	72	3	He			49024.15		
Ge	72	3	He			48913.69		
In	115	3	He			42846.71		
In	115	3	He			45364.07		
In	115	3	He			46608.50		
Tb	159	3	He			247036.21		
Tb	159	3	He			250243.49		
Tb	159	3	He			251344.53		
Bi	209	3	He			172149.43		
Bi	209	3	He			171451.97		
Bi	209	3	He			172645.31		

Quantitation Report

Data File Name	106_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 12:32:35
Sample Name	CCV 6148199
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

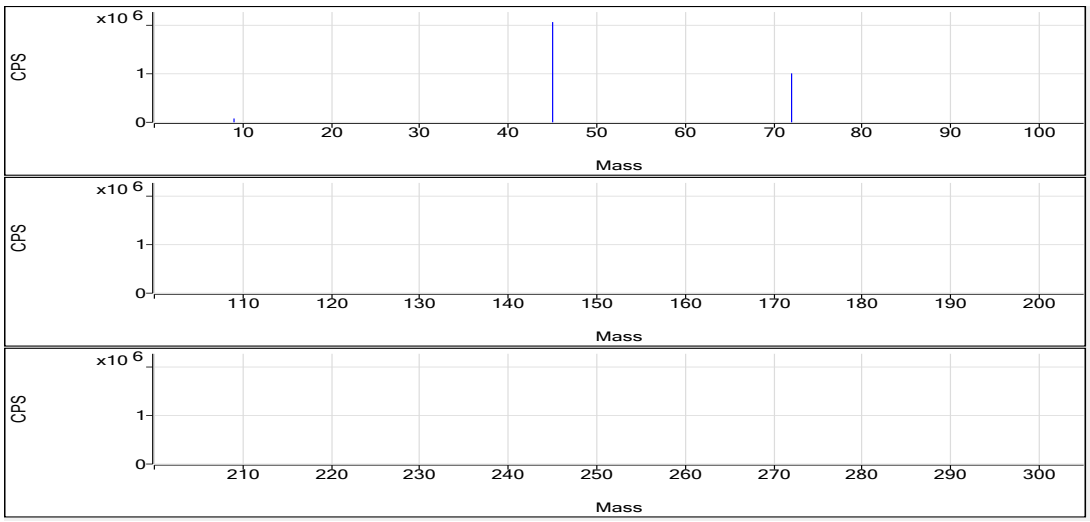
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.892	ppb	0.8	78898.54	0.0381	Pulse	0.5000	3
Se	78	72	H2	52.835	ppb	0.3	2418.21	0.0226	Pulse	1.5000	3
Na	23	45	He	10099.507	ppb	2.5	1166000.48	38.7190	Pulse	0.1000	3
Mg	24	45	He	5121.537	ppb	2.3	297035.74	9.8629	Pulse	0.1000	3
Al	27	45	He	5040.394	ppb	1.8	82773.93	2.7483	Pulse	0.1000	3
K	39	45	He	5065.651	ppb	3.2	174870.49	5.8073	Pulse	0.1000	3
Ca	44	45	He	5037.053	ppb	1.6	9553.48	0.3171	Pulse	0.1000	3
Ti	47	45	He	5124.044	ppb	2.7	75364.22	2.5027	Pulse	0.1000	3
V	51	45	He	505.718	ppb	2.7	333338.35	11.0696	Pulse	0.5000	3
Cr	52	45	He	501.667	ppb	3.4	437911.20	14.5442	Pulse	0.1000	3
Mn	55	45	He	509.409	ppb	2.9	182784.56	6.0699	Pulse	0.1000	3
Fe	57	45	He	5072.123	ppb	3.1	86191.68	2.8625	Pulse	0.1000	3
Co	59	72	He	513.885	ppb	1.0	860805.40	16.2788	Pulse	0.1000	3
Ni	60	72	He	514.824	ppb	1.3	246632.37	4.6643	Pulse	0.1000	3
Cu	63	72	He	513.863	ppb	1.6	704532.75	13.3243	Pulse	0.1000	3
Zn	66	72	He	510.472	ppb	3.1	76452.39	1.4461	Pulse	0.1000	3
As	75	72	He	520.159	ppb	1.4	51027.04	0.9650	Pulse	0.5000	3
Sr	88	115	He	52.598	ppb	0.2	21984.30	0.4222	Pulse	0.1000	3
Mo	98	115	He	51.659	ppb	1.8	61638.50	1.1841	Pulse	0.1000	3
Ag	107	115	He	51.226	ppb	1.7	133364.21	2.5619	Pulse	0.1000	3
Cd	111	115	He	51.007	ppb	2.2	14673.71	0.2819	Pulse	0.5000	3
Sn	120	115	He	52.588	ppb	1.6	44542.08	0.8556	Pulse	0.1000	3
Sb	121	159	He	52.152	ppb	2.6	38447.39	0.1362	Pulse	0.1000	3
Ba	137	115	He	513.299	ppb	1.8	133410.60	2.5627	Pulse	0.1000	3
Tl	205	209	He	50.096	ppb	0.9	373731.54	1.5686	Pulse	0.1000	3
Pb	208	209	He	50.482	ppb	0.4	494086.81	2.0737	Pulse	0.1000	3
U	238	209	He	49.890	ppb	0.5	596083.12	2.5018	Pulse	0.1000	3

ISTD Table:

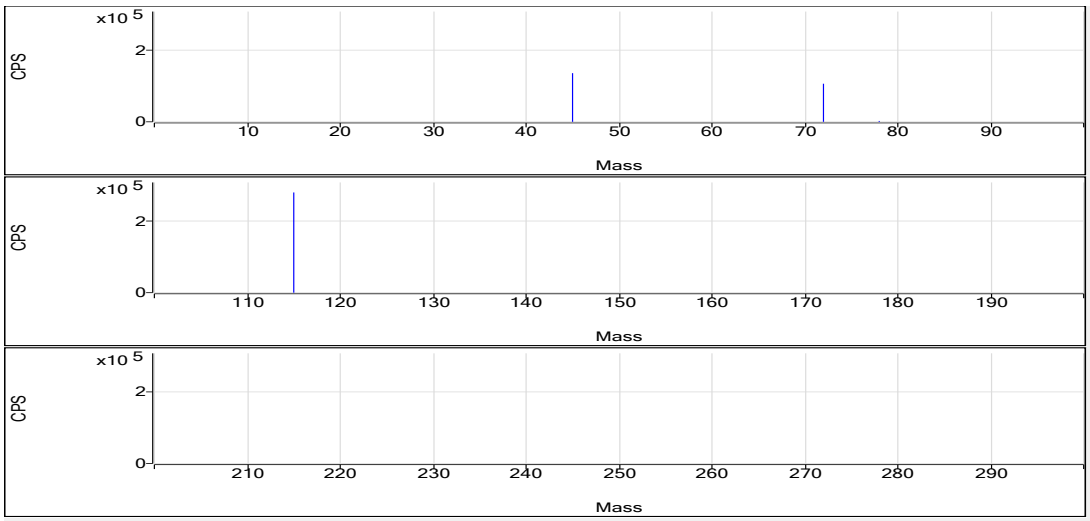
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2072969.92	0.3	94.3	Pulse	0.1000	3
No Gas	Ge	72	1011630.74	0.3	94.3	Pulse	0.1000	3
H2	Sc	45	136510.92	1.6	100.6	Pulse	0.1000	3
H2	Ge	72	106875.19	1.3	101.1	Pulse	0.1000	3
H2	In	115	281202.08	0.3	100.5	Pulse	0.1000	3
He	Sc	45	30128.47	2.9	100.9	Pulse	0.1000	3
He	Ge	72	52884.39	1.6	100.9	Pulse	0.1000	3
He	In	115	52068.44	2.2	101.6	Pulse	0.1000	3
He	Tb	159	282401.91	0.9	101.4	Pulse	0.1000	3
He	Bi	209	238261.72	0.5	100.3	Pulse	0.1000	3

No Gas

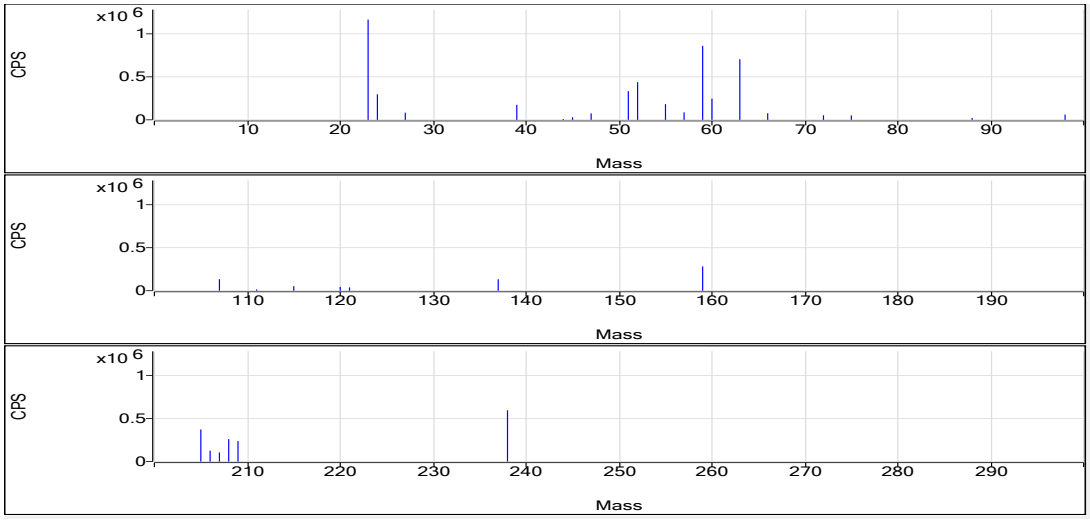


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.542	0.0378	78231.28	0.0007	2.306E-05
Be	9	1	No Gas	50.766	0.038	78948.71	0.0007	2.306E-05
Be	9	1	No Gas	51.367	0.0384	79515.63	0.0007	2.306E-05
Se	78	2	H2	52.844	0.0226	2409.54	0.0004	4.221E-05
Se	78	2	H2	52.975	0.0227	2399.54	0.0004	4.221E-05
Se	78	2	H2	52.686	0.0226	2445.55	0.0004	4.221E-05
Na	23	3	He	10266.459	39.3543	1166107.40	0.0038	0.2864
Na	23	3	He	9815.211	37.6371	1171784.28	0.0038	0.2864
Na	23	3	He	10216.852	39.1655	1160109.75	0.0038	0.2864
Mg	24	3	He	5229.591	10.0708	298409.19	0.0019	0.007972
Mg	24	3	He	4998.111	9.6254	299675.39	0.0019	0.007972
Mg	24	3	He	5136.908	9.8925	293022.63	0.0019	0.007972
Al	27	3	He	5118.85	2.791	82700.60	0.0005	0.00158
Al	27	3	He	4941.556	2.6944	83886.79	0.0005	0.00158
Al	27	3	He	5060.775	2.7594	81734.39	0.0005	0.00158
K	39	3	He	5103.33	5.8479	173278.69	0.0011	0.3552
K	39	3	He	4889.374	5.6176	174897.05	0.0011	0.3552
K	39	3	He	5204.25	5.9565	176435.72	0.0011	0.3552
Ca	44	3	He	4991.772	0.3143	9313.24	0.0001	0.002
Ca	44	3	He	4990.839	0.3142	9783.74	0.0001	0.002
Ca	44	3	He	5128.549	0.3229	9563.47	0.0001	0.002
Ti	47	3	He	5162.308	2.5214	74710.26	0.0005	0.0004395
Ti	47	3	He	4972.035	2.4284	75606.36	0.0005	0.0004395
Ti	47	3	He	5237.788	2.5582	75776.04	0.0005	0.0004395
V	51	3	He	511.781	11.202	331926.28	0.0218	0.02648
V	51	3	He	490.081	10.7282	334007.56	0.0218	0.02648
V	51	3	He	515.291	11.2786	334081.22	0.0218	0.02648
Cr	52	3	He	509.954	14.7844	438075.74	0.029	0.006056
Cr	52	3	He	482.185	13.9796	435238.35	0.029	0.006056
Cr	52	3	He	512.862	14.8686	440419.52	0.029	0.006056
Mn	55	3	He	511.647	6.0966	180647.89	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	493.851	5.8847	183211.13	0.0119	0.00335
Mn	55	3	He	522.73	6.2286	184494.65	0.0119	0.00335
Fe	57	3	He	5153.253	2.9083	86174.70	0.0006	0.003117
Fe	57	3	He	4889.359	2.7595	85913.26	0.0006	0.003117
Fe	57	3	He	5173.757	2.9198	86487.08	0.0006	0.003117
Co	59	3	He	518.714	16.4318	854368.58	0.0317	0.004379
Co	59	3	He	514.576	16.3007	863740.14	0.0317	0.004379
Co	59	3	He	508.365	16.104	864307.49	0.0317	0.004379
Ni	60	3	He	521.962	4.7288	245872.97	0.009	0.01049
Ni	60	3	He	514.034	4.6571	246770.84	0.009	0.01049
Ni	60	3	He	508.477	4.6069	247253.30	0.009	0.01049
Cu	63	3	He	521.719	13.5278	703375.85	0.0259	0.01685
Cu	63	3	He	514.206	13.3332	706498.97	0.0259	0.01685
Cu	63	3	He	505.663	13.112	703723.43	0.0259	0.01685
Zn	66	3	He	528.71	1.4976	77869.82	0.0028	0.003817
Zn	66	3	He	503.47	1.4263	75578.02	0.0028	0.003817
Zn	66	3	He	499.235	1.4144	75909.32	0.0028	0.003817
As	75	3	He	527.95	0.9795	50927.38	0.0019	0.0004832
As	75	3	He	518.807	0.9625	51001.55	0.0019	0.0004832
As	75	3	He	513.721	0.9531	51152.19	0.0019	0.0004832
Sr	88	3	He	52.477	0.4212	21386.55	0.008	0.0005203
Sr	88	3	He	52.68	0.4229	22308.18	0.008	0.0005203
Sr	88	3	He	52.637	0.4225	22258.17	0.008	0.0005203
Mo	98	3	He	52.585	1.2053	61193.24	0.0229	0.0003256
Mo	98	3	He	51.637	1.1836	62438.54	0.0229	0.0003256
Mo	98	3	He	50.754	1.1633	61283.72	0.0229	0.0003256
Ag	107	3	He	52.202	2.6107	132548.68	0.05	0.000719
Ag	107	3	He	50.755	2.5384	133912.36	0.05	0.000719
Ag	107	3	He	50.721	2.5367	133631.60	0.05	0.000719
Cd	111	3	He	52.189	0.2884	14643.69	0.0055	0.000104
Cd	111	3	He	49.971	0.2762	14569.61	0.0055	0.000104
Cd	111	3	He	50.861	0.2811	14807.82	0.0055	0.000104
Sn	120	3	He	53.38	0.8682	44080.70	0.0159	0.01867
Sn	120	3	He	51.746	0.8422	44431.39	0.0159	0.01867
Sn	120	3	He	52.636	0.8564	45114.14	0.0159	0.01867
Sb	121	3	He	52.761	0.1377	38474.40	0.0026	8.342E-05
Sb	121	3	He	53.082	0.1386	39366.42	0.0026	8.342E-05
Sb	121	3	He	50.615	0.1321	37501.34	0.0026	8.342E-05
Ba	137	3	He	520.949	2.6009	132047.77	0.005	0.0005882
Ba	137	3	He	515.843	2.5754	135863.99	0.005	0.0005882
Ba	137	3	He	503.104	2.5118	132320.04	0.005	0.0005882
Tl	205	3	He	50.164	1.5707	372292.77	0.0313	0.0009967
Tl	205	3	He	49.639	1.5543	371350.07	0.0313	0.0009967
Tl	205	3	He	50.484	1.5807	377551.79	0.0313	0.0009967
Pb	208	3	He	50.708	2.083	261073.41	0.041	0.002892
Pb	208	3	He	50.33	2.0675	260406.60	0.041	0.002892
Pb	208	3	He	50.408	2.0707	262142.28	0.041	0.002892
U	238	3	He	49.744	2.4944	591228.43	0.0501	0.0008282
U	238	3	He	49.72	2.4933	595694.99	0.0501	0.0008282
U	238	3	He	50.207	2.5176	601325.93	0.0501	0.0008282
Sc	45	1	No Gas			2069658.25		
Sc	45	1	No Gas			2079413.41		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2069838.09		
Ge	72	1	No Gas			1009909.44		
Ge	72	1	No Gas			1009564.59		
Ge	72	1	No Gas			1015418.19		
Sc	45	2	H2			136085.44		
Sc	45	2	H2			134625.12		
Sc	45	2	H2			138822.20		
Ge	72	2	H2			106471.49		
Ge	72	2	H2			105768.04		
Ge	72	2	H2			108386.03		
In	115	2	H2			280217.83		
In	115	2	H2			281874.55		
In	115	2	H2			281513.86		
Sc	45	3	He			29631.00		
Sc	45	3	He			31133.73		
Sc	45	3	He			29620.68		
Ge	72	3	He			51994.95		
Ge	72	3	He			52987.89		
Ge	72	3	He			53670.32		
In	115	3	He			51114.60		
In	115	3	He			53101.57		
In	115	3	He			53031.42		
Tb	159	3	He			279329.68		
Tb	159	3	He			284076.50		
Tb	159	3	He			283799.55		
Bi	209	3	He			237019.35		
Bi	209	3	He			238921.58		
Bi	209	3	He			238844.22		

Quantitation Report

Data File Name	107_CCB.d
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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

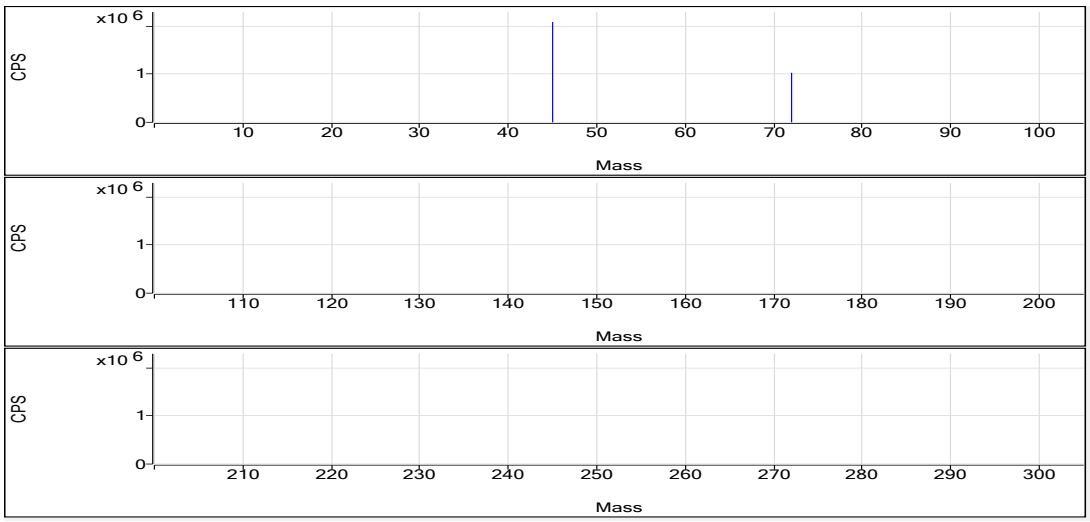
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.042	ppb	22.7	114.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.092	ppb	86.3	8.67	0.0001	Pulse	1.5000	3
Na	23	45	He	3511.535	ppb	8.4	405498.39	13.6492	Pulse	0.1000	3
Mg	24	45	He	79.429	ppb	17.1	4777.64	0.1608	Pulse	0.1000	3
Al	27	45	He	4.515	ppb	41.4	120.01	0.0040	Pulse	0.1000	3
K	39	45	He	14.928	ppb	22.3	11031.12	0.3713	Pulse	0.1000	3
Ca	44	45	He	127.617	ppb	24.2	296.68	0.0100	Pulse	0.1000	3
Ti	47	45	He	1.628	ppb	49.3	36.67	0.0012	Pulse	0.1000	3
V	51	45	He	0.717	ppb	4.8	1252.06	0.0421	Pulse	0.5000	3
Cr	52	45	He	0.852	ppb	9.7	913.39	0.0307	Pulse	0.1000	3
Mn	55	45	He	1.038	ppb	27.8	466.69	0.0157	Pulse	0.1000	3
Fe	57	45	He	32.694	ppb	17.1	640.04	0.0215	Pulse	0.1000	3
Co	59	72	He	0.387	ppb	10.7	866.73	0.0166	Pulse	0.1000	3
Ni	60	72	He	0.042	ppb	252.0	566.70	0.0109	Pulse	0.1000	3
Cu	63	72	He	0.646	ppb	11.5	1750.18	0.0336	Pulse	0.1000	3
Zn	66	72	He	0.347	ppb	142.3	250.01	0.0048	Pulse	0.1000	3
As	75	72	He	0.436	ppb	36.0	67.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.799	ppb	10.4	360.02	0.0069	Pulse	0.1000	3
Mo	98	115	He	0.090	ppb	40.3	123.34	0.0024	Pulse	0.1000	3
Ag	107	115	He	0.047	ppb	59.6	160.01	0.0031	Pulse	0.1000	3
Cd	111	115	He	0.021	ppb	69.7	11.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.186	ppb	N/A	816.72	0.0157	Pulse	0.1000	3
Sb	121	159	He	0.114	ppb	14.4	106.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.535	ppb	33.6	170.01	0.0033	Pulse	0.1000	3
Tl	205	209	He	0.139	ppb	8.4	1283.44	0.0054	Pulse	0.1000	3
Pb	208	209	He	0.054	ppb	31.2	1223.40	0.0051	Pulse	0.1000	3
U	238	209	He	0.047	ppb	25.9	760.06	0.0032	Pulse	0.1000	3

ISTD Table:

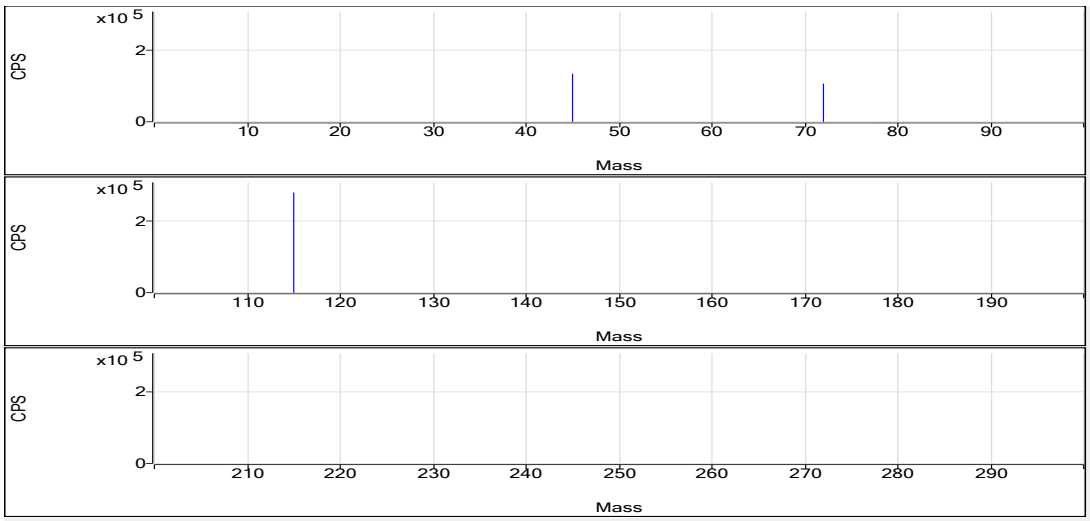
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2087545.96	0.2	95.0	Pulse	0.1000	3
No Gas	Ge	72	1030238.37	0.5	96.0	Pulse	0.1000	3
H2	Sc	45	134539.57	1.0	99.1	Pulse	0.1000	3
H2	Ge	72	106898.69	2.0	101.1	Pulse	0.1000	3
H2	In	115	280598.38	0.2	100.3	Pulse	0.1000	3
He	Sc	45	29710.80	0.3	99.5	Pulse	0.1000	3
He	Ge	72	52128.18	0.3	99.4	Pulse	0.1000	3
He	In	115	51991.45	2.0	101.5	Pulse	0.1000	3
He	Tb	159	280653.32	0.7	100.8	Pulse	0.1000	3
He	Bi	209	239588.73	0.3	100.9	Pulse	0.1000	3

No Gas

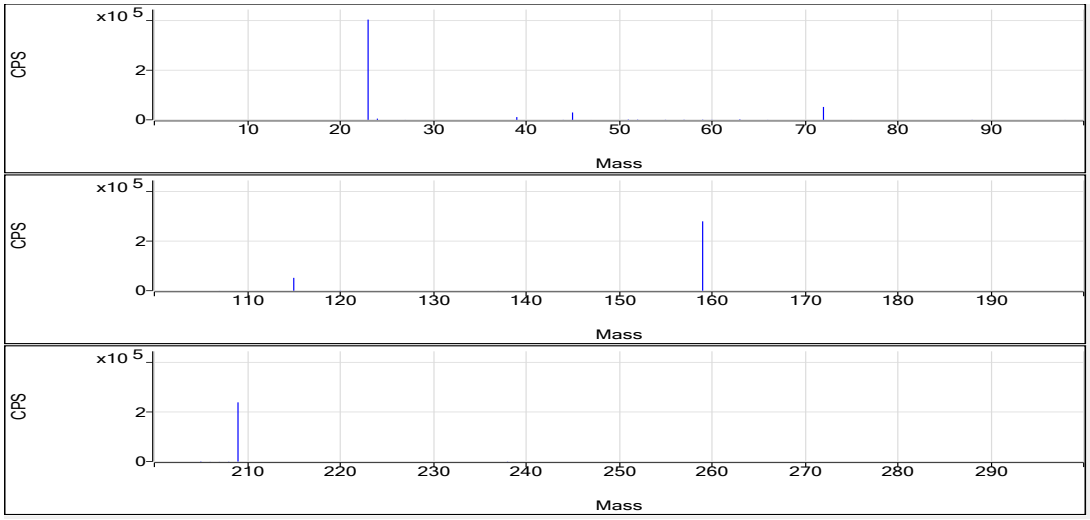


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.041	0.0001	112.00	0.0007	2.306E-05
Be	9	1	No Gas	0.052	0.0001	130.00	0.0007	2.306E-05
Be	9	1	No Gas	0.033	0	100.00	0.0007	2.306E-05
Se	78	2	H2	0.048	0.0001	6.67	0.0004	4.221E-05
Se	78	2	H2	0.183	0.0001	12.67	0.0004	4.221E-05
Se	78	2	H2	0.044	0.0001	6.67	0.0004	4.221E-05
Na	23	3	He	3837.728	14.8905	441361.59	0.0038	0.2864
Na	23	3	He	3432.097	13.3469	397886.24	0.0038	0.2864
Na	23	3	He	3264.781	12.7102	377247.34	0.0038	0.2864
Mg	24	3	He	91.962	0.1849	5481.30	0.0019	0.007972
Mg	24	3	He	81.295	0.1644	4900.96	0.0019	0.007972
Mg	24	3	He	65.031	0.1331	3950.67	0.0019	0.007972
Al	27	3	He	4.53	0.004	120.01	0.0005	0.00158
Al	27	3	He	2.64	0.003	90.00	0.0005	0.00158
Al	27	3	He	6.375	0.0051	150.01	0.0005	0.00158
K	39	3	He	18.669	0.3753	11124.56	0.0011	0.3552
K	39	3	He	12.306	0.3685	10984.44	0.0011	0.3552
K	39	3	He	13.808	0.3701	10984.35	0.0011	0.3552
Ca	44	3	He	145.989	0.0111	330.02	0.0001	0.002
Ca	44	3	He	144.97	0.0111	330.02	0.0001	0.002
Ca	44	3	He	91.891	0.0077	230.01	0.0001	0.002
Ti	47	3	He	2.554	0.0017	50.00	0.0005	0.0004395
Ti	47	3	He	1.161	0.001	30.00	0.0005	0.0004395
Ti	47	3	He	1.17	0.001	30.00	0.0005	0.0004395
V	51	3	He	0.691	0.0416	1232.06	0.0218	0.02648
V	51	3	He	0.705	0.0419	1248.06	0.0218	0.02648
V	51	3	He	0.756	0.043	1276.06	0.0218	0.02648
Cr	52	3	He	0.897	0.0321	950.07	0.029	0.006056
Cr	52	3	He	0.902	0.0322	960.07	0.029	0.006056
Cr	52	3	He	0.756	0.028	830.04	0.029	0.006056
Mn	55	3	He	1.305	0.0189	560.04	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.733	0.0121	360.02	0.0119	0.00335
Mn	55	3	He	1.077	0.0162	480.02	0.0119	0.00335
Fe	57	3	He	38.759	0.025	740.05	0.0006	0.003117
Fe	57	3	He	27.794	0.0188	560.03	0.0006	0.003117
Fe	57	3	He	31.527	0.0209	620.04	0.0006	0.003117
Co	59	3	He	0.415	0.0175	910.06	0.0317	0.004379
Co	59	3	He	0.339	0.0151	790.05	0.0317	0.004379
Co	59	3	He	0.407	0.0173	900.07	0.0317	0.004379
Ni	60	3	He	-0.075	0.0098	510.03	0.009	0.01049
Ni	60	3	He	0.131	0.0117	610.04	0.009	0.01049
Ni	60	3	He	0.07	0.0111	580.03	0.009	0.01049
Cu	63	3	He	0.56	0.0314	1630.16	0.0259	0.01685
Cu	63	3	He	0.695	0.0348	1820.20	0.0259	0.01685
Cu	63	3	He	0.682	0.0345	1800.18	0.0259	0.01685
Zn	66	3	He	0.896	0.0063	330.02	0.0028	0.003817
Zn	66	3	He	-0.064	0.0036	190.01	0.0028	0.003817
Zn	66	3	He	0.21	0.0044	230.01	0.0028	0.003817
As	75	3	He	0.59	0.0016	82.00	0.0019	0.0004832
As	75	3	He	0.276	0.001	52.00	0.0019	0.0004832
As	75	3	He	0.443	0.0013	68.00	0.0019	0.0004832
Sr	88	3	He	0.759	0.0066	350.01	0.008	0.0005203
Sr	88	3	He	0.743	0.0065	330.02	0.008	0.0005203
Sr	88	3	He	0.894	0.0077	400.02	0.008	0.0005203
Mo	98	3	He	0.068	0.0019	100.00	0.0229	0.0003256
Mo	98	3	He	0.131	0.0033	170.01	0.0229	0.0003256
Mo	98	3	He	0.07	0.0019	100.01	0.0229	0.0003256
Ag	107	3	He	0.016	0.0015	80.00	0.05	0.000719
Ag	107	3	He	0.056	0.0035	180.01	0.05	0.000719
Ag	107	3	He	0.07	0.0042	220.01	0.05	0.000719
Cd	111	3	He	0.015	0.0002	10.00	0.0055	0.000104
Cd	111	3	He	0.01	0.0002	8.00	0.0055	0.000104
Cd	111	3	He	0.037	0.0003	16.00	0.0055	0.000104
Sn	120	3	He	-0.237	0.0149	790.05	0.0159	0.01867
Sn	120	3	He	-0.161	0.0161	820.05	0.0159	0.01867
Sn	120	3	He	-0.159	0.0161	840.05	0.0159	0.01867
Sb	121	3	He	0.104	0.0004	100.00	0.0026	8.342E-05
Sb	121	3	He	0.133	0.0004	120.01	0.0026	8.342E-05
Sb	121	3	He	0.105	0.0004	100.00	0.0026	8.342E-05
Ba	137	3	He	0.714	0.0041	220.01	0.005	0.0005882
Ba	137	3	He	0.354	0.0024	120.01	0.005	0.0005882
Ba	137	3	He	0.537	0.0033	170.01	0.005	0.0005882
Tl	205	3	He	0.144	0.0055	1320.12	0.0313	0.0009967
Tl	205	3	He	0.148	0.0056	1350.11	0.0313	0.0009967
Tl	205	3	He	0.126	0.0049	1180.09	0.0313	0.0009967
Pb	208	3	He	0.057	0.0052	660.04	0.041	0.002892
Pb	208	3	He	0.069	0.0057	710.04	0.041	0.002892
Pb	208	3	He	0.036	0.0044	590.04	0.041	0.002892
U	238	3	He	0.054	0.0035	850.07	0.0501	0.0008282
U	238	3	He	0.053	0.0035	840.06	0.0501	0.0008282
U	238	3	He	0.033	0.0025	590.04	0.0501	0.0008282
Sc	45	1	No Gas			2082172.16		
Sc	45	1	No Gas			2091631.69		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2088834.03		
Ge	72	1	No Gas			1027335.14		
Ge	72	1	No Gas			1027034.83		
Ge	72	1	No Gas			1036345.14		
Sc	45	2	H2			133604.34		
Sc	45	2	H2			134007.63		
Sc	45	2	H2			136006.74		
Ge	72	2	H2			106301.03		
Ge	72	2	H2			105122.45		
Ge	72	2	H2			109272.59		
In	115	2	H2			280809.78		
In	115	2	H2			280018.96		
In	115	2	H2			280966.40		
Sc	45	3	He			29640.54		
Sc	45	3	He			29811.16		
Sc	45	3	He			29680.71		
Ge	72	3	He			51984.45		
Ge	72	3	He			52245.40		
Ge	72	3	He			52154.69		
In	115	3	He			53021.86		
In	115	3	He			50933.75		
In	115	3	He			52037.85		
Tb	159	3	He			282770.68		
Tb	159	3	He			279387.28		
Tb	159	3	He			279801.99		
Bi	209	3	He			240041.64		
Bi	209	3	He			239852.42		
Bi	209	3	He			238872.13		

Quantitation Report

Data File Name	108SMPL.d
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Sample Name	410-179113-P-6-A
Sample Type	Sample
Comment	A5
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

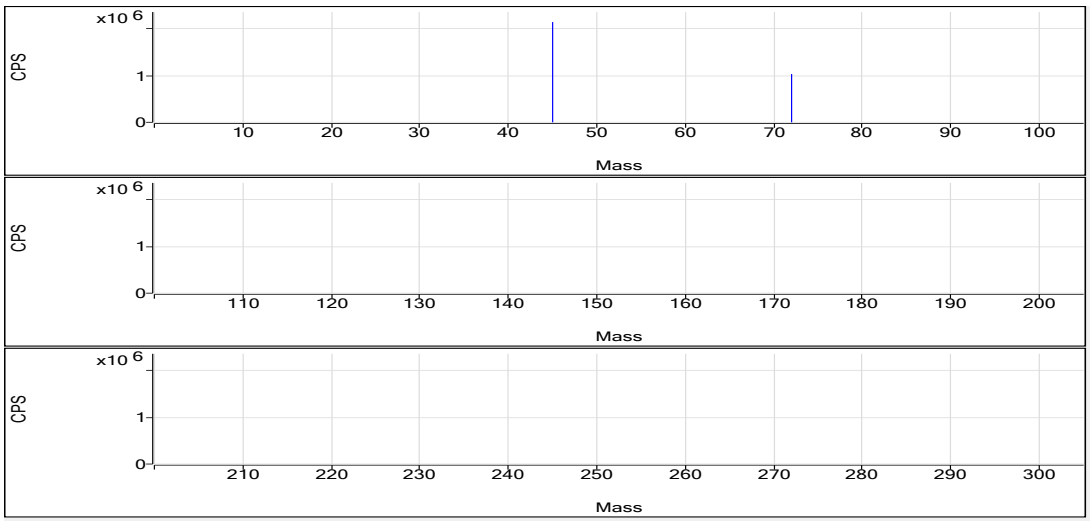
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.066	ppb	22.2	156.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.168	ppb	9.5	12.00	0.0001	Pulse	1.5000	3
Na	23	45	He	373974.320	ppb	5.1	42157705.20	1 423.4049	Analog	0.1000	3
Mg	24	45	He	11020.782	ppb	3.3	628613.34	21.2144	Pulse	0.1000	3
Al	27	45	He	130.663	ppb	10.9	2156.99	0.0728	Pulse	0.1000	3
K	39	45	He	5284.875	ppb	4.6	179019.50	6.0433	Pulse	0.1000	3
Ca	44	45	He	19241.300	ppb	5.0	35720.83	1.2058	Pulse	0.1000	3
Ti	47	45	He	5.097	ppb	44.8	86.67	0.0029	Pulse	0.1000	3
V	51	45	He	9.504	ppb	2.9	6935.68	0.2340	Pulse	0.5000	3
Cr	52	45	He	2.119	ppb	15.9	1993.55	0.0675	Pulse	0.1000	3
Mn	55	45	He	1521.216	ppb	5.0	536671.14	18.1196	Pulse	0.1000	3
Fe	57	45	He	27925.881	ppb	4.7	466415.41	15.7463	Pulse	0.1000	3
Co	59	72	He	5.267	ppb	3.3	9103.12	0.1712	Pulse	0.1000	3
Ni	60	72	He	0.719	ppb	27.1	903.39	0.0170	Pulse	0.1000	3
Cu	63	72	He	1.882	ppb	9.7	3490.53	0.0656	Pulse	0.1000	3
Zn	66	72	He	11.968	ppb	10.8	2000.20	0.0376	Pulse	0.1000	3
As	75	72	He	5.926	ppb	3.1	610.02	0.0115	Pulse	0.5000	3
Sr	88	115	He	137.986	ppb	3.2	57399.42	1.1068	Pulse	0.1000	3
Mo	98	115	He	0.606	ppb	9.0	736.72	0.0142	Pulse	0.1000	3
Ag	107	115	He	0.041	ppb	25.8	143.34	0.0028	Pulse	0.1000	3
Cd	111	115	He	0.047	ppb	72.3	18.67	0.0004	Pulse	0.5000	3
Sn	120	115	He	-0.084	ppb	N/A	900.06	0.0173	Pulse	0.1000	3
Sb	121	159	He	0.257	ppb	22.5	213.34	0.0008	Pulse	0.1000	3
Ba	137	115	He	48.899	ppb	1.6	12692.92	0.2447	Pulse	0.1000	3
Tl	205	209	He	0.076	ppb	8.4	793.39	0.0034	Pulse	0.1000	3
Pb	208	209	He	1.715	ppb	1.7	17281.77	0.0733	Pulse	0.1000	3
U	238	209	He	0.067	ppb	6.5	990.07	0.0042	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2147453.77	0.9	97.7	Pulse	0.1000	3
No Gas	Ge	72	1034254.91	0.8	96.4	Pulse	0.1000	3
H2	Sc	45	138550.48	1.6	102.1	Pulse	0.1000	3
H2	Ge	72	105346.69	0.4	99.6	Pulse	0.1000	3
H2	In	115	278068.04	0.8	99.4	Pulse	0.1000	3
He	Sc	45	29657.43	4.0	99.4	Pulse	0.1000	3
He	Ge	72	53185.79	1.3	101.5	Pulse	0.1000	3
He	In	115	51889.76	2.5	101.3	Pulse	0.1000	3
He	Tb	159	283737.59	1.5	101.9	Pulse	0.1000	3
He	Bi	209	235929.11	1.4	99.4	Pulse	0.1000	3

No Gas



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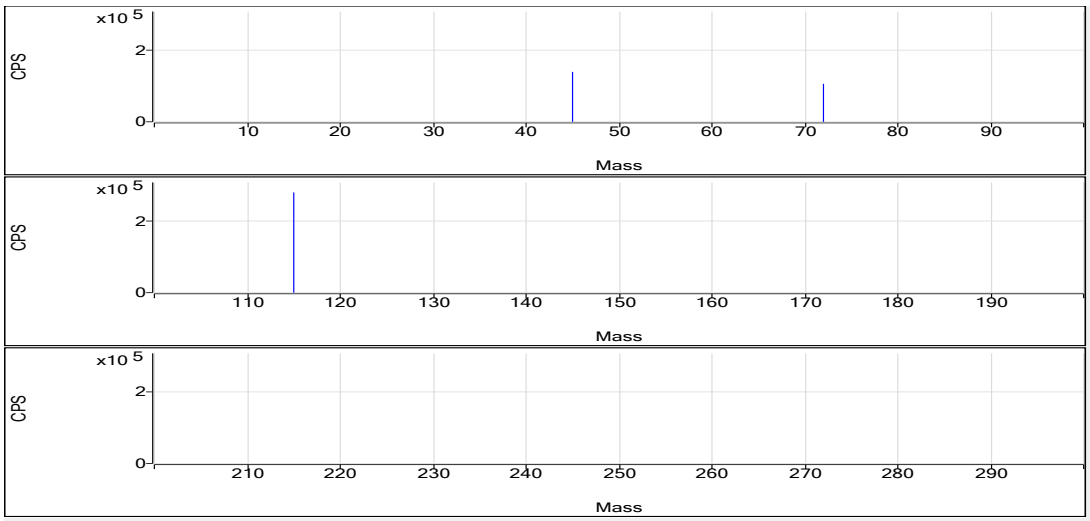
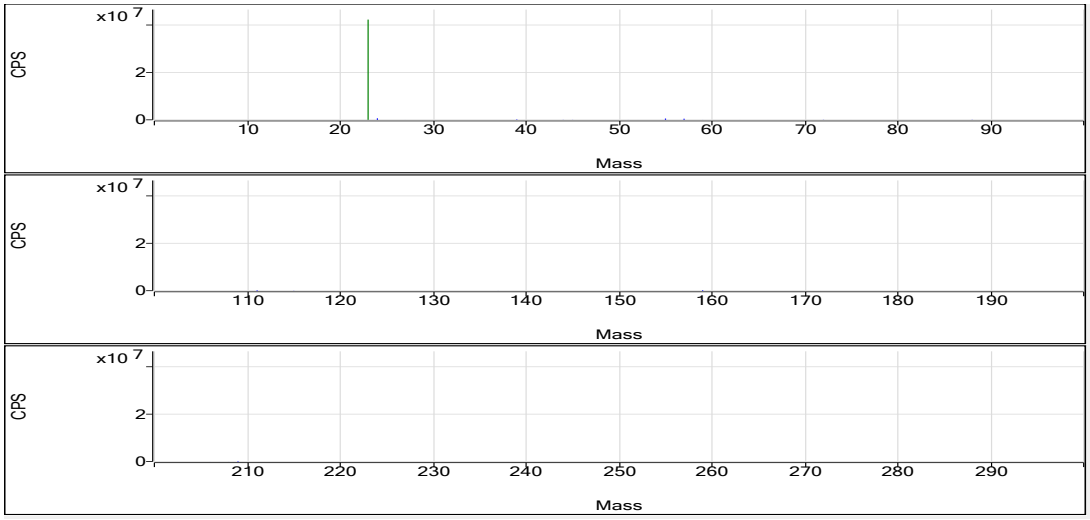


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.064	0.0001	152.00	0.0007	2.306E-05
Be	9	1	No Gas	0.053	0.0001	136.00	0.0007	2.306E-05
Be	9	1	No Gas	0.082	0.0001	180.00	0.0007	2.306E-05
Se	78	2	H2	0.184	0.0001	12.67	0.0004	4.221E-05
Se	78	2	H2	0.152	0.0001	11.33	0.0004	4.221E-05
Se	78	2	H2	0.167	0.0001	12.00	0.0004	4.221E-05
Na	23	3	He	393487.51	1497.6602	42725729.36	0.0038	0.2864
Na	23	3	He	372970.655	1419.5855	41949874.37	0.0038	0.2864
Na	23	3	He	355464.795	1352.9689	41797511.88	0.0038	0.2864
Mg	24	3	He	11376.653	21.8991	624745.34	0.0019	0.007972
Mg	24	3	He	11032.592	21.2371	627572.53	0.0019	0.007972
Mg	24	3	He	10653.103	20.5069	633522.14	0.0019	0.007972
Al	27	3	He	143.151	0.0796	2270.51	0.0005	0.00158
Al	27	3	He	115.102	0.0643	1900.21	0.0005	0.00158
Al	27	3	He	133.738	0.0745	2300.26	0.0005	0.00158
K	39	3	He	5512.102	6.2878	179381.60	0.0011	0.3552
K	39	3	He	5317.853	6.0788	179632.61	0.0011	0.3552
K	39	3	He	5024.668	5.7632	178044.29	0.0011	0.3552
Ca	44	3	He	20342.708	1.2747	36365.86	0.0001	0.002
Ca	44	3	He	18753.937	1.1753	34731.87	0.0001	0.002
Ca	44	3	He	18627.257	1.1674	36064.77	0.0001	0.002
Ti	47	3	He	6.997	0.0039	110.01	0.0005	0.0004395
Ti	47	3	He	2.565	0.0017	50.00	0.0005	0.0004395
Ti	47	3	He	5.729	0.0032	100.00	0.0005	0.0004395
V	51	3	He	9.818	0.2409	6871.65	0.0218	0.02648
V	51	3	He	9.393	0.2316	6843.63	0.0218	0.02648
V	51	3	He	9.3	0.2296	7091.76	0.0218	0.02648
Cr	52	3	He	2.501	0.0785	2240.26	0.029	0.006056
Cr	52	3	He	1.987	0.0636	1880.19	0.029	0.006056
Cr	52	3	He	1.869	0.0602	1860.19	0.029	0.006056
Mn	55	3	He	1597.661	19.03	542893.70	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1519.747	18.1021	534931.52	0.0119	0.00335
Mn	55	3	He	1446.241	17.2267	532188.20	0.0119	0.00335
Fe	57	3	He	29244.134	16.4895	470417.41	0.0006	0.003117
Fe	57	3	He	27903.13	15.7335	464937.30	0.0006	0.003117
Fe	57	3	He	26630.378	15.016	463891.52	0.0006	0.003117
Co	59	3	He	5.264	0.1711	9233.16	0.0317	0.004379
Co	59	3	He	5.094	0.1657	8772.93	0.0317	0.004379
Co	59	3	He	5.443	0.1767	9303.28	0.0317	0.004379
Ni	60	3	He	0.705	0.0169	910.06	0.009	0.01049
Ni	60	3	He	0.532	0.0153	810.05	0.009	0.01049
Ni	60	3	He	0.92	0.0188	990.06	0.009	0.01049
Cu	63	3	He	2.083	0.0708	3820.63	0.0259	0.01685
Cu	63	3	He	1.727	0.0616	3260.46	0.0259	0.01685
Cu	63	3	He	1.837	0.0644	3390.51	0.0259	0.01685
Zn	66	3	He	11.044	0.035	1890.19	0.0028	0.003817
Zn	66	3	He	11.418	0.0361	1910.19	0.0028	0.003817
Zn	66	3	He	13.443	0.0418	2200.23	0.0028	0.003817
As	75	3	He	5.715	0.0111	598.02	0.0019	0.0004832
As	75	3	He	6.034	0.0117	618.02	0.0019	0.0004832
As	75	3	He	6.03	0.0117	614.02	0.0019	0.0004832
Sr	88	3	He	138.702	1.1125	57617.07	0.008	0.0005203
Sr	88	3	He	141.943	1.1385	57647.28	0.008	0.0005203
Sr	88	3	He	133.312	1.0693	56933.91	0.008	0.0005203
Mo	98	3	He	0.643	0.0151	780.05	0.0229	0.0003256
Mo	98	3	He	0.632	0.0148	750.05	0.0229	0.0003256
Mo	98	3	He	0.543	0.0128	680.05	0.0229	0.0003256
Ag	107	3	He	0.044	0.0029	150.01	0.05	0.000719
Ag	107	3	He	0.029	0.0022	110.00	0.05	0.000719
Ag	107	3	He	0.049	0.0032	170.01	0.05	0.000719
Cd	111	3	He	0.072	0.0005	26.00	0.0055	0.000104
Cd	111	3	He	0.06	0.0004	22.00	0.0055	0.000104
Cd	111	3	He	0.008	0.0002	8.00	0.0055	0.000104
Sn	120	3	He	-0.215	0.0153	790.05	0.0159	0.01867
Sn	120	3	He	-0.056	0.0178	900.06	0.0159	0.01867
Sn	120	3	He	0.019	0.019	1010.07	0.0159	0.01867
Sb	121	3	He	0.22	0.0007	190.01	0.0026	8.342E-05
Sb	121	3	He	0.226	0.0007	190.01	0.0026	8.342E-05
Sb	121	3	He	0.323	0.0009	260.01	0.0026	8.342E-05
Ba	137	3	He	48.337	0.2419	12526.00	0.005	0.0005882
Ba	137	3	He	49.8	0.2492	12616.26	0.005	0.0005882
Ba	137	3	He	48.559	0.243	12936.51	0.005	0.0005882
Tl	205	3	He	0.083	0.0036	860.06	0.0313	0.0009967
Tl	205	3	He	0.071	0.0032	760.05	0.0313	0.0009967
Tl	205	3	He	0.072	0.0033	760.05	0.0313	0.0009967
Pb	208	3	He	1.721	0.0735	9603.88	0.041	0.002892
Pb	208	3	He	1.683	0.0719	8953.36	0.041	0.002892
Pb	208	3	He	1.742	0.0743	9113.43	0.041	0.002892
U	238	3	He	0.072	0.0044	1060.07	0.0501	0.0008282
U	238	3	He	0.063	0.004	940.07	0.0501	0.0008282
U	238	3	He	0.067	0.0042	970.07	0.0501	0.0008282
Sc	45	1	No Gas			2150955.75		
Sc	45	1	No Gas			2163882.94		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2127522.62		
Ge	72	1	No Gas			1032758.50		
Ge	72	1	No Gas			1043135.69		
Ge	72	1	No Gas			1026870.53		
Sc	45	2	H2			136129.76		
Sc	45	2	H2			140356.90		
Sc	45	2	H2			139164.77		
Ge	72	2	H2			104820.12		
Ge	72	2	H2			105585.28		
Ge	72	2	H2			105634.68		
In	115	2	H2			276825.97		
In	115	2	H2			276820.33		
In	115	2	H2			280557.83		
Sc	45	3	He			28528.32		
Sc	45	3	He			29550.79		
Sc	45	3	He			30893.18		
Ge	72	3	He			53971.93		
Ge	72	3	He			52947.98		
Ge	72	3	He			52637.47		
In	115	3	He			51796.47		
In	115	3	He			50641.71		
In	115	3	He			53252.15		
Tb	159	3	He			288702.65		
Tb	159	3	He			281786.70		
Tb	159	3	He			280723.43		
Bi	209	3	He			239515.58		
Bi	209	3	He			235332.79		
Bi	209	3	He			232938.96		

Quantitation Report

Data File Name	109SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 12:38:38
Sample Name	410-179113-P-4-A
Sample Type	Sample
Comment	A5
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

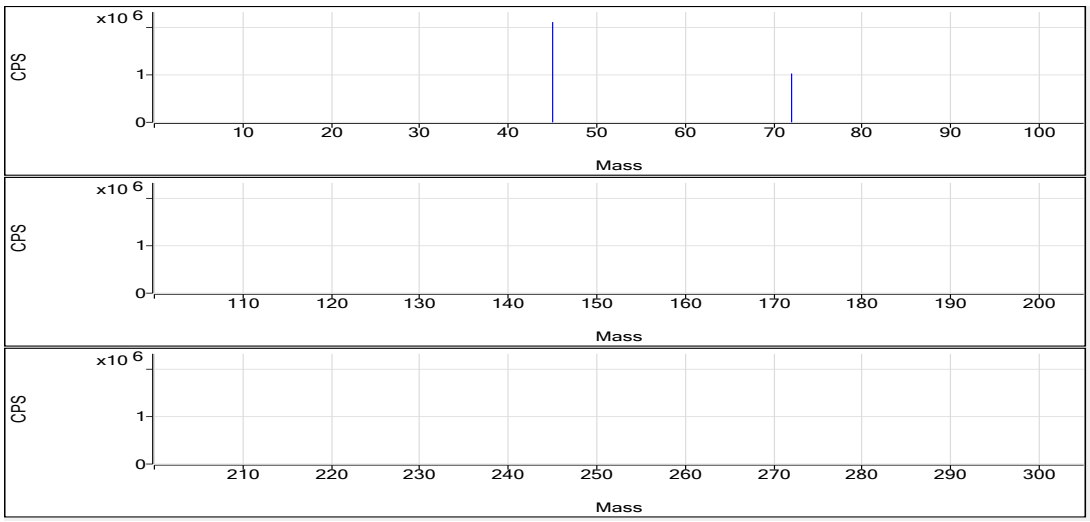
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.079	ppb	20.6	174.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.209	ppb	23.3	13.78	0.0001	Pulse	1.5000	3
Na	23	45	He	369641.049	ppb	1.8	42441842.70	1 406.9151	Analog	0.1000	3
Mg	24	45	He	10872.309	ppb	1.4	631371.89	20.9287	Pulse	0.1000	3
Al	27	45	He	335.316	ppb	0.8	5561.23	0.1843	Pulse	0.1000	3
K	39	45	He	5222.073	ppb	2.2	180268.64	5.9757	Pulse	0.1000	3
Ca	44	45	He	18897.232	ppb	1.5	35727.84	1.1843	Pulse	0.1000	3
Ti	47	45	He	14.504	ppb	17.7	226.68	0.0075	Pulse	0.1000	3
V	51	45	He	10.555	ppb	1.5	7752.75	0.2570	Pulse	0.5000	3
Cr	52	45	He	2.769	ppb	5.0	2603.66	0.0863	Pulse	0.1000	3
Mn	55	45	He	1497.834	ppb	1.3	538229.76	17.8411	Pulse	0.1000	3
Fe	57	45	He	27593.868	ppb	2.0	469366.19	15.5592	Pulse	0.1000	3
Co	59	72	He	5.193	ppb	4.7	8819.71	0.1688	Pulse	0.1000	3
Ni	60	72	He	1.226	ppb	11.8	1126.75	0.0216	Pulse	0.1000	3
Cu	63	72	He	3.709	ppb	3.6	5898.10	0.1129	Pulse	0.1000	3
Zn	66	72	He	24.301	ppb	1.7	3787.31	0.0725	Pulse	0.1000	3
As	75	72	He	5.693	ppb	9.0	576.68	0.0110	Pulse	0.5000	3
Sr	88	115	He	137.631	ppb	1.0	57021.75	1.1039	Pulse	0.1000	3
Mo	98	115	He	0.757	ppb	11.2	913.40	0.0177	Pulse	0.1000	3
Ag	107	115	He	0.035	ppb	73.7	126.67	0.0025	Pulse	0.1000	3
Cd	111	115	He	0.063	ppb	22.8	23.33	0.0005	Pulse	0.5000	3
Sn	120	115	He	0.319	ppb	34.7	1226.77	0.0237	Pulse	0.1000	3
Sb	121	159	He	0.426	ppb	35.0	336.69	0.0012	Pulse	0.1000	3
Ba	137	115	He	53.983	ppb	2.7	13950.84	0.2700	Pulse	0.1000	3
Tl	205	209	He	0.078	ppb	18.6	806.73	0.0034	Pulse	0.1000	3
Pb	208	209	He	3.535	ppb	3.9	34609.11	0.1479	Pulse	0.1000	3
U	238	209	He	0.082	ppb	6.4	1156.76	0.0049	Pulse	0.1000	3

ISTD Table:

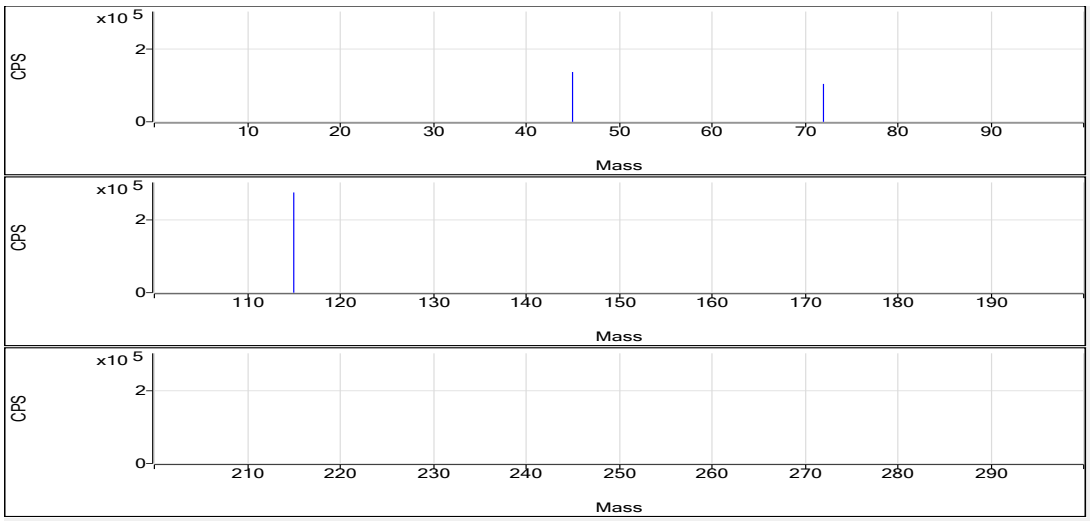
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2119338.93	0.8	96.4	Pulse	0.1000	3
No Gas	Ge	72	1031704.60	1.2	96.1	Pulse	0.1000	3
H2	Sc	45	137648.47	0.6	101.4	Pulse	0.1000	3
H2	Ge	72	104779.37	2.1	99.1	Pulse	0.1000	3
H2	In	115	277056.62	1.4	99.1	Pulse	0.1000	3
He	Sc	45	30171.76	1.5	101.1	Pulse	0.1000	3
He	Ge	72	52248.85	1.0	99.7	Pulse	0.1000	3
He	In	115	51656.90	1.0	100.8	Pulse	0.1000	3
He	Tb	159	281815.56	1.0	101.2	Pulse	0.1000	3
He	Bi	209	234047.86	1.0	98.6	Pulse	0.1000	3

No Gas

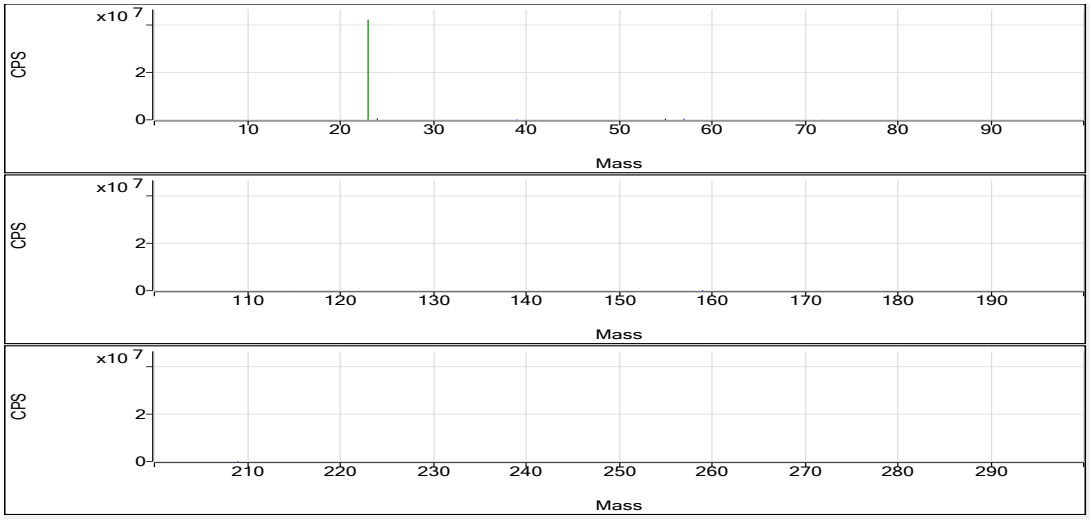


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.068	0.0001	156.00	0.0007	2.306E-05
Be	9	1	No Gas	0.072	0.0001	162.00	0.0007	2.306E-05
Be	9	1	No Gas	0.098	0.0001	206.00	0.0007	2.306E-05
Se	78	2	H2	0.204	0.0001	13.33	0.0004	4.221E-05
Se	78	2	H2	0.26	0.0002	16.00	0.0004	4.221E-05
Se	78	2	H2	0.163	0.0001	12.00	0.0004	4.221E-05
Na	23	3	He	377174.737	1435.5837	42594874.37	0.0038	0.2864
Na	23	3	He	366324.62	1394.2948	42319384.37	0.0038	0.2864
Na	23	3	He	365423.79	1390.8668	42411269.37	0.0038	0.2864
Mg	24	3	He	11043.018	21.2571	630715.77	0.0019	0.007972
Mg	24	3	He	10791.118	20.7724	630481.12	0.0019	0.007972
Mg	24	3	He	10782.791	20.7564	632918.78	0.0019	0.007972
Al	27	3	He	332.393	0.1827	5421.22	0.0005	0.00158
Al	27	3	He	336.356	0.1849	5611.21	0.0005	0.00158
Al	27	3	He	337.199	0.1853	5651.25	0.0005	0.00158
K	39	3	He	5310.943	6.0713	180141.27	0.0011	0.3552
K	39	3	He	5264.894	6.0218	182771.83	0.0011	0.3552
K	39	3	He	5090.381	5.8339	177892.81	0.0011	0.3552
Ca	44	3	He	19142.42	1.1996	35594.04	0.0001	0.002
Ca	44	3	He	18955.168	1.1879	36055.47	0.0001	0.002
Ca	44	3	He	18594.109	1.1653	35534.00	0.0001	0.002
Ti	47	3	He	17.045	0.0088	260.01	0.0005	0.0004395
Ti	47	3	He	11.92	0.0063	190.01	0.0005	0.0004395
Ti	47	3	He	14.547	0.0075	230.01	0.0005	0.0004395
V	51	3	He	10.681	0.2597	7706.05	0.0218	0.02648
V	51	3	He	10.372	0.253	7678.05	0.0218	0.02648
V	51	3	He	10.613	0.2582	7874.15	0.0218	0.02648
Cr	52	3	He	2.792	0.087	2580.32	0.029	0.006056
Cr	52	3	He	2.895	0.09	2730.35	0.029	0.006056
Cr	52	3	He	2.621	0.082	2500.31	0.029	0.006056
Mn	55	3	He	1519.954	18.1046	537176.67	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1492.049	17.7723	539420.19	0.0119	0.00335
Mn	55	3	He	1481.498	17.6466	538092.41	0.0119	0.00335
Fe	57	3	He	28099.095	15.844	470102.88	0.0006	0.003117
Fe	57	3	He	27698.682	15.6182	474042.02	0.0006	0.003117
Fe	57	3	He	26983.828	15.2152	463953.66	0.0006	0.003117
Co	59	3	He	5.347	0.1737	9113.21	0.0317	0.004379
Co	59	3	He	4.908	0.1598	8412.77	0.0317	0.004379
Co	59	3	He	5.323	0.1729	8933.14	0.0317	0.004379
Ni	60	3	He	1.181	0.0212	1110.09	0.009	0.01049
Ni	60	3	He	1.11	0.0205	1080.08	0.009	0.01049
Ni	60	3	He	1.388	0.023	1190.09	0.009	0.01049
Cu	63	3	He	3.554	0.1089	5711.32	0.0259	0.01685
Cu	63	3	He	3.789	0.115	6051.44	0.0259	0.01685
Cu	63	3	He	3.784	0.1148	5931.54	0.0259	0.01685
Zn	66	3	He	24.36	0.0726	3810.63	0.0028	0.003817
Zn	66	3	He	24.676	0.0735	3870.71	0.0028	0.003817
Zn	66	3	He	23.869	0.0713	3680.58	0.0028	0.003817
As	75	3	He	5.106	0.01	522.01	0.0019	0.0004832
As	75	3	He	5.948	0.0115	606.02	0.0019	0.0004832
As	75	3	He	6.025	0.0117	602.02	0.0019	0.0004832
Sr	88	3	He	138.072	1.1075	57286.39	0.008	0.0005203
Sr	88	3	He	138.673	1.1123	56854.31	0.008	0.0005203
Sr	88	3	He	136.147	1.092	56924.54	0.008	0.0005203
Mo	98	3	He	0.855	0.0199	1030.08	0.0229	0.0003256
Mo	98	3	He	0.703	0.0164	840.05	0.0229	0.0003256
Mo	98	3	He	0.714	0.0167	870.06	0.0229	0.0003256
Ag	107	3	He	0.036	0.0025	130.01	0.05	0.000719
Ag	107	3	He	0.06	0.0037	190.01	0.05	0.000719
Ag	107	3	He	0.009	0.0012	60.00	0.05	0.000719
Cd	111	3	He	0.079	0.0005	28.00	0.0055	0.000104
Cd	111	3	He	0.052	0.0004	20.00	0.0055	0.000104
Cd	111	3	He	0.058	0.0004	22.00	0.0055	0.000104
Sn	120	3	He	0.199	0.0218	1130.09	0.0159	0.01867
Sn	120	3	He	0.339	0.0241	1230.11	0.0159	0.01867
Sn	120	3	He	0.418	0.0253	1320.11	0.0159	0.01867
Sb	121	3	He	0.581	0.0016	450.03	0.0026	8.342E-05
Sb	121	3	He	0.412	0.0012	330.02	0.0026	8.342E-05
Sb	121	3	He	0.284	0.0008	230.01	0.0026	8.342E-05
Ba	137	3	He	52.738	0.2638	13647.06	0.005	0.0005882
Ba	137	3	He	53.647	0.2684	13717.34	0.005	0.0005882
Ba	137	3	He	55.565	0.2779	14488.11	0.005	0.0005882
Tl	205	3	He	0.095	0.004	930.08	0.0313	0.0009967
Tl	205	3	He	0.07	0.0032	750.05	0.0313	0.0009967
Tl	205	3	He	0.07	0.0032	740.05	0.0313	0.0009967
Pb	208	3	He	3.622	0.1515	18823.97	0.041	0.002892
Pb	208	3	He	3.378	0.1414	17992.96	0.041	0.002892
Pb	208	3	He	3.606	0.1508	18653.70	0.041	0.002892
U	238	3	He	0.076	0.0047	1090.08	0.0501	0.0008282
U	238	3	He	0.083	0.005	1180.10	0.0501	0.0008282
U	238	3	He	0.087	0.0052	1200.11	0.0501	0.0008282
Sc	45	1	No Gas			2105445.28		
Sc	45	1	No Gas			2115144.19		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2137427.31		
Ge	72	1	No Gas			1025003.66		
Ge	72	1	No Gas			1024618.97		
Ge	72	1	No Gas			1045491.16		
Sc	45	2	H2			136753.72		
Sc	45	2	H2			137833.05		
Sc	45	2	H2			138358.65		
Ge	72	2	H2			102866.93		
Ge	72	2	H2			104234.76		
Ge	72	2	H2			107236.42		
In	115	2	H2			277122.91		
In	115	2	H2			273136.36		
In	115	2	H2			280910.60		
Sc	45	3	He			29670.77		
Sc	45	3	He			30351.82		
Sc	45	3	He			30492.69		
Ge	72	3	He			52456.07		
Ge	72	3	He			52637.12		
Ge	72	3	He			51653.36		
In	115	3	He			51736.62		
In	115	3	He			51124.82		
In	115	3	He			52137.95		
Tb	159	3	He			281534.90		
Tb	159	3	He			284667.24		
Tb	159	3	He			279244.55		
Bi	209	3	He			234128.26		
Bi	209	3	He			236255.70		
Bi	209	3	He			231759.61		

Quantitation Report

Data File Name	110SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 12:40:39
Sample Name	410-179113-P-3-A
Sample Type	Sample
Comment	A5
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

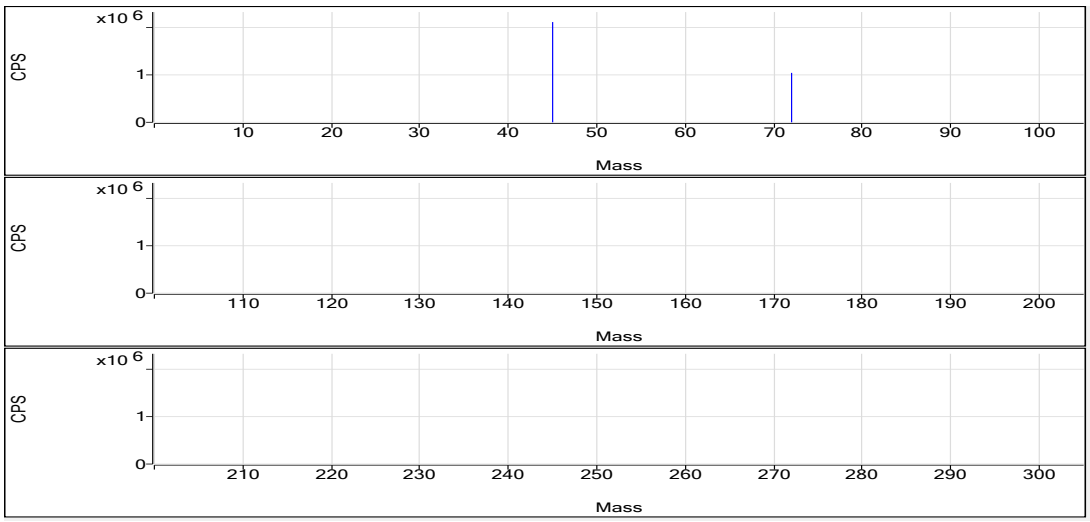
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.109	ppb	13.6	220.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.072	ppb	80.9	7.78	0.0001	Pulse	1.5000	3
Na	23	45	He	190046.223	ppb	2.0	22020285.51	723.4866	Analog	0.1000	3
Mg	24	45	He	6374.850	ppb	1.9	373571.34	12.2746	Pulse	0.1000	3
Al	27	45	He	614.671	ppb	0.2	10243.87	0.3365	Pulse	0.1000	3
K	39	45	He	6552.072	ppb	2.6	225435.82	7.4072	Pulse	0.1000	3
Ca	44	45	He	14780.106	ppb	1.4	28211.20	0.9267	Pulse	0.1000	3
Ti	47	45	He	15.258	ppb	19.8	240.01	0.0079	Pulse	0.1000	3
V	51	45	He	11.050	ppb	1.1	8150.32	0.2678	Pulse	0.5000	3
Cr	52	45	He	7.546	ppb	2.4	6841.84	0.2247	Pulse	0.1000	3
Mn	55	45	He	4339.327	ppb	1.6	1572948.26	51.6807	Pulse	0.1000	3
Fe	57	45	He	26992.333	ppb	1.4	463263.37	15.2200	Pulse	0.1000	3
Co	59	72	He	117.849	ppb	1.0	199483.18	3.7366	Pulse	0.1000	3
Ni	60	72	He	3.792	ppb	1.8	2390.28	0.0448	Pulse	0.1000	3
Cu	63	72	He	4.843	ppb	1.9	7595.60	0.1423	Pulse	0.1000	3
Zn	66	72	He	20.767	ppb	13.0	3333.85	0.0625	Pulse	0.1000	3
As	75	72	He	3.378	ppb	22.6	360.01	0.0067	Pulse	0.5000	3
Sr	88	115	He	120.313	ppb	1.8	51045.64	0.9651	Pulse	0.1000	3
Mo	98	115	He	0.371	ppb	6.1	466.69	0.0088	Pulse	0.1000	3
Ag	107	115	He	0.036	ppb	22.6	133.34	0.0025	Pulse	0.1000	3
Cd	111	115	He	0.719	ppb	17.7	215.33	0.0041	Pulse	0.5000	3
Sn	120	115	He	0.177	ppb	84.7	1136.75	0.0215	Pulse	0.1000	3
Sb	121	159	He	0.317	ppb	32.1	260.01	0.0009	Pulse	0.1000	3
Ba	137	115	He	269.274	ppb	2.3	71106.68	1.3446	Pulse	0.1000	3
Tl	205	209	He	1.446	ppb	1.4	11098.41	0.0462	Pulse	0.1000	3
Pb	208	209	He	2.633	ppb	1.6	26621.69	0.1109	Pulse	0.1000	3
U	238	209	He	0.170	ppb	14.1	2240.29	0.0093	Pulse	0.1000	3

ISTD Table:

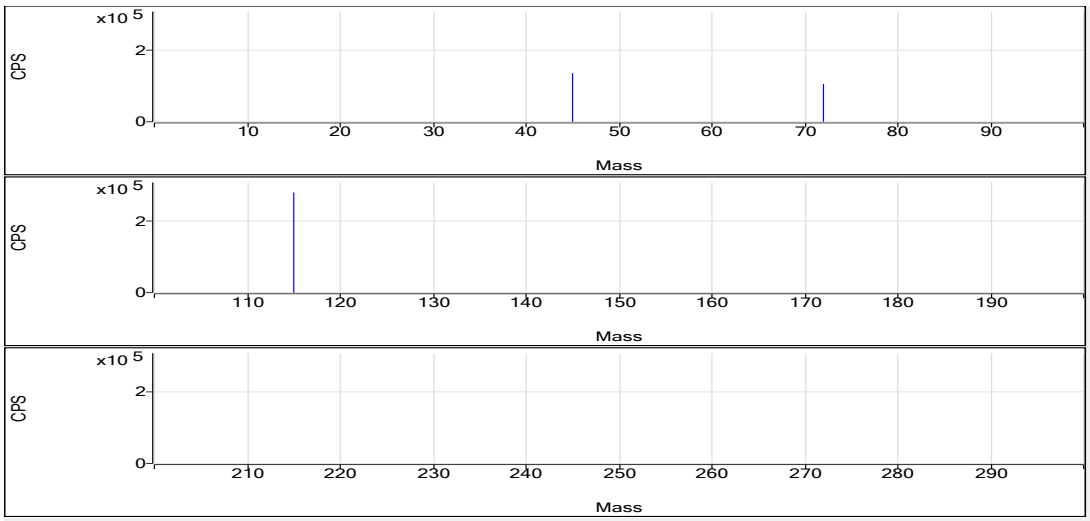
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2113591.01	0.4	96.2	Pulse	0.1000	3
No Gas	Ge	72	1042333.34	0.2	97.1	Pulse	0.1000	3
H2	Sc	45	136824.81	1.6	100.8	Pulse	0.1000	3
H2	Ge	72	106337.22	1.3	100.6	Pulse	0.1000	3
H2	In	115	281317.54	0.6	100.6	Pulse	0.1000	3
He	Sc	45	30438.92	1.3	102.0	Pulse	0.1000	3
He	Ge	72	53389.58	1.0	101.8	Pulse	0.1000	3
He	In	115	52891.86	1.4	103.2	Pulse	0.1000	3
He	Tb	159	285445.09	0.8	102.5	Pulse	0.1000	3
He	Bi	209	240036.62	0.5	101.1	Pulse	0.1000	3

No Gas

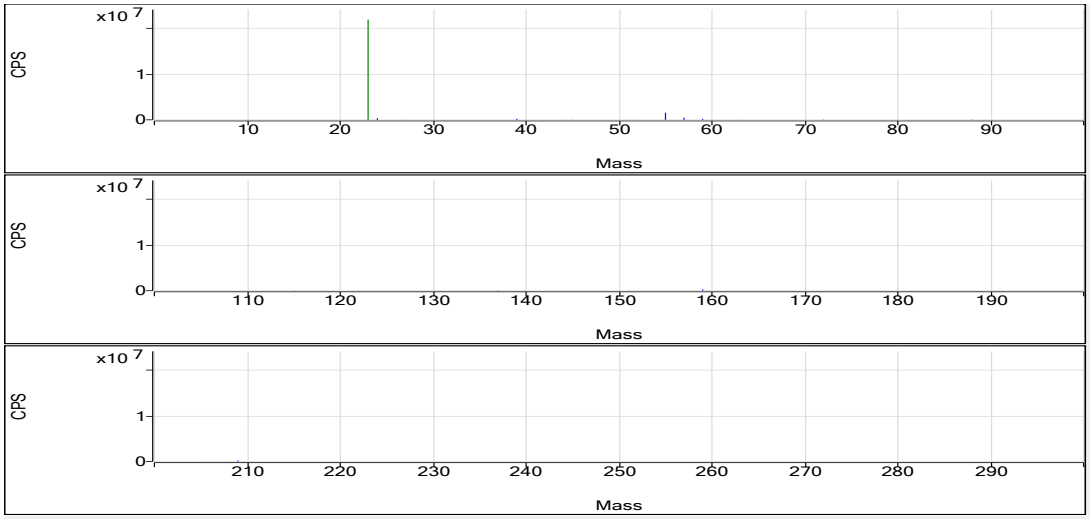


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.105	0.0001	216.00	0.0007	2.306E-05
Be	9	1	No Gas	0.125	0.0001	246.00	0.0007	2.306E-05
Be	9	1	No Gas	0.096	0.0001	200.00	0.0007	2.306E-05
Se	78	2	H2	0.065	0.0001	7.33	0.0004	4.221E-05
Se	78	2	H2	0.018	0	5.33	0.0004	4.221E-05
Se	78	2	H2	0.134	0.0001	10.67	0.0004	4.221E-05
Na	23	3	He	191304.133	728.2734	21856512.17	0.0038	0.2864
Na	23	3	He	193089.039	735.0657	22465334.67	0.0038	0.2864
Na	23	3	He	185745.497	707.1206	21739009.68	0.0038	0.2864
Mg	24	3	He	6510.005	12.5346	376182.18	0.0019	0.007972
Mg	24	3	He	6287.748	12.107	370017.42	0.0019	0.007972
Mg	24	3	He	6326.795	12.1821	374514.41	0.0019	0.007972
Al	27	3	He	614.297	0.3363	10093.78	0.0005	0.00158
Al	27	3	He	613.387	0.3358	10263.93	0.0005	0.00158
Al	27	3	He	616.33	0.3374	10373.90	0.0005	0.00158
K	39	3	He	6639.948	7.5017	225137.56	0.0011	0.3552
K	39	3	He	6657.537	7.5207	229849.16	0.0011	0.3552
K	39	3	He	6358.731	7.1991	221320.74	0.0011	0.3552
Ca	44	3	He	14553.502	0.9125	27386.33	0.0001	0.002
Ca	44	3	He	14845.975	0.9308	28448.32	0.0001	0.002
Ca	44	3	He	14940.84	0.9368	28798.94	0.0001	0.002
Ti	47	3	He	17.524	0.009	270.01	0.0005	0.0004395
Ti	47	3	He	11.831	0.0062	190.01	0.0005	0.0004395
Ti	47	3	He	16.419	0.0085	260.01	0.0005	0.0004395
V	51	3	He	11.157	0.2701	8106.29	0.0218	0.02648
V	51	3	He	10.925	0.265	8100.30	0.0218	0.02648
V	51	3	He	11.068	0.2682	8244.36	0.0218	0.02648
Cr	52	3	He	7.336	0.2186	6561.71	0.029	0.006056
Cr	52	3	He	7.629	0.2271	6941.92	0.029	0.006056
Cr	52	3	He	7.673	0.2284	7021.90	0.029	0.006056
Mn	55	3	He	4384.726	52.2213	1567235.13	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	4371.945	52.0691	1591354.04	0.0119	0.00335
Mn	55	3	He	4261.312	50.7516	1560255.60	0.0119	0.00335
Fe	57	3	He	27038.147	15.2459	457549.88	0.0006	0.003117
Fe	57	3	He	27340.456	15.4163	471158.08	0.0006	0.003117
Fe	57	3	He	26598.397	14.998	461082.14	0.0006	0.003117
Co	59	3	He	117.812	3.7354	198832.48	0.0317	0.004379
Co	59	3	He	119.025	3.7738	199930.91	0.0317	0.004379
Co	59	3	He	116.71	3.7005	199686.15	0.0317	0.004379
Ni	60	3	He	3.786	0.0447	2380.27	0.009	0.01049
Ni	60	3	He	3.726	0.0442	2340.28	0.009	0.01049
Ni	60	3	He	3.863	0.0454	2450.28	0.009	0.01049
Cu	63	3	He	4.843	0.1423	7572.26	0.0259	0.01685
Cu	63	3	He	4.934	0.1446	7662.33	0.0259	0.01685
Cu	63	3	He	4.754	0.14	7552.20	0.0259	0.01685
Zn	66	3	He	21.659	0.065	3460.55	0.0028	0.003817
Zn	66	3	He	22.904	0.0685	3630.60	0.0028	0.003817
Zn	66	3	He	17.738	0.0539	2910.40	0.0028	0.003817
As	75	3	He	2.779	0.0056	300.01	0.0019	0.0004832
As	75	3	He	4.239	0.0083	442.01	0.0019	0.0004832
As	75	3	He	3.117	0.0063	338.01	0.0019	0.0004832
Sr	88	3	He	118.595	0.9513	50831.42	0.008	0.0005203
Sr	88	3	He	119.66	0.9598	49968.64	0.008	0.0005203
Sr	88	3	He	122.683	0.9841	52336.85	0.008	0.0005203
Mo	98	3	He	0.353	0.0084	450.03	0.0229	0.0003256
Mo	98	3	He	0.397	0.0094	490.03	0.0229	0.0003256
Mo	98	3	He	0.363	0.0086	460.02	0.0229	0.0003256
Ag	107	3	He	0.027	0.0021	110.00	0.05	0.000719
Ag	107	3	He	0.039	0.0027	140.00	0.05	0.000719
Ag	107	3	He	0.042	0.0028	150.01	0.05	0.000719
Cd	111	3	He	0.693	0.0039	210.00	0.0055	0.000104
Cd	111	3	He	0.857	0.0048	252.00	0.0055	0.000104
Cd	111	3	He	0.607	0.0035	184.00	0.0055	0.000104
Sn	120	3	He	0.344	0.0241	1290.11	0.0159	0.01867
Sn	120	3	He	0.13	0.0207	1080.08	0.0159	0.01867
Sn	120	3	He	0.056	0.0196	1040.07	0.0159	0.01867
Sb	121	3	He	0.265	0.0008	220.01	0.0026	8.342E-05
Sb	121	3	He	0.434	0.0012	350.02	0.0026	8.342E-05
Sb	121	3	He	0.251	0.0007	210.01	0.0026	8.342E-05
Ba	137	3	He	266.705	1.3318	71163.38	0.005	0.0005882
Ba	137	3	He	276.3	1.3797	71826.93	0.005	0.0005882
Ba	137	3	He	264.817	1.3224	70329.74	0.005	0.0005882
Tl	205	3	He	1.455	0.0465	11185.12	0.0313	0.0009967
Tl	205	3	He	1.423	0.0455	10965.00	0.0313	0.0009967
Tl	205	3	He	1.46	0.0467	11145.10	0.0313	0.0009967
Pb	208	3	He	2.585	0.1089	14298.32	0.041	0.002892
Pb	208	3	He	2.656	0.1118	14668.80	0.041	0.002892
Pb	208	3	He	2.659	0.112	13907.76	0.041	0.002892
U	238	3	He	0.197	0.0107	2570.34	0.0501	0.0008282
U	238	3	He	0.161	0.0089	2140.27	0.0501	0.0008282
U	238	3	He	0.151	0.0084	2010.27	0.0501	0.0008282
Sc	45	1	No Gas			2122887.62		
Sc	45	1	No Gas			2110383.72		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2107501.69		
Ge	72	1	No Gas			1040716.63		
Ge	72	1	No Gas			1044595.06		
Ge	72	1	No Gas			1041688.34		
Sc	45	2	H2			135309.90		
Sc	45	2	H2			135854.51		
Sc	45	2	H2			139310.02		
Ge	72	2	H2			104708.77		
Ge	72	2	H2			107016.43		
Ge	72	2	H2			107286.47		
In	115	2	H2			282076.58		
In	115	2	H2			279484.94		
In	115	2	H2			282391.11		
Sc	45	3	He			30011.41		
Sc	45	3	He			30562.35		
Sc	45	3	He			30743.00		
Ge	72	3	He			53228.99		
Ge	72	3	He			52978.15		
Ge	72	3	He			53961.61		
In	115	3	He			53443.09		
In	115	3	He			52067.52		
In	115	3	He			53191.56		
Tb	159	3	He			284248.88		
Tb	159	3	He			287976.40		
Tb	159	3	He			284110.00		
Bi	209	3	He			240386.15		
Bi	209	3	He			240906.09		
Bi	209	3	He			238817.63		

Quantitation Report

Data File Name	111SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 12:42:40
Sample Name	410-179113-P-2-A
Sample Type	Sample
Comment	A5
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

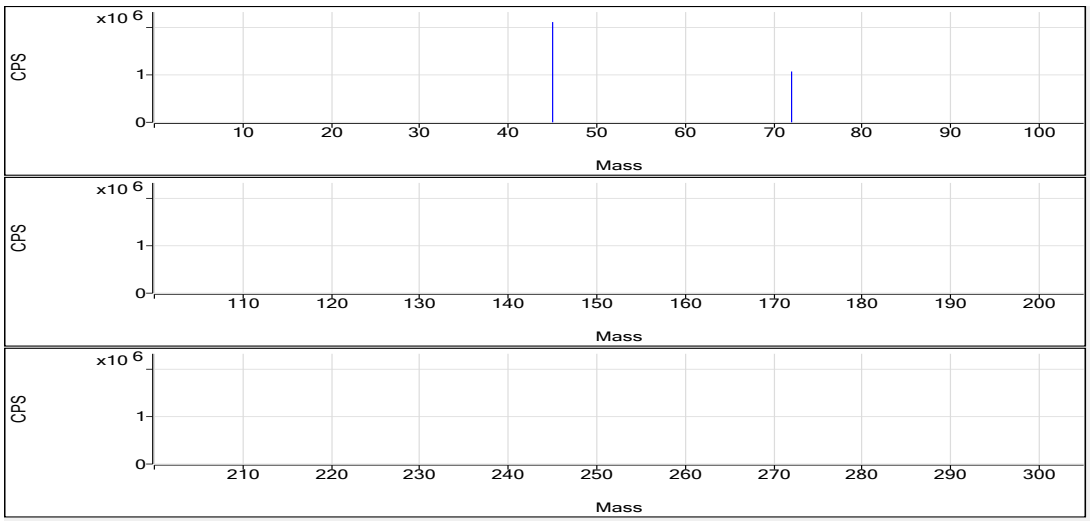
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.011	ppb	60.8	66.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.006	ppb	363.6	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	2549.320	ppb	1.5	296252.13	9.9876	Pulse	0.1000	3
Mg	24	45	He	63.683	ppb	5.3	3873.98	0.1305	Pulse	0.1000	3
Al	27	45	He	0.395	ppb	71.1	53.33	0.0018	Pulse	0.1000	3
K	39	45	He	14.800	ppb	202.3	11001.12	0.3712	Pulse	0.1000	3
Ca	44	45	He	172.679	ppb	6.6	380.02	0.0128	Pulse	0.1000	3
Ti	47	45	He	0.274	ppb	539.0	16.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.407	ppb	20.3	1048.04	0.0354	Pulse	0.5000	3
Cr	52	45	He	0.404	ppb	9.3	526.70	0.0178	Pulse	0.1000	3
Mn	55	45	He	2.825	ppb	6.5	1096.74	0.0370	Pulse	0.1000	3
Fe	57	45	He	36.557	ppb	10.5	703.38	0.0237	Pulse	0.1000	3
Co	59	72	He	0.156	ppb	39.8	513.36	0.0093	Pulse	0.1000	3
Ni	60	72	He	-0.211	ppb	N/A	470.02	0.0086	Pulse	0.1000	3
Cu	63	72	He	0.301	ppb	56.3	1350.11	0.0246	Pulse	0.1000	3
Zn	66	72	He	0.192	ppb	294.2	240.01	0.0044	Pulse	0.1000	3
As	75	72	He	0.132	ppb	14.3	40.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.630	ppb	5.9	290.01	0.0056	Pulse	0.1000	3
Mo	98	115	He	0.078	ppb	22.8	110.01	0.0021	Pulse	0.1000	3
Ag	107	115	He	0.028	ppb	36.0	110.00	0.0021	Pulse	0.1000	3
Cd	111	115	He	-0.003	ppb	N/A	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.046	ppb	N/A	933.44	0.0179	Pulse	0.1000	3
Sb	121	159	He	0.071	ppb	57.2	76.67	0.0003	Pulse	0.1000	3
Ba	137	115	He	1.779	ppb	141.5	494.56	0.0095	Pulse	0.1000	3
Tl	205	209	He	0.013	ppb	67.6	343.35	0.0014	Pulse	0.1000	3
Pb	208	209	He	0.009	ppb	59.0	790.05	0.0033	Pulse	0.1000	3
U	238	209	He	0.016	ppb	23.9	396.69	0.0016	Pulse	0.1000	3

ISTD Table:

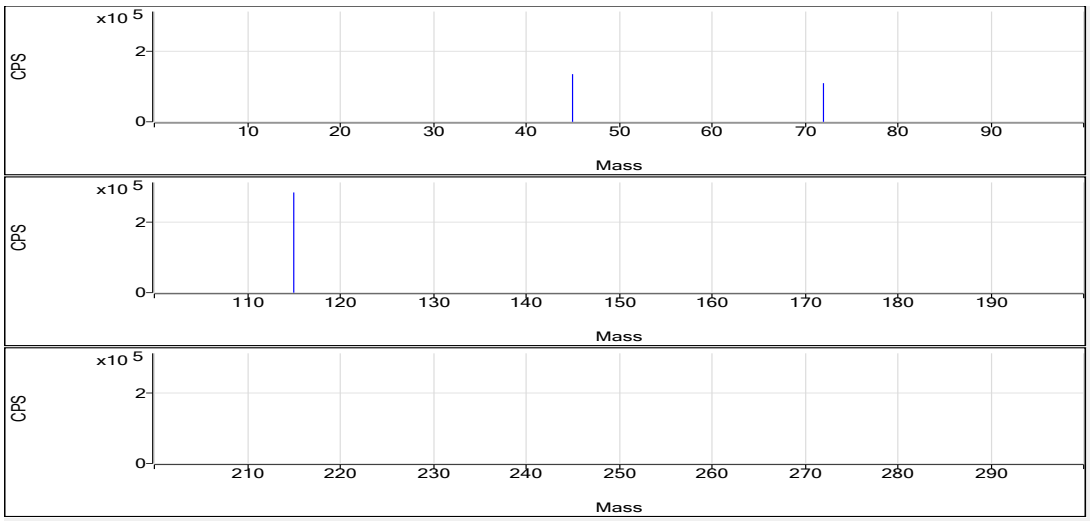
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2114628.30	0.5	96.2	Pulse	0.1000	3
No Gas	Ge	72	1072214.44	0.7	99.9	Pulse	0.1000	3
H2	Sc	45	134996.87	2.5	99.5	Pulse	0.1000	3
H2	Ge	72	109417.79	1.1	103.5	Pulse	0.1000	3
H2	In	115	283850.78	1.4	101.5	Pulse	0.1000	3
He	Sc	45	29667.48	2.5	99.4	Pulse	0.1000	3
He	Ge	72	54892.18	1.9	104.7	Pulse	0.1000	3
He	In	115	52030.05	1.1	101.5	Pulse	0.1000	3
He	Tb	159	286318.22	0.8	102.8	Pulse	0.1000	3
He	Bi	209	242890.72	0.1	102.3	Pulse	0.1000	3

No Gas

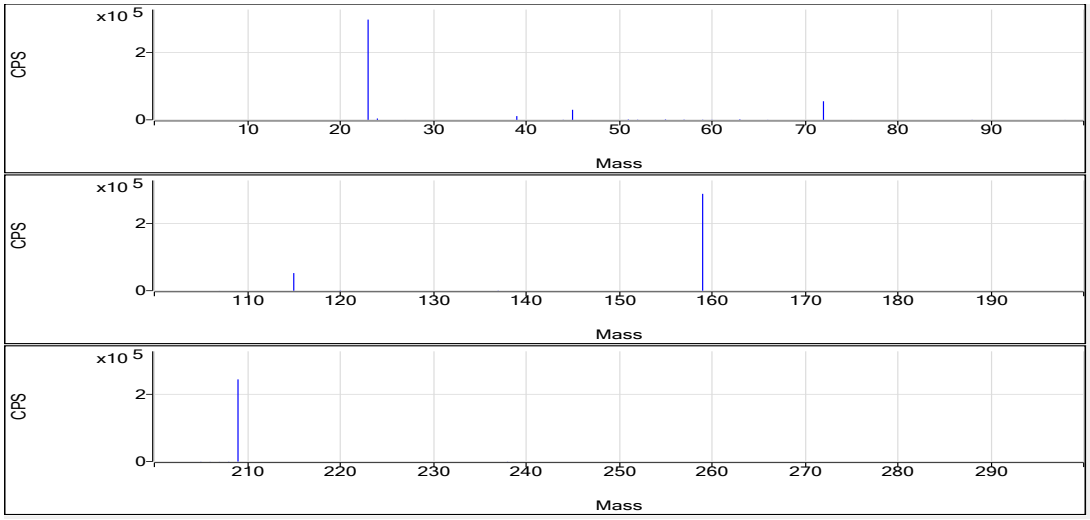


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.003	0	54.00	0.0007	2.306E-05
Be	9	1	No Gas	0.014	0	72.00	0.0007	2.306E-05
Be	9	1	No Gas	0.016	0	74.00	0.0007	2.306E-05
Se	78	2	H2	-0.013	0	4.00	0.0004	4.221E-05
Se	78	2	H2	0.002	0	4.67	0.0004	4.221E-05
Se	78	2	H2	0.028	0.0001	6.00	0.0004	4.221E-05
Na	23	3	He	2524.169	9.8919	292909.08	0.0038	0.2864
Na	23	3	He	2591.893	10.1496	293821.93	0.0038	0.2864
Na	23	3	He	2531.898	9.9213	302025.39	0.0038	0.2864
Mg	24	3	He	60.453	0.1243	3680.57	0.0019	0.007972
Mg	24	3	He	63.367	0.1299	3760.61	0.0019	0.007972
Mg	24	3	He	67.229	0.1373	4180.76	0.0019	0.007972
Al	27	3	He	0.199	0.0017	50.00	0.0005	0.00158
Al	27	3	He	0.269	0.0017	50.00	0.0005	0.00158
Al	27	3	He	0.717	0.002	60.00	0.0005	0.00158
K	39	3	He	43.197	0.4017	11895.22	0.0011	0.3552
K	39	3	He	17.68	0.3743	10834.26	0.0011	0.3552
K	39	3	He	-16.477	0.3375	10273.88	0.0011	0.3552
Ca	44	3	He	183.95	0.0135	400.02	0.0001	0.002
Ca	44	3	He	161.281	0.0121	350.02	0.0001	0.002
Ca	44	3	He	172.805	0.0128	390.02	0.0001	0.002
Ti	47	3	He	-0.208	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	1.929	0.0014	40.00	0.0005	0.0004395
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
V	51	3	He	0.38	0.0348	1030.04	0.0218	0.02648
V	51	3	He	0.499	0.0374	1082.05	0.0218	0.02648
V	51	3	He	0.34	0.0339	1032.04	0.0218	0.02648
Cr	52	3	He	0.362	0.0165	490.03	0.029	0.006056
Cr	52	3	He	0.435	0.0187	540.03	0.029	0.006056
Cr	52	3	He	0.415	0.0181	550.03	0.029	0.006056
Mn	55	3	He	2.952	0.0385	1140.08	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.91	0.038	1100.08	0.0119	0.00335
Mn	55	3	He	2.615	0.0345	1050.07	0.0119	0.00335
Fe	57	3	He	40.601	0.026	770.05	0.0006	0.003117
Fe	57	3	He	36.14	0.0235	680.04	0.0006	0.003117
Fe	57	3	He	32.931	0.0217	660.04	0.0006	0.003117
Co	59	3	He	0.199	0.0107	590.03	0.0317	0.004379
Co	59	3	He	0.185	0.0102	570.03	0.0317	0.004379
Co	59	3	He	0.085	0.0071	380.02	0.0317	0.004379
Ni	60	3	He	-0.238	0.0083	460.02	0.009	0.01049
Ni	60	3	He	-0.366	0.0072	400.02	0.009	0.01049
Ni	60	3	He	-0.028	0.0102	550.03	0.009	0.01049
Cu	63	3	He	0.315	0.025	1380.10	0.0259	0.01685
Cu	63	3	He	0.125	0.0201	1120.08	0.0259	0.01685
Cu	63	3	He	0.463	0.0288	1550.15	0.0259	0.01685
Zn	66	3	He	0.765	0.006	330.02	0.0028	0.003817
Zn	66	3	He	0.173	0.0043	240.01	0.0028	0.003817
Zn	66	3	He	-0.363	0.0028	150.01	0.0028	0.003817
As	75	3	He	0.111	0.0007	38.00	0.0019	0.0004832
As	75	3	He	0.146	0.0008	42.00	0.0019	0.0004832
As	75	3	He	0.141	0.0007	40.00	0.0019	0.0004832
Sr	88	3	He	0.672	0.0059	310.01	0.008	0.0005203
Sr	88	3	He	0.615	0.0055	280.01	0.008	0.0005203
Sr	88	3	He	0.603	0.0054	280.02	0.008	0.0005203
Mo	98	3	He	0.061	0.0017	90.00	0.0229	0.0003256
Mo	98	3	He	0.096	0.0025	130.01	0.0229	0.0003256
Mo	98	3	He	0.078	0.0021	110.01	0.0229	0.0003256
Ag	107	3	He	0.02	0.0017	90.00	0.05	0.000719
Ag	107	3	He	0.025	0.0019	100.00	0.05	0.000719
Ag	107	3	He	0.039	0.0027	140.01	0.05	0.000719
Cd	111	3	He	0.009	0.0002	8.00	0.0055	0.000104
Cd	111	3	He	-0.012	0	2.00	0.0055	0.000104
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Sn	120	3	He	-0.119	0.0168	880.07	0.0159	0.01867
Sn	120	3	He	-0.133	0.0166	850.05	0.0159	0.01867
Sn	120	3	He	0.113	0.0205	1070.19	0.0159	0.01867
Sb	121	3	He	0.035	0.0002	50.00	0.0026	8.342E-05
Sb	121	3	He	0.063	0.0002	70.00	0.0026	8.342E-05
Sb	121	3	He	0.114	0.0004	110.01	0.0026	8.342E-05
Ba	137	3	He	0.379	0.0025	130.01	0.005	0.0005882
Ba	137	3	He	0.272	0.0019	100.01	0.005	0.0005882
Ba	137	3	He	4.685	0.024	1253.67	0.005	0.0005882
Tl	205	3	He	0.01	0.0013	320.02	0.0313	0.0009967
Tl	205	3	He	0.023	0.0017	420.02	0.0313	0.0009967
Tl	205	3	He	0.006	0.0012	290.01	0.0313	0.0009967
Pb	208	3	He	0.003	0.003	290.02	0.041	0.002892
Pb	208	3	He	0.012	0.0034	420.02	0.041	0.002892
Pb	208	3	He	0.012	0.0034	460.04	0.041	0.002892
U	238	3	He	0.015	0.0016	380.02	0.0501	0.0008282
U	238	3	He	0.013	0.0015	360.03	0.0501	0.0008282
U	238	3	He	0.02	0.0019	450.03	0.0501	0.0008282
Sc	45	1	No Gas			2107692.00		
Sc	45	1	No Gas			2127250.28		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2108942.62		
Ge	72	1	No Gas			1068346.39		
Ge	72	1	No Gas			1080841.39		
Ge	72	1	No Gas			1067455.53		
Sc	45	2	H2			132272.94		
Sc	45	2	H2			133946.27		
Sc	45	2	H2			138771.40		
Ge	72	2	H2			108618.79		
Ge	72	2	H2			108809.66		
Ge	72	2	H2			110824.91		
In	115	2	H2			283128.78		
In	115	2	H2			280377.05		
In	115	2	H2			288046.52		
Sc	45	3	He			29611.10		
Sc	45	3	He			28949.16		
Sc	45	3	He			30442.18		
Ge	72	3	He			55196.86		
Ge	72	3	He			55739.09		
Ge	72	3	He			53740.58		
In	115	3	He			52459.03		
In	115	3	He			51354.57		
In	115	3	He			52298.40		
Tb	159	3	He			286979.04		
Tb	159	3	He			283914.06		
Tb	159	3	He			288061.56		
Bi	209	3	He			242798.06		
Bi	209	3	He			242636.89		
Bi	209	3	He			243237.20		

Quantitation Report

Data File Name	112SMPL.d
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Acq Time	2024-07-17 12:44:41
Sample Name	410-179157-B-3-A
Sample Type	Sample
Comment	A5
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

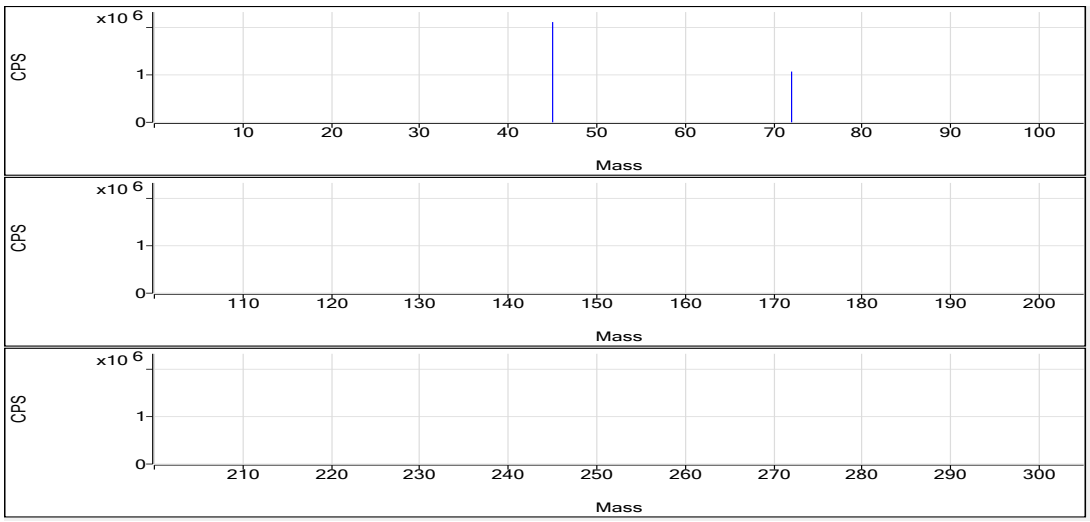
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.004	ppb	96.8	55.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.013	ppb	N/A	4.00	0.0000	Pulse	1.5000	3
Na	23	45	He	2590.640	ppb	9.9	295323.91	10.1448	Pulse	0.1000	3
Mg	24	45	He	74.988	ppb	10.1	4430.81	0.1523	Pulse	0.1000	3
Al	27	45	He	10.136	ppb	15.5	206.68	0.0071	Pulse	0.1000	3
K	39	45	He	11.106	ppb	123.6	10697.61	0.3672	Pulse	0.1000	3
Ca	44	45	He	240.110	ppb	10.2	496.69	0.0170	Pulse	0.1000	3
Ti	47	45	He	0.506	ppb	8.0	20.00	0.0007	Pulse	0.1000	3
V	51	45	He	0.474	ppb	21.7	1072.05	0.0368	Pulse	0.5000	3
Cr	52	45	He	0.423	ppb	19.6	533.36	0.0183	Pulse	0.1000	3
Mn	55	45	He	2.705	ppb	19.0	1033.41	0.0356	Pulse	0.1000	3
Fe	57	45	He	31.427	ppb	9.4	606.70	0.0208	Pulse	0.1000	3
Co	59	72	He	0.139	ppb	49.2	473.36	0.0088	Pulse	0.1000	3
Ni	60	72	He	-0.016	ppb	N/A	556.70	0.0103	Pulse	0.1000	3
Cu	63	72	He	0.404	ppb	40.5	1470.13	0.0273	Pulse	0.1000	3
Zn	66	72	He	0.467	ppb	60.1	276.68	0.0051	Pulse	0.1000	3
As	75	72	He	0.154	ppb	76.3	41.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.723	ppb	37.5	333.35	0.0063	Pulse	0.1000	3
Mo	98	115	He	0.052	ppb	44.6	80.00	0.0015	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	294.2	43.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	-0.007	ppb	N/A	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.129	ppb	N/A	880.06	0.0166	Pulse	0.1000	3
Sb	121	159	He	0.031	ppb	66.2	46.67	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.767	ppb	34.3	233.34	0.0044	Pulse	0.1000	3
Tl	205	209	He	0.009	ppb	66.9	310.02	0.0013	Pulse	0.1000	3
Pb	208	209	He	-0.005	ppb	N/A	656.70	0.0027	Pulse	0.1000	3
U	238	209	He	0.007	ppb	63.0	286.68	0.0012	Pulse	0.1000	3

ISTD Table:

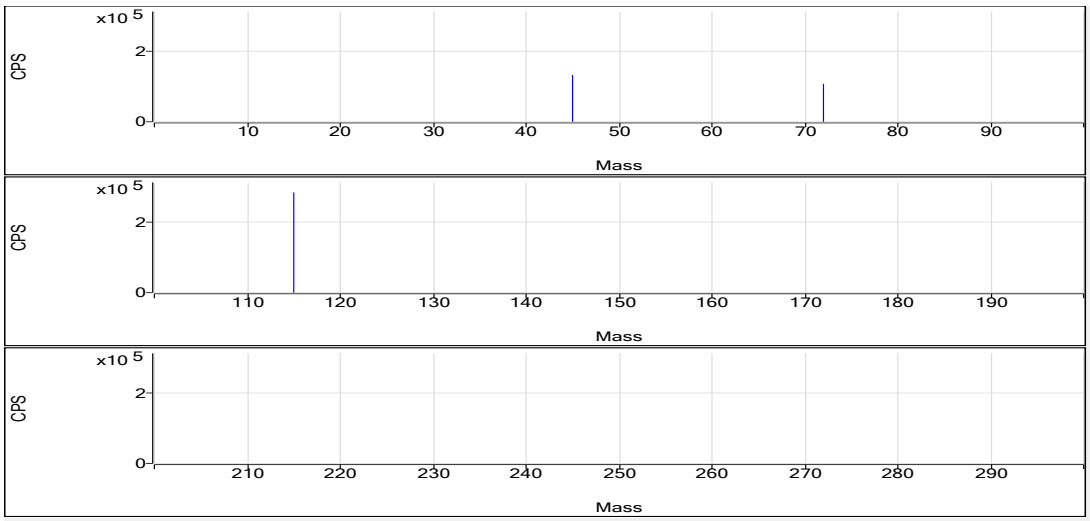
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2120670.75	0.4	96.5	Pulse	0.1000	3
No Gas	Ge	72	1073512.15	0.7	100.0	Pulse	0.1000	3
H2	Sc	45	133584.31	1.4	98.4	Pulse	0.1000	3
H2	Ge	72	108380.06	1.3	102.5	Pulse	0.1000	3
H2	In	115	285689.40	1.3	102.1	Pulse	0.1000	3
He	Sc	45	29146.23	2.9	97.6	Pulse	0.1000	3
He	Ge	72	53814.55	1.1	102.7	Pulse	0.1000	3
He	In	115	52977.77	2.7	103.4	Pulse	0.1000	3
He	Tb	159	284869.45	0.4	102.3	Pulse	0.1000	3
He	Bi	209	242777.51	1.7	102.2	Pulse	0.1000	3

No Gas

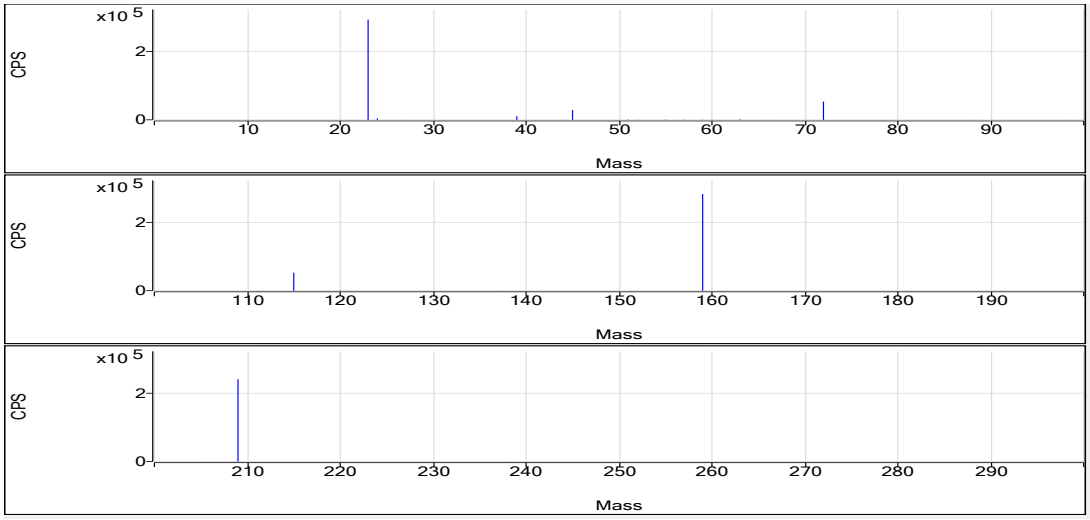


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.006	0	58.00	0.0007	2.306E-05
Be	9	1	No Gas	0	0	48.00	0.0007	2.306E-05
Be	9	1	No Gas	0.007	0	60.00	0.0007	2.306E-05
Se	78	2	H2	-0.026	0	3.33	0.0004	4.221E-05
Se	78	2	H2	0.015	0	5.33	0.0004	4.221E-05
Se	78	2	H2	-0.027	0	3.33	0.0004	4.221E-05
Na	23	3	He	2423.209	9.5077	286482.26	0.0038	0.2864
Na	23	3	He	2884.797	11.2642	321802.24	0.0038	0.2864
Na	23	3	He	2463.915	9.6626	277687.22	0.0038	0.2864
Mg	24	3	He	67.963	0.1387	4180.70	0.0019	0.007972
Mg	24	3	He	83.01	0.1677	4790.96	0.0019	0.007972
Mg	24	3	He	73.992	0.1503	4320.77	0.0019	0.007972
Al	27	3	He	8.672	0.0063	190.01	0.0005	0.00158
Al	27	3	He	9.947	0.007	200.01	0.0005	0.00158
Al	27	3	He	11.787	0.008	230.01	0.0005	0.00158
K	39	3	He	4.655	0.3602	10854.41	0.0011	0.3552
K	39	3	He	26.872	0.3841	10974.45	0.0011	0.3552
K	39	3	He	1.792	0.3572	10263.96	0.0011	0.3552
Ca	44	3	He	259.794	0.0183	550.03	0.0001	0.002
Ca	44	3	He	247.783	0.0175	500.03	0.0001	0.002
Ca	44	3	He	212.754	0.0153	440.02	0.0001	0.002
Ti	47	3	He	0.459	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	0.534	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	0.525	0.0007	20.00	0.0005	0.0004395
V	51	3	He	0.374	0.0346	1044.04	0.0218	0.02648
V	51	3	He	0.58	0.0391	1118.05	0.0218	0.02648
V	51	3	He	0.467	0.0367	1054.05	0.0218	0.02648
Cr	52	3	He	0.398	0.0176	530.03	0.029	0.006056
Cr	52	3	He	0.516	0.021	600.03	0.029	0.006056
Cr	52	3	He	0.355	0.0164	470.03	0.029	0.006056
Mn	55	3	He	2.227	0.0299	900.06	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3.246	0.042	1200.09	0.0119	0.00335
Mn	55	3	He	2.641	0.0348	1000.09	0.0119	0.00335
Fe	57	3	He	29.795	0.0199	600.03	0.0006	0.003117
Fe	57	3	He	34.832	0.0228	650.04	0.0006	0.003117
Fe	57	3	He	29.655	0.0198	570.03	0.0006	0.003117
Co	59	3	He	0.111	0.0079	420.02	0.0317	0.004379
Co	59	3	He	0.217	0.0113	610.03	0.0317	0.004379
Co	59	3	He	0.089	0.0072	390.02	0.0317	0.004379
Ni	60	3	He	0.026	0.0107	570.03	0.009	0.01049
Ni	60	3	He	0.167	0.012	650.04	0.009	0.01049
Ni	60	3	He	-0.241	0.0083	450.02	0.009	0.01049
Cu	63	3	He	0.439	0.0282	1500.13	0.0259	0.01685
Cu	63	3	He	0.226	0.0227	1230.09	0.0259	0.01685
Cu	63	3	He	0.548	0.031	1680.16	0.0259	0.01685
Zn	66	3	He	0.181	0.0043	230.01	0.0028	0.003817
Zn	66	3	He	0.479	0.0052	280.01	0.0028	0.003817
Zn	66	3	He	0.742	0.0059	320.01	0.0028	0.003817
As	75	3	He	0.226	0.0009	48.00	0.0019	0.0004832
As	75	3	He	0.217	0.0009	48.00	0.0019	0.0004832
As	75	3	He	0.018	0.0005	28.00	0.0019	0.0004832
Sr	88	3	He	0.606	0.0054	280.01	0.008	0.0005203
Sr	88	3	He	1.032	0.0088	460.02	0.008	0.0005203
Sr	88	3	He	0.529	0.0048	260.01	0.008	0.0005203
Mo	98	3	He	0.078	0.0021	110.00	0.0229	0.0003256
Mo	98	3	He	0.044	0.0013	70.00	0.0229	0.0003256
Mo	98	3	He	0.034	0.0011	60.00	0.0229	0.0003256
Ag	107	3	He	0.001	0.0008	40.00	0.05	0.000719
Ag	107	3	He	0.009	0.0011	60.00	0.05	0.000719
Ag	107	3	He	-0.003	0.0005	30.00	0.05	0.000719
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Cd	111	3	He	0.002	0.0001	6.00	0.0055	0.000104
Cd	111	3	He	-0.019	0	0.00	0.0055	0.000104
Sn	120	3	He	-0.231	0.015	780.05	0.0159	0.01867
Sn	120	3	He	-0.008	0.0186	970.07	0.0159	0.01867
Sn	120	3	He	-0.149	0.0163	890.06	0.0159	0.01867
Sb	121	3	He	0.049	0.0002	60.00	0.0026	8.342E-05
Sb	121	3	He	0.009	0.0001	30.00	0.0026	8.342E-05
Sb	121	3	He	0.035	0.0002	50.00	0.0026	8.342E-05
Ba	137	3	He	0.614	0.0037	190.01	0.005	0.0005882
Ba	137	3	He	1.07	0.0059	310.01	0.005	0.0005882
Ba	137	3	He	0.616	0.0037	200.01	0.005	0.0005882
Tl	205	3	He	0.014	0.0014	340.02	0.0313	0.0009967
Tl	205	3	He	0.011	0.0013	330.02	0.0313	0.0009967
Tl	205	3	He	0.002	0.0011	260.01	0.0313	0.0009967
Pb	208	3	He	-0.003	0.0028	420.03	0.041	0.002892
Pb	208	3	He	0.004	0.003	360.02	0.041	0.002892
Pb	208	3	He	-0.014	0.0023	310.01	0.041	0.002892
U	238	3	He	0.002	0.0009	220.01	0.0501	0.0008282
U	238	3	He	0.009	0.0013	320.02	0.0501	0.0008282
U	238	3	He	0.01	0.0013	320.02	0.0501	0.0008282
Sc	45	1	No Gas			2122597.94		
Sc	45	1	No Gas			2111086.53		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2128327.78		
Ge	72	1	No Gas			1081255.53		
Ge	72	1	No Gas			1065515.22		
Ge	72	1	No Gas			1073765.69		
Sc	45	2	H2			131697.56		
Sc	45	2	H2			133554.42		
Sc	45	2	H2			135500.96		
Ge	72	2	H2			106784.05		
Ge	72	2	H2			109263.67		
Ge	72	2	H2			109092.45		
In	115	2	H2			281586.48		
In	115	2	H2			286441.01		
In	115	2	H2			289040.70		
Sc	45	3	He			30131.69		
Sc	45	3	He			28568.59		
Sc	45	3	He			28738.42		
Ge	72	3	He			53158.84		
Ge	72	3	He			54162.34		
Ge	72	3	He			54122.46		
In	115	3	He			52027.86		
In	115	3	He			52298.95		
In	115	3	He			54627.09		
Tb	159	3	He			285310.15		
Tb	159	3	He			283588.39		
Tb	159	3	He			285709.82		
Bi	209	3	He			238139.27		
Bi	209	3	He			246458.90		
Bi	209	3	He			243734.35		

Quantitation Report

Data File Name	113SMPL.d
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Sample Type	Sample
Comment	A5
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

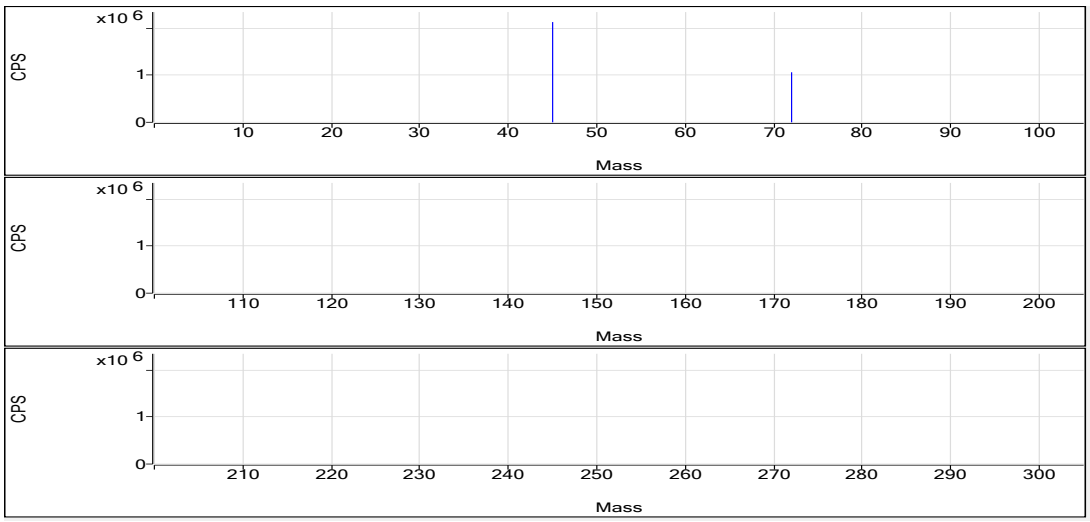
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.024	ppb	40.9	87.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.139	ppb	43.7	10.89	0.0001	Pulse	1.5000	3
Na	23	45	He	62403.781	ppb	2.3	7113501.35	237.7572	Analog	0.1000	3
Mg	24	45	He	24412.112	ppb	2.3	1405661.49	46.9822	Pulse	0.1000	3
Al	27	45	He	13.869	ppb	22.9	273.34	0.0091	Pulse	0.1000	3
K	39	45	He	1587.651	ppb	0.8	61773.46	2.0640	Pulse	0.1000	3
Ca	44	45	He	80627.502	ppb	2.3	151006.85	5.0464	Pulse	0.1000	3
Ti	47	45	He	0.016	ppb	2540.5	13.33	0.0004	Pulse	0.1000	3
V	51	45	He	0.681	ppb	9.8	1237.39	0.0414	Pulse	0.5000	3
Cr	52	45	He	0.594	ppb	12.2	696.71	0.0233	Pulse	0.1000	3
Mn	55	45	He	5404.196	ppb	1.2	1926056.01	64.3622	Pulse	0.1000	3
Fe	57	45	He	3940.115	ppb	3.0	66542.80	2.2244	Pulse	0.1000	3
Co	59	72	He	0.872	ppb	6.5	1736.83	0.0320	Pulse	0.1000	3
Ni	60	72	He	0.674	ppb	67.2	896.72	0.0166	Pulse	0.1000	3
Cu	63	72	He	0.764	ppb	14.4	1993.55	0.0366	Pulse	0.1000	3
Zn	66	72	He	1.537	ppb	46.3	443.36	0.0082	Pulse	0.1000	3
As	75	72	He	17.994	ppb	5.5	1838.80	0.0338	Pulse	0.5000	3
Sr	88	115	He	685.862	ppb	1.6	286311.93	5.4991	Pulse	0.1000	3
Mo	98	115	He	15.686	ppb	4.2	18729.71	0.3598	Pulse	0.1000	3
Ag	107	115	He	0.011	ppb	161.6	66.67	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.016	ppb	157.2	10.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.184	ppb	N/A	820.05	0.0157	Pulse	0.1000	3
Sb	121	159	He	0.115	ppb	29.6	110.00	0.0004	Pulse	0.1000	3
Ba	137	115	He	541.751	ppb	1.6	140819.29	2.7047	Pulse	0.1000	3
Tl	205	209	He	0.006	ppb	113.3	283.35	0.0012	Pulse	0.1000	3
Pb	208	209	He	0.145	ppb	10.7	2110.15	0.0089	Pulse	0.1000	3
U	238	209	He	1.735	ppb	1.6	20917.57	0.0878	Pulse	0.1000	3

ISTD Table:

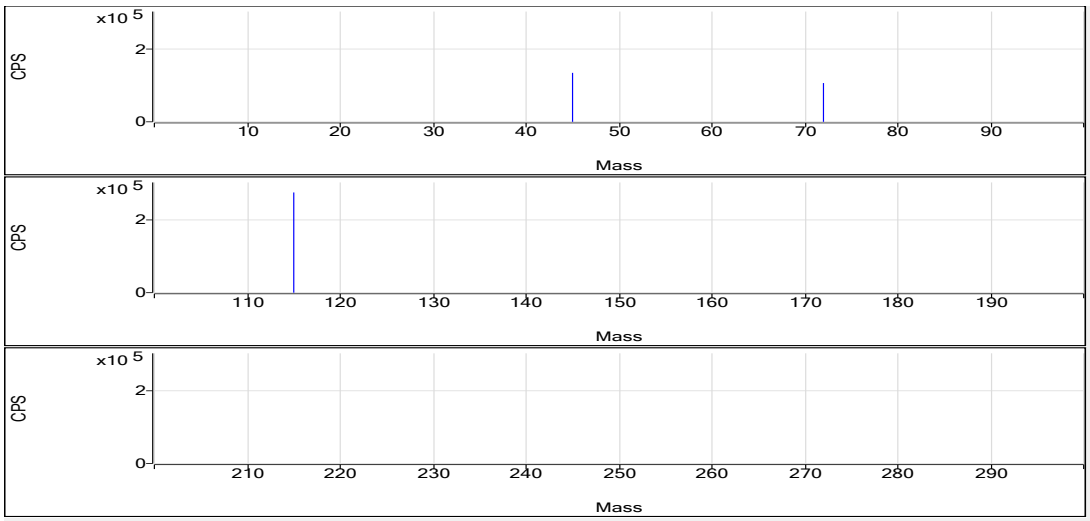
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2134379.29	0.4	97.1	Pulse	0.1000	3
No Gas	Ge	72	1065277.96	0.1	99.3	Pulse	0.1000	3
H2	Sc	45	135445.64	1.9	99.8	Pulse	0.1000	3
H2	Ge	72	107194.20	1.2	101.4	Pulse	0.1000	3
H2	In	115	277242.40	0.2	99.1	Pulse	0.1000	3
He	Sc	45	29927.89	2.1	100.3	Pulse	0.1000	3
He	Ge	72	54330.00	3.1	103.6	Pulse	0.1000	3
He	In	115	52067.69	0.5	101.6	Pulse	0.1000	3
He	Tb	159	287421.75	0.9	103.2	Pulse	0.1000	3
He	Bi	209	238220.73	0.7	100.3	Pulse	0.1000	3

No Gas

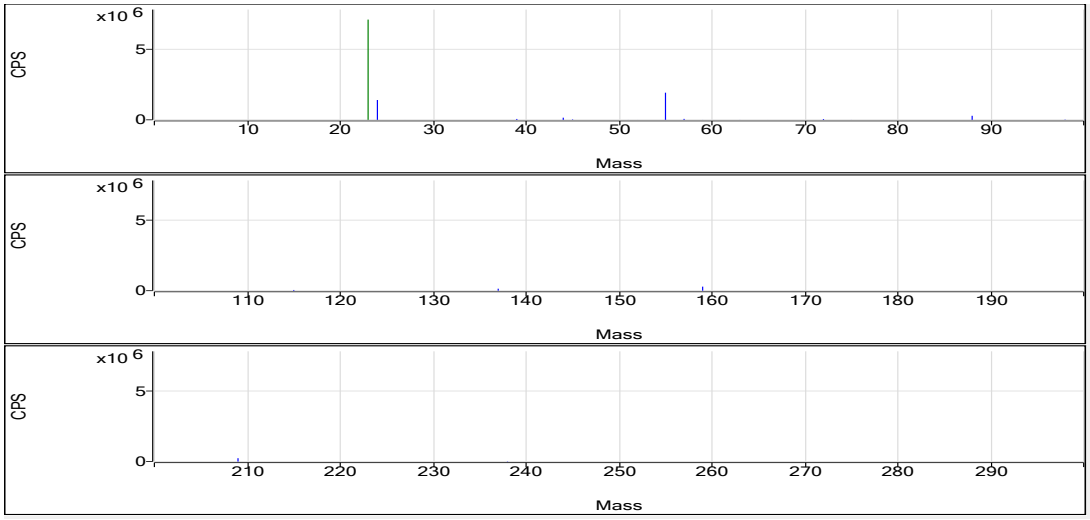


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.015	0	74.00	0.0007	2.306E-05
Be	9	1	No Gas	0.022	0	84.00	0.0007	2.306E-05
Be	9	1	No Gas	0.035	0	104.00	0.0007	2.306E-05
Se	78	2	H2	0.196	0.0001	13.33	0.0004	4.221E-05
Se	78	2	H2	0.075	0.0001	8.00	0.0004	4.221E-05
Se	78	2	H2	0.146	0.0001	11.33	0.0004	4.221E-05
Na	23	3	He	63549.007	242.1152	7190991.77	0.0038	0.2864
Na	23	3	He	62880.784	239.5724	7055430.52	0.0038	0.2864
Na	23	3	He	60781.55	231.584	7094081.77	0.0038	0.2864
Mg	24	3	He	24339.239	46.842	1391239.20	0.0019	0.007972
Mg	24	3	He	25018.376	48.1488	1417986.23	0.0019	0.007972
Mg	24	3	He	23878.722	45.9558	1407759.04	0.0019	0.007972
Al	27	3	He	10.693	0.0074	220.01	0.0005	0.00158
Al	27	3	He	17.04	0.0109	320.01	0.0005	0.00158
Al	27	3	He	13.874	0.0091	280.01	0.0005	0.00158
K	39	3	He	1573.069	2.0483	60835.98	0.0011	0.3552
K	39	3	He	1593.405	2.0702	60967.25	0.0011	0.3552
K	39	3	He	1596.479	2.0735	63517.15	0.0011	0.3552
Ca	44	3	He	79108.829	4.9514	147059.80	0.0001	0.002
Ca	44	3	He	82694.016	5.1757	152424.78	0.0001	0.002
Ca	44	3	He	80079.66	5.0121	153535.96	0.0001	0.002
Ti	47	3	He	-0.211	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	0.491	0.0007	20.00	0.0005	0.0004395
Ti	47	3	He	-0.232	0.0003	10.00	0.0005	0.0004395
V	51	3	He	0.758	0.043	1278.06	0.0218	0.02648
V	51	3	He	0.644	0.0405	1194.06	0.0218	0.02648
V	51	3	He	0.641	0.0405	1240.06	0.0218	0.02648
Cr	52	3	He	0.511	0.0209	620.04	0.029	0.006056
Cr	52	3	He	0.646	0.0248	730.04	0.029	0.006056
Cr	52	3	He	0.625	0.0242	740.05	0.029	0.006056
Mn	55	3	He	5357.651	63.8079	1895140.44	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5477.134	65.2309	1921055.60	0.0119	0.00335
Mn	55	3	He	5377.803	64.0479	1961972.00	0.0119	0.00335
Fe	57	3	He	3982.452	2.2482	66773.79	0.0006	0.003117
Fe	57	3	He	4030.307	2.2752	67004.91	0.0006	0.003117
Fe	57	3	He	3807.585	2.1496	65849.70	0.0006	0.003117
Co	59	3	He	0.885	0.0324	1700.16	0.0317	0.004379
Co	59	3	He	0.81	0.03	1670.16	0.0317	0.004379
Co	59	3	He	0.92	0.0335	1840.17	0.0317	0.004379
Ni	60	3	He	1.117	0.0206	1080.07	0.009	0.01049
Ni	60	3	He	0.212	0.0124	690.04	0.009	0.01049
Ni	60	3	He	0.694	0.0168	920.05	0.009	0.01049
Cu	63	3	He	0.637	0.0334	1750.16	0.0259	0.01685
Cu	63	3	He	0.828	0.0383	2130.25	0.0259	0.01685
Cu	63	3	He	0.827	0.0383	2100.23	0.0259	0.01685
Zn	66	3	He	1.348	0.0076	400.02	0.0028	0.003817
Zn	66	3	He	0.939	0.0065	360.02	0.0028	0.003817
Zn	66	3	He	2.325	0.0104	570.03	0.0028	0.003817
As	75	3	He	18.386	0.0346	1814.13	0.0019	0.0004832
As	75	3	He	18.719	0.0352	1958.14	0.0019	0.0004832
As	75	3	He	16.877	0.0318	1744.12	0.0019	0.0004832
Sr	88	3	He	683.059	5.4767	284898.90	0.008	0.0005203
Sr	88	3	He	676.372	5.4231	284016.71	0.008	0.0005203
Sr	88	3	He	698.154	5.5977	290020.19	0.008	0.0005203
Mo	98	3	He	15.407	0.3534	18382.48	0.0229	0.0003256
Mo	98	3	He	15.212	0.3489	18272.44	0.0229	0.0003256
Mo	98	3	He	16.44	0.377	19534.22	0.0229	0.0003256
Ag	107	3	He	0.032	0.0023	120.00	0.05	0.000719
Ag	107	3	He	-0.003	0.0006	30.00	0.05	0.000719
Ag	107	3	He	0.005	0.001	50.00	0.05	0.000719
Cd	111	3	He	0.023	0.0002	12.00	0.0055	0.000104
Cd	111	3	He	-0.012	0	2.00	0.0055	0.000104
Cd	111	3	He	0.037	0.0003	16.00	0.0055	0.000104
Sn	120	3	He	-0.11	0.0169	880.06	0.0159	0.01867
Sn	120	3	He	-0.165	0.016	840.05	0.0159	0.01867
Sn	120	3	He	-0.276	0.0143	740.05	0.0159	0.01867
Sb	121	3	He	0.153	0.0005	140.00	0.0026	8.342E-05
Sb	121	3	He	0.089	0.0003	90.00	0.0026	8.342E-05
Sb	121	3	He	0.101	0.0003	100.00	0.0026	8.342E-05
Ba	137	3	He	545.074	2.7213	141562.06	0.005	0.0005882
Ba	137	3	He	532.014	2.6561	139104.78	0.005	0.0005882
Ba	137	3	He	548.166	2.7367	141791.02	0.005	0.0005882
Tl	205	3	He	0.014	0.0014	340.02	0.0313	0.0009967
Tl	205	3	He	0.005	0.0011	270.01	0.0313	0.0009967
Tl	205	3	He	0	0.001	240.01	0.0313	0.0009967
Pb	208	3	He	0.131	0.0083	1140.09	0.041	0.002892
Pb	208	3	He	0.162	0.0095	1250.10	0.041	0.002892
Pb	208	3	He	0.143	0.0088	1090.09	0.041	0.002892
U	238	3	He	1.76	0.0891	21188.16	0.0501	0.0008282
U	238	3	He	1.738	0.088	20837.15	0.0501	0.0008282
U	238	3	He	1.707	0.0864	20727.39	0.0501	0.0008282
Sc	45	1	No Gas			2138675.59		
Sc	45	1	No Gas			2139332.16		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2125130.12		
Ge	72	1	No Gas			1066543.27		
Ge	72	1	No Gas			1063944.44		
Ge	72	1	No Gas			1065346.16		
Sc	45	2	H2			133030.85		
Sc	45	2	H2			138166.23		
Sc	45	2	H2			135139.83		
Ge	72	2	H2			105766.43		
Ge	72	2	H2			107702.17		
Ge	72	2	H2			108114.01		
In	115	2	H2			277146.81		
In	115	2	H2			277895.64		
In	115	2	H2			276684.74		
Sc	45	3	He			29700.70		
Sc	45	3	He			29450.10		
Sc	45	3	He			30632.87		
Ge	72	3	He			52466.55		
Ge	72	3	He			55638.24		
Ge	72	3	He			54885.20		
In	115	3	He			52027.28		
In	115	3	He			52378.52		
In	115	3	He			51816.45		
Tb	159	3	He			289969.33		
Tb	159	3	He			284730.37		
Tb	159	3	He			287565.54		
Bi	209	3	He			237854.53		
Bi	209	3	He			236857.52		
Bi	209	3	He			239950.13		

Quantitation Report

Data File Name	114SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 12:48:44
Sample Name	410-172824-H-28-A
Sample Type	Sample
Comment	A5
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

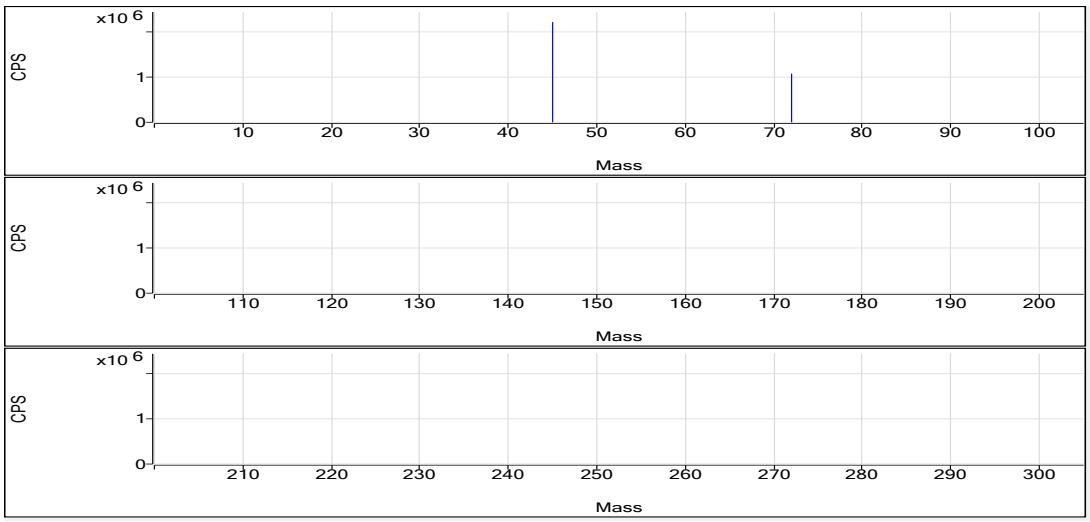
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.575	ppb	1.1	1005.37	0.0005	Pulse	0.5000	3
Se	78	72	H2	0.169	ppb	31.6	12.22	0.0001	Pulse	1.5000	3
Na	23	45	He	8785.303	ppb	1.2	1026220.17	33.7179	Pulse	0.1000	3
Mg	24	45	He	1933.106	ppb	1.2	113463.87	3.7277	Pulse	0.1000	3
Al	27	45	He	12324.790	ppb	1.2	204465.16	6.7178	Pulse	0.1000	3
K	39	45	He	2113.514	ppb	2.1	80040.77	2.6300	Pulse	0.1000	3
Ca	44	45	He	363.585	ppb	6.9	753.38	0.0247	Pulse	0.1000	3
Ti	47	45	He	303.667	ppb	4.2	4527.53	0.1487	Pulse	0.1000	3
V	51	45	He	53.762	ppb	2.3	36532.72	1.2005	Pulse	0.5000	3
Cr	52	45	He	17.284	ppb	1.5	15432.04	0.5070	Pulse	0.1000	3
Mn	55	45	He	42.834	ppb	2.7	15628.86	0.5135	Pulse	0.1000	3
Fe	57	45	He	6280.505	ppb	2.4	107844.30	3.5437	Pulse	0.1000	3
Co	59	72	He	2.274	ppb	8.1	4160.76	0.0764	Pulse	0.1000	3
Ni	60	72	He	7.610	ppb	6.8	4317.46	0.0793	Pulse	0.1000	3
Cu	63	72	He	5.072	ppb	1.6	8072.57	0.1482	Pulse	0.1000	3
Zn	66	72	He	18.943	ppb	2.1	3123.77	0.0573	Pulse	0.1000	3
As	75	72	He	5.199	ppb	10.8	551.35	0.0101	Pulse	0.5000	3
Sr	88	115	He	9.451	ppb	5.6	3987.36	0.0763	Pulse	0.1000	3
Mo	98	115	He	0.587	ppb	11.8	720.05	0.0138	Pulse	0.1000	3
Ag	107	115	He	0.017	ppb	44.7	83.33	0.0016	Pulse	0.1000	3
Cd	111	115	He	-0.003	ppb	N/A	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.113	ppb	39.7	1070.08	0.0205	Pulse	0.1000	3
Sb	121	159	He	1.188	ppb	12.6	923.40	0.0032	Pulse	0.1000	3
Ba	137	115	He	52.362	ppb	2.1	13687.17	0.2619	Pulse	0.1000	3
Tl	205	209	He	0.074	ppb	7.2	816.72	0.0033	Pulse	0.1000	3
Pb	208	209	He	23.155	ppb	0.6	234702.09	0.9528	Pulse	0.1000	3
U	238	209	He	1.154	ppb	3.8	14455.22	0.0587	Pulse	0.1000	3

ISTD Table:

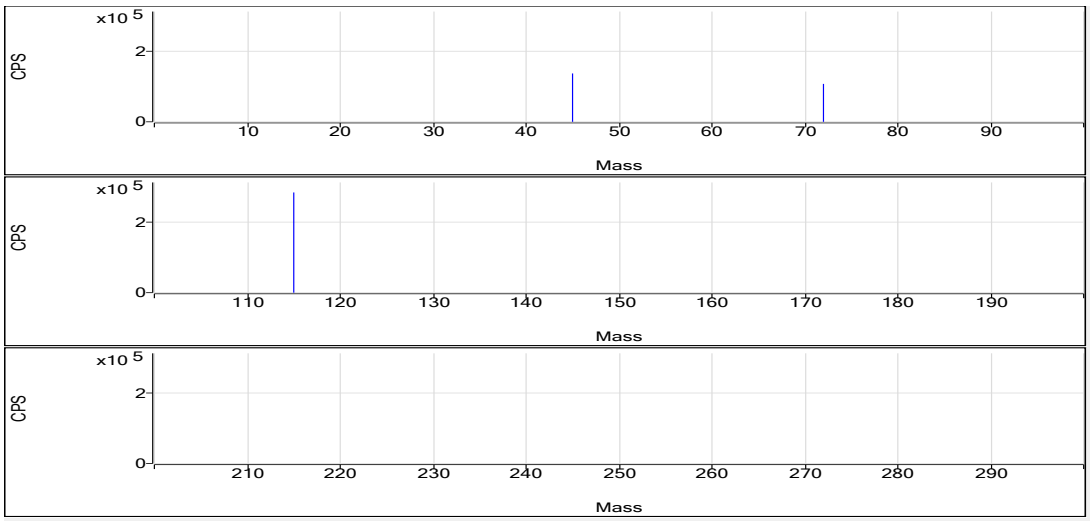
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2220460.49	1.0	101.0	Pulse	0.1000	3
No Gas	Ge	72	1078700.66	0.7	100.5	Pulse	0.1000	3
H2	Sc	45	136251.32	0.4	100.4	Pulse	0.1000	3
H2	Ge	72	106844.41	0.9	101.0	Pulse	0.1000	3
H2	In	115	282374.05	0.9	101.0	Pulse	0.1000	3
He	Sc	45	30438.97	1.5	102.0	Pulse	0.1000	3
He	Ge	72	54473.76	0.9	103.9	Pulse	0.1000	3
He	In	115	52256.69	0.7	102.0	Pulse	0.1000	3
He	Tb	159	289878.38	0.6	104.1	Pulse	0.1000	3
He	Bi	209	246344.34	0.5	103.7	Pulse	0.1000	3

No Gas

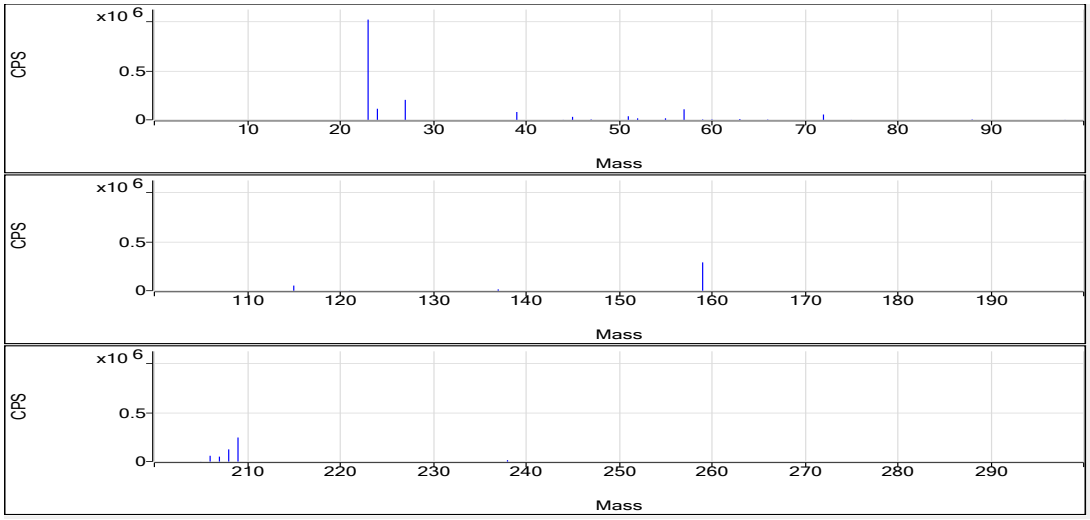


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.568	0.0004	996.04	0.0007	2.306E-05
Be	9	1	No Gas	0.576	0.0005	1016.04	0.0007	2.306E-05
Be	9	1	No Gas	0.581	0.0005	1004.04	0.0007	2.306E-05
Se	78	2	H2	0.205	0.0001	14.00	0.0004	4.221E-05
Se	78	2	H2	0.193	0.0001	13.33	0.0004	4.221E-05
Se	78	2	H2	0.108	0.0001	9.33	0.0004	4.221E-05
Na	23	3	He	8847.345	33.954	1029212.33	0.0038	0.2864
Na	23	3	He	8659.403	33.2388	1028190.69	0.0038	0.2864
Na	23	3	He	8849.16	33.9609	1021257.48	0.0038	0.2864
Mg	24	3	He	1959.948	3.7793	114559.09	0.0019	0.007972
Mg	24	3	He	1919.977	3.7024	114528.70	0.0019	0.007972
Mg	24	3	He	1919.393	3.7013	111303.83	0.0019	0.007972
Al	27	3	He	12233.44	6.668	202119.96	0.0005	0.00158
Al	27	3	He	12241.355	6.6723	206397.40	0.0005	0.00158
Al	27	3	He	12499.574	6.813	204878.12	0.0005	0.00158
K	39	3	He	2102.609	2.6182	79363.91	0.0011	0.3552
K	39	3	He	2074.553	2.588	80057.01	0.0011	0.3552
K	39	3	He	2163.38	2.6836	80701.39	0.0011	0.3552
Ca	44	3	He	389.895	0.0264	800.05	0.0001	0.002
Ca	44	3	He	360.751	0.0246	760.05	0.0001	0.002
Ca	44	3	He	340.11	0.0233	700.04	0.0001	0.002
Ti	47	3	He	288.973	0.1416	4290.77	0.0005	0.0004395
Ti	47	3	He	310.302	0.152	4700.94	0.0005	0.0004395
Ti	47	3	He	311.727	0.1527	4590.89	0.0005	0.0004395
V	51	3	He	54.19	1.2098	36671.69	0.0218	0.02648
V	51	3	He	52.374	1.1701	36196.59	0.0218	0.02648
V	51	3	He	54.722	1.2214	36729.87	0.0218	0.02648
Cr	52	3	He	16.99	0.4984	15108.37	0.029	0.006056
Cr	52	3	He	17.482	0.5127	15859.21	0.029	0.006056
Cr	52	3	He	17.38	0.5097	15328.54	0.029	0.006056
Mn	55	3	He	41.544	0.4981	15098.34	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	43.122	0.5169	15989.17	0.0119	0.00335
Mn	55	3	He	43.835	0.5254	15799.07	0.0119	0.00335
Fe	57	3	He	6261.403	3.533	107091.51	0.0006	0.003117
Fe	57	3	He	6139.021	3.464	107153.00	0.0006	0.003117
Fe	57	3	He	6441.091	3.6343	109288.39	0.0006	0.003117
Co	59	3	He	2.473	0.0827	4510.88	0.0317	0.004379
Co	59	3	He	2.11	0.0712	3910.66	0.0317	0.004379
Co	59	3	He	2.238	0.0753	4060.73	0.0317	0.004379
Ni	60	3	He	7.682	0.0799	4360.79	0.009	0.01049
Ni	60	3	He	7.06	0.0743	4080.73	0.009	0.01049
Ni	60	3	He	8.089	0.0836	4510.86	0.009	0.01049
Cu	63	3	He	4.985	0.146	7962.43	0.0259	0.01685
Cu	63	3	He	5.082	0.1485	8152.61	0.0259	0.01685
Cu	63	3	He	5.149	0.1502	8102.66	0.0259	0.01685
Zn	66	3	He	18.764	0.0568	3100.44	0.0028	0.003817
Zn	66	3	He	19.405	0.0586	3220.48	0.0028	0.003817
Zn	66	3	He	18.66	0.0565	3050.40	0.0028	0.003817
As	75	3	He	4.564	0.0089	488.01	0.0019	0.0004832
As	75	3	He	5.396	0.0105	576.02	0.0019	0.0004832
As	75	3	He	5.637	0.0109	590.02	0.0019	0.0004832
Sr	88	3	He	8.858	0.0715	3710.65	0.008	0.0005203
Sr	88	3	He	9.614	0.0776	4080.69	0.008	0.0005203
Sr	88	3	He	9.88	0.0797	4170.73	0.008	0.0005203
Mo	98	3	He	0.507	0.012	620.03	0.0229	0.0003256
Mo	98	3	He	0.616	0.0145	760.06	0.0229	0.0003256
Mo	98	3	He	0.637	0.0149	780.05	0.0229	0.0003256
Ag	107	3	He	0.009	0.0012	60.00	0.05	0.000719
Ag	107	3	He	0.02	0.0017	90.00	0.05	0.000719
Ag	107	3	He	0.024	0.0019	100.00	0.05	0.000719
Cd	111	3	He	-0.012	0	2.00	0.0055	0.000104
Cd	111	3	He	0.002	0.0001	6.00	0.0055	0.000104
Cd	111	3	He	0.002	0.0001	6.00	0.0055	0.000104
Sn	120	3	He	0.062	0.0197	1020.08	0.0159	0.01867
Sn	120	3	He	0.129	0.0207	1090.08	0.0159	0.01867
Sn	120	3	He	0.148	0.021	1100.08	0.0159	0.01867
Sb	121	3	He	1.096	0.0029	850.05	0.0026	8.342E-05
Sb	121	3	He	1.109	0.003	860.06	0.0026	8.342E-05
Sb	121	3	He	1.361	0.0036	1060.08	0.0026	8.342E-05
Ba	137	3	He	53.522	0.2677	13887.39	0.005	0.0005882
Ba	137	3	He	51.336	0.2568	13506.91	0.005	0.0005882
Ba	137	3	He	52.227	0.2613	13667.22	0.005	0.0005882
Tl	205	3	He	0.072	0.0033	800.05	0.0313	0.0009967
Tl	205	3	He	0.07	0.0032	790.06	0.0313	0.0009967
Tl	205	3	He	0.08	0.0035	860.06	0.0313	0.0009967
Pb	208	3	He	23.217	0.9553	124664.64	0.041	0.002892
Pb	208	3	He	22.991	0.946	125554.82	0.041	0.002892
Pb	208	3	He	23.258	0.957	124171.49	0.041	0.002892
U	238	3	He	1.169	0.0594	14628.72	0.0501	0.0008282
U	238	3	He	1.105	0.0562	13917.98	0.0501	0.0008282
U	238	3	He	1.189	0.0604	14818.97	0.0501	0.0008282
Sc	45	1	No Gas			2225003.87		
Sc	45	1	No Gas			2239293.25		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2197084.34		
Ge	72	1	No Gas			1080395.45		
Ge	72	1	No Gas			1085423.81		
Ge	72	1	No Gas			1070282.72		
Sc	45	2	H2			136470.45		
Sc	45	2	H2			136681.51		
Sc	45	2	H2			135602.00		
Ge	72	2	H2			107679.55		
Ge	72	2	H2			107046.15		
Ge	72	2	H2			105807.53		
In	115	2	H2			284367.03		
In	115	2	H2			283187.93		
In	115	2	H2			279567.18		
Sc	45	3	He			30311.94		
Sc	45	3	He			30933.42		
Sc	45	3	He			30071.54		
Ge	72	3	He			54553.88		
Ge	72	3	He			54915.86		
Ge	72	3	He			53951.53		
In	115	3	He			51876.96		
In	115	3	He			52599.56		
In	115	3	He			52318.58		
Tb	159	3	He			288808.20		
Tb	159	3	He			289040.33		
Tb	159	3	He			291786.60		
Bi	209	3	He			246134.31		
Bi	209	3	He			247630.95		
Bi	209	3	He			245267.77		

Quantitation Report

Data File Name	115SMPL.d
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Sample Type	Sample
Comment	A5
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

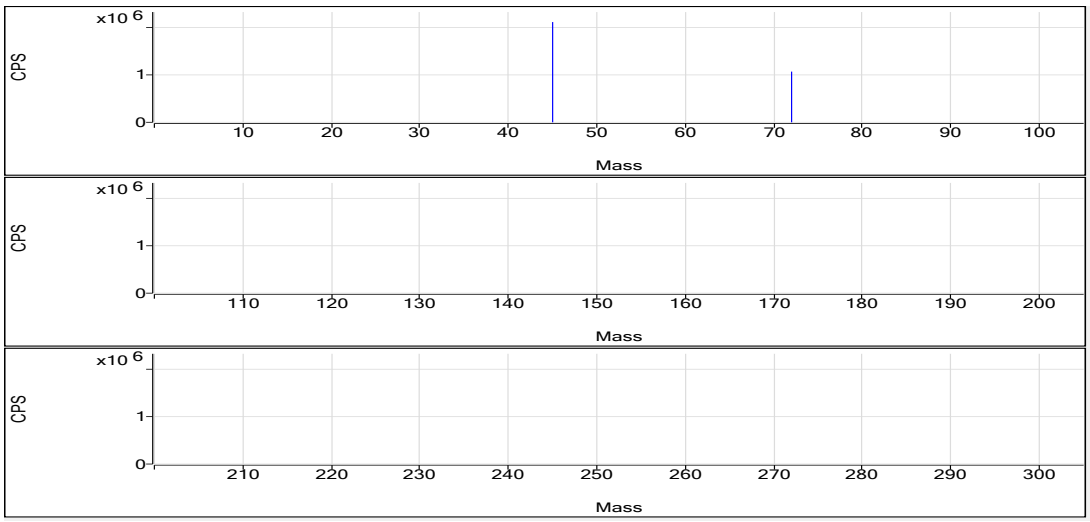
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.001	ppb	N/A	47.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.283	ppb	12.3	17.56	0.0002	Pulse	1.5000	3
Na	23	45	He	15045.512	ppb	0.6	1702980.60	57.5405	Pulse	0.1000	3
Mg	24	45	He	3017.143	ppb	0.8	172058.93	5.8136	Pulse	0.1000	3
Al	27	45	He	17.543	ppb	18.6	330.02	0.0111	Pulse	0.1000	3
K	39	45	He	1350.083	ppb	2.3	53521.63	1.8083	Pulse	0.1000	3
Ca	44	45	He	7186.710	ppb	0.6	13366.57	0.4516	Pulse	0.1000	3
Ti	47	45	He	0.254	ppb	569.8	16.67	0.0006	Pulse	0.1000	3
V	51	45	He	1.708	ppb	6.0	1887.47	0.0638	Pulse	0.5000	3
Cr	52	45	He	1.360	ppb	12.1	1346.77	0.0455	Pulse	0.1000	3
Mn	55	45	He	30.203	ppb	1.7	10744.32	0.3630	Pulse	0.1000	3
Fe	57	45	He	842.020	ppb	5.3	14137.36	0.4778	Pulse	0.1000	3
Co	59	72	He	0.170	ppb	40.5	530.03	0.0098	Pulse	0.1000	3
Ni	60	72	He	3.409	ppb	16.9	2230.25	0.0413	Pulse	0.1000	3
Cu	63	72	He	0.883	ppb	2.7	2150.23	0.0397	Pulse	0.1000	3
Zn	66	72	He	0.893	ppb	7.7	343.35	0.0063	Pulse	0.1000	3
As	75	72	He	34.021	ppb	5.1	3437.10	0.0636	Pulse	0.5000	3
Sr	88	115	He	38.734	ppb	1.2	16690.22	0.3111	Pulse	0.1000	3
Mo	98	115	He	4.739	ppb	6.3	5841.41	0.1089	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	109.5	53.33	0.0010	Pulse	0.1000	3
Cd	111	115	He	-0.001	ppb	N/A	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.226	ppb	74.0	1193.44	0.0223	Pulse	0.1000	3
Sb	121	159	He	0.315	ppb	7.5	260.01	0.0009	Pulse	0.1000	3
Ba	137	115	He	30.379	ppb	6.2	8162.70	0.1522	Pulse	0.1000	3
Tl	205	209	He	0.003	ppb	194.4	263.35	0.0011	Pulse	0.1000	3
Pb	208	209	He	8.499	ppb	3.0	85534.23	0.3515	Pulse	0.1000	3
U	238	209	He	0.472	ppb	3.7	5954.91	0.0245	Pulse	0.1000	3

ISTD Table:

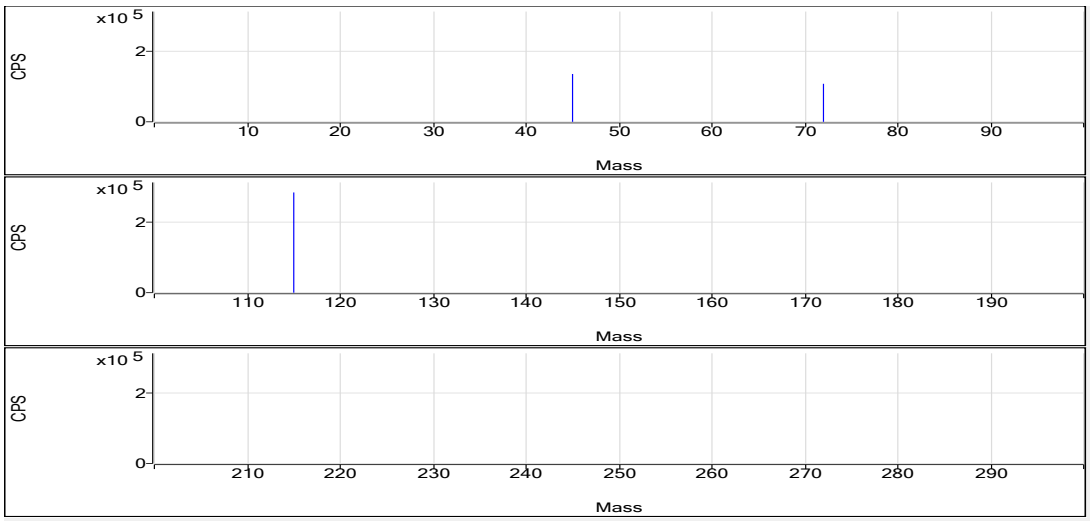
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2124853.20	0.9	96.7	Pulse	0.1000	3
No Gas	Ge	72	1074768.32	1.0	100.2	Pulse	0.1000	3
H2	Sc	45	135266.41	1.8	99.7	Pulse	0.1000	3
H2	Ge	72	107546.75	2.1	101.7	Pulse	0.1000	3
H2	In	115	283482.36	0.6	101.4	Pulse	0.1000	3
He	Sc	45	29597.15	0.9	99.1	Pulse	0.1000	3
He	Ge	72	54125.72	3.3	103.2	Pulse	0.1000	3
He	In	115	53664.61	1.8	104.7	Pulse	0.1000	3
He	Tb	159	287521.80	0.3	103.3	Pulse	0.1000	3
He	Bi	209	243366.94	0.8	102.5	Pulse	0.1000	3

No Gas

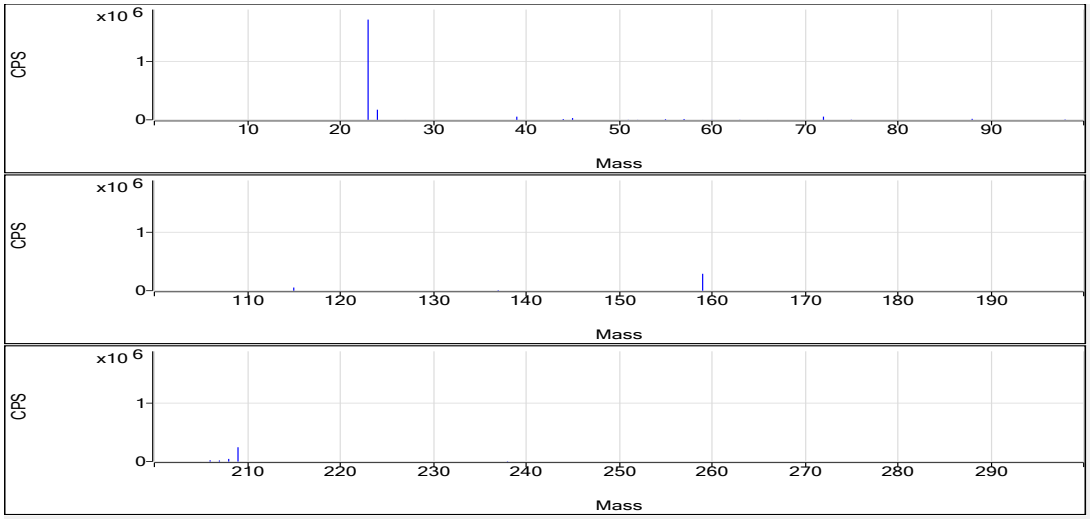


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.004	0	56.00	0.0007	2.306E-05
Be	9	1	No Gas	-0.004	0	42.00	0.0007	2.306E-05
Be	9	1	No Gas	-0.003	0	44.00	0.0007	2.306E-05
Se	78	2	H2	0.302	0.0002	18.00	0.0004	4.221E-05
Se	78	2	H2	0.243	0.0001	16.00	0.0004	4.221E-05
Se	78	2	H2	0.305	0.0002	18.67	0.0004	4.221E-05
Na	23	3	He	15070.354	57.635	1694462.79	0.0038	0.2864
Na	23	3	He	14944.196	57.1549	1708429.82	0.0038	0.2864
Na	23	3	He	15121.987	57.8315	1706049.19	0.0038	0.2864
Mg	24	3	He	3044.563	5.8664	172470.72	0.0019	0.007972
Mg	24	3	He	2994.594	5.7702	172478.94	0.0019	0.007972
Mg	24	3	He	3012.273	5.8042	171227.13	0.0019	0.007972
Al	27	3	He	14.578	0.0095	280.01	0.0005	0.00158
Al	27	3	He	21.044	0.013	390.02	0.0005	0.00158
Al	27	3	He	17.007	0.0108	320.02	0.0005	0.00158
K	39	3	He	1319.415	1.7753	52193.49	0.0011	0.3552
K	39	3	He	1349.393	1.8076	54030.16	0.0011	0.3552
K	39	3	He	1381.442	1.8421	54341.24	0.0011	0.3552
Ca	44	3	He	7207.704	0.4529	13316.55	0.0001	0.002
Ca	44	3	He	7136.889	0.4485	13406.66	0.0001	0.002
Ca	44	3	He	7215.537	0.4534	13376.51	0.0001	0.002
Ti	47	3	He	-0.9	0	0.00	0.0005	0.0004395
Ti	47	3	He	-0.215	0.0003	10.00	0.0005	0.0004395
Ti	47	3	He	1.877	0.0014	40.00	0.0005	0.0004395
V	51	3	He	1.806	0.0659	1938.14	0.0218	0.02648
V	51	3	He	1.601	0.0614	1836.12	0.0218	0.02648
V	51	3	He	1.719	0.064	1888.14	0.0218	0.02648
Cr	52	3	He	1.235	0.0418	1230.09	0.029	0.006056
Cr	52	3	He	1.546	0.0509	1520.13	0.029	0.006056
Cr	52	3	He	1.3	0.0437	1290.10	0.029	0.006056
Mn	55	3	He	30.005	0.3607	10604.15	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	29.817	0.3584	10714.31	0.0119	0.00335
Mn	55	3	He	30.786	0.37	10914.51	0.0119	0.00335
Fe	57	3	He	880.058	0.4992	14677.87	0.0006	0.003117
Fe	57	3	He	793.03	0.4502	13456.64	0.0006	0.003117
Fe	57	3	He	852.972	0.484	14277.57	0.0006	0.003117
Co	59	3	He	0.154	0.0093	510.03	0.0317	0.004379
Co	59	3	He	0.245	0.0121	670.04	0.0317	0.004379
Co	59	3	He	0.11	0.0079	410.02	0.0317	0.004379
Ni	60	3	He	2.854	0.0363	2000.21	0.009	0.01049
Ni	60	3	He	3.37	0.041	2260.25	0.009	0.01049
Ni	60	3	He	4.002	0.0467	2430.30	0.009	0.01049
Cu	63	3	He	0.863	0.0392	2160.24	0.0259	0.01685
Cu	63	3	He	0.91	0.0404	2230.25	0.0259	0.01685
Cu	63	3	He	0.877	0.0396	2060.21	0.0259	0.01685
Zn	66	3	He	0.961	0.0065	360.02	0.0028	0.003817
Zn	66	3	He	0.894	0.0063	350.02	0.0028	0.003817
Zn	66	3	He	0.824	0.0061	320.02	0.0028	0.003817
As	75	3	He	32.58	0.0609	3356.41	0.0019	0.0004832
As	75	3	He	33.555	0.0627	3460.44	0.0019	0.0004832
As	75	3	He	35.928	0.0671	3494.45	0.0019	0.0004832
Sr	88	3	He	39.21	0.3149	16539.99	0.008	0.0005203
Sr	88	3	He	38.295	0.3075	16720.15	0.008	0.0005203
Sr	88	3	He	38.696	0.3107	16810.51	0.008	0.0005203
Mo	98	3	He	5.005	0.115	6041.50	0.0229	0.0003256
Mo	98	3	He	4.418	0.1016	5521.24	0.0229	0.0003256
Mo	98	3	He	4.795	0.1102	5961.50	0.0229	0.0003256
Ag	107	3	He	0.012	0.0013	70.00	0.05	0.000719
Ag	107	3	He	0	0.0007	40.00	0.05	0.000719
Ag	107	3	He	0.004	0.0009	50.00	0.05	0.000719
Cd	111	3	He	0.002	0.0001	6.00	0.0055	0.000104
Cd	111	3	He	0.001	0.0001	6.00	0.0055	0.000104
Cd	111	3	He	-0.005	0.0001	4.00	0.0055	0.000104
Sn	120	3	He	0.418	0.0253	1330.13	0.0159	0.01867
Sn	120	3	He	0.11	0.0204	1110.09	0.0159	0.01867
Sn	120	3	He	0.151	0.0211	1140.09	0.0159	0.01867
Sb	121	3	He	0.3	0.0009	250.01	0.0026	8.342E-05
Sb	121	3	He	0.342	0.001	280.01	0.0026	8.342E-05
Sb	121	3	He	0.302	0.0009	250.01	0.0026	8.342E-05
Ba	137	3	He	32.464	0.1626	8542.92	0.005	0.0005882
Ba	137	3	He	28.781	0.1442	7842.49	0.005	0.0005882
Ba	137	3	He	29.89	0.1498	8102.68	0.005	0.0005882
Tl	205	3	He	0.004	0.0011	270.02	0.0313	0.0009967
Tl	205	3	He	-0.003	0.0009	220.01	0.0313	0.0009967
Tl	205	3	He	0.007	0.0012	300.02	0.0313	0.0009967
Pb	208	3	He	8.79	0.3635	46191.58	0.041	0.002892
Pb	208	3	He	8.311	0.3438	44626.31	0.041	0.002892
Pb	208	3	He	8.394	0.3472	44997.81	0.041	0.002892
U	238	3	He	0.49	0.0254	6121.65	0.0501	0.0008282
U	238	3	He	0.47	0.0244	5961.55	0.0501	0.0008282
U	238	3	He	0.455	0.0236	5781.54	0.0501	0.0008282
Sc	45	1	No Gas			2144291.53		
Sc	45	1	No Gas			2104558.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2125709.50		
Ge	72	1	No Gas			1087552.56		
Ge	72	1	No Gas			1067923.34		
Ge	72	1	No Gas			1068829.05		
Sc	45	2	H2			132392.45		
Sc	45	2	H2			136592.57		
Sc	45	2	H2			136814.21		
Ge	72	2	H2			105020.57		
Ge	72	2	H2			109474.32		
Ge	72	2	H2			108145.35		
In	115	2	H2			281722.93		
In	115	2	H2			284729.00		
In	115	2	H2			283995.15		
Sc	45	3	He			29399.89		
Sc	45	3	He			29891.21		
Sc	45	3	He			29500.35		
Ge	72	3	He			55115.99		
Ge	72	3	He			55186.46		
Ge	72	3	He			52074.70		
In	115	3	He			52539.71		
In	115	3	He			54376.52		
In	115	3	He			54105.51		
Tb	159	3	He			288553.86		
Tb	159	3	He			286956.40		
Tb	159	3	He			287055.15		
Bi	209	3	He			241100.11		
Bi	209	3	He			244363.02		
Bi	209	3	He			244637.69		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

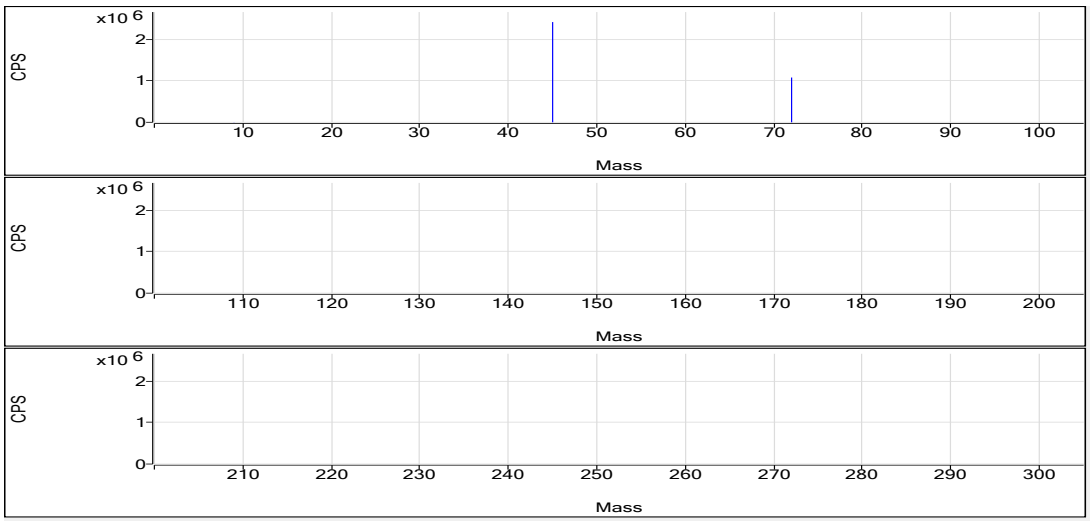
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	1.955	ppb	2.7	3576.45	0.0015	Pulse	0.5000	3
Se	78	72	H2	0.372	ppb	33.3	21.33	0.0002	Pulse	1.5000	3
Na	23	45	He	17756.491	ppb	0.7	2135464.40	67.8568	Pulse	0.1000	3
Mg	24	45	He	8584.964	ppb	1.1	520108.64	16.5273	Pulse	0.1000	3
Al	27	45	He	61309.970	ppb	0.5	1051477.30	33.4115	Pulse	0.1000	3
K	39	45	He	6763.037	ppb	1.3	240245.35	7.6342	Pulse	0.1000	3
Ca	44	45	He	1766.540	ppb	7.4	3540.55	0.1125	Pulse	0.1000	3
Ti	47	45	He	1101.559	ppb	1.1	16943.68	0.5384	Pulse	0.1000	3
V	51	45	He	120.513	ppb	0.5	83653.42	2.6581	Pulse	0.5000	3
Cr	52	45	He	74.717	ppb	1.8	68334.20	2.1713	Pulse	0.1000	3
Mn	55	45	He	102.018	ppb	0.4	38341.33	1.2183	Pulse	0.1000	3
Fe	57	45	He	17348.864	ppb	0.5	307898.52	9.7835	Pulse	0.1000	3
Co	59	72	He	10.673	ppb	4.3	18742.71	0.3424	Pulse	0.1000	3
Ni	60	72	He	32.040	ppb	4.0	16436.50	0.3001	Pulse	0.1000	3
Cu	63	72	He	11.605	ppb	4.4	17370.98	0.3174	Pulse	0.1000	3
Zn	66	72	He	85.803	ppb	1.2	13480.08	0.2462	Pulse	0.1000	3
As	75	72	He	4.623	ppb	10.4	495.34	0.0091	Pulse	0.5000	3
Sr	88	115	He	45.115	ppb	8.5	19163.45	0.3622	Pulse	0.1000	3
Mo	98	115	He	0.843	ppb	6.2	1040.08	0.0196	Pulse	0.1000	3
Ag	107	115	He	0.025	ppb	51.0	103.34	0.0020	Pulse	0.1000	3
Cd	111	115	He	0.018	ppb	99.2	10.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	1.381	ppb	7.6	2150.24	0.0406	Pulse	0.1000	3
Sb	121	159	He	0.376	ppb	20.0	310.01	0.0011	Pulse	0.1000	3
Ba	137	115	He	144.510	ppb	2.7	38193.76	0.7219	Pulse	0.1000	3
Tl	205	209	He	0.294	ppb	12.6	2520.33	0.0102	Pulse	0.1000	3
Pb	208	209	He	12.074	ppb	1.6	123268.49	0.4982	Pulse	0.1000	3
U	238	209	He	3.198	ppb	3.1	39865.72	0.1611	Pulse	0.1000	3

ISTD Table:

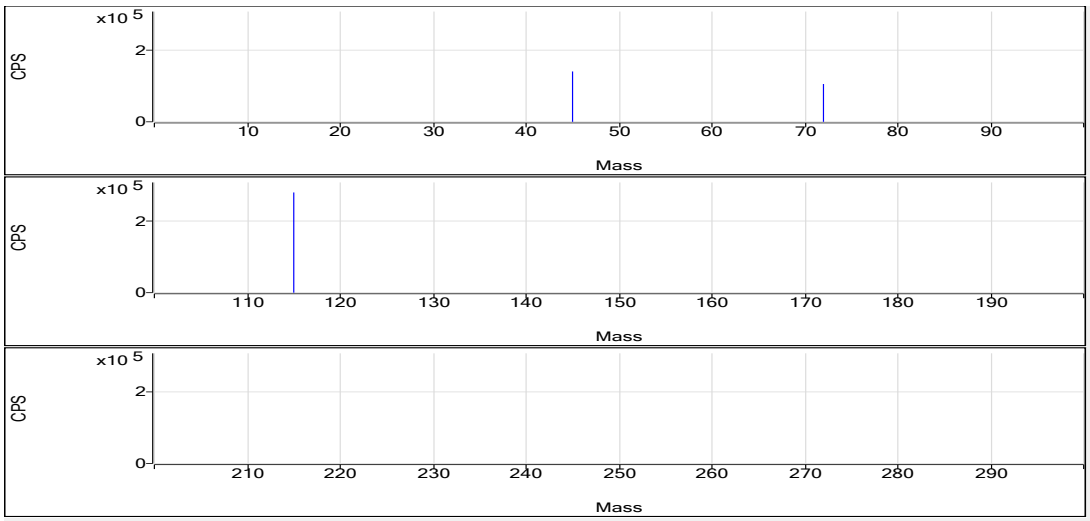
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2409599.34	0.6	109.6	Pulse	0.1000	3
No Gas	Ge	72	1076418.34	0.4	100.3	Pulse	0.1000	3
H2	Sc	45	141618.99	1.0	104.4	Pulse	0.1000	3
H2	Ge	72	106280.85	1.6	100.5	Pulse	0.1000	3
H2	In	115	281845.91	0.9	100.8	Pulse	0.1000	3
He	Sc	45	31471.09	0.6	105.4	Pulse	0.1000	3
He	Ge	72	54748.26	1.4	104.4	Pulse	0.1000	3
He	In	115	52924.01	1.8	103.3	Pulse	0.1000	3
He	Tb	159	291623.41	0.7	104.7	Pulse	0.1000	3
He	Bi	209	247443.30	1.0	104.2	Pulse	0.1000	3

No Gas

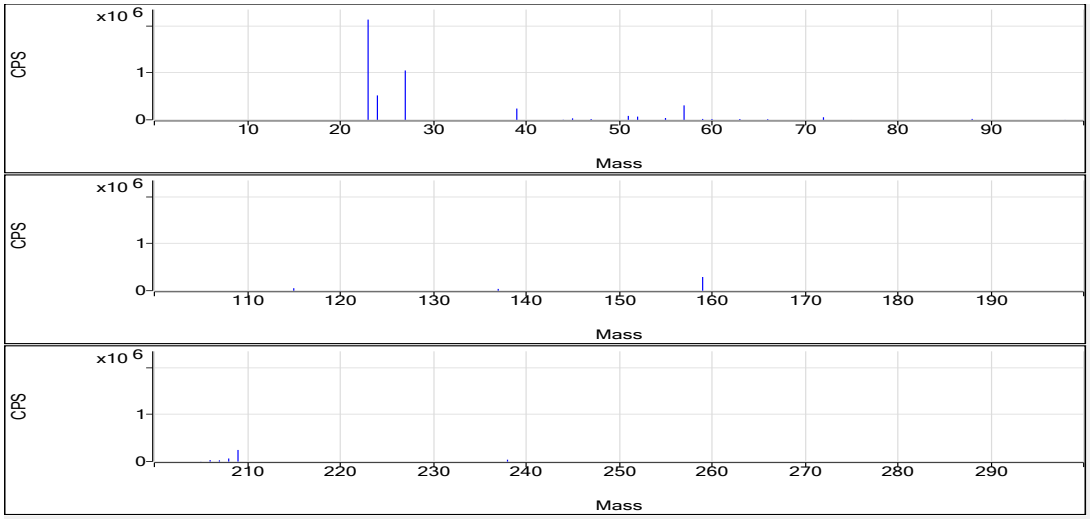


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.992	0.0015	3622.46	0.0007	2.306E-05
Be	9	1	No Gas	1.895	0.0014	3492.43	0.0007	2.306E-05
Be	9	1	No Gas	1.979	0.0015	3614.45	0.0007	2.306E-05
Se	78	2	H2	0.252	0.0001	16.00	0.0004	4.221E-05
Se	78	2	H2	0.365	0.0002	21.33	0.0004	4.221E-05
Se	78	2	H2	0.499	0.0003	26.67	0.0004	4.221E-05
Na	23	3	He	17897.942	68.3951	2136933.25	0.0038	0.2864
Na	23	3	He	17640.623	67.4159	2130654.66	0.0038	0.2864
Na	23	3	He	17730.907	67.7594	2138805.28	0.0038	0.2864
Mg	24	3	He	8695.571	16.7401	523028.39	0.0019	0.007972
Mg	24	3	He	8538.524	16.438	519515.54	0.0019	0.007972
Mg	24	3	He	8520.797	16.4038	517781.98	0.0019	0.007972
Al	27	3	He	61575.875	33.5564	1048433.89	0.0005	0.00158
Al	27	3	He	60938.825	33.2092	1049565.45	0.0005	0.00158
Al	27	3	He	61415.211	33.4688	1056432.56	0.0005	0.00158
K	39	3	He	6853.089	7.7311	241551.23	0.0011	0.3552
K	39	3	He	6674.123	7.5385	238252.03	0.0011	0.3552
K	39	3	He	6761.899	7.633	240932.79	0.0011	0.3552
Ca	44	3	He	1871.383	0.1191	3720.60	0.0001	0.002
Ca	44	3	He	1809.187	0.1152	3640.57	0.0001	0.002
Ca	44	3	He	1619.05	0.1033	3260.48	0.0001	0.002
Ti	47	3	He	1088.404	0.5319	16619.95	0.0005	0.0004395
Ti	47	3	He	1111.007	0.543	17160.65	0.0005	0.0004395
Ti	47	3	He	1105.265	0.5402	17050.44	0.0005	0.0004395
V	51	3	He	119.931	2.6453	82651.07	0.0218	0.02648
V	51	3	He	120.39	2.6554	83922.44	0.0218	0.02648
V	51	3	He	121.218	2.6735	84386.74	0.0218	0.02648
Cr	52	3	He	74.548	2.1664	67688.04	0.029	0.006056
Cr	52	3	He	73.442	2.1344	67456.69	0.029	0.006056
Cr	52	3	He	76.161	2.2132	69857.87	0.029	0.006056
Mn	55	3	He	101.685	1.2143	37940.18	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	101.853	1.2163	38441.47	0.0119	0.00335
Mn	55	3	He	102.517	1.2242	38642.35	0.0119	0.00335
Fe	57	3	He	17339.472	9.7782	305510.91	0.0006	0.003117
Fe	57	3	He	17274.034	9.7413	307871.81	0.0006	0.003117
Fe	57	3	He	17433.087	9.831	310312.83	0.0006	0.003117
Co	59	3	He	10.153	0.3259	17881.68	0.0317	0.004379
Co	59	3	He	11.001	0.3528	19033.01	0.0317	0.004379
Co	59	3	He	10.864	0.3484	19313.43	0.0317	0.004379
Ni	60	3	He	31.947	0.2993	16419.74	0.009	0.01049
Ni	60	3	He	30.804	0.2889	15588.91	0.009	0.01049
Ni	60	3	He	33.37	0.3121	17300.85	0.009	0.01049
Cu	63	3	He	11.244	0.308	16900.38	0.0259	0.01685
Cu	63	3	He	12.191	0.3326	17941.73	0.0259	0.01685
Cu	63	3	He	11.381	0.3116	17270.83	0.0259	0.01685
Zn	66	3	He	85.844	0.2464	13516.78	0.0028	0.003817
Zn	66	3	He	86.795	0.249	13436.62	0.0028	0.003817
Zn	66	3	He	84.769	0.2433	13486.84	0.0028	0.003817
As	75	3	He	4.32	0.0085	466.01	0.0019	0.0004832
As	75	3	He	5.177	0.0101	544.01	0.0019	0.0004832
As	75	3	He	4.371	0.0086	476.01	0.0019	0.0004832
Sr	88	3	He	42.293	0.3396	17781.52	0.008	0.0005203
Sr	88	3	He	43.554	0.3497	18883.11	0.008	0.0005203
Sr	88	3	He	49.498	0.3973	20825.73	0.008	0.0005203
Mo	98	3	He	0.886	0.0206	1080.09	0.0229	0.0003256
Mo	98	3	He	0.859	0.02	1080.08	0.0229	0.0003256
Mo	98	3	He	0.785	0.0183	960.06	0.0229	0.0003256
Ag	107	3	He	0.039	0.0027	140.01	0.05	0.000719
Ag	107	3	He	0.015	0.0015	80.00	0.05	0.000719
Ag	107	3	He	0.02	0.0017	90.00	0.05	0.000719
Cd	111	3	He	0.036	0.0003	16.00	0.0055	0.000104
Cd	111	3	He	0.001	0.0001	6.00	0.0055	0.000104
Cd	111	3	He	0.016	0.0002	10.00	0.0055	0.000104
Sn	120	3	He	1.443	0.0416	2180.25	0.0159	0.01867
Sn	120	3	He	1.259	0.0387	2090.22	0.0159	0.01867
Sn	120	3	He	1.441	0.0416	2180.25	0.0159	0.01867
Sb	121	3	He	0.294	0.0009	250.01	0.0026	8.342E-05
Sb	121	3	He	0.391	0.0011	320.01	0.0026	8.342E-05
Sb	121	3	He	0.442	0.0012	360.02	0.0026	8.342E-05
Ba	137	3	He	147.589	0.7373	38604.68	0.005	0.0005882
Ba	137	3	He	140.099	0.6999	37792.45	0.005	0.0005882
Ba	137	3	He	145.842	0.7285	38184.15	0.005	0.0005882
Tl	205	3	He	0.273	0.0095	2390.31	0.0313	0.0009967
Tl	205	3	He	0.336	0.0115	2830.40	0.0313	0.0009967
Tl	205	3	He	0.272	0.0095	2340.29	0.0313	0.0009967
Pb	208	3	He	11.972	0.494	65934.96	0.041	0.002892
Pb	208	3	He	12.303	0.5076	65623.51	0.041	0.002892
Pb	208	3	He	11.947	0.493	65171.72	0.041	0.002892
U	238	3	He	3.108	0.1566	39220.39	0.0501	0.0008282
U	238	3	He	3.182	0.1603	39380.80	0.0501	0.0008282
U	238	3	He	3.303	0.1664	40995.97	0.0501	0.0008282
Sc	45	1	No Gas			2396218.09		
Sc	45	1	No Gas			2426598.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2405981.37		
Ge	72	1	No Gas			1073241.94		
Ge	72	1	No Gas			1080772.25		
Ge	72	1	No Gas			1075240.84		
Sc	45	2	H2			142879.16		
Sc	45	2	H2			141993.61		
Sc	45	2	H2			139984.21		
Ge	72	2	H2			106763.83		
Ge	72	2	H2			107711.67		
Ge	72	2	H2			104367.06		
In	115	2	H2			284576.32		
In	115	2	H2			279965.70		
In	115	2	H2			280995.70		
Sc	45	3	He			31243.96		
Sc	45	3	He			31604.64		
Sc	45	3	He			31564.68		
Ge	72	3	He			54865.69		
Ge	72	3	He			53951.71		
Ge	72	3	He			55427.37		
In	115	3	He			52379.07		
In	115	3	He			54014.71		
In	115	3	He			52428.57		
Tb	159	3	He			293992.24		
Tb	159	3	He			289765.09		
Tb	159	3	He			291112.91		
Bi	209	3	He			250398.47		
Bi	209	3	He			245594.72		
Bi	209	3	He			246336.72		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 12:56:50
Sample Name	CCV 6148199
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

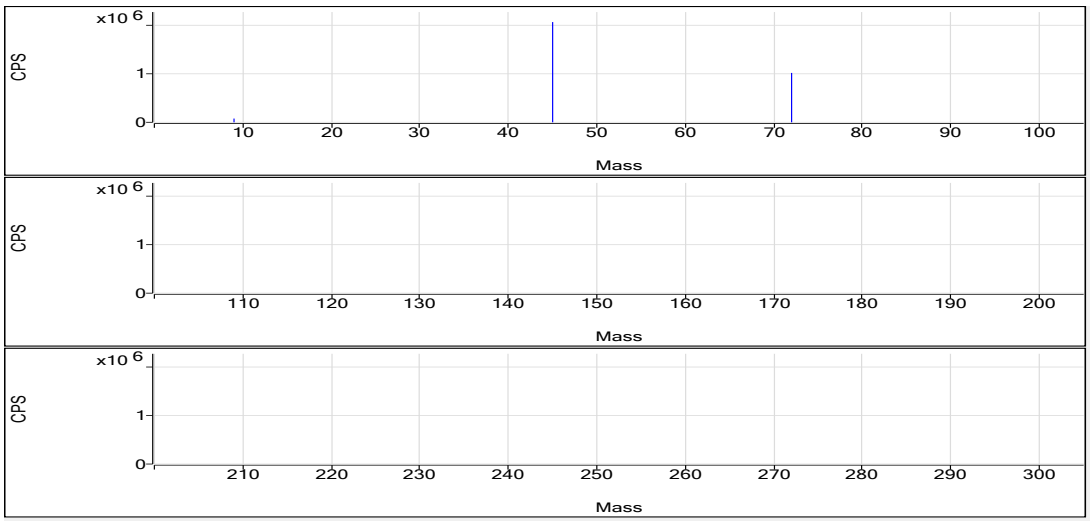
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.837	ppb	1.5	77314.50	0.0373	Pulse	0.5000	3
Se	78	72	H2	53.657	ppb	0.2	2313.08	0.0230	Pulse	1.5000	3
Na	23	45	He	6950.079	ppb	1.1	767644.94	26.7342	Pulse	0.1000	3
Mg	24	45	He	5067.874	ppb	0.5	280244.21	9.7597	Pulse	0.1000	3
Al	27	45	He	5104.231	ppb	0.9	79919.01	2.7830	Pulse	0.1000	3
K	39	45	He	5069.940	ppb	0.6	166886.40	5.8119	Pulse	0.1000	3
Ca	44	45	He	5132.658	ppb	3.6	9276.58	0.3231	Pulse	0.1000	3
Ti	47	45	He	5103.050	ppb	1.9	71565.00	2.4924	Pulse	0.1000	3
V	51	45	He	511.587	ppb	0.9	321536.58	11.1978	Pulse	0.5000	3
Cr	52	45	He	507.911	ppb	0.3	422830.93	14.7252	Pulse	0.1000	3
Mn	55	45	He	514.905	ppb	0.7	176172.08	6.1354	Pulse	0.1000	3
Fe	57	45	He	5144.841	ppb	1.0	83379.40	2.9035	Pulse	0.1000	3
Co	59	72	He	515.630	ppb	1.2	832570.20	16.3341	Pulse	0.1000	3
Ni	60	72	He	516.328	ppb	1.4	238440.31	4.6779	Pulse	0.1000	3
Cu	63	72	He	513.031	ppb	1.4	678055.12	13.3028	Pulse	0.1000	3
Zn	66	72	He	514.786	ppb	2.4	74324.47	1.4583	Pulse	0.1000	3
As	75	72	He	521.612	ppb	0.9	49328.47	0.9677	Pulse	0.5000	3
Sr	88	115	He	53.373	ppb	2.6	21810.82	0.4284	Pulse	0.1000	3
Mo	98	115	He	52.163	ppb	0.3	60864.93	1.1956	Pulse	0.1000	3
Ag	107	115	He	51.224	ppb	0.5	130414.37	2.5618	Pulse	0.1000	3
Cd	111	115	He	50.990	ppb	2.2	14344.03	0.2818	Pulse	0.5000	3
Sn	120	115	He	52.348	ppb	0.3	43361.53	0.8518	Pulse	0.1000	3
Sb	121	159	He	51.323	ppb	1.0	37574.61	0.1340	Pulse	0.1000	3
Ba	137	115	He	521.626	ppb	0.4	132572.47	2.6042	Pulse	0.1000	3
Tl	205	209	He	50.440	ppb	1.1	377679.45	1.5794	Pulse	0.1000	3
Pb	208	209	He	50.727	ppb	1.2	498300.73	2.0838	Pulse	0.1000	3
U	238	209	He	49.872	ppb	1.4	598031.98	2.5009	Pulse	0.1000	3

ISTD Table:

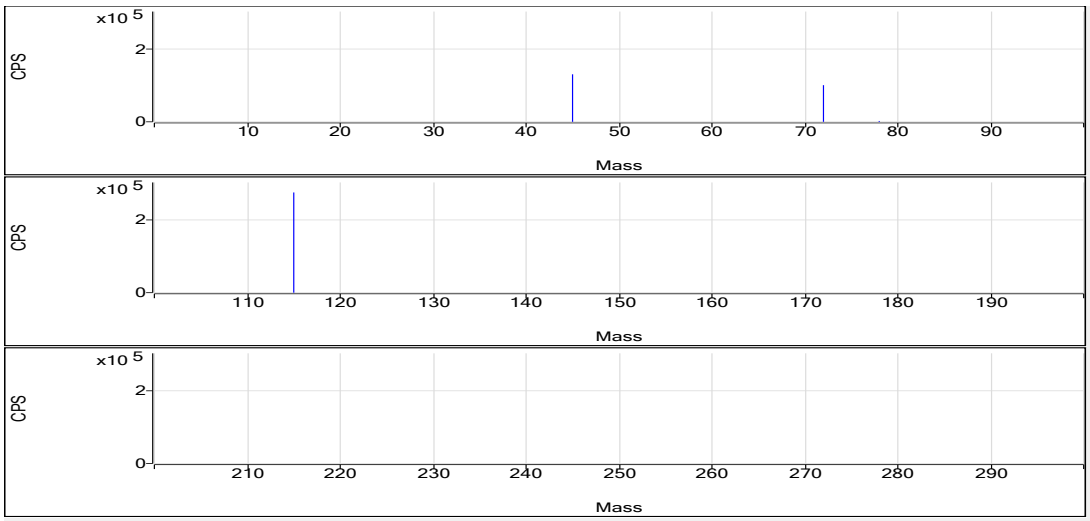
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2074326.79	0.6	94.4	Pulse	0.1000	3
No Gas	Ge	72	1022028.06	0.7	95.2	Pulse	0.1000	3
H2	Sc	45	130536.80	0.9	96.2	Pulse	0.1000	3
H2	Ge	72	100664.16	0.5	95.2	Pulse	0.1000	3
H2	In	115	275356.34	1.1	98.5	Pulse	0.1000	3
He	Sc	45	28715.43	1.0	96.2	Pulse	0.1000	3
He	Ge	72	50977.84	1.6	97.2	Pulse	0.1000	3
He	In	115	50906.50	0.8	99.3	Pulse	0.1000	3
He	Tb	159	280420.12	0.7	100.7	Pulse	0.1000	3
He	Bi	209	239147.27	0.8	100.7	Pulse	0.1000	3

No Gas

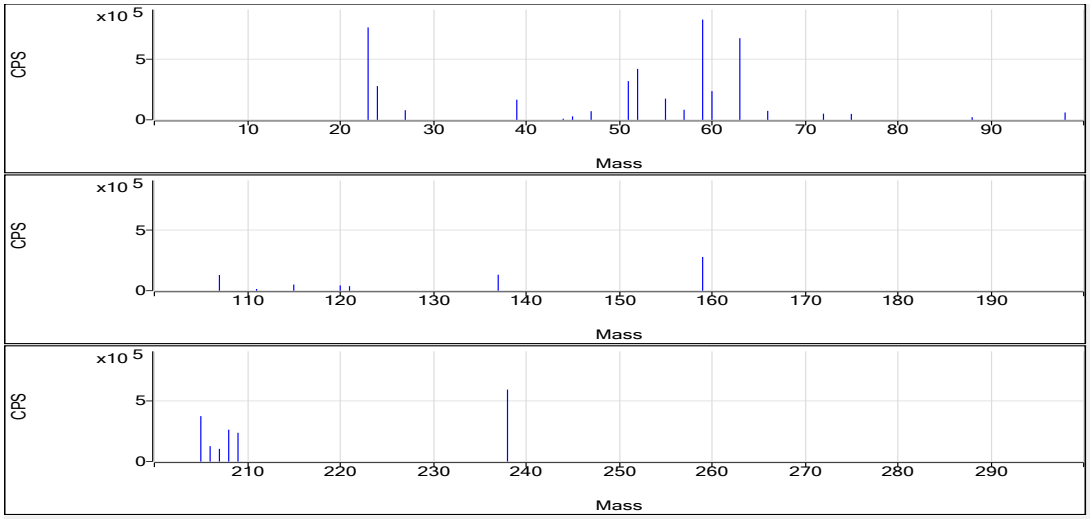


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.045	0.0367	76279.20	0.0007	2.306E-05
Be	9	1	No Gas	50.001	0.0374	77045.13	0.0007	2.306E-05
Be	9	1	No Gas	50.464	0.0377	78619.16	0.0007	2.306E-05
Se	78	2	H2	53.56	0.0229	2320.86	0.0004	4.221E-05
Se	78	2	H2	53.759	0.023	2309.52	0.0004	4.221E-05
Se	78	2	H2	53.652	0.023	2308.86	0.0004	4.221E-05
Na	23	3	He	6863.771	26.4057	763101.79	0.0038	0.2864
Na	23	3	He	7008.318	26.9558	765496.63	0.0038	0.2864
Na	23	3	He	6978.15	26.841	774336.39	0.0038	0.2864
Mg	24	3	He	5042.741	9.7113	280647.71	0.0019	0.007972
Mg	24	3	He	5095.561	9.8129	278669.94	0.0019	0.007972
Mg	24	3	He	5065.322	9.7548	281414.98	0.0019	0.007972
Al	27	3	He	5083.841	2.7719	80106.47	0.0005	0.00158
Al	27	3	He	5070.899	2.7649	78517.81	0.0005	0.00158
Al	27	3	He	5157.952	2.8123	81132.76	0.0005	0.00158
K	39	3	He	5051.335	5.7919	167381.29	0.0011	0.3552
K	39	3	He	5106.268	5.851	166159.29	0.0011	0.3552
K	39	3	He	5052.216	5.7929	167118.63	0.0011	0.3552
Ca	44	3	He	5074.728	0.3195	9233.18	0.0001	0.002
Ca	44	3	He	5339.411	0.3361	9543.42	0.0001	0.002
Ca	44	3	He	4983.836	0.3138	9053.13	0.0001	0.002
Ti	47	3	He	4992.574	2.4385	70469.49	0.0005	0.0004395
Ti	47	3	He	5170.506	2.5254	71715.66	0.0005	0.0004395
Ti	47	3	He	5146.07	2.5134	72509.84	0.0005	0.0004395
V	51	3	He	506.493	11.0865	320390.75	0.0218	0.02648
V	51	3	He	514.791	11.2677	319983.38	0.0218	0.02648
V	51	3	He	513.478	11.2391	324235.63	0.0218	0.02648
Cr	52	3	He	507.153	14.7032	424908.94	0.029	0.006056
Cr	52	3	He	509.699	14.777	419639.37	0.029	0.006056
Cr	52	3	He	506.88	14.6953	423944.49	0.029	0.006056
Mn	55	3	He	513.262	6.1158	176741.50	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	519.21	6.1867	175689.88	0.0119	0.00335
Mn	55	3	He	512.242	6.1037	176084.86	0.0119	0.00335
Fe	57	3	He	5130.189	2.8953	83670.34	0.0006	0.003117
Fe	57	3	He	5100.861	2.8787	81750.66	0.0006	0.003117
Fe	57	3	He	5203.472	2.9366	84717.21	0.0006	0.003117
Co	59	3	He	515.87	16.3417	833281.00	0.0317	0.004379
Co	59	3	He	521.806	16.5297	829265.77	0.0317	0.004379
Co	59	3	He	509.214	16.1309	835163.82	0.0317	0.004379
Ni	60	3	He	521.894	4.7282	241094.82	0.009	0.01049
Ni	60	3	He	519.151	4.7034	235960.47	0.009	0.01049
Ni	60	3	He	507.938	4.602	238265.64	0.009	0.01049
Cu	63	3	He	515.876	13.3764	682079.76	0.0259	0.01685
Cu	63	3	He	518.283	13.4388	674201.08	0.0259	0.01685
Cu	63	3	He	504.935	13.0931	677884.52	0.0259	0.01685
Zn	66	3	He	507.883	1.4388	73365.82	0.0028	0.003817
Zn	66	3	He	529.071	1.4987	75185.27	0.0028	0.003817
Zn	66	3	He	507.404	1.4374	74422.31	0.0028	0.003817
As	75	3	He	517.633	0.9603	48968.61	0.0019	0.0004832
As	75	3	He	527.076	0.9778	49056.87	0.0019	0.0004832
As	75	3	He	520.126	0.965	49959.93	0.0019	0.0004832
Sr	88	3	He	52.414	0.4207	21497.06	0.008	0.0005203
Sr	88	3	He	52.726	0.4232	21346.77	0.008	0.0005203
Sr	88	3	He	54.98	0.4413	22588.62	0.008	0.0005203
Mo	98	3	He	52.028	1.1925	60931.75	0.0229	0.0003256
Mo	98	3	He	52.098	1.1941	60228.50	0.0229	0.0003256
Mo	98	3	He	52.364	1.2002	61434.55	0.0229	0.0003256
Ag	107	3	He	51.504	2.5759	131613.55	0.05	0.000719
Ag	107	3	He	51.114	2.5563	128936.02	0.05	0.000719
Ag	107	3	He	51.053	2.5533	130693.55	0.05	0.000719
Cd	111	3	He	50.149	0.2772	14161.20	0.0055	0.000104
Cd	111	3	He	52.296	0.289	14577.59	0.0055	0.000104
Cd	111	3	He	50.526	0.2792	14293.29	0.0055	0.000104
Sn	120	3	He	52.479	0.8539	43628.94	0.0159	0.01867
Sn	120	3	He	52.415	0.8529	43017.11	0.0159	0.01867
Sn	120	3	He	52.149	0.8486	43438.53	0.0159	0.01867
Sb	121	3	He	50.941	0.133	37079.89	0.0026	8.342E-05
Sb	121	3	He	51.149	0.1335	37380.91	0.0026	8.342E-05
Sb	121	3	He	51.88	0.1354	38263.04	0.0026	8.342E-05
Ba	137	3	He	523.623	2.6142	133573.04	0.005	0.0005882
Ba	137	3	He	521.739	2.6048	131380.89	0.005	0.0005882
Ba	137	3	He	519.517	2.5937	132763.48	0.005	0.0005882
Tl	205	3	He	50.939	1.595	378514.17	0.0313	0.0009967
Tl	205	3	He	49.858	1.5611	376532.73	0.0313	0.0009967
Tl	205	3	He	50.524	1.582	377991.44	0.0313	0.0009967
Pb	208	3	He	51.217	2.1039	267591.09	0.041	0.002892
Pb	208	3	He	50.073	2.057	261906.46	0.041	0.002892
Pb	208	3	He	50.89	2.0905	264886.48	0.041	0.002892
U	238	3	He	50.593	2.537	602077.88	0.0501	0.0008282
U	238	3	He	49.161	2.4652	594594.21	0.0501	0.0008282
U	238	3	He	49.862	2.5004	597423.86	0.0501	0.0008282
Sc	45	1	No Gas			2079552.94		
Sc	45	1	No Gas			2060311.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2083115.59		
Ge	72	1	No Gas			1023332.41		
Ge	72	1	No Gas			1014087.25		
Ge	72	1	No Gas			1028664.52		
Sc	45	2	H2			129196.03		
Sc	45	2	H2			130838.98		
Sc	45	2	H2			131575.38		
Ge	72	2	H2			101184.49		
Ge	72	2	H2			100318.95		
Ge	72	2	H2			100489.05		
In	115	2	H2			271911.07		
In	115	2	H2			277661.97		
In	115	2	H2			276495.97		
Sc	45	3	He			28899.08		
Sc	45	3	He			28398.21		
Sc	45	3	He			28849.01		
Ge	72	3	He			50991.11		
Ge	72	3	He			50168.29		
Ge	72	3	He			51774.13		
In	115	3	He			51435.27		
In	115	3	He			50773.42		
In	115	3	He			51525.46		
Tb	159	3	He			278817.12		
Tb	159	3	He			279933.90		
Tb	159	3	He			282509.33		
Bi	209	3	He			237316.11		
Bi	209	3	He			241190.60		
Bi	209	3	He			238935.09		

Quantitation Report

Data File Name	119_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	2024-07-17 12:58:51
Sample Name	CCB 6148203
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins21905
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	2024-07-17 09:29:21
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

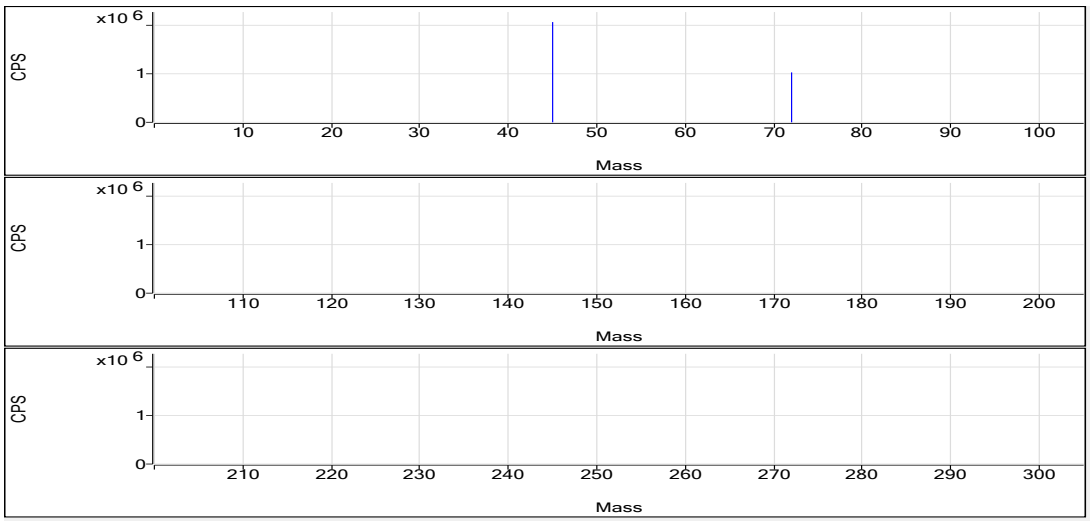
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.036	ppb	11.7	102.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.018	ppb	N/A	3.56	0.0000	Pulse	1.5000	3
Na	23	45	He	1150.718	ppb	4.4	133720.32	4.6653	Pulse	0.1000	3
Mg	24	45	He	25.800	ppb	2.9	1650.15	0.0576	Pulse	0.1000	3
Al	27	45	He	12.065	ppb	10.3	233.34	0.0082	Pulse	0.1000	3
K	39	45	He	2.901	ppb	662.1	10253.94	0.3583	Pulse	0.1000	3
Ca	44	45	He	50.143	ppb	41.6	146.67	0.0051	Pulse	0.1000	3
Ti	47	45	He	2.366	ppb	186.0	46.67	0.0016	Pulse	0.1000	3
V	51	45	He	0.623	ppb	2.3	1148.05	0.0401	Pulse	0.5000	3
Cr	52	45	He	0.469	ppb	9.4	563.37	0.0197	Pulse	0.1000	3
Mn	55	45	He	1.446	ppb	13.6	590.03	0.0206	Pulse	0.1000	3
Fe	57	45	He	15.069	ppb	27.7	333.35	0.0116	Pulse	0.1000	3
Co	59	72	He	0.255	ppb	13.1	650.04	0.0125	Pulse	0.1000	3
Ni	60	72	He	0.057	ppb	22.1	573.36	0.0110	Pulse	0.1000	3
Cu	63	72	He	0.236	ppb	18.7	1196.76	0.0230	Pulse	0.1000	3
Zn	66	72	He	0.120	ppb	278.5	216.68	0.0042	Pulse	0.1000	3
As	75	72	He	0.256	ppb	26.7	50.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.209	ppb	51.5	113.34	0.0022	Pulse	0.1000	3
Mo	98	115	He	0.059	ppb	35.7	86.67	0.0017	Pulse	0.1000	3
Ag	107	115	He	0.020	ppb	31.5	90.00	0.0017	Pulse	0.1000	3
Cd	111	115	He	0.021	ppb	68.6	11.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.109	ppb	N/A	873.39	0.0169	Pulse	0.1000	3
Sb	121	159	He	0.032	ppb	50.6	46.67	0.0002	Pulse	0.1000	3
Ba	137	115	He	0.284	ppb	42.2	103.33	0.0020	Pulse	0.1000	3
Tl	205	209	He	0.093	ppb	12.3	926.73	0.0039	Pulse	0.1000	3
Pb	208	209	He	0.017	ppb	45.8	853.38	0.0036	Pulse	0.1000	3
U	238	209	He	0.023	ppb	19.3	470.02	0.0020	Pulse	0.1000	3

ISTD Table:

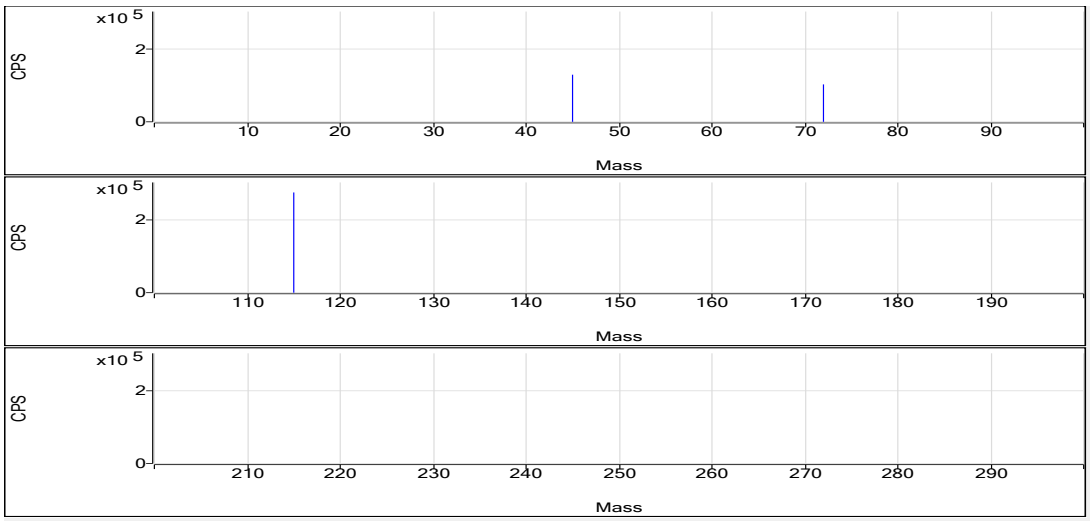
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2066088.77	0.5	94.0	Pulse	0.1000	3
No Gas	Ge	72	1028747.98	0.5	95.9	Pulse	0.1000	3
H2	Sc	45	129844.88	2.1	95.7	Pulse	0.1000	3
H2	Ge	72	103118.38	0.9	97.5	Pulse	0.1000	3
H2	In	115	276229.87	0.9	98.8	Pulse	0.1000	3
He	Sc	45	28642.21	2.6	95.9	Pulse	0.1000	3
He	Ge	72	52121.62	1.4	99.4	Pulse	0.1000	3
He	In	115	51575.90	0.9	100.6	Pulse	0.1000	3
He	Tb	159	279988.47	0.5	100.5	Pulse	0.1000	3
He	Bi	209	237709.99	0.7	100.1	Pulse	0.1000	3

No Gas

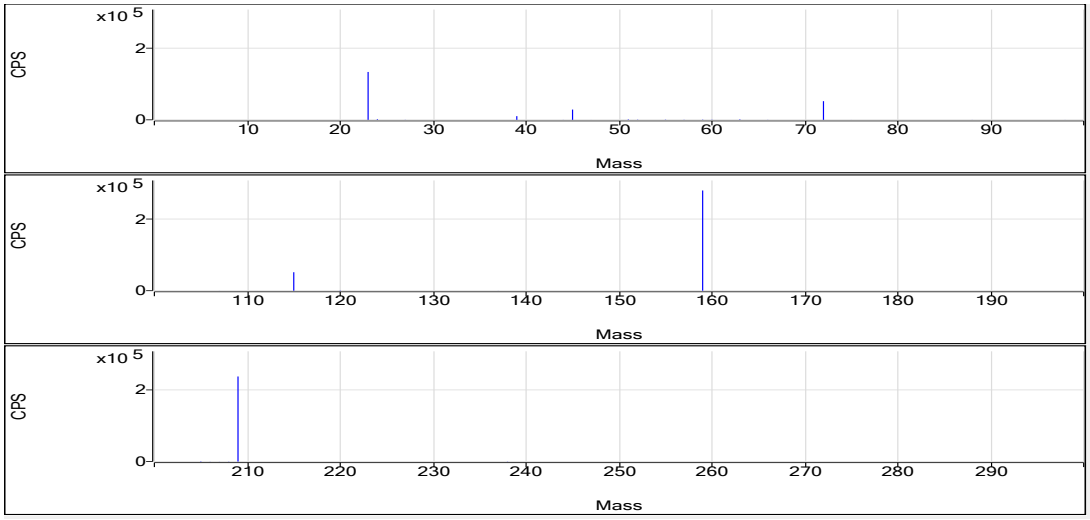


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.04	0.0001	110.00	0.0007	2.306E-05
Be	9	1	No Gas	0.033	0	98.00	0.0007	2.306E-05
Be	9	1	No Gas	0.034	0	100.00	0.0007	2.306E-05
Se	78	2	H2	-0.009	0	4.00	0.0004	4.221E-05
Se	78	2	H2	-0.038	0	2.67	0.0004	4.221E-05
Se	78	2	H2	-0.007	0	4.00	0.0004	4.221E-05
Na	23	3	He	1105.708	4.4941	125776.91	0.0038	0.2864
Na	23	3	He	1141.107	4.6288	131913.40	0.0038	0.2864
Na	23	3	He	1205.339	4.8732	143470.66	0.0038	0.2864
Mg	24	3	He	25.384	0.0568	1590.14	0.0019	0.007972
Mg	24	3	He	26.678	0.0593	1690.15	0.0019	0.007972
Mg	24	3	He	25.339	0.0567	1670.15	0.0019	0.007972
Al	27	3	He	13.493	0.0089	250.01	0.0005	0.00158
Al	27	3	He	11.267	0.0077	220.01	0.0005	0.00158
Al	27	3	He	11.437	0.0078	230.01	0.0005	0.00158
K	39	3	He	22.99	0.38	10634.23	0.0011	0.3552
K	39	3	He	0.994	0.3563	10153.81	0.0011	0.3552
K	39	3	He	-15.281	0.3388	9973.79	0.0011	0.3552
Ca	44	3	He	53.697	0.0054	150.01	0.0001	0.002
Ca	44	3	He	68.986	0.0063	180.01	0.0001	0.002
Ca	44	3	He	27.746	0.0037	110.00	0.0001	0.002
Ti	47	3	He	-0.168	0.0004	10.00	0.0005	0.0004395
Ti	47	3	He	-0.181	0.0004	10.00	0.0005	0.0004395
Ti	47	3	He	7.447	0.0041	120.01	0.0005	0.0004395
V	51	3	He	0.607	0.0397	1112.05	0.0218	0.02648
V	51	3	He	0.626	0.0401	1144.05	0.0218	0.02648
V	51	3	He	0.635	0.0404	1188.06	0.0218	0.02648
Cr	52	3	He	0.42	0.0182	510.03	0.029	0.006056
Cr	52	3	He	0.505	0.0207	590.04	0.029	0.006056
Cr	52	3	He	0.483	0.02	590.03	0.029	0.006056
Mn	55	3	He	1.219	0.0179	500.02	0.0119	0.00335

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.575	0.0221	630.05	0.0119	0.00335
Mn	55	3	He	1.544	0.0217	640.03	0.0119	0.00335
Fe	57	3	He	10.317	0.0089	250.01	0.0006	0.003117
Fe	57	3	He	18.125	0.0133	380.02	0.0006	0.003117
Fe	57	3	He	16.765	0.0126	370.02	0.0006	0.003117
Co	59	3	He	0.231	0.0117	600.04	0.0317	0.004379
Co	59	3	He	0.242	0.012	630.03	0.0317	0.004379
Co	59	3	He	0.293	0.0137	720.04	0.0317	0.004379
Ni	60	3	He	0.069	0.0111	570.03	0.009	0.01049
Ni	60	3	He	0.044	0.0109	570.03	0.009	0.01049
Ni	60	3	He	0.058	0.011	580.03	0.009	0.01049
Cu	63	3	He	0.192	0.0218	1120.09	0.0259	0.01685
Cu	63	3	He	0.234	0.0229	1200.08	0.0259	0.01685
Cu	63	3	He	0.28	0.0241	1270.10	0.0259	0.01685
Zn	66	3	He	0.098	0.0041	210.01	0.0028	0.003817
Zn	66	3	He	-0.202	0.0032	170.01	0.0028	0.003817
Zn	66	3	He	0.463	0.0051	270.01	0.0028	0.003817
As	75	3	He	0.202	0.0009	44.00	0.0019	0.0004832
As	75	3	He	0.234	0.0009	48.00	0.0019	0.0004832
As	75	3	He	0.333	0.0011	58.00	0.0019	0.0004832
Sr	88	3	He	0.204	0.0022	110.00	0.008	0.0005203
Sr	88	3	He	0.104	0.0014	70.00	0.008	0.0005203
Sr	88	3	He	0.319	0.0031	160.01	0.008	0.0005203
Mo	98	3	He	0.063	0.0018	90.00	0.0229	0.0003256
Mo	98	3	He	0.036	0.0012	60.00	0.0229	0.0003256
Mo	98	3	He	0.078	0.0021	110.00	0.0229	0.0003256
Ag	107	3	He	0.013	0.0014	70.00	0.05	0.000719
Ag	107	3	He	0.024	0.0019	100.00	0.05	0.000719
Ag	107	3	He	0.024	0.0019	100.00	0.05	0.000719
Cd	111	3	He	0.017	0.0002	10.00	0.0055	0.000104
Cd	111	3	He	0.009	0.0002	8.00	0.0055	0.000104
Cd	111	3	He	0.037	0.0003	16.00	0.0055	0.000104
Sn	120	3	He	-0.078	0.0174	890.06	0.0159	0.01867
Sn	120	3	He	-0.201	0.0155	800.05	0.0159	0.01867
Sn	120	3	He	-0.049	0.0179	930.06	0.0159	0.01867
Sb	121	3	He	0.051	0.0002	60.00	0.0026	8.342E-05
Sb	121	3	He	0.023	0.0001	40.00	0.0026	8.342E-05
Sb	121	3	He	0.023	0.0001	40.00	0.0026	8.342E-05
Ba	137	3	He	0.314	0.0022	110.00	0.005	0.0005882
Ba	137	3	He	0.386	0.0025	130.00	0.005	0.0005882
Ba	137	3	He	0.152	0.0013	70.00	0.005	0.0005882
Tl	205	3	He	0.094	0.0039	930.07	0.0313	0.0009967
Tl	205	3	He	0.081	0.0035	840.05	0.0313	0.0009967
Tl	205	3	He	0.103	0.0042	1010.08	0.0313	0.0009967
Pb	208	3	He	0.008	0.0032	430.02	0.041	0.002892
Pb	208	3	He	0.022	0.0038	370.02	0.041	0.002892
Pb	208	3	He	0.02	0.0037	530.03	0.041	0.002892
U	238	3	He	0.018	0.0017	410.02	0.0501	0.0008282
U	238	3	He	0.024	0.002	480.02	0.0501	0.0008282
U	238	3	He	0.027	0.0022	520.03	0.0501	0.0008282
Sc	45	1	No Gas			2064305.28		
Sc	45	1	No Gas			2056382.16		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2077578.88		
Ge	72	1	No Gas			1025363.27		
Ge	72	1	No Gas			1026393.27		
Ge	72	1	No Gas			1034487.41		
Sc	45	2	H2			132807.48		
Sc	45	2	H2			129398.02		
Sc	45	2	H2			127329.13		
Ge	72	2	H2			104135.91		
Ge	72	2	H2			102957.57		
Ge	72	2	H2			102261.66		
In	115	2	H2			278413.18		
In	115	2	H2			273511.01		
In	115	2	H2			276765.41		
Sc	45	3	He			27987.33		
Sc	45	3	He			28498.56		
Sc	45	3	He			29440.74		
Ge	72	3	He			51311.85		
Ge	72	3	He			52376.27		
Ge	72	3	He			52676.73		
In	115	3	He			51064.23		
In	115	3	He			51696.37		
In	115	3	He			51987.53		
Tb	159	3	He			278409.43		
Tb	159	3	He			281435.39		
Tb	159	3	He			280120.58		
Bi	209	3	He			235767.13		
Bi	209	3	He			238581.03		
Bi	209	3	He			238781.81		

US EPA Tune Check Report

Operator Name	us19_usr_ins21905
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA_ICPMS.b
Acq. Date-Time	2024-07-17 07:05:53
Report Comment	E07 Tune Report
Instrument Name	G8403A SG18254097

[No Gas]

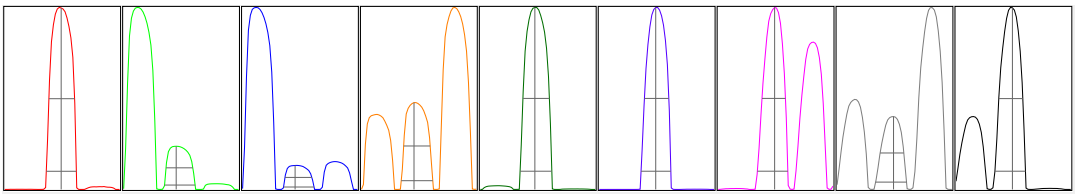
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)	RSD% (Flag)
9	10.00	5298	52975.09			0.260	5.000	
24	10.00	23684	236841.78			0.359	5.000	
25	10.00	3127	31267.95			0.607	5.000	
26	10.00	3553	35530.00			0.497	5.000	
59	10.00	34601	346012.02			0.484	5.000	
115	10.00	53459	534588.95			0.637	5.000	
206	10.00	11413	114129.30			0.730	5.000	
207	10.00	9374	93741.48			0.572	5.000	
208	10.00	23262	232624.81			0.506	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	5301	5291	5312	5306	5277
24	23626	23614	23655	23702	23824
25	3133	3094	3129	3138	3140
26	3531	3554	3580	3551	3549
59	34479	34580	34525	34528	34894
115	53011	53252	53460	53841	53730
206	11318	11331	11441	11478	11497
207	9308	9340	9370	9410	9443
208	23078	23213	23326	23333	23362

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	8397.96	9.00	8.90 - 9.10	
24	35696.16	23.90	23.90 - 24.10	
25	4702.37	24.90	24.90 - 25.10	
26	5457.69	25.90	25.90 - 26.10	
59	53466.98	58.95	58.90 - 59.10	

US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
115	89597.98	115.00	114.90 - 115.10	
206	19686.52	206.00	205.90 - 206.10	
207	15935.11	207.00	206.90 - 207.10	
208	39720.92	208.00	207.90 - 208.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
9	0.66	0.773	0.900	
24	0.69	0.785	0.900	
25	0.69	0.784	0.900	
26	0.68	0.811	0.900	
59	0.68	0.816	0.900	
115	0.63	0.766	0.900	
206	0.60	0.783	0.900	
207	0.61	0.795	0.900	
208	0.62	0.785	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	1.07 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	0.90 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.7 V	Deflect	15.6 V
Extract 2	-170.0 V	Cell Entrance	-40 V	Plate Bias	-50 V
Omega Bias	-75 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.5 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	140 V		

QP Parameters

Mass Gain	124	Axis Gain	0.9992	QP Bias	-2.5 V
Mass Offset	124	Axis Offset	0.11		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	-1.2 mm		

EM

Discriminator	3.8 mV	Analog HV	2199 V	Pulse HV	1851 V

Quantitation Report

Data File Name	012CALB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 7:33:19 AM
Sample Name	ICIS 6148203
Sample Type	CalBlk
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

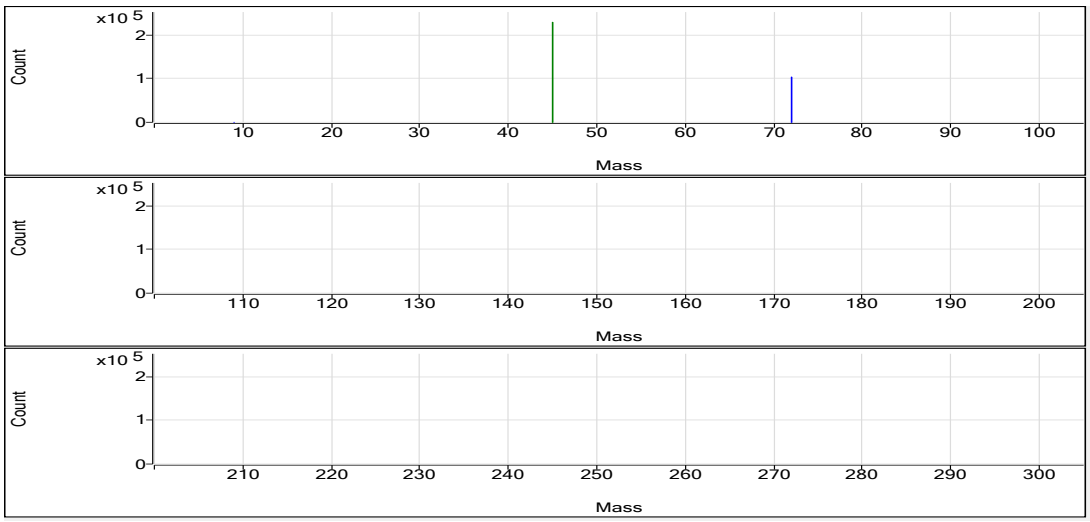
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.000	ppb	N/A	21.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.000	ppb	N/A	0.67	0.0000	Pulse	1.5000	3
Na	23	45	He	0.000	ppb	N/A	21804.79	0.4657	Pulse	0.1000	3
Mg	24	45	He	0.000	ppb	N/A	173.34	0.0037	Pulse	0.1000	3
Al	27	45	He	0.000	ppb	N/A	33.33	0.0007	Pulse	0.1000	3
K	39	45	He	0.000	ppb	N/A	20086.21	0.4296	Pulse	0.1000	3
Ca	44	45	He	0.000	ppb	N/A	136.67	0.0029	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	0.000	ppb	N/A	448.01	0.0096	Pulse	0.5000	3
Cr	52	45	He	0.000	ppb	N/A	823.38	0.0176	Pulse	0.1000	3
Mn	55	45	He	0.000	ppb	N/A	196.68	0.0042	Pulse	0.1000	3
Fe	57	45	He	0.000	ppb	N/A	140.01	0.0030	Pulse	0.1000	3
Co	59	45	He	0.000	ppb	N/A	143.34	0.0031	Pulse	0.1000	3
Ni	60	115	He	0.000	ppb	N/A	676.70	0.0112	Pulse	0.1000	3
Cu	63	72	He	0.000	ppb	N/A	1170.08	0.0153	Pulse	0.1000	3
Zn	66	72	He	0.000	ppb	N/A	213.34	0.0028	Pulse	0.1000	3
As	75	72	He	0.000	ppb	N/A	31.33	0.0004	Pulse	0.5000	3
Sr	88	115	He	0.000	ppb	N/A	53.33	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.000	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	50.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.000	ppb	N/A	816.72	0.0135	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	26.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.000	ppb	N/A	6.67	0.0001	Pulse	0.1000	3
Tl	205	159	He	0.000	ppb	N/A	60.00	0.0002	Pulse	0.1000	3
Pb	208	159	He	0.000	ppb	N/A	150.00	0.0006	Pulse	0.1000	3
U	238	159	He	0.000	ppb	N/A	6.67	0.0000	Pulse	0.1000	3

ISTD Table:

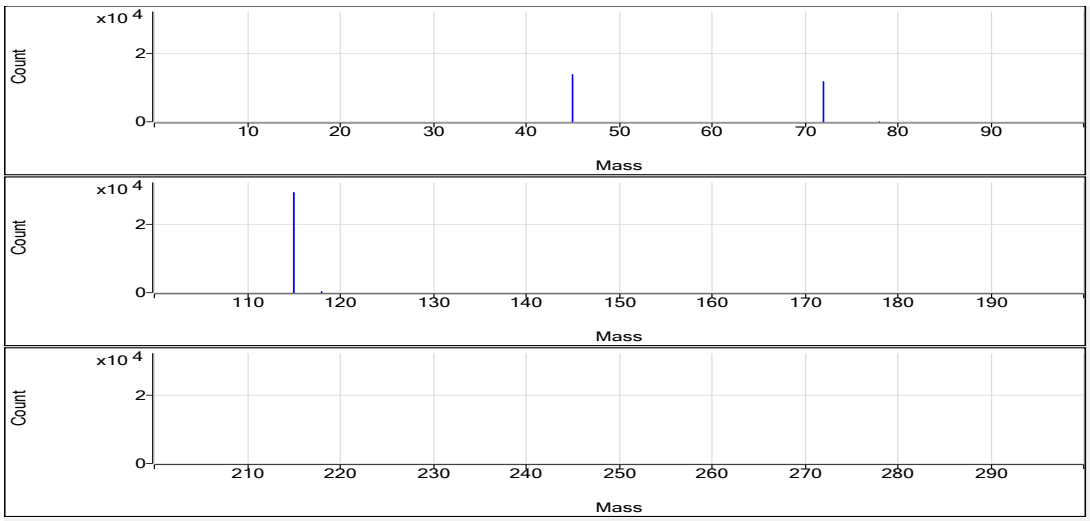
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2293974.08	1.0	100.0	Analog	0.1000	3
No Gas	Ge	72	1039039.44	0.7	100.0	Pulse	0.1000	3
H2	Sc	45	139045.17	0.7	100.0	Pulse	0.1000	3
H2	Ge	72	118061.46	1.4	100.0	Pulse	0.1000	3
H2	In	115	294635.22	0.5	100.0	Pulse	0.1000	3
He	Sc	45	46827.42	1.7	100.0	Pulse	0.1000	3
He	Ge	72	76472.19	0.9	100.0	Pulse	0.1000	3
He	In	115	60626.21	1.8	100.0	Pulse	0.1000	3
He	Tb	159	241155.06	0.2	100.0	Pulse	0.1000	3
He	Bi	209	165709.69	1.0	100.0	Pulse	0.1000	3

No Gas

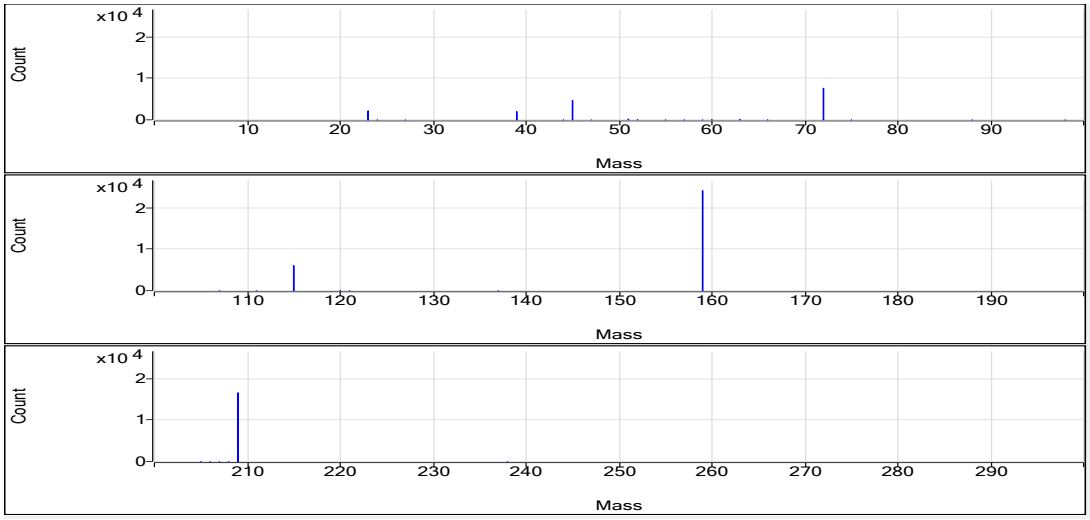


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.004	0	18.00	0.0004	9.309E-06
Be	9	1	No Gas	0.001	0	22.00	0.0004	9.309E-06
Be	9	1	No Gas	0.003	0	24.00	0.0004	9.309E-06
Se	78	2	H2	0.012	0	1.33	0.0004	5.598E-06
Se	78	2	H2	-0.013	0	0.00	0.0004	5.598E-06
Se	78	2	H2	0	0	0.67	0.0004	5.598E-06
Na	23	3	He	1.141	0.4692	21554.41	0.0031	0.4657
Na	23	3	He	5.923	0.4842	22906.33	0.0031	0.4657
Na	23	3	He	-7.064	0.4436	20953.64	0.0031	0.4657
Mg	24	3	He	0.142	0.0039	180.01	0.0015	0.003704
Mg	24	3	He	0.067	0.0038	180.01	0.0015	0.003704
Mg	24	3	He	-0.209	0.0034	160.01	0.0015	0.003704
Al	27	3	He	0.799	0.0011	50.00	0.0005	0.0007154
Al	27	3	He	-0.627	0.0004	20.00	0.0005	0.0007154
Al	27	3	He	-0.172	0.0006	30.00	0.0005	0.0007154
K	39	3	He	67.537	0.503	23106.74	0.0011	0.4296
K	39	3	He	-16.011	0.4122	19502.00	0.0011	0.4296
K	39	3	He	-51.526	0.3736	17649.89	0.0011	0.4296
Ca	44	3	He	9.044	0.0035	160.01	0.0001	0.002924
Ca	44	3	He	-13.11	0.0021	100.00	0.0001	0.002924
Ca	44	3	He	4.066	0.0032	150.01	0.0001	0.002924
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.021	0.01	460.01	0.021	0.009571
V	51	3	He	0.029	0.0102	482.01	0.021	0.009571
V	51	3	He	-0.05	0.0085	402.01	0.021	0.009571
Cr	52	3	He	-0.022	0.017	780.04	0.0267	0.01758
Cr	52	3	He	-0.017	0.0171	810.04	0.0267	0.01758
Cr	52	3	He	0.039	0.0186	880.05	0.0267	0.01758
Mn	55	3	He	-0.006	0.0041	190.01	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.042	0.0047	220.01	0.0108	0.004199
Mn	55	3	He	-0.036	0.0038	180.01	0.0108	0.004199
Fe	57	3	He	0.545	0.0033	150.01	0.0005	0.002993
Fe	57	3	He	-1.333	0.0023	110.00	0.0005	0.002993
Fe	57	3	He	0.788	0.0034	160.01	0.0005	0.002993
Co	59	3	He	0.004	0.0033	150.01	0.0524	0.003063
Co	59	3	He	-0.002	0.003	140.00	0.0524	0.003063
Co	59	3	He	-0.002	0.003	140.01	0.0524	0.003063
Ni	60	3	He	-0.011	0.011	660.03	0.0109	0.01116
Ni	60	3	He	0.042	0.0116	700.03	0.0109	0.01116
Ni	60	3	He	-0.03	0.0108	670.04	0.0109	0.01116
Cu	63	3	He	0.076	0.0172	1310.10	0.0255	0.01531
Cu	63	3	He	-0.029	0.0146	1110.07	0.0255	0.01531
Cu	63	3	He	-0.047	0.0141	1090.07	0.0255	0.01531
Zn	66	3	He	-0.099	0.0025	190.01	0.0029	0.002787
Zn	66	3	He	-0.102	0.0025	190.01	0.0029	0.002787
Zn	66	3	He	0.201	0.0034	260.01	0.0029	0.002787
As	75	3	He	-0.019	0.0004	28.00	0.0021	0.0004097
As	75	3	He	0.017	0.0004	34.00	0.0021	0.0004097
As	75	3	He	0.002	0.0004	32.00	0.0021	0.0004097
Sr	88	3	He	-0.04	0.0005	30.00	0.0094	0.0008765
Sr	88	3	He	0.013	0.001	60.00	0.0094	0.0008765
Sr	88	3	He	0.027	0.0011	70.00	0.0094	0.0008765
Mo	98	3	He	-0.01	0	0.00	0.023	0.0002199
Mo	98	3	He	0.012	0.0005	30.00	0.023	0.0002199
Mo	98	3	He	-0.003	0.0002	10.00	0.023	0.0002199
Ag	107	3	He	0.004	0.001	60.00	0.0483	0.0008224
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	0.006	0.0011	70.00	0.0483	0.0008224
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Sn	120	3	He	-0.095	0.012	720.04	0.0148	0.01345
Sn	120	3	He	-0.012	0.0133	800.05	0.0148	0.01345
Sn	120	3	He	0.107	0.015	930.06	0.0148	0.01345
Sb	121	3	He	-0.007	0.0003	20.00	0.0143	0.0004392
Sb	121	3	He	0.004	0.0005	30.00	0.0143	0.0004392
Sb	121	3	He	0.003	0.0005	30.00	0.0143	0.0004392
Ba	137	3	He	0.013	0.0002	10.00	0.0044	0.0001096
Ba	137	3	He	-0.025	0	0.00	0.0044	0.0001096
Ba	137	3	He	0.012	0.0002	10.00	0.0044	0.0001096
Tl	205	3	He	-0.012	0	0.00	0.0208	0.0002491
Tl	205	3	He	0.008	0.0004	100.00	0.0208	0.0002491
Tl	205	3	He	0.004	0.0003	80.00	0.0208	0.0002491
Pb	208	3	He	0.006	0.0008	150.01	0.0272	0.0006218
Pb	208	3	He	0.002	0.0007	100.00	0.0272	0.0006218
Pb	208	3	He	-0.008	0.0004	40.00	0.0272	0.0006218
U	238	3	He	0	0	10.00	0.0275	2.763E-05
U	238	3	He	-0.001	0	0.00	0.0275	2.763E-05
U	238	3	He	0.001	0	10.00	0.0275	2.763E-05
Sc	45	1	No Gas			2319679.18		
Sc	45	1	No Gas			2288887.00		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2273356.06		
Ge	72	1	No Gas			1045569.13		
Ge	72	1	No Gas			1039531.63		
Ge	72	1	No Gas			1032017.56		
Sc	45	2	H2			138612.59		
Sc	45	2	H2			140193.96		
Sc	45	2	H2			138328.95		
Ge	72	2	H2			119905.40		
Ge	72	2	H2			116772.49		
Ge	72	2	H2			117506.50		
In	115	2	H2			295743.75		
In	115	2	H2			295098.92		
In	115	2	H2			293062.98		
Sc	45	3	He			45935.39		
Sc	45	3	He			47308.43		
Sc	45	3	He			47238.45		
Ge	72	3	He			75960.14		
Ge	72	3	He			76211.04		
Ge	72	3	He			77245.38		
In	115	3	He			59784.69		
In	115	3	He			60247.32		
In	115	3	He			61863.77		
Tb	159	3	He			241680.17		
Tb	159	3	He			240917.50		
Tb	159	3	He			240867.52		
Bi	209	3	He			167481.25		
Bi	209	3	He			165320.84		
Bi	209	3	He			164326.99		

Quantitation Report

Data File Name	013CALS.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 7:35:19 AM
Sample Name	STD1 6224356
Sample Type	CalStd
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

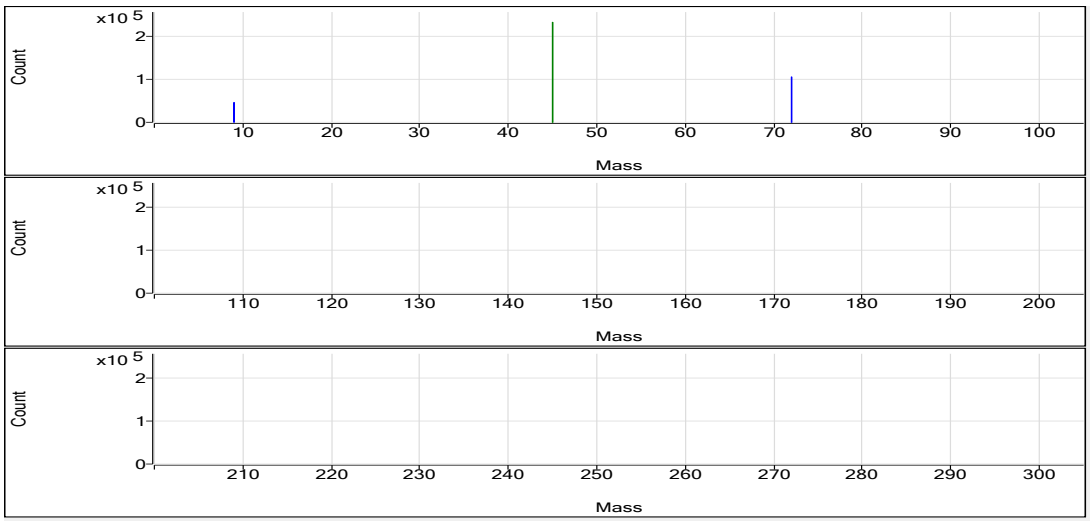
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	100.000	ppb	2.6	92436.54	0.0398	Pulse	0.5000	3
Se	78	72	H2	100.000	ppb	1.3	5386.02	0.0447	Pulse	1.5000	3
Na	23	45	He	10000.000	ppb	2.7	1473387.53	31.7431	Analog	0.1000	3
Mg	24	45	He	10000.000	ppb	1.6	704562.20	15.1774	Pulse	0.1000	3
Al	27	45	He	10000.000	ppb	2.0	216849.77	4.6715	Pulse	0.1000	3
K	39	45	He	10000.000	ppb	1.7	524440.53	11.2973	Pulse	0.1000	3
Ca	44	45	He	10000.000	ppb	1.1	28842.73	0.6211	Pulse	0.1000	3
Ti	47	45	He	10000.000	ppb	1.9	224839.85	4.8436	Pulse	0.1000	3
V	51	45	He	1000.000	ppb	1.9	977488.04	21.0575	Pulse	0.5000	3
Cr	52	45	He	1000.000	ppb	2.0	1239467.27	26.7014	Pulse	0.1000	3
Mn	55	45	He	1000.000	ppb	2.0	502419.81	10.8232	Pulse	0.1000	3
Fe	57	45	He	10000.000	ppb	1.7	232649.70	5.0116	Pulse	0.1000	3
Co	59	45	He	1000.000	ppb	2.0	2430285.43	52.3543	Analog	0.1000	3
Ni	60	115	He	1000.000	ppb	1.3	672182.91	10.9450	Pulse	0.1000	3
Cu	63	72	He	1000.000	ppb	2.3	1985858.25	25.4934	Analog	0.1000	3
Zn	66	72	He	1000.000	ppb	2.7	224355.92	2.8803	Pulse	0.1000	3
As	75	72	He	1000.000	ppb	2.6	165830.66	2.1289	Pulse	0.5000	3
Sr	88	115	He	100.000	ppb	1.1	57942.93	0.9435	Pulse	0.1000	3
Mo	98	115	He	100.000	ppb	0.7	141503.60	2.3040	Pulse	0.1000	3
Ag	107	115	He	100.000	ppb	0.5	296718.93	4.8312	Pulse	0.1000	3
Cd	111	115	He	100.000	ppb	1.2	32763.49	0.5335	Pulse	0.5000	3
Sn	120	115	He	100.000	ppb	1.3	91760.79	1.4941	Pulse	0.1000	3
Sb	121	115	He	100.000	ppb	1.5	87895.69	1.4312	Pulse	0.1000	3
Ba	137	115	He	1000.000	ppb	0.8	267889.82	4.3617	Pulse	0.1000	3
Tl	205	159	He	100.000	ppb	1.0	508241.35	2.0788	Pulse	0.1000	3
Pb	208	159	He	100.000	ppb	1.1	665629.94	2.7226	Pulse	0.1000	3
U	238	159	He	100.000	ppb	1.0	672425.25	2.7504	Pulse	0.1000	3

ISTD Table:

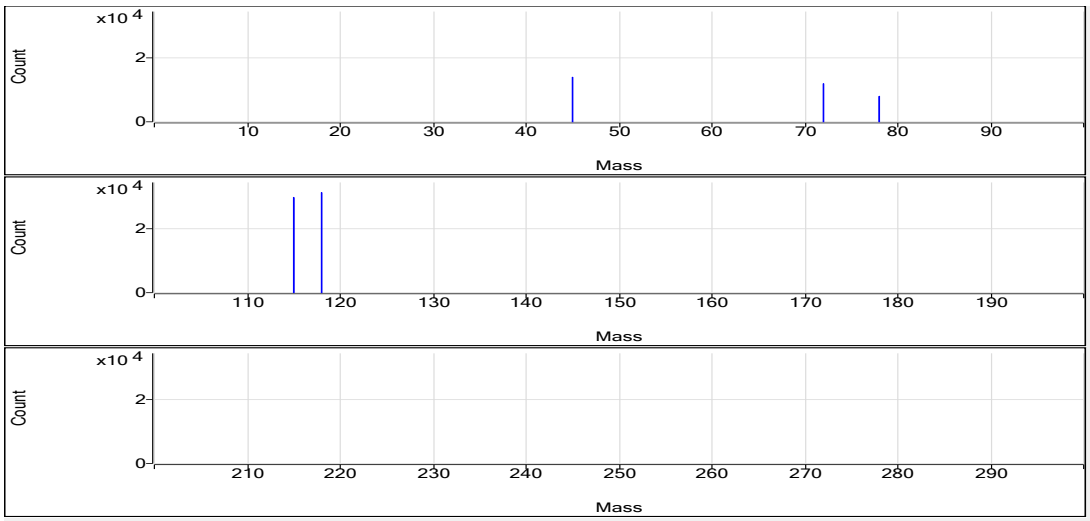
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2322956.42	0.7	101.3	Analog	0.1000	3
No Gas	Ge	72	1054905.77	0.4	101.5	Pulse	0.1000	3
H2	Sc	45	140952.15	1.5	101.4	Pulse	0.1000	3
H2	Ge	72	120395.10	2.0	102.0	Pulse	0.1000	3
H2	In	115	300299.95	1.9	101.9	Pulse	0.1000	3
He	Sc	45	46429.76	1.6	99.2	Pulse	0.1000	3
He	Ge	72	77923.14	2.2	101.9	Pulse	0.1000	3
He	In	115	61418.54	0.8	101.3	Pulse	0.1000	3
He	Tb	159	244498.02	1.0	101.4	Pulse	0.1000	3
He	Bi	209	168826.03	1.3	101.9	Pulse	0.1000	3

No Gas

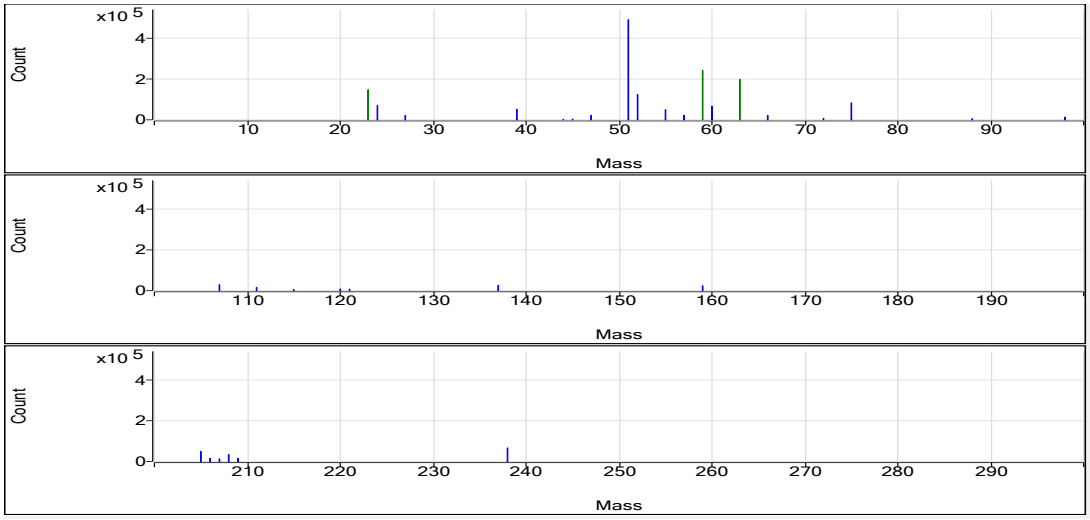


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	97.095	0.0386	90510.17	0.0004	9.309E-06
Be	9	1	No Gas	100.789	0.0401	92778.20	0.0004	9.309E-06
Be	9	1	No Gas	102.116	0.0406	94021.24	0.0004	9.309E-06
Se	78	2	H2	101.257	0.0453	5572.31	0.0004	5.598E-06
Se	78	2	H2	98.621	0.0441	5281.54	0.0004	5.598E-06
Se	78	2	H2	100.122	0.0448	5304.21	0.0004	5.598E-06
Na	23	3	He	9684.5	30.7563	1455043.42	0.0031	0.4657
Na	23	3	He	10188.3	32.3321	1484859.82	0.0031	0.4657
Na	23	3	He	10127.2	32.141	1480259.35	0.0031	0.4657
Mg	24	3	He	9822.089	14.9075	705253.74	0.0015	0.003704
Mg	24	3	He	10136.678	15.3848	706551.94	0.0015	0.003704
Mg	24	3	He	10041.233	15.24	701880.93	0.0015	0.003704
Al	27	3	He	9790.011	4.5734	216360.90	0.0005	0.0007154
Al	27	3	He	10195.438	4.7627	218730.35	0.0005	0.0007154
Al	27	3	He	10014.551	4.6783	215458.06	0.0005	0.0007154
K	39	3	He	9819.446	11.1011	525177.26	0.0011	0.4296
K	39	3	He	10153.663	11.4643	526499.91	0.0011	0.4296
K	39	3	He	10026.891	11.3265	521644.41	0.0011	0.4296
Ca	44	3	He	10113.514	0.6282	29717.78	0.0001	0.002924
Ca	44	3	He	9996.065	0.6209	28515.26	0.0001	0.002924
Ca	44	3	He	9890.421	0.6144	28295.14	0.0001	0.002924
Ti	47	3	He	9777.378	4.7358	224043.14	0.0005	0
Ti	47	3	He	10091.472	4.8879	224478.12	0.0005	0
Ti	47	3	He	10131.149	4.9071	225998.28	0.0005	0
V	51	3	He	978.118	20.5969	974414.06	0.021	0.009571
V	51	3	He	1014.32	21.3589	980912.88	0.021	0.009571
V	51	3	He	1007.562	21.2166	977137.19	0.021	0.009571
Cr	52	3	He	977.348	26.097	1234615.14	0.0267	0.01758
Cr	52	3	He	1016.971	27.1542	1247066.62	0.0267	0.01758
Cr	52	3	He	1005.681	26.853	1236720.06	0.0267	0.01758
Mn	55	3	He	980.275	10.6098	501936.48	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1020.875	11.049	507430.62	0.0108	0.004199
Mn	55	3	He	998.851	10.8108	497892.34	0.0108	0.004199
Fe	57	3	He	9823.015	4.9229	232898.57	0.0005	0.002993
Fe	57	3	He	10012.269	5.0177	230441.03	0.0005	0.002993
Fe	57	3	He	10164.716	5.0941	234609.49	0.0005	0.002993
Co	59	3	He	978.537	51.2307	2423659.34	0.0524	0.003063
Co	59	3	He	1018.015	53.2974	2447697.46	0.0524	0.003063
Co	59	3	He	1003.448	52.5348	2419499.50	0.0524	0.003063
Ni	60	3	He	1013.519	11.0928	676415.85	0.0109	0.01116
Ni	60	3	He	998.641	10.9302	670242.02	0.0109	0.01116
Ni	60	3	He	987.84	10.8121	669890.85	0.0109	0.01116
Cu	63	3	He	975.097	24.859	1984723.56	0.0255	0.01531
Cu	63	3	He	1020.71	26.0211	1991202.31	0.0255	0.01531
Cu	63	3	He	1004.192	25.6002	1981648.88	0.0255	0.01531
Zn	66	3	He	968.677	2.7902	222768.41	0.0029	0.002787
Zn	66	3	He	1019.084	2.9353	224613.53	0.0029	0.002787
Zn	66	3	He	1012.239	2.9156	225685.82	0.0029	0.002787
As	75	3	He	972.313	2.07	165267.42	0.0021	0.0004097
As	75	3	He	1023.119	2.1781	166677.02	0.0021	0.0004097
As	75	3	He	1004.567	2.1387	165547.55	0.0021	0.0004097
Sr	88	3	He	100.341	0.9467	57725.80	0.0094	0.0008765
Sr	88	3	He	100.873	0.9517	58357.53	0.0094	0.0008765
Sr	88	3	He	98.786	0.932	57745.45	0.0094	0.0008765
Mo	98	3	He	100.733	2.3209	141521.46	0.023	0.0002199
Mo	98	3	He	99.797	2.2993	140994.60	0.023	0.0002199
Mo	98	3	He	99.471	2.2918	141994.74	0.023	0.0002199
Ag	107	3	He	100.51	4.8558	296095.54	0.0483	0.0008224
Ag	107	3	He	99.626	4.8131	295140.33	0.0483	0.0008224
Ag	107	3	He	99.864	4.8246	298920.93	0.0483	0.0008224
Cd	111	3	He	99.282	0.5296	32295.16	0.0053	2.193E-05
Cd	111	3	He	101.332	0.5406	33146.96	0.0053	2.193E-05
Cd	111	3	He	99.386	0.5302	32848.36	0.0053	2.193E-05
Sn	120	3	He	101.168	1.5114	92162.91	0.0148	0.01345
Sn	120	3	He	100.31	1.4987	91901.87	0.0148	0.01345
Sn	120	3	He	98.523	1.4723	91217.59	0.0148	0.01345
Sb	121	3	He	101.711	1.4557	88763.77	0.0143	0.0004392
Sb	121	3	He	99.377	1.4223	87214.71	0.0143	0.0004392
Sb	121	3	He	98.912	1.4156	87708.58	0.0143	0.0004392
Ba	137	3	He	993.828	4.3348	264324.41	0.0044	0.0001096
Ba	137	3	He	1008.56	4.399	269750.13	0.0044	0.0001096
Ba	137	3	He	997.612	4.3513	269594.92	0.0044	0.0001096
Tl	205	3	He	99.489	2.0682	504353.90	0.0208	0.0002491
Tl	205	3	He	101.167	2.1031	509610.73	0.0208	0.0002491
Tl	205	3	He	99.344	2.0652	510759.41	0.0208	0.0002491
Pb	208	3	He	100.21	2.7283	351280.42	0.0272	0.0006218
Pb	208	3	He	100.96	2.7488	352868.08	0.0272	0.0006218
Pb	208	3	He	98.831	2.6908	350949.10	0.0272	0.0006218
U	238	3	He	99.852	2.7464	669728.66	0.0275	2.763E-05
U	238	3	He	101.075	2.78	673630.30	0.0275	2.763E-05
U	238	3	He	99.073	2.7249	673916.79	0.0275	2.763E-05
Sc	45	1	No Gas			2342295.12		
Sc	45	1	No Gas			2313017.47		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2313556.68		
Ge	72	1	No Gas			1058858.27		
Ge	72	1	No Gas			1051438.42		
Ge	72	1	No Gas			1054420.61		
Sc	45	2	H2			143211.77		
Sc	45	2	H2			138885.09		
Sc	45	2	H2			140759.59		
Ge	72	2	H2			123027.37		
Ge	72	2	H2			119723.00		
Ge	72	2	H2			118434.94		
In	115	2	H2			306133.96		
In	115	2	H2			300104.47		
In	115	2	H2			294661.42		
Sc	45	3	He			47308.77		
Sc	45	3	He			45925.29		
Sc	45	3	He			46055.22		
Ge	72	3	He			79839.38		
Ge	72	3	He			76522.63		
Ge	72	3	He			77407.41		
In	115	3	He			61622.80		
In	115	3	He			61963.65		
In	115	3	He			62596.13		
Tb	159	3	He			243861.11		
Tb	159	3	He			242315.11		
Tb	159	3	He			247317.85		
Bi	209	3	He			166371.13		
Bi	209	3	He			170266.25		
Bi	209	3	He			169840.72		

Quantitation Report

Data File Name	014_ICV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 7:37:18 AM
Sample Name	ICV 6213402
Sample Type	ICV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

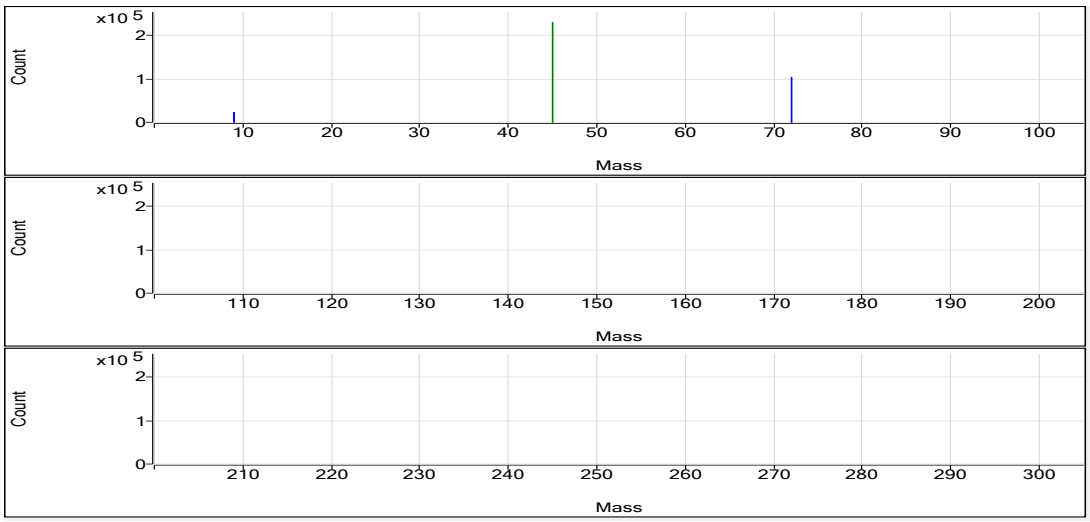
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.234	ppb	3.0	46122.57	0.0200	Pulse	0.5000	3
Se	78	72	H2	51.015	ppb	0.3	2664.67	0.0228	Pulse	1.5000	3
Na	23	45	He	4722.422	ppb	2.2	712776.34	15.2362	Pulse	0.1000	3
Mg	24	45	He	4946.064	ppb	1.3	351296.77	7.5087	Pulse	0.1000	3
Al	27	45	He	4901.889	ppb	1.6	107147.72	2.2903	Pulse	0.1000	3
K	39	45	He	4939.131	ppb	0.4	271270.53	5.7973	Pulse	0.1000	3
Ca	44	45	He	4754.291	ppb	2.7	13886.27	0.2968	Pulse	0.1000	3
Ti	47	45	He	4867.390	ppb	2.1	110292.80	2.3576	Pulse	0.1000	3
V	51	45	He	492.107	ppb	1.6	485028.78	10.3674	Pulse	0.5000	3
Cr	52	45	He	490.277	ppb	2.0	612856.23	13.1000	Pulse	0.1000	3
Mn	55	45	He	491.544	ppb	2.1	248983.04	5.3222	Pulse	0.1000	3
Fe	57	45	He	4986.225	ppb	1.4	116981.92	2.5004	Pulse	0.1000	3
Co	59	45	He	480.048	ppb	1.8	1175858.60	25.1341	Pulse	0.1000	3
Ni	60	115	He	505.525	ppb	1.7	336612.55	5.5385	Pulse	0.1000	3
Cu	63	72	He	487.930	ppb	0.9	951426.11	12.4468	Pulse	0.1000	3
Zn	66	72	He	507.945	ppb	1.5	111933.17	1.4644	Pulse	0.1000	3
As	75	72	He	494.141	ppb	1.6	80424.62	1.0522	Pulse	0.5000	3
Sr	88	115	He	49.678	ppb	2.1	28512.96	0.4691	Pulse	0.1000	3
Mo	98	115	He	49.605	ppb	1.0	69473.33	1.1430	Pulse	0.1000	3
Ag	107	115	He	50.071	ppb	2.3	147038.04	2.4194	Pulse	0.1000	3
Cd	111	115	He	54.086	ppb	1.3	17536.51	0.2885	Pulse	0.5000	3
Sn	120	115	He	51.727	ppb	3.4	47359.99	0.7794	Pulse	0.1000	3
Sb	121	115	He	54.031	ppb	1.9	47008.41	0.7735	Pulse	0.1000	3
Ba	137	115	He	502.548	ppb	2.5	133215.33	2.1920	Pulse	0.1000	3
Tl	205	159	He	50.657	ppb	1.0	256015.56	1.0532	Pulse	0.1000	3
Pb	208	159	He	50.260	ppb	0.9	332716.13	1.3687	Pulse	0.1000	3
U	238	159	He	51.639	ppb	1.1	345247.17	1.4203	Pulse	0.1000	3

ISTD Table:

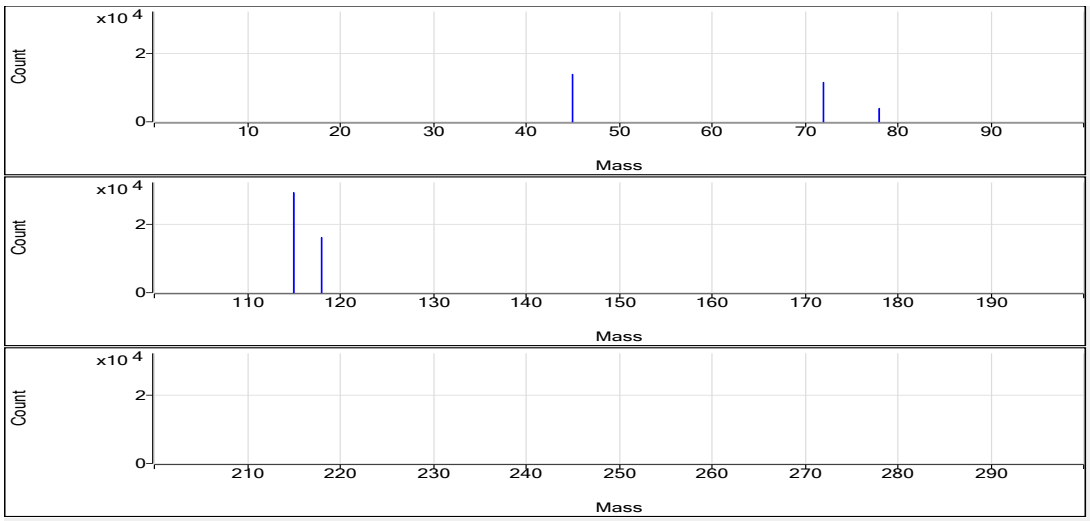
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2307211.63	1.6	100.6	Analog	0.1000	3
No Gas	Ge	72	1040186.37	0.9	100.1	Pulse	0.1000	3
H2	Sc	45	140440.36	0.5	101.0	Pulse	0.1000	3
H2	Ge	72	116758.33	0.9	98.9	Pulse	0.1000	3
H2	In	115	295552.42	1.4	100.3	Pulse	0.1000	3
He	Sc	45	46790.90	1.4	99.9	Pulse	0.1000	3
He	Ge	72	76445.38	1.4	100.0	Pulse	0.1000	3
He	In	115	60785.75	1.4	100.3	Pulse	0.1000	3
He	Tb	159	243098.99	1.0	100.8	Pulse	0.1000	3
He	Bi	209	167921.55	0.8	101.3	Pulse	0.1000	3

No Gas

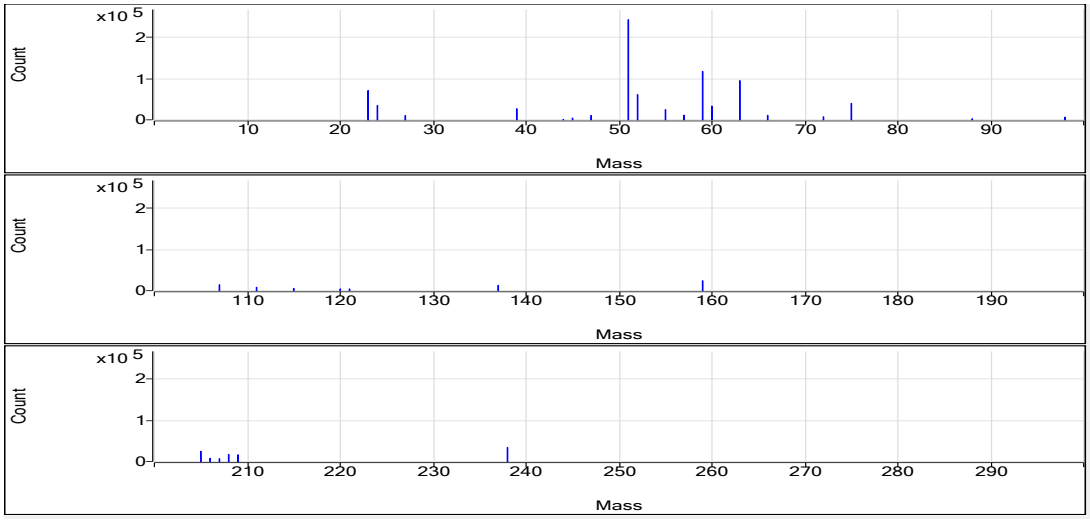


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.954	0.0195	45408.70	0.0004	9.309E-06
Be	9	1	No Gas	49.872	0.0199	46176.70	0.0004	9.309E-06
Be	9	1	No Gas	51.877	0.0207	46782.32	0.0004	9.309E-06
Se	78	2	H2	51.057	0.0228	2690.23	0.0004	5.598E-06
Se	78	2	H2	51.123	0.0229	2646.22	0.0004	5.598E-06
Se	78	2	H2	50.864	0.0228	2657.56	0.0004	5.598E-06
Na	23	3	He	4609.627	14.8834	706657.72	0.0031	0.4657
Na	23	3	He	4742.296	15.2984	714085.30	0.0031	0.4657
Na	23	3	He	4815.342	15.5268	717586.00	0.0031	0.4657
Mg	24	3	He	4875.338	7.4014	351415.42	0.0015	0.003704
Mg	24	3	He	4955.279	7.5227	351139.14	0.0015	0.003704
Mg	24	3	He	5007.575	7.6021	351335.74	0.0015	0.003704
Al	27	3	He	4811.801	2.2482	106742.82	0.0005	0.0007154
Al	27	3	He	4929.996	2.3034	107515.92	0.0005	0.0007154
Al	27	3	He	4963.87	2.3192	107184.41	0.0005	0.0007154
K	39	3	He	4959.654	5.8196	276312.38	0.0011	0.4296
K	39	3	He	4939.881	5.7981	270640.17	0.0011	0.4296
K	39	3	He	4917.859	5.7742	266859.04	0.0011	0.4296
Ca	44	3	He	4618.698	0.2885	13696.12	0.0001	0.002924
Ca	44	3	He	4764.791	0.2975	13886.26	0.0001	0.002924
Ca	44	3	He	4879.385	0.3046	14076.42	0.0001	0.002924
Ti	47	3	He	4747.181	2.2993	109171.72	0.0005	0
Ti	47	3	He	4930.756	2.3883	111477.27	0.0005	0
Ti	47	3	He	4924.234	2.3851	110229.40	0.0005	0
V	51	3	He	483.533	10.1869	483670.88	0.021	0.009571
V	51	3	He	493.721	10.4014	485506.97	0.021	0.009571
V	51	3	He	499.067	10.5139	485908.50	0.021	0.009571
Cr	52	3	He	481.101	12.8552	610359.44	0.0267	0.01758
Cr	52	3	He	489.443	13.0778	610435.15	0.0267	0.01758
Cr	52	3	He	500.287	13.3671	617774.09	0.0267	0.01758
Mn	55	3	He	479.795	5.1951	246661.54	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	494.643	5.3557	249991.46	0.0108	0.004199
Mn	55	3	He	500.194	5.4158	250296.13	0.0108	0.004199
Fe	57	3	He	4926.682	2.4706	117301.60	0.0005	0.002993
Fe	57	3	He	4971.364	2.4929	116364.04	0.0005	0.002993
Fe	57	3	He	5060.628	2.5377	117280.11	0.0005	0.002993
Co	59	3	He	471.54	24.6887	1172211.08	0.0524	0.003063
Co	59	3	He	479.702	25.116	1172347.95	0.0524	0.003063
Co	59	3	He	488.901	25.5976	1183016.78	0.0524	0.003063
Ni	60	3	He	501.049	5.4896	334243.35	0.0109	0.01116
Ni	60	3	He	515.373	5.6462	338094.92	0.0109	0.01116
Ni	60	3	He	500.154	5.4798	337499.37	0.0109	0.01116
Cu	63	3	He	491.347	12.5339	947540.22	0.0255	0.01531
Cu	63	3	He	489.348	12.483	950082.88	0.0255	0.01531
Cu	63	3	He	483.094	12.3236	956655.22	0.0255	0.01531
Zn	66	3	He	512.851	1.4785	111774.98	0.0029	0.002787
Zn	66	3	He	511.971	1.476	112339.80	0.0029	0.002787
Zn	66	3	He	499.013	1.4387	111684.72	0.0029	0.002787
As	75	3	He	497.705	1.0598	80117.73	0.0021	0.0004097
As	75	3	He	499.714	1.0641	80986.13	0.0021	0.0004097
As	75	3	He	485.004	1.0328	80170.02	0.0021	0.0004097
Sr	88	3	He	48.722	0.4601	28015.47	0.0094	0.0008765
Sr	88	3	He	50.767	0.4794	28706.64	0.0094	0.0008765
Sr	88	3	He	49.545	0.4679	28816.77	0.0094	0.0008765
Mo	98	3	He	49.197	1.1336	69021.79	0.023	0.0002199
Mo	98	3	He	50.177	1.1562	69232.07	0.023	0.0002199
Mo	98	3	He	49.442	1.1392	70166.13	0.023	0.0002199
Ag	107	3	He	49.28	2.3812	144986.28	0.0483	0.0008224
Ag	107	3	He	51.386	2.4829	148679.53	0.0483	0.0008224
Ag	107	3	He	49.545	2.394	147448.32	0.0483	0.0008224
Cd	111	3	He	54.271	0.2895	17627.94	0.0053	2.193E-05
Cd	111	3	He	54.701	0.2918	17473.77	0.0053	2.193E-05
Cd	111	3	He	53.286	0.2843	17507.82	0.0053	2.193E-05
Sn	120	3	He	52.039	0.784	47734.48	0.0148	0.01345
Sn	120	3	He	53.291	0.8025	48055.47	0.0148	0.01345
Sn	120	3	He	49.851	0.7516	46290.02	0.0148	0.01345
Sb	121	3	He	53.877	0.7713	46961.49	0.0143	0.0004392
Sb	121	3	He	55.124	0.7891	47252.81	0.0143	0.0004392
Sb	121	3	He	53.091	0.76	46810.92	0.0143	0.0004392
Ba	137	3	He	507.946	2.2156	134898.88	0.0044	0.0001096
Ba	137	3	He	511.626	2.2316	133629.51	0.0044	0.0001096
Ba	137	3	He	488.073	2.1289	131117.61	0.0044	0.0001096
Tl	205	3	He	51.084	1.0621	255309.47	0.0208	0.0002491
Tl	205	3	He	50.809	1.0563	257864.82	0.0208	0.0002491
Tl	205	3	He	50.078	1.0412	254872.40	0.0208	0.0002491
Pb	208	3	He	50.741	1.3818	175586.46	0.0272	0.0006218
Pb	208	3	He	50.182	1.3666	177167.22	0.0272	0.0006218
Pb	208	3	He	49.858	1.3578	176367.67	0.0272	0.0006218
U	238	3	He	52.254	1.4372	345490.89	0.0275	2.763E-05
U	238	3	He	51.524	1.4171	345936.48	0.0275	2.763E-05
U	238	3	He	51.138	1.4065	344314.14	0.0275	2.763E-05
Sc	45	1	No Gas			2330165.59		
Sc	45	1	No Gas			2326019.81		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2265449.50		
Ge	72	1	No Gas			1047239.05		
Ge	72	1	No Gas			1043782.72		
Ge	72	1	No Gas			1029537.33		
Sc	45	2	H2			140982.59		
Sc	45	2	H2			139681.33		
Sc	45	2	H2			140657.17		
Ge	72	2	H2			117779.00		
Ge	72	2	H2			115704.19		
Ge	72	2	H2			116791.80		
In	115	2	H2			299497.09		
In	115	2	H2			291103.75		
In	115	2	H2			296056.42		
Sc	45	3	He			47479.57		
Sc	45	3	He			46677.25		
Sc	45	3	He			46215.88		
Ge	72	3	He			75598.12		
Ge	72	3	He			76110.35		
Ge	72	3	He			77627.66		
In	115	3	He			61221.17		
In	115	3	He			60216.67		
In	115	3	He			61913.98		
Tb	159	3	He			240389.94		
Tb	159	3	He			244110.41		
Tb	159	3	He			244796.62		
Bi	209	3	He			168604.10		
Bi	209	3	He			166350.23		
Bi	209	3	He			168810.33		

Quantitation Report

Data File Name	015_ICB.d
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Acq Time	7/17/2024 7:40:18 AM
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Sample Type	ICB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

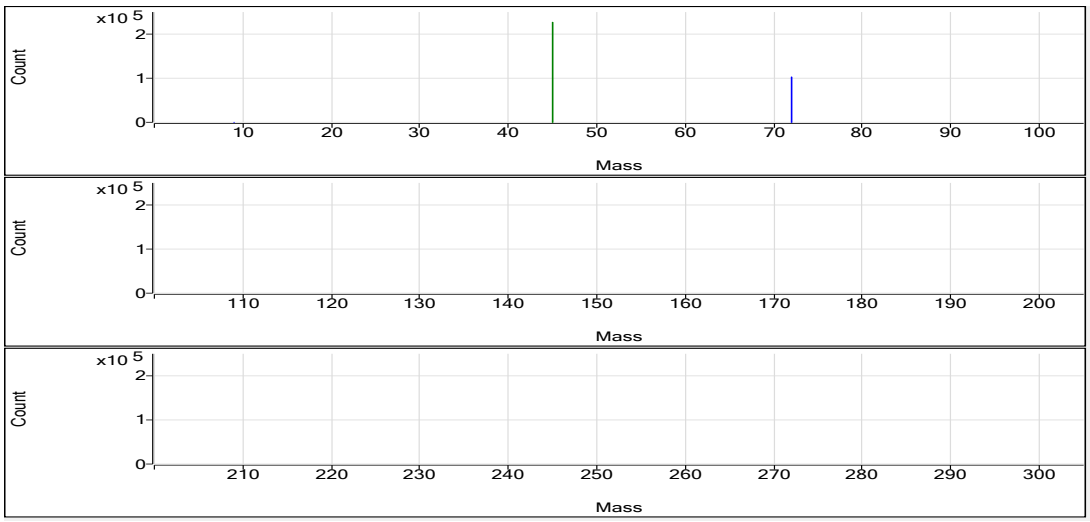
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.022	ppb	95.4	41.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.055	ppb	69.1	3.55	0.0000	Pulse	1.5000	3
Na	23	45	He	0.488	ppb	849.6	21127.14	0.4672	Pulse	0.1000	3
Mg	24	45	He	1.155	ppb	33.8	246.68	0.0055	Pulse	0.1000	3
Al	27	45	He	1.307	ppb	35.7	60.00	0.0013	Pulse	0.1000	3
K	39	45	He	2.917	ppb	2287.1	19549.02	0.4328	Pulse	0.1000	3
Ca	44	45	He	0.253	ppb	4607.6	133.34	0.0029	Pulse	0.1000	3
Ti	47	45	He	1.216	ppb	21.3	26.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.105	ppb	36.0	533.34	0.0118	Pulse	0.5000	3
Cr	52	45	He	0.150	ppb	68.5	976.73	0.0216	Pulse	0.1000	3
Mn	55	45	He	0.191	ppb	30.1	283.34	0.0063	Pulse	0.1000	3
Fe	57	45	He	-0.706	ppb	N/A	120.00	0.0026	Pulse	0.1000	3
Co	59	45	He	0.148	ppb	18.2	490.02	0.0108	Pulse	0.1000	3
Ni	60	115	He	0.032	ppb	175.4	706.71	0.0115	Pulse	0.1000	3
Cu	63	72	He	0.100	ppb	54.7	1360.10	0.0179	Pulse	0.1000	3
Zn	66	72	He	0.340	ppb	33.0	286.68	0.0038	Pulse	0.1000	3
As	75	72	He	0.198	ppb	31.7	63.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.034	ppb	106.5	73.33	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.005	ppb	153.8	20.00	0.0003	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	79.4	76.67	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	199.4	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.089	ppb	112.2	906.73	0.0148	Pulse	0.1000	3
Sb	121	115	He	0.003	ppb	658.0	30.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.074	ppb	126.3	26.67	0.0004	Pulse	0.1000	3
Tl	205	159	He	0.295	ppb	4.2	1523.46	0.0064	Pulse	0.1000	3
Pb	208	159	He	0.009	ppb	59.8	206.67	0.0009	Pulse	0.1000	3
U	238	159	He	0.016	ppb	45.1	113.34	0.0005	Pulse	0.1000	3

ISTD Table:

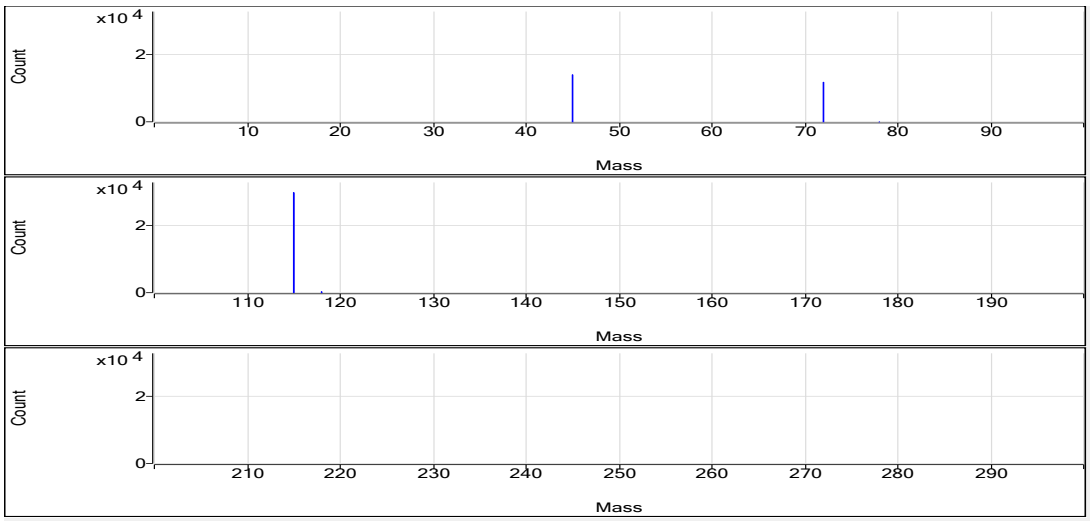
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2286221.48	0.5	99.7	Analog	0.1000	3
No Gas	Ge	72	1036543.32	0.4	99.8	Pulse	0.1000	3
H2	Sc	45	139264.62	1.0	100.2	Pulse	0.1000	3
H2	Ge	72	117380.21	2.0	99.4	Pulse	0.1000	3
H2	In	115	296192.38	1.0	100.5	Pulse	0.1000	3
He	Sc	45	45236.47	2.2	96.6	Pulse	0.1000	3
He	Ge	72	76143.83	0.6	99.6	Pulse	0.1000	3
He	In	115	61385.35	0.1	101.3	Pulse	0.1000	3
He	Tb	159	239068.73	1.1	99.1	Pulse	0.1000	3
He	Bi	209	166185.65	1.2	100.3	Pulse	0.1000	3

No Gas

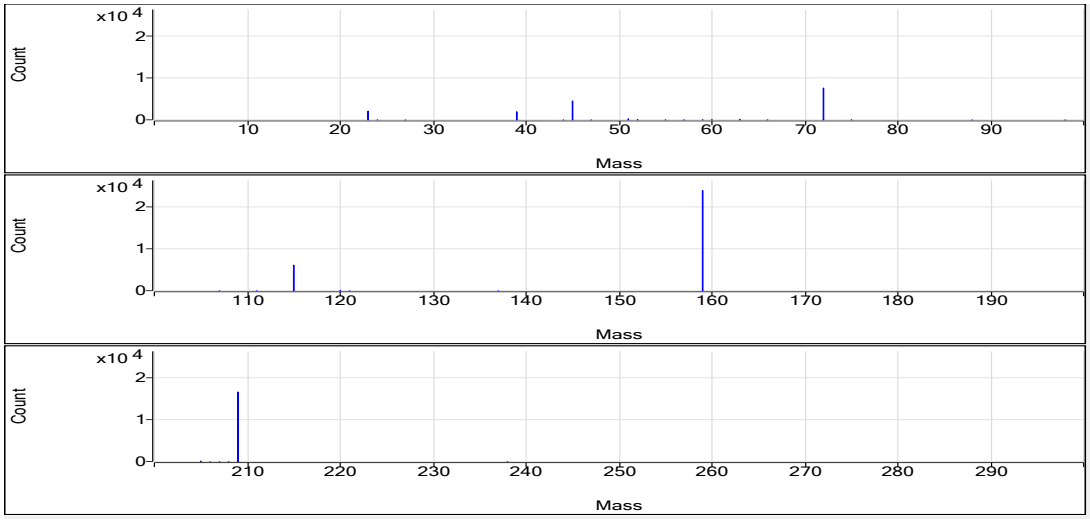


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.023	0	42.00	0.0004	9.309E-06
Be	9	1	No Gas	0.043	0	60.00	0.0004	9.309E-06
Be	9	1	No Gas	0.001	0	22.00	0.0004	9.309E-06
Se	78	2	H2	0.087	0	5.33	0.0004	5.598E-06
Se	78	2	H2	0.013	0	1.33	0.0004	5.598E-06
Se	78	2	H2	0.065	0	4.00	0.0004	5.598E-06
Na	23	3	He	-1.21	0.4619	20753.35	0.0031	0.4657
Na	23	3	He	5.211	0.482	21414.10	0.0031	0.4657
Na	23	3	He	-2.537	0.4577	21213.98	0.0031	0.4657
Mg	24	3	He	0.786	0.0049	220.01	0.0015	0.003704
Mg	24	3	He	1.564	0.0061	270.01	0.0015	0.003704
Mg	24	3	He	1.114	0.0054	250.01	0.0015	0.003704
Al	27	3	He	1.804	0.0016	70.00	0.0005	0.0007154
Al	27	3	He	0.878	0.0011	50.00	0.0005	0.0007154
Al	27	3	He	1.24	0.0013	60.00	0.0005	0.0007154
K	39	3	He	74.182	0.5102	22926.64	0.0011	0.4296
K	39	3	He	-7.409	0.4216	18731.13	0.0011	0.4296
K	39	3	He	-58.023	0.3666	16989.28	0.0011	0.4296
Ca	44	3	He	-11.301	0.0022	100.00	0.0001	0.002924
Ca	44	3	He	0.026	0.0029	130.00	0.0001	0.002924
Ca	44	3	He	12.035	0.0037	170.01	0.0001	0.002924
Ti	47	3	He	0.919	0.0004	20.00	0.0005	0
Ti	47	3	He	1.394	0.0007	30.00	0.0005	0
Ti	47	3	He	1.336	0.0006	30.00	0.0005	0
V	51	3	He	0.089	0.0114	514.01	0.021	0.009571
V	51	3	He	0.078	0.0112	498.01	0.021	0.009571
V	51	3	He	0.148	0.0127	588.01	0.021	0.009571
Cr	52	3	He	0.225	0.0236	1060.07	0.0267	0.01758
Cr	52	3	He	0.033	0.0185	820.05	0.0267	0.01758
Cr	52	3	He	0.19	0.0227	1050.07	0.0267	0.01758
Mn	55	3	He	0.126	0.0056	250.01	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.236	0.0068	300.01	0.0108	0.004199
Mn	55	3	He	0.21	0.0065	300.01	0.0108	0.004199
Fe	57	3	He	-1.087	0.0024	110.00	0.0005	0.002993
Fe	57	3	He	-2.38	0.0018	80.00	0.0005	0.002993
Fe	57	3	He	1.349	0.0037	170.01	0.0005	0.002993
Co	59	3	He	0.18	0.0125	560.03	0.0524	0.003063
Co	59	3	He	0.131	0.0099	440.02	0.0524	0.003063
Co	59	3	He	0.135	0.0101	470.02	0.0524	0.003063
Ni	60	3	He	-0.008	0.0111	680.04	0.0109	0.01116
Ni	60	3	He	0.096	0.0122	750.04	0.0109	0.01116
Ni	60	3	He	0.007	0.0112	690.04	0.0109	0.01116
Cu	63	3	He	0.155	0.0193	1460.12	0.0255	0.01531
Cu	63	3	He	0.045	0.0165	1250.08	0.0255	0.01531
Cu	63	3	He	0.101	0.0179	1370.10	0.0255	0.01531
Zn	66	3	He	0.406	0.004	300.01	0.0029	0.002787
Zn	66	3	He	0.404	0.0039	300.01	0.0029	0.002787
Zn	66	3	He	0.211	0.0034	260.01	0.0029	0.002787
As	75	3	He	0.266	0.001	74.00	0.0021	0.0004097
As	75	3	He	0.142	0.0007	54.00	0.0021	0.0004097
As	75	3	He	0.188	0.0008	62.00	0.0021	0.0004097
Sr	88	3	He	0.045	0.0013	80.00	0.0094	0.0008765
Sr	88	3	He	0.062	0.0015	90.00	0.0094	0.0008765
Sr	88	3	He	-0.007	0.0008	50.00	0.0094	0.0008765
Mo	98	3	He	-0.002	0.0002	10.00	0.023	0.0002199
Mo	98	3	He	0.005	0.0003	20.00	0.023	0.0002199
Mo	98	3	He	0.012	0.0005	30.00	0.023	0.0002199
Ag	107	3	He	0.007	0.0011	70.00	0.0483	0.0008224
Ag	107	3	He	0.017	0.0016	100.00	0.0483	0.0008224
Ag	107	3	He	0.003	0.001	60.00	0.0483	0.0008224
Cd	111	3	He	0.026	0.0002	10.00	0.0053	2.193E-05
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Sn	120	3	He	-0.017	0.0132	810.04	0.0148	0.01345
Sn	120	3	He	0.103	0.015	920.06	0.0148	0.01345
Sn	120	3	He	0.181	0.0161	990.08	0.0148	0.01345
Sb	121	3	He	0.026	0.0008	50.00	0.0143	0.0004392
Sb	121	3	He	0.003	0.0005	30.00	0.0143	0.0004392
Sb	121	3	He	-0.019	0.0002	10.00	0.0143	0.0004392
Ba	137	3	He	0.162	0.0008	50.00	0.0044	0.0001096
Ba	137	3	He	0.087	0.0005	30.00	0.0044	0.0001096
Ba	137	3	He	-0.025	0	0.00	0.0044	0.0001096
Tl	205	3	He	0.305	0.0066	1560.14	0.0208	0.0002491
Tl	205	3	He	0.281	0.0061	1450.12	0.0208	0.0002491
Tl	205	3	He	0.298	0.0064	1560.13	0.0208	0.0002491
Pb	208	3	He	0.004	0.0007	110.00	0.0272	0.0006218
Pb	208	3	He	0.014	0.001	120.00	0.0272	0.0006218
Pb	208	3	He	0.009	0.0009	100.00	0.0272	0.0006218
U	238	3	He	0.022	0.0006	150.01	0.0275	2.763E-05
U	238	3	He	0.019	0.0005	130.01	0.0275	2.763E-05
U	238	3	He	0.008	0.0002	60.00	0.0275	2.763E-05
Sc	45	1	No Gas			2298359.50		
Sc	45	1	No Gas			2274652.47		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2285652.47		
Ge	72	1	No Gas			1034307.09		
Ge	72	1	No Gas			1034126.16		
Ge	72	1	No Gas			1041196.70		
Sc	45	2	H2			140275.49		
Sc	45	2	H2			139873.50		
Sc	45	2	H2			137644.86		
Ge	72	2	H2			119995.66		
Ge	72	2	H2			116580.69		
Ge	72	2	H2			115564.28		
In	115	2	H2			298624.29		
In	115	2	H2			297122.87		
In	115	2	H2			292829.98		
Sc	45	3	He			44932.27		
Sc	45	3	He			44430.96		
Sc	45	3	He			46346.18		
Ge	72	3	He			75839.23		
Ge	72	3	He			75959.45		
Ge	72	3	He			76632.80		
In	115	3	He			61371.65		
In	115	3	He			61431.73		
In	115	3	He			61371.70		
Tb	159	3	He			236884.18		
Tb	159	3	He			238277.71		
Tb	159	3	He			242044.29		
Bi	209	3	He			168486.99		
Bi	209	3	He			164508.04		
Bi	209	3	He			165561.91		

Quantitation Report

Data File Name	016_LLC.d
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Acq Mode	Spectrum
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Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

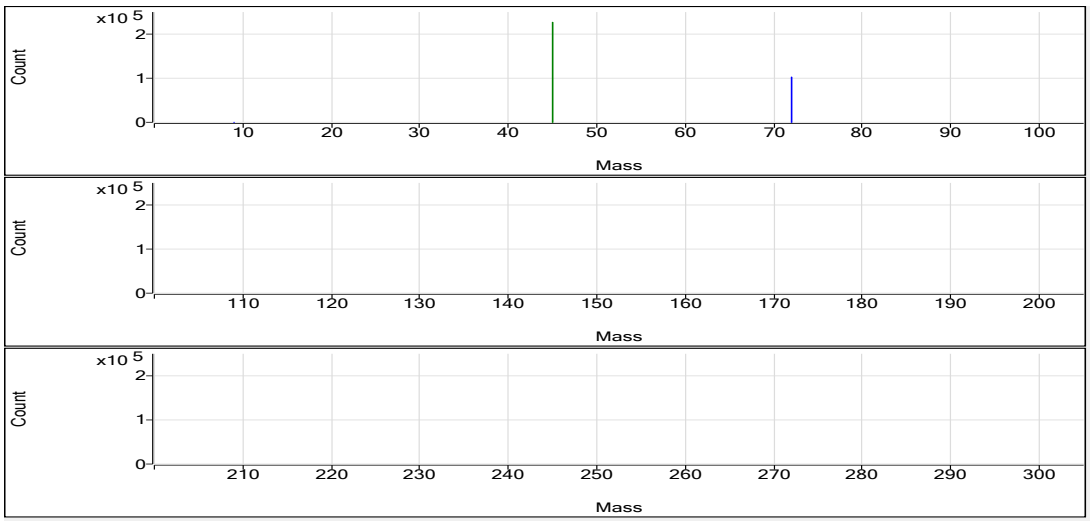
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.542	ppb	8.9	514.01	0.0002	Pulse	0.5000	3
Se	78	72	H2	1.022	ppb	8.4	53.55	0.0005	Pulse	1.5000	3
Na	23	45	He	181.387	ppb	7.2	48183.43	1.0330	Pulse	0.1000	3
Mg	24	45	He	53.387	ppb	2.8	3957.26	0.0847	Pulse	0.1000	3
Al	27	45	He	28.494	ppb	13.3	656.70	0.0140	Pulse	0.1000	3
K	39	45	He	187.019	ppb	32.8	29477.22	0.6329	Pulse	0.1000	3
Ca	44	45	He	91.122	ppb	8.1	400.02	0.0086	Pulse	0.1000	3
Ti	47	45	He	12.345	ppb	17.5	280.01	0.0060	Pulse	0.1000	3
V	51	45	He	2.040	ppb	7.6	2448.20	0.0525	Pulse	0.5000	3
Cr	52	45	He	1.992	ppb	8.2	3297.10	0.0707	Pulse	0.1000	3
Mn	55	45	He	2.175	ppb	17.5	1296.76	0.0277	Pulse	0.1000	3
Fe	57	45	He	47.227	ppb	15.7	1240.09	0.0266	Pulse	0.1000	3
Co	59	45	He	0.491	ppb	18.3	1340.10	0.0288	Pulse	0.1000	3
Ni	60	115	He	1.193	ppb	18.4	1496.79	0.0242	Pulse	0.1000	3
Cu	63	72	He	1.106	ppb	3.4	3287.11	0.0435	Pulse	0.1000	3
Zn	66	72	He	11.122	ppb	11.3	2630.30	0.0348	Pulse	0.1000	3
As	75	72	He	2.120	ppb	2.2	372.01	0.0049	Pulse	0.5000	3
Sr	88	115	He	0.967	ppb	11.8	616.70	0.0100	Pulse	0.1000	3
Mo	98	115	He	0.529	ppb	11.8	766.71	0.0124	Pulse	0.1000	3
Ag	107	115	He	0.506	ppb	16.0	1563.47	0.0253	Pulse	0.1000	3
Cd	111	115	He	0.474	ppb	10.6	157.33	0.0025	Pulse	0.5000	3
Sn	120	115	He	1.723	ppb	3.0	2406.93	0.0390	Pulse	0.1000	3
Sb	121	115	He	1.000	ppb	15.6	910.06	0.0147	Pulse	0.1000	3
Ba	137	115	He	1.969	ppb	10.9	536.69	0.0087	Pulse	0.1000	3
Tl	205	159	He	0.582	ppb	6.6	3000.41	0.0123	Pulse	0.1000	3
Pb	208	159	He	0.495	ppb	1.3	3426.94	0.0141	Pulse	0.1000	3
U	238	159	He	0.985	ppb	2.0	6588.40	0.0271	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2283864.03	1.8	99.6	Analog	0.1000	3
No Gas	Ge	72	1034352.20	1.0	99.5	Pulse	0.1000	3
H2	Sc	45	138087.90	0.6	99.3	Pulse	0.1000	3
H2	Ge	72	115631.10	1.0	97.9	Pulse	0.1000	3
H2	In	115	292462.14	0.3	99.3	Pulse	0.1000	3
He	Sc	45	46690.59	3.8	99.7	Pulse	0.1000	3
He	Ge	72	75577.93	1.1	98.8	Pulse	0.1000	3
He	In	115	61769.50	1.6	101.9	Pulse	0.1000	3
He	Tb	159	243006.85	0.3	100.8	Pulse	0.1000	3
He	Bi	209	166958.40	0.0	100.8	Pulse	0.1000	3

No Gas



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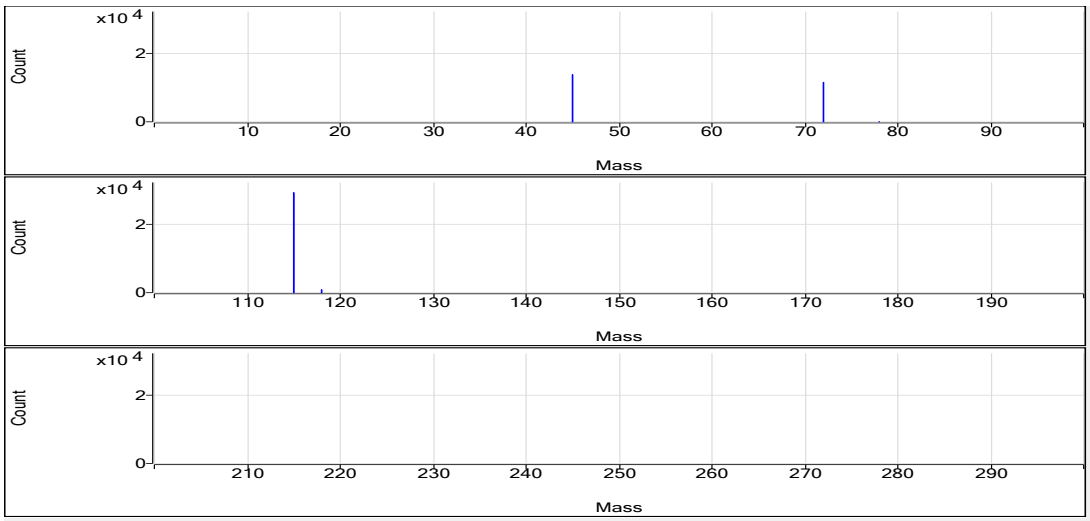
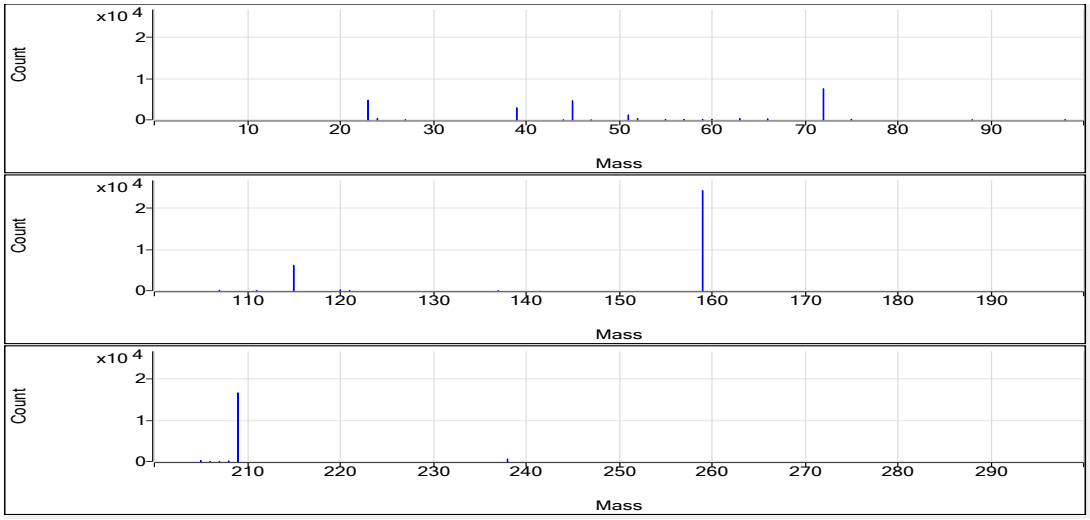


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.522	0.0002	488.01	0.0004	9.309E-06
Be	9	1	No Gas	0.598	0.0002	562.01	0.0004	9.309E-06
Be	9	1	No Gas	0.508	0.0002	492.01	0.0004	9.309E-06
Se	78	2	H2	0.925	0.0004	48.00	0.0004	5.598E-06
Se	78	2	H2	1.086	0.0005	57.33	0.0004	5.598E-06
Se	78	2	H2	1.056	0.0005	55.33	0.0004	5.598E-06
Na	23	3	He	195.251	1.0764	48179.83	0.0031	0.4657
Na	23	3	He	169.3	0.9952	47979.76	0.0031	0.4657
Na	23	3	He	179.609	1.0274	48390.71	0.0031	0.4657
Mg	24	3	He	52.484	0.0833	3730.52	0.0015	0.003704
Mg	24	3	He	55.117	0.0873	4210.66	0.0015	0.003704
Mg	24	3	He	52.559	0.0835	3930.61	0.0015	0.003704
Al	27	3	He	25.255	0.0125	560.03	0.0005	0.0007154
Al	27	3	He	32.664	0.016	770.04	0.0005	0.0007154
Al	27	3	He	27.563	0.0136	640.04	0.0005	0.0007154
K	39	3	He	257.585	0.7096	31761.38	0.0011	0.4296
K	39	3	He	156.176	0.5994	28895.87	0.0011	0.4296
K	39	3	He	147.298	0.5897	27774.42	0.0011	0.4296
Ca	44	3	He	82.798	0.008	360.02	0.0001	0.002924
Ca	44	3	He	93.619	0.0087	420.02	0.0001	0.002924
Ca	44	3	He	96.95	0.0089	420.02	0.0001	0.002924
Ti	47	3	He	10.148	0.0049	220.01	0.0005	0
Ti	47	3	He	12.419	0.006	290.01	0.0005	0
Ti	47	3	He	14.467	0.007	330.02	0.0005	0
V	51	3	He	2.212	0.0561	2512.21	0.021	0.009571
V	51	3	He	1.911	0.0498	2400.19	0.021	0.009571
V	51	3	He	1.999	0.0516	2432.20	0.021	0.009571
Cr	52	3	He	2.155	0.0751	3360.45	0.0267	0.01758
Cr	52	3	He	1.829	0.0664	3200.40	0.0267	0.01758
Cr	52	3	He	1.991	0.0707	3330.44	0.0267	0.01758
Mn	55	3	He	2.111	0.027	1210.08	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.584	0.0322	1550.12	0.0108	0.004199
Mn	55	3	He	1.83	0.024	1130.07	0.0108	0.004199
Fe	57	3	He	53.799	0.0299	1340.09	0.0005	0.002993
Fe	57	3	He	39.168	0.0226	1090.07	0.0005	0.002993
Fe	57	3	He	48.714	0.0274	1290.10	0.0005	0.002993
Co	59	3	He	0.526	0.0306	1370.11	0.0524	0.003063
Co	59	3	He	0.389	0.0234	1130.07	0.0524	0.003063
Co	59	3	He	0.558	0.0323	1520.12	0.0524	0.003063
Ni	60	3	He	0.987	0.022	1340.11	0.0109	0.01116
Ni	60	3	He	1.168	0.0239	1470.11	0.0109	0.01116
Ni	60	3	He	1.423	0.0267	1680.15	0.0109	0.01116
Cu	63	3	He	1.063	0.0424	3200.42	0.0255	0.01531
Cu	63	3	He	1.132	0.0442	3300.47	0.0255	0.01531
Cu	63	3	He	1.124	0.0439	3360.45	0.0255	0.01531
Zn	66	3	He	9.755	0.0309	2330.24	0.0029	0.002787
Zn	66	3	He	11.4	0.0356	2660.32	0.0029	0.002787
Zn	66	3	He	12.212	0.0379	2900.33	0.0029	0.002787
As	75	3	He	2.109	0.0049	370.01	0.0021	0.0004097
As	75	3	He	2.171	0.005	376.01	0.0021	0.0004097
As	75	3	He	2.081	0.0048	370.01	0.0021	0.0004097
Sr	88	3	He	1.037	0.0107	650.04	0.0094	0.0008765
Sr	88	3	He	1.03	0.0106	650.04	0.0094	0.0008765
Sr	88	3	He	0.835	0.0087	550.02	0.0094	0.0008765
Mo	98	3	He	0.595	0.0139	850.05	0.023	0.0002199
Mo	98	3	He	0.471	0.0111	680.04	0.023	0.0002199
Mo	98	3	He	0.522	0.0123	770.05	0.023	0.0002199
Ag	107	3	He	0.417	0.021	1280.10	0.0483	0.0008224
Ag	107	3	He	0.526	0.0262	1610.14	0.0483	0.0008224
Ag	107	3	He	0.576	0.0286	1800.17	0.0483	0.0008224
Cd	111	3	He	0.518	0.0028	170.00	0.0053	2.193E-05
Cd	111	3	He	0.484	0.0026	160.00	0.0053	2.193E-05
Cd	111	3	He	0.419	0.0023	142.00	0.0053	2.193E-05
Sn	120	3	He	1.67	0.0382	2330.25	0.0148	0.01345
Sn	120	3	He	1.774	0.0397	2440.27	0.0148	0.01345
Sn	120	3	He	1.724	0.039	2450.28	0.0148	0.01345
Sb	121	3	He	1.172	0.0172	1050.07	0.0143	0.0004392
Sb	121	3	He	0.868	0.0129	790.05	0.0143	0.0004392
Sb	121	3	He	0.959	0.0142	890.05	0.0143	0.0004392
Ba	137	3	He	2.192	0.0097	590.03	0.0044	0.0001096
Ba	137	3	He	1.953	0.0086	530.03	0.0044	0.0001096
Ba	137	3	He	1.762	0.0078	490.02	0.0044	0.0001096
Tl	205	3	He	0.54	0.0115	2790.36	0.0208	0.0002491
Tl	205	3	He	0.614	0.013	3150.45	0.0208	0.0002491
Tl	205	3	He	0.592	0.0126	3060.43	0.0208	0.0002491
Pb	208	3	He	0.501	0.0143	1760.16	0.0272	0.0006218
Pb	208	3	He	0.489	0.0139	1670.14	0.0272	0.0006218
Pb	208	3	He	0.496	0.0141	1980.21	0.0272	0.0006218
U	238	3	He	1.005	0.0277	6731.81	0.0275	2.763E-05
U	238	3	He	0.965	0.0266	6431.67	0.0275	2.763E-05
U	238	3	He	0.984	0.0271	6601.73	0.0275	2.763E-05
Sc	45	1	No Gas			2248840.44		
Sc	45	1	No Gas			2274087.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2328663.87		
Ge	72	1	No Gas			1035988.42		
Ge	72	1	No Gas			1023091.78		
Ge	72	1	No Gas			1043976.39		
Sc	45	2	H2			137300.72		
Sc	45	2	H2			139026.70		
Sc	45	2	H2			137936.29		
Ge	72	2	H2			114455.35		
Ge	72	2	H2			116651.71		
Ge	72	2	H2			115786.25		
In	115	2	H2			291463.04		
In	115	2	H2			292667.34		
In	115	2	H2			293256.05		
Sc	45	3	He			44761.80		
Sc	45	3	He			48211.48		
Sc	45	3	He			47098.50		
Ge	72	3	He			75517.33		
Ge	72	3	He			74744.14		
Ge	72	3	He			76472.31		
In	115	3	He			61040.43		
In	115	3	He			61441.39		
In	115	3	He			62877.22		
Tb	159	3	He			243312.75		
Tb	159	3	He			242103.86		
Tb	159	3	He			243603.94		
Bi	209	3	He			166966.31		
Bi	209	3	He			166999.08		
Bi	209	3	He			166909.80		

Quantitation Report

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Sample Type	ICSA
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

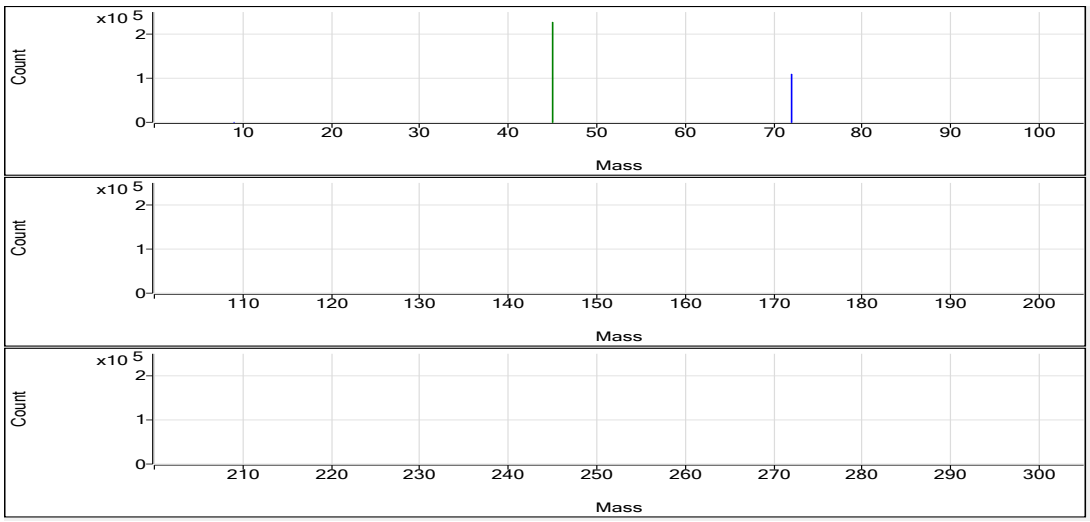
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.012	ppb	88.0	32.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.072	ppb	56.6	4.44	0.0000	Pulse	1.5000	3
Na	23	45	He	247584.300	ppb	0.5	34811662.82	774.8463	Analog	0.1000	3
Mg	24	45	He	100656.568	ppb	0.2	6862447.40	152.7371	Analog	0.1000	3
Al	27	45	He	101025.158	ppb	0.6	2119963.20	47.1870	Analog	0.1000	3
K	39	45	He	99898.822	ppb	1.1	4896879.51	108.9961	Analog	0.1000	3
Ca	44	45	He	286429.285	ppb	0.5	795689.70	17.7107	Pulse	0.1000	3
Ti	47	45	He	2029.812	ppb	1.3	44170.37	0.9832	Pulse	0.1000	3
V	51	45	He	0.045	ppb	73.9	472.01	0.0105	Pulse	0.5000	3
Cr	52	45	He	3.345	ppb	6.5	4800.86	0.1068	Pulse	0.1000	3
Mn	55	45	He	0.812	ppb	8.6	583.36	0.0130	Pulse	0.1000	3
Fe	57	45	He	253975.321	ppb	1.1	5714949.50	127.2090	Analog	0.1000	3
Co	59	45	He	0.187	ppb	2.4	576.70	0.0128	Pulse	0.1000	3
Ni	60	115	He	0.715	ppb	34.9	1093.41	0.0190	Pulse	0.1000	3
Cu	63	72	He	0.083	ppb	47.2	1353.43	0.0174	Pulse	0.1000	3
Zn	66	72	He	2.031	ppb	22.9	670.04	0.0086	Pulse	0.1000	3
As	75	72	He	0.170	ppb	14.3	60.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	2.168	ppb	2.0	1226.75	0.0213	Pulse	0.1000	3
Mo	98	115	He	2158.829	ppb	0.9	2862636.52	49.7348	Analog	0.1000	3
Ag	107	115	He	0.008	ppb	202.8	70.00	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.228	ppb	12.2	71.33	0.0012	Pulse	0.5000	3
Sn	120	115	He	0.266	ppb	80.8	1000.07	0.0174	Pulse	0.1000	3
Sb	121	115	He	0.123	ppb	66.4	126.67	0.0022	Pulse	0.1000	3
Ba	137	115	He	0.665	ppb	9.2	173.34	0.0030	Pulse	0.1000	3
Tl	205	159	He	0.044	ppb	13.0	273.34	0.0012	Pulse	0.1000	3
Pb	208	159	He	0.063	ppb	16.0	553.36	0.0023	Pulse	0.1000	3
U	238	159	He	0.062	ppb	16.7	410.02	0.0017	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2278340.54	1.4	99.3	Analog	0.1000	3
No Gas	Ge	72	1098176.05	0.9	105.7	Pulse	0.1000	3
H2	Sc	45	135970.51	1.3	97.8	Pulse	0.1000	3
H2	Ge	72	118047.60	0.3	100.0	Pulse	0.1000	3
H2	In	115	279257.34	0.9	94.8	Pulse	0.1000	3
He	Sc	45	44929.03	1.2	95.9	Pulse	0.1000	3
He	Ge	72	77704.55	1.0	101.6	Pulse	0.1000	3
He	In	115	57560.10	0.6	94.9	Pulse	0.1000	3
He	Tb	159	236194.40	1.0	97.9	Pulse	0.1000	3
He	Bi	209	159106.74	0.7	96.0	Pulse	0.1000	3

No Gas



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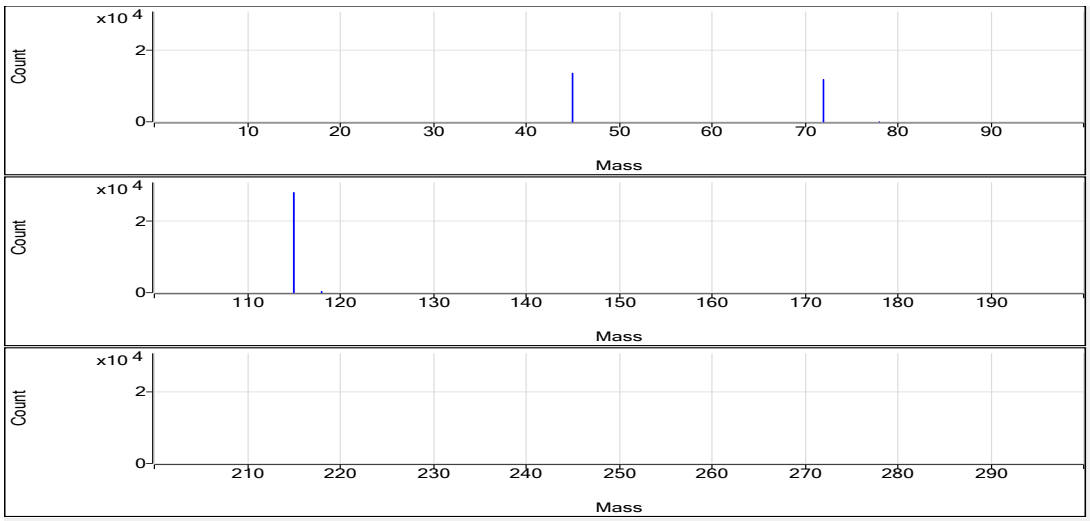
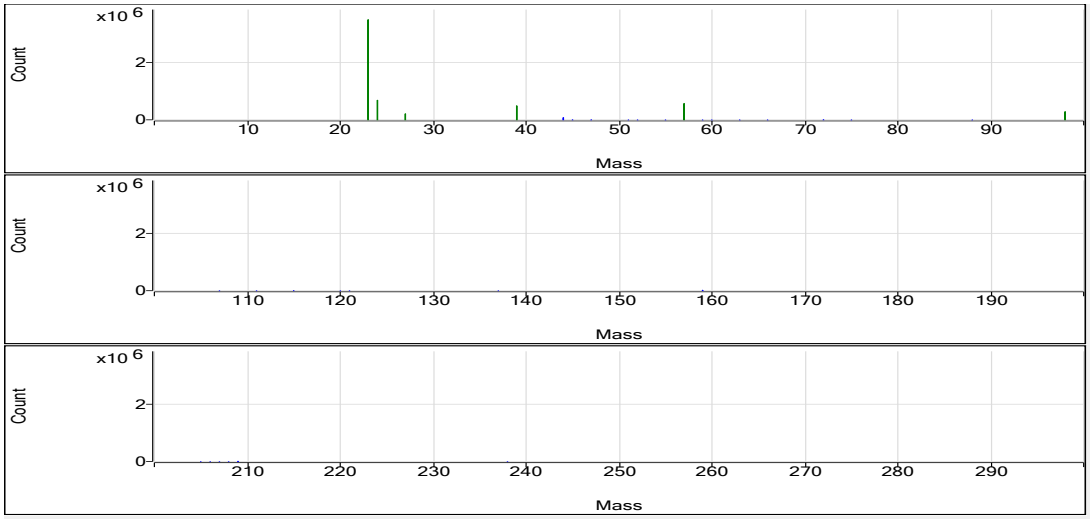


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.021	0	40.00	0.0004	9.309E-06
Be	9	1	No Gas	0.014	0	34.00	0.0004	9.309E-06
Be	9	1	No Gas	0.001	0	22.00	0.0004	9.309E-06
Se	78	2	H2	0.101	0.0001	6.00	0.0004	5.598E-06
Se	78	2	H2	0.025	0	2.00	0.0004	5.598E-06
Se	78	2	H2	0.089	0	5.33	0.0004	5.598E-06
Na	23	3	He	248901.654	778.9666	34532144.49	0.0031	0.4657
Na	23	3	He	247624.229	774.9712	34945659.48	0.0031	0.4657
Na	23	3	He	246227.017	770.6011	34957184.48	0.0031	0.4657
Mg	24	3	He	100390.584	152.3335	6753053.65	0.0015	0.003704
Mg	24	3	He	100821.663	152.9876	6898648.65	0.0015	0.003704
Mg	24	3	He	100757.458	152.8902	6935639.90	0.0015	0.003704
Al	27	3	He	101700.808	47.5026	2105821.84	0.0005	0.0007154
Al	27	3	He	100861.11	47.1104	2124339.97	0.0005	0.0007154
Al	27	3	He	100513.556	46.948	2129727.78	0.0005	0.0007154
K	39	3	He	100233.683	109.36	4848007.74	0.0011	0.4296
K	39	3	He	100764.267	109.9366	4957356.80	0.0011	0.4296
K	39	3	He	98698.515	107.6917	4885273.99	0.0011	0.4296
Ca	44	3	He	288154.531	17.8173	789855.38	0.0001	0.002924
Ca	44	3	He	285954.442	17.6813	797301.39	0.0001	0.002924
Ca	44	3	He	285178.883	17.6334	799912.33	0.0001	0.002924
Ti	47	3	He	2049.641	0.9928	44009.87	0.0005	0
Ti	47	3	He	1999.389	0.9684	43668.94	0.0005	0
Ti	47	3	He	2040.406	0.9883	44832.30	0.0005	0
V	51	3	He	0.077	0.0112	496.01	0.021	0.009571
V	51	3	He	0.011	0.0098	442.01	0.021	0.009571
V	51	3	He	0.046	0.0105	478.01	0.021	0.009571
Cr	52	3	He	3.155	0.1018	4510.75	0.0267	0.01758
Cr	52	3	He	3.581	0.1131	5100.97	0.0267	0.01758
Cr	52	3	He	3.299	0.1056	4790.86	0.0267	0.01758
Mn	55	3	He	0.863	0.0135	600.03	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.842	0.0133	600.03	0.0108	0.004199
Mn	55	3	He	0.733	0.0121	550.03	0.0108	0.004199
Fe	57	3	He	257098.368	128.7733	5708609.91	0.0005	0.002993
Fe	57	3	He	251566.117	126.0024	5681806.17	0.0005	0.002993
Fe	57	3	He	253261.478	126.8515	5754432.41	0.0005	0.002993
Co	59	3	He	0.183	0.0126	560.03	0.0524	0.003063
Co	59	3	He	0.191	0.0131	590.03	0.0524	0.003063
Co	59	3	He	0.186	0.0128	580.03	0.0524	0.003063
Ni	60	3	He	0.915	0.0212	1220.09	0.0109	0.01116
Ni	60	3	He	0.797	0.0199	1150.07	0.0109	0.01116
Ni	60	3	He	0.435	0.0159	910.06	0.0109	0.01116
Cu	63	3	He	0.127	0.0185	1430.11	0.0255	0.01531
Cu	63	3	He	0.068	0.0171	1340.09	0.0255	0.01531
Cu	63	3	He	0.053	0.0167	1290.10	0.0255	0.01531
Zn	66	3	He	2.187	0.0091	700.04	0.0029	0.002787
Zn	66	3	He	1.508	0.0071	560.03	0.0029	0.002787
Zn	66	3	He	2.398	0.0097	750.04	0.0029	0.002787
As	75	3	He	0.185	0.0008	62.00	0.0021	0.0004097
As	75	3	He	0.142	0.0007	56.00	0.0021	0.0004097
As	75	3	He	0.184	0.0008	62.00	0.0021	0.0004097
Sr	88	3	He	2.134	0.021	1210.08	0.0094	0.0008765
Sr	88	3	He	2.217	0.0218	1260.10	0.0094	0.0008765
Sr	88	3	He	2.153	0.0212	1210.08	0.0094	0.0008765
Mo	98	3	He	2149.091	49.5105	2854283.71	0.023	0.0002199
Mo	98	3	He	2145.861	49.4361	2860488.71	0.023	0.0002199
Mo	98	3	He	2181.535	50.2579	2873137.14	0.023	0.0002199
Ag	107	3	He	0.005	0.001	60.00	0.0483	0.0008224
Ag	107	3	He	-0.006	0.0005	30.00	0.0483	0.0008224
Ag	107	3	He	0.026	0.0021	120.00	0.0483	0.0008224
Cd	111	3	He	0.224	0.0012	70.00	0.0053	2.193E-05
Cd	111	3	He	0.203	0.0011	64.00	0.0053	2.193E-05
Cd	111	3	He	0.258	0.0014	80.00	0.0053	2.193E-05
Sn	120	3	He	0.333	0.0184	1060.09	0.0148	0.01345
Sn	120	3	He	0.025	0.0138	800.04	0.0148	0.01345
Sn	120	3	He	0.438	0.0199	1140.09	0.0148	0.01345
Sb	121	3	He	0.054	0.0012	70.00	0.0143	0.0004392
Sb	121	3	He	0.102	0.0019	110.00	0.0143	0.0004392
Sb	121	3	He	0.214	0.0035	200.01	0.0143	0.0004392
Ba	137	3	He	0.731	0.0033	190.01	0.0044	0.0001096
Ba	137	3	He	0.609	0.0028	160.01	0.0044	0.0001096
Ba	137	3	He	0.657	0.003	170.01	0.0044	0.0001096
Tl	205	3	He	0.05	0.0013	300.01	0.0208	0.0002491
Tl	205	3	He	0.039	0.0011	250.01	0.0208	0.0002491
Tl	205	3	He	0.043	0.0011	270.01	0.0208	0.0002491
Pb	208	3	He	0.053	0.0021	230.01	0.0272	0.0006218
Pb	208	3	He	0.073	0.0026	270.01	0.0272	0.0006218
Pb	208	3	He	0.064	0.0024	300.02	0.0272	0.0006218
U	238	3	He	0.058	0.0016	380.02	0.0275	2.763E-05
U	238	3	He	0.074	0.0021	490.03	0.0275	2.763E-05
U	238	3	He	0.054	0.0015	360.02	0.0275	2.763E-05
Sc	45	1	No Gas			2241113.56		
Sc	45	1	No Gas			2292134.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2301773.72		
Ge	72	1	No Gas			1086850.69		
Ge	72	1	No Gas			1101250.30		
Ge	72	1	No Gas			1106427.17		
Sc	45	2	H2			135909.38		
Sc	45	2	H2			134215.64		
Sc	45	2	H2			137786.51		
Ge	72	2	H2			118402.80		
Ge	72	2	H2			118031.30		
Ge	72	2	H2			117708.71		
In	115	2	H2			276755.17		
In	115	2	H2			279466.99		
In	115	2	H2			281549.86		
Sc	45	3	He			44330.71		
Sc	45	3	He			45092.85		
Sc	45	3	He			45363.53		
Ge	72	3	He			77095.17		
Ge	72	3	He			78582.36		
Ge	72	3	He			77436.12		
In	115	3	He			57657.51		
In	115	3	He			57867.97		
In	115	3	He			57175.82		
Tb	159	3	He			233571.68		
Tb	159	3	He			238092.40		
Tb	159	3	He			236919.12		
Bi	209	3	He			159271.62		
Bi	209	3	He			160091.24		
Bi	209	3	He			157957.37		

Quantitation Report

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Sample Type	ICSAB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

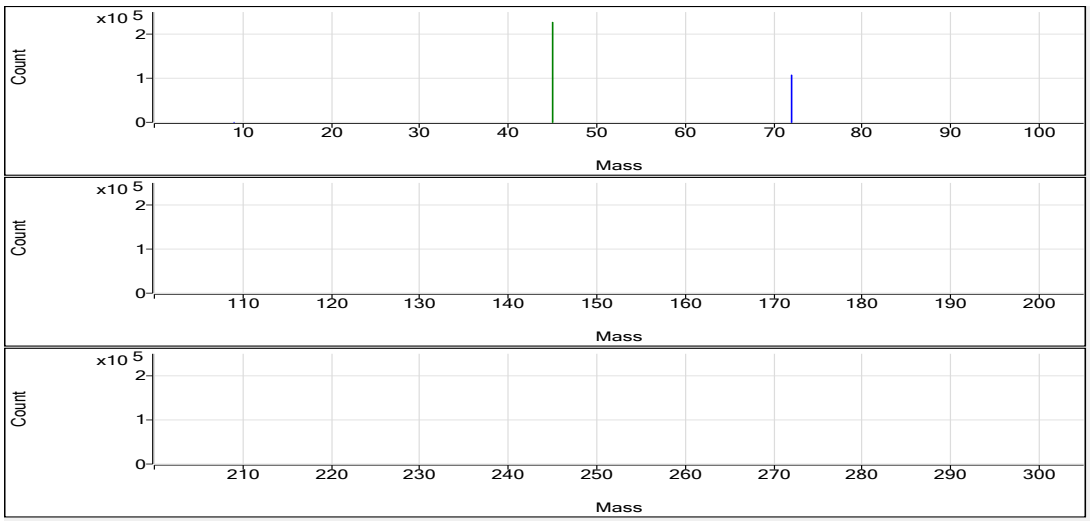
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.008	ppb	105.2	28.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	104.027	ppb	2.3	5374.24	0.0465	Pulse	1.5000	3
Na	23	45	He	248242.409	ppb	1.7	35069646.98	776.9047	Analog	0.1000	3
Mg	24	45	He	100585.540	ppb	1.8	6889661.15	152.6294	Analog	0.1000	3
Al	27	45	He	101429.626	ppb	2.2	2138452.52	47.3759	Analog	0.1000	3
K	39	45	He	99221.882	ppb	2.6	4886547.43	108.2604	Analog	0.1000	3
Ca	44	45	He	284879.307	ppb	2.3	795097.23	17.6149	Pulse	0.1000	3
Ti	47	45	He	1991.835	ppb	1.5	43551.90	0.9648	Pulse	0.1000	3
V	51	45	He	206.053	ppb	1.3	196214.41	4.3466	Pulse	0.5000	3
Cr	52	45	He	207.845	ppb	1.5	251151.01	5.5637	Pulse	0.1000	3
Mn	55	45	He	203.692	ppb	1.9	99667.67	2.2079	Pulse	0.1000	3
Fe	57	45	He	250565.267	ppb	1.3	5665443.67	125.5011	Analog	0.1000	3
Co	59	45	He	197.372	ppb	1.7	466548.90	10.3357	Pulse	0.1000	3
Ni	60	115	He	209.852	ppb	0.8	131952.89	2.3057	Pulse	0.1000	3
Cu	63	72	He	189.265	ppb	0.7	373299.58	4.8374	Pulse	0.1000	3
Zn	66	72	He	103.031	ppb	3.2	23093.75	0.2993	Pulse	0.1000	3
As	75	72	He	96.738	ppb	1.3	15920.56	0.2063	Pulse	0.5000	3
Sr	88	115	He	2.044	ppb	7.6	1153.41	0.0201	Pulse	0.1000	3
Mo	98	115	He	2183.600	ppb	1.3	2878914.33	50.3055	Analog	0.1000	3
Ag	107	115	He	53.044	ppb	1.3	146678.08	2.5630	Pulse	0.1000	3
Cd	111	115	He	104.376	ppb	0.8	31866.35	0.5568	Pulse	0.5000	3
Sn	120	115	He	0.283	ppb	41.5	1010.07	0.0176	Pulse	0.1000	3
Sb	121	115	He	0.112	ppb	22.7	116.67	0.0020	Pulse	0.1000	3
Ba	137	115	He	0.669	ppb	19.4	173.34	0.0030	Pulse	0.1000	3
Tl	205	159	He	0.025	ppb	53.5	183.34	0.0008	Pulse	0.1000	3
Pb	208	159	He	0.136	ppb	18.1	1020.05	0.0043	Pulse	0.1000	3
U	238	159	He	0.050	ppb	16.8	333.35	0.0014	Pulse	0.1000	3

ISTD Table:

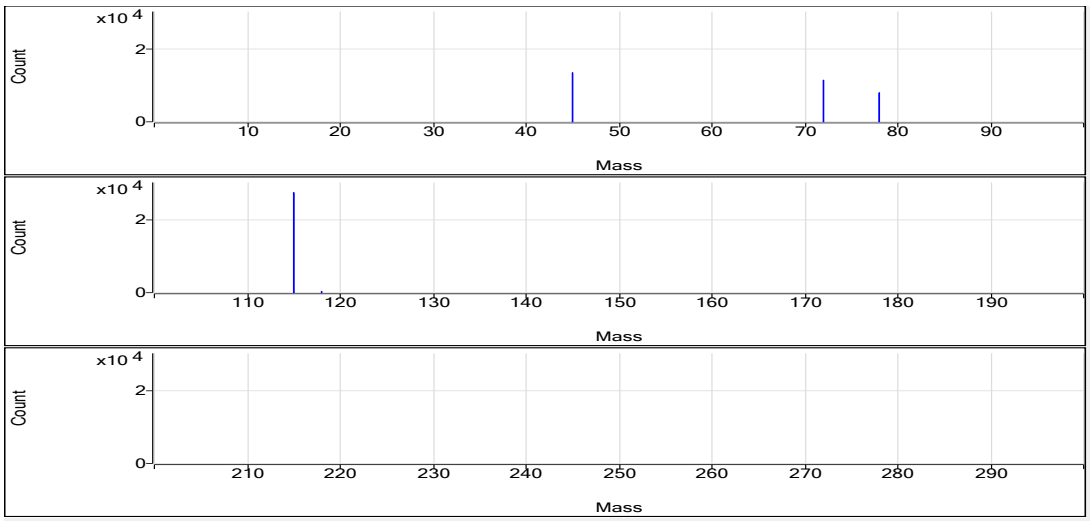
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2264776.06	1.4	98.7	Analog	0.1000	3
No Gas	Ge	72	1071301.10	0.9	103.1	Pulse	0.1000	3
H2	Sc	45	135855.94	1.6	97.7	Pulse	0.1000	3
H2	Ge	72	115519.71	1.4	97.8	Pulse	0.1000	3
H2	In	115	276692.56	0.8	93.9	Pulse	0.1000	3
He	Sc	45	45149.36	1.9	96.4	Pulse	0.1000	3
He	Ge	72	77171.94	1.2	100.9	Pulse	0.1000	3
He	In	115	57232.12	0.7	94.4	Pulse	0.1000	3
He	Tb	159	235786.32	0.1	97.8	Pulse	0.1000	3
He	Bi	209	155300.27	0.4	93.7	Pulse	0.1000	3

No Gas

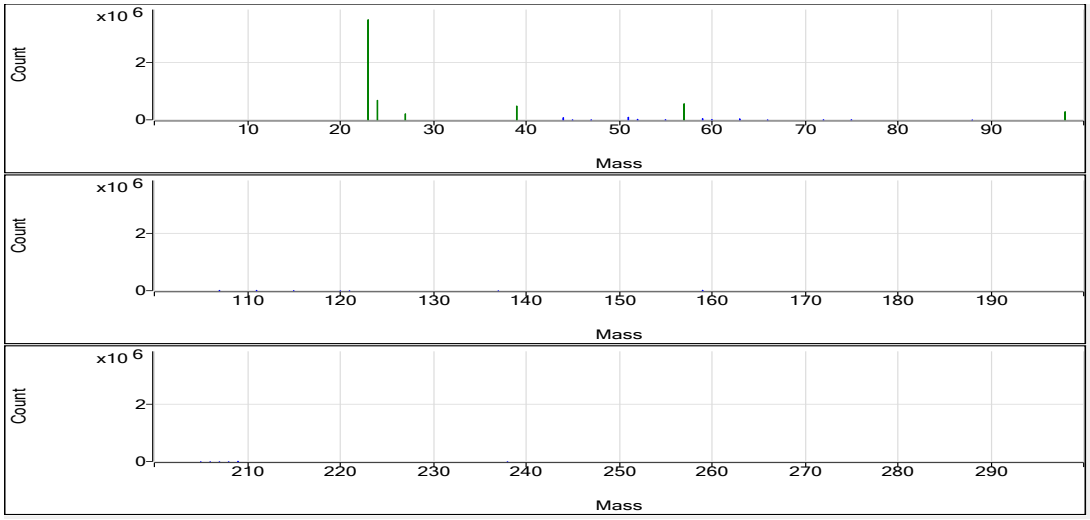


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.018	0	38.00	0.0004	9.309E-06
Be	9	1	No Gas	0.001	0	22.00	0.0004	9.309E-06
Be	9	1	No Gas	0.006	0	26.00	0.0004	9.309E-06
Se	78	2	H2	101.329	0.0453	5321.55	0.0004	5.598E-06
Se	78	2	H2	105.909	0.0474	5413.58	0.0004	5.598E-06
Se	78	2	H2	104.845	0.0469	5387.58	0.0004	5.598E-06
Na	23	3	He	252252.139	789.4461	34869881.98	0.0031	0.4657
Na	23	3	He	243868.652	763.2247	34981854.48	0.0031	0.4657
Na	23	3	He	248606.437	778.0433	35357204.47	0.0031	0.4657
Mg	24	3	He	102270.113	155.1855	6854551.77	0.0015	0.003704
Mg	24	3	He	98703.722	149.7739	6864780.52	0.0015	0.003704
Mg	24	3	He	100782.784	152.9286	6949651.15	0.0015	0.003704
Al	27	3	He	103411.73	48.3017	2133488.09	0.0005	0.0007154
Al	27	3	He	99033.715	46.2568	2120148.09	0.0005	0.0007154
Al	27	3	He	101843.432	47.5692	2161721.37	0.0005	0.0007154
K	39	3	He	101236.404	110.4498	4878572.11	0.0011	0.4296
K	39	3	He	96302.683	105.088	4816630.87	0.0011	0.4296
K	39	3	He	100126.559	109.2436	4964439.30	0.0011	0.4296
Ca	44	3	He	290415.743	17.9571	793167.72	0.0001	0.002924
Ca	44	3	He	277782.596	17.1761	787255.22	0.0001	0.002924
Ca	44	3	He	286439.581	17.7113	804868.74	0.0001	0.002924
Ti	47	3	He	2013.024	0.975	43066.98	0.0005	0
Ti	47	3	He	1956.662	0.9477	43438.40	0.0005	0
Ti	47	3	He	2005.82	0.9715	44150.31	0.0005	0
V	51	3	He	208.557	4.3993	194315.67	0.021	0.009571
V	51	3	He	203.319	4.289	196583.94	0.021	0.009571
V	51	3	He	206.283	4.3514	197743.63	0.021	0.009571
Cr	52	3	He	211.011	5.6482	249479.35	0.0267	0.01758
Cr	52	3	He	204.976	5.4871	251497.67	0.0267	0.01758
Cr	52	3	He	207.55	5.5558	252476.01	0.0267	0.01758
Mn	55	3	He	206.673	2.2402	98949.39	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	199.399	2.1615	99070.67	0.0108	0.004199
Mn	55	3	He	205.005	2.2222	100982.95	0.0108	0.004199
Fe	57	3	He	253499.115	126.9705	5608296.17	0.0005	0.002993
Fe	57	3	He	247087.954	123.7594	5672424.92	0.0005	0.002993
Fe	57	3	He	251108.733	125.7733	5715609.91	0.0005	0.002993
Co	59	3	He	201.013	10.5263	464949.37	0.0524	0.003063
Co	59	3	He	194.198	10.1696	466114.56	0.0524	0.003063
Co	59	3	He	196.905	10.3113	468582.77	0.0524	0.003063
Ni	60	3	He	208.157	2.2871	131921.65	0.0109	0.01116
Ni	60	3	He	211.371	2.3223	131993.20	0.0109	0.01116
Ni	60	3	He	210.028	2.3076	131943.82	0.0109	0.01116
Cu	63	3	He	190.725	4.8746	372232.30	0.0255	0.01531
Cu	63	3	He	188.408	4.8156	370820.42	0.0255	0.01531
Cu	63	3	He	188.662	4.8221	376846.01	0.0255	0.01531
Zn	66	3	He	101.138	0.2938	22436.28	0.0029	0.002787
Zn	66	3	He	106.883	0.3103	23898.19	0.0029	0.002787
Zn	66	3	He	101.071	0.2936	22946.78	0.0029	0.002787
As	75	3	He	97.163	0.2072	15823.78	0.0021	0.0004097
As	75	3	He	97.755	0.2085	16054.03	0.0021	0.0004097
As	75	3	He	95.296	0.2032	15883.88	0.0021	0.0004097
Sr	88	3	He	2.225	0.0218	1260.08	0.0094	0.0008765
Sr	88	3	He	1.96	0.0194	1100.08	0.0094	0.0008765
Sr	88	3	He	1.948	0.0192	1100.07	0.0094	0.0008765
Mo	98	3	He	2151.531	49.5667	2859011.83	0.023	0.0002199
Mo	98	3	He	2203.557	50.7653	2885397.77	0.023	0.0002199
Mo	98	3	He	2195.711	50.5845	2892333.39	0.023	0.0002199
Ag	107	3	He	52.274	2.5259	145691.63	0.0483	0.0008224
Ag	107	3	He	53.59	2.5894	147175.70	0.0483	0.0008224
Ag	107	3	He	53.268	2.5738	147166.91	0.0483	0.0008224
Cd	111	3	He	103.819	0.5538	31944.50	0.0053	2.193E-05
Cd	111	3	He	103.943	0.5545	31515.65	0.0053	2.193E-05
Cd	111	3	He	105.368	0.5621	32138.89	0.0053	2.193E-05
Sn	120	3	He	0.368	0.0189	1090.08	0.0148	0.01345
Sn	120	3	He	0.149	0.0157	890.05	0.0148	0.01345
Sn	120	3	He	0.332	0.0184	1050.07	0.0148	0.01345
Sb	121	3	He	0.103	0.0019	110.00	0.0143	0.0004392
Sb	121	3	He	0.092	0.0018	100.00	0.0143	0.0004392
Sb	121	3	He	0.14	0.0024	140.01	0.0143	0.0004392
Ba	137	3	He	0.571	0.0026	150.01	0.0044	0.0001096
Ba	137	3	He	0.62	0.0028	160.01	0.0044	0.0001096
Ba	137	3	He	0.817	0.0037	210.01	0.0044	0.0001096
Tl	205	3	He	0.029	0.0008	200.01	0.0208	0.0002491
Tl	205	3	He	0.01	0.0005	110.00	0.0208	0.0002491
Tl	205	3	He	0.037	0.001	240.01	0.0208	0.0002491
Pb	208	3	He	0.118	0.0038	390.02	0.0272	0.0006218
Pb	208	3	He	0.164	0.0051	540.03	0.0272	0.0006218
Pb	208	3	He	0.127	0.0041	580.03	0.0272	0.0006218
U	238	3	He	0.05	0.0014	330.02	0.0275	2.763E-05
U	238	3	He	0.059	0.0017	390.02	0.0275	2.763E-05
U	238	3	He	0.042	0.0012	280.01	0.0275	2.763E-05
Sc	45	1	No Gas			2300657.00		
Sc	45	1	No Gas			2252216.22		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2241454.97		
Ge	72	1	No Gas			1081736.23		
Ge	72	1	No Gas			1067754.67		
Ge	72	1	No Gas			1064412.41		
Sc	45	2	H2			138228.84		
Sc	45	2	H2			134003.56		
Sc	45	2	H2			135335.42		
Ge	72	2	H2			117407.29		
Ge	72	2	H2			114273.26		
Ge	72	2	H2			114878.59		
In	115	2	H2			278662.96		
In	115	2	H2			277005.99		
In	115	2	H2			274408.73		
Sc	45	3	He			44170.06		
Sc	45	3	He			45834.28		
Sc	45	3	He			45443.75		
Ge	72	3	He			76361.31		
Ge	72	3	He			77004.32		
Ge	72	3	He			78150.19		
In	115	3	He			57687.72		
In	115	3	He			56844.26		
In	115	3	He			57185.59		
Tb	159	3	He			235512.85		
Tb	159	3	He			236018.96		
Tb	159	3	He			235827.16		
Bi	209	3	He			155633.43		
Bi	209	3	He			155674.16		
Bi	209	3	He			154593.21		

Quantitation Report

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Sample Type	LRC
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

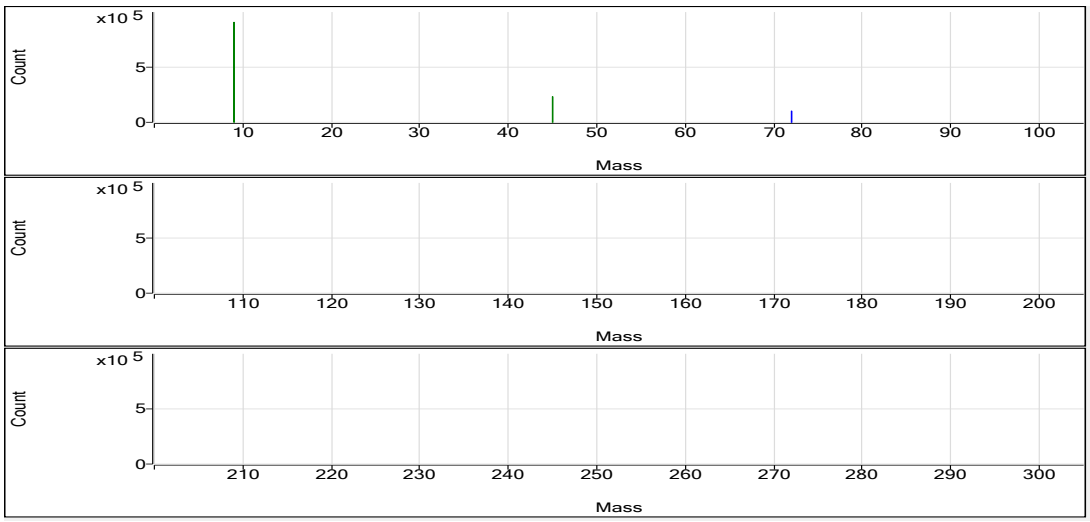
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	1952.830	ppb	2.2	1814404.09	0.7770	Analog	0.5000	3
Se	78	72	H2	2160.991	ppb	0.6	106040.89	0.9665	Pulse	1.5000	3
Na	23	45	He	198404.491	ppb	0.4	29191067.90	621.0244	Analog	0.1000	3
Mg	24	45	He	204018.298	ppb	0.1	14551557.28	309.5753	Analog	0.1000	3
Al	27	45	He	200314.365	ppb	0.4	4397843.79	93.5624	Analog	0.1000	3
K	39	45	He	199698.872	ppb	0.6	10221555.27	217.4553	Analog	0.1000	3
Ca	44	45	He	196781.616	ppb	0.6	571983.86	12.1684	Pulse	0.1000	3
Ti	47	45	He	2109.522	ppb	0.9	48027.61	1.0218	Pulse	0.1000	3
V	51	45	He	2030.655	ppb	1.2	2009542.55	42.7506	Analog	0.5000	3
Cr	52	45	He	2001.049	ppb	0.3	2510659.34	53.4132	Analog	0.1000	3
Mn	55	45	He	6081.276	ppb	1.1	3092755.16	65.7976	Analog	0.1000	3
Fe	57	45	He	162348.267	ppb	0.2	3822278.28	81.3167	Analog	0.1000	3
Co	59	45	He	1937.366	ppb	0.6	4767596.49	101.4265	Analog	0.1000	3
Ni	60	115	He	2086.513	ppb	1.2	1326983.99	22.8248	Pulse	0.1000	3
Cu	63	72	He	2031.387	ppb	0.9	3867059.21	51.7712	Analog	0.1000	3
Zn	66	72	He	2104.530	ppb	1.3	452556.67	6.0587	Pulse	0.1000	3
As	75	72	He	2062.823	ppb	0.5	328002.94	4.3912	Pulse	0.5000	3
Sr	88	115	He	2088.513	ppb	1.9	1144447.46	19.6868	Pulse	0.1000	3
Mo	98	115	He	2247.594	ppb	1.5	3010335.99	51.7798	Analog	0.1000	3
Ag	107	115	He	2138.776	ppb	0.3	6006946.58	103.3111	Analog	0.1000	3
Cd	111	115	He	2091.052	ppb	1.6	648457.83	11.1543	Pulse	0.5000	3
Sn	120	115	He	2202.403	ppb	1.2	1896765.02	32.6240	Analog	0.1000	3
Sb	121	115	He	2188.608	ppb	2.7	1820181.27	31.3140	Analog	0.1000	3
Ba	137	115	He	2096.491	ppb	2.9	531509.99	9.1441	Pulse	0.1000	3
Tl	205	159	He	2154.300	ppb	1.0	10256572.76	44.7791	Analog	0.1000	3
Pb	208	159	He	2135.822	ppb	0.9	13316613.44	58.1381	Analog	0.1000	3
U	238	159	He	210.534	ppb	0.8	1326324.35	5.7905	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2335851.68	2.1	101.8	Analog	0.1000	3
No Gas	Ge	72	1034592.54	1.0	99.6	Pulse	0.1000	3
H2	Sc	45	132289.29	1.1	95.1	Pulse	0.1000	3
H2	Ge	72	109716.44	0.6	92.9	Pulse	0.1000	3
H2	In	115	353488.11	0.4	120.0	Pulse	0.1000	3
He	Sc	45	47004.83	0.4	100.4	Pulse	0.1000	3
He	Ge	72	74697.13	0.5	97.7	Pulse	0.1000	3
He	In	115	58146.61	1.9	95.9	Pulse	0.1000	3
He	Tb	159	229063.70	1.0	95.0	Pulse	0.1000	3
He	Bi	209	150076.66	0.6	90.6	Pulse	0.1000	3

No Gas



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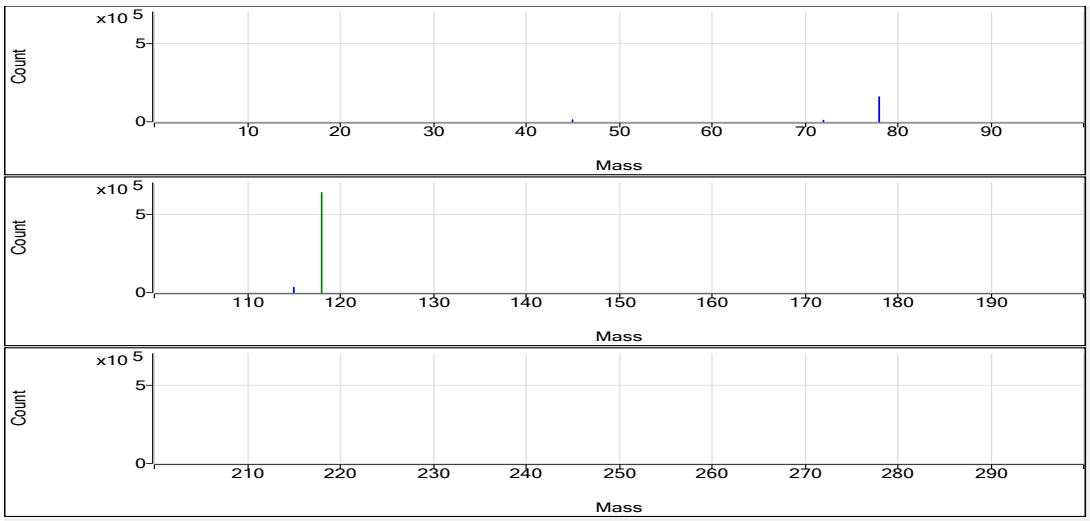
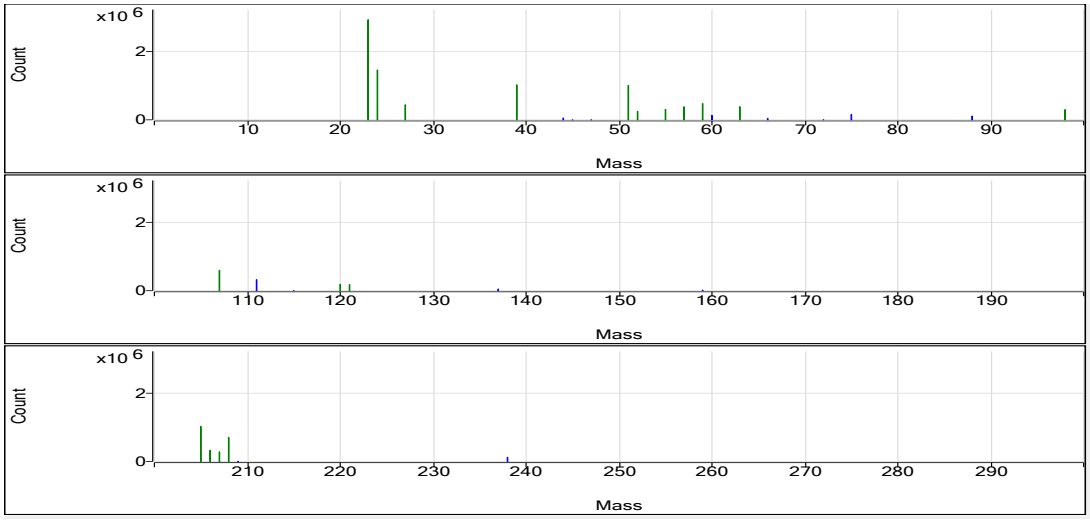


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1904.78	0.7579	1807146.88	0.0004	9.309E-06
Be	9	1	No Gas	1963.118	0.7811	1826019.88	0.0004	9.309E-06
Be	9	1	No Gas	1990.59	0.792	1810045.50	0.0004	9.309E-06
Se	78	2	H2	2150.987	0.962	106004.96	0.0004	5.598E-06
Se	78	2	H2	2175.262	0.9729	105966.58	0.0004	5.598E-06
Se	78	2	H2	2156.726	0.9646	106151.13	0.0004	5.598E-06
Na	23	3	He	198213.64	620.4274	29059407.07	0.0031	0.4657
Na	23	3	He	197822.942	619.2054	29213264.56	0.0031	0.4657
Na	23	3	He	199176.89	623.4402	29300532.06	0.0031	0.4657
Mg	24	3	He	203864.194	309.3415	14488848.53	0.0015	0.003704
Mg	24	3	He	204137.966	309.7569	14613904.78	0.0015	0.003704
Mg	24	3	He	204052.734	309.6275	14551918.53	0.0015	0.003704
Al	27	3	He	201146.265	93.951	4400449.31	0.0005	0.0007154
Al	27	3	He	199576.964	93.218	4397897.12	0.0005	0.0007154
Al	27	3	He	200219.865	93.5183	4395184.93	0.0005	0.0007154
K	39	3	He	198393.244	216.0363	10118649.85	0.0011	0.4296
K	39	3	He	200189.443	217.9884	10284393.60	0.0011	0.4296
K	39	3	He	200513.93	218.341	10261622.35	0.0011	0.4296
Ca	44	3	He	195526.781	12.0909	566308.66	0.0001	0.002924
Ca	44	3	He	197870.819	12.2358	577267.41	0.0001	0.002924
Ca	44	3	He	196947.248	12.1787	572375.50	0.0001	0.002924
Ti	47	3	He	2105.241	1.0197	47760.09	0.0005	0
Ti	47	3	He	2093.544	1.014	47840.41	0.0005	0
Ti	47	3	He	2129.782	1.0316	48482.33	0.0005	0
V	51	3	He	2003.145	42.1716	1975220.88	0.021	0.009571
V	51	3	He	2051.665	43.1928	2037778.38	0.021	0.009571
V	51	3	He	2037.155	42.8874	2015628.38	0.021	0.009571
Cr	52	3	He	2007.585	53.5876	2509921.37	0.0267	0.01758
Cr	52	3	He	1994.961	53.2508	2512298.24	0.0267	0.01758
Cr	52	3	He	2000.6	53.4012	2509758.40	0.0267	0.01758
Mn	55	3	He	6152.145	66.5643	3117719.33	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	6070.704	65.6832	3098842.14	0.0108	0.004199
Mn	55	3	He	6020.981	65.1452	3061704.02	0.0108	0.004199
Fe	57	3	He	162170.231	81.2276	3804513.69	0.0005	0.002993
Fe	57	3	He	162162.837	81.2239	3832030.26	0.0005	0.002993
Fe	57	3	He	162711.733	81.4988	3830290.88	0.0005	0.002993
Co	59	3	He	1923.145	100.682	4715714.93	0.0524	0.003063
Co	59	3	He	1944.443	101.797	4802641.49	0.0524	0.003063
Co	59	3	He	1944.51	101.8005	4784433.05	0.0524	0.003063
Ni	60	3	He	2114.698	23.133	1316145.76	0.0109	0.01116
Ni	60	3	He	2080.359	22.7575	1333758.42	0.0109	0.01116
Ni	60	3	He	2064.482	22.5839	1331047.79	0.0109	0.01116
Cu	63	3	He	2030.776	51.7557	3861111.50	0.0255	0.01531
Cu	63	3	He	2014.368	51.3376	3855253.38	0.0255	0.01531
Cu	63	3	He	2049.015	52.2204	3884812.75	0.0255	0.01531
Zn	66	3	He	2082.942	5.9966	447359.56	0.0029	0.002787
Zn	66	3	He	2096.425	6.0354	453232.06	0.0029	0.002787
Zn	66	3	He	2134.225	6.1441	457078.39	0.0029	0.002787
As	75	3	He	2061.708	4.3888	327416.09	0.0021	0.0004097
As	75	3	He	2053.081	4.3704	328202.47	0.0021	0.0004097
As	75	3	He	2073.681	4.4143	328390.25	0.0021	0.0004097
Sr	88	3	He	2132.453	20.101	1143638.26	0.0094	0.0008765
Sr	88	3	He	2079.004	19.5972	1148536.86	0.0094	0.0008765
Sr	88	3	He	2054.081	19.3622	1141167.25	0.0094	0.0008765
Mo	98	3	He	2276.968	52.4565	2984497.14	0.023	0.0002199
Mo	98	3	He	2256.221	51.9785	3046322.45	0.023	0.0002199
Mo	98	3	He	2209.593	50.9043	3000188.39	0.023	0.0002199
Ag	107	3	He	2147.097	103.713	5900722.41	0.0483	0.0008224
Ag	107	3	He	2132.667	103.016	6037489.91	0.0483	0.0008224
Ag	107	3	He	2136.564	103.2042	6082627.41	0.0483	0.0008224
Cd	111	3	He	2128.743	11.3553	646059.13	0.0053	2.193E-05
Cd	111	3	He	2073.425	11.0603	648212.69	0.0053	2.193E-05
Cd	111	3	He	2070.989	11.0473	651101.69	0.0053	2.193E-05
Sn	120	3	He	2220.947	32.8985	1871753.25	0.0148	0.01345
Sn	120	3	He	2214.889	32.8088	1922838.25	0.0148	0.01345
Sn	120	3	He	2171.371	32.1645	1895703.57	0.0148	0.01345
Sb	121	3	He	2256.933	32.2916	1837221.69	0.0143	0.0004392
Sb	121	3	He	2161.767	30.93	1812725.44	0.0143	0.0004392
Sb	121	3	He	2147.122	30.7205	1810596.69	0.0143	0.0004392
Ba	137	3	He	2164.606	9.4412	537155.93	0.0044	0.0001096
Ba	137	3	He	2072.071	9.0376	529671.05	0.0044	0.0001096
Ba	137	3	He	2052.797	8.9536	527703.00	0.0044	0.0001096
Tl	205	3	He	2176.793	45.2466	10266143.60	0.0208	0.0002491
Tl	205	3	He	2133.992	44.357	10273266.72	0.0208	0.0002491
Tl	205	3	He	2152.113	44.7336	10230307.97	0.0208	0.0002491
Pb	208	3	He	2156.351	58.6969	7087013.64	0.0272	0.0006218
Pb	208	3	He	2121.691	57.7534	7071688.64	0.0272	0.0006218
Pb	208	3	He	2129.422	57.9639	7088049.89	0.0272	0.0006218
U	238	3	He	212.019	5.8314	1323097.95	0.0275	2.763E-05
U	238	3	He	208.723	5.7407	1329571.54	0.0275	2.763E-05
U	238	3	He	210.86	5.7995	1326303.57	0.0275	2.763E-05
Sc	45	1	No Gas			2384459.34		
Sc	45	1	No Gas			2337764.18		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2285331.53		
Ge	72	1	No Gas			1038699.52		
Ge	72	1	No Gas			1041981.23		
Ge	72	1	No Gas			1023096.86		
Sc	45	2	H2			130919.80		
Sc	45	2	H2			132218.14		
Sc	45	2	H2			133729.92		
Ge	72	2	H2			110186.70		
Ge	72	2	H2			108917.60		
Ge	72	2	H2			110045.02		
In	115	2	H2			351878.04		
In	115	2	H2			354918.04		
In	115	2	H2			353668.24		
Sc	45	3	He			46837.72		
Sc	45	3	He			47178.63		
Sc	45	3	He			46998.14		
Ge	72	3	He			74602.66		
Ge	72	3	He			75096.07		
Ge	72	3	He			74392.66		
In	115	3	He			69996.99		
In	115	3	He			72067.20		
In	115	3	He			72207.71		
Tb	159	3	He			226893.00		
Tb	159	3	He			231604.27		
Tb	159	3	He			228693.82		
Bi	209	3	He			149966.56		
Bi	209	3	He			151056.30		
Bi	209	3	He			149207.13		

Quantitation Report

Data File Name	034_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 8:31:14 AM
Sample Name	CCV 6148199
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

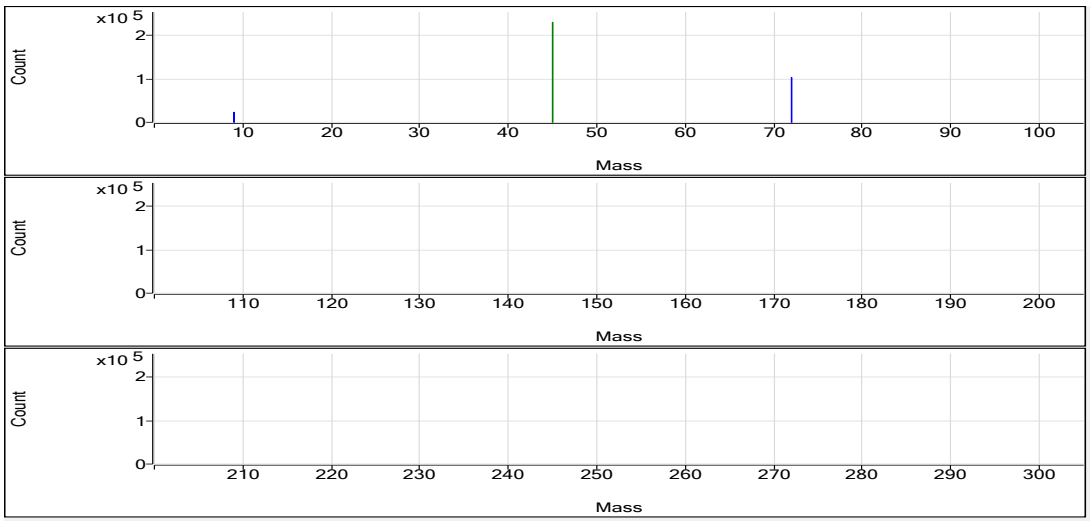
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.352	ppb	1.7	47309.88	0.0204	Pulse	0.5000	3
Se	78	72	H2	53.105	ppb	1.6	2765.80	0.0238	Pulse	1.5000	3
Na	23	45	He	4880.719	ppb	0.6	741382.44	15.7313	Pulse	0.1000	3
Mg	24	45	He	5067.686	ppb	0.5	362565.50	7.6933	Pulse	0.1000	3
Al	27	45	He	4945.080	ppb	1.0	108891.34	2.3104	Pulse	0.1000	3
K	39	45	He	5074.012	ppb	1.0	280124.10	5.9439	Pulse	0.1000	3
Ca	44	45	He	5035.773	ppb	1.1	14810.40	0.3142	Pulse	0.1000	3
Ti	47	45	He	5086.702	ppb	1.0	116109.44	2.4638	Pulse	0.1000	3
V	51	45	He	506.238	ppb	0.3	502609.86	10.6648	Pulse	0.5000	3
Cr	52	45	He	508.067	ppb	0.2	639749.74	13.5747	Pulse	0.1000	3
Mn	55	45	He	506.383	ppb	0.2	258391.57	5.4828	Pulse	0.1000	3
Fe	57	45	He	5103.925	ppb	2.5	120604.51	2.5593	Pulse	0.1000	3
Co	59	45	He	492.956	ppb	0.2	1216369.49	25.8099	Pulse	0.1000	3
Ni	60	115	He	520.104	ppb	1.0	348633.95	5.6979	Pulse	0.1000	3
Cu	63	72	He	505.020	ppb	1.8	974979.57	12.8823	Pulse	0.1000	3
Zn	66	72	He	531.990	ppb	0.6	116088.65	1.5336	Pulse	0.1000	3
As	75	72	He	533.345	ppb	0.9	85958.29	1.1356	Pulse	0.5000	3
Sr	88	115	He	51.405	ppb	1.5	29701.78	0.4854	Pulse	0.1000	3
Mo	98	115	He	51.868	ppb	2.1	73130.20	1.1951	Pulse	0.1000	3
Ag	107	115	He	51.860	ppb	0.4	153325.42	2.5058	Pulse	0.1000	3
Cd	111	115	He	51.039	ppb	1.2	16660.23	0.2723	Pulse	0.5000	3
Sn	120	115	He	51.340	ppb	1.1	47336.46	0.7736	Pulse	0.1000	3
Sb	121	115	He	51.381	ppb	1.2	45006.39	0.7356	Pulse	0.1000	3
Ba	137	115	He	515.815	ppb	0.8	137663.86	2.2499	Pulse	0.1000	3
Tl	205	159	He	51.133	ppb	1.4	260652.42	1.0631	Pulse	0.1000	3
Pb	208	159	He	51.216	ppb	1.9	341948.32	1.3947	Pulse	0.1000	3
U	238	159	He	51.172	ppb	1.5	345072.03	1.4075	Pulse	0.1000	3

ISTD Table:

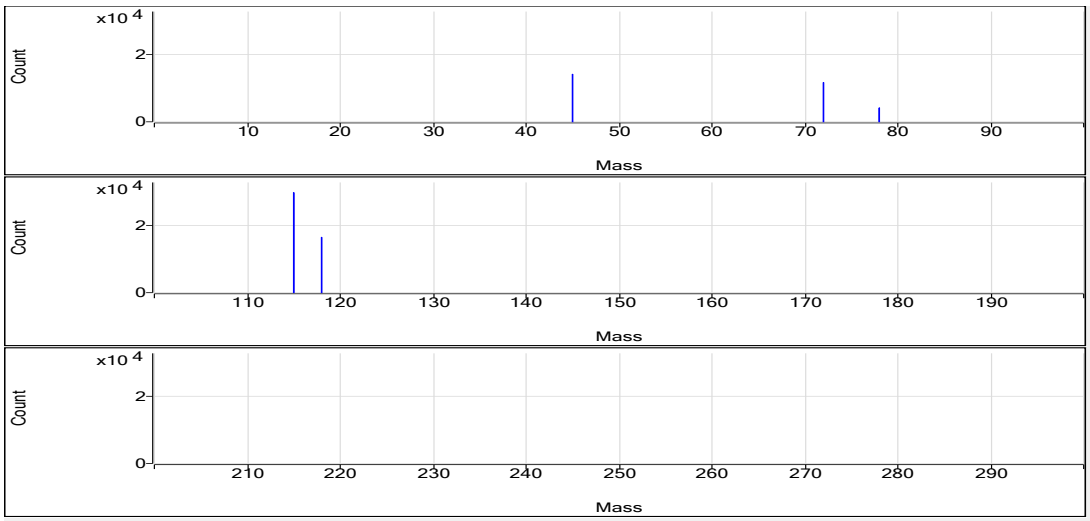
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2314419.19	1.1	100.9	Analog	0.1000	3
No Gas	Ge	72	1039099.65	1.1	100.0	Pulse	0.1000	3
H2	Sc	45	141063.33	0.7	101.5	Pulse	0.1000	3
H2	Ge	72	116403.38	1.4	98.6	Pulse	0.1000	3
H2	In	115	296031.53	1.6	100.5	Pulse	0.1000	3
He	Sc	45	47128.46	0.7	100.6	Pulse	0.1000	3
He	Ge	72	75698.40	1.6	99.0	Pulse	0.1000	3
He	In	115	61187.23	0.3	100.9	Pulse	0.1000	3
He	Tb	159	245189.27	0.6	101.7	Pulse	0.1000	3
He	Bi	209	167317.92	1.2	101.0	Pulse	0.1000	3

No Gas

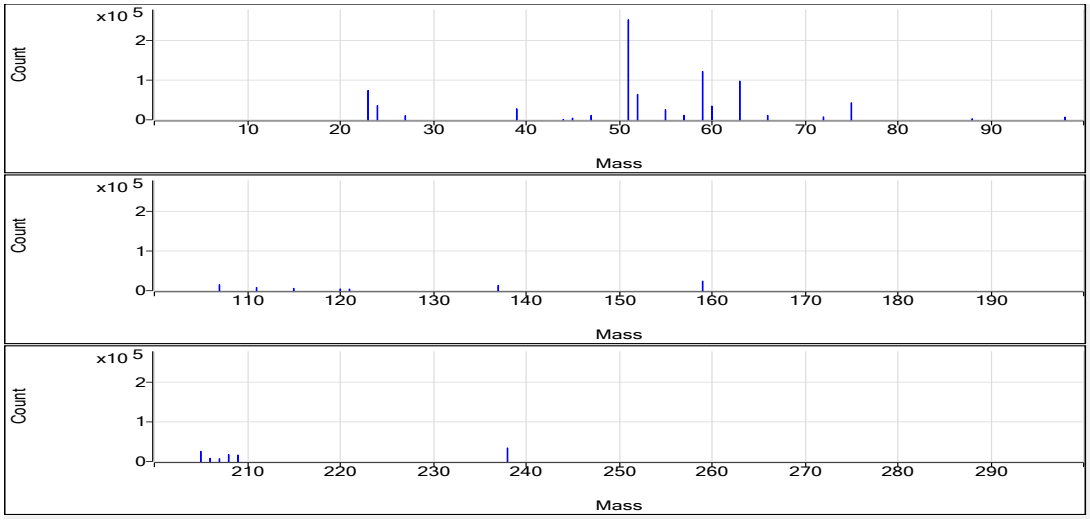


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.446	0.0201	46234.83	0.0004	9.309E-06
Be	9	1	No Gas	51.438	0.0205	47963.66	0.0004	9.309E-06
Be	9	1	No Gas	52.173	0.0208	47731.15	0.0004	9.309E-06
Se	78	2	H2	53.389	0.0239	2770.24	0.0004	5.598E-06
Se	78	2	H2	53.757	0.024	2843.59	0.0004	5.598E-06
Se	78	2	H2	52.171	0.0233	2683.56	0.0004	5.598E-06
Na	23	3	He	4853.26	15.6454	737340.69	0.0031	0.4657
Na	23	3	He	4879.71	15.7282	746447.41	0.0031	0.4657
Na	23	3	He	4909.188	15.8204	740359.21	0.0031	0.4657
Mg	24	3	He	5087.957	7.724	364019.33	0.0015	0.003704
Mg	24	3	He	5038.639	7.6492	363025.39	0.0015	0.003704
Mg	24	3	He	5076.461	7.7066	360651.79	0.0015	0.003704
Al	27	3	He	4913.462	2.2957	108190.64	0.0005	0.0007154
Al	27	3	He	5000.412	2.3363	110878.22	0.0005	0.0007154
Al	27	3	He	4921.366	2.2994	107605.15	0.0005	0.0007154
K	39	3	He	5131.571	6.0064	283072.63	0.0011	0.4296
K	39	3	He	5036.424	5.903	280154.08	0.0011	0.4296
K	39	3	He	5054.04	5.9222	277145.58	0.0011	0.4296
Ca	44	3	He	4979.811	0.3108	14646.89	0.0001	0.002924
Ca	44	3	He	5091.418	0.3177	15077.26	0.0001	0.002924
Ca	44	3	He	5036.089	0.3143	14707.06	0.0001	0.002924
Ti	47	3	He	5062.696	2.4522	115566.03	0.0005	0
Ti	47	3	He	5049.664	2.4459	116078.42	0.0005	0
Ti	47	3	He	5147.745	2.4934	116683.87	0.0005	0
V	51	3	He	505.651	10.6525	502031.03	0.021	0.009571
V	51	3	He	505.02	10.6392	504928.16	0.021	0.009571
V	51	3	He	508.044	10.7028	500870.38	0.021	0.009571
Cr	52	3	He	507.875	13.5696	639511.71	0.0267	0.01758
Cr	52	3	He	506.946	13.5448	642828.94	0.0267	0.01758
Cr	52	3	He	509.38	13.6098	636908.58	0.0267	0.01758
Mn	55	3	He	506.399	5.4829	258400.88	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	505.359	5.4717	259682.36	0.0108	0.004199
Mn	55	3	He	507.39	5.4937	257091.48	0.0108	0.004199
Fe	57	3	He	5066.693	2.5407	119738.40	0.0005	0.002993
Fe	57	3	He	5000.761	2.5077	119012.46	0.0005	0.002993
Fe	57	3	He	5244.32	2.6297	123062.66	0.0005	0.002993
Co	59	3	He	493.647	25.8461	1218079.83	0.0524	0.003063
Co	59	3	He	491.615	25.7397	1221587.09	0.0524	0.003063
Co	59	3	He	493.606	25.8439	1209441.54	0.0524	0.003063
Ni	60	3	He	514.617	5.6379	345740.07	0.0109	0.01116
Ni	60	3	He	521.07	5.7085	349689.45	0.0109	0.01116
Ni	60	3	He	524.626	5.7474	350472.34	0.0109	0.01116
Cu	63	3	He	514.275	13.1181	976668.42	0.0255	0.01531
Cu	63	3	He	496.271	12.6594	973687.09	0.0255	0.01531
Cu	63	3	He	504.515	12.8694	974583.19	0.0255	0.01531
Zn	66	3	He	531.997	1.5336	114182.38	0.0029	0.002787
Zn	66	3	He	528.718	1.5242	117233.17	0.0029	0.002787
Zn	66	3	He	535.256	1.543	116850.39	0.0029	0.002787
As	75	3	He	537.703	1.1449	85241.80	0.0021	0.0004097
As	75	3	He	528.195	1.1247	86504.45	0.0021	0.0004097
As	75	3	He	534.137	1.1373	86128.63	0.0021	0.0004097
Sr	88	3	He	52.101	0.492	30169.38	0.0094	0.0008765
Sr	88	3	He	51.515	0.4864	29798.60	0.0094	0.0008765
Sr	88	3	He	50.6	0.4778	29137.36	0.0094	0.0008765
Mo	98	3	He	52.465	1.2089	74134.74	0.023	0.0002199
Mo	98	3	He	52.543	1.2107	74164.66	0.023	0.0002199
Mo	98	3	He	50.595	1.1658	71091.20	0.023	0.0002199
Ag	107	3	He	51.846	2.5052	153626.94	0.0483	0.0008224
Ag	107	3	He	52.094	2.5172	154196.33	0.0483	0.0008224
Ag	107	3	He	51.639	2.4951	152153.00	0.0483	0.0008224
Cd	111	3	He	51.736	0.276	16925.18	0.0053	2.193E-05
Cd	111	3	He	50.67	0.2703	16558.79	0.0053	2.193E-05
Cd	111	3	He	50.711	0.2705	16496.71	0.0053	2.193E-05
Sn	120	3	He	50.712	0.7643	46871.85	0.0148	0.01345
Sn	120	3	He	51.774	0.7801	47784.50	0.0148	0.01345
Sn	120	3	He	51.536	0.7765	47353.02	0.0148	0.01345
Sb	121	3	He	50.944	0.7293	44725.19	0.0143	0.0004392
Sb	121	3	He	51.102	0.7316	44815.56	0.0143	0.0004392
Sb	121	3	He	52.095	0.7458	45478.42	0.0143	0.0004392
Ba	137	3	He	512.173	2.234	136997.74	0.0044	0.0001096
Ba	137	3	He	520.162	2.2688	138984.51	0.0044	0.0001096
Ba	137	3	He	515.109	2.2468	137009.34	0.0044	0.0001096
Tl	205	3	He	50.462	1.0491	256518.12	0.0208	0.0002491
Tl	205	3	He	51.915	1.0793	263503.80	0.0208	0.0002491
Tl	205	3	He	51.021	1.0608	261935.35	0.0208	0.0002491
Pb	208	3	He	51.761	1.4096	180869.61	0.0272	0.0006218
Pb	208	3	He	51.78	1.4101	181670.13	0.0272	0.0006218
Pb	208	3	He	50.108	1.3646	177245.58	0.0272	0.0006218
U	238	3	He	51.593	1.419	346957.77	0.0275	2.763E-05
U	238	3	He	51.63	1.42	346679.41	0.0275	2.763E-05
U	238	3	He	50.294	1.3833	341578.90	0.0275	2.763E-05
Sc	45	1	No Gas			2302441.22		
Sc	45	1	No Gas			2342487.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2298328.72		
Ge	72	1	No Gas			1027333.50		
Ge	72	1	No Gas			1049198.50		
Ge	72	1	No Gas			1040766.94		
Sc	45	2	H2			140983.07		
Sc	45	2	H2			142050.74		
Sc	45	2	H2			140156.17		
Ge	72	2	H2			115986.79		
Ge	72	2	H2			118243.00		
Ge	72	2	H2			114980.34		
In	115	2	H2			293919.23		
In	115	2	H2			301449.59		
In	115	2	H2			292725.78		
Sc	45	3	He			47128.19		
Sc	45	3	He			47459.31		
Sc	45	3	He			46797.89		
Ge	72	3	He			74452.08		
Ge	72	3	He			76914.46		
Ge	72	3	He			75728.65		
In	115	3	He			61652.12		
In	115	3	He			61592.43		
In	115	3	He			61311.20		
Tb	159	3	He			244504.70		
Tb	159	3	He			244132.40		
Tb	159	3	He			246930.72		
Bi	209	3	He			168342.56		
Bi	209	3	He			168637.20		
Bi	209	3	He			164974.00		

Quantitation Report

Data File Name	035_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 8:33:15 AM
Sample Name	CCB 6148203
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

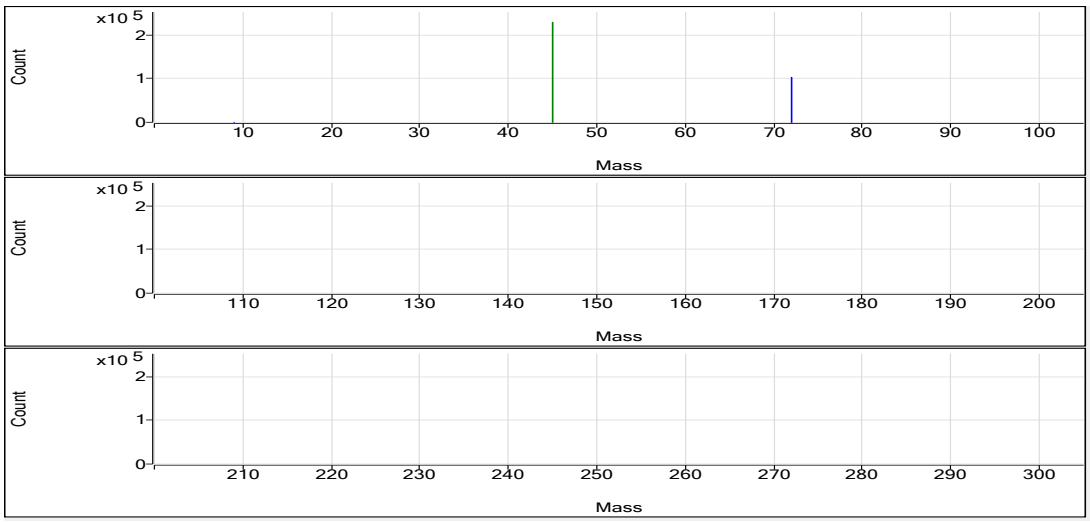
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.100	ppb	15.6	112.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.116	ppb	11.0	6.67	0.0001	Pulse	1.5000	3
Na	23	45	He	-17.953	ppb	N/A	18590.85	0.4095	Pulse	0.1000	3
Mg	24	45	He	5.070	ppb	16.3	516.69	0.0114	Pulse	0.1000	3
Al	27	45	He	3.057	ppb	57.7	96.67	0.0021	Pulse	0.1000	3
K	39	45	He	4.059	ppb	1620.3	19665.78	0.4340	Pulse	0.1000	3
Ca	44	45	He	22.695	ppb	119.4	196.67	0.0043	Pulse	0.1000	3
Ti	47	45	He	5.903	ppb	20.1	130.00	0.0029	Pulse	0.1000	3
V	51	45	He	0.326	ppb	16.7	746.02	0.0164	Pulse	0.5000	3
Cr	52	45	He	0.407	ppb	21.4	1290.10	0.0284	Pulse	0.1000	3
Mn	55	45	He	0.543	ppb	33.7	456.69	0.0101	Pulse	0.1000	3
Fe	57	45	He	4.441	ppb	92.1	236.68	0.0052	Pulse	0.1000	3
Co	59	45	He	0.346	ppb	16.5	960.06	0.0212	Pulse	0.1000	3
Ni	60	115	He	0.321	ppb	59.3	896.72	0.0147	Pulse	0.1000	3
Cu	63	72	He	0.382	ppb	21.4	1910.17	0.0250	Pulse	0.1000	3
Zn	66	72	He	0.580	ppb	45.3	340.01	0.0045	Pulse	0.1000	3
As	75	72	He	0.378	ppb	6.9	92.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.080	ppb	61.5	100.00	0.0016	Pulse	0.1000	3
Mo	98	115	He	0.106	ppb	12.4	163.34	0.0027	Pulse	0.1000	3
Ag	107	115	He	0.029	ppb	44.7	136.67	0.0022	Pulse	0.1000	3
Cd	111	115	He	0.037	ppb	74.0	13.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.112	ppb	192.3	926.72	0.0151	Pulse	0.1000	3
Sb	121	115	He	0.050	ppb	63.1	70.00	0.0011	Pulse	0.1000	3
Ba	137	115	He	0.261	ppb	73.4	76.67	0.0012	Pulse	0.1000	3
Tl	205	159	He	0.515	ppb	8.1	2640.33	0.0109	Pulse	0.1000	3
Pb	208	159	He	0.053	ppb	13.4	496.69	0.0021	Pulse	0.1000	3
U	238	159	He	0.050	ppb	8.1	340.02	0.0014	Pulse	0.1000	3

ISTD Table:

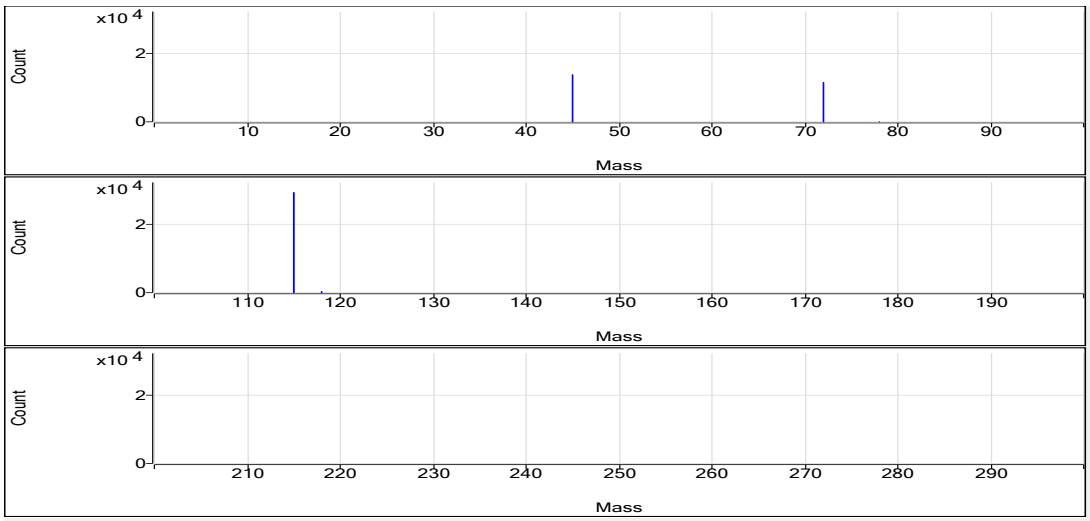
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2289639.97	0.8	99.8	Analog	0.1000	3
No Gas	Ge	72	1028918.06	0.8	99.0	Pulse	0.1000	3
H2	Sc	45	138483.53	2.0	99.6	Pulse	0.1000	3
H2	Ge	72	116157.69	2.3	98.4	Pulse	0.1000	3
H2	In	115	294718.06	0.4	100.0	Pulse	0.1000	3
He	Sc	45	45443.71	3.2	97.0	Pulse	0.1000	3
He	Ge	72	76384.81	2.4	99.9	Pulse	0.1000	3
He	In	115	61200.97	1.7	100.9	Pulse	0.1000	3
He	Tb	159	241212.71	0.7	100.0	Pulse	0.1000	3
He	Bi	209	166857.74	1.0	100.7	Pulse	0.1000	3

No Gas

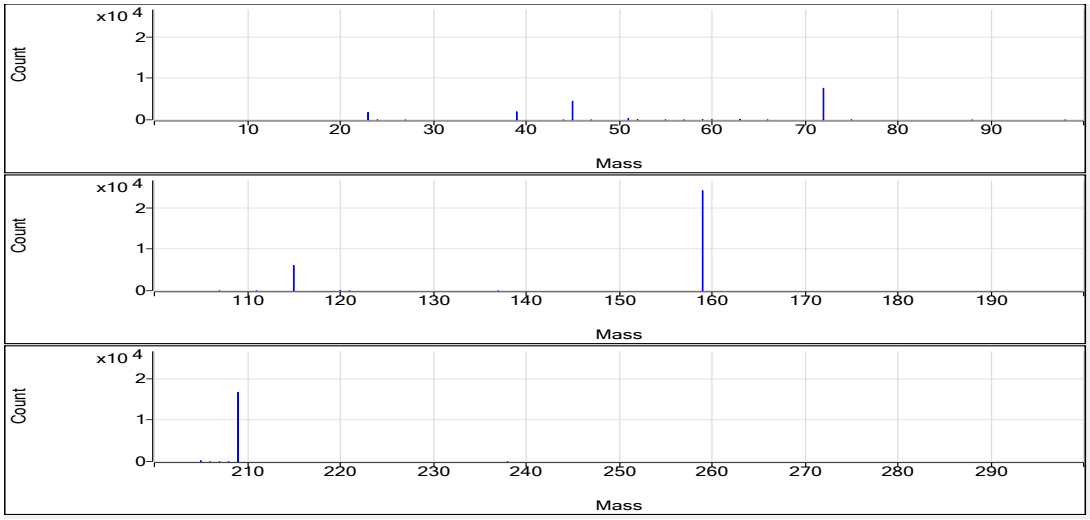


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.103	0.0001	114.00	0.0004	9.309E-06
Be	9	1	No Gas	0.114	0.0001	126.00	0.0004	9.309E-06
Be	9	1	No Gas	0.084	0	98.00	0.0004	9.309E-06
Se	78	2	H2	0.105	0.0001	6.00	0.0004	5.598E-06
Se	78	2	H2	0.113	0.0001	6.67	0.0004	5.598E-06
Se	78	2	H2	0.13	0.0001	7.33	0.0004	5.598E-06
Na	23	3	He	-14.053	0.4217	18770.98	0.0031	0.4657
Na	23	3	He	-14.709	0.4197	18750.92	0.0031	0.4657
Na	23	3	He	-25.095	0.3872	18250.64	0.0031	0.4657
Mg	24	3	He	5.407	0.0119	530.02	0.0015	0.003704
Mg	24	3	He	5.672	0.0123	550.03	0.0015	0.003704
Mg	24	3	He	4.131	0.01	470.03	0.0015	0.003704
Al	27	3	He	3.278	0.0022	100.00	0.0005	0.0007154
Al	27	3	He	4.698	0.0029	130.01	0.0005	0.0007154
Al	27	3	He	1.193	0.0013	60.00	0.0005	0.0007154
K	39	3	He	73.651	0.5097	22686.31	0.0011	0.4296
K	39	3	He	-4.43	0.4248	18981.41	0.0011	0.4296
K	39	3	He	-57.046	0.3676	17329.63	0.0011	0.4296
Ca	44	3	He	-3.693	0.0027	120.00	0.0001	0.002924
Ca	44	3	He	50.447	0.006	270.01	0.0001	0.002924
Ca	44	3	He	21.332	0.0042	200.01	0.0001	0.002924
Ti	47	3	He	6.958	0.0034	150.01	0.0005	0
Ti	47	3	He	4.621	0.0022	100.00	0.0005	0
Ti	47	3	He	6.132	0.003	140.00	0.0005	0
V	51	3	He	0.346	0.0169	750.02	0.021	0.009571
V	51	3	He	0.368	0.0173	774.02	0.021	0.009571
V	51	3	He	0.265	0.0151	714.02	0.021	0.009571
Cr	52	3	He	0.427	0.029	1290.10	0.0267	0.01758
Cr	52	3	He	0.482	0.0304	1360.11	0.0267	0.01758
Cr	52	3	He	0.311	0.0259	1220.09	0.0267	0.01758
Mn	55	3	He	0.754	0.0124	550.03	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.439	0.009	400.02	0.0108	0.004199
Mn	55	3	He	0.435	0.0089	420.02	0.0108	0.004199
Fe	57	3	He	8.828	0.0074	330.02	0.0005	0.002993
Fe	57	3	He	0.728	0.0034	150.01	0.0005	0.002993
Fe	57	3	He	3.767	0.0049	230.01	0.0005	0.002993
Co	59	3	He	0.409	0.0245	1090.07	0.0524	0.003063
Co	59	3	He	0.331	0.0204	910.05	0.0524	0.003063
Co	59	3	He	0.298	0.0187	880.05	0.0524	0.003063
Ni	60	3	He	0.21	0.0135	820.05	0.0109	0.01116
Ni	60	3	He	0.54	0.0171	1030.07	0.0109	0.01116
Ni	60	3	He	0.212	0.0135	840.05	0.0109	0.01116
Cu	63	3	He	0.467	0.0272	2020.20	0.0255	0.01531
Cu	63	3	He	0.374	0.0248	1930.16	0.0255	0.01531
Cu	63	3	He	0.304	0.0231	1780.16	0.0255	0.01531
Zn	66	3	He	0.669	0.0047	350.01	0.0029	0.002787
Zn	66	3	He	0.284	0.0036	280.01	0.0029	0.002787
Zn	66	3	He	0.787	0.0051	390.02	0.0029	0.002787
As	75	3	He	0.377	0.0012	90.00	0.0021	0.0004097
As	75	3	He	0.352	0.0012	90.00	0.0021	0.0004097
As	75	3	He	0.404	0.0013	98.00	0.0021	0.0004097
Sr	88	3	He	0.081	0.0016	100.00	0.0094	0.0008765
Sr	88	3	He	0.03	0.0012	70.00	0.0094	0.0008765
Sr	88	3	He	0.128	0.0021	130.00	0.0094	0.0008765
Mo	98	3	He	0.112	0.0028	170.01	0.023	0.0002199
Mo	98	3	He	0.091	0.0023	140.01	0.023	0.0002199
Mo	98	3	He	0.116	0.0029	180.01	0.023	0.0002199
Ag	107	3	He	0.044	0.003	180.01	0.0483	0.0008224
Ag	107	3	He	0.024	0.002	120.00	0.0483	0.0008224
Ag	107	3	He	0.02	0.0018	110.00	0.0483	0.0008224
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Cd	111	3	He	0.039	0.0002	14.00	0.0053	2.193E-05
Cd	111	3	He	0.062	0.0004	22.00	0.0053	2.193E-05
Sn	120	3	He	0.222	0.0167	1020.06	0.0148	0.01345
Sn	120	3	He	-0.136	0.0114	690.04	0.0148	0.01345
Sn	120	3	He	0.251	0.0172	1070.07	0.0148	0.01345
Sb	121	3	He	0.061	0.0013	80.00	0.0143	0.0004392
Sb	121	3	He	0.074	0.0015	90.00	0.0143	0.0004392
Sb	121	3	He	0.014	0.0006	40.00	0.0143	0.0004392
Ba	137	3	He	0.426	0.002	120.00	0.0044	0.0001096
Ba	137	3	He	0.051	0.0003	20.00	0.0044	0.0001096
Ba	137	3	He	0.306	0.0014	90.00	0.0044	0.0001096
Tl	205	3	He	0.553	0.0117	2830.35	0.0208	0.0002491
Tl	205	3	He	0.52	0.0111	2690.36	0.0208	0.0002491
Tl	205	3	He	0.47	0.01	2400.27	0.0208	0.0002491
Pb	208	3	He	0.056	0.0022	250.01	0.0272	0.0006218
Pb	208	3	He	0.057	0.0022	250.01	0.0272	0.0006218
Pb	208	3	He	0.045	0.0018	200.01	0.0272	0.0006218
U	238	3	He	0.046	0.0013	310.02	0.0275	2.763E-05
U	238	3	He	0.051	0.0014	350.02	0.0275	2.763E-05
U	238	3	He	0.054	0.0015	360.02	0.0275	2.763E-05
Sc	45	1	No Gas			2267747.00		
Sc	45	1	No Gas			2297242.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2303930.12		
Ge	72	1	No Gas			1026295.22		
Ge	72	1	No Gas			1022736.47		
Ge	72	1	No Gas			1037722.48		
Sc	45	2	H2			135868.17		
Sc	45	2	H2			141293.27		
Sc	45	2	H2			138289.14		
Ge	72	2	H2			114213.48		
Ge	72	2	H2			119169.33		
Ge	72	2	H2			115090.27		
In	115	2	H2			293419.90		
In	115	2	H2			295215.11		
In	115	2	H2			295519.16		
Sc	45	3	He			44511.55		
Sc	45	3	He			44681.40		
Sc	45	3	He			47138.18		
Ge	72	3	He			74261.08		
Ge	72	3	He			77677.17		
Ge	72	3	He			77216.19		
In	115	3	He			60950.10		
In	115	3	He			60347.24		
In	115	3	He			62325.04		
Tb	159	3	He			240976.60		
Tb	159	3	He			243114.43		
Tb	159	3	He			239547.11		
Bi	209	3	He			164978.02		
Bi	209	3	He			168373.28		
Bi	209	3	He			167221.91		

Quantitation Report

Data File Name	036SMPL.d
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Sample Name	MB 410-526998/1-A
Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

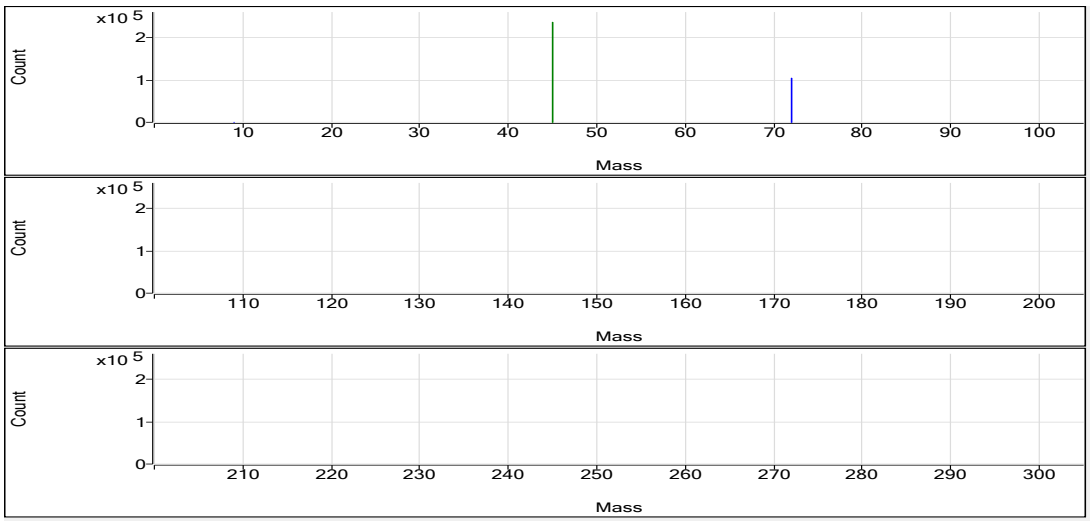
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.008	ppb	103.7	30.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.030	ppb	87.7	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	-19.017	ppb	N/A	18554.09	0.4062	Pulse	0.1000	3
Mg	24	45	He	0.827	ppb	87.8	226.68	0.0050	Pulse	0.1000	3
Al	27	45	He	1.124	ppb	23.4	56.67	0.0012	Pulse	0.1000	3
K	39	45	He	4.221	ppb	1592.8	19826.03	0.4342	Pulse	0.1000	3
Ca	44	45	He	9.369	ppb	67.2	160.01	0.0035	Pulse	0.1000	3
Ti	47	45	He	1.957	ppb	48.0	43.33	0.0009	Pulse	0.1000	3
V	51	45	He	0.021	ppb	226.8	457.34	0.0100	Pulse	0.5000	3
Cr	52	45	He	0.069	ppb	74.6	886.72	0.0194	Pulse	0.1000	3
Mn	55	45	He	0.023	ppb	407.7	203.34	0.0044	Pulse	0.1000	3
Fe	57	45	He	1.024	ppb	173.7	160.01	0.0035	Pulse	0.1000	3
Co	59	45	He	0.029	ppb	28.8	210.01	0.0046	Pulse	0.1000	3
Ni	60	115	He	-0.005	ppb	N/A	683.38	0.0111	Pulse	0.1000	3
Cu	63	72	He	-0.039	ppb	N/A	1090.07	0.0143	Pulse	0.1000	3
Zn	66	72	He	0.489	ppb	23.7	320.02	0.0042	Pulse	0.1000	3
As	75	72	He	0.083	ppb	44.7	44.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.005	ppb	560.3	56.67	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.007	ppb	59.4	23.33	0.0004	Pulse	0.1000	3
Ag	107	115	He	-0.007	ppb	N/A	30.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.076	ppb	124.7	896.73	0.0146	Pulse	0.1000	3
Sb	121	115	He	0.026	ppb	87.0	50.00	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.025	ppb	175.1	13.33	0.0002	Pulse	0.1000	3
Tl	205	159	He	0.050	ppb	36.7	316.68	0.0013	Pulse	0.1000	3
Pb	208	159	He	-0.004	ppb	N/A	123.34	0.0005	Pulse	0.1000	3
U	238	159	He	0.002	ppb	76.5	20.00	0.0001	Pulse	0.1000	3

ISTD Table:

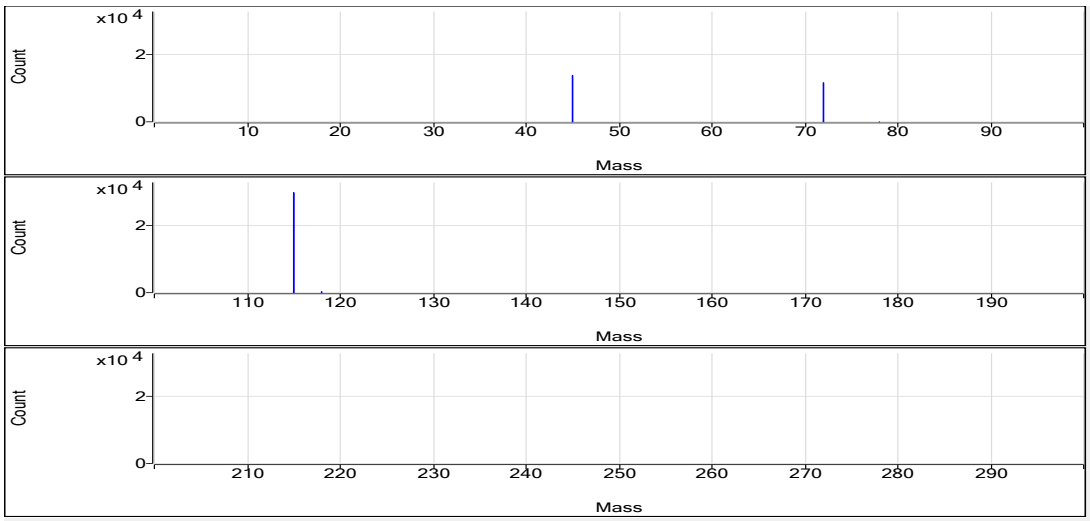
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2374075.54	1.3	103.5	Analog	0.1000	3
No Gas	Ge	72	1050131.99	0.8	101.1	Pulse	0.1000	3
H2	Sc	45	137865.09	1.3	99.2	Pulse	0.1000	3
H2	Ge	72	116100.45	1.7	98.3	Pulse	0.1000	3
H2	In	115	297198.46	0.9	100.9	Pulse	0.1000	3
He	Sc	45	45680.90	0.6	97.6	Pulse	0.1000	3
He	Ge	72	76234.29	1.8	99.7	Pulse	0.1000	3
He	In	115	61545.83	0.2	101.5	Pulse	0.1000	3
He	Tb	159	243757.78	1.4	101.1	Pulse	0.1000	3
He	Bi	209	167692.21	1.8	101.2	Pulse	0.1000	3

No Gas

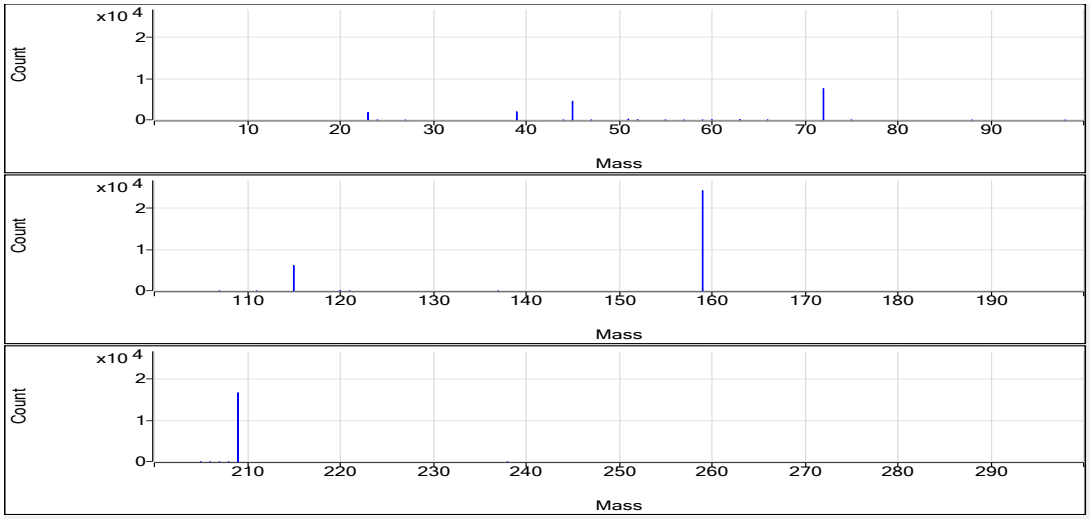


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.017	0	38.00	0.0004	9.309E-06
Be	9	1	No Gas	0	0	22.00	0.0004	9.309E-06
Be	9	1	No Gas	0.008	0	30.00	0.0004	9.309E-06
Se	78	2	H2	0	0	0.67	0.0004	5.598E-06
Se	78	2	H2	0.051	0	3.33	0.0004	5.598E-06
Se	78	2	H2	0.04	0	2.67	0.0004	5.598E-06
Na	23	3	He	-16.406	0.4144	18871.09	0.0031	0.4657
Na	23	3	He	-19.905	0.4034	18360.72	0.0031	0.4657
Na	23	3	He	-20.741	0.4008	18430.46	0.0031	0.4657
Mg	24	3	He	1.032	0.0053	240.01	0.0015	0.003704
Mg	24	3	He	0.021	0.0037	170.01	0.0015	0.003704
Mg	24	3	He	1.429	0.0059	270.01	0.0015	0.003704
Al	27	3	He	1.289	0.0013	60.00	0.0005	0.0007154
Al	27	3	He	0.82	0.0011	50.00	0.0005	0.0007154
Al	27	3	He	1.262	0.0013	60.00	0.0005	0.0007154
K	39	3	He	76.985	0.5133	23377.41	0.0011	0.4296
K	39	3	He	-8.745	0.4201	19121.61	0.0011	0.4296
K	39	3	He	-55.577	0.3692	16979.07	0.0011	0.4296
Ca	44	3	He	16.632	0.004	180.01	0.0001	0.002924
Ca	44	3	He	6.012	0.0033	150.01	0.0001	0.002924
Ca	44	3	He	5.462	0.0033	150.00	0.0001	0.002924
Ti	47	3	He	2.72	0.0013	60.00	0.0005	0
Ti	47	3	He	0.907	0.0004	20.00	0.0005	0
Ti	47	3	He	2.245	0.0011	50.00	0.0005	0
V	51	3	He	0.073	0.0111	506.01	0.021	0.009571
V	51	3	He	0.011	0.0098	446.01	0.021	0.009571
V	51	3	He	-0.021	0.0091	420.01	0.021	0.009571
Cr	52	3	He	0.098	0.0202	920.06	0.0267	0.01758
Cr	52	3	He	0.099	0.0202	920.05	0.0267	0.01758
Cr	52	3	He	0.01	0.0178	820.05	0.0267	0.01758
Mn	55	3	He	0.058	0.0048	220.01	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.083	0.0033	150.01	0.0108	0.004199
Mn	55	3	He	0.094	0.0052	240.01	0.0108	0.004199
Fe	57	3	He	2.793	0.0044	200.01	0.0005	0.002993
Fe	57	3	He	1.044	0.0035	160.01	0.0005	0.002993
Fe	57	3	He	-0.765	0.0026	120.01	0.0005	0.002993
Co	59	3	He	0.021	0.0042	190.01	0.0524	0.003063
Co	59	3	He	0.038	0.0051	230.01	0.0524	0.003063
Co	59	3	He	0.029	0.0046	210.01	0.0524	0.003063
Ni	60	3	He	-0.087	0.0102	630.04	0.0109	0.01116
Ni	60	3	He	-0.04	0.0107	660.04	0.0109	0.01116
Ni	60	3	He	0.111	0.0124	760.05	0.0109	0.01116
Cu	63	3	He	-0.106	0.0126	950.06	0.0255	0.01531
Cu	63	3	He	0.048	0.0165	1250.09	0.0255	0.01531
Cu	63	3	He	-0.061	0.0138	1070.07	0.0255	0.01531
Zn	66	3	He	0.508	0.0042	320.02	0.0029	0.002787
Zn	66	3	He	0.365	0.0038	290.01	0.0029	0.002787
Zn	66	3	He	0.595	0.0045	350.02	0.0029	0.002787
As	75	3	He	0.045	0.0005	38.00	0.0021	0.0004097
As	75	3	He	0.118	0.0007	50.00	0.0021	0.0004097
As	75	3	He	0.085	0.0006	46.00	0.0021	0.0004097
Sr	88	3	He	-0.024	0.0006	40.00	0.0094	0.0008765
Sr	88	3	He	0.028	0.0011	70.00	0.0094	0.0008765
Sr	88	3	He	0.011	0.001	60.00	0.0094	0.0008765
Mo	98	3	He	0.005	0.0003	20.00	0.023	0.0002199
Mo	98	3	He	0.005	0.0003	20.00	0.023	0.0002199
Mo	98	3	He	0.012	0.0005	30.00	0.023	0.0002199
Ag	107	3	He	-0.014	0.0002	10.00	0.0483	0.0008224
Ag	107	3	He	-0.004	0.0007	40.00	0.0483	0.0008224
Ag	107	3	He	-0.004	0.0007	40.00	0.0483	0.0008224
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Sn	120	3	He	-0.033	0.013	800.05	0.0148	0.01345
Sn	120	3	He	0.123	0.0153	940.06	0.0148	0.01345
Sn	120	3	He	0.136	0.0155	950.07	0.0148	0.01345
Sb	121	3	He	0.026	0.0008	50.00	0.0143	0.0004392
Sb	121	3	He	0.049	0.0011	70.00	0.0143	0.0004392
Sb	121	3	He	0.003	0.0005	30.00	0.0143	0.0004392
Ba	137	3	He	-0.025	0	0.00	0.0044	0.0001096
Ba	137	3	He	0.049	0.0003	20.00	0.0044	0.0001096
Ba	137	3	He	0.05	0.0003	20.00	0.0044	0.0001096
Tl	205	3	He	0.066	0.0016	390.02	0.0208	0.0002491
Tl	205	3	He	0.056	0.0014	350.02	0.0208	0.0002491
Tl	205	3	He	0.03	0.0009	210.01	0.0208	0.0002491
Pb	208	3	He	-0.003	0.0005	70.00	0.0272	0.0006218
Pb	208	3	He	-0.015	0.0002	30.00	0.0272	0.0006218
Pb	208	3	He	0.006	0.0008	110.01	0.0272	0.0006218
U	238	3	He	0.004	0.0001	30.00	0.0275	2.763E-05
U	238	3	He	0	0	10.00	0.0275	2.763E-05
U	238	3	He	0.002	0.0001	20.00	0.0275	2.763E-05
Sc	45	1	No Gas			2345195.90		
Sc	45	1	No Gas			2369390.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2407640.12		
Ge	72	1	No Gas			1040941.23		
Ge	72	1	No Gas			1057595.61		
Ge	72	1	No Gas			1051859.12		
Sc	45	2	H2			138511.84		
Sc	45	2	H2			139285.75		
Sc	45	2	H2			135797.67		
Ge	72	2	H2			117064.20		
Ge	72	2	H2			117446.46		
Ge	72	2	H2			113790.69		
In	115	2	H2			295885.89		
In	115	2	H2			300387.85		
In	115	2	H2			295321.64		
Sc	45	3	He			45543.82		
Sc	45	3	He			45513.92		
Sc	45	3	He			45984.95		
Ge	72	3	He			75326.78		
Ge	72	3	He			75577.90		
Ge	72	3	He			77798.18		
In	115	3	He			61713.63		
In	115	3	He			61521.50		
In	115	3	He			61421.19		
Tb	159	3	He			241722.38		
Tb	159	3	He			247716.93		
Tb	159	3	He			241834.02		
Bi	209	3	He			165714.14		
Bi	209	3	He			171083.57		
Bi	209	3	He			166278.92		

Quantitation Report

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Sample Type	Sample
Comment	E1
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

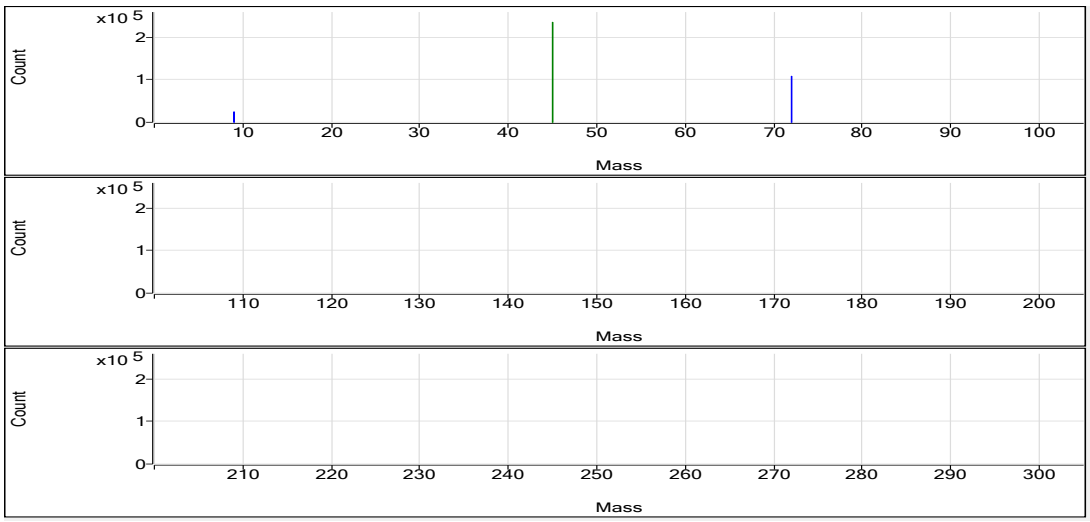
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	53.029	ppb	1.6	49597.00	0.0211	Pulse	0.5000	3
Se	78	72	H2	105.504	ppb	0.9	5749.03	0.0472	Pulse	1.5000	3
Na	23	45	He	4999.227	ppb	1.6	765669.81	16.1020	Pulse	0.1000	3
Mg	24	45	He	5159.620	ppb	2.3	372431.08	7.8328	Pulse	0.1000	3
Al	27	45	He	5152.975	ppb	1.0	114491.74	2.4075	Pulse	0.1000	3
K	39	45	He	5207.547	ppb	0.6	289585.74	6.0890	Pulse	0.1000	3
Ca	44	45	He	5117.709	ppb	3.2	15184.13	0.3193	Pulse	0.1000	3
Ti	47	45	He	531.624	ppb	2.9	12245.00	0.2575	Pulse	0.1000	3
V	51	45	He	519.795	ppb	1.6	520695.60	10.9502	Pulse	0.5000	3
Cr	52	45	He	522.009	ppb	1.5	663194.86	13.9468	Pulse	0.1000	3
Mn	55	45	He	525.827	ppb	0.8	270737.56	5.6931	Pulse	0.1000	3
Fe	57	45	He	5215.868	ppb	1.6	124366.47	2.6154	Pulse	0.1000	3
Co	59	45	He	510.368	ppb	1.8	1270606.15	26.7215	Pulse	0.1000	3
Ni	60	115	He	537.599	ppb	0.6	360671.18	5.8892	Pulse	0.1000	3
Cu	63	72	He	501.387	ppb	0.7	1022882.59	12.7897	Pulse	0.1000	3
Zn	66	72	He	521.551	ppb	2.5	120245.28	1.5036	Pulse	0.1000	3
As	75	72	He	520.751	ppb	1.2	88680.29	1.1088	Pulse	0.5000	3
Sr	88	115	He	53.864	ppb	1.8	31144.64	0.5086	Pulse	0.1000	3
Mo	98	115	He	53.342	ppb	3.3	75257.01	1.2291	Pulse	0.1000	3
Ag	107	115	He	55.225	ppb	0.9	163428.31	2.6684	Pulse	0.1000	3
Cd	111	115	He	53.541	ppb	0.3	17493.13	0.2856	Pulse	0.5000	3
Sn	120	115	He	104.874	ppb	1.9	95919.05	1.5663	Pulse	0.1000	3
Sb	121	115	He	107.060	ppb	0.7	93846.68	1.5322	Pulse	0.1000	3
Ba	137	115	He	537.943	ppb	0.3	143704.81	2.3464	Pulse	0.1000	3
Tl	205	159	He	101.442	ppb	0.8	516760.11	2.1088	Pulse	0.1000	3
Pb	208	159	He	53.013	ppb	0.8	353761.17	1.4436	Pulse	0.1000	3
U	238	159	He	52.877	ppb	0.9	356383.96	1.4544	Pulse	0.1000	3

ISTD Table:

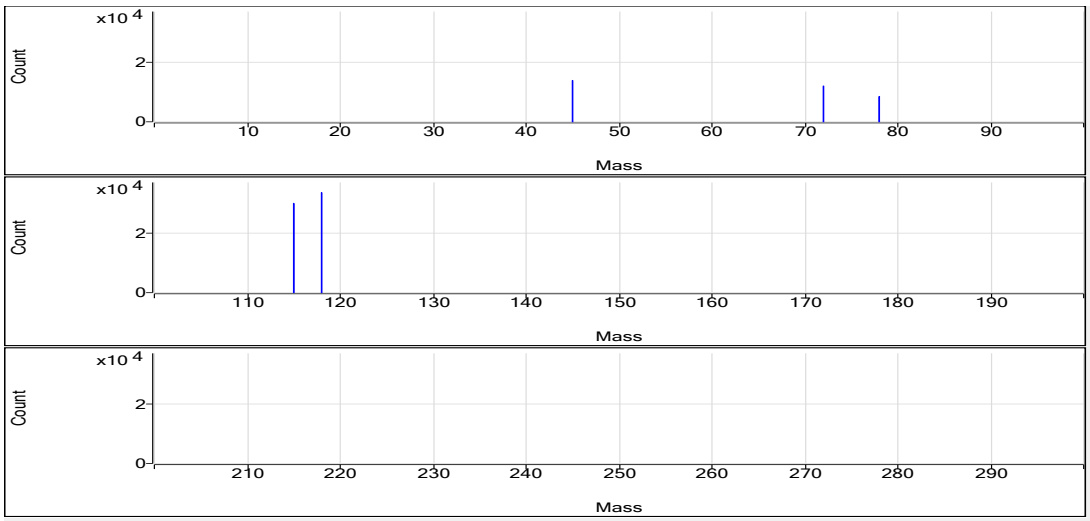
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2349867.99	1.2	102.4	Analog	0.1000	3
No Gas	Ge	72	1084643.89	0.5	104.4	Pulse	0.1000	3
H2	Sc	45	140494.52	1.4	101.0	Pulse	0.1000	3
H2	Ge	72	121832.39	1.7	103.2	Pulse	0.1000	3
H2	In	115	303272.52	0.4	102.9	Pulse	0.1000	3
He	Sc	45	47559.51	1.6	101.6	Pulse	0.1000	3
He	Ge	72	79978.63	0.6	104.6	Pulse	0.1000	3
He	In	115	61246.05	1.3	101.0	Pulse	0.1000	3
He	Tb	159	245063.93	1.2	101.6	Pulse	0.1000	3
He	Bi	209	167713.78	0.6	101.2	Pulse	0.1000	3

No Gas

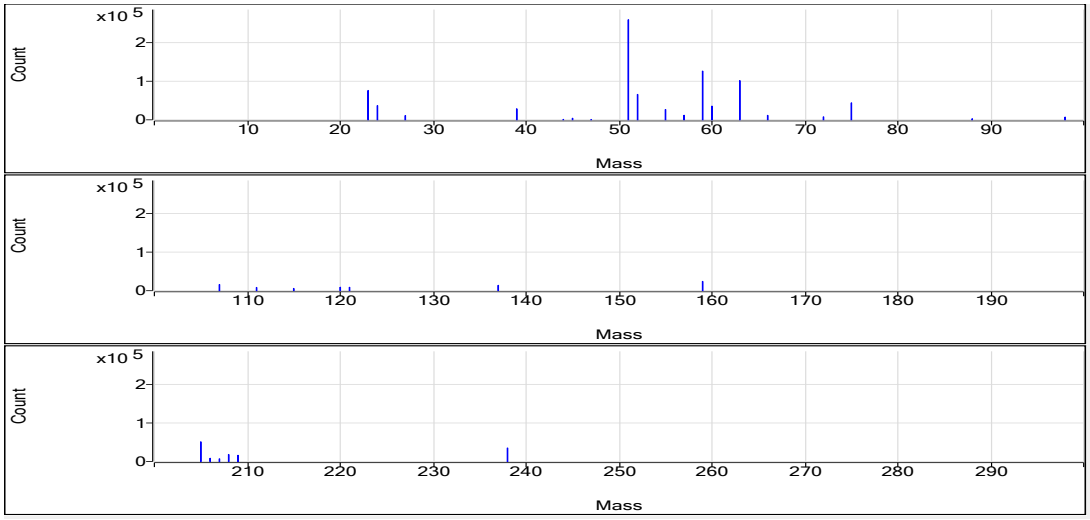


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	52.32	0.0208	49147.03	0.0004	9.309E-06
Be	9	1	No Gas	52.803	0.021	49825.05	0.0004	9.309E-06
Be	9	1	No Gas	53.964	0.0215	49818.91	0.0004	9.309E-06
Se	78	2	H2	104.792	0.0469	5799.05	0.0004	5.598E-06
Se	78	2	H2	105.118	0.047	5745.03	0.0004	5.598E-06
Se	78	2	H2	106.601	0.0477	5703.01	0.0004	5.598E-06
Na	23	3	He	4913.649	15.8343	766406.39	0.0031	0.4657
Na	23	3	He	5076.551	16.3438	765998.35	0.0031	0.4657
Na	23	3	He	5007.481	16.1278	764604.68	0.0031	0.4657
Mg	24	3	He	5038.338	7.6487	370211.28	0.0015	0.003704
Mg	24	3	He	5271.057	8.0019	375029.06	0.0015	0.003704
Mg	24	3	He	5169.465	7.8477	372052.89	0.0015	0.003704
Al	27	3	He	5095.837	2.3808	115237.02	0.0005	0.0007154
Al	27	3	He	5161.932	2.4117	113031.97	0.0005	0.0007154
Al	27	3	He	5201.157	2.43	115206.22	0.0005	0.0007154
K	39	3	He	5212.03	6.0939	294953.69	0.0011	0.4296
K	39	3	He	5238.585	6.1227	286959.02	0.0011	0.4296
K	39	3	He	5172.027	6.0504	286844.51	0.0011	0.4296
Ca	44	3	He	5101.756	0.3183	15407.56	0.0001	0.002924
Ca	44	3	He	5291.074	0.33	15467.83	0.0001	0.002924
Ca	44	3	He	4960.296	0.3096	14677.01	0.0001	0.002924
Ti	47	3	He	519.753	0.2517	12184.98	0.0005	0
Ti	47	3	He	526.184	0.2549	11944.81	0.0005	0
Ti	47	3	He	548.935	0.2659	12605.22	0.0005	0
V	51	3	He	510.354	10.7515	520387.78	0.021	0.009571
V	51	3	He	525.866	11.078	519199.03	0.021	0.009571
V	51	3	He	523.164	11.0211	522500.00	0.021	0.009571
Cr	52	3	He	514.067	13.7349	664789.21	0.0267	0.01758
Cr	52	3	He	529.592	14.1491	663137.02	0.0267	0.01758
Cr	52	3	He	522.368	13.9563	661658.35	0.0267	0.01758
Mn	55	3	He	520.968	5.6406	273011.87	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	529.475	5.7326	268673.69	0.0108	0.004199
Mn	55	3	He	527.038	5.7062	270527.12	0.0108	0.004199
Fe	57	3	He	5121.922	2.5684	124312.72	0.0005	0.002993
Fe	57	3	He	5278.634	2.6468	124051.88	0.0005	0.002993
Fe	57	3	He	5247.048	2.631	124734.80	0.0005	0.002993
Co	59	3	He	499.694	26.1626	1266314.90	0.0524	0.003063
Co	59	3	He	517.621	27.1012	1270170.92	0.0524	0.003063
Co	59	3	He	513.79	26.9006	1275332.64	0.0524	0.003063
Ni	60	3	He	540.236	5.918	359701.21	0.0109	0.01116
Ni	60	3	He	533.744	5.847	363487.18	0.0109	0.01116
Ni	60	3	He	538.819	5.9025	358825.15	0.0109	0.01116
Cu	63	3	He	497.54	12.6917	1020927.88	0.0255	0.01531
Cu	63	3	He	502.803	12.8258	1019598.34	0.0255	0.01531
Cu	63	3	He	503.818	12.8517	1028121.55	0.0255	0.01531
Zn	66	3	He	506.456	1.4601	117454.90	0.0029	0.002787
Zn	66	3	He	526.666	1.5183	120698.48	0.0029	0.002787
Zn	66	3	He	531.531	1.5323	122582.46	0.0029	0.002787
As	75	3	He	513.594	1.0936	87970.45	0.0021	0.0004097
As	75	3	He	523.337	1.1143	88585.84	0.0021	0.0004097
As	75	3	He	525.322	1.1186	89484.59	0.0021	0.0004097
Sr	88	3	He	54.036	0.5102	31010.94	0.0094	0.0008765
Sr	88	3	He	52.83	0.4988	31011.12	0.0094	0.0008765
Sr	88	3	He	54.726	0.5167	31411.85	0.0094	0.0008765
Mo	98	3	He	54.75	1.2615	76676.43	0.023	0.0002199
Mo	98	3	He	51.362	1.1835	73572.49	0.023	0.0002199
Mo	98	3	He	53.915	1.2423	75522.12	0.023	0.0002199
Ag	107	3	He	54.711	2.6435	160675.79	0.0483	0.0008224
Ag	107	3	He	55.305	2.6723	166123.73	0.0483	0.0008224
Ag	107	3	He	55.658	2.6893	163485.40	0.0483	0.0008224
Cd	111	3	He	53.545	0.2856	17361.65	0.0053	2.193E-05
Cd	111	3	He	53.372	0.2847	17700.03	0.0053	2.193E-05
Cd	111	3	He	53.708	0.2865	17417.70	0.0053	2.193E-05
Sn	120	3	He	104.204	1.5564	94597.18	0.0148	0.01345
Sn	120	3	He	103.294	1.5429	95916.19	0.0148	0.01345
Sn	120	3	He	107.125	1.5996	97243.78	0.0148	0.01345
Sb	121	3	He	106.61	1.5258	92736.53	0.0143	0.0004392
Sb	121	3	He	107.888	1.544	95986.98	0.0143	0.0004392
Sb	121	3	He	106.682	1.5268	92816.53	0.0143	0.0004392
Ba	137	3	He	537.077	2.3426	142385.52	0.0044	0.0001096
Ba	137	3	He	536.652	2.3408	145515.78	0.0044	0.0001096
Ba	137	3	He	540.1	2.3558	143213.13	0.0044	0.0001096
Tl	205	3	He	102.292	2.1265	514501.13	0.0208	0.0002491
Tl	205	3	He	100.68	2.093	518075.89	0.0208	0.0002491
Tl	205	3	He	101.355	2.107	517703.31	0.0208	0.0002491
Pb	208	3	He	53.52	1.4575	187271.44	0.0272	0.0006218
Pb	208	3	He	52.757	1.4367	186975.93	0.0272	0.0006218
Pb	208	3	He	52.76	1.4368	186594.94	0.0272	0.0006218
U	238	3	He	53.347	1.4673	355005.89	0.0275	2.763E-05
U	238	3	He	52.354	1.44	356436.44	0.0275	2.763E-05
U	238	3	He	52.931	1.4558	357709.56	0.0275	2.763E-05
Sc	45	1	No Gas			2359853.87		
Sc	45	1	No Gas			2370507.31		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2319242.78		
Ge	72	1	No Gas			1087463.27		
Ge	72	1	No Gas			1088106.55		
Ge	72	1	No Gas			1078361.86		
Sc	45	2	H2			142666.14		
Sc	45	2	H2			138954.97		
Sc	45	2	H2			139862.44		
Ge	72	2	H2			123714.28		
Ge	72	2	H2			122181.47		
Ge	72	2	H2			119601.42		
In	115	2	H2			304172.36		
In	115	2	H2			303551.25		
In	115	2	H2			302093.96		
Sc	45	3	He			48401.63		
Sc	45	3	He			46867.76		
Sc	45	3	He			47409.14		
Ge	72	3	He			80440.71		
Ge	72	3	He			79495.99		
Ge	72	3	He			79999.18		
In	115	3	He			61442.72		
In	115	3	He			62837.34		
In	115	3	He			61472.39		
Tb	159	3	He			241951.17		
Tb	159	3	He			247533.06		
Tb	159	3	He			245707.57		
Bi	209	3	He			167211.40		
Bi	209	3	He			168930.64		
Bi	209	3	He			166999.29		

Quantitation Report

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Sample Type	Sample
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Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

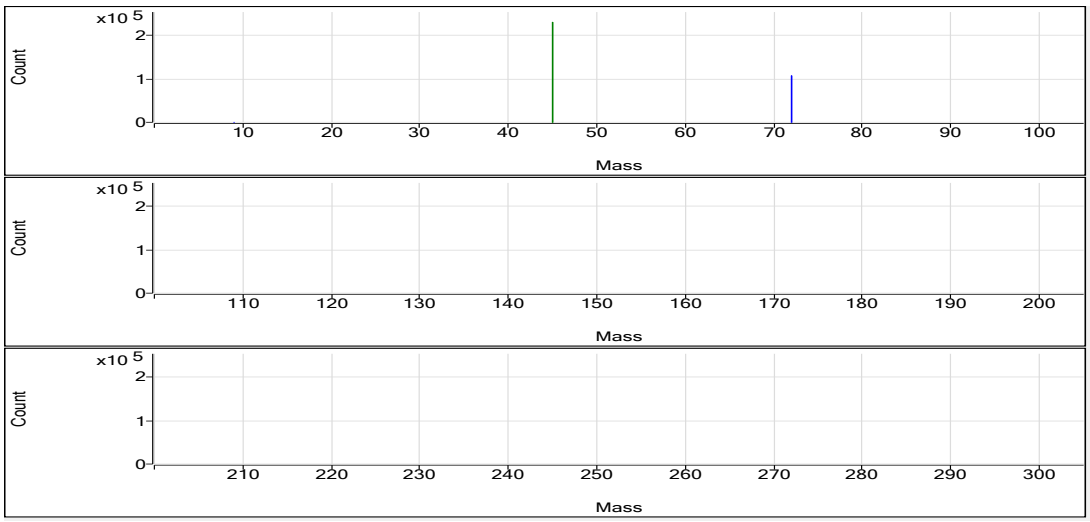
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.077	ppb	12.7	92.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.202	ppb	14.3	11.55	0.0001	Pulse	1.5000	3
Na	23	45	He	29856.215	ppb	0.5	4371086.91	93.8483	Analog	0.1000	3
Mg	24	45	He	4756.958	ppb	1.1	336351.19	7.2218	Pulse	0.1000	3
Al	27	45	He	34.472	ppb	3.3	783.38	0.0168	Pulse	0.1000	3
K	39	45	He	1241.178	ppb	4.7	82824.49	1.7785	Pulse	0.1000	3
Ca	44	45	He	4049.204	ppb	3.2	11794.54	0.2533	Pulse	0.1000	3
Ti	47	45	He	1.187	ppb	94.8	26.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.505	ppb	7.7	941.37	0.0202	Pulse	0.5000	3
Cr	52	45	He	0.452	ppb	20.2	1380.10	0.0296	Pulse	0.1000	3
Mn	55	45	He	13.640	ppb	3.4	7068.43	0.1518	Pulse	0.1000	3
Fe	57	45	He	549.142	ppb	3.5	12948.90	0.2780	Pulse	0.1000	3
Co	59	45	He	0.370	ppb	11.7	1043.40	0.0224	Pulse	0.1000	3
Ni	60	115	He	0.296	ppb	14.9	886.72	0.0144	Pulse	0.1000	3
Cu	63	72	He	0.536	ppb	17.2	2306.90	0.0290	Pulse	0.1000	3
Zn	66	72	He	0.864	ppb	10.2	420.02	0.0053	Pulse	0.1000	3
As	75	72	He	0.362	ppb	21.5	94.00	0.0012	Pulse	0.5000	3
Sr	88	115	He	44.293	ppb	2.8	25754.81	0.4184	Pulse	0.1000	3
Mo	98	115	He	0.082	ppb	14.0	130.00	0.0021	Pulse	0.1000	3
Ag	107	115	He	0.017	ppb	40.0	100.00	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.034	ppb	35.9	12.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.236	ppb	52.5	1043.40	0.0170	Pulse	0.1000	3
Sb	121	115	He	0.083	ppb	28.2	100.00	0.0016	Pulse	0.1000	3
Ba	137	115	He	2.225	ppb	22.2	603.36	0.0098	Pulse	0.1000	3
Tl	205	159	He	3.005	ppb	5.8	15301.75	0.0627	Pulse	0.1000	3
Pb	208	159	He	0.034	ppb	34.0	380.01	0.0016	Pulse	0.1000	3
U	238	159	He	0.033	ppb	20.2	226.68	0.0009	Pulse	0.1000	3

ISTD Table:

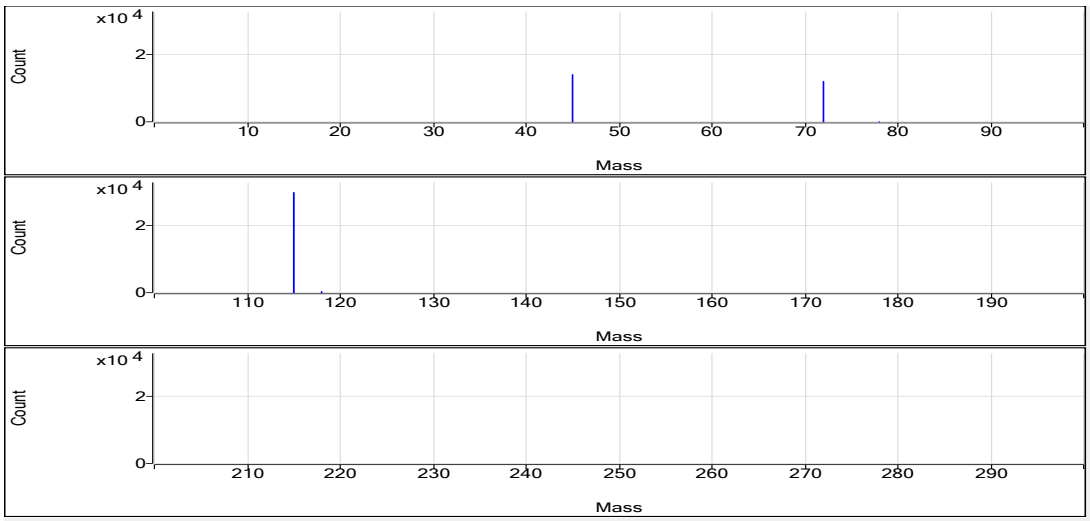
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2311160.69	2.1	100.7	Analog	0.1000	3
No Gas	Ge	72	1075839.23	0.9	103.5	Pulse	0.1000	3
H2	Sc	45	140392.88	1.7	101.0	Pulse	0.1000	3
H2	Ge	72	120439.40	1.2	102.0	Pulse	0.1000	3
H2	In	115	298100.54	0.3	101.2	Pulse	0.1000	3
He	Sc	45	46576.84	0.8	99.5	Pulse	0.1000	3
He	Ge	72	79643.94	0.1	104.1	Pulse	0.1000	3
He	In	115	61568.63	1.1	101.6	Pulse	0.1000	3
He	Tb	159	244002.27	0.5	101.2	Pulse	0.1000	3
He	Bi	209	168438.14	1.1	101.6	Pulse	0.1000	3

No Gas

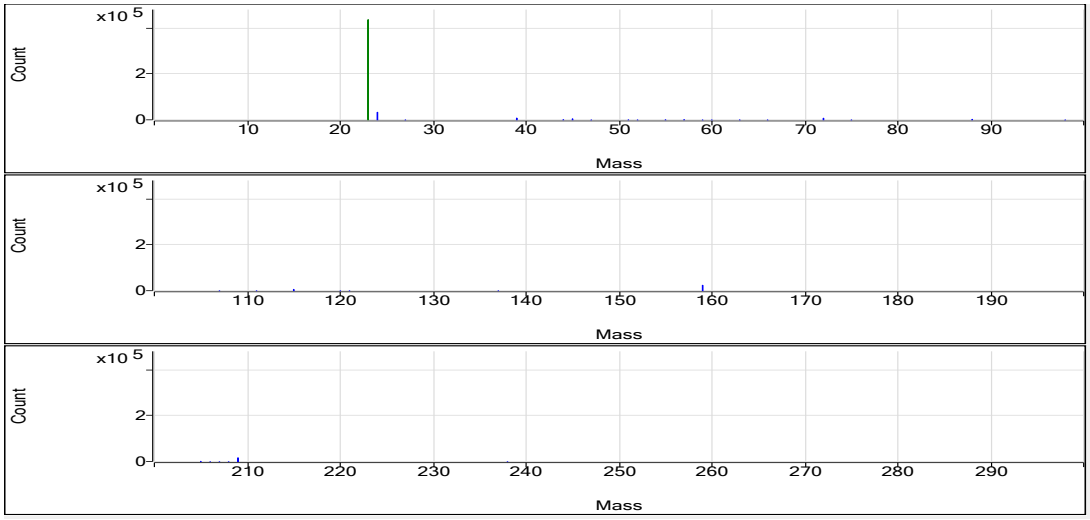


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.069	0	84.00	0.0004	9.309E-06
Be	9	1	No Gas	0.088	0	102.00	0.0004	9.309E-06
Be	9	1	No Gas	0.074	0	92.00	0.0004	9.309E-06
Se	78	2	H2	0.233	0.0001	13.33	0.0004	5.598E-06
Se	78	2	H2	0.176	0.0001	10.00	0.0004	5.598E-06
Se	78	2	H2	0.197	0.0001	11.33	0.0004	5.598E-06
Na	23	3	He	29959.113	94.1701	4345578.06	0.0031	0.4657
Na	23	3	He	29702.52	93.3676	4369341.50	0.0031	0.4657
Na	23	3	He	29907.011	94.0072	4398341.18	0.0031	0.4657
Mg	24	3	He	4807.276	7.2981	336779.64	0.0015	0.003704
Mg	24	3	He	4756.242	7.2207	337908.12	0.0015	0.003704
Mg	24	3	He	4707.354	7.1465	334365.82	0.0015	0.003704
Al	27	3	He	33.267	0.0163	750.04	0.0005	0.0007154
Al	27	3	He	35.528	0.0173	810.04	0.0005	0.0007154
Al	27	3	He	34.621	0.0169	790.05	0.0005	0.0007154
K	39	3	He	1294.551	1.8365	84747.30	0.0011	0.4296
K	39	3	He	1250.688	1.7888	83712.41	0.0011	0.4296
K	39	3	He	1178.296	1.7102	80013.77	0.0011	0.4296
Ca	44	3	He	4146.624	0.2593	11964.68	0.0001	0.002924
Ca	44	3	He	3901.471	0.2441	11424.26	0.0001	0.002924
Ca	44	3	He	4099.517	0.2564	11994.69	0.0001	0.002924
Ti	47	3	He	2.237	0.0011	50.00	0.0005	0
Ti	47	3	He	1.324	0.0006	30.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.495	0.02	922.03	0.021	0.009571
V	51	3	He	0.473	0.0195	914.03	0.021	0.009571
V	51	3	He	0.549	0.0211	988.04	0.021	0.009571
Cr	52	3	He	0.527	0.0316	1460.11	0.0267	0.01758
Cr	52	3	He	0.478	0.0303	1420.10	0.0267	0.01758
Cr	52	3	He	0.351	0.0269	1260.09	0.0267	0.01758
Mn	55	3	He	13.977	0.1554	7171.88	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	13.105	0.146	6831.61	0.0108	0.004199
Mn	55	3	He	13.839	0.1539	7201.80	0.0108	0.004199
Fe	57	3	He	559.33	0.2831	13065.73	0.0005	0.002993
Fe	57	3	He	526.698	0.2668	12485.25	0.0005	0.002993
Fe	57	3	He	561.396	0.2842	13295.71	0.0005	0.002993
Co	59	3	He	0.405	0.0243	1120.08	0.0524	0.003063
Co	59	3	He	0.382	0.0231	1080.07	0.0524	0.003063
Co	59	3	He	0.321	0.0199	930.06	0.0524	0.003063
Ni	60	3	He	0.344	0.0149	910.06	0.0109	0.01116
Ni	60	3	He	0.288	0.0143	880.05	0.0109	0.01116
Ni	60	3	He	0.257	0.014	870.05	0.0109	0.01116
Cu	63	3	He	0.558	0.0295	2350.24	0.0255	0.01531
Cu	63	3	He	0.435	0.0264	2100.18	0.0255	0.01531
Cu	63	3	He	0.616	0.031	2470.29	0.0255	0.01531
Zn	66	3	He	0.952	0.0055	440.02	0.0029	0.002787
Zn	66	3	He	0.865	0.0053	420.02	0.0029	0.002787
Zn	66	3	He	0.776	0.005	400.02	0.0029	0.002787
As	75	3	He	0.374	0.0012	96.00	0.0021	0.0004097
As	75	3	He	0.433	0.0013	106.00	0.0021	0.0004097
As	75	3	He	0.279	0.001	80.00	0.0021	0.0004097
Sr	88	3	He	44.575	0.421	25671.40	0.0094	0.0008765
Sr	88	3	He	45.359	0.4284	26332.42	0.0094	0.0008765
Sr	88	3	He	42.945	0.4057	25260.62	0.0094	0.0008765
Mo	98	3	He	0.069	0.0018	110.00	0.023	0.0002199
Mo	98	3	He	0.089	0.0023	140.01	0.023	0.0002199
Mo	98	3	He	0.088	0.0022	140.00	0.023	0.0002199
Ag	107	3	He	0.01	0.0013	80.00	0.0483	0.0008224
Ag	107	3	He	0.023	0.002	120.01	0.0483	0.0008224
Ag	107	3	He	0.016	0.0016	100.00	0.0483	0.0008224
Cd	111	3	He	0.02	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.039	0.0002	14.00	0.0053	2.193E-05
Cd	111	3	He	0.044	0.0003	16.00	0.0053	2.193E-05
Sn	120	3	He	0.188	0.0162	990.06	0.0148	0.01345
Sn	120	3	He	0.377	0.019	1170.08	0.0148	0.01345
Sn	120	3	He	0.144	0.0156	970.06	0.0148	0.01345
Sb	121	3	He	0.084	0.0016	100.00	0.0143	0.0004392
Sb	121	3	He	0.106	0.002	120.01	0.0143	0.0004392
Sb	121	3	He	0.059	0.0013	80.00	0.0143	0.0004392
Ba	137	3	He	2.758	0.0121	740.04	0.0044	0.0001096
Ba	137	3	He	2.138	0.0094	580.03	0.0044	0.0001096
Ba	137	3	He	1.779	0.0079	490.02	0.0044	0.0001096
Tl	205	3	He	3.205	0.0669	16399.55	0.0208	0.0002491
Tl	205	3	He	2.891	0.0603	14667.73	0.0208	0.0002491
Tl	205	3	He	2.918	0.0609	14837.98	0.0208	0.0002491
Pb	208	3	He	0.048	0.0019	280.01	0.0272	0.0006218
Pb	208	3	He	0.026	0.0013	210.01	0.0272	0.0006218
Pb	208	3	He	0.03	0.0014	170.01	0.0272	0.0006218
U	238	3	He	0.039	0.0011	270.01	0.0275	2.763E-05
U	238	3	He	0.033	0.0009	230.01	0.0275	2.763E-05
U	238	3	He	0.026	0.0007	180.01	0.0275	2.763E-05
Sc	45	1	No Gas			2275332.78		
Sc	45	1	No Gas			2293186.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2364962.46		
Ge	72	1	No Gas			1069702.80		
Ge	72	1	No Gas			1071325.53		
Ge	72	1	No Gas			1086489.36		
Sc	45	2	H2			142887.40		
Sc	45	2	H2			138238.44		
Sc	45	2	H2			140052.79		
Ge	72	2	H2			121588.20		
Ge	72	2	H2			118806.53		
Ge	72	2	H2			120923.46		
In	115	2	H2			298626.58		
In	115	2	H2			296956.23		
In	115	2	H2			298718.82		
Sc	45	3	He			46146.03		
Sc	45	3	He			46797.20		
Sc	45	3	He			46787.29		
Ge	72	3	He			79616.73		
Ge	72	3	He			79607.45		
Ge	72	3	He			79707.63		
In	115	3	He			60979.75		
In	115	3	He			61472.55		
In	115	3	He			62275.50		
Tb	159	3	He			245233.59		
Tb	159	3	He			243111.77		
Tb	159	3	He			243661.44		
Bi	209	3	He			167685.37		
Bi	209	3	He			170620.84		
Bi	209	3	He			167008.20		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 8:47:01 AM
Sample Name	410-178873-S-10-A PDS
Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

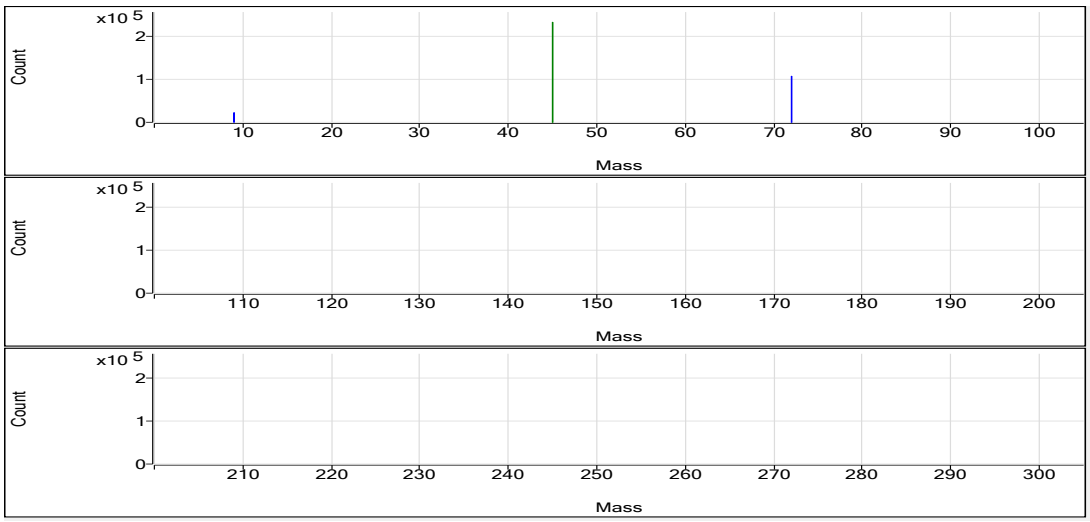
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	48.675	ppb	1.5	45066.44	0.0194	Pulse	0.5000	3
Se	78	72	H2	97.244	ppb	1.8	5256.42	0.0435	Pulse	1.5000	3
Na	23	45	He	33771.055	ppb	1.5	4939389.09	106.0929	Analog	0.1000	3
Mg	24	45	He	9441.213	ppb	0.6	667208.56	14.3295	Pulse	0.1000	3
Al	27	45	He	4837.065	ppb	0.3	105231.86	2.2600	Pulse	0.1000	3
K	39	45	He	6037.500	ppb	2.2	325463.60	6.9910	Pulse	0.1000	3
Ca	44	45	He	8670.368	ppb	3.9	25086.40	0.5389	Pulse	0.1000	3
Ti	47	45	He	491.197	ppb	0.9	11077.38	0.2379	Pulse	0.1000	3
V	51	45	He	488.581	ppb	0.6	479262.11	10.2932	Pulse	0.5000	3
Cr	52	45	He	489.215	ppb	0.6	608633.92	13.0717	Pulse	0.1000	3
Mn	55	45	He	503.947	ppb	0.2	254068.92	5.4564	Pulse	0.1000	3
Fe	57	45	He	5483.232	ppb	0.4	128014.33	2.7493	Pulse	0.1000	3
Co	59	45	He	475.811	ppb	1.1	1159919.10	24.9123	Pulse	0.1000	3
Ni	60	115	He	495.929	ppb	1.5	331221.02	5.4336	Pulse	0.1000	3
Cu	63	72	He	462.284	ppb	1.0	941424.65	11.7934	Pulse	0.1000	3
Zn	66	72	He	484.815	ppb	1.6	111590.56	1.3979	Pulse	0.1000	3
As	75	72	He	479.762	ppb	0.8	81552.94	1.0216	Pulse	0.5000	3
Sr	88	115	He	91.316	ppb	2.5	52514.37	0.8616	Pulse	0.1000	3
Mo	98	115	He	48.643	ppb	3.5	68304.97	1.1209	Pulse	0.1000	3
Ag	107	115	He	46.478	ppb	1.7	136901.20	2.2459	Pulse	0.1000	3
Cd	111	115	He	49.959	ppb	3.4	16241.78	0.2665	Pulse	0.5000	3
Sn	120	115	He	98.981	ppb	1.6	90154.79	1.4790	Pulse	0.1000	3
Sb	121	115	He	97.221	ppb	1.0	84821.93	1.3914	Pulse	0.1000	3
Ba	137	115	He	496.646	ppb	1.6	132055.08	2.1663	Pulse	0.1000	3
Tl	205	159	He	97.182	ppb	1.2	493561.81	2.0203	Pulse	0.1000	3
Pb	208	159	He	49.059	ppb	0.5	326403.48	1.3360	Pulse	0.1000	3
U	238	159	He	49.547	ppb	0.4	332940.62	1.3627	Pulse	0.1000	3

ISTD Table:

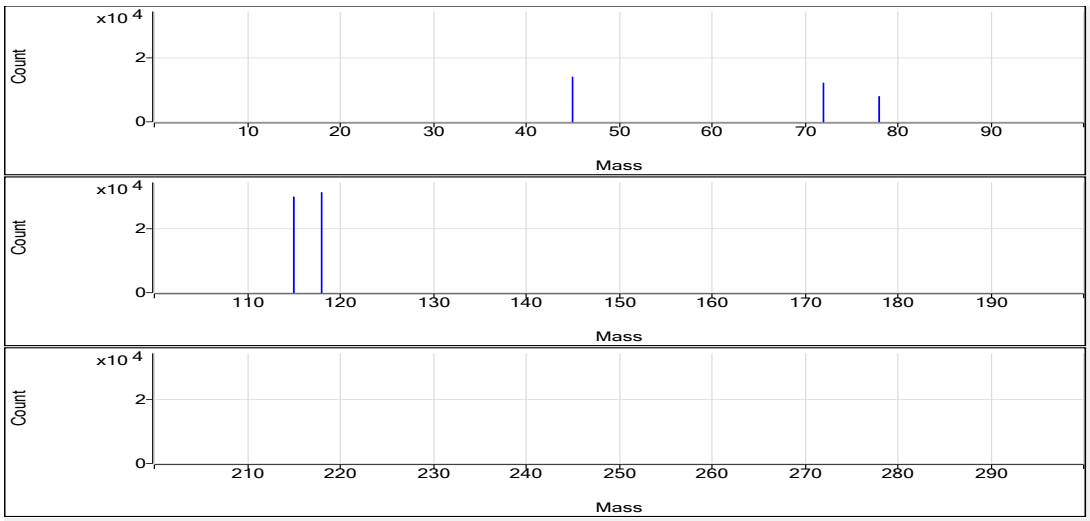
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2325562.00	1.4	101.4	Analog	0.1000	3
No Gas	Ge	72	1073615.14	1.2	103.3	Pulse	0.1000	3
H2	Sc	45	139556.45	0.5	100.4	Pulse	0.1000	3
H2	Ge	72	120858.72	1.4	102.4	Pulse	0.1000	3
H2	In	115	297986.53	0.2	101.1	Pulse	0.1000	3
He	Sc	45	46563.55	1.4	99.4	Pulse	0.1000	3
He	Ge	72	79831.69	1.1	104.4	Pulse	0.1000	3
He	In	115	60968.12	2.0	100.6	Pulse	0.1000	3
He	Tb	159	244319.65	0.8	101.3	Pulse	0.1000	3
He	Bi	209	167686.20	0.3	101.2	Pulse	0.1000	3

No Gas

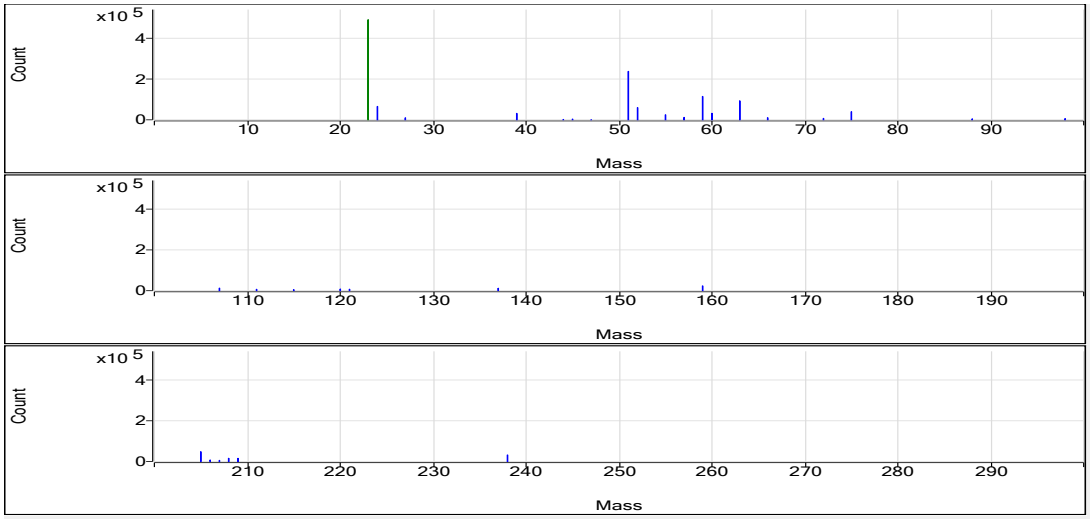


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.836	0.019	43577.89	0.0004	9.309E-06
Be	9	1	No Gas	49.044	0.0195	45641.29	0.0004	9.309E-06
Be	9	1	No Gas	49.144	0.0196	45980.14	0.0004	9.309E-06
Se	78	2	H2	98.795	0.0442	5309.55	0.0004	5.598E-06
Se	78	2	H2	97.515	0.0436	5216.18	0.0004	5.598E-06
Se	78	2	H2	95.421	0.0427	5243.53	0.0004	5.598E-06
Na	23	3	He	34355.028	107.9194	4945385.86	0.0031	0.4657
Na	23	3	He	33484.429	105.1964	4939825.55	0.0031	0.4657
Na	23	3	He	33473.707	105.1629	4932955.86	0.0031	0.4657
Mg	24	3	He	9484.843	14.3957	659681.55	0.0015	0.003704
Mg	24	3	He	9380.513	14.2374	668562.72	0.0015	0.003704
Mg	24	3	He	9458.285	14.3554	673381.40	0.0015	0.003704
Al	27	3	He	4843.588	2.263	103702.92	0.0005	0.0007154
Al	27	3	He	4845.901	2.2641	106318.40	0.0005	0.0007154
Al	27	3	He	4821.704	2.2528	105674.26	0.0005	0.0007154
K	39	3	He	6187.758	7.1543	327842.73	0.0011	0.4296
K	39	3	He	5935.382	6.88	323071.42	0.0011	0.4296
K	39	3	He	5989.359	6.9387	325476.66	0.0011	0.4296
Ca	44	3	He	9059.899	0.563	25800.70	0.0001	0.002924
Ca	44	3	He	8453.763	0.5256	24679.14	0.0001	0.002924
Ca	44	3	He	8497.443	0.5283	24779.35	0.0001	0.002924
Ti	47	3	He	495.775	0.2401	11004.05	0.0005	0
Ti	47	3	He	487.325	0.236	11084.01	0.0005	0
Ti	47	3	He	490.492	0.2376	11144.08	0.0005	0
V	51	3	He	491.792	10.3608	474779.75	0.021	0.009571
V	51	3	He	486.088	10.2407	480883.81	0.021	0.009571
V	51	3	He	487.865	10.2781	482122.78	0.021	0.009571
Cr	52	3	He	492.342	13.1551	602831.36	0.0267	0.01758
Cr	52	3	He	486.561	13.0009	610496.90	0.0267	0.01758
Cr	52	3	He	488.743	13.0591	612573.51	0.0267	0.01758
Mn	55	3	He	504.118	5.4582	250123.16	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	502.801	5.444	255640.23	0.0108	0.004199
Mn	55	3	He	504.924	5.467	256443.38	0.0108	0.004199
Fe	57	3	He	5505.126	2.7603	126489.68	0.0005	0.002993
Fe	57	3	He	5484.361	2.7499	129129.60	0.0005	0.002993
Fe	57	3	He	5460.209	2.7378	128423.71	0.0005	0.002993
Co	59	3	He	480.181	25.1411	1152085.84	0.0524	0.003063
Co	59	3	He	469.838	24.5996	1155152.25	0.0524	0.003063
Co	59	3	He	477.414	24.9963	1172519.20	0.0524	0.003063
Ni	60	3	He	496.21	5.4367	326900.60	0.0109	0.01116
Ni	60	3	He	488.286	5.35	333652.03	0.0109	0.01116
Ni	60	3	He	503.292	5.5141	333110.42	0.0109	0.01116
Cu	63	3	He	462.737	11.805	935962.56	0.0255	0.01531
Cu	63	3	He	466.838	11.9095	944963.27	0.0255	0.01531
Cu	63	3	He	457.276	11.6658	943348.11	0.0255	0.01531
Zn	66	3	He	478.715	1.3803	109438.95	0.0029	0.002787
Zn	66	3	He	493.701	1.4234	112943.36	0.0029	0.002787
Zn	66	3	He	482.031	1.3899	112389.38	0.0029	0.002787
As	75	3	He	477.765	1.0173	80660.48	0.0021	0.0004097
As	75	3	He	484.247	1.0311	81816.35	0.0021	0.0004097
As	75	3	He	477.274	1.0163	82182.00	0.0021	0.0004097
Sr	88	3	He	92.039	0.8684	52216.98	0.0094	0.0008765
Sr	88	3	He	88.804	0.8379	52256.67	0.0094	0.0008765
Sr	88	3	He	93.106	0.8785	53069.46	0.0094	0.0008765
Mo	98	3	He	49.73	1.1459	68900.66	0.023	0.0002199
Mo	98	3	He	46.71	1.0763	67123.29	0.023	0.0002199
Mo	98	3	He	49.491	1.1404	68890.95	0.023	0.0002199
Ag	107	3	He	47.363	2.2886	137610.84	0.0483	0.0008224
Ag	107	3	He	45.781	2.2122	137963.36	0.0483	0.0008224
Ag	107	3	He	46.291	2.2368	135129.39	0.0483	0.0008224
Cd	111	3	He	51.216	0.2732	16428.65	0.0053	2.193E-05
Cd	111	3	He	48.032	0.2562	15980.19	0.0053	2.193E-05
Cd	111	3	He	50.629	0.2701	16316.51	0.0053	2.193E-05
Sn	120	3	He	100.168	1.4966	89990.40	0.0148	0.01345
Sn	120	3	He	97.133	1.4517	90533.79	0.0148	0.01345
Sn	120	3	He	99.641	1.4888	89940.19	0.0148	0.01345
Sb	121	3	He	98.133	1.4045	84450.06	0.0143	0.0004392
Sb	121	3	He	96.18	1.3765	85847.42	0.0143	0.0004392
Sb	121	3	He	97.349	1.3933	84168.30	0.0143	0.0004392
Ba	137	3	He	494.975	2.159	129817.67	0.0044	0.0001096
Ba	137	3	He	489.903	2.1369	133264.82	0.0044	0.0001096
Ba	137	3	He	505.058	2.203	133082.75	0.0044	0.0001096
Tl	205	3	He	98.457	2.0468	496608.31	0.0208	0.0002491
Tl	205	3	He	96.286	2.0016	493428.90	0.0208	0.0002491
Tl	205	3	He	96.803	2.0124	490648.23	0.0208	0.0002491
Pb	208	3	He	49.228	1.3406	173653.34	0.0272	0.0006218
Pb	208	3	He	48.784	1.3285	173310.27	0.0272	0.0006218
Pb	208	3	He	49.164	1.3389	171710.86	0.0272	0.0006218
U	238	3	He	49.785	1.3693	332233.94	0.0275	2.763E-05
U	238	3	He	49.439	1.3598	335207.69	0.0275	2.763E-05
U	238	3	He	49.416	1.3591	331380.23	0.0275	2.763E-05
Sc	45	1	No Gas			2288476.22		
Sc	45	1	No Gas			2337815.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2350394.18		
Ge	72	1	No Gas			1063132.56		
Ge	72	1	No Gas			1087235.84		
Ge	72	1	No Gas			1070477.02		
Sc	45	2	H2			139680.67		
Sc	45	2	H2			138842.87		
Sc	45	2	H2			140145.82		
Ge	72	2	H2			120146.50		
Ge	72	2	H2			119582.86		
Ge	72	2	H2			122846.80		
In	115	2	H2			298504.39		
In	115	2	H2			297541.85		
In	115	2	H2			297913.34		
Sc	45	3	He			45824.79		
Sc	45	3	He			46958.11		
Sc	45	3	He			46907.76		
Ge	72	3	He			79285.48		
Ge	72	3	He			79345.52		
Ge	72	3	He			80864.07		
In	115	3	He			60758.92		
In	115	3	He			62998.38		
In	115	3	He			61040.32		
Tb	159	3	He			242630.88		
Tb	159	3	He			246513.71		
Tb	159	3	He			243814.37		
Bi	209	3	He			168302.40		
Bi	209	3	He			167393.71		
Bi	209	3	He			167362.50		

Quantitation Report

Data File Name	040SMPL.d
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Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

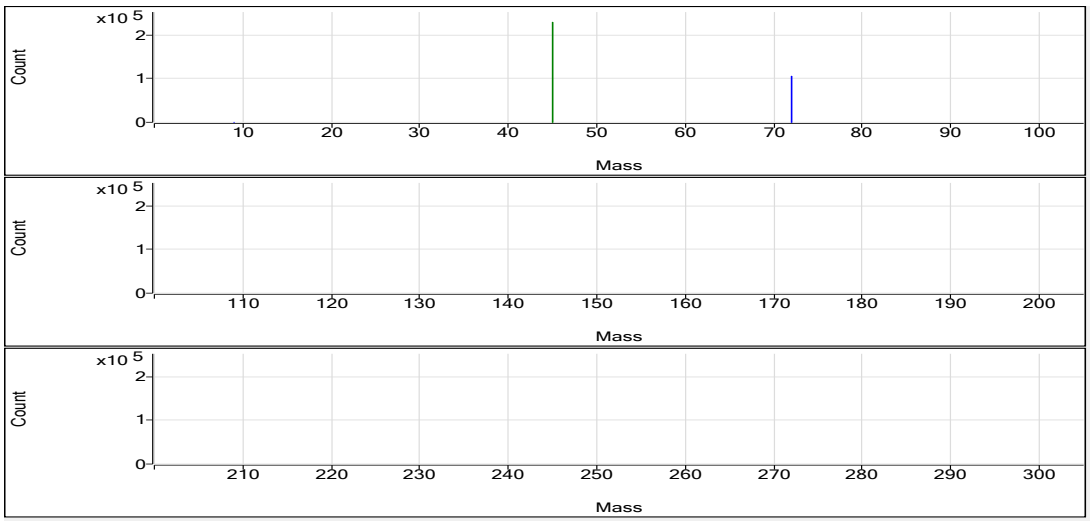
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.060	ppb	4.0	76.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.145	ppb	4.6	8.22	0.0001	Pulse	1.5000	3
Na	23	45	He	5456.764	ppb	2.0	791195.41	17.5330	Pulse	0.1000	3
Mg	24	45	He	907.871	ppb	2.1	62330.56	1.3813	Pulse	0.1000	3
Al	27	45	He	7.167	ppb	65.9	183.34	0.0041	Pulse	0.1000	3
K	39	45	He	246.186	ppb	26.8	31420.68	0.6972	Pulse	0.1000	3
Ca	44	45	He	745.232	ppb	5.5	2210.22	0.0490	Pulse	0.1000	3
Ti	47	45	He	1.076	ppb	67.6	23.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.281	ppb	16.9	698.69	0.0155	Pulse	0.5000	3
Cr	52	45	He	0.291	ppb	4.5	1143.41	0.0253	Pulse	0.1000	3
Mn	55	45	He	2.715	ppb	6.7	1516.79	0.0336	Pulse	0.1000	3
Fe	57	45	He	104.208	ppb	8.8	2490.27	0.0552	Pulse	0.1000	3
Co	59	45	He	0.261	ppb	26.4	753.38	0.0167	Pulse	0.1000	3
Ni	60	115	He	0.381	ppb	51.8	943.39	0.0153	Pulse	0.1000	3
Cu	63	72	He	0.294	ppb	12.6	1770.15	0.0228	Pulse	0.1000	3
Zn	66	72	He	1.121	ppb	25.1	466.69	0.0060	Pulse	0.1000	3
As	75	72	He	0.357	ppb	28.6	90.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	7.901	ppb	7.0	4637.52	0.0753	Pulse	0.1000	3
Mo	98	115	He	0.037	ppb	46.1	66.67	0.0011	Pulse	0.1000	3
Ag	107	115	He	0.023	ppb	39.7	120.00	0.0020	Pulse	0.1000	3
Cd	111	115	He	0.033	ppb	50.6	12.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.166	ppb	71.6	980.07	0.0159	Pulse	0.1000	3
Sb	121	115	He	0.079	ppb	20.6	96.67	0.0016	Pulse	0.1000	3
Ba	137	115	He	0.683	ppb	22.1	190.01	0.0031	Pulse	0.1000	3
Tl	205	159	He	0.952	ppb	5.6	4837.61	0.0200	Pulse	0.1000	3
Pb	208	159	He	0.022	ppb	34.1	293.34	0.0012	Pulse	0.1000	3
U	238	159	He	0.032	ppb	33.6	220.01	0.0009	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2298842.99	1.2	100.2	Analog	0.1000	3
No Gas	Ge	72	1061725.92	0.5	102.2	Pulse	0.1000	3
H2	Sc	45	135873.17	1.0	97.7	Pulse	0.1000	3
H2	Ge	72	116946.03	1.0	99.1	Pulse	0.1000	3
H2	In	115	294502.00	1.5	100.0	Pulse	0.1000	3
He	Sc	45	45139.48	2.3	96.4	Pulse	0.1000	3
He	Ge	72	77587.75	1.1	101.5	Pulse	0.1000	3
He	In	115	61545.35	1.4	101.5	Pulse	0.1000	3
He	Tb	159	241371.92	0.8	100.1	Pulse	0.1000	3
He	Bi	209	167246.55	0.4	100.9	Pulse	0.1000	3

No Gas



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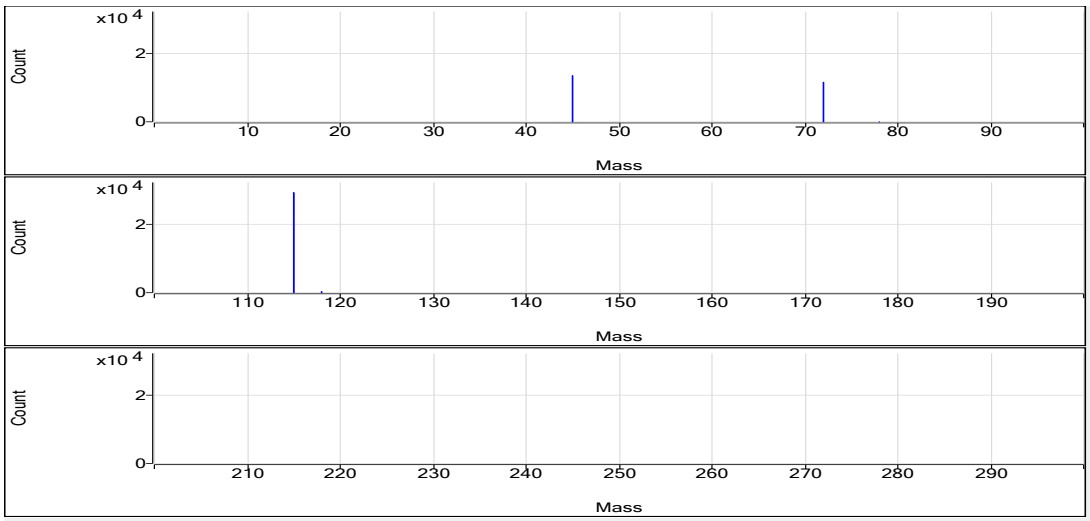
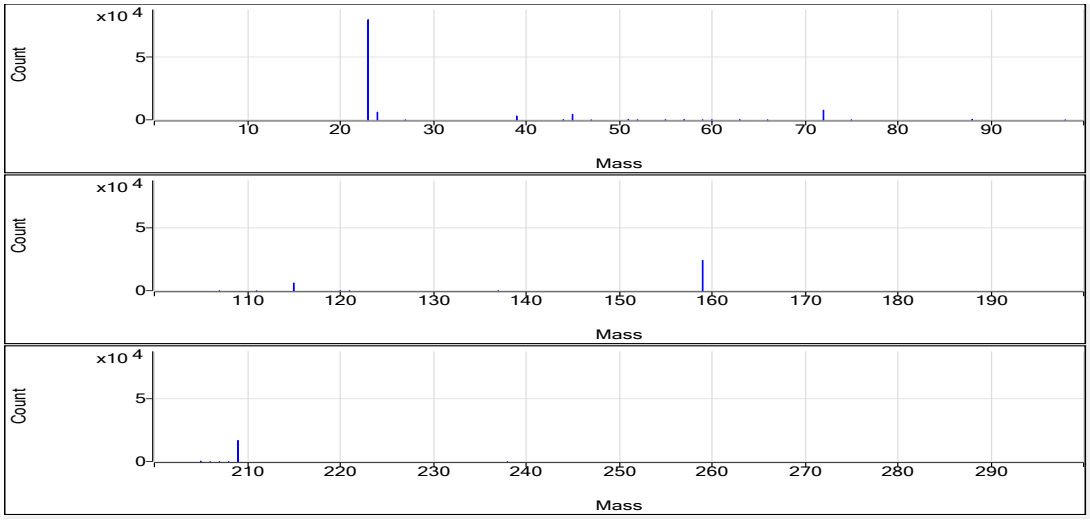


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.063	0	80.00	0.0004	9.309E-06
Be	9	1	No Gas	0.059	0	76.00	0.0004	9.309E-06
Be	9	1	No Gas	0.059	0	74.00	0.0004	9.309E-06
Se	78	2	H2	0.142	0.0001	8.00	0.0004	5.598E-06
Se	78	2	H2	0.152	0.0001	8.67	0.0004	5.598E-06
Se	78	2	H2	0.14	0.0001	8.00	0.0004	5.598E-06
Na	23	3	He	5574.335	17.9008	787805.93	0.0031	0.4657
Na	23	3	He	5438.565	17.4761	792774.99	0.0031	0.4657
Na	23	3	He	5357.39	17.2222	793005.30	0.0031	0.4657
Mg	24	3	He	927.286	1.4107	62086.18	0.0015	0.003704
Mg	24	3	He	907.27	1.3804	62618.15	0.0015	0.003704
Mg	24	3	He	889.058	1.3527	62287.35	0.0015	0.003704
Al	27	3	He	9.171	0.005	220.01	0.0005	0.0007154
Al	27	3	He	1.772	0.0015	70.00	0.0005	0.0007154
Al	27	3	He	10.558	0.0056	260.01	0.0005	0.0007154
K	39	3	He	317.762	0.775	34105.83	0.0011	0.4296
K	39	3	He	232.868	0.6827	30969.71	0.0011	0.4296
K	39	3	He	187.927	0.6339	29186.51	0.0011	0.4296
Ca	44	3	He	790.774	0.0518	2280.22	0.0001	0.002924
Ca	44	3	He	712.279	0.047	2130.22	0.0001	0.002924
Ca	44	3	He	732.642	0.0482	2220.22	0.0001	0.002924
Ti	47	3	He	1.876	0.0009	40.00	0.0005	0
Ti	47	3	He	0.455	0.0002	10.00	0.0005	0
Ti	47	3	He	0.897	0.0004	20.00	0.0005	0
V	51	3	He	0.32	0.0163	718.02	0.021	0.009571
V	51	3	He	0.228	0.0144	652.02	0.021	0.009571
V	51	3	He	0.294	0.0158	726.02	0.021	0.009571
Cr	52	3	He	0.304	0.0257	1130.07	0.0267	0.01758
Cr	52	3	He	0.291	0.0254	1150.07	0.0267	0.01758
Cr	52	3	He	0.277	0.025	1150.08	0.0267	0.01758
Mn	55	3	He	2.51	0.0314	1380.10	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.852	0.0351	1590.12	0.0108	0.004199
Mn	55	3	He	2.784	0.0343	1580.14	0.0108	0.004199
Fe	57	3	He	103.371	0.0548	2410.27	0.0005	0.002993
Fe	57	3	He	113.753	0.06	2720.31	0.0005	0.002993
Fe	57	3	He	95.499	0.0508	2340.24	0.0005	0.002993
Co	59	3	He	0.341	0.0209	920.06	0.0524	0.003063
Co	59	3	He	0.224	0.0148	670.03	0.0524	0.003063
Co	59	3	He	0.219	0.0146	670.04	0.0524	0.003063
Ni	60	3	He	0.208	0.0134	820.05	0.0109	0.01116
Ni	60	3	He	0.34	0.0149	930.06	0.0109	0.01116
Ni	60	3	He	0.596	0.0177	1080.07	0.0109	0.01116
Cu	63	3	He	0.333	0.0238	1850.17	0.0255	0.01531
Cu	63	3	He	0.291	0.0227	1780.14	0.0255	0.01531
Cu	63	3	He	0.259	0.0219	1680.13	0.0255	0.01531
Zn	66	3	He	1.445	0.0069	540.03	0.0029	0.002787
Zn	66	3	He	0.984	0.0056	440.02	0.0029	0.002787
Zn	66	3	He	0.935	0.0055	420.02	0.0029	0.002787
As	75	3	He	0.424	0.0013	102.00	0.0021	0.0004097
As	75	3	He	0.239	0.0009	72.00	0.0021	0.0004097
As	75	3	He	0.408	0.0013	98.00	0.0021	0.0004097
Sr	88	3	He	8.407	0.0801	4890.94	0.0094	0.0008765
Sr	88	3	He	7.987	0.0762	4760.88	0.0094	0.0008765
Sr	88	3	He	7.307	0.0698	4260.73	0.0094	0.0008765
Mo	98	3	He	0.04	0.0011	70.00	0.023	0.0002199
Mo	98	3	He	0.053	0.0014	90.00	0.023	0.0002199
Mo	98	3	He	0.019	0.0007	40.00	0.023	0.0002199
Ag	107	3	He	0.034	0.0025	150.01	0.0483	0.0008224
Ag	107	3	He	0.016	0.0016	100.00	0.0483	0.0008224
Ag	107	3	He	0.02	0.0018	110.00	0.0483	0.0008224
Cd	111	3	He	0.045	0.0003	16.00	0.0053	2.193E-05
Cd	111	3	He	0.014	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.039	0.0002	14.00	0.0053	2.193E-05
Sn	120	3	He	0.032	0.0139	850.06	0.0148	0.01345
Sn	120	3	He	0.258	0.0173	1080.07	0.0148	0.01345
Sn	120	3	He	0.208	0.0165	1010.07	0.0148	0.01345
Sb	121	3	He	0.084	0.0016	100.00	0.0143	0.0004392
Sb	121	3	He	0.092	0.0018	110.00	0.0143	0.0004392
Sb	121	3	He	0.061	0.0013	80.00	0.0143	0.0004392
Ba	137	3	He	0.839	0.0038	230.01	0.0044	0.0001096
Ba	137	3	He	0.672	0.003	190.01	0.0044	0.0001096
Ba	137	3	He	0.538	0.0025	150.01	0.0044	0.0001096
Tl	205	3	He	1.013	0.0213	5101.05	0.0208	0.0002491
Tl	205	3	He	0.927	0.0195	4750.89	0.0208	0.0002491
Tl	205	3	He	0.917	0.0193	4660.90	0.0208	0.0002491
Pb	208	3	He	0.025	0.0013	210.01	0.0272	0.0006218
Pb	208	3	He	0.013	0.001	110.00	0.0272	0.0006218
Pb	208	3	He	0.027	0.0014	180.01	0.0272	0.0006218
U	238	3	He	0.043	0.0012	290.01	0.0275	2.763E-05
U	238	3	He	0.021	0.0006	150.01	0.0275	2.763E-05
U	238	3	He	0.032	0.0009	220.01	0.0275	2.763E-05
Sc	45	1	No Gas			2324017.47		
Sc	45	1	No Gas			2304738.72		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2267772.78		
Ge	72	1	No Gas			1067302.87		
Ge	72	1	No Gas			1060376.31		
Ge	72	1	No Gas			1057498.58		
Sc	45	2	H2			134911.70		
Sc	45	2	H2			135314.47		
Sc	45	2	H2			137393.35		
Ge	72	2	H2			115532.42		
Ge	72	2	H2			117668.74		
Ge	72	2	H2			117636.94		
In	115	2	H2			293295.78		
In	115	2	H2			290727.67		
In	115	2	H2			299482.55		
Sc	45	3	He			44009.62		
Sc	45	3	He			45363.35		
Sc	45	3	He			46045.48		
Ge	72	3	He			77748.88		
Ge	72	3	He			78331.13		
Ge	72	3	He			76683.23		
In	115	3	He			61050.54		
In	115	3	He			62515.79		
In	115	3	He			61090.30		
Tb	159	3	He			239345.45		
Tb	159	3	He			243364.49		
Tb	159	3	He			241405.82		
Bi	209	3	He			166492.24		
Bi	209	3	He			167289.96		
Bi	209	3	He			167957.46		

Quantitation Report

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Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

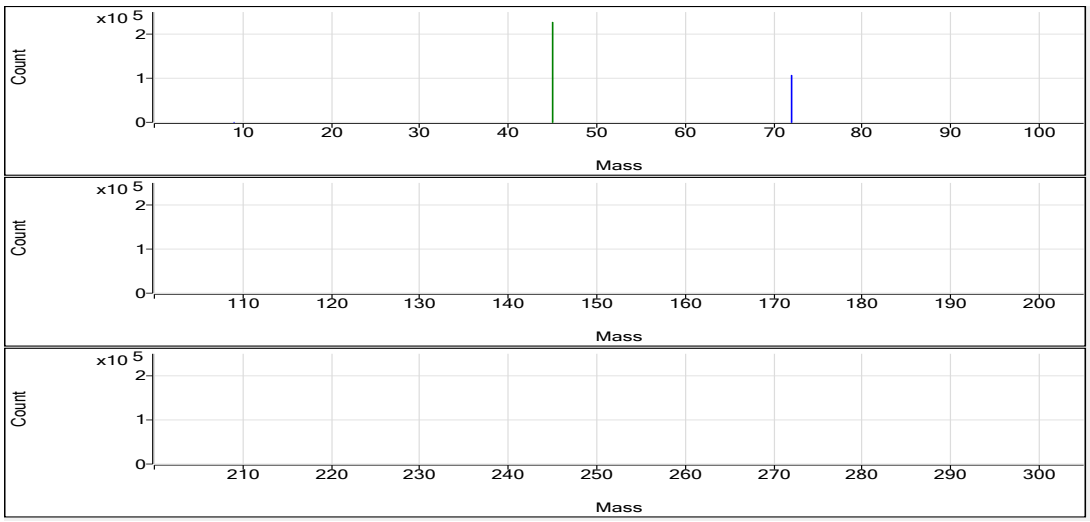
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.012	ppb	98.9	32.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.070	ppb	54.8	4.45	0.0000	Pulse	1.5000	3
Na	23	45	He	30005.941	ppb	0.9	4313993.89	94.3166	Analog	0.1000	3
Mg	24	45	He	4764.886	ppb	1.7	330838.17	7.2338	Pulse	0.1000	3
Al	27	45	He	30.339	ppb	13.5	680.04	0.0149	Pulse	0.1000	3
K	39	45	He	1276.794	ppb	7.8	83066.06	1.8172	Pulse	0.1000	3
Ca	44	45	He	4095.101	ppb	3.2	11711.14	0.2561	Pulse	0.1000	3
Ti	47	45	He	0.298	ppb	86.6	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.294	ppb	14.2	720.69	0.0158	Pulse	0.5000	3
Cr	52	45	He	0.228	ppb	30.5	1083.41	0.0237	Pulse	0.1000	3
Mn	55	45	He	13.383	ppb	0.9	6814.94	0.1490	Pulse	0.1000	3
Fe	57	45	He	547.247	ppb	3.3	12678.68	0.2771	Pulse	0.1000	3
Co	59	45	He	0.124	ppb	28.6	436.68	0.0096	Pulse	0.1000	3
Ni	60	115	He	0.277	ppb	28.9	866.72	0.0142	Pulse	0.1000	3
Cu	63	72	He	0.289	ppb	30.5	1773.48	0.0227	Pulse	0.1000	3
Zn	66	72	He	0.807	ppb	22.0	400.02	0.0051	Pulse	0.1000	3
As	75	72	He	0.103	ppb	61.8	49.33	0.0006	Pulse	0.5000	3
Sr	88	115	He	44.446	ppb	2.6	25611.26	0.4198	Pulse	0.1000	3
Mo	98	115	He	0.033	ppb	37.3	60.00	0.0010	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	368.3	60.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	104.5	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.113	ppb	56.8	923.39	0.0151	Pulse	0.1000	3
Sb	121	115	He	0.007	ppb	393.5	33.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	1.916	ppb	24.5	516.69	0.0085	Pulse	0.1000	3
Tl	205	159	He	0.124	ppb	0.6	686.71	0.0028	Pulse	0.1000	3
Pb	208	159	He	0.013	ppb	94.9	236.67	0.0010	Pulse	0.1000	3
U	238	159	He	0.006	ppb	23.7	50.00	0.0002	Pulse	0.1000	3

ISTD Table:

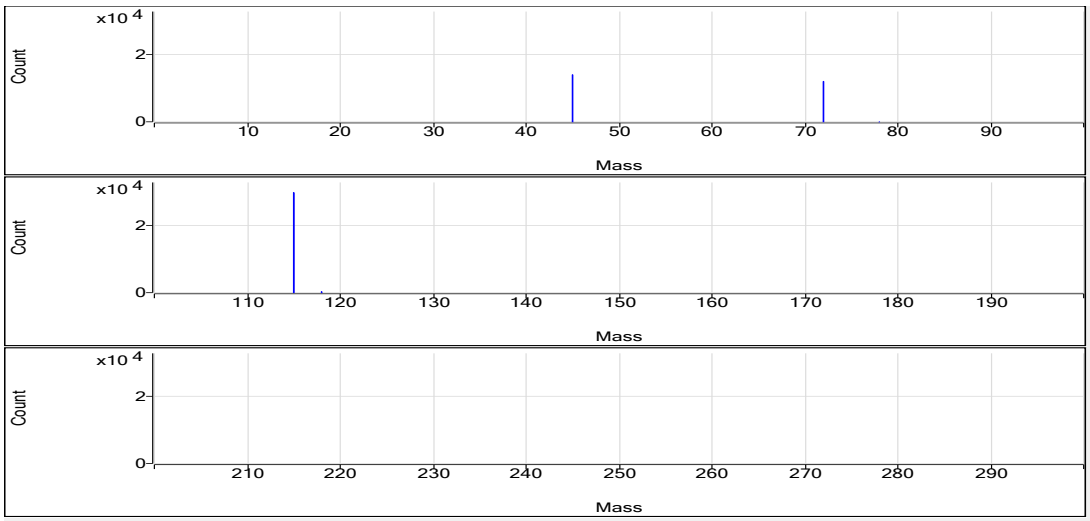
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2280372.78	1.5	99.4	Analog	0.1000	3
No Gas	Ge	72	1072653.16	0.4	103.2	Pulse	0.1000	3
H2	Sc	45	139909.75	1.0	100.6	Pulse	0.1000	3
H2	Ge	72	120216.23	0.7	101.8	Pulse	0.1000	3
H2	In	115	297473.28	0.9	101.0	Pulse	0.1000	3
He	Sc	45	45744.46	1.9	97.7	Pulse	0.1000	3
He	Ge	72	78266.94	1.5	102.3	Pulse	0.1000	3
He	In	115	61026.83	1.9	100.7	Pulse	0.1000	3
He	Tb	159	242978.24	0.6	100.8	Pulse	0.1000	3
He	Bi	209	168073.42	1.6	101.4	Pulse	0.1000	3

No Gas

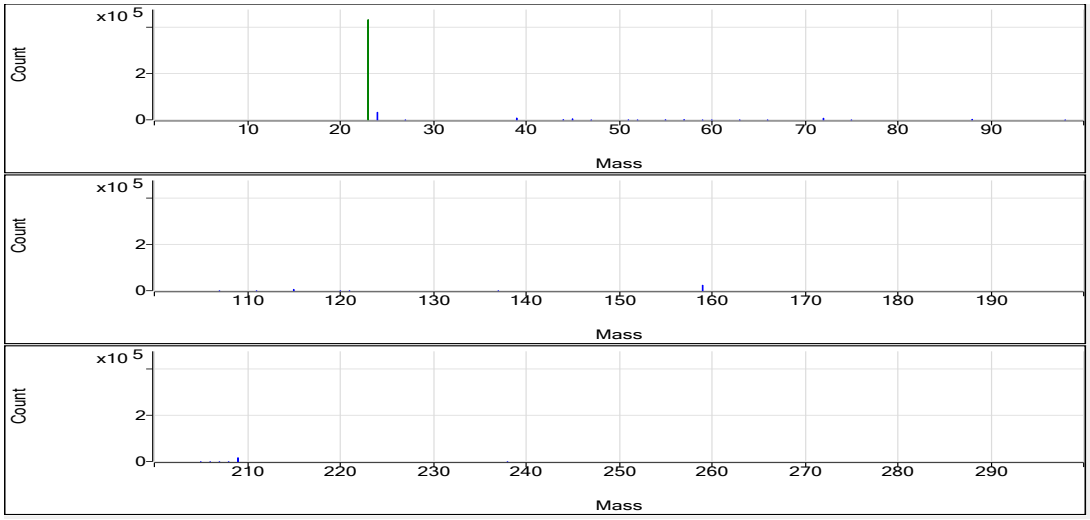


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.017	0	36.00	0.0004	9.309E-06
Be	9	1	No Gas	-0.002	0	20.00	0.0004	9.309E-06
Be	9	1	No Gas	0.02	0	40.00	0.0004	9.309E-06
Se	78	2	H2	0.037	0	2.67	0.0004	5.598E-06
Se	78	2	H2	0.062	0	4.00	0.0004	5.598E-06
Se	78	2	H2	0.113	0.0001	6.67	0.0004	5.598E-06
Na	23	3	He	30308.778	95.2638	4273739.00	0.0031	0.4657
Na	23	3	He	29919.382	94.0459	4308679.62	0.0031	0.4657
Na	23	3	He	29789.663	93.6401	4359563.06	0.0031	0.4657
Mg	24	3	He	4850.648	7.3639	330362.14	0.0015	0.003704
Mg	24	3	He	4751.244	7.2131	330466.05	0.0015	0.003704
Mg	24	3	He	4692.766	7.1244	331686.32	0.0015	0.003704
Al	27	3	He	32.831	0.0161	720.04	0.0005	0.0007154
Al	27	3	He	32.584	0.0159	730.04	0.0005	0.0007154
Al	27	3	He	25.602	0.0127	590.03	0.0005	0.0007154
K	39	3	He	1377.348	1.9265	86426.18	0.0011	0.4296
K	39	3	He	1274.081	1.8143	83119.57	0.0011	0.4296
K	39	3	He	1178.953	1.7109	79652.42	0.0011	0.4296
Ca	44	3	He	4165.601	0.2605	11684.43	0.0001	0.002924
Ca	44	3	He	4176.947	0.2612	11964.65	0.0001	0.002924
Ca	44	3	He	3942.755	0.2467	11484.34	0.0001	0.002924
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.451	0.0002	10.00	0.0005	0
Ti	47	3	He	0.443	0.0002	10.00	0.0005	0
V	51	3	He	0.325	0.0164	736.02	0.021	0.009571
V	51	3	He	0.246	0.0148	676.02	0.021	0.009571
V	51	3	He	0.311	0.0161	750.02	0.021	0.009571
Cr	52	3	He	0.202	0.023	1030.07	0.0267	0.01758
Cr	52	3	He	0.176	0.0223	1020.06	0.0267	0.01758
Cr	52	3	He	0.307	0.0258	1200.09	0.0267	0.01758
Mn	55	3	He	13.522	0.1505	6751.60	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	13.334	0.1485	6801.59	0.0108	0.004199
Mn	55	3	He	13.294	0.148	6891.63	0.0108	0.004199
Fe	57	3	He	541.206	0.2741	12294.97	0.0005	0.002993
Fe	57	3	He	532.888	0.2699	12365.15	0.0005	0.002993
Fe	57	3	He	567.648	0.2873	13375.93	0.0005	0.002993
Co	59	3	He	0.154	0.0111	500.02	0.0524	0.003063
Co	59	3	He	0.133	0.01	460.02	0.0524	0.003063
Co	59	3	He	0.085	0.0075	350.01	0.0524	0.003063
Ni	60	3	He	0.269	0.0141	860.05	0.0109	0.01116
Ni	60	3	He	0.201	0.0134	800.05	0.0109	0.01116
Ni	60	3	He	0.36	0.0151	940.06	0.0109	0.01116
Cu	63	3	He	0.358	0.0244	1930.17	0.0255	0.01531
Cu	63	3	He	0.318	0.0234	1800.16	0.0255	0.01531
Cu	63	3	He	0.19	0.0201	1590.12	0.0255	0.01531
Zn	66	3	He	1.012	0.0057	450.02	0.0029	0.002787
Zn	66	3	He	0.704	0.0048	370.02	0.0029	0.002787
Zn	66	3	He	0.704	0.0048	380.02	0.0029	0.002787
As	75	3	He	0.176	0.0008	62.00	0.0021	0.0004097
As	75	3	He	0.076	0.0006	44.00	0.0021	0.0004097
As	75	3	He	0.057	0.0005	42.00	0.0021	0.0004097
Sr	88	3	He	44.4	0.4194	25571.14	0.0094	0.0008765
Sr	88	3	He	45.611	0.4308	25791.61	0.0094	0.0008765
Sr	88	3	He	43.325	0.4093	25471.04	0.0094	0.0008765
Mo	98	3	He	0.047	0.0013	80.00	0.023	0.0002199
Mo	98	3	He	0.027	0.0008	50.00	0.023	0.0002199
Mo	98	3	He	0.025	0.0008	50.00	0.023	0.0002199
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	0.014	0.0015	90.00	0.0483	0.0008224
Ag	107	3	He	0.006	0.0011	70.00	0.0483	0.0008224
Cd	111	3	He	0.027	0.0002	10.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Sn	120	3	He	0.144	0.0156	950.06	0.0148	0.01345
Sn	120	3	He	0.039	0.014	840.05	0.0148	0.01345
Sn	120	3	He	0.155	0.0157	980.07	0.0148	0.01345
Sb	121	3	He	0.004	0.0005	30.00	0.0143	0.0004392
Sb	121	3	He	-0.019	0.0002	10.00	0.0143	0.0004392
Sb	121	3	He	0.037	0.001	60.00	0.0143	0.0004392
Ba	137	3	He	2.457	0.0108	660.03	0.0044	0.0001096
Ba	137	3	He	1.622	0.0072	430.02	0.0044	0.0001096
Ba	137	3	He	1.67	0.0074	460.03	0.0044	0.0001096
Tl	205	3	He	0.123	0.0028	680.04	0.0208	0.0002491
Tl	205	3	He	0.125	0.0028	690.04	0.0208	0.0002491
Tl	205	3	He	0.124	0.0028	690.04	0.0208	0.0002491
Pb	208	3	He	0.026	0.0013	130.01	0.0272	0.0006218
Pb	208	3	He	0.012	0.0009	130.01	0.0272	0.0006218
Pb	208	3	He	0.001	0.0007	60.00	0.0272	0.0006218
U	238	3	He	0.008	0.0002	60.00	0.0275	2.763E-05
U	238	3	He	0.006	0.0002	50.00	0.0275	2.763E-05
U	238	3	He	0.005	0.0002	40.00	0.0275	2.763E-05
Sc	45	1	No Gas			2240343.40		
Sc	45	1	No Gas			2301683.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2299091.06		
Ge	72	1	No Gas			1068077.56		
Ge	72	1	No Gas			1075486.55		
Ge	72	1	No Gas			1074395.37		
Sc	45	2	H2			138713.91		
Sc	45	2	H2			139670.08		
Sc	45	2	H2			141345.27		
Ge	72	2	H2			121021.56		
Ge	72	2	H2			120367.61		
Ge	72	2	H2			119259.51		
In	115	2	H2			295081.25		
In	115	2	H2			300215.17		
In	115	2	H2			297123.41		
Sc	45	3	He			44862.15		
Sc	45	3	He			45814.66		
Sc	45	3	He			46556.56		
Ge	72	3	He			78974.21		
Ge	72	3	He			76873.27		
Ge	72	3	He			78953.33		
In	115	3	He			60979.60		
In	115	3	He			59875.31		
In	115	3	He			62244.97		
Tb	159	3	He			241763.38		
Tb	159	3	He			242545.50		
Tb	159	3	He			244625.84		
Bi	209	3	He			166735.92		
Bi	209	3	He			171084.02		
Bi	209	3	He			166400.33		

Quantitation Report

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Acq Time	7/17/2024 8:53:04 AM
Sample Name	410-178873-T-10-A MS
Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

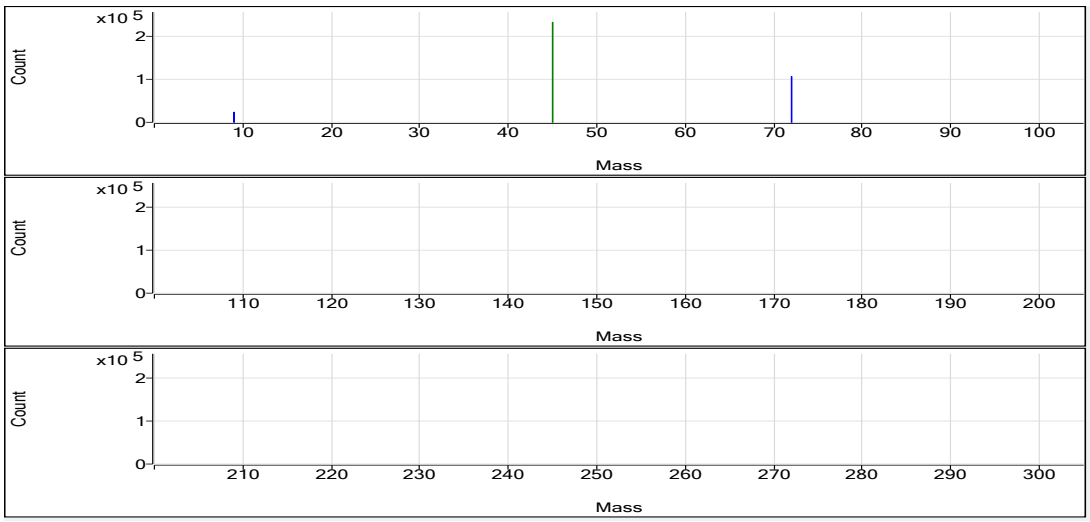
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.729	ppb	2.4	47876.74	0.0206	Pulse	0.5000	3
Se	78	72	H2	103.587	ppb	1.5	5600.98	0.0463	Pulse	1.5000	3
Na	23	45	He	33968.062	ppb	1.2	4958207.53	106.7091	Analog	0.1000	3
Mg	24	45	He	9701.800	ppb	0.9	684205.59	14.7249	Pulse	0.1000	3
Al	27	45	He	5110.542	ppb	1.0	110952.48	2.3877	Pulse	0.1000	3
K	39	45	He	6405.202	ppb	0.5	343409.89	7.3906	Pulse	0.1000	3
Ca	44	45	He	9316.906	ppb	1.2	26899.34	0.5789	Pulse	0.1000	3
Ti	47	45	He	527.127	ppb	6.2	11864.68	0.2553	Pulse	0.1000	3
V	51	45	He	516.451	ppb	0.7	505535.49	10.8798	Pulse	0.5000	3
Cr	52	45	He	517.936	ppb	0.7	642993.65	13.8381	Pulse	0.1000	3
Mn	55	45	He	532.442	ppb	1.3	267856.69	5.7647	Pulse	0.1000	3
Fe	57	45	He	5734.548	ppb	2.7	133591.88	2.8752	Pulse	0.1000	3
Co	59	45	He	505.969	ppb	0.4	1230937.56	26.4911	Pulse	0.1000	3
Ni	60	115	He	531.904	ppb	0.7	349013.35	5.8269	Pulse	0.1000	3
Cu	63	72	He	500.367	ppb	1.4	991545.87	12.7637	Pulse	0.1000	3
Zn	66	72	He	520.198	ppb	1.9	116508.01	1.4997	Pulse	0.1000	3
As	75	72	He	522.298	ppb	1.2	86396.69	1.1121	Pulse	0.5000	3
Sr	88	115	He	97.493	ppb	1.1	55096.36	0.9198	Pulse	0.1000	3
Mo	98	115	He	53.138	ppb	0.5	73337.86	1.2244	Pulse	0.1000	3
Ag	107	115	He	54.083	ppb	0.8	156522.09	2.6132	Pulse	0.1000	3
Cd	111	115	He	53.102	ppb	1.3	16967.22	0.2833	Pulse	0.5000	3
Sn	120	115	He	104.006	ppb	0.9	93044.66	1.5534	Pulse	0.1000	3
Sb	121	115	He	106.338	ppb	0.7	91157.52	1.5219	Pulse	0.1000	3
Ba	137	115	He	536.263	ppb	0.6	140101.61	2.3391	Pulse	0.1000	3
Tl	205	159	He	101.306	ppb	0.7	513153.66	2.1060	Pulse	0.1000	3
Pb	208	159	He	51.612	ppb	0.7	342469.89	1.4055	Pulse	0.1000	3
U	238	159	He	52.365	ppb	1.7	350917.70	1.4403	Pulse	0.1000	3

ISTD Table:

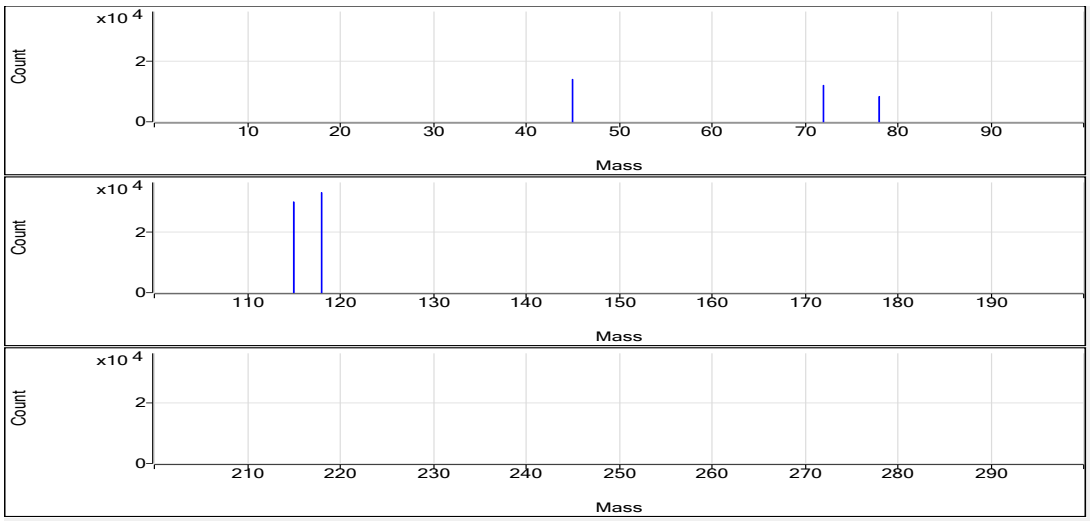
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2325356.63	1.0	101.4	Analog	0.1000	3
No Gas	Ge	72	1066165.77	0.6	102.6	Pulse	0.1000	3
H2	Sc	45	140675.11	1.7	101.2	Pulse	0.1000	3
H2	Ge	72	120895.59	1.5	102.4	Pulse	0.1000	3
H2	In	115	300065.39	0.3	101.8	Pulse	0.1000	3
He	Sc	45	46466.61	0.5	99.2	Pulse	0.1000	3
He	Ge	72	77690.99	0.9	101.6	Pulse	0.1000	3
He	In	115	59897.17	0.4	98.8	Pulse	0.1000	3
He	Tb	159	243673.61	0.9	101.0	Pulse	0.1000	3
He	Bi	209	166219.29	0.4	100.3	Pulse	0.1000	3

No Gas

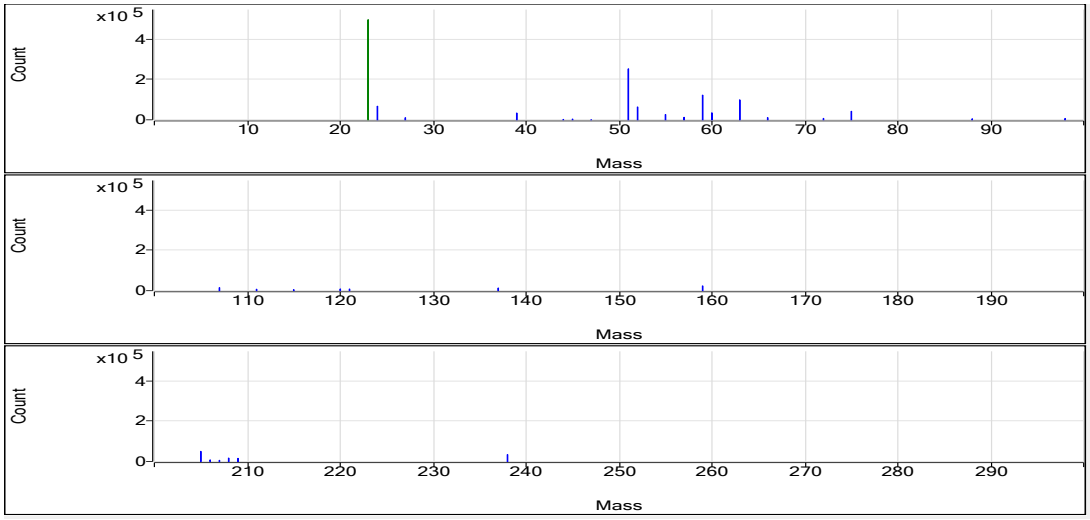


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.719	0.0202	47484.22	0.0004	9.309E-06
Be	9	1	No Gas	51.362	0.0204	47237.58	0.0004	9.309E-06
Be	9	1	No Gas	53.105	0.0211	48908.41	0.0004	9.309E-06
Se	78	2	H2	101.968	0.0456	5609.65	0.0004	5.598E-06
Se	78	2	H2	103.62	0.0464	5557.63	0.0004	5.598E-06
Se	78	2	H2	105.172	0.047	5635.67	0.0004	5.598E-06
Na	23	3	He	33589.758	105.5259	4918221.18	0.0031	0.4657
Na	23	3	He	34417.789	108.1157	4992353.68	0.0031	0.4657
Na	23	3	He	33896.637	106.4857	4964047.74	0.0031	0.4657
Mg	24	3	He	9603.896	14.5764	679358.27	0.0015	0.003704
Mg	24	3	He	9759.616	14.8127	683989.91	0.0015	0.003704
Mg	24	3	He	9741.887	14.7858	689268.58	0.0015	0.003704
Al	27	3	He	5165.9	2.4136	112488.94	0.0005	0.0007154
Al	27	3	He	5060.975	2.3646	109186.27	0.0005	0.0007154
Al	27	3	He	5104.751	2.385	111182.24	0.0005	0.0007154
K	39	3	He	6408.252	7.3939	344605.42	0.0011	0.4296
K	39	3	He	6437.23	7.4254	342874.57	0.0011	0.4296
K	39	3	He	6370.126	7.3525	342749.68	0.0011	0.4296
Ca	44	3	He	9324.267	0.5794	27002.72	0.0001	0.002924
Ca	44	3	He	9429.38	0.5859	27053.21	0.0001	0.002924
Ca	44	3	He	9197.07	0.5715	26642.08	0.0001	0.002924
Ti	47	3	He	502.084	0.2432	11334.26	0.0005	0
Ti	47	3	He	515.272	0.2496	11524.46	0.0005	0
Ti	47	3	He	564.024	0.2732	12735.32	0.0005	0
V	51	3	He	512.704	10.8009	503395.47	0.021	0.009571
V	51	3	He	520.196	10.9586	506025.06	0.021	0.009571
V	51	3	He	516.454	10.8798	507185.94	0.021	0.009571
Cr	52	3	He	515.511	13.7734	641932.96	0.0267	0.01758
Cr	52	3	He	521.781	13.9407	643725.42	0.0267	0.01758
Cr	52	3	He	516.515	13.8002	643322.57	0.0267	0.01758
Mn	55	3	He	525.044	5.6846	264943.18	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	538.142	5.8264	269038.10	0.0108	0.004199
Mn	55	3	He	534.139	5.7831	269588.79	0.0108	0.004199
Fe	57	3	He	5558.07	2.7868	129884.11	0.0005	0.002993
Fe	57	3	He	5858.491	2.9373	135631.68	0.0005	0.002993
Fe	57	3	He	5787.085	2.9015	135259.84	0.0005	0.002993
Co	59	3	He	505.221	26.452	1232840.84	0.0524	0.003063
Co	59	3	He	508.052	26.6002	1228290.68	0.0524	0.003063
Co	59	3	He	504.634	26.4213	1231681.15	0.0524	0.003063
Ni	60	3	He	528.025	5.7845	346728.43	0.0109	0.01116
Ni	60	3	He	535.166	5.8626	349540.39	0.0109	0.01116
Ni	60	3	He	532.521	5.8337	350771.24	0.0109	0.01116
Cu	63	3	He	493.453	12.5876	984976.08	0.0255	0.01531
Cu	63	3	He	507.154	12.9366	994494.59	0.0255	0.01531
Cu	63	3	He	500.494	12.767	995166.94	0.0255	0.01531
Zn	66	3	He	509.658	1.4694	114977.01	0.0029	0.002787
Zn	66	3	He	521.073	1.5022	115480.85	0.0029	0.002787
Zn	66	3	He	529.862	1.5275	119066.16	0.0029	0.002787
As	75	3	He	515.809	1.0983	85943.57	0.0021	0.0004097
As	75	3	He	528.213	1.1247	86462.30	0.0021	0.0004097
As	75	3	He	522.871	1.1134	86784.19	0.0021	0.0004097
Sr	88	3	He	96.661	0.912	54664.74	0.0094	0.0008765
Sr	88	3	He	97.106	0.9162	54624.78	0.0094	0.0008765
Sr	88	3	He	98.713	0.9313	55999.56	0.0094	0.0008765
Mo	98	3	He	52.869	1.2182	73020.14	0.023	0.0002199
Mo	98	3	He	53.4	1.2304	73361.45	0.023	0.0002199
Mo	98	3	He	53.146	1.2246	73631.99	0.023	0.0002199
Ag	107	3	He	53.936	2.6061	156213.82	0.0483	0.0008224
Ag	107	3	He	54.582	2.6373	157242.68	0.0483	0.0008224
Ag	107	3	He	53.732	2.5963	156109.76	0.0483	0.0008224
Cd	111	3	He	52.686	0.2811	16847.09	0.0053	2.193E-05
Cd	111	3	He	53.912	0.2876	17147.42	0.0053	2.193E-05
Cd	111	3	He	52.708	0.2812	16907.14	0.0053	2.193E-05
Sn	120	3	He	103.364	1.5439	92545.33	0.0148	0.01345
Sn	120	3	He	105.141	1.5703	93621.91	0.0148	0.01345
Sn	120	3	He	103.512	1.5461	92966.75	0.0148	0.01345
Sb	121	3	He	106.943	1.5305	91740.77	0.0143	0.0004392
Sb	121	3	He	105.487	1.5097	90011.10	0.0143	0.0004392
Sb	121	3	He	106.585	1.5254	91720.69	0.0143	0.0004392
Ba	137	3	He	537.539	2.3446	140538.86	0.0044	0.0001096
Ba	137	3	He	538.511	2.3489	140044.83	0.0044	0.0001096
Ba	137	3	He	532.74	2.3237	139721.13	0.0044	0.0001096
Tl	205	3	He	100.825	2.096	511518.66	0.0208	0.0002491
Tl	205	3	He	101.019	2.1	515826.55	0.0208	0.0002491
Tl	205	3	He	102.074	2.1219	512115.77	0.0208	0.0002491
Pb	208	3	He	51.509	1.4027	181628.34	0.0272	0.0006218
Pb	208	3	He	51.317	1.3975	181518.34	0.0272	0.0006218
Pb	208	3	He	52.01	1.4163	181337.42	0.0272	0.0006218
U	238	3	He	52.455	1.4427	352096.48	0.0275	2.763E-05
U	238	3	He	51.421	1.4143	347397.49	0.0275	2.763E-05
U	238	3	He	53.218	1.4637	353259.14	0.0275	2.763E-05
Sc	45	1	No Gas			2351947.31		
Sc	45	1	No Gas			2310437.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2313684.97		
Ge	72	1	No Gas			1073726.08		
Ge	72	1	No Gas			1060406.94		
Ge	72	1	No Gas			1064364.28		
Sc	45	2	H2			142301.44		
Sc	45	2	H2			137914.84		
Sc	45	2	H2			141809.05		
Ge	72	2	H2			122988.31		
Ge	72	2	H2			119904.30		
Ge	72	2	H2			119794.17		
In	115	2	H2			299784.16		
In	115	2	H2			299484.33		
In	115	2	H2			300927.69		
Sc	45	3	He			46606.78		
Sc	45	3	He			46176.01		
Sc	45	3	He			46617.03		
Ge	72	3	He			78249.98		
Ge	72	3	He			76874.33		
Ge	72	3	He			77948.66		
In	115	3	He			60588.56		
In	115	3	He			60277.48		
In	115	3	He			60779.42		
Tb	159	3	He			244047.83		
Tb	159	3	He			245629.39		
Tb	159	3	He			241343.61		
Bi	209	3	He			166988.59		
Bi	209	3	He			165581.77		
Bi	209	3	He			166087.50		

Quantitation Report

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Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

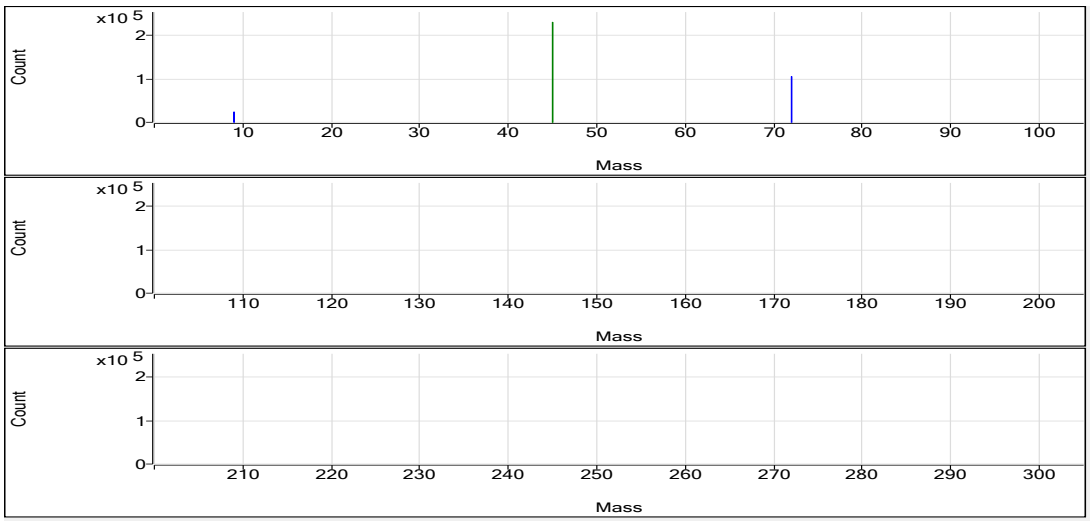
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	52.482	ppb	2.6	48309.27	0.0209	Pulse	0.5000	3
Se	78	72	H2	104.671	ppb	0.3	5558.74	0.0468	Pulse	1.5000	3
Na	23	45	He	33836.224	ppb	0.8	5010359.30	106.2968	Analog	0.1000	3
Mg	24	45	He	9644.655	ppb	1.4	689952.91	14.6382	Pulse	0.1000	3
Al	27	45	He	5026.422	ppb	2.1	110686.49	2.3484	Pulse	0.1000	3
K	39	45	He	6278.854	ppb	1.4	341873.94	7.2533	Pulse	0.1000	3
Ca	44	45	He	8950.054	ppb	0.9	26221.56	0.5562	Pulse	0.1000	3
Ti	47	45	He	535.017	ppb	4.3	12211.63	0.2591	Pulse	0.1000	3
V	51	45	He	508.575	ppb	0.8	505011.00	10.7140	Pulse	0.5000	3
Cr	52	45	He	510.554	ppb	0.3	643007.89	13.6411	Pulse	0.1000	3
Mn	55	45	He	522.892	ppb	0.0	266867.44	5.6614	Pulse	0.1000	3
Fe	57	45	He	5663.002	ppb	0.8	133836.95	2.8394	Pulse	0.1000	3
Co	59	45	He	498.769	ppb	0.8	1230916.70	26.1142	Pulse	0.1000	3
Ni	60	115	He	526.628	ppb	0.2	350856.53	5.7692	Pulse	0.1000	3
Cu	63	72	He	502.946	ppb	0.6	991959.80	12.8294	Pulse	0.1000	3
Zn	66	72	He	525.709	ppb	0.8	117179.16	1.5155	Pulse	0.1000	3
As	75	72	He	524.795	ppb	0.6	86401.45	1.1174	Pulse	0.5000	3
Sr	88	115	He	96.353	ppb	2.4	55280.19	0.9091	Pulse	0.1000	3
Mo	98	115	He	52.022	ppb	1.3	72895.37	1.1987	Pulse	0.1000	3
Ag	107	115	He	53.710	ppb	0.8	157818.17	2.5952	Pulse	0.1000	3
Cd	111	115	He	53.675	ppb	0.3	17413.70	0.2863	Pulse	0.5000	3
Sn	120	115	He	103.463	ppb	1.0	93988.28	1.5454	Pulse	0.1000	3
Sb	121	115	He	104.975	ppb	1.0	91365.52	1.5024	Pulse	0.1000	3
Ba	137	115	He	530.401	ppb	0.8	140693.71	2.3135	Pulse	0.1000	3
Tl	205	159	He	105.460	ppb	1.0	527195.24	2.1923	Pulse	0.1000	3
Pb	208	159	He	52.619	ppb	1.1	344586.06	1.4329	Pulse	0.1000	3
U	238	159	He	53.469	ppb	0.8	353652.46	1.4706	Pulse	0.1000	3

ISTD Table:

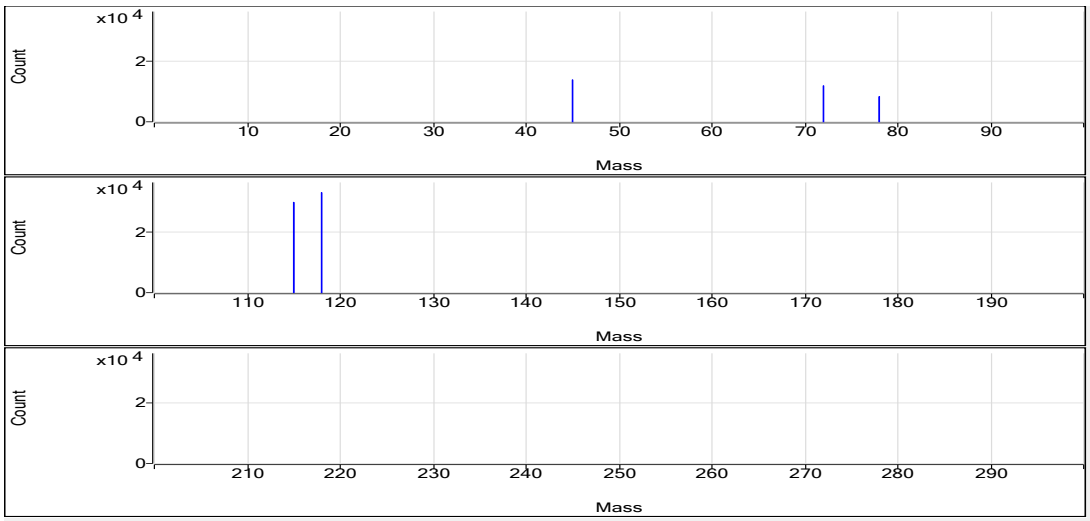
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2312837.88	0.9	100.8	Analog	0.1000	3
No Gas	Ge	72	1059040.79	0.7	101.9	Pulse	0.1000	3
H2	Sc	45	138174.57	1.0	99.4	Pulse	0.1000	3
H2	Ge	72	118725.54	0.3	100.6	Pulse	0.1000	3
H2	In	115	297314.56	1.1	100.9	Pulse	0.1000	3
He	Sc	45	47138.36	1.1	100.7	Pulse	0.1000	3
He	Ge	72	77319.40	0.5	101.1	Pulse	0.1000	3
He	In	115	60814.44	0.8	100.3	Pulse	0.1000	3
He	Tb	159	240485.01	0.7	99.7	Pulse	0.1000	3
He	Bi	209	165671.88	0.9	100.0	Pulse	0.1000	3

No Gas

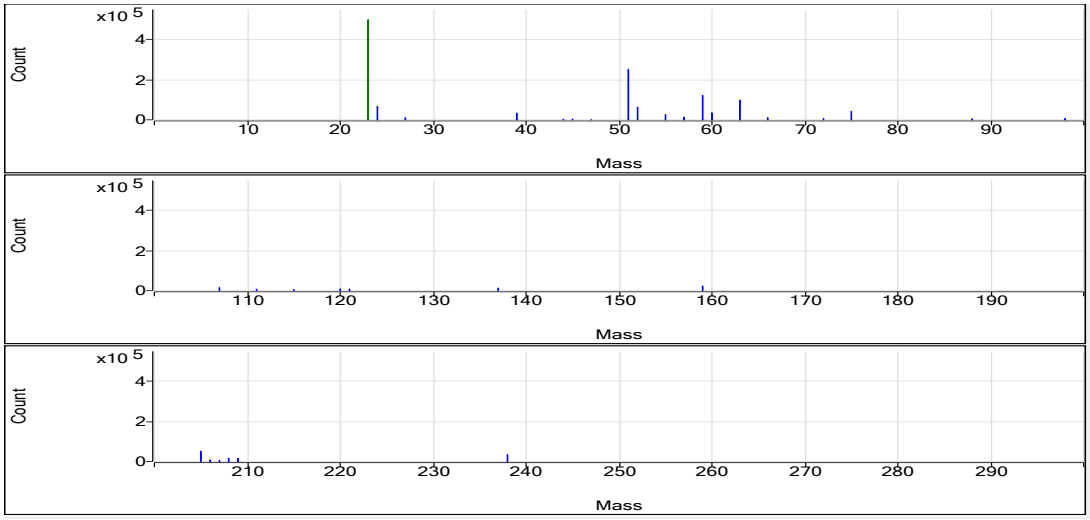


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.918	0.0203	47376.05	0.0004	9.309E-06
Be	9	1	No Gas	53.351	0.0212	48840.09	0.0004	9.309E-06
Be	9	1	No Gas	53.176	0.0212	48711.67	0.0004	9.309E-06
Se	78	2	H2	104.474	0.0467	5564.30	0.0004	5.598E-06
Se	78	2	H2	105.04	0.047	5562.30	0.0004	5.598E-06
Se	78	2	H2	104.499	0.0467	5549.63	0.0004	5.598E-06
Na	23	3	He	33890.509	106.4665	4997254.30	0.0031	0.4657
Na	23	3	He	34086.721	107.0802	5006786.49	0.0031	0.4657
Na	23	3	He	33531.443	105.3435	5027037.11	0.0031	0.4657
Mg	24	3	He	9693.241	14.712	690539.68	0.0015	0.003704
Mg	24	3	He	9747.349	14.7941	691730.54	0.0015	0.003704
Mg	24	3	He	9493.373	14.4087	687588.51	0.0015	0.003704
Al	27	3	He	5120.732	2.3925	112296.51	0.0005	0.0007154
Al	27	3	He	5046.907	2.358	110253.61	0.0005	0.0007154
Al	27	3	He	4911.627	2.2948	109509.35	0.0005	0.0007154
K	39	3	He	6321.466	7.2996	342622.46	0.0011	0.4296
K	39	3	He	6339.185	7.3188	342209.02	0.0011	0.4296
K	39	3	He	6175.912	7.1414	340790.35	0.0011	0.4296
Ca	44	3	He	8982.209	0.5582	26201.65	0.0001	0.002924
Ca	44	3	He	8854.057	0.5503	25730.73	0.0001	0.002924
Ca	44	3	He	9013.896	0.5602	26732.29	0.0001	0.002924
Ti	47	3	He	545.213	0.2641	12395.15	0.0005	0
Ti	47	3	He	551.283	0.267	12485.10	0.0005	0
Ti	47	3	He	508.554	0.2463	11754.63	0.0005	0
V	51	3	He	511.403	10.7735	505680.94	0.021	0.009571
V	51	3	He	510.677	10.7583	503027.22	0.021	0.009571
V	51	3	He	503.644	10.6102	506324.84	0.021	0.009571
Cr	52	3	He	510.029	13.6271	639619.25	0.0267	0.01758
Cr	52	3	He	512.34	13.6888	640050.34	0.0267	0.01758
Cr	52	3	He	509.293	13.6075	649354.09	0.0267	0.01758
Mn	55	3	He	522.762	5.66	265663.45	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	523.146	5.6641	264839.04	0.0108	0.004199
Mn	55	3	He	522.77	5.66	270099.84	0.0108	0.004199
Fe	57	3	He	5703.778	2.8598	134230.71	0.0005	0.002993
Fe	57	3	He	5667.18	2.8415	132858.90	0.0005	0.002993
Fe	57	3	He	5618.049	2.8168	134421.24	0.0005	0.002993
Co	59	3	He	502.461	26.3075	1234802.87	0.0524	0.003063
Co	59	3	He	499.658	26.1608	1223207.48	0.0524	0.003063
Co	59	3	He	494.189	25.8744	1234739.75	0.0524	0.003063
Ni	60	3	He	527.506	5.7788	353880.78	0.0109	0.01116
Ni	60	3	He	525.738	5.7595	347160.82	0.0109	0.01116
Ni	60	3	He	526.64	5.7694	351528.00	0.0109	0.01116
Cu	63	3	He	504.244	12.8625	989308.74	0.0255	0.01531
Cu	63	3	He	499.44	12.7401	986937.33	0.0255	0.01531
Cu	63	3	He	505.154	12.8857	999633.34	0.0255	0.01531
Zn	66	3	He	527.811	1.5216	117031.83	0.0029	0.002787
Zn	66	3	He	528.188	1.5227	117957.26	0.0029	0.002787
Zn	66	3	He	521.127	1.5024	116548.39	0.0029	0.002787
As	75	3	He	521.762	1.111	85450.94	0.0021	0.0004097
As	75	3	He	528.415	1.1252	87162.26	0.0021	0.0004097
As	75	3	He	524.207	1.1162	86591.14	0.0021	0.0004097
Sr	88	3	He	96.02	0.9059	55477.45	0.0094	0.0008765
Sr	88	3	He	98.789	0.932	56179.80	0.0094	0.0008765
Sr	88	3	He	94.251	0.8893	54183.31	0.0094	0.0008765
Mo	98	3	He	52.133	1.2013	73561.85	0.023	0.0002199
Mo	98	3	He	52.661	1.2134	73139.91	0.023	0.0002199
Mo	98	3	He	51.273	1.1814	71984.34	0.023	0.0002199
Ag	107	3	He	53.384	2.5795	157959.27	0.0483	0.0008224
Ag	107	3	He	54.191	2.6184	157828.28	0.0483	0.0008224
Ag	107	3	He	53.554	2.5877	157666.96	0.0483	0.0008224
Cd	111	3	He	53.844	0.2872	17589.88	0.0053	2.193E-05
Cd	111	3	He	53.706	0.2865	17269.54	0.0053	2.193E-05
Cd	111	3	He	53.475	0.2853	17381.68	0.0053	2.193E-05
Sn	120	3	He	104.108	1.555	95221.11	0.0148	0.01345
Sn	120	3	He	102.211	1.5269	92033.46	0.0148	0.01345
Sn	120	3	He	104.071	1.5544	94710.26	0.0148	0.01345
Sb	121	3	He	105.676	1.5124	92615.42	0.0143	0.0004392
Sb	121	3	He	105.449	1.5092	90966.00	0.0143	0.0004392
Sb	121	3	He	103.8	1.4856	90515.13	0.0143	0.0004392
Ba	137	3	He	526.799	2.2978	140710.24	0.0044	0.0001096
Ba	137	3	He	529.174	2.3081	139126.00	0.0044	0.0001096
Ba	137	3	He	535.23	2.3346	142244.88	0.0044	0.0001096
Tl	205	3	He	104.878	2.1802	526857.30	0.0208	0.0002491
Tl	205	3	He	106.659	2.2172	529099.56	0.0208	0.0002491
Tl	205	3	He	104.842	2.1795	525628.86	0.0208	0.0002491
Pb	208	3	He	52.916	1.441	185611.62	0.0272	0.0006218
Pb	208	3	He	52.966	1.4424	181943.36	0.0272	0.0006218
Pb	208	3	He	51.974	1.4154	179888.59	0.0272	0.0006218
U	238	3	He	53.503	1.4716	355607.81	0.0275	2.763E-05
U	238	3	He	53.878	1.4819	353621.32	0.0275	2.763E-05
U	238	3	He	53.025	1.4584	351728.24	0.0275	2.763E-05
Sc	45	1	No Gas			2337392.00		
Sc	45	1	No Gas			2299809.97		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2301311.68		
Ge	72	1	No Gas			1065950.30		
Ge	72	1	No Gas			1060171.94		
Ge	72	1	No Gas			1051000.14		
Sc	45	2	H2			137109.53		
Sc	45	2	H2			139761.21		
Sc	45	2	H2			137652.96		
Ge	72	2	H2			119067.82		
Ge	72	2	H2			118383.35		
Ge	72	2	H2			118725.46		
In	115	2	H2			295697.44		
In	115	2	H2			295110.93		
In	115	2	H2			301135.31		
Sc	45	3	He			46937.32		
Sc	45	3	He			46757.33		
Sc	45	3	He			47720.44		
Ge	72	3	He			76914.15		
Ge	72	3	He			77467.05		
Ge	72	3	He			77577.01		
In	115	3	He			61903.84		
In	115	3	He			60920.28		
In	115	3	He			61592.96		
Tb	159	3	He			241652.05		
Tb	159	3	He			238629.82		
Tb	159	3	He			241173.16		
Bi	209	3	He			165378.47		
Bi	209	3	He			167310.41		
Bi	209	3	He			164326.76		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

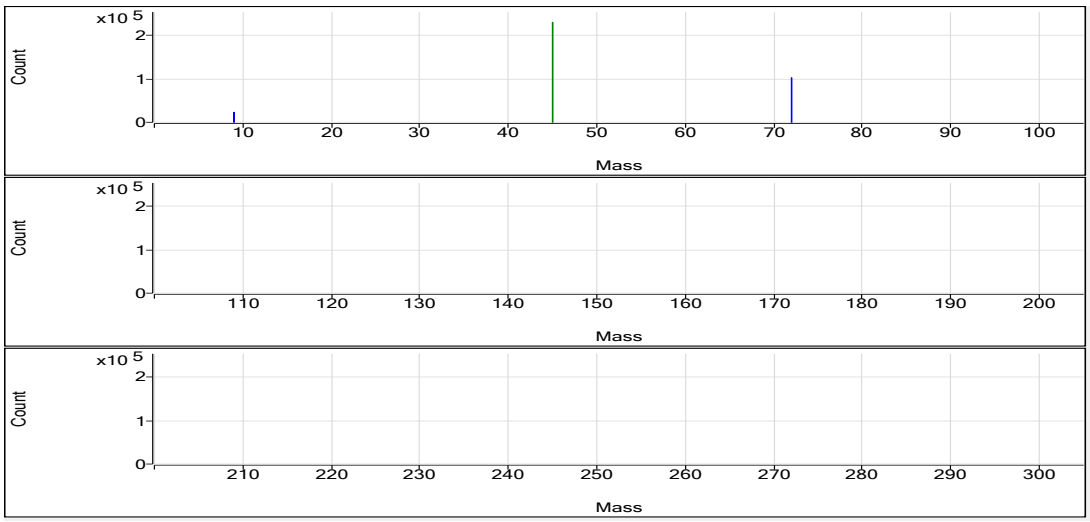
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.032	ppb	2.0	46952.82	0.0203	Pulse	0.5000	3
Se	78	72	H2	52.222	ppb	1.9	2727.79	0.0234	Pulse	1.5000	3
Na	23	45	He	4814.795	ppb	2.2	722129.91	15.5251	Pulse	0.1000	3
Mg	24	45	He	5022.122	ppb	1.6	354645.91	7.6241	Pulse	0.1000	3
Al	27	45	He	4938.910	ppb	1.3	107341.93	2.3076	Pulse	0.1000	3
K	39	45	He	4984.751	ppb	0.8	271998.77	5.8469	Pulse	0.1000	3
Ca	44	45	He	4864.192	ppb	4.7	14119.84	0.3036	Pulse	0.1000	3
Ti	47	45	He	5017.285	ppb	2.6	113041.81	2.4302	Pulse	0.1000	3
V	51	45	He	502.490	ppb	2.0	492398.96	10.5859	Pulse	0.5000	3
Cr	52	45	He	504.175	ppb	2.5	626555.34	13.4709	Pulse	0.1000	3
Mn	55	45	He	508.451	ppb	1.7	256075.24	5.5051	Pulse	0.1000	3
Fe	57	45	He	5117.313	ppb	1.6	119362.53	2.5660	Pulse	0.1000	3
Co	59	45	He	489.924	ppb	1.7	1193183.11	25.6512	Pulse	0.1000	3
Ni	60	115	He	512.077	ppb	0.3	340849.96	5.6102	Pulse	0.1000	3
Cu	63	72	He	502.578	ppb	2.2	957911.10	12.8200	Pulse	0.1000	3
Zn	66	72	He	525.869	ppb	1.6	113285.41	1.5160	Pulse	0.1000	3
As	75	72	He	525.481	ppb	2.0	83606.81	1.1189	Pulse	0.5000	3
Sr	88	115	He	50.035	ppb	2.0	28706.54	0.4725	Pulse	0.1000	3
Mo	98	115	He	51.178	ppb	1.8	71639.91	1.1793	Pulse	0.1000	3
Ag	107	115	He	51.638	ppb	1.1	151580.45	2.4951	Pulse	0.1000	3
Cd	111	115	He	50.997	ppb	0.5	16528.77	0.2721	Pulse	0.5000	3
Sn	120	115	He	51.359	ppb	2.9	47008.49	0.7739	Pulse	0.1000	3
Sb	121	115	He	51.310	ppb	1.2	44624.90	0.7346	Pulse	0.1000	3
Ba	137	115	He	513.574	ppb	2.0	136076.84	2.2401	Pulse	0.1000	3
Tl	205	159	He	51.121	ppb	0.5	259192.52	1.0628	Pulse	0.1000	3
Pb	208	159	He	51.045	ppb	0.1	338992.90	1.3901	Pulse	0.1000	3
U	238	159	He	51.059	ppb	0.9	342468.08	1.4044	Pulse	0.1000	3

ISTD Table:

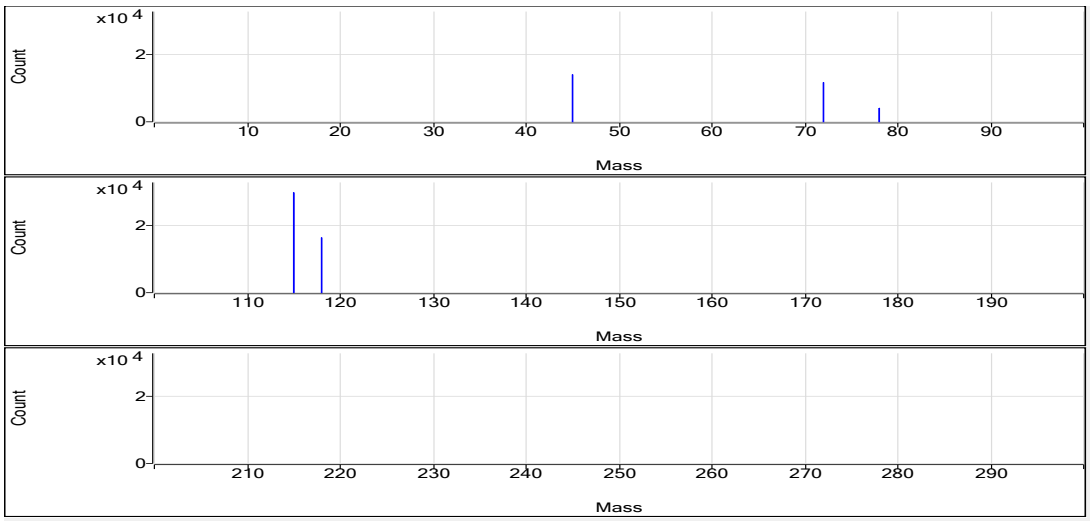
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2311635.59	1.0	100.8	Analog	0.1000	3
No Gas	Ge	72	1030390.82	0.6	99.2	Pulse	0.1000	3
H2	Sc	45	140144.48	1.6	100.8	Pulse	0.1000	3
H2	Ge	72	116752.77	0.7	98.9	Pulse	0.1000	3
H2	In	115	296991.06	0.7	100.8	Pulse	0.1000	3
He	Sc	45	46523.51	1.5	99.4	Pulse	0.1000	3
He	Ge	72	74740.49	1.9	97.7	Pulse	0.1000	3
He	In	115	60757.89	1.5	100.2	Pulse	0.1000	3
He	Tb	159	243865.47	0.5	101.1	Pulse	0.1000	3
He	Bi	209	167355.47	0.2	101.0	Pulse	0.1000	3

No Gas

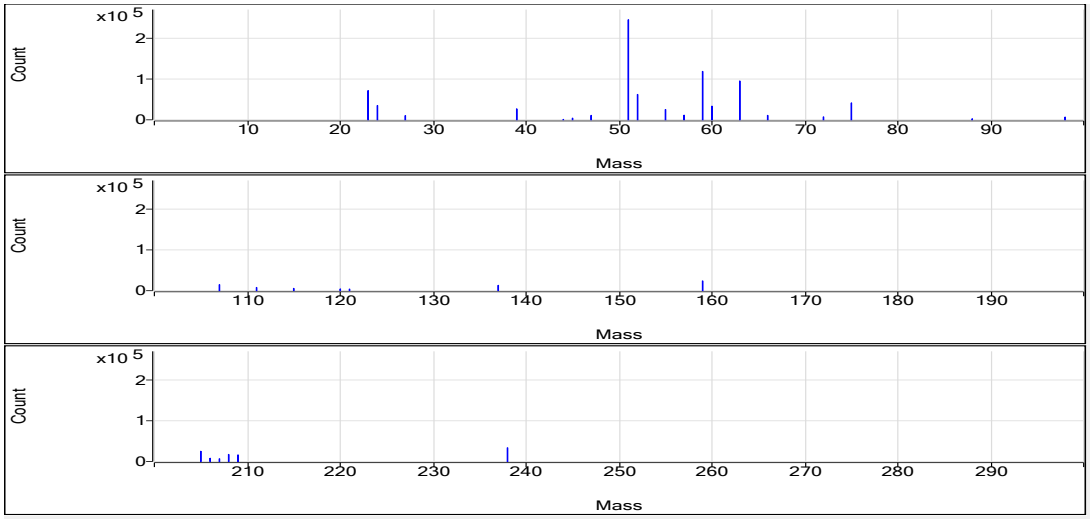


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.987	0.0199	46411.31	0.0004	9.309E-06
Be	9	1	No Gas	51.999	0.0207	47335.91	0.0004	9.309E-06
Be	9	1	No Gas	51.111	0.0203	47111.24	0.0004	9.309E-06
Se	78	2	H2	52.822	0.0236	2778.91	0.0004	5.598E-06
Se	78	2	H2	51.099	0.0229	2654.22	0.0004	5.598E-06
Se	78	2	H2	52.747	0.0236	2750.24	0.0004	5.598E-06
Na	23	3	He	4708.004	15.1911	716847.49	0.0031	0.4657
Na	23	3	He	4816.095	15.5292	723305.61	0.0031	0.4657
Na	23	3	He	4920.286	15.8551	726236.63	0.0031	0.4657
Mg	24	3	He	4956.433	7.5245	355068.82	0.0015	0.003704
Mg	24	3	He	4998.142	7.5877	353415.66	0.0015	0.003704
Mg	24	3	He	5111.792	7.7602	355453.24	0.0015	0.003704
Al	27	3	He	4867.874	2.2744	107324.63	0.0005	0.0007154
Al	27	3	He	4953.594	2.3144	107798.78	0.0005	0.0007154
Al	27	3	He	4995.261	2.3339	106902.38	0.0005	0.0007154
K	39	3	He	4944.295	5.8029	273831.66	0.0011	0.4296
K	39	3	He	4990.662	5.8533	272630.43	0.0011	0.4296
K	39	3	He	5019.296	5.8844	269534.21	0.0011	0.4296
Ca	44	3	He	4640.606	0.2898	13676.11	0.0001	0.002924
Ca	44	3	He	4851.639	0.3029	14106.57	0.0001	0.002924
Ca	44	3	He	5100.331	0.3182	14576.85	0.0001	0.002924
Ti	47	3	He	4873.832	2.3607	111397.53	0.0005	0
Ti	47	3	He	5128.818	2.4842	115706.57	0.0005	0
Ti	47	3	He	5049.207	2.4456	112021.34	0.0005	0
V	51	3	He	492.743	10.3808	489854.34	0.021	0.009571
V	51	3	He	502.256	10.581	492833.06	0.021	0.009571
V	51	3	He	512.472	10.796	494509.47	0.021	0.009571
Cr	52	3	He	492.548	13.1606	621032.22	0.0267	0.01758
Cr	52	3	He	502.033	13.4137	624773.55	0.0267	0.01758
Cr	52	3	He	517.945	13.8383	633860.26	0.0267	0.01758
Mn	55	3	He	499.13	5.4043	255021.19	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	509.851	5.5203	257119.21	0.0108	0.004199
Mn	55	3	He	516.37	5.5908	256085.33	0.0108	0.004199
Fe	57	3	He	5031.623	2.5231	119063.11	0.0005	0.002993
Fe	57	3	He	5122.833	2.5688	119648.12	0.0005	0.002993
Fe	57	3	He	5197.482	2.6062	119376.36	0.0005	0.002993
Co	59	3	He	482.292	25.2516	1191590.14	0.0524	0.003063
Co	59	3	He	488.751	25.5898	1191899.83	0.0524	0.003063
Co	59	3	He	498.73	26.1122	1196059.36	0.0524	0.003063
Ni	60	3	He	513.866	5.6297	336111.95	0.0109	0.01116
Ni	60	3	He	511.64	5.6054	342492.14	0.0109	0.01116
Ni	60	3	He	510.726	5.5954	343945.78	0.0109	0.01116
Cu	63	3	He	509.425	12.9945	961468.03	0.0255	0.01531
Cu	63	3	He	508.588	12.9732	958323.97	0.0255	0.01531
Cu	63	3	He	489.719	12.4924	953941.31	0.0255	0.01531
Zn	66	3	He	528.085	1.5224	112641.41	0.0029	0.002787
Zn	66	3	He	532.735	1.5358	113446.15	0.0029	0.002787
Zn	66	3	He	516.787	1.4899	113768.66	0.0029	0.002787
As	75	3	He	530.631	1.1299	83599.43	0.0021	0.0004097
As	75	3	He	532.407	1.1336	83742.23	0.0021	0.0004097
As	75	3	He	513.406	1.0932	83478.77	0.0021	0.0004097
Sr	88	3	He	50.099	0.4731	28245.47	0.0094	0.0008765
Sr	88	3	He	51.004	0.4816	29427.95	0.0094	0.0008765
Sr	88	3	He	49.003	0.4628	28446.21	0.0094	0.0008765
Mo	98	3	He	51.728	1.1919	71161.81	0.023	0.0002199
Mo	98	3	He	51.715	1.1916	72808.23	0.023	0.0002199
Mo	98	3	He	50.092	1.1542	70949.68	0.023	0.0002199
Ag	107	3	He	52.267	2.5255	150779.67	0.0483	0.0008224
Ag	107	3	He	51.55	2.4908	152192.79	0.0483	0.0008224
Ag	107	3	He	51.098	2.469	151768.89	0.0483	0.0008224
Cd	111	3	He	51.242	0.2734	16320.57	0.0053	2.193E-05
Cd	111	3	He	50.752	0.2707	16542.77	0.0053	2.193E-05
Cd	111	3	He	50.997	0.2721	16722.96	0.0053	2.193E-05
Sn	120	3	He	52.895	0.7967	47563.18	0.0148	0.01345
Sn	120	3	He	51.277	0.7727	47212.41	0.0148	0.01345
Sn	120	3	He	49.906	0.7524	46249.88	0.0148	0.01345
Sb	121	3	He	51.999	0.7444	44444.53	0.0143	0.0004392
Sb	121	3	He	51.199	0.733	44785.40	0.0143	0.0004392
Sb	121	3	He	50.732	0.7263	44644.77	0.0143	0.0004392
Ba	137	3	He	525.106	2.2904	136744.65	0.0044	0.0001096
Ba	137	3	He	509.167	2.2209	135697.86	0.0044	0.0001096
Ba	137	3	He	506.448	2.209	135788.01	0.0044	0.0001096
Tl	205	3	He	50.911	1.0585	256821.77	0.0208	0.0002491
Tl	205	3	He	51.032	1.061	259789.66	0.0208	0.0002491
Tl	205	3	He	51.421	1.0691	260966.13	0.0208	0.0002491
Pb	208	3	He	51.102	1.3916	177478.30	0.0272	0.0006218
Pb	208	3	He	51.047	1.3901	180171.87	0.0272	0.0006218
Pb	208	3	He	50.987	1.3885	178216.54	0.0272	0.0006218
U	238	3	He	51.456	1.4153	343386.83	0.0275	2.763E-05
U	238	3	He	51.175	1.4075	344644.45	0.0275	2.763E-05
U	238	3	He	50.547	1.3903	339372.96	0.0275	2.763E-05
Sc	45	1	No Gas			2332437.47		
Sc	45	1	No Gas			2286884.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2315584.65		
Ge	72	1	No Gas			1037131.31		
Ge	72	1	No Gas			1026568.03		
Ge	72	1	No Gas			1027473.11		
Sc	45	2	H2			138934.23		
Sc	45	2	H2			142765.95		
Sc	45	2	H2			138733.25		
Ge	72	2	H2			117598.78		
Ge	72	2	H2			116108.31		
Ge	72	2	H2			116551.23		
In	115	2	H2			294733.75		
In	115	2	H2			297974.60		
In	115	2	H2			298264.84		
Sc	45	3	He			47188.64		
Sc	45	3	He			46577.18		
Sc	45	3	He			45804.70		
Ge	72	3	He			73990.33		
Ge	72	3	He			73869.64		
Ge	72	3	He			76361.51		
In	115	3	He			60036.25		
In	115	3	He			61431.25		
In	115	3	He			61793.34		
Tb	159	3	He			242632.46		
Tb	159	3	He			244858.12		
Tb	159	3	He			244105.82		
Bi	209	3	He			167361.91		
Bi	209	3	He			167634.94		
Bi	209	3	He			167069.55		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
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Sample Name	CCB 6148203
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

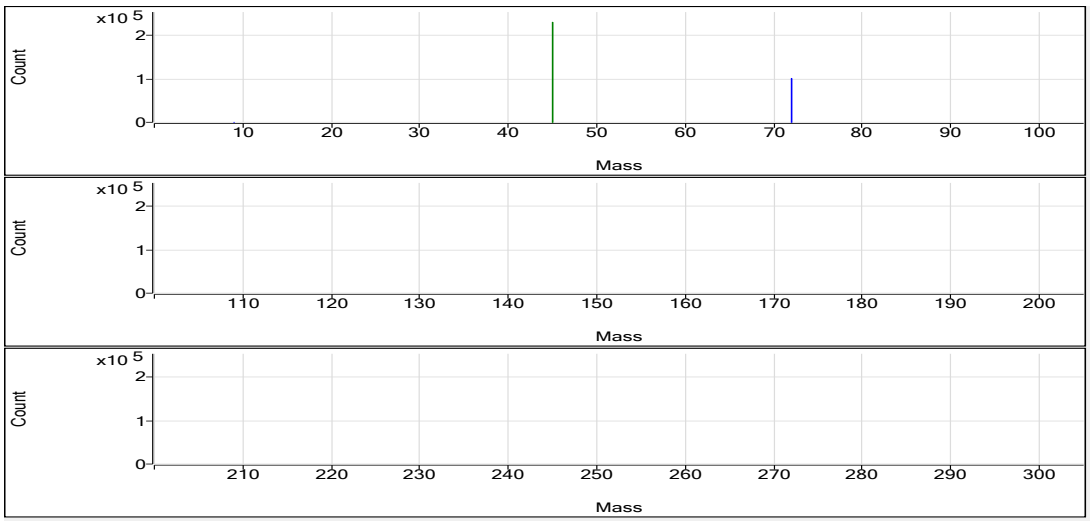
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.071	ppb	15.1	86.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.079	ppb	29.3	4.67	0.0000	Pulse	1.5000	3
Na	23	45	He	-17.449	ppb	N/A	18383.88	0.4111	Pulse	0.1000	3
Mg	24	45	He	2.777	ppb	36.1	353.35	0.0079	Pulse	0.1000	3
Al	27	45	He	1.487	ppb	99.9	63.33	0.0014	Pulse	0.1000	3
K	39	45	He	-14.592	ppb	N/A	18474.37	0.4138	Pulse	0.1000	3
Ca	44	45	He	-1.420	ppb	N/A	126.67	0.0028	Pulse	0.1000	3
Ti	47	45	He	3.388	ppb	21.2	73.33	0.0016	Pulse	0.1000	3
V	51	45	He	0.278	ppb	18.2	688.69	0.0154	Pulse	0.5000	3
Cr	52	45	He	0.250	ppb	57.6	1083.40	0.0243	Pulse	0.1000	3
Mn	55	45	He	0.252	ppb	41.0	310.01	0.0069	Pulse	0.1000	3
Fe	57	45	He	1.182	ppb	120.4	160.01	0.0036	Pulse	0.1000	3
Co	59	45	He	0.216	ppb	5.4	643.37	0.0144	Pulse	0.1000	3
Ni	60	115	He	0.299	ppb	49.1	863.38	0.0144	Pulse	0.1000	3
Cu	63	72	He	0.254	ppb	62.7	1630.14	0.0218	Pulse	0.1000	3
Zn	66	72	He	0.550	ppb	68.7	326.68	0.0044	Pulse	0.1000	3
As	75	72	He	0.250	ppb	21.3	70.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.049	ppb	158.1	80.00	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.053	ppb	20.5	86.67	0.0014	Pulse	0.1000	3
Ag	107	115	He	0.015	ppb	64.3	93.34	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.029	ppb	61.3	10.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.070	ppb	121.4	866.72	0.0145	Pulse	0.1000	3
Sb	121	115	He	0.043	ppb	81.5	63.33	0.0011	Pulse	0.1000	3
Ba	137	115	He	0.345	ppb	12.8	96.67	0.0016	Pulse	0.1000	3
Tl	205	159	He	0.629	ppb	8.8	3190.45	0.0133	Pulse	0.1000	3
Pb	208	159	He	0.010	ppb	47.7	216.67	0.0009	Pulse	0.1000	3
U	238	159	He	0.028	ppb	38.8	193.34	0.0008	Pulse	0.1000	3

ISTD Table:

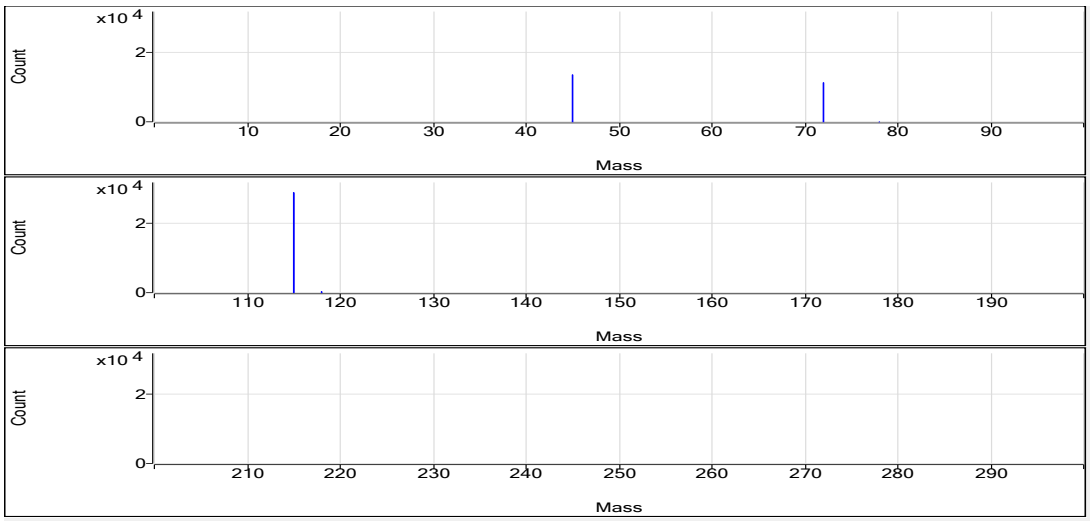
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2307348.61	0.8	100.6	Analog	0.1000	3
No Gas	Ge	72	1012087.64	0.2	97.4	Pulse	0.1000	3
H2	Sc	45	136349.41	0.7	98.1	Pulse	0.1000	3
H2	Ge	72	113548.91	0.7	96.2	Pulse	0.1000	3
H2	In	115	290198.18	0.7	98.5	Pulse	0.1000	3
He	Sc	45	44711.76	1.4	95.5	Pulse	0.1000	3
He	Ge	72	74931.24	1.4	98.0	Pulse	0.1000	3
He	In	115	59853.21	0.9	98.7	Pulse	0.1000	3
He	Tb	159	239329.12	0.2	99.2	Pulse	0.1000	3
He	Bi	209	165992.65	1.2	100.2	Pulse	0.1000	3

No Gas

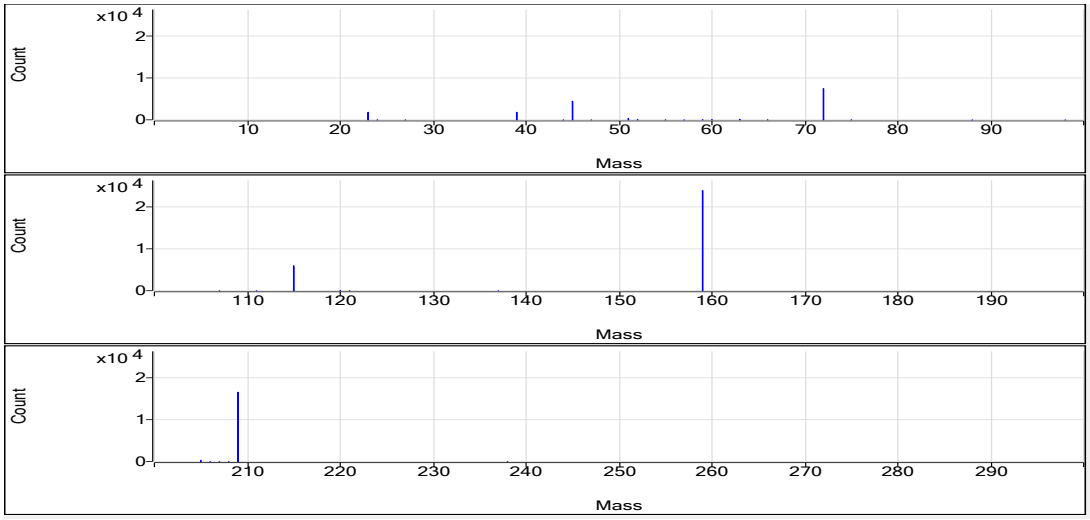


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.08	0	94.00	0.0004	9.309E-06
Be	9	1	No Gas	0.074	0	90.00	0.0004	9.309E-06
Be	9	1	No Gas	0.059	0	76.00	0.0004	9.309E-06
Se	78	2	H2	0.106	0.0001	6.00	0.0004	5.598E-06
Se	78	2	H2	0.066	0	4.00	0.0004	5.598E-06
Se	78	2	H2	0.066	0	4.00	0.0004	5.598E-06
Na	23	3	He	-22.283	0.396	17549.71	0.0031	0.4657
Na	23	3	He	-15.388	0.4175	18530.61	0.0031	0.4657
Na	23	3	He	-14.676	0.4198	19071.33	0.0031	0.4657
Mg	24	3	He	3.359	0.0088	390.02	0.0015	0.003704
Mg	24	3	He	3.351	0.0088	390.02	0.0015	0.003704
Mg	24	3	He	1.621	0.0062	280.01	0.0015	0.003704
Al	27	3	He	0.884	0.0011	50.00	0.0005	0.0007154
Al	27	3	He	0.398	0.0009	40.00	0.0005	0.0007154
Al	27	3	He	3.181	0.0022	100.00	0.0005	0.0007154
K	39	3	He	60.281	0.4951	21945.11	0.0011	0.4296
K	39	3	He	-25.238	0.4022	17850.12	0.0011	0.4296
K	39	3	He	-78.82	0.344	15627.87	0.0011	0.4296
Ca	44	3	He	3.797	0.0032	140.01	0.0001	0.002924
Ca	44	3	He	0.08	0.0029	130.00	0.0001	0.002924
Ca	44	3	He	-8.138	0.0024	110.00	0.0001	0.002924
Ti	47	3	He	2.795	0.0014	60.00	0.0005	0
Ti	47	3	He	4.187	0.002	90.00	0.0005	0
Ti	47	3	He	3.181	0.0015	70.00	0.0005	0
V	51	3	He	0.317	0.0162	720.02	0.021	0.009571
V	51	3	He	0.295	0.0158	700.02	0.021	0.009571
V	51	3	He	0.221	0.0142	646.02	0.021	0.009571
Cr	52	3	He	0.415	0.0287	1270.09	0.0267	0.01758
Cr	52	3	He	0.186	0.0225	1000.05	0.0267	0.01758
Cr	52	3	He	0.15	0.0216	980.06	0.0267	0.01758
Mn	55	3	He	0.133	0.0056	250.01	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.32	0.0077	340.02	0.0108	0.004199
Mn	55	3	He	0.304	0.0075	340.01	0.0108	0.004199
Fe	57	3	He	2.584	0.0043	190.01	0.0005	0.002993
Fe	57	3	He	1.223	0.0036	160.01	0.0005	0.002993
Fe	57	3	He	-0.262	0.0029	130.01	0.0005	0.002993
Co	59	3	He	0.209	0.014	620.03	0.0524	0.003063
Co	59	3	He	0.23	0.0151	670.04	0.0524	0.003063
Co	59	3	He	0.211	0.0141	640.03	0.0524	0.003063
Ni	60	3	He	0.327	0.0147	890.05	0.0109	0.01116
Ni	60	3	He	0.14	0.0127	760.04	0.0109	0.01116
Ni	60	3	He	0.429	0.0159	940.06	0.0109	0.01116
Cu	63	3	He	0.286	0.0226	1710.14	0.0255	0.01531
Cu	63	3	He	0.395	0.0254	1870.17	0.0255	0.01531
Cu	63	3	He	0.081	0.0174	1310.10	0.0255	0.01531
Zn	66	3	He	0.133	0.0032	240.01	0.0029	0.002787
Zn	66	3	He	0.87	0.0053	390.01	0.0029	0.002787
Zn	66	3	He	0.645	0.0046	350.02	0.0029	0.002787
As	75	3	He	0.292	0.001	78.00	0.0021	0.0004097
As	75	3	He	0.19	0.0008	60.00	0.0021	0.0004097
As	75	3	He	0.269	0.001	74.00	0.0021	0.0004097
Sr	88	3	He	-0.005	0.0008	50.00	0.0094	0.0008765
Sr	88	3	He	0.137	0.0022	130.00	0.0094	0.0008765
Sr	88	3	He	0.014	0.001	60.00	0.0094	0.0008765
Mo	98	3	He	0.062	0.0017	100.00	0.023	0.0002199
Mo	98	3	He	0.041	0.0012	70.00	0.023	0.0002199
Mo	98	3	He	0.056	0.0015	90.00	0.023	0.0002199
Ag	107	3	He	0.021	0.0018	110.01	0.0483	0.0008224
Ag	107	3	He	0.021	0.0018	110.00	0.0483	0.0008224
Ag	107	3	He	0.004	0.001	60.00	0.0483	0.0008224
Cd	111	3	He	0.039	0.0002	14.00	0.0053	2.193E-05
Cd	111	3	He	0.04	0.0002	14.00	0.0053	2.193E-05
Cd	111	3	He	0.009	0.0001	4.00	0.0053	2.193E-05
Sn	120	3	He	-0.025	0.0131	790.05	0.0148	0.01345
Sn	120	3	He	0.095	0.0149	890.05	0.0148	0.01345
Sn	120	3	He	0.139	0.0155	920.06	0.0148	0.01345
Sb	121	3	He	0.074	0.0015	90.00	0.0143	0.0004392
Sb	121	3	He	0.051	0.0012	70.00	0.0143	0.0004392
Sb	121	3	He	0.005	0.0005	30.00	0.0143	0.0004392
Ba	137	3	He	0.317	0.0015	90.00	0.0044	0.0001096
Ba	137	3	He	0.396	0.0018	110.00	0.0044	0.0001096
Ba	137	3	He	0.323	0.0015	90.00	0.0044	0.0001096
Tl	205	3	He	0.681	0.0144	3440.51	0.0208	0.0002491
Tl	205	3	He	0.637	0.0135	3230.44	0.0208	0.0002491
Tl	205	3	He	0.57	0.0121	2900.39	0.0208	0.0002491
Pb	208	3	He	0.014	0.001	140.00	0.0272	0.0006218
Pb	208	3	He	0.012	0.001	150.01	0.0272	0.0006218
Pb	208	3	He	0.005	0.0008	150.01	0.0272	0.0006218
U	238	3	He	0.034	0.001	230.01	0.0275	2.763E-05
U	238	3	He	0.035	0.001	240.01	0.0275	2.763E-05
U	238	3	He	0.016	0.0005	110.00	0.0275	2.763E-05
Sc	45	1	No Gas			2286063.25		
Sc	45	1	No Gas			2322310.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2313672.15		
Ge	72	1	No Gas			1010251.16		
Ge	72	1	No Gas			1013232.25		
Ge	72	1	No Gas			1012779.52		
Sc	45	2	H2			137472.63		
Sc	45	2	H2			135636.54		
Sc	45	2	H2			135939.07		
Ge	72	2	H2			112884.79		
Ge	72	2	H2			113378.36		
Ge	72	2	H2			114383.57		
In	115	2	H2			292617.77		
In	115	2	H2			289406.09		
In	115	2	H2			288570.68		
Sc	45	3	He			44320.84		
Sc	45	3	He			44380.87		
Sc	45	3	He			45433.56		
Ge	72	3	He			75688.28		
Ge	72	3	He			73718.68		
Ge	72	3	He			75386.75		
In	115	3	He			60368.09		
In	115	3	He			59896.35		
In	115	3	He			59313.39		
Tb	159	3	He			238875.68		
Tb	159	3	He			239515.58		
Tb	159	3	He			239596.11		
Bi	209	3	He			163670.01		
Bi	209	3	He			166724.41		
Bi	209	3	He			167583.53		

Quantitation Report

Data File Name	047SMPL.d
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Sample Name	410-179201-K-2-A
Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

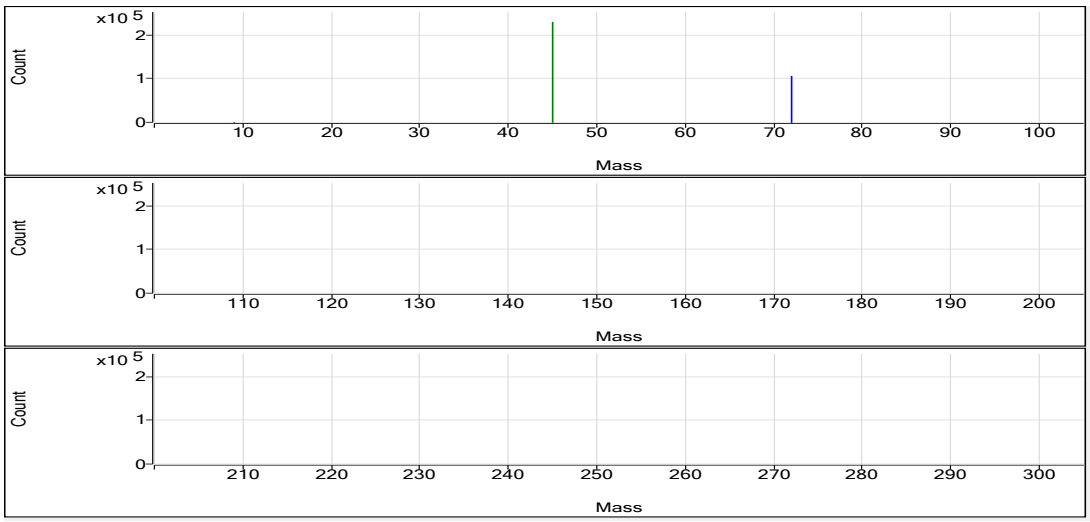
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.180	ppb	11.0	186.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.718	ppb	14.2	39.78	0.0003	Pulse	1.5000	3
Na	23	45	He	122697.528	ppb	1.7	17734760.99	384.2323	Analog	0.1000	3
Mg	24	45	He	16827.962	ppb	2.5	1178622.43	25.5380	Analog	0.1000	3
Al	27	45	He	317.330	ppb	8.4	6875.29	0.1489	Pulse	0.1000	3
K	39	45	He	7606.710	ppb	1.2	401419.75	8.6963	Pulse	0.1000	3
Ca	44	45	He	21482.329	ppb	1.2	61438.79	1.3310	Pulse	0.1000	3
Ti	47	45	He	19.866	ppb	28.0	443.35	0.0096	Pulse	0.1000	3
V	51	45	He	21.986	ppb	2.4	21799.18	0.4723	Pulse	0.5000	3
Cr	52	45	He	2.072	ppb	4.6	3363.78	0.0729	Pulse	0.1000	3
Mn	55	45	He	87.681	ppb	3.0	43973.34	0.9528	Pulse	0.1000	3
Fe	57	45	He	378.978	ppb	3.6	8899.36	0.1928	Pulse	0.1000	3
Co	59	45	He	0.194	ppb	15.7	610.03	0.0132	Pulse	0.1000	3
Ni	60	115	He	1.453	ppb	11.2	1613.47	0.0271	Pulse	0.1000	3
Cu	63	72	He	0.717	ppb	2.2	2626.97	0.0336	Pulse	0.1000	3
Zn	66	72	He	4.424	ppb	14.2	1213.42	0.0155	Pulse	0.1000	3
As	75	72	He	0.452	ppb	13.3	107.33	0.0014	Pulse	0.5000	3
Sr	88	115	He	173.519	ppb	1.3	97585.95	1.6364	Pulse	0.1000	3
Mo	98	115	He	1.738	ppb	7.2	2400.26	0.0403	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	217.3	70.00	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.023	ppb	16.4	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.221	ppb	66.7	996.73	0.0167	Pulse	0.1000	3
Sb	121	115	He	0.052	ppb	83.1	70.00	0.0012	Pulse	0.1000	3
Ba	137	115	He	9.826	ppb	5.9	2563.64	0.0430	Pulse	0.1000	3
Tl	205	159	He	0.085	ppb	3.1	490.02	0.0020	Pulse	0.1000	3
Pb	208	159	He	0.090	ppb	15.0	743.37	0.0031	Pulse	0.1000	3
U	238	159	He	0.135	ppb	4.5	906.73	0.0037	Pulse	0.1000	3

ISTD Table:

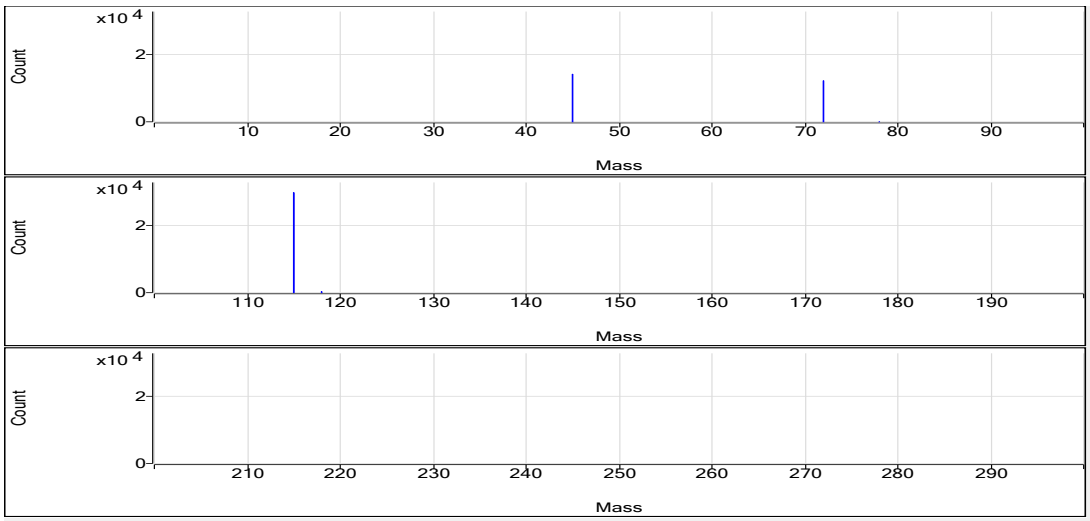
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2301208.98	0.3	100.3	Analog	0.1000	3
No Gas	Ge	72	1061196.13	0.3	102.1	Pulse	0.1000	3
H2	Sc	45	141193.54	1.3	101.5	Pulse	0.1000	3
H2	Ge	72	121641.11	1.6	103.0	Pulse	0.1000	3
H2	In	115	296091.97	1.0	100.5	Pulse	0.1000	3
He	Sc	45	46165.80	1.8	98.6	Pulse	0.1000	3
He	Ge	72	78253.85	0.9	102.3	Pulse	0.1000	3
He	In	115	59637.68	1.2	98.4	Pulse	0.1000	3
He	Tb	159	242811.44	1.0	100.7	Pulse	0.1000	3
He	Bi	209	168632.02	0.2	101.8	Pulse	0.1000	3

No Gas

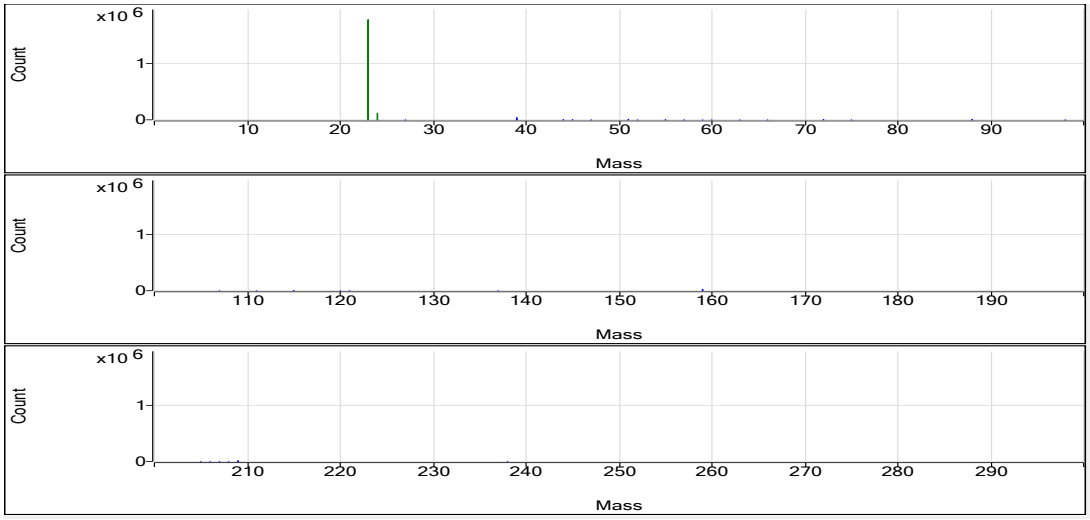


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.197	0.0001	202.00	0.0004	9.309E-06
Be	9	1	No Gas	0.187	0.0001	192.00	0.0004	9.309E-06
Be	9	1	No Gas	0.158	0.0001	166.00	0.0004	9.309E-06
Se	78	2	H2	0.71	0.0003	40.00	0.0004	5.598E-06
Se	78	2	H2	0.62	0.0003	34.00	0.0004	5.598E-06
Se	78	2	H2	0.825	0.0004	45.33	0.0004	5.598E-06
Na	23	3	He	123087.495	385.452	17740478.49	0.0031	0.4657
Na	23	3	He	120435.58	377.1575	17748544.74	0.0031	0.4657
Na	23	3	He	124569.509	390.0874	17715259.74	0.0031	0.4657
Mg	24	3	He	16877.821	25.6136	1178870.69	0.0015	0.003704
Mg	24	3	He	16378.227	24.8556	1169670.69	0.0015	0.003704
Mg	24	3	He	17227.839	26.1447	1187325.92	0.0015	0.003704
Al	27	3	He	286.943	0.1347	6201.38	0.0005	0.0007154
Al	27	3	He	327.53	0.1537	7232.74	0.0005	0.0007154
Al	27	3	He	337.518	0.1584	7191.75	0.0005	0.0007154
K	39	3	He	7630.259	8.7219	401427.69	0.0011	0.4296
K	39	3	He	7508.294	8.5894	404204.99	0.0011	0.4296
K	39	3	He	7681.579	8.7777	398626.56	0.0011	0.4296
Ca	44	3	He	21505.15	1.3324	61325.04	0.0001	0.002924
Ca	44	3	He	21221.4	1.3149	61876.70	0.0001	0.002924
Ca	44	3	He	21720.438	1.3457	61114.62	0.0001	0.002924
Ti	47	3	He	25.57	0.0124	570.03	0.0005	0
Ti	47	3	He	14.478	0.007	330.01	0.0005	0
Ti	47	3	He	19.549	0.0095	430.02	0.0005	0
V	51	3	He	22.269	0.4783	22012.76	0.021	0.009571
V	51	3	He	21.369	0.4593	21616.30	0.021	0.009571
V	51	3	He	22.319	0.4793	21768.49	0.021	0.009571
Cr	52	3	He	1.963	0.07	3220.42	0.0267	0.01758
Cr	52	3	He	2.105	0.0737	3470.47	0.0267	0.01758
Cr	52	3	He	2.147	0.0749	3400.46	0.0267	0.01758
Mn	55	3	He	89.505	0.9726	44762.05	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	84.616	0.9197	43277.82	0.0108	0.004199
Mn	55	3	He	88.921	0.9662	43880.14	0.0108	0.004199
Fe	57	3	He	366.333	0.1865	8582.51	0.0005	0.002993
Fe	57	3	He	377.259	0.1919	9032.76	0.0005	0.002993
Fe	57	3	He	393.342	0.2	9082.81	0.0005	0.002993
Co	59	3	He	0.228	0.015	690.04	0.0524	0.003063
Co	59	3	He	0.169	0.0119	560.03	0.0524	0.003063
Co	59	3	He	0.185	0.0128	580.03	0.0524	0.003063
Ni	60	3	He	1.314	0.0255	1510.12	0.0109	0.01116
Ni	60	3	He	1.414	0.0266	1610.14	0.0109	0.01116
Ni	60	3	He	1.633	0.029	1720.15	0.0109	0.01116
Cu	63	3	He	0.701	0.0332	2570.33	0.0255	0.01531
Cu	63	3	He	0.718	0.0336	2630.28	0.0255	0.01531
Cu	63	3	He	0.732	0.0339	2680.31	0.0255	0.01531
Zn	66	3	He	5.13	0.0175	1360.11	0.0029	0.002787
Zn	66	3	He	4.225	0.0149	1170.08	0.0029	0.002787
Zn	66	3	He	3.917	0.0141	1110.07	0.0029	0.002787
As	75	3	He	0.389	0.0012	96.00	0.0021	0.0004097
As	75	3	He	0.456	0.0014	108.00	0.0021	0.0004097
As	75	3	He	0.51	0.0015	118.00	0.0021	0.0004097
Sr	88	3	He	172.94	1.631	96483.21	0.0094	0.0008765
Sr	88	3	He	171.585	1.6182	97870.89	0.0094	0.0008765
Sr	88	3	He	176.032	1.6601	98403.74	0.0094	0.0008765
Mo	98	3	He	1.84	0.0426	2520.28	0.023	0.0002199
Mo	98	3	He	1.598	0.037	2240.25	0.023	0.0002199
Mo	98	3	He	1.777	0.0412	2440.26	0.023	0.0002199
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Ag	107	3	He	0.024	0.002	120.01	0.0483	0.0008224
Ag	107	3	He	0.004	0.001	60.00	0.0483	0.0008224
Cd	111	3	He	0.021	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.021	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.028	0.0002	10.00	0.0053	2.193E-05
Sn	120	3	He	0.13	0.0154	910.06	0.0148	0.01345
Sn	120	3	He	0.141	0.0155	940.06	0.0148	0.01345
Sn	120	3	He	0.39	0.0192	1140.08	0.0148	0.01345
Sb	121	3	He	0.064	0.0014	80.00	0.0143	0.0004392
Sb	121	3	He	0.004	0.0005	30.00	0.0143	0.0004392
Sb	121	3	He	0.087	0.0017	100.00	0.0143	0.0004392
Ba	137	3	He	9.278	0.0406	2400.26	0.0044	0.0001096
Ba	137	3	He	10.439	0.0456	2760.36	0.0044	0.0001096
Ba	137	3	He	9.762	0.0427	2530.29	0.0044	0.0001096
Tl	205	3	He	0.087	0.0021	500.03	0.0208	0.0002491
Tl	205	3	He	0.086	0.002	500.02	0.0208	0.0002491
Tl	205	3	He	0.082	0.002	470.02	0.0208	0.0002491
Pb	208	3	He	0.104	0.0035	440.02	0.0272	0.0006218
Pb	208	3	He	0.078	0.0027	310.02	0.0272	0.0006218
Pb	208	3	He	0.087	0.003	420.02	0.0272	0.0006218
U	238	3	He	0.137	0.0038	920.07	0.0275	2.763E-05
U	238	3	He	0.128	0.0035	870.07	0.0275	2.763E-05
U	238	3	He	0.14	0.0039	930.06	0.0275	2.763E-05
Sc	45	1	No Gas			2308307.00		
Sc	45	1	No Gas			2298654.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2296665.28		
Ge	72	1	No Gas			1064863.73		
Ge	72	1	No Gas			1057876.00		
Ge	72	1	No Gas			1060848.66		
Sc	45	2	H2			141768.68		
Sc	45	2	H2			139206.12		
Sc	45	2	H2			142605.82		
Ge	72	2	H2			123744.19		
Ge	72	2	H2			120096.00		
Ge	72	2	H2			121083.14		
In	115	2	H2			297290.35		
In	115	2	H2			298118.53		
In	115	2	H2			292867.03		
Sc	45	3	He			46025.13		
Sc	45	3	He			47058.71		
Sc	45	3	He			45413.57		
Ge	72	3	He			77506.84		
Ge	72	3	He			78300.52		
Ge	72	3	He			78954.19		
In	115	3	He			59163.09		
In	115	3	He			60487.79		
In	115	3	He			59283.09		
Tb	159	3	He			242949.78		
Tb	159	3	He			245131.77		
Tb	159	3	He			240352.77		
Bi	209	3	He			168749.43		
Bi	209	3	He			168294.63		
Bi	209	3	He			168852.01		

Quantitation Report

Data File Name	048SMPL.d
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Sample Name	410-179201-K-1-A
Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

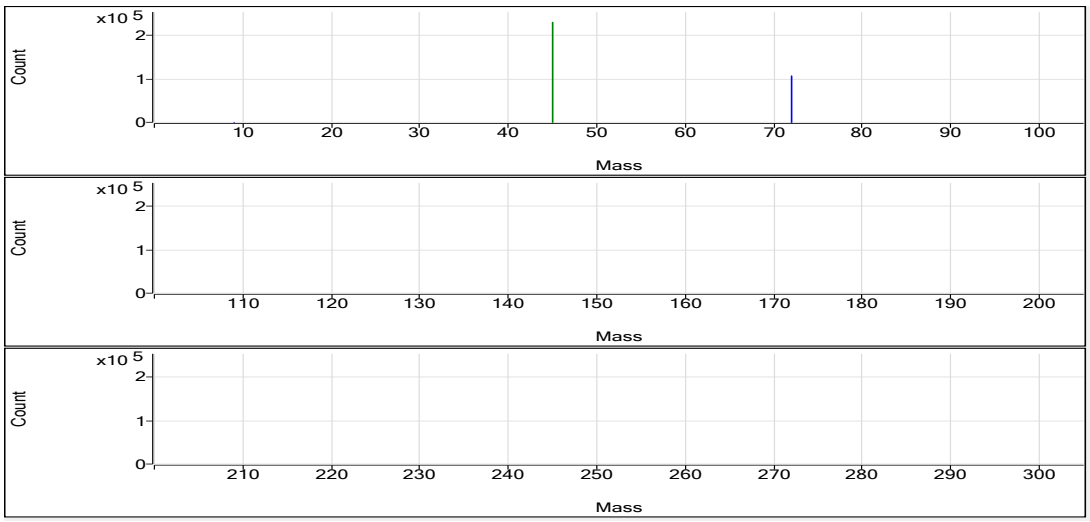
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.015	ppb	66.3	35.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.558	ppb	3.7	30.67	0.0003	Pulse	1.5000	3
Na	23	45	He	77775.391	ppb	1.5	11349460.66	243.7273	Analog	0.1000	3
Mg	24	45	He	12083.584	ppb	2.1	853915.33	18.3390	Pulse	0.1000	3
Al	27	45	He	29.607	ppb	10.2	676.70	0.0145	Pulse	0.1000	3
K	39	45	He	5375.478	ppb	2.1	292025.58	6.2715	Pulse	0.1000	3
Ca	44	45	He	14746.884	ppb	0.4	42595.88	0.9146	Pulse	0.1000	3
Ti	47	45	He	2.513	ppb	26.9	56.67	0.0012	Pulse	0.1000	3
V	51	45	He	24.533	ppb	1.1	24491.67	0.5259	Pulse	0.5000	3
Cr	52	45	He	1.571	ppb	4.6	2770.33	0.0595	Pulse	0.1000	3
Mn	55	45	He	41.333	ppb	0.9	21020.83	0.4514	Pulse	0.1000	3
Fe	57	45	He	144.245	ppb	0.9	3503.83	0.0752	Pulse	0.1000	3
Co	59	45	He	0.836	ppb	12.7	2183.56	0.0468	Pulse	0.1000	3
Ni	60	115	He	3.525	ppb	7.5	3043.72	0.0497	Pulse	0.1000	3
Cu	63	72	He	2.457	ppb	5.3	6091.32	0.0779	Pulse	0.1000	3
Zn	66	72	He	21.974	ppb	7.3	5160.98	0.0660	Pulse	0.1000	3
As	75	72	He	0.368	ppb	17.3	93.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	115.745	ppb	2.8	66840.89	1.0919	Pulse	0.1000	3
Mo	98	115	He	2.142	ppb	3.7	3033.72	0.0496	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	111.4	63.33	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	27.9	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.224	ppb	25.9	1026.73	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.113	ppb	45.4	126.67	0.0021	Pulse	0.1000	3
Ba	137	115	He	7.613	ppb	3.7	2040.22	0.0333	Pulse	0.1000	3
Tl	205	159	He	0.049	ppb	35.2	310.01	0.0013	Pulse	0.1000	3
Pb	208	159	He	0.080	ppb	19.1	683.37	0.0028	Pulse	0.1000	3
U	238	159	He	0.044	ppb	29.2	303.35	0.0012	Pulse	0.1000	3

ISTD Table:

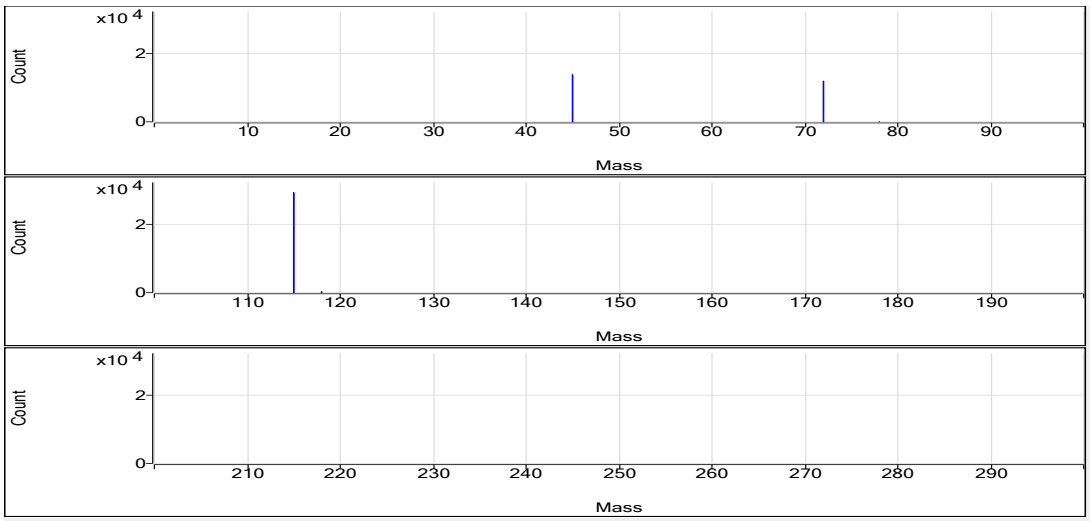
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2311982.10	1.2	100.8	Analog	0.1000	3
No Gas	Ge	72	1072789.15	0.8	103.2	Pulse	0.1000	3
H2	Sc	45	138958.84	0.5	99.9	Pulse	0.1000	3
H2	Ge	72	120244.53	0.7	101.8	Pulse	0.1000	3
H2	In	115	295155.00	0.5	100.2	Pulse	0.1000	3
He	Sc	45	46573.61	1.6	99.5	Pulse	0.1000	3
He	Ge	72	78199.87	0.9	102.3	Pulse	0.1000	3
He	In	115	61233.88	1.5	101.0	Pulse	0.1000	3
He	Tb	159	243913.84	1.0	101.1	Pulse	0.1000	3
He	Bi	209	168026.92	0.5	101.4	Pulse	0.1000	3

No Gas

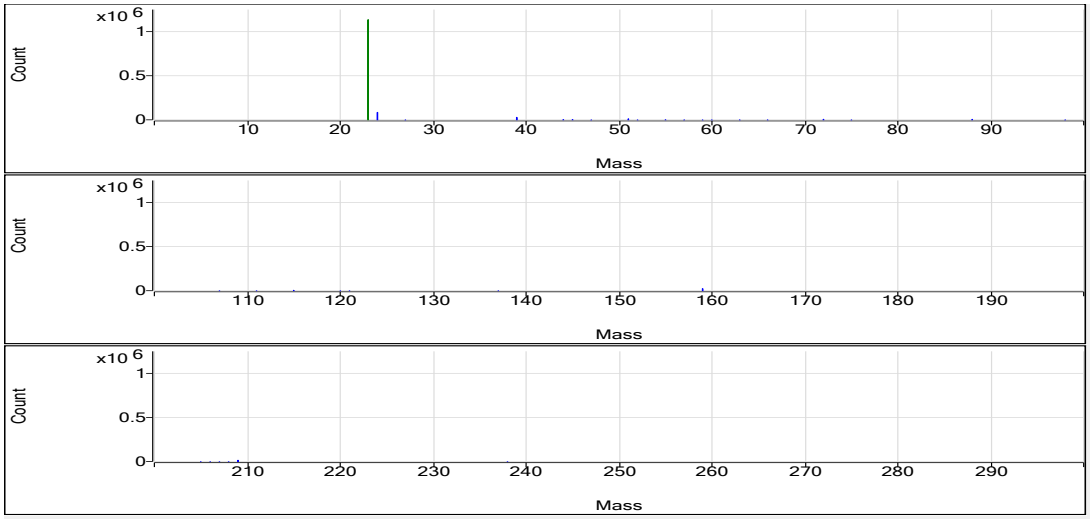


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.026	0	46.00	0.0004	9.309E-06
Be	9	1	No Gas	0.007	0	28.00	0.0004	9.309E-06
Be	9	1	No Gas	0.012	0	32.00	0.0004	9.309E-06
Se	78	2	H2	0.578	0.0003	32.00	0.0004	5.598E-06
Se	78	2	H2	0.558	0.0003	30.67	0.0004	5.598E-06
Se	78	2	H2	0.537	0.0002	29.33	0.0004	5.598E-06
Na	23	3	He	77105.718	241.6327	11341763.58	0.0031	0.4657
Na	23	3	He	79084.869	247.823	11324063.58	0.0031	0.4657
Na	23	3	He	77135.586	241.7261	11382554.83	0.0031	0.4657
Mg	24	3	He	11994.939	18.2045	854482.64	0.0015	0.003704
Mg	24	3	He	12373.447	18.7788	858082.49	0.0015	0.003704
Mg	24	3	He	11882.364	18.0337	849180.85	0.0015	0.003704
Al	27	3	He	29.486	0.0145	680.03	0.0005	0.0007154
Al	27	3	He	32.674	0.016	730.04	0.0005	0.0007154
Al	27	3	He	26.659	0.0132	620.03	0.0005	0.0007154
K	39	3	He	5340.44	6.2334	292584.96	0.0011	0.4296
K	39	3	He	5500.45	6.4073	292777.30	0.0011	0.4296
K	39	3	He	5285.543	6.1738	290714.47	0.0011	0.4296
Ca	44	3	He	14679.997	0.9105	42736.02	0.0001	0.002924
Ca	44	3	He	14786.536	0.9171	41904.47	0.0001	0.002924
Ca	44	3	He	14774.119	0.9163	43147.15	0.0001	0.002924
Ti	47	3	He	1.759	0.0009	40.00	0.0005	0
Ti	47	3	He	2.711	0.0013	60.00	0.0005	0
Ti	47	3	He	3.069	0.0015	70.00	0.0005	0
V	51	3	He	24.351	0.5221	24506.34	0.021	0.009571
V	51	3	He	24.84	0.5324	24328.09	0.021	0.009571
V	51	3	He	24.407	0.5233	24640.57	0.021	0.009571
Cr	52	3	He	1.537	0.0586	2750.33	0.0267	0.01758
Cr	52	3	He	1.654	0.0617	2820.34	0.0267	0.01758
Cr	52	3	He	1.522	0.0582	2740.33	0.0267	0.01758
Mn	55	3	He	40.973	0.4475	21004.16	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	41.714	0.4555	20814.03	0.0108	0.004199
Mn	55	3	He	41.312	0.4512	21244.30	0.0108	0.004199
Fe	57	3	He	143.774	0.075	3520.50	0.0005	0.002993
Fe	57	3	He	145.665	0.076	3470.50	0.0005	0.002993
Fe	57	3	He	143.295	0.0748	3520.50	0.0005	0.002993
Co	59	3	He	0.914	0.0509	2390.26	0.0524	0.003063
Co	59	3	He	0.715	0.0405	1850.17	0.0524	0.003063
Co	59	3	He	0.879	0.0491	2310.24	0.0524	0.003063
Ni	60	3	He	3.768	0.0524	3170.42	0.0109	0.01116
Ni	60	3	He	3.244	0.0466	2840.34	0.0109	0.01116
Ni	60	3	He	3.564	0.0501	3120.39	0.0109	0.01116
Cu	63	3	He	2.43	0.0772	5981.30	0.0255	0.01531
Cu	63	3	He	2.341	0.0749	5901.22	0.0255	0.01531
Cu	63	3	He	2.598	0.0815	6391.44	0.0255	0.01531
Zn	66	3	He	23.716	0.071	5501.12	0.0029	0.002787
Zn	66	3	He	21.676	0.0652	5130.98	0.0029	0.002787
Zn	66	3	He	20.531	0.0619	4850.85	0.0029	0.002787
As	75	3	He	0.39	0.0012	96.00	0.0021	0.0004097
As	75	3	He	0.297	0.001	82.00	0.0021	0.0004097
As	75	3	He	0.419	0.0013	102.00	0.0021	0.0004097
Sr	88	3	He	118.532	1.1181	67704.41	0.0094	0.0008765
Sr	88	3	He	116.586	1.0998	66991.66	0.0094	0.0008765
Sr	88	3	He	112.116	1.0577	65826.59	0.0094	0.0008765
Mo	98	3	He	2.22	0.0514	3110.40	0.023	0.0002199
Mo	98	3	He	2.143	0.0496	3020.38	0.023	0.0002199
Mo	98	3	He	2.062	0.0477	2970.39	0.023	0.0002199
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	0.003	0.001	60.00	0.0483	0.0008224
Ag	107	3	He	0.01	0.0013	80.00	0.0483	0.0008224
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Cd	111	3	He	0.014	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.014	0.0001	6.00	0.0053	2.193E-05
Sn	120	3	He	0.207	0.0165	1000.06	0.0148	0.01345
Sn	120	3	He	0.289	0.0177	1080.07	0.0148	0.01345
Sn	120	3	He	0.177	0.0161	1000.07	0.0148	0.01345
Sb	121	3	He	0.073	0.0015	90.00	0.0143	0.0004392
Sb	121	3	He	0.096	0.0018	110.00	0.0143	0.0004392
Sb	121	3	He	0.171	0.0029	180.01	0.0143	0.0004392
Ba	137	3	He	7.321	0.032	1940.20	0.0044	0.0001096
Ba	137	3	He	7.88	0.0345	2100.23	0.0044	0.0001096
Ba	137	3	He	7.638	0.0334	2080.22	0.0044	0.0001096
Tl	205	3	He	0.06	0.0015	360.02	0.0208	0.0002491
Tl	205	3	He	0.059	0.0015	360.01	0.0208	0.0002491
Tl	205	3	He	0.029	0.0009	210.01	0.0208	0.0002491
Pb	208	3	He	0.063	0.0023	220.01	0.0272	0.0006218
Pb	208	3	He	0.091	0.0031	470.02	0.0272	0.0006218
Pb	208	3	He	0.087	0.003	340.01	0.0272	0.0006218
U	238	3	He	0.041	0.0012	280.02	0.0275	2.763E-05
U	238	3	He	0.033	0.0009	230.02	0.0275	2.763E-05
U	238	3	He	0.058	0.0016	400.02	0.0275	2.763E-05
Sc	45	1	No Gas			2336570.43		
Sc	45	1	No Gas			2316572.93		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2282802.93		
Ge	72	1	No Gas			1080966.16		
Ge	72	1	No Gas			1072707.56		
Ge	72	1	No Gas			1064693.73		
Sc	45	2	H2			138573.15		
Sc	45	2	H2			139811.13		
Sc	45	2	H2			138492.24		
Ge	72	2	H2			121204.95		
Ge	72	2	H2			120096.16		
Ge	72	2	H2			119432.48		
In	115	2	H2			295062.53		
In	115	2	H2			296819.86		
In	115	2	H2			293582.61		
Sc	45	3	He			46938.03		
Sc	45	3	He			45694.16		
Sc	45	3	He			47088.64		
Ge	72	3	He			77446.13		
Ge	72	3	He			78742.67		
Ge	72	3	He			78410.82		
In	115	3	He			60558.12		
In	115	3	He			60920.28		
In	115	3	He			62244.81		
Tb	159	3	He			240999.00		
Tb	159	3	He			245660.52		
Tb	159	3	He			245082.01		
Bi	209	3	He			167007.65		
Bi	209	3	He			168525.35		
Bi	209	3	He			168547.75		

Quantitation Report

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Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

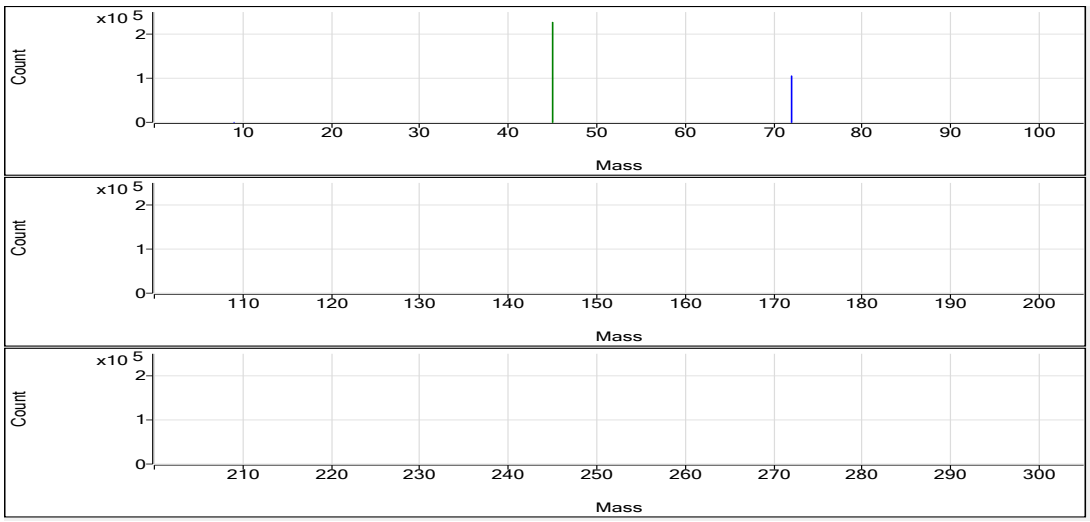
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.007	ppb	74.4	28.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.003	ppb	14.2	53.11	0.0005	Pulse	1.5000	3
Na	23	45	He	10143.969	ppb	2.8	1503477.01	32.1934	Analog	0.1000	3
Mg	24	45	He	4335.212	ppb	1.3	307429.88	6.5818	Pulse	0.1000	3
Al	27	45	He	3.980	ppb	51.0	120.00	0.0026	Pulse	0.1000	3
K	39	45	He	3044.640	ppb	0.9	174618.57	3.7384	Pulse	0.1000	3
Ca	44	45	He	20264.009	ppb	2.5	58645.71	1.2557	Pulse	0.1000	3
Ti	47	45	He	0.737	ppb	34.8	16.67	0.0004	Pulse	0.1000	3
V	51	45	He	0.382	ppb	14.5	822.69	0.0176	Pulse	0.5000	3
Cr	52	45	He	0.178	ppb	74.2	1043.40	0.0223	Pulse	0.1000	3
Mn	55	45	He	53.028	ppb	1.5	26996.34	0.5779	Pulse	0.1000	3
Fe	57	45	He	1000.947	ppb	2.4	23554.23	0.5043	Pulse	0.1000	3
Co	59	45	He	0.207	ppb	9.1	650.03	0.0139	Pulse	0.1000	3
Ni	60	115	He	0.230	ppb	16.6	833.38	0.0137	Pulse	0.1000	3
Cu	63	72	He	8.449	ppb	2.0	17880.35	0.2306	Pulse	0.1000	3
Zn	66	72	He	4.677	ppb	7.3	1260.08	0.0162	Pulse	0.1000	3
As	75	72	He	1.402	ppb	8.3	263.33	0.0034	Pulse	0.5000	3
Sr	88	115	He	78.820	ppb	2.6	45305.12	0.7438	Pulse	0.1000	3
Mo	98	115	He	0.604	ppb	10.1	860.05	0.0141	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	50.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	152.7	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.148	ppb	18.4	953.39	0.0157	Pulse	0.1000	3
Sb	121	115	He	0.069	ppb	54.4	86.67	0.0014	Pulse	0.1000	3
Ba	137	115	He	27.619	ppb	6.3	7345.36	0.1206	Pulse	0.1000	3
Tl	205	159	He	0.050	ppb	15.9	316.68	0.0013	Pulse	0.1000	3
Pb	208	159	He	0.142	ppb	14.9	1096.73	0.0045	Pulse	0.1000	3
U	238	159	He	0.033	ppb	31.4	230.01	0.0009	Pulse	0.1000	3

ISTD Table:

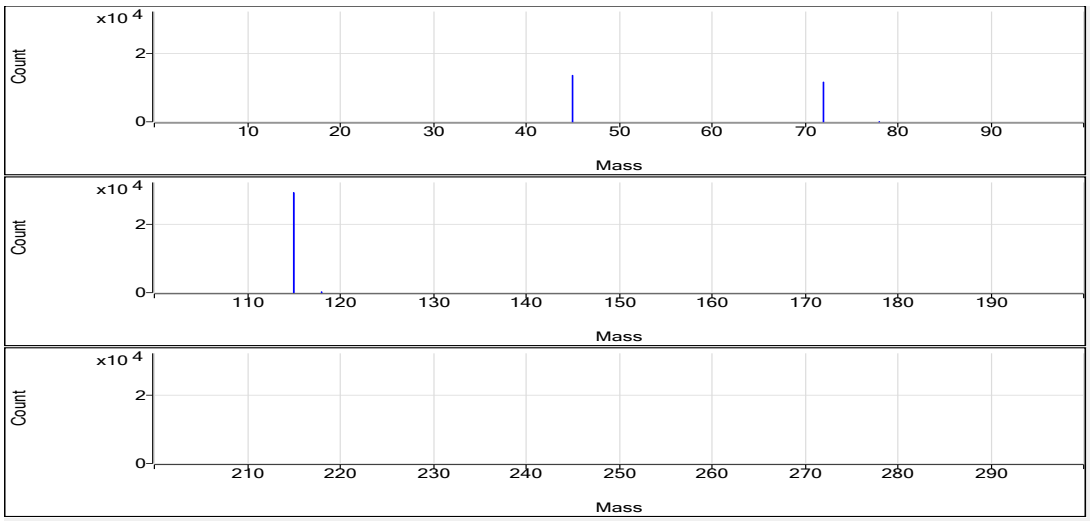
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2276530.74	1.1	99.2	Analog	0.1000	3
No Gas	Ge	72	1056271.86	1.4	101.7	Pulse	0.1000	3
H2	Sc	45	136513.88	2.6	98.2	Pulse	0.1000	3
H2	Ge	72	116916.49	0.1	99.0	Pulse	0.1000	3
H2	In	115	293672.70	0.7	99.7	Pulse	0.1000	3
He	Sc	45	46710.64	1.1	99.8	Pulse	0.1000	3
He	Ge	72	77553.59	0.9	101.4	Pulse	0.1000	3
He	In	115	60909.61	0.7	100.5	Pulse	0.1000	3
He	Tb	159	244526.46	0.1	101.4	Pulse	0.1000	3
He	Bi	209	167240.17	2.0	100.9	Pulse	0.1000	3

No Gas

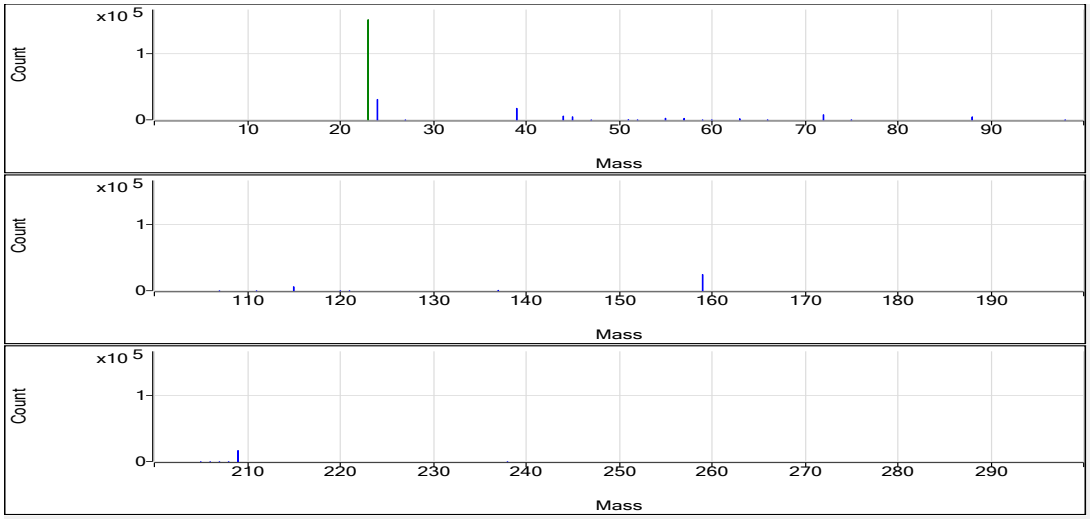


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.003	0	24.00	0.0004	9.309E-06
Be	9	1	No Gas	0.005	0	26.00	0.0004	9.309E-06
Be	9	1	No Gas	0.014	0	34.00	0.0004	9.309E-06
Se	78	2	H2	0.853	0.0004	45.33	0.0004	5.598E-06
Se	78	2	H2	1.136	0.0005	60.00	0.0004	5.598E-06
Se	78	2	H2	1.021	0.0005	54.00	0.0004	5.598E-06
Na	23	3	He	10141.074	32.1844	1505502.01	0.0031	0.4657
Na	23	3	He	10424.702	33.0715	1526769.66	0.0031	0.4657
Na	23	3	He	9866.132	31.3244	1478159.35	0.0031	0.4657
Mg	24	3	He	4274.262	6.4893	303555.11	0.0015	0.003704
Mg	24	3	He	4382.27	6.6532	307151.60	0.0015	0.003704
Mg	24	3	He	4349.103	6.6029	311582.93	0.0015	0.003704
Al	27	3	He	5.334	0.0032	150.01	0.0005	0.0007154
Al	27	3	He	4.961	0.003	140.00	0.0005	0.0007154
Al	27	3	He	1.644	0.0015	70.00	0.0005	0.0007154
K	39	3	He	3016.487	3.7078	173443.34	0.0011	0.4296
K	39	3	He	3072.756	3.769	173998.38	0.0011	0.4296
K	39	3	He	3044.677	3.7385	176413.98	0.0011	0.4296
Ca	44	3	He	19850.174	1.2301	57541.42	0.0001	0.002924
Ca	44	3	He	20838.341	1.2912	59609.28	0.0001	0.002924
Ca	44	3	He	20103.512	1.2458	58786.42	0.0001	0.002924
Ti	47	3	He	0.441	0.0002	10.00	0.0005	0
Ti	47	3	He	0.894	0.0004	20.00	0.0005	0
Ti	47	3	He	0.875	0.0004	20.00	0.0005	0
V	51	3	He	0.439	0.0188	880.03	0.021	0.009571
V	51	3	He	0.379	0.0175	810.03	0.021	0.009571
V	51	3	He	0.329	0.0165	778.02	0.021	0.009571
Cr	52	3	He	0.287	0.0252	1180.08	0.0267	0.01758
Cr	52	3	He	0.031	0.0184	850.05	0.0267	0.01758
Cr	52	3	He	0.215	0.0233	1100.07	0.0267	0.01758
Mn	55	3	He	52.415	0.5713	26722.66	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	52.773	0.5751	26552.21	0.0108	0.004199
Mn	55	3	He	53.896	0.5873	27714.14	0.0108	0.004199
Fe	57	3	He	981.567	0.4946	23137.07	0.0005	0.002993
Fe	57	3	He	1027.566	0.5177	23898.12	0.0005	0.002993
Fe	57	3	He	993.71	0.5007	23627.49	0.0005	0.002993
Co	59	3	He	0.227	0.015	700.04	0.0524	0.003063
Co	59	3	He	0.19	0.013	600.03	0.0524	0.003063
Co	59	3	He	0.205	0.0138	650.03	0.0524	0.003063
Ni	60	3	He	0.202	0.0134	810.05	0.0109	0.01116
Ni	60	3	He	0.215	0.0135	830.05	0.0109	0.01116
Ni	60	3	He	0.274	0.0142	860.05	0.0109	0.01116
Cu	63	3	He	8.306	0.2269	17579.98	0.0255	0.01531
Cu	63	3	He	8.402	0.2294	17960.55	0.0255	0.01531
Cu	63	3	He	8.638	0.2354	18100.52	0.0255	0.01531
Zn	66	3	He	5.043	0.0173	1340.10	0.0029	0.002787
Zn	66	3	He	4.624	0.0161	1260.08	0.0029	0.002787
Zn	66	3	He	4.365	0.0153	1180.07	0.0029	0.002787
As	75	3	He	1.518	0.0036	282.00	0.0021	0.0004097
As	75	3	He	1.404	0.0034	266.00	0.0021	0.0004097
As	75	3	He	1.286	0.0031	242.00	0.0021	0.0004097
Sr	88	3	He	77.252	0.729	44151.80	0.0094	0.0008765
Sr	88	3	He	78.106	0.7371	45275.00	0.0094	0.0008765
Sr	88	3	He	81.103	0.7653	46488.56	0.0094	0.0008765
Mo	98	3	He	0.593	0.0139	840.05	0.023	0.0002199
Mo	98	3	He	0.549	0.0129	790.05	0.023	0.0002199
Mo	98	3	He	0.669	0.0156	950.05	0.023	0.0002199
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Ag	107	3	He	0.007	0.0012	70.00	0.0483	0.0008224
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Cd	111	3	He	0.014	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Sn	120	3	He	0.117	0.0152	920.06	0.0148	0.01345
Sn	120	3	He	0.169	0.016	980.06	0.0148	0.01345
Sn	120	3	He	0.159	0.0158	960.06	0.0148	0.01345
Sb	121	3	He	0.096	0.0018	110.00	0.0143	0.0004392
Sb	121	3	He	0.026	0.0008	50.00	0.0143	0.0004392
Sb	121	3	He	0.084	0.0016	100.00	0.0143	0.0004392
Ba	137	3	He	25.611	0.1118	6771.68	0.0044	0.0001096
Ba	137	3	He	28.463	0.1243	7632.18	0.0044	0.0001096
Ba	137	3	He	28.783	0.1256	7632.23	0.0044	0.0001096
Tl	205	3	He	0.055	0.0014	340.02	0.0208	0.0002491
Tl	205	3	He	0.055	0.0014	340.02	0.0208	0.0002491
Tl	205	3	He	0.041	0.0011	270.01	0.0208	0.0002491
Pb	208	3	He	0.162	0.005	710.04	0.0272	0.0006218
Pb	208	3	He	0.12	0.0039	580.03	0.0272	0.0006218
Pb	208	3	He	0.144	0.0045	600.04	0.0272	0.0006218
U	238	3	He	0.033	0.0009	230.01	0.0275	2.763E-05
U	238	3	He	0.044	0.0012	300.01	0.0275	2.763E-05
U	238	3	He	0.023	0.0007	160.01	0.0275	2.763E-05
Sc	45	1	No Gas			2248827.62		
Sc	45	1	No Gas			2285575.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2295189.18		
Ge	72	1	No Gas			1042473.66		
Ge	72	1	No Gas			1054064.12		
Ge	72	1	No Gas			1072277.80		
Sc	45	2	H2			132470.33		
Sc	45	2	H2			137955.96		
Sc	45	2	H2			139115.35		
Ge	72	2	H2			117084.94		
Ge	72	2	H2			116842.62		
Ge	72	2	H2			116821.90		
In	115	2	H2			291224.08		
In	115	2	H2			294644.31		
In	115	2	H2			295149.72		
Sc	45	3	He			46777.44		
Sc	45	3	He			46165.75		
Sc	45	3	He			47188.73		
Ge	72	3	He			77466.22		
Ge	72	3	He			78301.20		
Ge	72	3	He			76893.34		
In	115	3	He			60568.42		
In	115	3	He			61431.36		
In	115	3	He			60749.08		
Tb	159	3	He			244389.00		
Tb	159	3	He			244384.53		
Tb	159	3	He			244805.84		
Bi	209	3	He			165601.91		
Bi	209	3	He			165115.68		
Bi	209	3	He			171002.91		

Quantitation Report

Data File Name	050SMPL.d
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Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

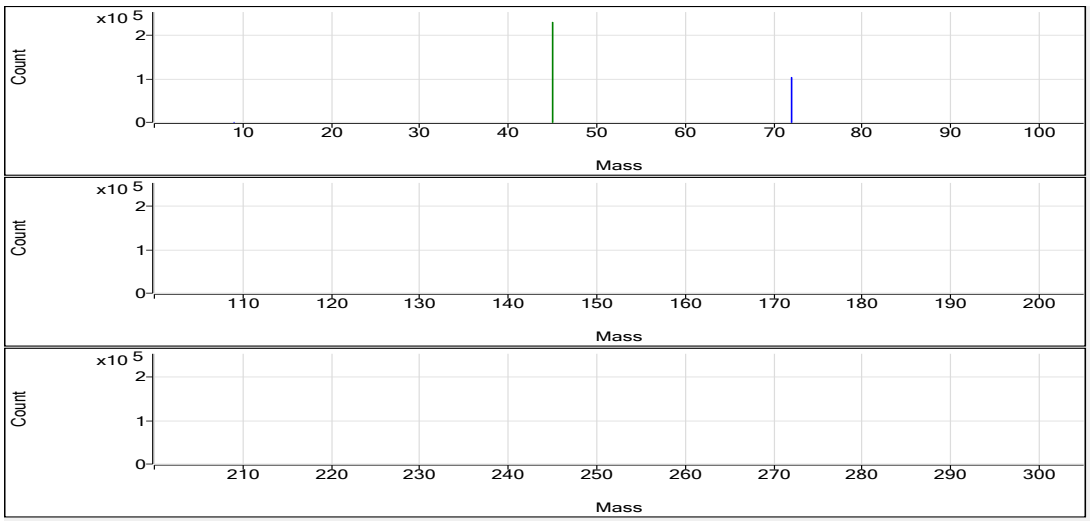
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.010	ppb	46.1	30.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.389	ppb	17.2	20.89	0.0002	Pulse	1.5000	3
Na	23	45	He	80631.506	ppb	1.5	11578765.25	252.6605	Analog	0.1000	3
Mg	24	45	He	11781.741	ppb	1.6	819428.82	17.8810	Pulse	0.1000	3
Al	27	45	He	66.763	ppb	8.3	1463.44	0.0319	Pulse	0.1000	3
K	39	45	He	7813.453	ppb	2.4	408787.86	8.9210	Pulse	0.1000	3
Ca	44	45	He	79301.552	ppb	1.9	224796.38	4.9055	Pulse	0.1000	3
Ti	47	45	He	2.717	ppb	45.2	60.00	0.0013	Pulse	0.1000	3
V	51	45	He	0.894	ppb	3.8	1300.73	0.0284	Pulse	0.5000	3
Cr	52	45	He	0.557	ppb	21.0	1486.79	0.0325	Pulse	0.1000	3
Mn	55	45	He	123.063	ppb	2.2	61202.44	1.3356	Pulse	0.1000	3
Fe	57	45	He	20016.474	ppb	2.1	459546.91	10.0284	Pulse	0.1000	3
Co	59	45	He	0.497	ppb	1.9	1333.43	0.0291	Pulse	0.1000	3
Ni	60	115	He	0.864	ppb	7.2	1263.43	0.0206	Pulse	0.1000	3
Cu	63	72	He	1.772	ppb	5.3	4597.48	0.0605	Pulse	0.1000	3
Zn	66	72	He	134.154	ppb	2.6	29561.19	0.3888	Pulse	0.1000	3
As	75	72	He	89.346	ppb	0.8	14491.90	0.1906	Pulse	0.5000	3
Sr	88	115	He	576.360	ppb	1.2	333071.82	5.4335	Pulse	0.1000	3
Mo	98	115	He	1.110	ppb	4.7	1580.12	0.0258	Pulse	0.1000	3
Ag	107	115	He	-0.009	ppb	N/A	23.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.279	ppb	18.1	92.67	0.0015	Pulse	0.5000	3
Sn	120	115	He	0.369	ppb	15.7	1160.08	0.0189	Pulse	0.1000	3
Sb	121	115	He	0.486	ppb	12.6	453.36	0.0074	Pulse	0.1000	3
Ba	137	115	He	21.250	ppb	3.0	5687.92	0.0928	Pulse	0.1000	3
Tl	205	159	He	0.030	ppb	16.6	213.34	0.0009	Pulse	0.1000	3
Pb	208	159	He	5.201	ppb	1.2	34650.58	0.1422	Pulse	0.1000	3
U	238	159	He	0.149	ppb	5.2	1006.74	0.0041	Pulse	0.1000	3

ISTD Table:

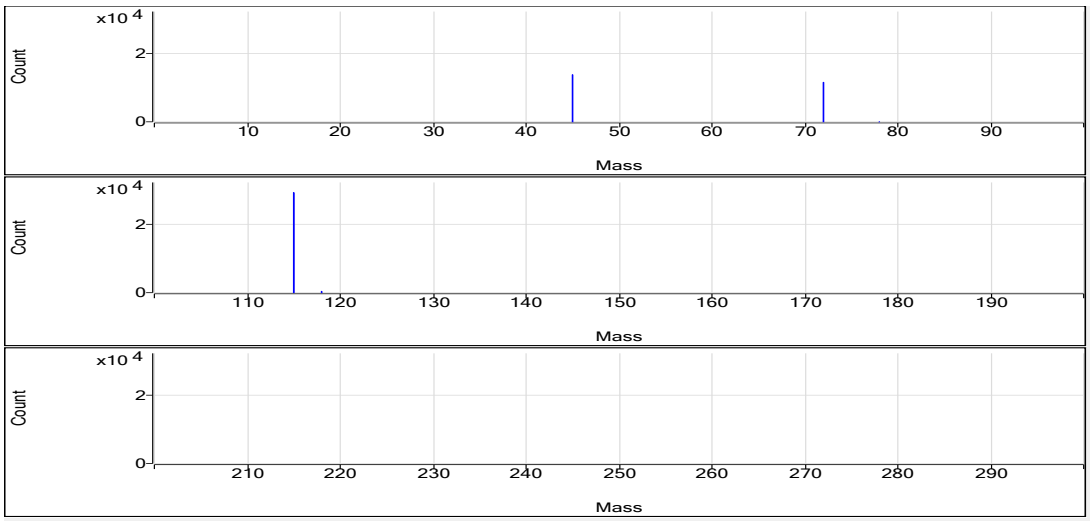
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2313436.84	1.0	100.8	Analog	0.1000	3
No Gas	Ge	72	1038855.27	0.5	100.0	Pulse	0.1000	3
H2	Sc	45	138756.06	0.7	99.8	Pulse	0.1000	3
H2	Ge	72	116480.32	0.7	98.7	Pulse	0.1000	3
H2	In	115	294725.00	0.4	100.0	Pulse	0.1000	3
He	Sc	45	45835.11	1.7	97.9	Pulse	0.1000	3
He	Ge	72	76036.83	1.5	99.4	Pulse	0.1000	3
He	In	115	61306.37	1.5	101.1	Pulse	0.1000	3
He	Tb	159	243671.03	0.6	101.0	Pulse	0.1000	3
He	Bi	209	166041.00	0.3	100.2	Pulse	0.1000	3

No Gas

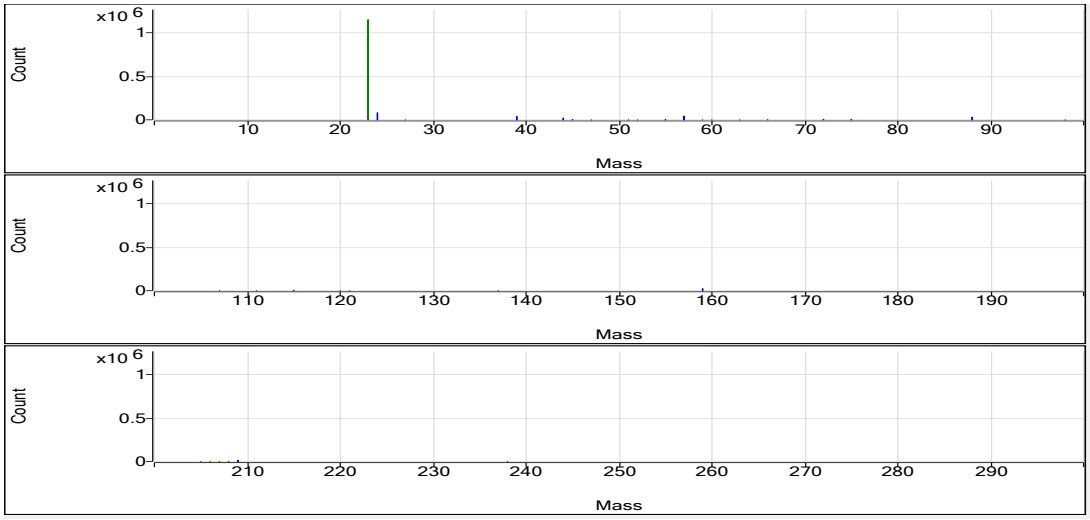


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.013	0	34.00	0.0004	9.309E-06
Be	9	1	No Gas	0.012	0	32.00	0.0004	9.309E-06
Be	9	1	No Gas	0.005	0	26.00	0.0004	9.309E-06
Se	78	2	H2	0.395	0.0002	21.33	0.0004	5.598E-06
Se	78	2	H2	0.452	0.0002	24.00	0.0004	5.598E-06
Se	78	2	H2	0.319	0.0001	17.33	0.0004	5.598E-06
Na	23	3	He	81738.678	256.1234	11582767.33	0.0031	0.4657
Na	23	3	He	80798.096	253.1815	11530909.83	0.0031	0.4657
Na	23	3	He	79357.742	248.6765	11622618.58	0.0031	0.4657
Mg	24	3	He	11888.547	18.043	815967.64	0.0015	0.003704
Mg	24	3	He	11891.376	18.0473	821948.82	0.0015	0.003704
Mg	24	3	He	11565.299	17.5526	820369.99	0.0015	0.003704
Al	27	3	He	63.333	0.0303	1370.11	0.0005	0.0007154
Al	27	3	He	63.816	0.0305	1390.10	0.0005	0.0007154
Al	27	3	He	73.141	0.0349	1630.12	0.0005	0.0007154
K	39	3	He	7974.725	9.0963	411364.41	0.0011	0.4296
K	39	3	He	7858.068	8.9695	408507.22	0.0011	0.4296
K	39	3	He	7607.568	8.6973	406491.95	0.0011	0.4296
Ca	44	3	He	80659.321	4.9895	225641.17	0.0001	0.002924
Ca	44	3	He	79594.191	4.9236	224242.07	0.0001	0.002924
Ca	44	3	He	77651.145	4.8035	224505.91	0.0001	0.002924
Ti	47	3	He	3.652	0.0018	80.00	0.0005	0
Ti	47	3	He	3.173	0.0015	70.00	0.0005	0
Ti	47	3	He	1.325	0.0006	30.00	0.0005	0
V	51	3	He	0.909	0.0287	1298.06	0.021	0.009571
V	51	3	He	0.918	0.0289	1316.06	0.021	0.009571
V	51	3	He	0.855	0.0276	1288.06	0.021	0.009571
Cr	52	3	He	0.684	0.0358	1620.13	0.0267	0.01758
Cr	52	3	He	0.452	0.0296	1350.11	0.0267	0.01758
Cr	52	3	He	0.536	0.0319	1490.12	0.0267	0.01758
Mn	55	3	He	125.282	1.3596	61486.97	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	123.888	1.3445	61235.82	0.0108	0.004199
Mn	55	3	He	120.018	1.3027	60884.53	0.0108	0.004199
Fe	57	3	He	20252.3	10.1466	458861.63	0.0005	0.002993
Fe	57	3	He	20258.288	10.1496	462251.83	0.0005	0.002993
Fe	57	3	He	19538.833	9.7892	457527.26	0.0005	0.002993
Co	59	3	He	0.491	0.0287	1300.09	0.0524	0.003063
Co	59	3	He	0.508	0.0296	1350.10	0.0524	0.003063
Co	59	3	He	0.493	0.0289	1350.10	0.0524	0.003063
Ni	60	3	He	0.842	0.0204	1230.08	0.0109	0.01116
Ni	60	3	He	0.816	0.0201	1250.10	0.0109	0.01116
Ni	60	3	He	0.934	0.0214	1310.12	0.0109	0.01116
Cu	63	3	He	1.762	0.0602	4650.83	0.0255	0.01531
Cu	63	3	He	1.684	0.0582	4370.73	0.0255	0.01531
Cu	63	3	He	1.871	0.063	4770.87	0.0255	0.01531
Zn	66	3	He	133.297	0.3864	29848.42	0.0029	0.002787
Zn	66	3	He	137.996	0.3999	30028.94	0.0029	0.002787
Zn	66	3	He	131.17	0.3802	28806.20	0.0029	0.002787
As	75	3	He	89.437	0.1908	14738.80	0.0021	0.0004097
As	75	3	He	88.584	0.189	14190.29	0.0021	0.0004097
As	75	3	He	90.016	0.192	14546.60	0.0021	0.0004097
Sr	88	3	He	584.312	5.5085	332710.42	0.0094	0.0008765
Sr	88	3	He	570.924	5.3823	335030.74	0.0094	0.0008765
Sr	88	3	He	573.845	5.4098	331474.29	0.0094	0.0008765
Mo	98	3	He	1.133	0.0263	1590.13	0.023	0.0002199
Mo	98	3	He	1.05	0.0244	1520.11	0.023	0.0002199
Mo	98	3	He	1.145	0.0266	1630.13	0.023	0.0002199
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Ag	107	3	He	-0.014	0.0002	10.00	0.0483	0.0008224
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Cd	111	3	He	0.319	0.0017	104.00	0.0053	2.193E-05
Cd	111	3	He	0.297	0.0016	100.00	0.0053	2.193E-05
Cd	111	3	He	0.222	0.0012	74.00	0.0053	2.193E-05
Sn	120	3	He	0.333	0.0184	1110.08	0.0148	0.01345
Sn	120	3	He	0.339	0.0185	1150.07	0.0148	0.01345
Sn	120	3	He	0.436	0.0199	1220.10	0.0148	0.01345
Sb	121	3	He	0.478	0.0073	440.02	0.0143	0.0004392
Sb	121	3	He	0.43	0.0066	410.02	0.0143	0.0004392
Sb	121	3	He	0.551	0.0083	510.03	0.0143	0.0004392
Ba	137	3	He	21.92	0.0957	5781.31	0.0044	0.0001096
Ba	137	3	He	21.195	0.0926	5761.27	0.0044	0.0001096
Ba	137	3	He	20.634	0.0901	5521.17	0.0044	0.0001096
Tl	205	3	He	0.035	0.001	240.01	0.0208	0.0002491
Tl	205	3	He	0.03	0.0009	210.01	0.0208	0.0002491
Tl	205	3	He	0.025	0.0008	190.01	0.0208	0.0002491
Pb	208	3	He	5.135	0.1404	17851.43	0.0272	0.0006218
Pb	208	3	He	5.255	0.1437	18382.14	0.0272	0.0006218
Pb	208	3	He	5.214	0.1425	18632.60	0.0272	0.0006218
U	238	3	He	0.146	0.0041	990.07	0.0275	2.763E-05
U	238	3	He	0.143	0.004	960.07	0.0275	2.763E-05
U	238	3	He	0.158	0.0044	1070.08	0.0275	2.763E-05
Sc	45	1	No Gas			2330127.15		
Sc	45	1	No Gas			2285755.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2324428.25		
Ge	72	1	No Gas			1045102.41		
Ge	72	1	No Gas			1034912.09		
Ge	72	1	No Gas			1036551.31		
Sc	45	2	H2			139478.63		
Sc	45	2	H2			139075.61		
Sc	45	2	H2			137713.95		
Ge	72	2	H2			116984.64		
Ge	72	2	H2			115533.61		
Ge	72	2	H2			116922.70		
In	115	2	H2			295588.59		
In	115	2	H2			295094.51		
In	115	2	H2			293491.89		
Sc	45	3	He			45223.38		
Sc	45	3	He			45544.04		
Sc	45	3	He			46737.91		
Ge	72	3	He			77255.94		
Ge	72	3	He			75095.45		
Ge	72	3	He			75759.09		
In	115	3	He			60407.43		
In	115	3	He			62254.91		
In	115	3	He			61281.14		
Tb	159	3	He			244059.22		
Tb	159	3	He			242064.12		
Tb	159	3	He			244889.74		
Bi	209	3	He			166179.45		
Bi	209	3	He			166461.54		
Bi	209	3	He			165482.01		

Quantitation Report

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Sample Name	450-179170-I-8-A
Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

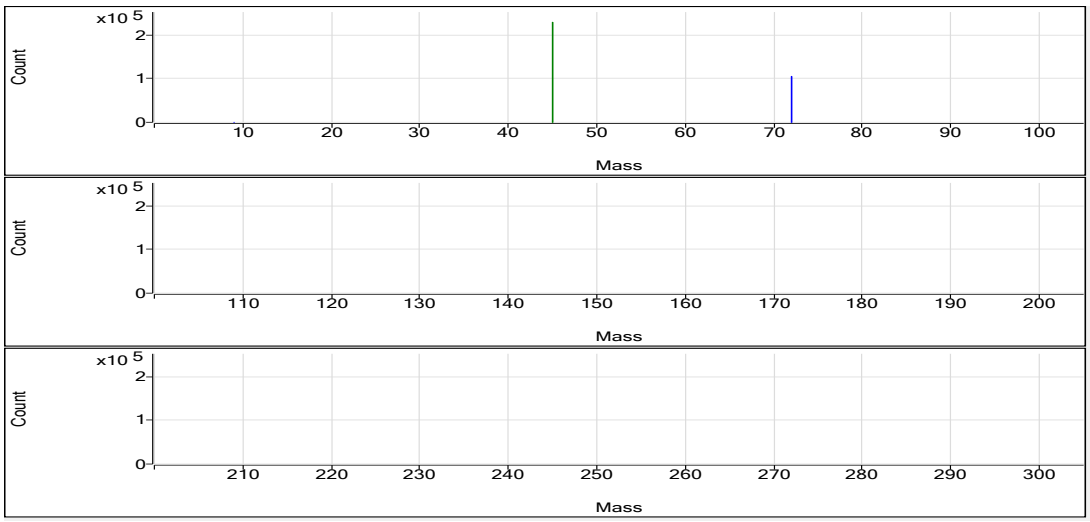
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.027	ppb	62.2	46.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.638	ppb	13.5	34.22	0.0003	Pulse	1.5000	3
Na	23	45	He	74543.805	ppb	1.5	10603095.26	233.6197	Analog	0.1000	3
Mg	24	45	He	8621.713	ppb	1.7	593909.61	13.0860	Pulse	0.1000	3
Al	27	45	He	118.884	ppb	3.7	2553.62	0.0562	Pulse	0.1000	3
K	39	45	He	7895.966	ppb	2.4	408924.64	9.0107	Pulse	0.1000	3
Ca	44	45	He	63408.270	ppb	1.6	178045.50	3.9230	Pulse	0.1000	3
Ti	47	45	He	2.731	ppb	29.3	60.00	0.0013	Pulse	0.1000	3
V	51	45	He	2.633	ppb	2.4	2949.62	0.0650	Pulse	0.5000	3
Cr	52	45	He	0.961	ppb	19.7	1960.18	0.0432	Pulse	0.1000	3
Mn	55	45	He	1019.501	ppb	1.3	500813.62	11.0342	Pulse	0.1000	3
Fe	57	45	He	37069.434	ppb	2.4	842726.60	18.5696	Pulse	0.1000	3
Co	59	45	He	1.149	ppb	4.3	2870.35	0.0632	Pulse	0.1000	3
Ni	60	115	He	1.593	ppb	5.1	1743.49	0.0286	Pulse	0.1000	3
Cu	63	72	He	1.683	ppb	8.7	4467.41	0.0582	Pulse	0.1000	3
Zn	66	72	He	16.727	ppb	8.4	3913.93	0.0509	Pulse	0.1000	3
As	75	72	He	45.736	ppb	1.5	7509.78	0.0978	Pulse	0.5000	3
Sr	88	115	He	368.789	ppb	0.8	212036.53	3.4770	Pulse	0.1000	3
Mo	98	115	He	0.999	ppb	8.1	1416.78	0.0232	Pulse	0.1000	3
Ag	107	115	He	-0.013	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
Cd	111	115	He	0.020	ppb	30.5	8.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.210	ppb	80.8	1010.07	0.0166	Pulse	0.1000	3
Sb	121	115	He	0.386	ppb	25.3	363.35	0.0060	Pulse	0.1000	3
Ba	137	115	He	30.562	ppb	3.0	8135.72	0.1334	Pulse	0.1000	3
Tl	205	159	He	0.026	ppb	8.0	193.34	0.0008	Pulse	0.1000	3
Pb	208	159	He	1.904	ppb	5.8	12669.25	0.0524	Pulse	0.1000	3
U	238	159	He	0.763	ppb	2.3	5081.07	0.0210	Pulse	0.1000	3

ISTD Table:

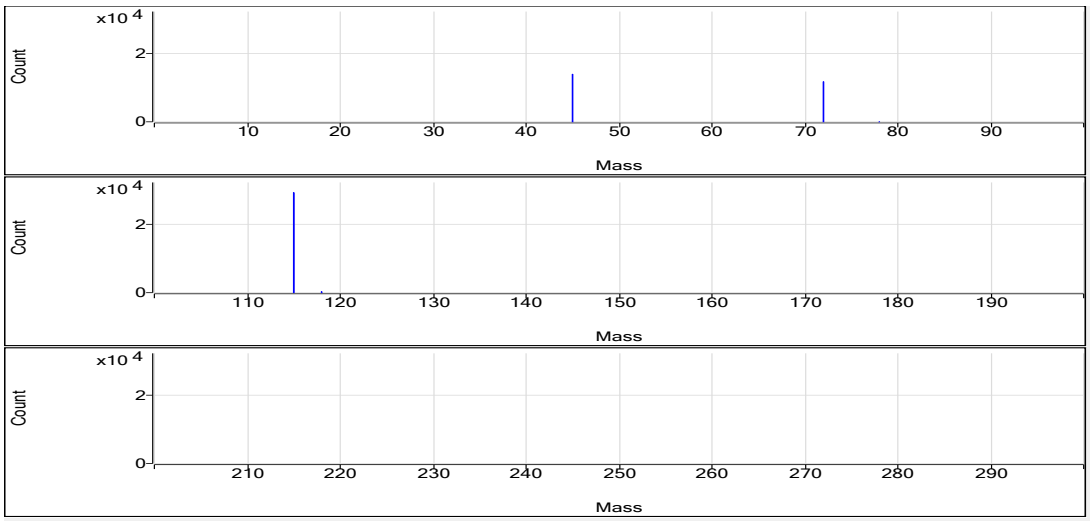
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2293036.22	0.7	100.0	Analog	0.1000	3
No Gas	Ge	72	1052754.93	0.6	101.3	Pulse	0.1000	3
H2	Sc	45	139629.38	0.6	100.4	Pulse	0.1000	3
H2	Ge	72	117588.07	1.2	99.6	Pulse	0.1000	3
H2	In	115	293052.34	0.4	99.5	Pulse	0.1000	3
He	Sc	45	45393.50	1.7	96.9	Pulse	0.1000	3
He	Ge	72	76823.52	1.3	100.5	Pulse	0.1000	3
He	In	115	60983.19	0.4	100.6	Pulse	0.1000	3
He	Tb	159	241674.61	0.9	100.2	Pulse	0.1000	3
He	Bi	209	165838.18	1.9	100.1	Pulse	0.1000	3

No Gas

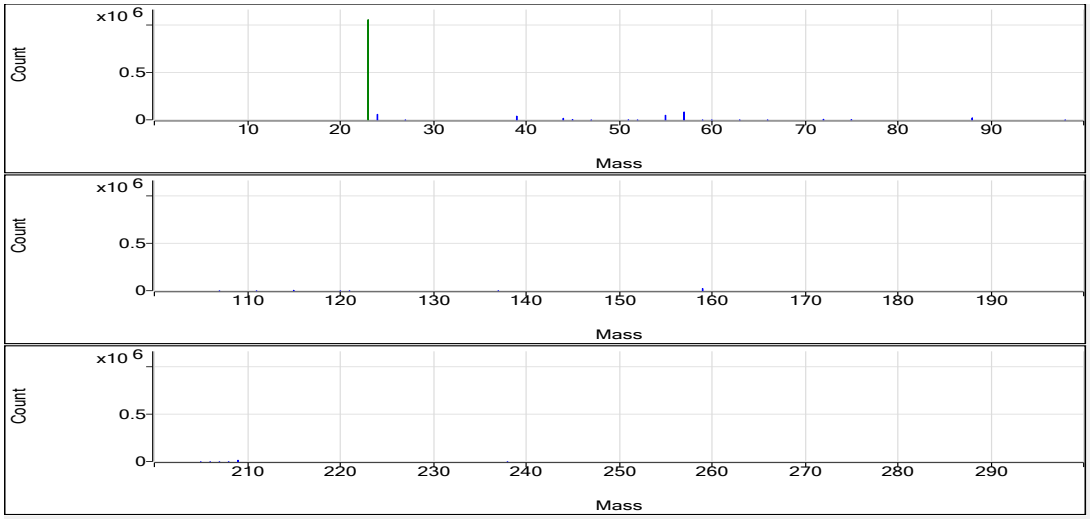


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.045	0	62.00	0.0004	9.309E-06
Be	9	1	No Gas	0.011	0	32.00	0.0004	9.309E-06
Be	9	1	No Gas	0.025	0	44.00	0.0004	9.309E-06
Se	78	2	H2	0.651	0.0003	35.33	0.0004	5.598E-06
Se	78	2	H2	0.718	0.0003	38.00	0.0004	5.598E-06
Se	78	2	H2	0.546	0.0002	29.33	0.0004	5.598E-06
Na	23	3	He	74725.475	234.1879	10581282.34	0.0031	0.4657
Na	23	3	He	75533.874	236.7164	10595882.34	0.0031	0.4657
Na	23	3	He	73372.065	229.9548	10632121.09	0.0031	0.4657
Mg	24	3	He	8668.051	13.1564	594442.02	0.0015	0.003704
Mg	24	3	He	8738.62	13.2634	593697.10	0.0015	0.003704
Mg	24	3	He	8458.467	12.8383	593589.72	0.0015	0.003704
Al	27	3	He	114.1	0.054	2440.26	0.0005	0.0007154
Al	27	3	He	119.971	0.0568	2540.27	0.0005	0.0007154
Al	27	3	He	122.583	0.058	2680.32	0.0005	0.0007154
K	39	3	He	7915.057	9.0314	408066.05	0.0011	0.4296
K	39	3	He	8073.214	9.2033	411958.00	0.0011	0.4296
K	39	3	He	7699.628	8.7973	406749.88	0.0011	0.4296
Ca	44	3	He	63855.656	3.9506	178501.11	0.0001	0.002924
Ca	44	3	He	64149.459	3.9688	177651.17	0.0001	0.002924
Ca	44	3	He	62219.694	3.8495	177984.22	0.0001	0.002924
Ti	47	3	He	3.656	0.0018	80.00	0.0005	0
Ti	47	3	He	2.306	0.0011	50.00	0.0005	0
Ti	47	3	He	2.233	0.0011	50.00	0.0005	0
V	51	3	He	2.616	0.0646	2920.28	0.021	0.009571
V	51	3	He	2.702	0.0664	2974.29	0.021	0.009571
V	51	3	He	2.581	0.0639	2954.28	0.021	0.009571
Cr	52	3	He	0.926	0.0423	1910.17	0.0267	0.01758
Cr	52	3	He	1.167	0.0487	2180.22	0.0267	0.01758
Cr	52	3	He	0.792	0.0387	1790.15	0.0267	0.01758
Mn	55	3	He	1016.731	11.0042	497202.14	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1034.009	11.1911	500937.41	0.0108	0.004199
Mn	55	3	He	1007.762	10.9072	504301.32	0.0108	0.004199
Fe	57	3	He	36975.612	18.5226	836903.97	0.0005	0.002993
Fe	57	3	He	37997.671	19.0345	852021.08	0.0005	0.002993
Fe	57	3	He	36235.019	18.1517	839254.75	0.0005	0.002993
Co	59	3	He	1.189	0.0653	2950.36	0.0524	0.003063
Co	59	3	He	1.094	0.0603	2700.33	0.0524	0.003063
Co	59	3	He	1.165	0.064	2960.35	0.0524	0.003063
Ni	60	3	He	1.572	0.0284	1730.15	0.0109	0.01116
Ni	60	3	He	1.684	0.0296	1810.16	0.0109	0.01116
Ni	60	3	He	1.524	0.0278	1690.15	0.0109	0.01116
Cu	63	3	He	1.786	0.0608	4620.81	0.0255	0.01531
Cu	63	3	He	1.515	0.0539	4200.65	0.0255	0.01531
Cu	63	3	He	1.748	0.0598	4580.77	0.0255	0.01531
Zn	66	3	He	15.129	0.0463	3520.49	0.0029	0.002787
Zn	66	3	He	17.72	0.0538	4190.69	0.0029	0.002787
Zn	66	3	He	17.331	0.0527	4030.62	0.0029	0.002787
As	75	3	He	46.491	0.0994	7551.81	0.0021	0.0004097
As	75	3	He	45.625	0.0975	7599.82	0.0021	0.0004097
As	75	3	He	45.091	0.0964	7377.72	0.0021	0.0004097
Sr	88	3	He	365.632	3.4473	210333.08	0.0094	0.0008765
Sr	88	3	He	369.006	3.4791	212929.39	0.0094	0.0008765
Sr	88	3	He	371.729	3.5047	212847.11	0.0094	0.0008765
Mo	98	3	He	1.072	0.0249	1520.12	0.023	0.0002199
Mo	98	3	He	1.012	0.0235	1440.12	0.023	0.0002199
Mo	98	3	He	0.913	0.0212	1290.09	0.023	0.0002199
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	-0.014	0.0002	10.00	0.0483	0.0008224
Ag	107	3	He	-0.014	0.0002	10.00	0.0483	0.0008224
Cd	111	3	He	0.02	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.014	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.027	0.0002	10.00	0.0053	2.193E-05
Sn	120	3	He	0.021	0.0138	840.05	0.0148	0.01345
Sn	120	3	He	0.349	0.0186	1140.09	0.0148	0.01345
Sn	120	3	He	0.259	0.0173	1050.07	0.0148	0.01345
Sb	121	3	He	0.324	0.0051	310.02	0.0143	0.0004392
Sb	121	3	He	0.335	0.0052	320.01	0.0143	0.0004392
Sb	121	3	He	0.499	0.0076	460.02	0.0143	0.0004392
Ba	137	3	He	29.519	0.1289	7862.21	0.0044	0.0001096
Ba	137	3	He	31.189	0.1361	8332.48	0.0044	0.0001096
Ba	137	3	He	30.979	0.1352	8212.46	0.0044	0.0001096
Tl	205	3	He	0.024	0.0007	180.01	0.0208	0.0002491
Tl	205	3	He	0.027	0.0008	200.01	0.0208	0.0002491
Tl	205	3	He	0.028	0.0008	200.01	0.0208	0.0002491
Pb	208	3	He	1.917	0.0528	6661.76	0.0272	0.0006218
Pb	208	3	He	1.788	0.0493	6481.59	0.0272	0.0006218
Pb	208	3	He	2.006	0.0552	7121.92	0.0272	0.0006218
U	238	3	He	0.744	0.0205	4921.02	0.0275	2.763E-05
U	238	3	He	0.778	0.0214	5231.11	0.0275	2.763E-05
U	238	3	He	0.768	0.0212	5091.08	0.0275	2.763E-05
Sc	45	1	No Gas			2281722.31		
Sc	45	1	No Gas			2311798.09		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2285588.25		
Ge	72	1	No Gas			1058064.75		
Ge	72	1	No Gas			1055158.19		
Ge	72	1	No Gas			1045041.86		
Sc	45	2	H2			140386.16		
Sc	45	2	H2			138691.63		
Sc	45	2	H2			139810.34		
Ge	72	2	H2			119118.52		
Ge	72	2	H2			116318.30		
Ge	72	2	H2			117327.38		
In	115	2	H2			294364.76		
In	115	2	H2			291879.21		
In	115	2	H2			292913.04		
Sc	45	3	He			45182.87		
Sc	45	3	He			44761.93		
Sc	45	3	He			46235.70		
Ge	72	3	He			75999.54		
Ge	72	3	He			77928.96		
Ge	72	3	He			76542.05		
In	115	3	He			61020.55		
In	115	3	He			61211.27		
In	115	3	He			60738.95		
Tb	159	3	He			240172.32		
Tb	159	3	He			244168.30		
Tb	159	3	He			240683.20		
Bi	209	3	He			169163.96		
Bi	209	3	He			162901.08		
Bi	209	3	He			165449.51		

Quantitation Report

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Acq Time	7/17/2024 9:13:16 AM
Sample Name	410-179170-K-2-A
Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

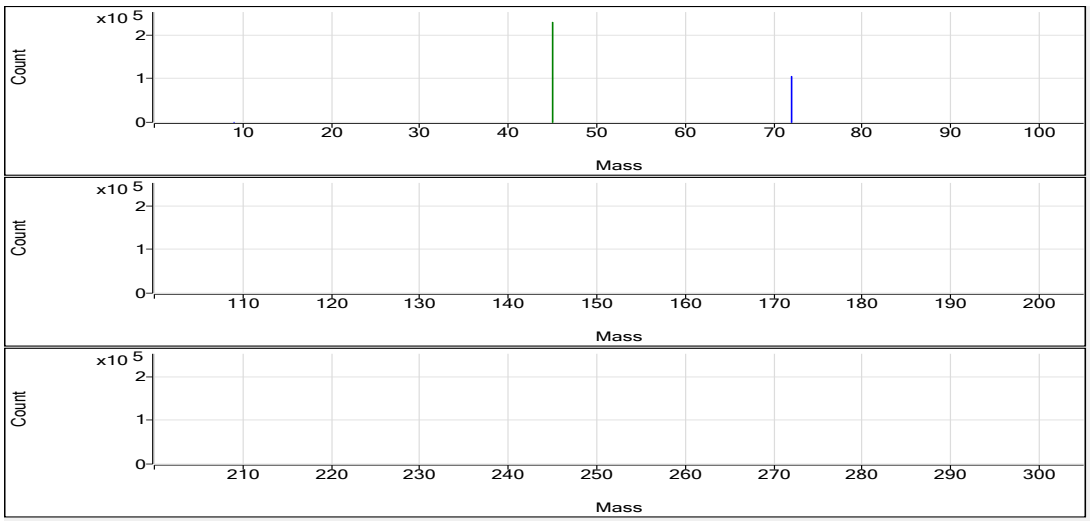
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.158	ppb	15.4	166.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	1.339	ppb	9.7	72.00	0.0006	Pulse	1.5000	3
Na	23	45	He	38073.186	ppb	0.9	5398095.54	119.5489	Analog	0.1000	3
Mg	24	45	He	13491.172	ppb	0.8	924522.59	20.4748	Pulse	0.1000	3
Al	27	45	He	1093.997	ppb	3.0	23106.71	0.5117	Pulse	0.1000	3
K	39	45	He	7297.143	ppb	1.3	377466.24	8.3599	Pulse	0.1000	3
Ca	44	45	He	73904.743	ppb	1.2	206434.02	4.5719	Pulse	0.1000	3
Ti	47	45	He	32.910	ppb	10.3	720.04	0.0159	Pulse	0.1000	3
V	51	45	He	10.437	ppb	1.9	10352.65	0.2293	Pulse	0.5000	3
Cr	52	45	He	5.364	ppb	5.3	7255.18	0.1607	Pulse	0.1000	3
Mn	55	45	He	302.800	ppb	2.2	148099.00	3.2802	Pulse	0.1000	3
Fe	57	45	He	73905.625	ppb	0.9	1671769.77	37.0194	Analog	0.1000	3
Co	59	45	He	10.528	ppb	1.4	25026.55	0.5542	Pulse	0.1000	3
Ni	60	115	He	12.171	ppb	3.1	8575.84	0.1442	Pulse	0.1000	3
Cu	63	72	He	43.362	ppb	2.8	87325.99	1.1201	Pulse	0.1000	3
Zn	66	72	He	211.328	ppb	2.8	47627.53	0.6109	Pulse	0.1000	3
As	75	72	He	249.826	ppb	1.7	41491.28	0.5322	Pulse	0.5000	3
Sr	88	115	He	634.518	ppb	1.8	355698.07	5.9817	Pulse	0.1000	3
Mo	98	115	He	8.116	ppb	1.7	11130.98	0.1872	Pulse	0.1000	3
Ag	107	115	He	0.023	ppb	49.1	113.34	0.0019	Pulse	0.1000	3
Cd	111	115	He	3.306	ppb	2.1	1050.04	0.0177	Pulse	0.5000	3
Sn	120	115	He	1.806	ppb	5.0	2390.26	0.0402	Pulse	0.1000	3
Sb	121	115	He	4.590	ppb	4.5	3930.63	0.0661	Pulse	0.1000	3
Ba	137	115	He	107.698	ppb	3.9	27932.64	0.4698	Pulse	0.1000	3
Tl	205	159	He	0.047	ppb	28.9	296.68	0.0012	Pulse	0.1000	3
Pb	208	159	He	29.321	ppb	1.0	193977.12	0.7988	Pulse	0.1000	3
U	238	159	He	3.509	ppb	2.9	23443.20	0.0965	Pulse	0.1000	3

ISTD Table:

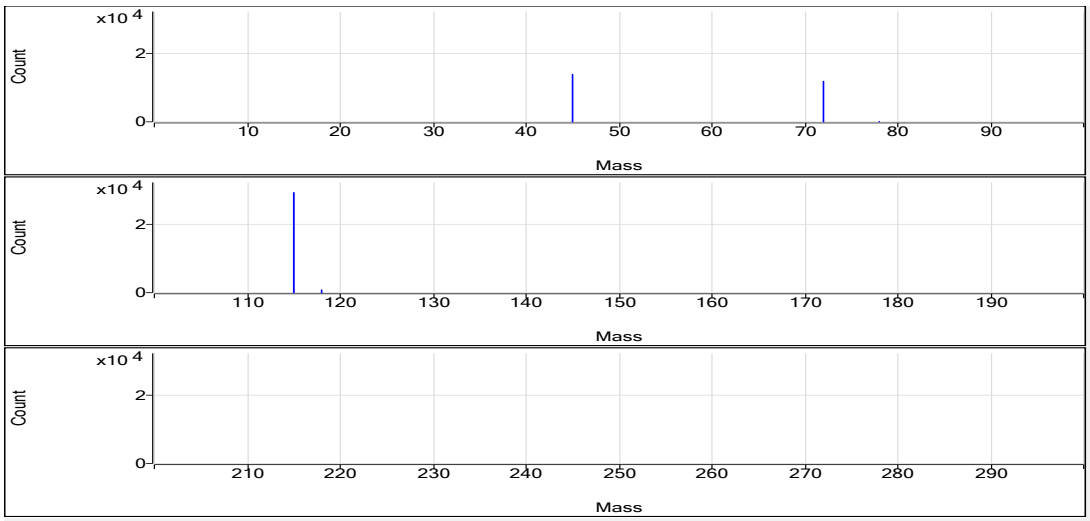
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2296891.95	1.1	100.1	Analog	0.1000	3
No Gas	Ge	72	1054750.19	0.9	101.5	Pulse	0.1000	3
H2	Sc	45	139482.66	0.4	100.3	Pulse	0.1000	3
H2	Ge	72	119155.77	0.8	100.9	Pulse	0.1000	3
H2	In	115	293416.54	1.1	99.6	Pulse	0.1000	3
He	Sc	45	45156.21	1.2	96.4	Pulse	0.1000	3
He	Ge	72	77968.82	0.4	102.0	Pulse	0.1000	3
He	In	115	59470.75	1.4	98.1	Pulse	0.1000	3
He	Tb	159	242866.32	1.3	100.7	Pulse	0.1000	3
He	Bi	209	165123.03	0.8	99.6	Pulse	0.1000	3

No Gas

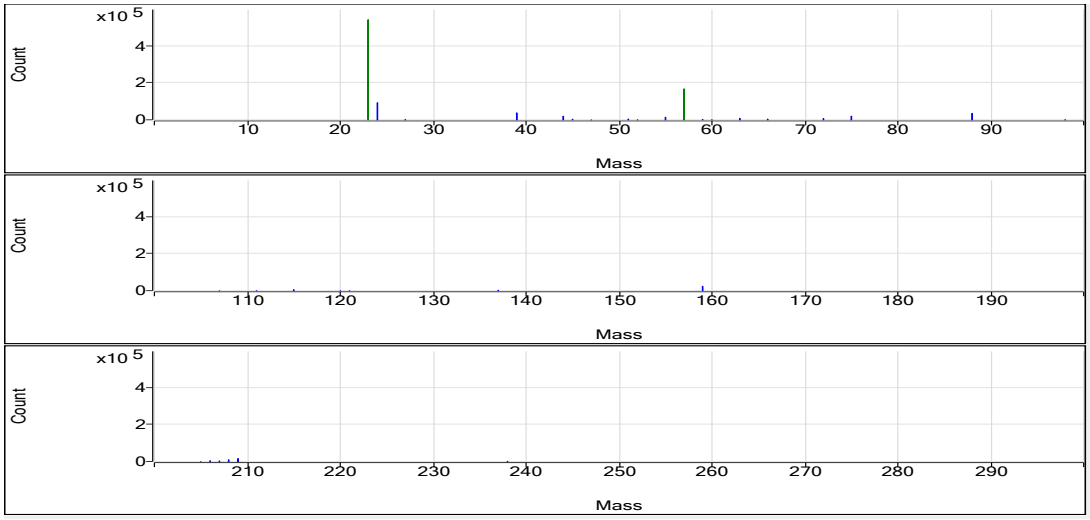


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.165	0.0001	170.00	0.0004	9.309E-06
Be	9	1	No Gas	0.131	0.0001	142.00	0.0004	9.309E-06
Be	9	1	No Gas	0.179	0.0001	186.00	0.0004	9.309E-06
Se	78	2	H2	1.477	0.0007	78.67	0.0004	5.598E-06
Se	78	2	H2	1.218	0.0006	66.00	0.0004	5.598E-06
Se	78	2	H2	1.323	0.0006	71.33	0.0004	5.598E-06
Na	23	3	He	38347.276	120.4062	5363039.30	0.0031	0.4657
Na	23	3	He	37690.826	118.353	5384319.29	0.0031	0.4657
Na	23	3	He	38181.454	119.8875	5446928.04	0.0031	0.4657
Mg	24	3	He	13577.971	20.6065	917840.30	0.0015	0.003704
Mg	24	3	He	13370.51	20.2917	923147.02	0.0015	0.003704
Mg	24	3	He	13525.033	20.5262	932580.45	0.0015	0.003704
Al	27	3	He	1087.981	0.5089	22666.30	0.0005	0.0007154
Al	27	3	He	1065.154	0.4982	22665.96	0.0005	0.0007154
Al	27	3	He	1128.857	0.528	23987.86	0.0005	0.0007154
K	39	3	He	7400.944	8.4727	377385.07	0.0011	0.4296
K	39	3	He	7213.432	8.2689	376184.64	0.0011	0.4296
K	39	3	He	7277.052	8.3381	378829.02	0.0011	0.4296
Ca	44	3	He	74748.021	4.624	205959.96	0.0001	0.002924
Ca	44	3	He	73944.292	4.5743	208103.88	0.0001	0.002924
Ca	44	3	He	73021.916	4.5173	205238.22	0.0001	0.002924
Ti	47	3	He	31.521	0.0153	680.04	0.0005	0
Ti	47	3	He	36.761	0.0178	810.04	0.0005	0
Ti	47	3	He	30.447	0.0147	670.03	0.0005	0
V	51	3	He	10.354	0.2275	10133.17	0.021	0.009571
V	51	3	He	10.295	0.2263	10293.28	0.021	0.009571
V	51	3	He	10.663	0.234	10631.49	0.021	0.009571
Cr	52	3	He	5.561	0.166	7391.85	0.0267	0.01758
Cr	52	3	He	5.035	0.1519	6911.72	0.0267	0.01758
Cr	52	3	He	5.496	0.1642	7461.97	0.0267	0.01758
Mn	55	3	He	309.14	3.3488	149159.11	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	295.852	3.205	145808.63	0.0108	0.004199
Mn	55	3	He	303.406	3.2868	149329.27	0.0108	0.004199
Fe	57	3	He	73153.029	36.6424	1632098.10	0.0005	0.002993
Fe	57	3	He	74293.968	37.2139	1692997.79	0.0005	0.002993
Fe	57	3	He	74269.878	37.2018	1690213.41	0.0005	0.002993
Co	59	3	He	10.564	0.5561	24769.44	0.0524	0.003063
Co	59	3	He	10.653	0.5608	25510.77	0.0524	0.003063
Co	59	3	He	10.368	0.5458	24799.45	0.0524	0.003063
Ni	60	3	He	11.839	0.1406	8422.41	0.0109	0.01116
Ni	60	3	He	12.579	0.1487	8702.62	0.0109	0.01116
Ni	60	3	He	12.094	0.1434	8602.49	0.0109	0.01116
Cu	63	3	He	41.947	1.084	84902.85	0.0255	0.01531
Cu	63	3	He	44.11	1.1392	88452.26	0.0255	0.01531
Cu	63	3	He	44.029	1.1371	88622.85	0.0255	0.01531
Zn	66	3	He	204.545	0.5914	46316.98	0.0029	0.002787
Zn	66	3	He	214.093	0.6189	48052.11	0.0029	0.002787
Zn	66	3	He	215.346	0.6225	48513.50	0.0029	0.002787
As	75	3	He	245.303	0.5225	40925.75	0.0021	0.0004097
As	75	3	He	250.636	0.5339	41455.32	0.0021	0.0004097
As	75	3	He	253.54	0.5401	42092.77	0.0021	0.0004097
Sr	88	3	He	621.762	5.8615	351098.90	0.0094	0.0008765
Sr	88	3	He	643.803	6.0692	355195.62	0.0094	0.0008765
Sr	88	3	He	637.99	6.0144	360799.68	0.0094	0.0008765
Mo	98	3	He	8.197	0.1891	11324.48	0.023	0.0002199
Mo	98	3	He	8.197	0.1891	11064.26	0.023	0.0002199
Mo	98	3	He	7.953	0.1834	11004.20	0.023	0.0002199
Ag	107	3	He	0.011	0.0013	80.00	0.0483	0.0008224
Ag	107	3	He	0.033	0.0024	140.01	0.0483	0.0008224
Ag	107	3	He	0.024	0.002	120.00	0.0483	0.0008224
Cd	111	3	He	3.238	0.0173	1036.04	0.0053	2.193E-05
Cd	111	3	He	3.379	0.018	1056.04	0.0053	2.193E-05
Cd	111	3	He	3.302	0.0176	1058.04	0.0053	2.193E-05
Sn	120	3	He	1.73	0.0391	2340.25	0.0148	0.01345
Sn	120	3	He	1.781	0.0398	2330.27	0.0148	0.01345
Sn	120	3	He	1.906	0.0417	2500.27	0.0148	0.01345
Sb	121	3	He	4.357	0.0628	3760.57	0.0143	0.0004392
Sb	121	3	He	4.747	0.0684	4000.67	0.0143	0.0004392
Sb	121	3	He	4.665	0.0672	4030.66	0.0143	0.0004392
Ba	137	3	He	104.105	0.4542	27204.57	0.0044	0.0001096
Ba	137	3	He	112.283	0.4898	28667.48	0.0044	0.0001096
Ba	137	3	He	106.706	0.4655	27925.86	0.0044	0.0001096
Tl	205	3	He	0.04	0.0011	260.01	0.0208	0.0002491
Tl	205	3	He	0.038	0.001	250.01	0.0208	0.0002491
Tl	205	3	He	0.062	0.0015	380.02	0.0208	0.0002491
Pb	208	3	He	29.607	0.8065	104382.56	0.0272	0.0006218
Pb	208	3	He	29.345	0.7994	102982.35	0.0272	0.0006218
Pb	208	3	He	29.012	0.7903	101370.49	0.0272	0.0006218
U	238	3	He	3.449	0.0949	22958.97	0.0275	2.763E-05
U	238	3	He	3.627	0.0998	23970.74	0.0275	2.763E-05
U	238	3	He	3.452	0.095	23399.90	0.0275	2.763E-05
Sc	45	1	No Gas			2267669.97		
Sc	45	1	No Gas			2309025.75		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2313980.12		
Ge	72	1	No Gas			1049336.55		
Ge	72	1	No Gas			1049147.33		
Ge	72	1	No Gas			1065766.70		
Sc	45	2	H2			139691.23		
Sc	45	2	H2			139942.12		
Sc	45	2	H2			138814.64		
Ge	72	2	H2			118090.99		
Ge	72	2	H2			119924.80		
Ge	72	2	H2			119451.51		
In	115	2	H2			290709.47		
In	115	2	H2			296873.53		
In	115	2	H2			292666.62		
Sc	45	3	He			44541.23		
Sc	45	3	He			45493.74		
Sc	45	3	He			45433.65		
Ge	72	3	He			78320.57		
Ge	72	3	He			77647.21		
Ge	72	3	He			77938.69		
In	115	3	He			59915.77		
In	115	3	He			58540.30		
In	115	3	He			60006.36		
Tb	159	3	He			241980.68		
Tb	159	3	He			240248.06		
Tb	159	3	He			246370.21		
Bi	209	3	He			165641.50		
Bi	209	3	He			166149.55		
Bi	209	3	He			163578.05		

Quantitation Report

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Sample Type	Sample
Comment	E1
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

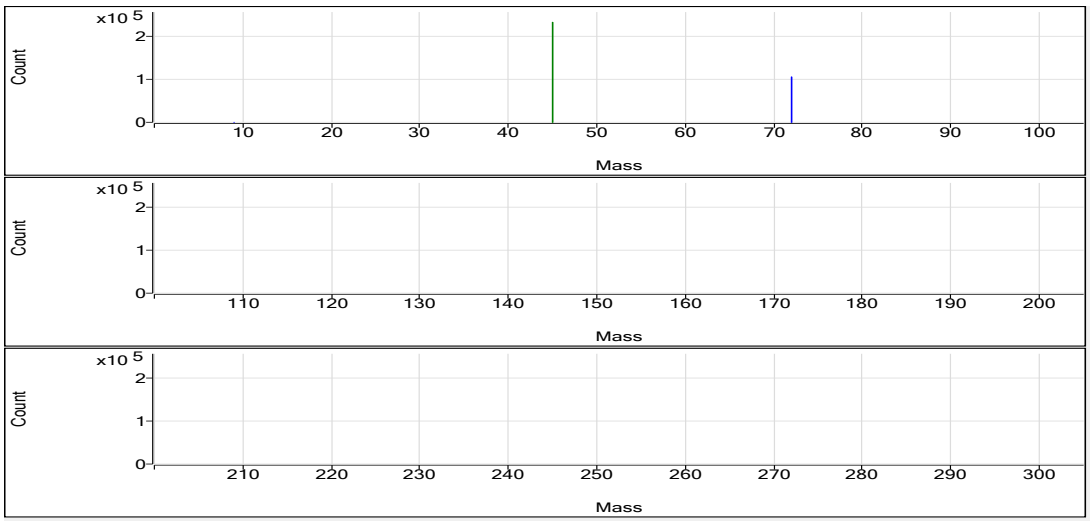
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.019	ppb	55.5	38.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.703	ppb	5.5	88.89	0.0008	Pulse	1.5000	3
Na	23	45	He	17869.781	ppb	2.2	2605813.35	56.3578	Analog	0.1000	3
Mg	24	45	He	5887.800	ppb	2.5	413231.71	8.9377	Pulse	0.1000	3
Al	27	45	He	115.437	ppb	2.8	2526.93	0.0546	Pulse	0.1000	3
K	39	45	He	8018.104	ppb	2.7	422738.99	9.1434	Pulse	0.1000	3
Ca	44	45	He	55086.778	ppb	2.3	157599.92	3.4085	Pulse	0.1000	3
Ti	47	45	He	4.000	ppb	31.2	90.00	0.0019	Pulse	0.1000	3
V	51	45	He	1.029	ppb	2.7	1444.74	0.0312	Pulse	0.5000	3
Cr	52	45	He	1.186	ppb	3.1	2276.89	0.0492	Pulse	0.1000	3
Mn	55	45	He	1009.231	ppb	1.6	505096.11	10.9231	Pulse	0.1000	3
Fe	57	45	He	5358.261	ppb	1.7	124238.03	2.6867	Pulse	0.1000	3
Co	59	45	He	5.057	ppb	2.5	12381.73	0.2678	Pulse	0.1000	3
Ni	60	115	He	1.519	ppb	18.2	1713.48	0.0278	Pulse	0.1000	3
Cu	63	72	He	0.999	ppb	4.8	3133.76	0.0408	Pulse	0.1000	3
Zn	66	72	He	11.164	ppb	7.6	2683.65	0.0349	Pulse	0.1000	3
As	75	72	He	4.197	ppb	2.2	718.02	0.0093	Pulse	0.5000	3
Sr	88	115	He	225.069	ppb	1.1	130821.99	2.1223	Pulse	0.1000	3
Mo	98	115	He	0.262	ppb	16.2	386.68	0.0063	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	36.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.071	ppb	34.7	24.67	0.0004	Pulse	0.5000	3
Sn	120	115	He	0.484	ppb	50.9	1270.09	0.0206	Pulse	0.1000	3
Sb	121	115	He	0.143	ppb	59.0	153.34	0.0025	Pulse	0.1000	3
Ba	137	115	He	23.527	ppb	3.6	6331.52	0.1027	Pulse	0.1000	3
Tl	205	159	He	0.079	ppb	11.1	456.69	0.0019	Pulse	0.1000	3
Pb	208	159	He	2.691	ppb	1.2	17861.50	0.0739	Pulse	0.1000	3
U	238	159	He	0.355	ppb	7.1	2363.61	0.0098	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2317231.84	2.6	101.0	Analog	0.1000	3
No Gas	Ge	72	1052229.85	2.2	101.3	Pulse	0.1000	3
H2	Sc	45	139418.29	1.1	100.3	Pulse	0.1000	3
H2	Ge	72	115855.32	0.8	98.1	Pulse	0.1000	3
H2	In	115	293000.66	0.6	99.4	Pulse	0.1000	3
He	Sc	45	46252.51	2.3	98.8	Pulse	0.1000	3
He	Ge	72	76863.86	1.3	100.5	Pulse	0.1000	3
He	In	115	61646.82	1.4	101.7	Pulse	0.1000	3
He	Tb	159	241739.73	1.2	100.2	Pulse	0.1000	3
He	Bi	209	167096.42	0.2	100.8	Pulse	0.1000	3

No Gas



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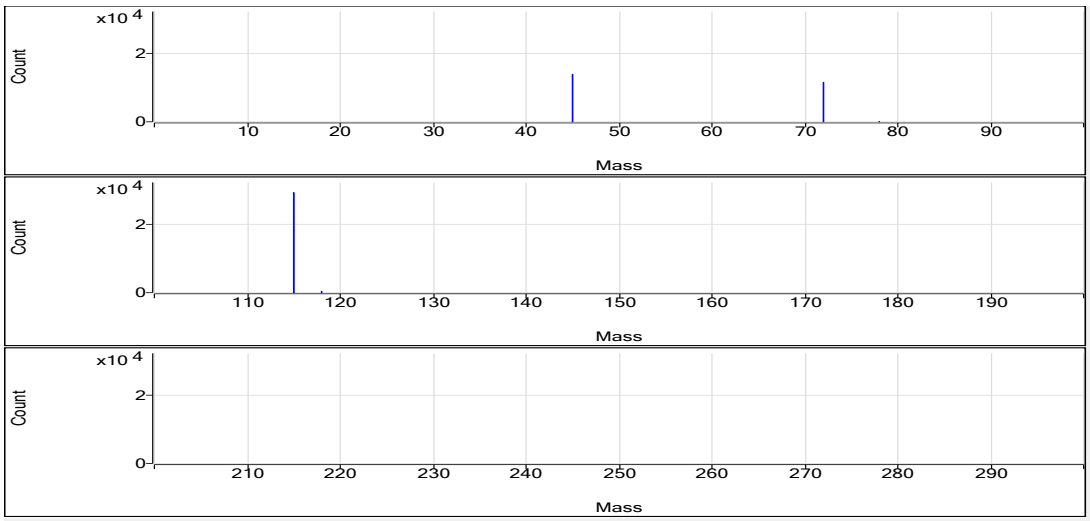
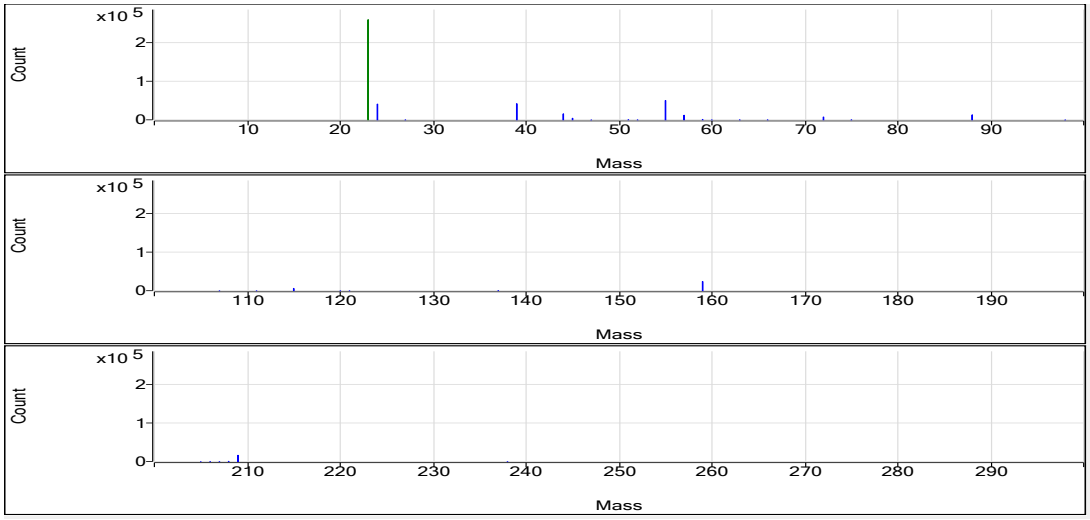


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.026	0	46.00	0.0004	9.309E-06
Be	9	1	No Gas	0.007	0	28.00	0.0004	9.309E-06
Be	9	1	No Gas	0.024	0	42.00	0.0004	9.309E-06
Se	78	2	H2	1.611	0.0007	84.00	0.0004	5.598E-06
Se	78	2	H2	1.698	0.0008	88.00	0.0004	5.598E-06
Se	78	2	H2	1.799	0.0008	94.67	0.0004	5.598E-06
Na	23	3	He	18182.91	57.3372	2605608.24	0.0031	0.4657
Na	23	3	He	18003.843	56.7771	2604075.43	0.0031	0.4657
Na	23	3	He	17422.592	54.9591	2607756.37	0.0031	0.4657
Mg	24	3	He	6006.061	9.1171	414315.35	0.0015	0.003704
Mg	24	3	He	5936.122	9.011	413288.86	0.0015	0.003704
Mg	24	3	He	5721.217	8.6849	412090.93	0.0015	0.003704
Al	27	3	He	118.148	0.0559	2540.27	0.0005	0.0007154
Al	27	3	He	111.913	0.053	2430.24	0.0005	0.0007154
Al	27	3	He	116.249	0.055	2610.29	0.0005	0.0007154
K	39	3	He	8194.866	9.3355	424239.68	0.0011	0.4296
K	39	3	He	8085.644	9.2168	422728.47	0.0011	0.4296
K	39	3	He	7773.801	8.8779	421248.82	0.0011	0.4296
Ca	44	3	He	55697.4	3.4463	156611.11	0.0001	0.002924
Ca	44	3	He	55932.769	3.4608	158730.34	0.0001	0.002924
Ca	44	3	He	53630.164	3.3185	157458.31	0.0001	0.002924
Ti	47	3	He	2.726	0.0013	60.00	0.0005	0
Ti	47	3	He	4.051	0.002	90.00	0.0005	0
Ti	47	3	He	5.222	0.0025	120.01	0.0005	0
V	51	3	He	1.011	0.0309	1402.07	0.021	0.009571
V	51	3	He	1.014	0.0309	1418.07	0.021	0.009571
V	51	3	He	1.061	0.0319	1514.08	0.021	0.009571
Cr	52	3	He	1.147	0.0482	2190.23	0.0267	0.01758
Cr	52	3	He	1.221	0.0502	2300.22	0.0267	0.01758
Cr	52	3	He	1.19	0.0493	2340.23	0.0267	0.01758
Mn	55	3	He	1019.179	11.0307	501274.95	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1018.253	11.0207	505462.65	0.0108	0.004199
Mn	55	3	He	990.26	10.7178	508550.73	0.0108	0.004199
Fe	57	3	He	5399.902	2.7076	123042.54	0.0005	0.002993
Fe	57	3	He	5419.086	2.7172	124623.88	0.0005	0.002993
Fe	57	3	He	5255.795	2.6354	125047.66	0.0005	0.002993
Co	59	3	He	5.198	0.2752	12505.10	0.0524	0.003063
Co	59	3	He	5.016	0.2657	12184.87	0.0524	0.003063
Co	59	3	He	4.956	0.2625	12455.21	0.0524	0.003063
Ni	60	3	He	1.208	0.0244	1480.12	0.0109	0.01116
Ni	60	3	He	1.613	0.0288	1780.16	0.0109	0.01116
Ni	60	3	He	1.735	0.0301	1880.17	0.0109	0.01116
Cu	63	3	He	1.049	0.042	3220.46	0.0255	0.01531
Cu	63	3	He	0.996	0.0407	3170.44	0.0255	0.01531
Cu	63	3	He	0.953	0.0396	3010.37	0.0255	0.01531
Zn	66	3	He	10.19	0.0321	2460.28	0.0029	0.002787
Zn	66	3	He	11.561	0.0361	2810.33	0.0029	0.002787
Zn	66	3	He	11.742	0.0366	2780.33	0.0029	0.002787
As	75	3	He	4.21	0.0094	718.02	0.0021	0.0004097
As	75	3	He	4.099	0.0091	712.02	0.0021	0.0004097
As	75	3	He	4.282	0.0095	724.02	0.0021	0.0004097
Sr	88	3	He	227.798	2.1481	130472.32	0.0094	0.0008765
Sr	88	3	He	224.466	2.1167	130815.18	0.0094	0.0008765
Sr	88	3	He	222.943	2.1023	131178.46	0.0094	0.0008765
Mo	98	3	He	0.248	0.0059	360.02	0.023	0.0002199
Mo	98	3	He	0.229	0.0055	340.01	0.023	0.0002199
Mo	98	3	He	0.31	0.0074	460.02	0.023	0.0002199
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	-0.004	0.0006	40.00	0.0483	0.0008224
Cd	111	3	He	0.064	0.0004	22.00	0.0053	2.193E-05
Cd	111	3	He	0.05	0.0003	18.00	0.0053	2.193E-05
Cd	111	3	He	0.098	0.0005	34.00	0.0053	2.193E-05
Sn	120	3	He	0.481	0.0206	1250.09	0.0148	0.01345
Sn	120	3	He	0.731	0.0243	1500.11	0.0148	0.01345
Sn	120	3	He	0.239	0.017	1060.07	0.0148	0.01345
Sb	121	3	He	0.211	0.0035	210.01	0.0143	0.0004392
Sb	121	3	He	0.048	0.0011	70.00	0.0143	0.0004392
Sb	121	3	He	0.171	0.0029	180.01	0.0143	0.0004392
Ba	137	3	He	23.686	0.1034	6281.50	0.0044	0.0001096
Ba	137	3	He	24.28	0.106	6551.61	0.0044	0.0001096
Ba	137	3	He	22.614	0.0987	6161.44	0.0044	0.0001096
Tl	205	3	He	0.083	0.002	480.03	0.0208	0.0002491
Tl	205	3	He	0.085	0.002	480.02	0.0208	0.0002491
Tl	205	3	He	0.069	0.0017	410.02	0.0208	0.0002491
Pb	208	3	He	2.716	0.0745	9283.19	0.0272	0.0006218
Pb	208	3	He	2.653	0.0728	8842.93	0.0272	0.0006218
Pb	208	3	He	2.705	0.0743	9603.53	0.0272	0.0006218
U	238	3	He	0.369	0.0102	2470.29	0.0275	2.763E-05
U	238	3	He	0.369	0.0102	2430.29	0.0275	2.763E-05
U	238	3	He	0.326	0.009	2190.26	0.0275	2.763E-05
Sc	45	1	No Gas			2364333.56		
Sc	45	1	No Gas			2336544.81		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2250817.15		
Ge	72	1	No Gas			1060888.42		
Ge	72	1	No Gas			1069866.62		
Ge	72	1	No Gas			1025934.52		
Sc	45	2	H2			137976.97		
Sc	45	2	H2			139216.95		
Sc	45	2	H2			141060.95		
Ge	72	2	H2			115693.95		
Ge	72	2	H2			115039.04		
Ge	72	2	H2			116832.98		
In	115	2	H2			292408.57		
In	115	2	H2			291574.90		
In	115	2	H2			295018.51		
Sc	45	3	He			45443.61		
Sc	45	3	He			45864.89		
Sc	45	3	He			47449.04		
Ge	72	3	He			76623.24		
Ge	72	3	He			77948.77		
Ge	72	3	He			76019.56		
In	115	3	He			60748.41		
In	115	3	He			61813.42		
In	115	3	He			62405.31		
Tb	159	3	He			242856.79		
Tb	159	3	He			238527.81		
Tb	159	3	He			243834.59		
Bi	209	3	He			166685.95		
Bi	209	3	He			167492.46		
Bi	209	3	He			167110.84		

Quantitation Report

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Sample Type	Sample
Comment	E1
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

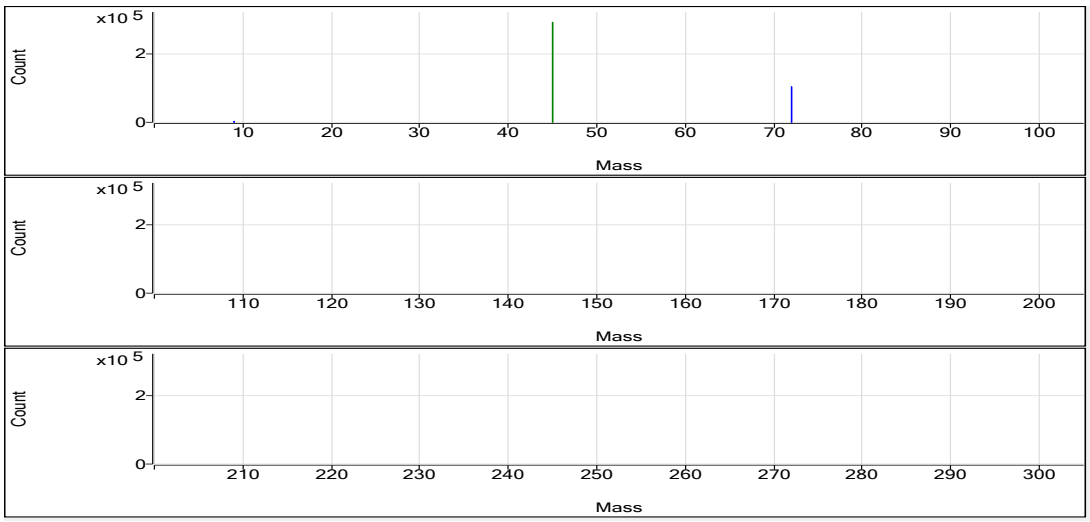
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	5.627	ppb	1.3	6615.99	0.0022	Pulse	0.5000	3
Se	78	72	H2	1.783	ppb	0.6	93.78	0.0008	Pulse	1.5000	3
Na	23	45	He	605193.317	ppb	2.5	108956115.04	1,893.3562	Analog	0.1000	3
Mg	24	45	He	25020.529	ppb	2.5	2185021.68	37.9691	Analog	0.1000	3
Al	27	45	He	46992.639	ppb	2.2	1263195.58	21.9498	Analog	0.1000	3
K	39	45	He	20923.389	ppb	1.1	1333604.57	23.1684	Analog	0.1000	3
Ca	44	45	He	88956.934	ppb	2.1	316667.10	5.5025	Pulse	0.1000	3
Ti	47	45	He	1027.691	ppb	1.7	28665.66	0.4978	Pulse	0.1000	3
V	51	45	He	1013.055	ppb	2.5	1227589.46	21.3322	Pulse	0.5000	3
Cr	52	45	He	173.663	ppb	2.3	267695.77	4.6516	Pulse	0.1000	3
Mn	55	45	He	1104.966	ppb	1.8	688276.03	11.9588	Pulse	0.1000	3
Fe	57	45	He	237157.175	ppb	3.0	6835069.06	118.7855	Analog	0.1000	3
Co	59	45	He	91.006	ppb	2.1	274369.66	4.7674	Pulse	0.1000	3
Ni	60	115	He	439.615	ppb	0.8	280341.69	4.8179	Pulse	0.1000	3
Cu	63	72	He	727.184	ppb	2.0	1470245.50	18.5426	Mix	0.1000	3
Zn	66	72	He	10547.983	ppb	0.2	2406820.90	30.3552	Analog	0.1000	3
As	75	72	He	141.745	ppb	1.3	23953.16	0.3021	Pulse	0.5000	3
Sr	88	115	He	840.248	ppb	1.9	460857.36	7.9209	Pulse	0.1000	3
Mo	98	115	He	41.119	ppb	1.5	55130.42	0.9475	Pulse	0.1000	3
Ag	107	115	He	0.561	ppb	9.4	1623.47	0.0279	Pulse	0.1000	3
Cd	111	115	He	223.197	ppb	1.4	69276.70	1.1906	Pulse	0.5000	3
Sn	120	115	He	19.674	ppb	2.5	17733.98	0.3048	Pulse	0.1000	3
Sb	121	115	He	13.363	ppb	1.3	11151.03	0.1916	Pulse	0.1000	3
Ba	137	115	He	369.369	ppb	2.9	93732.31	1.6111	Pulse	0.1000	3
Tl	205	159	He	0.358	ppb	8.5	2093.56	0.0077	Pulse	0.1000	3
Pb	208	159	He	2255.249	ppb	1.4	16739036.94	61.3889	Analog	0.1000	3
U	238	159	He	5.054	ppb	1.8	37911.06	0.1390	Pulse	0.1000	3

ISTD Table:

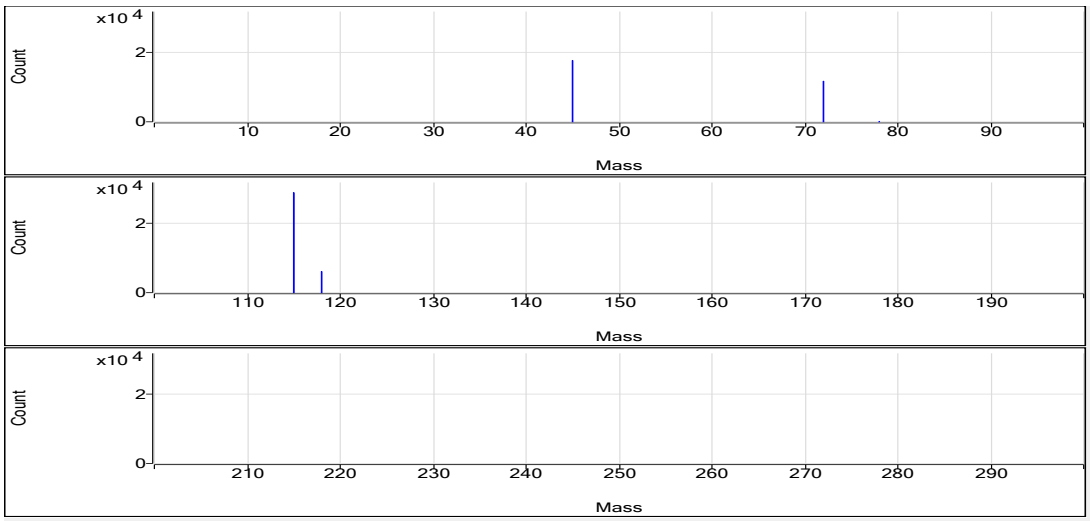
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2942667.04	0.6	128.3	Analog	0.1000	3
No Gas	Ge	72	1048057.98	0.3	100.9	Pulse	0.1000	3
H2	Sc	45	175809.70	1.1	126.4	Pulse	0.1000	3
H2	Ge	72	116748.26	1.0	98.9	Pulse	0.1000	3
H2	In	115	286819.54	1.0	97.3	Pulse	0.1000	3
He	Sc	45	57571.51	2.6	122.9	Pulse	0.1000	3
He	Ge	72	79288.97	0.7	103.7	Pulse	0.1000	3
He	In	115	58192.55	1.4	96.0	Pulse	0.1000	3
He	Tb	159	272718.34	2.0	113.1	Pulse	0.1000	3
He	Bi	209	166077.46	0.7	100.2	Pulse	0.1000	3

No Gas

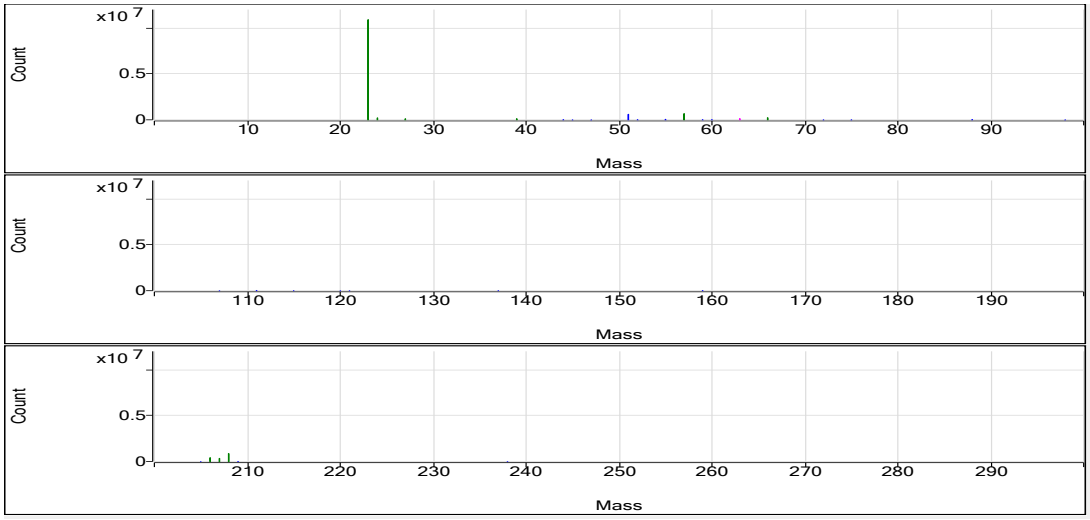


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	5.652	0.0023	6689.37	0.0004	9.309E-06
Be	9	1	No Gas	5.546	0.0022	6503.28	0.0004	9.309E-06
Be	9	1	No Gas	5.683	0.0023	6655.33	0.0004	9.309E-06
Se	78	2	H2	1.78	0.0008	92.67	0.0004	5.598E-06
Se	78	2	H2	1.775	0.0008	93.33	0.0004	5.598E-06
Se	78	2	H2	1.795	0.0008	95.33	0.0004	5.598E-06
Na	23	3	He	588602.264	1841.4636	109102098.37	0.0031	0.4657
Na	23	3	He	608535.389	1903.8094	108707058.38	0.0031	0.4657
Na	23	3	He	618442.299	1934.7957	109059188.37	0.0031	0.4657
Mg	24	3	He	24301.454	36.878	2184931.37	0.0015	0.003704
Mg	24	3	He	25366.041	38.4934	2197964.81	0.0015	0.003704
Mg	24	3	He	25394.094	38.536	2172168.87	0.0015	0.003704
Al	27	3	He	45817.44	21.4009	1267947.56	0.0005	0.0007154
Al	27	3	He	47352.619	22.1179	1262927.25	0.0005	0.0007154
Al	27	3	He	47807.858	22.3305	1258711.93	0.0005	0.0007154
K	39	3	He	20653.229	22.8748	1355275.92	0.0011	0.4296
K	39	3	He	21093.594	23.3534	1333473.42	0.0011	0.4296
K	39	3	He	21023.344	23.2771	1312064.36	0.0011	0.4296
Ca	44	3	He	86806.874	5.3695	318131.60	0.0001	0.002924
Ca	44	3	He	89607.039	5.5427	316484.00	0.0001	0.002924
Ca	44	3	He	90456.889	5.5952	315385.70	0.0001	0.002924
Ti	47	3	He	1047.779	0.5075	30068.19	0.0005	0
Ti	47	3	He	1018	0.4931	28154.61	0.0005	0
Ti	47	3	He	1017.294	0.4927	27774.17	0.0005	0
V	51	3	He	984.595	20.7332	1228392.50	0.021	0.009571
V	51	3	He	1019.801	21.4742	1226174.50	0.021	0.009571
V	51	3	He	1034.767	21.7893	1228201.38	0.021	0.009571
Cr	52	3	He	169.057	4.5287	268312.16	0.0267	0.01758
Cr	52	3	He	176.034	4.7148	269215.99	0.0267	0.01758
Cr	52	3	He	175.899	4.7112	265559.16	0.0267	0.01758
Mn	55	3	He	1081.949	11.7098	693776.79	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1115.311	12.0708	689237.26	0.0108	0.004199
Mn	55	3	He	1117.637	12.0959	681814.05	0.0108	0.004199
Fe	57	3	He	228930.305	114.665	6793613.65	0.0005	0.002993
Fe	57	3	He	240127.778	120.2734	6867580.52	0.0005	0.002993
Fe	57	3	He	242413.443	121.4182	6844013.02	0.0005	0.002993
Co	59	3	He	89.168	4.6711	276751.23	0.0524	0.003063
Co	59	3	He	90.872	4.7603	271812.65	0.0524	0.003063
Co	59	3	He	92.979	4.8706	274545.09	0.0524	0.003063
Ni	60	3	He	437.183	4.7913	281676.73	0.0109	0.01116
Ni	60	3	He	443.798	4.8636	278461.34	0.0109	0.01116
Ni	60	3	He	437.863	4.7987	280887.01	0.0109	0.01116
Cu	63	3	He	720.626	18.3755	1445829.20	0.0255	0.01531
Cu	63	3	He	717.403	18.2934	1458313.57	0.0255	0.01531
Cu	63	3	He	743.522	18.9589	1506593.73	0.0255	0.01531
Zn	66	3	He	10562.95	30.3982	2391807.93	0.0029	0.002787
Zn	66	3	He	10554.687	30.3745	2421392.15	0.0029	0.002787
Zn	66	3	He	10526.313	30.2928	2407262.62	0.0029	0.002787
As	75	3	He	143.78	0.3064	24112.08	0.0021	0.0004097
As	75	3	He	140.422	0.2993	23859.67	0.0021	0.0004097
As	75	3	He	141.033	0.3006	23887.72	0.0021	0.0004097
Sr	88	3	He	832.926	7.8519	461608.27	0.0094	0.0008765
Sr	88	3	He	858.458	8.0925	463331.44	0.0094	0.0008765
Sr	88	3	He	829.359	7.8182	457632.38	0.0094	0.0008765
Mo	98	3	He	40.516	0.9336	54886.35	0.023	0.0002199
Mo	98	3	He	41.739	0.9618	55066.82	0.023	0.0002199
Mo	98	3	He	41.102	0.9471	55438.08	0.023	0.0002199
Ag	107	3	He	0.504	0.0252	1480.12	0.0483	0.0008224
Ag	107	3	He	0.569	0.0283	1620.14	0.0483	0.0008224
Ag	107	3	He	0.609	0.0302	1770.15	0.0483	0.0008224
Cd	111	3	He	219.915	1.1731	68966.60	0.0053	2.193E-05
Cd	111	3	He	226.247	1.2069	69099.26	0.0053	2.193E-05
Cd	111	3	He	223.43	1.1919	69764.25	0.0053	2.193E-05
Sn	120	3	He	19.161	0.2972	17470.26	0.0148	0.01345
Sn	120	3	He	19.711	0.3053	17480.42	0.0148	0.01345
Sn	120	3	He	20.15	0.3118	18251.25	0.0148	0.01345
Sb	121	3	He	13.171	0.1889	11104.31	0.0143	0.0004392
Sb	121	3	He	13.391	0.192	10994.22	0.0143	0.0004392
Sb	121	3	He	13.527	0.194	11354.57	0.0143	0.0004392
Ba	137	3	He	359.064	1.5662	92076.06	0.0044	0.0001096
Ba	137	3	He	380.334	1.659	94983.04	0.0044	0.0001096
Ba	137	3	He	368.708	1.6083	94137.83	0.0044	0.0001096
Tl	205	3	He	0.323	0.007	1940.20	0.0208	0.0002491
Tl	205	3	He	0.376	0.0081	2180.23	0.0208	0.0002491
Tl	205	3	He	0.375	0.008	2160.24	0.0208	0.0002491
Pb	208	3	He	2220.442	60.4415	8895274.87	0.0272	0.0006218
Pb	208	3	He	2278.488	62.0215	8844098.62	0.0272	0.0006218
Pb	208	3	He	2266.816	61.7038	8713669.25	0.0272	0.0006218
U	238	3	He	4.999	0.1375	38362.17	0.0275	2.763E-05
U	238	3	He	5.006	0.1377	37279.33	0.0275	2.763E-05
U	238	3	He	5.157	0.1419	38091.67	0.0275	2.763E-05
Sc	45	1	No Gas			2962386.52		
Sc	45	1	No Gas			2934572.14		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2931042.46		
Ge	72	1	No Gas			1050967.80		
Ge	72	1	No Gas			1048545.22		
Ge	72	1	No Gas			1044660.92		
Sc	45	2	H2			177269.72		
Sc	45	2	H2			173539.22		
Sc	45	2	H2			176620.15		
Ge	72	2	H2			115602.95		
Ge	72	2	H2			116741.90		
Ge	72	2	H2			117899.92		
In	115	2	H2			284091.27		
In	115	2	H2			286348.98		
In	115	2	H2			290018.37		
Sc	45	3	He			59247.49		
Sc	45	3	He			57099.76		
Sc	45	3	He			56367.29		
Ge	72	3	He			78682.44		
Ge	72	3	He			79718.02		
Ge	72	3	He			79466.45		
In	115	3	He			58911.86		
In	115	3	He			57376.55		
In	115	3	He			58661.66		
Tb	159	3	He			278964.04		
Tb	159	3	He			270690.25		
Tb	159	3	He			268500.72		
Bi	209	3	He			167281.40		
Bi	209	3	He			166007.07		
Bi	209	3	He			164943.92		

Quantitation Report

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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

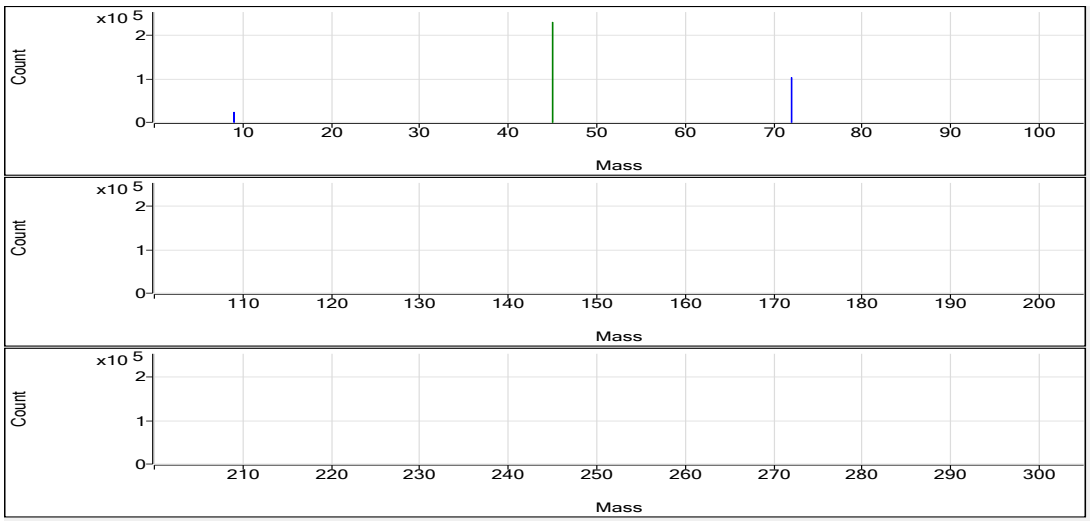
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.191	ppb	1.7	46940.15	0.0204	Pulse	0.5000	3
Se	78	72	H2	53.802	ppb	0.8	2711.79	0.0241	Pulse	1.5000	3
Na	23	45	He	5037.289	ppb	0.4	733227.67	16.2210	Pulse	0.1000	3
Mg	24	45	He	5150.888	ppb	0.9	353452.89	7.8195	Pulse	0.1000	3
Al	27	45	He	5066.961	ppb	0.5	107009.76	2.3674	Pulse	0.1000	3
K	39	45	He	5111.828	ppb	1.3	270526.94	5.9850	Pulse	0.1000	3
Ca	44	45	He	5008.584	ppb	3.0	14129.83	0.3126	Pulse	0.1000	3
Ti	47	45	He	5163.436	ppb	0.6	113048.59	2.5010	Pulse	0.1000	3
V	51	45	He	513.325	ppb	0.4	488817.84	10.8140	Pulse	0.5000	3
Cr	52	45	He	519.746	ppb	0.4	627703.15	13.8864	Pulse	0.1000	3
Mn	55	45	He	516.165	ppb	0.4	252625.73	5.5886	Pulse	0.1000	3
Fe	57	45	He	5199.615	ppb	0.3	117855.31	2.6073	Pulse	0.1000	3
Co	59	45	He	502.333	ppb	0.6	1188876.00	26.3008	Pulse	0.1000	3
Ni	60	115	He	522.093	ppb	2.0	338184.34	5.7197	Pulse	0.1000	3
Cu	63	72	He	497.722	ppb	1.7	957858.71	12.6963	Pulse	0.1000	3
Zn	66	72	He	521.185	ppb	2.5	113345.83	1.5025	Pulse	0.1000	3
As	75	72	He	516.816	ppb	2.4	83016.35	1.1005	Pulse	0.5000	3
Sr	88	115	He	51.576	ppb	3.7	28793.55	0.4870	Pulse	0.1000	3
Mo	98	115	He	52.350	ppb	1.2	71328.63	1.2062	Pulse	0.1000	3
Ag	107	115	He	52.118	ppb	1.2	148912.02	2.5183	Pulse	0.1000	3
Cd	111	115	He	52.525	ppb	3.0	16566.14	0.2802	Pulse	0.5000	3
Sn	120	115	He	51.490	ppb	1.0	45878.52	0.7758	Pulse	0.1000	3
Sb	121	115	He	52.377	ppb	0.8	44340.73	0.7498	Pulse	0.1000	3
Ba	137	115	He	524.627	ppb	1.2	135313.64	2.2883	Pulse	0.1000	3
Tl	205	159	He	51.807	ppb	0.3	258428.13	1.0771	Pulse	0.1000	3
Pb	208	159	He	52.045	ppb	0.5	340050.06	1.4173	Pulse	0.1000	3
U	238	159	He	51.991	ppb	0.2	343092.94	1.4300	Pulse	0.1000	3

ISTD Table:

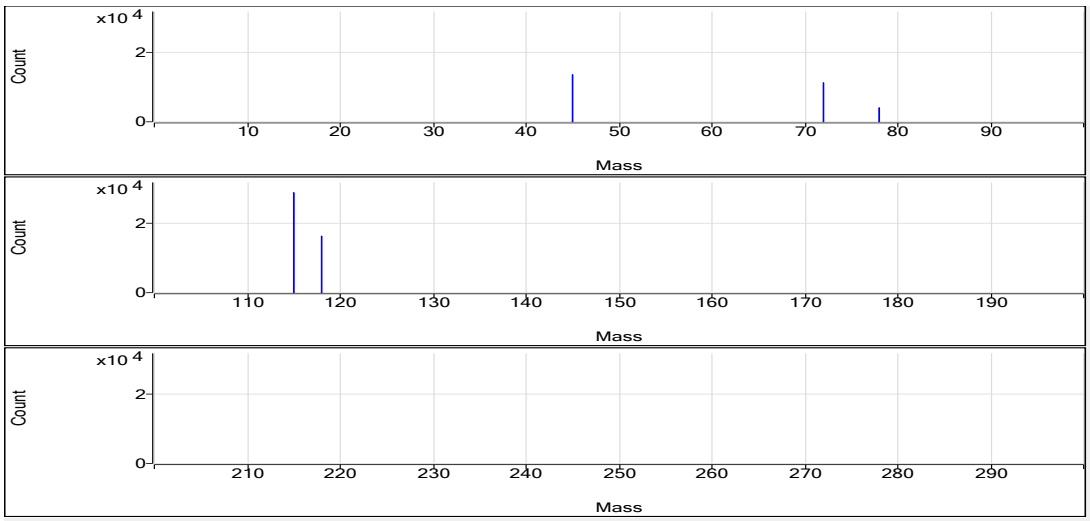
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2303776.01	0.9	100.4	Analog	0.1000	3
No Gas	Ge	72	1031251.94	0.6	99.3	Pulse	0.1000	3
H2	Sc	45	135768.43	1.5	97.6	Pulse	0.1000	3
H2	Ge	72	112669.84	1.3	95.4	Pulse	0.1000	3
H2	In	115	288226.17	0.4	97.8	Pulse	0.1000	3
He	Sc	45	45203.05	0.6	96.5	Pulse	0.1000	3
He	Ge	72	75460.04	1.9	98.7	Pulse	0.1000	3
He	In	115	59139.77	1.6	97.5	Pulse	0.1000	3
He	Tb	159	239928.54	0.3	99.5	Pulse	0.1000	3
He	Bi	209	166269.32	1.6	100.3	Pulse	0.1000	3

No Gas

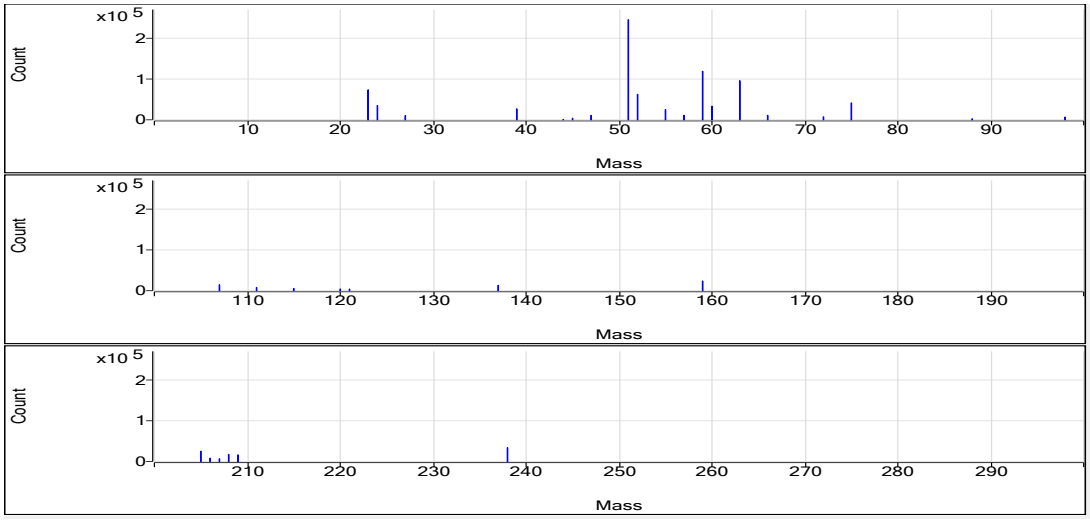


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.189	0.02	46467.55	0.0004	9.309E-06
Be	9	1	No Gas	51.552	0.0205	46864.56	0.0004	9.309E-06
Be	9	1	No Gas	51.831	0.0206	47488.34	0.0004	9.309E-06
Se	78	2	H2	53.51	0.0239	2732.90	0.0004	5.598E-06
Se	78	2	H2	53.597	0.024	2667.56	0.0004	5.598E-06
Se	78	2	H2	54.297	0.0243	2734.90	0.0004	5.598E-06
Na	23	3	He	5033.919	16.2105	730972.25	0.0031	0.4657
Na	23	3	He	5060.852	16.2947	732978.58	0.0031	0.4657
Na	23	3	He	5017.096	16.1579	735732.18	0.0031	0.4657
Mg	24	3	He	5152.236	7.8216	352694.29	0.0015	0.003704
Mg	24	3	He	5196.64	7.8889	354864.80	0.0015	0.003704
Mg	24	3	He	5103.788	7.748	352799.57	0.0015	0.003704
Al	27	3	He	5074.162	2.3707	106902.13	0.0005	0.0007154
Al	27	3	He	5087.547	2.377	106922.61	0.0005	0.0007154
Al	27	3	He	5039.175	2.3544	107204.55	0.0005	0.0007154
K	39	3	He	5161.113	6.0385	272293.51	0.0011	0.4296
K	39	3	He	5135.24	6.0104	270364.49	0.0011	0.4296
K	39	3	He	5039.13	5.906	268922.81	0.0011	0.4296
Ca	44	3	He	5124.221	0.3197	14416.82	0.0001	0.002924
Ca	44	3	He	4841.684	0.3022	13595.94	0.0001	0.002924
Ca	44	3	He	5059.847	0.3157	14376.74	0.0001	0.002924
Ti	47	3	He	5150.152	2.4945	112484.47	0.0005	0
Ti	47	3	He	5200.225	2.5188	113301.08	0.0005	0
Ti	47	3	He	5139.931	2.4896	113360.22	0.0005	0
V	51	3	He	514.505	10.8388	488750.31	0.021	0.009571
V	51	3	He	514.357	10.8357	487417.88	0.021	0.009571
V	51	3	He	511.114	10.7675	490285.34	0.021	0.009571
Cr	52	3	He	517.822	13.835	623857.61	0.0267	0.01758
Cr	52	3	He	522.022	13.9471	627376.90	0.0267	0.01758
Cr	52	3	He	519.394	13.877	631874.95	0.0267	0.01758
Mn	55	3	He	515.536	5.5818	251696.93	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	514.528	5.5709	250592.71	0.0108	0.004199
Mn	55	3	He	518.432	5.6131	255587.55	0.0108	0.004199
Fe	57	3	He	5191.752	2.6033	117390.97	0.0005	0.002993
Fe	57	3	He	5220.168	2.6176	117744.86	0.0005	0.002993
Fe	57	3	He	5186.926	2.6009	118430.11	0.0005	0.002993
Co	59	3	He	498.892	26.1207	1177847.48	0.0524	0.003063
Co	59	3	He	505.061	26.4436	1189500.92	0.0524	0.003063
Co	59	3	He	503.046	26.3381	1199279.59	0.0524	0.003063
Ni	60	3	He	526.85	5.7717	339101.60	0.0109	0.01116
Ni	60	3	He	529.556	5.8013	338919.68	0.0109	0.01116
Ni	60	3	He	509.874	5.5861	336531.75	0.0109	0.01116
Cu	63	3	He	502.637	12.8216	956129.99	0.0255	0.01531
Cu	63	3	He	487.89	12.4458	959629.13	0.0255	0.01531
Cu	63	3	He	502.638	12.8216	957817.02	0.0255	0.01531
Zn	66	3	He	530.435	1.5291	114031.29	0.0029	0.002787
Zn	66	3	He	506.582	1.4605	112611.36	0.0029	0.002787
Zn	66	3	He	526.539	1.5179	113394.83	0.0029	0.002787
As	75	3	He	522.779	1.1132	83010.27	0.0021	0.0004097
As	75	3	He	502.687	1.0704	82531.84	0.0021	0.0004097
As	75	3	He	524.982	1.1178	83506.95	0.0021	0.0004097
Sr	88	3	He	50.695	0.4787	28125.86	0.0094	0.0008765
Sr	88	3	He	53.784	0.5078	29668.35	0.0094	0.0008765
Sr	88	3	He	50.248	0.4745	28586.43	0.0094	0.0008765
Mo	98	3	He	52.149	1.2016	70598.30	0.023	0.0002199
Mo	98	3	He	53.079	1.223	71451.91	0.023	0.0002199
Mo	98	3	He	51.821	1.1941	71935.69	0.023	0.0002199
Ag	107	3	He	52.27	2.5256	148387.27	0.0483	0.0008224
Ag	107	3	He	52.637	2.5434	148588.15	0.0483	0.0008224
Ag	107	3	He	51.446	2.4859	149760.64	0.0483	0.0008224
Cd	111	3	He	52.505	0.2801	16456.71	0.0053	2.193E-05
Cd	111	3	He	54.114	0.2887	16865.14	0.0053	2.193E-05
Cd	111	3	He	50.956	0.2718	16376.58	0.0053	2.193E-05
Sn	120	3	He	51.656	0.7783	45727.84	0.0148	0.01345
Sn	120	3	He	51.908	0.782	45688.05	0.0148	0.01345
Sn	120	3	He	50.905	0.7672	46219.67	0.0148	0.01345
Sb	121	3	He	52.567	0.7525	44213.70	0.0143	0.0004392
Sb	121	3	He	52.685	0.7542	44063.29	0.0143	0.0004392
Sb	121	3	He	51.881	0.7427	44745.20	0.0143	0.0004392
Ba	137	3	He	528.527	2.3053	135444.25	0.0044	0.0001096
Ba	137	3	He	527.727	2.3018	134477.23	0.0044	0.0001096
Ba	137	3	He	517.625	2.2578	136019.45	0.0044	0.0001096
Tl	205	3	He	51.788	1.0767	257648.28	0.0208	0.0002491
Tl	205	3	He	51.673	1.0743	258591.46	0.0208	0.0002491
Tl	205	3	He	51.961	1.0803	259044.66	0.0208	0.0002491
Pb	208	3	He	52.315	1.4246	180060.11	0.0272	0.0006218
Pb	208	3	He	51.842	1.4118	178938.92	0.0272	0.0006218
Pb	208	3	He	51.979	1.4155	179331.58	0.0272	0.0006218
U	238	3	He	52.116	1.4334	343010.74	0.0275	2.763E-05
U	238	3	He	51.954	1.429	343955.89	0.0275	2.763E-05
U	238	3	He	51.903	1.4276	342312.18	0.0275	2.763E-05
Sc	45	1	No Gas			2325891.37		
Sc	45	1	No Gas			2283739.97		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2301696.68		
Ge	72	1	No Gas			1034049.75		
Ge	72	1	No Gas			1023638.89		
Ge	72	1	No Gas			1036067.17		
Sc	45	2	H2			137945.75		
Sc	45	2	H2			135456.02		
Sc	45	2	H2			133903.52		
Ge	72	2	H2			114164.12		
Ge	72	2	H2			111253.63		
Ge	72	2	H2			112591.76		
In	115	2	H2			288162.96		
In	115	2	H2			287112.07		
In	115	2	H2			289403.47		
Sc	45	3	He			45092.57		
Sc	45	3	He			44982.58		
Sc	45	3	He			45534.00		
Ge	72	3	He			74572.07		
Ge	72	3	He			77104.53		
Ge	72	3	He			74703.52		
In	115	3	He			59072.81		
In	115	3	He			58741.50		
In	115	3	He			60568.45		
Tb	159	3	He			239293.84		
Tb	159	3	He			240702.18		
Tb	159	3	He			239789.61		
Bi	209	3	He			163366.39		
Bi	209	3	He			166765.51		
Bi	209	3	He			168676.05		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

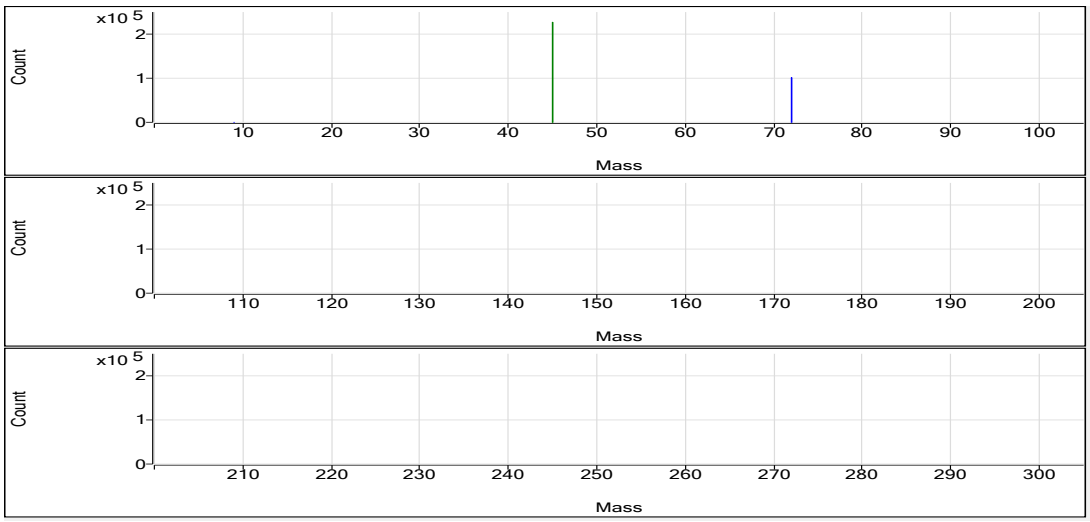
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.073	ppb	18.1	87.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.088	ppb	18.3	4.89	0.0000	Pulse	1.5000	3
Na	23	45	He	13.235	ppb	46.6	22799.45	0.5071	Pulse	0.1000	3
Mg	24	45	He	2.008	ppb	68.9	303.35	0.0068	Pulse	0.1000	3
Al	27	45	He	2.581	ppb	53.6	86.67	0.0019	Pulse	0.1000	3
K	39	45	He	-8.063	ppb	N/A	18921.36	0.4209	Pulse	0.1000	3
Ca	44	45	He	10.319	ppb	76.2	160.01	0.0036	Pulse	0.1000	3
Ti	47	45	He	3.363	ppb	14.8	73.33	0.0016	Pulse	0.1000	3
V	51	45	He	0.181	ppb	17.4	601.35	0.0134	Pulse	0.5000	3
Cr	52	45	He	0.239	ppb	54.0	1076.73	0.0240	Pulse	0.1000	3
Mn	55	45	He	0.359	ppb	31.3	363.35	0.0081	Pulse	0.1000	3
Fe	57	45	He	7.201	ppb	22.5	296.68	0.0066	Pulse	0.1000	3
Co	59	45	He	0.217	ppb	29.8	646.70	0.0144	Pulse	0.1000	3
Ni	60	115	He	0.320	ppb	55.3	853.38	0.0147	Pulse	0.1000	3
Cu	63	72	He	0.281	ppb	4.3	1633.47	0.0225	Pulse	0.1000	3
Zn	66	72	He	1.007	ppb	28.3	413.35	0.0057	Pulse	0.1000	3
As	75	72	He	0.299	ppb	21.3	76.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.102	ppb	147.0	106.67	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.025	ppb	133.1	46.67	0.0008	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	186.0	66.67	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	0.8	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.016	ppb	1162.0	796.71	0.0137	Pulse	0.1000	3
Sb	121	115	He	0.053	ppb	98.4	70.00	0.0012	Pulse	0.1000	3
Ba	137	115	He	0.158	ppb	27.9	46.67	0.0008	Pulse	0.1000	3
Tl	205	159	He	0.302	ppb	8.4	1540.13	0.0065	Pulse	0.1000	3
Pb	208	159	He	0.058	ppb	11.8	516.69	0.0022	Pulse	0.1000	3
U	238	159	He	0.027	ppb	26.7	180.01	0.0008	Pulse	0.1000	3

ISTD Table:

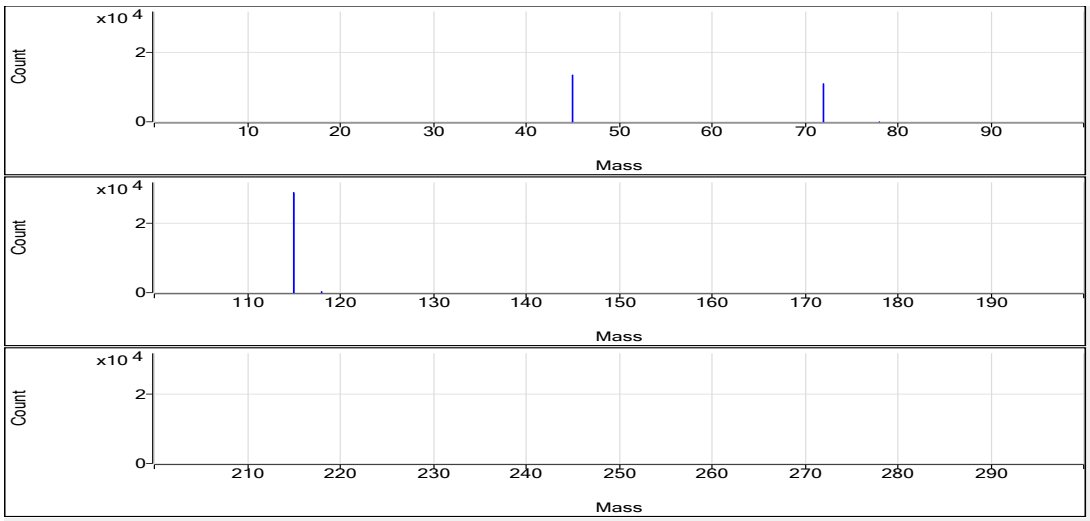
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2266608.98	1.2	98.8	Analog	0.1000	3
No Gas	Ge	72	1013740.48	1.0	97.6	Pulse	0.1000	3
H2	Sc	45	134332.88	0.4	96.6	Pulse	0.1000	3
H2	Ge	72	109199.18	0.9	92.5	Pulse	0.1000	3
H2	In	115	286932.10	0.8	97.4	Pulse	0.1000	3
He	Sc	45	44972.75	1.7	96.0	Pulse	0.1000	3
He	Ge	72	72697.80	1.0	95.1	Pulse	0.1000	3
He	In	115	58210.75	0.6	96.0	Pulse	0.1000	3
He	Tb	159	235842.27	0.4	97.8	Pulse	0.1000	3
He	Bi	209	161921.17	1.4	97.7	Pulse	0.1000	3

No Gas

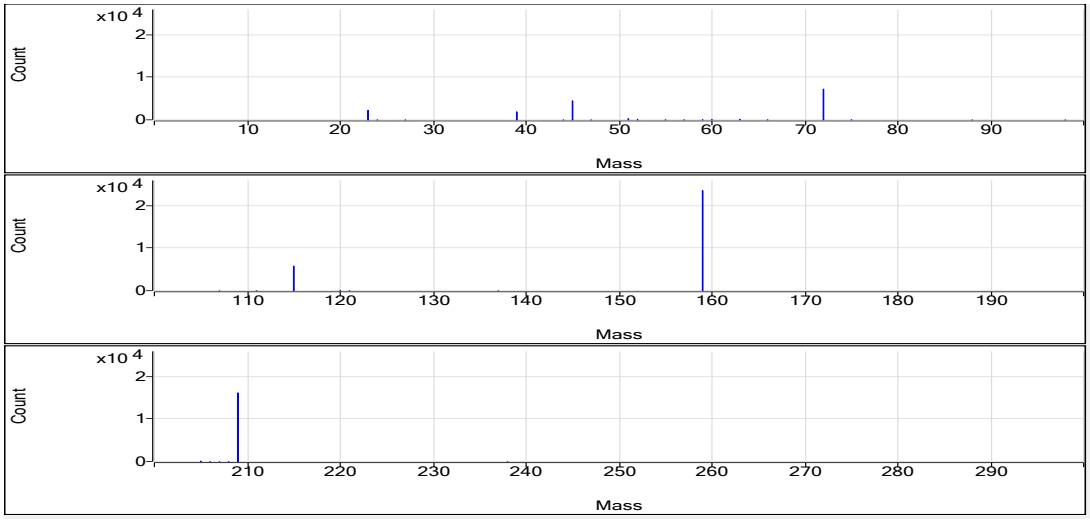


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.087	0	100.00	0.0004	9.309E-06
Be	9	1	No Gas	0.06	0	76.00	0.0004	9.309E-06
Be	9	1	No Gas	0.073	0	86.00	0.0004	9.309E-06
Se	78	2	H2	0.096	0	5.33	0.0004	5.598E-06
Se	78	2	H2	0.069	0	4.00	0.0004	5.598E-06
Se	78	2	H2	0.098	0	5.33	0.0004	5.598E-06
Na	23	3	He	8.074	0.4909	21954.89	0.0031	0.4657
Na	23	3	He	11.564	0.5018	22996.37	0.0031	0.4657
Na	23	3	He	20.065	0.5284	23447.09	0.0031	0.4657
Mg	24	3	He	3.601	0.0092	410.02	0.0015	0.003704
Mg	24	3	He	1.299	0.0057	260.01	0.0015	0.003704
Mg	24	3	He	1.124	0.0054	240.01	0.0015	0.003704
Al	27	3	He	1.341	0.0013	60.00	0.0005	0.0007154
Al	27	3	He	4.075	0.0026	120.00	0.0005	0.0007154
Al	27	3	He	2.328	0.0018	80.00	0.0005	0.0007154
K	39	3	He	47.334	0.4811	21514.46	0.0011	0.4296
K	39	3	He	-33.281	0.3935	18030.27	0.0011	0.4296
K	39	3	He	-38.242	0.3881	17219.36	0.0011	0.4296
Ca	44	3	He	17.807	0.004	180.01	0.0001	0.002924
Ca	44	3	He	2.12	0.0031	140.01	0.0001	0.002924
Ca	44	3	He	11.03	0.0036	160.01	0.0001	0.002924
Ti	47	3	He	3.693	0.0018	80.00	0.0005	0
Ti	47	3	He	3.604	0.0017	80.00	0.0005	0
Ti	47	3	He	2.792	0.0014	60.00	0.0005	0
V	51	3	He	0.217	0.0141	632.02	0.021	0.009571
V	51	3	He	0.165	0.0131	598.02	0.021	0.009571
V	51	3	He	0.16	0.0129	574.01	0.021	0.009571
Cr	52	3	He	0.38	0.0277	1240.08	0.0267	0.01758
Cr	52	3	He	0.126	0.021	960.05	0.0267	0.01758
Cr	52	3	He	0.211	0.0232	1030.07	0.0267	0.01758
Mn	55	3	He	0.273	0.0072	320.02	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.318	0.0076	350.01	0.0108	0.004199
Mn	55	3	He	0.487	0.0095	420.02	0.0108	0.004199
Fe	57	3	He	5.633	0.0058	260.01	0.0005	0.002993
Fe	57	3	He	7.096	0.0065	300.01	0.0005	0.002993
Fe	57	3	He	8.875	0.0074	330.02	0.0005	0.002993
Co	59	3	He	0.279	0.0177	790.05	0.0524	0.003063
Co	59	3	He	0.15	0.0109	500.02	0.0524	0.003063
Co	59	3	He	0.221	0.0146	650.03	0.0524	0.003063
Ni	60	3	He	0.195	0.0133	770.04	0.0109	0.01116
Ni	60	3	He	0.522	0.0169	980.06	0.0109	0.01116
Ni	60	3	He	0.243	0.0138	810.05	0.0109	0.01116
Cu	63	3	He	0.289	0.0227	1630.13	0.0255	0.01531
Cu	63	3	He	0.287	0.0226	1650.14	0.0255	0.01531
Cu	63	3	He	0.267	0.0221	1620.13	0.0255	0.01531
Zn	66	3	He	1.062	0.0058	420.02	0.0029	0.002787
Zn	66	3	He	0.699	0.0048	350.02	0.0029	0.002787
Zn	66	3	He	1.261	0.0064	470.02	0.0029	0.002787
As	75	3	He	0.37	0.0012	86.00	0.0021	0.0004097
As	75	3	He	0.246	0.0009	68.00	0.0021	0.0004097
As	75	3	He	0.282	0.001	74.00	0.0021	0.0004097
Sr	88	3	He	0.273	0.0035	200.01	0.0094	0.0008765
Sr	88	3	He	-0.002	0.0009	50.00	0.0094	0.0008765
Sr	88	3	He	0.034	0.0012	70.00	0.0094	0.0008765
Mo	98	3	He	0.058	0.0016	90.00	0.023	0.0002199
Mo	98	3	He	0.028	0.0009	50.00	0.023	0.0002199
Mo	98	3	He	-0.01	0	0.00	0.023	0.0002199
Ag	107	3	He	0.008	0.0012	70.00	0.0483	0.0008224
Ag	107	3	He	-0.006	0.0005	30.00	0.0483	0.0008224
Ag	107	3	He	0.018	0.0017	100.00	0.0483	0.0008224
Cd	111	3	He	0.015	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.015	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.015	0.0001	6.00	0.0053	2.193E-05
Sn	120	3	He	0.036	0.014	810.04	0.0148	0.01345
Sn	120	3	He	0.196	0.0164	950.06	0.0148	0.01345
Sn	120	3	He	-0.183	0.0107	630.03	0.0148	0.01345
Sb	121	3	He	0.03	0.0009	50.00	0.0143	0.0004392
Sb	121	3	He	0.114	0.0021	120.01	0.0143	0.0004392
Sb	121	3	He	0.017	0.0007	40.00	0.0143	0.0004392
Ba	137	3	He	0.133	0.0007	40.00	0.0044	0.0001096
Ba	137	3	He	0.133	0.0007	40.00	0.0044	0.0001096
Ba	137	3	He	0.21	0.001	60.00	0.0044	0.0001096
Tl	205	3	He	0.289	0.0063	1470.14	0.0208	0.0002491
Tl	205	3	He	0.331	0.0071	1680.15	0.0208	0.0002491
Tl	205	3	He	0.286	0.0062	1470.11	0.0208	0.0002491
Pb	208	3	He	0.06	0.0023	280.01	0.0272	0.0006218
Pb	208	3	He	0.063	0.0023	290.01	0.0272	0.0006218
Pb	208	3	He	0.05	0.002	250.01	0.0272	0.0006218
U	238	3	He	0.035	0.001	230.01	0.0275	2.763E-05
U	238	3	He	0.025	0.0007	170.01	0.0275	2.763E-05
U	238	3	He	0.02	0.0006	140.00	0.0275	2.763E-05
Sc	45	1	No Gas			2280377.15		
Sc	45	1	No Gas			2284343.25		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2235106.53		
Ge	72	1	No Gas			1023763.42		
Ge	72	1	No Gas			1004076.47		
Ge	72	1	No Gas			1013381.55		
Sc	45	2	H2			134295.33		
Sc	45	2	H2			134841.44		
Sc	45	2	H2			133861.87		
Ge	72	2	H2			109944.22		
Ge	72	2	H2			109521.16		
Ge	72	2	H2			108132.17		
In	115	2	H2			284498.88		
In	115	2	H2			289062.77		
In	115	2	H2			287234.66		
Sc	45	3	He			44721.91		
Sc	45	3	He			45824.68		
Sc	45	3	He			44371.66		
Ge	72	3	He			71891.15		
Ge	72	3	He			72935.26		
Ge	72	3	He			73267.00		
In	115	3	He			57928.36		
In	115	3	He			58089.52		
In	115	3	He			58631.11		
Tb	159	3	He			235208.18		
Tb	159	3	He			235342.32		
Tb	159	3	He			236976.31		
Bi	209	3	He			161821.82		
Bi	209	3	He			159684.95		
Bi	209	3	He			164256.74		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
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Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

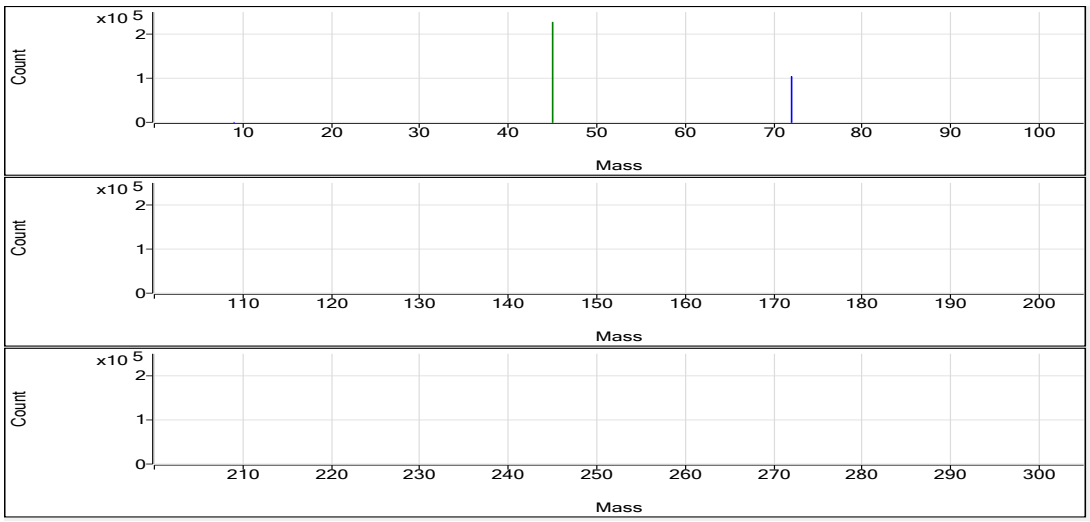
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.003	ppb	243.9	24.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.045	ppb	18.2	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	338.229	ppb	2.3	68993.23	1.5236	Pulse	0.1000	3
Mg	24	45	He	13.357	ppb	16.3	1086.74	0.0240	Pulse	0.1000	3
Al	27	45	He	2.725	ppb	45.9	90.00	0.0020	Pulse	0.1000	3
K	39	45	He	-8.167	ppb	N/A	19031.61	0.4208	Pulse	0.1000	3
Ca	44	45	He	68.324	ppb	20.6	323.35	0.0071	Pulse	0.1000	3
Ti	47	45	He	1.211	ppb	77.0	26.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.096	ppb	53.3	525.34	0.0116	Pulse	0.5000	3
Cr	52	45	He	0.433	ppb	15.4	1320.10	0.0291	Pulse	0.1000	3
Mn	55	45	He	0.326	ppb	27.3	350.01	0.0077	Pulse	0.1000	3
Fe	57	45	He	9.775	ppb	36.3	356.68	0.0079	Pulse	0.1000	3
Co	59	45	He	0.110	ppb	38.2	400.02	0.0088	Pulse	0.1000	3
Ni	60	115	He	0.091	ppb	273.8	723.37	0.0122	Pulse	0.1000	3
Cu	63	72	He	0.290	ppb	42.6	1720.15	0.0227	Pulse	0.1000	3
Zn	66	72	He	1.186	ppb	23.6	470.03	0.0062	Pulse	0.1000	3
As	75	72	He	0.187	ppb	28.8	61.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.192	ppb	22.7	160.01	0.0027	Pulse	0.1000	3
Mo	98	115	He	0.020	ppb	65.4	40.00	0.0007	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	203.2	56.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.013	ppb	188.5	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.169	ppb	68.5	950.06	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.016	ppb	72.8	40.00	0.0007	Pulse	0.1000	3
Ba	137	115	He	0.283	ppb	76.2	80.00	0.0013	Pulse	0.1000	3
Tl	205	159	He	0.042	ppb	12.6	266.68	0.0011	Pulse	0.1000	3
Pb	208	159	He	0.084	ppb	9.7	696.70	0.0029	Pulse	0.1000	3
U	238	159	He	0.008	ppb	50.1	56.67	0.0002	Pulse	0.1000	3

ISTD Table:

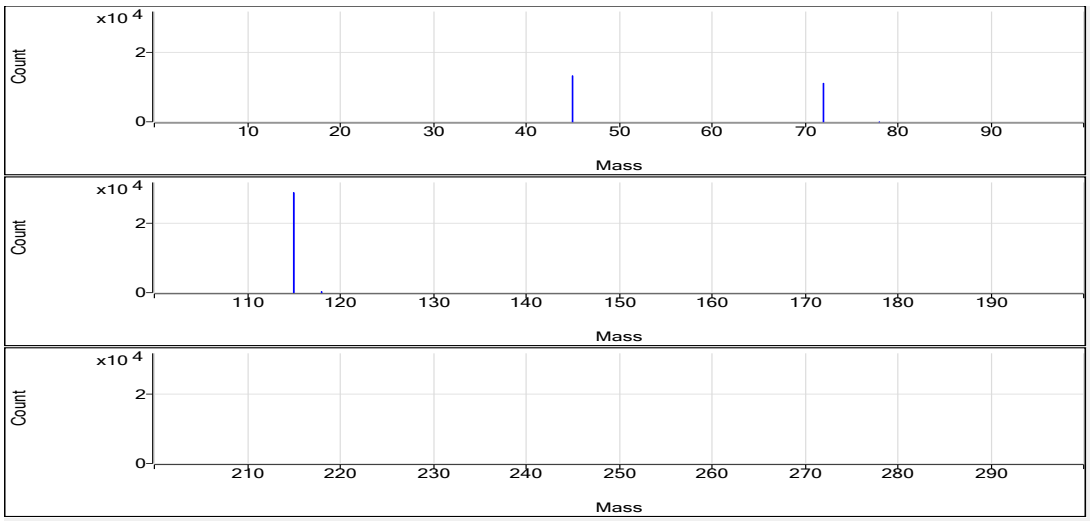
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2261000.75	0.5	98.6	Analog	0.1000	3
No Gas	Ge	72	1034435.95	0.7	99.6	Pulse	0.1000	3
H2	Sc	45	133751.16	0.7	96.2	Pulse	0.1000	3
H2	Ge	72	112223.52	1.2	95.1	Pulse	0.1000	3
H2	In	115	290758.40	0.7	98.7	Pulse	0.1000	3
He	Sc	45	45283.29	1.3	96.7	Pulse	0.1000	3
He	Ge	72	75805.56	0.9	99.1	Pulse	0.1000	3
He	In	115	59574.41	1.2	98.3	Pulse	0.1000	3
He	Tb	159	239172.76	0.6	99.2	Pulse	0.1000	3
He	Bi	209	165838.62	0.8	100.1	Pulse	0.1000	3

No Gas

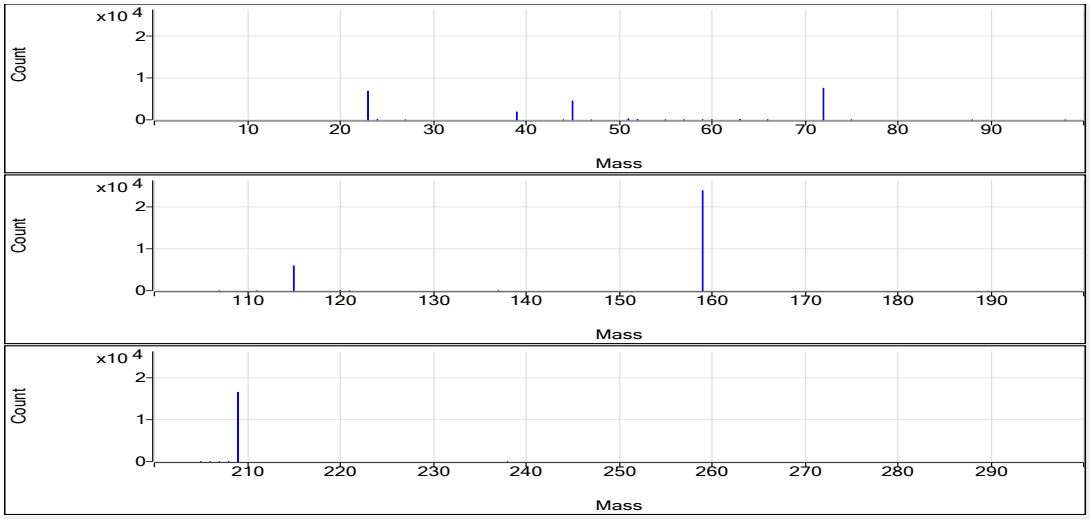


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.001	0	22.00	0.0004	9.309E-06
Be	9	1	No Gas	0.012	0	32.00	0.0004	9.309E-06
Be	9	1	No Gas	-0.003	0	18.00	0.0004	9.309E-06
Se	78	2	H2	0.055	0	3.33	0.0004	5.598E-06
Se	78	2	H2	0.04	0	2.67	0.0004	5.598E-06
Se	78	2	H2	0.041	0	2.67	0.0004	5.598E-06
Na	23	3	He	333.339	1.5083	67346.77	0.0031	0.4657
Na	23	3	He	334.024	1.5104	69244.05	0.0031	0.4657
Na	23	3	He	347.324	1.552	70388.88	0.0031	0.4657
Mg	24	3	He	10.843	0.0202	900.05	0.0015	0.003704
Mg	24	3	He	14.667	0.026	1190.08	0.0015	0.003704
Mg	24	3	He	14.562	0.0258	1170.08	0.0015	0.003704
Al	27	3	He	2.304	0.0018	80.00	0.0005	0.0007154
Al	27	3	He	1.737	0.0015	70.00	0.0005	0.0007154
Al	27	3	He	4.133	0.0026	120.00	0.0005	0.0007154
K	39	3	He	52.988	0.4872	21755.09	0.0011	0.4296
K	39	3	He	-42.078	0.3839	17599.83	0.0011	0.4296
K	39	3	He	-35.411	0.3911	17739.90	0.0011	0.4296
Ca	44	3	He	83.118	0.0081	360.02	0.0001	0.002924
Ca	44	3	He	55.023	0.0063	290.01	0.0001	0.002924
Ca	44	3	He	66.831	0.0071	320.01	0.0001	0.002924
Ti	47	3	He	0.925	0.0004	20.00	0.0005	0
Ti	47	3	He	2.252	0.0011	50.00	0.0005	0
Ti	47	3	He	0.455	0.0002	10.00	0.0005	0
V	51	3	He	0.041	0.0104	466.01	0.021	0.009571
V	51	3	He	0.105	0.0118	540.01	0.021	0.009571
V	51	3	He	0.142	0.0126	570.01	0.021	0.009571
Cr	52	3	He	0.39	0.028	1250.08	0.0267	0.01758
Cr	52	3	He	0.51	0.0312	1430.11	0.0267	0.01758
Cr	52	3	He	0.399	0.0282	1280.11	0.0267	0.01758
Mn	55	3	He	0.295	0.0074	330.01	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.257	0.007	320.01	0.0108	0.004199
Mn	55	3	He	0.427	0.0088	400.02	0.0108	0.004199
Fe	57	3	He	13.7	0.0099	440.02	0.0005	0.002993
Fe	57	3	He	8.833	0.0074	340.02	0.0005	0.002993
Fe	57	3	He	6.792	0.0064	290.01	0.0005	0.002993
Co	59	3	He	0.074	0.0069	310.01	0.0524	0.003063
Co	59	3	He	0.1	0.0083	380.02	0.0524	0.003063
Co	59	3	He	0.156	0.0112	510.02	0.0524	0.003063
Ni	60	3	He	-0.173	0.0093	560.03	0.0109	0.01116
Ni	60	3	He	0.123	0.0125	740.04	0.0109	0.01116
Ni	60	3	He	0.324	0.0147	870.05	0.0109	0.01116
Cu	63	3	He	0.198	0.0204	1530.12	0.0255	0.01531
Cu	63	3	He	0.241	0.0214	1640.13	0.0255	0.01531
Cu	63	3	He	0.43	0.0263	1990.19	0.0255	0.01531
Zn	66	3	He	1.39	0.0068	510.03	0.0029	0.002787
Zn	66	3	He	1.303	0.0065	500.03	0.0029	0.002787
Zn	66	3	He	0.866	0.0053	400.02	0.0029	0.002787
As	75	3	He	0.158	0.0007	56.00	0.0021	0.0004097
As	75	3	He	0.25	0.0009	72.00	0.0021	0.0004097
As	75	3	He	0.155	0.0007	56.00	0.0021	0.0004097
Sr	88	3	He	0.241	0.0031	190.01	0.0094	0.0008765
Sr	88	3	He	0.176	0.0025	150.00	0.0094	0.0008765
Sr	88	3	He	0.158	0.0024	140.01	0.0094	0.0008765
Mo	98	3	He	0.005	0.0003	20.00	0.023	0.0002199
Mo	98	3	He	0.027	0.0008	50.00	0.023	0.0002199
Mo	98	3	He	0.027	0.0008	50.00	0.023	0.0002199
Ag	107	3	He	-0.003	0.0007	40.00	0.0483	0.0008224
Ag	107	3	He	0.004	0.001	60.00	0.0483	0.0008224
Ag	107	3	He	0.007	0.0012	70.00	0.0483	0.0008224
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Cd	111	3	He	0.04	0.0002	14.00	0.0053	2.193E-05
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Sn	120	3	He	0.087	0.0147	890.05	0.0148	0.01345
Sn	120	3	He	0.119	0.0152	900.06	0.0148	0.01345
Sn	120	3	He	0.301	0.0179	1060.07	0.0148	0.01345
Sb	121	3	He	0.016	0.0007	40.00	0.0143	0.0004392
Sb	121	3	He	0.028	0.0008	50.00	0.0143	0.0004392
Sb	121	3	He	0.005	0.0005	30.00	0.0143	0.0004392
Ba	137	3	He	0.317	0.0015	90.00	0.0044	0.0001096
Ba	137	3	He	0.052	0.0003	20.00	0.0044	0.0001096
Ba	137	3	He	0.479	0.0022	130.00	0.0044	0.0001096
Tl	205	3	He	0.036	0.001	240.01	0.0208	0.0002491
Tl	205	3	He	0.043	0.0011	270.01	0.0208	0.0002491
Tl	205	3	He	0.046	0.0012	290.01	0.0208	0.0002491
Pb	208	3	He	0.075	0.0027	350.01	0.0272	0.0006218
Pb	208	3	He	0.088	0.003	310.02	0.0272	0.0006218
Pb	208	3	He	0.089	0.0031	390.02	0.0272	0.0006218
U	238	3	He	0.008	0.0002	60.00	0.0275	2.763E-05
U	238	3	He	0.004	0.0001	30.00	0.0275	2.763E-05
U	238	3	He	0.011	0.0003	80.00	0.0275	2.763E-05
Sc	45	1	No Gas			2248968.87		
Sc	45	1	No Gas			2264345.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2269687.78		
Ge	72	1	No Gas			1028830.06		
Ge	72	1	No Gas			1032554.83		
Ge	72	1	No Gas			1041922.95		
Sc	45	2	H2			132733.73		
Sc	45	2	H2			134326.25		
Sc	45	2	H2			134193.51		
Ge	72	2	H2			110900.76		
Ge	72	2	H2			113569.64		
Ge	72	2	H2			112200.15		
In	115	2	H2			289722.89		
In	115	2	H2			293114.00		
In	115	2	H2			289438.32		
Sc	45	3	He			44651.79		
Sc	45	3	He			45844.61		
Sc	45	3	He			45353.46		
Ge	72	3	He			75145.88		
Ge	72	3	He			76512.53		
Ge	72	3	He			75758.28		
In	115	3	He			60387.34		
In	115	3	He			59183.01		
In	115	3	He			59172.83		
Tb	159	3	He			240738.94		
Tb	159	3	He			237717.30		
Tb	159	3	He			239062.05		
Bi	209	3	He			166970.17		
Bi	209	3	He			166198.61		
Bi	209	3	He			164347.07		

Quantitation Report

Data File Name	059SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 9:27:18 AM
Sample Name	410-172824-H-37-A
Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

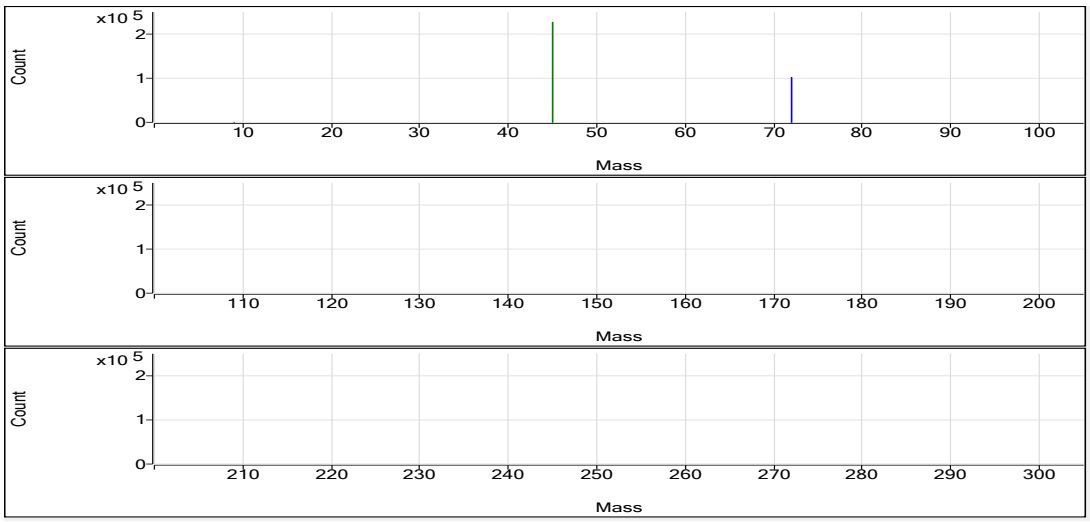
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.005	ppb	249.7	25.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.050	ppb	67.9	3.11	0.0000	Pulse	1.5000	3
Na	23	45	He	23.279	ppb	40.5	24598.66	0.5385	Pulse	0.1000	3
Mg	24	45	He	2.604	ppb	13.8	350.01	0.0077	Pulse	0.1000	3
Al	27	45	He	3.486	ppb	45.6	106.67	0.0023	Pulse	0.1000	3
K	39	45	He	-2.004	ppb	N/A	19512.15	0.4275	Pulse	0.1000	3
Ca	44	45	He	12.700	ppb	90.0	170.01	0.0037	Pulse	0.1000	3
Ti	47	45	He	0.903	ppb	50.5	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.042	ppb	116.0	477.34	0.0105	Pulse	0.5000	3
Cr	52	45	He	0.286	ppb	53.2	1150.08	0.0252	Pulse	0.1000	3
Mn	55	45	He	0.266	ppb	13.3	323.34	0.0071	Pulse	0.1000	3
Fe	57	45	He	5.393	ppb	30.4	260.01	0.0057	Pulse	0.1000	3
Co	59	45	He	0.071	ppb	34.3	310.01	0.0068	Pulse	0.1000	3
Ni	60	115	He	0.136	ppb	65.7	753.37	0.0127	Pulse	0.1000	3
Cu	63	72	He	0.098	ppb	30.1	1313.44	0.0178	Pulse	0.1000	3
Zn	66	72	He	0.807	ppb	26.9	376.68	0.0051	Pulse	0.1000	3
As	75	72	He	0.105	ppb	27.6	46.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.020	ppb	287.5	63.33	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.007	ppb	314.5	23.33	0.0004	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	36.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	2.0	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.079	ppb	81.3	870.05	0.0146	Pulse	0.1000	3
Sb	121	115	He	0.267	ppb	17.6	253.34	0.0043	Pulse	0.1000	3
Ba	137	115	He	0.155	ppb	57.6	46.67	0.0008	Pulse	0.1000	3
Tl	205	159	He	0.020	ppb	41.9	156.67	0.0007	Pulse	0.1000	3
Pb	208	159	He	0.021	ppb	65.8	286.68	0.0012	Pulse	0.1000	3
U	238	159	He	0.004	ppb	84.8	30.00	0.0001	Pulse	0.1000	3

ISTD Table:

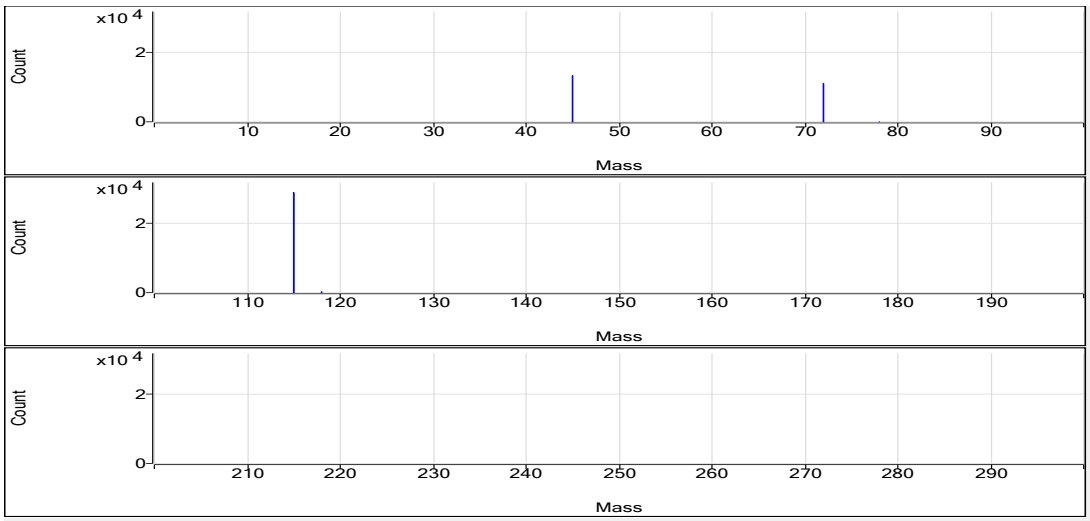
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2278413.24	0.8	99.3	Analog	0.1000	3
No Gas	Ge	72	1019890.46	0.5	98.2	Pulse	0.1000	3
H2	Sc	45	134175.65	0.5	96.5	Pulse	0.1000	3
H2	Ge	72	111300.61	0.4	94.3	Pulse	0.1000	3
H2	In	115	290095.79	0.2	98.5	Pulse	0.1000	3
He	Sc	45	45714.55	2.1	97.6	Pulse	0.1000	3
He	Ge	72	73758.98	1.0	96.5	Pulse	0.1000	3
He	In	115	59531.97	0.7	98.2	Pulse	0.1000	3
He	Tb	159	238329.01	0.7	98.8	Pulse	0.1000	3
He	Bi	209	165754.91	2.1	100.0	Pulse	0.1000	3

No Gas

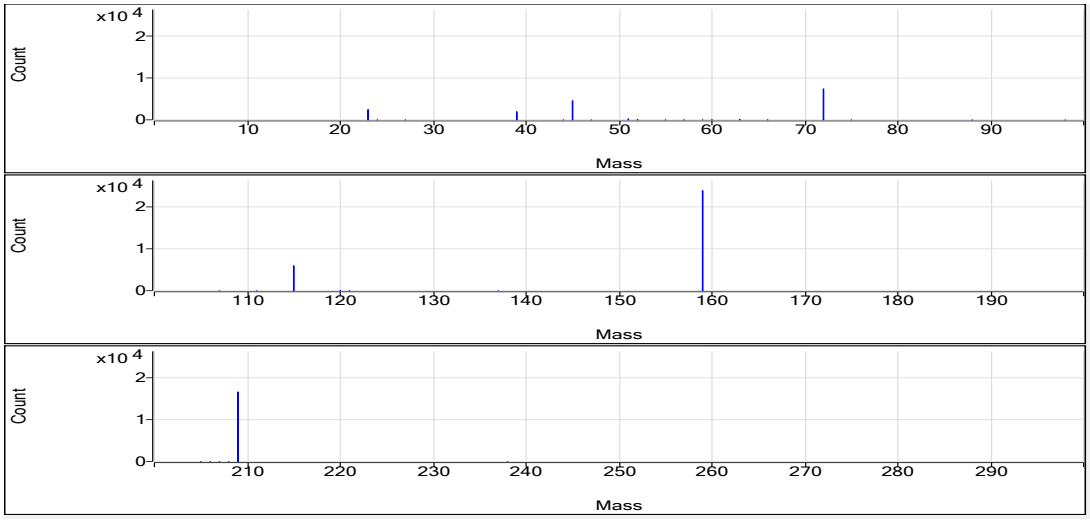


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.008	0	14.00	0.0004	9.309E-06
Be	9	1	No Gas	0.014	0	34.00	0.0004	9.309E-06
Be	9	1	No Gas	0.008	0	28.00	0.0004	9.309E-06
Se	78	2	H2	0.014	0	1.33	0.0004	5.598E-06
Se	78	2	H2	0.054	0	3.33	0.0004	5.598E-06
Se	78	2	H2	0.082	0	4.67	0.0004	5.598E-06
Na	23	3	He	24.176	0.5413	24478.40	0.0031	0.4657
Na	23	3	He	32.234	0.5665	25550.13	0.0031	0.4657
Na	23	3	He	13.426	0.5077	23767.44	0.0031	0.4657
Mg	24	3	He	2.951	0.0082	370.01	0.0015	0.003704
Mg	24	3	He	2.235	0.0071	320.01	0.0015	0.003704
Mg	24	3	He	2.627	0.0077	360.01	0.0015	0.003704
Al	27	3	He	4.623	0.0029	130.01	0.0005	0.0007154
Al	27	3	He	4.165	0.0027	120.00	0.0005	0.0007154
Al	27	3	He	1.669	0.0015	70.00	0.0005	0.0007154
K	39	3	He	67.087	0.5025	22726.35	0.0011	0.4296
K	39	3	He	-20.137	0.4077	18390.51	0.0011	0.4296
K	39	3	He	-52.963	0.3721	17419.58	0.0011	0.4296
Ca	44	3	He	9.931	0.0035	160.01	0.0001	0.002924
Ca	44	3	He	2.911	0.0031	140.01	0.0001	0.002924
Ca	44	3	He	25.257	0.0045	210.01	0.0001	0.002924
Ti	47	3	He	1.37	0.0007	30.00	0.0005	0
Ti	47	3	He	0.458	0.0002	10.00	0.0005	0
Ti	47	3	He	0.882	0.0004	20.00	0.0005	0
V	51	3	He	0.031	0.0102	462.01	0.021	0.009571
V	51	3	He	0.095	0.0116	522.01	0.021	0.009571
V	51	3	He	0	0.0096	448.01	0.021	0.009571
Cr	52	3	He	0.286	0.0252	1140.08	0.0267	0.01758
Cr	52	3	He	0.438	0.0293	1320.10	0.0267	0.01758
Cr	52	3	He	0.134	0.0211	990.06	0.0267	0.01758
Mn	55	3	He	0.307	0.0075	340.01	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.247	0.0069	310.01	0.0108	0.004199
Mn	55	3	He	0.244	0.0068	320.01	0.0108	0.004199
Fe	57	3	He	7.27	0.0066	300.01	0.0005	0.002993
Fe	57	3	He	4.649	0.0053	240.01	0.0005	0.002993
Fe	57	3	He	4.26	0.0051	240.01	0.0005	0.002993
Co	59	3	He	0.089	0.0077	350.02	0.0524	0.003063
Co	59	3	He	0.081	0.0073	330.01	0.0524	0.003063
Co	59	3	He	0.043	0.0053	250.01	0.0524	0.003063
Ni	60	3	He	0.109	0.0124	730.04	0.0109	0.01116
Ni	60	3	He	0.064	0.0119	710.04	0.0109	0.01116
Ni	60	3	He	0.236	0.0137	820.04	0.0109	0.01116
Cu	63	3	He	0.12	0.0184	1340.12	0.0255	0.01531
Cu	63	3	He	0.11	0.0181	1340.11	0.0255	0.01531
Cu	63	3	He	0.065	0.017	1260.08	0.0255	0.01531
Zn	66	3	He	0.842	0.0052	380.02	0.0029	0.002787
Zn	66	3	He	1.004	0.0057	420.02	0.0029	0.002787
Zn	66	3	He	0.575	0.0044	330.01	0.0029	0.002787
As	75	3	He	0.13	0.0007	50.00	0.0021	0.0004097
As	75	3	He	0.112	0.0006	48.00	0.0021	0.0004097
As	75	3	He	0.073	0.0006	42.00	0.0021	0.0004097
Sr	88	3	He	-0.021	0.0007	40.00	0.0094	0.0008765
Sr	88	3	He	0.084	0.0017	100.00	0.0094	0.0008765
Sr	88	3	He	-0.004	0.0008	50.00	0.0094	0.0008765
Mo	98	3	He	-0.002	0.0002	10.00	0.023	0.0002199
Mo	98	3	He	0.034	0.001	60.00	0.023	0.0002199
Mo	98	3	He	-0.01	0	0.00	0.023	0.0002199
Ag	107	3	He	0.004	0.001	60.00	0.0483	0.0008224
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Sn	120	3	He	0.109	0.0151	890.05	0.0148	0.01345
Sn	120	3	He	0.005	0.0135	810.04	0.0148	0.01345
Sn	120	3	He	0.122	0.0153	910.06	0.0148	0.01345
Sb	121	3	He	0.277	0.0044	260.01	0.0143	0.0004392
Sb	121	3	He	0.308	0.0048	290.01	0.0143	0.0004392
Sb	121	3	He	0.215	0.0035	210.01	0.0143	0.0004392
Ba	137	3	He	0.208	0.001	60.00	0.0044	0.0001096
Ba	137	3	He	0.205	0.001	60.00	0.0044	0.0001096
Ba	137	3	He	0.052	0.0003	20.00	0.0044	0.0001096
Tl	205	3	He	0.026	0.0008	190.01	0.0208	0.0002491
Tl	205	3	He	0.022	0.0007	170.01	0.0208	0.0002491
Tl	205	3	He	0.01	0.0005	110.00	0.0208	0.0002491
Pb	208	3	He	0.011	0.0009	100.00	0.0272	0.0006218
Pb	208	3	He	0.037	0.0016	200.01	0.0272	0.0006218
Pb	208	3	He	0.016	0.0011	120.01	0.0272	0.0006218
U	238	3	He	0.007	0.0002	50.00	0.0275	2.763E-05
U	238	3	He	0.001	0	10.00	0.0275	2.763E-05
U	238	3	He	0.004	0.0001	30.00	0.0275	2.763E-05
Sc	45	1	No Gas			2297486.68		
Sc	45	1	No Gas			2264422.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2273330.43		
Ge	72	1	No Gas			1016662.80		
Ge	72	1	No Gas			1016739.13		
Ge	72	1	No Gas			1026269.44		
Sc	45	2	H2			133429.67		
Sc	45	2	H2			134286.74		
Sc	45	2	H2			134810.55		
Ge	72	2	H2			111545.30		
Ge	72	2	H2			111566.37		
Ge	72	2	H2			110790.15		
In	115	2	H2			290497.65		
In	115	2	H2			289296.03		
In	115	2	H2			290493.69		
Sc	45	3	He			45223.08		
Sc	45	3	He			45102.83		
Sc	45	3	He			46817.74		
Ge	72	3	He			72955.08		
Ge	72	3	He			74000.55		
Ge	72	3	He			74321.32		
In	115	3	He			59083.55		
In	115	3	He			59875.85		
In	115	3	He			59654.79		
Tb	159	3	He			240053.94		
Tb	159	3	He			238123.43		
Tb	159	3	He			236809.66		
Bi	209	3	He			169609.74		
Bi	209	3	He			164863.92		
Bi	209	3	He			162791.06		

Quantitation Report

Data File Name	060SMPL.d
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Acq Time	7/17/2024 9:29:19 AM
Sample Name	410-179170-I-10-A
Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

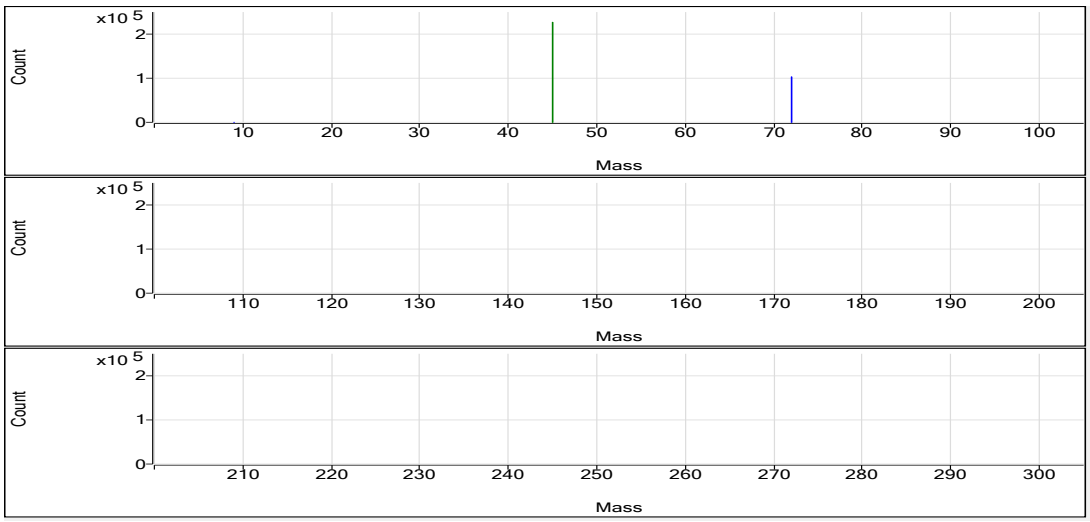
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.460	ppb	6.9	438.01	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.241	ppb	27.2	12.89	0.0001	Pulse	1.5000	3
Na	23	45	He	432814.549	ppb	1.1	60403394.10	1,354.1993	Analog	0.1000	3
Mg	24	45	He	16485.546	ppb	0.8	1116082.30	25.0184	Mix	0.1000	3
Al	27	45	He	2735.349	ppb	1.3	57018.40	1.2783	Pulse	0.1000	3
K	39	45	He	9448.877	ppb	0.9	477202.44	10.6983	Pulse	0.1000	3
Ca	44	45	He	87375.915	ppb	0.3	241089.21	5.4047	Pulse	0.1000	3
Ti	47	45	He	33.154	ppb	12.0	716.71	0.0161	Pulse	0.1000	3
V	51	45	He	29.172	ppb	1.5	27813.60	0.6236	Pulse	0.5000	3
Cr	52	45	He	5.781	ppb	3.9	7665.38	0.1718	Pulse	0.1000	3
Mn	55	45	He	502.763	ppb	1.2	242807.83	5.4436	Pulse	0.1000	3
Fe	57	45	He	62637.604	ppb	0.6	1399541.18	31.3757	Analog	0.1000	3
Co	59	45	He	2.316	ppb	5.0	5544.46	0.1243	Pulse	0.1000	3
Ni	60	115	He	4.249	ppb	3.0	3390.47	0.0576	Pulse	0.1000	3
Cu	63	72	He	0.836	ppb	9.5	2776.98	0.0366	Pulse	0.1000	3
Zn	66	72	He	363.447	ppb	1.6	79549.04	1.0486	Pulse	0.1000	3
As	75	72	He	6.237	ppb	3.3	1038.04	0.0137	Pulse	0.5000	3
Sr	88	115	He	795.624	ppb	1.6	441149.11	7.5003	Pulse	0.1000	3
Mo	98	115	He	0.382	ppb	8.1	530.03	0.0090	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	33.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.210	ppb	17.1	67.33	0.0011	Pulse	0.5000	3
Sn	120	115	He	0.995	ppb	13.1	1656.81	0.0282	Pulse	0.1000	3
Sb	121	115	He	0.159	ppb	19.3	160.01	0.0027	Pulse	0.1000	3
Ba	137	115	He	1144.335	ppb	1.5	293567.10	4.9912	Pulse	0.1000	3
Tl	205	159	He	0.019	ppb	53.3	153.34	0.0006	Pulse	0.1000	3
Pb	208	159	He	53.694	ppb	0.4	350945.59	1.4622	Pulse	0.1000	3
U	238	159	He	0.314	ppb	5.8	2080.23	0.0087	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2274512.15	1.5	99.2	Analog	0.1000	3
No Gas	Ge	72	1034168.47	1.4	99.5	Pulse	0.1000	3
H2	Sc	45	134575.48	1.0	96.8	Pulse	0.1000	3
H2	Ge	72	113534.96	0.6	96.2	Pulse	0.1000	3
H2	In	115	281137.58	0.3	95.4	Pulse	0.1000	3
He	Sc	45	44607.98	1.1	95.3	Pulse	0.1000	3
He	Ge	72	75866.02	0.8	99.2	Pulse	0.1000	3
He	In	115	58823.78	1.2	97.0	Pulse	0.1000	3
He	Tb	159	240013.16	0.4	99.5	Pulse	0.1000	3
He	Bi	209	159348.26	1.0	96.2	Pulse	0.1000	3

No Gas



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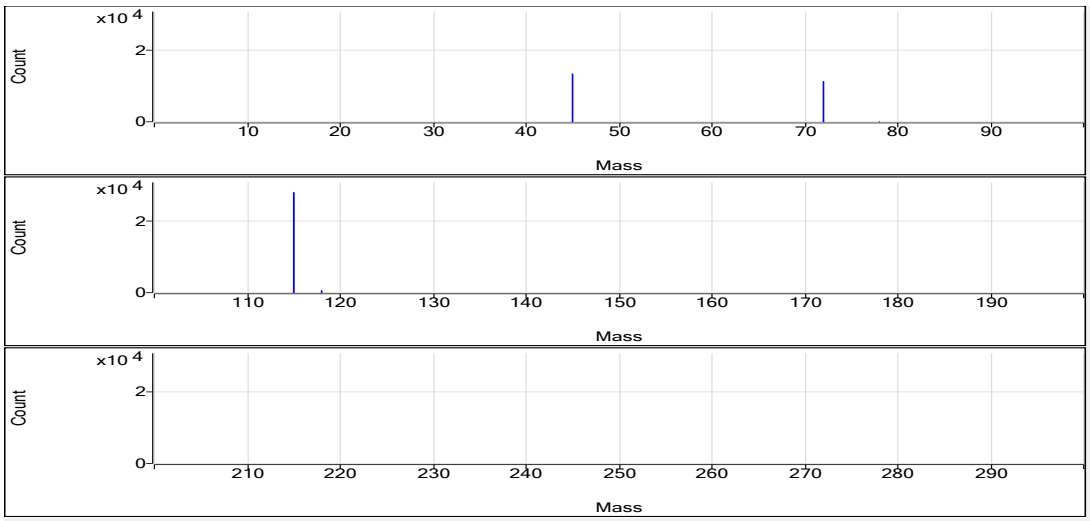
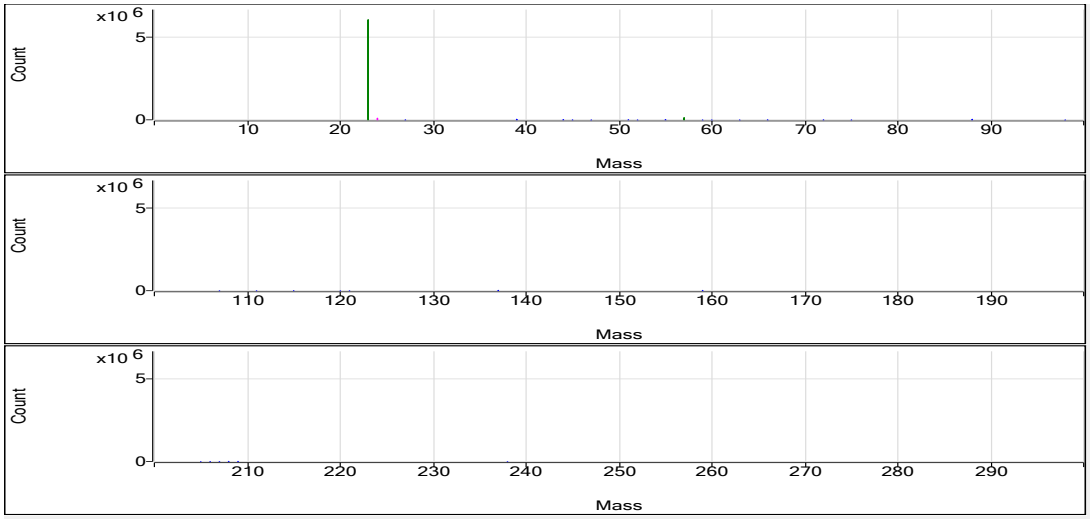


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.486	0.0002	468.01	0.0004	9.309E-06
Be	9	1	No Gas	0.471	0.0002	446.01	0.0004	9.309E-06
Be	9	1	No Gas	0.425	0.0002	400.01	0.0004	9.309E-06
Se	78	2	H2	0.209	0.0001	11.33	0.0004	5.598E-06
Se	78	2	H2	0.198	0.0001	10.67	0.0004	5.598E-06
Se	78	2	H2	0.317	0.0001	16.67	0.0004	5.598E-06
Na	23	3	He	430854.542	1348.0689	60476799.10	0.0031	0.4657
Na	23	3	He	438266.918	1371.253	60416994.10	0.0031	0.4657
Na	23	3	He	429322.188	1343.2761	60316389.10	0.0031	0.4657
Mg	24	3	He	16513.091	25.0602	1124245.69	0.0015	0.003704
Mg	24	3	He	16339.332	24.7965	1092528.26	0.0015	0.003704
Mg	24	3	He	16604.214	25.1985	1131472.95	0.0015	0.003704
Al	27	3	He	2710.51	1.2667	56827.56	0.0005	0.0007154
Al	27	3	He	2775.981	1.2973	57158.86	0.0005	0.0007154
Al	27	3	He	2719.557	1.271	57068.79	0.0005	0.0007154
K	39	3	He	9413.6	10.66	478226.59	0.0011	0.4296
K	39	3	He	9544.41	10.8022	475939.72	0.0011	0.4296
K	39	3	He	9388.621	10.6328	477441.01	0.0011	0.4296
Ca	44	3	He	87072.154	5.3859	241622.85	0.0001	0.002924
Ca	44	3	He	87638.054	5.4209	238844.23	0.0001	0.002924
Ca	44	3	He	87417.536	5.4073	242800.56	0.0001	0.002924
Ti	47	3	He	31.296	0.0152	680.04	0.0005	0
Ti	47	3	He	30.46	0.0148	650.03	0.0005	0
Ti	47	3	He	37.705	0.0183	820.05	0.0005	0
V	51	3	He	28.804	0.6158	27627.30	0.021	0.009571
V	51	3	He	29.656	0.6338	27923.78	0.021	0.009571
V	51	3	He	29.055	0.6211	27889.73	0.021	0.009571
Cr	52	3	He	5.541	0.1654	7421.93	0.0267	0.01758
Cr	52	3	He	5.816	0.1728	7612.00	0.0267	0.01758
Cr	52	3	He	5.987	0.1773	7962.20	0.0267	0.01758
Mn	55	3	He	500.479	5.4189	243100.93	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	509.483	5.5163	243046.48	0.0108	0.004199
Mn	55	3	He	498.328	5.3956	242276.07	0.0108	0.004199
Fe	57	3	He	62447.991	31.2807	1403307.95	0.0005	0.002993
Fe	57	3	He	63098.853	31.6067	1392580.76	0.0005	0.002993
Fe	57	3	He	62365.968	31.2396	1402734.82	0.0005	0.002993
Co	59	3	He	2.42	0.1298	5821.22	0.0524	0.003063
Co	59	3	He	2.335	0.1253	5521.17	0.0524	0.003063
Co	59	3	He	2.192	0.1178	5290.99	0.0524	0.003063
Ni	60	3	He	4.142	0.0564	3300.44	0.0109	0.01116
Ni	60	3	He	4.393	0.0592	3530.51	0.0109	0.01116
Ni	60	3	He	4.214	0.0572	3340.45	0.0109	0.01116
Cu	63	3	He	0.926	0.0389	2950.36	0.0255	0.01531
Cu	63	3	He	0.801	0.0357	2690.29	0.0255	0.01531
Cu	63	3	He	0.78	0.0352	2690.30	0.0255	0.01531
Zn	66	3	He	361.467	1.0429	79073.53	0.0029	0.002787
Zn	66	3	He	370.045	1.0676	80409.70	0.0029	0.002787
Zn	66	3	He	358.83	1.0353	79163.90	0.0029	0.002787
As	75	3	He	6.364	0.014	1058.04	0.0021	0.0004097
As	75	3	He	6.345	0.0139	1048.04	0.0021	0.0004097
As	75	3	He	6.001	0.0132	1008.04	0.0021	0.0004097
Sr	88	3	He	792.511	7.4709	436818.63	0.0094	0.0008765
Sr	88	3	He	784.713	7.3974	441217.10	0.0094	0.0008765
Sr	88	3	He	809.648	7.6325	445411.59	0.0094	0.0008765
Mo	98	3	He	0.406	0.0096	560.03	0.023	0.0002199
Mo	98	3	He	0.347	0.0082	490.02	0.023	0.0002199
Mo	98	3	He	0.392	0.0093	540.03	0.023	0.0002199
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	0.004	0.001	60.00	0.0483	0.0008224
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Cd	111	3	He	0.175	0.001	56.00	0.0053	2.193E-05
Cd	111	3	He	0.247	0.0013	80.00	0.0053	2.193E-05
Cd	111	3	He	0.208	0.0011	66.00	0.0053	2.193E-05
Sn	120	3	He	1.044	0.0289	1690.14	0.0148	0.01345
Sn	120	3	He	0.847	0.026	1550.13	0.0148	0.01345
Sn	120	3	He	1.094	0.0296	1730.15	0.0148	0.01345
Sb	121	3	He	0.184	0.0031	180.01	0.0143	0.0004392
Sb	121	3	He	0.169	0.0029	170.01	0.0143	0.0004392
Sb	121	3	He	0.125	0.0022	130.01	0.0143	0.0004392
Ba	137	3	He	1149.126	5.0121	293054.29	0.0044	0.0001096
Ba	137	3	He	1124.93	4.9066	292652.03	0.0044	0.0001096
Ba	137	3	He	1158.948	5.055	294994.98	0.0044	0.0001096
Tl	205	3	He	0.03	0.0009	210.01	0.0208	0.0002491
Tl	205	3	He	0.014	0.0005	130.01	0.0208	0.0002491
Tl	205	3	He	0.012	0.0005	120.00	0.0208	0.0002491
Pb	208	3	He	53.798	1.465	184222.56	0.0272	0.0006218
Pb	208	3	He	53.421	1.4548	184596.58	0.0272	0.0006218
Pb	208	3	He	53.864	1.4668	186622.46	0.0272	0.0006218
U	238	3	He	0.335	0.0092	2210.25	0.0275	2.763E-05
U	238	3	He	0.303	0.0084	2010.21	0.0275	2.763E-05
U	238	3	He	0.304	0.0084	2020.22	0.0275	2.763E-05
Sc	45	1	No Gas			2310886.84		
Sc	45	1	No Gas			2268532.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2244117.00		
Ge	72	1	No Gas			1045713.50		
Ge	72	1	No Gas			1038358.89		
Ge	72	1	No Gas			1018433.03		
Sc	45	2	H2			134983.09		
Sc	45	2	H2			135635.54		
Sc	45	2	H2			133107.80		
Ge	72	2	H2			114353.78		
Ge	72	2	H2			113125.52		
Ge	72	2	H2			113125.59		
In	115	2	H2			281537.40		
In	115	2	H2			280187.53		
In	115	2	H2			281687.81		
Sc	45	3	He			44861.80		
Sc	45	3	He			44059.70		
Sc	45	3	He			44902.45		
Ge	72	3	He			75818.76		
Ge	72	3	He			75317.43		
Ge	72	3	He			76461.88		
In	115	3	He			58480.93		
In	115	3	He			59655.55		
In	115	3	He			58369.64		
Tb	159	3	He			239046.62		
Tb	159	3	He			240258.08		
Tb	159	3	He			240734.78		
Bi	209	3	He			157698.73		
Bi	209	3	He			159375.42		
Bi	209	3	He			160970.62		

Quantitation Report

Data File Name	061SMPL.d
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Acq Time	7/17/2024 9:31:19 AM
Sample Name	410-179170-K-12-A
Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

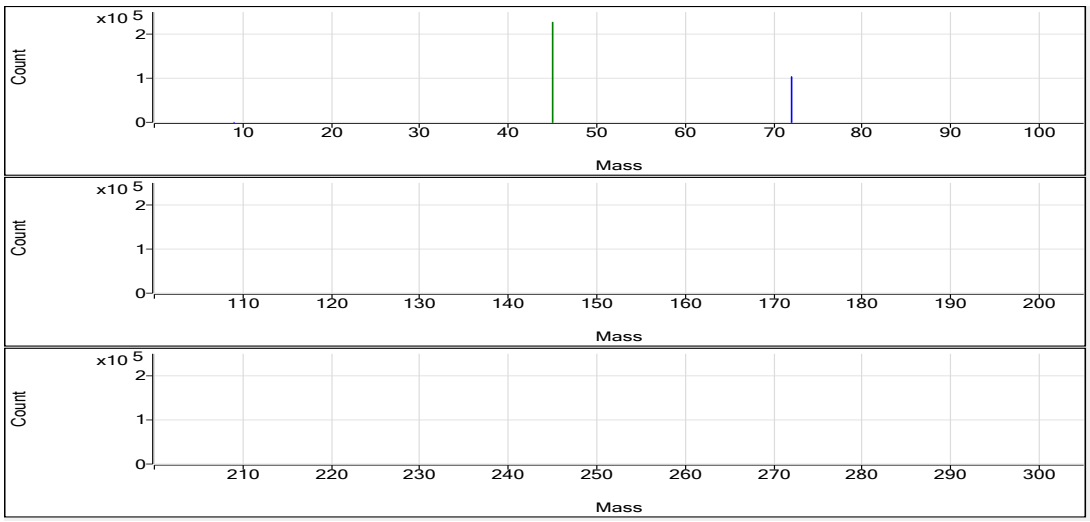
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.000	ppb	452.1	21.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.005	ppb	150.5	0.89	0.0000	Pulse	1.5000	3
Na	23	45	He	520.480	ppb	4.6	93843.53	2.0936	Pulse	0.1000	3
Mg	24	45	He	20.498	ppb	9.7	1560.12	0.0348	Pulse	0.1000	3
Al	27	45	He	4.039	ppb	6.6	116.67	0.0026	Pulse	0.1000	3
K	39	45	He	13.489	ppb	536.7	19892.68	0.4443	Pulse	0.1000	3
Ca	44	45	He	127.354	ppb	24.5	483.36	0.0108	Pulse	0.1000	3
Ti	47	45	He	0.155	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.037	ppb	66.5	464.01	0.0103	Pulse	0.5000	3
Cr	52	45	He	0.448	ppb	30.4	1323.43	0.0295	Pulse	0.1000	3
Mn	55	45	He	0.546	ppb	13.3	453.35	0.0101	Pulse	0.1000	3
Fe	57	45	He	26.706	ppb	10.7	733.38	0.0164	Pulse	0.1000	3
Co	59	45	He	0.021	ppb	56.7	186.68	0.0042	Pulse	0.1000	3
Ni	60	115	He	0.070	ppb	161.8	713.37	0.0119	Pulse	0.1000	3
Cu	63	72	He	0.376	ppb	35.9	1900.18	0.0249	Pulse	0.1000	3
Zn	66	72	He	1.244	ppb	23.7	486.69	0.0064	Pulse	0.1000	3
As	75	72	He	0.033	ppb	142.5	36.67	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.511	ppb	1.7	340.02	0.0057	Pulse	0.1000	3
Mo	98	115	He	0.032	ppb	94.0	56.67	0.0010	Pulse	0.1000	3
Ag	107	115	He	-0.009	ppb	N/A	23.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	55.8	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.303	ppb	151.1	1070.32	0.0179	Pulse	0.1000	3
Sb	121	115	He	0.001	ppb	4482.5	26.67	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.958	ppb	15.3	256.68	0.0043	Pulse	0.1000	3
Tl	205	159	He	0.043	ppb	23.4	273.35	0.0011	Pulse	0.1000	3
Pb	208	159	He	0.081	ppb	15.0	680.03	0.0028	Pulse	0.1000	3
U	238	159	He	0.002	ppb	73.7	20.00	0.0001	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2260259.76	1.0	98.5	Analog	0.1000	3
No Gas	Ge	72	1028446.49	1.3	99.0	Pulse	0.1000	3
H2	Sc	45	134858.15	1.1	97.0	Pulse	0.1000	3
H2	Ge	72	113216.10	0.6	95.9	Pulse	0.1000	3
H2	In	115	291496.81	1.2	98.9	Pulse	0.1000	3
He	Sc	45	44838.66	1.4	95.8	Pulse	0.1000	3
He	Ge	72	76404.90	0.4	99.9	Pulse	0.1000	3
He	In	115	59761.11	1.5	98.6	Pulse	0.1000	3
He	Tb	159	239650.23	1.0	99.4	Pulse	0.1000	3
He	Bi	209	164189.60	1.1	99.1	Pulse	0.1000	3

No Gas



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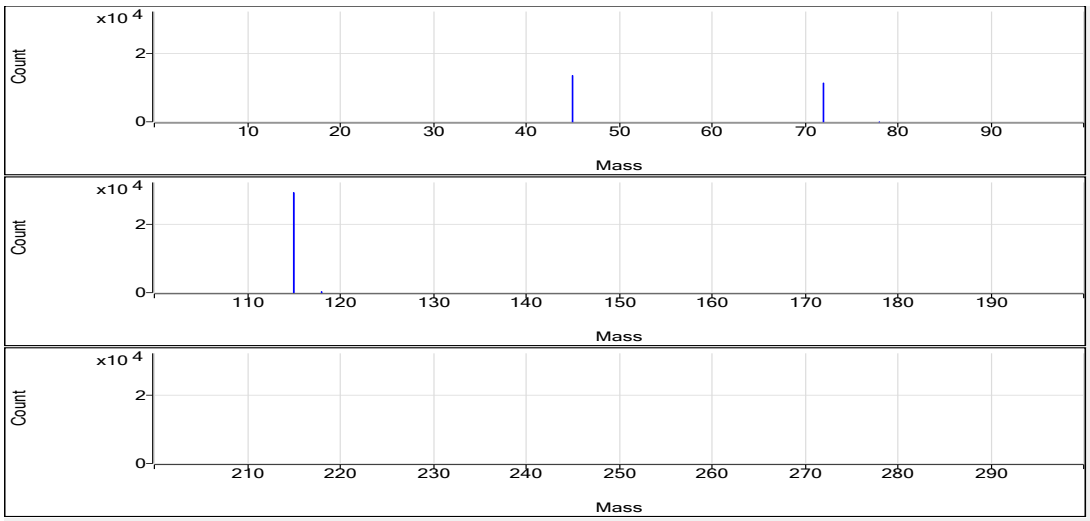
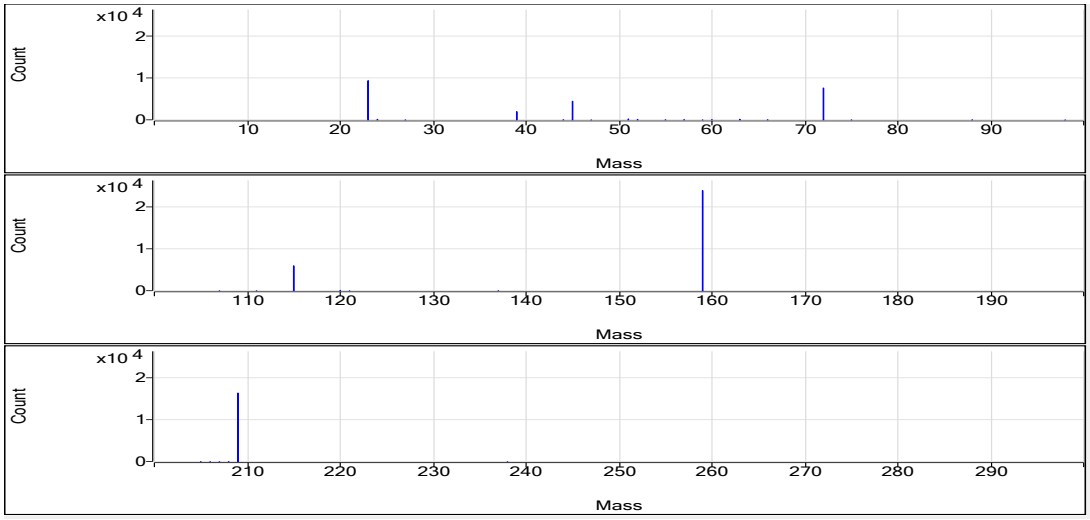


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.001	0	22.00	0.0004	9.309E-06
Be	9	1	No Gas	0.001	0	22.00	0.0004	9.309E-06
Be	9	1	No Gas	-0.001	0	20.00	0.0004	9.309E-06
Se	78	2	H2	0.001	0	0.67	0.0004	5.598E-06
Se	78	2	H2	0.001	0	0.67	0.0004	5.598E-06
Se	78	2	H2	0.014	0	1.33	0.0004	5.598E-06
Na	23	3	He	543.677	2.1661	96026.32	0.0031	0.4657
Na	23	3	He	521.98	2.0983	93691.95	0.0031	0.4657
Na	23	3	He	495.784	2.0164	91812.32	0.0031	0.4657
Mg	24	3	He	22.686	0.0381	1690.15	0.0015	0.003704
Mg	24	3	He	18.814	0.0323	1440.10	0.0015	0.003704
Mg	24	3	He	19.995	0.034	1550.12	0.0015	0.003704
Al	27	3	He	4.264	0.0027	120.00	0.0005	0.0007154
Al	27	3	He	3.743	0.0025	110.00	0.0005	0.0007154
Al	27	3	He	4.111	0.0026	120.00	0.0005	0.0007154
K	39	3	He	93.647	0.5314	23557.34	0.0011	0.4296
K	39	3	He	-6.027	0.4231	18891.26	0.0011	0.4296
K	39	3	He	-47.152	0.3784	17229.45	0.0011	0.4296
Ca	44	3	He	157.044	0.0126	560.03	0.0001	0.002924
Ca	44	3	He	130.216	0.011	490.03	0.0001	0.002924
Ca	44	3	He	94.801	0.0088	400.02	0.0001	0.002924
Ti	47	3	He	0.466	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.023	0.0101	446.01	0.021	0.009571
V	51	3	He	0.022	0.01	448.01	0.021	0.009571
V	51	3	He	0.065	0.0109	498.01	0.021	0.009571
Cr	52	3	He	0.466	0.03	1330.09	0.0267	0.01758
Cr	52	3	He	0.575	0.0329	1470.12	0.0267	0.01758
Cr	52	3	He	0.304	0.0257	1170.08	0.0267	0.01758
Mn	55	3	He	0.488	0.0095	420.02	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.523	0.0099	440.02	0.0108	0.004199
Mn	55	3	He	0.627	0.011	500.02	0.0108	0.004199
Fe	57	3	He	28.256	0.0171	760.04	0.0005	0.002993
Fe	57	3	He	28.457	0.0172	770.05	0.0005	0.002993
Fe	57	3	He	23.405	0.0147	670.04	0.0005	0.002993
Co	59	3	He	0.01	0.0036	160.01	0.0524	0.003063
Co	59	3	He	0.018	0.004	180.01	0.0524	0.003063
Co	59	3	He	0.034	0.0048	220.01	0.0524	0.003063
Ni	60	3	He	0.2	0.0133	810.05	0.0109	0.01116
Ni	60	3	He	0.003	0.0112	660.04	0.0109	0.01116
Ni	60	3	He	0.006	0.0112	670.03	0.0109	0.01116
Cu	63	3	He	0.26	0.0219	1680.16	0.0255	0.01531
Cu	63	3	He	0.524	0.0287	2180.22	0.0255	0.01531
Cu	63	3	He	0.343	0.024	1840.16	0.0255	0.01531
Zn	66	3	He	1.436	0.0069	530.02	0.0029	0.002787
Zn	66	3	He	0.904	0.0054	410.02	0.0029	0.002787
Zn	66	3	He	1.393	0.0068	520.03	0.0029	0.002787
As	75	3	He	-0.021	0.0004	28.00	0.0021	0.0004097
As	75	3	He	0.067	0.0006	42.00	0.0021	0.0004097
As	75	3	He	0.053	0.0005	40.00	0.0021	0.0004097
Sr	88	3	He	0.501	0.0056	340.01	0.0094	0.0008765
Sr	88	3	He	0.519	0.0058	340.02	0.0094	0.0008765
Sr	88	3	He	0.512	0.0057	340.02	0.0094	0.0008765
Mo	98	3	He	0.005	0.0003	20.00	0.023	0.0002199
Mo	98	3	He	0.064	0.0017	100.00	0.023	0.0002199
Mo	98	3	He	0.027	0.0008	50.00	0.023	0.0002199
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Sn	120	3	He	-0.118	0.0117	710.04	0.0148	0.01345
Sn	120	3	He	0.237	0.017	1000.07	0.0148	0.01345
Sn	120	3	He	0.79	0.0252	1500.86	0.0148	0.01345
Sb	121	3	He	-0.019	0.0002	10.00	0.0143	0.0004392
Sb	121	3	He	0.04	0.001	60.00	0.0143	0.0004392
Sb	121	3	He	-0.019	0.0002	10.00	0.0143	0.0004392
Ba	137	3	He	1.071	0.0048	290.02	0.0044	0.0001096
Ba	137	3	He	0.792	0.0036	210.01	0.0044	0.0001096
Ba	137	3	He	1.012	0.0045	270.01	0.0044	0.0001096
Tl	205	3	He	0.04	0.0011	260.01	0.0208	0.0002491
Tl	205	3	He	0.035	0.001	230.01	0.0208	0.0002491
Tl	205	3	He	0.054	0.0014	330.02	0.0208	0.0002491
Pb	208	3	He	0.088	0.003	450.02	0.0272	0.0006218
Pb	208	3	He	0.089	0.003	360.02	0.0272	0.0006218
Pb	208	3	He	0.067	0.0025	300.01	0.0272	0.0006218
U	238	3	He	0.004	0.0001	30.00	0.0275	2.763E-05
U	238	3	He	0.001	0	10.00	0.0275	2.763E-05
U	238	3	He	0.002	0.0001	20.00	0.0275	2.763E-05
Sc	45	1	No Gas			2252986.37		
Sc	45	1	No Gas			2241819.50		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2285973.40		
Ge	72	1	No Gas			1023050.84		
Ge	72	1	No Gas			1018851.55		
Ge	72	1	No Gas			1043437.09		
Sc	45	2	H2			133208.90		
Sc	45	2	H2			136060.91		
Sc	45	2	H2			135304.64		
Ge	72	2	H2			113447.85		
Ge	72	2	H2			113800.48		
Ge	72	2	H2			112399.98		
In	115	2	H2			289203.98		
In	115	2	H2			295455.09		
In	115	2	H2			289831.36		
Sc	45	3	He			44330.47		
Sc	45	3	He			44651.64		
Sc	45	3	He			45533.88		
Ge	72	3	He			76612.40		
Ge	72	3	He			76079.94		
Ge	72	3	He			76522.37		
In	115	3	He			60689.19		
In	115	3	He			58942.24		
In	115	3	He			59674.39		
Tb	159	3	He			241748.69		
Tb	159	3	He			236905.76		
Tb	159	3	He			240296.25		
Bi	209	3	He			166339.59		
Bi	209	3	He			163114.42		
Bi	209	3	He			163114.80		

Quantitation Report

Data File Name	062SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 9:33:20 AM
Sample Name	410-179170-K-3-A
Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

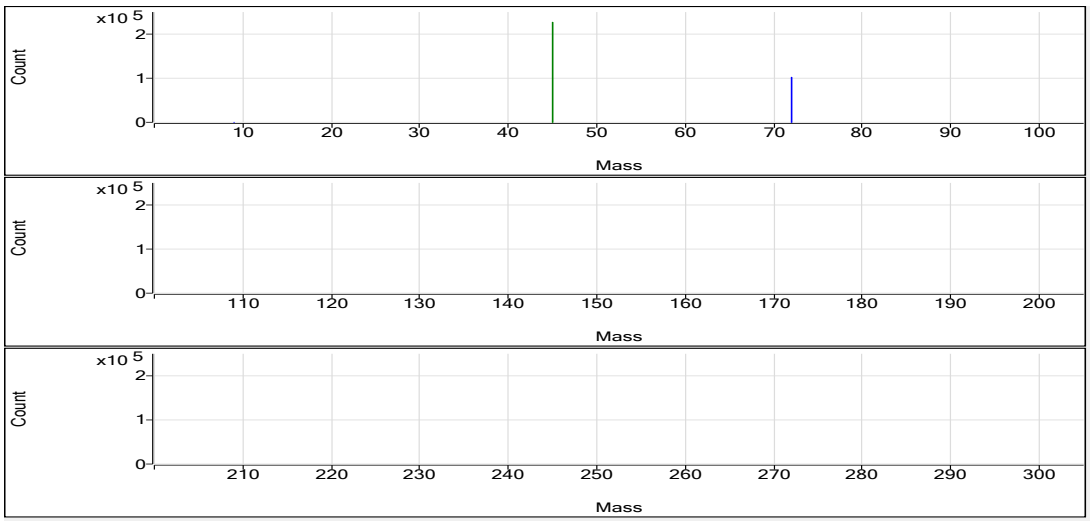
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.006	ppb	17.9	26.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.672	ppb	11.8	33.78	0.0003	Pulse	1.5000	3
Na	23	45	He	208283.019	ppb	3.1	29717473.73	651.9219	Analog	0.1000	3
Mg	24	45	He	12665.734	ppb	3.3	876207.15	19.2223	Pulse	0.1000	3
Al	27	45	He	36.449	ppb	19.0	806.71	0.0177	Pulse	0.1000	3
K	39	45	He	7106.956	ppb	3.1	371669.47	8.1532	Pulse	0.1000	3
Ca	44	45	He	63975.133	ppb	2.8	180432.61	3.9580	Pulse	0.1000	3
Ti	47	45	He	0.459	ppb	101.9	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.668	ppb	4.8	1077.37	0.0236	Pulse	0.5000	3
Cr	52	45	He	0.471	ppb	26.2	1373.43	0.0302	Pulse	0.1000	3
Mn	55	45	He	57.143	ppb	1.0	28385.42	0.6224	Pulse	0.1000	3
Fe	57	45	He	18829.475	ppb	2.8	430065.63	9.4339	Pulse	0.1000	3
Co	59	45	He	3.590	ppb	3.0	8705.92	0.1910	Pulse	0.1000	3
Ni	60	115	He	2.565	ppb	6.1	2350.25	0.0392	Pulse	0.1000	3
Cu	63	72	He	1.245	ppb	1.8	3547.17	0.0470	Pulse	0.1000	3
Zn	66	72	He	17.132	ppb	7.7	3927.27	0.0521	Pulse	0.1000	3
As	75	72	He	52.142	ppb	3.7	8400.24	0.1114	Pulse	0.5000	3
Sr	88	115	He	513.795	ppb	1.5	290424.01	4.8438	Pulse	0.1000	3
Mo	98	115	He	3.259	ppb	3.7	4514.12	0.0753	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	40.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.283	ppb	0.6	92.00	0.0015	Pulse	0.5000	3
Sn	120	115	He	0.635	ppb	20.6	1370.11	0.0229	Pulse	0.1000	3
Sb	121	115	He	0.929	ppb	5.5	823.38	0.0137	Pulse	0.1000	3
Ba	137	115	He	15.315	ppb	4.1	4010.66	0.0669	Pulse	0.1000	3
Tl	205	159	He	0.016	ppb	33.3	136.67	0.0006	Pulse	0.1000	3
Pb	208	159	He	6.383	ppb	4.9	41310.84	0.1744	Pulse	0.1000	3
U	238	159	He	0.194	ppb	1.8	1270.10	0.0054	Pulse	0.1000	3

ISTD Table:

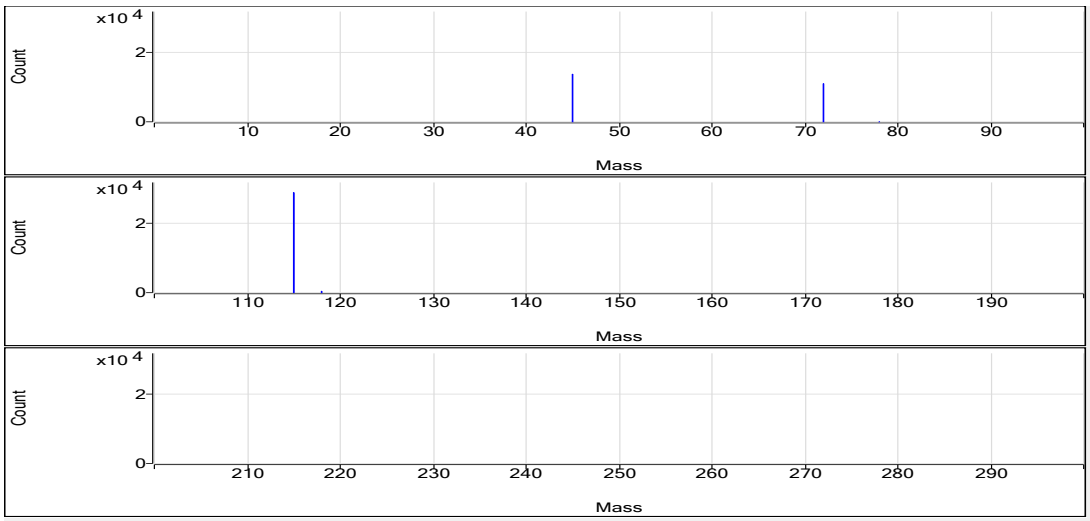
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2273805.38	0.8	99.1	Analog	0.1000	3
No Gas	Ge	72	1024866.08	0.8	98.6	Pulse	0.1000	3
H2	Sc	45	137730.63	0.9	99.1	Pulse	0.1000	3
H2	Ge	72	110209.89	0.6	93.3	Pulse	0.1000	3
H2	In	115	288869.89	0.6	98.0	Pulse	0.1000	3
He	Sc	45	45610.82	2.8	97.4	Pulse	0.1000	3
He	Ge	72	75433.88	1.8	98.6	Pulse	0.1000	3
He	In	115	59966.52	1.6	98.9	Pulse	0.1000	3
He	Tb	159	237004.04	1.1	98.3	Pulse	0.1000	3
He	Bi	209	162043.11	1.0	97.8	Pulse	0.1000	3

No Gas

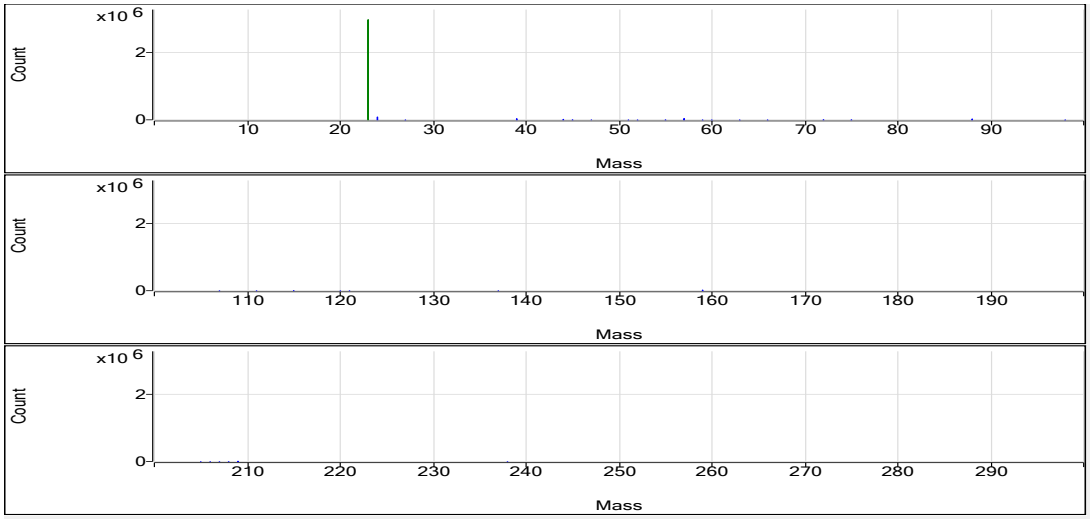


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.005	0	26.00	0.0004	9.309E-06
Be	9	1	No Gas	0.007	0	28.00	0.0004	9.309E-06
Be	9	1	No Gas	0.006	0	26.00	0.0004	9.309E-06
Se	78	2	H2	0.692	0.0003	34.67	0.0004	5.598E-06
Se	78	2	H2	0.585	0.0003	29.33	0.0004	5.598E-06
Se	78	2	H2	0.74	0.0003	37.33	0.0004	5.598E-06
Na	23	3	He	202602.811	634.1557	29600464.56	0.0031	0.4657
Na	23	3	He	206984.583	647.8607	29785617.06	0.0031	0.4657
Na	23	3	He	215261.664	673.7493	29766339.56	0.0031	0.4657
Mg	24	3	He	12316.992	18.6932	872539.99	0.0015	0.003704
Mg	24	3	He	12557.16	19.0576	876178.82	0.0015	0.003704
Mg	24	3	He	13123.05	19.9162	879902.64	0.0015	0.003704
Al	27	3	He	28.743	0.0141	660.03	0.0005	0.0007154
Al	27	3	He	38.519	0.0187	860.05	0.0005	0.0007154
Al	27	3	He	42.085	0.0204	900.05	0.0005	0.0007154
K	39	3	He	6932.244	7.9633	371704.88	0.0011	0.4296
K	39	3	He	7034.057	8.074	371204.60	0.0011	0.4296
K	39	3	He	7354.567	8.4223	372098.94	0.0011	0.4296
Ca	44	3	He	62469.025	3.8649	180402.38	0.0001	0.002924
Ca	44	3	He	63473.367	3.927	180545.29	0.0001	0.002924
Ca	44	3	He	65983.005	4.0822	180350.17	0.0001	0.002924
Ti	47	3	He	0.442	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.935	0.0005	20.00	0.0005	0
V	51	3	He	0.671	0.0237	1106.04	0.021	0.009571
V	51	3	He	0.635	0.0229	1054.04	0.021	0.009571
V	51	3	He	0.698	0.0243	1072.04	0.021	0.009571
Cr	52	3	He	0.329	0.0264	1230.08	0.0267	0.01758
Cr	52	3	He	0.54	0.032	1470.10	0.0267	0.01758
Cr	52	3	He	0.546	0.0321	1420.11	0.0267	0.01758
Mn	55	3	He	57.031	0.6212	28996.62	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	56.638	0.617	28365.24	0.0108	0.004199
Mn	55	3	He	57.761	0.6291	27794.41	0.0108	0.004199
Fe	57	3	He	18398.523	9.2181	430271.83	0.0005	0.002993
Fe	57	3	He	18683.964	9.361	430377.06	0.0005	0.002993
Fe	57	3	He	19405.938	9.7226	429548.00	0.0005	0.002993
Co	59	3	He	3.491	0.1858	8672.58	0.0524	0.003063
Co	59	3	He	3.574	0.1902	8742.63	0.0524	0.003063
Co	59	3	He	3.704	0.197	8702.56	0.0524	0.003063
Ni	60	3	He	2.557	0.0391	2340.24	0.0109	0.01116
Ni	60	3	He	2.412	0.0375	2290.25	0.0109	0.01116
Ni	60	3	He	2.726	0.041	2420.25	0.0109	0.01116
Cu	63	3	He	1.247	0.0471	3540.51	0.0255	0.01531
Cu	63	3	He	1.221	0.0464	3570.49	0.0255	0.01531
Cu	63	3	He	1.267	0.0476	3530.51	0.0255	0.01531
Zn	66	3	He	18.537	0.0561	4220.69	0.0029	0.002787
Zn	66	3	He	15.935	0.0486	3740.55	0.0029	0.002787
Zn	66	3	He	16.925	0.0515	3820.58	0.0029	0.002787
As	75	3	He	53.915	0.1152	8660.37	0.0021	0.0004097
As	75	3	He	50.074	0.107	8228.15	0.0021	0.0004097
As	75	3	He	52.436	0.112	8312.20	0.0021	0.0004097
Sr	88	3	He	510.826	4.8158	288059.51	0.0094	0.0008765
Sr	88	3	He	508.001	4.7892	292193.47	0.0094	0.0008765
Sr	88	3	He	522.558	4.9264	291019.04	0.0094	0.0008765
Mo	98	3	He	3.148	0.0727	4350.74	0.023	0.0002199
Mo	98	3	He	3.242	0.0749	4570.79	0.023	0.0002199
Mo	98	3	He	3.386	0.0782	4620.84	0.023	0.0002199
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Ag	107	3	He	-0.003	0.0007	40.00	0.0483	0.0008224
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Cd	111	3	He	0.284	0.0015	92.00	0.0053	2.193E-05
Cd	111	3	He	0.285	0.0015	94.00	0.0053	2.193E-05
Cd	111	3	He	0.281	0.0015	90.00	0.0053	2.193E-05
Sn	120	3	He	0.785	0.0251	1500.12	0.0148	0.01345
Sn	120	3	He	0.564	0.0218	1330.11	0.0148	0.01345
Sn	120	3	He	0.555	0.0217	1280.10	0.0148	0.01345
Sb	121	3	He	0.974	0.0144	860.05	0.0143	0.0004392
Sb	121	3	He	0.874	0.0129	790.05	0.0143	0.0004392
Sb	121	3	He	0.94	0.0139	820.05	0.0143	0.0004392
Ba	137	3	He	15.731	0.0687	4110.68	0.0044	0.0001096
Ba	137	3	He	14.595	0.0638	3890.61	0.0044	0.0001096
Ba	137	3	He	15.619	0.0682	4030.68	0.0044	0.0001096
Tl	205	3	He	0.021	0.0007	160.01	0.0208	0.0002491
Tl	205	3	He	0.01	0.0005	110.00	0.0208	0.0002491
Tl	205	3	He	0.016	0.0006	140.01	0.0208	0.0002491
Pb	208	3	He	6.701	0.183	22017.39	0.0272	0.0006218
Pb	208	3	He	6.37	0.174	21316.13	0.0272	0.0006218
Pb	208	3	He	6.078	0.1661	21646.68	0.0272	0.0006218
U	238	3	He	0.194	0.0054	1260.09	0.0275	2.763E-05
U	238	3	He	0.197	0.0054	1290.11	0.0275	2.763E-05
U	238	3	He	0.19	0.0053	1260.10	0.0275	2.763E-05
Sc	45	1	No Gas			2275242.93		
Sc	45	1	No Gas			2290658.25		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2255514.97		
Ge	72	1	No Gas			1025648.34		
Ge	72	1	No Gas			1032545.38		
Ge	72	1	No Gas			1016404.52		
Sc	45	2	H2			138247.82		
Sc	45	2	H2			136382.58		
Sc	45	2	H2			138561.49		
Ge	72	2	H2			110025.41		
Ge	72	2	H2			109713.92		
Ge	72	2	H2			110890.35		
In	115	2	H2			287136.85		
In	115	2	H2			290260.87		
In	115	2	H2			289211.95		
Sc	45	3	He			46676.97		
Sc	45	3	He			45975.34		
Sc	45	3	He			44180.14		
Ge	72	3	He			75196.46		
Ge	72	3	He			76903.49		
Ge	72	3	He			74201.69		
In	115	3	He			59825.70		
In	115	3	He			61020.29		
In	115	3	He			59082.33		
Tb	159	3	He			234580.45		
Tb	159	3	He			236855.37		
Tb	159	3	He			239576.29		
Bi	209	3	He			163470.33		
Bi	209	3	He			162415.70		
Bi	209	3	He			160243.31		

Quantitation Report

Data File Name	063SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 9:35:20 AM
Sample Name	410-179170-I-6-A
Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

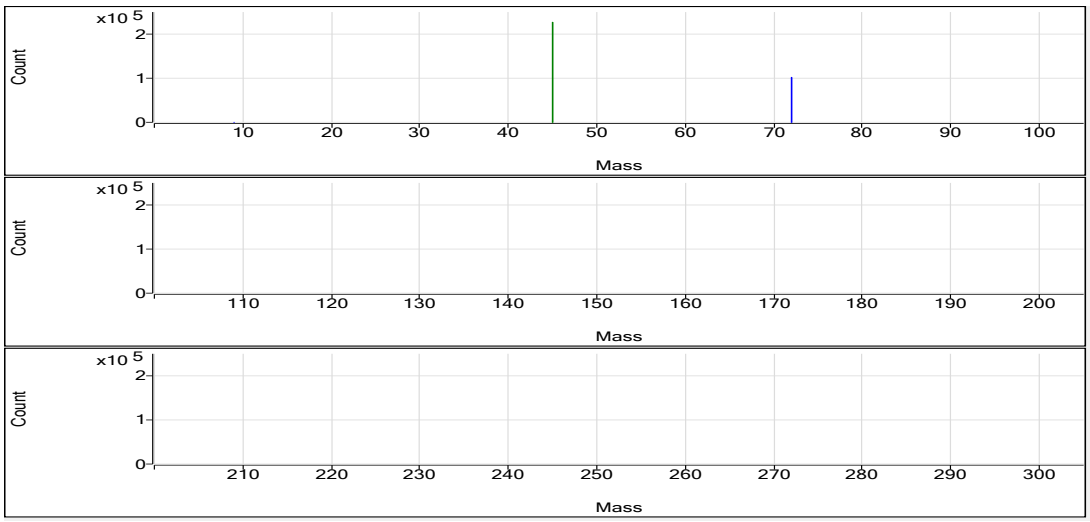
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.020	ppb	38.1	39.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.349	ppb	20.9	18.00	0.0002	Pulse	1.5000	3
Na	23	45	He	122356.067	ppb	1.0	17587458.07	383.1643	Analog	0.1000	3
Mg	24	45	He	9919.582	ppb	0.5	691063.14	15.0554	Pulse	0.1000	3
Al	27	45	He	47.907	ppb	7.5	1060.07	0.0231	Pulse	0.1000	3
K	39	45	He	1779.838	ppb	3.3	108512.55	2.3639	Pulse	0.1000	3
Ca	44	45	He	68463.345	ppb	0.7	194414.58	4.2355	Pulse	0.1000	3
Ti	47	45	He	1.800	ppb	25.2	40.00	0.0009	Pulse	0.1000	3
V	51	45	He	0.892	ppb	0.2	1300.73	0.0283	Pulse	0.5000	3
Cr	52	45	He	0.602	ppb	9.9	1543.45	0.0336	Pulse	0.1000	3
Mn	55	45	He	394.347	ppb	1.2	196023.84	4.2706	Pulse	0.1000	3
Fe	57	45	He	50990.448	ppb	0.7	1172403.32	25.5421	Pulse	0.1000	3
Co	59	45	He	0.424	ppb	9.5	1160.08	0.0253	Pulse	0.1000	3
Ni	60	115	He	2.504	ppb	7.2	2296.90	0.0385	Pulse	0.1000	3
Cu	63	72	He	8.871	ppb	2.4	17920.47	0.2413	Pulse	0.1000	3
Zn	66	72	He	46.246	ppb	3.5	10090.11	0.1359	Pulse	0.1000	3
As	75	72	He	131.582	ppb	0.8	20829.51	0.2805	Pulse	0.5000	3
Sr	88	115	He	396.083	ppb	1.9	222593.10	3.7343	Pulse	0.1000	3
Mo	98	115	He	1.726	ppb	5.7	2383.59	0.0400	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	90.3	76.67	0.0013	Pulse	0.1000	3
Cd	111	115	He	2.863	ppb	4.9	911.37	0.0153	Pulse	0.5000	3
Sn	120	115	He	0.178	ppb	145.0	960.06	0.0161	Pulse	0.1000	3
Sb	121	115	He	0.356	ppb	6.0	330.01	0.0055	Pulse	0.1000	3
Ba	137	115	He	25.849	ppb	6.3	6728.36	0.1129	Pulse	0.1000	3
Tl	205	159	He	0.010	ppb	110.5	110.00	0.0005	Pulse	0.1000	3
Pb	208	159	He	3.420	ppb	2.1	22274.12	0.0937	Pulse	0.1000	3
U	238	159	He	0.101	ppb	2.8	670.04	0.0028	Pulse	0.1000	3

ISTD Table:

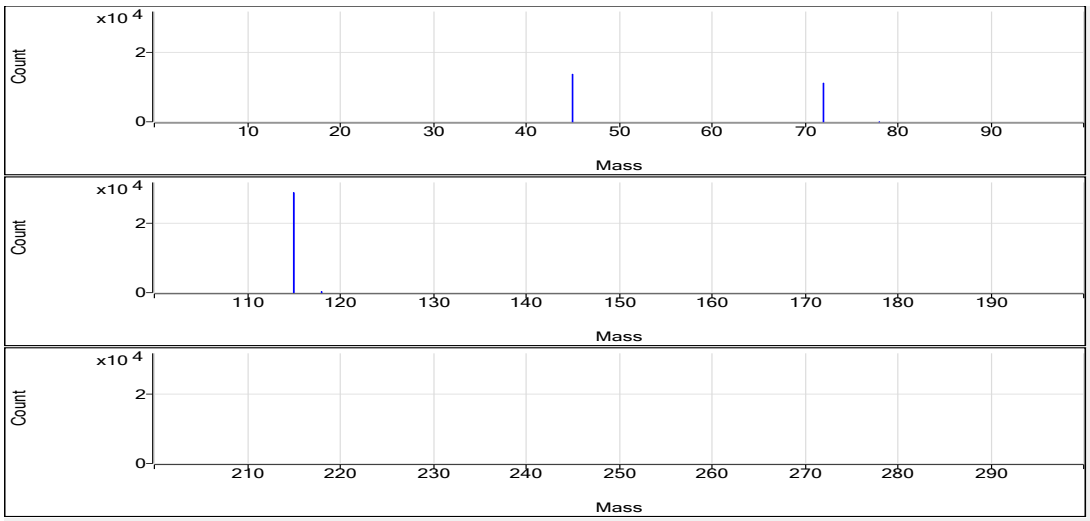
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2266814.34	1.5	98.8	Analog	0.1000	3
No Gas	Ge	72	1018801.26	1.0	98.1	Pulse	0.1000	3
H2	Sc	45	137032.10	1.2	98.6	Pulse	0.1000	3
H2	Ge	72	111491.56	1.3	94.4	Pulse	0.1000	3
H2	In	115	287506.47	0.5	97.6	Pulse	0.1000	3
He	Sc	45	45901.67	0.4	98.0	Pulse	0.1000	3
He	Ge	72	74265.21	0.9	97.1	Pulse	0.1000	3
He	In	115	59611.29	0.9	98.3	Pulse	0.1000	3
He	Tb	159	237695.72	0.5	98.6	Pulse	0.1000	3
He	Bi	209	162808.66	1.2	98.2	Pulse	0.1000	3

No Gas

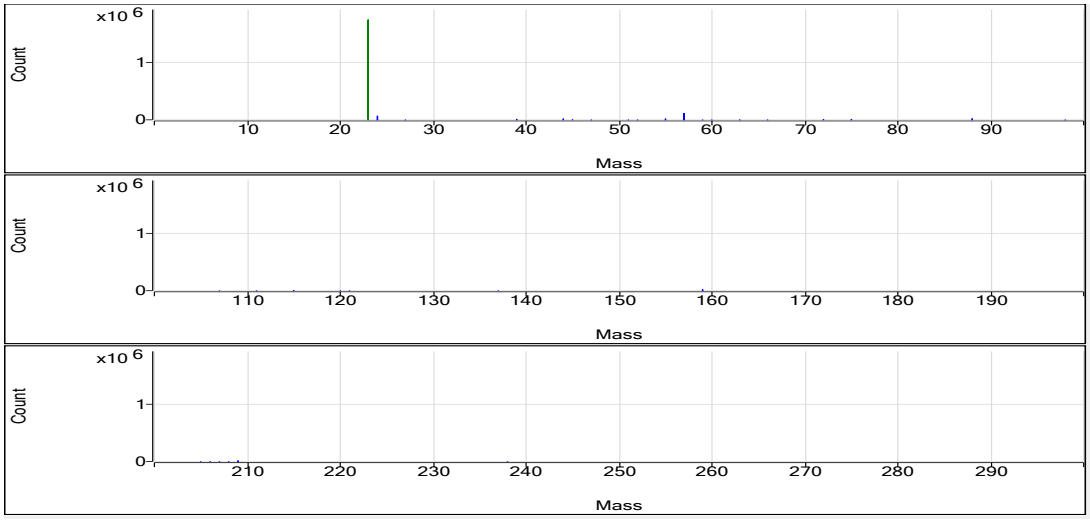


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.029	0	48.00	0.0004	9.309E-06
Be	9	1	No Gas	0.017	0	36.00	0.0004	9.309E-06
Be	9	1	No Gas	0.015	0	34.00	0.0004	9.309E-06
Se	78	2	H2	0.388	0.0002	20.00	0.0004	5.598E-06
Se	78	2	H2	0.394	0.0002	20.00	0.0004	5.598E-06
Se	78	2	H2	0.265	0.0001	14.00	0.0004	5.598E-06
Na	23	3	He	121383.898	380.1236	17518135.99	0.0031	0.4657
Na	23	3	He	122037.013	382.1664	17539505.99	0.0031	0.4657
Na	23	3	He	123647.289	387.2029	17704732.24	0.0031	0.4657
Mg	24	3	He	9916.508	15.0507	693618.58	0.0015	0.003704
Mg	24	3	He	9871.601	14.9826	687625.30	0.0015	0.003704
Mg	24	3	He	9970.636	15.1329	691945.54	0.0015	0.003704
Al	27	3	He	49.11	0.0237	1090.08	0.0005	0.0007154
Al	27	3	He	50.72	0.0244	1120.08	0.0005	0.0007154
Al	27	3	He	43.89	0.0212	970.06	0.0005	0.0007154
K	39	3	He	1845.509	2.4353	112230.06	0.0011	0.4296
K	39	3	He	1735.121	2.3153	106260.50	0.0011	0.4296
K	39	3	He	1758.883	2.3411	107047.09	0.0011	0.4296
Ca	44	3	He	68002.782	4.207	193882.18	0.0001	0.002924
Ca	44	3	He	68944.87	4.2653	195754.10	0.0001	0.002924
Ca	44	3	He	68442.383	4.2342	193607.46	0.0001	0.002924
Ti	47	3	He	1.344	0.0007	30.00	0.0005	0
Ti	47	3	He	2.249	0.0011	50.00	0.0005	0
Ti	47	3	He	1.806	0.0009	40.00	0.0005	0
V	51	3	He	0.89	0.0283	1304.06	0.021	0.009571
V	51	3	He	0.893	0.0284	1302.06	0.021	0.009571
V	51	3	He	0.892	0.0283	1296.06	0.021	0.009571
Cr	52	3	He	0.577	0.033	1520.11	0.0267	0.01758
Cr	52	3	He	0.558	0.0325	1490.13	0.0267	0.01758
Cr	52	3	He	0.669	0.0354	1620.12	0.0267	0.01758
Mn	55	3	He	390.555	4.2296	194923.30	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	392.648	4.2523	195157.26	0.0108	0.004199
Mn	55	3	He	399.84	4.3301	197990.95	0.0108	0.004199
Fe	57	3	He	50595.117	25.3441	1167990.30	0.0005	0.002993
Fe	57	3	He	51122.291	25.6081	1175282.40	0.0005	0.002993
Fe	57	3	He	51253.936	25.674	1173937.25	0.0005	0.002993
Co	59	3	He	0.393	0.0237	1090.07	0.0524	0.003063
Co	59	3	He	0.47	0.0277	1270.09	0.0524	0.003063
Co	59	3	He	0.409	0.0245	1120.08	0.0524	0.003063
Ni	60	3	He	2.712	0.0408	2410.26	0.0109	0.01116
Ni	60	3	He	2.409	0.0375	2240.22	0.0109	0.01116
Ni	60	3	He	2.391	0.0373	2240.22	0.0109	0.01116
Cu	63	3	He	9.114	0.2475	18360.98	0.0255	0.01531
Cu	63	3	He	8.785	0.2391	17610.16	0.0255	0.01531
Cu	63	3	He	8.712	0.2373	17790.27	0.0255	0.01531
Zn	66	3	He	44.394	0.1305	9683.14	0.0029	0.002787
Zn	66	3	He	47.185	0.1386	10203.63	0.0029	0.002787
Zn	66	3	He	47.161	0.1385	10383.56	0.0029	0.002787
As	75	3	He	130.9	0.279	20699.33	0.0021	0.0004097
As	75	3	He	132.788	0.2831	20843.55	0.0021	0.0004097
As	75	3	He	131.058	0.2794	20945.65	0.0021	0.0004097
Sr	88	3	He	402.449	3.7943	224041.31	0.0094	0.0008765
Sr	88	3	He	387.864	3.6568	218449.65	0.0094	0.0008765
Sr	88	3	He	397.937	3.7518	225288.34	0.0094	0.0008765
Mo	98	3	He	1.703	0.0395	2330.23	0.023	0.0002199
Mo	98	3	He	1.64	0.038	2270.24	0.023	0.0002199
Mo	98	3	He	1.834	0.0425	2550.29	0.023	0.0002199
Ag	107	3	He	0.011	0.0014	80.00	0.0483	0.0008224
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	0.017	0.0017	100.00	0.0483	0.0008224
Cd	111	3	He	3.025	0.0162	954.04	0.0053	2.193E-05
Cd	111	3	He	2.789	0.0149	890.03	0.0053	2.193E-05
Cd	111	3	He	2.774	0.0148	890.03	0.0053	2.193E-05
Sn	120	3	He	-0.119	0.0117	690.04	0.0148	0.01345
Sn	120	3	He	0.312	0.0181	1080.07	0.0148	0.01345
Sn	120	3	He	0.34	0.0185	1110.07	0.0148	0.01345
Sb	121	3	He	0.336	0.0053	310.01	0.0143	0.0004392
Sb	121	3	He	0.379	0.0059	350.01	0.0143	0.0004392
Sb	121	3	He	0.353	0.0055	330.01	0.0143	0.0004392
Ba	137	3	He	25.492	0.1113	6571.67	0.0044	0.0001096
Ba	137	3	He	24.429	0.1067	6371.50	0.0044	0.0001096
Ba	137	3	He	27.625	0.1206	7241.90	0.0044	0.0001096
Tl	205	3	He	0.023	0.0007	170.01	0.0208	0.0002491
Tl	205	3	He	0.008	0.0004	100.00	0.0208	0.0002491
Tl	205	3	He	0	0.0003	60.00	0.0208	0.0002491
Pb	208	3	He	3.443	0.0943	11995.39	0.0272	0.0006218
Pb	208	3	He	3.476	0.0952	12165.50	0.0272	0.0006218
Pb	208	3	He	3.341	0.0916	11374.90	0.0272	0.0006218
U	238	3	He	0.104	0.0029	680.04	0.0275	2.763E-05
U	238	3	He	0.098	0.0027	650.04	0.0275	2.763E-05
U	238	3	He	0.103	0.0029	680.04	0.0275	2.763E-05
Sc	45	1	No Gas			2306368.72		
Sc	45	1	No Gas			2251946.69		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2242127.62		
Ge	72	1	No Gas			1026111.55		
Ge	72	1	No Gas			1022589.59		
Ge	72	1	No Gas			1007702.64		
Sc	45	2	H2			135989.22		
Sc	45	2	H2			136112.65		
Sc	45	2	H2			138994.42		
Ge	72	2	H2			111716.04		
Ge	72	2	H2			109934.92		
Ge	72	2	H2			112823.71		
In	115	2	H2			287350.93		
In	115	2	H2			286241.68		
In	115	2	H2			288926.79		
Sc	45	3	He			46085.37		
Sc	45	3	He			45894.95		
Sc	45	3	He			45724.69		
Ge	72	3	He			74182.23		
Ge	72	3	He			73638.72		
Ge	72	3	He			74974.69		
In	115	3	He			59052.00		
In	115	3	He			59745.46		
In	115	3	He			60056.56		
Tb	159	3	He			236357.54		
Tb	159	3	He			238213.75		
Tb	159	3	He			238515.86		
Bi	209	3	He			164783.47		
Bi	209	3	He			160850.36		
Bi	209	3	He			162792.14		

Quantitation Report

Data File Name	064SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 9:37:22 AM
Sample Name	410-172824-H-19-A
Sample Type	Sample
Comment	E1
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

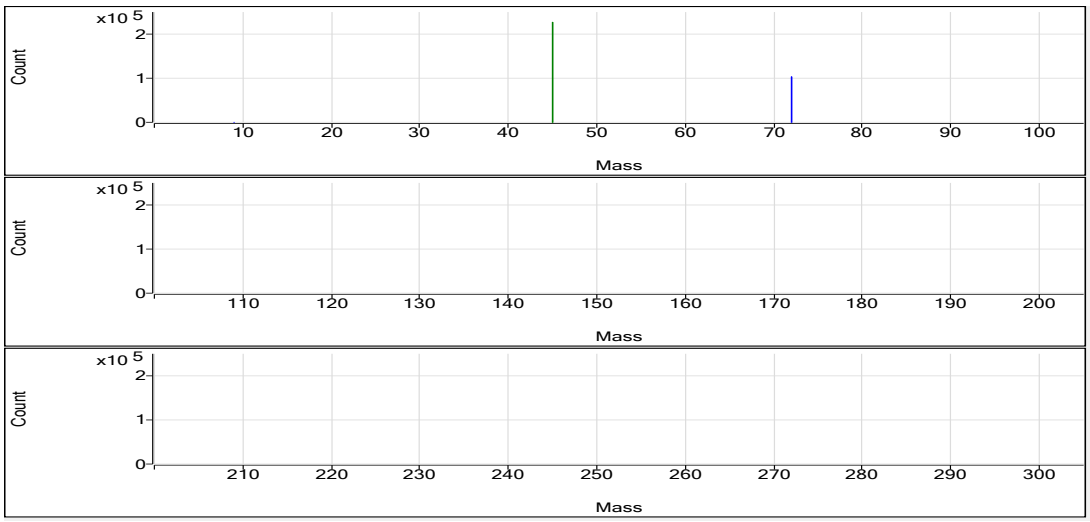
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.013	ppb	17.0	33.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.077	ppb	60.4	4.67	0.0000	Pulse	1.5000	3
Na	23	45	He	9019.417	ppb	2.8	1317183.05	28.6761	Analog	0.1000	3
Mg	24	45	He	151.365	ppb	3.2	10720.39	0.2334	Pulse	0.1000	3
Al	27	45	He	159.585	ppb	7.5	3460.46	0.0753	Pulse	0.1000	3
K	39	45	He	410.167	ppb	14.2	40193.15	0.8754	Pulse	0.1000	3
Ca	44	45	He	210.640	ppb	23.8	733.37	0.0159	Pulse	0.1000	3
Ti	47	45	He	5.855	ppb	31.3	130.01	0.0028	Pulse	0.1000	3
V	51	45	He	7.035	ppb	3.3	7242.97	0.1577	Pulse	0.5000	3
Cr	52	45	He	0.419	ppb	11.6	1320.10	0.0287	Pulse	0.1000	3
Mn	55	45	He	0.783	ppb	28.3	583.36	0.0127	Pulse	0.1000	3
Fe	57	45	He	40.282	ppb	14.4	1063.40	0.0232	Pulse	0.1000	3
Co	59	45	He	0.284	ppb	1.8	823.37	0.0179	Pulse	0.1000	3
Ni	60	115	He	1.962	ppb	16.4	1953.52	0.0326	Pulse	0.1000	3
Cu	63	72	He	2.091	ppb	4.0	5321.04	0.0686	Pulse	0.1000	3
Zn	66	72	He	2.286	ppb	27.9	726.71	0.0094	Pulse	0.1000	3
As	75	72	He	0.955	ppb	21.9	189.33	0.0024	Pulse	0.5000	3
Sr	88	115	He	2.033	ppb	9.6	1200.09	0.0200	Pulse	0.1000	3
Mo	98	115	He	2.348	ppb	1.9	3253.76	0.0543	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	40.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.017	ppb	85.7	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.060	ppb	99.4	860.06	0.0143	Pulse	0.1000	3
Sb	121	115	He	0.164	ppb	28.5	166.68	0.0028	Pulse	0.1000	3
Ba	137	115	He	0.294	ppb	7.1	83.33	0.0014	Pulse	0.1000	3
Tl	205	159	He	0.001	ppb	510.7	66.67	0.0003	Pulse	0.1000	3
Pb	208	159	He	1.973	ppb	4.0	13046.10	0.0543	Pulse	0.1000	3
U	238	159	He	0.869	ppb	4.3	5748.02	0.0239	Pulse	0.1000	3

ISTD Table:

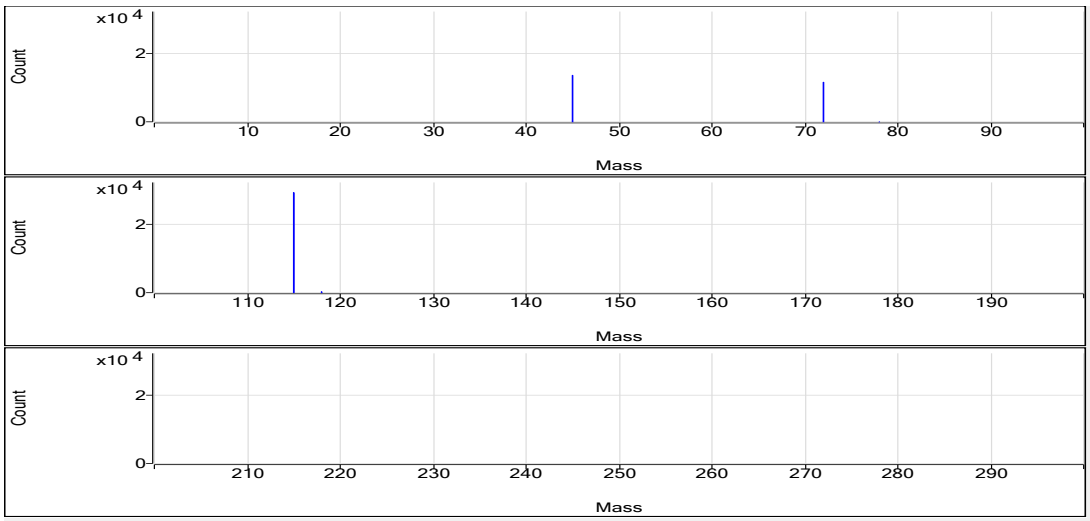
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2282032.83	1.0	99.5	Analog	0.1000	3
No Gas	Ge	72	1038581.81	0.2	100.0	Pulse	0.1000	3
H2	Sc	45	136611.83	0.9	98.2	Pulse	0.1000	3
H2	Ge	72	116429.91	0.9	98.6	Pulse	0.1000	3
H2	In	115	293754.37	0.5	99.7	Pulse	0.1000	3
He	Sc	45	45955.22	2.6	98.1	Pulse	0.1000	3
He	Ge	72	77583.62	0.5	101.5	Pulse	0.1000	3
He	In	115	59916.58	0.9	98.8	Pulse	0.1000	3
He	Tb	159	240165.15	1.2	99.6	Pulse	0.1000	3
He	Bi	209	165676.47	0.4	100.0	Pulse	0.1000	3

No Gas

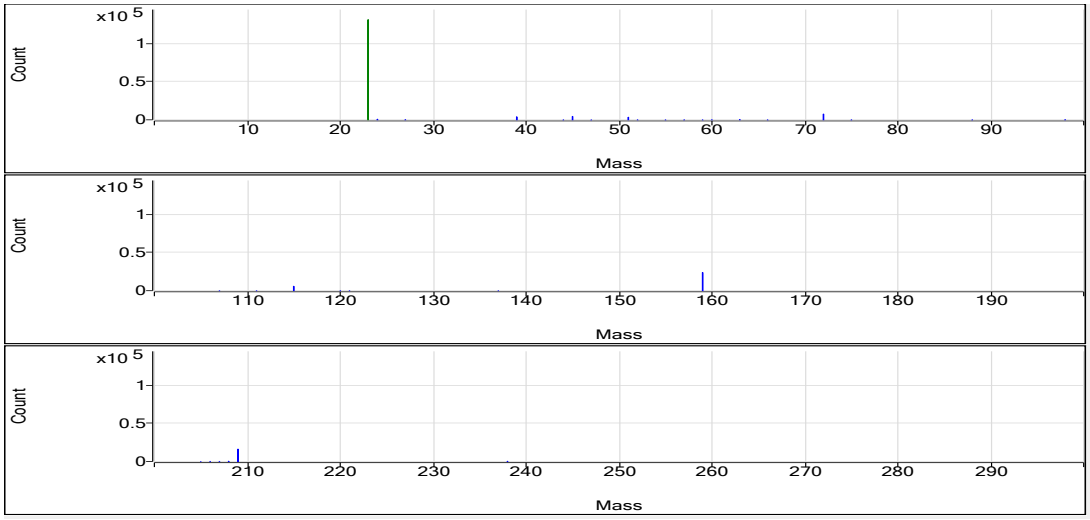


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.012	0	32.00	0.0004	9.309E-06
Be	9	1	No Gas	0.016	0	36.00	0.0004	9.309E-06
Be	9	1	No Gas	0.012	0	32.00	0.0004	9.309E-06
Se	78	2	H2	0.039	0	2.67	0.0004	5.598E-06
Se	78	2	H2	0.129	0.0001	7.33	0.0004	5.598E-06
Se	78	2	H2	0.064	0	4.00	0.0004	5.598E-06
Na	23	3	He	9276.96	29.4816	1316990.61	0.0031	0.4657
Na	23	3	He	8769.505	27.8944	1312672.01	0.0031	0.4657
Na	23	3	He	9011.787	28.6522	1321886.54	0.0031	0.4657
Mg	24	3	He	154.141	0.2376	10613.67	0.0015	0.003704
Mg	24	3	He	145.778	0.2249	10583.64	0.0015	0.003704
Mg	24	3	He	154.175	0.2376	10963.85	0.0015	0.003704
Al	27	3	He	158.087	0.0746	3330.43	0.0005	0.0007154
Al	27	3	He	172.289	0.0812	3820.56	0.0005	0.0007154
Al	27	3	He	148.38	0.07	3230.40	0.0005	0.0007154
K	39	3	He	471.956	0.9425	42104.56	0.0011	0.4296
K	39	3	He	402.287	0.8668	40791.36	0.0011	0.4296
K	39	3	He	356.259	0.8168	37683.52	0.0011	0.4296
Ca	44	3	He	177.209	0.0139	620.03	0.0001	0.002924
Ca	44	3	He	186.448	0.0145	680.04	0.0001	0.002924
Ca	44	3	He	268.261	0.0195	900.05	0.0001	0.002924
Ti	47	3	He	6.009	0.0029	130.01	0.0005	0
Ti	47	3	He	3.949	0.0019	90.00	0.0005	0
Ti	47	3	He	7.608	0.0037	170.01	0.0005	0
V	51	3	He	7.075	0.1585	7079.56	0.021	0.009571
V	51	3	He	6.786	0.1524	7171.60	0.021	0.009571
V	51	3	He	7.246	0.1621	7477.75	0.021	0.009571
Cr	52	3	He	0.465	0.03	1340.10	0.0267	0.01758
Cr	52	3	He	0.369	0.0274	1290.10	0.0267	0.01758
Cr	52	3	He	0.422	0.0288	1330.10	0.0267	0.01758
Mn	55	3	He	0.729	0.0121	540.02	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.026	0.0153	720.04	0.0108	0.004199
Mn	55	3	He	0.594	0.0106	490.03	0.0108	0.004199
Fe	57	3	He	45.873	0.026	1160.07	0.0005	0.002993
Fe	57	3	He	40.698	0.0234	1100.07	0.0005	0.002993
Fe	57	3	He	34.274	0.0202	930.06	0.0005	0.002993
Co	59	3	He	0.279	0.0177	790.04	0.0524	0.003063
Co	59	3	He	0.282	0.0179	840.04	0.0524	0.003063
Co	59	3	He	0.289	0.0182	840.04	0.0524	0.003063
Ni	60	3	He	2.153	0.0347	2090.21	0.0109	0.01116
Ni	60	3	He	1.591	0.0286	1720.15	0.0109	0.01116
Ni	60	3	He	2.142	0.0346	2050.19	0.0109	0.01116
Cu	63	3	He	2.187	0.071	5481.13	0.0255	0.01531
Cu	63	3	He	2.038	0.0672	5220.98	0.0255	0.01531
Cu	63	3	He	2.049	0.0675	5261.02	0.0255	0.01531
Zn	66	3	He	1.824	0.008	620.04	0.0029	0.002787
Zn	66	3	He	3.014	0.0115	890.06	0.0029	0.002787
Zn	66	3	He	2.02	0.0086	670.04	0.0029	0.002787
As	75	3	He	1.184	0.0029	226.00	0.0021	0.0004097
As	75	3	He	0.775	0.0021	160.00	0.0021	0.0004097
As	75	3	He	0.905	0.0023	182.00	0.0021	0.0004097
Sr	88	3	He	2.056	0.0203	1220.09	0.0094	0.0008765
Sr	88	3	He	1.827	0.0181	1090.08	0.0094	0.0008765
Sr	88	3	He	2.216	0.0218	1290.10	0.0094	0.0008765
Mo	98	3	He	2.398	0.0555	3340.45	0.023	0.0002199
Mo	98	3	He	2.311	0.0535	3220.42	0.023	0.0002199
Mo	98	3	He	2.334	0.054	3200.41	0.023	0.0002199
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Cd	111	3	He	0.033	0.0002	12.00	0.0053	2.193E-05
Cd	111	3	He	0.009	0.0001	4.00	0.0053	2.193E-05
Sn	120	3	He	0.089	0.0148	890.06	0.0148	0.01345
Sn	120	3	He	0.101	0.0149	900.06	0.0148	0.01345
Sn	120	3	He	-0.009	0.0133	790.05	0.0148	0.01345
Sb	121	3	He	0.12	0.0022	130.01	0.0143	0.0004392
Sb	121	3	He	0.213	0.0035	210.01	0.0143	0.0004392
Sb	121	3	He	0.158	0.0027	160.01	0.0143	0.0004392
Ba	137	3	He	0.279	0.0013	80.00	0.0044	0.0001096
Ba	137	3	He	0.317	0.0015	90.00	0.0044	0.0001096
Ba	137	3	He	0.284	0.0013	80.00	0.0044	0.0001096
Tl	205	3	He	0.008	0.0004	100.00	0.0208	0.0002491
Tl	205	3	He	-0.006	0.0001	30.00	0.0208	0.0002491
Tl	205	3	He	0.002	0.0003	70.00	0.0208	0.0002491
Pb	208	3	He	1.934	0.0533	6561.74	0.0272	0.0006218
Pb	208	3	He	2.063	0.0568	7622.21	0.0272	0.0006218
Pb	208	3	He	1.921	0.0529	6911.79	0.0272	0.0006218
U	238	3	He	0.895	0.0246	5841.37	0.0275	2.763E-05
U	238	3	He	0.887	0.0244	5871.42	0.0275	2.763E-05
U	238	3	He	0.826	0.0228	5531.28	0.0275	2.763E-05
Sc	45	1	No Gas			2258762.31		
Sc	45	1	No Gas			2302595.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2284741.06		
Ge	72	1	No Gas			1037194.91		
Ge	72	1	No Gas			1041557.02		
Ge	72	1	No Gas			1036993.50		
Sc	45	2	H2			136524.02		
Sc	45	2	H2			137925.88		
Sc	45	2	H2			135385.59		
Ge	72	2	H2			115987.18		
Ge	72	2	H2			115724.39		
Ge	72	2	H2			117578.17		
In	115	2	H2			294072.26		
In	115	2	H2			292109.18		
In	115	2	H2			295081.68		
Sc	45	3	He			44671.56		
Sc	45	3	He			47058.55		
Sc	45	3	He			46135.54		
Ge	72	3	He			77154.82		
Ge	72	3	He			77667.68		
Ge	72	3	He			77928.36		
In	115	3	He			60237.30		
In	115	3	He			60237.15		
In	115	3	He			59293.36		
Tb	159	3	He			237125.47		
Tb	159	3	He			240307.01		
Tb	159	3	He			243062.98		
Bi	209	3	He			165601.85		
Bi	209	3	He			165107.81		
Bi	209	3	He			166319.74		

Quantitation Report

Data File Name	066_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 9:41:24 AM
Sample Name	CCV 6148199
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

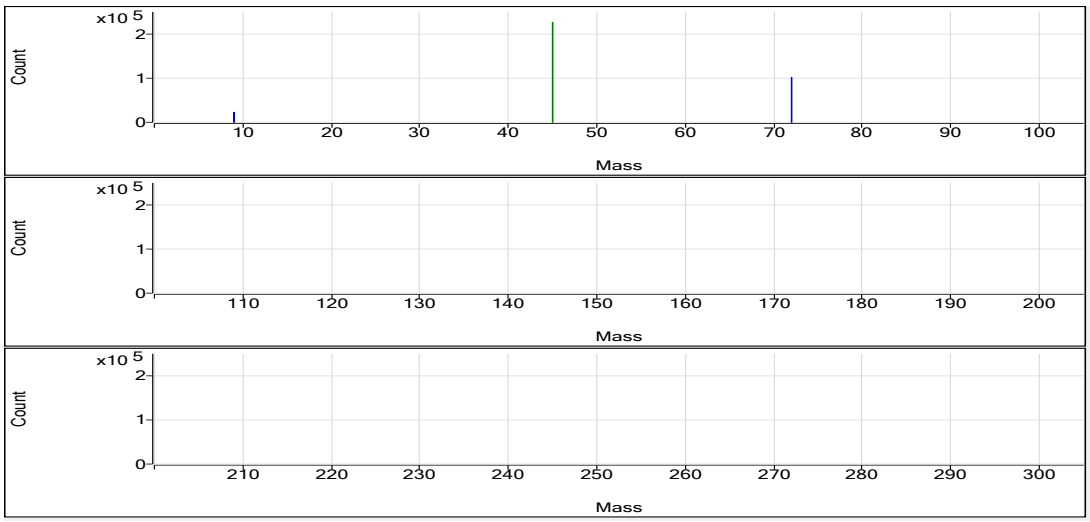
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.263	ppb	1.6	46627.30	0.0204	Pulse	0.5000	3
Se	78	72	H2	53.731	ppb	1.9	2690.23	0.0240	Pulse	1.5000	3
Na	23	45	He	5057.295	ppb	0.9	739566.37	16.2836	Pulse	0.1000	3
Mg	24	45	He	5121.780	ppb	0.6	353150.06	7.7753	Pulse	0.1000	3
Al	27	45	He	5097.856	ppb	1.6	108170.80	2.3818	Pulse	0.1000	3
K	39	45	He	5216.950	ppb	1.9	276998.19	6.0992	Pulse	0.1000	3
Ca	44	45	He	5023.491	ppb	1.3	14239.92	0.3135	Pulse	0.1000	3
Ti	47	45	He	5156.288	ppb	0.6	113441.59	2.4975	Pulse	0.1000	3
V	51	45	He	517.116	ppb	0.9	494777.29	10.8938	Pulse	0.5000	3
Cr	52	45	He	521.001	ppb	0.8	632220.88	13.9199	Pulse	0.1000	3
Mn	55	45	He	517.927	ppb	0.7	254711.25	5.6077	Pulse	0.1000	3
Fe	57	45	He	5227.803	ppb	0.6	119059.96	2.6214	Pulse	0.1000	3
Co	59	45	He	506.003	ppb	1.2	1203231.49	26.4929	Pulse	0.1000	3
Ni	60	115	He	519.995	ppb	1.8	340855.30	5.6967	Pulse	0.1000	3
Cu	63	72	He	504.462	ppb	1.7	966294.28	12.8680	Pulse	0.1000	3
Zn	66	72	He	530.523	ppb	2.0	114846.15	1.5294	Pulse	0.1000	3
As	75	72	He	527.657	ppb	1.3	84374.02	1.1235	Pulse	0.5000	3
Sr	88	115	He	51.627	ppb	3.1	29164.06	0.4875	Pulse	0.1000	3
Mo	98	115	He	51.640	ppb	2.0	71201.33	1.1899	Pulse	0.1000	3
Ag	107	115	He	51.899	ppb	1.1	150059.98	2.5077	Pulse	0.1000	3
Cd	111	115	He	51.372	ppb	2.9	16395.28	0.2741	Pulse	0.5000	3
Sn	120	115	He	51.664	ppb	1.1	46583.78	0.7784	Pulse	0.1000	3
Sb	121	115	He	51.936	ppb	4.0	44474.63	0.7435	Pulse	0.1000	3
Ba	137	115	He	514.601	ppb	1.6	134307.65	2.2446	Pulse	0.1000	3
Tl	205	159	He	50.944	ppb	1.7	255886.40	1.0592	Pulse	0.1000	3
Pb	208	159	He	50.879	ppb	1.1	334756.07	1.3855	Pulse	0.1000	3
U	238	159	He	50.906	ppb	1.4	338287.27	1.4001	Pulse	0.1000	3

ISTD Table:

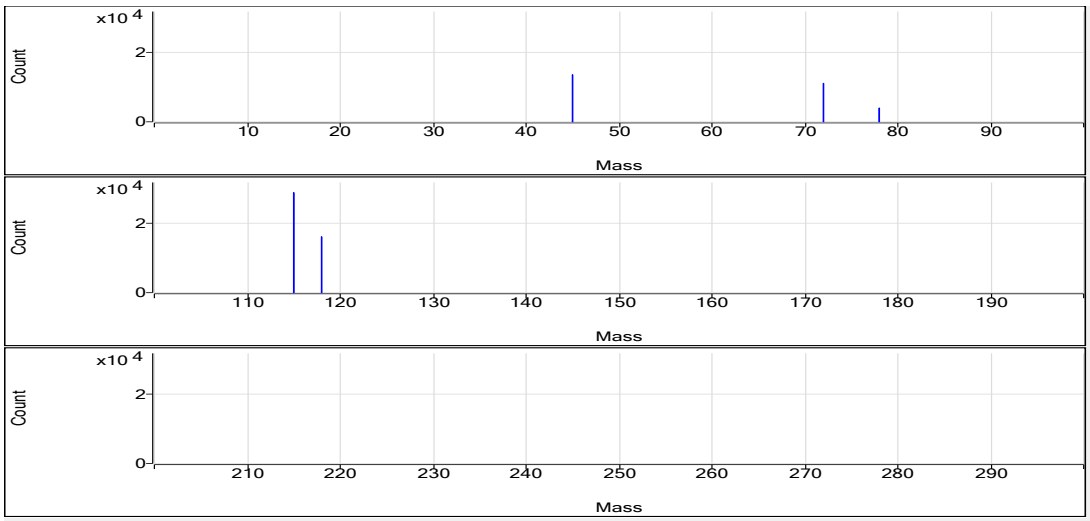
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2285280.23	1.3	99.6	Analog	0.1000	3
No Gas	Ge	72	1027701.83	0.4	98.9	Pulse	0.1000	3
H2	Sc	45	136703.13	1.0	98.3	Pulse	0.1000	3
H2	Ge	72	111928.28	0.6	94.8	Pulse	0.1000	3
H2	In	115	290099.28	1.6	98.5	Pulse	0.1000	3
He	Sc	45	45420.32	1.0	97.0	Pulse	0.1000	3
He	Ge	72	75105.58	1.6	98.2	Pulse	0.1000	3
He	In	115	59847.59	2.0	98.7	Pulse	0.1000	3
He	Tb	159	241631.73	1.5	100.2	Pulse	0.1000	3
He	Bi	209	163853.83	0.4	98.9	Pulse	0.1000	3

No Gas

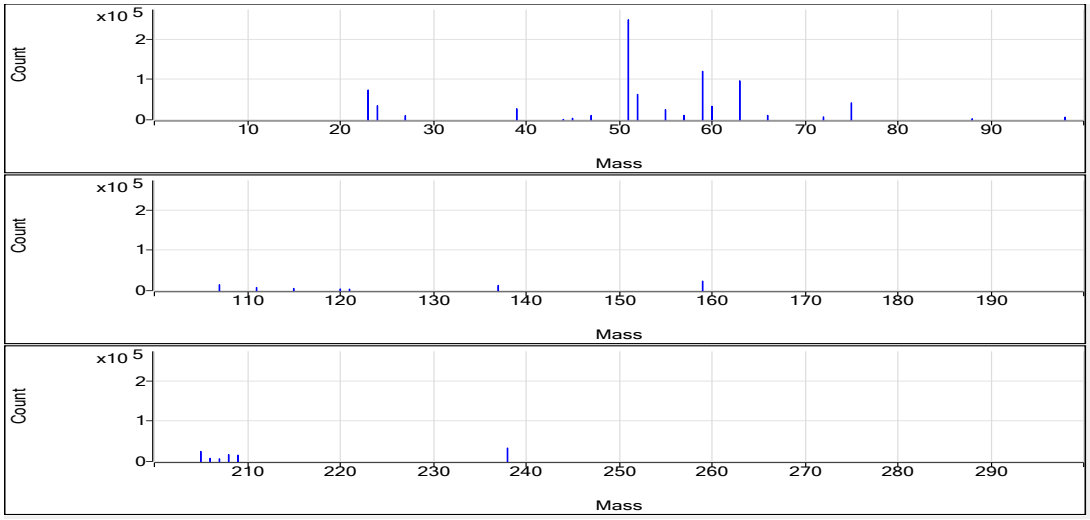


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.912	0.0203	46176.78	0.0004	9.309E-06
Be	9	1	No Gas	52.219	0.0208	46976.88	0.0004	9.309E-06
Be	9	1	No Gas	50.656	0.0202	46728.23	0.0004	9.309E-06
Se	78	2	H2	53.294	0.0238	2678.89	0.0004	5.598E-06
Se	78	2	H2	52.992	0.0237	2661.56	0.0004	5.598E-06
Se	78	2	H2	54.907	0.0246	2730.24	0.0004	5.598E-06
Na	23	3	He	5100.65	16.4192	738081.08	0.0031	0.4657
Na	23	3	He	5014.195	16.1488	740177.65	0.0031	0.4657
Na	23	3	He	5057.04	16.2828	740440.38	0.0031	0.4657
Mg	24	3	He	5129.595	7.7872	350052.96	0.0015	0.003704
Mg	24	3	He	5085.312	7.72	353845.78	0.0015	0.003704
Mg	24	3	He	5150.432	7.8188	355551.44	0.0015	0.003704
Al	27	3	He	5173.461	2.4171	108654.53	0.0005	0.0007154
Al	27	3	He	5011.243	2.3413	107314.95	0.0005	0.0007154
Al	27	3	He	5108.863	2.3869	108542.91	0.0005	0.0007154
K	39	3	He	5325.816	6.2175	279492.77	0.0011	0.4296
K	39	3	He	5139.928	6.0155	275720.64	0.0011	0.4296
K	39	3	He	5185.106	6.0646	275781.17	0.0011	0.4296
Ca	44	3	He	4949.486	0.3089	13886.38	0.0001	0.002924
Ca	44	3	He	5072.179	0.3165	14506.68	0.0001	0.002924
Ca	44	3	He	5048.808	0.3151	14326.69	0.0001	0.002924
Ti	47	3	He	5120.949	2.4804	111498.78	0.0005	0
Ti	47	3	He	5182.91	2.5104	115063.41	0.0005	0
Ti	47	3	He	5165.005	2.5017	113762.57	0.0005	0
V	51	3	He	519.417	10.9422	491877.81	0.021	0.009571
V	51	3	He	511.842	10.7828	494227.44	0.021	0.009571
V	51	3	He	520.089	10.9563	498226.63	0.021	0.009571
Cr	52	3	He	522.973	13.9725	628095.58	0.0267	0.01758
Cr	52	3	He	516.405	13.7972	632394.83	0.0267	0.01758
Cr	52	3	He	523.624	13.9899	636172.22	0.0267	0.01758
Mn	55	3	He	513.612	5.561	249978.32	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	519.146	5.6208	257630.64	0.0108	0.004199
Mn	55	3	He	521.024	5.6412	256524.80	0.0108	0.004199
Fe	57	3	He	5262.576	2.6388	118620.45	0.0005	0.002993
Fe	57	3	He	5205.012	2.61	119627.85	0.0005	0.002993
Fe	57	3	He	5215.82	2.6154	118931.58	0.0005	0.002993
Co	59	3	He	510.63	26.7352	1201807.56	0.0524	0.003063
Co	59	3	He	499.045	26.1287	1197605.06	0.0524	0.003063
Co	59	3	He	508.334	26.6149	1210281.86	0.0524	0.003063
Ni	60	3	He	530.582	5.8125	340040.74	0.0109	0.01116
Ni	60	3	He	515.955	5.6526	340779.76	0.0109	0.01116
Ni	60	3	He	513.448	5.6251	341745.39	0.0109	0.01116
Cu	63	3	He	514.52	13.1243	968960.61	0.0255	0.01531
Cu	63	3	He	500.081	12.7564	961541.31	0.0255	0.01531
Cu	63	3	He	498.784	12.7234	968380.92	0.0255	0.01531
Zn	66	3	He	542.227	1.5631	115400.96	0.0029	0.002787
Zn	66	3	He	522.432	1.5061	113526.15	0.0029	0.002787
Zn	66	3	He	526.909	1.519	115611.33	0.0029	0.002787
As	75	3	He	533.143	1.1352	83812.41	0.0021	0.0004097
As	75	3	He	529.675	1.1278	85012.63	0.0021	0.0004097
As	75	3	He	520.152	1.1076	84297.01	0.0021	0.0004097
Sr	88	3	He	53.383	0.5041	29488.30	0.0094	0.0008765
Sr	88	3	He	51.287	0.4843	29197.34	0.0094	0.0008765
Sr	88	3	He	50.211	0.4742	28806.54	0.0094	0.0008765
Mo	98	3	He	52.493	1.2095	70759.84	0.023	0.0002199
Mo	98	3	He	50.524	1.1642	70186.35	0.023	0.0002199
Mo	98	3	He	51.903	1.1959	72657.80	0.023	0.0002199
Ag	107	3	He	52.565	2.5399	148588.97	0.0483	0.0008224
Ag	107	3	He	51.642	2.4953	150436.81	0.0483	0.0008224
Ag	107	3	He	51.491	2.488	151154.17	0.0483	0.0008224
Cd	111	3	He	53.096	0.2833	16570.79	0.0053	2.193E-05
Cd	111	3	He	50.614	0.27	16278.48	0.0053	2.193E-05
Cd	111	3	He	50.406	0.2689	16336.58	0.0053	2.193E-05
Sn	120	3	He	51.881	0.7816	45727.89	0.0148	0.01345
Sn	120	3	He	52.093	0.7848	47312.53	0.0148	0.01345
Sn	120	3	He	51.018	0.7689	46710.91	0.0148	0.01345
Sb	121	3	He	54.338	0.7779	45507.77	0.0143	0.0004392
Sb	121	3	He	50.6	0.7244	43672.41	0.0143	0.0004392
Sb	121	3	He	50.869	0.7283	44243.71	0.0143	0.0004392
Ba	137	3	He	523.721	2.2844	133639.32	0.0044	0.0001096
Ba	137	3	He	508.09	2.2162	133608.89	0.0044	0.0001096
Ba	137	3	He	511.993	2.2332	135674.73	0.0044	0.0001096
Tl	205	3	He	51.226	1.065	255717.05	0.0208	0.0002491
Tl	205	3	He	51.617	1.0732	256516.05	0.0208	0.0002491
Tl	205	3	He	49.99	1.0393	255426.11	0.0208	0.0002491
Pb	208	3	He	51.3	1.397	175848.53	0.0272	0.0006218
Pb	208	3	He	51.112	1.3919	175839.51	0.0272	0.0006218
Pb	208	3	He	50.224	1.3677	177600.06	0.0272	0.0006218
U	238	3	He	51.694	1.4218	341381.36	0.0275	2.763E-05
U	238	3	He	50.723	1.3951	333470.89	0.0275	2.763E-05
U	238	3	He	50.301	1.3835	340009.57	0.0275	2.763E-05
Sc	45	1	No Gas			2278490.28		
Sc	45	1	No Gas			2260007.31		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2317343.09		
Ge	72	1	No Gas			1023988.97		
Ge	72	1	No Gas			1027797.09		
Ge	72	1	No Gas			1031319.44		
Sc	45	2	H2			136072.21		
Sc	45	2	H2			138329.65		
Sc	45	2	H2			135707.54		
Ge	72	2	H2			112361.34		
Ge	72	2	H2			112271.56		
Ge	72	2	H2			111151.94		
In	115	2	H2			294111.99		
In	115	2	H2			291036.99		
In	115	2	H2			285148.86		
Sc	45	3	He			44952.32		
Sc	45	3	He			45834.87		
Sc	45	3	He			45473.78		
Ge	72	3	He			73829.50		
Ge	72	3	He			75376.93		
Ge	72	3	He			76110.30		
In	115	3	He			58821.90		
In	115	3	He			60618.94		
In	115	3	He			61080.19		
Tb	159	3	He			240103.98		
Tb	159	3	He			239029.27		
Tb	159	3	He			245761.93		
Bi	209	3	He			164177.28		
Bi	209	3	He			163024.02		
Bi	209	3	He			164360.19		

Quantitation Report

Data File Name	067_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 9:43:23 AM
Sample Name	CCB 6148203
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

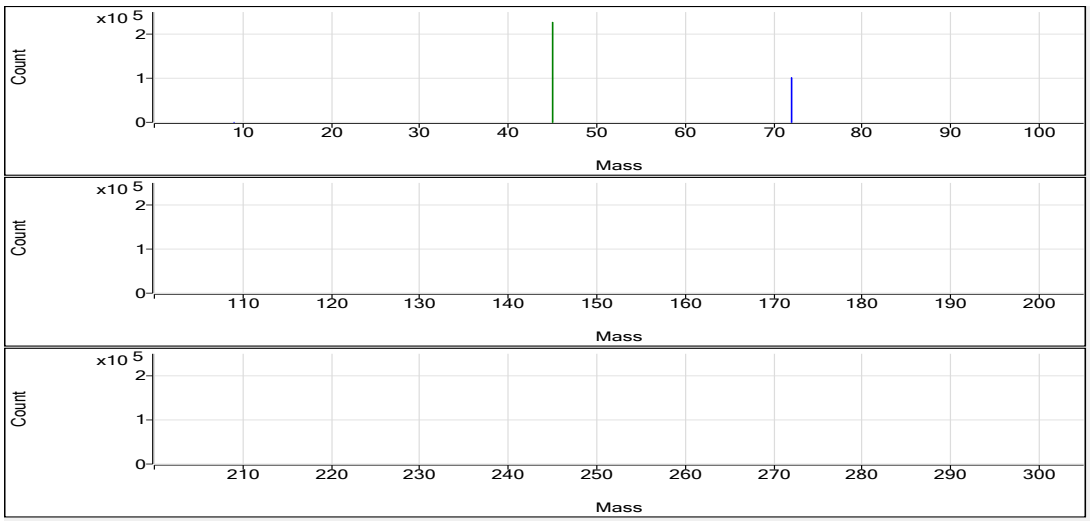
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.081	ppb	37.5	94.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.140	ppb	36.9	7.56	0.0001	Pulse	1.5000	3
Na	23	45	He	16.668	ppb	7.7	23340.14	0.5178	Pulse	0.1000	3
Mg	24	45	He	3.505	ppb	27.6	406.69	0.0090	Pulse	0.1000	3
Al	27	45	He	3.828	ppb	69.3	113.34	0.0025	Pulse	0.1000	3
K	39	45	He	2.928	ppb	2260.2	19478.82	0.4328	Pulse	0.1000	3
Ca	44	45	He	16.136	ppb	79.2	176.67	0.0039	Pulse	0.1000	3
Ti	47	45	He	5.484	ppb	23.7	120.01	0.0027	Pulse	0.1000	3
V	51	45	He	0.343	ppb	3.8	756.69	0.0168	Pulse	0.5000	3
Cr	52	45	He	0.381	ppb	29.9	1250.09	0.0277	Pulse	0.1000	3
Mn	55	45	He	0.261	ppb	6.8	316.68	0.0070	Pulse	0.1000	3
Fe	57	45	He	8.522	ppb	37.1	326.68	0.0073	Pulse	0.1000	3
Co	59	45	He	0.282	ppb	13.1	803.38	0.0178	Pulse	0.1000	3
Ni	60	115	He	0.384	ppb	41.4	896.72	0.0154	Pulse	0.1000	3
Cu	63	72	He	0.358	ppb	41.9	1826.83	0.0244	Pulse	0.1000	3
Zn	66	72	He	0.722	ppb	14.6	363.35	0.0049	Pulse	0.1000	3
As	75	72	He	0.470	ppb	24.2	105.33	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.113	ppb	26.8	113.34	0.0019	Pulse	0.1000	3
Mo	98	115	He	0.045	ppb	26.7	73.33	0.0013	Pulse	0.1000	3
Ag	107	115	He	0.016	ppb	101.5	93.33	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.052	ppb	26.6	17.33	0.0003	Pulse	0.5000	3
Sn	120	115	He	0.069	ppb	55.3	846.72	0.0145	Pulse	0.1000	3
Sb	121	115	He	0.041	ppb	103.7	60.00	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.366	ppb	19.8	100.00	0.0017	Pulse	0.1000	3
Tl	205	159	He	0.345	ppb	12.9	1750.16	0.0074	Pulse	0.1000	3
Pb	208	159	He	0.051	ppb	22.8	476.68	0.0020	Pulse	0.1000	3
U	238	159	He	0.049	ppb	20.7	323.35	0.0014	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2276714.76	0.4	99.2	Analog	0.1000	3
No Gas	Ge	72	1015757.49	0.7	97.8	Pulse	0.1000	3
H2	Sc	45	134397.47	1.0	96.7	Pulse	0.1000	3
H2	Ge	72	110810.82	0.7	93.9	Pulse	0.1000	3
H2	In	115	289495.17	1.4	98.3	Pulse	0.1000	3
He	Sc	45	45079.28	1.5	96.3	Pulse	0.1000	3
He	Ge	72	74700.35	0.9	97.7	Pulse	0.1000	3
He	In	115	58454.67	1.8	96.4	Pulse	0.1000	3
He	Tb	159	235668.86	0.6	97.7	Pulse	0.1000	3
He	Bi	209	161420.61	0.9	97.4	Pulse	0.1000	3

No Gas



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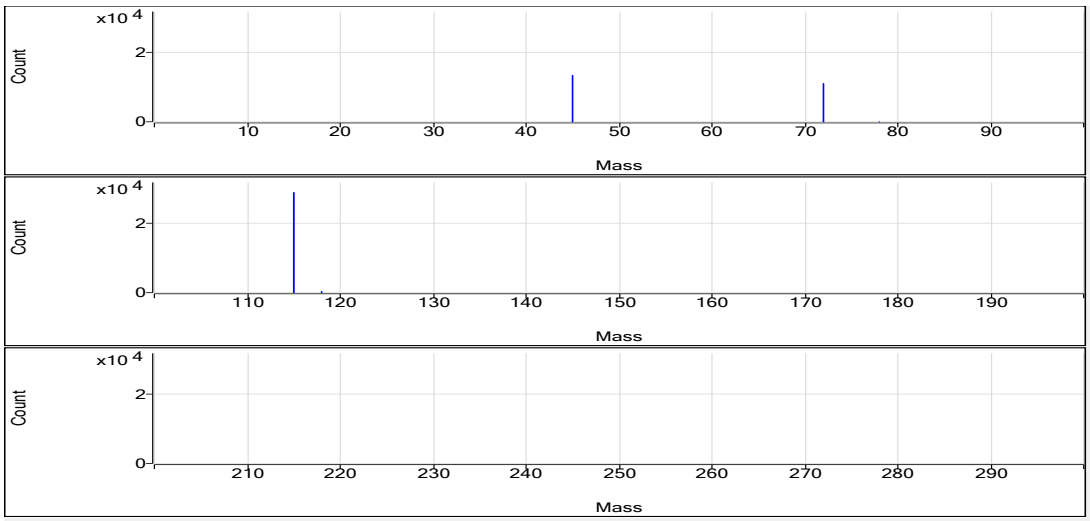
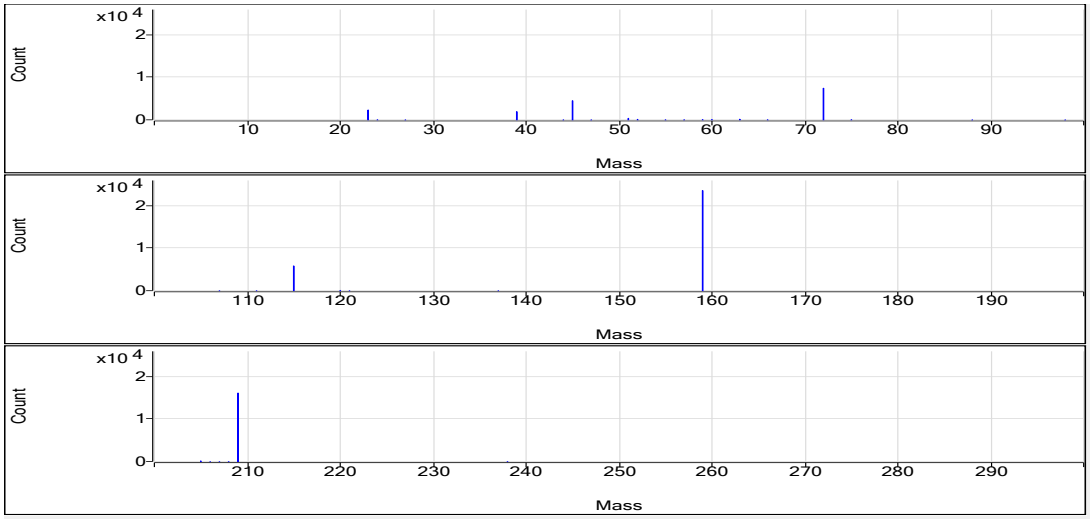


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.106	0.0001	118.00	0.0004	9.309E-06
Be	9	1	No Gas	0.047	0	64.00	0.0004	9.309E-06
Be	9	1	No Gas	0.09	0	102.00	0.0004	9.309E-06
Se	78	2	H2	0.177	0.0001	9.33	0.0004	5.598E-06
Se	78	2	H2	0.163	0.0001	8.67	0.0004	5.598E-06
Se	78	2	H2	0.081	0	4.67	0.0004	5.598E-06
Na	23	3	He	18.091	0.5222	23146.42	0.0031	0.4657
Na	23	3	He	16.341	0.5168	23427.03	0.0031	0.4657
Na	23	3	He	15.571	0.5144	23446.97	0.0031	0.4657
Mg	24	3	He	3.359	0.0088	390.02	0.0015	0.003704
Mg	24	3	He	4.537	0.0106	480.02	0.0015	0.003704
Mg	24	3	He	2.62	0.0077	350.02	0.0015	0.003704
Al	27	3	He	0.884	0.0011	50.00	0.0005	0.0007154
Al	27	3	He	6.025	0.0035	160.01	0.0005	0.0007154
Al	27	3	He	4.575	0.0029	130.01	0.0005	0.0007154
K	39	3	He	77.748	0.5141	22786.34	0.0011	0.4296
K	39	3	He	-21.025	0.4068	18440.63	0.0011	0.4296
K	39	3	He	-47.939	0.3775	17209.49	0.0011	0.4296
Ca	44	3	He	18.396	0.0041	180.01	0.0001	0.002924
Ca	44	3	He	27.633	0.0046	210.01	0.0001	0.002924
Ca	44	3	He	2.378	0.0031	140.00	0.0001	0.002924
Ti	47	3	He	4.192	0.002	90.00	0.0005	0
Ti	47	3	He	5.466	0.0026	120.01	0.0005	0
Ti	47	3	He	6.794	0.0033	150.01	0.0005	0
V	51	3	He	0.358	0.0171	758.02	0.021	0.009571
V	51	3	He	0.333	0.0166	752.02	0.021	0.009571
V	51	3	He	0.337	0.0167	760.02	0.021	0.009571
Cr	52	3	He	0.415	0.0287	1270.09	0.0267	0.01758
Cr	52	3	He	0.474	0.0302	1370.10	0.0267	0.01758
Cr	52	3	He	0.254	0.0244	1110.07	0.0267	0.01758
Mn	55	3	He	0.279	0.0072	320.02	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.244	0.0068	310.01	0.0108	0.004199
Mn	55	3	He	0.261	0.007	320.01	0.0108	0.004199
Fe	57	3	He	12.045	0.009	400.02	0.0005	0.002993
Fe	57	3	He	5.917	0.006	270.01	0.0005	0.002993
Fe	57	3	He	7.603	0.0068	310.01	0.0005	0.002993
Co	59	3	He	0.243	0.0158	700.03	0.0524	0.003063
Co	59	3	He	0.317	0.0196	890.06	0.0524	0.003063
Co	59	3	He	0.285	0.018	820.05	0.0524	0.003063
Ni	60	3	He	0.206	0.0134	800.04	0.0109	0.01116
Ni	60	3	He	0.435	0.0159	920.05	0.0109	0.01116
Ni	60	3	He	0.511	0.0167	970.06	0.0109	0.01116
Cu	63	3	He	0.532	0.0289	2170.21	0.0255	0.01531
Cu	63	3	He	0.269	0.0222	1660.13	0.0255	0.01531
Cu	63	3	He	0.275	0.0223	1650.14	0.0255	0.01531
Zn	66	3	He	0.742	0.0049	370.02	0.0029	0.002787
Zn	66	3	He	0.608	0.0045	340.01	0.0029	0.002787
Zn	66	3	He	0.817	0.0051	380.01	0.0029	0.002787
As	75	3	He	0.357	0.0012	88.00	0.0021	0.0004097
As	75	3	He	0.585	0.0017	124.00	0.0021	0.0004097
As	75	3	He	0.468	0.0014	104.00	0.0021	0.0004097
Sr	88	3	He	0.085	0.0017	100.00	0.0094	0.0008765
Sr	88	3	He	0.109	0.0019	110.00	0.0094	0.0008765
Sr	88	3	He	0.145	0.0022	130.01	0.0094	0.0008765
Mo	98	3	He	0.034	0.001	60.00	0.023	0.0002199
Mo	98	3	He	0.043	0.0012	70.00	0.023	0.0002199
Mo	98	3	He	0.058	0.0016	90.00	0.023	0.0002199
Ag	107	3	He	0.025	0.002	120.00	0.0483	0.0008224
Ag	107	3	He	0.026	0.0021	120.00	0.0483	0.0008224
Ag	107	3	He	-0.003	0.0007	40.00	0.0483	0.0008224
Cd	111	3	He	0.046	0.0003	16.00	0.0053	2.193E-05
Cd	111	3	He	0.041	0.0002	14.00	0.0053	2.193E-05
Cd	111	3	He	0.067	0.0004	22.00	0.0053	2.193E-05
Sn	120	3	He	0.099	0.0149	890.06	0.0148	0.01345
Sn	120	3	He	0.026	0.0138	800.05	0.0148	0.01345
Sn	120	3	He	0.083	0.0147	850.05	0.0148	0.01345
Sb	121	3	He	0.075	0.0015	90.00	0.0143	0.0004392
Sb	121	3	He	-0.007	0.0003	20.00	0.0143	0.0004392
Sb	121	3	He	0.054	0.0012	70.00	0.0143	0.0004392
Ba	137	3	He	0.436	0.002	120.00	0.0044	0.0001096
Ba	137	3	He	0.372	0.0017	100.01	0.0044	0.0001096
Ba	137	3	He	0.292	0.0014	80.00	0.0044	0.0001096
Tl	205	3	He	0.396	0.0085	1990.20	0.0208	0.0002491
Tl	205	3	He	0.328	0.0071	1660.15	0.0208	0.0002491
Tl	205	3	He	0.312	0.0067	1600.14	0.0208	0.0002491
Pb	208	3	He	0.065	0.0024	280.01	0.0272	0.0006218
Pb	208	3	He	0.043	0.0018	250.01	0.0272	0.0006218
Pb	208	3	He	0.047	0.0019	200.01	0.0272	0.0006218
U	238	3	He	0.059	0.0017	390.02	0.0275	2.763E-05
U	238	3	He	0.039	0.0011	260.01	0.0275	2.763E-05
U	238	3	He	0.048	0.0013	320.02	0.0275	2.763E-05
Sc	45	1	No Gas			2286589.50		
Sc	45	1	No Gas			2272894.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2270660.75		
Ge	72	1	No Gas			1022064.91		
Ge	72	1	No Gas			1008434.28		
Ge	72	1	No Gas			1016773.27		
Sc	45	2	H2			133097.51		
Sc	45	2	H2			135880.18		
Sc	45	2	H2			134214.71		
Ge	72	2	H2			110065.07		
Ge	72	2	H2			110730.50		
Ge	72	2	H2			111636.88		
In	115	2	H2			294059.16		
In	115	2	H2			287269.86		
In	115	2	H2			287156.50		
Sc	45	3	He			44320.71		
Sc	45	3	He			45332.97		
Sc	45	3	He			45584.17		
Ge	72	3	He			75196.32		
Ge	72	3	He			74944.87		
Ge	72	3	He			73959.85		
In	115	3	He			59645.29		
In	115	3	He			57807.97		
In	115	3	He			57928.52		
Tb	159	3	He			234701.89		
Tb	159	3	He			235003.75		
Tb	159	3	He			237300.95		
Bi	209	3	He			159808.37		
Bi	209	3	He			161669.53		
Bi	209	3	He			162783.92		

Quantitation Report

Data File Name	068SMPL.d
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Acq Time	7/17/2024 9:46:31 AM
Sample Name	MB 410-527423/1-A
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

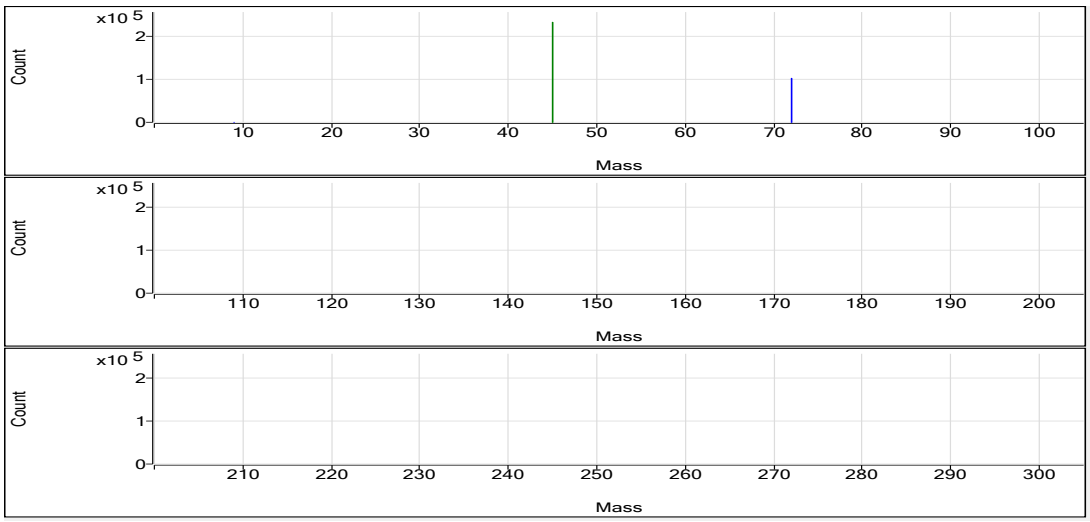
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.007	ppb	120.4	28.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.030	ppb	129.8	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	-16.270	ppb	N/A	19244.92	0.4148	Pulse	0.1000	3
Mg	24	45	He	-0.069	ppb	N/A	166.68	0.0036	Pulse	0.1000	3
Al	27	45	He	0.620	ppb	111.7	46.67	0.0010	Pulse	0.1000	3
K	39	45	He	-12.521	ppb	N/A	19328.71	0.4160	Pulse	0.1000	3
Ca	44	45	He	-8.877	ppb	N/A	110.00	0.0024	Pulse	0.1000	3
Ti	47	45	He	0.447	ppb	98.9	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.060	ppb	N/A	385.34	0.0083	Pulse	0.5000	3
Cr	52	45	He	0.002	ppb	3738.3	816.71	0.0176	Pulse	0.1000	3
Mn	55	45	He	-0.035	ppb	N/A	176.67	0.0038	Pulse	0.1000	3
Fe	57	45	He	4.369	ppb	47.6	240.01	0.0052	Pulse	0.1000	3
Co	59	45	He	0.009	ppb	252.7	163.34	0.0035	Pulse	0.1000	3
Ni	60	115	He	-0.035	ppb	N/A	653.37	0.0108	Pulse	0.1000	3
Cu	63	72	He	0.081	ppb	125.7	1310.09	0.0174	Pulse	0.1000	3
Zn	66	72	He	0.214	ppb	109.9	256.68	0.0034	Pulse	0.1000	3
As	75	72	He	0.119	ppb	100.9	50.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	-0.017	ppb	N/A	43.33	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.005	ppb	259.9	20.00	0.0003	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	36.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	229.2	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.117	ppb	N/A	710.04	0.0117	Pulse	0.1000	3
Sb	121	115	He	-0.004	ppb	N/A	23.33	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.088	ppb	112.9	30.00	0.0005	Pulse	0.1000	3
Tl	205	159	He	0.045	ppb	26.4	290.01	0.0012	Pulse	0.1000	3
Pb	208	159	He	0.002	ppb	468.3	163.33	0.0007	Pulse	0.1000	3
U	238	159	He	0.004	ppb	95.0	33.33	0.0001	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2336168.30	1.6	101.8	Analog	0.1000	3
No Gas	Ge	72	1029141.34	0.5	99.0	Pulse	0.1000	3
H2	Sc	45	140410.72	1.2	101.0	Pulse	0.1000	3
H2	Ge	72	116294.85	1.1	98.5	Pulse	0.1000	3
H2	In	115	299189.11	0.7	101.5	Pulse	0.1000	3
He	Sc	45	46416.50	2.5	99.1	Pulse	0.1000	3
He	Ge	72	75447.16	1.2	98.7	Pulse	0.1000	3
He	In	115	60643.57	0.5	100.0	Pulse	0.1000	3
He	Tb	159	245741.62	0.2	101.9	Pulse	0.1000	3
He	Bi	209	168503.68	0.5	101.7	Pulse	0.1000	3

No Gas



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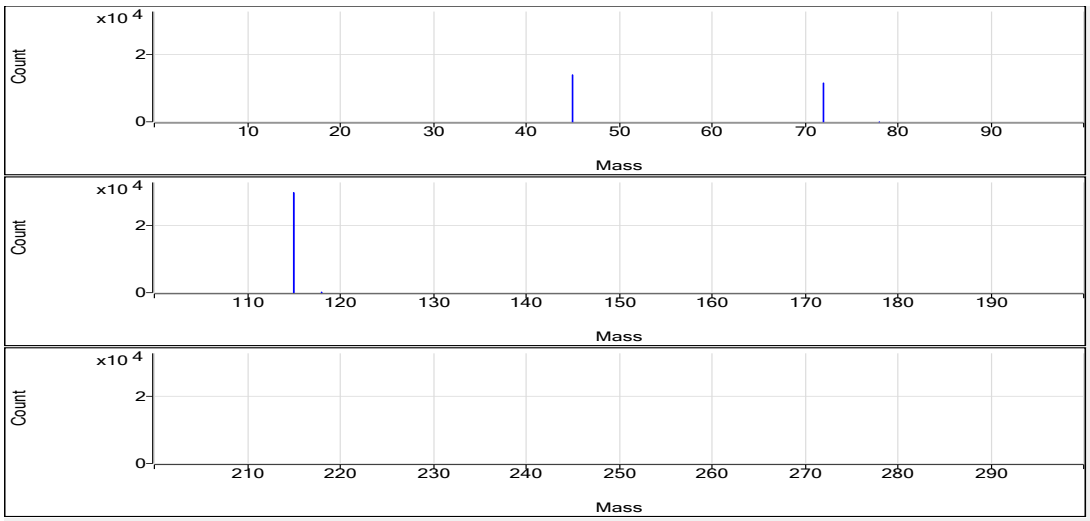
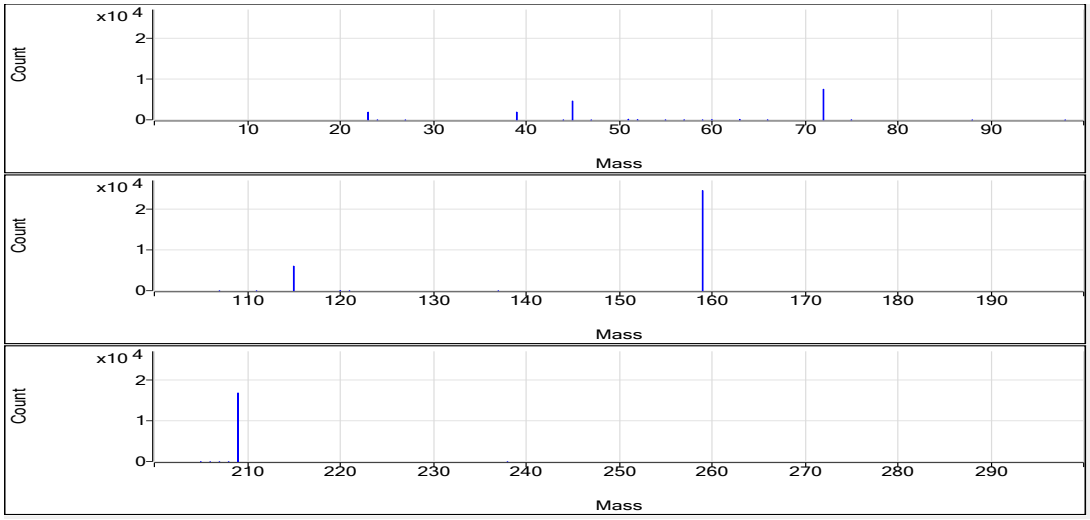


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	30.00	0.0004	9.309E-06
Be	9	1	No Gas	0.014	0	34.00	0.0004	9.309E-06
Be	9	1	No Gas	-0.002	0	20.00	0.0004	9.309E-06
Se	78	2	H2	0.039	0	2.67	0.0004	5.598E-06
Se	78	2	H2	-0.013	0	0.00	0.0004	5.598E-06
Se	78	2	H2	0.065	0	4.00	0.0004	5.598E-06
Na	23	3	He	-20.606	0.4012	19021.36	0.0031	0.4657
Na	23	3	He	-13.547	0.4233	19121.41	0.0031	0.4657
Na	23	3	He	-14.657	0.4198	19592.00	0.0031	0.4657
Mg	24	3	He	-0.356	0.0032	150.01	0.0015	0.003704
Mg	24	3	He	0.331	0.0042	190.01	0.0015	0.003704
Mg	24	3	He	-0.181	0.0034	160.01	0.0015	0.003704
Al	27	3	He	1.178	0.0013	60.00	0.0005	0.0007154
Al	27	3	He	0.838	0.0011	50.00	0.0005	0.0007154
Al	27	3	He	-0.155	0.0006	30.00	0.0005	0.0007154
K	39	3	He	44.984	0.4785	22686.24	0.0011	0.4296
K	39	3	He	-17.859	0.4102	18530.91	0.0011	0.4296
K	39	3	He	-64.687	0.3593	16768.97	0.0011	0.4296
Ca	44	3	He	-16.594	0.0019	90.00	0.0001	0.002924
Ca	44	3	He	-4.332	0.0027	120.00	0.0001	0.002924
Ca	44	3	He	-5.704	0.0026	120.01	0.0001	0.002924
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.457	0.0002	10.00	0.0005	0
Ti	47	3	He	0.885	0.0004	20.00	0.0005	0
V	51	3	He	-0.048	0.0086	406.01	0.021	0.009571
V	51	3	He	-0.04	0.0087	394.01	0.021	0.009571
V	51	3	He	-0.092	0.0076	356.01	0.021	0.009571
Cr	52	3	He	-0.05	0.0162	770.05	0.0267	0.01758
Cr	52	3	He	0.071	0.0195	880.05	0.0267	0.01758
Cr	52	3	He	-0.016	0.0171	800.04	0.0267	0.01758
Mn	55	3	He	-0.076	0.0034	160.00	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.021	0.0044	200.01	0.0108	0.004199
Mn	55	3	He	-0.051	0.0036	170.01	0.0108	0.004199
Fe	57	3	He	2.027	0.004	190.01	0.0005	0.002993
Fe	57	3	He	5.075	0.0055	250.01	0.0005	0.002993
Fe	57	3	He	6.005	0.006	280.01	0.0005	0.002993
Co	59	3	He	0.002	0.0032	150.01	0.0524	0.003063
Co	59	3	He	0.035	0.0049	220.01	0.0524	0.003063
Co	59	3	He	-0.009	0.0026	120.00	0.0524	0.003063
Ni	60	3	He	0.086	0.0121	730.05	0.0109	0.01116
Ni	60	3	He	0.138	0.0127	770.04	0.0109	0.01116
Ni	60	3	He	-0.33	0.0076	460.02	0.0109	0.01116
Cu	63	3	He	0.002	0.0153	1150.08	0.0255	0.01531
Cu	63	3	He	0.196	0.0203	1520.12	0.0255	0.01531
Cu	63	3	He	0.046	0.0165	1260.08	0.0255	0.01531
Zn	66	3	He	0.469	0.0041	310.01	0.0029	0.002787
Zn	66	3	He	0.006	0.0028	210.01	0.0029	0.002787
Zn	66	3	He	0.167	0.0033	250.01	0.0029	0.002787
As	75	3	He	0.008	0.0004	32.00	0.0021	0.0004097
As	75	3	He	0.247	0.0009	70.00	0.0021	0.0004097
As	75	3	He	0.102	0.0006	48.00	0.0021	0.0004097
Sr	88	3	He	-0.023	0.0007	40.00	0.0094	0.0008765
Sr	88	3	He	-0.006	0.0008	50.00	0.0094	0.0008765
Sr	88	3	He	-0.023	0.0007	40.00	0.0094	0.0008765
Mo	98	3	He	0.019	0.0007	40.00	0.023	0.0002199
Mo	98	3	He	-0.002	0.0002	10.00	0.023	0.0002199
Mo	98	3	He	-0.002	0.0002	10.00	0.023	0.0002199
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	-0.014	0.0002	10.00	0.0483	0.0008224
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Cd	111	3	He	0.014	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Sn	120	3	He	0.032	0.0139	840.05	0.0148	0.01345
Sn	120	3	He	-0.075	0.0123	750.05	0.0148	0.01345
Sn	120	3	He	-0.309	0.0089	540.03	0.0148	0.01345
Sb	121	3	He	0.004	0.0005	30.00	0.0143	0.0004392
Sb	121	3	He	0.004	0.0005	30.00	0.0143	0.0004392
Sb	121	3	He	-0.019	0.0002	10.00	0.0143	0.0004392
Ba	137	3	He	0.051	0.0003	20.00	0.0044	0.0001096
Ba	137	3	He	0.013	0.0002	10.00	0.0044	0.0001096
Ba	137	3	He	0.201	0.001	60.00	0.0044	0.0001096
Tl	205	3	He	0.053	0.0013	330.01	0.0208	0.0002491
Tl	205	3	He	0.051	0.0013	320.01	0.0208	0.0002491
Tl	205	3	He	0.031	0.0009	220.01	0.0208	0.0002491
Pb	208	3	He	-0.003	0.0005	60.00	0.0272	0.0006218
Pb	208	3	He	0.01	0.0009	90.00	0.0272	0.0006218
Pb	208	3	He	-0.002	0.0006	80.00	0.0272	0.0006218
U	238	3	He	0.003	0.0001	30.00	0.0275	2.763E-05
U	238	3	He	0	0	10.00	0.0275	2.763E-05
U	238	3	He	0.008	0.0002	60.00	0.0275	2.763E-05
Sc	45	1	No Gas			2331205.28		
Sc	45	1	No Gas			2300746.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2376552.78		
Ge	72	1	No Gas			1023385.45		
Ge	72	1	No Gas			1033615.53		
Ge	72	1	No Gas			1030423.03		
Sc	45	2	H2			142365.19		
Sc	45	2	H2			139810.78		
Sc	45	2	H2			139056.19		
Ge	72	2	H2			116852.52		
Ge	72	2	H2			117174.15		
Ge	72	2	H2			114857.88		
In	115	2	H2			298164.41		
In	115	2	H2			297748.88		
In	115	2	H2			301654.04		
Sc	45	3	He			47409.39		
Sc	45	3	He			45172.87		
Sc	45	3	He			46667.23		
Ge	72	3	He			74924.56		
Ge	72	3	He			74904.22		
Ge	72	3	He			76512.70		
In	115	3	He			60327.30		
In	115	3	He			60758.97		
In	115	3	He			60859.34		
Tb	159	3	He			245866.15		
Tb	159	3	He			246050.52		
Tb	159	3	He			245308.20		
Bi	209	3	He			167653.85		
Bi	209	3	He			168381.60		
Bi	209	3	He			169475.58		

Quantitation Report

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Sample Type	Sample
Comment	J2
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

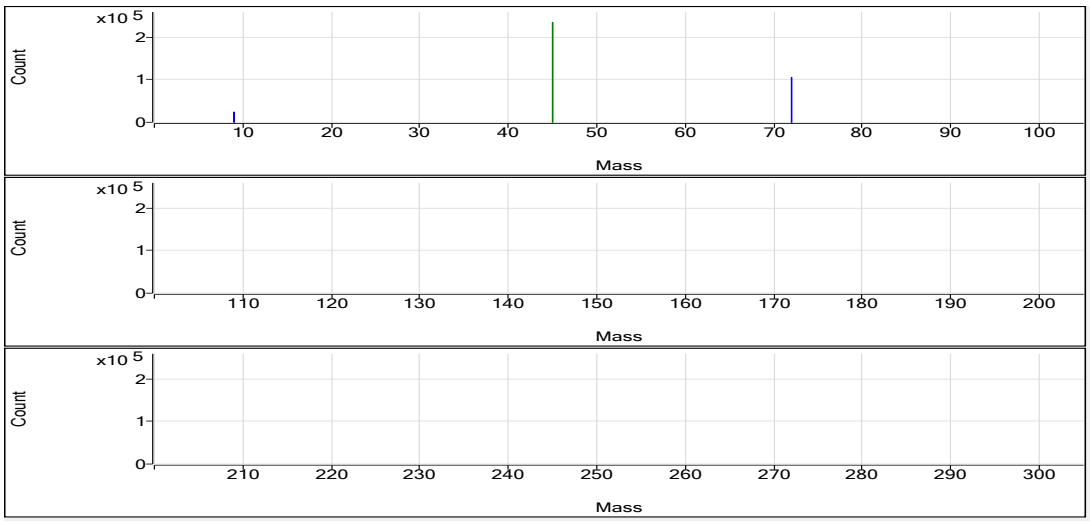
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	52.315	ppb	2.4	49005.25	0.0208	Pulse	0.5000	3
Se	78	72	H2	104.776	ppb	1.3	5631.22	0.0469	Pulse	1.5000	3
Na	23	45	He	4882.699	ppb	0.9	745832.05	15.7375	Pulse	0.1000	3
Mg	24	45	He	5119.305	ppb	0.5	368313.51	7.7716	Pulse	0.1000	3
Al	27	45	He	5015.102	ppb	1.5	111045.18	2.3431	Pulse	0.1000	3
K	39	45	He	5056.733	ppb	0.4	280805.73	5.9251	Pulse	0.1000	3
Ca	44	45	He	5081.667	ppb	3.0	15027.31	0.3171	Pulse	0.1000	3
Ti	47	45	He	508.876	ppb	3.3	11681.20	0.2465	Pulse	0.1000	3
V	51	45	He	510.039	ppb	0.4	509219.44	10.7448	Pulse	0.5000	3
Cr	52	45	He	510.961	ppb	0.4	646994.90	13.6520	Pulse	0.1000	3
Mn	55	45	He	510.619	ppb	0.8	262010.24	5.5286	Pulse	0.1000	3
Fe	57	45	He	5184.893	ppb	0.8	123213.98	2.5999	Pulse	0.1000	3
Co	59	45	He	495.400	ppb	0.7	1229250.74	25.9379	Pulse	0.1000	3
Ni	60	115	He	516.590	ppb	0.9	352293.24	5.6595	Pulse	0.1000	3
Cu	63	72	He	497.616	ppb	0.3	990298.58	12.6936	Pulse	0.1000	3
Zn	66	72	He	529.330	ppb	0.1	119049.56	1.5260	Pulse	0.1000	3
As	75	72	He	525.419	ppb	0.5	87282.59	1.1188	Pulse	0.5000	3
Sr	88	115	He	51.075	ppb	0.6	30022.20	0.4823	Pulse	0.1000	3
Mo	98	115	He	50.748	ppb	1.6	72791.67	1.1693	Pulse	0.1000	3
Ag	107	115	He	52.958	ppb	0.6	159286.80	2.5589	Pulse	0.1000	3
Cd	111	115	He	51.966	ppb	0.8	17256.20	0.2772	Pulse	0.5000	3
Sn	120	115	He	101.291	ppb	0.8	94199.37	1.5132	Pulse	0.1000	3
Sb	121	115	He	102.075	ppb	1.4	90932.81	1.4609	Pulse	0.1000	3
Ba	137	115	He	519.212	ppb	2.1	140963.79	2.2647	Pulse	0.1000	3
Tl	205	159	He	104.504	ppb	1.5	535963.69	2.1724	Pulse	0.1000	3
Pb	208	159	He	51.898	ppb	1.3	348674.29	1.4133	Pulse	0.1000	3
U	238	159	He	52.279	ppb	0.8	354761.58	1.4379	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2353688.67	1.2	102.6	Analog	0.1000	3
No Gas	Ge	72	1058682.12	0.8	101.9	Pulse	0.1000	3
H2	Sc	45	142410.27	1.1	102.4	Pulse	0.1000	3
H2	Ge	72	120146.72	1.4	101.8	Pulse	0.1000	3
H2	In	115	301445.23	1.0	102.3	Pulse	0.1000	3
He	Sc	45	47392.28	0.2	101.2	Pulse	0.1000	3
He	Ge	72	78015.90	0.3	102.0	Pulse	0.1000	3
He	In	115	62248.45	0.7	102.7	Pulse	0.1000	3
He	Tb	159	246732.75	1.0	102.3	Pulse	0.1000	3
He	Bi	209	170693.05	0.7	103.0	Pulse	0.1000	3

No Gas



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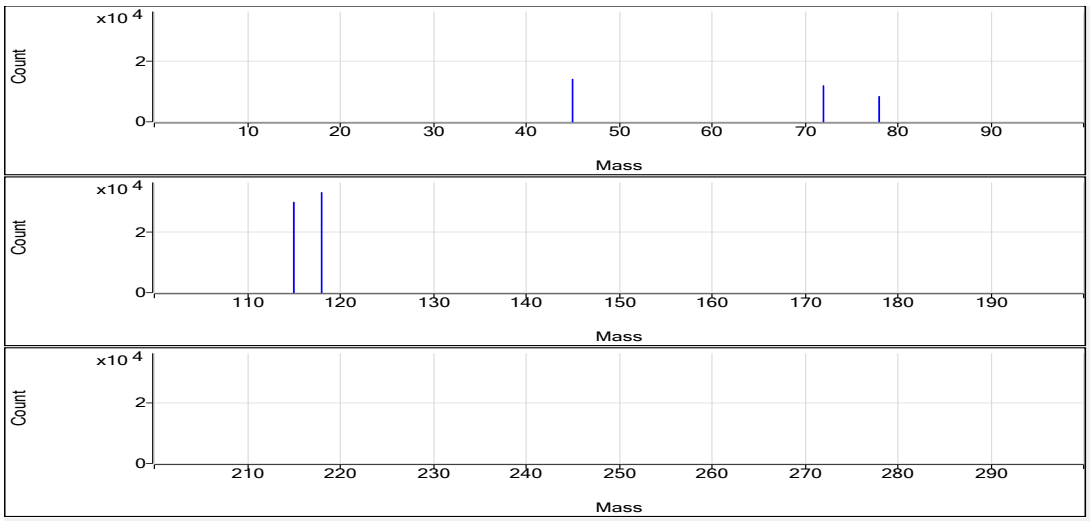
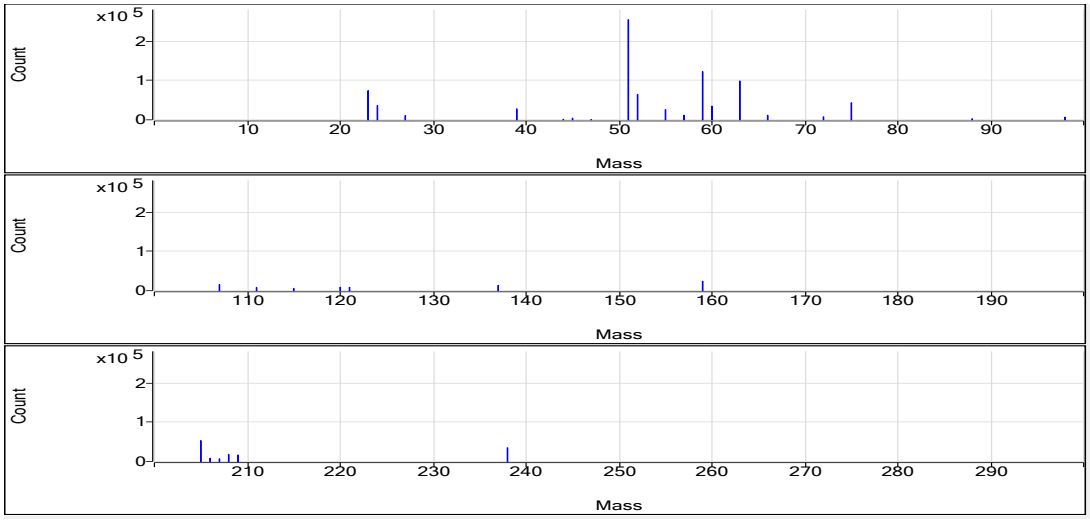


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.1	0.0203	48459.00	0.0004	9.309E-06
Be	9	1	No Gas	53.559	0.0213	49576.24	0.0004	9.309E-06
Be	9	1	No Gas	52.287	0.0208	48980.51	0.0004	9.309E-06
Se	78	2	H2	104.76	0.0469	5717.02	0.0004	5.598E-06
Se	78	2	H2	103.428	0.0463	5486.28	0.0004	5.598E-06
Se	78	2	H2	106.14	0.0475	5690.35	0.0004	5.598E-06
Na	23	3	He	4845.468	15.6211	741831.79	0.0031	0.4657
Na	23	3	He	4930.13	15.8859	752493.58	0.0031	0.4657
Na	23	3	He	4872.498	15.7056	743170.77	0.0031	0.4657
Mg	24	3	He	5111.16	7.7592	368479.96	0.0015	0.003704
Mg	24	3	He	5149.262	7.817	370284.02	0.0015	0.003704
Mg	24	3	He	5097.491	7.7385	366176.56	0.0015	0.003704
Al	27	3	He	4934.602	2.3055	109488.35	0.0005	0.0007154
Al	27	3	He	5081.843	2.3743	112468.35	0.0005	0.0007154
Al	27	3	He	5028.861	2.3496	111178.83	0.0005	0.0007154
K	39	3	He	5081.694	5.9522	282667.01	0.0011	0.4296
K	39	3	He	5044.218	5.9115	280020.89	0.0011	0.4296
K	39	3	He	5044.287	5.9116	279729.29	0.0011	0.4296
Ca	44	3	He	5006.397	0.3124	14837.15	0.0001	0.002924
Ca	44	3	He	5255.078	0.3278	15527.77	0.0001	0.002924
Ca	44	3	He	4983.525	0.311	14717.01	0.0001	0.002924
Ti	47	3	He	503.198	0.2437	11574.47	0.0005	0
Ti	47	3	He	528.028	0.2558	12114.82	0.0005	0
Ti	47	3	He	495.403	0.24	11354.31	0.0005	0
V	51	3	He	508.441	10.7112	508666.31	0.021	0.009571
V	51	3	He	509.222	10.7276	508154.66	0.021	0.009571
V	51	3	He	512.453	10.7956	510837.34	0.021	0.009571
Cr	52	3	He	508.59	13.5887	645316.47	0.0267	0.01758
Cr	52	3	He	512.27	13.6869	648331.67	0.0267	0.01758
Cr	52	3	He	512.023	13.6803	647336.55	0.0267	0.01758
Mn	55	3	He	508.102	5.5014	261255.13	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	508.163	5.502	260623.92	0.0108	0.004199
Mn	55	3	He	515.591	5.5824	264151.68	0.0108	0.004199
Fe	57	3	He	5149.247	2.582	122619.26	0.0005	0.002993
Fe	57	3	He	5174.688	2.5948	122911.87	0.0005	0.002993
Fe	57	3	He	5230.743	2.6229	124110.82	0.0005	0.002993
Co	59	3	He	495.017	25.9178	1230815.92	0.0524	0.003063
Co	59	3	He	492.386	25.7801	1221170.45	0.0524	0.003063
Co	59	3	He	498.798	26.1157	1235765.84	0.0524	0.003063
Ni	60	3	He	515.518	5.6478	348885.54	0.0109	0.01116
Ni	60	3	He	521.532	5.7135	356247.57	0.0109	0.01116
Ni	60	3	He	512.721	5.6172	351746.60	0.0109	0.01116
Cu	63	3	He	499.358	12.738	990737.88	0.0255	0.01531
Cu	63	3	He	496.177	12.657	990669.83	0.0255	0.01531
Cu	63	3	He	497.313	12.6859	989488.03	0.0255	0.01531
Zn	66	3	He	528.731	1.5242	118552.42	0.0029	0.002787
Zn	66	3	He	530.142	1.5283	119621.04	0.0029	0.002787
Zn	66	3	He	529.115	1.5253	118975.21	0.0029	0.002787
As	75	3	He	522.825	1.1133	86586.73	0.0021	0.0004097
As	75	3	He	524.906	1.1177	87481.88	0.0021	0.0004097
As	75	3	He	528.526	1.1254	87779.16	0.0021	0.0004097
Sr	88	3	He	51.29	0.4843	29918.65	0.0094	0.0008765
Sr	88	3	He	50.746	0.4792	29878.60	0.0094	0.0008765
Sr	88	3	He	51.19	0.4834	30269.34	0.0094	0.0008765
Mo	98	3	He	50.635	1.1667	72074.71	0.023	0.0002199
Mo	98	3	He	49.978	1.1516	71804.25	0.023	0.0002199
Mo	98	3	He	51.63	1.1897	74496.04	0.023	0.0002199
Ag	107	3	He	52.924	2.5572	157970.39	0.0483	0.0008224
Ag	107	3	He	52.684	2.5457	158726.02	0.0483	0.0008224
Ag	107	3	He	53.265	2.5737	161163.98	0.0483	0.0008224
Cd	111	3	He	52.428	0.2797	17277.55	0.0053	2.193E-05
Cd	111	3	He	51.75	0.2761	17213.51	0.0053	2.193E-05
Cd	111	3	He	51.72	0.2759	17277.55	0.0053	2.193E-05
Sn	120	3	He	100.897	1.5074	93118.82	0.0148	0.01345
Sn	120	3	He	100.794	1.5059	93894.73	0.0148	0.01345
Sn	120	3	He	102.181	1.5264	95584.55	0.0148	0.01345
Sb	121	3	He	103.654	1.4835	91640.10	0.0143	0.0004392
Sb	121	3	He	100.822	1.443	89970.51	0.0143	0.0004392
Sb	121	3	He	101.749	1.4562	91187.81	0.0143	0.0004392
Ba	137	3	He	530.656	2.3146	142982.94	0.0044	0.0001096
Ba	137	3	He	509.078	2.2205	138451.51	0.0044	0.0001096
Ba	137	3	He	517.902	2.259	141456.92	0.0044	0.0001096
Tl	205	3	He	103.114	2.1436	531621.71	0.0208	0.0002491
Tl	205	3	He	106.22	2.2081	538340.58	0.0208	0.0002491
Tl	205	3	He	104.178	2.1657	537928.78	0.0208	0.0002491
Pb	208	3	He	51.687	1.4075	184272.05	0.0272	0.0006218
Pb	208	3	He	52.667	1.4342	184736.17	0.0272	0.0006218
Pb	208	3	He	51.34	1.3981	183147.81	0.0272	0.0006218
U	238	3	He	51.859	1.4263	353745.70	0.0275	2.763E-05
U	238	3	He	52.667	1.4486	353162.49	0.0275	2.763E-05
U	238	3	He	52.311	1.4388	357376.56	0.0275	2.763E-05
Sc	45	1	No Gas			2382341.53		
Sc	45	1	No Gas			2325403.72		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2353320.75		
Ge	72	1	No Gas			1066436.86		
Ge	72	1	No Gas			1059468.19		
Ge	72	1	No Gas			1050141.31		
Sc	45	2	H2			144250.34		
Sc	45	2	H2			141445.29		
Sc	45	2	H2			141535.19		
Ge	72	2	H2			122001.11		
Ge	72	2	H2			118585.02		
Ge	72	2	H2			119854.04		
In	115	2	H2			302427.34		
In	115	2	H2			298012.24		
In	115	2	H2			303896.11		
Sc	45	3	He			47489.22		
Sc	45	3	He			47368.78		
Sc	45	3	He			47318.85		
Ge	72	3	He			77778.08		
Ge	72	3	He			78270.69		
Ge	72	3	He			77998.93		
In	115	3	He			62425.88		
In	115	3	He			63008.86		
In	115	3	He			63288.80		
Tb	159	3	He			248009.27		
Tb	159	3	He			243801.32		
Tb	159	3	He			248387.67		
Bi	209	3	He			170132.69		
Bi	209	3	He			169930.99		
Bi	209	3	He			172015.47		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

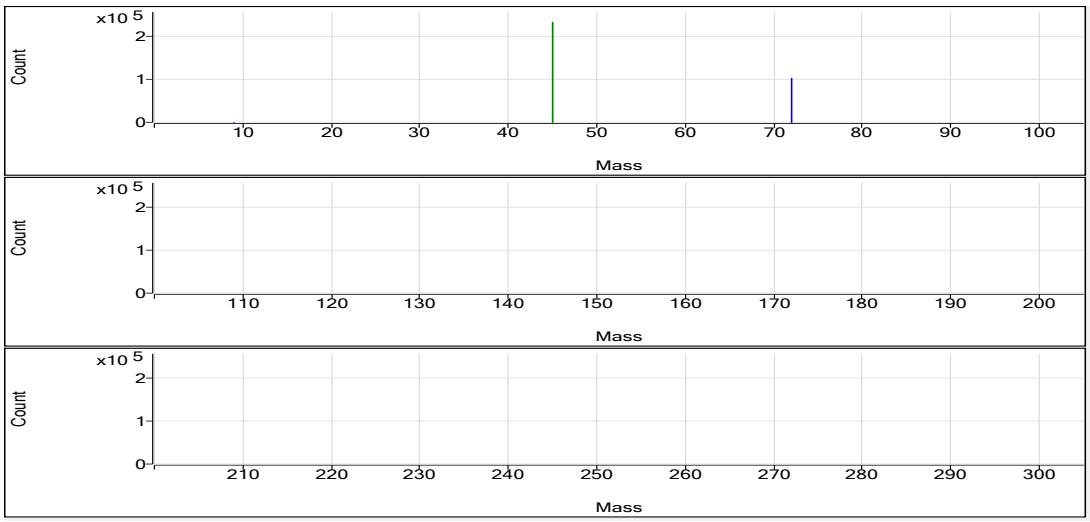
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.082	ppb	21.0	97.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.300	ppb	5.6	16.44	0.0001	Pulse	1.5000	3
Na	23	45	He	588534.121	ppb	1.6	84127645.41	1,841.2505	Analog	0.1000	3
Mg	24	45	He	122361.789	ppb	0.5	8483605.08	185.6720	Analog	0.1000	3
Al	27	45	He	10.335	ppb	18.5	253.35	0.0055	Pulse	0.1000	3
K	39	45	He	10555.072	ppb	0.4	543754.02	11.9005	Pulse	0.1000	3
Ca	44	45	He	138784.147	ppb	0.4	392160.22	8.5829	Pulse	0.1000	3
Ti	47	45	He	1.055	ppb	107.6	23.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.565	ppb	14.1	980.70	0.0215	Pulse	0.5000	3
Cr	52	45	He	0.504	ppb	47.1	1416.77	0.0310	Pulse	0.1000	3
Mn	55	45	He	1541.547	ppb	1.0	762229.34	16.6822	Pulse	0.1000	3
Fe	57	45	He	4444.662	ppb	0.5	101851.40	2.2291	Pulse	0.1000	3
Co	59	45	He	7.610	ppb	0.9	18344.09	0.4015	Pulse	0.1000	3
Ni	60	115	He	2.237	ppb	15.5	2120.21	0.0356	Pulse	0.1000	3
Cu	63	72	He	0.292	ppb	17.4	1706.82	0.0227	Pulse	0.1000	3
Zn	66	72	He	3.462	ppb	13.8	956.73	0.0127	Pulse	0.1000	3
As	75	72	He	17.464	ppb	3.5	2820.93	0.0376	Pulse	0.5000	3
Sr	88	115	He	2169.994	ppb	0.5	1216983.32	20.4548	Pulse	0.1000	3
Mo	98	115	He	4.018	ppb	3.2	5521.14	0.0928	Pulse	0.1000	3
Ag	107	115	He	0.017	ppb	84.8	96.67	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.038	ppb	34.3	13.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.061	ppb	N/A	746.71	0.0126	Pulse	0.1000	3
Sb	121	115	He	0.568	ppb	22.7	510.02	0.0086	Pulse	0.1000	3
Ba	137	115	He	67.878	ppb	0.2	17620.71	0.2962	Pulse	0.1000	3
Tl	205	159	He	0.377	ppb	9.5	1963.53	0.0081	Pulse	0.1000	3
Pb	208	159	He	0.046	ppb	23.7	453.35	0.0019	Pulse	0.1000	3
U	238	159	He	5.901	ppb	0.3	39415.08	0.1623	Pulse	0.1000	3

ISTD Table:

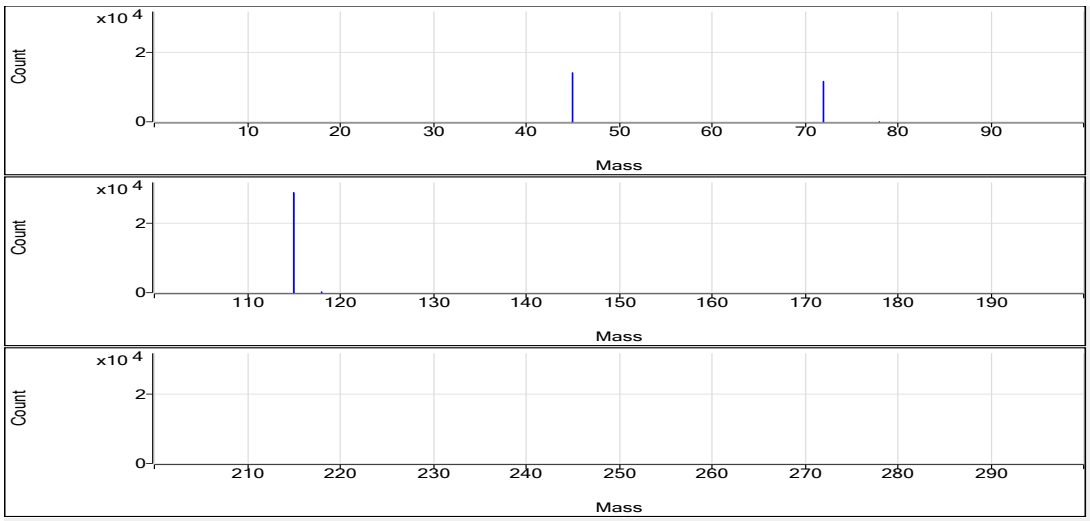
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2327983.66	1.0	101.5	Analog	0.1000	3
No Gas	Ge	72	1027826.08	0.4	98.9	Pulse	0.1000	3
H2	Sc	45	142251.91	0.8	102.3	Pulse	0.1000	3
H2	Ge	72	117718.47	0.9	99.7	Pulse	0.1000	3
H2	In	115	290449.71	0.7	98.6	Pulse	0.1000	3
He	Sc	45	45691.36	0.4	97.6	Pulse	0.1000	3
He	Ge	72	75059.01	0.4	98.2	Pulse	0.1000	3
He	In	115	59496.00	0.3	98.1	Pulse	0.1000	3
He	Tb	159	242790.28	0.3	100.7	Pulse	0.1000	3
He	Bi	209	160912.95	1.4	97.1	Pulse	0.1000	3

No Gas

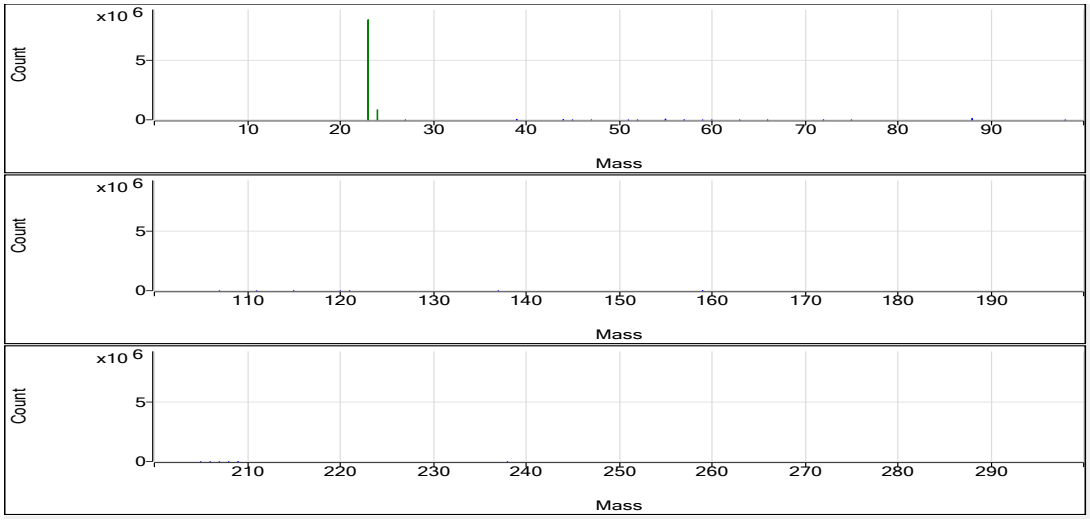


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.064	0	82.00	0.0004	9.309E-06
Be	9	1	No Gas	0.099	0	112.00	0.0004	9.309E-06
Be	9	1	No Gas	0.082	0	98.00	0.0004	9.309E-06
Se	78	2	H2	0.281	0.0001	15.33	0.0004	5.598E-06
Se	78	2	H2	0.314	0.0001	17.33	0.0004	5.598E-06
Se	78	2	H2	0.304	0.0001	16.67	0.0004	5.598E-06
Na	23	3	He	578493.6	1809.8463	82972168.76	0.0031	0.4657
Na	23	3	He	596537.3	1866.2824	85372808.73	0.0031	0.4657
Na	23	3	He	590571.464	1847.6228	84037958.75	0.0031	0.4657
Mg	24	3	He	121888.165	184.9534	8479162.37	0.0015	0.003704
Mg	24	3	He	122998.622	186.6383	8537742.37	0.0015	0.003704
Mg	24	3	He	122198.58	185.4244	8433910.50	0.0015	0.003704
Al	27	3	He	12.479	0.0065	300.01	0.0005	0.0007154
Al	27	3	He	9.702	0.0052	240.02	0.0005	0.0007154
Al	27	3	He	8.824	0.0048	220.01	0.0005	0.0007154
K	39	3	He	10554.68	11.9001	545557.69	0.0011	0.4296
K	39	3	He	10593.909	11.9427	546317.65	0.0011	0.4296
K	39	3	He	10516.627	11.8587	539386.71	0.0011	0.4296
Ca	44	3	He	138308.854	8.5535	392134.80	0.0001	0.002924
Ca	44	3	He	138669.586	8.5758	392299.45	0.0001	0.002924
Ca	44	3	He	139374	8.6194	392046.40	0.0001	0.002924
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	2.257	0.0011	50.00	0.0005	0
Ti	47	3	He	0.908	0.0004	20.00	0.0005	0
V	51	3	He	0.646	0.0232	1062.04	0.021	0.009571
V	51	3	He	0.486	0.0198	906.03	0.021	0.009571
V	51	3	He	0.563	0.0214	974.04	0.021	0.009571
Cr	52	3	He	0.502	0.031	1420.11	0.0267	0.01758
Cr	52	3	He	0.267	0.0247	1130.07	0.0267	0.01758
Cr	52	3	He	0.742	0.0374	1700.14	0.0267	0.01758
Mn	55	3	He	1527.865	16.5342	758007.10	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1557.085	16.8503	770814.68	0.0108	0.004199
Mn	55	3	He	1539.691	16.6621	757866.24	0.0108	0.004199
Fe	57	3	He	4437.436	2.2255	102028.97	0.0005	0.002993
Fe	57	3	He	4424.776	2.2192	101516.32	0.0005	0.002993
Fe	57	3	He	4471.772	2.2427	102008.90	0.0005	0.002993
Co	59	3	He	7.558	0.3988	18280.68	0.0524	0.003063
Co	59	3	He	7.692	0.4058	18561.02	0.0524	0.003063
Co	59	3	He	7.581	0.3999	18190.58	0.0524	0.003063
Ni	60	3	He	2.132	0.0345	2050.20	0.0109	0.01116
Ni	60	3	He	1.955	0.0325	1930.19	0.0109	0.01116
Ni	60	3	He	2.625	0.0399	2380.24	0.0109	0.01116
Cu	63	3	He	0.344	0.0241	1800.16	0.0255	0.01531
Cu	63	3	He	0.289	0.0227	1700.15	0.0255	0.01531
Cu	63	3	He	0.243	0.0215	1620.14	0.0255	0.01531
Zn	66	3	He	4.004	0.0143	1070.07	0.0029	0.002787
Zn	66	3	He	3.11	0.0117	880.05	0.0029	0.002787
Zn	66	3	He	3.272	0.0122	920.06	0.0029	0.002787
As	75	3	He	17.022	0.0366	2740.25	0.0021	0.0004097
As	75	3	He	18.152	0.039	2928.28	0.0021	0.0004097
As	75	3	He	17.219	0.0371	2794.26	0.0021	0.0004097
Sr	88	3	He	2157.281	20.335	1209298.81	0.0094	0.0008765
Sr	88	3	He	2174.444	20.4968	1215632.17	0.0094	0.0008765
Sr	88	3	He	2178.257	20.5327	1226018.97	0.0094	0.0008765
Mo	98	3	He	4.071	0.094	5591.15	0.023	0.0002199
Mo	98	3	He	3.87	0.0894	5301.06	0.023	0.0002199
Mo	98	3	He	4.113	0.095	5671.21	0.023	0.0002199
Ag	107	3	He	0.032	0.0024	140.00	0.0483	0.0008224
Ag	107	3	He	0.014	0.0015	90.00	0.0483	0.0008224
Ag	107	3	He	0.004	0.001	60.00	0.0483	0.0008224
Cd	111	3	He	0.027	0.0002	10.00	0.0053	2.193E-05
Cd	111	3	He	0.034	0.0002	12.00	0.0053	2.193E-05
Cd	111	3	He	0.052	0.0003	18.00	0.0053	2.193E-05
Sn	120	3	He	0.102	0.015	890.06	0.0148	0.01345
Sn	120	3	He	-0.123	0.0116	690.04	0.0148	0.01345
Sn	120	3	He	-0.162	0.0111	660.04	0.0148	0.01345
Sb	121	3	He	0.451	0.0069	410.02	0.0143	0.0004392
Sb	121	3	He	0.547	0.0083	490.02	0.0143	0.0004392
Sb	121	3	He	0.707	0.0106	630.03	0.0143	0.0004392
Ba	137	3	He	67.716	0.2955	17570.52	0.0044	0.0001096
Ba	137	3	He	67.938	0.2964	17580.74	0.0044	0.0001096
Ba	137	3	He	67.98	0.2966	17710.88	0.0044	0.0001096
Tl	205	3	He	0.364	0.0078	1890.20	0.0208	0.0002491
Tl	205	3	He	0.418	0.0089	2170.23	0.0208	0.0002491
Tl	205	3	He	0.35	0.0075	1830.17	0.0208	0.0002491
Pb	208	3	He	0.056	0.0021	260.02	0.0272	0.0006218
Pb	208	3	He	0.047	0.0019	250.01	0.0272	0.0006218
Pb	208	3	He	0.034	0.0016	180.01	0.0272	0.0006218
U	238	3	He	5.882	0.1618	39144.09	0.0275	2.763E-05
U	238	3	He	5.906	0.1625	39475.61	0.0275	2.763E-05
U	238	3	He	5.917	0.1628	39625.53	0.0275	2.763E-05
Sc	45	1	No Gas			2350368.56		
Sc	45	1	No Gas			2306022.31		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2327560.12		
Ge	72	1	No Gas			1031608.73		
Ge	72	1	No Gas			1027635.14		
Ge	72	1	No Gas			1024234.36		
Sc	45	2	H2			142806.16		
Sc	45	2	H2			140960.22		
Sc	45	2	H2			142989.34		
Ge	72	2	H2			116680.60		
Ge	72	2	H2			118796.96		
Ge	72	2	H2			117677.84		
In	115	2	H2			292529.86		
In	115	2	H2			290628.12		
In	115	2	H2			288191.15		
Sc	45	3	He			45844.87		
Sc	45	3	He			45744.85		
Sc	45	3	He			45484.37		
Ge	72	3	He			74784.43		
Ge	72	3	He			74995.28		
Ge	72	3	He			75397.33		
In	115	3	He			59475.14		
In	115	3	He			59313.36		
In	115	3	He			59715.19		
Tb	159	3	He			241922.26		
Tb	159	3	He			242979.80		
Tb	159	3	He			243468.79		
Bi	209	3	He			159019.83		
Bi	209	3	He			160394.40		
Bi	209	3	He			163324.62		

Quantitation Report

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Acq Time	7/17/2024 9:52:31 AM
Sample Name	410-179192-O-5-A PDS
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

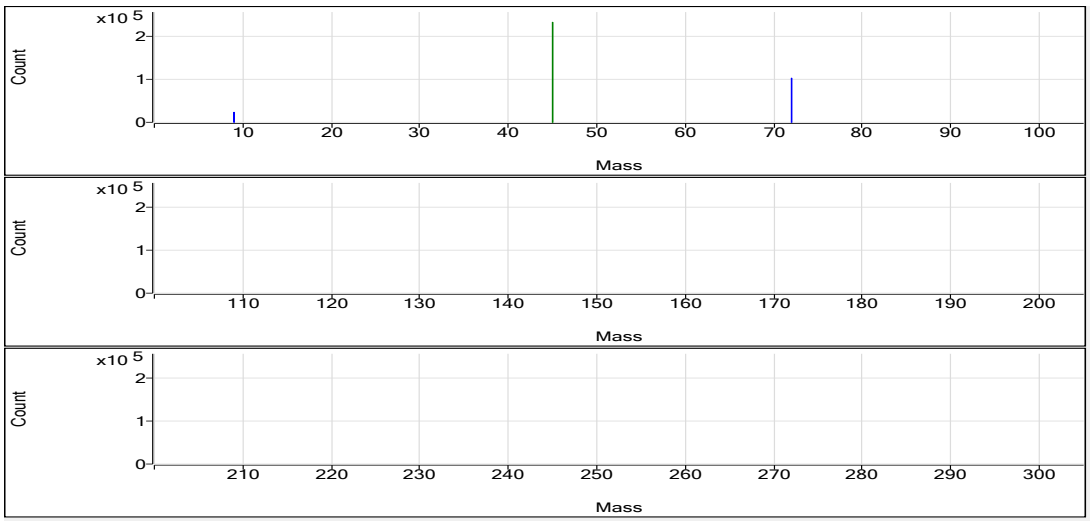
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.070	ppb	1.5	47088.51	0.0203	Pulse	0.5000	3
Se	78	72	H2	104.164	ppb	1.6	5469.16	0.0466	Pulse	1.5000	3
Na	23	45	He	576221.388	ppb	2.2	83199468.76	1,802.7394	Analog	0.1000	3
Mg	24	45	He	124029.815	ppb	1.8	8686067.58	188.2030	Analog	0.1000	3
Al	27	45	He	4829.260	ppb	1.2	104145.12	2.2563	Pulse	0.1000	3
K	39	45	He	15138.698	ppb	2.1	779163.40	16.8818	Pulse	0.1000	3
Ca	44	45	He	138677.965	ppb	2.2	395846.78	8.5763	Pulse	0.1000	3
Ti	47	45	He	517.860	ppb	2.2	11577.73	0.2508	Pulse	0.1000	3
V	51	45	He	499.504	ppb	1.8	485682.68	10.5231	Pulse	0.5000	3
Cr	52	45	He	489.520	ppb	2.7	603639.71	13.0799	Pulse	0.1000	3
Mn	55	45	He	1966.270	ppb	1.1	982083.03	21.2773	Pulse	0.1000	3
Fe	57	45	He	9226.582	ppb	1.3	213433.84	4.6242	Pulse	0.1000	3
Co	59	45	He	479.266	ppb	1.6	1158181.44	25.0932	Pulse	0.1000	3
Ni	60	115	He	498.363	ppb	2.1	323474.70	5.4602	Pulse	0.1000	3
Cu	63	72	He	475.509	ppb	0.8	912533.76	12.1304	Pulse	0.1000	3
Zn	66	72	He	502.355	ppb	1.6	108945.43	1.4483	Pulse	0.1000	3
As	75	72	He	535.869	ppb	0.4	85840.31	1.1410	Pulse	0.5000	3
Sr	88	115	He	2165.502	ppb	1.5	1209399.75	20.4125	Pulse	0.1000	3
Mo	98	115	He	55.373	ppb	2.0	75598.04	1.2759	Pulse	0.1000	3
Ag	107	115	He	31.199	ppb	3.5	89320.69	1.5078	Pulse	0.1000	3
Cd	111	115	He	50.086	ppb	2.0	15829.39	0.2672	Pulse	0.5000	3
Sn	120	115	He	99.894	ppb	2.1	88427.75	1.4926	Pulse	0.1000	3
Sb	121	115	He	100.726	ppb	1.2	85411.77	1.4416	Pulse	0.1000	3
Ba	137	115	He	574.982	ppb	1.6	148584.19	2.5079	Pulse	0.1000	3
Tl	205	159	He	98.320	ppb	0.5	499134.24	2.0439	Pulse	0.1000	3
Pb	208	159	He	48.585	ppb	1.0	323101.71	1.3231	Pulse	0.1000	3
U	238	159	He	56.705	ppb	1.3	380848.25	1.5596	Pulse	0.1000	3

ISTD Table:

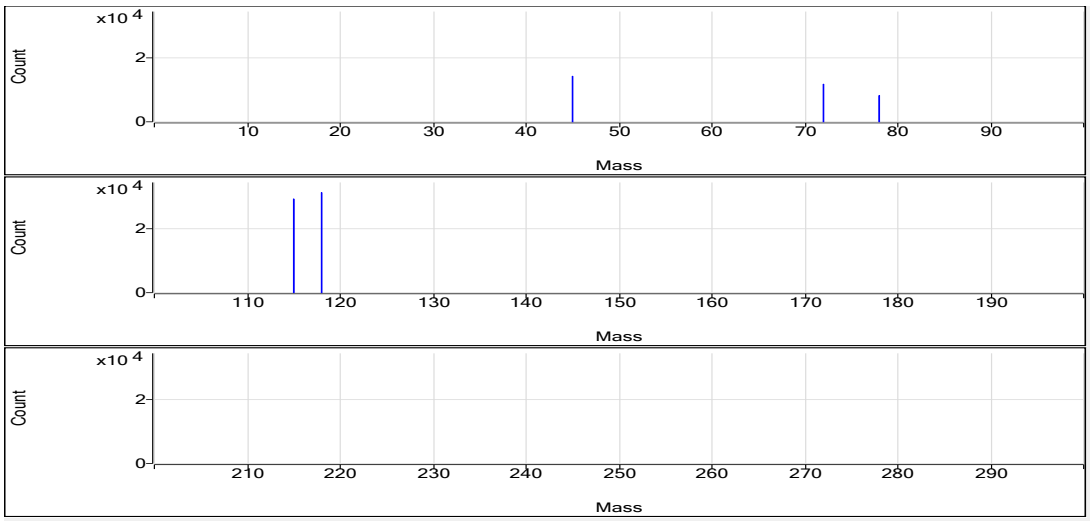
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2316607.15	1.3	101.0	Analog	0.1000	3
No Gas	Ge	72	1025042.49	1.5	98.7	Pulse	0.1000	3
H2	Sc	45	141963.79	1.0	102.1	Pulse	0.1000	3
H2	Ge	72	117386.34	0.6	99.4	Pulse	0.1000	3
H2	In	115	291344.94	0.6	98.9	Pulse	0.1000	3
He	Sc	45	46162.43	1.8	98.6	Pulse	0.1000	3
He	Ge	72	75232.67	1.6	98.4	Pulse	0.1000	3
He	In	115	59256.71	1.7	97.7	Pulse	0.1000	3
He	Tb	159	244215.21	1.2	101.3	Pulse	0.1000	3
He	Bi	209	160189.08	0.9	96.7	Pulse	0.1000	3

No Gas

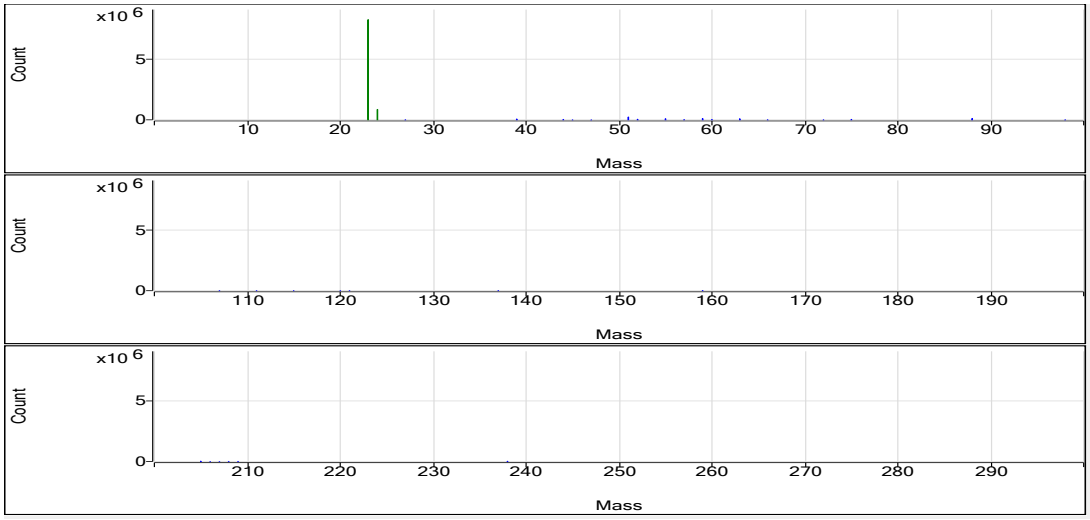


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.19	0.02	46948.82	0.0004	9.309E-06
Be	9	1	No Gas	51.458	0.0205	46906.67	0.0004	9.309E-06
Be	9	1	No Gas	51.562	0.0205	47410.05	0.0004	9.309E-06
Se	78	2	H2	103.688	0.0464	5436.93	0.0004	5.598E-06
Se	78	2	H2	102.757	0.046	5428.92	0.0004	5.598E-06
Se	78	2	H2	106.047	0.0474	5541.63	0.0004	5.598E-06
Na	23	3	He	580473.423	1816.0387	82691723.77	0.0031	0.4657
Na	23	3	He	562001.119	1758.262	82776303.77	0.0031	0.4657
Na	23	3	He	586189.622	1833.9175	84130378.75	0.0031	0.4657
Mg	24	3	He	125765.012	190.836	8689548.00	0.0015	0.003704
Mg	24	3	He	121496.977	184.3598	8679378.00	0.0015	0.003704
Mg	24	3	He	124827.455	189.4133	8689276.75	0.0015	0.003704
Al	27	3	He	4847.476	2.2648	103127.81	0.0005	0.0007154
Al	27	3	He	4765.349	2.2265	104819.65	0.0005	0.0007154
Al	27	3	He	4874.954	2.2777	104487.91	0.0005	0.0007154
K	39	3	He	15145.905	16.8897	769055.85	0.0011	0.4296
K	39	3	He	14813.309	16.5282	778122.88	0.0011	0.4296
K	39	3	He	15456.881	17.2276	790311.47	0.0011	0.4296
Ca	44	3	He	137873.482	8.5266	388251.21	0.0001	0.002924
Ca	44	3	He	136126.745	8.4186	396335.46	0.0001	0.002924
Ca	44	3	He	142033.668	8.7838	402953.67	0.0001	0.002924
Ti	47	3	He	512.549	0.2483	11304.20	0.0005	0
Ti	47	3	He	510.218	0.2471	11634.44	0.0005	0
Ti	47	3	He	530.812	0.2571	11794.56	0.0005	0
V	51	3	He	501.672	10.5687	481237.44	0.021	0.009571
V	51	3	He	489.614	10.3149	485611.06	0.021	0.009571
V	51	3	He	507.226	10.6856	490199.53	0.021	0.009571
Cr	52	3	He	491.646	13.1366	598162.57	0.0267	0.01758
Cr	52	3	He	475.371	12.7023	598003.98	0.0267	0.01758
Cr	52	3	He	501.544	13.4007	614752.57	0.0267	0.01758
Mn	55	3	He	1978.339	21.4079	974788.11	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1940.216	20.9954	988431.86	0.0108	0.004199
Mn	55	3	He	1980.254	21.4286	983029.13	0.0108	0.004199
Fe	57	3	He	9299.275	4.6606	212217.54	0.0005	0.002993
Fe	57	3	He	9091.605	4.5566	214518.43	0.0005	0.002993
Fe	57	3	He	9288.865	4.6554	213565.56	0.0005	0.002993
Co	59	3	He	480.884	25.1779	1146453.19	0.0524	0.003063
Co	59	3	He	471.08	24.6647	1161176.00	0.0524	0.003063
Co	59	3	He	485.833	25.437	1166915.14	0.0524	0.003063
Ni	60	3	He	501.012	5.4892	323336.40	0.0109	0.01116
Ni	60	3	He	486.79	5.3337	322249.55	0.0109	0.01116
Ni	60	3	He	507.287	5.5578	324838.16	0.0109	0.01116
Cu	63	3	He	479.507	12.2322	903343.66	0.0255	0.01531
Cu	63	3	He	471.835	12.0368	912612.17	0.0255	0.01531
Cu	63	3	He	475.185	12.1221	921645.46	0.0255	0.01531
Zn	66	3	He	511.178	1.4737	108833.98	0.0029	0.002787
Zn	66	3	He	495.115	1.4275	108231.62	0.0029	0.002787
Zn	66	3	He	500.771	1.4438	109770.68	0.0029	0.002787
As	75	3	He	536.735	1.1429	84399.52	0.0021	0.0004097
As	75	3	He	537.277	1.144	86737.63	0.0021	0.0004097
As	75	3	He	533.596	1.1362	86383.80	0.0021	0.0004097
Sr	88	3	He	2156.999	20.3323	1197665.61	0.0094	0.0008765
Sr	88	3	He	2139.07	20.1633	1218229.83	0.0094	0.0008765
Sr	88	3	He	2200.436	20.7418	1212303.81	0.0094	0.0008765
Mo	98	3	He	54.354	1.2524	73772.38	0.023	0.0002199
Mo	98	3	He	55.179	1.2714	76817.42	0.023	0.0002199
Mo	98	3	He	56.585	1.3038	76204.31	0.023	0.0002199
Ag	107	3	He	32.203	1.5563	91675.44	0.0483	0.0008224
Ag	107	3	He	30.043	1.452	87726.57	0.0483	0.0008224
Ag	107	3	He	31.351	1.5152	88560.07	0.0483	0.0008224
Cd	111	3	He	50.561	0.2697	15888.13	0.0053	2.193E-05
Cd	111	3	He	48.946	0.2611	15775.99	0.0053	2.193E-05
Cd	111	3	He	50.751	0.2707	15824.06	0.0053	2.193E-05
Sn	120	3	He	99.029	1.4797	87163.93	0.0148	0.01345
Sn	120	3	He	98.38	1.4701	88823.50	0.0148	0.01345
Sn	120	3	He	102.273	1.5278	89295.82	0.0148	0.01345
Sb	121	3	He	101.115	1.4471	85243.49	0.0143	0.0004392
Sb	121	3	He	99.396	1.4226	85948.11	0.0143	0.0004392
Sb	121	3	He	101.667	1.455	85043.71	0.0143	0.0004392
Ba	137	3	He	576.736	2.5156	148179.69	0.0044	0.0001096
Ba	137	3	He	564.744	2.4633	148827.24	0.0044	0.0001096
Ba	137	3	He	583.465	2.5449	148745.63	0.0044	0.0001096
Tl	205	3	He	98.831	2.0545	495139.76	0.0208	0.0002491
Tl	205	3	He	98.168	2.0407	499376.28	0.0208	0.0002491
Tl	205	3	He	97.961	2.0364	502886.67	0.0208	0.0002491
Pb	208	3	He	49.164	1.3389	170902.83	0.0272	0.0006218
Pb	208	3	He	48.208	1.3129	169362.09	0.0272	0.0006218
Pb	208	3	He	48.383	1.3176	172286.70	0.0272	0.0006218
U	238	3	He	57.533	1.5824	381357.77	0.0275	2.763E-05
U	238	3	He	56.194	1.5456	378210.23	0.0275	2.763E-05
U	238	3	He	56.386	1.5509	382976.75	0.0275	2.763E-05
Sc	45	1	No Gas			2349932.15		
Sc	45	1	No Gas			2289990.75		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2309898.56		
Ge	72	1	No Gas			1042728.19		
Ge	72	1	No Gas			1017759.91		
Ge	72	1	No Gas			1014639.36		
Sc	45	2	H2			140336.30		
Sc	45	2	H2			143020.24		
Sc	45	2	H2			142534.83		
Ge	72	2	H2			117224.35		
Ge	72	2	H2			118111.43		
Ge	72	2	H2			116823.25		
In	115	2	H2			291201.44		
In	115	2	H2			293183.71		
In	115	2	H2			289649.66		
Sc	45	3	He			45534.12		
Sc	45	3	He			47078.48		
Sc	45	3	He			45874.68		
Ge	72	3	He			73849.36		
Ge	72	3	He			75818.66		
Ge	72	3	He			76029.99		
In	115	3	He			59514.67		
In	115	3	He			61039.85		
In	115	3	He			59072.58		
Tb	159	3	He			240999.31		
Tb	159	3	He			244703.30		
Tb	159	3	He			246943.02		
Bi	209	3	He			159454.23		
Bi	209	3	He			161859.53		
Bi	209	3	He			159253.48		

Quantitation Report

Data File Name	072SMPL.d
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Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

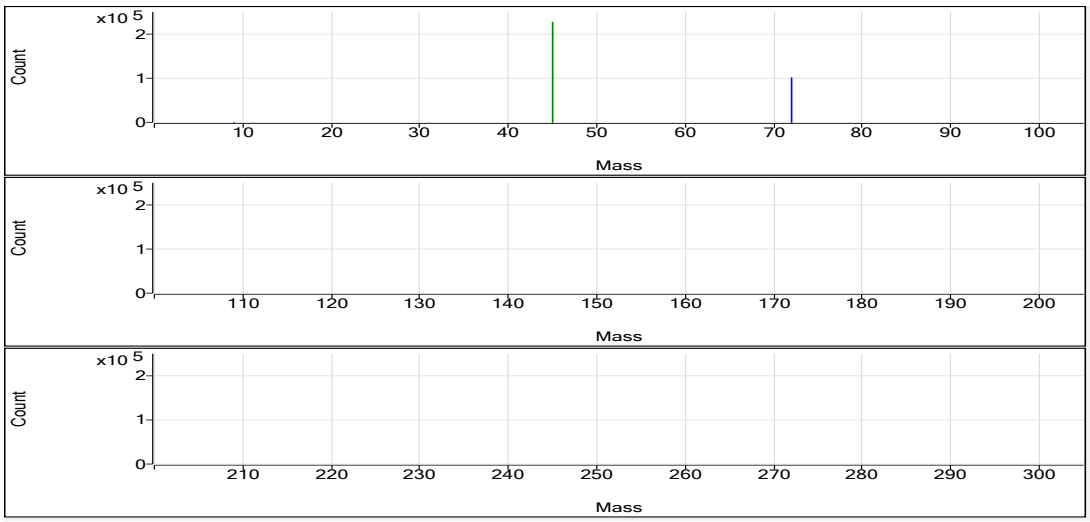
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.056	ppb	25.8	71.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.198	ppb	22.3	10.44	0.0001	Pulse	1.5000	3
Na	23	45	He	114738.758	ppb	2.6	16141893.09	359.3393	Analog	0.1000	3
Mg	24	45	He	23995.935	ppb	2.8	1635860.08	36.4145	Analog	0.1000	3
Al	27	45	He	4.169	ppb	27.0	120.00	0.0027	Pulse	0.1000	3
K	39	45	He	2054.041	ppb	4.7	119551.32	2.6619	Pulse	0.1000	3
Ca	44	45	He	25655.123	ppb	2.3	71382.12	1.5890	Pulse	0.1000	3
Ti	47	45	He	1.381	ppb	67.8	30.00	0.0007	Pulse	0.1000	3
V	51	45	He	0.284	ppb	16.4	698.69	0.0156	Pulse	0.5000	3
Cr	52	45	He	0.237	ppb	15.0	1073.41	0.0239	Pulse	0.1000	3
Mn	55	45	He	292.487	ppb	1.3	142368.10	3.1686	Pulse	0.1000	3
Fe	57	45	He	857.431	ppb	0.9	19435.46	0.4324	Pulse	0.1000	3
Co	59	45	He	1.646	ppb	0.6	4010.61	0.0893	Pulse	0.1000	3
Ni	60	115	He	0.661	ppb	34.5	1076.74	0.0184	Pulse	0.1000	3
Cu	63	72	He	0.255	ppb	26.1	1630.13	0.0218	Pulse	0.1000	3
Zn	66	72	He	1.369	ppb	32.4	503.36	0.0067	Pulse	0.1000	3
As	75	72	He	3.771	ppb	4.6	630.69	0.0084	Pulse	0.5000	3
Sr	88	115	He	399.163	ppb	1.5	220349.24	3.7633	Pulse	0.1000	3
Mo	98	115	He	0.910	ppb	10.3	1240.09	0.0212	Pulse	0.1000	3
Ag	107	115	He	0.226	ppb	24.3	686.70	0.0117	Pulse	0.1000	3
Cd	111	115	He	0.019	ppb	38.3	7.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.130	ppb	39.4	900.06	0.0154	Pulse	0.1000	3
Sb	121	115	He	0.240	ppb	20.3	226.68	0.0039	Pulse	0.1000	3
Ba	137	115	He	12.456	ppb	4.7	3187.10	0.0544	Pulse	0.1000	3
Tl	205	159	He	0.107	ppb	7.9	586.70	0.0025	Pulse	0.1000	3
Pb	208	159	He	0.029	ppb	18.5	336.68	0.0014	Pulse	0.1000	3
U	238	159	He	1.132	ppb	2.7	7382.18	0.0312	Pulse	0.1000	3

ISTD Table:

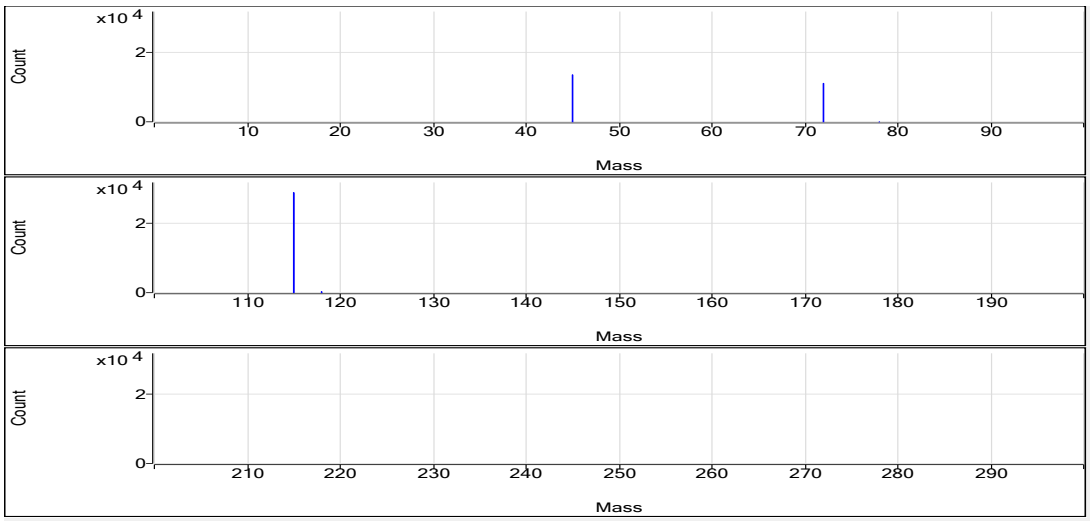
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2261641.63	0.5	98.6	Analog	0.1000	3
No Gas	Ge	72	1005556.86	0.8	96.8	Pulse	0.1000	3
H2	Sc	45	135647.65	1.6	97.6	Pulse	0.1000	3
H2	Ge	72	111136.88	1.3	94.1	Pulse	0.1000	3
H2	In	115	288785.33	0.3	98.0	Pulse	0.1000	3
He	Sc	45	44938.96	2.3	96.0	Pulse	0.1000	3
He	Ge	72	74753.93	1.3	97.8	Pulse	0.1000	3
He	In	115	58554.36	0.4	96.6	Pulse	0.1000	3
He	Tb	159	236973.70	1.2	98.3	Pulse	0.1000	3
He	Bi	209	161975.62	0.9	97.7	Pulse	0.1000	3

No Gas

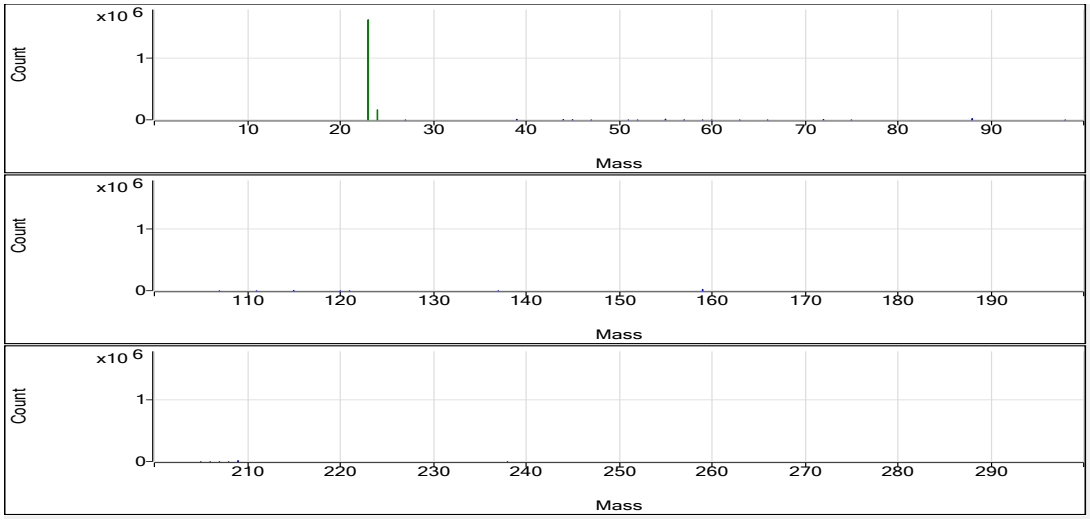


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.07	0	84.00	0.0004	9.309E-06
Be	9	1	No Gas	0.041	0	58.00	0.0004	9.309E-06
Be	9	1	No Gas	0.056	0	72.00	0.0004	9.309E-06
Se	78	2	H2	0.232	0.0001	12.00	0.0004	5.598E-06
Se	78	2	H2	0.213	0.0001	11.33	0.0004	5.598E-06
Se	78	2	H2	0.148	0.0001	8.00	0.0004	5.598E-06
Na	23	3	He	116676.323	365.3995	16158082.26	0.0031	0.4657
Na	23	3	He	116271.301	364.1327	16197062.26	0.0031	0.4657
Na	23	3	He	111268.649	348.4857	16070534.76	0.0031	0.4657
Mg	24	3	He	24034.721	36.4733	1612861.38	0.0015	0.003704
Mg	24	3	He	24637.61	37.3881	1663068.57	0.0015	0.003704
Mg	24	3	He	23315.473	35.3819	1631650.29	0.0015	0.003704
Al	27	3	He	3.794	0.0025	110.00	0.0005	0.0007154
Al	27	3	He	3.281	0.0022	100.00	0.0005	0.0007154
Al	27	3	He	5.433	0.0033	150.01	0.0005	0.0007154
K	39	3	He	2134.079	2.7489	121556.00	0.0011	0.4296
K	39	3	He	2081.52	2.6918	119732.40	0.0011	0.4296
K	39	3	He	1946.524	2.545	117365.57	0.0011	0.4296
Ca	44	3	He	26134.595	1.6186	71576.28	0.0001	0.002924
Ca	44	3	He	25849.714	1.601	71215.16	0.0001	0.002924
Ca	44	3	He	24981.06	1.5473	71354.93	0.0001	0.002924
Ti	47	3	He	2.334	0.0011	50.00	0.0005	0
Ti	47	3	He	0.464	0.0002	10.00	0.0005	0
Ti	47	3	He	1.343	0.0007	30.00	0.0005	0
V	51	3	He	0.338	0.0167	738.02	0.021	0.009571
V	51	3	He	0.257	0.015	666.02	0.021	0.009571
V	51	3	He	0.258	0.015	692.02	0.021	0.009571
Cr	52	3	He	0.274	0.0249	1100.07	0.0267	0.01758
Cr	52	3	He	0.234	0.0238	1060.07	0.0267	0.01758
Cr	52	3	He	0.203	0.023	1060.08	0.0267	0.01758
Mn	55	3	He	293.395	3.1784	140551.60	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	295.867	3.2052	142570.33	0.0108	0.004199
Mn	55	3	He	288.199	3.1222	143982.38	0.0108	0.004199
Fe	57	3	He	848.34	0.4279	18921.53	0.0005	0.002993
Fe	57	3	He	861.309	0.4344	19322.09	0.0005	0.002993
Fe	57	3	He	862.643	0.4351	20062.76	0.0005	0.002993
Co	59	3	He	1.652	0.0896	3960.61	0.0524	0.003063
Co	59	3	He	1.651	0.0895	3980.59	0.0524	0.003063
Co	59	3	He	1.636	0.0887	4090.64	0.0524	0.003063
Ni	60	3	He	0.58	0.0175	1030.07	0.0109	0.01116
Ni	60	3	He	0.918	0.0212	1240.09	0.0109	0.01116
Ni	60	3	He	0.484	0.0165	960.05	0.0109	0.01116
Cu	63	3	He	0.306	0.0231	1720.14	0.0255	0.01531
Cu	63	3	He	0.279	0.0224	1700.14	0.0255	0.01531
Cu	63	3	He	0.18	0.0199	1470.10	0.0255	0.01531
Zn	66	3	He	0.899	0.0054	400.02	0.0029	0.002787
Zn	66	3	He	1.78	0.0079	600.03	0.0029	0.002787
Zn	66	3	He	1.429	0.0069	510.02	0.0029	0.002787
As	75	3	He	3.581	0.008	598.02	0.0021	0.0004097
As	75	3	He	3.808	0.0085	646.02	0.0021	0.0004097
As	75	3	He	3.925	0.0088	648.02	0.0021	0.0004097
Sr	88	3	He	392.062	3.6964	217440.04	0.0094	0.0008765
Sr	88	3	He	402.721	3.7968	222052.83	0.0094	0.0008765
Sr	88	3	He	402.707	3.7967	221554.84	0.0094	0.0008765
Mo	98	3	He	1.009	0.0235	1380.10	0.023	0.0002199
Mo	98	3	He	0.822	0.0192	1120.08	0.023	0.0002199
Mo	98	3	He	0.898	0.0209	1220.09	0.023	0.0002199
Ag	107	3	He	0.205	0.0107	630.03	0.0483	0.0008224
Ag	107	3	He	0.185	0.0097	570.03	0.0483	0.0008224
Ag	107	3	He	0.288	0.0147	860.05	0.0483	0.0008224
Cd	111	3	He	0.015	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.028	0.0002	10.00	0.0053	2.193E-05
Cd	111	3	He	0.015	0.0001	6.00	0.0053	2.193E-05
Sn	120	3	He	0.102	0.015	880.06	0.0148	0.01345
Sn	120	3	He	0.189	0.0162	950.06	0.0148	0.01345
Sn	120	3	He	0.098	0.0149	870.06	0.0148	0.01345
Sb	121	3	He	0.231	0.0037	220.01	0.0143	0.0004392
Sb	121	3	He	0.196	0.0032	190.01	0.0143	0.0004392
Sb	121	3	He	0.293	0.0046	270.01	0.0143	0.0004392
Ba	137	3	He	11.825	0.0517	3040.40	0.0044	0.0001096
Ba	137	3	He	12.561	0.0549	3210.44	0.0044	0.0001096
Ba	137	3	He	12.982	0.0567	3310.47	0.0044	0.0001096
Tl	205	3	He	0.117	0.0027	630.04	0.0208	0.0002491
Tl	205	3	He	0.102	0.0024	570.04	0.0208	0.0002491
Tl	205	3	He	0.102	0.0024	560.03	0.0208	0.0002491
Pb	208	3	He	0.024	0.0013	160.01	0.0272	0.0006218
Pb	208	3	He	0.029	0.0014	120.00	0.0272	0.0006218
Pb	208	3	He	0.035	0.0016	210.01	0.0272	0.0006218
U	238	3	He	1.165	0.0321	7542.25	0.0275	2.763E-05
U	238	3	He	1.106	0.0304	7312.17	0.0275	2.763E-05
U	238	3	He	1.124	0.031	7292.11	0.0275	2.763E-05
Sc	45	1	No Gas			2256092.47		
Sc	45	1	No Gas			2252947.78		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2275884.65		
Ge	72	1	No Gas			1007523.66		
Ge	72	1	No Gas			1012469.91		
Ge	72	1	No Gas			996677.02		
Sc	45	2	H2			137089.62		
Sc	45	2	H2			136746.21		
Sc	45	2	H2			133107.11		
Ge	72	2	H2			109572.20		
Ge	72	2	H2			112452.93		
Ge	72	2	H2			111385.51		
In	115	2	H2			289449.49		
In	115	2	H2			288967.94		
In	115	2	H2			287938.57		
Sc	45	3	He			44220.32		
Sc	45	3	He			44481.21		
Sc	45	3	He			46115.34		
Ge	72	3	He			74452.69		
Ge	72	3	He			75868.91		
Ge	72	3	He			73940.20		
In	115	3	He			58831.32		
In	115	3	He			58490.23		
In	115	3	He			58360.44		
Tb	159	3	He			235199.70		
Tb	159	3	He			240139.10		
Tb	159	3	He			235582.30		
Bi	209	3	He			162083.05		
Bi	209	3	He			163417.71		
Bi	209	3	He			160426.10		

Quantitation Report

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Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

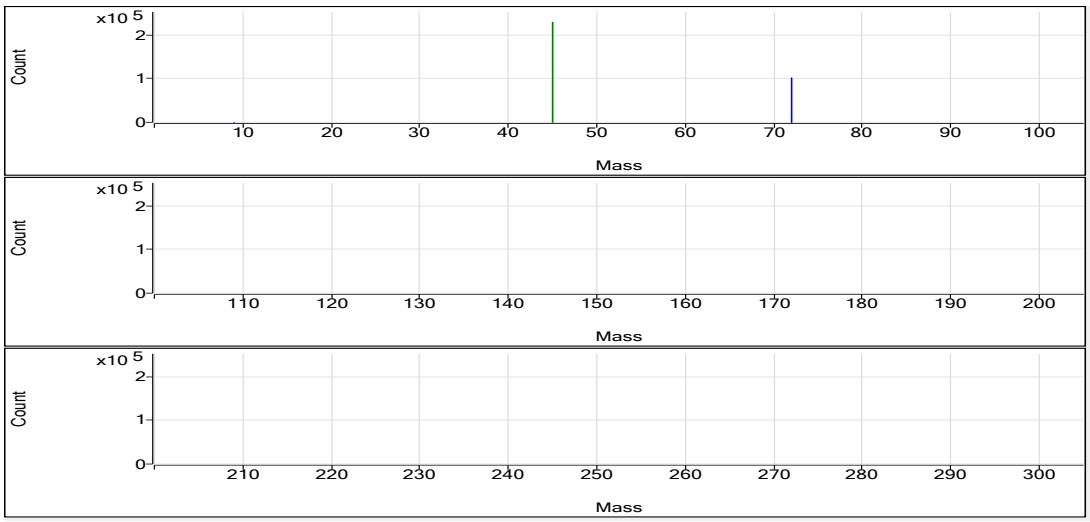
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.016	ppb	90.5	36.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.306	ppb	29.4	16.67	0.0001	Pulse	1.5000	3
Na	23	45	He	600375.308	ppb	0.9	84425718.74	1,878.2867	Analog	0.1000	3
Mg	24	45	He	121748.665	ppb	1.6	8303285.08	184.7417	Analog	0.1000	3
Al	27	45	He	6.429	ppb	50.5	166.67	0.0037	Pulse	0.1000	3
K	39	45	He	10631.056	ppb	2.4	538551.23	11.9831	Pulse	0.1000	3
Ca	44	45	He	138430.386	ppb	1.3	384790.80	8.5610	Pulse	0.1000	3
Ti	47	45	He	0.911	ppb	85.2	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.462	ppb	3.5	867.36	0.0193	Pulse	0.5000	3
Cr	52	45	He	0.264	ppb	16.4	1106.74	0.0246	Pulse	0.1000	3
Mn	55	45	He	1537.213	ppb	1.0	747720.04	16.6353	Pulse	0.1000	3
Fe	57	45	He	4479.587	ppb	1.7	100975.94	2.2466	Pulse	0.1000	3
Co	59	45	He	7.627	ppb	3.5	18080.56	0.4023	Pulse	0.1000	3
Ni	60	115	He	2.279	ppb	8.1	2170.21	0.0361	Pulse	0.1000	3
Cu	63	72	He	0.112	ppb	17.4	1373.43	0.0182	Pulse	0.1000	3
Zn	66	72	He	3.291	ppb	25.4	926.73	0.0123	Pulse	0.1000	3
As	75	72	He	17.346	ppb	2.8	2821.60	0.0373	Pulse	0.5000	3
Sr	88	115	He	2096.521	ppb	1.4	1188001.02	19.7623	Pulse	0.1000	3
Mo	98	115	He	4.206	ppb	5.6	5837.93	0.0971	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	338.3	60.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	58.4	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.104	ppb	N/A	716.70	0.0119	Pulse	0.1000	3
Sb	121	115	He	0.318	ppb	22.7	300.01	0.0050	Pulse	0.1000	3
Ba	137	115	He	66.525	ppb	0.5	17450.37	0.2903	Pulse	0.1000	3
Tl	205	159	He	0.045	ppb	12.3	290.01	0.0012	Pulse	0.1000	3
Pb	208	159	He	0.045	ppb	18.2	446.68	0.0018	Pulse	0.1000	3
U	238	159	He	5.805	ppb	1.2	38890.28	0.1597	Pulse	0.1000	3

ISTD Table:

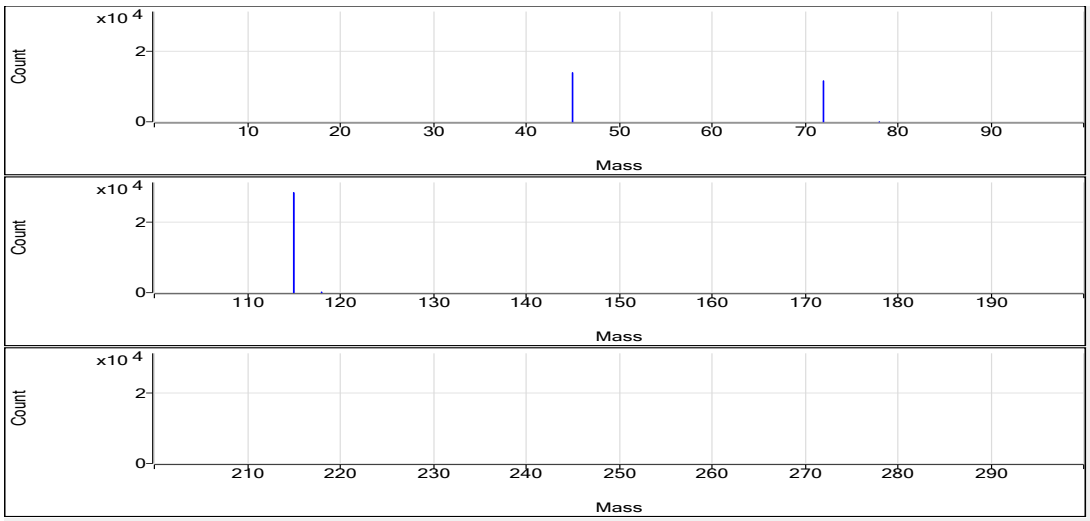
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2299523.25	0.5	100.2	Analog	0.1000	3
No Gas	Ge	72	1021105.27	0.6	98.3	Pulse	0.1000	3
H2	Sc	45	140332.75	0.7	100.9	Pulse	0.1000	3
H2	Ge	72	117077.50	0.9	99.2	Pulse	0.1000	3
H2	In	115	285717.93	0.3	97.0	Pulse	0.1000	3
He	Sc	45	44952.09	1.4	96.0	Pulse	0.1000	3
He	Ge	72	75581.03	0.3	98.8	Pulse	0.1000	3
He	In	115	60121.70	1.3	99.2	Pulse	0.1000	3
He	Tb	159	243567.76	1.1	101.0	Pulse	0.1000	3
He	Bi	209	159605.46	0.1	96.3	Pulse	0.1000	3

No Gas

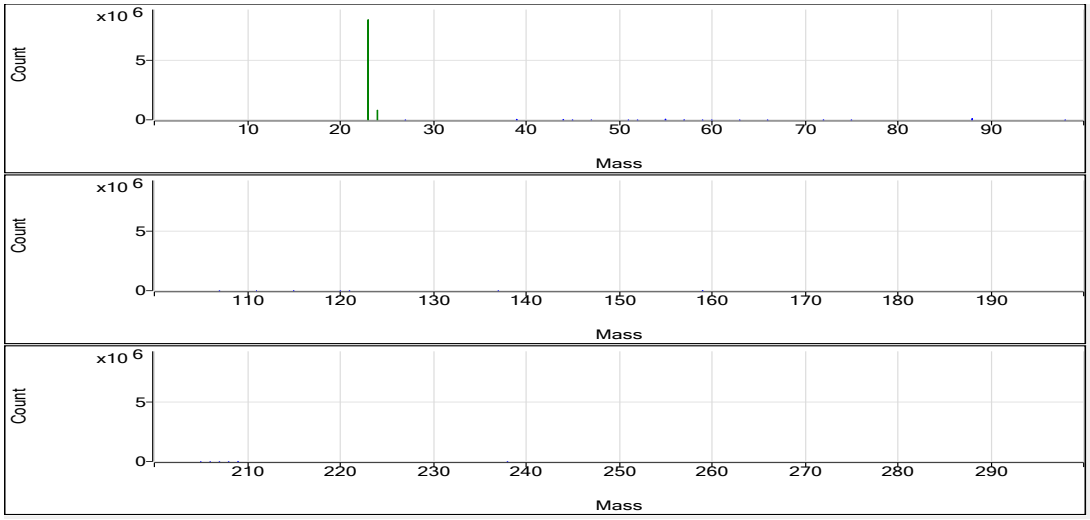


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.029	0	48.00	0.0004	9.309E-06
Be	9	1	No Gas	0.018	0	38.00	0.0004	9.309E-06
Be	9	1	No Gas	0.001	0	22.00	0.0004	9.309E-06
Se	78	2	H2	0.256	0.0001	14.00	0.0004	5.598E-06
Se	78	2	H2	0.252	0.0001	14.00	0.0004	5.598E-06
Se	78	2	H2	0.41	0.0002	22.00	0.0004	5.598E-06
Na	23	3	He	604312.682	1890.6018	84284938.74	0.0031	0.4657
Na	23	3	He	602795.879	1885.8576	84111438.75	0.0031	0.4657
Na	23	3	He	594017.363	1858.4007	84880778.74	0.0031	0.4657
Mg	24	3	He	123292.454	187.0842	8340401.75	0.0015	0.003704
Mg	24	3	He	122459.969	185.821	8287831.75	0.0015	0.003704
Mg	24	3	He	119493.574	181.3199	8281621.75	0.0015	0.003704
Al	27	3	He	5.672	0.0034	150.01	0.0005	0.0007154
Al	27	3	He	9.989	0.0054	240.01	0.0005	0.0007154
Al	27	3	He	3.625	0.0024	110.00	0.0005	0.0007154
K	39	3	He	10839.145	12.2092	544299.68	0.0011	0.4296
K	39	3	He	10710.889	12.0698	538329.02	0.0011	0.4296
K	39	3	He	10343.134	11.6702	533024.99	0.0011	0.4296
Ca	44	3	He	139554.007	8.6305	384756.13	0.0001	0.002924
Ca	44	3	He	139335.967	8.617	384328.82	0.0001	0.002924
Ca	44	3	He	136401.184	8.4356	385287.46	0.0001	0.002924
Ti	47	3	He	0.463	0.0002	10.00	0.0005	0
Ti	47	3	He	0.463	0.0002	10.00	0.0005	0
Ti	47	3	He	1.808	0.0009	40.00	0.0005	0
V	51	3	He	0.481	0.0197	878.03	0.021	0.009571
V	51	3	He	0.453	0.0191	852.03	0.021	0.009571
V	51	3	He	0.452	0.0191	872.03	0.021	0.009571
Cr	52	3	He	0.216	0.0233	1040.07	0.0267	0.01758
Cr	52	3	He	0.299	0.0256	1140.07	0.0267	0.01758
Cr	52	3	He	0.277	0.025	1140.08	0.0267	0.01758
Mn	55	3	He	1546.114	16.7316	745912.18	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1546.749	16.7385	746556.00	0.0108	0.004199
Mn	55	3	He	1518.775	16.4358	750691.94	0.0108	0.004199
Fe	57	3	He	4506.179	2.26	100751.16	0.0005	0.002993
Fe	57	3	He	4537.051	2.2754	101486.36	0.0005	0.002993
Fe	57	3	He	4395.532	2.2045	100690.31	0.0005	0.002993
Co	59	3	He	7.882	0.4157	18530.98	0.0524	0.003063
Co	59	3	He	7.651	0.4036	18000.61	0.0524	0.003063
Co	59	3	He	7.348	0.3877	17710.08	0.0524	0.003063
Ni	60	3	He	2.483	0.0383	2330.24	0.0109	0.01116
Ni	60	3	He	2.126	0.0344	2040.18	0.0109	0.01116
Ni	60	3	He	2.228	0.0355	2140.21	0.0109	0.01116
Cu	63	3	He	0.117	0.0183	1380.09	0.0255	0.01531
Cu	63	3	He	0.129	0.0186	1410.11	0.0255	0.01531
Cu	63	3	He	0.091	0.0176	1330.10	0.0255	0.01531
Zn	66	3	He	3.085	0.0117	880.06	0.0029	0.002787
Zn	66	3	He	4.211	0.0149	1130.08	0.0029	0.002787
Zn	66	3	He	2.577	0.0102	770.04	0.0029	0.002787
As	75	3	He	16.784	0.0361	2726.25	0.0021	0.0004097
As	75	3	He	17.578	0.0378	2868.27	0.0021	0.0004097
As	75	3	He	17.676	0.038	2870.27	0.0021	0.0004097
Sr	88	3	He	2072.914	19.5397	1188285.06	0.0094	0.0008765
Sr	88	3	He	2129.306	20.0713	1190199.51	0.0094	0.0008765
Sr	88	3	He	2087.342	19.6758	1185518.50	0.0094	0.0008765
Mo	98	3	He	4.245	0.098	5961.31	0.023	0.0002199
Mo	98	3	He	4.42	0.102	6051.35	0.023	0.0002199
Mo	98	3	He	3.954	0.0913	5501.13	0.023	0.0002199
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	0.014	0.0015	90.00	0.0483	0.0008224
Ag	107	3	He	0.007	0.0012	70.00	0.0483	0.0008224
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Cd	111	3	He	0.009	0.0001	4.00	0.0053	2.193E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Sn	120	3	He	-0.098	0.012	730.04	0.0148	0.01345
Sn	120	3	He	-0.157	0.0111	660.03	0.0148	0.01345
Sn	120	3	He	-0.057	0.0126	760.04	0.0148	0.01345
Sb	121	3	He	0.372	0.0058	350.02	0.0143	0.0004392
Sb	121	3	He	0.346	0.0054	320.01	0.0143	0.0004392
Sb	121	3	He	0.236	0.0038	230.01	0.0143	0.0004392
Ba	137	3	He	66.142	0.2886	17550.54	0.0044	0.0001096
Ba	137	3	He	66.788	0.2914	17280.25	0.0044	0.0001096
Ba	137	3	He	66.643	0.2908	17520.31	0.0044	0.0001096
Tl	205	3	He	0.041	0.0011	270.01	0.0208	0.0002491
Tl	205	3	He	0.052	0.0013	320.01	0.0208	0.0002491
Tl	205	3	He	0.044	0.0012	280.01	0.0208	0.0002491
Pb	208	3	He	0.035	0.0016	180.01	0.0272	0.0006218
Pb	208	3	He	0.048	0.0019	240.01	0.0272	0.0006218
Pb	208	3	He	0.05	0.002	210.01	0.0272	0.0006218
U	238	3	He	5.729	0.1576	38853.45	0.0275	2.763E-05
U	238	3	He	5.814	0.1599	38783.24	0.0275	2.763E-05
U	238	3	He	5.871	0.1615	39034.14	0.0275	2.763E-05
Sc	45	1	No Gas			2287205.59		
Sc	45	1	No Gas			2311695.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2299668.72		
Ge	72	1	No Gas			1026964.98		
Ge	72	1	No Gas			1021419.98		
Ge	72	1	No Gas			1014930.84		
Sc	45	2	H2			139740.69		
Sc	45	2	H2			141395.34		
Sc	45	2	H2			139862.23		
Ge	72	2	H2			116611.49		
Ge	72	2	H2			118221.64		
Ge	72	2	H2			116399.38		
In	115	2	H2			285937.07		
In	115	2	H2			286333.02		
In	115	2	H2			284883.71		
Sc	45	3	He			44581.01		
Sc	45	3	He			44601.16		
Sc	45	3	He			45674.10		
Ge	72	3	He			75447.32		
Ge	72	3	He			75828.62		
Ge	72	3	He			75467.14		
In	115	3	He			60818.84		
In	115	3	He			59303.22		
In	115	3	He			60258.09		
Tb	159	3	He			246535.11		
Tb	159	3	He			242480.70		
Tb	159	3	He			241687.46		
Bi	209	3	He			159656.05		
Bi	209	3	He			159776.91		
Bi	209	3	He			159383.41		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 9:58:27 AM
Sample Name	410-179192-P-5-A MS
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

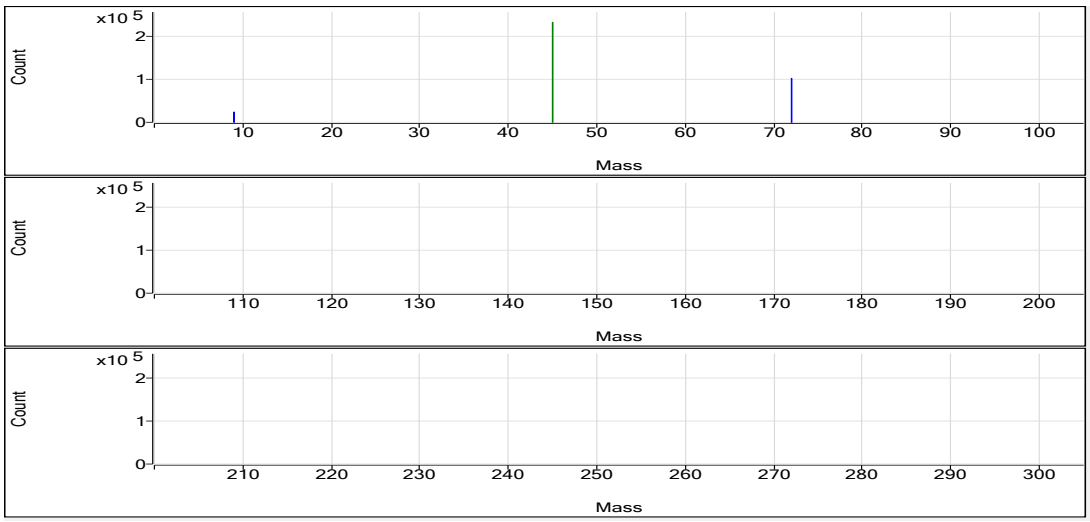
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	52.231	ppb	1.4	48315.93	0.0208	Pulse	0.5000	3
Se	78	72	H2	104.003	ppb	1.4	5495.16	0.0465	Pulse	1.5000	3
Na	23	45	He	585024.389	ppb	1.5	83762097.09	1,830.2730	Analog	0.1000	3
Mg	24	45	He	125050.792	ppb	1.2	8684460.91	189.7522	Analog	0.1000	3
Al	27	45	He	4999.194	ppb	1.6	106892.04	2.3357	Pulse	0.1000	3
K	39	45	He	15309.233	ppb	1.1	781131.40	17.0672	Pulse	0.1000	3
Ca	44	45	He	139105.955	ppb	1.2	393727.24	8.6028	Pulse	0.1000	3
Ti	47	45	He	505.733	ppb	7.0	11207.47	0.2450	Pulse	0.1000	3
V	51	45	He	514.650	ppb	0.9	496210.12	10.8419	Pulse	0.5000	3
Cr	52	45	He	504.868	ppb	1.0	617370.04	13.4894	Pulse	0.1000	3
Mn	55	45	He	1996.279	ppb	1.1	988692.38	21.6020	Pulse	0.1000	3
Fe	57	45	He	9357.904	ppb	0.4	214664.30	4.6900	Pulse	0.1000	3
Co	59	45	He	491.932	ppb	0.4	1178854.54	25.7563	Pulse	0.1000	3
Ni	60	115	He	503.844	ppb	1.8	326724.85	5.5201	Pulse	0.1000	3
Cu	63	72	He	487.588	ppb	0.3	927203.48	12.4381	Pulse	0.1000	3
Zn	66	72	He	521.803	ppb	1.6	112131.00	1.5043	Pulse	0.1000	3
As	75	72	He	553.079	ppb	0.7	87790.81	1.1777	Pulse	0.5000	3
Sr	88	115	He	2163.235	ppb	2.0	1206890.19	20.3911	Pulse	0.1000	3
Mo	98	115	He	57.151	ppb	3.4	77922.58	1.3169	Pulse	0.1000	3
Ag	107	115	He	48.000	ppb	1.8	137278.57	2.3194	Pulse	0.1000	3
Cd	111	115	He	50.464	ppb	4.4	15928.13	0.2692	Pulse	0.5000	3
Sn	120	115	He	103.363	ppb	1.8	91381.74	1.5439	Pulse	0.1000	3
Sb	121	115	He	102.657	ppb	2.9	86953.55	1.4692	Pulse	0.1000	3
Ba	137	115	He	590.088	ppb	3.0	152326.52	2.5738	Pulse	0.1000	3
Tl	205	159	He	101.539	ppb	0.9	508133.89	2.1108	Pulse	0.1000	3
Pb	208	159	He	50.017	ppb	0.9	327891.96	1.3621	Pulse	0.1000	3
U	238	159	He	58.453	ppb	0.2	387024.50	1.6077	Pulse	0.1000	3

ISTD Table:

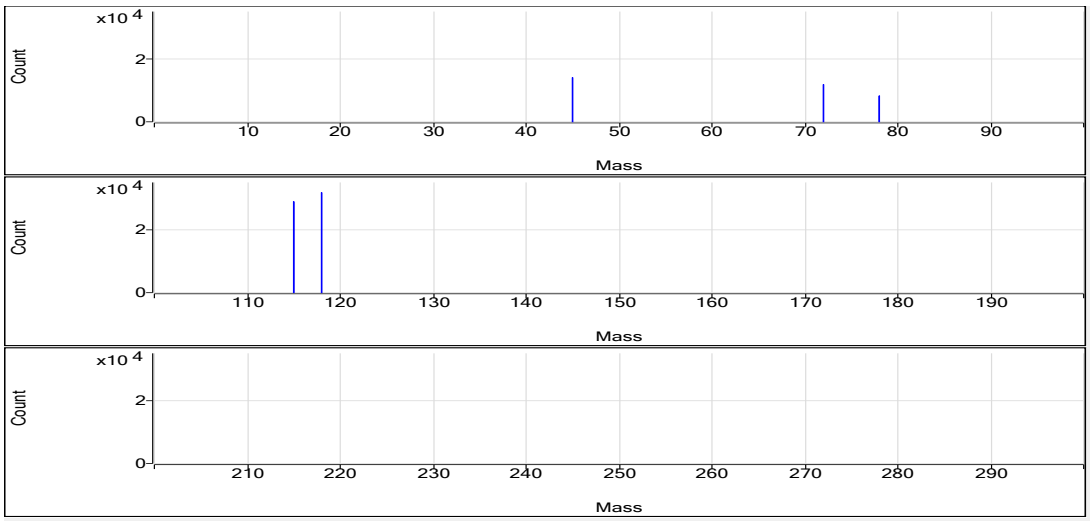
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2324094.50	1.0	101.3	Analog	0.1000	3
No Gas	Ge	72	1022082.23	0.8	98.4	Pulse	0.1000	3
H2	Sc	45	140141.24	1.3	100.8	Pulse	0.1000	3
H2	Ge	72	118138.53	1.6	100.1	Pulse	0.1000	3
H2	In	115	288235.47	1.4	97.8	Pulse	0.1000	3
He	Sc	45	45771.25	1.4	97.7	Pulse	0.1000	3
He	Ge	72	74546.46	0.8	97.5	Pulse	0.1000	3
He	In	115	59202.59	2.2	97.7	Pulse	0.1000	3
He	Tb	159	240731.28	0.4	99.8	Pulse	0.1000	3
He	Bi	209	161658.71	1.1	97.6	Pulse	0.1000	3

No Gas

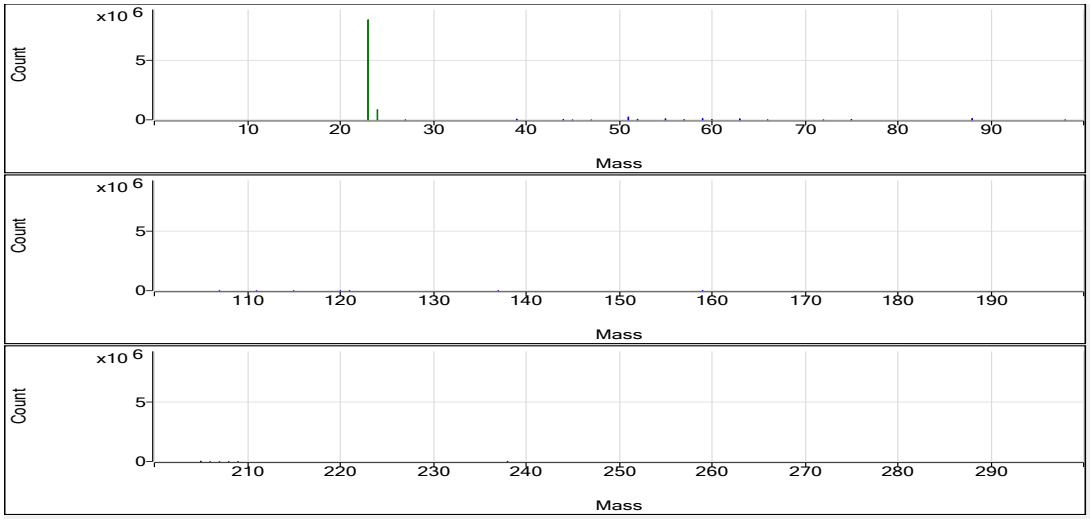


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.376	0.0205	47975.68	0.0004	9.309E-06
Be	9	1	No Gas	52.509	0.0209	48629.44	0.0004	9.309E-06
Be	9	1	No Gas	52.807	0.021	48342.67	0.0004	9.309E-06
Se	78	2	H2	105.627	0.0472	5492.94	0.0004	5.598E-06
Se	78	2	H2	102.702	0.0459	5510.28	0.0004	5.598E-06
Se	78	2	H2	103.679	0.0464	5482.27	0.0004	5.598E-06
Na	23	3	He	593944.494	1858.1728	83695873.75	0.0031	0.4657
Na	23	3	He	576007.001	1802.0689	83446708.76	0.0031	0.4657
Na	23	3	He	585121.671	1830.5772	84143708.75	0.0031	0.4657
Mg	24	3	He	125979.836	191.1619	8610321.75	0.0015	0.003704
Mg	24	3	He	123293.234	187.0854	8663186.12	0.0015	0.003704
Mg	24	3	He	125879.306	191.0094	8779874.87	0.0015	0.003704
Al	27	3	He	5090.871	2.3785	107133.84	0.0005	0.0007154
Al	27	3	He	4939.307	2.3077	106862.29	0.0005	0.0007154
Al	27	3	He	4967.404	2.3209	106679.99	0.0005	0.0007154
K	39	3	He	15396.966	17.1625	773034.05	0.0011	0.4296
K	39	3	He	15110.224	16.8509	780298.04	0.0011	0.4296
K	39	3	He	15420.509	17.1881	790062.10	0.0011	0.4296
Ca	44	3	He	140140.826	8.6668	390369.02	0.0001	0.002924
Ca	44	3	He	137147.921	8.4817	392756.13	0.0001	0.002924
Ca	44	3	He	140029.119	8.6599	398056.56	0.0001	0.002924
Ti	47	3	He	520.898	0.2523	11364.18	0.0005	0
Ti	47	3	He	465.189	0.2253	10433.62	0.0005	0
Ti	47	3	He	531.111	0.2572	11824.60	0.0005	0
V	51	3	He	518.298	10.9187	491798.63	0.021	0.009571
V	51	3	He	509.257	10.7284	496788.09	0.021	0.009571
V	51	3	He	516.396	10.8786	500043.66	0.021	0.009571
Cr	52	3	He	510.25	13.633	614057.76	0.0267	0.01758
Cr	52	3	He	500.979	13.3856	619835.30	0.0267	0.01758
Cr	52	3	He	503.375	13.4495	618217.06	0.0267	0.01758
Mn	55	3	He	2004.171	21.6873	976841.55	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1972.069	21.34	988172.41	0.0108	0.004199
Mn	55	3	He	2012.597	21.7785	1001063.19	0.0108	0.004199
Fe	57	3	He	9359.696	4.6909	211287.18	0.0005	0.002993
Fe	57	3	He	9318.922	4.6705	216270.93	0.0005	0.002993
Fe	57	3	He	9395.094	4.7086	216434.80	0.0005	0.002993
Co	59	3	He	494.3	25.8803	1165700.53	0.0524	0.003063
Co	59	3	He	491.275	25.7219	1191079.44	0.0524	0.003063
Co	59	3	He	490.219	25.6666	1179783.65	0.0524	0.003063
Ni	60	3	He	500.078	5.479	324874.16	0.0109	0.01116
Ni	60	3	He	514.297	5.6344	326144.17	0.0109	0.01116
Ni	60	3	He	497.158	5.447	329156.21	0.0109	0.01116
Cu	63	3	He	489.384	12.4839	923062.10	0.0255	0.01531
Cu	63	3	He	486.538	12.4114	932168.35	0.0255	0.01531
Cu	63	3	He	486.841	12.4191	926379.99	0.0255	0.01531
Zn	66	3	He	530.243	1.5286	113024.37	0.0029	0.002787
Zn	66	3	He	513.422	1.4802	111170.73	0.0029	0.002787
Zn	66	3	He	521.743	1.5041	112197.89	0.0029	0.002787
As	75	3	He	549.922	1.1709	86578.98	0.0021	0.0004097
As	75	3	He	552.127	1.1756	88296.26	0.0021	0.0004097
As	75	3	He	557.189	1.1864	88497.18	0.0021	0.0004097
Sr	88	3	He	2142.309	20.1939	1197393.73	0.0094	0.0008765
Sr	88	3	He	2212.058	20.8513	1206960.14	0.0094	0.0008765
Sr	88	3	He	2135.339	20.1282	1216316.70	0.0094	0.0008765
Mo	98	3	He	57.093	1.3155	78003.22	0.023	0.0002199
Mo	98	3	He	59.147	1.3628	78886.74	0.023	0.0002199
Mo	98	3	He	55.213	1.2722	76877.77	0.023	0.0002199
Ag	107	3	He	48.199	2.329	138096.76	0.0483	0.0008224
Ag	107	3	He	48.768	2.3565	136403.09	0.0483	0.0008224
Ag	107	3	He	47.033	2.2727	137335.87	0.0483	0.0008224
Cd	111	3	He	49.664	0.2649	15709.90	0.0053	2.193E-05
Cd	111	3	He	52.976	0.2826	16358.58	0.0053	2.193E-05
Cd	111	3	He	48.751	0.2601	15715.92	0.0053	2.193E-05
Sn	120	3	He	103.389	1.5443	91569.73	0.0148	0.01345
Sn	120	3	He	105.168	1.5706	90915.70	0.0148	0.01345
Sn	120	3	He	101.533	1.5168	91659.80	0.0148	0.01345
Sb	121	3	He	104.752	1.4992	88894.03	0.0143	0.0004392
Sb	121	3	He	103.98	1.4881	86139.49	0.0143	0.0004392
Sb	121	3	He	99.239	1.4203	85827.14	0.0143	0.0004392
Ba	137	3	He	576.447	2.5143	149087.12	0.0044	0.0001096
Ba	137	3	He	609.94	2.6604	153996.07	0.0044	0.0001096
Ba	137	3	He	583.879	2.5467	153896.36	0.0044	0.0001096
Tl	205	3	He	102.466	2.1301	512996.67	0.0208	0.0002491
Tl	205	3	He	100.609	2.0915	505285.19	0.0208	0.0002491
Tl	205	3	He	101.541	2.1109	506119.80	0.0208	0.0002491
Pb	208	3	He	49.67	1.3526	170201.54	0.0272	0.0006218
Pb	208	3	He	49.869	1.3581	172499.47	0.0272	0.0006218
Pb	208	3	He	50.512	1.3756	174069.43	0.0272	0.0006218
U	238	3	He	58.468	1.6081	387287.38	0.0275	2.763E-05
U	238	3	He	58.331	1.6044	387598.63	0.0275	2.763E-05
U	238	3	He	58.56	1.6107	386187.49	0.0275	2.763E-05
Sc	45	1	No Gas			2345889.03		
Sc	45	1	No Gas			2326571.68		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2299822.78		
Ge	72	1	No Gas			1024011.55		
Ge	72	1	No Gas			1028898.27		
Ge	72	1	No Gas			1013336.86		
Sc	45	2	H2			138066.78		
Sc	45	2	H2			141163.17		
Sc	45	2	H2			141193.77		
Ge	72	2	H2			116258.07		
Ge	72	2	H2			119945.98		
Ge	72	2	H2			118211.55		
In	115	2	H2			283969.04		
In	115	2	H2			291933.77		
In	115	2	H2			288803.59		
Sc	45	3	He			45042.03		
Sc	45	3	He			46306.06		
Sc	45	3	He			45965.67		
Ge	72	3	He			73940.31		
Ge	72	3	He			75105.93		
Ge	72	3	He			74593.14		
In	115	3	He			59935.94		
In	115	3	He			58520.60		
In	115	3	He			61070.24		
Tb	159	3	He			240833.41		
Tb	159	3	He			241590.91		
Tb	159	3	He			239769.53		
Bi	209	3	He			160224.14		
Bi	209	3	He			161143.25		
Bi	209	3	He			163608.73		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

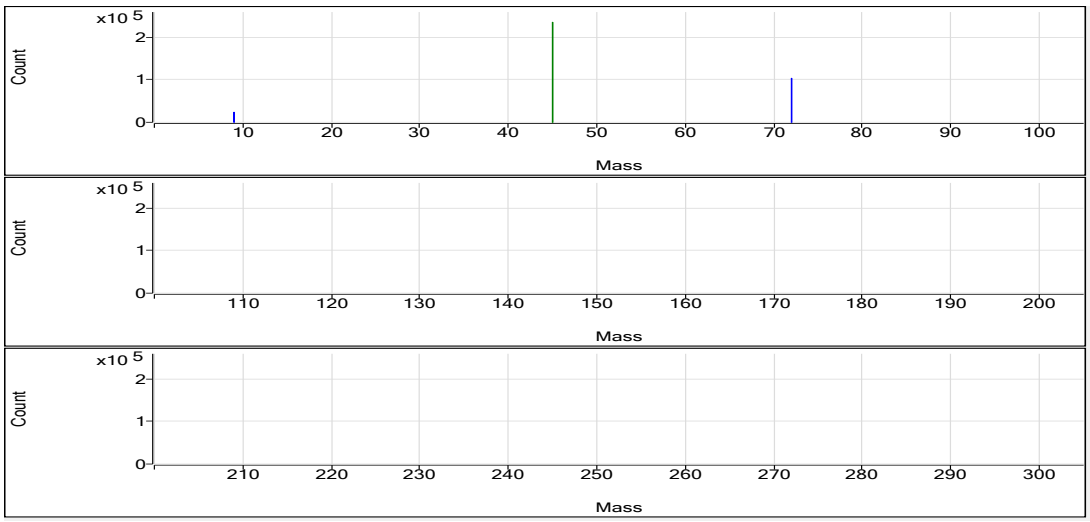
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.615	ppb	1.6	48284.58	0.0205	Pulse	0.5000	3
Se	78	72	H2	104.254	ppb	0.8	5503.84	0.0466	Pulse	1.5000	3
Na	23	45	He	578007.024	ppb	0.8	83296865.42	1,808.3244	Analog	0.1000	3
Mg	24	45	He	124625.173	ppb	1.6	8709455.49	189.1064	Analog	0.1000	3
Al	27	45	He	4905.226	ppb	0.4	105568.01	2.2918	Pulse	0.1000	3
K	39	45	He	14994.857	ppb	1.5	770383.09	16.7255	Pulse	0.1000	3
Ca	44	45	He	138230.567	ppb	1.7	393724.93	8.5487	Pulse	0.1000	3
Ti	47	45	He	519.128	ppb	2.2	11584.44	0.2514	Pulse	0.1000	3
V	51	45	He	499.873	ppb	0.9	485053.44	10.5308	Pulse	0.5000	3
Cr	52	45	He	492.167	ppb	1.7	605659.66	13.1505	Pulse	0.1000	3
Mn	55	45	He	1974.420	ppb	0.9	984101.08	21.3655	Pulse	0.1000	3
Fe	57	45	He	9165.689	ppb	1.3	211577.06	4.5937	Pulse	0.1000	3
Co	59	45	He	479.004	ppb	1.3	1155112.66	25.0795	Pulse	0.1000	3
Ni	60	115	He	507.273	ppb	1.1	323747.84	5.5576	Pulse	0.1000	3
Cu	63	72	He	473.489	ppb	0.6	907681.45	12.0789	Pulse	0.1000	3
Zn	66	72	He	502.043	ppb	1.8	108774.52	1.4474	Pulse	0.1000	3
As	75	72	He	545.157	ppb	0.6	87229.12	1.1608	Pulse	0.5000	3
Sr	88	115	He	2201.177	ppb	1.4	1208613.08	20.7487	Pulse	0.1000	3
Mo	98	115	He	56.303	ppb	2.3	75571.40	1.2973	Pulse	0.1000	3
Ag	107	115	He	42.381	ppb	4.6	119246.01	2.0480	Pulse	0.1000	3
Cd	111	115	He	50.749	ppb	2.4	15773.99	0.2707	Pulse	0.5000	3
Sn	120	115	He	105.475	ppb	2.8	91734.29	1.5752	Pulse	0.1000	3
Sb	121	115	He	105.350	ppb	2.0	87818.07	1.5077	Pulse	0.1000	3
Ba	137	115	He	586.180	ppb	2.1	148920.54	2.5568	Pulse	0.1000	3
Tl	205	159	He	100.979	ppb	0.4	502554.65	2.0992	Pulse	0.1000	3
Pb	208	159	He	49.358	ppb	0.9	321787.67	1.3441	Pulse	0.1000	3
U	238	159	He	57.828	ppb	0.4	380781.78	1.5905	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2350094.76	0.7	102.4	Analog	0.1000	3
No Gas	Ge	72	1036617.22	1.8	99.8	Pulse	0.1000	3
H2	Sc	45	142588.23	1.3	102.5	Pulse	0.1000	3
H2	Ge	72	118017.30	1.0	100.0	Pulse	0.1000	3
H2	In	115	289968.68	0.8	98.4	Pulse	0.1000	3
He	Sc	45	46065.48	2.0	98.4	Pulse	0.1000	3
He	Ge	72	75149.27	1.4	98.3	Pulse	0.1000	3
He	In	115	58263.06	2.5	96.1	Pulse	0.1000	3
He	Tb	159	239404.75	0.4	99.3	Pulse	0.1000	3
He	Bi	209	159700.03	0.4	96.4	Pulse	0.1000	3

No Gas



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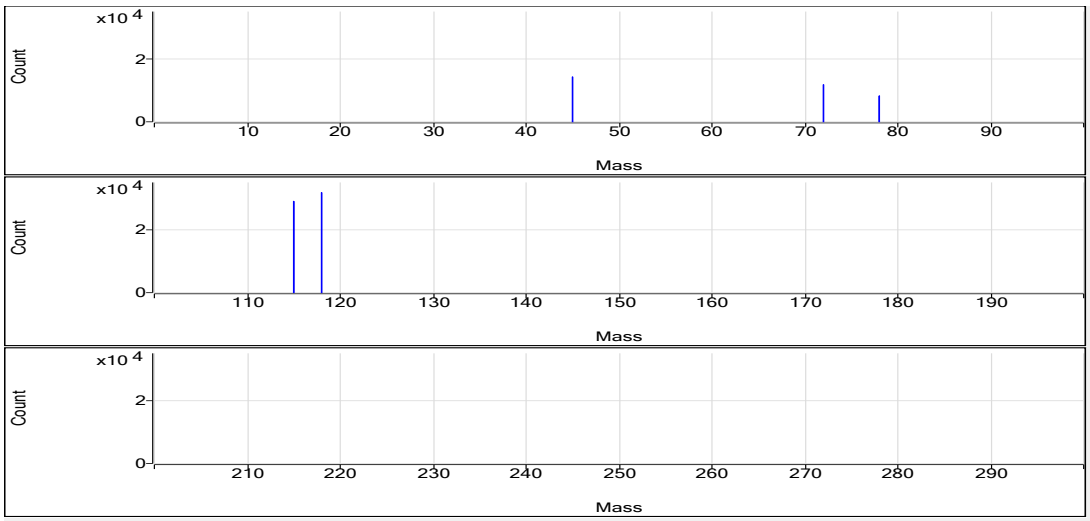
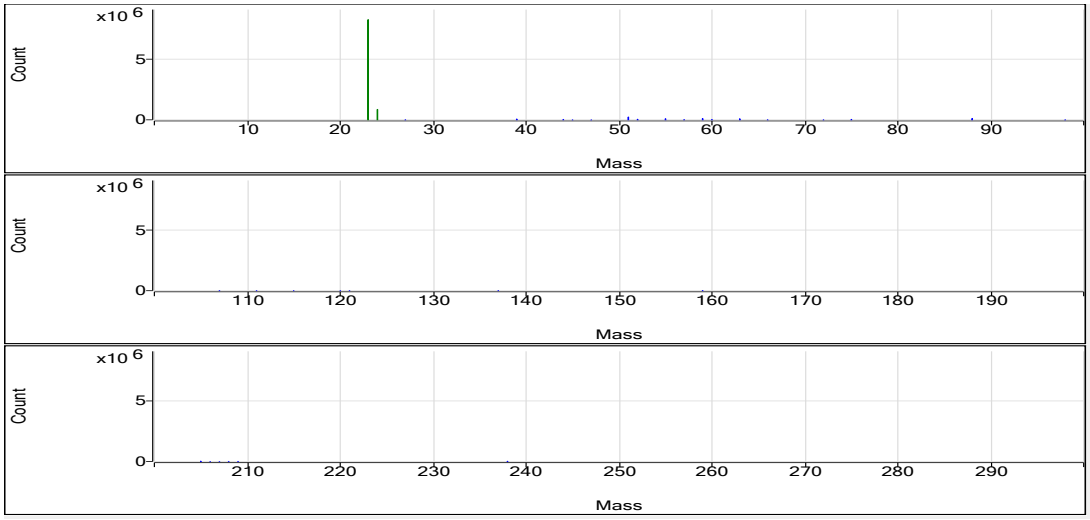


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.681	0.0202	47392.06	0.0004	9.309E-06
Be	9	1	No Gas	51.912	0.0207	48918.43	0.0004	9.309E-06
Be	9	1	No Gas	52.253	0.0208	48543.24	0.0004	9.309E-06
Se	78	2	H2	103.551	0.0463	5453.60	0.0004	5.598E-06
Se	78	2	H2	104.073	0.0466	5444.93	0.0004	5.598E-06
Se	78	2	H2	105.138	0.047	5612.98	0.0004	5.598E-06
Na	23	3	He	577017.784	1805.2303	81710573.78	0.0031	0.4657
Na	23	3	He	583057.889	1824.1222	83663603.75	0.0031	0.4657
Na	23	3	He	573945.4	1795.6207	84516418.74	0.0031	0.4657
Mg	24	3	He	126455.384	191.8835	8685269.87	0.0015	0.003704
Mg	24	3	He	124874.956	189.4854	8690773.62	0.0015	0.003704
Mg	24	3	He	122545.179	185.9503	8752322.99	0.0015	0.003704
Al	27	3	He	4928.459	2.3027	104226.39	0.0005	0.0007154
Al	27	3	He	4901.343	2.29	105031.46	0.0005	0.0007154
Al	27	3	He	4885.876	2.2828	107446.19	0.0005	0.0007154
K	39	3	He	14965.195	16.6933	755591.55	0.0011	0.4296
K	39	3	He	15235.521	16.9871	779113.35	0.0011	0.4296
K	39	3	He	14783.855	16.4962	776444.36	0.0011	0.4296
Ca	44	3	He	138990.39	8.5956	389066.95	0.0001	0.002924
Ca	44	3	He	140073.134	8.6626	397310.70	0.0001	0.002924
Ca	44	3	He	135628.176	8.3878	394797.14	0.0001	0.002924
Ti	47	3	He	506.944	0.2455	11114.08	0.0005	0
Ti	47	3	He	529.573	0.2565	11764.57	0.0005	0
Ti	47	3	He	520.868	0.2523	11874.67	0.0005	0
V	51	3	He	502.048	10.5766	478732.47	0.021	0.009571
V	51	3	He	503.132	10.5994	486144.59	0.021	0.009571
V	51	3	He	494.439	10.4165	490283.25	0.021	0.009571
Cr	52	3	He	495.881	13.2496	599718.55	0.0267	0.01758
Cr	52	3	He	498.127	13.3095	610442.73	0.0267	0.01758
Cr	52	3	He	482.493	12.8923	606817.69	0.0267	0.01758
Mn	55	3	He	1982.825	21.4564	971185.61	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1986.972	21.5013	986157.80	0.0108	0.004199
Mn	55	3	He	1953.464	21.1387	994959.83	0.0108	0.004199
Fe	57	3	He	9237.563	4.6297	209556.01	0.0005	0.002993
Fe	57	3	He	9231.215	4.6265	212196.77	0.0005	0.002993
Fe	57	3	He	9028.29	4.5249	212978.40	0.0005	0.002993
Co	59	3	He	482.811	25.2788	1144200.14	0.0524	0.003063
Co	59	3	He	482.213	25.2475	1157978.34	0.0524	0.003063
Co	59	3	He	471.989	24.7123	1163159.51	0.0524	0.003063
Ni	60	3	He	512.69	5.6168	318371.73	0.0109	0.01116
Ni	60	3	He	501.763	5.4974	327118.33	0.0109	0.01116
Ni	60	3	He	507.365	5.5586	325753.47	0.0109	0.01116
Cu	63	3	He	476.624	12.1588	899634.91	0.0255	0.01531
Cu	63	3	He	470.54	12.0038	905891.16	0.0255	0.01531
Cu	63	3	He	473.302	12.0742	917518.27	0.0255	0.01531
Zn	66	3	He	504.582	1.4547	107637.49	0.0029	0.002787
Zn	66	3	He	491.954	1.4184	107043.43	0.0029	0.002787
Zn	66	3	He	509.594	1.4692	111642.65	0.0029	0.002787
As	75	3	He	548.361	1.1676	86391.68	0.0021	0.0004097
As	75	3	He	541.409	1.1528	86999.41	0.0021	0.0004097
As	75	3	He	545.7	1.1619	88296.27	0.0021	0.0004097
Sr	88	3	He	2230.529	21.0254	1191752.40	0.0094	0.0008765
Sr	88	3	He	2167.895	20.435	1215973.42	0.0094	0.0008765
Sr	88	3	He	2205.106	20.7858	1218113.42	0.0094	0.0008765
Mo	98	3	He	56.601	1.3042	73923.46	0.023	0.0002199
Mo	98	3	He	54.869	1.2643	75230.37	0.023	0.0002199
Mo	98	3	He	57.439	1.3235	77560.36	0.023	0.0002199
Ag	107	3	He	44.556	2.153	122036.85	0.0483	0.0008224
Ag	107	3	He	41.854	2.0225	120347.51	0.0483	0.0008224
Ag	107	3	He	40.733	1.9684	115353.66	0.0483	0.0008224
Cd	111	3	He	50.239	0.268	15191.40	0.0053	2.193E-05
Cd	111	3	He	49.893	0.2662	15838.08	0.0053	2.193E-05
Cd	111	3	He	52.114	0.278	16292.50	0.0053	2.193E-05
Sn	120	3	He	108.784	1.6242	92061.96	0.0148	0.01345
Sn	120	3	He	103.239	1.5421	91761.15	0.0148	0.01345
Sn	120	3	He	104.401	1.5593	91379.77	0.0148	0.01345
Sb	121	3	He	107.823	1.5431	87466.17	0.0143	0.0004392
Sb	121	3	He	104.159	1.4907	88703.11	0.0143	0.0004392
Sb	121	3	He	104.07	1.4894	87284.93	0.0143	0.0004392
Ba	137	3	He	596.128	2.6002	147381.73	0.0044	0.0001096
Ba	137	3	He	572.557	2.4974	148604.35	0.0044	0.0001096
Ba	137	3	He	589.856	2.5728	150775.55	0.0044	0.0001096
Tl	205	3	He	100.969	2.099	500283.35	0.0208	0.0002491
Tl	205	3	He	100.614	2.0916	501569.84	0.0208	0.0002491
Tl	205	3	He	101.354	2.107	505810.77	0.0208	0.0002491
Pb	208	3	He	49.872	1.3582	170668.43	0.0272	0.0006218
Pb	208	3	He	49.128	1.3379	169364.10	0.0272	0.0006218
Pb	208	3	He	49.072	1.3364	169037.69	0.0272	0.0006218
U	238	3	He	57.614	1.5846	377690.50	0.0275	2.763E-05
U	238	3	He	57.828	1.5905	381407.73	0.0275	2.763E-05
U	238	3	He	58.043	1.5964	383247.10	0.0275	2.763E-05
Sc	45	1	No Gas			2349110.75		
Sc	45	1	No Gas			2367324.18		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2333849.34		
Ge	72	1	No Gas			1034997.64		
Ge	72	1	No Gas			1055775.06		
Ge	72	1	No Gas			1019078.97		
Sc	45	2	H2			141888.76		
Sc	45	2	H2			141122.55		
Sc	45	2	H2			144753.39		
Ge	72	2	H2			117739.08		
Ge	72	2	H2			116962.41		
Ge	72	2	H2			119350.42		
In	115	2	H2			289377.11		
In	115	2	H2			287968.55		
In	115	2	H2			292560.39		
Sc	45	3	He			45263.24		
Sc	45	3	He			45865.13		
Sc	45	3	He			47068.08		
Ge	72	3	He			73990.41		
Ge	72	3	He			75467.19		
Ge	72	3	He			75990.20		
In	115	3	He			57325.98		
In	115	3	He			60146.72		
In	115	3	He			59242.90		
Tb	159	3	He			238347.57		
Tb	159	3	He			239802.26		
Tb	159	3	He			240064.43		
Bi	209	3	He			160415.21		
Bi	209	3	He			159341.87		
Bi	209	3	He			159343.02		

Quantitation Report

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Sample Type	CCV
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Auto Dilution	1.0000
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Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

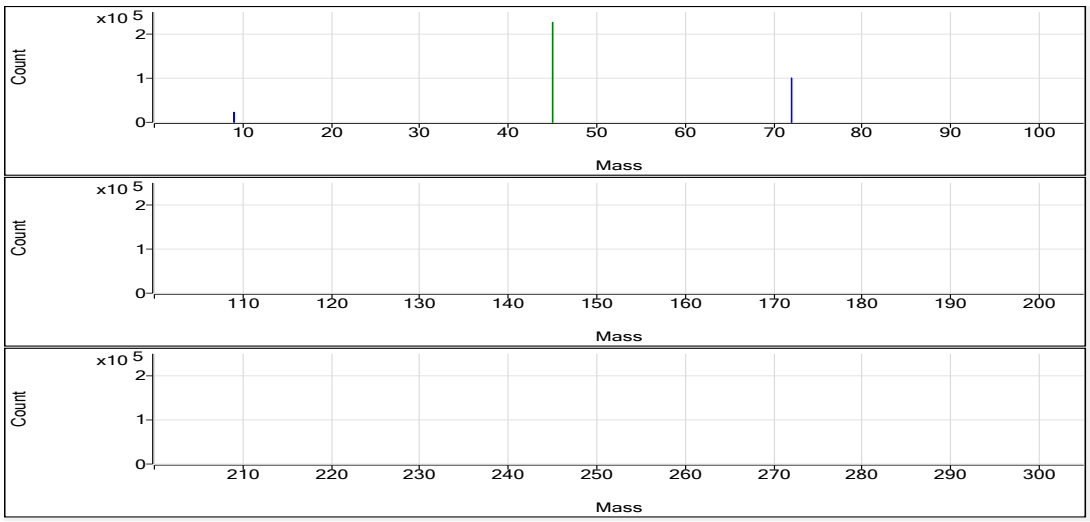
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.418	ppb	2.6	46433.43	0.0205	Pulse	0.5000	3
Se	78	72	H2	53.042	ppb	1.0	2661.78	0.0237	Pulse	1.5000	3
Na	23	45	He	5293.798	ppb	1.9	746127.93	17.0233	Pulse	0.1000	3
Mg	24	45	He	5265.393	ppb	2.9	350285.45	7.9933	Pulse	0.1000	3
Al	27	45	He	5121.191	ppb	1.4	104879.32	2.3927	Pulse	0.1000	3
K	39	45	He	5229.852	ppb	3.3	267891.09	6.1132	Pulse	0.1000	3
Ca	44	45	He	4989.369	ppb	4.5	13649.33	0.3114	Pulse	0.1000	3
Ti	47	45	He	5188.664	ppb	1.8	110155.99	2.5132	Pulse	0.1000	3
V	51	45	He	522.376	ppb	2.5	482269.28	11.0045	Pulse	0.5000	3
Cr	52	45	He	526.969	ppb	1.8	617086.42	14.0791	Pulse	0.1000	3
Mn	55	45	He	521.846	ppb	2.0	247633.71	5.6501	Pulse	0.1000	3
Fe	57	45	He	5297.728	ppb	2.0	116431.42	2.6564	Pulse	0.1000	3
Co	59	45	He	508.461	ppb	2.1	1166758.13	26.6216	Pulse	0.1000	3
Ni	60	115	He	523.010	ppb	1.0	335716.97	5.7297	Pulse	0.1000	3
Cu	63	72	He	501.854	ppb	0.4	944701.55	12.8016	Pulse	0.1000	3
Zn	66	72	He	519.093	ppb	1.9	110429.36	1.4965	Pulse	0.1000	3
As	75	72	He	517.061	ppb	0.8	81249.48	1.1010	Pulse	0.5000	3
Sr	88	115	He	51.642	ppb	3.0	28569.61	0.4876	Pulse	0.1000	3
Mo	98	115	He	51.165	ppb	1.1	69075.55	1.1790	Pulse	0.1000	3
Ag	107	115	He	51.598	ppb	1.0	146078.60	2.4932	Pulse	0.1000	3
Cd	111	115	He	51.189	ppb	1.5	15999.55	0.2731	Pulse	0.5000	3
Sn	120	115	He	51.537	ppb	2.4	45497.65	0.7766	Pulse	0.1000	3
Sb	121	115	He	51.324	ppb	1.2	43053.89	0.7348	Pulse	0.1000	3
Ba	137	115	He	513.939	ppb	0.9	131348.82	2.2417	Pulse	0.1000	3
Tl	205	159	He	52.023	ppb	1.3	252072.09	1.0816	Pulse	0.1000	3
Pb	208	159	He	51.683	ppb	0.6	328022.34	1.4074	Pulse	0.1000	3
U	238	159	He	51.844	ppb	0.8	332319.93	1.4259	Pulse	0.1000	3

ISTD Table:

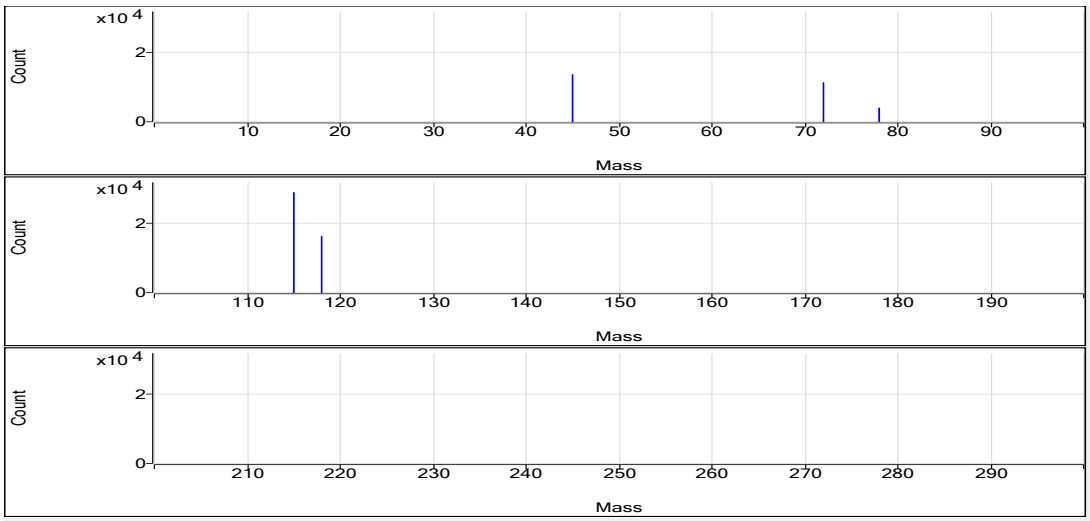
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2268832.94	0.9	98.9	Analog	0.1000	3
No Gas	Ge	72	1006255.69	1.0	96.8	Pulse	0.1000	3
H2	Sc	45	135432.19	0.1	97.4	Pulse	0.1000	3
H2	Ge	72	112180.33	0.9	95.0	Pulse	0.1000	3
H2	In	115	287208.87	1.0	97.5	Pulse	0.1000	3
He	Sc	45	43842.42	2.4	93.6	Pulse	0.1000	3
He	Ge	72	73796.29	0.5	96.5	Pulse	0.1000	3
He	In	115	58593.35	0.6	96.6	Pulse	0.1000	3
He	Tb	159	233064.39	1.0	96.6	Pulse	0.1000	3
He	Bi	209	161847.22	0.6	97.7	Pulse	0.1000	3

No Gas

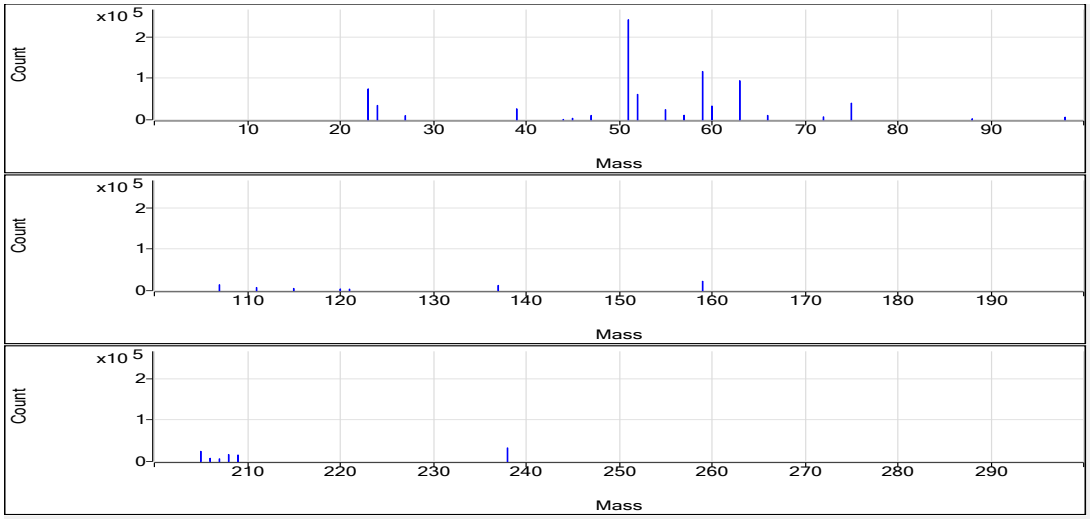


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.937	0.0199	45218.10	0.0004	9.309E-06
Be	9	1	No Gas	51.702	0.0206	47021.01	0.0004	9.309E-06
Be	9	1	No Gas	52.615	0.0209	47061.17	0.0004	9.309E-06
Se	78	2	H2	53.645	0.024	2665.56	0.0004	5.598E-06
Se	78	2	H2	52.884	0.0237	2664.23	0.0004	5.598E-06
Se	78	2	H2	52.598	0.0235	2655.56	0.0004	5.598E-06
Na	23	3	He	5410.067	17.387	741657.80	0.0031	0.4657
Na	23	3	He	5235.089	16.8397	744651.94	0.0031	0.4657
Na	23	3	He	5236.238	16.8433	752074.05	0.0031	0.4657
Mg	24	3	He	5440.891	8.2596	352319.21	0.0015	0.003704
Mg	24	3	He	5179.863	7.8635	347723.51	0.0015	0.003704
Mg	24	3	He	5175.424	7.8567	350813.63	0.0015	0.003704
Al	27	3	He	5204.449	2.4316	103721.33	0.0005	0.0007154
Al	27	3	He	5065.155	2.3665	104647.60	0.0005	0.0007154
Al	27	3	He	5093.969	2.38	106269.02	0.0005	0.0007154
K	39	3	He	5428.954	6.3296	269996.09	0.0011	0.4296
K	39	3	He	5131.024	6.0058	265578.77	0.0011	0.4296
K	39	3	He	5129.578	6.0043	268098.41	0.0011	0.4296
Ca	44	3	He	5100.752	0.3183	13575.90	0.0001	0.002924
Ca	44	3	He	4731.952	0.2955	13065.48	0.0001	0.002924
Ca	44	3	He	5135.404	0.3204	14306.60	0.0001	0.002924
Ti	47	3	He	5271.432	2.5533	108911.98	0.0005	0
Ti	47	3	He	5204.755	2.521	111477.47	0.0005	0
Ti	47	3	He	5089.805	2.4653	110078.51	0.0005	0
V	51	3	He	537.131	11.3151	482654.19	0.021	0.009571
V	51	3	He	518.167	10.9159	482701.72	0.021	0.009571
V	51	3	He	511.829	10.7825	481451.94	0.021	0.009571
Cr	52	3	He	537.76	14.3671	612841.32	0.0267	0.01758
Cr	52	3	He	523.118	13.9764	618035.03	0.0267	0.01758
Cr	52	3	He	520.03	13.894	620382.92	0.0267	0.01758
Mn	55	3	He	534.014	5.7817	246623.80	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	516.022	5.587	247059.47	0.0108	0.004199
Mn	55	3	He	515.503	5.5814	249217.87	0.0108	0.004199
Fe	57	3	He	5413.243	2.7143	115779.69	0.0005	0.002993
Fe	57	3	He	5209.303	2.6121	115508.25	0.0005	0.002993
Fe	57	3	He	5270.637	2.6428	118006.32	0.0005	0.002993
Co	59	3	He	520.711	27.2629	1162925.06	0.0524	0.003063
Co	59	3	He	504.581	26.4185	1168226.39	0.0524	0.003063
Co	59	3	He	500.091	26.1834	1169122.95	0.0524	0.003063
Ni	60	3	He	522.591	5.7251	337878.74	0.0109	0.01116
Ni	60	3	He	528.671	5.7916	337622.34	0.0109	0.01116
Ni	60	3	He	517.766	5.6723	331649.84	0.0109	0.01116
Cu	63	3	He	502.115	12.8083	947561.08	0.0255	0.01531
Cu	63	3	He	503.642	12.8472	942570.06	0.0255	0.01531
Cu	63	3	He	499.806	12.7494	943973.50	0.0255	0.01531
Zn	66	3	He	513.021	1.479	109419.46	0.0029	0.002787
Zn	66	3	He	530.71	1.5299	112247.97	0.0029	0.002787
Zn	66	3	He	513.548	1.4805	109620.64	0.0029	0.002787
As	75	3	He	514.004	1.0945	80969.93	0.0021	0.0004097
As	75	3	He	515.337	1.0973	80507.78	0.0021	0.0004097
As	75	3	He	521.84	1.1112	82270.73	0.0021	0.0004097
Sr	88	3	He	49.927	0.4715	27825.00	0.0094	0.0008765
Sr	88	3	He	52.095	0.4919	28676.43	0.0094	0.0008765
Sr	88	3	He	52.905	0.4995	29207.40	0.0094	0.0008765
Mo	98	3	He	50.55	1.1648	68741.16	0.023	0.0002199
Mo	98	3	He	51.698	1.1912	69443.48	0.023	0.0002199
Mo	98	3	He	51.248	1.1809	69042.00	0.023	0.0002199
Ag	107	3	He	51.121	2.4702	145781.39	0.0483	0.0008224
Ag	107	3	He	51.515	2.4892	145107.31	0.0483	0.0008224
Ag	107	3	He	52.156	2.5201	147347.10	0.0483	0.0008224
Cd	111	3	He	50.49	0.2693	15896.09	0.0053	2.193E-05
Cd	111	3	He	51.984	0.2773	16166.43	0.0053	2.193E-05
Cd	111	3	He	51.092	0.2726	15936.14	0.0053	2.193E-05
Sn	120	3	He	50.79	0.7655	45176.59	0.0148	0.01345
Sn	120	3	He	52.952	0.7975	46490.57	0.0148	0.01345
Sn	120	3	He	50.87	0.7667	44825.80	0.0148	0.01345
Sb	121	3	He	52.011	0.7446	43943.06	0.0143	0.0004392
Sb	121	3	He	51.044	0.7307	42599.14	0.0143	0.0004392
Sb	121	3	He	50.917	0.7289	42619.46	0.0143	0.0004392
Ba	137	3	He	512.877	2.2371	132024.83	0.0044	0.0001096
Ba	137	3	He	510.02	2.2246	129683.92	0.0044	0.0001096
Ba	137	3	He	518.921	2.2634	132337.70	0.0044	0.0001096
Tl	205	3	He	52.016	1.0814	254714.49	0.0208	0.0002491
Tl	205	3	He	52.726	1.0962	253070.48	0.0208	0.0002491
Tl	205	3	He	51.328	1.0671	248431.29	0.0208	0.0002491
Pb	208	3	He	51.484	1.402	173808.51	0.0272	0.0006218
Pb	208	3	He	51.543	1.4036	171216.52	0.0272	0.0006218
Pb	208	3	He	52.022	1.4167	173582.28	0.0272	0.0006218
U	238	3	He	51.445	1.415	333268.63	0.0275	2.763E-05
U	238	3	He	52.257	1.4373	331815.85	0.0275	2.763E-05
U	238	3	He	51.831	1.4256	331875.31	0.0275	2.763E-05
Sc	45	1	No Gas			2274727.00		
Sc	45	1	No Gas			2284741.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2247030.75		
Ge	72	1	No Gas			1001555.30		
Ge	72	1	No Gas			1018021.55		
Ge	72	1	No Gas			999190.22		
Sc	45	2	H2			135455.29		
Sc	45	2	H2			135354.18		
Sc	45	2	H2			135487.10		
Ge	72	2	H2			111071.69		
Ge	72	2	H2			112613.19		
Ge	72	2	H2			112856.12		
In	115	2	H2			285750.52		
In	115	2	H2			285315.48		
In	115	2	H2			290560.62		
Sc	45	3	He			42655.94		
Sc	45	3	He			44220.05		
Sc	45	3	He			44651.27		
Ge	72	3	He			73980.43		
Ge	72	3	He			73367.91		
Ge	72	3	He			74040.53		
In	115	3	He			59333.21		
In	115	3	He			58620.71		
In	115	3	He			58781.59		
Tb	159	3	He			235532.16		
Tb	159	3	He			230859.68		
Tb	159	3	He			232801.32		
Bi	209	3	He			162649.41		
Bi	209	3	He			162084.52		
Bi	209	3	He			160807.73		

Quantitation Report

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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

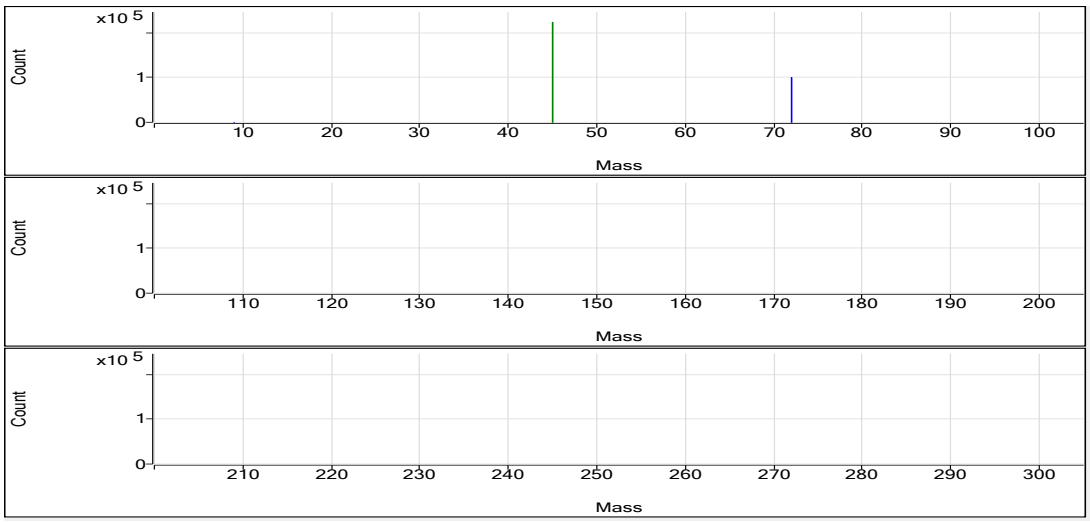
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.073	ppb	35.1	85.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.103	ppb	37.0	5.56	0.0001	Pulse	1.5000	3
Na	23	45	He	147.306	ppb	4.9	40339.41	0.9264	Pulse	0.1000	3
Mg	24	45	He	24.626	ppb	8.8	1786.82	0.0411	Pulse	0.1000	3
Al	27	45	He	5.337	ppb	30.0	140.00	0.0032	Pulse	0.1000	3
K	39	45	He	18.030	ppb	389.1	19518.89	0.4492	Pulse	0.1000	3
Ca	44	45	He	30.736	ppb	36.8	210.01	0.0048	Pulse	0.1000	3
Ti	47	45	He	3.447	ppb	68.7	73.34	0.0017	Pulse	0.1000	3
V	51	45	He	0.319	ppb	13.3	708.69	0.0163	Pulse	0.5000	3
Cr	52	45	He	0.285	ppb	41.0	1096.74	0.0252	Pulse	0.1000	3
Mn	55	45	He	0.797	ppb	33.0	556.69	0.0128	Pulse	0.1000	3
Fe	57	45	He	11.189	ppb	32.1	373.35	0.0086	Pulse	0.1000	3
Co	59	45	He	0.362	ppb	18.2	960.06	0.0220	Pulse	0.1000	3
Ni	60	115	He	0.487	ppb	51.8	953.39	0.0165	Pulse	0.1000	3
Cu	63	72	He	0.384	ppb	9.5	1840.16	0.0251	Pulse	0.1000	3
Zn	66	72	He	0.721	ppb	57.0	356.68	0.0049	Pulse	0.1000	3
As	75	72	He	0.448	ppb	6.2	100.00	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.507	ppb	21.8	326.68	0.0057	Pulse	0.1000	3
Mo	98	115	He	0.063	ppb	7.5	96.67	0.0017	Pulse	0.1000	3
Ag	107	115	He	0.046	ppb	31.7	176.67	0.0031	Pulse	0.1000	3
Cd	111	115	He	0.052	ppb	14.5	17.33	0.0003	Pulse	0.5000	3
Sn	120	115	He	0.228	ppb	63.2	973.39	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.074	ppb	24.5	86.67	0.0015	Pulse	0.1000	3
Ba	137	115	He	0.451	ppb	26.3	120.00	0.0021	Pulse	0.1000	3
Tl	205	159	He	0.393	ppb	2.2	1943.53	0.0084	Pulse	0.1000	3
Pb	208	159	He	0.056	ppb	19.4	496.69	0.0022	Pulse	0.1000	3
U	238	159	He	0.043	ppb	22.8	280.01	0.0012	Pulse	0.1000	3

ISTD Table:

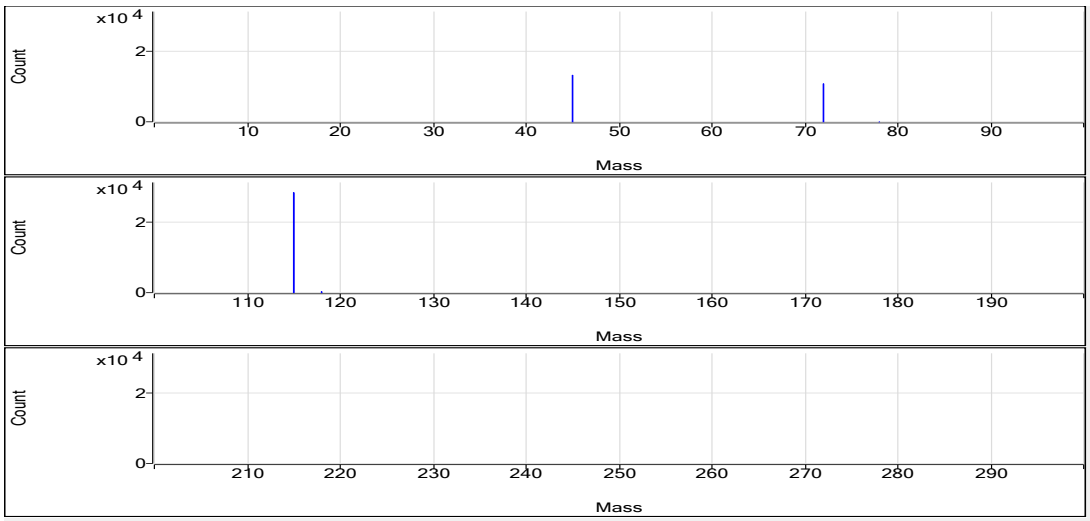
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2231084.86	0.9	97.3	Analog	0.1000	3
No Gas	Ge	72	999444.34	0.3	96.2	Pulse	0.1000	3
H2	Sc	45	131708.37	0.1	94.7	Pulse	0.1000	3
H2	Ge	72	107410.89	2.4	91.0	Pulse	0.1000	3
H2	In	115	282220.49	0.9	95.8	Pulse	0.1000	3
He	Sc	45	43555.34	2.3	93.0	Pulse	0.1000	3
He	Ge	72	73374.41	0.9	95.9	Pulse	0.1000	3
He	In	115	57821.21	0.6	95.4	Pulse	0.1000	3
He	Tb	159	230743.22	0.6	95.7	Pulse	0.1000	3
He	Bi	209	160657.20	1.5	97.0	Pulse	0.1000	3

No Gas

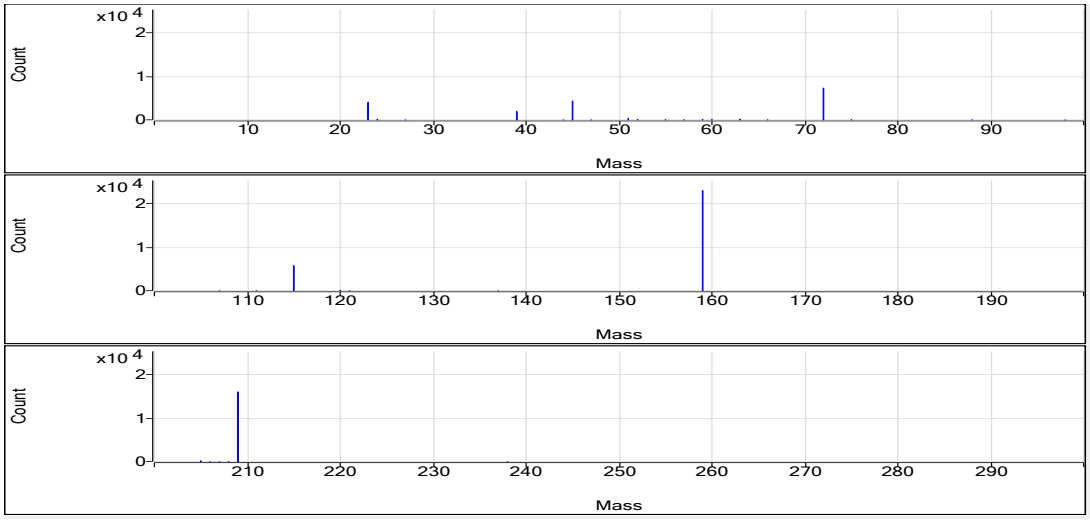


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.101	0	110.00	0.0004	9.309E-06
Be	9	1	No Gas	0.066	0	80.00	0.0004	9.309E-06
Be	9	1	No Gas	0.051	0	66.00	0.0004	9.309E-06
Se	78	2	H2	0.124	0.0001	6.67	0.0004	5.598E-06
Se	78	2	H2	0.059	0	3.33	0.0004	5.598E-06
Se	78	2	H2	0.125	0.0001	6.67	0.0004	5.598E-06
Na	23	3	He	152.308	0.942	39938.45	0.0031	0.4657
Na	23	3	He	138.945	0.9002	39818.35	0.0031	0.4657
Na	23	3	He	150.664	0.9369	41261.42	0.0031	0.4657
Mg	24	3	He	26.786	0.0443	1880.16	0.0015	0.003704
Mg	24	3	He	22.444	0.0378	1670.14	0.0015	0.003704
Mg	24	3	He	24.647	0.0411	1810.16	0.0015	0.003704
Al	27	3	He	4.528	0.0028	120.00	0.0005	0.0007154
Al	27	3	He	7.182	0.0041	180.01	0.0005	0.0007154
Al	27	3	He	4.302	0.0027	120.00	0.0005	0.0007154
K	39	3	He	95.318	0.5332	22606.05	0.0011	0.4296
K	39	3	He	0.391	0.4301	19021.53	0.0011	0.4296
K	39	3	He	-41.619	0.3844	16929.09	0.0011	0.4296
Ca	44	3	He	32.825	0.005	210.01	0.0001	0.002924
Ca	44	3	He	18.53	0.0041	180.01	0.0001	0.002924
Ca	44	3	He	40.852	0.0054	240.01	0.0001	0.002924
Ti	47	3	He	1.461	0.0007	30.00	0.0005	0
Ti	47	3	He	6.069	0.0029	130.01	0.0005	0
Ti	47	3	He	2.813	0.0014	60.00	0.0005	0
V	51	3	He	0.368	0.0173	734.02	0.021	0.009571
V	51	3	He	0.293	0.0157	696.02	0.021	0.009571
V	51	3	He	0.296	0.0158	696.02	0.021	0.009571
Cr	52	3	He	0.278	0.025	1060.08	0.0267	0.01758
Cr	52	3	He	0.172	0.0222	980.06	0.0267	0.01758
Cr	52	3	He	0.405	0.0284	1250.09	0.0267	0.01758
Mn	55	3	He	1.094	0.016	680.04	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.594	0.0106	470.02	0.0108	0.004199
Mn	55	3	He	0.703	0.0118	520.02	0.0108	0.004199
Fe	57	3	He	14.747	0.0104	440.02	0.0005	0.002993
Fe	57	3	He	7.567	0.0068	300.01	0.0005	0.002993
Fe	57	3	He	11.253	0.0086	380.02	0.0005	0.002993
Co	59	3	He	0.343	0.021	890.05	0.0524	0.003063
Co	59	3	He	0.309	0.0192	850.06	0.0524	0.003063
Co	59	3	He	0.436	0.0259	1140.08	0.0524	0.003063
Ni	60	3	He	0.769	0.0196	1130.07	0.0109	0.01116
Ni	60	3	He	0.409	0.0156	910.05	0.0109	0.01116
Ni	60	3	He	0.282	0.0143	820.05	0.0109	0.01116
Cu	63	3	He	0.358	0.0244	1780.15	0.0255	0.01531
Cu	63	3	He	0.368	0.0247	1830.14	0.0255	0.01531
Cu	63	3	He	0.425	0.0261	1910.18	0.0255	0.01531
Zn	66	3	He	0.366	0.0038	280.01	0.0029	0.002787
Zn	66	3	He	0.625	0.0046	340.02	0.0029	0.002787
Zn	66	3	He	1.171	0.0062	450.02	0.0029	0.002787
As	75	3	He	0.426	0.0013	96.00	0.0021	0.0004097
As	75	3	He	0.479	0.0014	106.00	0.0021	0.0004097
As	75	3	He	0.437	0.0013	98.00	0.0021	0.0004097
Sr	88	3	He	0.55	0.0061	350.02	0.0094	0.0008765
Sr	88	3	He	0.381	0.0045	260.01	0.0094	0.0008765
Sr	88	3	He	0.589	0.0064	370.02	0.0094	0.0008765
Mo	98	3	He	0.066	0.0017	100.00	0.023	0.0002199
Mo	98	3	He	0.058	0.0015	90.00	0.023	0.0002199
Mo	98	3	He	0.066	0.0017	100.00	0.023	0.0002199
Ag	107	3	He	0.062	0.0038	220.01	0.0483	0.0008224
Ag	107	3	He	0.033	0.0024	140.00	0.0483	0.0008224
Ag	107	3	He	0.044	0.003	170.01	0.0483	0.0008224
Cd	111	3	He	0.061	0.0003	20.00	0.0053	2.193E-05
Cd	111	3	He	0.047	0.0003	16.00	0.0053	2.193E-05
Cd	111	3	He	0.048	0.0003	16.00	0.0053	2.193E-05
Sn	120	3	He	0.062	0.0144	830.04	0.0148	0.01345
Sn	120	3	He	0.299	0.0179	1040.07	0.0148	0.01345
Sn	120	3	He	0.324	0.0182	1050.07	0.0148	0.01345
Sb	121	3	He	0.054	0.0012	70.00	0.0143	0.0004392
Sb	121	3	He	0.089	0.0017	100.00	0.0143	0.0004392
Sb	121	3	He	0.079	0.0016	90.00	0.0143	0.0004392
Ba	137	3	He	0.571	0.0026	150.01	0.0044	0.0001096
Ba	137	3	He	0.448	0.0021	120.00	0.0044	0.0001096
Ba	137	3	He	0.333	0.0016	90.00	0.0044	0.0001096
Tl	205	3	He	0.403	0.0086	2000.22	0.0208	0.0002491
Tl	205	3	He	0.391	0.0084	1920.19	0.0208	0.0002491
Tl	205	3	He	0.386	0.0083	1910.19	0.0208	0.0002491
Pb	208	3	He	0.067	0.0025	330.02	0.0272	0.0006218
Pb	208	3	He	0.056	0.0021	250.01	0.0272	0.0006218
Pb	208	3	He	0.046	0.0019	210.01	0.0272	0.0006218
U	238	3	He	0.037	0.001	240.01	0.0275	2.763E-05
U	238	3	He	0.054	0.0015	350.02	0.0275	2.763E-05
U	238	3	He	0.038	0.0011	250.01	0.0275	2.763E-05
Sc	45	1	No Gas			2221064.65		
Sc	45	1	No Gas			2255078.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2217111.37		
Ge	72	1	No Gas			997570.22		
Ge	72	1	No Gas			1002822.41		
Ge	72	1	No Gas			997940.38		
Sc	45	2	H2			131785.61		
Sc	45	2	H2			131704.87		
Sc	45	2	H2			131634.63		
Ge	72	2	H2			108999.10		
Ge	72	2	H2			104427.56		
Ge	72	2	H2			108806.00		
In	115	2	H2			283307.01		
In	115	2	H2			283949.80		
In	115	2	H2			279404.66		
Sc	45	3	He			42395.44		
Sc	45	3	He			44230.39		
Sc	45	3	He			44040.18		
Ge	72	3	He			72895.38		
Ge	72	3	He			74141.21		
Ge	72	3	He			73086.65		
In	115	3	He			57747.61		
In	115	3	He			58188.94		
In	115	3	He			57547.52		
Tb	159	3	He			232050.13		
Tb	159	3	He			229511.62		
Tb	159	3	He			230667.91		
Bi	209	3	He			163418.08		
Bi	209	3	He			159556.71		
Bi	209	3	He			158996.80		

Quantitation Report

Data File Name	079SMPL.d
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Sample Name	410-179192-O-1-A
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

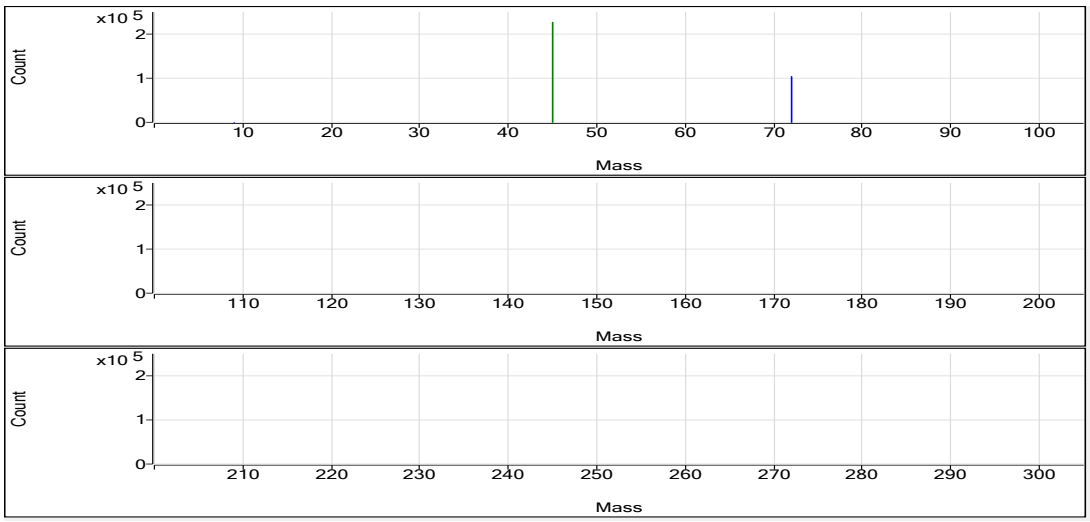
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.022	ppb	31.2	41.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.289	ppb	23.2	15.78	0.0001	Pulse	1.5000	3
Na	23	45	He	63049.873	ppb	2.0	8983714.87	197.6696	Analog	0.1000	3
Mg	24	45	He	36620.874	ppb	1.3	2525788.97	55.5712	Analog	0.1000	3
Al	27	45	He	3.492	ppb	15.4	106.67	0.0023	Pulse	0.1000	3
K	39	45	He	9157.279	ppb	0.7	471879.46	10.3814	Pulse	0.1000	3
Ca	44	45	He	98428.117	ppb	1.1	276713.76	6.0880	Pulse	0.1000	3
Ti	47	45	He	0.910	ppb	50.1	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.838	ppb	8.2	1237.39	0.0272	Pulse	0.5000	3
Cr	52	45	He	0.239	ppb	66.2	1090.07	0.0240	Pulse	0.1000	3
Mn	55	45	He	144.183	ppb	2.1	71085.52	1.5641	Pulse	0.1000	3
Fe	57	45	He	40.311	ppb	6.2	1053.40	0.0232	Pulse	0.1000	3
Co	59	45	He	0.539	ppb	4.3	1423.44	0.0313	Pulse	0.1000	3
Ni	60	115	He	1.366	ppb	9.3	1550.12	0.0261	Pulse	0.1000	3
Cu	63	72	He	0.781	ppb	15.1	2703.65	0.0352	Pulse	0.1000	3
Zn	66	72	He	0.808	ppb	45.4	393.35	0.0051	Pulse	0.1000	3
As	75	72	He	6.514	ppb	2.6	1096.04	0.0143	Pulse	0.5000	3
Sr	88	115	He	1108.851	ppb	0.6	620733.44	10.4527	Pulse	0.1000	3
Mo	98	115	He	4.762	ppb	1.8	6528.21	0.1099	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	1524.4	50.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.023	ppb	95.3	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.086	ppb	N/A	723.37	0.0122	Pulse	0.1000	3
Sb	121	115	He	0.205	ppb	29.0	200.01	0.0034	Pulse	0.1000	3
Ba	137	115	He	43.192	ppb	2.9	11194.41	0.1885	Pulse	0.1000	3
Tl	205	159	He	0.054	ppb	30.3	330.01	0.0014	Pulse	0.1000	3
Pb	208	159	He	0.065	ppb	26.2	580.03	0.0024	Pulse	0.1000	3
U	238	159	He	2.628	ppb	2.3	17464.54	0.0723	Pulse	0.1000	3

ISTD Table:

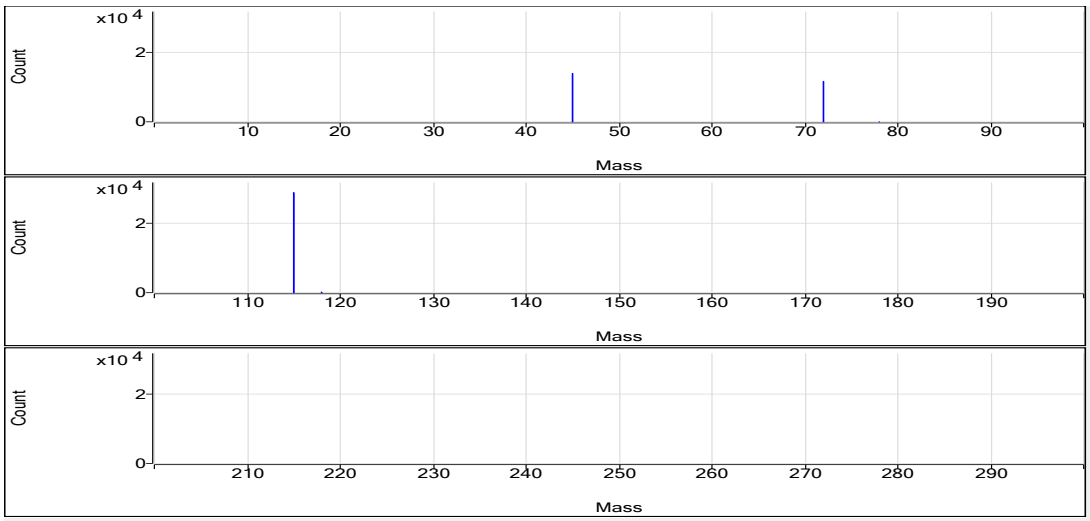
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2272363.56	0.6	99.1	Analog	0.1000	3
No Gas	Ge	72	1037280.56	1.3	99.8	Pulse	0.1000	3
H2	Sc	45	140494.76	0.4	101.0	Pulse	0.1000	3
H2	Ge	72	117056.78	0.6	99.1	Pulse	0.1000	3
H2	In	115	289828.49	0.8	98.4	Pulse	0.1000	3
He	Sc	45	45457.03	1.5	97.1	Pulse	0.1000	3
He	Ge	72	76810.25	2.1	100.4	Pulse	0.1000	3
He	In	115	59385.38	0.3	98.0	Pulse	0.1000	3
He	Tb	159	241561.10	0.7	100.2	Pulse	0.1000	3
He	Bi	209	166162.86	0.0	100.3	Pulse	0.1000	3

No Gas

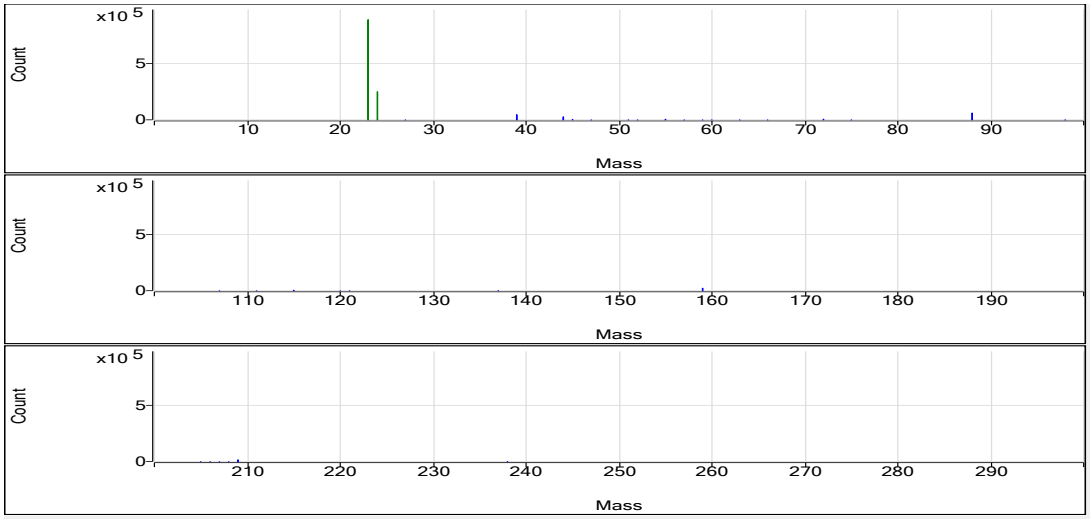


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.014	0	34.00	0.0004	9.309E-06
Be	9	1	No Gas	0.025	0	44.00	0.0004	9.309E-06
Be	9	1	No Gas	0.027	0	46.00	0.0004	9.309E-06
Se	78	2	H2	0.346	0.0002	18.67	0.0004	5.598E-06
Se	78	2	H2	0.305	0.0001	16.67	0.0004	5.598E-06
Se	78	2	H2	0.216	0.0001	12.00	0.0004	5.598E-06
Na	23	3	He	61920.974	194.1387	8945026.12	0.0031	0.4657
Na	23	3	He	62807.037	196.9101	8968129.87	0.0031	0.4657
Na	23	3	He	64421.607	201.96	9037988.62	0.0031	0.4657
Mg	24	3	He	36093.403	54.7708	2523589.18	0.0015	0.003704
Mg	24	3	He	36723.592	55.727	2538048.56	0.0015	0.003704
Mg	24	3	He	37045.628	56.2157	2515729.18	0.0015	0.003704
Al	27	3	He	3.115	0.0022	100.00	0.0005	0.0007154
Al	27	3	He	4.11	0.0026	120.01	0.0005	0.0007154
Al	27	3	He	3.252	0.0022	100.00	0.0005	0.0007154
K	39	3	He	9089.598	10.3079	474940.19	0.0011	0.4296
K	39	3	He	9166.587	10.3916	473275.81	0.0011	0.4296
K	39	3	He	9215.652	10.4449	467422.38	0.0011	0.4296
Ca	44	3	He	97708.739	6.0435	278457.71	0.0001	0.002924
Ca	44	3	He	97901.058	6.0554	275789.20	0.0001	0.002924
Ca	44	3	He	99674.554	6.165	275894.37	0.0001	0.002924
Ti	47	3	He	0.448	0.0002	10.00	0.0005	0
Ti	47	3	He	1.36	0.0007	30.00	0.0005	0
Ti	47	3	He	0.923	0.0004	20.00	0.0005	0
V	51	3	He	0.9	0.0285	1314.06	0.021	0.009571
V	51	3	He	0.849	0.0274	1250.06	0.021	0.009571
V	51	3	He	0.764	0.0257	1148.05	0.021	0.009571
Cr	52	3	He	0.228	0.0237	1090.07	0.0267	0.01758
Cr	52	3	He	0.403	0.0283	1290.09	0.0267	0.01758
Cr	52	3	He	0.087	0.0199	890.05	0.0267	0.01758
Mn	55	3	He	141.429	1.5343	70694.26	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	143.652	1.5584	70974.82	0.0108	0.004199
Mn	55	3	He	147.469	1.5997	71587.48	0.0108	0.004199
Fe	57	3	He	39.527	0.0228	1050.07	0.0005	0.002993
Fe	57	3	He	38.304	0.0222	1010.06	0.0005	0.002993
Fe	57	3	He	43.104	0.0246	1100.06	0.0005	0.002993
Co	59	3	He	0.547	0.0317	1460.11	0.0524	0.003063
Co	59	3	He	0.558	0.0323	1470.10	0.0524	0.003063
Co	59	3	He	0.514	0.0299	1340.10	0.0524	0.003063
Ni	60	3	He	1.458	0.0271	1610.12	0.0109	0.01116
Ni	60	3	He	1.42	0.0267	1580.13	0.0109	0.01116
Ni	60	3	He	1.221	0.0245	1460.11	0.0109	0.01116
Cu	63	3	He	0.897	0.0382	2870.37	0.0255	0.01531
Cu	63	3	He	0.661	0.0322	2470.26	0.0255	0.01531
Cu	63	3	He	0.786	0.0353	2770.33	0.0255	0.01531
Zn	66	3	He	0.741	0.0049	370.02	0.0029	0.002787
Zn	66	3	He	0.479	0.0042	320.02	0.0029	0.002787
Zn	66	3	He	1.204	0.0063	490.02	0.0029	0.002787
As	75	3	He	6.679	0.0146	1100.04	0.0021	0.0004097
As	75	3	He	6.522	0.0143	1098.04	0.0021	0.0004097
As	75	3	He	6.341	0.0139	1090.04	0.0021	0.0004097
Sr	88	3	He	1101.997	10.3881	617041.63	0.0094	0.0008765
Sr	88	3	He	1114.732	10.5081	622163.27	0.0094	0.0008765
Sr	88	3	He	1109.822	10.4618	622995.42	0.0094	0.0008765
Mo	98	3	He	4.815	0.1111	6601.61	0.023	0.0002199
Mo	98	3	He	4.808	0.111	6571.53	0.023	0.0002199
Mo	98	3	He	4.664	0.1077	6411.49	0.023	0.0002199
Ag	107	3	He	0.004	0.001	60.00	0.0483	0.0008224
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Ag	107	3	He	0.004	0.001	60.00	0.0483	0.0008224
Cd	111	3	He	0.046	0.0003	16.00	0.0053	2.193E-05
Cd	111	3	He	0.021	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Sn	120	3	He	-0.09	0.0121	720.04	0.0148	0.01345
Sn	120	3	He	-0.11	0.0118	700.04	0.0148	0.01345
Sn	120	3	He	-0.058	0.0126	750.04	0.0148	0.01345
Sb	121	3	He	0.146	0.0025	150.00	0.0143	0.0004392
Sb	121	3	He	0.264	0.0042	250.01	0.0143	0.0004392
Sb	121	3	He	0.204	0.0034	200.01	0.0143	0.0004392
Ba	137	3	He	42.412	0.1851	10994.35	0.0044	0.0001096
Ba	137	3	He	42.51	0.1855	10984.22	0.0044	0.0001096
Ba	137	3	He	44.655	0.1949	11604.67	0.0044	0.0001096
Tl	205	3	He	0.048	0.0012	300.01	0.0208	0.0002491
Tl	205	3	He	0.041	0.0011	270.01	0.0208	0.0002491
Tl	205	3	He	0.072	0.0018	420.02	0.0208	0.0002491
Pb	208	3	He	0.079	0.0028	390.02	0.0272	0.0006218
Pb	208	3	He	0.071	0.0026	380.02	0.0272	0.0006218
Pb	208	3	He	0.046	0.0019	220.01	0.0272	0.0006218
U	238	3	He	2.672	0.0735	17791.44	0.0275	2.763E-05
U	238	3	He	2.56	0.0704	17110.98	0.0275	2.763E-05
U	238	3	He	2.652	0.073	17491.21	0.0275	2.763E-05
Sc	45	1	No Gas			2265231.37		
Sc	45	1	No Gas			2263485.75		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2288373.56		
Ge	72	1	No Gas			1022992.80		
Ge	72	1	No Gas			1039693.11		
Ge	72	1	No Gas			1049155.77		
Sc	45	2	H2			140175.50		
Sc	45	2	H2			141062.97		
Sc	45	2	H2			140245.81		
Ge	72	2	H2			116289.00		
Ge	72	2	H2			117245.18		
Ge	72	2	H2			117636.16		
In	115	2	H2			288245.68		
In	115	2	H2			292635.70		
In	115	2	H2			288604.08		
Sc	45	3	He			46075.44		
Sc	45	3	He			45544.29		
Sc	45	3	He			44751.37		
Ge	72	3	He			75216.04		
Ge	72	3	He			76833.43		
Ge	72	3	He			78381.27		
In	115	3	He			59404.02		
In	115	3	He			59212.74		
In	115	3	He			59554.57		
Tb	159	3	He			242026.38		
Tb	159	3	He			242915.54		
Tb	159	3	He			239741.38		
Bi	209	3	He			166249.10		
Bi	209	3	He			166099.63		
Bi	209	3	He			166139.84		

Quantitation Report

Data File Name	080SMPL.d
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Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

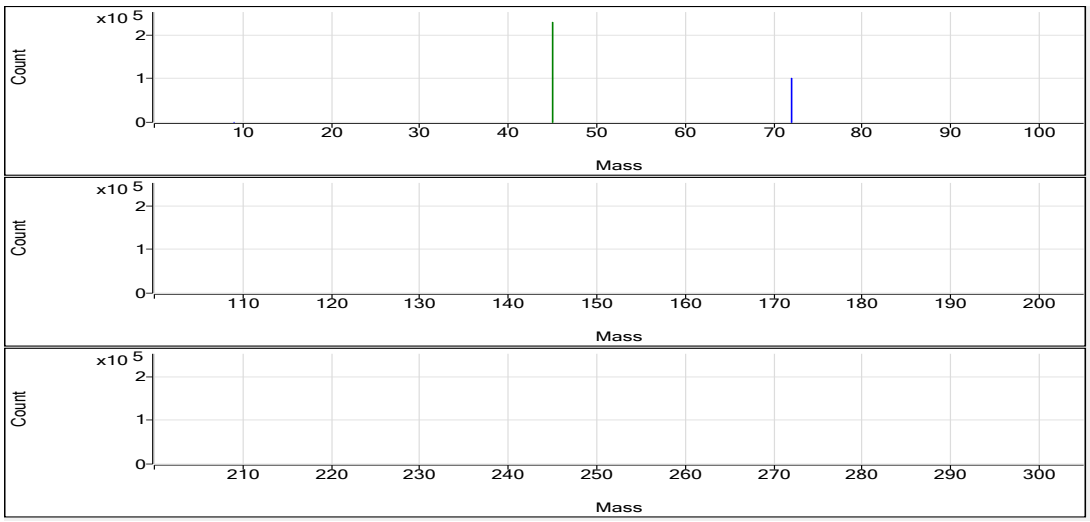
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.024	ppb	44.5	43.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	3.822	ppb	3.2	199.11	0.0017	Pulse	1.5000	3
Na	23	45	He	390812.498	ppb	2.3	54888667.52	1,222.8276	Analog	0.1000	3
Mg	24	45	He	116250.255	ppb	1.6	7918919.88	176.3985	Analog	0.1000	3
Al	27	45	He	4.018	ppb	27.7	116.67	0.0026	Pulse	0.1000	3
K	39	45	He	11194.968	ppb	3.1	565323.81	12.5959	Pulse	0.1000	3
Ca	44	45	He	209833.843	ppb	2.5	582407.79	12.9754	Pulse	0.1000	3
Ti	47	45	He	0.770	ppb	36.3	16.67	0.0004	Pulse	0.1000	3
V	51	45	He	0.941	ppb	2.7	1318.73	0.0294	Pulse	0.5000	3
Cr	52	45	He	0.434	ppb	24.8	1310.09	0.0292	Pulse	0.1000	3
Mn	55	45	He	9.420	ppb	6.9	4764.15	0.1061	Pulse	0.1000	3
Fe	57	45	He	15.192	ppb	12.9	476.69	0.0106	Pulse	0.1000	3
Co	59	45	He	5.785	ppb	6.0	13722.86	0.3059	Pulse	0.1000	3
Ni	60	115	He	1.739	ppb	20.4	1766.83	0.0302	Pulse	0.1000	3
Cu	63	72	He	1.951	ppb	5.7	4850.88	0.0650	Pulse	0.1000	3
Zn	66	72	He	4.834	ppb	7.6	1246.75	0.0167	Pulse	0.1000	3
As	75	72	He	1.771	ppb	1.2	312.01	0.0042	Pulse	0.5000	3
Sr	88	115	He	2453.161	ppb	0.6	1354814.77	23.1239	Pulse	0.1000	3
Mo	98	115	He	1.976	ppb	1.6	2680.31	0.0457	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	447.9	53.33	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.023	ppb	60.8	8.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.121	ppb	N/A	683.37	0.0117	Pulse	0.1000	3
Sb	121	115	He	0.701	ppb	18.1	613.37	0.0105	Pulse	0.1000	3
Ba	137	115	He	60.054	ppb	0.6	15354.74	0.2620	Pulse	0.1000	3
Tl	205	159	He	0.044	ppb	6.3	283.34	0.0012	Pulse	0.1000	3
Pb	208	159	He	0.030	ppb	4.8	350.01	0.0014	Pulse	0.1000	3
U	238	159	He	8.686	ppb	0.7	57693.71	0.2389	Pulse	0.1000	3

ISTD Table:

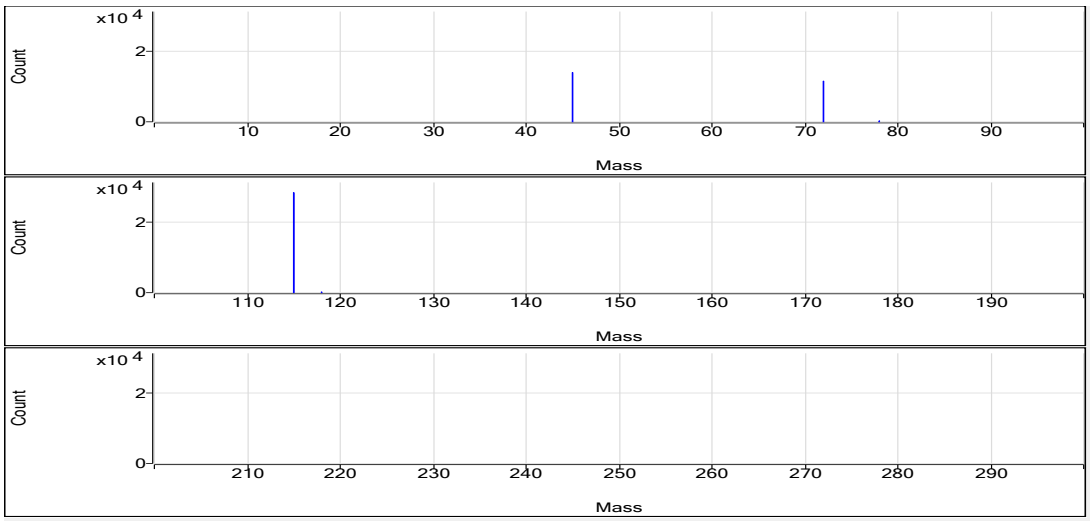
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2295578.46	0.7	100.1	Analog	0.1000	3
No Gas	Ge	72	1014175.19	0.5	97.6	Pulse	0.1000	3
H2	Sc	45	140335.01	0.3	100.9	Pulse	0.1000	3
H2	Ge	72	116097.05	0.4	98.3	Pulse	0.1000	3
H2	In	115	284675.34	0.4	96.6	Pulse	0.1000	3
He	Sc	45	44905.55	2.7	95.9	Pulse	0.1000	3
He	Ge	72	74633.40	1.7	97.6	Pulse	0.1000	3
He	In	115	58592.79	1.5	96.6	Pulse	0.1000	3
He	Tb	159	241460.44	0.4	100.1	Pulse	0.1000	3
He	Bi	209	160711.03	1.2	97.0	Pulse	0.1000	3

No Gas

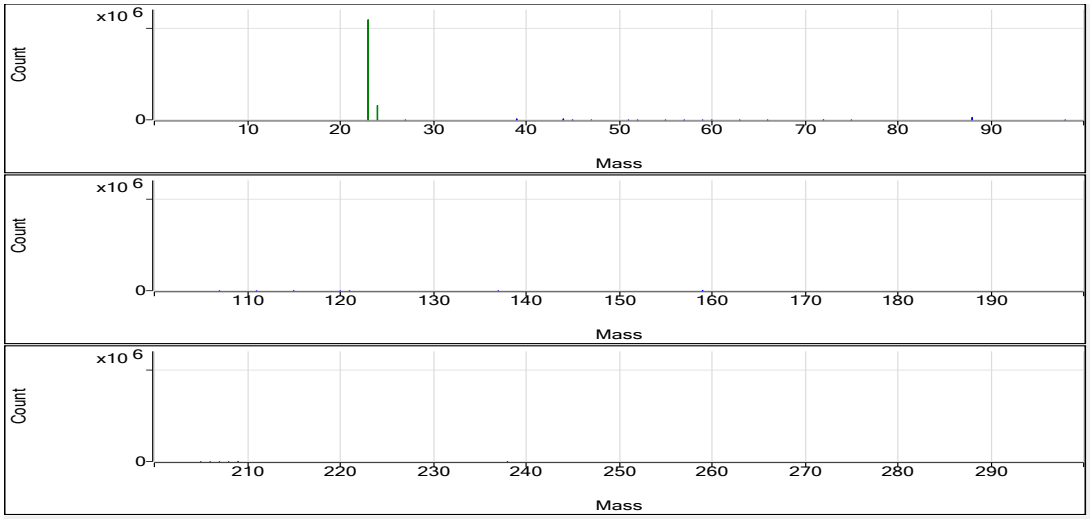


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.012	0	32.00	0.0004	9.309E-06
Be	9	1	No Gas	0.029	0	48.00	0.0004	9.309E-06
Be	9	1	No Gas	0.032	0	50.00	0.0004	9.309E-06
Se	78	2	H2	3.765	0.0017	196.67	0.0004	5.598E-06
Se	78	2	H2	3.961	0.0018	205.34	0.0004	5.598E-06
Se	78	2	H2	3.741	0.0017	195.33	0.0004	5.598E-06
Na	23	3	He	400070.84	1251.7854	54576114.19	0.0031	0.4657
Na	23	3	He	381996.685	1195.254	55024259.18	0.0031	0.4657
Na	23	3	He	390369.97	1221.4435	55065629.18	0.0031	0.4657
Mg	24	3	He	118323.507	179.5444	7827889.88	0.0015	0.003704
Mg	24	3	He	114593.891	173.8852	8004914.26	0.0015	0.003704
Mg	24	3	He	115833.368	175.766	7923955.51	0.0015	0.003704
Al	27	3	He	2.888	0.0021	90.00	0.0005	0.0007154
Al	27	3	He	4.049	0.0026	120.00	0.0005	0.0007154
Al	27	3	He	5.117	0.0031	140.00	0.0005	0.0007154
K	39	3	He	11522.733	12.9521	564694.84	0.0011	0.4296
K	39	3	He	10827.467	12.1965	561475.11	0.0011	0.4296
K	39	3	He	11234.703	12.6391	569801.48	0.0011	0.4296
Ca	44	3	He	214853.785	13.2857	579238.62	0.0001	0.002924
Ca	44	3	He	204506.038	12.646	582165.85	0.0001	0.002924
Ca	44	3	He	210141.707	12.9944	585818.90	0.0001	0.002924
Ti	47	3	He	0.947	0.0005	20.00	0.0005	0
Ti	47	3	He	0.448	0.0002	10.00	0.0005	0
Ti	47	3	He	0.916	0.0004	20.00	0.0005	0
V	51	3	He	0.962	0.0298	1300.06	0.021	0.009571
V	51	3	He	0.947	0.0295	1358.06	0.021	0.009571
V	51	3	He	0.913	0.0288	1298.06	0.021	0.009571
Cr	52	3	He	0.467	0.03	1310.09	0.0267	0.01758
Cr	52	3	He	0.522	0.0315	1450.11	0.0267	0.01758
Cr	52	3	He	0.314	0.026	1170.08	0.0267	0.01758
Mn	55	3	He	9.26	0.1044	4550.75	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	8.869	0.1002	4610.74	0.0108	0.004199
Mn	55	3	He	10.132	0.1138	5130.97	0.0108	0.004199
Fe	57	3	He	14.175	0.0101	440.02	0.0005	0.002993
Fe	57	3	He	17.446	0.0117	540.02	0.0005	0.002993
Fe	57	3	He	13.955	0.01	450.02	0.0005	0.002993
Co	59	3	He	6.161	0.3256	14196.70	0.0524	0.003063
Co	59	3	He	5.471	0.2895	13325.75	0.0524	0.003063
Co	59	3	He	5.723	0.3027	13646.14	0.0524	0.003063
Ni	60	3	He	1.795	0.0308	1780.17	0.0109	0.01116
Ni	60	3	He	1.361	0.026	1550.12	0.0109	0.01116
Ni	60	3	He	2.063	0.0337	1970.20	0.0109	0.01116
Cu	63	3	He	1.972	0.0656	4830.89	0.0255	0.01531
Cu	63	3	He	1.83	0.0619	4710.81	0.0255	0.01531
Cu	63	3	He	2.051	0.0676	5010.94	0.0255	0.01531
Zn	66	3	He	4.833	0.0167	1230.09	0.0029	0.002787
Zn	66	3	He	5.201	0.0178	1350.09	0.0029	0.002787
Zn	66	3	He	4.468	0.0156	1160.07	0.0029	0.002787
As	75	3	He	1.759	0.0042	306.01	0.0021	0.0004097
As	75	3	He	1.797	0.0042	322.01	0.0021	0.0004097
As	75	3	He	1.759	0.0042	308.01	0.0021	0.0004097
Sr	88	3	He	2463.143	23.218	1342557.48	0.0094	0.0008765
Sr	88	3	He	2435.893	22.9611	1366636.07	0.0094	0.0008765
Sr	88	3	He	2460.446	23.1926	1355250.76	0.0094	0.0008765
Mo	98	3	He	1.95	0.0451	2610.30	0.023	0.0002199
Mo	98	3	He	1.967	0.0455	2710.33	0.023	0.0002199
Mo	98	3	He	2.011	0.0466	2720.31	0.023	0.0002199
Ag	107	3	He	0.012	0.0014	80.00	0.0483	0.0008224
Ag	107	3	He	-0.003	0.0007	40.00	0.0483	0.0008224
Ag	107	3	He	-0.003	0.0007	40.00	0.0483	0.0008224
Cd	111	3	He	0.015	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.04	0.0002	14.00	0.0053	2.193E-05
Cd	111	3	He	0.015	0.0001	6.00	0.0053	2.193E-05
Sn	120	3	He	-0.231	0.01	580.03	0.0148	0.01345
Sn	120	3	He	-0.126	0.0116	690.04	0.0148	0.01345
Sn	120	3	He	-0.007	0.0133	780.05	0.0148	0.01345
Sb	121	3	He	0.598	0.009	520.03	0.0143	0.0004392
Sb	121	3	He	0.662	0.0099	590.03	0.0143	0.0004392
Sb	121	3	He	0.842	0.0125	730.04	0.0143	0.0004392
Ba	137	3	He	59.68	0.2604	15057.84	0.0044	0.0001096
Ba	137	3	He	60.446	0.2638	15698.37	0.0044	0.0001096
Ba	137	3	He	60.037	0.262	15308.00	0.0044	0.0001096
Tl	205	3	He	0.048	0.0012	300.01	0.0208	0.0002491
Tl	205	3	He	0.042	0.0011	270.01	0.0208	0.0002491
Tl	205	3	He	0.044	0.0012	280.01	0.0208	0.0002491
Pb	208	3	He	0.03	0.0014	220.01	0.0272	0.0006218
Pb	208	3	He	0.029	0.0014	120.00	0.0272	0.0006218
Pb	208	3	He	0.032	0.0015	170.01	0.0272	0.0006218
U	238	3	He	8.628	0.2373	57546.77	0.0275	2.763E-05
U	238	3	He	8.679	0.2387	57445.68	0.0275	2.763E-05
U	238	3	He	8.752	0.2408	58088.69	0.0275	2.763E-05
Sc	45	1	No Gas			2285267.31		
Sc	45	1	No Gas			2315084.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2286384.03		
Ge	72	1	No Gas			1015719.75		
Ge	72	1	No Gas			1018291.08		
Ge	72	1	No Gas			1008514.75		
Sc	45	2	H2			140758.19		
Sc	45	2	H2			140073.59		
Sc	45	2	H2			140173.26		
Ge	72	2	H2			116408.33		
Ge	72	2	H2			115543.34		
Ge	72	2	H2			116339.48		
In	115	2	H2			285626.27		
In	115	2	H2			283487.36		
In	115	2	H2			284912.38		
Sc	45	3	He			43598.62		
Sc	45	3	He			46035.62		
Sc	45	3	He			45082.42		
Ge	72	3	He			73689.00		
Ge	72	3	He			76050.53		
Ge	72	3	He			74160.68		
In	115	3	He			57828.12		
In	115	3	He			59524.41		
In	115	3	He			58440.20		
Tb	159	3	He			242482.91		
Tb	159	3	He			240619.23		
Tb	159	3	He			241279.18		
Bi	209	3	He			158503.19		
Bi	209	3	He			162183.24		
Bi	209	3	He			161446.66		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 10:12:24 AM
Sample Name	410-179192-O-2-A
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

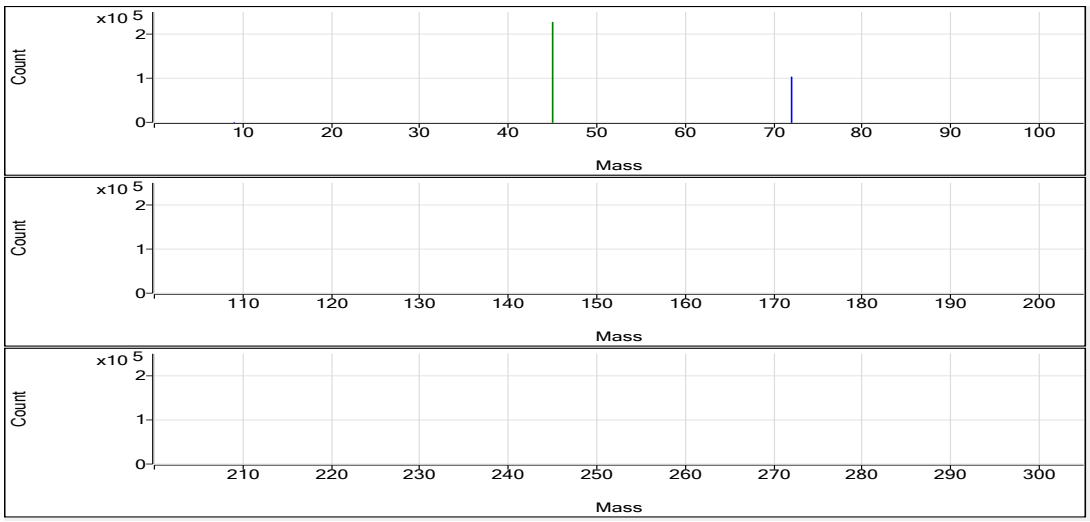
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.010	ppb	139.0	30.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	2.978	ppb	3.0	158.22	0.0013	Pulse	1.5000	3
Na	23	45	He	94360.316	ppb	0.3	13495560.22	295.6007	Analog	0.1000	3
Mg	24	45	He	40053.226	ppb	1.4	2774630.69	60.7793	Analog	0.1000	3
Al	27	45	He	2.372	ppb	28.8	83.33	0.0018	Pulse	0.1000	3
K	39	45	He	14863.226	ppb	0.6	757051.97	16.5825	Pulse	0.1000	3
Ca	44	45	He	101084.534	ppb	1.3	285417.01	6.2522	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	0.262	ppb	16.1	688.69	0.0151	Pulse	0.5000	3
Cr	52	45	He	0.225	ppb	28.8	1076.75	0.0236	Pulse	0.1000	3
Mn	55	45	He	781.793	ppb	0.6	386330.71	8.4624	Pulse	0.1000	3
Fe	57	45	He	431.910	ppb	1.7	10013.38	0.2193	Pulse	0.1000	3
Co	59	45	He	0.866	ppb	4.1	2210.23	0.0484	Pulse	0.1000	3
Ni	60	115	He	1.981	ppb	2.6	1946.84	0.0328	Pulse	0.1000	3
Cu	63	72	He	0.375	ppb	19.4	1893.51	0.0249	Pulse	0.1000	3
Zn	66	72	He	0.705	ppb	18.2	366.68	0.0048	Pulse	0.1000	3
As	75	72	He	10.234	ppb	1.3	1690.10	0.0222	Pulse	0.5000	3
Sr	88	115	He	1093.315	ppb	1.3	611344.06	10.3062	Pulse	0.1000	3
Mo	98	115	He	3.193	ppb	6.8	4374.08	0.0738	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	110.9	63.33	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.017	ppb	76.8	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.101	ppb	N/A	710.04	0.0120	Pulse	0.1000	3
Sb	121	115	He	0.158	ppb	26.1	160.01	0.0027	Pulse	0.1000	3
Ba	137	115	He	47.823	ppb	0.9	12382.07	0.2087	Pulse	0.1000	3
Tl	205	159	He	0.028	ppb	43.0	200.01	0.0008	Pulse	0.1000	3
Pb	208	159	He	0.030	ppb	29.8	350.01	0.0015	Pulse	0.1000	3
U	238	159	He	2.007	ppb	1.5	13306.68	0.0552	Pulse	0.1000	3

ISTD Table:

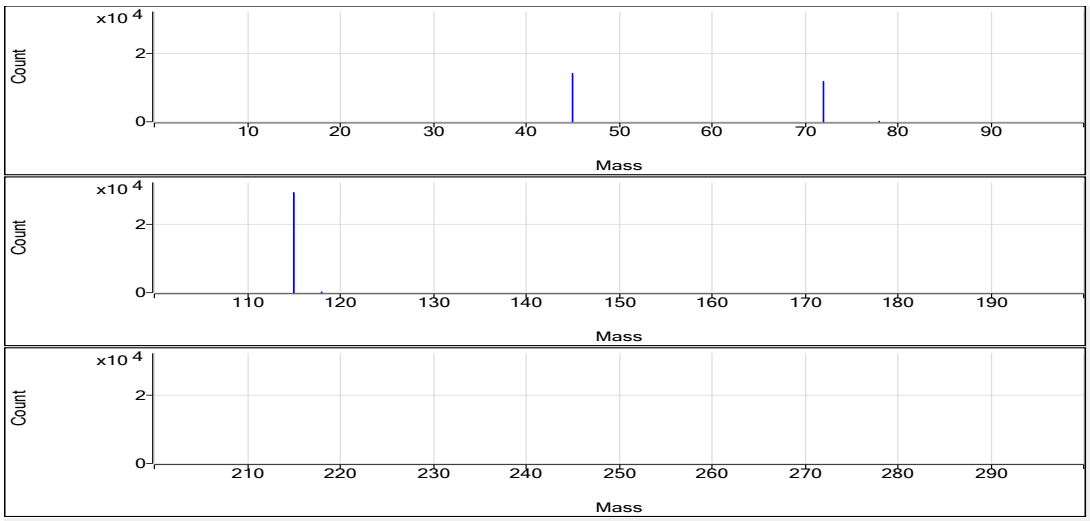
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2286991.63	0.5	99.7	Analog	0.1000	3
No Gas	Ge	72	1036575.24	1.1	99.8	Pulse	0.1000	3
H2	Sc	45	142397.31	1.5	102.4	Pulse	0.1000	3
H2	Ge	72	118266.02	0.9	100.2	Pulse	0.1000	3
H2	In	115	293667.72	1.2	99.7	Pulse	0.1000	3
He	Sc	45	45654.27	1.0	97.5	Pulse	0.1000	3
He	Ge	72	76150.59	1.1	99.6	Pulse	0.1000	3
He	In	115	59328.60	2.0	97.9	Pulse	0.1000	3
He	Tb	159	240918.79	1.0	99.9	Pulse	0.1000	3
He	Bi	209	166887.12	1.2	100.7	Pulse	0.1000	3

No Gas

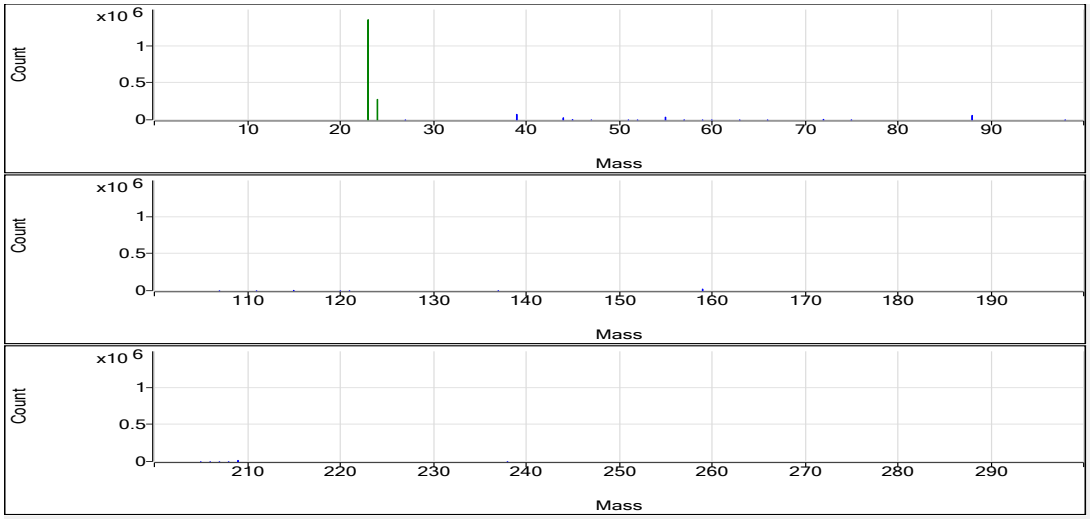


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.023	0	42.00	0.0004	9.309E-06
Be	9	1	No Gas	-0.004	0	18.00	0.0004	9.309E-06
Be	9	1	No Gas	0.009	0	30.00	0.0004	9.309E-06
Se	78	2	H2	3.082	0.0014	164.67	0.0004	5.598E-06
Se	78	2	H2	2.937	0.0013	156.67	0.0004	5.598E-06
Se	78	2	H2	2.916	0.0013	153.33	0.0004	5.598E-06
Na	23	3	He	94149.432	294.9411	13515576.05	0.0031	0.4657
Na	23	3	He	94261.778	295.2925	13330401.05	0.0031	0.4657
Na	23	3	He	94669.738	296.5685	13640703.55	0.0031	0.4657
Mg	24	3	He	40264.863	61.1005	2799908.08	0.0015	0.003704
Mg	24	3	He	40488.016	61.4391	2773546.52	0.0015	0.003704
Mg	24	3	He	39406.798	59.7985	2750437.46	0.0015	0.003704
Al	27	3	He	2.206	0.0017	80.00	0.0005	0.0007154
Al	27	3	He	1.788	0.0016	70.00	0.0005	0.0007154
Al	27	3	He	3.123	0.0022	100.00	0.0005	0.0007154
K	39	3	He	14955.521	16.6828	764481.71	0.0011	0.4296
K	39	3	He	14870.683	16.5906	748948.27	0.0011	0.4296
K	39	3	He	14763.476	16.4741	757725.93	0.0011	0.4296
Ca	44	3	He	100164.377	6.1953	283898.92	0.0001	0.002924
Ca	44	3	He	102602.27	6.346	286479.86	0.0001	0.002924
Ca	44	3	He	100486.956	6.2153	285872.24	0.0001	0.002924
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.3	0.0159	728.02	0.021	0.009571
V	51	3	He	0.269	0.0152	688.02	0.021	0.009571
V	51	3	He	0.217	0.0141	650.02	0.021	0.009571
Cr	52	3	He	0.151	0.0216	990.08	0.0267	0.01758
Cr	52	3	He	0.254	0.0244	1100.08	0.0267	0.01758
Cr	52	3	He	0.27	0.0248	1140.08	0.0267	0.01758
Mn	55	3	He	778.757	8.4296	386282.34	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	787.356	8.5226	384736.36	0.0108	0.004199
Mn	55	3	He	779.268	8.4351	387973.43	0.0108	0.004199
Fe	57	3	He	426.384	0.2166	9923.40	0.0005	0.002993
Fe	57	3	He	429.368	0.218	9843.25	0.0005	0.002993
Fe	57	3	He	439.979	0.2234	10273.50	0.0005	0.002993
Co	59	3	He	0.905	0.0504	2310.26	0.0524	0.003063
Co	59	3	He	0.834	0.0467	2110.21	0.0524	0.003063
Co	59	3	He	0.859	0.0481	2210.21	0.0524	0.003063
Ni	60	3	He	2.021	0.0333	1970.19	0.0109	0.01116
Ni	60	3	He	1.923	0.0322	1950.17	0.0109	0.01116
Ni	60	3	He	1.998	0.033	1920.17	0.0109	0.01116
Cu	63	3	He	0.4	0.0255	1960.18	0.0255	0.01531
Cu	63	3	He	0.293	0.0228	1740.15	0.0255	0.01531
Cu	63	3	He	0.433	0.0263	1980.19	0.0255	0.01531
Zn	66	3	He	0.614	0.0046	350.02	0.0029	0.002787
Zn	66	3	He	0.851	0.0052	400.02	0.0029	0.002787
Zn	66	3	He	0.649	0.0047	350.01	0.0029	0.002787
As	75	3	He	10.382	0.0225	1730.10	0.0021	0.0004097
As	75	3	He	10.14	0.022	1680.10	0.0021	0.0004097
As	75	3	He	10.18	0.0221	1660.10	0.0021	0.0004097
Sr	88	3	He	1095.809	10.3298	611916.20	0.0094	0.0008765
Sr	88	3	He	1077.575	10.1579	615391.90	0.0094	0.0008765
Sr	88	3	He	1106.562	10.4311	606724.09	0.0094	0.0008765
Mo	98	3	He	3.332	0.077	4560.85	0.023	0.0002199
Mo	98	3	He	2.943	0.068	4120.64	0.023	0.0002199
Mo	98	3	He	3.304	0.0763	4440.75	0.023	0.0002199
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	0.003	0.001	60.00	0.0483	0.0008224
Ag	107	3	He	0.011	0.0014	80.00	0.0483	0.0008224
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Cd	111	3	He	0.027	0.0002	10.00	0.0053	2.193E-05
Cd	111	3	He	0.022	0.0001	8.00	0.0053	2.193E-05
Sn	120	3	He	-0.099	0.012	710.04	0.0148	0.01345
Sn	120	3	He	-0.061	0.0125	760.04	0.0148	0.01345
Sn	120	3	He	-0.142	0.0113	660.04	0.0148	0.01345
Sb	121	3	He	0.205	0.0034	200.01	0.0143	0.0004392
Sb	121	3	He	0.131	0.0023	140.01	0.0143	0.0004392
Sb	121	3	He	0.138	0.0024	140.01	0.0143	0.0004392
Ba	137	3	He	47.33	0.2065	12235.27	0.0044	0.0001096
Ba	137	3	He	48.211	0.2104	12745.66	0.0044	0.0001096
Ba	137	3	He	47.928	0.2092	12165.27	0.0044	0.0001096
Tl	205	3	He	0.042	0.0011	270.01	0.0208	0.0002491
Tl	205	3	He	0.022	0.0007	170.01	0.0208	0.0002491
Tl	205	3	He	0.02	0.0007	160.01	0.0208	0.0002491
Pb	208	3	He	0.027	0.0014	240.01	0.0272	0.0006218
Pb	208	3	He	0.023	0.0013	170.01	0.0272	0.0006218
Pb	208	3	He	0.041	0.0017	300.01	0.0272	0.0006218
U	238	3	He	1.975	0.0543	13136.43	0.0275	2.763E-05
U	238	3	He	2.035	0.056	13346.71	0.0275	2.763E-05
U	238	3	He	2.012	0.0554	13436.90	0.0275	2.763E-05
Sc	45	1	No Gas			2273125.12		
Sc	45	1	No Gas			2294778.40		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2293071.37		
Ge	72	1	No Gas			1023549.20		
Ge	72	1	No Gas			1045847.64		
Ge	72	1	No Gas			1040328.89		
Sc	45	2	H2			144895.10		
Sc	45	2	H2			141084.10		
Sc	45	2	H2			141212.74		
Ge	72	2	H2			118967.58		
Ge	72	2	H2			118755.64		
Ge	72	2	H2			117074.83		
In	115	2	H2			297741.83		
In	115	2	H2			292287.14		
In	115	2	H2			290974.19		
Sc	45	3	He			45824.66		
Sc	45	3	He			45143.04		
Sc	45	3	He			45995.12		
Ge	72	3	He			76863.68		
Ge	72	3	He			76392.09		
Ge	72	3	He			75196.00		
In	115	3	He			59243.19		
In	115	3	He			60588.02		
In	115	3	He			58169.51		
Tb	159	3	He			241762.14		
Tb	159	3	He			238322.63		
Tb	159	3	He			242671.60		
Bi	209	3	He			166150.13		
Bi	209	3	He			169070.54		
Bi	209	3	He			165440.68		

Quantitation Report

Data File Name	082SMPL.d
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Acq Time	7/17/2024 10:14:22 AM
Sample Name	410-179192-O-4-A
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

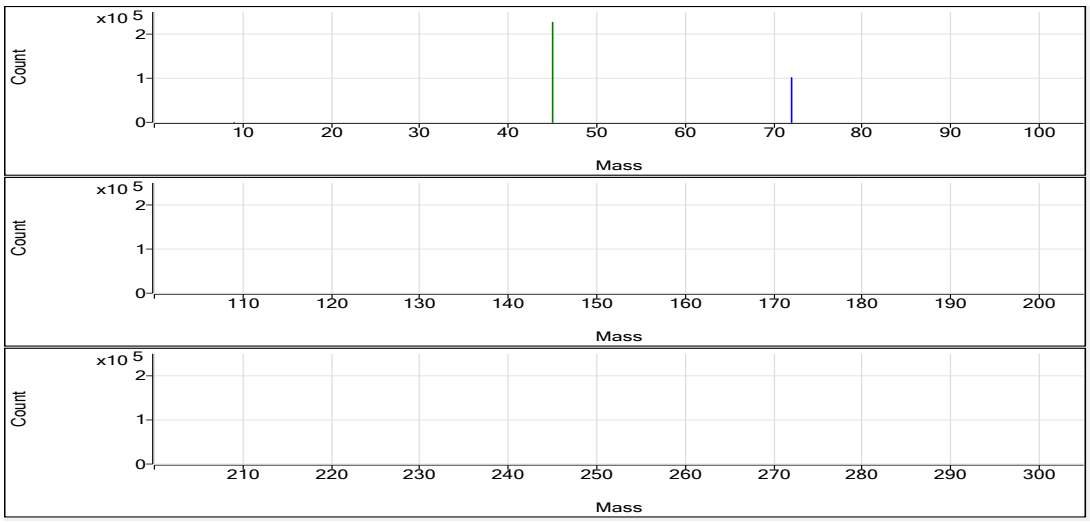
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.026	ppb	48.8	44.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	3.379	ppb	7.1	178.00	0.0015	Pulse	1.5000	3
Na	23	45	He	443249.123	ppb	1.5	61783034.08	1,386.8360	Analog	0.1000	3
Mg	24	45	He	158936.027	ppb	0.6	10744148.59	241.1687	Analog	0.1000	3
Al	27	45	He	8.231	ppb	34.7	203.34	0.0046	Pulse	0.1000	3
K	39	45	He	12182.013	ppb	0.4	608952.88	13.6686	Pulse	0.1000	3
Ca	44	45	He	258113.317	ppb	1.7	711009.47	15.9601	Pulse	0.1000	3
Ti	47	45	He	0.620	ppb	114.9	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.584	ppb	13.7	974.04	0.0219	Pulse	0.5000	3
Cr	52	45	He	0.331	ppb	24.1	1176.75	0.0264	Pulse	0.1000	3
Mn	55	45	He	6.797	ppb	3.9	3463.82	0.0777	Pulse	0.1000	3
Fe	57	45	He	15.255	ppb	35.0	473.36	0.0106	Pulse	0.1000	3
Co	59	45	He	0.726	ppb	4.2	1830.16	0.0411	Pulse	0.1000	3
Ni	60	115	He	1.325	ppb	12.6	1513.45	0.0257	Pulse	0.1000	3
Cu	63	72	He	2.103	ppb	2.8	5134.33	0.0689	Pulse	0.1000	3
Zn	66	72	He	1.131	ppb	13.3	450.02	0.0060	Pulse	0.1000	3
As	75	72	He	1.670	ppb	11.7	295.34	0.0040	Pulse	0.5000	3
Sr	88	115	He	3069.840	ppb	0.5	1706939.97	28.9366	Analog	0.1000	3
Mo	98	115	He	1.412	ppb	9.6	1930.18	0.0327	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	40.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.036	ppb	26.4	12.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.203	ppb	N/A	616.70	0.0105	Pulse	0.1000	3
Sb	121	115	He	0.214	ppb	10.7	206.68	0.0035	Pulse	0.1000	3
Ba	137	115	He	57.869	ppb	1.0	14894.32	0.2525	Pulse	0.1000	3
Tl	205	159	He	0.035	ppb	41.3	233.34	0.0010	Pulse	0.1000	3
Pb	208	159	He	0.058	ppb	25.8	533.36	0.0022	Pulse	0.1000	3
U	238	159	He	9.260	ppb	0.6	61362.40	0.2547	Pulse	0.1000	3

ISTD Table:

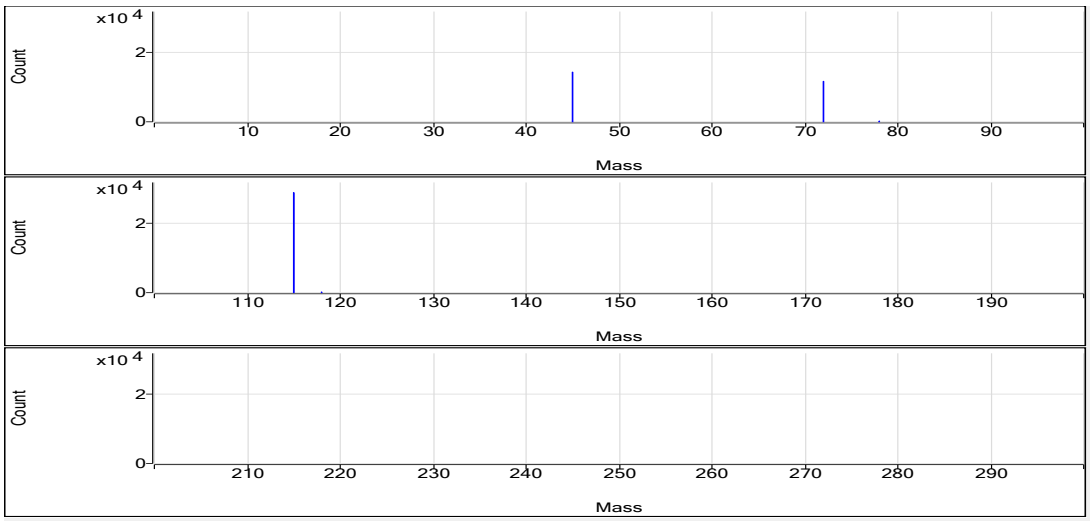
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2272547.47	1.2	99.1	Analog	0.1000	3
No Gas	Ge	72	1012170.56	1.0	97.4	Pulse	0.1000	3
H2	Sc	45	144047.32	1.2	103.6	Pulse	0.1000	3
H2	Ge	72	117353.57	0.6	99.4	Pulse	0.1000	3
H2	In	115	289419.30	0.2	98.2	Pulse	0.1000	3
He	Sc	45	44551.11	0.5	95.1	Pulse	0.1000	3
He	Ge	72	74543.02	1.2	97.5	Pulse	0.1000	3
He	In	115	58988.42	0.9	97.3	Pulse	0.1000	3
He	Tb	159	240891.93	0.7	99.9	Pulse	0.1000	3
He	Bi	209	162427.08	1.5	98.0	Pulse	0.1000	3

No Gas

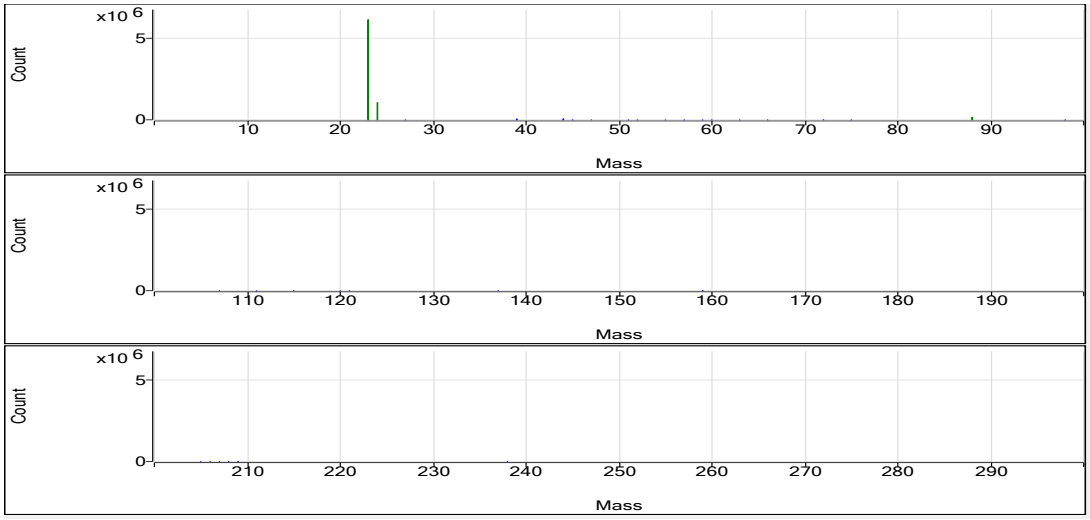


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.014	0	34.00	0.0004	9.309E-06
Be	9	1	No Gas	0.025	0	44.00	0.0004	9.309E-06
Be	9	1	No Gas	0.039	0	56.00	0.0004	9.309E-06
Se	78	2	H2	3.578	0.0016	187.33	0.0004	5.598E-06
Se	78	2	H2	3.11	0.0014	164.00	0.0004	5.598E-06
Se	78	2	H2	3.449	0.0015	182.67	0.0004	5.598E-06
Na	23	3	He	435695.952	1363.2116	60896354.09	0.0031	0.4657
Na	23	3	He	445502.669	1393.8845	62294624.07	0.0031	0.4657
Na	23	3	He	448548.749	1403.4119	62158124.07	0.0031	0.4657
Mg	24	3	He	158101.947	239.9031	10716769.84	0.0015	0.003704
Mg	24	3	He	158806.595	240.9723	10769386.09	0.0015	0.003704
Mg	24	3	He	159899.538	242.6307	10746289.84	0.0015	0.003704
Al	27	3	He	8.534	0.0047	210.01	0.0005	0.0007154
Al	27	3	He	10.925	0.0058	260.02	0.0005	0.0007154
Al	27	3	He	5.236	0.0032	140.00	0.0005	0.0007154
K	39	3	He	12130.253	13.6124	608080.89	0.0011	0.4296
K	39	3	He	12239.03	13.7306	613638.23	0.0011	0.4296
K	39	3	He	12176.757	13.6629	605139.52	0.0011	0.4296
Ca	44	3	He	253333.799	15.6646	699758.82	0.0001	0.002924
Ca	44	3	He	258820.663	16.0038	715234.13	0.0001	0.002924
Ca	44	3	He	262185.489	16.2119	718035.46	0.0001	0.002924
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.462	0.0002	10.00	0.0005	0
Ti	47	3	He	1.398	0.0007	30.00	0.0005	0
V	51	3	He	0.494	0.02	892.03	0.021	0.009571
V	51	3	He	0.647	0.0232	1036.04	0.021	0.009571
V	51	3	He	0.612	0.0224	994.04	0.021	0.009571
Cr	52	3	He	0.256	0.0244	1090.07	0.0267	0.01758
Cr	52	3	He	0.415	0.0286	1280.11	0.0267	0.01758
Cr	52	3	He	0.323	0.0262	1160.08	0.0267	0.01758
Mn	55	3	He	6.896	0.0788	3520.50	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	6.996	0.0799	3570.51	0.0108	0.004199
Mn	55	3	He	6.5	0.0745	3300.44	0.0108	0.004199
Fe	57	3	He	10.563	0.0083	370.02	0.0005	0.002993
Fe	57	3	He	14.129	0.0101	450.02	0.0005	0.002993
Fe	57	3	He	21.073	0.0135	600.03	0.0005	0.002993
Co	59	3	He	0.703	0.0399	1780.16	0.0524	0.003063
Co	59	3	He	0.715	0.0405	1810.16	0.0524	0.003063
Co	59	3	He	0.761	0.0429	1900.17	0.0524	0.003063
Ni	60	3	He	1.33	0.0257	1500.12	0.0109	0.01116
Ni	60	3	He	1.156	0.0238	1410.09	0.0109	0.01116
Ni	60	3	He	1.49	0.0275	1630.14	0.0109	0.01116
Cu	63	3	He	2.092	0.0686	5040.99	0.0255	0.01531
Cu	63	3	He	2.05	0.0675	5080.94	0.0255	0.01531
Cu	63	3	He	2.166	0.0705	5281.07	0.0255	0.01531
Zn	66	3	He	1.302	0.0065	480.03	0.0029	0.002787
Zn	66	3	He	1.018	0.0057	430.02	0.0029	0.002787
Zn	66	3	He	1.073	0.0059	440.02	0.0029	0.002787
As	75	3	He	1.789	0.0042	310.01	0.0021	0.0004097
As	75	3	He	1.444	0.0035	262.00	0.0021	0.0004097
As	75	3	He	1.777	0.0042	314.01	0.0021	0.0004097
Sr	88	3	He	3062.071	28.8633	1684655.60	0.0094	0.0008765
Sr	88	3	He	3087.251	29.1007	1723607.94	0.0094	0.0008765
Sr	88	3	He	3060.199	28.8457	1712556.38	0.0094	0.0008765
Mo	98	3	He	1.56	0.0362	2110.20	0.023	0.0002199
Mo	98	3	He	1.383	0.0321	1900.17	0.023	0.0002199
Mo	98	3	He	1.292	0.03	1780.17	0.023	0.0002199
Ag	107	3	He	0.001	0.0009	50.00	0.0483	0.0008224
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Cd	111	3	He	0.034	0.0002	12.00	0.0053	2.193E-05
Cd	111	3	He	0.028	0.0002	10.00	0.0053	2.193E-05
Cd	111	3	He	0.046	0.0003	16.00	0.0053	2.193E-05
Sn	120	3	He	-0.237	0.0099	580.03	0.0148	0.01345
Sn	120	3	He	-0.145	0.0113	670.04	0.0148	0.01345
Sn	120	3	He	-0.226	0.0101	600.03	0.0148	0.01345
Sb	121	3	He	0.197	0.0033	190.01	0.0143	0.0004392
Sb	121	3	He	0.205	0.0034	200.01	0.0143	0.0004392
Sb	121	3	He	0.24	0.0039	230.02	0.0143	0.0004392
Ba	137	3	He	58.417	0.2549	14877.71	0.0044	0.0001096
Ba	137	3	He	57.914	0.2527	14967.69	0.0044	0.0001096
Ba	137	3	He	57.275	0.2499	14837.57	0.0044	0.0001096
Tl	205	3	He	0.048	0.0013	300.01	0.0208	0.0002491
Tl	205	3	He	0.02	0.0007	160.01	0.0208	0.0002491
Tl	205	3	He	0.036	0.001	240.01	0.0208	0.0002491
Pb	208	3	He	0.051	0.002	260.01	0.0272	0.0006218
Pb	208	3	He	0.049	0.0019	210.01	0.0272	0.0006218
Pb	208	3	He	0.076	0.0027	420.02	0.0272	0.0006218
U	238	3	He	9.203	0.2532	60479.21	0.0275	2.763E-05
U	238	3	He	9.264	0.2548	61603.10	0.0275	2.763E-05
U	238	3	He	9.314	0.2562	62004.88	0.0275	2.763E-05
Sc	45	1	No Gas			2301106.22		
Sc	45	1	No Gas			2267631.53		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2248904.65		
Ge	72	1	No Gas			1014717.64		
Ge	72	1	No Gas			1021061.39		
Ge	72	1	No Gas			1000732.64		
Sc	45	2	H2			144511.37		
Sc	45	2	H2			142090.78		
Sc	45	2	H2			145539.82		
Ge	72	2	H2			116651.46		
Ge	72	2	H2			117417.34		
Ge	72	2	H2			117991.91		
In	115	2	H2			289781.48		
In	115	2	H2			288855.82		
In	115	2	H2			289620.60		
Sc	45	3	He			44671.24		
Sc	45	3	He			44691.38		
Sc	45	3	He			44290.72		
Ge	72	3	He			73488.23		
Ge	72	3	He			75226.33		
Ge	72	3	He			74914.51		
In	115	3	He			58370.67		
In	115	3	He			59233.80		
In	115	3	He			59373.74		
Tb	159	3	He			238904.88		
Tb	159	3	He			241750.09		
Tb	159	3	He			242020.82		
Bi	209	3	He			161656.85		
Bi	209	3	He			165177.63		
Bi	209	3	He			160446.77		

Quantitation Report

Data File Name	083SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 10:16:22 AM
Sample Name	410-179192-O-6-A
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

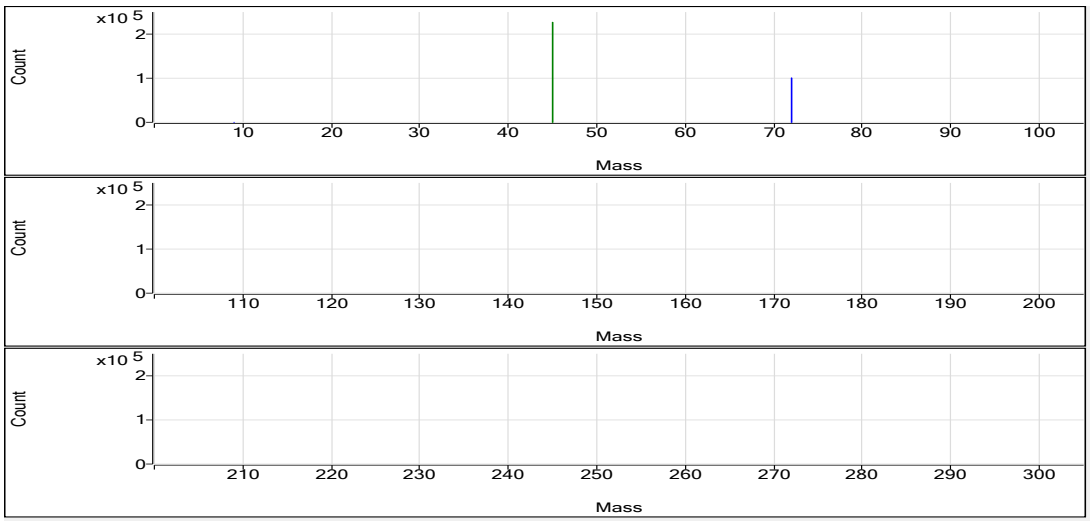
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.016	ppb	66.8	35.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.338	ppb	16.0	18.67	0.0002	Pulse	1.5000	3
Na	23	45	He	596536.799	ppb	1.1	84110882.08	1,866.2808	Analog	0.1000	3
Mg	24	45	He	123349.976	ppb	0.7	8436546.33	187.1715	Analog	0.1000	3
Al	27	45	He	9.400	ppb	23.4	230.02	0.0051	Pulse	0.1000	3
K	39	45	He	10625.067	ppb	1.0	539784.69	11.9766	Pulse	0.1000	3
Ca	44	45	He	140694.940	ppb	0.7	392163.77	8.7010	Pulse	0.1000	3
Ti	47	45	He	2.272	ppb	121.1	50.01	0.0011	Pulse	0.1000	3
V	51	45	He	0.421	ppb	3.7	830.70	0.0184	Pulse	0.5000	3
Cr	52	45	He	0.276	ppb	27.5	1123.41	0.0249	Pulse	0.1000	3
Mn	55	45	He	1530.379	ppb	0.1	746460.15	16.5614	Pulse	0.1000	3
Fe	57	45	He	4439.609	ppb	0.5	100362.88	2.2266	Pulse	0.1000	3
Co	59	45	He	0.632	ppb	13.9	1626.81	0.0361	Pulse	0.1000	3
Ni	60	115	He	1.248	ppb	16.7	1483.45	0.0248	Pulse	0.1000	3
Cu	63	72	He	0.156	ppb	28.0	1433.44	0.0193	Pulse	0.1000	3
Zn	66	72	He	0.435	ppb	58.4	300.01	0.0040	Pulse	0.1000	3
As	75	72	He	16.992	ppb	1.2	2718.25	0.0366	Pulse	0.5000	3
Sr	88	115	He	2151.353	ppb	1.5	1211726.70	20.2791	Pulse	0.1000	3
Mo	98	115	He	3.960	ppb	1.4	5464.43	0.0915	Pulse	0.1000	3
Ag	107	115	He	-0.008	ppb	N/A	26.67	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	226.3	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.136	ppb	N/A	683.37	0.0114	Pulse	0.1000	3
Sb	121	115	He	0.071	ppb	85.0	86.67	0.0014	Pulse	0.1000	3
Ba	137	115	He	67.270	ppb	3.9	17537.29	0.2935	Pulse	0.1000	3
Tl	205	159	He	0.040	ppb	35.5	260.01	0.0011	Pulse	0.1000	3
Pb	208	159	He	0.015	ppb	59.4	250.00	0.0010	Pulse	0.1000	3
U	238	159	He	5.858	ppb	1.0	38920.66	0.1612	Pulse	0.1000	3

ISTD Table:

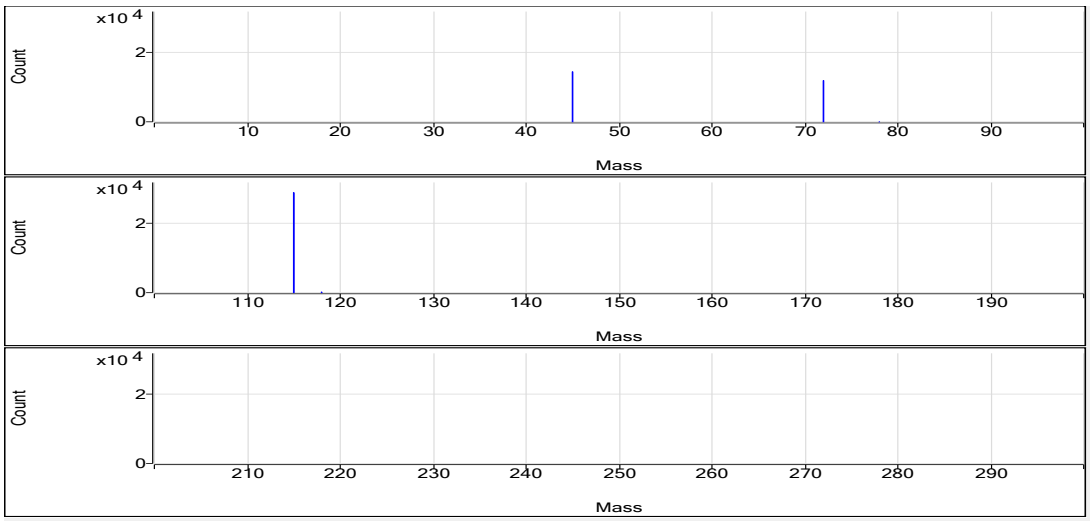
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2277189.60	0.0	99.3	Analog	0.1000	3
No Gas	Ge	72	1011067.56	0.5	97.3	Pulse	0.1000	3
H2	Sc	45	144522.54	1.2	103.9	Pulse	0.1000	3
H2	Ge	72	119158.81	0.2	100.9	Pulse	0.1000	3
H2	In	115	288745.95	0.3	98.0	Pulse	0.1000	3
He	Sc	45	45072.57	1.2	96.3	Pulse	0.1000	3
He	Ge	72	74315.50	0.4	97.2	Pulse	0.1000	3
He	In	115	59757.46	1.0	98.6	Pulse	0.1000	3
He	Tb	159	241519.18	0.6	100.2	Pulse	0.1000	3
He	Bi	209	163149.70	1.4	98.5	Pulse	0.1000	3

No Gas

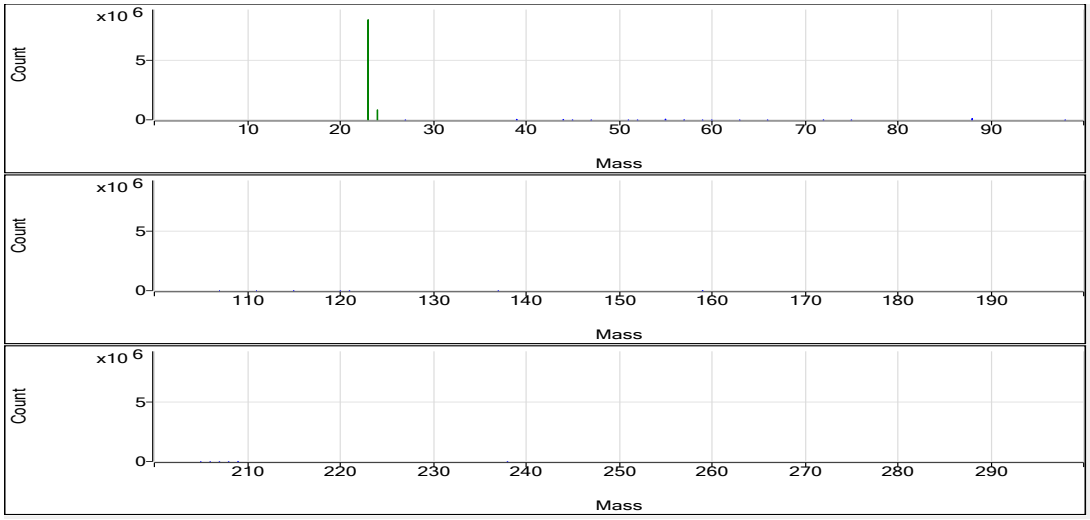


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.008	0	28.00	0.0004	9.309E-06
Be	9	1	No Gas	0.027	0	46.00	0.0004	9.309E-06
Be	9	1	No Gas	0.012	0	32.00	0.0004	9.309E-06
Se	78	2	H2	0.312	0.0001	17.33	0.0004	5.598E-06
Se	78	2	H2	0.4	0.0002	22.00	0.0004	5.598E-06
Se	78	2	H2	0.301	0.0001	16.67	0.0004	5.598E-06
Na	23	3	He	603764.17	1888.8862	84094838.75	0.0031	0.4657
Na	23	3	He	594938.437	1861.2816	83985528.75	0.0031	0.4657
Na	23	3	He	590907.79	1848.6747	84252278.74	0.0031	0.4657
Mg	24	3	He	123212.029	186.9621	8323715.50	0.0015	0.003704
Mg	24	3	He	122586.391	186.0128	8393348.62	0.0015	0.003704
Mg	24	3	He	124251.509	188.5394	8592574.87	0.0015	0.003704
Al	27	3	He	9.048	0.0049	220.01	0.0005	0.0007154
Al	27	3	He	11.756	0.0062	280.04	0.0005	0.0007154
Al	27	3	He	7.395	0.0042	190.01	0.0005	0.0007154
K	39	3	He	10745.922	12.1079	539054.84	0.0011	0.4296
K	39	3	He	10528.487	11.8716	535676.01	0.0011	0.4296
K	39	3	He	10600.793	11.9502	544623.23	0.0011	0.4296
Ca	44	3	He	140950.97	8.7169	388081.99	0.0001	0.002924
Ca	44	3	He	141594.841	8.7567	395121.83	0.0001	0.002924
Ca	44	3	He	139539.009	8.6296	393287.49	0.0001	0.002924
Ti	47	3	He	0.464	0.0002	10.00	0.0005	0
Ti	47	3	He	0.915	0.0004	20.00	0.0005	0
Ti	47	3	He	5.438	0.0026	120.04	0.0005	0
V	51	3	He	0.408	0.0181	808.03	0.021	0.009571
V	51	3	He	0.438	0.0188	848.03	0.021	0.009571
V	51	3	He	0.417	0.0183	836.03	0.021	0.009571
Cr	52	3	He	0.318	0.0261	1160.09	0.0267	0.01758
Cr	52	3	He	0.321	0.0262	1180.08	0.0267	0.01758
Cr	52	3	He	0.188	0.0226	1030.07	0.0267	0.01758
Mn	55	3	He	1531.599	16.5746	737914.52	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1529.829	16.5554	747020.85	0.0108	0.004199
Mn	55	3	He	1529.71	16.5541	754445.07	0.0108	0.004199
Fe	57	3	He	4413.964	2.2138	98558.96	0.0005	0.002993
Fe	57	3	He	4451.172	2.2324	100731.57	0.0005	0.002993
Fe	57	3	He	4453.691	2.2337	101798.12	0.0005	0.002993
Co	59	3	He	0.731	0.0413	1840.17	0.0524	0.003063
Co	59	3	He	0.598	0.0344	1550.14	0.0524	0.003063
Co	59	3	He	0.566	0.0327	1490.11	0.0524	0.003063
Ni	60	3	He	1.069	0.0229	1360.10	0.0109	0.01116
Ni	60	3	He	1.477	0.0273	1650.14	0.0109	0.01116
Ni	60	3	He	1.199	0.0243	1440.12	0.0109	0.01116
Cu	63	3	He	0.106	0.018	1340.10	0.0255	0.01531
Cu	63	3	He	0.184	0.02	1490.11	0.0255	0.01531
Cu	63	3	He	0.18	0.0199	1470.12	0.0255	0.01531
Zn	66	3	He	0.245	0.0035	260.01	0.0029	0.002787
Zn	66	3	He	0.337	0.0038	280.01	0.0029	0.002787
Zn	66	3	He	0.724	0.0049	360.02	0.0029	0.002787
As	75	3	He	16.862	0.0363	2702.25	0.0021	0.0004097
As	75	3	He	16.897	0.0364	2712.24	0.0021	0.0004097
As	75	3	He	17.219	0.0371	2740.25	0.0021	0.0004097
Sr	88	3	He	2147.539	20.2431	1204877.33	0.0094	0.0008765
Sr	88	3	He	2122.121	20.0036	1208487.48	0.0094	0.0008765
Sr	88	3	He	2184.399	20.5906	1221815.29	0.0094	0.0008765
Mo	98	3	He	3.973	0.0918	5461.08	0.023	0.0002199
Mo	98	3	He	3.9	0.0901	5441.09	0.023	0.0002199
Mo	98	3	He	4.007	0.0925	5491.11	0.023	0.0002199
Ag	107	3	He	-0.017	0	0.00	0.0483	0.0008224
Ag	107	3	He	0.004	0.001	60.00	0.0483	0.0008224
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Cd	111	3	He	0.015	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Sn	120	3	He	-0.16	0.0111	660.04	0.0148	0.01345
Sn	120	3	He	-0.148	0.0113	680.04	0.0148	0.01345
Sn	120	3	He	-0.1	0.012	710.04	0.0148	0.01345
Sb	121	3	He	0.122	0.0022	130.00	0.0143	0.0004392
Sb	121	3	He	0.085	0.0017	100.00	0.0143	0.0004392
Sb	121	3	He	0.005	0.0005	30.00	0.0143	0.0004392
Ba	137	3	He	65.421	0.2854	16989.99	0.0044	0.0001096
Ba	137	3	He	66.087	0.2884	17420.61	0.0044	0.0001096
Ba	137	3	He	70.302	0.3067	18201.26	0.0044	0.0001096
Tl	205	3	He	0.04	0.0011	260.01	0.0208	0.0002491
Tl	205	3	He	0.054	0.0014	330.02	0.0208	0.0002491
Tl	205	3	He	0.026	0.0008	190.01	0.0208	0.0002491
Pb	208	3	He	0.011	0.0009	120.00	0.0272	0.0006218
Pb	208	3	He	0.009	0.0009	90.00	0.0272	0.0006218
Pb	208	3	He	0.025	0.0013	150.01	0.0272	0.0006218
U	238	3	He	5.871	0.1615	38813.92	0.0275	2.763E-05
U	238	3	He	5.911	0.1626	39194.37	0.0275	2.763E-05
U	238	3	He	5.793	0.1594	38753.68	0.0275	2.763E-05
Sc	45	1	No Gas			2276860.12		
Sc	45	1	No Gas			2277566.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2277142.62		
Ge	72	1	No Gas			1006856.16		
Ge	72	1	No Gas			1010080.92		
Ge	72	1	No Gas			1016265.61		
Sc	45	2	H2			142637.37		
Sc	45	2	H2			144965.81		
Sc	45	2	H2			145964.45		
Ge	72	2	H2			119309.18		
Ge	72	2	H2			119290.47		
Ge	72	2	H2			118876.77		
In	115	2	H2			287775.95		
In	115	2	H2			289666.89		
In	115	2	H2			288795.00		
Sc	45	3	He			44520.86		
Sc	45	3	He			45122.42		
Sc	45	3	He			45574.42		
Ge	72	3	He			74442.63		
Ge	72	3	He			74563.24		
Ge	72	3	He			73940.63		
In	115	3	He			59524.87		
In	115	3	He			60418.35		
In	115	3	He			59343.50		
Tb	159	3	He			240338.32		
Tb	159	3	He			241038.75		
Tb	159	3	He			243180.48		
Bi	209	3	He			160688.86		
Bi	209	3	He			163681.99		
Bi	209	3	He			165078.26		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
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Sample Name	410-179324-W-1-A
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

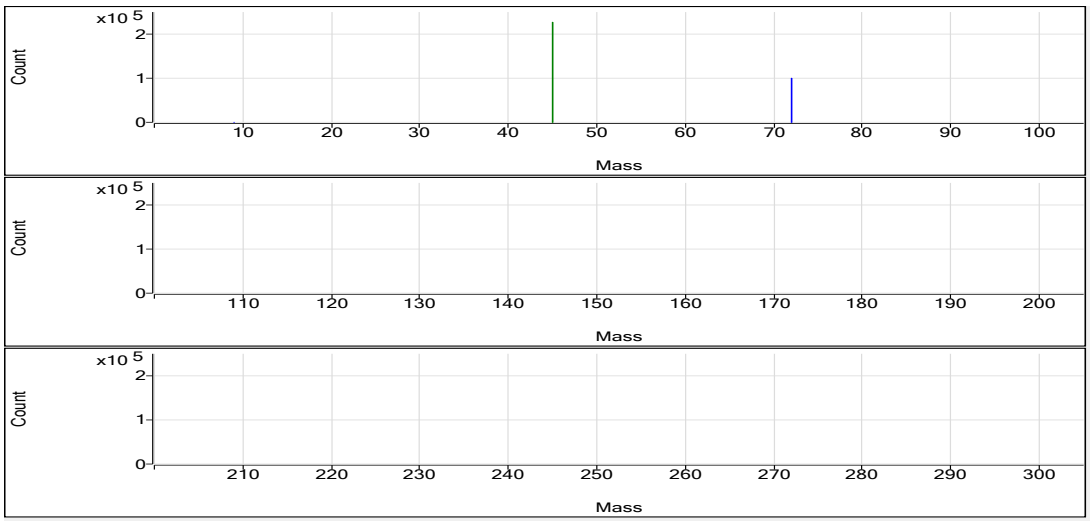
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.016	ppb	89.2	36.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.212	ppb	2.1	65.33	0.0005	Pulse	1.5000	3
Na	23	45	He	424635.317	ppb	1.8	58666172.46	1,328.6168	Analog	0.1000	3
Mg	24	45	He	114981.055	ppb	1.4	7703934.47	174.4727	Analog	0.1000	3
Al	27	45	He	4.460	ppb	54.8	123.34	0.0028	Pulse	0.1000	3
K	39	45	He	98430.238	ppb	1.5	4742385.87	107.4001	Analog	0.1000	3
Ca	44	45	He	506396.761	ppb	0.9	1382605.14	31.3096	Analog	0.1000	3
Ti	47	45	He	1.086	ppb	64.3	23.33	0.0005	Pulse	0.1000	3
V	51	45	He	1.611	ppb	5.8	1919.46	0.0435	Pulse	0.5000	3
Cr	52	45	He	0.020	ppb	501.9	800.05	0.0181	Pulse	0.1000	3
Mn	55	45	He	70.513	ppb	5.6	33859.30	0.7671	Pulse	0.1000	3
Fe	57	45	He	26.879	ppb	5.0	726.71	0.0165	Pulse	0.1000	3
Co	59	45	He	0.162	ppb	5.7	510.03	0.0116	Pulse	0.1000	3
Ni	60	115	He	2.086	ppb	12.6	2070.20	0.0340	Pulse	0.1000	3
Cu	63	72	He	0.218	ppb	7.4	1566.79	0.0209	Pulse	0.1000	3
Zn	66	72	He	1.359	ppb	13.4	503.36	0.0067	Pulse	0.1000	3
As	75	72	He	5.542	ppb	4.1	916.70	0.0122	Pulse	0.5000	3
Sr	88	115	He	8586.849	ppb	2.1	4931910.24	80.9388	Analog	0.1000	3
Mo	98	115	He	1779.431	ppb	1.3	2498212.93	40.9944	Analog	0.1000	3
Ag	107	115	He	0.002	ppb	563.9	56.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.174	ppb	16.8	58.00	0.0010	Pulse	0.5000	3
Sn	120	115	He	-0.188	ppb	N/A	650.04	0.0107	Pulse	0.1000	3
Sb	121	115	He	0.391	ppb	14.0	366.68	0.0060	Pulse	0.1000	3
Ba	137	115	He	33.481	ppb	4.8	8909.53	0.1461	Pulse	0.1000	3
Tl	205	159	He	0.166	ppb	9.5	910.06	0.0037	Pulse	0.1000	3
Pb	208	159	He	0.013	ppb	49.4	243.34	0.0010	Pulse	0.1000	3
U	238	159	He	16.424	ppb	1.5	111355.01	0.4517	Pulse	0.1000	3

ISTD Table:

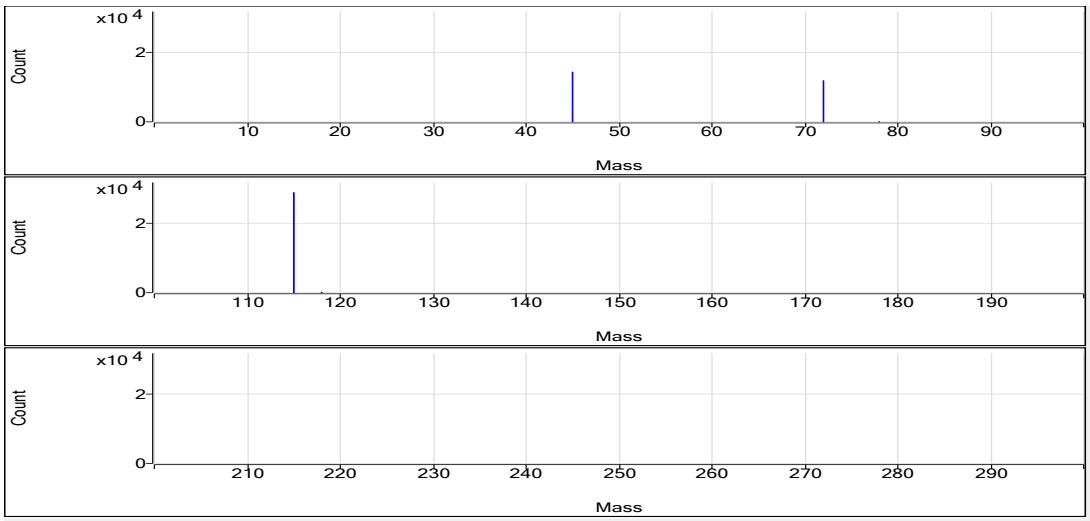
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2280685.12	0.3	99.4	Analog	0.1000	3
No Gas	Ge	72	1007491.57	0.2	97.0	Pulse	0.1000	3
H2	Sc	45	144566.73	1.1	104.0	Pulse	0.1000	3
H2	Ge	72	119317.18	0.6	101.1	Pulse	0.1000	3
H2	In	115	290546.49	0.5	98.6	Pulse	0.1000	3
He	Sc	45	44160.20	1.2	94.3	Pulse	0.1000	3
He	Ge	72	75119.21	1.3	98.2	Pulse	0.1000	3
He	In	115	60952.25	2.6	100.5	Pulse	0.1000	3
He	Tb	159	246531.92	1.4	102.2	Pulse	0.1000	3
He	Bi	209	165821.16	0.2	100.1	Pulse	0.1000	3

No Gas

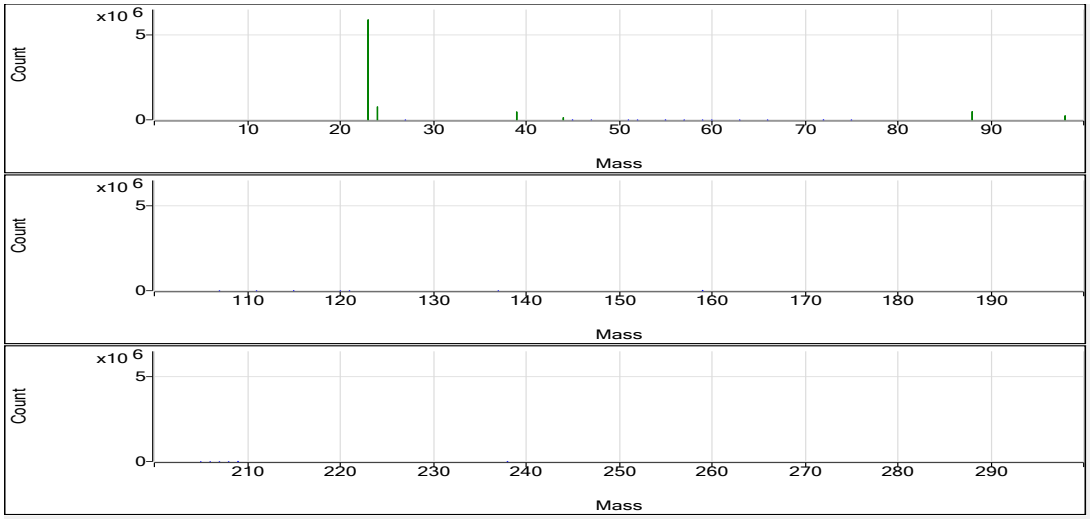


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.03	0	48.00	0.0004	9.309E-06
Be	9	1	No Gas	0.001	0	22.00	0.0004	9.309E-06
Be	9	1	No Gas	0.019	0	38.00	0.0004	9.309E-06
Se	78	2	H2	1.203	0.0005	64.67	0.0004	5.598E-06
Se	78	2	H2	1.24	0.0006	67.33	0.0004	5.598E-06
Se	78	2	H2	1.191	0.0005	64.00	0.0004	5.598E-06
Na	23	3	He	422492.35	1321.9141	57938399.14	0.0031	0.4657
Na	23	3	He	418100.074	1308.1762	58556204.13	0.0031	0.4657
Na	23	3	He	433313.528	1355.76	59503914.11	0.0031	0.4657
Mg	24	3	He	115447.533	175.1805	7678016.76	0.0015	0.003704
Mg	24	3	He	113167.24	171.7205	7686501.76	0.0015	0.003704
Mg	24	3	He	116328.393	176.5171	7747284.88	0.0015	0.003704
Al	27	3	He	7.261	0.0041	180.01	0.0005	0.0007154
Al	27	3	He	2.773	0.002	90.00	0.0005	0.0007154
Al	27	3	He	3.346	0.0023	100.00	0.0005	0.0007154
K	39	3	He	98225.552	107.1777	4697508.06	0.0011	0.4296
K	39	3	He	97073.486	105.9256	4741412.74	0.0011	0.4296
K	39	3	He	99991.677	109.097	4788236.80	0.0011	0.4296
Ca	44	3	He	503241.933	31.1146	1363725.76	0.0001	0.002924
Ca	44	3	He	504322.208	31.1814	1395730.76	0.0001	0.002924
Ca	44	3	He	511626.143	31.6329	1388358.89	0.0001	0.002924
Ti	47	3	He	0.942	0.0005	20.00	0.0005	0
Ti	47	3	He	1.845	0.0009	40.00	0.0005	0
Ti	47	3	He	0.47	0.0002	10.00	0.0005	0
V	51	3	He	1.59	0.043	1886.12	0.021	0.009571
V	51	3	He	1.53	0.0418	1870.12	0.021	0.009571
V	51	3	He	1.713	0.0456	2002.13	0.021	0.009571
Cr	52	3	He	0.077	0.0196	860.05	0.0267	0.01758
Cr	52	3	He	0.078	0.0197	880.06	0.0267	0.01758
Cr	52	3	He	-0.095	0.015	660.04	0.0267	0.01758
Mn	55	3	He	72.933	0.7933	34768.00	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	65.921	0.7174	32112.16	0.0108	0.004199
Mn	55	3	He	72.684	0.7906	34697.73	0.0108	0.004199
Fe	57	3	He	25.459	0.0157	690.04	0.0005	0.002993
Fe	57	3	He	27.034	0.0165	740.04	0.0005	0.002993
Fe	57	3	He	28.145	0.0171	750.04	0.0005	0.002993
Co	59	3	He	0.172	0.0121	530.03	0.0524	0.003063
Co	59	3	He	0.155	0.0112	500.02	0.0524	0.003063
Co	59	3	He	0.159	0.0114	500.03	0.0524	0.003063
Ni	60	3	He	2.206	0.0353	2090.19	0.0109	0.01116
Ni	60	3	He	1.784	0.0307	1880.17	0.0109	0.01116
Ni	60	3	He	2.267	0.0359	2240.24	0.0109	0.01116
Cu	63	3	He	0.236	0.0213	1610.14	0.0255	0.01531
Cu	63	3	He	0.211	0.0207	1530.12	0.0255	0.01531
Cu	63	3	He	0.207	0.0206	1560.12	0.0255	0.01531
Zn	66	3	He	1.333	0.0066	500.03	0.0029	0.002787
Zn	66	3	He	1.191	0.0062	460.02	0.0029	0.002787
Zn	66	3	He	1.552	0.0073	550.03	0.0029	0.002787
As	75	3	He	5.334	0.0118	888.03	0.0021	0.0004097
As	75	3	He	5.787	0.0127	942.03	0.0021	0.0004097
As	75	3	He	5.507	0.0121	920.03	0.0021	0.0004097
Sr	88	3	He	8712.746	82.1255	4865025.87	0.0094	0.0008765
Sr	88	3	He	8671.965	81.7411	5010527.43	0.0094	0.0008765
Sr	88	3	He	8375.837	78.9498	4920177.43	0.0094	0.0008765
Mo	98	3	He	1796.708	41.3924	2452039.18	0.023	0.0002199
Mo	98	3	He	1789.126	41.2177	2526542.62	0.023	0.0002199
Mo	98	3	He	1752.46	40.373	2516056.99	0.023	0.0002199
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	0.013	0.0015	90.00	0.0483	0.0008224
Ag	107	3	He	0.003	0.001	60.00	0.0483	0.0008224
Cd	111	3	He	0.179	0.001	58.00	0.0053	2.193E-05
Cd	111	3	He	0.143	0.0008	48.00	0.0053	2.193E-05
Cd	111	3	He	0.2	0.0011	68.00	0.0053	2.193E-05
Sn	120	3	He	-0.133	0.0115	680.04	0.0148	0.01345
Sn	120	3	He	-0.259	0.0096	590.03	0.0148	0.01345
Sn	120	3	He	-0.172	0.0109	680.04	0.0148	0.01345
Sb	121	3	He	0.429	0.0066	390.02	0.0143	0.0004392
Sb	121	3	He	0.414	0.0064	390.02	0.0143	0.0004392
Sb	121	3	He	0.328	0.0051	320.01	0.0143	0.0004392
Ba	137	3	He	33.619	0.1467	8692.77	0.0044	0.0001096
Ba	137	3	He	31.815	0.1389	8512.62	0.0044	0.0001096
Ba	137	3	He	35.01	0.1528	9523.19	0.0044	0.0001096
Tl	205	3	He	0.157	0.0035	850.06	0.0208	0.0002491
Tl	205	3	He	0.184	0.0041	1010.07	0.0208	0.0002491
Tl	205	3	He	0.156	0.0035	870.05	0.0208	0.0002491
Pb	208	3	He	0.006	0.0008	60.00	0.0272	0.0006218
Pb	208	3	He	0.016	0.001	150.01	0.0272	0.0006218
Pb	208	3	He	0.019	0.0011	160.01	0.0272	0.0006218
U	238	3	He	16.696	0.4592	111391.33	0.0275	2.763E-05
U	238	3	He	16.192	0.4454	110616.44	0.0275	2.763E-05
U	238	3	He	16.384	0.4507	112057.27	0.0275	2.763E-05
Sc	45	1	No Gas			2277514.81		
Sc	45	1	No Gas			2289721.22		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2274819.34		
Ge	72	1	No Gas			1008728.27		
Ge	72	1	No Gas			1004984.36		
Ge	72	1	No Gas			1008762.09		
Sc	45	2	H2			144301.37		
Sc	45	2	H2			143151.82		
Sc	45	2	H2			146247.00		
Ge	72	2	H2			118918.00		
Ge	72	2	H2			120176.89		
Ge	72	2	H2			118856.64		
In	115	2	H2			288964.68		
In	115	2	H2			290651.05		
In	115	2	H2			292023.73		
Sc	45	3	He			43829.17		
Sc	45	3	He			44761.71		
Sc	45	3	He			43889.71		
Ge	72	3	He			75498.08		
Ge	72	3	He			74020.79		
Ge	72	3	He			75838.77		
In	115	3	He			59243.69		
In	115	3	He			61301.66		
In	115	3	He			62325.05		
Tb	159	3	He			242565.23		
Tb	159	3	He			248373.71		
Tb	159	3	He			248656.83		
Bi	209	3	He			165531.44		
Bi	209	3	He			165875.04		
Bi	209	3	He			166056.99		

Quantitation Report

Data File Name	085SMPL.d
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Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

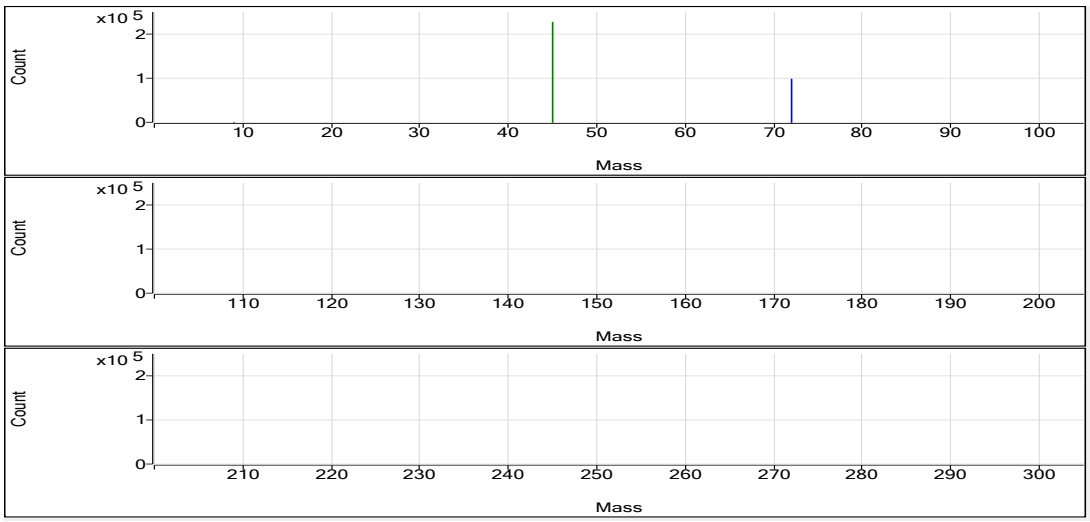
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.018	ppb	84.5	37.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	23.526	ppb	0.7	1217.60	0.0105	Pulse	1.5000	3
Na	23	45	He	1513849.696	ppb	0.8	210603423.53	4,735.4020	Analog	0.1000	3
Mg	24	45	He	301257.161	ppb	0.3	20330275.12	457.1228	Analog	0.1000	3
Al	27	45	He	5.368	ppb	33.9	143.34	0.0032	Pulse	0.1000	3
K	39	45	He	20592.220	ppb	0.3	1014396.65	22.8085	Pulse	0.1000	3
Ca	44	45	He	339500.635	ppb	0.4	933597.77	20.9917	Pulse	0.1000	3
Ti	47	45	He	2.167	ppb	62.0	46.67	0.0010	Pulse	0.1000	3
V	51	45	He	6.476	ppb	2.1	6487.99	0.1459	Pulse	0.5000	3
Cr	52	45	He	1.257	ppb	17.5	2273.56	0.0511	Pulse	0.1000	3
Mn	55	45	He	2843.275	ppb	1.7	1368266.54	30.7656	Analog	0.1000	3
Fe	57	45	He	3238.018	ppb	1.3	72260.81	1.6248	Pulse	0.1000	3
Co	59	45	He	10.865	ppb	2.1	25433.84	0.5719	Pulse	0.1000	3
Ni	60	115	He	1.724	ppb	10.0	1763.48	0.0300	Pulse	0.1000	3
Cu	63	72	He	0.086	ppb	46.3	1293.43	0.0175	Pulse	0.1000	3
Zn	66	72	He	1.304	ppb	25.5	483.36	0.0065	Pulse	0.1000	3
As	75	72	He	1.149	ppb	10.7	210.67	0.0029	Pulse	0.5000	3
Sr	88	115	He	5915.028	ppb	0.7	3276959.74	55.7548	Analog	0.1000	3
Mo	98	115	He	3.583	ppb	3.6	4864.27	0.0828	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	40.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.006	ppb	149.6	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.096	ppb	N/A	706.71	0.0120	Pulse	0.1000	3
Sb	121	115	He	0.215	ppb	10.6	206.68	0.0035	Pulse	0.1000	3
Ba	137	115	He	647.604	ppb	1.0	166020.76	2.8247	Pulse	0.1000	3
Tl	205	159	He	0.778	ppb	5.6	3913.99	0.0164	Pulse	0.1000	3
Pb	208	159	He	0.017	ppb	58.0	260.01	0.0011	Pulse	0.1000	3
U	238	159	He	2.869	ppb	0.8	18806.21	0.0789	Pulse	0.1000	3

ISTD Table:

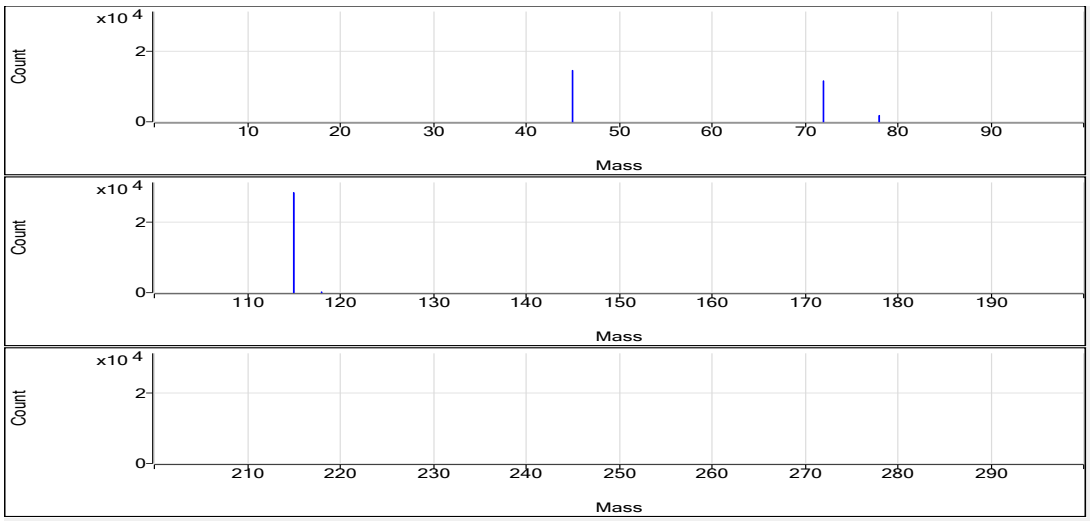
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2284972.15	1.3	99.6	Analog	0.1000	3
No Gas	Ge	72	988652.93	0.6	95.2	Pulse	0.1000	3
H2	Sc	45	145211.93	1.1	104.4	Pulse	0.1000	3
H2	Ge	72	115656.74	0.3	98.0	Pulse	0.1000	3
H2	In	115	282486.91	0.7	95.9	Pulse	0.1000	3
He	Sc	45	44474.55	0.1	95.0	Pulse	0.1000	3
He	Ge	72	73839.57	1.0	96.6	Pulse	0.1000	3
He	In	115	58776.68	0.8	96.9	Pulse	0.1000	3
He	Tb	159	238256.94	0.4	98.8	Pulse	0.1000	3
He	Bi	209	156988.16	0.7	94.7	Pulse	0.1000	3

No Gas

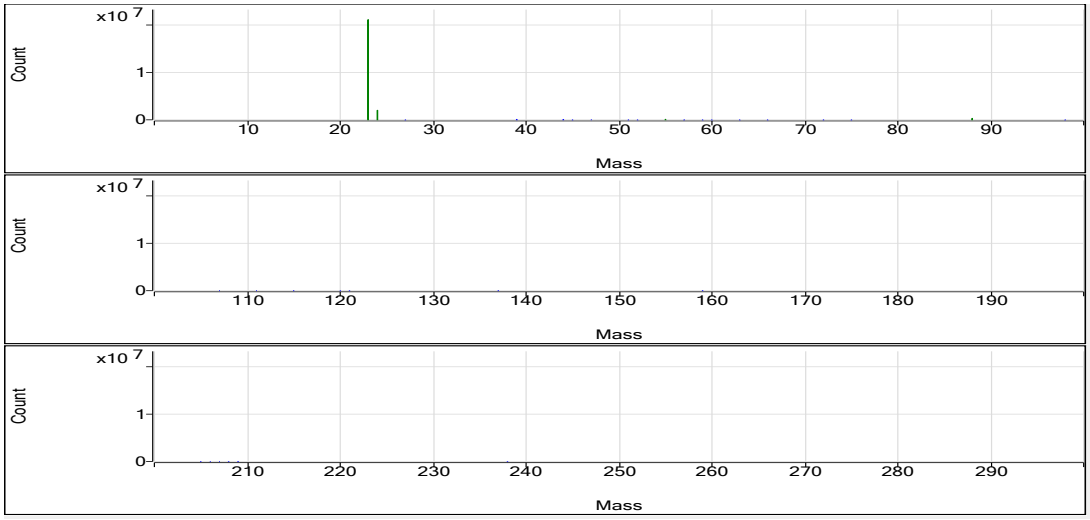


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.034	0	52.00	0.0004	9.309E-06
Be	9	1	No Gas	0.005	0	26.00	0.0004	9.309E-06
Be	9	1	No Gas	0.014	0	34.00	0.0004	9.309E-06
Se	78	2	H2	23.471	0.0105	1217.38	0.0004	5.598E-06
Se	78	2	H2	23.386	0.0105	1211.38	0.0004	5.598E-06
Se	78	2	H2	23.722	0.0106	1224.05	0.0004	5.598E-06
Na	23	3	He	1524615.62	4769.075	211849036.84	0.0031	0.4657
Na	23	3	He	1501847.124	4697.861	209248176.88	0.0031	0.4657
Na	23	3	He	1515086.344	4739.2699	210713056.86	0.0031	0.4657
Mg	24	3	He	301914.873	458.1208	20350370.95	0.0015	0.003704
Mg	24	3	He	300223.164	455.5538	20290895.95	0.0015	0.003704
Mg	24	3	He	301633.446	457.6938	20349558.45	0.0015	0.003704
Al	27	3	He	6.18	0.0036	160.01	0.0005	0.0007154
Al	27	3	He	6.64	0.0038	170.01	0.0005	0.0007154
Al	27	3	He	3.284	0.0022	100.00	0.0005	0.0007154
K	39	3	He	20673.898	22.8973	1017129.75	0.0011	0.4296
K	39	3	He	20559.866	22.7734	1014351.94	0.0011	0.4296
K	39	3	He	20542.896	22.7549	1011708.27	0.0011	0.4296
Ca	44	3	He	337836.599	20.8888	927910.30	0.0001	0.002924
Ca	44	3	He	339970.353	21.0207	936287.33	0.0001	0.002924
Ca	44	3	He	340694.952	21.0655	936595.69	0.0001	0.002924
Ti	47	3	He	3.718	0.0018	80.00	0.0005	0
Ti	47	3	He	1.391	0.0007	30.00	0.0005	0
Ti	47	3	He	1.393	0.0007	30.00	0.0005	0
V	51	3	He	6.349	0.1432	6361.26	0.021	0.009571
V	51	3	He	6.459	0.1455	6481.32	0.021	0.009571
V	51	3	He	6.621	0.1489	6621.39	0.021	0.009571
Cr	52	3	He	1.012	0.0446	1980.18	0.0267	0.01758
Cr	52	3	He	1.437	0.0559	2490.27	0.0267	0.01758
Cr	52	3	He	1.322	0.0529	2350.24	0.0267	0.01758
Mn	55	3	He	2892.98	31.3034	1390539.51	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2798.621	30.2825	1348817.48	0.0108	0.004199
Mn	55	3	He	2838.225	30.711	1365442.64	0.0108	0.004199
Fe	57	3	He	3276.645	1.6441	73034.69	0.0005	0.002993
Fe	57	3	He	3194.837	1.6032	71406.54	0.0005	0.002993
Fe	57	3	He	3242.573	1.6271	72341.19	0.0005	0.002993
Co	59	3	He	10.709	0.5637	25040.01	0.0524	0.003063
Co	59	3	He	10.757	0.5662	25220.13	0.0524	0.003063
Co	59	3	He	11.13	0.5857	26041.39	0.0524	0.003063
Ni	60	3	He	1.525	0.0278	1650.13	0.0109	0.01116
Ni	60	3	He	1.827	0.0311	1830.15	0.0109	0.01116
Ni	60	3	He	1.819	0.0311	1810.17	0.0109	0.01116
Cu	63	3	He	0.08	0.0173	1270.09	0.0255	0.01531
Cu	63	3	He	0.05	0.0166	1220.08	0.0255	0.01531
Cu	63	3	He	0.129	0.0186	1390.11	0.0255	0.01531
Zn	66	3	He	1.166	0.0061	450.02	0.0029	0.002787
Zn	66	3	He	1.063	0.0058	430.02	0.0029	0.002787
Zn	66	3	He	1.683	0.0076	570.03	0.0029	0.002787
As	75	3	He	1.257	0.0031	226.00	0.0021	0.0004097
As	75	3	He	1.175	0.0029	214.00	0.0021	0.0004097
As	75	3	He	1.015	0.0026	192.00	0.0021	0.0004097
Sr	88	3	He	5865.345	55.2865	3276731.83	0.0094	0.0008765
Sr	88	3	He	5937.046	55.9623	3289289.95	0.0094	0.0008765
Sr	88	3	He	5942.693	56.0155	3264857.45	0.0094	0.0008765
Mo	98	3	He	3.441	0.0795	4710.93	0.023	0.0002199
Mo	98	3	He	3.625	0.0837	4920.95	0.023	0.0002199
Mo	98	3	He	3.685	0.0851	4960.93	0.023	0.0002199
Ag	107	3	He	-0.003	0.0007	40.00	0.0483	0.0008224
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	0.004	0.001	60.00	0.0483	0.0008224
Cd	111	3	He	0.015	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.009	0.0001	4.00	0.0053	2.193E-05
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Sn	120	3	He	-0.1	0.012	710.05	0.0148	0.01345
Sn	120	3	He	-0.127	0.0116	680.04	0.0148	0.01345
Sn	120	3	He	-0.063	0.0125	730.04	0.0148	0.01345
Sb	121	3	He	0.241	0.0039	230.01	0.0143	0.0004392
Sb	121	3	He	0.207	0.0034	200.01	0.0143	0.0004392
Sb	121	3	He	0.197	0.0033	190.01	0.0143	0.0004392
Ba	137	3	He	647.139	2.8227	167294.39	0.0044	0.0001096
Ba	137	3	He	641.2	2.7968	164384.82	0.0044	0.0001096
Ba	137	3	He	654.474	2.8547	166383.08	0.0044	0.0001096
Tl	205	3	He	0.828	0.0175	4150.73	0.0208	0.0002491
Tl	205	3	He	0.759	0.016	3810.62	0.0208	0.0002491
Tl	205	3	He	0.748	0.0158	3780.63	0.0208	0.0002491
Pb	208	3	He	0.019	0.0011	160.01	0.0272	0.0006218
Pb	208	3	He	0.007	0.0008	130.01	0.0272	0.0006218
Pb	208	3	He	0.026	0.0013	200.01	0.0272	0.0006218
U	238	3	He	2.893	0.0796	18913.01	0.0275	2.763E-05
U	238	3	He	2.869	0.0789	18772.82	0.0275	2.763E-05
U	238	3	He	2.845	0.0783	18732.79	0.0275	2.763E-05
Sc	45	1	No Gas			2268927.93		
Sc	45	1	No Gas			2318857.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2267130.90		
Ge	72	1	No Gas			983073.03		
Ge	72	1	No Gas			994930.77		
Ge	72	1	No Gas			987954.99		
Sc	45	2	H2			143624.72		
Sc	45	2	H2			146742.62		
Sc	45	2	H2			145268.45		
Ge	72	2	H2			115905.31		
Ge	72	2	H2			115753.81		
Ge	72	2	H2			115311.10		
In	115	2	H2			280352.67		
In	115	2	H2			283487.57		
In	115	2	H2			283620.48		
Sc	45	3	He			44421.41		
Sc	45	3	He			44541.16		
Sc	45	3	He			44461.08		
Ge	72	3	He			73256.94		
Ge	72	3	He			73548.53		
Ge	72	3	He			74713.25		
In	115	3	He			59273.23		
In	115	3	He			58781.66		
In	115	3	He			58289.98		
Tb	159	3	He			237601.66		
Tb	159	3	He			237810.11		
Tb	159	3	He			239359.06		
Bi	209	3	He			157998.38		
Bi	209	3	He			155917.46		
Bi	209	3	He			157048.64		

Quantitation Report

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Sample Type	Sample
Comment	J2
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

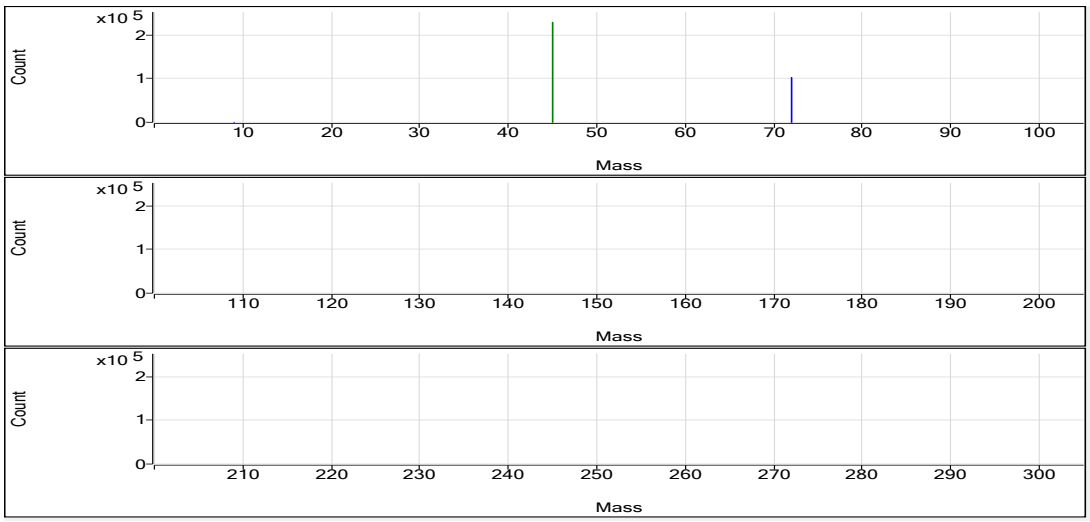
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.013	ppb	18.2	33.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	2.004	ppb	4.7	111.33	0.0009	Pulse	1.5000	3
Na	23	45	He	20739.283	ppb	1.8	2967831.94	65.3329	Analog	0.1000	3
Mg	24	45	He	67604.806	ppb	1.5	4660275.55	102.5853	Analog	0.1000	3
Al	27	45	He	10.517	ppb	90.0	256.75	0.0056	Pulse	0.1000	3
K	39	45	He	5439.709	ppb	1.4	288089.65	6.3413	Pulse	0.1000	3
Ca	44	45	He	300365.450	ppb	1.8	843675.67	18.5722	Pulse	0.1000	3
Ti	47	45	He	0.300	ppb	173.2	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.345	ppb	14.6	764.69	0.0168	Pulse	0.5000	3
Cr	52	45	He	0.097	ppb	61.6	916.73	0.0202	Pulse	0.1000	3
Mn	55	45	He	1146.982	ppb	1.9	563889.20	12.4134	Pulse	0.1000	3
Fe	57	45	He	23.158	ppb	17.5	663.37	0.0146	Pulse	0.1000	3
Co	59	45	He	2.110	ppb	9.9	5154.31	0.1135	Pulse	0.1000	3
Ni	60	115	He	5.423	ppb	6.6	4340.74	0.0705	Pulse	0.1000	3
Cu	63	72	He	0.895	ppb	9.6	2877.00	0.0381	Pulse	0.1000	3
Zn	66	72	He	5.646	ppb	8.7	1436.78	0.0190	Pulse	0.1000	3
As	75	72	He	0.475	ppb	5.9	107.33	0.0014	Pulse	0.5000	3
Sr	88	115	He	1507.579	ppb	0.9	875395.79	14.2110	Pulse	0.1000	3
Mo	98	115	He	127.814	ppb	0.7	181397.90	2.9448	Pulse	0.1000	3
Ag	107	115	He	-0.009	ppb	N/A	23.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.523	ppb	12.3	173.33	0.0028	Pulse	0.5000	3
Sn	120	115	He	3.222	ppb	12.0	3767.25	0.0612	Pulse	0.1000	3
Sb	121	115	He	0.544	ppb	16.7	506.69	0.0082	Pulse	0.1000	3
Ba	137	115	He	63.699	ppb	1.2	17119.99	0.2779	Pulse	0.1000	3
Tl	205	159	He	2.944	ppb	0.9	15158.44	0.0615	Pulse	0.1000	3
Pb	208	159	He	0.020	ppb	16.3	290.01	0.0012	Pulse	0.1000	3
U	238	159	He	3.679	ppb	0.7	24965.73	0.1012	Pulse	0.1000	3

ISTD Table:

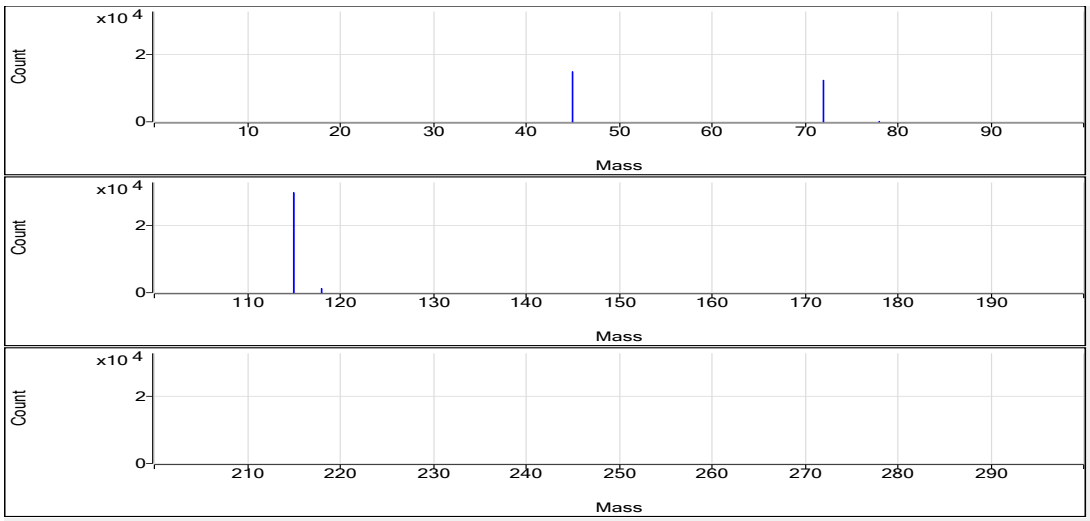
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2295304.70	1.4	100.1	Analog	0.1000	3
No Gas	Ge	72	1025855.87	1.1	98.7	Pulse	0.1000	3
H2	Sc	45	148639.01	0.4	106.9	Pulse	0.1000	3
H2	Ge	72	123431.77	0.9	104.5	Pulse	0.1000	3
H2	In	115	296661.91	0.8	100.7	Pulse	0.1000	3
He	Sc	45	45433.74	1.4	97.0	Pulse	0.1000	3
He	Ge	72	75483.90	1.8	98.7	Pulse	0.1000	3
He	In	115	61599.45	1.1	101.6	Pulse	0.1000	3
He	Tb	159	246671.79	1.2	102.3	Pulse	0.1000	3
He	Bi	209	170605.49	1.5	103.0	Pulse	0.1000	3

No Gas

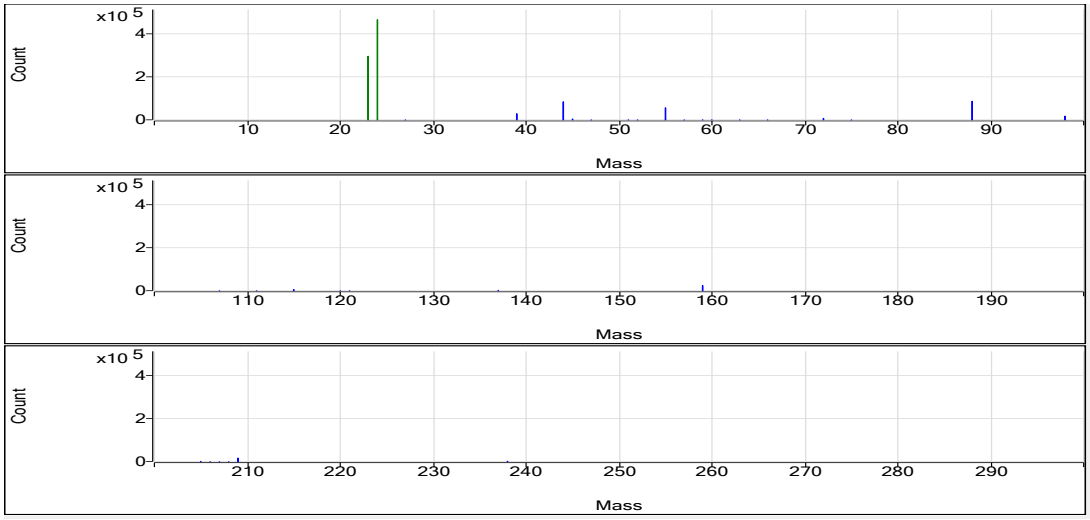


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.011	0	32.00	0.0004	9.309E-06
Be	9	1	No Gas	0.012	0	32.00	0.0004	9.309E-06
Be	9	1	No Gas	0.016	0	36.00	0.0004	9.309E-06
Se	78	2	H2	1.913	0.0009	107.33	0.0004	5.598E-06
Se	78	2	H2	1.999	0.0009	110.00	0.0004	5.598E-06
Se	78	2	H2	2.102	0.0009	116.67	0.0004	5.598E-06
Na	23	3	He	20361.024	64.1498	2947372.46	0.0031	0.4657
Na	23	3	He	20737.684	65.3279	2981194.33	0.0031	0.4657
Na	23	3	He	21119.141	66.521	2974929.02	0.0031	0.4657
Mg	24	3	He	66466.084	100.8575	4633913.99	0.0015	0.003704
Mg	24	3	He	67920.529	103.0644	4703276.49	0.0015	0.003704
Mg	24	3	He	68427.806	103.8341	4643636.18	0.0015	0.003704
Al	27	3	He	21.313	0.0107	490.24	0.0005	0.0007154
Al	27	3	He	3.629	0.0024	110.01	0.0005	0.0007154
Al	27	3	He	6.607	0.0038	170.01	0.0005	0.0007154
K	39	3	He	5355.191	6.2495	287132.63	0.0011	0.4296
K	39	3	He	5492.842	6.3991	292016.77	0.0011	0.4296
K	39	3	He	5471.094	6.3754	285119.55	0.0011	0.4296
Ca	44	3	He	294791.307	18.2276	837472.33	0.0001	0.002924
Ca	44	3	He	300870.389	18.6035	848957.10	0.0001	0.002924
Ca	44	3	He	305434.654	18.8856	844597.57	0.0001	0.002924
Ti	47	3	He	0.899	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.397	0.0179	824.03	0.021	0.009571
V	51	3	He	0.297	0.0158	722.02	0.021	0.009571
V	51	3	He	0.34	0.0167	748.02	0.021	0.009571
Cr	52	3	He	0.124	0.0209	960.07	0.0267	0.01758
Cr	52	3	He	0.138	0.0213	970.06	0.0267	0.01758
Cr	52	3	He	0.028	0.0183	820.05	0.0267	0.01758
Mn	55	3	He	1126.614	12.193	560211.59	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1144.461	12.3861	565232.69	0.0108	0.004199
Mn	55	3	He	1169.872	12.661	566223.31	0.0108	0.004199
Fe	57	3	He	21.838	0.0139	640.03	0.0005	0.002993
Fe	57	3	He	27.716	0.0169	770.05	0.0005	0.002993
Fe	57	3	He	19.92	0.013	580.03	0.0005	0.002993
Co	59	3	He	1.871	0.101	4640.81	0.0524	0.003063
Co	59	3	He	2.257	0.1212	5531.10	0.0524	0.003063
Co	59	3	He	2.201	0.1183	5291.02	0.0524	0.003063
Ni	60	3	He	5.077	0.0667	4070.67	0.0109	0.01116
Ni	60	3	He	5.402	0.0702	4380.73	0.0109	0.01116
Ni	60	3	He	5.791	0.0745	4570.81	0.0109	0.01116
Cu	63	3	He	0.849	0.0369	2730.32	0.0255	0.01531
Cu	63	3	He	0.841	0.0367	2810.31	0.0255	0.01531
Cu	63	3	He	0.994	0.0406	3090.37	0.0255	0.01531
Zn	66	3	He	5.756	0.0193	1430.11	0.0029	0.002787
Zn	66	3	He	6.073	0.0203	1550.13	0.0029	0.002787
Zn	66	3	He	5.11	0.0175	1330.10	0.0029	0.002787
As	75	3	He	0.456	0.0014	102.00	0.0021	0.0004097
As	75	3	He	0.508	0.0015	114.00	0.0021	0.0004097
As	75	3	He	0.462	0.0014	106.00	0.0021	0.0004097
Sr	88	3	He	1495.201	14.0943	860490.69	0.0094	0.0008765
Sr	88	3	He	1505.297	14.1895	885112.41	0.0094	0.0008765
Sr	88	3	He	1522.239	14.3492	880584.28	0.0094	0.0008765
Mo	98	3	He	127.001	2.926	178640.41	0.023	0.0002199
Mo	98	3	He	127.735	2.9429	183575.15	0.023	0.0002199
Mo	98	3	He	128.707	2.9653	181978.14	0.023	0.0002199
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Ag	107	3	He	-0.014	0.0002	10.00	0.0483	0.0008224
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Cd	111	3	He	0.469	0.0025	154.00	0.0053	2.193E-05
Cd	111	3	He	0.507	0.0027	170.00	0.0053	2.193E-05
Cd	111	3	He	0.595	0.0032	196.00	0.0053	2.193E-05
Sn	120	3	He	3.539	0.0659	4020.65	0.0148	0.01345
Sn	120	3	He	3.336	0.0629	3920.62	0.0148	0.01345
Sn	120	3	He	2.79	0.0548	3360.49	0.0148	0.01345
Sb	121	3	He	0.439	0.0067	410.02	0.0143	0.0004392
Sb	121	3	He	0.597	0.009	560.04	0.0143	0.0004392
Sb	121	3	He	0.596	0.009	550.02	0.0143	0.0004392
Ba	137	3	He	64.568	0.2817	17200.07	0.0044	0.0001096
Ba	137	3	He	63.379	0.2765	17250.10	0.0044	0.0001096
Ba	137	3	He	63.151	0.2755	16909.79	0.0044	0.0001096
Tl	205	3	He	2.922	0.061	14888.08	0.0208	0.0002491
Tl	205	3	He	2.936	0.0613	15308.63	0.0208	0.0002491
Tl	205	3	He	2.975	0.0621	15278.60	0.0208	0.0002491
Pb	208	3	He	0.021	0.0012	190.01	0.0272	0.0006218
Pb	208	3	He	0.017	0.0011	140.01	0.0272	0.0006218
Pb	208	3	He	0.023	0.0013	170.01	0.0272	0.0006218
U	238	3	He	3.652	0.1005	24531.52	0.0275	2.763E-05
U	238	3	He	3.682	0.1013	25302.99	0.0275	2.763E-05
U	238	3	He	3.702	0.1019	25062.69	0.0275	2.763E-05
Sc	45	1	No Gas			2319525.12		
Sc	45	1	No Gas			2257530.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2308858.87		
Ge	72	1	No Gas			1032262.80		
Ge	72	1	No Gas			1012895.61		
Ge	72	1	No Gas			1032409.20		
Sc	45	2	H2			148085.17		
Sc	45	2	H2			149183.54		
Sc	45	2	H2			148648.31		
Ge	72	2	H2			124610.57		
Ge	72	2	H2			122294.19		
Ge	72	2	H2			123390.56		
In	115	2	H2			294397.94		
In	115	2	H2			296421.60		
In	115	2	H2			299166.19		
Sc	45	3	He			45945.18		
Sc	45	3	He			45634.35		
Sc	45	3	He			44721.68		
Ge	72	3	He			73909.32		
Ge	72	3	He			76501.93		
Ge	72	3	He			76040.45		
In	115	3	He			61080.32		
In	115	3	He			62405.41		
In	115	3	He			61391.72		
Tb	159	3	He			244139.39		
Tb	159	3	He			249819.49		
Tb	159	3	He			246056.50		
Bi	209	3	He			167917.93		
Bi	209	3	He			173076.56		
Bi	209	3	He			170821.97		

Quantitation Report

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Sample Name	CCV 6148199
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

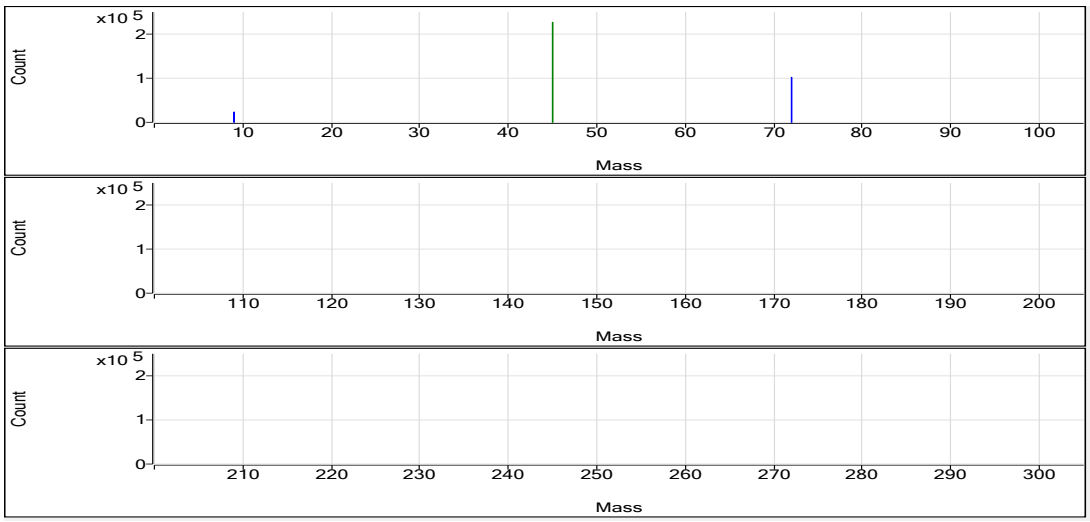
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	52.280	ppb	1.0	47443.52	0.0208	Pulse	0.5000	3
Se	78	72	H2	53.678	ppb	1.6	2759.80	0.0240	Pulse	1.5000	3
Na	23	45	He	5234.458	ppb	0.9	749878.11	16.8377	Pulse	0.1000	3
Mg	24	45	He	5252.361	ppb	0.3	355113.99	7.9735	Pulse	0.1000	3
Al	27	45	He	5119.052	ppb	1.7	106509.88	2.3917	Pulse	0.1000	3
K	39	45	He	5221.446	ppb	0.8	271850.45	6.1041	Pulse	0.1000	3
Ca	44	45	He	5192.881	ppb	2.2	14426.85	0.3240	Pulse	0.1000	3
Ti	47	45	He	5190.488	ppb	0.6	111967.56	2.5141	Pulse	0.1000	3
V	51	45	He	520.559	ppb	1.1	488378.79	10.9662	Pulse	0.5000	3
Cr	52	45	He	523.534	ppb	0.6	622951.16	13.9875	Pulse	0.1000	3
Mn	55	45	He	520.052	ppb	1.1	250760.60	5.6306	Pulse	0.1000	3
Fe	57	45	He	5300.185	ppb	2.1	118352.68	2.6576	Pulse	0.1000	3
Co	59	45	He	505.648	ppb	0.9	1179045.81	26.4743	Pulse	0.1000	3
Ni	60	115	He	514.563	ppb	2.0	336796.80	5.6373	Pulse	0.1000	3
Cu	63	72	He	506.752	ppb	1.5	953634.15	12.9264	Pulse	0.1000	3
Zn	66	72	He	527.132	ppb	0.5	112126.98	1.5196	Pulse	0.1000	3
As	75	72	He	523.867	ppb	1.1	82296.77	1.1155	Pulse	0.5000	3
Sr	88	115	He	51.460	ppb	1.5	29033.70	0.4859	Pulse	0.1000	3
Mo	98	115	He	51.376	ppb	1.8	70732.41	1.1838	Pulse	0.1000	3
Ag	107	115	He	52.042	ppb	1.6	150241.55	2.5146	Pulse	0.1000	3
Cd	111	115	He	51.567	ppb	2.2	16435.33	0.2751	Pulse	0.5000	3
Sn	120	115	He	51.791	ppb	1.1	46627.43	0.7803	Pulse	0.1000	3
Sb	121	115	He	50.896	ppb	2.7	43528.59	0.7286	Pulse	0.1000	3
Ba	137	115	He	516.045	ppb	2.7	134468.84	2.2509	Pulse	0.1000	3
Tl	205	159	He	51.557	ppb	1.8	258012.32	1.0719	Pulse	0.1000	3
Pb	208	159	He	51.706	ppb	0.8	338918.71	1.4081	Pulse	0.1000	3
U	238	159	He	52.168	ppb	0.7	345373.08	1.4349	Pulse	0.1000	3

ISTD Table:

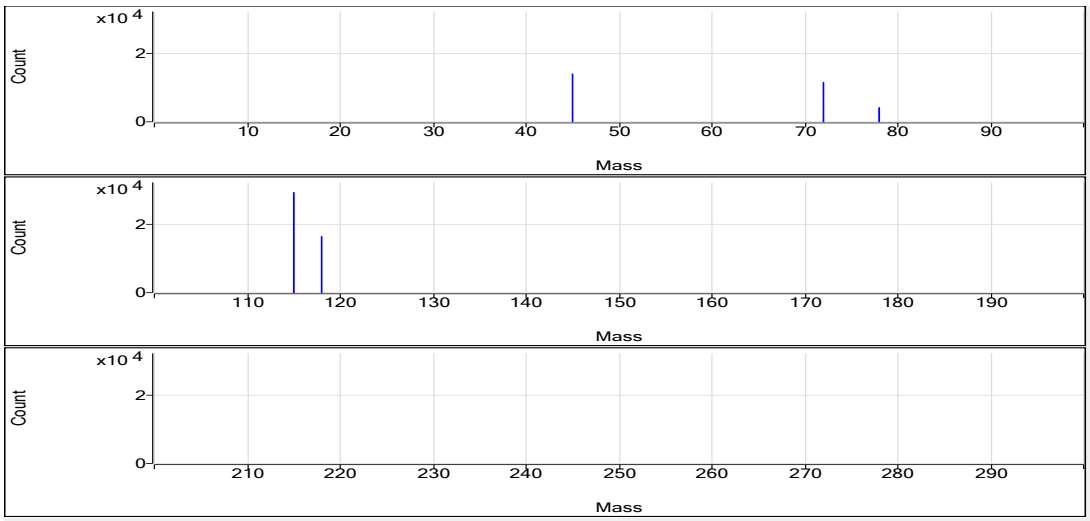
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2279863.66	0.5	99.4	Analog	0.1000	3
No Gas	Ge	72	1026935.09	0.8	98.8	Pulse	0.1000	3
H2	Sc	45	139210.44	0.5	100.1	Pulse	0.1000	3
H2	Ge	72	114942.79	2.7	97.4	Pulse	0.1000	3
H2	In	115	291011.59	1.3	98.8	Pulse	0.1000	3
He	Sc	45	44537.60	0.9	95.1	Pulse	0.1000	3
He	Ge	72	73782.74	1.2	96.5	Pulse	0.1000	3
He	In	115	59756.54	1.6	98.6	Pulse	0.1000	3
He	Tb	159	240705.05	0.5	99.8	Pulse	0.1000	3
He	Bi	209	167685.19	0.5	101.2	Pulse	0.1000	3

No Gas

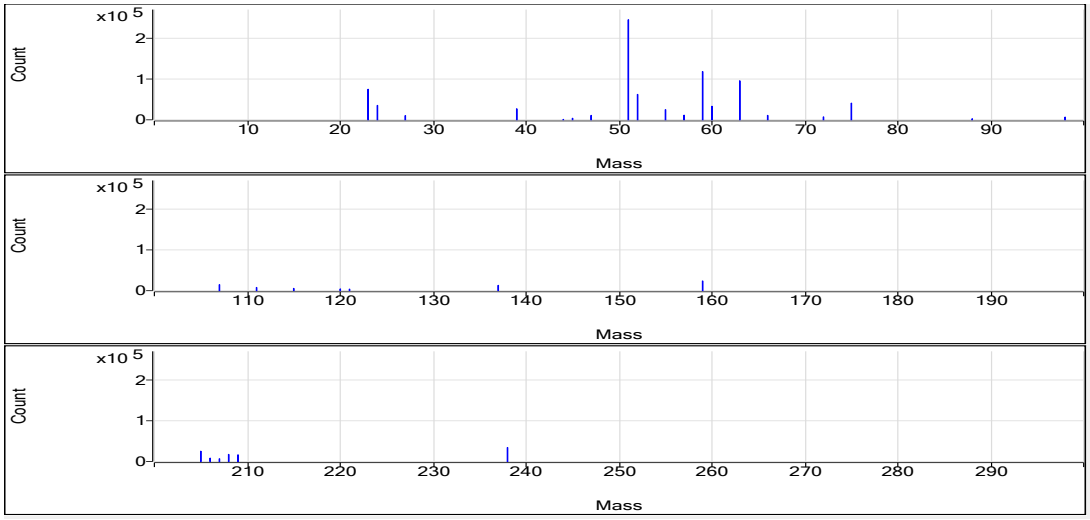


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.678	0.0206	47191.48	0.0004	9.309E-06
Be	9	1	No Gas	52.414	0.0209	47444.23	0.0004	9.309E-06
Be	9	1	No Gas	52.747	0.021	47694.86	0.0004	9.309E-06
Se	78	2	H2	52.804	0.0236	2784.91	0.0004	5.598E-06
Se	78	2	H2	53.719	0.024	2684.23	0.0004	5.598E-06
Se	78	2	H2	54.511	0.0244	2810.25	0.0004	5.598E-06
Na	23	3	He	5197.701	16.7228	747534.36	0.0031	0.4657
Na	23	3	He	5220.542	16.7942	752576.55	0.0031	0.4657
Na	23	3	He	5285.131	16.9962	749523.43	0.0031	0.4657
Mg	24	3	He	5250.22	7.9702	356282.77	0.0015	0.003704
Mg	24	3	He	5237.354	7.9507	356285.27	0.0015	0.003704
Mg	24	3	He	5269.51	7.9995	352773.94	0.0015	0.003704
Al	27	3	He	5103.112	2.3842	106579.79	0.0005	0.0007154
Al	27	3	He	5038.694	2.3542	105493.96	0.0005	0.0007154
Al	27	3	He	5215.35	2.4367	107455.88	0.0005	0.0007154
K	39	3	He	5209.318	6.0909	272274.66	0.0011	0.4296
K	39	3	He	5184.864	6.0644	271754.23	0.0011	0.4296
K	39	3	He	5270.156	6.157	271522.46	0.0011	0.4296
Ca	44	3	He	5205.669	0.3248	14516.92	0.0001	0.002924
Ca	44	3	He	5073.517	0.3166	14186.56	0.0001	0.002924
Ca	44	3	He	5299.458	0.3305	14577.06	0.0001	0.002924
Ti	47	3	He	5159.853	2.4992	111719.34	0.0005	0
Ti	47	3	He	5193.082	2.5153	112715.68	0.0005	0
Ti	47	3	He	5218.529	2.5276	111467.65	0.0005	0
V	51	3	He	516.841	10.888	486710.97	0.021	0.009571
V	51	3	He	517.431	10.9004	488465.81	0.021	0.009571
V	51	3	He	527.405	11.1103	489959.59	0.021	0.009571
Cr	52	3	He	520.106	13.896	621174.01	0.0267	0.01758
Cr	52	3	He	523.676	13.9912	626971.71	0.0267	0.01758
Cr	52	3	He	526.821	14.0752	620707.76	0.0267	0.01758
Mn	55	3	He	516.104	5.5879	249789.70	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	517.617	5.6043	251138.32	0.0108	0.004199
Mn	55	3	He	526.435	5.6997	251353.77	0.0108	0.004199
Fe	57	3	He	5205.365	2.6102	116678.04	0.0005	0.002993
Fe	57	3	He	5276.425	2.6457	118560.28	0.0005	0.002993
Fe	57	3	He	5418.764	2.717	119819.72	0.0005	0.002993
Co	59	3	He	503.024	26.337	1177306.23	0.0524	0.003063
Co	59	3	He	503.201	26.3462	1180619.98	0.0524	0.003063
Co	59	3	He	510.719	26.7398	1179211.23	0.0524	0.003063
Ni	60	3	He	521.999	5.7186	338182.49	0.0109	0.01116
Ni	60	3	He	518.54	5.6808	336666.32	0.0109	0.01116
Ni	60	3	He	503.149	5.5125	335541.60	0.0109	0.01116
Cu	63	3	He	508.123	12.9613	955630.77	0.0255	0.01531
Cu	63	3	He	498.512	12.7165	949453.81	0.0255	0.01531
Cu	63	3	He	513.62	13.1014	955817.88	0.0255	0.01531
Zn	66	3	He	528.626	1.5239	112359.00	0.0029	0.002787
Zn	66	3	He	528.841	1.5246	113828.46	0.0029	0.002787
Zn	66	3	He	523.929	1.5104	110193.49	0.0029	0.002787
As	75	3	He	520.738	1.1088	81752.02	0.0021	0.0004097
As	75	3	He	520.483	1.1083	82747.02	0.0021	0.0004097
As	75	3	He	530.381	1.1293	82391.27	0.0021	0.0004097
Sr	88	3	He	51.37	0.4851	28686.33	0.0094	0.0008765
Sr	88	3	He	52.247	0.4933	29237.36	0.0094	0.0008765
Sr	88	3	He	50.762	0.4793	29177.40	0.0094	0.0008765
Mo	98	3	He	52.43	1.2081	71442.51	0.023	0.0002199
Mo	98	3	He	50.868	1.1721	69463.52	0.023	0.0002199
Mo	98	3	He	50.83	1.1712	71291.20	0.023	0.0002199
Ag	107	3	He	52.915	2.5568	151202.59	0.0483	0.0008224
Ag	107	3	He	52.006	2.5129	148922.76	0.0483	0.0008224
Ag	107	3	He	51.204	2.4742	150599.29	0.0483	0.0008224
Cd	111	3	He	51.676	0.2757	16302.55	0.0053	2.193E-05
Cd	111	3	He	52.667	0.281	16650.87	0.0053	2.193E-05
Cd	111	3	He	50.359	0.2687	16352.56	0.0053	2.193E-05
Sn	120	3	He	52.403	0.7894	46680.77	0.0148	0.01345
Sn	120	3	He	51.306	0.7731	45818.21	0.0148	0.01345
Sn	120	3	He	51.665	0.7784	47383.32	0.0148	0.01345
Sb	121	3	He	52.035	0.7449	44053.35	0.0143	0.0004392
Sb	121	3	He	51.274	0.734	43502.14	0.0143	0.0004392
Sb	121	3	He	49.379	0.7069	43030.27	0.0143	0.0004392
Ba	137	3	He	519.065	2.2641	133889.30	0.0044	0.0001096
Ba	137	3	He	528.267	2.3042	136554.98	0.0044	0.0001096
Ba	137	3	He	500.803	2.1844	132962.24	0.0044	0.0001096
Tl	205	3	He	51.782	1.0766	257723.67	0.0208	0.0002491
Tl	205	3	He	52.367	1.0887	262910.68	0.0208	0.0002491
Tl	205	3	He	50.523	1.0504	253402.61	0.0208	0.0002491
Pb	208	3	He	52.155	1.4203	179460.52	0.0272	0.0006218
Pb	208	3	He	51.513	1.4028	177845.33	0.0272	0.0006218
Pb	208	3	He	51.449	1.4011	177450.45	0.0272	0.0006218
U	238	3	He	52.423	1.4419	345169.96	0.0275	2.763E-05
U	238	3	He	52.303	1.4385	347383.00	0.0275	2.763E-05
U	238	3	He	51.779	1.4242	343566.28	0.0275	2.763E-05
Sc	45	1	No Gas			2294059.65		
Sc	45	1	No Gas			2273972.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2271559.18		
Ge	72	1	No Gas			1035768.73		
Ge	72	1	No Gas			1025573.50		
Ge	72	1	No Gas			1019463.03		
Sc	45	2	H2			138954.87		
Sc	45	2	H2			139962.74		
Sc	45	2	H2			138713.72		
Ge	72	2	H2			117891.27		
Ge	72	2	H2			111695.78		
Ge	72	2	H2			115241.31		
In	115	2	H2			295259.70		
In	115	2	H2			288003.78		
In	115	2	H2			289771.28		
Sc	45	3	He			44701.64		
Sc	45	3	He			44811.72		
Sc	45	3	He			44099.45		
Ge	72	3	He			73729.39		
Ge	72	3	He			74663.33		
Ge	72	3	He			72955.51		
In	115	3	He			59463.73		
In	115	3	He			59584.49		
In	115	3	He			61200.59		
Tb	159	3	He			239391.50		
Tb	159	3	He			241481.75		
Tb	159	3	He			241241.91		
Bi	209	3	He			168503.83		
Bi	209	3	He			167624.04		
Bi	209	3	He			166927.71		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

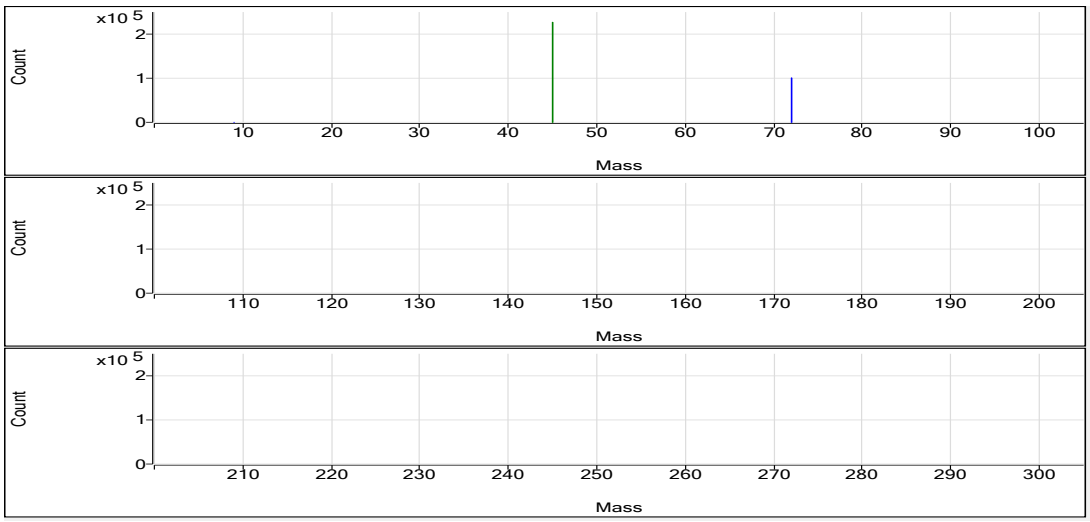
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.063	ppb	44.4	78.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.167	ppb	15.5	9.11	0.0001	Pulse	1.5000	3
Na	23	45	He	124.005	ppb	7.8	38347.93	0.8535	Pulse	0.1000	3
Mg	24	45	He	21.161	ppb	17.9	1606.80	0.0358	Pulse	0.1000	3
Al	27	45	He	3.688	ppb	42.5	110.00	0.0024	Pulse	0.1000	3
K	39	45	He	-2.015	ppb	N/A	19201.79	0.4274	Pulse	0.1000	3
Ca	44	45	He	30.746	ppb	18.8	216.68	0.0048	Pulse	0.1000	3
Ti	47	45	He	3.817	ppb	61.5	83.33	0.0018	Pulse	0.1000	3
V	51	45	He	0.260	ppb	13.5	676.02	0.0150	Pulse	0.5000	3
Cr	52	45	He	0.253	ppb	61.2	1096.74	0.0243	Pulse	0.1000	3
Mn	55	45	He	0.573	ppb	30.2	466.68	0.0104	Pulse	0.1000	3
Fe	57	45	He	7.625	ppb	23.4	306.68	0.0068	Pulse	0.1000	3
Co	59	45	He	0.216	ppb	27.4	643.37	0.0144	Pulse	0.1000	3
Ni	60	115	He	0.387	ppb	17.3	906.73	0.0154	Pulse	0.1000	3
Cu	63	72	He	0.214	ppb	74.2	1553.46	0.0208	Pulse	0.1000	3
Zn	66	72	He	0.616	ppb	77.0	340.02	0.0046	Pulse	0.1000	3
As	75	72	He	0.390	ppb	10.5	92.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.442	ppb	16.1	296.68	0.0050	Pulse	0.1000	3
Mo	98	115	He	0.121	ppb	24.6	176.67	0.0030	Pulse	0.1000	3
Ag	107	115	He	0.017	ppb	51.2	96.67	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.026	ppb	62.8	9.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.112	ppb	38.1	890.05	0.0151	Pulse	0.1000	3
Sb	121	115	He	0.029	ppb	124.4	50.00	0.0009	Pulse	0.1000	3
Ba	137	115	He	0.208	ppb	80.8	60.00	0.0010	Pulse	0.1000	3
Tl	205	159	He	0.353	ppb	1.0	1796.84	0.0076	Pulse	0.1000	3
Pb	208	159	He	0.051	ppb	4.2	476.69	0.0020	Pulse	0.1000	3
U	238	159	He	0.029	ppb	12.8	196.68	0.0008	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2274763.77	0.9	99.2	Analog	0.1000	3
No Gas	Ge	72	1010427.28	0.9	97.2	Pulse	0.1000	3
H2	Sc	45	137472.45	0.4	98.9	Pulse	0.1000	3
H2	Ge	72	113431.12	1.0	96.1	Pulse	0.1000	3
H2	In	115	287376.66	0.3	97.5	Pulse	0.1000	3
He	Sc	45	44952.33	2.2	96.0	Pulse	0.1000	3
He	Ge	72	74750.94	1.2	97.7	Pulse	0.1000	3
He	In	115	58899.23	0.6	97.2	Pulse	0.1000	3
He	Tb	159	236941.55	0.4	98.3	Pulse	0.1000	3
He	Bi	209	164018.42	0.9	99.0	Pulse	0.1000	3

No Gas



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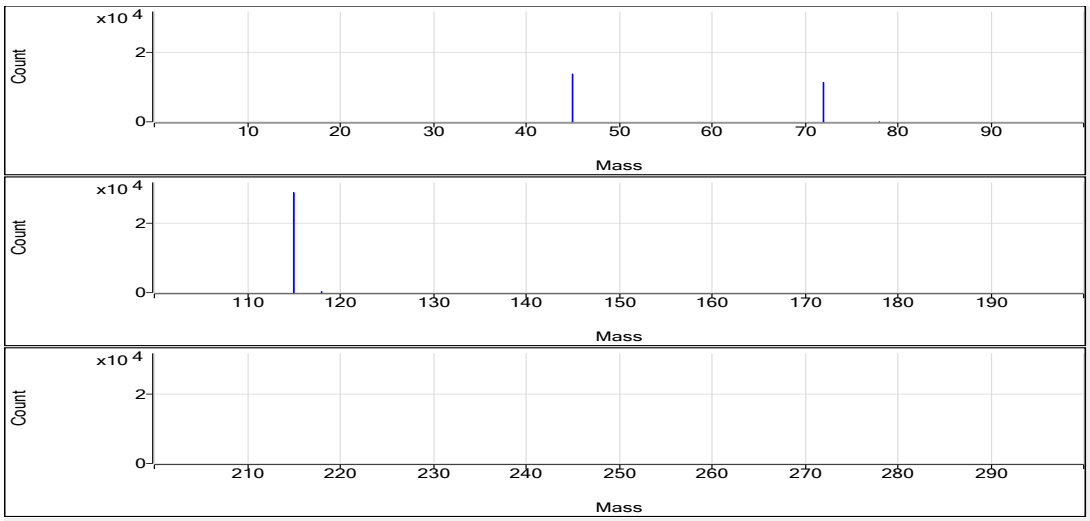
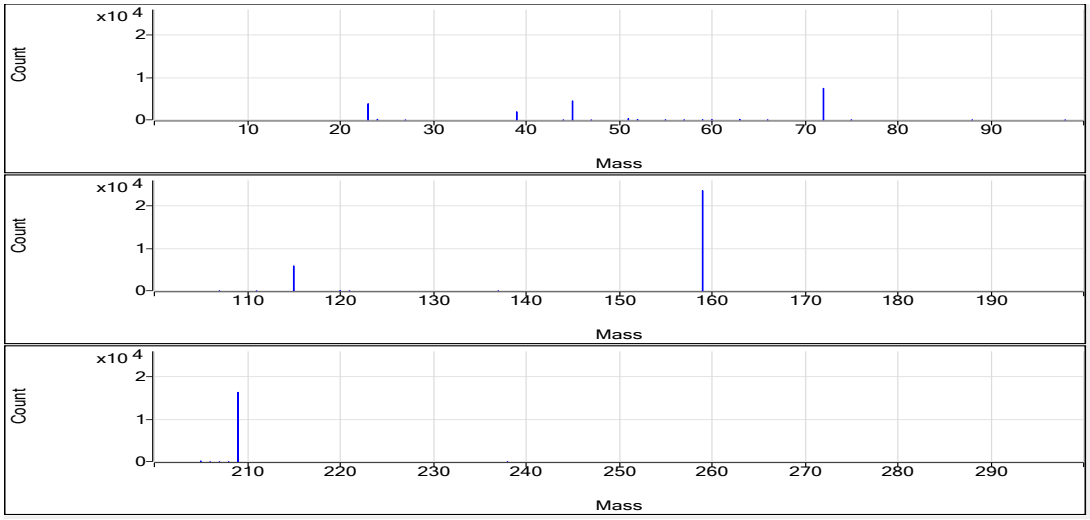


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.095	0	108.00	0.0004	9.309E-06
Be	9	1	No Gas	0.048	0	64.00	0.0004	9.309E-06
Be	9	1	No Gas	0.046	0	62.00	0.0004	9.309E-06
Se	78	2	H2	0.196	0.0001	10.67	0.0004	5.598E-06
Se	78	2	H2	0.158	0.0001	8.67	0.0004	5.598E-06
Se	78	2	H2	0.147	0.0001	8.00	0.0004	5.598E-06
Na	23	3	He	123.228	0.8511	38284.13	0.0031	0.4657
Na	23	3	He	134.001	0.8848	38885.94	0.0031	0.4657
Na	23	3	He	114.786	0.8247	37873.72	0.0031	0.4657
Mg	24	3	He	23.64	0.0396	1780.18	0.0015	0.003704
Mg	24	3	He	23.053	0.0387	1700.13	0.0015	0.003704
Mg	24	3	He	16.79	0.0292	1340.09	0.0015	0.003704
Al	27	3	He	4.656	0.0029	130.00	0.0005	0.0007154
Al	27	3	He	1.878	0.0016	70.00	0.0005	0.0007154
Al	27	3	He	4.529	0.0028	130.01	0.0005	0.0007154
K	39	3	He	57.679	0.4923	22145.49	0.0011	0.4296
K	39	3	He	-12.806	0.4157	18270.43	0.0011	0.4296
K	39	3	He	-50.919	0.3743	17189.45	0.0011	0.4296
Ca	44	3	He	28.217	0.0047	210.01	0.0001	0.002924
Ca	44	3	He	37.353	0.0052	230.01	0.0001	0.002924
Ca	44	3	He	26.667	0.0046	210.01	0.0001	0.002924
Ti	47	3	He	6.426	0.0031	140.00	0.0005	0
Ti	47	3	He	1.879	0.0009	40.00	0.0005	0
Ti	47	3	He	3.147	0.0015	70.00	0.0005	0
V	51	3	He	0.255	0.0149	672.02	0.021	0.009571
V	51	3	He	0.298	0.0158	696.02	0.021	0.009571
V	51	3	He	0.228	0.0144	660.02	0.021	0.009571
Cr	52	3	He	0.249	0.0242	1090.08	0.0267	0.01758
Cr	52	3	He	0.1	0.0203	890.05	0.0267	0.01758
Cr	52	3	He	0.41	0.0285	1310.09	0.0267	0.01758
Mn	55	3	He	0.742	0.0122	550.02	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.579	0.0105	460.02	0.0108	0.004199
Mn	55	3	He	0.397	0.0085	390.01	0.0108	0.004199
Fe	57	3	He	6.453	0.0062	280.01	0.0005	0.002993
Fe	57	3	He	6.745	0.0064	280.01	0.0005	0.002993
Fe	57	3	He	9.676	0.0078	360.01	0.0005	0.002993
Co	59	3	He	0.235	0.0153	690.04	0.0524	0.003063
Co	59	3	He	0.263	0.0168	740.05	0.0524	0.003063
Co	59	3	He	0.149	0.0109	500.02	0.0524	0.003063
Ni	60	3	He	0.461	0.0162	960.06	0.0109	0.01116
Ni	60	3	He	0.331	0.0148	870.06	0.0109	0.01116
Ni	60	3	He	0.368	0.0152	890.06	0.0109	0.01116
Cu	63	3	He	0.037	0.0163	1200.09	0.0255	0.01531
Cu	63	3	He	0.345	0.0241	1820.16	0.0255	0.01531
Cu	63	3	He	0.259	0.0219	1640.12	0.0255	0.01531
Zn	66	3	He	1.009	0.0057	420.02	0.0029	0.002787
Zn	66	3	He	0.089	0.003	230.01	0.0029	0.002787
Zn	66	3	He	0.749	0.0049	370.02	0.0029	0.002787
As	75	3	He	0.355	0.0012	86.00	0.0021	0.0004097
As	75	3	He	0.38	0.0012	92.00	0.0021	0.0004097
As	75	3	He	0.435	0.0013	100.00	0.0021	0.0004097
Sr	88	3	He	0.39	0.0046	270.01	0.0094	0.0008765
Sr	88	3	He	0.412	0.0048	280.01	0.0094	0.0008765
Sr	88	3	He	0.523	0.0058	340.02	0.0094	0.0008765
Mo	98	3	He	0.137	0.0034	200.01	0.023	0.0002199
Mo	98	3	He	0.086	0.0022	130.00	0.023	0.0002199
Mo	98	3	He	0.139	0.0034	200.01	0.023	0.0002199
Ag	107	3	He	0.025	0.002	120.00	0.0483	0.0008224
Ag	107	3	He	0.018	0.0017	100.01	0.0483	0.0008224
Ag	107	3	He	0.008	0.0012	70.00	0.0483	0.0008224
Cd	111	3	He	0.009	0.0001	4.00	0.0053	2.193E-05
Cd	111	3	He	0.04	0.0002	14.00	0.0053	2.193E-05
Cd	111	3	He	0.028	0.0002	10.00	0.0053	2.193E-05
Sn	120	3	He	0.117	0.0152	900.06	0.0148	0.01345
Sn	120	3	He	0.067	0.0144	850.04	0.0148	0.01345
Sn	120	3	He	0.152	0.0157	920.06	0.0148	0.01345
Sb	121	3	He	-0.007	0.0003	20.00	0.0143	0.0004392
Sb	121	3	He	0.064	0.0014	80.00	0.0143	0.0004392
Sb	121	3	He	0.029	0.0009	50.00	0.0143	0.0004392
Ba	137	3	He	0.4	0.0019	110.00	0.0044	0.0001096
Ba	137	3	He	0.092	0.0005	30.00	0.0044	0.0001096
Ba	137	3	He	0.131	0.0007	40.00	0.0044	0.0001096
Tl	205	3	He	0.353	0.0076	1790.17	0.0208	0.0002491
Tl	205	3	He	0.349	0.0075	1780.17	0.0208	0.0002491
Tl	205	3	He	0.356	0.0077	1820.18	0.0208	0.0002491
Pb	208	3	He	0.049	0.002	260.01	0.0272	0.0006218
Pb	208	3	He	0.053	0.0021	230.01	0.0272	0.0006218
Pb	208	3	He	0.051	0.002	250.01	0.0272	0.0006218
U	238	3	He	0.025	0.0007	170.01	0.0275	2.763E-05
U	238	3	He	0.03	0.0008	200.01	0.0275	2.763E-05
U	238	3	He	0.033	0.0009	220.01	0.0275	2.763E-05
Sc	45	1	No Gas			2297910.28		
Sc	45	1	No Gas			2267259.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2259121.69		
Ge	72	1	No Gas			1018558.19		
Ge	72	1	No Gas			1012617.02		
Ge	72	1	No Gas			1000106.63		
Sc	45	2	H2			138026.40		
Sc	45	2	H2			137380.68		
Sc	45	2	H2			137010.27		
Ge	72	2	H2			114354.07		
Ge	72	2	H2			113770.46		
Ge	72	2	H2			112168.83		
In	115	2	H2			287367.30		
In	115	2	H2			288287.71		
In	115	2	H2			286474.96		
Sc	45	3	He			44982.43		
Sc	45	3	He			43949.58		
Sc	45	3	He			45924.99		
Ge	72	3	He			73809.49		
Ge	72	3	He			75557.91		
Ge	72	3	He			74885.41		
In	115	3	He			59263.36		
In	115	3	He			58851.47		
In	115	3	He			58601.55		
Tb	159	3	He			235891.03		
Tb	159	3	He			237127.73		
Tb	159	3	He			237805.88		
Bi	209	3	He			165059.10		
Bi	209	3	He			164600.90		
Bi	209	3	He			162395.26		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

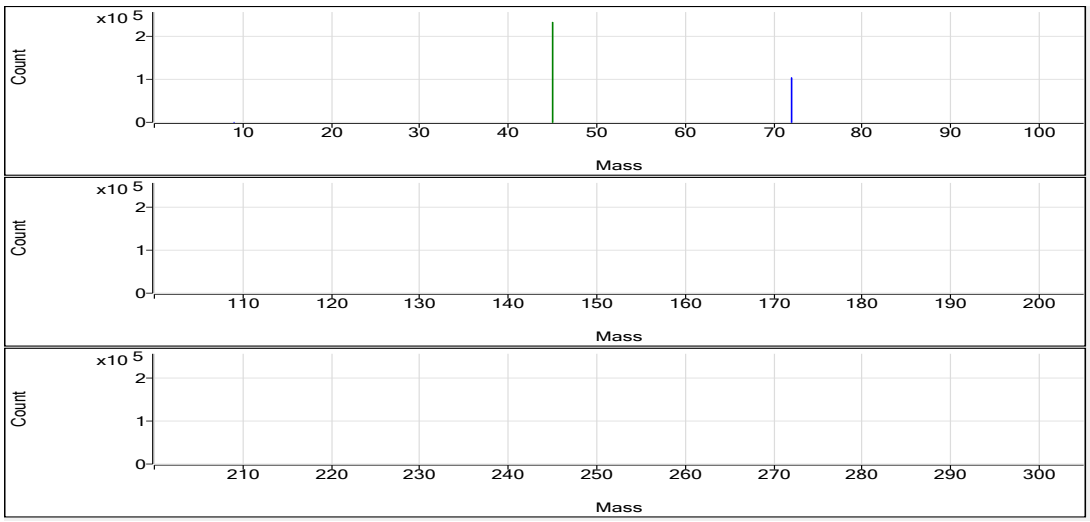
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.052	ppb	35.4	70.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.254	ppb	16.7	66.89	0.0006	Pulse	1.5000	3
Na	23	45	He	19164.882	ppb	1.6	2728263.81	60.4085	Analog	0.1000	3
Mg	24	45	He	67427.369	ppb	1.4	4620970.97	102.3161	Analog	0.1000	3
Al	27	45	He	25.502	ppb	13.6	570.03	0.0126	Pulse	0.1000	3
K	39	45	He	5353.154	ppb	0.9	282169.01	6.2472	Pulse	0.1000	3
Ca	44	45	He	299279.984	ppb	1.1	835772.28	18.5051	Pulse	0.1000	3
Ti	47	45	He	0.912	ppb	86.2	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.011	ppb	261.1	442.68	0.0098	Pulse	0.5000	3
Cr	52	45	He	0.066	ppb	117.1	873.39	0.0193	Pulse	0.1000	3
Mn	55	45	He	2225.047	ppb	1.2	1087414.70	24.0770	Pulse	0.1000	3
Fe	57	45	He	106639.103	ppb	1.2	2412399.70	53.4142	Analog	0.1000	3
Co	59	45	He	4.521	ppb	3.9	10827.27	0.2398	Pulse	0.1000	3
Ni	60	115	He	7.644	ppb	1.5	5717.86	0.0947	Pulse	0.1000	3
Cu	63	72	He	27.371	ppb	2.4	54235.10	0.7127	Pulse	0.1000	3
Zn	66	72	He	47.998	ppb	2.0	10723.88	0.1409	Pulse	0.1000	3
As	75	72	He	0.252	ppb	33.8	72.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	1523.042	ppb	2.9	866142.09	14.3568	Pulse	0.1000	3
Mo	98	115	He	0.161	ppb	22.5	236.68	0.0039	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	128.2	76.67	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.686	ppb	2.4	222.00	0.0037	Pulse	0.5000	3
Sn	120	115	He	-0.150	ppb	N/A	676.70	0.0112	Pulse	0.1000	3
Sb	121	115	He	0.023	ppb	76.4	46.67	0.0008	Pulse	0.1000	3
Ba	137	115	He	80.104	ppb	2.8	21085.10	0.3495	Pulse	0.1000	3
Tl	205	159	He	2.673	ppb	3.5	13710.26	0.0558	Pulse	0.1000	3
Pb	208	159	He	0.073	ppb	20.1	640.03	0.0026	Pulse	0.1000	3
U	238	159	He	2.525	ppb	2.7	17064.00	0.0695	Pulse	0.1000	3

ISTD Table:

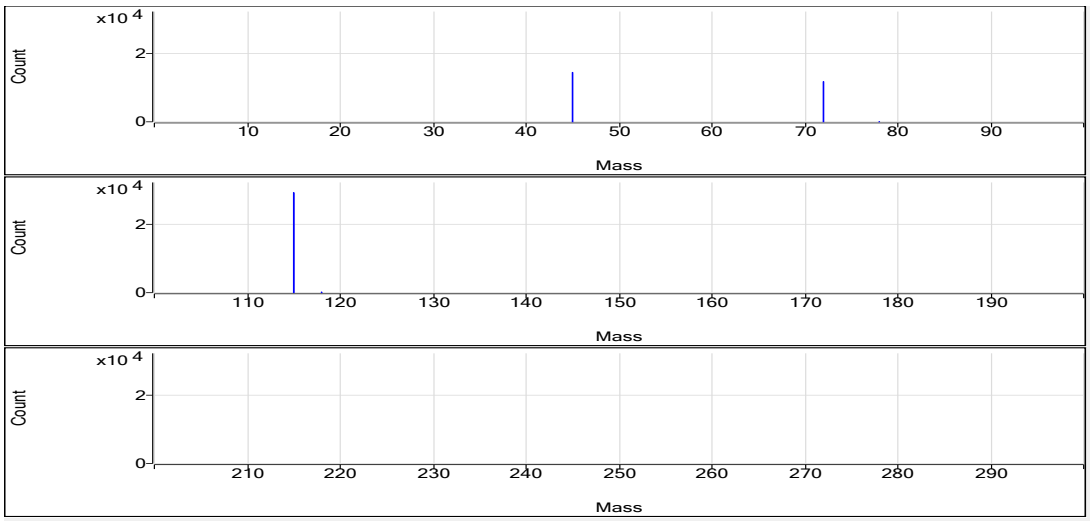
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2320718.76	0.5	101.2	Analog	0.1000	3
No Gas	Ge	72	1033561.08	1.0	99.5	Pulse	0.1000	3
H2	Sc	45	144942.40	2.0	104.2	Pulse	0.1000	3
H2	Ge	72	118034.10	0.3	100.0	Pulse	0.1000	3
H2	In	115	293300.74	1.2	99.5	Pulse	0.1000	3
He	Sc	45	45166.11	0.6	96.5	Pulse	0.1000	3
He	Ge	72	76116.91	1.2	99.5	Pulse	0.1000	3
He	In	115	60352.82	2.0	99.5	Pulse	0.1000	3
He	Tb	159	245634.17	0.4	101.9	Pulse	0.1000	3
He	Bi	209	170063.51	0.9	102.6	Pulse	0.1000	3

No Gas

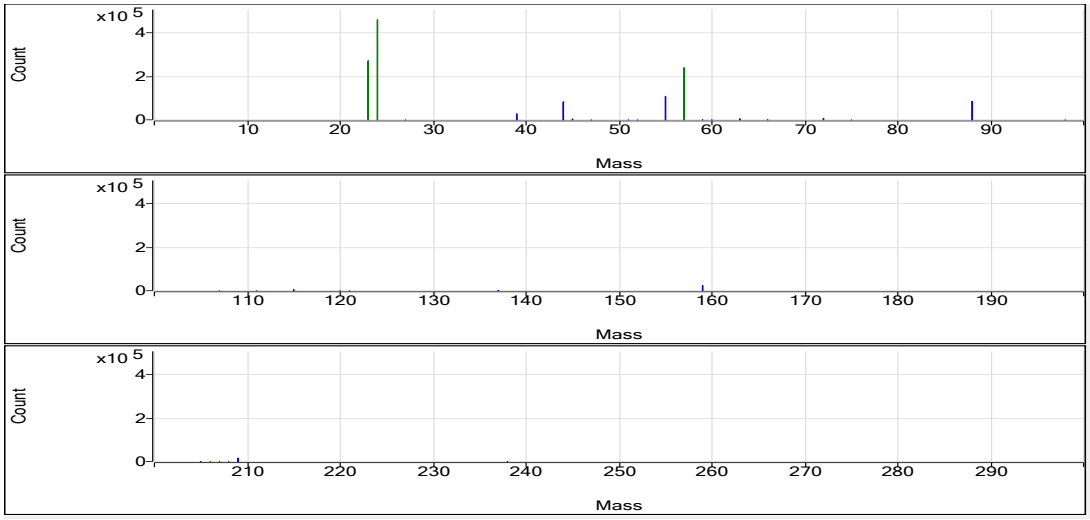


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.041	0	60.00	0.0004	9.309E-06
Be	9	1	No Gas	0.074	0	90.00	0.0004	9.309E-06
Be	9	1	No Gas	0.042	0	60.00	0.0004	9.309E-06
Se	78	2	H2	1.013	0.0005	54.00	0.0004	5.598E-06
Se	78	2	H2	1.387	0.0006	74.00	0.0004	5.598E-06
Se	78	2	H2	1.362	0.0006	72.67	0.0004	5.598E-06
Na	23	3	He	18857.907	59.4484	2697362.15	0.0031	0.4657
Na	23	3	He	19457.334	61.3233	2751703.08	0.0031	0.4657
Na	23	3	He	19179.406	60.454	2735726.21	0.0031	0.4657
Mg	24	3	He	66901.462	101.5181	4606197.43	0.0015	0.003704
Mg	24	3	He	68549.584	104.0189	4667546.49	0.0015	0.003704
Mg	24	3	He	66831.062	101.4113	4589168.99	0.0015	0.003704
Al	27	3	He	23.95	0.0119	540.03	0.0005	0.0007154
Al	27	3	He	29.483	0.0145	650.03	0.0005	0.0007154
Al	27	3	He	23.072	0.0115	520.03	0.0005	0.0007154
K	39	3	He	5410.087	6.3091	286264.78	0.0011	0.4296
K	39	3	He	5333.834	6.2263	279385.00	0.0011	0.4296
K	39	3	He	5315.542	6.2064	280857.26	0.0011	0.4296
Ca	44	3	He	297630.543	18.4032	835010.22	0.0001	0.002924
Ca	44	3	He	302966.033	18.733	840590.14	0.0001	0.002924
Ca	44	3	He	297243.376	18.3792	831716.47	0.0001	0.002924
Ti	47	3	He	1.82	0.0009	40.00	0.0005	0
Ti	47	3	He	0.46	0.0002	10.00	0.0005	0
Ti	47	3	He	0.456	0.0002	10.00	0.0005	0
V	51	3	He	0.016	0.0099	450.01	0.021	0.009571
V	51	3	He	0.037	0.0103	464.01	0.021	0.009571
V	51	3	He	-0.02	0.0091	414.01	0.021	0.009571
Cr	52	3	He	0.151	0.0216	980.07	0.0267	0.01758
Cr	52	3	He	0.001	0.0176	790.04	0.0267	0.01758
Cr	52	3	He	0.045	0.0188	850.05	0.0267	0.01758
Mn	55	3	He	2205.324	23.8636	1082767.64	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2254.78	24.3987	1094819.59	0.0108	0.004199
Mn	55	3	He	2215.038	23.9687	1084656.86	0.0108	0.004199
Fe	57	3	He	105780.826	52.9844	2404068.71	0.0005	0.002993
Fe	57	3	He	108156.628	54.1743	2430915.12	0.0005	0.002993
Fe	57	3	He	105979.854	53.0841	2402215.28	0.0005	0.002993
Co	59	3	He	4.389	0.2328	10563.76	0.0524	0.003063
Co	59	3	He	4.724	0.2504	11234.21	0.0524	0.003063
Co	59	3	He	4.451	0.2361	10683.85	0.0524	0.003063
Ni	60	3	He	7.551	0.0937	5741.18	0.0109	0.01116
Ni	60	3	He	7.614	0.0944	5571.13	0.0109	0.01116
Ni	60	3	He	7.767	0.0961	5841.26	0.0109	0.01116
Cu	63	3	He	27.413	0.7137	54372.22	0.0255	0.01531
Cu	63	3	He	27.999	0.7287	54763.25	0.0255	0.01531
Cu	63	3	He	26.7	0.6956	53569.82	0.0255	0.01531
Zn	66	3	He	47.176	0.1385	10553.82	0.0029	0.002787
Zn	66	3	He	49.08	0.144	10823.83	0.0029	0.002787
Zn	66	3	He	47.738	0.1402	10793.99	0.0029	0.002787
As	75	3	He	0.178	0.0008	60.00	0.0021	0.0004097
As	75	3	He	0.233	0.0009	68.00	0.0021	0.0004097
As	75	3	He	0.344	0.0011	88.00	0.0021	0.0004097
Sr	88	3	He	1490.354	14.0487	860576.86	0.0094	0.0008765
Sr	88	3	He	1573.255	14.8301	875083.89	0.0094	0.0008765
Sr	88	3	He	1505.518	14.1916	862765.53	0.0094	0.0008765
Mo	98	3	He	0.182	0.0044	270.01	0.023	0.0002199
Mo	98	3	He	0.182	0.0044	260.01	0.023	0.0002199
Mo	98	3	He	0.119	0.003	180.01	0.023	0.0002199
Ag	107	3	He	0.02	0.0018	110.00	0.0483	0.0008224
Ag	107	3	He	0.011	0.0014	80.00	0.0483	0.0008224
Ag	107	3	He	-0.003	0.0007	40.00	0.0483	0.0008224
Cd	111	3	He	0.688	0.0037	226.00	0.0053	2.193E-05
Cd	111	3	He	0.701	0.0038	222.00	0.0053	2.193E-05
Cd	111	3	He	0.668	0.0036	218.00	0.0053	2.193E-05
Sn	120	3	He	-0.28	0.0093	570.03	0.0148	0.01345
Sn	120	3	He	-0.085	0.0122	720.04	0.0148	0.01345
Sn	120	3	He	-0.087	0.0122	740.04	0.0148	0.01345
Sb	121	3	He	0.004	0.0005	30.00	0.0143	0.0004392
Sb	121	3	He	0.029	0.0008	50.00	0.0143	0.0004392
Sb	121	3	He	0.038	0.001	60.00	0.0143	0.0004392
Ba	137	3	He	79.081	0.345	21135.24	0.0044	0.0001096
Ba	137	3	He	82.718	0.3609	21295.27	0.0044	0.0001096
Ba	137	3	He	78.512	0.3425	20824.80	0.0044	0.0001096
Tl	205	3	He	2.772	0.0579	14277.66	0.0208	0.0002491
Tl	205	3	He	2.661	0.0556	13596.76	0.0208	0.0002491
Tl	205	3	He	2.586	0.054	13256.36	0.0208	0.0002491
Pb	208	3	He	0.059	0.0022	340.02	0.0272	0.0006218
Pb	208	3	He	0.088	0.003	540.03	0.0272	0.0006218
Pb	208	3	He	0.071	0.0026	300.01	0.0272	0.0006218
U	238	3	He	2.602	0.0716	17661.26	0.0275	2.763E-05
U	238	3	He	2.474	0.0681	16660.32	0.0275	2.763E-05
U	238	3	He	2.498	0.0687	16870.41	0.0275	2.763E-05
Sc	45	1	No Gas			2326379.18		
Sc	45	1	No Gas			2327290.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2308486.68		
Ge	72	1	No Gas			1045314.20		
Ge	72	1	No Gas			1031286.31		
Ge	72	1	No Gas			1024082.72		
Sc	45	2	H2			144683.05		
Sc	45	2	H2			142211.43		
Sc	45	2	H2			147932.72		
Ge	72	2	H2			117678.19		
Ge	72	2	H2			118181.49		
Ge	72	2	H2			118242.62		
In	115	2	H2			294409.35		
In	115	2	H2			289476.19		
In	115	2	H2			296016.69		
Sc	45	3	He			45373.17		
Sc	45	3	He			44872.10		
Sc	45	3	He			45253.05		
Ge	72	3	He			76180.53		
Ge	72	3	He			75156.11		
Ge	72	3	He			77014.09		
In	115	3	He			61260.88		
In	115	3	He			59012.46		
In	115	3	He			60799.33		
Tb	159	3	He			246717.67		
Tb	159	3	He			244733.79		
Tb	159	3	He			245451.05		
Bi	209	3	He			170104.55		
Bi	209	3	He			171551.83		
Bi	209	3	He			168534.16		

Quantitation Report

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Sample Name	410-179333-C-9-A
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

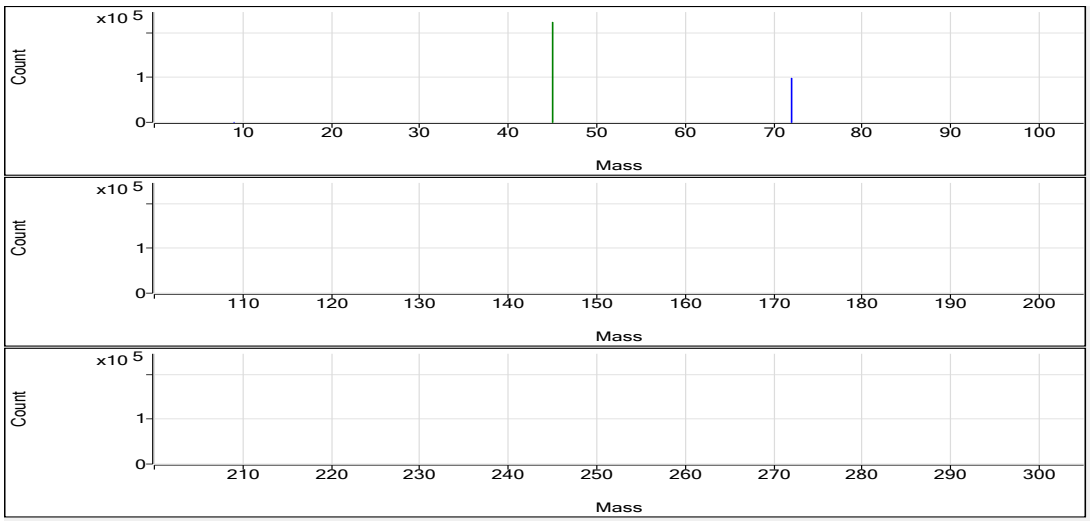
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.031	ppb	56.0	48.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	2.995	ppb	2.9	157.11	0.0013	Pulse	1.5000	3
Na	23	45	He	1972431.590	ppb	1.4	274972895.90	6,169.7293	Analog	0.1000	3
Mg	24	45	He	56604.939	ppb	1.5	3828019.63	85.8944	Analog	0.1000	3
Al	27	45	He	23.795	ppb	14.6	526.71	0.0118	Pulse	0.1000	3
K	39	45	He	16221.826	ppb	1.4	804829.03	18.0589	Pulse	0.1000	3
Ca	44	45	He	141820.592	ppb	0.8	390899.73	8.7706	Pulse	0.1000	3
Ti	47	45	He	0.926	ppb	50.1	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	4.330	ppb	3.4	4487.97	0.1007	Pulse	0.5000	3
Cr	52	45	He	14.334	ppb	0.7	17830.20	0.4001	Pulse	0.1000	3
Mn	55	45	He	288.122	ppb	0.5	139119.59	3.1214	Pulse	0.1000	3
Fe	57	45	He	64.664	ppb	2.3	1576.80	0.0354	Pulse	0.1000	3
Co	59	45	He	2.367	ppb	5.7	5661.17	0.1270	Pulse	0.1000	3
Ni	60	115	He	2.889	ppb	2.7	2503.60	0.0428	Pulse	0.1000	3
Cu	63	72	He	8.208	ppb	2.6	16555.58	0.2244	Pulse	0.1000	3
Zn	66	72	He	7.657	ppb	9.1	1830.17	0.0248	Pulse	0.1000	3
As	75	72	He	0.653	ppb	23.8	132.67	0.0018	Pulse	0.5000	3
Sr	88	115	He	1877.535	ppb	1.4	1036170.82	17.6981	Pulse	0.1000	3
Mo	98	115	He	68.735	ppb	1.1	92725.75	1.5837	Pulse	0.1000	3
Ag	107	115	He	0.169	ppb	16.2	526.69	0.0090	Pulse	0.1000	3
Cd	111	115	He	0.130	ppb	27.6	42.00	0.0007	Pulse	0.5000	3
Sn	120	115	He	-0.051	ppb	N/A	743.38	0.0127	Pulse	0.1000	3
Sb	121	115	He	0.136	ppb	14.2	140.01	0.0024	Pulse	0.1000	3
Ba	137	115	He	72.885	ppb	1.4	18621.87	0.3180	Pulse	0.1000	3
Tl	205	159	He	1.889	ppb	5.6	9426.67	0.0395	Pulse	0.1000	3
Pb	208	159	He	0.059	ppb	16.0	533.35	0.0022	Pulse	0.1000	3
U	238	159	He	48.187	ppb	1.4	316159.65	1.3254	Pulse	0.1000	3

ISTD Table:

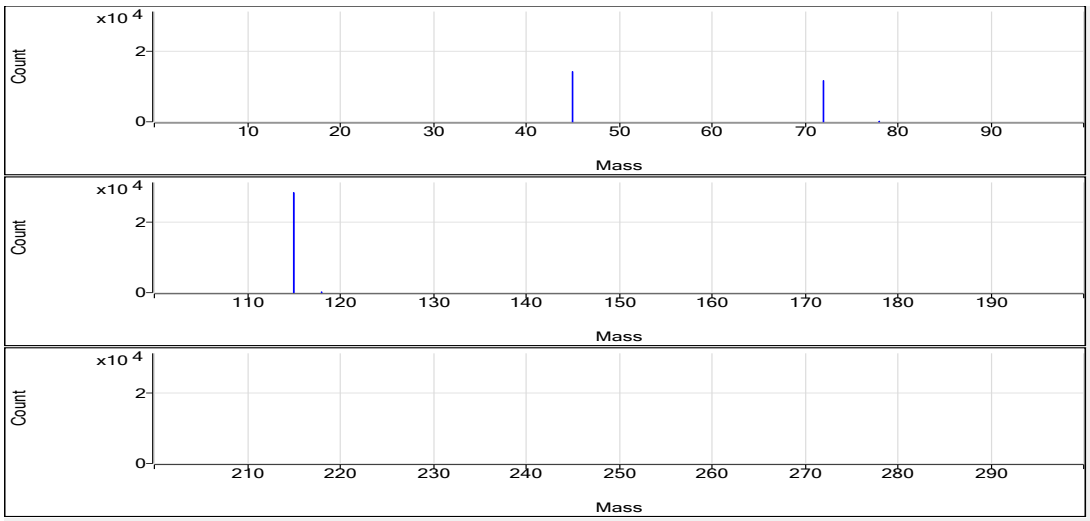
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2242752.21	1.2	97.8	Analog	0.1000	3
No Gas	Ge	72	990977.33	1.3	95.4	Pulse	0.1000	3
H2	Sc	45	142288.97	0.7	102.3	Pulse	0.1000	3
H2	Ge	72	116798.78	0.7	98.9	Pulse	0.1000	3
H2	In	115	283411.28	1.1	96.2	Pulse	0.1000	3
He	Sc	45	44571.38	1.2	95.2	Pulse	0.1000	3
He	Ge	72	73769.58	0.9	96.5	Pulse	0.1000	3
He	In	115	58555.39	1.5	96.6	Pulse	0.1000	3
He	Tb	159	238559.45	0.7	98.9	Pulse	0.1000	3
He	Bi	209	159252.29	0.1	96.1	Pulse	0.1000	3

No Gas

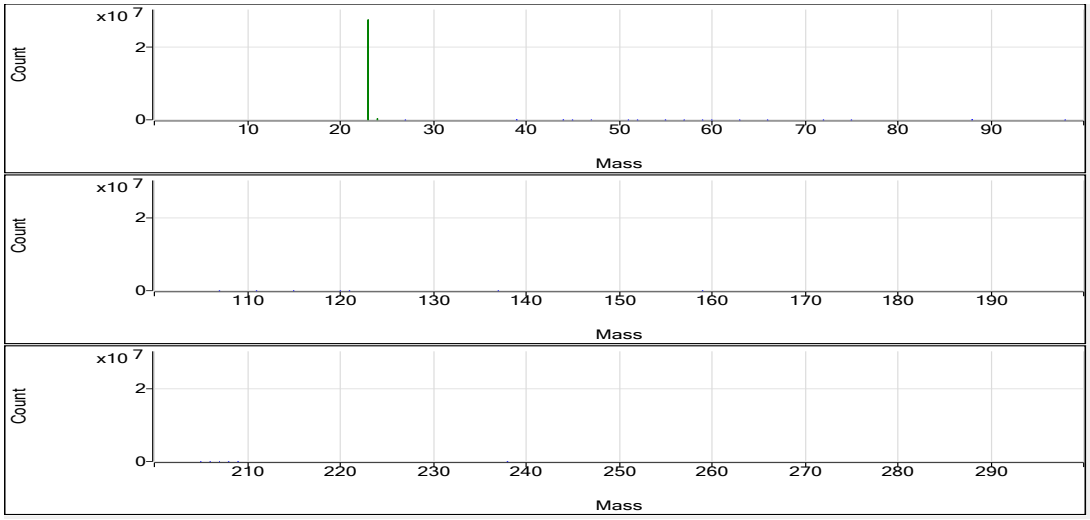


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.014	0	34.00	0.0004	9.309E-06
Be	9	1	No Gas	0.03	0	48.00	0.0004	9.309E-06
Be	9	1	No Gas	0.049	0	64.00	0.0004	9.309E-06
Se	78	2	H2	2.906	0.0013	153.33	0.0004	5.598E-06
Se	78	2	H2	3.08	0.0014	162.00	0.0004	5.598E-06
Se	78	2	H2	2.999	0.0013	156.00	0.0004	5.598E-06
Na	23	3	He	1956869.198	6121.0541	271719835.95	0.0031	0.4657
Na	23	3	He	1955943.391	6118.1584	276252595.88	0.0031	0.4657
Na	23	3	He	2004482.182	6269.9754	276946255.87	0.0031	0.4657
Mg	24	3	He	57112.035	86.6639	3847098.38	0.0015	0.003704
Mg	24	3	He	55657.783	84.4572	3813489.63	0.0015	0.003704
Mg	24	3	He	57044.998	86.5622	3823470.88	0.0015	0.003704
Al	27	3	He	25.48	0.0126	560.05	0.0005	0.0007154
Al	27	3	He	19.807	0.01	450.03	0.0005	0.0007154
Al	27	3	He	26.1	0.0129	570.06	0.0005	0.0007154
K	39	3	He	16300.123	18.144	805431.71	0.0011	0.4296
K	39	3	He	15972.062	17.7875	803157.18	0.0011	0.4296
K	39	3	He	16393.294	18.2453	805898.19	0.0011	0.4296
Ca	44	3	He	142831.115	8.8331	392109.99	0.0001	0.002924
Ca	44	3	He	140659.53	8.6988	392777.85	0.0001	0.002924
Ca	44	3	He	141971.13	8.7799	387811.36	0.0001	0.002924
Ti	47	3	He	1.395	0.0007	30.00	0.0005	0
Ti	47	3	He	0.914	0.0004	20.00	0.0005	0
Ti	47	3	He	0.467	0.0002	10.00	0.0005	0
V	51	3	He	4.251	0.099	4396.61	0.021	0.009571
V	51	3	He	4.239	0.0988	4460.63	0.021	0.009571
V	51	3	He	4.5	0.1043	4606.67	0.021	0.009571
Cr	52	3	He	14.377	0.4012	17810.24	0.0267	0.01758
Cr	52	3	He	14.223	0.3971	17930.22	0.0267	0.01758
Cr	52	3	He	14.401	0.4019	17750.14	0.0267	0.01758
Mn	55	3	He	288.884	3.1296	138927.56	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	286.461	3.1034	140128.68	0.0108	0.004199
Mn	55	3	He	289.022	3.1311	138302.53	0.0108	0.004199
Fe	57	3	He	63.744	0.0349	1550.12	0.0005	0.002993
Fe	57	3	He	63.895	0.035	1580.13	0.0005	0.002993
Fe	57	3	He	66.354	0.0362	1600.15	0.0005	0.002993
Co	59	3	He	2.421	0.1298	5761.20	0.0524	0.003063
Co	59	3	He	2.468	0.1322	5971.30	0.0524	0.003063
Co	59	3	He	2.212	0.1189	5251.01	0.0524	0.003063
Ni	60	3	He	2.956	0.0435	2530.27	0.0109	0.01116
Ni	60	3	He	2.802	0.0418	2420.25	0.0109	0.01116
Ni	60	3	He	2.91	0.043	2560.29	0.0109	0.01116
Cu	63	3	He	7.972	0.2184	16118.35	0.0255	0.01531
Cu	63	3	He	8.267	0.2259	16819.28	0.0255	0.01531
Cu	63	3	He	8.386	0.229	16729.12	0.0255	0.01531
Zn	66	3	He	7.744	0.0251	1850.17	0.0029	0.002787
Zn	66	3	He	6.921	0.0227	1690.14	0.0029	0.002787
Zn	66	3	He	8.307	0.0267	1950.19	0.0029	0.002787
As	75	3	He	0.826	0.0022	160.00	0.0021	0.0004097
As	75	3	He	0.527	0.0015	114.00	0.0021	0.0004097
As	75	3	He	0.605	0.0017	124.00	0.0021	0.0004097
Sr	88	3	He	1885.658	17.7747	1034382.41	0.0094	0.0008765
Sr	88	3	He	1899.662	17.9067	1036841.78	0.0094	0.0008765
Sr	88	3	He	1847.284	17.413	1037288.27	0.0094	0.0008765
Mo	98	3	He	69.43	1.5997	93095.33	0.023	0.0002199
Mo	98	3	He	68.897	1.5875	91917.53	0.023	0.0002199
Mo	98	3	He	67.877	1.564	93164.39	0.023	0.0002199
Ag	107	3	He	0.2	0.0105	610.03	0.0483	0.0008224
Ag	107	3	He	0.147	0.0079	460.02	0.0483	0.0008224
Ag	107	3	He	0.16	0.0086	510.02	0.0483	0.0008224
Cd	111	3	He	0.17	0.0009	54.00	0.0053	2.193E-05
Cd	111	3	He	0.099	0.0006	32.00	0.0053	2.193E-05
Cd	111	3	He	0.122	0.0007	40.00	0.0053	2.193E-05
Sn	120	3	He	-0.096	0.012	700.05	0.0148	0.01345
Sn	120	3	He	0.001	0.0135	780.05	0.0148	0.01345
Sn	120	3	He	-0.058	0.0126	750.05	0.0148	0.01345
Sb	121	3	He	0.149	0.0026	150.01	0.0143	0.0004392
Sb	121	3	He	0.114	0.0021	120.00	0.0143	0.0004392
Sb	121	3	He	0.145	0.0025	150.01	0.0143	0.0004392
Ba	137	3	He	71.685	0.3128	18201.41	0.0044	0.0001096
Ba	137	3	He	73.434	0.3204	18551.86	0.0044	0.0001096
Ba	137	3	He	73.535	0.3208	19112.34	0.0044	0.0001096
Tl	205	3	He	1.977	0.0414	9803.57	0.0208	0.0002491
Tl	205	3	He	1.771	0.0371	8832.91	0.0208	0.0002491
Tl	205	3	He	1.919	0.0401	9643.53	0.0208	0.0002491
Pb	208	3	He	0.05	0.002	220.01	0.0272	0.0006218
Pb	208	3	He	0.059	0.0022	290.01	0.0272	0.0006218
Pb	208	3	He	0.069	0.0025	250.01	0.0272	0.0006218
U	238	3	He	48.952	1.3464	319197.57	0.0275	2.763E-05
U	238	3	He	47.991	1.32	314607.07	0.0275	2.763E-05
U	238	3	He	47.62	1.3097	314674.31	0.0275	2.763E-05
Sc	45	1	No Gas			2264345.59		
Sc	45	1	No Gas			2251279.19		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2212631.84		
Ge	72	1	No Gas			1001470.22		
Ge	72	1	No Gas			995251.00		
Ge	72	1	No Gas			976210.77		
Sc	45	2	H2			141848.26		
Sc	45	2	H2			141648.25		
Sc	45	2	H2			143370.39		
Ge	72	2	H2			117458.09		
Ge	72	2	H2			117113.82		
Ge	72	2	H2			115824.42		
In	115	2	H2			286868.92		
In	115	2	H2			281981.32		
In	115	2	H2			281383.61		
Sc	45	3	He			44391.02		
Sc	45	3	He			45152.90		
Sc	45	3	He			44170.23		
Ge	72	3	He			73799.44		
Ge	72	3	He			74442.90		
Ge	72	3	He			73066.40		
In	115	3	He			58198.93		
In	115	3	He			57907.88		
In	115	3	He			59574.98		
Tb	159	3	He			237076.01		
Tb	159	3	He			238346.52		
Tb	159	3	He			240255.82		
Bi	209	3	He			159068.43		
Bi	209	3	He			159284.33		
Bi	209	3	He			159404.12		

Quantitation Report

Data File Name	092SMPL.d
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Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

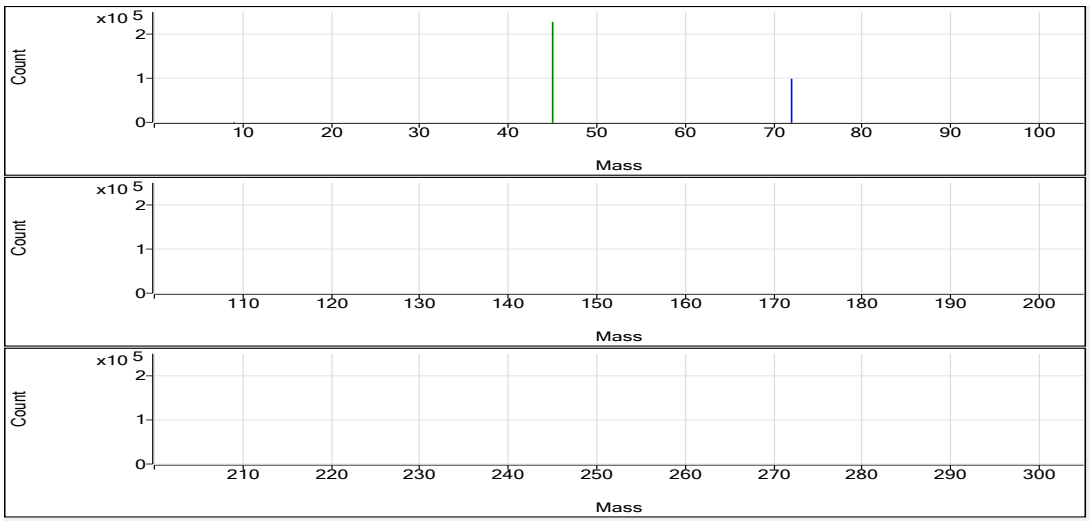
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.013	ppb	70.8	32.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	5.946	ppb	10.0	308.67	0.0027	Pulse	1.5000	3
Na	23	45	He	49976.147	ppb	1.7	7051249.27	156.7783	Analog	0.1000	3
Mg	24	45	He	371.778	ppb	4.4	25530.13	0.5678	Pulse	0.1000	3
Al	27	45	He	414.259	ppb	0.6	8735.88	0.1942	Pulse	0.1000	3
K	39	45	He	22934.749	ppb	2.1	1140296.44	25.3543	Pulse	0.1000	3
Ca	44	45	He	799176.420	ppb	2.4	2222377.47	49.4100	Analog	0.1000	3
Ti	47	45	He	1.846	ppb	51.0	40.00	0.0009	Pulse	0.1000	3
V	51	45	He	6.532	ppb	2.7	6613.37	0.1471	Pulse	0.5000	3
Cr	52	45	He	88.971	ppb	0.5	107583.53	2.3917	Pulse	0.1000	3
Mn	55	45	He	2.624	ppb	13.1	1466.78	0.0326	Pulse	0.1000	3
Fe	57	45	He	56.978	ppb	10.8	1416.79	0.0315	Pulse	0.1000	3
Co	59	45	He	2.291	ppb	5.8	5534.44	0.1230	Pulse	0.1000	3
Ni	60	115	He	1.567	ppb	3.4	1723.48	0.0283	Pulse	0.1000	3
Cu	63	72	He	3.222	ppb	6.6	7151.85	0.0974	Pulse	0.1000	3
Zn	66	72	He	0.799	ppb	45.7	373.35	0.0051	Pulse	0.1000	3
As	75	72	He	2.175	ppb	7.0	370.01	0.0050	Pulse	0.5000	3
Sr	88	115	He	4305.268	ppb	2.3	2470571.32	40.5815	Analog	0.1000	3
Mo	98	115	He	1061.299	ppb	2.2	1488621.02	24.4502	Analog	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	40.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.116	ppb	42.4	38.67	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.160	ppb	22.3	963.40	0.0158	Pulse	0.1000	3
Sb	121	115	He	0.088	ppb	56.1	103.33	0.0017	Pulse	0.1000	3
Ba	137	115	He	67.727	ppb	4.0	17987.74	0.2955	Pulse	0.1000	3
Tl	205	159	He	0.418	ppb	9.3	2173.57	0.0089	Pulse	0.1000	3
Pb	208	159	He	0.018	ppb	53.8	273.34	0.0011	Pulse	0.1000	3
U	238	159	He	0.064	ppb	12.6	436.69	0.0018	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2282764.50	0.8	99.5	Analog	0.1000	3
No Gas	Ge	72	987986.81	0.5	95.1	Pulse	0.1000	3
H2	Sc	45	145054.33	1.9	104.3	Pulse	0.1000	3
H2	Ge	72	115862.72	1.9	98.1	Pulse	0.1000	3
H2	In	115	293988.45	0.4	99.8	Pulse	0.1000	3
He	Sc	45	44985.54	1.9	96.1	Pulse	0.1000	3
He	Ge	72	73431.19	0.5	96.0	Pulse	0.1000	3
He	In	115	60899.76	2.2	100.5	Pulse	0.1000	3
He	Tb	159	243509.61	0.6	101.0	Pulse	0.1000	3
He	Bi	209	165457.33	0.8	99.8	Pulse	0.1000	3

No Gas



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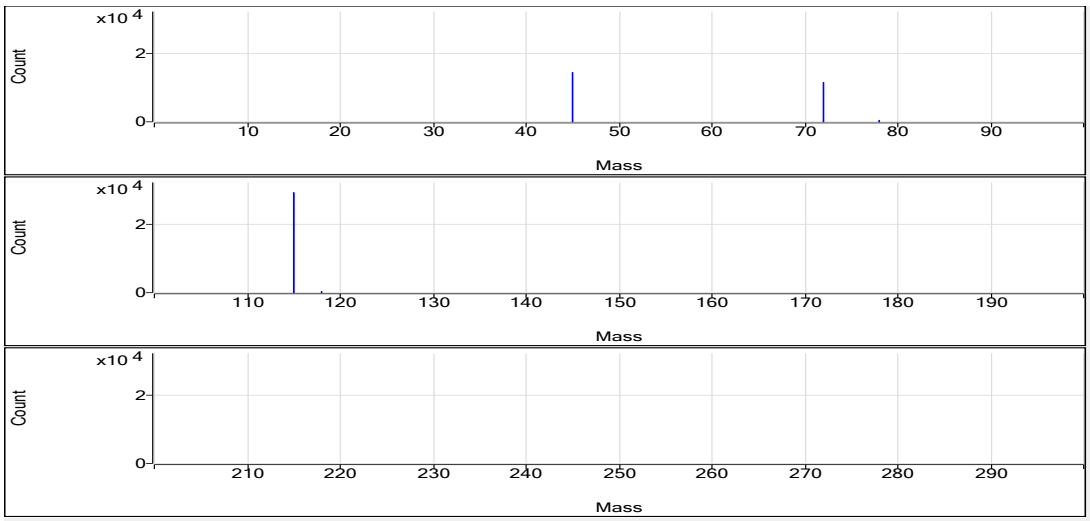
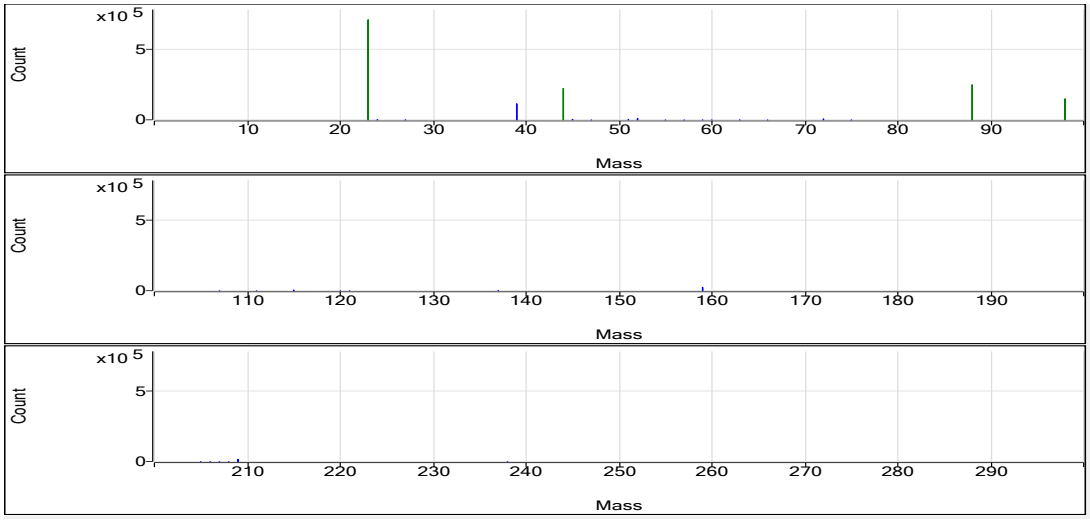


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.003	0	24.00	0.0004	9.309E-06
Be	9	1	No Gas	0.021	0	40.00	0.0004	9.309E-06
Be	9	1	No Gas	0.014	0	34.00	0.0004	9.309E-06
Se	78	2	H2	5.28	0.0024	277.34	0.0004	5.598E-06
Se	78	2	H2	6.141	0.0028	312.00	0.0004	5.598E-06
Se	78	2	H2	6.417	0.0029	336.67	0.0004	5.598E-06
Na	23	3	He	50206.096	157.4975	7018259.27	0.0031	0.4657
Na	23	3	He	50708.523	159.069	7067509.27	0.0031	0.4657
Na	23	3	He	49013.823	153.7684	7067979.27	0.0031	0.4657
Mg	24	3	He	381.212	0.5821	25940.98	0.0015	0.003704
Mg	24	3	He	381.147	0.582	25860.53	0.0015	0.003704
Mg	24	3	He	352.975	0.5393	24788.87	0.0015	0.003704
Al	27	3	He	417.074	0.1955	8712.58	0.0005	0.0007154
Al	27	3	He	413.962	0.1941	8622.47	0.0005	0.0007154
Al	27	3	He	411.741	0.193	8872.60	0.0005	0.0007154
K	39	3	He	23015.484	25.442	1133724.51	0.0011	0.4296
K	39	3	He	23365.317	25.8222	1147293.34	0.0011	0.4296
K	39	3	He	22423.447	24.7986	1139871.47	0.0011	0.4296
Ca	44	3	He	786857.274	48.6484	2167823.09	0.0001	0.002924
Ca	44	3	He	821715.705	50.8034	2257218.25	0.0001	0.002924
Ca	44	3	He	788956.281	48.7781	2242091.06	0.0001	0.002924
Ti	47	3	He	2.78	0.0013	60.00	0.0005	0
Ti	47	3	He	1.859	0.0009	40.00	0.0005	0
Ti	47	3	He	0.898	0.0004	20.00	0.0005	0
V	51	3	He	6.635	0.1492	6649.38	0.021	0.009571
V	51	3	He	6.634	0.1492	6629.38	0.021	0.009571
V	51	3	He	6.327	0.1427	6561.35	0.021	0.009571
Cr	52	3	He	88.989	2.3922	106596.93	0.0267	0.01758
Cr	52	3	He	89.431	2.4039	106807.65	0.0267	0.01758
Cr	52	3	He	88.492	2.3789	109346.02	0.0267	0.01758
Mn	55	3	He	2.226	0.0283	1260.08	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.816	0.0347	1540.12	0.0108	0.004199
Mn	55	3	He	2.83	0.0348	1600.13	0.0108	0.004199
Fe	57	3	He	57.653	0.0319	1420.11	0.0005	0.002993
Fe	57	3	He	62.785	0.0344	1530.14	0.0005	0.002993
Fe	57	3	He	50.497	0.0283	1300.11	0.0005	0.002993
Co	59	3	He	2.137	0.1149	5120.92	0.0524	0.003063
Co	59	3	He	2.362	0.1267	5631.17	0.0524	0.003063
Co	59	3	He	2.373	0.1273	5851.23	0.0524	0.003063
Ni	60	3	He	1.52	0.0278	1670.14	0.0109	0.01116
Ni	60	3	He	1.625	0.0289	1740.14	0.0109	0.01116
Ni	60	3	He	1.557	0.0282	1760.15	0.0109	0.01116
Cu	63	3	He	3.277	0.0988	7291.85	0.0255	0.01531
Cu	63	3	He	3.403	0.102	7461.98	0.0255	0.01531
Cu	63	3	He	2.986	0.0914	6701.71	0.0255	0.01531
Zn	66	3	He	0.538	0.0043	320.01	0.0029	0.002787
Zn	66	3	He	1.217	0.0063	460.02	0.0029	0.002787
Zn	66	3	He	0.643	0.0046	340.02	0.0029	0.002787
As	75	3	He	2.074	0.0048	356.01	0.0021	0.0004097
As	75	3	He	2.351	0.0054	396.01	0.0021	0.0004097
As	75	3	He	2.101	0.0049	358.01	0.0021	0.0004097
Sr	88	3	He	4360.909	41.1059	2470869.96	0.0094	0.0008765
Sr	88	3	He	4364.132	41.1363	2474362.46	0.0094	0.0008765
Sr	88	3	He	4190.762	39.5022	2466481.53	0.0094	0.0008765
Mo	98	3	He	1059.072	24.3989	1466611.54	0.023	0.0002199
Mo	98	3	He	1085.69	25.0121	1504485.29	0.023	0.0002199
Mo	98	3	He	1039.135	23.9396	1494766.23	0.023	0.0002199
Ag	107	3	He	0.004	0.001	60.00	0.0483	0.0008224
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	-0.014	0.0002	10.00	0.0483	0.0008224
Cd	111	3	He	0.158	0.0009	52.00	0.0053	2.193E-05
Cd	111	3	He	0.127	0.0007	42.00	0.0053	2.193E-05
Cd	111	3	He	0.062	0.0004	22.00	0.0053	2.193E-05
Sn	120	3	He	0.181	0.0161	970.06	0.0148	0.01345
Sn	120	3	He	0.181	0.0161	970.07	0.0148	0.01345
Sn	120	3	He	0.119	0.0152	950.07	0.0148	0.01345
Sb	121	3	He	0.074	0.0015	90.00	0.0143	0.0004392
Sb	121	3	He	0.144	0.0025	150.00	0.0143	0.0004392
Sb	121	3	He	0.048	0.0011	70.00	0.0143	0.0004392
Ba	137	3	He	67.566	0.2948	17720.73	0.0044	0.0001096
Ba	137	3	He	70.498	0.3076	18501.69	0.0044	0.0001096
Ba	137	3	He	65.118	0.2841	17740.79	0.0044	0.0001096
Tl	205	3	He	0.387	0.0083	2030.19	0.0208	0.0002491
Tl	205	3	He	0.461	0.0098	2390.28	0.0208	0.0002491
Tl	205	3	He	0.405	0.0087	2100.24	0.0208	0.0002491
Pb	208	3	He	0.007	0.0008	80.00	0.0272	0.0006218
Pb	208	3	He	0.022	0.0012	140.00	0.0272	0.0006218
Pb	208	3	He	0.026	0.0013	130.01	0.0272	0.0006218
U	238	3	He	0.064	0.0018	440.02	0.0275	2.763E-05
U	238	3	He	0.072	0.002	490.03	0.0275	2.763E-05
U	238	3	He	0.056	0.0016	380.02	0.0275	2.763E-05
Sc	45	1	No Gas			2272252.31		
Sc	45	1	No Gas			2273433.09		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2302608.09		
Ge	72	1	No Gas			984167.49		
Ge	72	1	No Gas			985595.38		
Ge	72	1	No Gas			994197.56		
Sc	45	2	H2			142382.87		
Sc	45	2	H2			144927.29		
Sc	45	2	H2			147852.83		
Ge	72	2	H2			117155.08		
Ge	72	2	H2			113357.65		
Ge	72	2	H2			117075.42		
In	115	2	H2			295313.67		
In	115	2	H2			293894.31		
In	115	2	H2			292757.36		
Sc	45	3	He			44561.07		
Sc	45	3	He			44430.46		
Sc	45	3	He			45965.09		
Ge	72	3	He			73799.72		
Ge	72	3	He			73156.35		
Ge	72	3	He			73337.49		
In	115	3	He			60116.60		
In	115	3	He			60157.11		
In	115	3	He			62445.79		
Tb	159	3	He			245095.47		
Tb	159	3	He			243233.84		
Tb	159	3	He			242199.53		
Bi	209	3	He			165935.70		
Bi	209	3	He			166462.79		
Bi	209	3	He			163973.49		

Quantitation Report

Data File Name	093SMPL.d
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Sample Name	410-179333-C-7-A
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

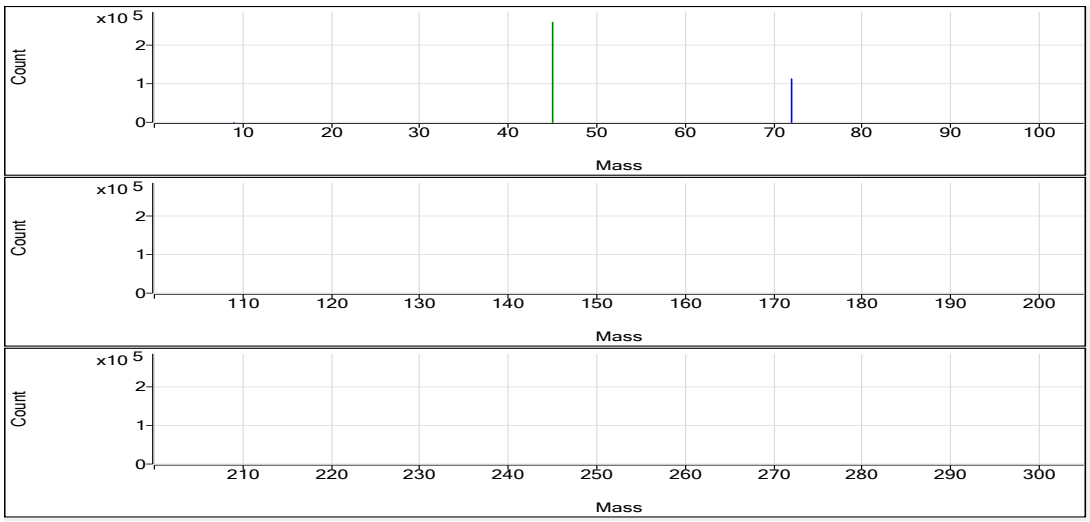
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.003	ppb	444.4	27.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.104	ppb	47.2	6.67	0.0001	Pulse	1.5000	3
Na	23	45	He	150384.350	ppb	77.0	23884103.39	470.8296	Analog	0.1000	3
Mg	24	45	He	3803.991	ppb	76.0	292987.31	5.7758	Pulse	0.1000	3
Al	27	45	He	2.575	ppb	65.9	96.67	0.0019	Pulse	0.1000	3
K	39	45	He	1035.024	ppb	75.5	78669.10	1.5545	Pulse	0.1000	3
Ca	44	45	He	9746.136	ppb	77.9	30719.66	0.6055	Pulse	0.1000	3
Ti	47	45	He	0.411	ppb	101.2	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.286	ppb	84.4	786.70	0.0156	Pulse	0.5000	3
Cr	52	45	He	1.171	ppb	82.3	2470.38	0.0488	Pulse	0.1000	3
Mn	55	45	He	15.526	ppb	77.9	8735.17	0.1722	Pulse	0.1000	3
Fe	57	45	He	8.159	ppb	23.3	356.68	0.0071	Pulse	0.1000	3
Co	59	45	He	0.140	ppb	86.2	526.70	0.0104	Pulse	0.1000	3
Ni	60	115	He	0.138	ppb	282.2	863.39	0.0127	Pulse	0.1000	3
Cu	63	72	He	0.910	ppb	79.4	3130.54	0.0385	Pulse	0.1000	3
Zn	66	72	He	0.756	ppb	104.1	403.35	0.0050	Pulse	0.1000	3
As	75	72	He	0.104	ppb	98.8	51.33	0.0006	Pulse	0.5000	3
Sr	88	115	He	134.547	ppb	77.2	86468.85	1.2691	Pulse	0.1000	3
Mo	98	115	He	6.700	ppb	76.3	10537.84	0.1546	Pulse	0.1000	3
Ag	107	115	He	0.011	ppb	14.1	93.33	0.0014	Pulse	0.1000	3
Cd	111	115	He	0.018	ppb	61.2	8.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.261	ppb	N/A	653.37	0.0096	Pulse	0.1000	3
Sb	121	115	He	0.004	ppb	442.0	33.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	5.144	ppb	73.2	1536.89	0.0225	Pulse	0.1000	3
Tl	205	159	He	0.185	ppb	50.0	1110.12	0.0041	Pulse	0.1000	3
Pb	208	159	He	0.004	ppb	27.5	200.01	0.0007	Pulse	0.1000	3
U	238	159	He	3.756	ppb	75.6	27998.29	0.1033	Pulse	0.1000	3

ISTD Table:

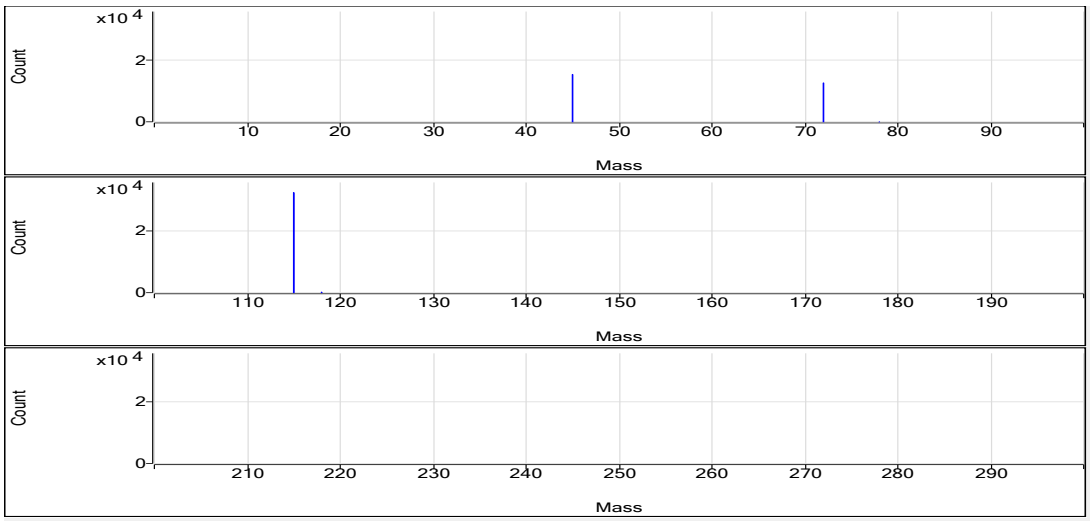
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2610152.88	1.0	113.8	Analog	0.1000	3
No Gas	Ge	72	1133813.39	0.7	109.1	Pulse	0.1000	3
H2	Sc	45	154671.14	1.3	111.2	Pulse	0.1000	3
H2	Ge	72	127121.55	1.3	107.7	Pulse	0.1000	3
H2	In	115	326663.97	0.5	110.9	Pulse	0.1000	3
He	Sc	45	50298.29	1.9	107.4	Pulse	0.1000	3
He	Ge	72	81253.49	1.6	106.3	Pulse	0.1000	3
He	In	115	68058.02	1.0	112.3	Pulse	0.1000	3
He	Tb	159	269898.88	1.1	111.9	Pulse	0.1000	3
He	Bi	209	187390.78	1.0	113.1	Pulse	0.1000	3

No Gas

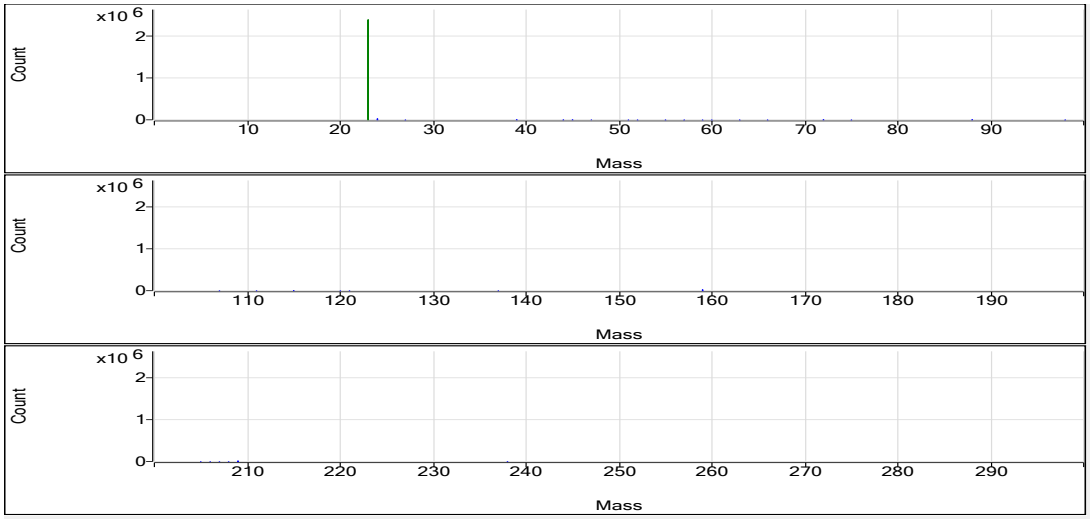


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.008	0	32.00	0.0004	9.309E-06
Be	9	1	No Gas	-0.012	0	12.00	0.0004	9.309E-06
Be	9	1	No Gas	0.013	0	38.00	0.0004	9.309E-06
Se	78	2	H2	0.07	0	4.67	0.0004	5.598E-06
Se	78	2	H2	0.082	0	5.33	0.0004	5.598E-06
Se	78	2	H2	0.161	0.0001	10.00	0.0004	5.598E-06
Na	23	3	He	41039.455	128.8266	6417713.65	0.0031	0.4657
Na	23	3	He	271677.573	850.2039	43701884.35	0.0031	0.4657
Na	23	3	He	138436.022	433.4583	21532712.18	0.0031	0.4657
Mg	24	3	He	1113.049	1.6926	84320.31	0.0015	0.003704
Mg	24	3	He	6860.064	10.413	535243.86	0.0015	0.003704
Mg	24	3	He	3438.861	5.2217	259397.75	0.0015	0.003704
Al	27	3	He	0.617	0.001	50.00	0.0005	0.0007154
Al	27	3	He	3.467	0.0023	120.01	0.0005	0.0007154
Al	27	3	He	3.64	0.0024	120.00	0.0005	0.0007154
K	39	3	He	315.38	0.7724	38477.12	0.0011	0.4296
K	39	3	He	1865.598	2.4571	126298.81	0.0011	0.4296
K	39	3	He	924.094	1.4339	71231.36	0.0011	0.4296
Ca	44	3	He	2739.401	0.1723	8582.45	0.0001	0.002924
Ca	44	3	He	17807.472	1.1038	56738.46	0.0001	0.002924
Ca	44	3	He	8691.534	0.5403	26838.06	0.0001	0.002924
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.402	0.0002	10.00	0.0005	0
Ti	47	3	He	0.831	0.0004	20.00	0.0005	0
V	51	3	He	0.032	0.0102	510.01	0.021	0.009571
V	51	3	He	0.512	0.0204	1046.05	0.021	0.009571
V	51	3	He	0.314	0.0162	804.03	0.021	0.009571
Cr	52	3	He	0.229	0.0237	1180.12	0.0267	0.01758
Cr	52	3	He	2.156	0.0751	3860.72	0.0267	0.01758
Cr	52	3	He	1.129	0.0477	2370.29	0.0267	0.01758
Mn	55	3	He	4.512	0.053	2641.07	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	28.476	0.3123	16051.56	0.0108	0.004199
Mn	55	3	He	13.591	0.1512	7512.88	0.0108	0.004199
Fe	57	3	He	7.251	0.0066	330.01	0.0005	0.002993
Fe	57	3	He	10.339	0.0082	420.02	0.0005	0.002993
Fe	57	3	He	6.886	0.0064	320.01	0.0005	0.002993
Co	59	3	He	0.045	0.0054	270.01	0.0524	0.003063
Co	59	3	He	0.276	0.0175	900.06	0.0524	0.003063
Co	59	3	He	0.099	0.0083	410.02	0.0524	0.003063
Ni	60	3	He	-0.151	0.0095	650.04	0.0109	0.01116
Ni	60	3	He	0.581	0.0175	1200.08	0.0109	0.01116
Ni	60	3	He	-0.016	0.011	740.04	0.0109	0.01116
Cu	63	3	He	0.27	0.0222	1820.18	0.0255	0.01531
Cu	63	3	He	1.693	0.0584	4791.06	0.0255	0.01531
Cu	63	3	He	0.768	0.0349	2780.39	0.0255	0.01531
Zn	66	3	He	0.006	0.0028	230.01	0.0029	0.002787
Zn	66	3	He	1.575	0.0073	600.03	0.0029	0.002787
Zn	66	3	He	0.688	0.0048	380.02	0.0029	0.002787
As	75	3	He	0.025	0.0005	38.00	0.0021	0.0004097
As	75	3	He	0.22	0.0009	72.00	0.0021	0.0004097
As	75	3	He	0.067	0.0006	44.00	0.0021	0.0004097
Sr	88	3	He	38.24	0.3613	24698.47	0.0094	0.0008765
Sr	88	3	He	244.623	2.3066	158018.70	0.0094	0.0008765
Sr	88	3	He	120.78	1.1393	76689.39	0.0094	0.0008765
Mo	98	3	He	2.449	0.0566	3872.11	0.023	0.0002199
Mo	98	3	He	12.37	0.2852	19537.66	0.023	0.0002199
Mo	98	3	He	5.281	0.1219	8203.74	0.023	0.0002199
Ag	107	3	He	0.01	0.0013	90.00	0.0483	0.0008224
Ag	107	3	He	0.013	0.0015	100.00	0.0483	0.0008224
Ag	107	3	He	0.011	0.0013	90.00	0.0483	0.0008224
Cd	111	3	He	0.029	0.0002	12.00	0.0053	2.193E-05
Cd	111	3	He	0.007	0.0001	4.00	0.0053	2.193E-05
Cd	111	3	He	0.018	0.0001	8.00	0.0053	2.193E-05
Sn	120	3	He	-0.266	0.0095	650.04	0.0148	0.01345
Sn	120	3	He	-0.189	0.0107	730.04	0.0148	0.01345
Sn	120	3	He	-0.327	0.0086	580.03	0.0148	0.01345
Sb	121	3	He	-0.01	0.0003	20.00	0.0143	0.0004392
Sb	121	3	He	0.02	0.0007	50.00	0.0143	0.0004392
Sb	121	3	He	0	0.0004	30.00	0.0143	0.0004392
Ba	137	3	He	1.988	0.0088	600.08	0.0044	0.0001096
Ba	137	3	He	9.314	0.0407	2790.48	0.0044	0.0001096
Ba	137	3	He	4.131	0.0181	1220.11	0.0044	0.0001096
Tl	205	3	He	0.093	0.0022	590.06	0.0208	0.0002491
Tl	205	3	He	0.279	0.006	1650.19	0.0208	0.0002491
Tl	205	3	He	0.184	0.0041	1090.10	0.0208	0.0002491
Pb	208	3	He	0.003	0.0007	150.01	0.0272	0.0006218
Pb	208	3	He	0.005	0.0008	110.01	0.0272	0.0006218
Pb	208	3	He	0.005	0.0007	160.01	0.0272	0.0006218
U	238	3	He	1.161	0.032	8614.84	0.0275	2.763E-05
U	238	3	He	6.786	0.1867	50983.38	0.0275	2.763E-05
U	238	3	He	3.321	0.0914	24396.65	0.0275	2.763E-05
Sc	45	1	No Gas			2579994.02		
Sc	45	1	No Gas			2628742.77		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2621721.84		
Ge	72	1	No Gas			1126714.51		
Ge	72	1	No Gas			1132580.45		
Ge	72	1	No Gas			1142145.22		
Sc	45	2	H2			154333.56		
Sc	45	2	H2			152920.68		
Sc	45	2	H2			156759.17		
Ge	72	2	H2			126405.13		
Ge	72	2	H2			125971.61		
Ge	72	2	H2			128987.92		
In	115	2	H2			328403.51		
In	115	2	H2			325093.02		
In	115	2	H2			326495.39		
Sc	45	3	He			49816.67		
Sc	45	3	He			51401.65		
Sc	45	3	He			49676.55		
Ge	72	3	He			82051.58		
Ge	72	3	He			81969.92		
Ge	72	3	He			79738.98		
In	115	3	He			68361.28		
In	115	3	He			68510.98		
In	115	3	He			67315.53		
Tb	159	3	He			269566.29		
Tb	159	3	He			273109.25		
Tb	159	3	He			267021.09		
Bi	209	3	He			188058.51		
Bi	209	3	He			188753.45		
Bi	209	3	He			185360.39		

Quantitation Report

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Sample Name	410-179333-C-5-A
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

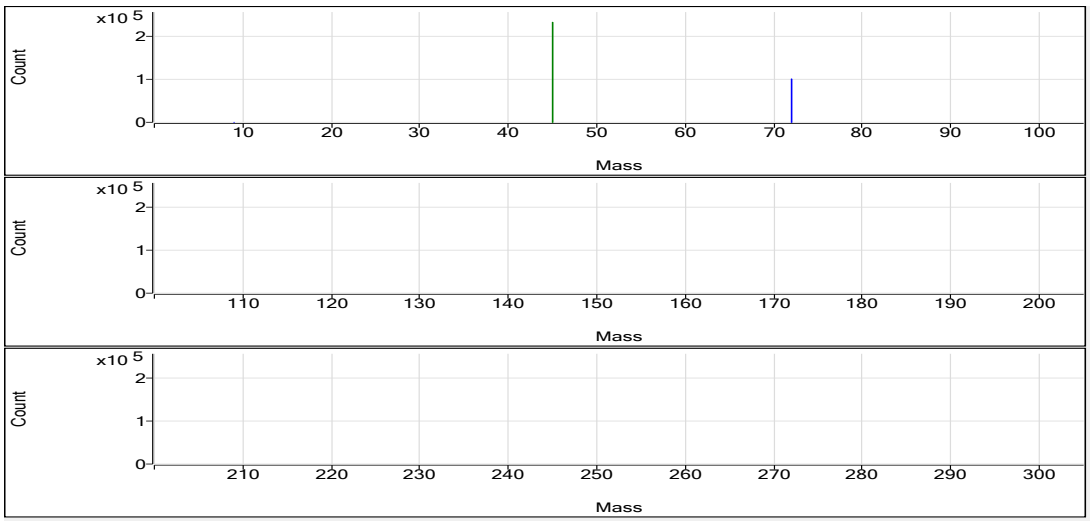
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.014	ppb	110.3	34.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.664	ppb	3.7	87.55	0.0007	Pulse	1.5000	3
Na	23	45	He	48611.339	ppb	1.9	6978653.23	152.5096	Analog	0.1000	3
Mg	24	45	He	73482.304	ppb	1.5	5102501.90	111.5037	Analog	0.1000	3
Al	27	45	He	5.849	ppb	61.4	156.67	0.0034	Pulse	0.1000	3
K	39	45	He	19602.009	ppb	2.0	994446.23	21.7324	Pulse	0.1000	3
Ca	44	45	He	799922.108	ppb	2.4	2262891.53	49.4561	Analog	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	0.109	ppb	34.7	543.34	0.0119	Pulse	0.5000	3
Cr	52	45	He	3.459	ppb	8.1	5024.27	0.1099	Pulse	0.1000	3
Mn	55	45	He	350.056	ppb	3.5	173454.11	3.7915	Pulse	0.1000	3
Fe	57	45	He	32.241	ppb	5.7	876.72	0.0191	Pulse	0.1000	3
Co	59	45	He	1.036	ppb	1.6	2623.64	0.0573	Pulse	0.1000	3
Ni	60	115	He	2.203	ppb	7.1	2120.20	0.0352	Pulse	0.1000	3
Cu	63	72	He	1.045	ppb	2.8	3073.71	0.0419	Pulse	0.1000	3
Zn	66	72	He	4.280	ppb	4.9	1106.74	0.0151	Pulse	0.1000	3
As	75	72	He	0.418	ppb	22.6	95.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	5501.193	ppb	2.2	3119942.98	51.8540	Analog	0.1000	3
Mo	98	115	He	68.920	ppb	2.8	95538.77	1.5880	Pulse	0.1000	3
Ag	107	115	He	0.072	ppb	48.3	256.68	0.0043	Pulse	0.1000	3
Cd	111	115	He	0.139	ppb	10.4	46.00	0.0008	Pulse	0.5000	3
Sn	120	115	He	-0.149	ppb	N/A	676.71	0.0112	Pulse	0.1000	3
Sb	121	115	He	0.004	ppb	477.9	30.00	0.0005	Pulse	0.1000	3
Ba	137	115	He	67.779	ppb	1.5	17797.51	0.2957	Pulse	0.1000	3
Tl	205	159	He	1.528	ppb	2.9	7849.08	0.0320	Pulse	0.1000	3
Pb	208	159	He	0.012	ppb	61.3	233.34	0.0010	Pulse	0.1000	3
U	238	159	He	2.348	ppb	3.8	15839.27	0.0646	Pulse	0.1000	3

ISTD Table:

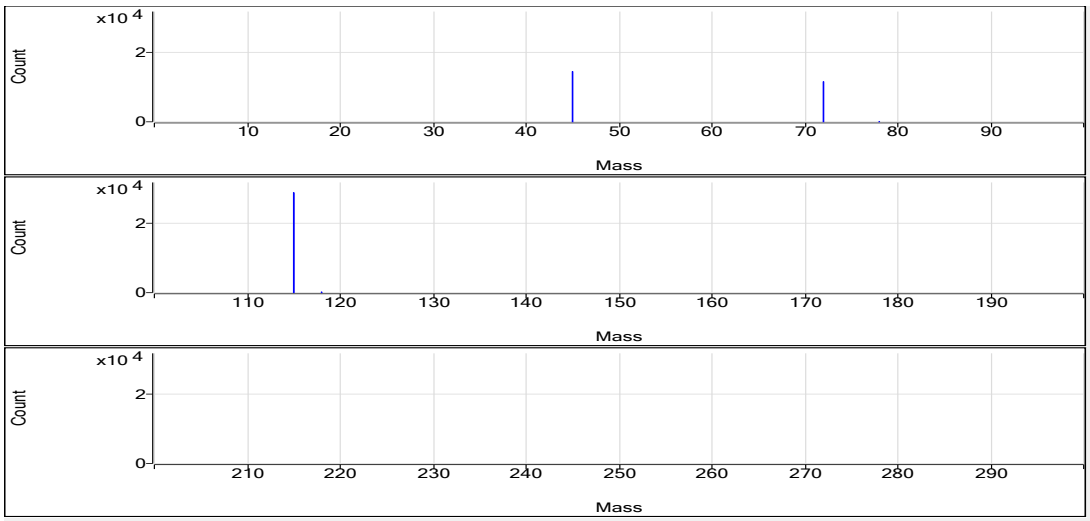
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2340613.61	0.8	102.0	Analog	0.1000	3
No Gas	Ge	72	1015240.06	0.9	97.7	Pulse	0.1000	3
H2	Sc	45	146118.84	1.5	105.1	Pulse	0.1000	3
H2	Ge	72	116758.52	0.9	98.9	Pulse	0.1000	3
H2	In	115	290467.15	0.7	98.6	Pulse	0.1000	3
He	Sc	45	45771.24	2.2	97.7	Pulse	0.1000	3
He	Ge	72	73307.74	1.6	95.9	Pulse	0.1000	3
He	In	115	60178.76	1.5	99.3	Pulse	0.1000	3
He	Tb	159	245207.79	0.9	101.7	Pulse	0.1000	3
He	Bi	209	165702.06	0.7	100.0	Pulse	0.1000	3

No Gas

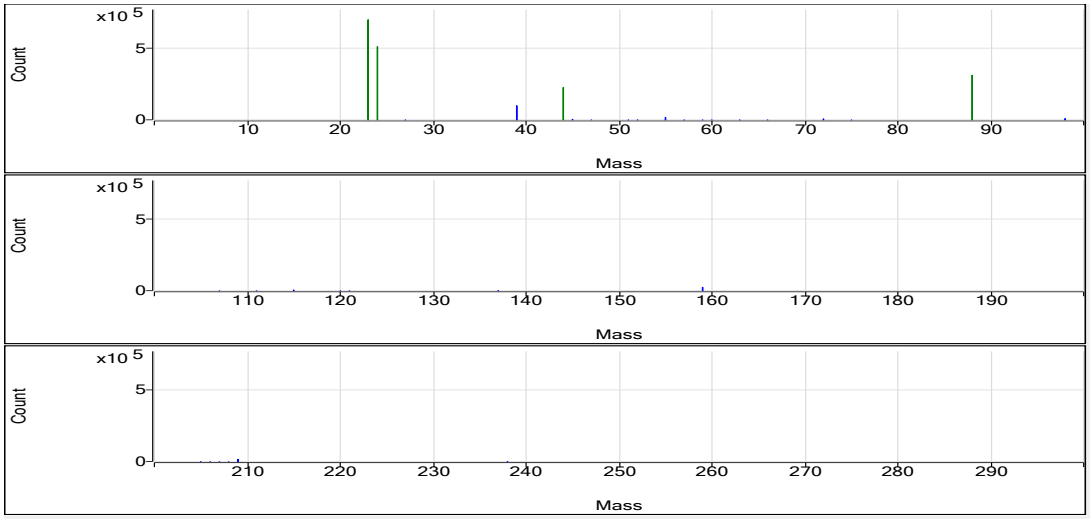


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.002	0	20.00	0.0004	9.309E-06
Be	9	1	No Gas	0.028	0	48.00	0.0004	9.309E-06
Be	9	1	No Gas	0.015	0	36.00	0.0004	9.309E-06
Se	78	2	H2	1.735	0.0008	92.00	0.0004	5.598E-06
Se	78	2	H2	1.619	0.0007	85.33	0.0004	5.598E-06
Se	78	2	H2	1.638	0.0007	85.33	0.0004	5.598E-06
Na	23	3	He	49632.807	155.7044	6947706.77	0.0031	0.4657
Na	23	3	He	47928.382	150.3734	6994976.77	0.0031	0.4657
Na	23	3	He	48272.829	151.4508	6993276.15	0.0031	0.4657
Mg	24	3	He	74753.982	113.4333	5061519.92	0.0015	0.003704
Mg	24	3	He	72557.219	110.1	5121561.17	0.0015	0.003704
Mg	24	3	He	73135.71	110.9778	5124424.61	0.0015	0.003704
Al	27	3	He	9.984	0.0054	240.01	0.0005	0.0007154
Al	27	3	He	3.531	0.0024	110.00	0.0005	0.0007154
Al	27	3	He	4.032	0.0026	120.00	0.0005	0.0007154
K	39	3	He	20003.62	22.1689	989199.05	0.0011	0.4296
K	39	3	He	19227.057	21.3249	991978.81	0.0011	0.4296
K	39	3	He	19575.35	21.7034	1002160.84	0.0011	0.4296
Ca	44	3	He	820244.018	50.7124	2262844.65	0.0001	0.002924
Ca	44	3	He	782461.184	48.3766	2250351.53	0.0001	0.002924
Ca	44	3	He	797061.123	49.2792	2275478.40	0.0001	0.002924
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.112	0.0119	532.01	0.021	0.009571
V	51	3	He	0.07	0.011	514.01	0.021	0.009571
V	51	3	He	0.146	0.0126	584.01	0.021	0.009571
Cr	52	3	He	3.777	0.1184	5281.03	0.0267	0.01758
Cr	52	3	He	3.241	0.1041	4840.87	0.0267	0.01758
Cr	52	3	He	3.359	0.1072	4950.90	0.0267	0.01758
Mn	55	3	He	362.846	3.9298	175353.51	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	338.783	3.6695	170695.39	0.0108	0.004199
Mn	55	3	He	348.539	3.775	174313.43	0.0108	0.004199
Fe	57	3	He	30.27	0.0182	810.04	0.0005	0.002993
Fe	57	3	He	33.944	0.02	930.06	0.0005	0.002993
Fe	57	3	He	32.51	0.0193	890.05	0.0005	0.002993
Co	59	3	He	1.033	0.0572	2550.27	0.0524	0.003063
Co	59	3	He	1.022	0.0565	2630.32	0.0524	0.003063
Co	59	3	He	1.054	0.0583	2690.33	0.0524	0.003063
Ni	60	3	He	2.116	0.0343	2080.18	0.0109	0.01116
Ni	60	3	He	2.383	0.0372	2200.22	0.0109	0.01116
Ni	60	3	He	2.109	0.0342	2080.21	0.0109	0.01116
Cu	63	3	He	1.036	0.0417	3000.37	0.0255	0.01531
Cu	63	3	He	1.021	0.0413	3050.38	0.0255	0.01531
Cu	63	3	He	1.077	0.0427	3170.37	0.0255	0.01531
Zn	66	3	He	4.489	0.0157	1130.09	0.0029	0.002787
Zn	66	3	He	4.07	0.0145	1070.07	0.0029	0.002787
Zn	66	3	He	4.28	0.0151	1120.07	0.0029	0.002787
As	75	3	He	0.434	0.0013	96.00	0.0021	0.0004097
As	75	3	He	0.317	0.0011	80.00	0.0021	0.0004097
As	75	3	He	0.504	0.0015	110.00	0.0021	0.0004097
Sr	88	3	He	5379.217	50.7043	3075365.27	0.0094	0.0008765
Sr	88	3	He	5618.613	52.9608	3130410.27	0.0094	0.0008765
Sr	88	3	He	5505.749	51.897	3154053.39	0.0094	0.0008765
Mo	98	3	He	67.118	1.5465	93797.95	0.023	0.0002199
Mo	98	3	He	70.927	1.6342	96595.28	0.023	0.0002199
Mo	98	3	He	68.715	1.5833	96223.08	0.023	0.0002199
Ag	107	3	He	0.065	0.004	240.01	0.0483	0.0008224
Ag	107	3	He	0.109	0.0061	360.02	0.0483	0.0008224
Ag	107	3	He	0.041	0.0028	170.01	0.0483	0.0008224
Cd	111	3	He	0.126	0.0007	42.00	0.0053	2.193E-05
Cd	111	3	He	0.154	0.0008	50.00	0.0053	2.193E-05
Cd	111	3	He	0.138	0.0008	46.00	0.0053	2.193E-05
Sn	120	3	He	0.027	0.0139	840.06	0.0148	0.01345
Sn	120	3	He	-0.132	0.0115	680.04	0.0148	0.01345
Sn	120	3	He	-0.342	0.0084	510.03	0.0148	0.01345
Sb	121	3	He	-0.008	0.0003	20.00	0.0143	0.0004392
Sb	121	3	He	0.028	0.0008	50.00	0.0143	0.0004392
Sb	121	3	He	-0.008	0.0003	20.00	0.0143	0.0004392
Ba	137	3	He	68.929	0.3008	18241.41	0.0044	0.0001096
Ba	137	3	He	67.469	0.2944	17400.36	0.0044	0.0001096
Ba	137	3	He	66.939	0.2921	17750.76	0.0044	0.0001096
Tl	205	3	He	1.558	0.0326	7922.39	0.0208	0.0002491
Tl	205	3	He	1.478	0.031	7612.29	0.0208	0.0002491
Tl	205	3	He	1.549	0.0324	8012.56	0.0208	0.0002491
Pb	208	3	He	0.006	0.0008	70.00	0.0272	0.0006218
Pb	208	3	He	0.01	0.0009	70.00	0.0272	0.0006218
Pb	208	3	He	0.02	0.0012	150.01	0.0272	0.0006218
U	238	3	He	2.373	0.0653	15849.32	0.0275	2.763E-05
U	238	3	He	2.25	0.0619	15218.55	0.0275	2.763E-05
U	238	3	He	2.421	0.0666	16449.94	0.0275	2.763E-05
Sc	45	1	No Gas			2360380.12		
Sc	45	1	No Gas			2326558.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2334901.84		
Ge	72	1	No Gas			1024256.94		
Ge	72	1	No Gas			1005842.41		
Ge	72	1	No Gas			1015620.84		
Sc	45	2	H2			147901.68		
Sc	45	2	H2			146680.12		
Sc	45	2	H2			143774.71		
Ge	72	2	H2			117719.44		
Ge	72	2	H2			116952.23		
Ge	72	2	H2			115603.89		
In	115	2	H2			288083.73		
In	115	2	H2			292054.04		
In	115	2	H2			291263.67		
Sc	45	3	He			44621.12		
Sc	45	3	He			46517.37		
Sc	45	3	He			46175.24		
Ge	72	3	He			71961.97		
Ge	72	3	He			73799.24		
Ge	72	3	He			74162.00		
In	115	3	He			60658.82		
In	115	3	He			59112.82		
In	115	3	He			60778.86		
Tb	159	3	He			242787.05		
Tb	159	3	He			245853.71		
Tb	159	3	He			246982.61		
Bi	209	3	He			164467.97		
Bi	209	3	He			165904.06		
Bi	209	3	He			166734.16		

Quantitation Report

Data File Name	095SMPL.d
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Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

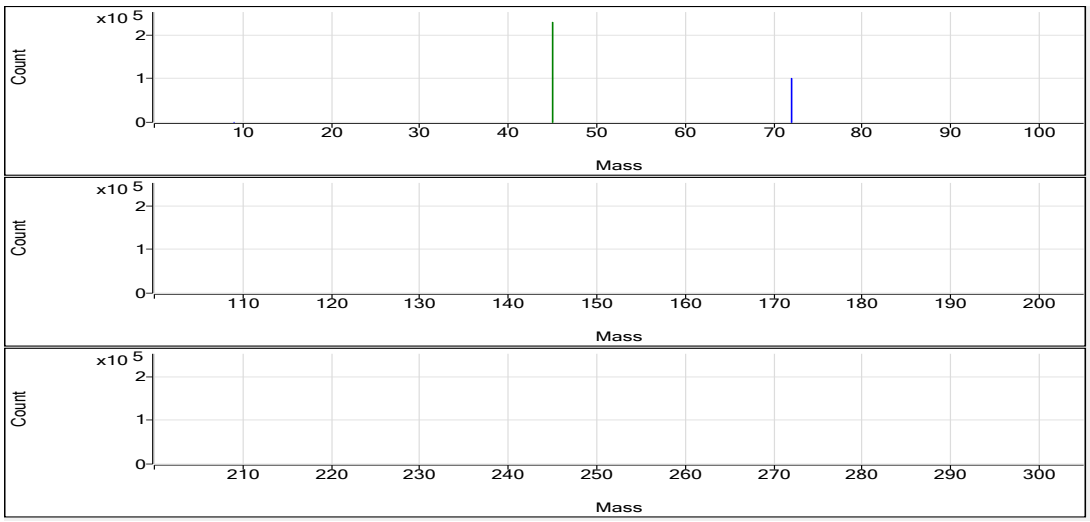
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.034	ppb	7.3	52.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.132	ppb	63.2	7.55	0.0001	Pulse	1.5000	3
Na	23	45	He	38734.891	ppb	0.6	5560928.04	121.6185	Analog	0.1000	3
Mg	24	45	He	112277.168	ppb	0.6	7790026.76	170.3699	Analog	0.1000	3
Al	27	45	He	7.835	ppb	31.7	200.01	0.0044	Pulse	0.1000	3
K	39	45	He	15451.736	ppb	0.9	787460.09	17.2220	Pulse	0.1000	3
Ca	44	45	He	770174.512	ppb	0.6	2177250.23	47.6170	Analog	0.1000	3
Ti	47	45	He	0.752	ppb	69.2	16.67	0.0004	Pulse	0.1000	3
V	51	45	He	0.072	ppb	11.3	506.68	0.0111	Pulse	0.5000	3
Cr	52	45	He	0.338	ppb	44.6	1216.76	0.0266	Pulse	0.1000	3
Mn	55	45	He	7760.501	ppb	0.7	3839231.40	83.9651	Analog	0.1000	3
Fe	57	45	He	42.062	ppb	3.9	1100.08	0.0241	Pulse	0.1000	3
Co	59	45	He	28.866	ppb	1.7	69238.07	1.5142	Pulse	0.1000	3
Ni	60	115	He	14.431	ppb	3.6	10050.06	0.1690	Pulse	0.1000	3
Cu	63	72	He	1.637	ppb	5.5	4224.02	0.0570	Pulse	0.1000	3
Zn	66	72	He	12.961	ppb	4.9	2970.36	0.0401	Pulse	0.1000	3
As	75	72	He	0.437	ppb	12.0	99.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	5679.627	ppb	1.3	3184843.08	53.5359	Analog	0.1000	3
Mo	98	115	He	42.796	ppb	2.0	58662.83	0.9861	Pulse	0.1000	3
Ag	107	115	He	-0.007	ppb	N/A	30.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.238	ppb	16.4	76.67	0.0013	Pulse	0.5000	3
Sn	120	115	He	2.074	ppb	6.7	2626.97	0.0442	Pulse	0.1000	3
Sb	121	115	He	0.079	ppb	23.0	93.33	0.0016	Pulse	0.1000	3
Ba	137	115	He	81.558	ppb	1.2	21168.54	0.3558	Pulse	0.1000	3
Tl	205	159	He	0.819	ppb	7.7	4244.11	0.0173	Pulse	0.1000	3
Pb	208	159	He	0.021	ppb	30.2	290.01	0.0012	Pulse	0.1000	3
U	238	159	He	1.626	ppb	3.3	11001.27	0.0448	Pulse	0.1000	3

ISTD Table:

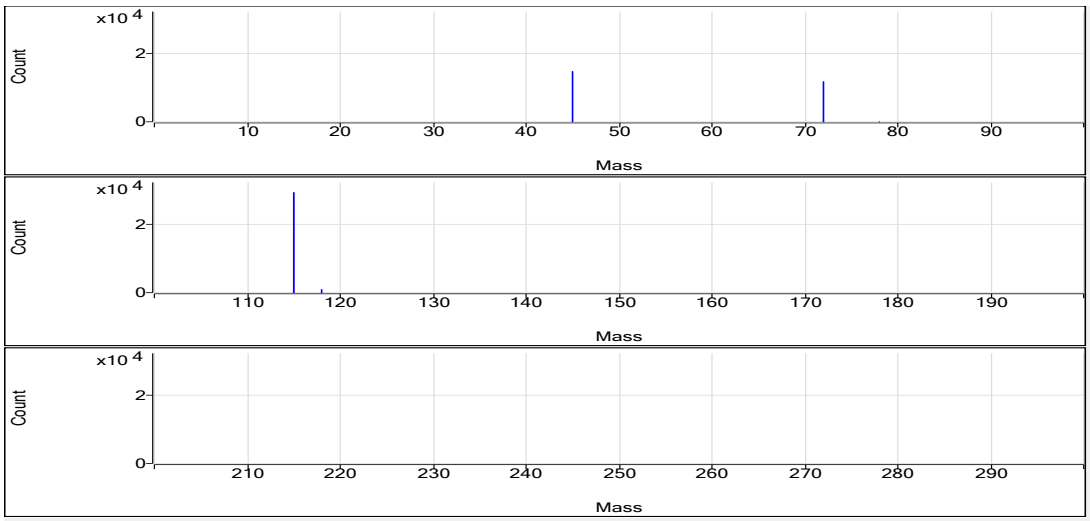
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2288818.51	0.9	99.8	Analog	0.1000	3
No Gas	Ge	72	1006013.19	0.5	96.8	Pulse	0.1000	3
H2	Sc	45	146569.81	0.5	105.4	Pulse	0.1000	3
H2	Ge	72	116872.91	1.0	99.0	Pulse	0.1000	3
H2	In	115	291842.05	0.9	99.1	Pulse	0.1000	3
He	Sc	45	45724.48	0.2	97.6	Pulse	0.1000	3
He	Ge	72	74104.32	0.2	96.9	Pulse	0.1000	3
He	In	115	59492.63	0.6	98.1	Pulse	0.1000	3
He	Tb	159	245841.97	0.9	101.9	Pulse	0.1000	3
He	Bi	209	166963.67	0.7	100.8	Pulse	0.1000	3

No Gas

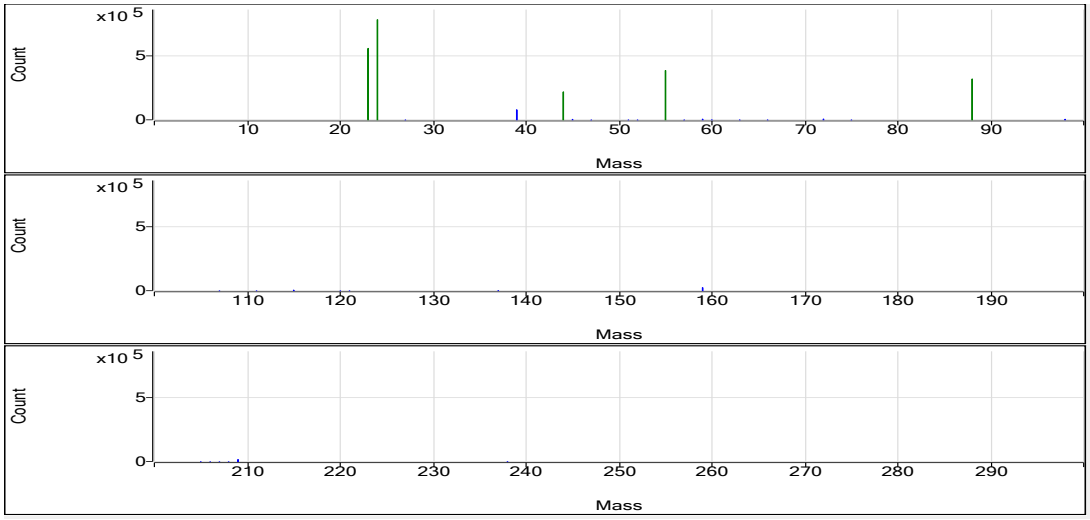


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.036	0	54.00	0.0004	9.309E-06
Be	9	1	No Gas	0.033	0	52.00	0.0004	9.309E-06
Be	9	1	No Gas	0.032	0	50.00	0.0004	9.309E-06
Se	78	2	H2	0.218	0.0001	12.00	0.0004	5.598E-06
Se	78	2	H2	0.129	0.0001	7.33	0.0004	5.598E-06
Se	78	2	H2	0.05	0	3.33	0.0004	5.598E-06
Na	23	3	He	38865.423	122.0268	5568610.54	0.0031	0.4657
Na	23	3	He	38889.573	122.1023	5589208.04	0.0031	0.4657
Na	23	3	He	38449.676	120.7265	5524965.54	0.0031	0.4657
Mg	24	3	He	112998.986	171.4652	7824696.13	0.0015	0.003704
Mg	24	3	He	112239.964	170.3134	7796060.51	0.0015	0.003704
Mg	24	3	He	111592.554	169.3311	7749323.63	0.0015	0.003704
Al	27	3	He	9.729	0.0053	240.01	0.0005	0.0007154
Al	27	3	He	8.759	0.0048	220.01	0.0005	0.0007154
Al	27	3	He	5.018	0.0031	140.00	0.0005	0.0007154
K	39	3	He	15613.971	17.3983	793961.32	0.0011	0.4296
K	39	3	He	15329.161	17.0888	782236.86	0.0011	0.4296
K	39	3	He	15412.077	17.1789	786182.10	0.0011	0.4296
Ca	44	3	He	774618.915	47.8918	2185507.78	0.0001	0.002924
Ca	44	3	He	770293.409	47.6243	2179993.87	0.0001	0.002924
Ca	44	3	He	765611.212	47.3349	2166249.03	0.0001	0.002924
Ti	47	3	He	0.452	0.0002	10.00	0.0005	0
Ti	47	3	He	0.451	0.0002	10.00	0.0005	0
Ti	47	3	He	1.353	0.0007	30.00	0.0005	0
V	51	3	He	0.08	0.0113	514.01	0.021	0.009571
V	51	3	He	0.07	0.0111	506.01	0.021	0.009571
V	51	3	He	0.064	0.0109	500.01	0.021	0.009571
Cr	52	3	He	0.302	0.0256	1170.09	0.0267	0.01758
Cr	52	3	He	0.209	0.0232	1060.07	0.0267	0.01758
Cr	52	3	He	0.504	0.031	1420.13	0.0267	0.01758
Mn	55	3	He	7818.24	84.5898	3860196.82	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	7712.212	83.4427	3819569.32	0.0108	0.004199
Mn	55	3	He	7751.052	83.8629	3837928.07	0.0108	0.004199
Fe	57	3	He	43.905	0.025	1140.09	0.0005	0.002993
Fe	57	3	He	41.571	0.0238	1090.07	0.0005	0.002993
Fe	57	3	He	40.709	0.0234	1070.07	0.0005	0.002993
Co	59	3	He	28.398	1.4897	67983.22	0.0524	0.003063
Co	59	3	He	29.4	1.5422	70593.72	0.0524	0.003063
Co	59	3	He	28.799	1.5107	69137.26	0.0524	0.003063
Ni	60	3	He	13.863	0.1627	9743.16	0.0109	0.01116
Ni	60	3	He	14.546	0.1702	10123.39	0.0109	0.01116
Ni	60	3	He	14.884	0.1739	10283.64	0.0109	0.01116
Cu	63	3	He	1.717	0.0591	4370.73	0.0255	0.01531
Cu	63	3	He	1.539	0.0545	4050.66	0.0255	0.01531
Cu	63	3	He	1.654	0.0574	4250.68	0.0255	0.01531
Zn	66	3	He	12.227	0.038	2810.32	0.0029	0.002787
Zn	66	3	He	13.345	0.0412	3060.39	0.0029	0.002787
Zn	66	3	He	13.31	0.0411	3040.38	0.0029	0.002787
As	75	3	He	0.379	0.0012	90.00	0.0021	0.0004097
As	75	3	He	0.452	0.0014	102.00	0.0021	0.0004097
As	75	3	He	0.48	0.0014	106.00	0.0021	0.0004097
Sr	88	3	He	5597.258	52.7595	3158593.39	0.0094	0.0008765
Sr	88	3	He	5717.625	53.8941	3205454.01	0.0094	0.0008765
Sr	88	3	He	5723.998	53.9541	3190481.83	0.0094	0.0008765
Mo	98	3	He	41.896	0.9654	57796.54	0.023	0.0002199
Mo	98	3	He	42.889	0.9883	58780.09	0.023	0.0002199
Mo	98	3	He	43.602	1.0047	59411.85	0.023	0.0002199
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	-0.003	0.0007	40.00	0.0483	0.0008224
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Cd	111	3	He	0.203	0.0011	66.00	0.0053	2.193E-05
Cd	111	3	He	0.28	0.0015	90.00	0.0053	2.193E-05
Cd	111	3	He	0.23	0.0013	74.00	0.0053	2.193E-05
Sn	120	3	He	1.968	0.0426	2550.29	0.0148	0.01345
Sn	120	3	He	2.021	0.0434	2580.29	0.0148	0.01345
Sn	120	3	He	2.233	0.0465	2750.34	0.0148	0.01345
Sb	121	3	He	0.063	0.0013	80.00	0.0143	0.0004392
Sb	121	3	He	0.099	0.0018	110.00	0.0143	0.0004392
Sb	121	3	He	0.076	0.0015	90.00	0.0143	0.0004392
Ba	137	3	He	81.108	0.3539	21185.23	0.0044	0.0001096
Ba	137	3	He	80.869	0.3528	20984.94	0.0044	0.0001096
Ba	137	3	He	82.698	0.3608	21335.44	0.0044	0.0001096
Tl	205	3	He	0.795	0.0168	4160.77	0.0208	0.0002491
Tl	205	3	He	0.89	0.0187	4600.85	0.0208	0.0002491
Tl	205	3	He	0.771	0.0163	3970.70	0.0208	0.0002491
Pb	208	3	He	0.014	0.001	150.01	0.0272	0.0006218
Pb	208	3	He	0.027	0.0013	170.01	0.0272	0.0006218
Pb	208	3	He	0.021	0.0012	150.01	0.0272	0.0006218
U	238	3	He	1.579	0.0435	10784.40	0.0275	2.763E-05
U	238	3	He	1.684	0.0463	11374.94	0.0275	2.763E-05
U	238	3	He	1.615	0.0445	10844.46	0.0275	2.763E-05
Sc	45	1	No Gas			2269774.97		
Sc	45	1	No Gas			2311567.15		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2285113.40		
Ge	72	1	No Gas			1004421.55		
Ge	72	1	No Gas			1011194.20		
Ge	72	1	No Gas			1002423.81		
Sc	45	2	H2			146497.78		
Sc	45	2	H2			145894.46		
Sc	45	2	H2			147317.18		
Ge	72	2	H2			116510.36		
Ge	72	2	H2			115906.73		
Ge	72	2	H2			118201.63		
In	115	2	H2			290476.79		
In	115	2	H2			290293.77		
In	115	2	H2			294755.60		
Sc	45	3	He			45634.32		
Sc	45	3	He			45774.78		
Sc	45	3	He			45764.33		
Ge	72	3	He			74010.31		
Ge	72	3	He			74301.97		
Ge	72	3	He			74000.67		
In	115	3	He			59885.60		
In	115	3	He			59494.99		
In	115	3	He			59152.46		
Tb	159	3	He			248141.85		
Tb	159	3	He			245466.17		
Tb	159	3	He			243917.89		
Bi	209	3	He			167663.92		
Bi	209	3	He			167595.49		
Bi	209	3	He			165631.60		

Quantitation Report

Data File Name	096SMPL.d
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Acq Time	7/17/2024 10:42:21 AM
Sample Name	410-179333-C-6-A
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

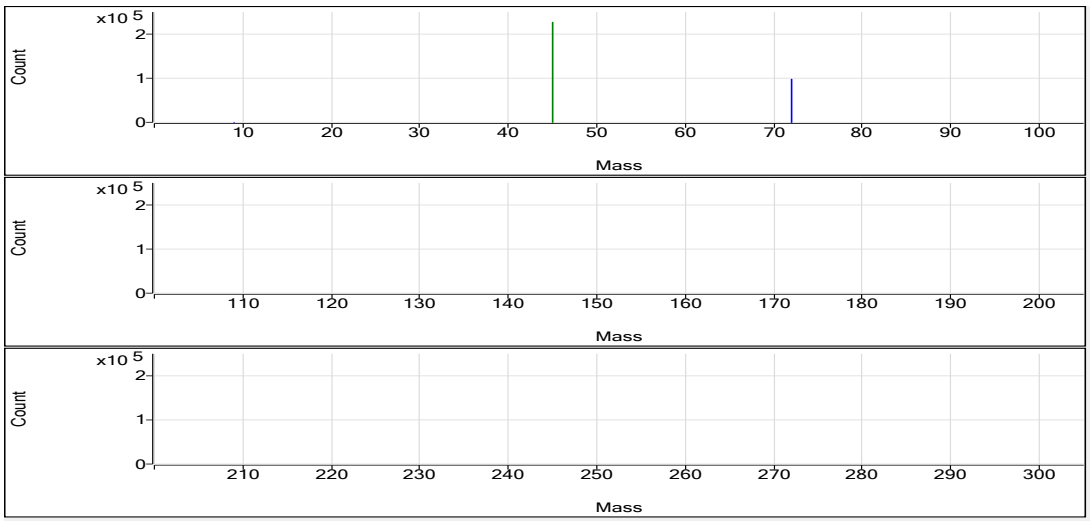
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.003	ppb	220.3	24.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	4.073	ppb	4.3	210.67	0.0018	Pulse	1.5000	3
Na	23	45	He	49743.422	ppb	1.7	7181020.73	156.0504	Analog	0.1000	3
Mg	24	45	He	9755.653	ppb	1.9	681344.36	14.8067	Pulse	0.1000	3
Al	27	45	He	34.820	ppb	23.2	783.41	0.0170	Pulse	0.1000	3
K	39	45	He	21274.078	ppb	2.2	1083677.12	23.5495	Pulse	0.1000	3
Ca	44	45	He	830801.412	ppb	0.8	2364016.79	51.3651	Analog	0.1000	3
Ti	47	45	He	0.746	ppb	68.7	16.67	0.0004	Pulse	0.1000	3
V	51	45	He	0.641	ppb	3.1	1062.04	0.0231	Pulse	0.5000	3
Cr	52	45	He	34.240	ppb	1.6	42853.67	0.9312	Pulse	0.1000	3
Mn	55	45	He	13.375	ppb	12.3	6841.64	0.1489	Pulse	0.1000	3
Fe	57	45	He	27.690	ppb	17.6	776.72	0.0169	Pulse	0.1000	3
Co	59	45	He	1.042	ppb	12.6	2646.98	0.0576	Pulse	0.1000	3
Ni	60	115	He	1.279	ppb	11.0	1560.13	0.0251	Pulse	0.1000	3
Cu	63	72	He	0.889	ppb	2.8	2813.67	0.0379	Pulse	0.1000	3
Zn	66	72	He	0.859	ppb	22.5	390.02	0.0053	Pulse	0.1000	3
As	75	72	He	0.732	ppb	6.0	146.00	0.0020	Pulse	0.5000	3
Sr	88	115	He	5030.016	ppb	1.5	2941115.58	47.4128	Analog	0.1000	3
Mo	98	115	He	432.476	ppb	0.7	618094.83	9.9635	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	50.00	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.079	ppb	22.7	27.33	0.0004	Pulse	0.5000	3
Sn	120	115	He	-0.115	ppb	N/A	730.05	0.0118	Pulse	0.1000	3
Sb	121	115	He	0.037	ppb	108.2	60.00	0.0010	Pulse	0.1000	3
Ba	137	115	He	58.301	ppb	2.3	15781.90	0.2544	Pulse	0.1000	3
Tl	205	159	He	0.892	ppb	5.0	4650.88	0.0188	Pulse	0.1000	3
Pb	208	159	He	0.015	ppb	75.3	253.34	0.0010	Pulse	0.1000	3
U	238	159	He	0.290	ppb	4.8	1980.21	0.0080	Pulse	0.1000	3

ISTD Table:

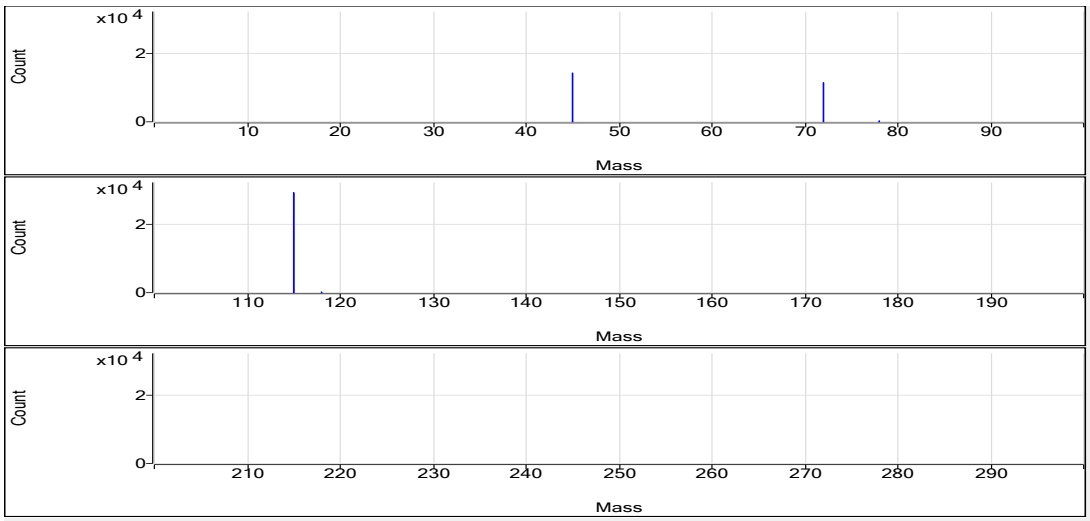
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2281485.22	1.1	99.5	Analog	0.1000	3
No Gas	Ge	72	985876.96	0.4	94.9	Pulse	0.1000	3
H2	Sc	45	143647.19	1.9	103.3	Pulse	0.1000	3
H2	Ge	72	115288.10	0.2	97.7	Pulse	0.1000	3
H2	In	115	294119.04	1.3	99.8	Pulse	0.1000	3
He	Sc	45	46028.63	2.2	98.3	Pulse	0.1000	3
He	Ge	72	74154.89	0.8	97.0	Pulse	0.1000	3
He	In	115	62039.42	1.3	102.3	Pulse	0.1000	3
He	Tb	159	247463.50	0.7	102.6	Pulse	0.1000	3
He	Bi	209	168757.50	0.4	101.8	Pulse	0.1000	3

No Gas

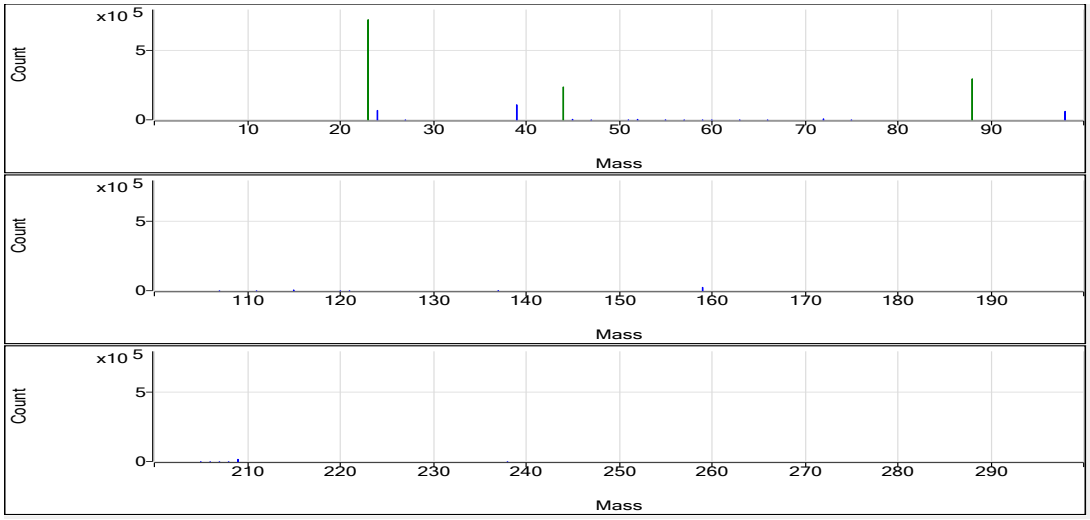


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.01	0	30.00	0.0004	9.309E-06
Be	9	1	No Gas	-0.004	0	18.00	0.0004	9.309E-06
Be	9	1	No Gas	0.003	0	24.00	0.0004	9.309E-06
Se	78	2	H2	4.102	0.0018	212.00	0.0004	5.598E-06
Se	78	2	H2	4.233	0.0019	219.34	0.0004	5.598E-06
Se	78	2	H2	3.884	0.0017	200.67	0.0004	5.598E-06
Na	23	3	He	50631.411	158.8278	7130039.89	0.0031	0.4657
Na	23	3	He	49619.655	155.6633	7209778.02	0.0031	0.4657
Na	23	3	He	48979.201	153.6601	7203244.27	0.0031	0.4657
Mg	24	3	He	9962.525	15.1206	678786.47	0.0015	0.003704
Mg	24	3	He	9677.749	14.6884	680317.26	0.0015	0.003704
Mg	24	3	He	9626.685	14.611	684929.36	0.0015	0.003704
Al	27	3	He	29.947	0.0147	660.04	0.0005	0.0007154
Al	27	3	He	30.365	0.0149	690.04	0.0005	0.0007154
Al	27	3	He	44.147	0.0213	1000.16	0.0005	0.0007154
K	39	3	He	21600.609	23.9044	1073107.64	0.0011	0.4296
K	39	3	He	21476.173	23.7692	1100904.59	0.0011	0.4296
K	39	3	He	20745.453	22.9751	1077019.12	0.0011	0.4296
Ca	44	3	He	836592.214	51.7231	2321934.18	0.0001	0.002924
Ca	44	3	He	831771.714	51.4251	2381829.34	0.0001	0.002924
Ca	44	3	He	824040.309	50.9471	2388286.84	0.0001	0.002924
Ti	47	3	He	0.46	0.0002	10.00	0.0005	0
Ti	47	3	He	1.337	0.0006	30.00	0.0005	0
Ti	47	3	He	0.44	0.0002	10.00	0.0005	0
V	51	3	He	0.618	0.0226	1014.04	0.021	0.009571
V	51	3	He	0.651	0.0233	1078.04	0.021	0.009571
V	51	3	He	0.654	0.0233	1094.04	0.021	0.009571
Cr	52	3	He	34.725	0.9442	42385.61	0.0267	0.01758
Cr	52	3	He	34.367	0.9346	43288.26	0.0267	0.01758
Cr	52	3	He	33.627	0.9149	42887.13	0.0267	0.01758
Mn	55	3	He	15.243	0.1691	7591.98	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	12.746	0.1421	6581.51	0.0108	0.004199
Mn	55	3	He	12.135	0.1355	6351.43	0.0108	0.004199
Fe	57	3	He	24.27	0.0151	680.05	0.0005	0.002993
Fe	57	3	He	33.255	0.0196	910.06	0.0005	0.002993
Fe	57	3	He	25.544	0.0158	740.04	0.0005	0.002993
Co	59	3	He	1.188	0.0653	2930.38	0.0524	0.003063
Co	59	3	He	0.936	0.052	2410.25	0.0524	0.003063
Co	59	3	He	1.001	0.0555	2600.31	0.0524	0.003063
Ni	60	3	He	1.168	0.0239	1470.11	0.0109	0.01116
Ni	60	3	He	1.232	0.0246	1550.13	0.0109	0.01116
Ni	60	3	He	1.437	0.0269	1660.14	0.0109	0.01116
Cu	63	3	He	0.893	0.0381	2830.34	0.0255	0.01531
Cu	63	3	He	0.911	0.0385	2830.33	0.0255	0.01531
Cu	63	3	He	0.862	0.0373	2780.34	0.0255	0.01531
Zn	66	3	He	0.761	0.005	370.02	0.0029	0.002787
Zn	66	3	He	0.734	0.0049	360.02	0.0029	0.002787
Zn	66	3	He	1.081	0.0059	440.02	0.0029	0.002787
As	75	3	He	0.73	0.002	146.00	0.0021	0.0004097
As	75	3	He	0.69	0.0019	138.00	0.0021	0.0004097
As	75	3	He	0.777	0.0021	154.00	0.0021	0.0004097
Sr	88	3	He	5064.093	47.734	2931716.21	0.0094	0.0008765
Sr	88	3	He	4945.277	46.6141	2933507.77	0.0094	0.0008765
Sr	88	3	He	5080.678	47.8903	2958122.77	0.0094	0.0008765
Mo	98	3	He	435.138	10.0248	615702.49	0.023	0.0002199
Mo	98	3	He	429.328	9.891	622456.67	0.023	0.0002199
Mo	98	3	He	432.963	9.9747	616125.34	0.023	0.0002199
Ag	107	3	He	0.003	0.001	60.00	0.0483	0.0008224
Ag	107	3	He	0.003	0.001	60.00	0.0483	0.0008224
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Cd	111	3	He	0.069	0.0004	24.00	0.0053	2.193E-05
Cd	111	3	He	0.067	0.0004	24.00	0.0053	2.193E-05
Cd	111	3	He	0.099	0.0006	34.00	0.0053	2.193E-05
Sn	120	3	He	-0.183	0.0107	660.05	0.0148	0.01345
Sn	120	3	He	0.025	0.0138	870.05	0.0148	0.01345
Sn	120	3	He	-0.187	0.0107	660.04	0.0148	0.01345
Sb	121	3	He	0.026	0.0008	50.00	0.0143	0.0004392
Sb	121	3	He	0.08	0.0016	100.00	0.0143	0.0004392
Sb	121	3	He	0.003	0.0005	30.00	0.0143	0.0004392
Ba	137	3	He	59.624	0.2602	15978.73	0.0044	0.0001096
Ba	137	3	He	58.299	0.2544	16008.84	0.0044	0.0001096
Ba	137	3	He	56.982	0.2486	15358.14	0.0044	0.0001096
Tl	205	3	He	0.942	0.0198	4870.98	0.0208	0.0002491
Tl	205	3	He	0.878	0.0185	4610.86	0.0208	0.0002491
Tl	205	3	He	0.857	0.0181	4470.79	0.0208	0.0002491
Pb	208	3	He	0.009	0.0009	120.00	0.0272	0.0006218
Pb	208	3	He	0.008	0.0008	120.00	0.0272	0.0006218
Pb	208	3	He	0.028	0.0014	170.01	0.0272	0.0006218
U	238	3	He	0.302	0.0083	2050.22	0.0275	2.763E-05
U	238	3	He	0.292	0.0081	2010.21	0.0275	2.763E-05
U	238	3	He	0.275	0.0076	1880.19	0.0275	2.763E-05
Sc	45	1	No Gas			2275242.93		
Sc	45	1	No Gas			2308255.59		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2260957.15		
Ge	72	1	No Gas			987984.59		
Ge	72	1	No Gas			988637.88		
Ge	72	1	No Gas			981008.42		
Sc	45	2	H2			143865.03		
Sc	45	2	H2			146226.22		
Sc	45	2	H2			140850.31		
Ge	72	2	H2			115200.77		
Ge	72	2	H2			115512.13		
Ge	72	2	H2			115151.39		
In	115	2	H2			296783.28		
In	115	2	H2			296005.89		
In	115	2	H2			289567.96		
Sc	45	3	He			44891.63		
Sc	45	3	He			46316.49		
Sc	45	3	He			46877.77		
Ge	72	3	He			74362.84		
Ge	72	3	He			73488.57		
Ge	72	3	He			74613.26		
In	115	3	He			61422.39		
In	115	3	He			62937.90		
In	115	3	He			61773.30		
Tb	159	3	He			245670.04		
Tb	159	3	He			249116.23		
Tb	159	3	He			247604.22		
Bi	209	3	He			169362.13		
Bi	209	3	He			167918.53		
Bi	209	3	He			168991.85		

Quantitation Report

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Sample Name	CCV 6148199
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

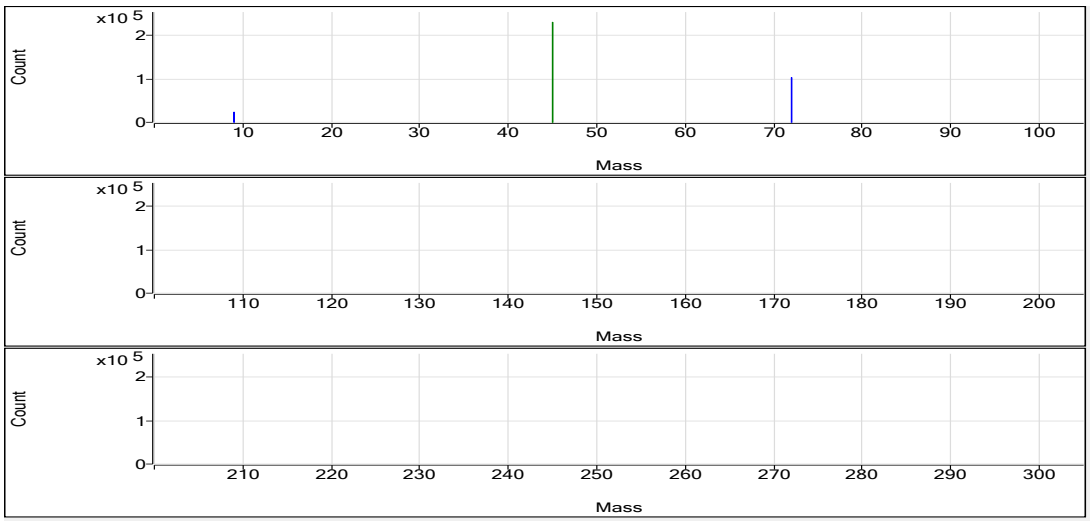
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.839	ppb	2.3	47579.28	0.0206	Pulse	0.5000	3
Se	78	72	H2	53.354	ppb	0.7	2728.24	0.0239	Pulse	1.5000	3
Na	23	45	He	5168.101	ppb	1.6	745359.75	16.6302	Pulse	0.1000	3
Mg	24	45	He	5155.439	ppb	2.1	350759.43	7.8264	Pulse	0.1000	3
Al	27	45	He	5091.083	ppb	1.4	106610.56	2.3786	Pulse	0.1000	3
K	39	45	He	5167.456	ppb	1.8	270952.56	6.0454	Pulse	0.1000	3
Ca	44	45	He	5175.398	ppb	3.6	14470.16	0.3229	Pulse	0.1000	3
Ti	47	45	He	5143.452	ppb	0.7	111665.69	2.4913	Pulse	0.1000	3
V	51	45	He	516.093	ppb	0.8	487318.78	10.8723	Pulse	0.5000	3
Cr	52	45	He	519.972	ppb	1.4	622665.04	13.8924	Pulse	0.1000	3
Mn	55	45	He	515.246	ppb	0.9	250045.50	5.5786	Pulse	0.1000	3
Fe	57	45	He	5218.194	ppb	1.6	117273.53	2.6166	Pulse	0.1000	3
Co	59	45	He	506.356	ppb	1.5	1188241.70	26.5114	Pulse	0.1000	3
Ni	60	115	He	522.377	ppb	1.7	340281.57	5.7228	Pulse	0.1000	3
Cu	63	72	He	498.480	ppb	0.7	952389.36	12.7156	Pulse	0.1000	3
Zn	66	72	He	521.023	ppb	0.9	112503.13	1.5021	Pulse	0.1000	3
As	75	72	He	518.356	ppb	0.5	82670.59	1.1037	Pulse	0.5000	3
Sr	88	115	He	51.948	ppb	1.2	29174.14	0.4905	Pulse	0.1000	3
Mo	98	115	He	51.270	ppb	1.9	70247.16	1.1814	Pulse	0.1000	3
Ag	107	115	He	52.058	ppb	1.2	149574.77	2.5154	Pulse	0.1000	3
Cd	111	115	He	52.124	ppb	0.7	16535.44	0.2781	Pulse	0.5000	3
Sn	120	115	He	50.920	ppb	1.1	45641.30	0.7674	Pulse	0.1000	3
Sb	121	115	He	51.028	ppb	1.9	43438.25	0.7305	Pulse	0.1000	3
Ba	137	115	He	518.143	ppb	1.3	134391.10	2.2600	Pulse	0.1000	3
Tl	205	159	He	51.826	ppb	0.8	257060.58	1.0775	Pulse	0.1000	3
Pb	208	159	He	52.108	ppb	0.1	338528.16	1.4190	Pulse	0.1000	3
U	238	159	He	52.250	ppb	1.3	342833.34	1.4371	Pulse	0.1000	3

ISTD Table:

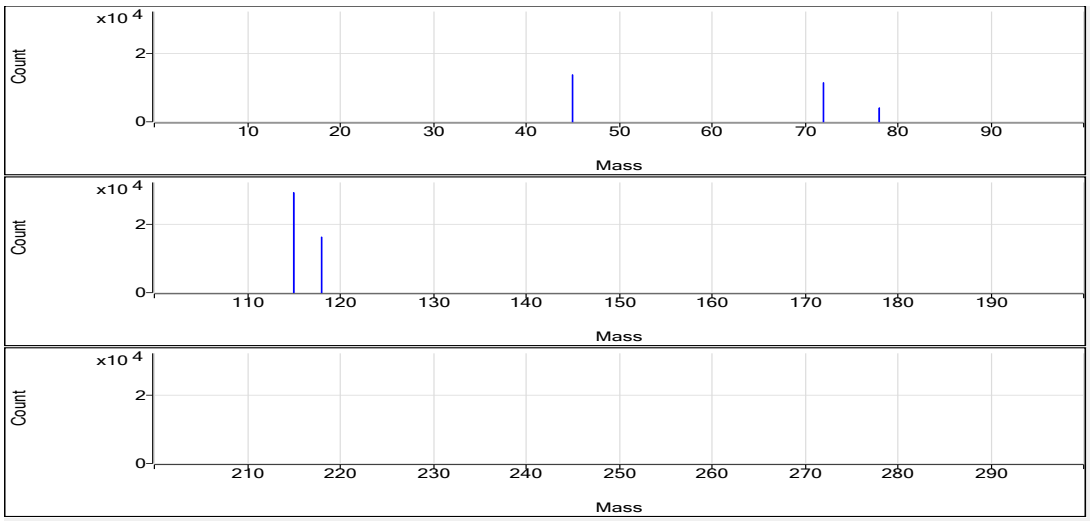
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2305761.22	0.3	100.5	Analog	0.1000	3
No Gas	Ge	72	1032583.78	0.8	99.4	Pulse	0.1000	3
H2	Sc	45	137384.78	1.5	98.8	Pulse	0.1000	3
H2	Ge	72	114304.89	2.2	96.8	Pulse	0.1000	3
H2	In	115	292222.69	1.5	99.2	Pulse	0.1000	3
He	Sc	45	44825.23	1.2	95.7	Pulse	0.1000	3
He	Ge	72	74900.99	0.5	97.9	Pulse	0.1000	3
He	In	115	59469.43	1.3	98.1	Pulse	0.1000	3
He	Tb	159	238566.13	0.4	98.9	Pulse	0.1000	3
He	Bi	209	164843.30	0.3	99.5	Pulse	0.1000	3

No Gas

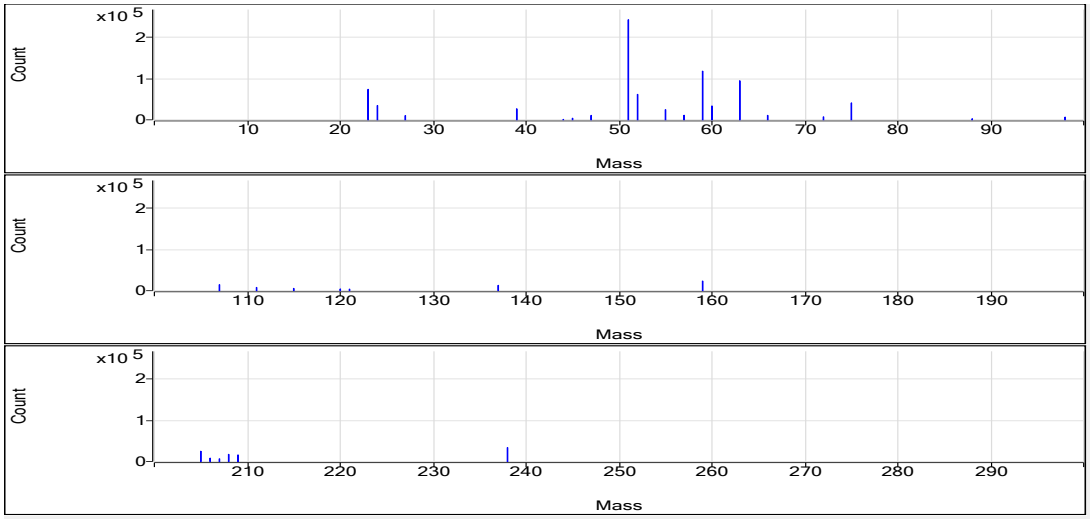


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.482	0.0201	46371.26	0.0004	9.309E-06
Be	9	1	No Gas	52.408	0.0209	48200.34	0.0004	9.309E-06
Be	9	1	No Gas	52.628	0.0209	48166.23	0.0004	9.309E-06
Se	78	2	H2	53.113	0.0238	2778.91	0.0004	5.598E-06
Se	78	2	H2	53.765	0.0241	2739.57	0.0004	5.598E-06
Se	78	2	H2	53.185	0.0238	2666.23	0.0004	5.598E-06
Na	23	3	He	5132.007	16.5173	741329.52	0.0031	0.4657
Na	23	3	He	5110.161	16.4489	746013.58	0.0031	0.4657
Na	23	3	He	5262.136	16.9243	748736.16	0.0031	0.4657
Mg	24	3	He	5127.118	7.7834	349337.22	0.0015	0.003704
Mg	24	3	He	5062.234	7.685	348539.60	0.0015	0.003704
Mg	24	3	He	5276.966	8.0108	354401.48	0.0015	0.003704
Al	27	3	He	5090.794	2.3785	106751.76	0.0005	0.0007154
Al	27	3	He	5021.728	2.3462	106409.45	0.0005	0.0007154
Al	27	3	He	5160.727	2.4112	106670.47	0.0005	0.0007154
K	39	3	He	5193.883	6.0742	272620.78	0.0011	0.4296
K	39	3	He	5063.99	5.933	269080.70	0.0011	0.4296
K	39	3	He	5244.495	6.1292	271156.19	0.0011	0.4296
Ca	44	3	He	5007.791	0.3125	14026.46	0.0001	0.002924
Ca	44	3	He	5140.866	0.3207	14546.84	0.0001	0.002924
Ca	44	3	He	5377.537	0.3354	14837.18	0.0001	0.002924
Ti	47	3	He	5133.082	2.4863	111588.29	0.0005	0
Ti	47	3	He	5113.708	2.4769	112334.22	0.0005	0
Ti	47	3	He	5183.566	2.5107	111074.57	0.0005	0
V	51	3	He	514.588	10.8406	486547.53	0.021	0.009571
V	51	3	He	512.82	10.8034	489967.41	0.021	0.009571
V	51	3	He	520.871	10.9728	485441.41	0.021	0.009571
Cr	52	3	He	515.94	13.7848	618692.02	0.0267	0.01758
Cr	52	3	He	515.674	13.7777	624865.19	0.0267	0.01758
Cr	52	3	He	528.301	14.1147	624437.92	0.0267	0.01758
Mn	55	3	He	513.906	5.5642	249730.82	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	511.386	5.5369	251115.99	0.0108	0.004199
Mn	55	3	He	520.445	5.6349	249289.68	0.0108	0.004199
Fe	57	3	He	5238.551	2.6268	117895.01	0.0005	0.002993
Fe	57	3	He	5125.06	2.5699	116554.73	0.0005	0.002993
Fe	57	3	He	5290.971	2.653	117370.86	0.0005	0.002993
Co	59	3	He	502.908	26.3309	1181785.84	0.0524	0.003063
Co	59	3	He	501.248	26.244	1190250.14	0.0524	0.003063
Co	59	3	He	514.912	26.9593	1192689.12	0.0524	0.003063
Ni	60	3	He	523.233	5.7321	340653.67	0.0109	0.01116
Ni	60	3	He	513.181	5.6222	338687.30	0.0109	0.01116
Ni	60	3	He	530.717	5.814	341503.74	0.0109	0.01116
Cu	63	3	He	498.07	12.7052	953460.22	0.0255	0.01531
Cu	63	3	He	495.01	12.6272	949767.72	0.0255	0.01531
Cu	63	3	He	502.361	12.8145	953940.14	0.0255	0.01531
Zn	66	3	He	516.123	1.488	111663.61	0.0029	0.002787
Zn	66	3	He	521.507	1.5035	113083.42	0.0029	0.002787
Zn	66	3	He	525.439	1.5148	112762.37	0.0029	0.002787
As	75	3	He	520.315	1.1079	83143.13	0.0021	0.0004097
As	75	3	He	515.653	1.098	82586.09	0.0021	0.0004097
As	75	3	He	519.098	1.1053	82282.55	0.0021	0.0004097
Sr	88	3	He	51.583	0.4871	28946.90	0.0094	0.0008765
Sr	88	3	He	52.686	0.4975	29969.06	0.0094	0.0008765
Sr	88	3	He	51.575	0.487	28606.46	0.0094	0.0008765
Mo	98	3	He	52.055	1.1994	71281.34	0.023	0.0002199
Mo	98	3	He	50.159	1.1558	69624.58	0.023	0.0002199
Mo	98	3	He	51.598	1.1889	69835.56	0.023	0.0002199
Ag	107	3	He	51.917	2.5086	149082.28	0.0483	0.0008224
Ag	107	3	He	51.533	2.4901	150003.16	0.0483	0.0008224
Ag	107	3	He	52.723	2.5475	149638.86	0.0483	0.0008224
Cd	111	3	He	51.971	0.2773	16476.70	0.0053	2.193E-05
Cd	111	3	He	51.838	0.2765	16658.91	0.0053	2.193E-05
Cd	111	3	He	52.563	0.2804	16470.70	0.0053	2.193E-05
Sn	120	3	He	50.568	0.7622	45296.72	0.0148	0.01345
Sn	120	3	He	51.561	0.7769	46801.45	0.0148	0.01345
Sn	120	3	He	50.631	0.7631	44825.72	0.0148	0.01345
Sb	121	3	He	51.756	0.7409	44033.31	0.0143	0.0004392
Sb	121	3	He	49.953	0.7151	43080.69	0.0143	0.0004392
Sb	121	3	He	51.374	0.7355	43200.75	0.0143	0.0004392
Ba	137	3	He	514.34	2.2434	133325.53	0.0044	0.0001096
Ba	137	3	He	514.431	2.2438	135171.08	0.0044	0.0001096
Ba	137	3	He	525.658	2.2928	134676.70	0.0044	0.0001096
Tl	205	3	He	52.132	1.0838	259721.13	0.0208	0.0002491
Tl	205	3	He	51.961	1.0803	257647.09	0.0208	0.0002491
Tl	205	3	He	51.387	1.0684	253813.51	0.0208	0.0002491
Pb	208	3	He	52.072	1.418	179786.44	0.0272	0.0006218
Pb	208	3	He	52.121	1.4194	179827.09	0.0272	0.0006218
Pb	208	3	He	52.132	1.4197	179069.02	0.0272	0.0006218
U	238	3	He	51.534	1.4174	339654.17	0.0275	2.763E-05
U	238	3	He	52.831	1.4531	346554.80	0.0275	2.763E-05
U	238	3	He	52.384	1.4408	342291.05	0.0275	2.763E-05
Sc	45	1	No Gas			2307575.28		
Sc	45	1	No Gas			2310476.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2299232.31		
Ge	72	1	No Gas			1025789.28		
Ge	72	1	No Gas			1029653.34		
Ge	72	1	No Gas			1042308.73		
Sc	45	2	H2			139498.64		
Sc	45	2	H2			137301.52		
Sc	45	2	H2			135354.18		
Ge	72	2	H2			116953.88		
Ge	72	2	H2			113901.33		
Ge	72	2	H2			112059.47		
In	115	2	H2			296741.93		
In	115	2	H2			291921.17		
In	115	2	H2			288004.98		
Sc	45	3	He			44882.07		
Sc	45	3	He			45353.27		
Sc	45	3	He			44240.34		
Ge	72	3	He			75044.91		
Ge	72	3	He			75215.87		
Ge	72	3	He			74442.18		
In	115	3	He			59745.93		
In	115	3	He			60568.45		
In	115	3	He			59052.39		
Tb	159	3	He			239628.92		
Tb	159	3	He			238497.34		
Tb	159	3	He			237572.13		
Bi	209	3	He			164367.67		
Bi	209	3	He			165036.15		
Bi	209	3	He			165126.09		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

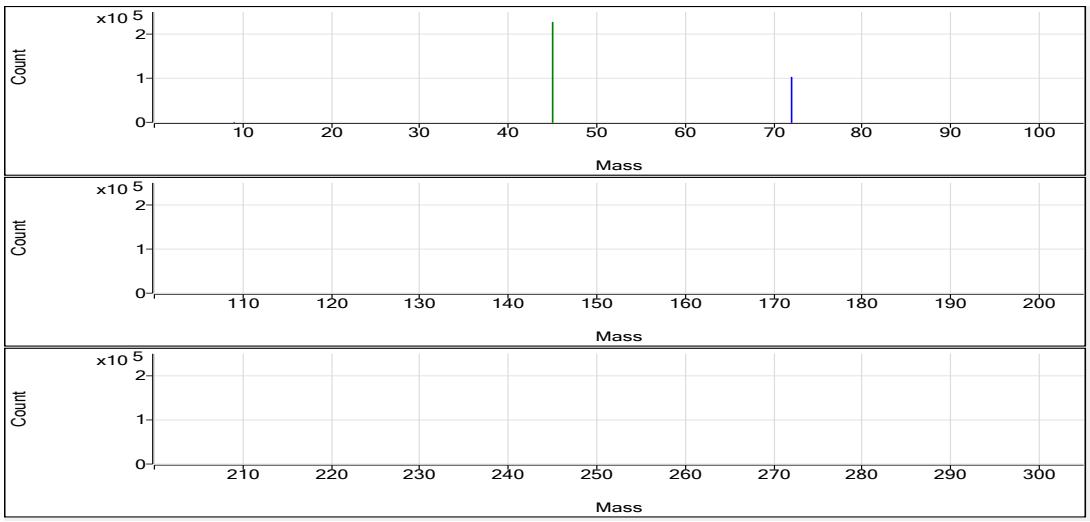
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.079	ppb	12.3	92.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.101	ppb	17.9	5.78	0.0001	Pulse	1.5000	3
Na	23	45	He	98.105	ppb	4.3	34272.39	0.7725	Pulse	0.1000	3
Mg	24	45	He	11.468	ppb	14.4	936.73	0.0211	Pulse	0.1000	3
Al	27	45	He	1.688	ppb	87.4	66.67	0.0015	Pulse	0.1000	3
K	39	45	He	-1.306	ppb	N/A	18994.94	0.4282	Pulse	0.1000	3
Ca	44	45	He	60.769	ppb	41.3	296.68	0.0067	Pulse	0.1000	3
Ti	47	45	He	2.328	ppb	52.8	50.00	0.0011	Pulse	0.1000	3
V	51	45	He	0.278	ppb	21.0	684.02	0.0154	Pulse	0.5000	3
Cr	52	45	He	0.131	ppb	107.1	933.39	0.0211	Pulse	0.1000	3
Mn	55	45	He	0.680	ppb	26.1	513.36	0.0116	Pulse	0.1000	3
Fe	57	45	He	4.970	ppb	30.7	243.34	0.0055	Pulse	0.1000	3
Co	59	45	He	0.240	ppb	5.7	693.37	0.0156	Pulse	0.1000	3
Ni	60	115	He	0.397	ppb	13.4	920.06	0.0155	Pulse	0.1000	3
Cu	63	72	He	0.209	ppb	32.9	1536.79	0.0206	Pulse	0.1000	3
Zn	66	72	He	0.534	ppb	75.1	323.35	0.0043	Pulse	0.1000	3
As	75	72	He	0.396	ppb	25.9	93.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.669	ppb	16.1	426.69	0.0072	Pulse	0.1000	3
Mo	98	115	He	0.132	ppb	30.8	193.34	0.0033	Pulse	0.1000	3
Ag	107	115	He	0.011	ppb	138.9	80.00	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.028	ppb	82.9	10.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.063	ppb	141.1	853.38	0.0144	Pulse	0.1000	3
Sb	121	115	He	0.040	ppb	48.6	60.00	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.245	ppb	41.6	70.00	0.0012	Pulse	0.1000	3
Tl	205	159	He	0.362	ppb	18.5	1833.51	0.0078	Pulse	0.1000	3
Pb	208	159	He	0.043	ppb	7.2	420.01	0.0018	Pulse	0.1000	3
U	238	159	He	0.032	ppb	16.5	216.68	0.0009	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2265693.40	0.5	98.8	Analog	0.1000	3
No Gas	Ge	72	1022018.42	1.1	98.4	Pulse	0.1000	3
H2	Sc	45	135881.86	3.1	97.7	Pulse	0.1000	3
H2	Ge	72	113401.58	1.8	96.1	Pulse	0.1000	3
H2	In	115	287984.22	0.6	97.7	Pulse	0.1000	3
He	Sc	45	44367.35	1.1	94.7	Pulse	0.1000	3
He	Ge	72	74576.82	3.1	97.5	Pulse	0.1000	3
He	In	115	59357.69	1.5	97.9	Pulse	0.1000	3
He	Tb	159	235920.23	0.2	97.8	Pulse	0.1000	3
He	Bi	209	163182.47	0.9	98.5	Pulse	0.1000	3

No Gas



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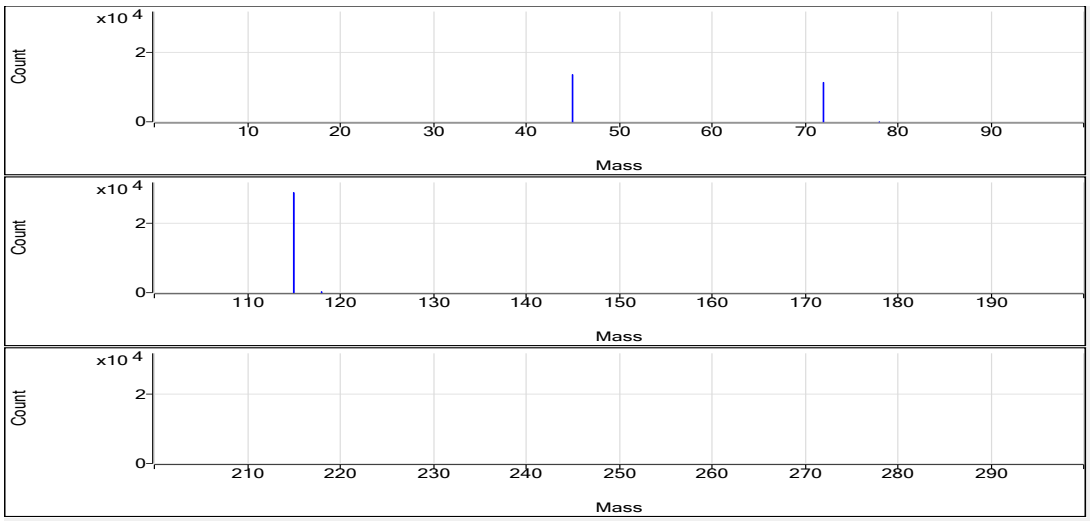
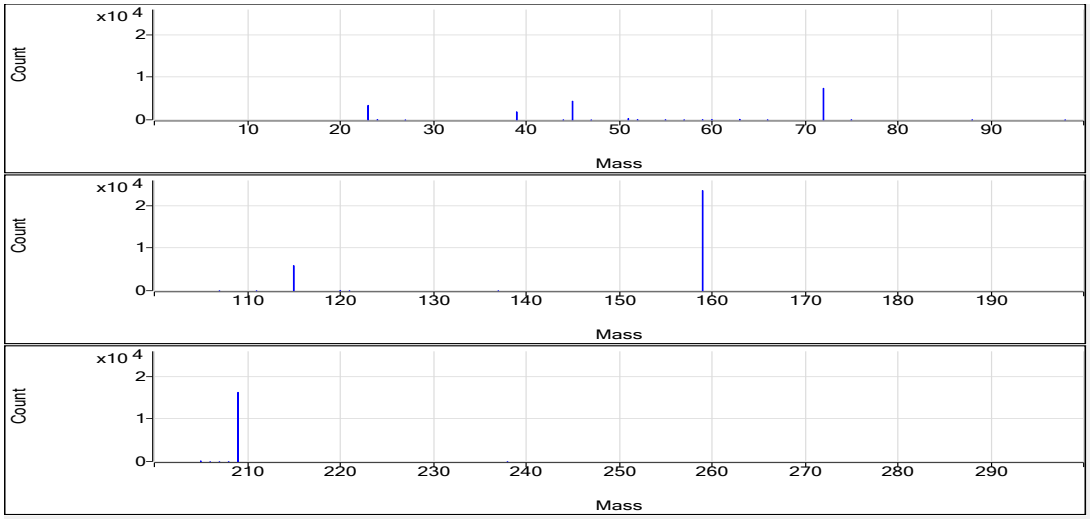


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.075	0	88.00	0.0004	9.309E-06
Be	9	1	No Gas	0.09	0	102.00	0.0004	9.309E-06
Be	9	1	No Gas	0.072	0	86.00	0.0004	9.309E-06
Se	78	2	H2	0.081	0	4.67	0.0004	5.598E-06
Se	78	2	H2	0.117	0.0001	6.67	0.0004	5.598E-06
Se	78	2	H2	0.105	0.0001	6.00	0.0004	5.598E-06
Na	23	3	He	93.509	0.7581	33684.50	0.0031	0.4657
Na	23	3	He	101.821	0.7841	34375.84	0.0031	0.4657
Na	23	3	He	98.984	0.7753	34756.82	0.0031	0.4657
Mg	24	3	He	13.283	0.0239	1060.07	0.0015	0.003704
Mg	24	3	He	10.037	0.0189	830.05	0.0015	0.003704
Mg	24	3	He	11.084	0.0205	920.06	0.0015	0.003704
Al	27	3	He	3.287	0.0023	100.00	0.0005	0.0007154
Al	27	3	He	1.398	0.0014	60.00	0.0005	0.0007154
Al	27	3	He	0.378	0.0009	40.00	0.0005	0.0007154
K	39	3	He	56.667	0.4912	21824.95	0.0011	0.4296
K	39	3	He	-14.566	0.4138	18140.68	0.0011	0.4296
K	39	3	He	-46.019	0.3796	17019.19	0.0011	0.4296
Ca	44	3	He	87.408	0.0083	370.02	0.0001	0.002924
Ca	44	3	He	37.566	0.0052	230.01	0.0001	0.002924
Ca	44	3	He	57.334	0.0065	290.01	0.0001	0.002924
Ti	47	3	He	3.717	0.0018	80.00	0.0005	0
Ti	47	3	He	1.884	0.0009	40.00	0.0005	0
Ti	47	3	He	1.382	0.0007	30.00	0.0005	0
V	51	3	He	0.309	0.0161	714.02	0.021	0.009571
V	51	3	He	0.315	0.0162	710.02	0.021	0.009571
V	51	3	He	0.211	0.014	628.02	0.021	0.009571
Cr	52	3	He	0.126	0.0209	930.06	0.0267	0.01758
Cr	52	3	He	0.273	0.0249	1090.07	0.0267	0.01758
Cr	52	3	He	-0.007	0.0174	780.05	0.0267	0.01758
Mn	55	3	He	0.798	0.0128	570.02	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.476	0.0094	410.02	0.0108	0.004199
Mn	55	3	He	0.766	0.0125	560.03	0.0108	0.004199
Fe	57	3	He	6.608	0.0063	280.01	0.0005	0.002993
Fe	57	3	He	3.589	0.0048	210.01	0.0005	0.002993
Fe	57	3	He	4.713	0.0054	240.01	0.0005	0.002993
Co	59	3	He	0.255	0.0164	730.04	0.0524	0.003063
Co	59	3	He	0.229	0.0151	660.04	0.0524	0.003063
Co	59	3	He	0.235	0.0154	690.04	0.0524	0.003063
Ni	60	3	He	0.335	0.0148	880.05	0.0109	0.01116
Ni	60	3	He	0.433	0.0159	930.06	0.0109	0.01116
Ni	60	3	He	0.422	0.0158	950.06	0.0109	0.01116
Cu	63	3	He	0.285	0.0226	1630.12	0.0255	0.01531
Cu	63	3	He	0.193	0.0202	1510.14	0.0255	0.01531
Cu	63	3	He	0.15	0.0191	1470.11	0.0255	0.01531
Zn	66	3	He	0.138	0.0032	230.01	0.0029	0.002787
Zn	66	3	He	0.94	0.0055	410.02	0.0029	0.002787
Zn	66	3	He	0.524	0.0043	330.01	0.0029	0.002787
As	75	3	He	0.354	0.0012	84.00	0.0021	0.0004097
As	75	3	He	0.512	0.0015	112.00	0.0021	0.0004097
As	75	3	He	0.321	0.0011	84.00	0.0021	0.0004097
Sr	88	3	He	0.64	0.0069	410.02	0.0094	0.0008765
Sr	88	3	He	0.578	0.0063	370.02	0.0094	0.0008765
Sr	88	3	He	0.788	0.0083	500.02	0.0094	0.0008765
Mo	98	3	He	0.086	0.0022	130.00	0.023	0.0002199
Mo	98	3	He	0.161	0.0039	230.01	0.023	0.0002199
Mo	98	3	He	0.149	0.0037	220.01	0.023	0.0002199
Ag	107	3	He	0.018	0.0017	100.00	0.0483	0.0008224
Ag	107	3	He	-0.006	0.0005	30.00	0.0483	0.0008224
Ag	107	3	He	0.021	0.0018	110.00	0.0483	0.0008224
Cd	111	3	He	0.046	0.0003	16.00	0.0053	2.193E-05
Cd	111	3	He	0.034	0.0002	12.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Sn	120	3	He	0.025	0.0138	820.05	0.0148	0.01345
Sn	120	3	He	0.165	0.0159	930.06	0.0148	0.01345
Sn	120	3	He	0	0.0134	810.04	0.0148	0.01345
Sb	121	3	He	0.028	0.0008	50.00	0.0143	0.0004392
Sb	121	3	He	0.029	0.0009	50.00	0.0143	0.0004392
Sb	121	3	He	0.062	0.0013	80.00	0.0143	0.0004392
Ba	137	3	He	0.361	0.0017	100.00	0.0044	0.0001096
Ba	137	3	He	0.171	0.0009	50.00	0.0044	0.0001096
Ba	137	3	He	0.203	0.001	60.00	0.0044	0.0001096
Tl	205	3	He	0.377	0.0081	1910.19	0.0208	0.0002491
Tl	205	3	He	0.42	0.009	2120.22	0.0208	0.0002491
Tl	205	3	He	0.288	0.0062	1470.12	0.0208	0.0002491
Pb	208	3	He	0.046	0.0019	250.01	0.0272	0.0006218
Pb	208	3	He	0.042	0.0018	210.01	0.0272	0.0006218
Pb	208	3	He	0.04	0.0017	250.01	0.0272	0.0006218
U	238	3	He	0.033	0.0009	220.01	0.0275	2.763E-05
U	238	3	He	0.037	0.0011	250.01	0.0275	2.763E-05
U	238	3	He	0.027	0.0008	180.01	0.0275	2.763E-05
Sc	45	1	No Gas			2253371.37		
Sc	45	1	No Gas			2267682.93		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2276025.90		
Ge	72	1	No Gas			1021110.69		
Ge	72	1	No Gas			1033442.72		
Ge	72	1	No Gas			1011501.86		
Sc	45	2	H2			132047.96		
Sc	45	2	H2			140436.50		
Sc	45	2	H2			135161.11		
Ge	72	2	H2			111132.30		
Ge	72	2	H2			115221.47		
Ge	72	2	H2			113850.96		
In	115	2	H2			286246.77		
In	115	2	H2			288042.40		
In	115	2	H2			289663.49		
Sc	45	3	He			44430.59		
Sc	45	3	He			43839.20		
Sc	45	3	He			44832.26		
Ge	72	3	He			72232.76		
Ge	72	3	He			74643.99		
Ge	72	3	He			76853.71		
In	115	3	He			59343.58		
In	115	3	He			58510.37		
In	115	3	He			60237.05		
Tb	159	3	He			235997.24		
Tb	159	3	He			236289.55		
Tb	159	3	He			235473.90		
Bi	209	3	He			163619.98		
Bi	209	3	He			164309.49		
Bi	209	3	He			161617.93		

Quantitation Report

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Comment	J2
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Auto Dilution	1.0000
Total Dilution	1.0000
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Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

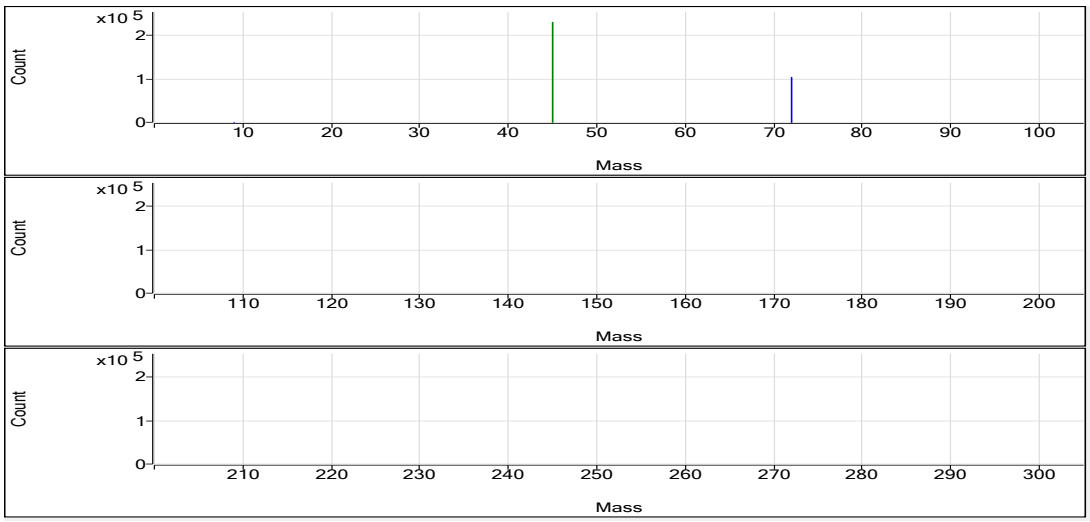
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.011	ppb	15.5	32.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.552	ppb	5.9	82.22	0.0007	Pulse	1.5000	3
Na	23	45	He	19083.365	ppb	0.4	2774359.02	60.1536	Analog	0.1000	3
Mg	24	45	He	66197.703	ppb	1.8	4632335.03	100.4502	Analog	0.1000	3
Al	27	45	He	6.212	ppb	27.1	166.67	0.0036	Pulse	0.1000	3
K	39	45	He	5378.853	ppb	1.6	289393.38	6.2752	Pulse	0.1000	3
Ca	44	45	He	296338.370	ppb	1.0	845053.35	18.3233	Pulse	0.1000	3
Ti	47	45	He	0.751	ppb	92.0	16.67	0.0004	Pulse	0.1000	3
V	51	45	He	0.402	ppb	7.8	831.36	0.0180	Pulse	0.5000	3
Cr	52	45	He	0.067	ppb	19.3	893.39	0.0194	Pulse	0.1000	3
Mn	55	45	He	1144.721	ppb	1.5	571372.35	12.3889	Pulse	0.1000	3
Fe	57	45	He	13.487	ppb	31.4	450.02	0.0097	Pulse	0.1000	3
Co	59	45	He	2.213	ppb	8.0	5484.43	0.1189	Pulse	0.1000	3
Ni	60	115	He	5.104	ppb	8.6	4093.96	0.0670	Pulse	0.1000	3
Cu	63	72	He	0.842	ppb	7.7	2817.01	0.0368	Pulse	0.1000	3
Zn	66	72	He	5.411	ppb	8.4	1406.77	0.0184	Pulse	0.1000	3
As	75	72	He	0.470	ppb	4.4	108.00	0.0014	Pulse	0.5000	3
Sr	88	115	He	1498.650	ppb	2.9	863136.34	14.1269	Pulse	0.1000	3
Mo	98	115	He	128.690	ppb	3.4	181144.35	2.9650	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	386.9	56.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.530	ppb	9.7	174.00	0.0029	Pulse	0.5000	3
Sn	120	115	He	3.375	ppb	2.0	3877.27	0.0634	Pulse	0.1000	3
Sb	121	115	He	0.402	ppb	30.5	376.68	0.0062	Pulse	0.1000	3
Ba	137	115	He	63.623	ppb	2.4	16963.15	0.2776	Pulse	0.1000	3
Tl	205	159	He	2.612	ppb	3.1	13219.76	0.0545	Pulse	0.1000	3
Pb	208	159	He	0.019	ppb	21.8	276.67	0.0011	Pulse	0.1000	3
U	238	159	He	3.533	ppb	2.1	23560.02	0.0972	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2313903.19	1.3	100.9	Analog	0.1000	3
No Gas	Ge	72	1040444.65	1.1	100.1	Pulse	0.1000	3
H2	Sc	45	142033.75	0.5	102.1	Pulse	0.1000	3
H2	Ge	72	117483.45	1.9	99.5	Pulse	0.1000	3
H2	In	115	291066.57	1.6	98.8	Pulse	0.1000	3
He	Sc	45	46122.16	1.2	98.5	Pulse	0.1000	3
He	Ge	72	76629.38	0.2	100.2	Pulse	0.1000	3
He	In	115	61133.44	2.9	100.8	Pulse	0.1000	3
He	Tb	159	242448.21	1.4	100.5	Pulse	0.1000	3
He	Bi	209	168491.86	0.8	101.7	Pulse	0.1000	3

No Gas



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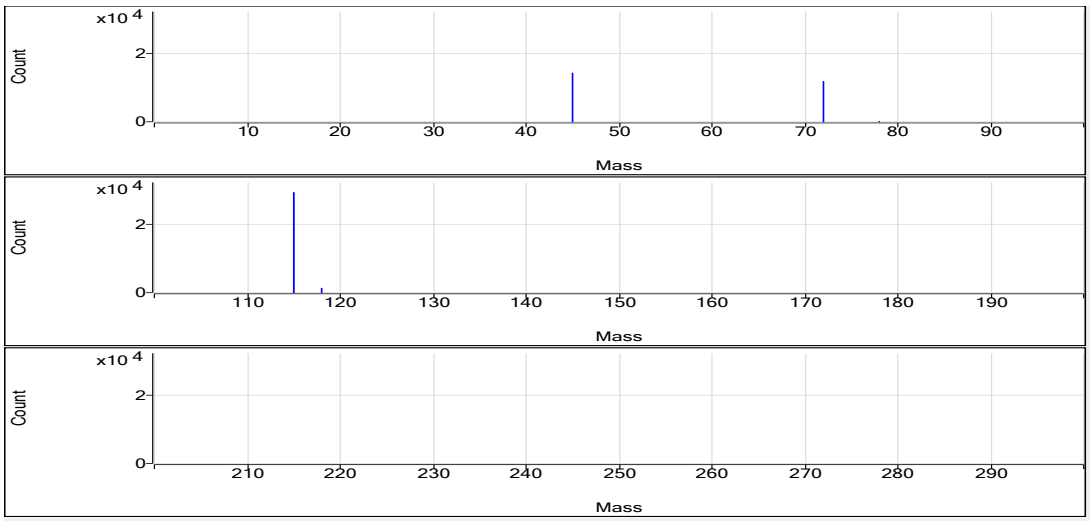
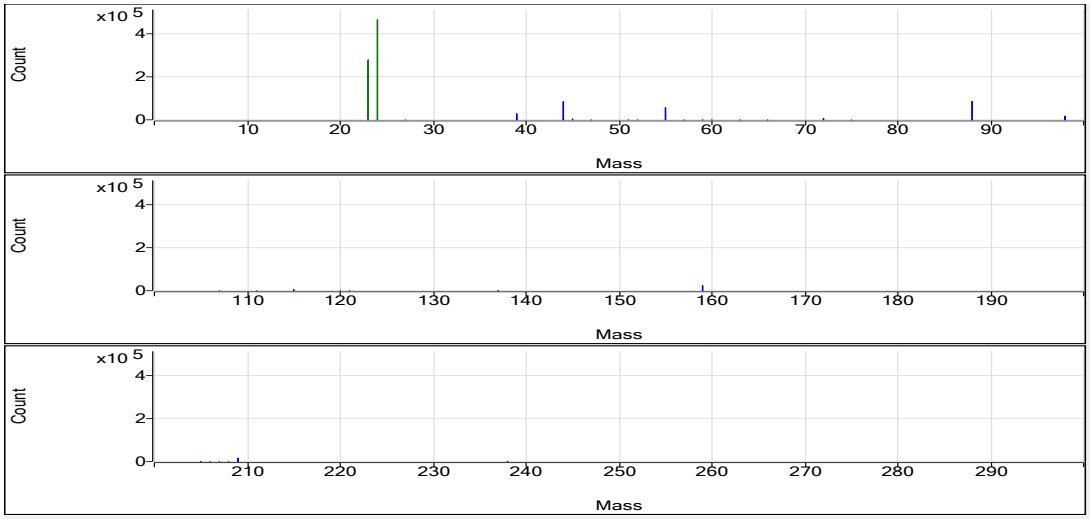


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	30.00	0.0004	9.309E-06
Be	9	1	No Gas	0.013	0	34.00	0.0004	9.309E-06
Be	9	1	No Gas	0.012	0	32.00	0.0004	9.309E-06
Se	78	2	H2	1.657	0.0007	88.67	0.0004	5.598E-06
Se	78	2	H2	1.506	0.0007	78.00	0.0004	5.598E-06
Se	78	2	H2	1.493	0.0007	80.00	0.0004	5.598E-06
Na	23	3	He	19101.05	60.2089	2743960.90	0.0031	0.4657
Na	23	3	He	18997.477	59.8849	2792853.08	0.0031	0.4657
Na	23	3	He	19151.569	60.3669	2786263.08	0.0031	0.4657
Mg	24	3	He	67496.148	102.4204	4667711.49	0.0015	0.003704
Mg	24	3	He	65110.909	98.8012	4607788.37	0.0015	0.003704
Mg	24	3	He	65986.051	100.1291	4621505.24	0.0015	0.003704
Al	27	3	He	7.864	0.0044	200.01	0.0005	0.0007154
Al	27	3	He	6.273	0.0036	170.01	0.0005	0.0007154
Al	27	3	He	4.498	0.0028	130.00	0.0005	0.0007154
K	39	3	He	5451.28	6.3539	289572.22	0.0011	0.4296
K	39	3	He	5286.725	6.1751	287985.97	0.0011	0.4296
K	39	3	He	5398.553	6.2966	290621.95	0.0011	0.4296
Ca	44	3	He	298110.349	18.4328	840058.35	0.0001	0.002924
Ca	44	3	He	292810.477	18.1052	844371.24	0.0001	0.002924
Ca	44	3	He	298094.283	18.4318	850730.46	0.0001	0.002924
Ti	47	3	He	1.359	0.0007	30.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.895	0.0004	20.00	0.0005	0
V	51	3	He	0.434	0.0187	852.03	0.021	0.009571
V	51	3	He	0.37	0.0174	810.02	0.021	0.009571
V	51	3	He	0.402	0.018	832.03	0.021	0.009571
Cr	52	3	He	0.081	0.0197	900.06	0.0267	0.01758
Cr	52	3	He	0.065	0.0193	900.06	0.0267	0.01758
Cr	52	3	He	0.056	0.0191	880.05	0.0267	0.01758
Mn	55	3	He	1145.731	12.3999	565111.63	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1127.25	12.1999	568967.57	0.0108	0.004199
Mn	55	3	He	1161.183	12.567	580037.84	0.0108	0.004199
Fe	57	3	He	12.864	0.0094	430.02	0.0005	0.002993
Fe	57	3	He	18	0.012	560.03	0.0005	0.002993
Fe	57	3	He	9.598	0.0078	360.01	0.0005	0.002993
Co	59	3	He	2.36	0.1266	5771.20	0.0524	0.003063
Co	59	3	He	2.264	0.1216	5671.17	0.0524	0.003063
Co	59	3	He	2.015	0.1086	5010.91	0.0524	0.003063
Ni	60	3	He	4.597	0.0614	3750.54	0.0109	0.01116
Ni	60	3	He	5.402	0.0702	4170.65	0.0109	0.01116
Ni	60	3	He	5.313	0.0693	4360.70	0.0109	0.01116
Cu	63	3	He	0.847	0.0369	2830.35	0.0255	0.01531
Cu	63	3	He	0.904	0.0383	2930.37	0.0255	0.01531
Cu	63	3	He	0.775	0.0351	2690.30	0.0255	0.01531
Zn	66	3	He	5.282	0.018	1380.10	0.0029	0.002787
Zn	66	3	He	5.035	0.0173	1320.10	0.0029	0.002787
Zn	66	3	He	5.916	0.0198	1520.11	0.0029	0.002787
As	75	3	He	0.493	0.0015	112.00	0.0021	0.0004097
As	75	3	He	0.459	0.0014	106.00	0.0021	0.0004097
As	75	3	He	0.457	0.0014	106.00	0.0021	0.0004097
Sr	88	3	He	1492.78	14.0715	859101.39	0.0094	0.0008765
Sr	88	3	He	1545.146	14.5651	864981.16	0.0094	0.0008765
Sr	88	3	He	1458.024	13.7439	865326.47	0.0094	0.0008765
Mo	98	3	He	130.662	3.0104	183791.15	0.023	0.0002199
Mo	98	3	He	131.767	3.0358	180289.98	0.023	0.0002199
Mo	98	3	He	123.641	2.8486	179351.91	0.023	0.0002199
Ag	107	3	He	0.003	0.001	60.00	0.0483	0.0008224
Ag	107	3	He	0.011	0.0013	80.00	0.0483	0.0008224
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Cd	111	3	He	0.506	0.0027	166.00	0.0053	2.193E-05
Cd	111	3	He	0.589	0.0032	188.00	0.0053	2.193E-05
Cd	111	3	He	0.496	0.0027	168.00	0.0053	2.193E-05
Sn	120	3	He	3.439	0.0644	3930.62	0.0148	0.01345
Sn	120	3	He	3.379	0.0635	3770.59	0.0148	0.01345
Sn	120	3	He	3.308	0.0624	3930.59	0.0148	0.01345
Sb	121	3	He	0.381	0.0059	360.02	0.0143	0.0004392
Sb	121	3	He	0.534	0.0081	480.02	0.0143	0.0004392
Sb	121	3	He	0.291	0.0046	290.01	0.0143	0.0004392
Ba	137	3	He	63.44	0.2768	16899.72	0.0044	0.0001096
Ba	137	3	He	65.258	0.2847	16909.78	0.0044	0.0001096
Ba	137	3	He	62.172	0.2713	17079.94	0.0044	0.0001096
Tl	205	3	He	2.521	0.0526	12956.14	0.0208	0.0002491
Tl	205	3	He	2.675	0.0558	13376.57	0.0208	0.0002491
Tl	205	3	He	2.641	0.0551	13326.56	0.0208	0.0002491
Pb	208	3	He	0.023	0.0013	130.01	0.0272	0.0006218
Pb	208	3	He	0.019	0.0011	160.01	0.0272	0.0006218
Pb	208	3	He	0.015	0.001	110.00	0.0272	0.0006218
U	238	3	He	3.459	0.0952	23419.62	0.0275	2.763E-05
U	238	3	He	3.529	0.0971	23259.45	0.0275	2.763E-05
U	238	3	He	3.609	0.0993	24001.00	0.0275	2.763E-05
Sc	45	1	No Gas			2292724.81		
Sc	45	1	No Gas			2348764.18		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2300220.59		
Ge	72	1	No Gas			1029925.77		
Ge	72	1	No Gas			1053347.17		
Ge	72	1	No Gas			1038061.00		
Sc	45	2	H2			142272.74		
Sc	45	2	H2			141303.94		
Sc	45	2	H2			142524.56		
Ge	72	2	H2			118765.83		
Ge	72	2	H2			114847.92		
Ge	72	2	H2			118836.60		
In	115	2	H2			289036.89		
In	115	2	H2			287867.96		
In	115	2	H2			296294.86		
Sc	45	3	He			45574.02		
Sc	45	3	He			46636.99		
Sc	45	3	He			46155.48		
Ge	72	3	He			76733.98		
Ge	72	3	He			76420.87		
Ge	72	3	He			76733.29		
In	115	3	He			61079.98		
In	115	3	He			59413.56		
In	115	3	He			62988.18		
Tb	159	3	He			246087.93		
Tb	159	3	He			239547.77		
Tb	159	3	He			241708.94		
Bi	209	3	He			167524.65		
Bi	209	3	He			167826.99		
Bi	209	3	He			170123.94		

Quantitation Report

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Acq Time	7/17/2024 10:52:24 AM
Sample Name	410-179333-C-12-A PDS
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

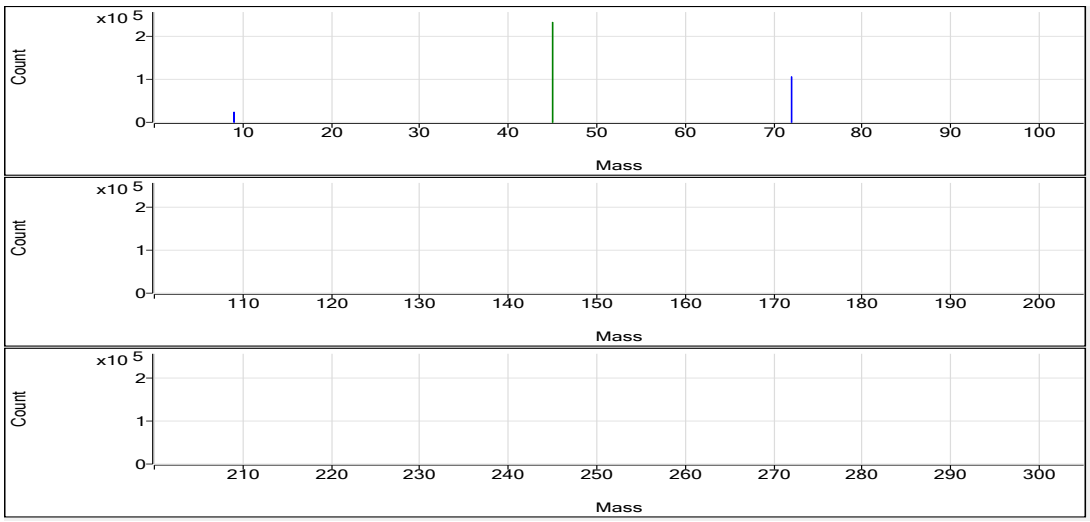
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.958	ppb	1.7	48191.64	0.0207	Pulse	0.5000	3
Se	78	72	H2	102.273	ppb	1.1	5607.20	0.0457	Pulse	1.5000	3
Na	23	45	He	23410.222	ppb	1.6	3400339.84	73.6869	Analog	0.1000	3
Mg	24	45	He	69750.215	ppb	2.2	4883725.97	105.8407	Analog	0.1000	3
Al	27	45	He	4979.408	ppb	2.3	107348.39	2.3265	Pulse	0.1000	3
K	39	45	He	10220.152	ppb	2.4	532321.74	11.5365	Pulse	0.1000	3
Ca	44	45	He	295181.093	ppb	1.8	842217.83	18.2517	Pulse	0.1000	3
Ti	47	45	He	523.767	ppb	5.3	11701.24	0.2537	Pulse	0.1000	3
V	51	45	He	509.270	ppb	1.7	495074.85	10.7286	Pulse	0.5000	3
Cr	52	45	He	507.881	ppb	1.5	626200.68	13.5698	Pulse	0.1000	3
Mn	55	45	He	1611.287	ppb	1.5	804641.91	17.4367	Pulse	0.1000	3
Fe	57	45	He	5086.228	ppb	1.8	117693.06	2.5505	Pulse	0.1000	3
Co	59	45	He	481.082	ppb	2.0	1162275.03	25.1883	Pulse	0.1000	3
Ni	60	115	He	500.929	ppb	1.4	329929.19	5.4883	Pulse	0.1000	3
Cu	63	72	He	467.772	ppb	1.7	931682.33	11.9333	Pulse	0.1000	3
Zn	66	72	He	505.913	ppb	1.8	113876.67	1.4586	Pulse	0.1000	3
As	75	72	He	506.739	ppb	1.7	84244.23	1.0790	Pulse	0.5000	3
Sr	88	115	He	1556.442	ppb	1.4	881994.05	14.6716	Pulse	0.1000	3
Mo	98	115	He	179.836	ppb	2.4	249051.42	4.1432	Pulse	0.1000	3
Ag	107	115	He	40.544	ppb	0.8	117790.49	1.9592	Pulse	0.1000	3
Cd	111	115	He	52.126	ppb	1.5	16717.63	0.2781	Pulse	0.5000	3
Sn	120	115	He	105.476	ppb	1.9	94691.55	1.5752	Pulse	0.1000	3
Sb	121	115	He	104.035	ppb	1.4	89508.24	1.4889	Pulse	0.1000	3
Ba	137	115	He	585.219	ppb	0.8	153461.31	2.5526	Pulse	0.1000	3
Tl	205	159	He	104.851	ppb	0.9	533833.22	2.1797	Pulse	0.1000	3
Pb	208	159	He	50.712	ppb	0.8	338240.78	1.3810	Pulse	0.1000	3
U	238	159	He	56.063	ppb	1.1	377655.67	1.5420	Pulse	0.1000	3

ISTD Table:

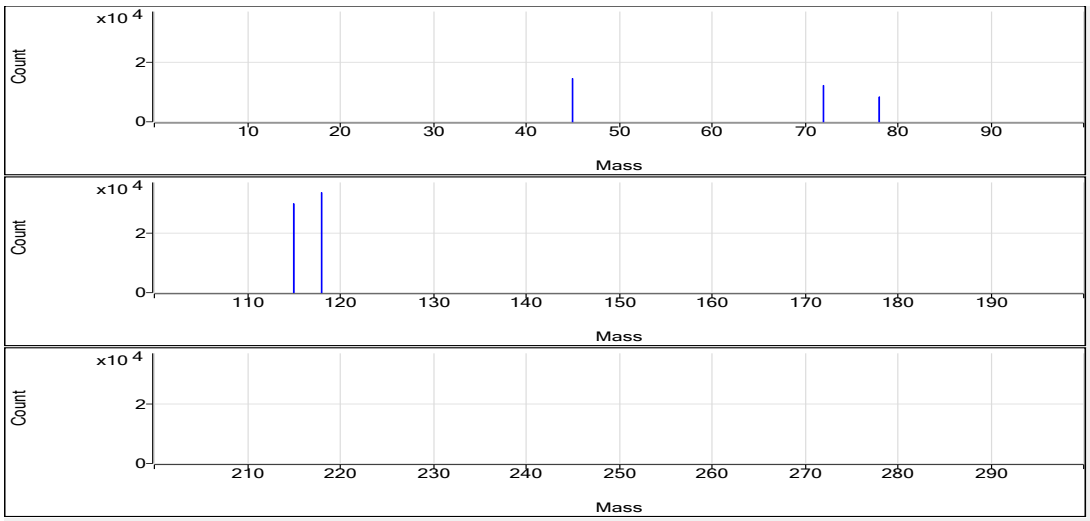
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2329957.72	1.3	101.6	Analog	0.1000	3
No Gas	Ge	72	1061173.73	1.1	102.1	Pulse	0.1000	3
H2	Sc	45	145850.05	0.5	104.9	Pulse	0.1000	3
H2	Ge	72	122581.06	2.2	103.8	Pulse	0.1000	3
H2	In	115	299705.99	0.5	101.7	Pulse	0.1000	3
He	Sc	45	46155.49	1.9	98.6	Pulse	0.1000	3
He	Ge	72	78090.14	1.8	102.1	Pulse	0.1000	3
He	In	115	60123.01	1.3	99.2	Pulse	0.1000	3
He	Tb	159	244923.39	0.5	101.6	Pulse	0.1000	3
He	Bi	209	169500.28	0.6	102.3	Pulse	0.1000	3

No Gas

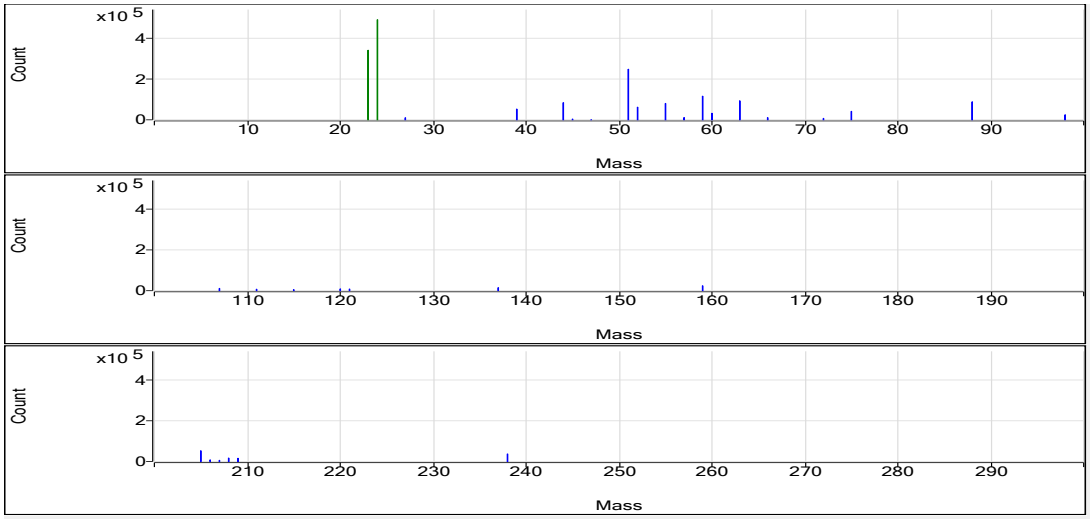


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.208	0.0204	46842.50	0.0004	9.309E-06
Be	9	1	No Gas	51.742	0.0206	48623.54	0.0004	9.309E-06
Be	9	1	No Gas	52.924	0.0211	49108.89	0.0004	9.309E-06
Se	78	2	H2	101.667	0.0455	5528.95	0.0004	5.598E-06
Se	78	2	H2	101.587	0.0454	5706.35	0.0004	5.598E-06
Se	78	2	H2	103.564	0.0463	5586.31	0.0004	5.598E-06
Na	23	3	He	23839.246	75.0288	3386250.26	0.0031	0.4657
Na	23	3	He	23283.695	73.2911	3409241.82	0.0031	0.4657
Na	23	3	He	23107.725	72.7407	3405527.45	0.0031	0.4657
Mg	24	3	He	71554.334	108.5782	4900428.36	0.0015	0.003704
Mg	24	3	He	68869.587	104.5045	4861174.62	0.0015	0.003704
Mg	24	3	He	68826.723	104.4394	4889574.93	0.0015	0.003704
Al	27	3	He	5101.583	2.3835	107575.31	0.0005	0.0007154
Al	27	3	He	4955.45	2.3153	107698.50	0.0005	0.0007154
Al	27	3	He	4881.192	2.2806	106771.37	0.0005	0.0007154
K	39	3	He	10500.038	11.8407	534402.69	0.0011	0.4296
K	39	3	He	10050.74	11.3524	528073.90	0.0011	0.4296
K	39	3	He	10109.679	11.4165	534488.62	0.0011	0.4296
Ca	44	3	He	301471.851	18.6407	841302.88	0.0001	0.002924
Ca	44	3	He	292236.451	18.0697	840537.72	0.0001	0.002924
Ca	44	3	He	291834.977	18.0449	844812.88	0.0001	0.002924
Ti	47	3	He	555.562	0.2691	12144.84	0.0005	0
Ti	47	3	He	510.615	0.2473	11504.50	0.0005	0
Ti	47	3	He	505.123	0.2447	11454.37	0.0005	0
V	51	3	He	519.088	10.9353	493538.94	0.021	0.009571
V	51	3	He	506.55	10.6714	496395.16	0.021	0.009571
V	51	3	He	502.171	10.5792	495290.44	0.021	0.009571
Cr	52	3	He	516.368	13.7962	622661.87	0.0267	0.01758
Cr	52	3	He	504.766	13.4867	627351.75	0.0267	0.01758
Cr	52	3	He	502.508	13.4264	628588.43	0.0267	0.01758
Mn	55	3	He	1638.721	17.7335	800361.94	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1603.697	17.3546	807274.36	0.0108	0.004199
Mn	55	3	He	1591.443	17.222	806289.44	0.0108	0.004199
Fe	57	3	He	5178.224	2.5966	117189.64	0.0005	0.002993
Fe	57	3	He	5080.602	2.5477	118508.17	0.0005	0.002993
Fe	57	3	He	4999.857	2.5072	117381.38	0.0005	0.002993
Co	59	3	He	492.392	25.7804	1163538.73	0.0524	0.003063
Co	59	3	He	475.492	24.8956	1158055.92	0.0524	0.003063
Co	59	3	He	475.363	24.8889	1165230.45	0.0524	0.003063
Ni	60	3	He	507.535	5.5605	330394.29	0.0109	0.01116
Ni	60	3	He	493.317	5.405	329612.42	0.0109	0.01116
Ni	60	3	He	501.935	5.4993	329780.85	0.0109	0.01116
Cu	63	3	He	476.924	12.1664	930391.94	0.0255	0.01531
Cu	63	3	He	462.18	11.7908	929275.85	0.0255	0.01531
Cu	63	3	He	464.211	11.8425	935379.20	0.0255	0.01531
Zn	66	3	He	516.227	1.4883	113810.08	0.0029	0.002787
Zn	66	3	He	500.101	1.4419	113637.75	0.0029	0.002787
Zn	66	3	He	501.411	1.4456	114182.17	0.0029	0.002787
As	75	3	He	516.208	1.0992	84055.72	0.0021	0.0004097
As	75	3	He	500.028	1.0647	83915.25	0.0021	0.0004097
As	75	3	He	503.98	1.0731	84761.73	0.0021	0.0004097
Sr	88	3	He	1575.746	14.8535	882570.77	0.0094	0.0008765
Sr	88	3	He	1533.603	14.4563	881583.35	0.0094	0.0008765
Sr	88	3	He	1559.978	14.7049	881828.03	0.0094	0.0008765
Mo	98	3	He	183.358	4.2244	251005.00	0.023	0.0002199
Mo	98	3	He	174.949	4.0307	245799.86	0.023	0.0002199
Mo	98	3	He	181.202	4.1747	250349.41	0.023	0.0002199
Ag	107	3	He	40.564	1.9602	116470.86	0.0483	0.0008224
Ag	107	3	He	40.227	1.9439	118545.99	0.0483	0.0008224
Ag	107	3	He	40.842	1.9736	118354.62	0.0483	0.0008224
Cd	111	3	He	53.01	0.2828	16803.03	0.0053	2.193E-05
Cd	111	3	He	51.859	0.2767	16871.14	0.0053	2.193E-05
Cd	111	3	He	51.51	0.2748	16478.71	0.0053	2.193E-05
Sn	120	3	He	107.563	1.6061	95432.57	0.0148	0.01345
Sn	120	3	He	103.555	1.5468	94325.99	0.0148	0.01345
Sn	120	3	He	105.311	1.5728	94316.09	0.0148	0.01345
Sb	121	3	He	104.819	1.5001	89135.85	0.0143	0.0004392
Sb	121	3	He	102.336	1.4646	89316.40	0.0143	0.0004392
Sb	121	3	He	104.949	1.502	90072.47	0.0143	0.0004392
Ba	137	3	He	590.41	2.5752	153015.62	0.0044	0.0001096
Ba	137	3	He	582.413	2.5404	154917.43	0.0044	0.0001096
Ba	137	3	He	582.835	2.5422	152450.89	0.0044	0.0001096
Tl	205	3	He	105.798	2.1993	535716.44	0.0208	0.0002491
Tl	205	3	He	104.83	2.1792	533780.07	0.0208	0.0002491
Tl	205	3	He	103.925	2.1604	532003.16	0.0208	0.0002491
Pb	208	3	He	51.112	1.3919	178864.45	0.0272	0.0006218
Pb	208	3	He	50.26	1.3687	178410.08	0.0272	0.0006218
Pb	208	3	He	50.766	1.3825	180060.23	0.0272	0.0006218
U	238	3	He	56.729	1.5603	380057.92	0.0275	2.763E-05
U	238	3	He	55.462	1.5254	373639.99	0.0275	2.763E-05
U	238	3	He	55.997	1.5402	379269.10	0.0275	2.763E-05
Sc	45	1	No Gas			2298012.93		
Sc	45	1	No Gas			2360757.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2331102.62		
Ge	72	1	No Gas			1047604.28		
Ge	72	1	No Gas			1068108.34		
Ge	72	1	No Gas			1067808.58		
Sc	45	2	H2			145085.83		
Sc	45	2	H2			146621.14		
Sc	45	2	H2			145843.19		
Ge	72	2	H2			121576.78		
Ge	72	2	H2			125577.44		
Ge	72	2	H2			120588.95		
In	115	2	H2			298443.02		
In	115	2	H2			299360.64		
In	115	2	H2			301314.31		
Sc	45	3	He			45132.70		
Sc	45	3	He			46516.43		
Sc	45	3	He			46817.33		
Ge	72	3	He			76472.04		
Ge	72	3	He			78813.68		
Ge	72	3	He			78984.70		
In	115	3	He			60086.23		
In	115	3	He			61642.87		
In	115	3	He			60628.45		
Tb	159	3	He			243579.45		
Tb	159	3	He			244939.72		
Tb	159	3	He			246251.01		
Bi	209	3	He			170052.26		
Bi	209	3	He			170052.61		
Bi	209	3	He			168395.97		

Quantitation Report

Data File Name	102SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 10:54:25 AM
Sample Name	410-179333-C-12-A SD @5
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

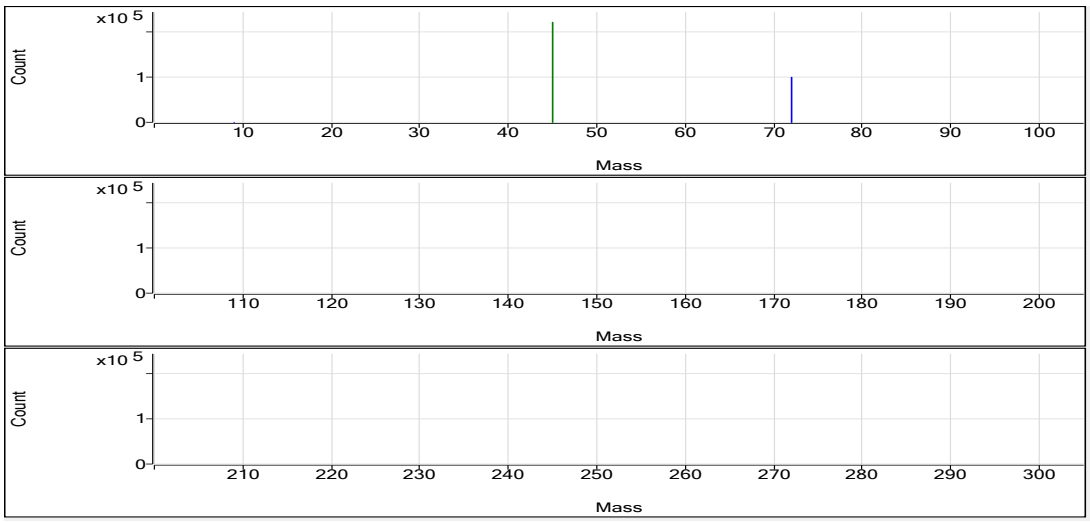
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.047	ppb	58.5	62.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.507	ppb	2.1	26.00	0.0002	Pulse	1.5000	3
Na	23	45	He	3551.325	ppb	2.4	520580.84	11.5733	Pulse	0.1000	3
Mg	24	45	He	12466.757	ppb	1.7	851079.86	18.9204	Pulse	0.1000	3
Al	27	45	He	3.718	ppb	73.0	110.00	0.0025	Pulse	0.1000	3
K	39	45	He	1018.065	ppb	4.1	69108.47	1.5360	Pulse	0.1000	3
Ca	44	45	He	56412.306	ppb	2.1	157004.34	3.4905	Pulse	0.1000	3
Ti	47	45	He	0.775	ppb	173.2	16.67	0.0004	Pulse	0.1000	3
V	51	45	He	0.278	ppb	6.3	693.35	0.0154	Pulse	0.5000	3
Cr	52	45	He	0.125	ppb	70.0	940.06	0.0209	Pulse	0.1000	3
Mn	55	45	He	218.970	ppb	2.4	106748.41	2.3732	Pulse	0.1000	3
Fe	57	45	He	5.127	ppb	63.4	250.01	0.0056	Pulse	0.1000	3
Co	59	45	He	0.629	ppb	5.2	1620.13	0.0360	Pulse	0.1000	3
Ni	60	115	He	1.218	ppb	22.7	1443.45	0.0245	Pulse	0.1000	3
Cu	63	72	He	0.410	ppb	12.5	1876.84	0.0258	Pulse	0.1000	3
Zn	66	72	He	1.734	ppb	11.3	566.70	0.0078	Pulse	0.1000	3
As	75	72	He	0.340	ppb	18.8	82.67	0.0011	Pulse	0.5000	3
Sr	88	115	He	287.690	ppb	1.7	159997.92	2.7126	Pulse	0.1000	3
Mo	98	115	He	24.909	ppb	2.3	33863.68	0.5741	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	283.3	56.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.106	ppb	26.8	34.67	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.795	ppb	32.3	1486.79	0.0252	Pulse	0.1000	3
Sb	121	115	He	0.111	ppb	20.7	120.00	0.0020	Pulse	0.1000	3
Ba	137	115	He	13.141	ppb	5.5	3390.49	0.0574	Pulse	0.1000	3
Tl	205	159	He	0.978	ppb	2.2	4884.30	0.0206	Pulse	0.1000	3
Pb	208	159	He	0.022	ppb	26.6	286.67	0.0012	Pulse	0.1000	3
U	238	159	He	0.708	ppb	3.9	4634.25	0.0195	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2219776.84	1.4	96.8	Analog	0.1000	3
No Gas	Ge	72	1002467.07	1.8	96.5	Pulse	0.1000	3
H2	Sc	45	138500.65	1.2	99.6	Pulse	0.1000	3
H2	Ge	72	111890.91	0.5	94.8	Pulse	0.1000	3
H2	In	115	288187.89	0.5	97.8	Pulse	0.1000	3
He	Sc	45	44989.41	1.5	96.1	Pulse	0.1000	3
He	Ge	72	72885.53	0.2	95.3	Pulse	0.1000	3
He	In	115	58998.55	2.2	97.3	Pulse	0.1000	3
He	Tb	159	237472.23	0.7	98.5	Pulse	0.1000	3
He	Bi	209	163285.76	0.4	98.5	Pulse	0.1000	3

No Gas



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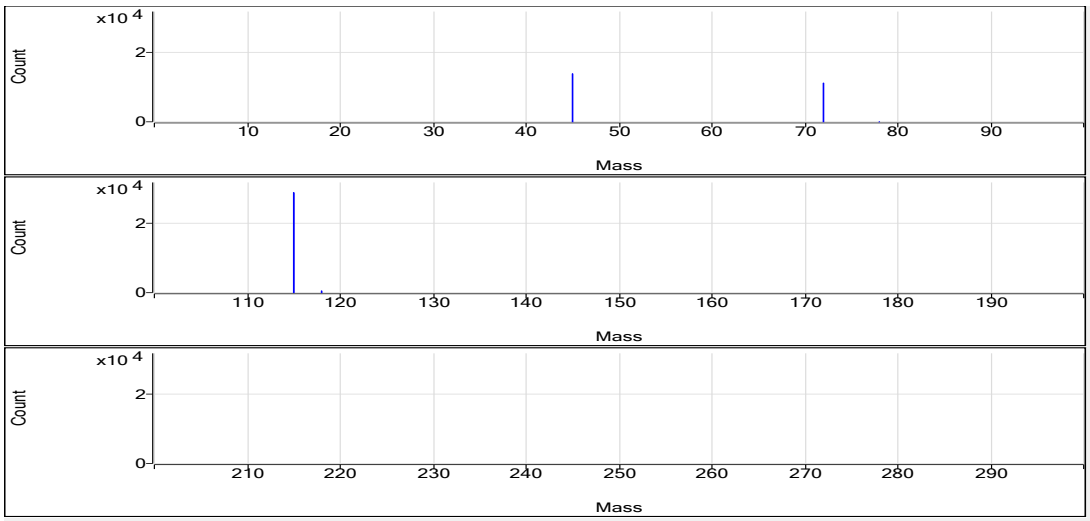
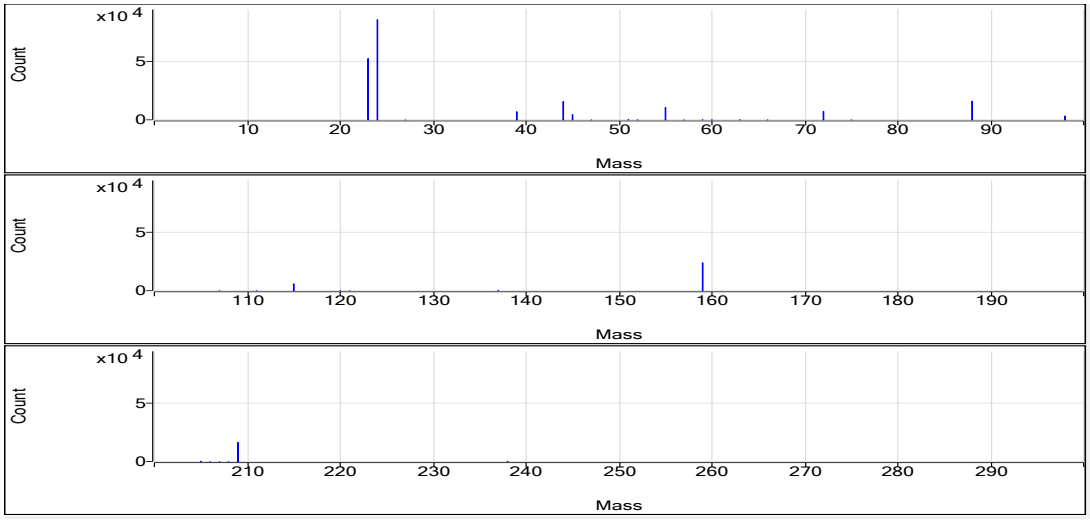


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.079	0	92.00	0.0004	9.309E-06
Be	9	1	No Gas	0.033	0	50.00	0.0004	9.309E-06
Be	9	1	No Gas	0.029	0	46.00	0.0004	9.309E-06
Se	78	2	H2	0.518	0.0002	26.67	0.0004	5.598E-06
Se	78	2	H2	0.496	0.0002	25.33	0.0004	5.598E-06
Se	78	2	H2	0.507	0.0002	26.00	0.0004	5.598E-06
Na	23	3	He	3502.983	11.4221	512876.63	0.0031	0.4657
Na	23	3	He	3501.661	11.418	521739.29	0.0031	0.4657
Na	23	3	He	3649.329	11.8798	527126.59	0.0031	0.4657
Mg	24	3	He	12433.75	18.8703	847317.33	0.0015	0.003704
Mg	24	3	He	12273.697	18.6275	851174.13	0.0015	0.003704
Mg	24	3	He	12692.824	19.2634	854748.11	0.0015	0.003704
Al	27	3	He	1.329	0.0013	60.00	0.0005	0.0007154
Al	27	3	He	3.154	0.0022	100.00	0.0005	0.0007154
Al	27	3	He	6.671	0.0038	170.01	0.0005	0.0007154
K	39	3	He	1064.429	1.5864	71233.36	0.0011	0.4296
K	39	3	He	1006.774	1.5238	69627.44	0.0011	0.4296
K	39	3	He	982.992	1.4979	66464.60	0.0011	0.4296
Ca	44	3	He	56093.053	3.4707	155843.27	0.0001	0.002924
Ca	44	3	He	55444.69	3.4307	156762.13	0.0001	0.002924
Ca	44	3	He	57699.174	3.57	158407.61	0.0001	0.002924
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	2.326	0.0011	50.00	0.0005	0
V	51	3	He	0.258	0.015	674.02	0.021	0.009571
V	51	3	He	0.281	0.0155	708.02	0.021	0.009571
V	51	3	He	0.293	0.0157	698.02	0.021	0.009571
Cr	52	3	He	0.109	0.0205	920.06	0.0267	0.01758
Cr	52	3	He	0.047	0.0188	860.05	0.0267	0.01758
Cr	52	3	He	0.22	0.0234	1040.07	0.0267	0.01758
Mn	55	3	He	216.595	2.3475	105409.42	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	215.335	2.3339	106646.81	0.0108	0.004199
Mn	55	3	He	224.979	2.4383	108188.99	0.0108	0.004199
Fe	57	3	He	1.584	0.0038	170.01	0.0005	0.002993
Fe	57	3	He	5.823	0.0059	270.01	0.0005	0.002993
Fe	57	3	He	7.974	0.007	310.01	0.0005	0.002993
Co	59	3	He	0.648	0.037	1660.13	0.0524	0.003063
Co	59	3	He	0.648	0.037	1690.14	0.0524	0.003063
Co	59	3	He	0.592	0.034	1510.12	0.0524	0.003063
Ni	60	3	He	1.397	0.0264	1520.12	0.0109	0.01116
Ni	60	3	He	1.358	0.026	1560.13	0.0109	0.01116
Ni	60	3	He	0.9	0.021	1250.09	0.0109	0.01116
Cu	63	3	He	0.398	0.0254	1850.17	0.0255	0.01531
Cu	63	3	He	0.366	0.0246	1800.15	0.0255	0.01531
Cu	63	3	He	0.466	0.0272	1980.19	0.0255	0.01531
Zn	66	3	He	1.708	0.0077	560.03	0.0029	0.002787
Zn	66	3	He	1.552	0.0073	530.02	0.0029	0.002787
Zn	66	3	He	1.941	0.0084	610.04	0.0029	0.002787
As	75	3	He	0.311	0.0011	78.00	0.0021	0.0004097
As	75	3	He	0.296	0.001	76.00	0.0021	0.0004097
As	75	3	He	0.414	0.0013	94.00	0.0021	0.0004097
Sr	88	3	He	293.29	2.7654	158998.02	0.0094	0.0008765
Sr	88	3	He	284.334	2.681	160796.69	0.0094	0.0008765
Sr	88	3	He	285.444	2.6914	160199.04	0.0094	0.0008765
Mo	98	3	He	25.347	0.5842	33586.56	0.023	0.0002199
Mo	98	3	He	25.132	0.5792	34738.69	0.023	0.0002199
Mo	98	3	He	24.25	0.5589	33265.79	0.023	0.0002199
Ag	107	3	He	0.008	0.0012	70.00	0.0483	0.0008224
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Ag	107	3	He	0.007	0.0012	70.00	0.0483	0.0008224
Cd	111	3	He	0.139	0.0008	44.00	0.0053	2.193E-05
Cd	111	3	He	0.09	0.0005	30.00	0.0053	2.193E-05
Cd	111	3	He	0.09	0.0005	30.00	0.0053	2.193E-05
Sn	120	3	He	0.865	0.0263	1510.13	0.0148	0.01345
Sn	120	3	He	0.51	0.021	1260.09	0.0148	0.01345
Sn	120	3	He	1.009	0.0284	1690.16	0.0148	0.01345
Sb	121	3	He	0.115	0.0021	120.00	0.0143	0.0004392
Sb	121	3	He	0.132	0.0023	140.00	0.0143	0.0004392
Sb	121	3	He	0.087	0.0017	100.00	0.0143	0.0004392
Ba	137	3	He	12.338	0.0539	3100.41	0.0044	0.0001096
Ba	137	3	He	13.356	0.0584	3500.50	0.0044	0.0001096
Ba	137	3	He	13.728	0.06	3570.55	0.0044	0.0001096
Tl	205	3	He	0.992	0.0209	4920.97	0.0208	0.0002491
Tl	205	3	He	0.989	0.0208	4971.01	0.0208	0.0002491
Tl	205	3	He	0.952	0.02	4760.93	0.0208	0.0002491
Pb	208	3	He	0.027	0.0014	180.01	0.0272	0.0006218
Pb	208	3	He	0.016	0.001	120.00	0.0272	0.0006218
Pb	208	3	He	0.022	0.0012	110.01	0.0272	0.0006218
U	238	3	He	0.679	0.0187	4410.87	0.0275	2.763E-05
U	238	3	He	0.713	0.0196	4690.96	0.0275	2.763E-05
U	238	3	He	0.734	0.0202	4800.93	0.0275	2.763E-05
Sc	45	1	No Gas			2254642.15		
Sc	45	1	No Gas			2212233.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2192454.50		
Ge	72	1	No Gas			1020981.31		
Ge	72	1	No Gas			985879.44		
Ge	72	1	No Gas			1000540.45		
Sc	45	2	H2			139388.27		
Sc	45	2	H2			136533.83		
Sc	45	2	H2			139579.85		
Ge	72	2	H2			112440.79		
Ge	72	2	H2			111364.31		
Ge	72	2	H2			111867.64		
In	115	2	H2			289823.04		
In	115	2	H2			287389.88		
In	115	2	H2			287350.74		
Sc	45	3	He			44902.11		
Sc	45	3	He			45694.58		
Sc	45	3	He			44371.53		
Ge	72	3	He			72724.89		
Ge	72	3	He			73076.41		
Ge	72	3	He			72855.30		
In	115	3	He			57506.63		
In	115	3	He			59986.24		
In	115	3	He			59534.01		
Tb	159	3	He			235907.05		
Tb	159	3	He			239009.86		
Tb	159	3	He			237499.78		
Bi	209	3	He			163225.21		
Bi	209	3	He			163902.09		
Bi	209	3	He			162729.99		

Quantitation Report

Data File Name	103SMPL.d
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Acq Time	7/17/2024 10:56:26 AM
Sample Name	410-179333-F-12-A DU
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

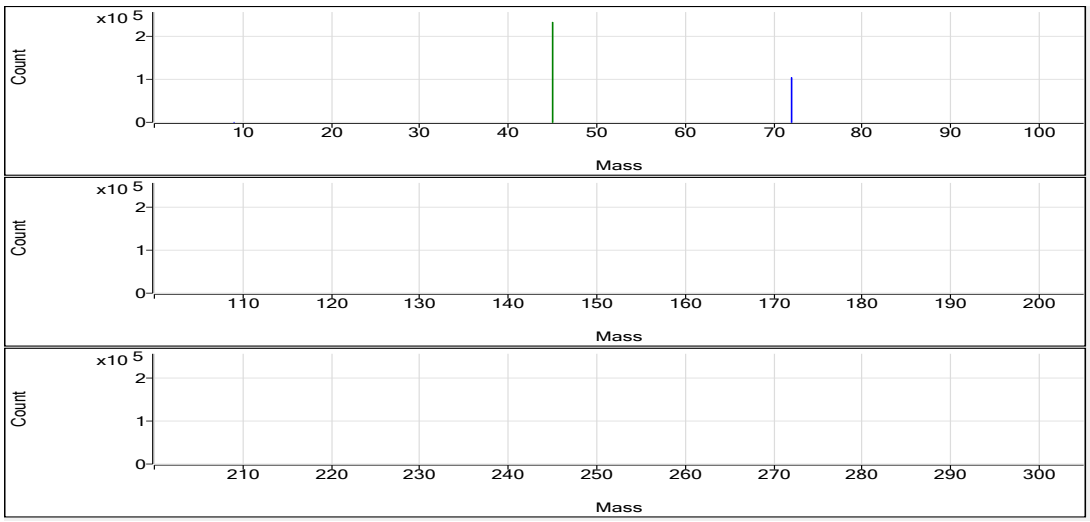
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.007	ppb	58.3	28.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.774	ppb	11.4	96.22	0.0008	Pulse	1.5000	3
Na	23	45	He	19021.841	ppb	1.2	2750856.52	59.9611	Analog	0.1000	3
Mg	24	45	He	66326.766	ppb	1.2	4617345.35	100.6461	Analog	0.1000	3
Al	27	45	He	3.765	ppb	52.8	113.34	0.0025	Pulse	0.1000	3
K	39	45	He	5324.762	ppb	0.6	285206.41	6.2164	Pulse	0.1000	3
Ca	44	45	He	298693.109	ppb	2.0	847242.09	18.4689	Pulse	0.1000	3
Ti	47	45	He	0.598	ppb	42.0	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.409	ppb	7.0	834.70	0.0182	Pulse	0.5000	3
Cr	52	45	He	0.114	ppb	88.0	946.72	0.0206	Pulse	0.1000	3
Mn	55	45	He	1153.188	ppb	1.6	572555.89	12.4806	Pulse	0.1000	3
Fe	57	45	He	14.145	ppb	38.3	463.36	0.0101	Pulse	0.1000	3
Co	59	45	He	2.264	ppb	3.6	5581.11	0.1216	Pulse	0.1000	3
Ni	60	115	He	5.363	ppb	9.0	4200.68	0.0698	Pulse	0.1000	3
Cu	63	72	He	0.936	ppb	3.4	3003.71	0.0392	Pulse	0.1000	3
Zn	66	72	He	6.776	ppb	7.9	1710.14	0.0223	Pulse	0.1000	3
As	75	72	He	0.457	ppb	10.4	106.00	0.0014	Pulse	0.5000	3
Sr	88	115	He	1536.810	ppb	1.8	872216.71	14.4865	Pulse	0.1000	3
Mo	98	115	He	130.959	ppb	2.1	181662.27	3.0172	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	255.8	60.00	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.564	ppb	18.8	182.00	0.0030	Pulse	0.5000	3
Sn	120	115	He	3.581	ppb	7.5	4000.63	0.0665	Pulse	0.1000	3
Sb	121	115	He	0.440	ppb	21.6	406.68	0.0067	Pulse	0.1000	3
Ba	137	115	He	64.671	ppb	4.5	16986.58	0.2822	Pulse	0.1000	3
Tl	205	159	He	2.552	ppb	2.6	13156.35	0.0533	Pulse	0.1000	3
Pb	208	159	He	0.017	ppb	71.6	270.01	0.0011	Pulse	0.1000	3
U	238	159	He	3.598	ppb	1.2	24441.62	0.0990	Pulse	0.1000	3

ISTD Table:

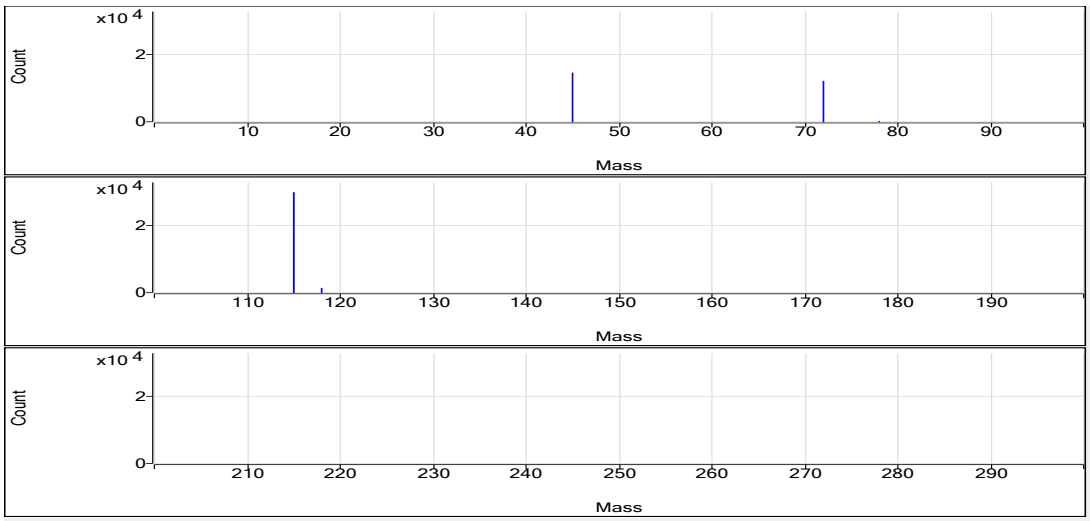
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2339907.72	0.7	102.0	Analog	0.1000	3
No Gas	Ge	72	1046259.96	0.9	100.7	Pulse	0.1000	3
H2	Sc	45	144827.95	2.0	104.2	Pulse	0.1000	3
H2	Ge	72	120445.46	1.1	102.0	Pulse	0.1000	3
H2	In	115	296458.30	1.1	100.6	Pulse	0.1000	3
He	Sc	45	45881.55	1.2	98.0	Pulse	0.1000	3
He	Ge	72	76719.76	1.8	100.3	Pulse	0.1000	3
He	In	115	60219.46	1.6	99.3	Pulse	0.1000	3
He	Tb	159	246915.79	1.7	102.4	Pulse	0.1000	3
He	Bi	209	168713.58	0.3	101.8	Pulse	0.1000	3

No Gas

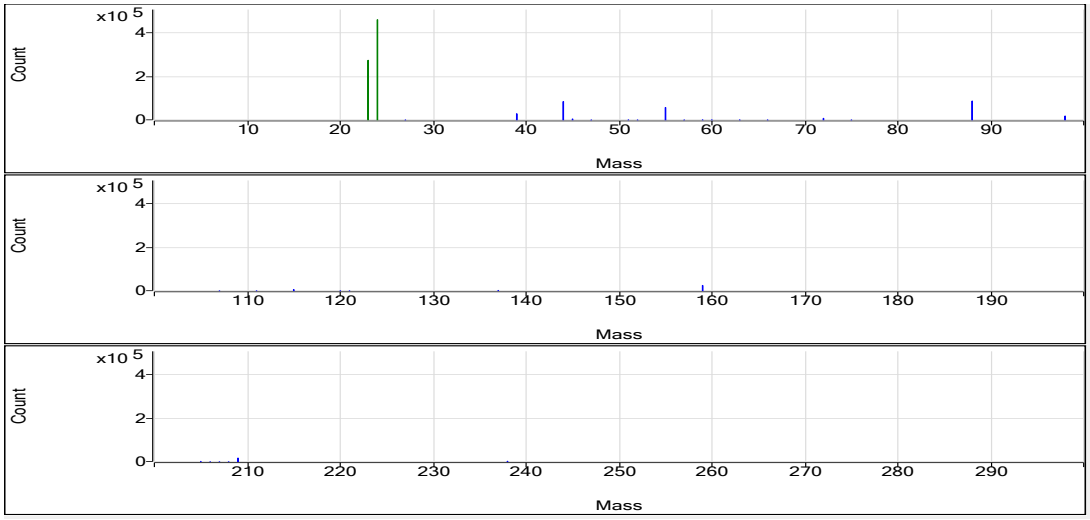


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	30.00	0.0004	9.309E-06
Be	9	1	No Gas	0.002	0	24.00	0.0004	9.309E-06
Be	9	1	No Gas	0.009	0	30.00	0.0004	9.309E-06
Se	78	2	H2	1.998	0.0009	108.00	0.0004	5.598E-06
Se	78	2	H2	1.602	0.0007	88.00	0.0004	5.598E-06
Se	78	2	H2	1.724	0.0008	92.67	0.0004	5.598E-06
Na	23	3	He	18765.366	59.159	2751870.90	0.0031	0.4657
Na	23	3	He	19144.094	60.3435	2742842.15	0.0031	0.4657
Na	23	3	He	19156.063	60.381	2757856.52	0.0031	0.4657
Mg	24	3	He	65458.628	99.3288	4620432.74	0.0015	0.003704
Mg	24	3	He	67059.405	101.7577	4625276.18	0.0015	0.003704
Mg	24	3	He	66462.266	100.8517	4606327.12	0.0015	0.003704
Al	27	3	He	3.071	0.0021	100.00	0.0005	0.0007154
Al	27	3	He	6.005	0.0035	160.01	0.0005	0.0007154
Al	27	3	He	2.218	0.0018	80.00	0.0005	0.0007154
K	39	3	He	5296.838	6.186	287753.57	0.0011	0.4296
K	39	3	He	5359.252	6.2539	284262.36	0.0011	0.4296
K	39	3	He	5318.195	6.2093	283603.30	0.0011	0.4296
Ca	44	3	He	291784.75	18.0418	839241.08	0.0001	0.002924
Ca	44	3	He	302640.873	18.7129	850573.42	0.0001	0.002924
Ca	44	3	He	301653.704	18.6519	851911.78	0.0001	0.002924
Ti	47	3	He	0.888	0.0004	20.00	0.0005	0
Ti	47	3	He	0.454	0.0002	10.00	0.0005	0
Ti	47	3	He	0.452	0.0002	10.00	0.0005	0
V	51	3	He	0.442	0.0189	878.03	0.021	0.009571
V	51	3	He	0.398	0.018	816.03	0.021	0.009571
V	51	3	He	0.388	0.0177	810.03	0.021	0.009571
Cr	52	3	He	0.228	0.0236	1100.07	0.0267	0.01758
Cr	52	3	He	0.075	0.0196	890.05	0.0267	0.01758
Cr	52	3	He	0.039	0.0186	850.05	0.0267	0.01758
Mn	55	3	He	1132.154	12.253	569966.40	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1162.212	12.5782	571725.73	0.0108	0.004199
Mn	55	3	He	1165.2	12.6105	575975.54	0.0108	0.004199
Fe	57	3	He	19.78	0.0129	600.04	0.0005	0.002993
Fe	57	3	He	8.96	0.0075	340.01	0.0005	0.002993
Fe	57	3	He	13.697	0.0099	450.02	0.0005	0.002993
Co	59	3	He	2.344	0.1258	5851.20	0.0524	0.003063
Co	59	3	He	2.182	0.1173	5331.04	0.0524	0.003063
Co	59	3	He	2.267	0.1218	5561.09	0.0524	0.003063
Ni	60	3	He	5.915	0.0758	4510.82	0.0109	0.01116
Ni	60	3	He	5.036	0.0662	4060.64	0.0109	0.01116
Ni	60	3	He	5.136	0.0673	4030.58	0.0109	0.01116
Cu	63	3	He	0.972	0.0401	3050.40	0.0255	0.01531
Cu	63	3	He	0.913	0.0386	3020.38	0.0255	0.01531
Cu	63	3	He	0.923	0.0388	2940.35	0.0255	0.01531
Zn	66	3	He	6.156	0.0205	1560.12	0.0029	0.002787
Zn	66	3	He	7.065	0.0231	1810.16	0.0029	0.002787
Zn	66	3	He	7.106	0.0232	1760.14	0.0029	0.002787
As	75	3	He	0.462	0.0014	106.00	0.0021	0.0004097
As	75	3	He	0.408	0.0013	100.00	0.0021	0.0004097
As	75	3	He	0.502	0.0015	112.00	0.0021	0.0004097
Sr	88	3	He	1548.435	14.5961	868112.64	0.0094	0.0008765
Sr	88	3	He	1505.891	14.1951	870375.46	0.0094	0.0008765
Sr	88	3	He	1556.104	14.6684	878162.02	0.0094	0.0008765
Mo	98	3	He	131.351	3.0263	179988.06	0.023	0.0002199
Mo	98	3	He	128.067	2.9506	180916.48	0.023	0.0002199
Mo	98	3	He	133.459	3.0748	184082.26	0.023	0.0002199
Ag	107	3	He	0.014	0.0015	90.00	0.0483	0.0008224
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	-0.003	0.0007	40.00	0.0483	0.0008224
Cd	111	3	He	0.639	0.0034	204.00	0.0053	2.193E-05
Cd	111	3	He	0.442	0.0024	146.00	0.0053	2.193E-05
Cd	111	3	He	0.61	0.0033	196.00	0.0053	2.193E-05
Sn	120	3	He	3.793	0.0696	4140.67	0.0148	0.01345
Sn	120	3	He	3.278	0.062	3800.56	0.0148	0.01345
Sn	120	3	He	3.672	0.0678	4060.66	0.0148	0.01345
Sb	121	3	He	0.334	0.0052	310.01	0.0143	0.0004392
Sb	121	3	He	0.516	0.0078	480.02	0.0143	0.0004392
Sb	121	3	He	0.471	0.0072	430.02	0.0143	0.0004392
Ba	137	3	He	64.659	0.2821	16779.55	0.0044	0.0001096
Ba	137	3	He	61.783	0.2696	16529.57	0.0044	0.0001096
Ba	137	3	He	67.571	0.2948	17650.63	0.0044	0.0001096
Tl	205	3	He	2.622	0.0548	13266.46	0.0208	0.0002491
Tl	205	3	He	2.545	0.0531	13186.27	0.0208	0.0002491
Tl	205	3	He	2.489	0.052	13016.31	0.0208	0.0002491
Pb	208	3	He	0.03	0.0014	160.01	0.0272	0.0006218
Pb	208	3	He	0.005	0.0008	90.00	0.0272	0.0006218
Pb	208	3	He	0.017	0.0011	140.01	0.0272	0.0006218
U	238	3	He	3.62	0.0996	24131.15	0.0275	2.763E-05
U	238	3	He	3.626	0.0998	24752.08	0.0275	2.763E-05
U	238	3	He	3.549	0.0976	24441.63	0.0275	2.763E-05
Sc	45	1	No Gas			2332296.37		
Sc	45	1	No Gas			2357902.93		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2329523.87		
Ge	72	1	No Gas			1056527.09		
Ge	72	1	No Gas			1044903.42		
Ge	72	1	No Gas			1037349.36		
Sc	45	2	H2			145238.58		
Sc	45	2	H2			147548.02		
Sc	45	2	H2			141697.25		
Ge	72	2	H2			120116.04		
Ge	72	2	H2			121870.45		
Ge	72	2	H2			119349.90		
In	115	2	H2			297352.93		
In	115	2	H2			299183.41		
In	115	2	H2			292838.55		
Sc	45	3	He			46516.56		
Sc	45	3	He			45453.80		
Sc	45	3	He			45674.28		
Ge	72	3	He			76100.27		
Ge	72	3	He			78300.94		
Ge	72	3	He			75758.07		
In	115	3	He			59504.58		
In	115	3	He			61341.79		
In	115	3	He			59896.01		
Tb	159	3	He			242290.04		
Tb	159	3	He			248099.61		
Tb	159	3	He			250357.71		
Bi	209	3	He			168210.90		
Bi	209	3	He			169324.31		
Bi	209	3	He			168605.52		

Quantitation Report

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Acq Time	7/17/2024 10:58:26 AM
Sample Name	410-179333-D-12-A MS
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

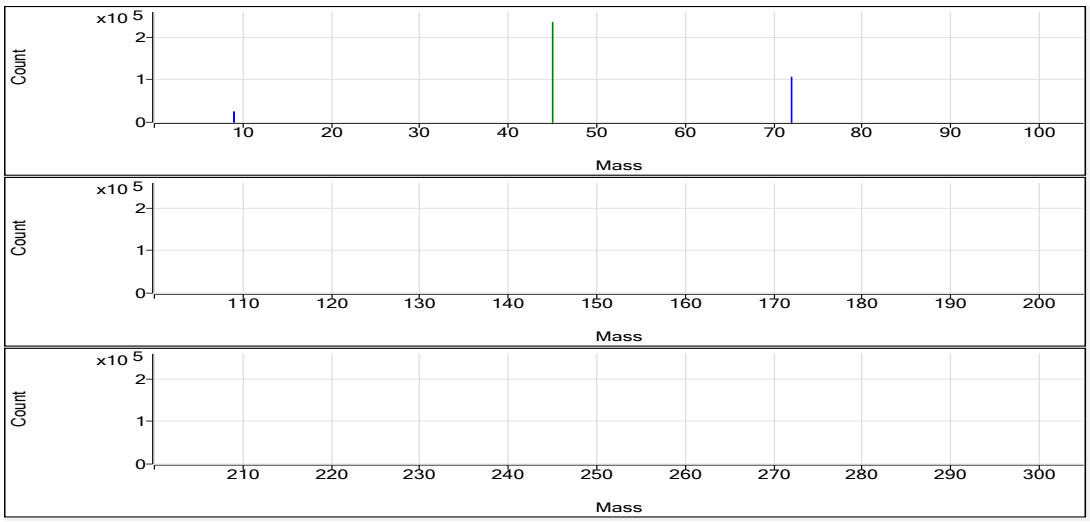
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	53.252	ppb	0.9	49812.27	0.0212	Pulse	0.5000	3
Se	78	72	H2	105.697	ppb	0.9	5736.58	0.0473	Pulse	1.5000	3
Na	23	45	He	23749.701	ppb	1.5	3454203.18	74.7487	Analog	0.1000	3
Mg	24	45	He	70647.549	ppb	2.4	4953147.43	107.2023	Analog	0.1000	3
Al	27	45	He	5087.059	ppb	2.4	109814.02	2.3767	Pulse	0.1000	3
K	39	45	He	10440.981	ppb	2.6	544101.55	11.7765	Pulse	0.1000	3
Ca	44	45	He	298885.045	ppb	1.9	853940.72	18.4807	Pulse	0.1000	3
Ti	47	45	He	547.545	ppb	4.0	12251.59	0.2652	Pulse	0.1000	3
V	51	45	He	522.871	ppb	1.4	508997.75	11.0149	Pulse	0.5000	3
Cr	52	45	He	517.285	ppb	1.3	638665.80	13.8207	Pulse	0.1000	3
Mn	55	45	He	1637.289	ppb	2.2	818659.39	17.7180	Pulse	0.1000	3
Fe	57	45	He	5133.855	ppb	2.3	118943.80	2.5743	Pulse	0.1000	3
Co	59	45	He	493.010	ppb	1.4	1192806.81	25.8128	Pulse	0.1000	3
Ni	60	115	He	511.812	ppb	0.7	340556.44	5.6073	Pulse	0.1000	3
Cu	63	72	He	493.689	ppb	1.3	957156.16	12.5936	Pulse	0.1000	3
Zn	66	72	He	530.300	ppb	2.1	116178.83	1.5288	Pulse	0.1000	3
As	75	72	He	535.925	ppb	0.4	86733.93	1.1411	Pulse	0.5000	3
Sr	88	115	He	1552.299	ppb	0.5	888705.90	14.6325	Pulse	0.1000	3
Mo	98	115	He	181.295	ppb	0.1	253681.17	4.1769	Pulse	0.1000	3
Ag	107	115	He	52.108	ppb	1.3	152920.04	2.5178	Pulse	0.1000	3
Cd	111	115	He	52.806	ppb	1.7	17109.37	0.2817	Pulse	0.5000	3
Sn	120	115	He	107.628	ppb	1.2	97606.31	1.6071	Pulse	0.1000	3
Sb	121	115	He	105.520	ppb	0.7	91720.65	1.5102	Pulse	0.1000	3
Ba	137	115	He	592.275	ppb	2.0	156899.83	2.5834	Pulse	0.1000	3
Tl	205	159	He	107.657	ppb	0.7	553944.21	2.2380	Pulse	0.1000	3
Pb	208	159	He	51.504	ppb	0.4	347175.70	1.4026	Pulse	0.1000	3
U	238	159	He	56.852	ppb	1.0	387046.19	1.5637	Pulse	0.1000	3

ISTD Table:

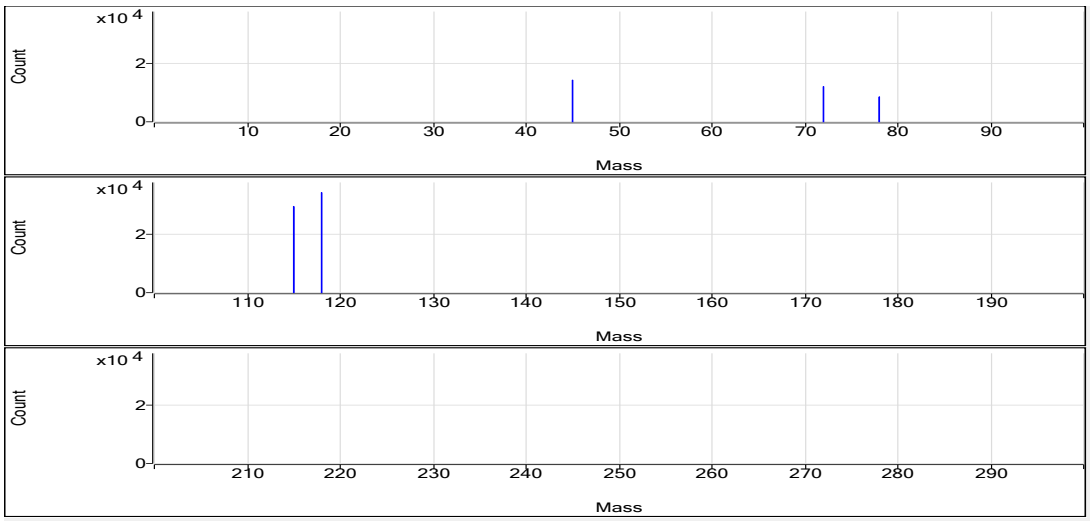
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2349987.78	0.3	102.4	Analog	0.1000	3
No Gas	Ge	72	1063342.30	1.0	102.3	Pulse	0.1000	3
H2	Sc	45	143775.91	1.3	103.4	Pulse	0.1000	3
H2	Ge	72	121338.63	1.6	102.8	Pulse	0.1000	3
H2	In	115	296430.07	0.5	100.6	Pulse	0.1000	3
He	Sc	45	46219.38	2.2	98.7	Pulse	0.1000	3
He	Ge	72	76009.70	1.6	99.4	Pulse	0.1000	3
He	In	115	60734.89	0.1	100.2	Pulse	0.1000	3
He	Tb	159	247524.08	0.7	102.6	Pulse	0.1000	3
He	Bi	209	168026.22	1.4	101.4	Pulse	0.1000	3

No Gas

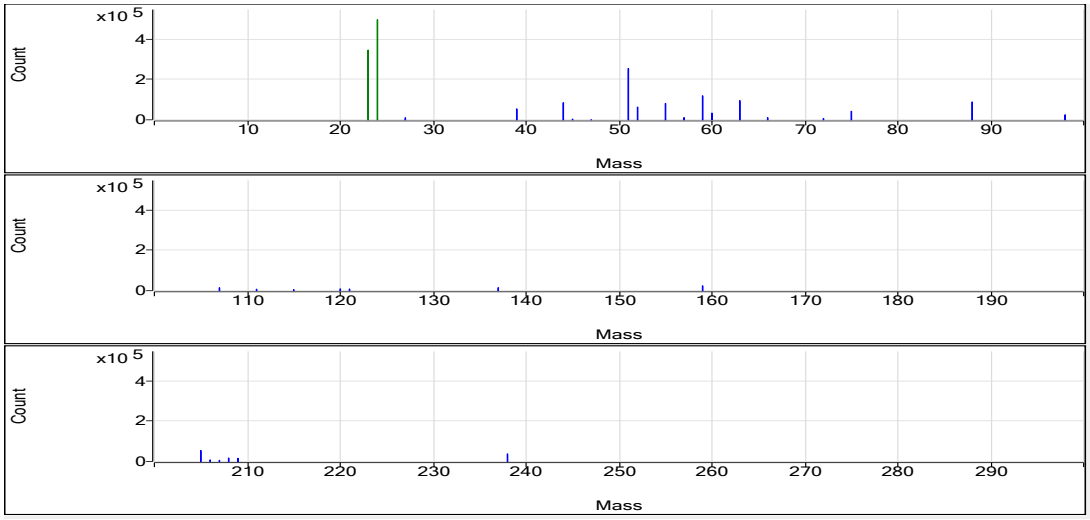


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	53.733	0.0214	50095.75	0.0004	9.309E-06
Be	9	1	No Gas	52.807	0.021	49479.97	0.0004	9.309E-06
Be	9	1	No Gas	53.215	0.0212	49861.09	0.0004	9.309E-06
Se	78	2	H2	104.836	0.0469	5784.38	0.0004	5.598E-06
Se	78	2	H2	106.785	0.0478	5792.38	0.0004	5.598E-06
Se	78	2	H2	105.469	0.0472	5632.99	0.0004	5.598E-06
Na	23	3	He	24135.219	75.9545	3452450.26	0.0031	0.4657
Na	23	3	He	23448.535	73.8067	3496173.70	0.0031	0.4657
Na	23	3	He	23665.349	74.4849	3413985.57	0.0031	0.4657
Mg	24	3	He	71454.685	108.427	4928463.36	0.0015	0.003704
Mg	24	3	He	68687.846	104.2287	4937242.43	0.0015	0.003704
Mg	24	3	He	71800.118	108.9512	4993736.49	0.0015	0.003704
Al	27	3	He	5162.209	2.4119	109628.74	0.0005	0.0007154
Al	27	3	He	4947.075	2.3114	109487.88	0.0005	0.0007154
Al	27	3	He	5151.893	2.407	110325.44	0.0005	0.0007154
K	39	3	He	10645.999	11.9993	545419.64	0.0011	0.4296
K	39	3	He	10128.804	11.4373	541774.95	0.0011	0.4296
K	39	3	He	10548.14	11.893	545110.07	0.0011	0.4296
Ca	44	3	He	301949.9	18.6702	848639.21	0.0001	0.002924
Ca	44	3	He	292463.513	18.0837	856614.13	0.0001	0.002924
Ca	44	3	He	302241.72	18.6882	856568.82	0.0001	0.002924
Ti	47	3	He	571.178	0.2767	12575.14	0.0005	0
Ti	47	3	He	528.457	0.256	12124.79	0.0005	0
Ti	47	3	He	543	0.263	12054.84	0.0005	0
V	51	3	He	527.759	11.1178	505350.00	0.021	0.009571
V	51	3	He	514.353	10.8356	513276.06	0.021	0.009571
V	51	3	He	526.502	11.0913	508367.19	0.021	0.009571
Cr	52	3	He	523.071	13.9751	635227.49	0.0267	0.01758
Cr	52	3	He	510.027	13.627	645503.70	0.0267	0.01758
Cr	52	3	He	518.756	13.86	635266.20	0.0267	0.01758
Mn	55	3	He	1661.172	17.9764	817104.28	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1596.734	17.2793	818507.41	0.0108	0.004199
Mn	55	3	He	1653.96	17.8984	820366.47	0.0108	0.004199
Fe	57	3	He	5236.754	2.6259	119356.94	0.0005	0.002993
Fe	57	3	He	5001.832	2.5082	118812.20	0.0005	0.002993
Fe	57	3	He	5162.978	2.5889	118662.26	0.0005	0.002993
Co	59	3	He	499.342	26.1442	1188363.42	0.0524	0.003063
Co	59	3	He	485.517	25.4204	1204148.89	0.0524	0.003063
Co	59	3	He	494.173	25.8736	1185908.11	0.0524	0.003063
Ni	60	3	He	507.724	5.5626	337664.57	0.0109	0.01116
Ni	60	3	He	512.982	5.62	341664.99	0.0109	0.01116
Ni	60	3	He	514.731	5.6392	342339.76	0.0109	0.01116
Cu	63	3	He	497.731	12.6966	946816.39	0.0255	0.01531
Cu	63	3	He	496.775	12.6722	971873.89	0.0255	0.01531
Cu	63	3	He	486.559	12.4119	952778.19	0.0255	0.01531
Zn	66	3	He	540.374	1.5577	116165.09	0.0029	0.002787
Zn	66	3	He	531.84	1.5332	117585.13	0.0029	0.002787
Zn	66	3	He	518.685	1.4953	114786.27	0.0029	0.002787
As	75	3	He	538.292	1.1462	85473.30	0.0021	0.0004097
As	75	3	He	535.078	1.1393	87379.30	0.0021	0.0004097
As	75	3	He	534.407	1.1379	87349.18	0.0021	0.0004097
Sr	88	3	He	1543.463	14.5492	883185.14	0.0094	0.0008765
Sr	88	3	He	1552.953	14.6387	889945.22	0.0094	0.0008765
Sr	88	3	He	1560.482	14.7097	892987.33	0.0094	0.0008765
Mo	98	3	He	181.449	4.1804	253763.57	0.023	0.0002199
Mo	98	3	He	181.321	4.1775	253964.02	0.023	0.0002199
Mo	98	3	He	181.116	4.1727	253315.91	0.023	0.0002199
Ag	107	3	He	52.005	2.5128	152537.42	0.0483	0.0008224
Ag	107	3	He	52.807	2.5516	155119.97	0.0483	0.0008224
Ag	107	3	He	51.512	2.489	151102.73	0.0483	0.0008224
Cd	111	3	He	51.789	0.2763	16771.02	0.0053	2.193E-05
Cd	111	3	He	53.237	0.284	17265.57	0.0053	2.193E-05
Cd	111	3	He	53.393	0.2848	17291.53	0.0053	2.193E-05
Sn	120	3	He	108.425	1.6189	98270.71	0.0148	0.01345
Sn	120	3	He	108.271	1.6166	98279.91	0.0148	0.01345
Sn	120	3	He	106.189	1.5858	96268.31	0.0148	0.01345
Sb	121	3	He	105.252	1.5063	91439.30	0.0143	0.0004392
Sb	121	3	He	106.32	1.5216	92505.03	0.0143	0.0004392
Sb	121	3	He	104.989	1.5026	91217.61	0.0143	0.0004392
Ba	137	3	He	585.05	2.5519	154905.69	0.0044	0.0001096
Ba	137	3	He	585.777	2.555	155330.37	0.0044	0.0001096
Ba	137	3	He	605.998	2.6432	160463.44	0.0044	0.0001096
Tl	205	3	He	107.516	2.2351	551066.48	0.0208	0.0002491
Tl	205	3	He	106.981	2.2239	554767.80	0.0208	0.0002491
Tl	205	3	He	108.475	2.255	555998.35	0.0208	0.0002491
Pb	208	3	He	51.652	1.4066	184128.55	0.0272	0.0006218
Pb	208	3	He	51.614	1.4056	185071.38	0.0272	0.0006218
Pb	208	3	He	51.247	1.3956	181428.92	0.0272	0.0006218
U	238	3	He	56.371	1.5505	382273.74	0.0275	2.763E-05
U	238	3	He	56.697	1.5594	388996.87	0.0275	2.763E-05
U	238	3	He	57.489	1.5812	389867.96	0.0275	2.763E-05
Sc	45	1	No Gas			2342166.68		
Sc	45	1	No Gas			2353936.84		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2353859.81		
Ge	72	1	No Gas			1072048.89		
Ge	72	1	No Gas			1066494.67		
Ge	72	1	No Gas			1051483.34		
Sc	45	2	H2			145562.01		
Sc	45	2	H2			143947.05		
Sc	45	2	H2			141818.67		
Ge	72	2	H2			123349.82		
Ge	72	2	H2			121265.60		
Ge	72	2	H2			119400.47		
In	115	2	H2			297354.10		
In	115	2	H2			297365.35		
In	115	2	H2			294570.76		
Sc	45	3	He			45454.20		
Sc	45	3	He			47369.32		
Sc	45	3	He			45834.63		
Ge	72	3	He			74572.67		
Ge	72	3	He			76693.32		
Ge	72	3	He			76763.10		
In	115	3	He			61391.04		
In	115	3	He			61481.96		
In	115	3	He			61381.40		
Tb	159	3	He			246555.95		
Tb	159	3	He			249452.16		
Tb	159	3	He			246564.12		
Bi	209	3	He			167270.88		
Bi	209	3	He			166228.57		
Bi	209	3	He			170579.20		

Quantitation Report

Data File Name	105SMPL.d
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Acq Time	7/17/2024 11:00:25 AM
Sample Name	410-179333-E-12-A MSD
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

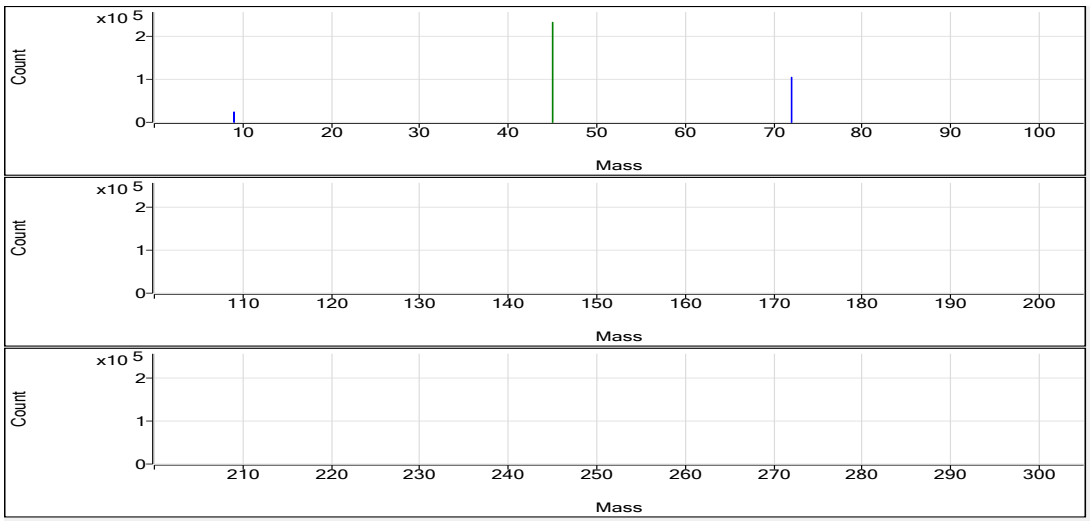
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	52.582	ppb	1.8	48828.75	0.0209	Pulse	0.5000	3
Se	78	72	H2	103.736	ppb	1.3	5613.65	0.0464	Pulse	1.5000	3
Na	23	45	He	23144.911	ppb	1.0	3350358.49	72.8571	Analog	0.1000	3
Mg	24	45	He	70375.885	ppb	0.5	4910920.34	106.7901	Analog	0.1000	3
Al	27	45	He	4972.840	ppb	1.2	106841.73	2.3234	Pulse	0.1000	3
K	39	45	He	10291.414	ppb	0.6	534084.03	11.6140	Pulse	0.1000	3
Ca	44	45	He	296326.336	ppb	0.7	842577.85	18.3225	Pulse	0.1000	3
Ti	47	45	He	533.160	ppb	2.0	11877.97	0.2582	Pulse	0.1000	3
V	51	45	He	513.571	ppb	1.2	497512.31	10.8192	Pulse	0.5000	3
Cr	52	45	He	509.424	ppb	0.9	625910.00	13.6110	Pulse	0.1000	3
Mn	55	45	He	1626.456	ppb	1.1	809375.61	17.6008	Pulse	0.1000	3
Fe	57	45	He	5047.578	ppb	1.8	116390.89	2.5311	Pulse	0.1000	3
Co	59	45	He	485.150	ppb	0.8	1168105.76	25.4012	Pulse	0.1000	3
Ni	60	115	He	508.239	ppb	1.8	333350.52	5.5682	Pulse	0.1000	3
Cu	63	72	He	478.784	ppb	1.2	933878.71	12.2138	Pulse	0.1000	3
Zn	66	72	He	511.782	ppb	2.1	112805.87	1.4755	Pulse	0.1000	3
As	75	72	He	522.460	ppb	1.3	85059.57	1.1125	Pulse	0.5000	3
Sr	88	115	He	1564.861	ppb	1.3	883124.60	14.7509	Pulse	0.1000	3
Mo	98	115	He	182.656	ppb	2.2	251930.39	4.2082	Pulse	0.1000	3
Ag	107	115	He	51.552	ppb	1.5	149130.48	2.4910	Pulse	0.1000	3
Cd	111	115	He	52.334	ppb	2.1	16713.62	0.2792	Pulse	0.5000	3
Sn	120	115	He	108.849	ppb	1.1	97297.82	1.6252	Pulse	0.1000	3
Sb	121	115	He	106.952	ppb	1.2	91646.95	1.5307	Pulse	0.1000	3
Ba	137	115	He	593.754	ppb	2.0	155042.67	2.5898	Pulse	0.1000	3
Tl	205	159	He	106.539	ppb	0.8	544318.22	2.2148	Pulse	0.1000	3
Pb	208	159	He	51.132	ppb	0.7	342228.72	1.3924	Pulse	0.1000	3
U	238	159	He	56.766	ppb	1.7	383718.16	1.5613	Pulse	0.1000	3

ISTD Table:

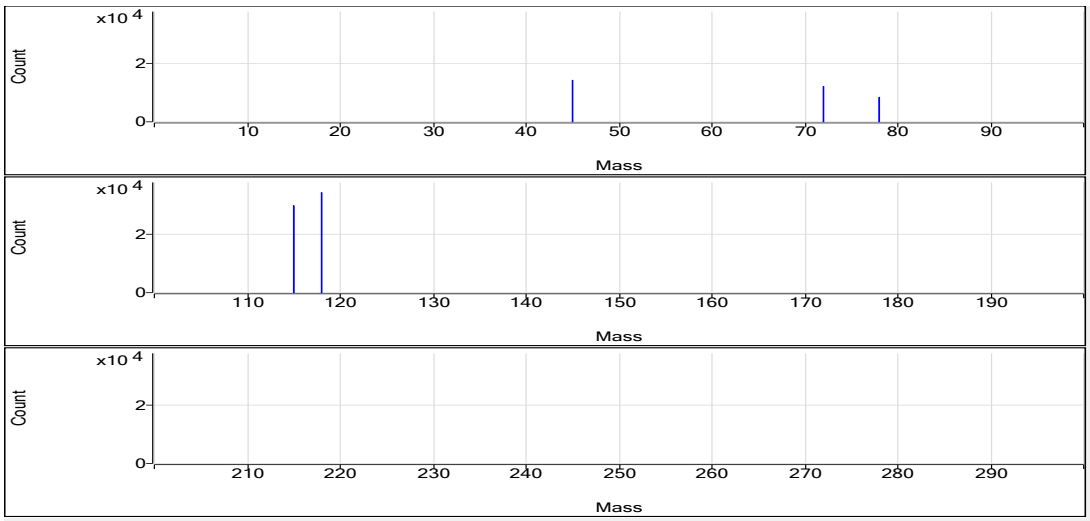
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2333130.64	0.9	101.7	Analog	0.1000	3
No Gas	Ge	72	1054001.34	0.6	101.4	Pulse	0.1000	3
H2	Sc	45	142353.80	0.3	102.4	Pulse	0.1000	3
H2	Ge	72	120983.59	1.1	102.5	Pulse	0.1000	3
H2	In	115	297763.38	0.4	101.1	Pulse	0.1000	3
He	Sc	45	45988.53	1.2	98.2	Pulse	0.1000	3
He	Ge	72	76468.56	1.3	100.0	Pulse	0.1000	3
He	In	115	59873.54	0.9	98.8	Pulse	0.1000	3
He	Tb	159	245773.00	0.4	101.9	Pulse	0.1000	3
He	Bi	209	167537.12	1.4	101.1	Pulse	0.1000	3

No Gas

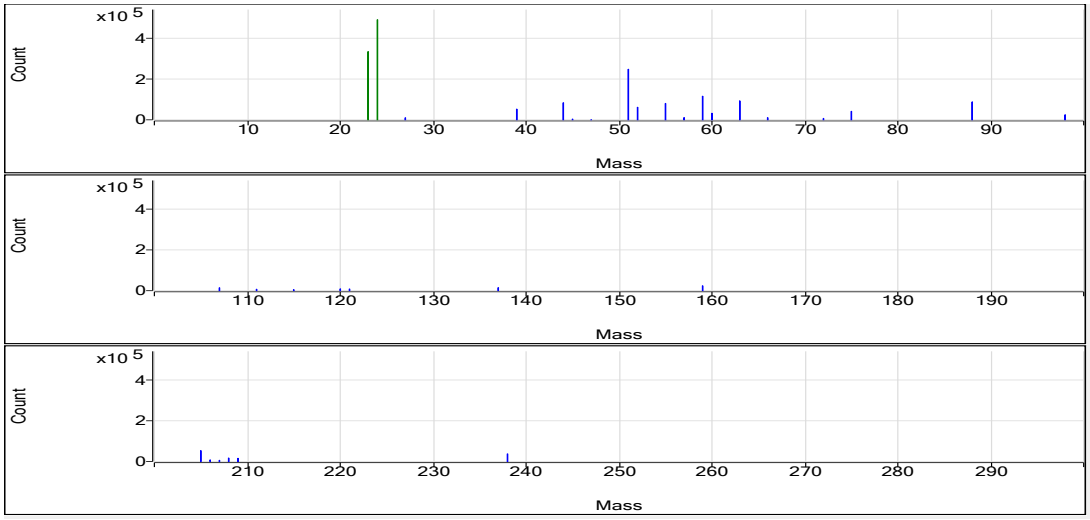


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.467	0.0205	48286.64	0.0004	9.309E-06
Be	9	1	No Gas	53.073	0.0211	48974.39	0.0004	9.309E-06
Be	9	1	No Gas	53.206	0.0212	49225.23	0.0004	9.309E-06
Se	78	2	H2	104.451	0.0467	5691.68	0.0004	5.598E-06
Se	78	2	H2	104.584	0.0468	5590.98	0.0004	5.598E-06
Se	78	2	H2	102.172	0.0457	5558.30	0.0004	5.598E-06
Na	23	3	He	23171.38	72.9398	3374636.82	0.0031	0.4657
Na	23	3	He	23370.349	73.5622	3337044.64	0.0031	0.4657
Na	23	3	He	22893.004	72.0692	3339394.01	0.0031	0.4657
Mg	24	3	He	70077.109	106.3367	4919778.05	0.0015	0.003704
Mg	24	3	He	70801.487	107.4359	4873678.05	0.0015	0.003704
Mg	24	3	He	70249.06	106.5976	4939304.93	0.0015	0.003704
Al	27	3	He	4913.738	2.2958	106217.37	0.0005	0.0007154
Al	27	3	He	5030.57	2.3504	106621.05	0.0005	0.0007154
Al	27	3	He	4974.213	2.324	107686.78	0.0005	0.0007154
K	39	3	He	10264.738	11.585	535991.16	0.0011	0.4296
K	39	3	He	10365.946	11.695	530526.01	0.0011	0.4296
K	39	3	He	10243.559	11.562	535734.91	0.0011	0.4296
Ca	44	3	He	295243.113	18.2556	844612.96	0.0001	0.002924
Ca	44	3	He	298848.661	18.4785	838250.30	0.0001	0.002924
Ca	44	3	He	294887.233	18.2336	844870.30	0.0001	0.002924
Ti	47	3	He	540.167	0.2616	12104.80	0.0005	0
Ti	47	3	He	520.855	0.2523	11444.37	0.0005	0
Ti	47	3	He	538.458	0.2608	12084.75	0.0005	0
V	51	3	He	508.79	10.7185	495903.88	0.021	0.009571
V	51	3	He	520.49	10.9648	497402.94	0.021	0.009571
V	51	3	He	511.432	10.7741	499230.13	0.021	0.009571
Cr	52	3	He	505.212	13.4986	624524.56	0.0267	0.01758
Cr	52	3	He	514.089	13.7354	623089.09	0.0267	0.01758
Cr	52	3	He	508.971	13.5989	630116.36	0.0267	0.01758
Mn	55	3	He	1610.764	17.4311	806466.24	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1644.951	17.8009	807514.13	0.0108	0.004199
Mn	55	3	He	1623.653	17.5705	814146.47	0.0108	0.004199
Fe	57	3	He	4946.051	2.4803	114752.31	0.0005	0.002993
Fe	57	3	He	5126.995	2.5709	116625.22	0.0005	0.002993
Fe	57	3	He	5069.688	2.5422	117795.13	0.0005	0.002993
Co	59	3	He	481.245	25.1968	1165757.01	0.0524	0.003063
Co	59	3	He	488.964	25.6009	1161349.59	0.0524	0.003063
Co	59	3	He	485.24	25.406	1177210.69	0.0524	0.003063
Ni	60	3	He	506.279	5.5468	332076.99	0.0109	0.01116
Ni	60	3	He	500.039	5.4785	331009.10	0.0109	0.01116
Ni	60	3	He	518.399	5.6793	336965.46	0.0109	0.01116
Cu	63	3	He	485.251	12.3786	932193.50	0.0255	0.01531
Cu	63	3	He	475.45	12.1289	931774.44	0.0255	0.01531
Cu	63	3	He	475.651	12.134	937668.19	0.0255	0.01531
Zn	66	3	He	524.369	1.5117	113840.26	0.0029	0.002787
Zn	66	3	He	505.569	1.4576	111976.11	0.0029	0.002787
Zn	66	3	He	505.41	1.4571	112601.24	0.0029	0.002787
As	75	3	He	530.444	1.1295	85056.94	0.0021	0.0004097
As	75	3	He	518.632	1.1043	84837.72	0.0021	0.0004097
As	75	3	He	518.303	1.1036	85284.05	0.0021	0.0004097
Sr	88	3	He	1558.437	14.6904	879494.52	0.0094	0.0008765
Sr	88	3	He	1548.425	14.596	881883.19	0.0094	0.0008765
Sr	88	3	He	1587.723	14.9664	887996.08	0.0094	0.0008765
Mo	98	3	He	180.715	4.1635	249262.63	0.023	0.0002199
Mo	98	3	He	180.008	4.1472	250572.01	0.023	0.0002199
Mo	98	3	He	187.245	4.3139	255956.54	0.023	0.0002199
Ag	107	3	He	51.539	2.4903	149093.48	0.0483	0.0008224
Ag	107	3	He	50.793	2.4543	148286.02	0.0483	0.0008224
Ag	107	3	He	52.326	2.5283	150011.94	0.0483	0.0008224
Cd	111	3	He	52.448	0.2798	16751.02	0.0053	2.193E-05
Cd	111	3	He	51.169	0.273	16492.71	0.0053	2.193E-05
Cd	111	3	He	53.384	0.2848	16897.12	0.0053	2.193E-05
Sn	120	3	He	108.564	1.6209	97043.42	0.0148	0.01345
Sn	120	3	He	107.779	1.6093	97233.61	0.0148	0.01345
Sn	120	3	He	110.206	1.6452	97616.42	0.0148	0.01345
Sb	121	3	He	108.364	1.5509	92847.66	0.0143	0.0004392
Sb	121	3	He	106.398	1.5227	92002.30	0.0143	0.0004392
Sb	121	3	He	106.096	1.5184	90090.89	0.0143	0.0004392
Ba	137	3	He	593.781	2.5899	155056.16	0.0044	0.0001096
Ba	137	3	He	581.735	2.5374	153308.00	0.0044	0.0001096
Ba	137	3	He	605.746	2.6421	156763.86	0.0044	0.0001096
Tl	205	3	He	106.496	2.2138	542483.74	0.0208	0.0002491
Tl	205	3	He	107.381	2.2322	547561.12	0.0208	0.0002491
Tl	205	3	He	105.742	2.1982	542909.80	0.0208	0.0002491
Pb	208	3	He	50.741	1.3818	179695.04	0.0272	0.0006218
Pb	208	3	He	51.299	1.397	180080.47	0.0272	0.0006218
Pb	208	3	He	51.355	1.3985	183646.27	0.0272	0.0006218
U	238	3	He	57.854	1.5912	389915.11	0.0275	2.763E-05
U	238	3	He	56.294	1.5483	379797.03	0.0275	2.763E-05
U	238	3	He	56.152	1.5444	381442.34	0.0275	2.763E-05
Sc	45	1	No Gas			2356940.28		
Sc	45	1	No Gas			2318203.09		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2324248.56		
Ge	72	1	No Gas			1059330.77		
Ge	72	1	No Gas			1055205.84		
Ge	72	1	No Gas			1047467.41		
Sc	45	2	H2			141859.87		
Sc	45	2	H2			142495.29		
Sc	45	2	H2			142706.23		
Ge	72	2	H2			121819.56		
Ge	72	2	H2			119512.40		
Ge	72	2	H2			121618.82		
In	115	2	H2			298493.14		
In	115	2	H2			296374.59		
In	115	2	H2			298422.42		
Sc	45	3	He			46266.03		
Sc	45	3	He			45363.60		
Sc	45	3	He			46335.97		
Ge	72	3	He			75306.84		
Ge	72	3	He			76822.83		
Ge	72	3	He			77276.00		
In	115	3	He			60547.99		
In	115	3	He			61100.06		
In	115	3	He			60015.82		
Tb	159	3	He			245040.99		
Tb	159	3	He			245295.64		
Tb	159	3	He			246982.36		
Bi	209	3	He			169535.02		
Bi	209	3	He			164834.63		
Bi	209	3	He			168241.70		

Quantitation Report

Data File Name	107_CCV.d
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Acq Time	7/17/2024 11:04:28 AM
Sample Name	CCV 6148199
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

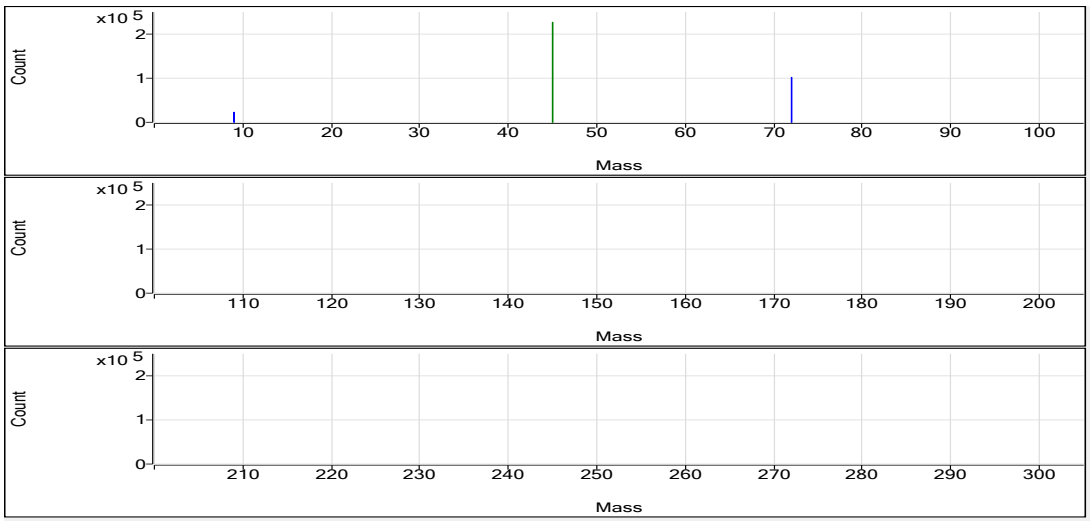
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.664	ppb	2.4	46612.59	0.0206	Pulse	0.5000	3
Se	78	72	H2	53.631	ppb	2.2	2631.77	0.0240	Pulse	1.5000	3
Na	23	45	He	5017.889	ppb	1.3	735343.45	16.1603	Pulse	0.1000	3
Mg	24	45	He	5065.206	ppb	0.8	349898.28	7.6895	Pulse	0.1000	3
Al	27	45	He	4931.530	ppb	1.0	104842.85	2.3041	Pulse	0.1000	3
K	39	45	He	5108.138	ppb	0.3	272173.27	5.9810	Pulse	0.1000	3
Ca	44	45	He	5129.144	ppb	2.6	14566.85	0.3200	Pulse	0.1000	3
Ti	47	45	He	4988.162	ppb	1.1	109937.19	2.4161	Pulse	0.1000	3
V	51	45	He	510.000	ppb	1.3	488864.21	10.7440	Pulse	0.5000	3
Cr	52	45	He	510.541	ppb	1.0	620700.08	13.6408	Pulse	0.1000	3
Mn	55	45	He	506.249	ppb	1.4	249410.27	5.4813	Pulse	0.1000	3
Fe	57	45	He	5094.490	ppb	1.9	116233.19	2.5546	Pulse	0.1000	3
Co	59	45	He	497.551	ppb	1.3	1185339.62	26.0505	Pulse	0.1000	3
Ni	60	115	He	519.546	ppb	0.7	336017.35	5.6918	Pulse	0.1000	3
Cu	63	72	He	502.720	ppb	0.7	949118.94	12.8237	Pulse	0.1000	3
Zn	66	72	He	523.768	ppb	1.4	111755.32	1.5100	Pulse	0.1000	3
As	75	72	He	519.965	ppb	0.6	81946.35	1.1072	Pulse	0.5000	3
Sr	88	115	He	52.011	ppb	4.2	28987.06	0.4911	Pulse	0.1000	3
Mo	98	115	He	52.030	ppb	0.8	70775.90	1.1989	Pulse	0.1000	3
Ag	107	115	He	51.635	ppb	1.2	147293.42	2.4950	Pulse	0.1000	3
Cd	111	115	He	51.624	ppb	1.5	16257.14	0.2754	Pulse	0.5000	3
Sn	120	115	He	51.265	ppb	1.8	45604.29	0.7725	Pulse	0.1000	3
Sb	121	115	He	51.725	ppb	1.7	43712.27	0.7405	Pulse	0.1000	3
Ba	137	115	He	512.441	ppb	1.2	131957.20	2.2352	Pulse	0.1000	3
Tl	205	159	He	51.545	ppb	0.8	254234.98	1.0717	Pulse	0.1000	3
Pb	208	159	He	51.046	ppb	1.4	329754.40	1.3901	Pulse	0.1000	3
U	238	159	He	50.958	ppb	1.2	332493.26	1.4016	Pulse	0.1000	3

ISTD Table:

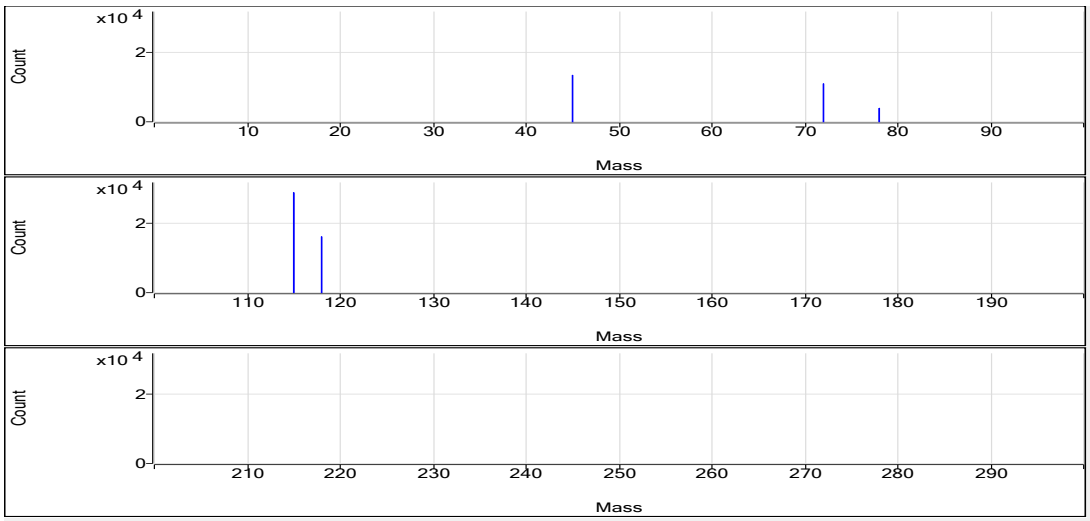
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2266681.74	0.5	98.8	Analog	0.1000	3
No Gas	Ge	72	1019342.64	0.8	98.1	Pulse	0.1000	3
H2	Sc	45	134296.84	0.8	96.6	Pulse	0.1000	3
H2	Ge	72	109699.47	1.4	92.9	Pulse	0.1000	3
H2	In	115	287968.32	0.6	97.7	Pulse	0.1000	3
He	Sc	45	45507.23	1.5	97.2	Pulse	0.1000	3
He	Ge	72	74013.75	0.5	96.8	Pulse	0.1000	3
He	In	115	59037.99	1.1	97.4	Pulse	0.1000	3
He	Tb	159	237228.83	0.7	98.4	Pulse	0.1000	3
He	Bi	209	162369.45	1.2	98.0	Pulse	0.1000	3

No Gas

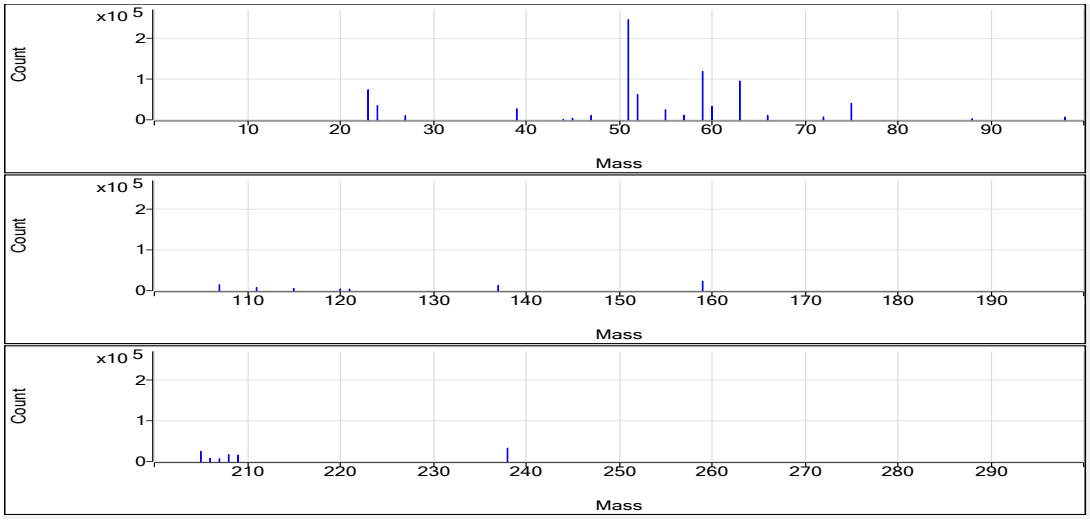


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.695	0.0202	45972.16	0.0004	9.309E-06
Be	9	1	No Gas	51.264	0.0204	46200.80	0.0004	9.309E-06
Be	9	1	No Gas	53.034	0.0211	47664.82	0.0004	9.309E-06
Se	78	2	H2	52.406	0.0234	2569.54	0.0004	5.598E-06
Se	78	2	H2	53.774	0.0241	2677.56	0.0004	5.598E-06
Se	78	2	H2	54.714	0.0245	2648.22	0.0004	5.598E-06
Na	23	3	He	4940.884	15.9195	733973.82	0.0031	0.4657
Na	23	3	He	5053.386	16.2714	728012.49	0.0031	0.4657
Na	23	3	He	5059.397	16.2902	744044.05	0.0031	0.4657
Mg	24	3	He	5026.525	7.6308	351821.17	0.0015	0.003704
Mg	24	3	He	5110.452	7.7582	347114.99	0.0015	0.003704
Mg	24	3	He	5058.641	7.6795	350758.67	0.0015	0.003704
Al	27	3	He	4895.389	2.2872	105453.35	0.0005	0.0007154
Al	27	3	He	4988.245	2.3306	104275.39	0.0005	0.0007154
Al	27	3	He	4910.955	2.2945	104799.80	0.0005	0.0007154
K	39	3	He	5089.197	5.9604	274805.80	0.0011	0.4296
K	39	3	He	5112.092	5.9853	267792.54	0.0011	0.4296
K	39	3	He	5123.127	5.9973	273921.48	0.0011	0.4296
Ca	44	3	He	5196.706	0.3242	14947.23	0.0001	0.002924
Ca	44	3	He	4972.939	0.3104	13886.26	0.0001	0.002924
Ca	44	3	He	5217.787	0.3255	14867.05	0.0001	0.002924
Ti	47	3	He	4927.452	2.3867	110037.64	0.0005	0
Ti	47	3	He	5033.935	2.4382	109091.25	0.0005	0
Ti	47	3	He	5003.098	2.4233	110682.67	0.0005	0
V	51	3	He	503.062	10.598	488623.50	0.021	0.009571
V	51	3	He	516.778	10.8867	487090.00	0.021	0.009571
V	51	3	He	510.159	10.7474	490879.13	0.021	0.009571
Cr	52	3	He	504.551	13.4809	621542.88	0.0267	0.01758
Cr	52	3	He	514.181	13.7379	614659.40	0.0267	0.01758
Cr	52	3	He	512.891	13.7035	625897.96	0.0267	0.01758
Mn	55	3	He	498.06	5.3927	248632.91	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	511.064	5.5334	247575.02	0.0108	0.004199
Mn	55	3	He	509.623	5.5178	252022.89	0.0108	0.004199
Fe	57	3	He	4987.718	2.5011	115315.97	0.0005	0.002993
Fe	57	3	He	5176.36	2.5956	116133.22	0.0005	0.002993
Fe	57	3	He	5119.392	2.5671	117250.38	0.0005	0.002993
Co	59	3	He	490.439	25.6781	1183899.90	0.0524	0.003063
Co	59	3	He	503.198	26.3461	1178775.53	0.0524	0.003063
Co	59	3	He	499.016	26.1272	1193343.42	0.0524	0.003063
Ni	60	3	He	523.532	5.7354	334496.99	0.0109	0.01116
Ni	60	3	He	516.43	5.6577	336195.31	0.0109	0.01116
Ni	60	3	He	518.676	5.6823	337359.76	0.0109	0.01116
Cu	63	3	He	504.704	12.8742	947914.60	0.0255	0.01531
Cu	63	3	He	498.649	12.7199	943837.95	0.0255	0.01531
Cu	63	3	He	504.808	12.8769	955604.28	0.0255	0.01531
Zn	66	3	He	528.169	1.5226	112108.83	0.0029	0.002787
Zn	66	3	He	515.54	1.4863	110284.16	0.0029	0.002787
Zn	66	3	He	527.596	1.521	112872.96	0.0029	0.002787
As	75	3	He	517.871	1.1027	81191.28	0.0021	0.0004097
As	75	3	He	518.773	1.1046	81964.97	0.0021	0.0004097
As	75	3	He	523.25	1.1142	82682.80	0.0021	0.0004097
Sr	88	3	He	54.186	0.5116	29838.58	0.0094	0.0008765
Sr	88	3	He	49.818	0.4705	27955.30	0.0094	0.0008765
Sr	88	3	He	52.028	0.4913	29167.29	0.0094	0.0008765
Mo	98	3	He	52.505	1.2098	70558.46	0.023	0.0002199
Mo	98	3	He	51.811	1.1938	70939.85	0.023	0.0002199
Mo	98	3	He	51.776	1.193	70829.40	0.023	0.0002199
Ag	107	3	He	51.951	2.5102	146399.40	0.0483	0.0008224
Ag	107	3	He	50.941	2.4615	146265.67	0.0483	0.0008224
Ag	107	3	He	52.014	2.5133	149215.18	0.0483	0.0008224
Cd	111	3	He	52.52	0.2802	16340.57	0.0053	2.193E-05
Cd	111	3	He	51.112	0.2727	16202.42	0.0053	2.193E-05
Cd	111	3	He	51.239	0.2733	16228.44	0.0053	2.193E-05
Sn	120	3	He	52.033	0.7839	45718.08	0.0148	0.01345
Sn	120	3	He	51.485	0.7758	46098.72	0.0148	0.01345
Sn	120	3	He	50.277	0.7579	44996.08	0.0148	0.01345
Sb	121	3	He	52.667	0.754	43972.88	0.0143	0.0004392
Sb	121	3	He	50.912	0.7289	43311.14	0.0143	0.0004392
Sb	121	3	He	51.595	0.7386	43852.78	0.0143	0.0004392
Ba	137	3	He	513.8	2.2411	130703.94	0.0044	0.0001096
Ba	137	3	He	505.877	2.2065	131117.28	0.0044	0.0001096
Ba	137	3	He	517.647	2.2579	134050.37	0.0044	0.0001096
Tl	205	3	He	51.229	1.0651	251843.02	0.0208	0.0002491
Tl	205	3	He	51.425	1.0692	252528.20	0.0208	0.0002491
Tl	205	3	He	51.982	1.0807	258333.73	0.0208	0.0002491
Pb	208	3	He	51.831	1.4115	177095.19	0.0272	0.0006218
Pb	208	3	He	50.933	1.387	173068.28	0.0272	0.0006218
Pb	208	3	He	50.372	1.3718	171168.10	0.0272	0.0006218
U	238	3	He	51.568	1.4183	335374.21	0.0275	2.763E-05
U	238	3	He	50.375	1.3855	327258.63	0.0275	2.763E-05
U	238	3	He	50.931	1.4008	334846.95	0.0275	2.763E-05
Sc	45	1	No Gas			2278105.28		
Sc	45	1	No Gas			2264050.44		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2257889.50		
Ge	72	1	No Gas			1026778.03		
Ge	72	1	No Gas			1010321.16		
Ge	72	1	No Gas			1020928.73		
Sc	45	2	H2			133691.21		
Sc	45	2	H2			133692.19		
Sc	45	2	H2			135507.12		
Ge	72	2	H2			109601.39		
Ge	72	2	H2			111303.97		
Ge	72	2	H2			108193.06		
In	115	2	H2			290109.62		
In	115	2	H2			286862.50		
In	115	2	H2			286932.83		
Sc	45	3	He			46105.35		
Sc	45	3	He			44741.93		
Sc	45	3	He			45674.42		
Ge	72	3	He			73628.89		
Ge	72	3	He			74201.40		
Ge	72	3	He			74210.97		
In	115	3	He			58641.57		
In	115	3	He			59744.90		
In	115	3	He			59685.19		
Tb	159	3	He			236454.96		
Tb	159	3	He			236194.64		
Tb	159	3	He			239036.89		
Bi	209	3	He			164387.99		
Bi	209	3	He			160697.48		
Bi	209	3	He			162022.89		

Quantitation Report

Data File Name	108_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 11:06:27 AM
Sample Name	CCB 6148203
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

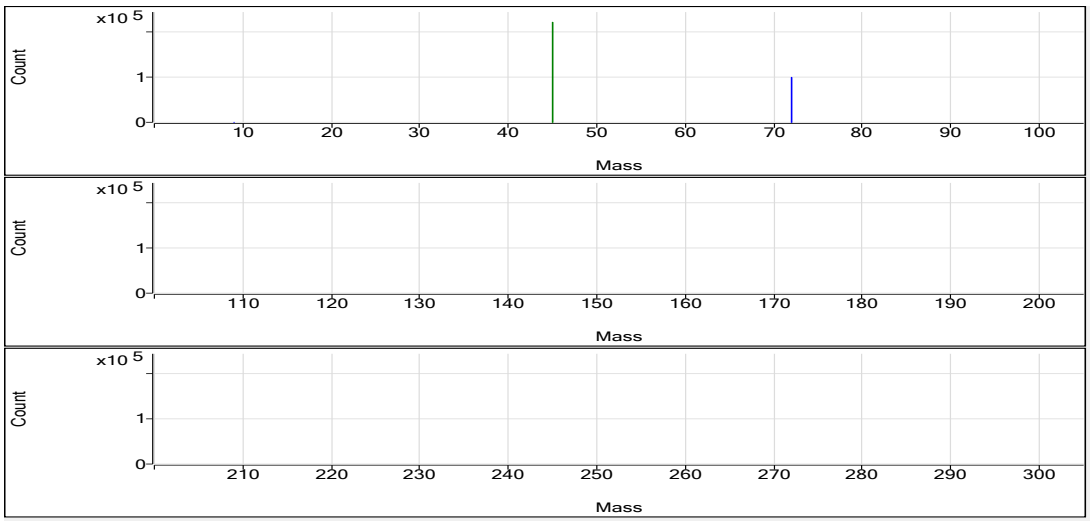
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.094	ppb	12.9	104.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.143	ppb	6.9	7.55	0.0001	Pulse	1.5000	3
Na	23	45	He	53.195	ppb	14.4	28334.64	0.6320	Pulse	0.1000	3
Mg	24	45	He	15.263	ppb	12.0	1206.75	0.0269	Pulse	0.1000	3
Al	27	45	He	3.096	ppb	37.8	96.67	0.0022	Pulse	0.1000	3
K	39	45	He	-1.007	ppb	N/A	19178.55	0.4285	Pulse	0.1000	3
Ca	44	45	He	68.718	ppb	65.2	320.02	0.0072	Pulse	0.1000	3
Ti	47	45	He	4.139	ppb	9.8	90.00	0.0020	Pulse	0.1000	3
V	51	45	He	0.316	ppb	16.6	727.35	0.0162	Pulse	0.5000	3
Cr	52	45	He	0.267	ppb	28.8	1106.74	0.0247	Pulse	0.1000	3
Mn	55	45	He	0.629	ppb	15.0	493.36	0.0110	Pulse	0.1000	3
Fe	57	45	He	9.317	ppb	15.1	343.35	0.0077	Pulse	0.1000	3
Co	59	45	He	0.239	ppb	14.2	696.70	0.0156	Pulse	0.1000	3
Ni	60	115	He	0.492	ppb	43.0	943.39	0.0165	Pulse	0.1000	3
Cu	63	72	He	0.283	ppb	20.9	1673.48	0.0225	Pulse	0.1000	3
Zn	66	72	He	0.448	ppb	60.9	303.35	0.0041	Pulse	0.1000	3
As	75	72	He	0.296	ppb	20.0	77.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.453	ppb	12.0	293.34	0.0051	Pulse	0.1000	3
Mo	98	115	He	0.125	ppb	20.0	176.67	0.0031	Pulse	0.1000	3
Ag	107	115	He	0.016	ppb	22.1	90.00	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.022	ppb	78.9	8.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.094	ppb	49.1	846.72	0.0148	Pulse	0.1000	3
Sb	121	115	He	0.055	ppb	40.6	70.00	0.0012	Pulse	0.1000	3
Ba	137	115	He	0.256	ppb	27.4	70.00	0.0012	Pulse	0.1000	3
Tl	205	159	He	0.349	ppb	1.7	1743.51	0.0075	Pulse	0.1000	3
Pb	208	159	He	0.056	ppb	25.8	500.03	0.0022	Pulse	0.1000	3
U	238	159	He	0.032	ppb	9.8	210.01	0.0009	Pulse	0.1000	3

ISTD Table:

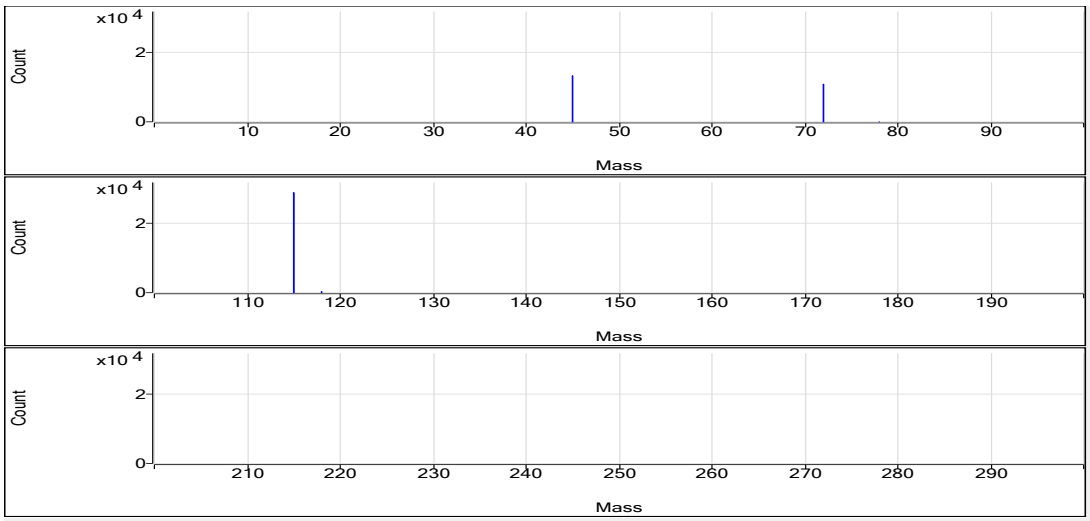
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2229454.76	1.0	97.2	Analog	0.1000	3
No Gas	Ge	72	1001854.72	1.4	96.4	Pulse	0.1000	3
H2	Sc	45	132105.08	1.2	95.0	Pulse	0.1000	3
H2	Ge	72	108320.37	1.2	91.7	Pulse	0.1000	3
H2	In	115	286754.81	0.4	97.3	Pulse	0.1000	3
He	Sc	45	44855.43	2.2	95.8	Pulse	0.1000	3
He	Ge	72	74332.04	0.8	97.2	Pulse	0.1000	3
He	In	115	57015.82	1.3	94.0	Pulse	0.1000	3
He	Tb	159	232305.28	0.4	96.3	Pulse	0.1000	3
He	Bi	209	160955.34	0.6	97.1	Pulse	0.1000	3

No Gas

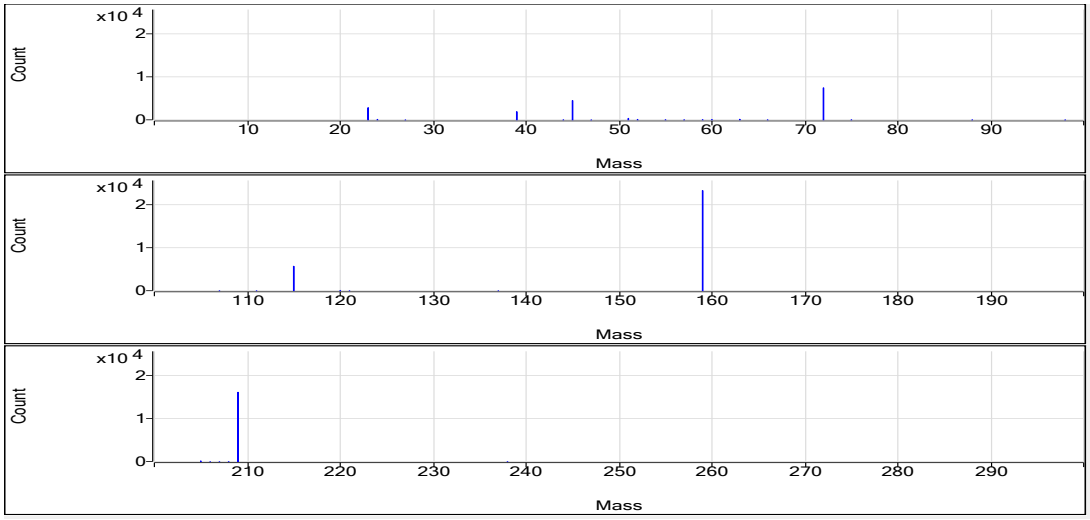


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.08	0	92.00	0.0004	9.309E-06
Be	9	1	No Gas	0.097	0	106.00	0.0004	9.309E-06
Be	9	1	No Gas	0.104	0.0001	114.00	0.0004	9.309E-06
Se	78	2	H2	0.137	0.0001	7.33	0.0004	5.598E-06
Se	78	2	H2	0.138	0.0001	7.33	0.0004	5.598E-06
Se	78	2	H2	0.155	0.0001	8.00	0.0004	5.598E-06
Na	23	3	He	61.847	0.6591	28835.57	0.0031	0.4657
Na	23	3	He	50.483	0.6236	28124.17	0.0031	0.4657
Na	23	3	He	47.253	0.6135	28044.18	0.0031	0.4657
Mg	24	3	He	13.528	0.0242	1060.07	0.0015	0.003704
Mg	24	3	He	15.095	0.0266	1200.09	0.0015	0.003704
Mg	24	3	He	17.167	0.0298	1360.10	0.0015	0.003704
Al	27	3	He	3.851	0.0025	110.00	0.0005	0.0007154
Al	27	3	He	3.69	0.0024	110.00	0.0005	0.0007154
Al	27	3	He	1.747	0.0015	70.00	0.0005	0.0007154
K	39	3	He	66.658	0.5021	21965.36	0.0011	0.4296
K	39	3	He	-21.556	0.4062	18320.74	0.0011	0.4296
K	39	3	He	-48.124	0.3773	17249.54	0.0011	0.4296
Ca	44	3	He	107.992	0.0096	420.02	0.0001	0.002924
Ca	44	3	He	78.229	0.0078	350.02	0.0001	0.002924
Ca	44	3	He	19.931	0.0042	190.01	0.0001	0.002924
Ti	47	3	He	3.775	0.0018	80.00	0.0005	0
Ti	47	3	He	4.578	0.0022	100.00	0.0005	0
Ti	47	3	He	4.065	0.002	90.00	0.0005	0
V	51	3	He	0.373	0.0174	762.02	0.021	0.009571
V	51	3	He	0.308	0.0161	724.02	0.021	0.009571
V	51	3	He	0.269	0.0152	696.02	0.021	0.009571
Cr	52	3	He	0.352	0.027	1180.08	0.0267	0.01758
Cr	52	3	He	0.247	0.0242	1090.07	0.0267	0.01758
Cr	52	3	He	0.202	0.023	1050.07	0.0267	0.01758
Mn	55	3	He	0.668	0.0114	500.03	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.698	0.0118	530.03	0.0108	0.004199
Mn	55	3	He	0.522	0.0098	450.02	0.0108	0.004199
Fe	57	3	He	10.455	0.0082	360.02	0.0005	0.002993
Fe	57	3	He	7.748	0.0069	310.01	0.0005	0.002993
Fe	57	3	He	9.748	0.0079	360.01	0.0005	0.002993
Co	59	3	He	0.278	0.0176	770.04	0.0524	0.003063
Co	59	3	He	0.217	0.0144	650.03	0.0524	0.003063
Co	59	3	He	0.221	0.0147	670.04	0.0524	0.003063
Ni	60	3	He	0.674	0.0185	1070.06	0.0109	0.01116
Ni	60	3	He	0.541	0.0171	960.06	0.0109	0.01116
Ni	60	3	He	0.26	0.014	800.04	0.0109	0.01116
Cu	63	3	He	0.309	0.0232	1710.16	0.0255	0.01531
Cu	63	3	He	0.215	0.0208	1560.12	0.0255	0.01531
Cu	63	3	He	0.325	0.0236	1750.16	0.0255	0.01531
Zn	66	3	He	0.209	0.0034	250.01	0.0029	0.002787
Zn	66	3	He	0.746	0.0049	370.02	0.0029	0.002787
Zn	66	3	He	0.39	0.0039	290.01	0.0029	0.002787
As	75	3	He	0.228	0.0009	66.00	0.0021	0.0004097
As	75	3	He	0.334	0.0011	84.00	0.0021	0.0004097
As	75	3	He	0.327	0.0011	82.00	0.0021	0.0004097
Sr	88	3	He	0.514	0.0057	330.01	0.0094	0.0008765
Sr	88	3	He	0.435	0.005	280.01	0.0094	0.0008765
Sr	88	3	He	0.409	0.0047	270.01	0.0094	0.0008765
Mo	98	3	He	0.133	0.0033	190.01	0.023	0.0002199
Mo	98	3	He	0.145	0.0036	200.01	0.023	0.0002199
Mo	98	3	He	0.097	0.0025	140.00	0.023	0.0002199
Ag	107	3	He	0.019	0.0017	100.00	0.0483	0.0008224
Ag	107	3	He	0.016	0.0016	90.00	0.0483	0.0008224
Ag	107	3	He	0.012	0.0014	80.00	0.0483	0.0008224
Cd	111	3	He	0.028	0.0002	10.00	0.0053	2.193E-05
Cd	111	3	He	0.036	0.0002	12.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Sn	120	3	He	0.086	0.0147	850.06	0.0148	0.01345
Sn	120	3	He	0.053	0.0142	800.04	0.0148	0.01345
Sn	120	3	He	0.144	0.0156	890.06	0.0148	0.01345
Sb	121	3	He	0.042	0.001	60.00	0.0143	0.0004392
Sb	121	3	He	0.081	0.0016	90.00	0.0143	0.0004392
Sb	121	3	He	0.043	0.0011	60.00	0.0143	0.0004392
Ba	137	3	He	0.293	0.0014	80.00	0.0044	0.0001096
Ba	137	3	He	0.301	0.0014	80.00	0.0044	0.0001096
Ba	137	3	He	0.176	0.0009	50.00	0.0044	0.0001096
Tl	205	3	He	0.349	0.0075	1740.17	0.0208	0.0002491
Tl	205	3	He	0.355	0.0076	1780.19	0.0208	0.0002491
Tl	205	3	He	0.343	0.0074	1710.16	0.0208	0.0002491
Pb	208	3	He	0.072	0.0026	380.02	0.0272	0.0006218
Pb	208	3	He	0.053	0.0021	280.02	0.0272	0.0006218
Pb	208	3	He	0.044	0.0018	220.01	0.0272	0.0006218
U	238	3	He	0.035	0.001	230.01	0.0275	2.763E-05
U	238	3	He	0.032	0.0009	210.01	0.0275	2.763E-05
U	238	3	He	0.029	0.0008	190.01	0.0275	2.763E-05
Sc	45	1	No Gas			2229407.62		
Sc	45	1	No Gas			2206586.37		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2252370.28		
Ge	72	1	No Gas			994256.70		
Ge	72	1	No Gas			993625.30		
Ge	72	1	No Gas			1017682.17		
Sc	45	2	H2			130778.33		
Sc	45	2	H2			131623.66		
Sc	45	2	H2			133913.24		
Ge	72	2	H2			109482.48		
Ge	72	2	H2			108585.14		
Ge	72	2	H2			106893.50		
In	115	2	H2			286960.54		
In	115	2	H2			287879.98		
In	115	2	H2			285423.90		
Sc	45	3	He			43749.36		
Sc	45	3	He			45102.33		
Sc	45	3	He			45714.61		
Ge	72	3	He			73779.77		
Ge	72	3	He			75015.13		
Ge	72	3	He			74201.23		
In	115	3	He			57728.17		
In	115	3	He			56222.22		
In	115	3	He			57114.85		
Tb	159	3	He			231970.48		
Tb	159	3	He			233422.20		
Tb	159	3	He			231523.16		
Bi	209	3	He			160103.01		
Bi	209	3	He			160719.24		
Bi	209	3	He			162043.76		

Quantitation Report

Data File Name	109SMPL.d
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Sample Name	410-179333-C-7-A
Sample Type	Sample
Comment	J2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

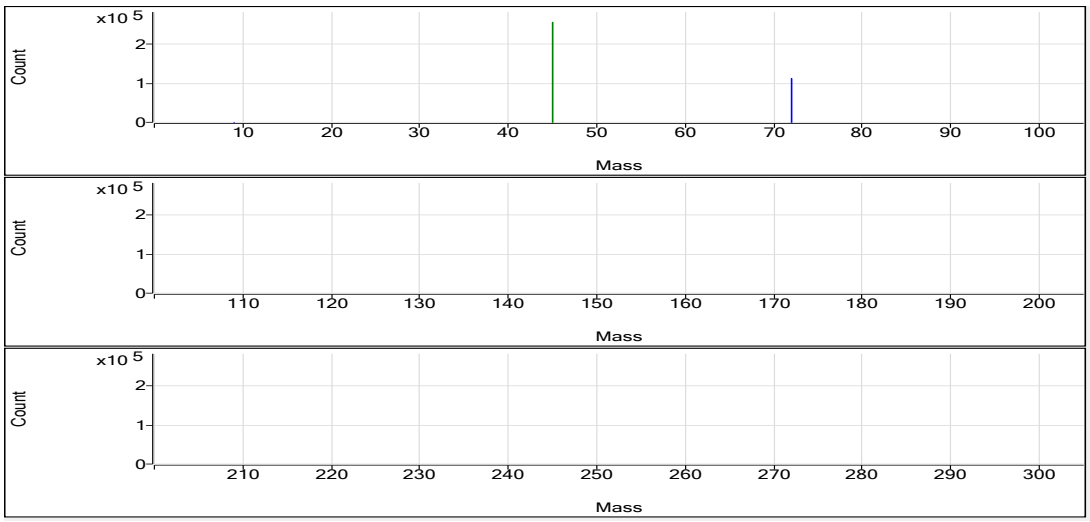
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.009	ppb	31.1	33.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.105	ppb	38.9	6.44	0.0001	Pulse	1.5000	3
Na	23	45	He	5.358	ppb	58.0	24221.42	0.4824	Pulse	0.1000	3
Mg	24	45	He	11.252	ppb	67.8	1050.08	0.0208	Pulse	0.1000	3
Al	27	45	He	2.139	ppb	86.5	86.67	0.0017	Pulse	0.1000	3
K	39	45	He	-64.880	ppb	N/A	17993.72	0.3591	Pulse	0.1000	3
Ca	44	45	He	40.229	ppb	117.5	273.35	0.0054	Pulse	0.1000	3
Ti	47	45	He	1.640	ppb	48.6	40.00	0.0008	Pulse	0.1000	3
V	51	45	He	0.047	ppb	293.9	532.01	0.0106	Pulse	0.5000	3
Cr	52	45	He	0.073	ppb	252.0	983.40	0.0195	Pulse	0.1000	3
Mn	55	45	He	0.314	ppb	81.3	383.35	0.0076	Pulse	0.1000	3
Fe	57	45	He	0.900	ppb	202.9	173.34	0.0034	Pulse	0.1000	3
Co	59	45	He	0.133	ppb	68.7	506.69	0.0100	Pulse	0.1000	3
Ni	60	115	He	0.158	ppb	106.4	853.39	0.0129	Pulse	0.1000	3
Cu	63	72	He	0.203	ppb	76.4	1693.47	0.0205	Pulse	0.1000	3
Zn	66	72	He	0.489	ppb	43.4	346.68	0.0042	Pulse	0.1000	3
As	75	72	He	0.273	ppb	48.0	82.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.254	ppb	55.6	216.67	0.0033	Pulse	0.1000	3
Mo	98	115	He	0.055	ppb	134.4	100.00	0.0015	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	334.1	70.00	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.028	ppb	57.0	11.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.045	ppb	N/A	846.72	0.0128	Pulse	0.1000	3
Sb	121	115	He	-0.003	ppb	N/A	26.67	0.0004	Pulse	0.1000	3
Ba	137	115	He	0.113	ppb	79.5	40.00	0.0006	Pulse	0.1000	3
Tl	205	159	He	0.087	ppb	120.3	556.70	0.0021	Pulse	0.1000	3
Pb	208	159	He	0.014	ppb	97.7	273.34	0.0010	Pulse	0.1000	3
U	238	159	He	0.016	ppb	88.6	126.67	0.0005	Pulse	0.1000	3

ISTD Table:

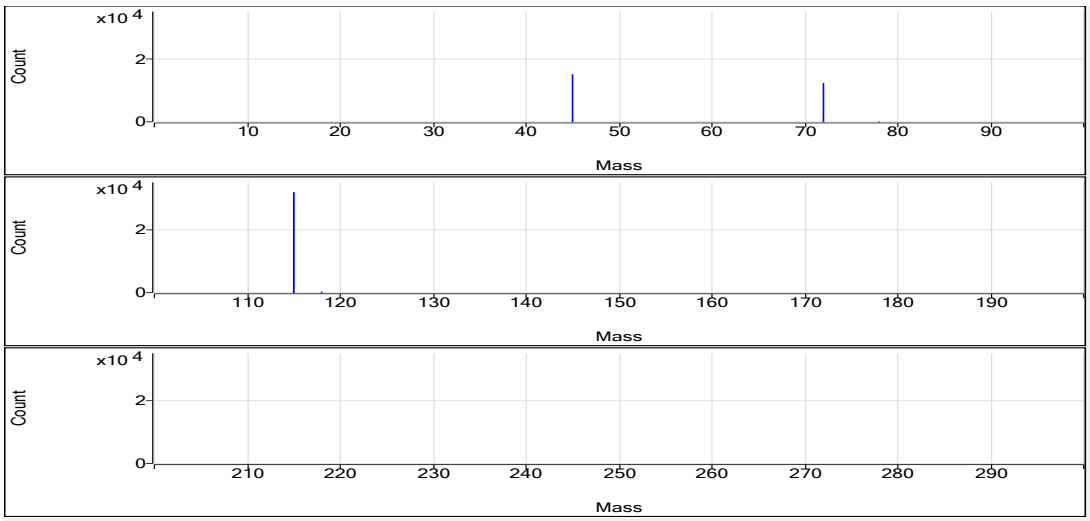
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2573653.30	3.4	112.2	Analog	0.1000	3
No Gas	Ge	72	1127809.10	3.5	108.5	Pulse	0.1000	3
H2	Sc	45	150921.37	1.9	108.5	Pulse	0.1000	3
H2	Ge	72	123154.11	2.7	104.3	Pulse	0.1000	3
H2	In	115	320531.32	1.8	108.8	Pulse	0.1000	3
He	Sc	45	50194.51	2.1	107.2	Pulse	0.1000	3
He	Ge	72	82499.03	1.9	107.9	Pulse	0.1000	3
He	In	115	66145.74	1.2	109.1	Pulse	0.1000	3
He	Tb	159	268062.98	1.7	111.2	Pulse	0.1000	3
He	Bi	209	187084.01	1.1	112.9	Pulse	0.1000	3

No Gas

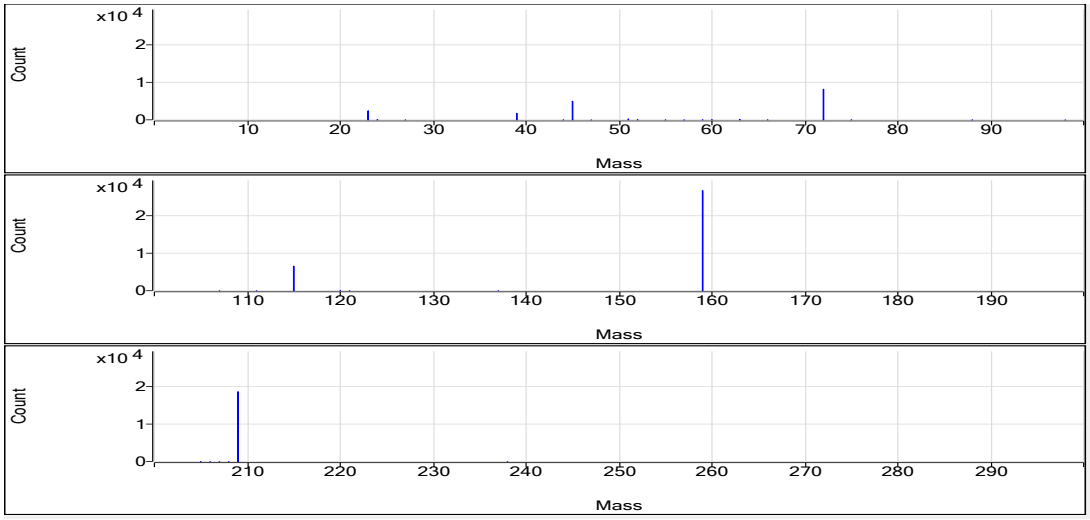


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.007	0	32.00	0.0004	9.309E-06
Be	9	1	No Gas	0.012	0	36.00	0.0004	9.309E-06
Be	9	1	No Gas	0.009	0	32.00	0.0004	9.309E-06
Se	78	2	H2	0.133	0.0001	8.00	0.0004	5.598E-06
Se	78	2	H2	0.124	0.0001	7.33	0.0004	5.598E-06
Se	78	2	H2	0.058	0	4.00	0.0004	5.598E-06
Na	23	3	He	3.006	0.4751	23356.59	0.0031	0.4657
Na	23	3	He	4.183	0.4787	24017.92	0.0031	0.4657
Na	23	3	He	8.883	0.4935	25289.75	0.0031	0.4657
Mg	24	3	He	6.675	0.0138	680.04	0.0015	0.003704
Mg	24	3	He	7.018	0.0144	720.04	0.0015	0.003704
Mg	24	3	He	20.064	0.0341	1750.16	0.0015	0.003704
Al	27	3	He	0.21	0.0008	40.00	0.0005	0.0007154
Al	27	3	He	2.309	0.0018	90.00	0.0005	0.0007154
Al	27	3	He	3.899	0.0025	130.00	0.0005	0.0007154
K	39	3	He	-14.965	0.4134	20323.09	0.0011	0.4296
K	39	3	He	-78.947	0.3438	17249.44	0.0011	0.4296
K	39	3	He	-100.728	0.3202	16408.62	0.0011	0.4296
Ca	44	3	He	15.213	0.0039	190.01	0.0001	0.002924
Ca	44	3	He	10.739	0.0036	180.01	0.0001	0.002924
Ca	44	3	He	94.734	0.0088	450.03	0.0001	0.002924
Ti	47	3	He	1.68	0.0008	40.00	0.0005	0
Ti	47	3	He	0.823	0.0004	20.00	0.0005	0
Ti	47	3	He	2.417	0.0012	60.00	0.0005	0
V	51	3	He	-0.033	0.0089	436.01	0.021	0.009571
V	51	3	He	-0.032	0.0089	446.01	0.021	0.009571
V	51	3	He	0.207	0.0139	714.02	0.021	0.009571
Cr	52	3	He	-0.079	0.0155	760.04	0.0267	0.01758
Cr	52	3	He	0.021	0.0181	910.05	0.0267	0.01758
Cr	52	3	He	0.277	0.025	1280.10	0.0267	0.01758
Mn	55	3	He	0.119	0.0055	270.01	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.22	0.0066	330.02	0.0108	0.004199
Mn	55	3	He	0.604	0.0107	550.03	0.0108	0.004199
Fe	57	3	He	0.116	0.0031	150.00	0.0005	0.002993
Fe	57	3	He	-0.403	0.0028	140.01	0.0005	0.002993
Fe	57	3	He	2.985	0.0045	230.01	0.0005	0.002993
Co	59	3	He	0.105	0.0085	420.02	0.0524	0.003063
Co	59	3	He	0.06	0.0062	310.01	0.0524	0.003063
Co	59	3	He	0.236	0.0154	790.05	0.0524	0.003063
Ni	60	3	He	0.111	0.0124	810.05	0.0109	0.01116
Ni	60	3	He	0.018	0.0114	750.05	0.0109	0.01116
Ni	60	3	He	0.344	0.0149	1000.06	0.0109	0.01116
Cu	63	3	He	0.093	0.0177	1430.10	0.0255	0.01531
Cu	63	3	He	0.135	0.0188	1550.13	0.0255	0.01531
Cu	63	3	He	0.381	0.025	2100.19	0.0255	0.01531
Zn	66	3	He	0.321	0.0037	300.02	0.0029	0.002787
Zn	66	3	He	0.419	0.004	330.01	0.0029	0.002787
Zn	66	3	He	0.728	0.0049	410.02	0.0029	0.002787
As	75	3	He	0.179	0.0008	64.00	0.0021	0.0004097
As	75	3	He	0.217	0.0009	72.00	0.0021	0.0004097
As	75	3	He	0.423	0.0013	110.00	0.0021	0.0004097
Sr	88	3	He	0.248	0.0032	210.01	0.0094	0.0008765
Sr	88	3	He	0.116	0.002	130.00	0.0094	0.0008765
Sr	88	3	He	0.398	0.0046	310.01	0.0094	0.0008765
Mo	98	3	He	-0.003	0.0002	10.00	0.023	0.0002199
Mo	98	3	He	0.03	0.0009	60.00	0.023	0.0002199
Mo	98	3	He	0.139	0.0034	230.01	0.023	0.0002199
Ag	107	3	He	-0.004	0.0006	40.00	0.0483	0.0008224
Ag	107	3	He	-0.004	0.0006	40.00	0.0483	0.0008224
Ag	107	3	He	0.023	0.0019	130.00	0.0483	0.0008224
Cd	111	3	He	0.019	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.019	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.046	0.0003	18.00	0.0053	2.193E-05
Sn	120	3	He	-0.124	0.0116	760.05	0.0148	0.01345
Sn	120	3	He	-0.039	0.0129	850.06	0.0148	0.01345
Sn	120	3	He	0.029	0.0139	930.06	0.0148	0.01345
Sb	121	3	He	0.001	0.0005	30.00	0.0143	0.0004392
Sb	121	3	He	-0.01	0.0003	20.00	0.0143	0.0004392
Sb	121	3	He	0.001	0.0004	30.00	0.0143	0.0004392
Ba	137	3	He	0.045	0.0003	20.00	0.0044	0.0001096
Ba	137	3	He	0.079	0.0005	30.00	0.0044	0.0001096
Ba	137	3	He	0.214	0.001	70.00	0.0044	0.0001096
Tl	205	3	He	0.037	0.001	270.01	0.0208	0.0002491
Tl	205	3	He	0.016	0.0006	160.01	0.0208	0.0002491
Tl	205	3	He	0.208	0.0046	1240.09	0.0208	0.0002491
Pb	208	3	He	0.002	0.0007	120.01	0.0272	0.0006218
Pb	208	3	He	0.011	0.0009	110.01	0.0272	0.0006218
Pb	208	3	He	0.03	0.0014	210.01	0.0272	0.0006218
U	238	3	He	0.009	0.0003	70.00	0.0275	2.763E-05
U	238	3	He	0.007	0.0002	60.00	0.0275	2.763E-05
U	238	3	He	0.033	0.0009	250.01	0.0275	2.763E-05
Sc	45	1	No Gas			2672999.34		
Sc	45	1	No Gas			2533953.40		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2514007.15		
Ge	72	1	No Gas			1168975.30		
Ge	72	1	No Gas			1123861.55		
Ge	72	1	No Gas			1090590.45		
Sc	45	2	H2			150819.47		
Sc	45	2	H2			148097.19		
Sc	45	2	H2			153847.44		
Ge	72	2	H2			122817.71		
Ge	72	2	H2			120058.32		
Ge	72	2	H2			126586.29		
In	115	2	H2			317429.55		
In	115	2	H2			316823.84		
In	115	2	H2			327340.58		
Sc	45	3	He			49164.71		
Sc	45	3	He			50168.01		
Sc	45	3	He			51250.82		
Ge	72	3	He			80853.56		
Ge	72	3	He			82653.02		
Ge	72	3	He			83990.52		
In	115	3	He			65437.70		
In	115	3	He			66011.44		
In	115	3	He			67005.85		
Tb	159	3	He			262761.07		
Tb	159	3	He			270397.26		
Tb	159	3	He			271030.60		
Bi	209	3	He			184665.56		
Bi	209	3	He			188115.90		
Bi	209	3	He			188470.56		

Quantitation Report

Data File Name	111_CCV.d
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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

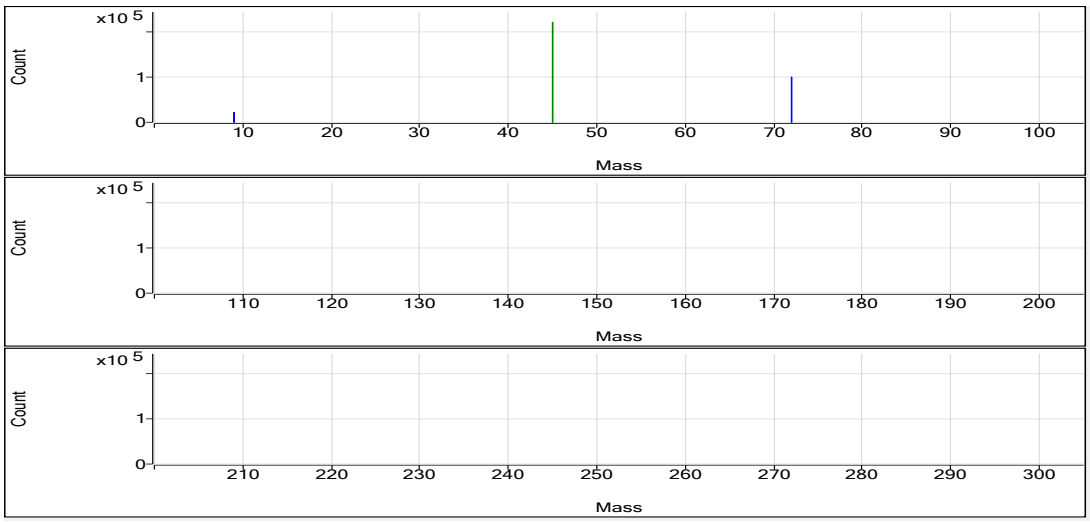
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.219	ppb	1.4	44543.76	0.0200	Pulse	0.5000	3
Se	78	72	H2	54.343	ppb	1.3	2586.43	0.0243	Pulse	1.5000	3
Na	23	45	He	5072.963	ppb	2.1	745916.11	16.3326	Pulse	0.1000	3
Mg	24	45	He	5067.089	ppb	2.0	351315.24	7.6924	Pulse	0.1000	3
Al	27	45	He	4919.785	ppb	2.5	104972.99	2.2986	Pulse	0.1000	3
K	39	45	He	5046.318	ppb	2.6	270082.85	5.9138	Pulse	0.1000	3
Ca	44	45	He	4991.442	ppb	1.8	14229.86	0.3115	Pulse	0.1000	3
Ti	47	45	He	5067.800	ppb	2.0	112105.02	2.4546	Pulse	0.1000	3
V	51	45	He	508.144	ppb	1.7	488929.57	10.7049	Pulse	0.5000	3
Cr	52	45	He	514.944	ppb	1.8	628369.69	13.7583	Pulse	0.1000	3
Mn	55	45	He	507.259	ppb	1.7	250846.15	5.4922	Pulse	0.1000	3
Fe	57	45	He	5155.184	ppb	2.8	118046.42	2.5850	Pulse	0.1000	3
Co	59	45	He	496.436	ppb	2.2	1187056.39	25.9921	Pulse	0.1000	3
Ni	60	115	He	525.676	ppb	1.3	336989.62	5.7588	Pulse	0.1000	3
Cu	63	72	He	505.764	ppb	1.9	950945.69	12.9012	Pulse	0.1000	3
Zn	66	72	He	527.202	ppb	2.0	112033.28	1.5198	Pulse	0.1000	3
As	75	72	He	524.785	ppb	1.8	82366.39	1.1174	Pulse	0.5000	3
Sr	88	115	He	50.765	ppb	1.0	28052.18	0.4794	Pulse	0.1000	3
Mo	98	115	He	51.448	ppb	1.0	69369.92	1.1855	Pulse	0.1000	3
Ag	107	115	He	52.612	ppb	0.6	148771.24	2.5422	Pulse	0.1000	3
Cd	111	115	He	51.179	ppb	1.9	15976.21	0.2730	Pulse	0.5000	3
Sn	120	115	He	51.808	ppb	0.9	45677.84	0.7806	Pulse	0.1000	3
Sb	121	115	He	51.269	ppb	2.1	42947.08	0.7340	Pulse	0.1000	3
Ba	137	115	He	515.849	ppb	1.7	131665.71	2.2500	Pulse	0.1000	3
Tl	205	159	He	51.552	ppb	1.3	248739.39	1.0718	Pulse	0.1000	3
Pb	208	159	He	51.582	ppb	1.2	325999.79	1.4047	Pulse	0.1000	3
U	238	159	He	51.480	ppb	2.0	328576.20	1.4159	Pulse	0.1000	3

ISTD Table:

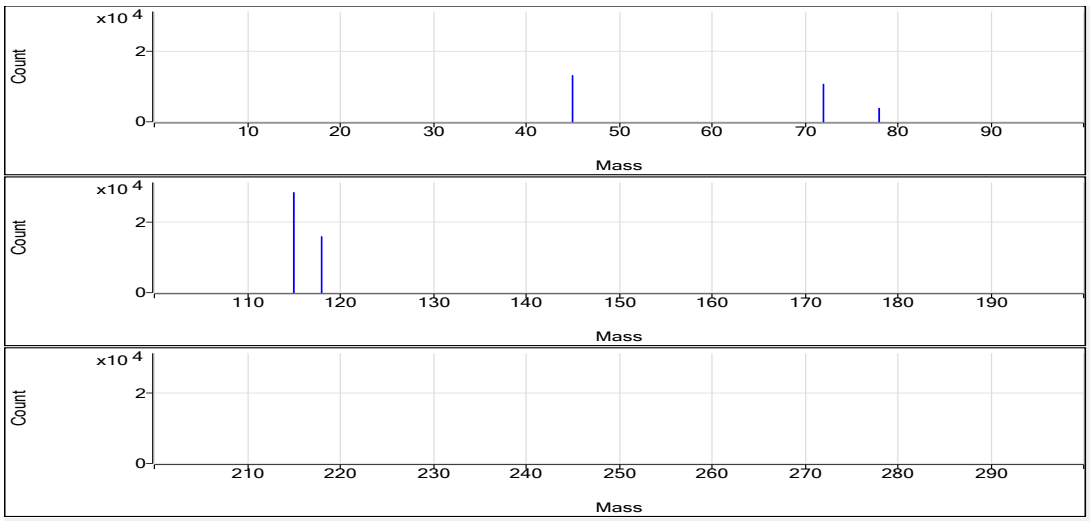
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2228072.78	0.8	97.1	Analog	0.1000	3
No Gas	Ge	72	1010223.71	0.4	97.2	Pulse	0.1000	3
H2	Sc	45	130482.91	2.6	93.8	Pulse	0.1000	3
H2	Ge	72	106397.63	0.9	90.1	Pulse	0.1000	3
H2	In	115	281992.95	0.7	95.7	Pulse	0.1000	3
He	Sc	45	45684.43	2.3	97.6	Pulse	0.1000	3
He	Ge	72	73729.27	2.1	96.4	Pulse	0.1000	3
He	In	115	58522.05	1.2	96.5	Pulse	0.1000	3
He	Tb	159	232104.01	1.5	96.2	Pulse	0.1000	3
He	Bi	209	160173.69	1.1	96.7	Pulse	0.1000	3

No Gas

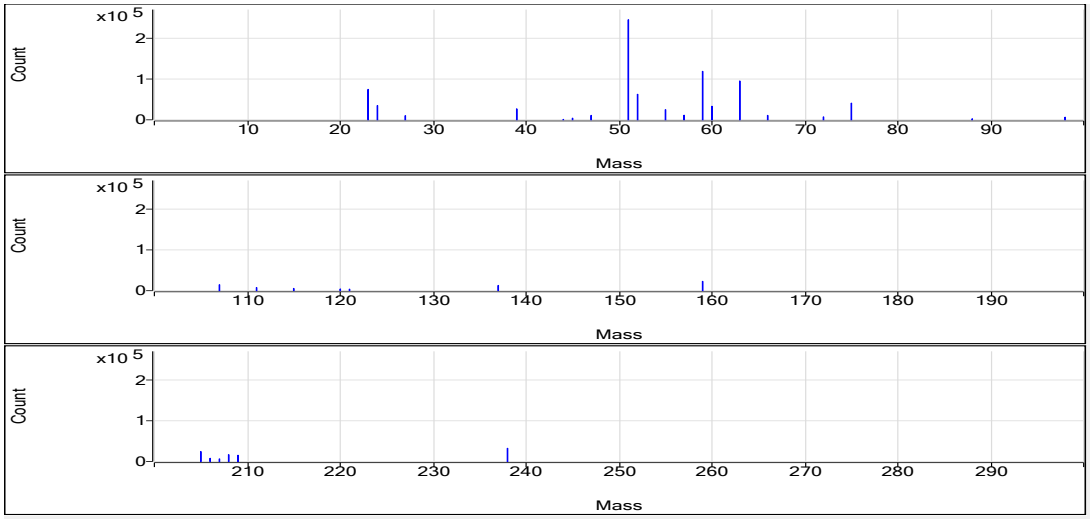


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.486	0.0197	43515.83	0.0004	9.309E-06
Be	9	1	No Gas	50.337	0.02	44722.84	0.0004	9.309E-06
Be	9	1	No Gas	50.835	0.0202	45392.62	0.0004	9.309E-06
Se	78	2	H2	53.558	0.024	2574.21	0.0004	5.598E-06
Se	78	2	H2	54.542	0.0244	2580.21	0.0004	5.598E-06
Se	78	2	H2	54.928	0.0246	2604.88	0.0004	5.598E-06
Na	23	3	He	4978.139	16.036	746104.83	0.0031	0.4657
Na	23	3	He	5188.84	16.695	743454.91	0.0031	0.4657
Na	23	3	He	5051.909	16.2668	748188.58	0.0031	0.4657
Mg	24	3	He	4989.683	7.5749	352436.36	0.0015	0.003704
Mg	24	3	He	5181.95	7.8666	350313.63	0.0015	0.003704
Mg	24	3	He	5029.633	7.6355	351195.74	0.0015	0.003704
Al	27	3	He	4793.101	2.2394	104194.47	0.0005	0.0007154
Al	27	3	He	5041.315	2.3554	104888.79	0.0005	0.0007154
Al	27	3	He	4924.939	2.301	105835.70	0.0005	0.0007154
K	39	3	He	5006.737	5.8708	273148.45	0.0011	0.4296
K	39	3	He	5192.695	6.0729	270433.84	0.0011	0.4296
K	39	3	He	4939.523	5.7977	266666.27	0.0011	0.4296
Ca	44	3	He	4898.657	0.3058	14226.56	0.0001	0.002924
Ca	44	3	He	4996.636	0.3118	13886.19	0.0001	0.002924
Ca	44	3	He	5079.034	0.3169	14576.84	0.0001	0.002924
Ti	47	3	He	5000.77	2.4222	112695.83	0.0005	0
Ti	47	3	He	5185.624	2.5117	111849.98	0.0005	0
Ti	47	3	He	5017.005	2.43	111769.25	0.0005	0
V	51	3	He	499.656	10.5263	489754.09	0.021	0.009571
V	51	3	He	516.708	10.8852	484733.94	0.021	0.009571
V	51	3	He	508.069	10.7034	492300.69	0.021	0.009571
Cr	52	3	He	507.112	13.5493	630404.68	0.0267	0.01758
Cr	52	3	He	525.021	14.0272	624650.19	0.0267	0.01758
Cr	52	3	He	512.698	13.6983	630054.21	0.0267	0.01758
Mn	55	3	He	498.472	5.3972	251113.41	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	516.094	5.5878	248833.98	0.0108	0.004199
Mn	55	3	He	507.21	5.4917	252591.05	0.0108	0.004199
Fe	57	3	He	5008.728	2.5117	116859.72	0.0005	0.002993
Fe	57	3	He	5301.028	2.6581	118367.62	0.0005	0.002993
Fe	57	3	He	5155.797	2.5853	118911.91	0.0005	0.002993
Co	59	3	He	485.633	25.4265	1183014.67	0.0524	0.003063
Co	59	3	He	507.269	26.5592	1182721.15	0.0524	0.003063
Co	59	3	He	496.406	25.9905	1195433.34	0.0524	0.003063
Ni	60	3	He	517.801	5.6727	336175.27	0.0109	0.01116
Ni	60	3	He	528.669	5.7916	334754.33	0.0109	0.01116
Ni	60	3	He	530.558	5.8122	340039.25	0.0109	0.01116
Cu	63	3	He	500.733	12.7731	951117.41	0.0255	0.01531
Cu	63	3	He	517.052	13.1888	949348.42	0.0255	0.01531
Cu	63	3	He	499.508	12.7418	952371.24	0.0255	0.01531
Zn	66	3	He	530.789	1.5302	113940.04	0.0029	0.002787
Zn	66	3	He	535.651	1.5442	111149.92	0.0029	0.002787
Zn	66	3	He	515.167	1.4852	111009.89	0.0029	0.002787
As	75	3	He	519.564	1.1063	82379.08	0.0021	0.0004097
As	75	3	He	535.776	1.1408	82117.65	0.0021	0.0004097
As	75	3	He	519.014	1.1051	82602.45	0.0021	0.0004097
Sr	88	3	He	50.205	0.4741	28095.68	0.0094	0.0008765
Sr	88	3	He	50.924	0.4809	27795.05	0.0094	0.0008765
Sr	88	3	He	51.164	0.4831	28265.82	0.0094	0.0008765
Mo	98	3	He	50.87	1.1722	69464.08	0.023	0.0002199
Mo	98	3	He	51.9	1.1959	69121.97	0.023	0.0002199
Mo	98	3	He	51.573	1.1884	69523.71	0.023	0.0002199
Ag	107	3	He	52.674	2.5452	150830.65	0.0483	0.0008224
Ag	107	3	He	52.897	2.5559	147732.23	0.0483	0.0008224
Ag	107	3	He	52.266	2.5255	147750.83	0.0483	0.0008224
Cd	111	3	He	50.864	0.2713	16080.30	0.0053	2.193E-05
Cd	111	3	He	52.28	0.2789	16120.36	0.0053	2.193E-05
Cd	111	3	He	50.393	0.2688	15727.98	0.0053	2.193E-05
Sn	120	3	He	51.639	0.7781	46108.93	0.0148	0.01345
Sn	120	3	He	52.335	0.7884	45567.63	0.0148	0.01345
Sn	120	3	He	51.451	0.7753	45356.96	0.0148	0.01345
Sb	121	3	He	50.046	0.7165	42459.15	0.0143	0.0004392
Sb	121	3	He	51.881	0.7427	42930.23	0.0143	0.0004392
Sb	121	3	He	51.88	0.7427	43451.85	0.0143	0.0004392
Ba	137	3	He	514.974	2.2462	133114.05	0.0044	0.0001096
Ba	137	3	He	525.274	2.2911	132428.48	0.0044	0.0001096
Ba	137	3	He	507.299	2.2127	129454.61	0.0044	0.0001096
Tl	205	3	He	51.484	1.0704	250083.94	0.0208	0.0002491
Tl	205	3	He	50.936	1.059	248379.43	0.0208	0.0002491
Tl	205	3	He	52.236	1.086	247754.80	0.0208	0.0002491
Pb	208	3	He	51.566	1.4042	172939.04	0.0272	0.0006218
Pb	208	3	He	50.978	1.3882	172043.06	0.0272	0.0006218
Pb	208	3	He	52.203	1.4216	171478.77	0.0272	0.0006218
U	238	3	He	51.062	1.4044	328127.10	0.0275	2.763E-05
U	238	3	He	50.731	1.3953	327261.11	0.0275	2.763E-05
U	238	3	He	52.647	1.448	330340.39	0.0275	2.763E-05
Sc	45	1	No Gas			2209063.56		
Sc	45	1	No Gas			2231949.03		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2243205.75		
Ge	72	1	No Gas			1008280.14		
Ge	72	1	No Gas			1007408.58		
Ge	72	1	No Gas			1014982.41		
Sc	45	2	H2			132804.58		
Sc	45	2	H2			126595.58		
Sc	45	2	H2			132048.56		
Ge	72	2	H2			107438.19		
Ge	72	2	H2			105746.76		
Ge	72	2	H2			106007.95		
In	115	2	H2			283957.44		
In	115	2	H2			279834.12		
In	115	2	H2			282187.28		
Sc	45	3	He			46526.82		
Sc	45	3	He			44531.50		
Sc	45	3	He			45994.96		
Ge	72	3	He			74462.82		
Ge	72	3	He			71981.27		
Ge	72	3	He			74743.72		
In	115	3	He			59584.35		
In	115	3	He			58119.28		
In	115	3	He			58821.75		
Tb	159	3	He			233637.87		
Tb	159	3	He			234541.72		
Tb	159	3	He			228132.44		
Bi	209	3	He			162166.44		
Bi	209	3	He			159687.70		
Bi	209	3	He			158666.93		

Quantitation Report

Data File Name	112_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 11:14:29 AM
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Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

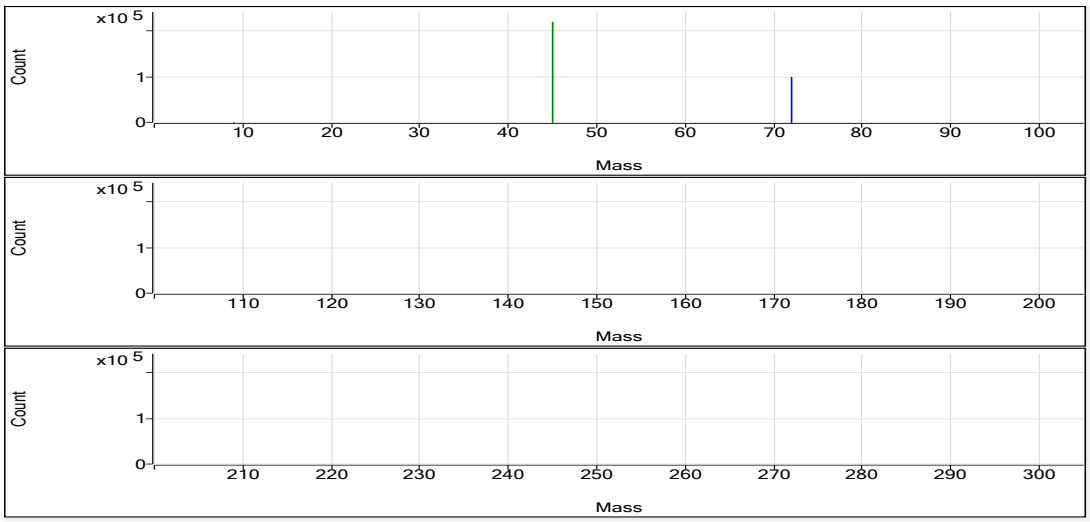
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.117	ppb	20.6	122.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.158	ppb	23.3	8.00	0.0001	Pulse	1.5000	3
Na	23	45	He	55.971	ppb	4.4	28625.10	0.6407	Pulse	0.1000	3
Mg	24	45	He	9.483	ppb	17.5	806.72	0.0181	Pulse	0.1000	3
Al	27	45	He	3.742	ppb	3.2	110.00	0.0025	Pulse	0.1000	3
K	39	45	He	-4.496	ppb	N/A	18938.06	0.4247	Pulse	0.1000	3
Ca	44	45	He	15.453	ppb	79.9	173.34	0.0039	Pulse	0.1000	3
Ti	47	45	He	4.474	ppb	36.3	96.67	0.0022	Pulse	0.1000	3
V	51	45	He	0.260	ppb	29.0	671.35	0.0151	Pulse	0.5000	3
Cr	52	45	He	0.259	ppb	36.2	1093.41	0.0245	Pulse	0.1000	3
Mn	55	45	He	0.539	ppb	29.7	446.68	0.0100	Pulse	0.1000	3
Fe	57	45	He	5.819	ppb	44.5	263.35	0.0059	Pulse	0.1000	3
Co	59	45	He	0.193	ppb	36.0	586.69	0.0132	Pulse	0.1000	3
Ni	60	115	He	0.627	ppb	37.1	1033.40	0.0180	Pulse	0.1000	3
Cu	63	72	He	0.230	ppb	31.5	1560.13	0.0212	Pulse	0.1000	3
Zn	66	72	He	0.982	ppb	19.9	413.35	0.0056	Pulse	0.1000	3
As	75	72	He	0.378	ppb	21.6	89.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.307	ppb	26.2	216.68	0.0038	Pulse	0.1000	3
Mo	98	115	He	0.061	ppb	8.3	93.33	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.006	ppb	179.8	63.33	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.024	ppb	40.0	8.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.095	ppb	23.7	853.39	0.0149	Pulse	0.1000	3
Sb	121	115	He	0.063	ppb	74.9	76.67	0.0013	Pulse	0.1000	3
Ba	137	115	He	0.240	ppb	90.0	66.67	0.0012	Pulse	0.1000	3
Tl	205	159	He	0.347	ppb	3.7	1710.16	0.0075	Pulse	0.1000	3
Pb	208	159	He	0.034	ppb	37.5	353.35	0.0015	Pulse	0.1000	3
U	238	159	He	0.021	ppb	52.2	140.01	0.0006	Pulse	0.1000	3

ISTD Table:

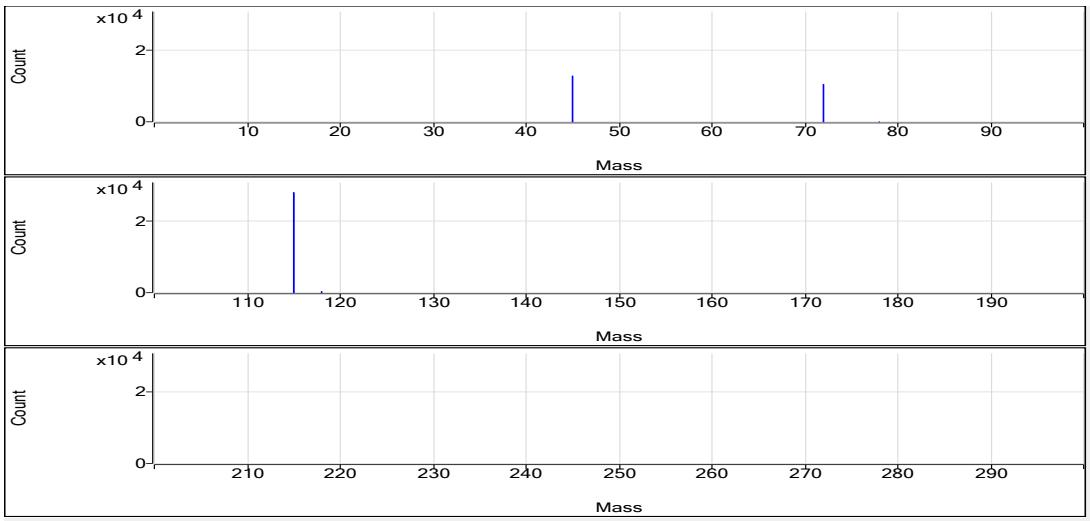
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2196805.75	0.3	95.8	Analog	0.1000	3
No Gas	Ge	72	992055.27	0.9	95.5	Pulse	0.1000	3
H2	Sc	45	128077.89	1.5	92.1	Pulse	0.1000	3
H2	Ge	72	104914.65	1.2	88.9	Pulse	0.1000	3
H2	In	115	279440.76	1.0	94.8	Pulse	0.1000	3
He	Sc	45	44667.98	2.2	95.4	Pulse	0.1000	3
He	Ge	72	73702.60	1.5	96.4	Pulse	0.1000	3
He	In	115	57400.03	1.2	94.7	Pulse	0.1000	3
He	Tb	159	229408.41	0.9	95.1	Pulse	0.1000	3
He	Bi	209	156803.54	1.2	94.6	Pulse	0.1000	3

No Gas

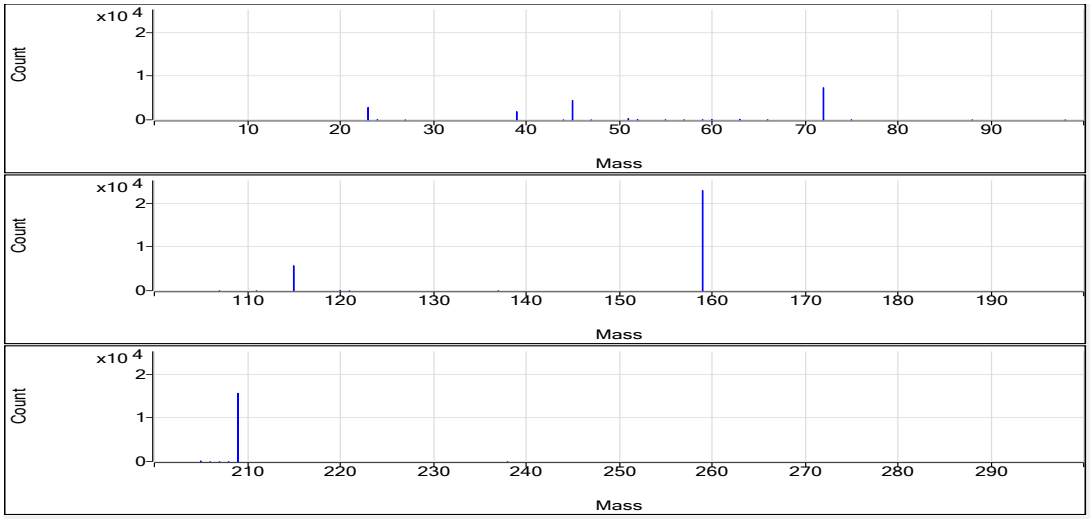


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.12	0.0001	126.00	0.0004	9.309E-06
Be	9	1	No Gas	0.139	0.0001	142.00	0.0004	9.309E-06
Be	9	1	No Gas	0.091	0	100.00	0.0004	9.309E-06
Se	78	2	H2	0.131	0.0001	6.67	0.0004	5.598E-06
Se	78	2	H2	0.2	0.0001	10.00	0.0004	5.598E-06
Se	78	2	H2	0.142	0.0001	7.33	0.0004	5.598E-06
Na	23	3	He	53.204	0.6321	27513.08	0.0031	0.4657
Na	23	3	He	56.687	0.643	29005.95	0.0031	0.4657
Na	23	3	He	58.021	0.6471	29356.28	0.0031	0.4657
Mg	24	3	He	11.035	0.0204	890.06	0.0015	0.003704
Mg	24	3	He	9.685	0.0184	830.05	0.0015	0.003704
Mg	24	3	He	7.729	0.0154	700.04	0.0015	0.003704
Al	27	3	He	3.879	0.0025	110.00	0.0005	0.0007154
Al	27	3	He	3.689	0.0024	110.00	0.0005	0.0007154
Al	27	3	He	3.66	0.0024	110.00	0.0005	0.0007154
K	39	3	He	49.105	0.483	21023.98	0.0011	0.4296
K	39	3	He	-17.968	0.4101	18500.80	0.0011	0.4296
K	39	3	He	-44.626	0.3811	17289.41	0.0011	0.4296
Ca	44	3	He	15.876	0.0039	170.01	0.0001	0.002924
Ca	44	3	He	2.901	0.0031	140.01	0.0001	0.002924
Ca	44	3	He	27.583	0.0046	210.01	0.0001	0.002924
Ti	47	3	He	4.743	0.0023	100.00	0.0005	0
Ti	47	3	He	5.949	0.0029	130.00	0.0005	0
Ti	47	3	He	2.731	0.0013	60.00	0.0005	0
V	51	3	He	0.346	0.0169	734.02	0.021	0.009571
V	51	3	He	0.23	0.0144	650.02	0.021	0.009571
V	51	3	He	0.205	0.0139	630.02	0.021	0.009571
Cr	52	3	He	0.314	0.026	1130.08	0.0267	0.01758
Cr	52	3	He	0.313	0.0259	1170.09	0.0267	0.01758
Cr	52	3	He	0.151	0.0216	980.07	0.0267	0.01758
Mn	55	3	He	0.716	0.0119	520.02	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.493	0.0095	430.02	0.0108	0.004199
Mn	55	3	He	0.407	0.0086	390.01	0.0108	0.004199
Fe	57	3	He	7.327	0.0067	290.01	0.0005	0.002993
Fe	57	3	He	7.303	0.0067	300.02	0.0005	0.002993
Fe	57	3	He	2.828	0.0044	200.01	0.0005	0.002993
Co	59	3	He	0.262	0.0168	730.04	0.0524	0.003063
Co	59	3	He	0.196	0.0133	600.02	0.0524	0.003063
Co	59	3	He	0.123	0.0095	430.02	0.0524	0.003063
Ni	60	3	He	0.512	0.0168	960.05	0.0109	0.01116
Ni	60	3	He	0.474	0.0163	950.06	0.0109	0.01116
Ni	60	3	He	0.895	0.0209	1190.09	0.0109	0.01116
Cu	63	3	He	0.233	0.0213	1540.13	0.0255	0.01531
Cu	63	3	He	0.301	0.023	1700.16	0.0255	0.01531
Cu	63	3	He	0.156	0.0193	1440.11	0.0255	0.01531
Zn	66	3	He	1.189	0.0062	450.02	0.0029	0.002787
Zn	66	3	He	0.958	0.0055	410.02	0.0029	0.002787
Zn	66	3	He	0.8	0.0051	380.02	0.0029	0.002787
As	75	3	He	0.469	0.0014	102.00	0.0021	0.0004097
As	75	3	He	0.354	0.0012	86.00	0.0021	0.0004097
As	75	3	He	0.311	0.0011	80.00	0.0021	0.0004097
Sr	88	3	He	0.259	0.0033	190.01	0.0094	0.0008765
Sr	88	3	He	0.4	0.0046	270.01	0.0094	0.0008765
Sr	88	3	He	0.262	0.0033	190.01	0.0094	0.0008765
Mo	98	3	He	0.059	0.0016	90.00	0.023	0.0002199
Mo	98	3	He	0.058	0.0015	90.00	0.023	0.0002199
Mo	98	3	He	0.067	0.0018	100.00	0.023	0.0002199
Ag	107	3	He	0.012	0.0014	80.00	0.0483	0.0008224
Ag	107	3	He	-0.006	0.0005	30.00	0.0483	0.0008224
Ag	107	3	He	0.012	0.0014	80.00	0.0483	0.0008224
Cd	111	3	He	0.016	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.035	0.0002	12.00	0.0053	2.193E-05
Cd	111	3	He	0.022	0.0001	8.00	0.0053	2.193E-05
Sn	120	3	He	0.07	0.0145	830.05	0.0148	0.01345
Sn	120	3	He	0.102	0.015	870.06	0.0148	0.01345
Sn	120	3	He	0.114	0.0151	860.05	0.0148	0.01345
Sb	121	3	He	0.03	0.0009	50.00	0.0143	0.0004392
Sb	121	3	He	0.041	0.001	60.00	0.0143	0.0004392
Sb	121	3	He	0.117	0.0021	120.01	0.0143	0.0004392
Ba	137	3	He	0.095	0.0005	30.00	0.0044	0.0001096
Ba	137	3	He	0.488	0.0022	130.00	0.0044	0.0001096
Ba	137	3	He	0.136	0.0007	40.00	0.0044	0.0001096
Tl	205	3	He	0.354	0.0076	1730.16	0.0208	0.0002491
Tl	205	3	He	0.354	0.0076	1750.16	0.0208	0.0002491
Tl	205	3	He	0.332	0.0071	1650.15	0.0208	0.0002491
Pb	208	3	He	0.048	0.0019	210.01	0.0272	0.0006218
Pb	208	3	He	0.028	0.0014	200.01	0.0272	0.0006218
Pb	208	3	He	0.025	0.0013	150.01	0.0272	0.0006218
U	238	3	He	0.028	0.0008	180.01	0.0275	2.763E-05
U	238	3	He	0.027	0.0008	180.01	0.0275	2.763E-05
U	238	3	He	0.008	0.0003	60.00	0.0275	2.763E-05
Sc	45	1	No Gas			2203056.53		
Sc	45	1	No Gas			2196369.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2190991.37		
Ge	72	1	No Gas			999128.34		
Ge	72	1	No Gas			995162.72		
Ge	72	1	No Gas			981874.75		
Sc	45	2	H2			125882.42		
Sc	45	2	H2			129094.87		
Sc	45	2	H2			129256.38		
Ge	72	2	H2			103572.08		
Ge	72	2	H2			105253.41		
Ge	72	2	H2			105918.46		
In	115	2	H2			282349.80		
In	115	2	H2			276801.58		
In	115	2	H2			279170.91		
Sc	45	3	He			43528.21		
Sc	45	3	He			45112.55		
Sc	45	3	He			45363.18		
Ge	72	3	He			72473.76		
Ge	72	3	He			73970.40		
Ge	72	3	He			74663.65		
In	115	3	He			57275.74		
In	115	3	He			58128.59		
In	115	3	He			56813.69		
Tb	159	3	He			227199.82		
Tb	159	3	He			230032.16		
Tb	159	3	He			230993.24		
Bi	209	3	He			154804.53		
Bi	209	3	He			157089.54		
Bi	209	3	He			158516.56		

Quantitation Report

Data File Name	119_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 11:28:36 AM
Sample Name	CCV 6148199
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

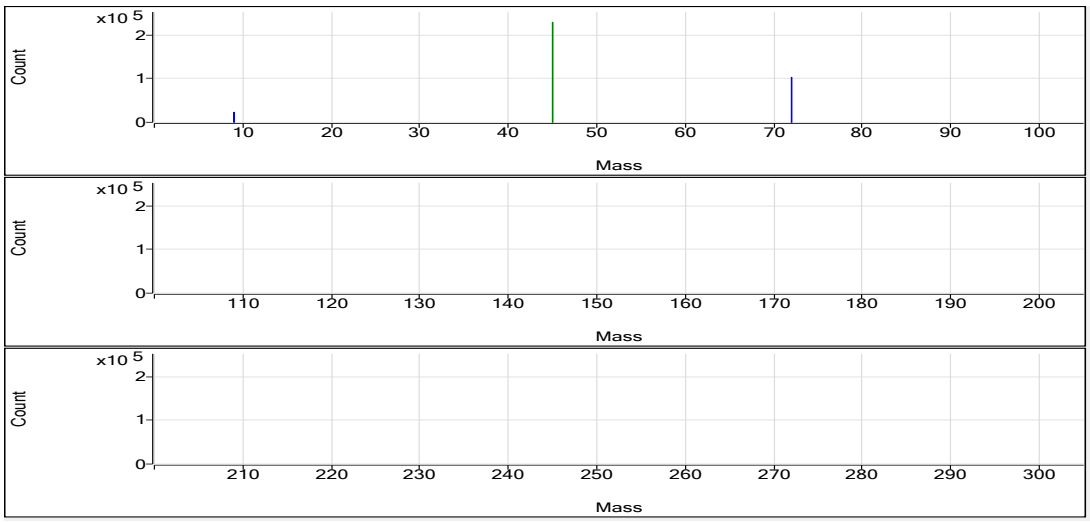
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.287	ppb	1.6	46854.60	0.0204	Pulse	0.5000	3
Se	78	72	H2	53.261	ppb	1.3	2736.68	0.0238	Pulse	1.5000	3
Na	23	45	He	5041.589	ppb	2.4	734049.94	16.2345	Pulse	0.1000	3
Mg	24	45	He	5150.133	ppb	3.8	353422.47	7.8184	Pulse	0.1000	3
Al	27	45	He	5112.365	ppb	2.0	108006.29	2.3886	Pulse	0.1000	3
K	39	45	He	5172.877	ppb	2.2	273629.07	6.0513	Pulse	0.1000	3
Ca	44	45	He	5172.936	ppb	4.7	14586.80	0.3227	Pulse	0.1000	3
Ti	47	45	He	5133.715	ppb	1.6	112444.31	2.4866	Pulse	0.1000	3
V	51	45	He	518.204	ppb	2.5	493590.62	10.9167	Pulse	0.5000	3
Cr	52	45	He	518.185	ppb	2.7	625956.20	13.8447	Pulse	0.1000	3
Mn	55	45	He	519.114	ppb	3.7	254075.52	5.6205	Pulse	0.1000	3
Fe	57	45	He	5258.782	ppb	2.6	119228.20	2.6369	Pulse	0.1000	3
Co	59	45	He	505.129	ppb	2.2	1195847.69	26.4472	Pulse	0.1000	3
Ni	60	115	He	517.594	ppb	1.0	338415.06	5.6705	Pulse	0.1000	3
Cu	63	72	He	498.705	ppb	0.9	962055.66	12.7214	Pulse	0.1000	3
Zn	66	72	He	521.736	ppb	1.5	113748.75	1.5041	Pulse	0.1000	3
As	75	72	He	521.028	ppb	0.5	83903.70	1.1094	Pulse	0.5000	3
Sr	88	115	He	51.538	ppb	2.6	29047.12	0.4867	Pulse	0.1000	3
Mo	98	115	He	51.467	ppb	0.8	70775.87	1.1859	Pulse	0.1000	3
Ag	107	115	He	51.907	ppb	0.6	149693.01	2.5081	Pulse	0.1000	3
Cd	111	115	He	52.307	ppb	0.4	16654.23	0.2790	Pulse	0.5000	3
Sn	120	115	He	51.949	ppb	2.0	46704.20	0.7827	Pulse	0.1000	3
Sb	121	115	He	52.371	ppb	1.1	44745.19	0.7497	Pulse	0.1000	3
Ba	137	115	He	520.070	ppb	0.6	135386.99	2.2684	Pulse	0.1000	3
Tl	205	159	He	51.928	ppb	1.0	260538.32	1.0796	Pulse	0.1000	3
Pb	208	159	He	51.463	ppb	0.6	338210.79	1.4014	Pulse	0.1000	3
U	238	159	He	52.356	ppb	0.5	347519.42	1.4400	Pulse	0.1000	3

ISTD Table:

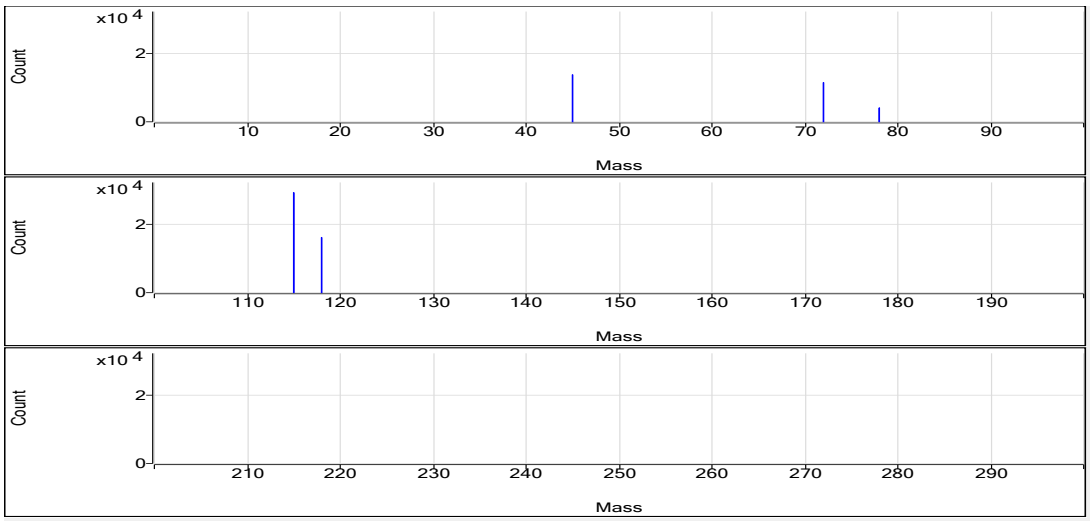
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2295163.51	0.4	100.1	Analog	0.1000	3
No Gas	Ge	72	1033702.74	0.3	99.5	Pulse	0.1000	3
H2	Sc	45	137738.33	0.7	99.1	Pulse	0.1000	3
H2	Ge	72	114862.06	0.6	97.3	Pulse	0.1000	3
H2	In	115	292569.21	0.5	99.3	Pulse	0.1000	3
He	Sc	45	45233.15	2.5	96.6	Pulse	0.1000	3
He	Ge	72	75628.11	0.6	98.9	Pulse	0.1000	3
He	In	115	59685.86	1.5	98.4	Pulse	0.1000	3
He	Tb	159	241333.09	0.6	100.1	Pulse	0.1000	3
He	Bi	209	167395.37	1.0	101.0	Pulse	0.1000	3

No Gas

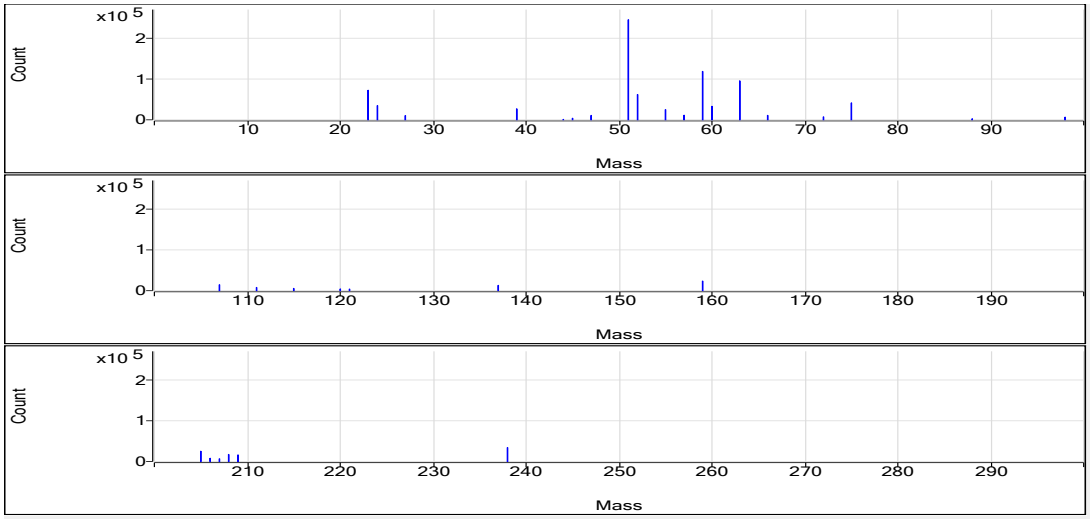


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.353	0.02	46202.82	0.0004	9.309E-06
Be	9	1	No Gas	51.521	0.0205	46978.92	0.0004	9.309E-06
Be	9	1	No Gas	51.986	0.0207	47382.05	0.0004	9.309E-06
Se	78	2	H2	53.643	0.024	2754.91	0.0004	5.598E-06
Se	78	2	H2	53.651	0.024	2742.24	0.0004	5.598E-06
Se	78	2	H2	52.489	0.0235	2712.90	0.0004	5.598E-06
Na	23	3	He	4905.443	15.8086	735841.79	0.0031	0.4657
Na	23	3	He	5130.133	16.5114	733453.90	0.0031	0.4657
Na	23	3	He	5089.192	16.3834	732854.13	0.0031	0.4657
Mg	24	3	He	4926.06	7.4784	348094.14	0.0015	0.003704
Mg	24	3	He	5285.466	8.0237	356421.83	0.0015	0.003704
Mg	24	3	He	5238.873	7.953	355751.44	0.0015	0.003704
Al	27	3	He	4999.43	2.3358	108725.01	0.0005	0.0007154
Al	27	3	He	5201.84	2.4304	107959.14	0.0005	0.0007154
Al	27	3	He	5135.825	2.3995	107334.72	0.0005	0.0007154
K	39	3	He	5050.836	5.9187	275496.60	0.0011	0.4296
K	39	3	He	5273.539	6.1607	273665.70	0.0011	0.4296
K	39	3	He	5194.255	6.0746	271724.92	0.0011	0.4296
Ca	44	3	He	4910.415	0.3065	14266.51	0.0001	0.002924
Ca	44	3	He	5388.204	0.336	14927.07	0.0001	0.002924
Ca	44	3	He	5220.19	0.3256	14566.81	0.0001	0.002924
Ti	47	3	He	5039.28	2.4408	113612.46	0.0005	0
Ti	47	3	He	5194.301	2.5159	111759.18	0.0005	0
Ti	47	3	He	5167.563	2.503	111961.29	0.0005	0
V	51	3	He	503.541	10.6081	493771.16	0.021	0.009571
V	51	3	He	526.719	11.0959	492891.53	0.021	0.009571
V	51	3	He	524.352	11.0461	494109.16	0.021	0.009571
Cr	52	3	He	502.105	13.4156	624455.69	0.0267	0.01758
Cr	52	3	He	527.195	14.0851	625676.51	0.0267	0.01758
Cr	52	3	He	525.255	14.0334	627736.40	0.0267	0.01758
Mn	55	3	He	497.204	5.3834	250582.32	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	531.304	5.7524	255526.56	0.0108	0.004199
Mn	55	3	He	528.834	5.7257	256117.67	0.0108	0.004199
Fe	57	3	He	5126.616	2.5707	119658.32	0.0005	0.002993
Fe	57	3	He	5399.377	2.7073	120262.09	0.0005	0.002993
Fe	57	3	He	5250.353	2.6327	117764.20	0.0005	0.002993
Co	59	3	He	492.856	25.8046	1201123.73	0.0524	0.003063
Co	59	3	He	514.823	26.9547	1197354.04	0.0524	0.003063
Co	59	3	He	507.709	26.5822	1189065.29	0.0524	0.003063
Ni	60	3	He	516.488	5.6584	338034.21	0.0109	0.01116
Ni	60	3	He	513.284	5.6233	340459.76	0.0109	0.01116
Ni	60	3	He	523.009	5.7297	336751.21	0.0109	0.01116
Cu	63	3	He	504.091	12.8586	965357.49	0.0255	0.01531
Cu	63	3	He	496.328	12.6608	962220.92	0.0255	0.01531
Cu	63	3	He	495.695	12.6447	958588.58	0.0255	0.01531
Zn	66	3	He	528.27	1.5229	114332.43	0.0029	0.002787
Zn	66	3	He	524.178	1.5111	114846.24	0.0029	0.002787
Zn	66	3	He	512.759	1.4783	112067.59	0.0029	0.002787
As	75	3	He	520.812	1.109	83255.66	0.0021	0.0004097
As	75	3	He	518.56	1.1042	83917.23	0.0021	0.0004097
As	75	3	He	523.711	1.1151	84538.20	0.0021	0.0004097
Sr	88	3	He	53.092	0.5013	29948.68	0.0094	0.0008765
Sr	88	3	He	50.684	0.4786	28977.23	0.0094	0.0008765
Sr	88	3	He	50.839	0.4801	28215.46	0.0094	0.0008765
Mo	98	3	He	51.323	1.1826	70648.82	0.023	0.0002199
Mo	98	3	He	51.16	1.1788	71371.41	0.023	0.0002199
Mo	98	3	He	51.916	1.1962	70307.37	0.023	0.0002199
Ag	107	3	He	52.234	2.5239	150779.57	0.0483	0.0008224
Ag	107	3	He	51.561	2.4914	150839.87	0.0483	0.0008224
Ag	107	3	He	51.925	2.509	147459.58	0.0483	0.0008224
Cd	111	3	He	52.247	0.2787	16650.89	0.0053	2.193E-05
Cd	111	3	He	52.13	0.2781	16837.09	0.0053	2.193E-05
Cd	111	3	He	52.545	0.2803	16474.72	0.0053	2.193E-05
Sn	120	3	He	51.728	0.7794	46560.40	0.0148	0.01345
Sn	120	3	He	51.018	0.7689	46550.60	0.0148	0.01345
Sn	120	3	He	53.101	0.7997	47001.60	0.0148	0.01345
Sb	121	3	He	51.873	0.7426	44364.45	0.0143	0.0004392
Sb	121	3	He	52.226	0.7477	45266.48	0.0143	0.0004392
Sb	121	3	He	53.013	0.7589	44604.65	0.0143	0.0004392
Ba	137	3	He	521.998	2.2768	136019.85	0.0044	0.0001096
Ba	137	3	He	516.407	2.2525	136372.91	0.0044	0.0001096
Ba	137	3	He	521.805	2.276	133768.21	0.0044	0.0001096
Tl	205	3	He	52.142	1.0841	260660.68	0.0208	0.0002491
Tl	205	3	He	51.329	1.0672	259233.61	0.0208	0.0002491
Tl	205	3	He	52.314	1.0876	261720.68	0.0208	0.0002491
Pb	208	3	He	51.261	1.396	177906.01	0.0272	0.0006218
Pb	208	3	He	51.294	1.3968	179460.78	0.0272	0.0006218
Pb	208	3	He	51.832	1.4115	177681.72	0.0272	0.0006218
U	238	3	He	52.224	1.4364	345377.30	0.0275	2.763E-05
U	238	3	He	52.183	1.4353	348655.93	0.0275	2.763E-05
U	238	3	He	52.66	1.4484	348525.03	0.0275	2.763E-05
Sc	45	1	No Gas			2305085.28		
Sc	45	1	No Gas			2290709.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2289695.59		
Ge	72	1	No Gas			1029713.97		
Ge	72	1	No Gas			1035049.59		
Ge	72	1	No Gas			1036344.67		
Sc	45	2	H2			137068.80		
Sc	45	2	H2			137282.16		
Sc	45	2	H2			138864.02		
Ge	72	2	H2			114798.55		
Ge	72	2	H2			114254.47		
Ge	72	2	H2			115533.17		
In	115	2	H2			291167.89		
In	115	2	H2			292390.17		
In	115	2	H2			294149.57		
Sc	45	3	He			46546.81		
Sc	45	3	He			44421.02		
Sc	45	3	He			44731.61		
Ge	72	3	He			75074.87		
Ge	72	3	He			75999.94		
Ge	72	3	He			75809.53		
In	115	3	He			60066.36		
In	115	3	He			60869.79		
In	115	3	He			59102.20		
Tb	159	3	He			240447.44		
Tb	159	3	He			242919.82		
Tb	159	3	He			240632.01		
Bi	209	3	He			167948.18		
Bi	209	3	He			168677.20		
Bi	209	3	He			165560.74		

Quantitation Report

Data File Name	120_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 11:30:36 AM
Sample Name	CCB 6148203
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

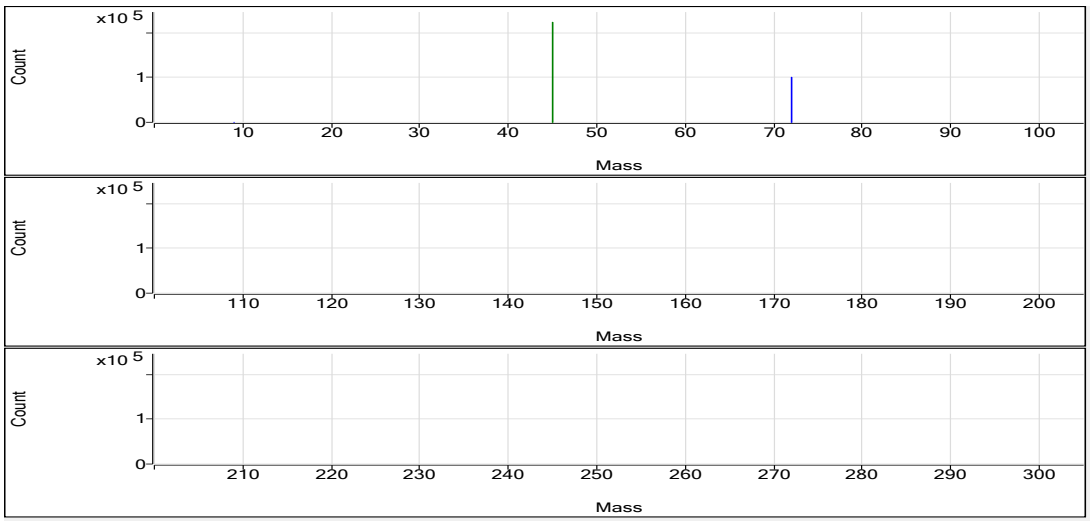
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.061	ppb	8.2	75.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.117	ppb	21.9	6.67	0.0001	Pulse	1.5000	3
Na	23	45	He	27.804	ppb	30.6	25042.75	0.5526	Pulse	0.1000	3
Mg	24	45	He	7.599	ppb	19.4	690.03	0.0152	Pulse	0.1000	3
Al	27	45	He	3.033	ppb	8.0	96.67	0.0021	Pulse	0.1000	3
K	39	45	He	-5.337	ppb	N/A	19211.89	0.4238	Pulse	0.1000	3
Ca	44	45	He	25.198	ppb	40.7	203.34	0.0045	Pulse	0.1000	3
Ti	47	45	He	2.579	ppb	26.7	56.67	0.0012	Pulse	0.1000	3
V	51	45	He	0.261	ppb	21.1	682.69	0.0151	Pulse	0.5000	3
Cr	52	45	He	0.077	ppb	58.3	890.06	0.0196	Pulse	0.1000	3
Mn	55	45	He	0.306	ppb	42.5	340.02	0.0075	Pulse	0.1000	3
Fe	57	45	He	7.394	ppb	16.7	303.34	0.0067	Pulse	0.1000	3
Co	59	45	He	0.218	ppb	23.9	656.70	0.0145	Pulse	0.1000	3
Ni	60	115	He	0.166	ppb	66.0	786.71	0.0130	Pulse	0.1000	3
Cu	63	72	He	0.272	ppb	27.3	1673.47	0.0223	Pulse	0.1000	3
Zn	66	72	He	0.571	ppb	24.0	333.35	0.0044	Pulse	0.1000	3
As	75	72	He	0.315	ppb	7.2	81.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.211	ppb	47.2	173.34	0.0029	Pulse	0.1000	3
Mo	98	115	He	0.041	ppb	34.6	70.00	0.0012	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	86.8	63.33	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.014	ppb	44.0	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.098	ppb	38.1	903.39	0.0149	Pulse	0.1000	3
Sb	121	115	He	0.073	ppb	30.7	90.00	0.0015	Pulse	0.1000	3
Ba	137	115	He	0.190	ppb	51.4	56.67	0.0009	Pulse	0.1000	3
Tl	205	159	He	0.339	ppb	9.6	1740.16	0.0073	Pulse	0.1000	3
Pb	208	159	He	0.039	ppb	30.3	403.35	0.0017	Pulse	0.1000	3
U	238	159	He	0.028	ppb	13.9	190.01	0.0008	Pulse	0.1000	3

ISTD Table:

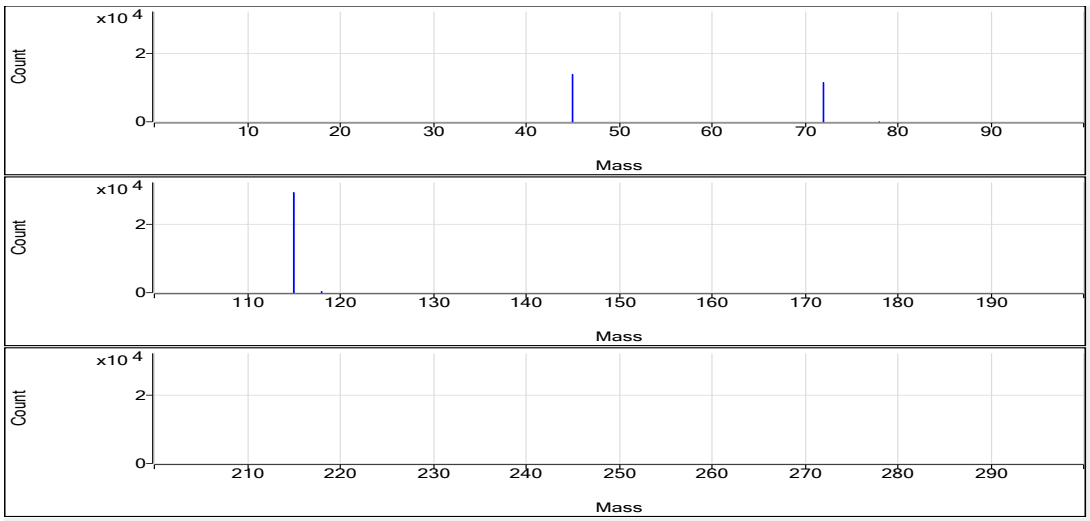
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2236856.48	0.6	97.5	Analog	0.1000	3
No Gas	Ge	72	1009009.78	0.1	97.1	Pulse	0.1000	3
H2	Sc	45	138545.42	0.9	99.6	Pulse	0.1000	3
H2	Ge	72	114797.86	0.3	97.2	Pulse	0.1000	3
H2	In	115	292183.11	1.3	99.2	Pulse	0.1000	3
He	Sc	45	45329.90	1.0	96.8	Pulse	0.1000	3
He	Ge	72	75233.18	1.2	98.4	Pulse	0.1000	3
He	In	115	60635.75	1.2	100.0	Pulse	0.1000	3
He	Tb	159	238721.04	0.6	99.0	Pulse	0.1000	3
He	Bi	209	166237.43	0.2	100.3	Pulse	0.1000	3

No Gas

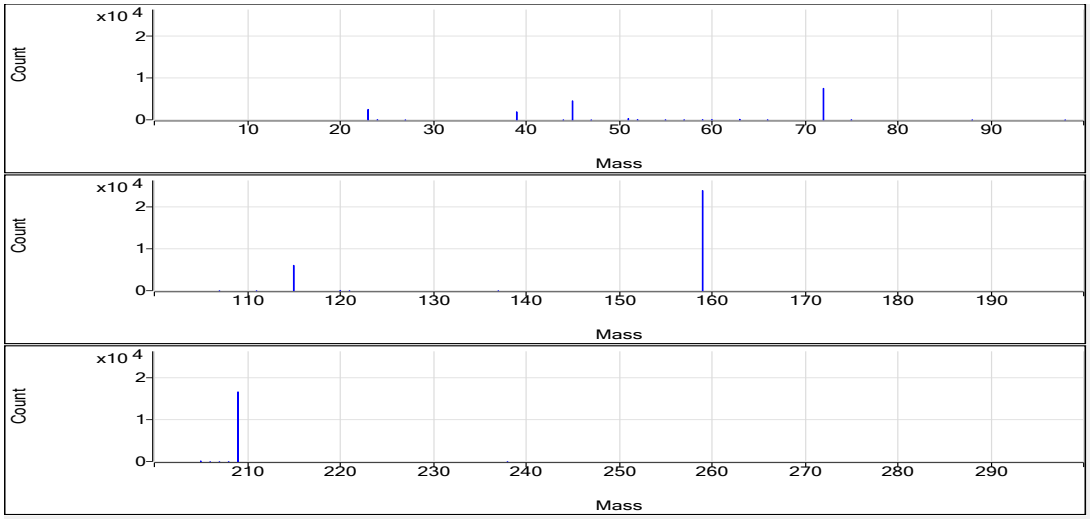


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.059	0	74.00	0.0004	9.309E-06
Be	9	1	No Gas	0.058	0	72.00	0.0004	9.309E-06
Be	9	1	No Gas	0.067	0	80.00	0.0004	9.309E-06
Se	78	2	H2	0.143	0.0001	8.00	0.0004	5.598E-06
Se	78	2	H2	0.118	0.0001	6.67	0.0004	5.598E-06
Se	78	2	H2	0.091	0	5.33	0.0004	5.598E-06
Na	23	3	He	31.611	0.5645	25530.14	0.0031	0.4657
Na	23	3	He	18.062	0.5222	23927.75	0.0031	0.4657
Na	23	3	He	33.738	0.5712	25670.36	0.0031	0.4657
Mg	24	3	He	6.886	0.0142	640.03	0.0015	0.003704
Mg	24	3	He	6.62	0.0137	630.03	0.0015	0.003704
Mg	24	3	He	9.291	0.0178	800.04	0.0015	0.003704
Al	27	3	He	3.203	0.0022	100.00	0.0005	0.0007154
Al	27	3	He	3.14	0.0022	100.00	0.0005	0.0007154
Al	27	3	He	2.756	0.002	90.00	0.0005	0.0007154
K	39	3	He	61.174	0.4961	22435.74	0.0011	0.4296
K	39	3	He	-27.447	0.3998	18320.83	0.0011	0.4296
K	39	3	He	-49.739	0.3756	16879.09	0.0011	0.4296
Ca	44	3	He	27.815	0.0046	210.01	0.0001	0.002924
Ca	44	3	He	33.889	0.005	230.01	0.0001	0.002924
Ca	44	3	He	13.889	0.0038	170.01	0.0001	0.002924
Ti	47	3	He	3.196	0.0015	70.00	0.0005	0
Ti	47	3	He	2.703	0.0013	60.00	0.0005	0
Ti	47	3	He	1.838	0.0009	40.00	0.0005	0
V	51	3	He	0.302	0.0159	720.02	0.021	0.009571
V	51	3	He	0.198	0.0137	630.02	0.021	0.009571
V	51	3	He	0.283	0.0155	698.02	0.021	0.009571
Cr	52	3	He	0.129	0.021	950.06	0.0267	0.01758
Cr	52	3	He	0.045	0.0188	860.06	0.0267	0.01758
Cr	52	3	He	0.058	0.0191	860.05	0.0267	0.01758
Mn	55	3	He	0.246	0.0069	310.02	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.217	0.0065	300.01	0.0108	0.004199
Mn	55	3	He	0.455	0.0091	410.02	0.0108	0.004199
Fe	57	3	He	7.27	0.0066	300.01	0.0005	0.002993
Fe	57	3	He	6.225	0.0061	280.01	0.0005	0.002993
Fe	57	3	He	8.686	0.0073	330.01	0.0005	0.002993
Co	59	3	He	0.254	0.0164	740.04	0.0524	0.003063
Co	59	3	He	0.242	0.0157	720.04	0.0524	0.003063
Co	59	3	He	0.158	0.0113	510.03	0.0524	0.003063
Ni	60	3	He	0.293	0.0144	860.05	0.0109	0.01116
Ni	60	3	He	0.099	0.0122	750.04	0.0109	0.01116
Ni	60	3	He	0.107	0.0123	750.05	0.0109	0.01116
Cu	63	3	He	0.31	0.0232	1720.14	0.0255	0.01531
Cu	63	3	He	0.321	0.0235	1780.16	0.0255	0.01531
Cu	63	3	He	0.187	0.0201	1520.11	0.0255	0.01531
Zn	66	3	He	0.484	0.0042	310.01	0.0029	0.002787
Zn	66	3	He	0.499	0.0042	320.01	0.0029	0.002787
Zn	66	3	He	0.729	0.0049	370.02	0.0029	0.002787
As	75	3	He	0.289	0.001	76.00	0.0021	0.0004097
As	75	3	He	0.328	0.0011	84.00	0.0021	0.0004097
As	75	3	He	0.328	0.0011	84.00	0.0021	0.0004097
Sr	88	3	He	0.315	0.0038	230.01	0.0094	0.0008765
Sr	88	3	He	0.201	0.0028	170.01	0.0094	0.0008765
Sr	88	3	He	0.116	0.002	120.00	0.0094	0.0008765
Mo	98	3	He	0.041	0.0012	70.00	0.023	0.0002199
Mo	98	3	He	0.054	0.0015	90.00	0.023	0.0002199
Mo	98	3	He	0.026	0.0008	50.00	0.023	0.0002199
Ag	107	3	He	0.007	0.0012	70.00	0.0483	0.0008224
Ag	107	3	He	0.007	0.0011	70.00	0.0483	0.0008224
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Cd	111	3	He	0.021	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.014	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Sn	120	3	He	0.096	0.0149	890.05	0.0148	0.01345
Sn	120	3	He	0.062	0.0144	880.05	0.0148	0.01345
Sn	120	3	He	0.136	0.0155	940.06	0.0148	0.01345
Sb	121	3	He	0.051	0.0012	70.00	0.0143	0.0004392
Sb	121	3	He	0.072	0.0015	90.00	0.0143	0.0004392
Sb	121	3	He	0.096	0.0018	110.00	0.0143	0.0004392
Ba	137	3	He	0.281	0.0013	80.00	0.0044	0.0001096
Ba	137	3	He	0.087	0.0005	30.00	0.0044	0.0001096
Ba	137	3	He	0.201	0.001	60.00	0.0044	0.0001096
Tl	205	3	He	0.365	0.0078	1860.18	0.0208	0.0002491
Tl	205	3	He	0.303	0.0065	1570.14	0.0208	0.0002491
Tl	205	3	He	0.349	0.0075	1790.17	0.0208	0.0002491
Pb	208	3	He	0.05	0.002	320.01	0.0272	0.0006218
Pb	208	3	He	0.041	0.0017	200.01	0.0272	0.0006218
Pb	208	3	He	0.026	0.0013	160.01	0.0272	0.0006218
U	238	3	He	0.027	0.0008	180.01	0.0275	2.763E-05
U	238	3	He	0.032	0.0009	220.01	0.0275	2.763E-05
U	238	3	He	0.025	0.0007	170.01	0.0275	2.763E-05
Sc	45	1	No Gas			2251279.19		
Sc	45	1	No Gas			2234143.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2225146.37		
Ge	72	1	No Gas			1009736.94		
Ge	72	1	No Gas			1009484.36		
Ge	72	1	No Gas			1007808.03		
Sc	45	2	H2			139722.04		
Sc	45	2	H2			137242.81		
Sc	45	2	H2			138671.41		
Ge	72	2	H2			115240.44		
Ge	72	2	H2			114516.39		
Ge	72	2	H2			114636.74		
In	115	2	H2			295507.07		
In	115	2	H2			292991.56		
In	115	2	H2			288050.70		
Sc	45	3	He			45223.13		
Sc	45	3	He			45824.68		
Sc	45	3	He			44941.90		
Ge	72	3	He			74151.17		
Ge	72	3	He			75789.27		
Ge	72	3	He			75759.11		
In	115	3	He			59865.18		
In	115	3	He			61271.47		
In	115	3	He			60789.58		
Tb	159	3	He			237305.39		
Tb	159	3	He			240114.29		
Tb	159	3	He			238743.43		
Bi	209	3	He			165947.58		
Bi	209	3	He			166645.23		
Bi	209	3	He			166119.49		

Quantitation Report

Data File Name	121SMPL.d
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Sample Type	Sample
Comment	D2
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

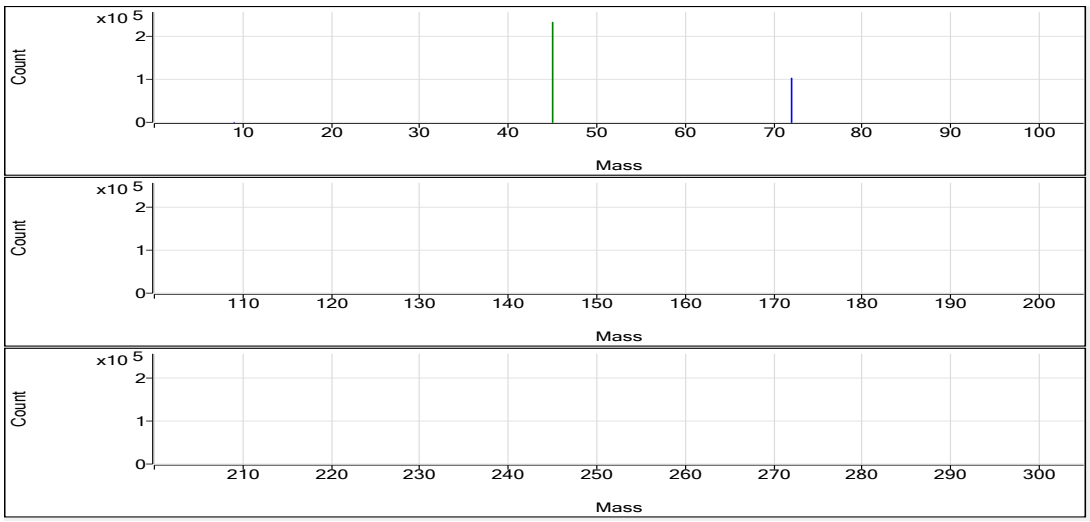
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.010	ppb	48.0	30.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.074	ppb	77.7	4.67	0.0000	Pulse	1.5000	3
Na	23	45	He	8.667	ppb	107.2	22585.96	0.4928	Pulse	0.1000	3
Mg	24	45	He	4.768	ppb	30.3	500.03	0.0109	Pulse	0.1000	3
Al	27	45	He	0.811	ppb	105.2	50.00	0.0011	Pulse	0.1000	3
K	39	45	He	-8.304	ppb	N/A	19278.61	0.4206	Pulse	0.1000	3
Ca	44	45	He	-9.687	ppb	N/A	106.67	0.0023	Pulse	0.1000	3
Ti	47	45	He	0.456	ppb	173.2	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	-0.002	ppb	N/A	437.34	0.0095	Pulse	0.5000	3
Cr	52	45	He	-0.046	ppb	N/A	750.04	0.0164	Pulse	0.1000	3
Mn	55	45	He	0.437	ppb	30.0	410.02	0.0089	Pulse	0.1000	3
Fe	57	45	He	1.266	ppb	55.5	166.67	0.0036	Pulse	0.1000	3
Co	59	45	He	0.057	ppb	40.7	276.68	0.0060	Pulse	0.1000	3
Ni	60	115	He	0.075	ppb	244.4	753.38	0.0120	Pulse	0.1000	3
Cu	63	72	He	0.086	ppb	80.5	1326.77	0.0175	Pulse	0.1000	3
Zn	66	72	He	0.325	ppb	73.4	283.34	0.0037	Pulse	0.1000	3
As	75	72	He	0.096	ppb	35.2	46.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.036	ppb	72.1	76.67	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.018	ppb	66.5	40.00	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	40.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.004	ppb	235.8	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.051	ppb	302.9	893.39	0.0142	Pulse	0.1000	3
Sb	121	115	He	0.006	ppb	408.8	33.33	0.0005	Pulse	0.1000	3
Ba	137	115	He	0.024	ppb	235.8	13.33	0.0002	Pulse	0.1000	3
Tl	205	159	He	0.039	ppb	12.8	260.01	0.0011	Pulse	0.1000	3
Pb	208	159	He	-0.001	ppb	N/A	146.67	0.0006	Pulse	0.1000	3
U	238	159	He	0.003	ppb	57.6	26.67	0.0001	Pulse	0.1000	3

ISTD Table:

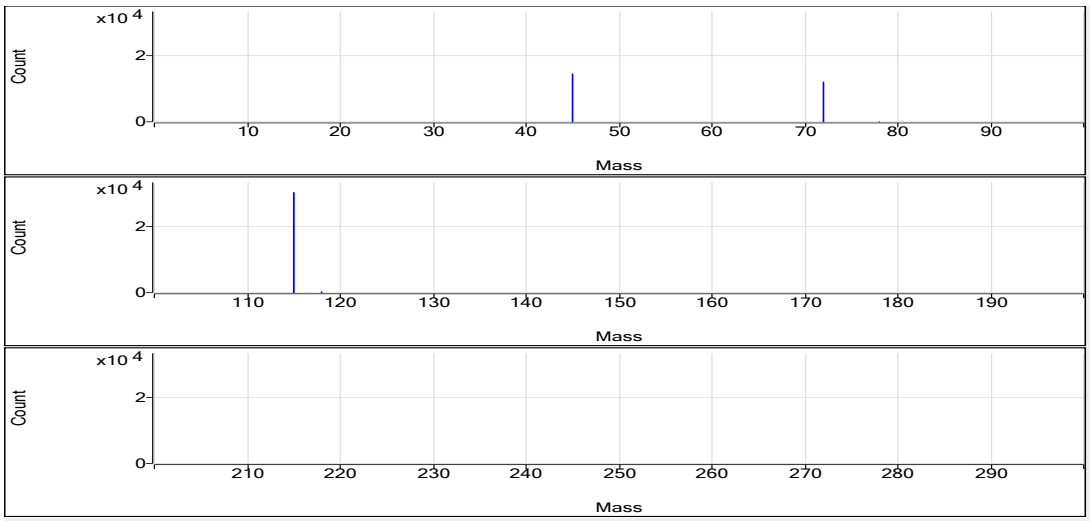
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2338487.20	0.5	101.9	Analog	0.1000	3
No Gas	Ge	72	1034312.33	0.4	99.5	Pulse	0.1000	3
H2	Sc	45	145211.44	0.8	104.4	Pulse	0.1000	3
H2	Ge	72	120817.72	1.2	102.3	Pulse	0.1000	3
H2	In	115	303236.21	1.1	102.9	Pulse	0.1000	3
He	Sc	45	45874.81	2.7	98.0	Pulse	0.1000	3
He	Ge	72	75986.43	3.3	99.4	Pulse	0.1000	3
He	In	115	62941.52	1.2	103.8	Pulse	0.1000	3
He	Tb	159	245961.92	0.4	102.0	Pulse	0.1000	3
He	Bi	209	171549.39	0.3	103.5	Pulse	0.1000	3

No Gas

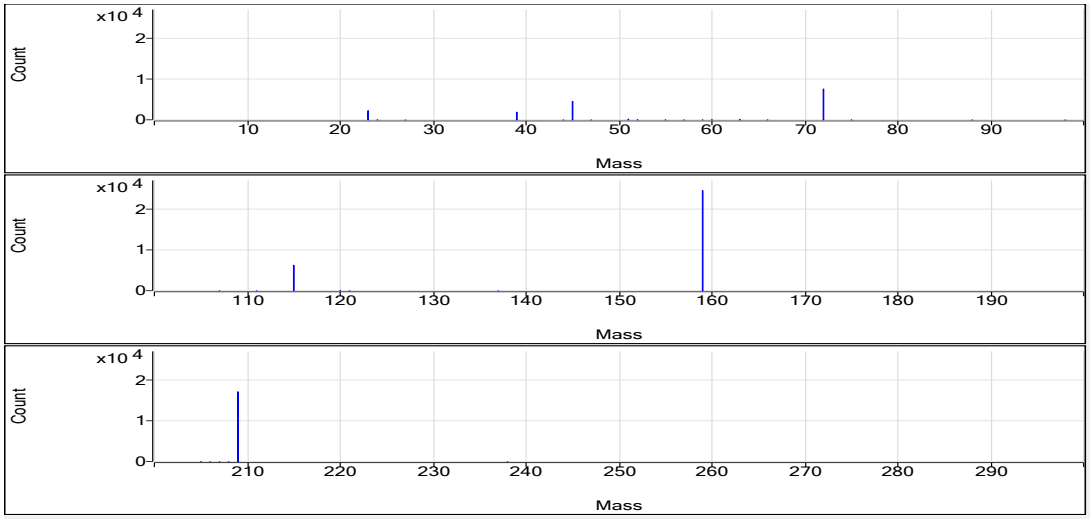


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.011	0	32.00	0.0004	9.309E-06
Be	9	1	No Gas	0.013	0	34.00	0.0004	9.309E-06
Be	9	1	No Gas	0.004	0	26.00	0.0004	9.309E-06
Se	78	2	H2	0.137	0.0001	8.00	0.0004	5.598E-06
Se	78	2	H2	0.024	0	2.00	0.0004	5.598E-06
Se	78	2	H2	0.062	0	4.00	0.0004	5.598E-06
Na	23	3	He	6.766	0.4868	22035.32	0.0031	0.4657
Na	23	3	He	0.475	0.4672	22105.18	0.0031	0.4657
Na	23	3	He	18.759	0.5243	23617.37	0.0031	0.4657
Mg	24	3	He	5.859	0.0126	570.03	0.0015	0.003704
Mg	24	3	He	3.13	0.0085	400.02	0.0015	0.003704
Mg	24	3	He	5.314	0.0118	530.03	0.0015	0.003704
Al	27	3	He	0.36	0.0009	40.00	0.0005	0.0007154
Al	27	3	He	0.278	0.0008	40.00	0.0005	0.0007154
Al	27	3	He	1.796	0.0016	70.00	0.0005	0.0007154
K	39	3	He	50.8	0.4848	21945.30	0.0011	0.4296
K	39	3	He	-34.199	0.3925	18571.01	0.0011	0.4296
K	39	3	He	-41.512	0.3845	17319.52	0.0011	0.4296
Ca	44	3	He	-11.565	0.0022	100.00	0.0001	0.002924
Ca	44	3	He	-9.699	0.0023	110.00	0.0001	0.002924
Ca	44	3	He	-7.798	0.0024	110.00	0.0001	0.002924
Ti	47	3	He	1.368	0.0007	30.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.001	0.0095	432.01	0.021	0.009571
V	51	3	He	0.039	0.0104	492.01	0.021	0.009571
V	51	3	He	-0.045	0.0086	388.01	0.021	0.009571
Cr	52	3	He	-0.096	0.015	680.04	0.0267	0.01758
Cr	52	3	He	-0.049	0.0163	770.04	0.0267	0.01758
Cr	52	3	He	0.007	0.0178	800.04	0.0267	0.01758
Mn	55	3	He	0.286	0.0073	330.01	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.51	0.0097	460.02	0.0108	0.004199
Mn	55	3	He	0.515	0.0098	440.02	0.0108	0.004199
Fe	57	3	He	1.083	0.0035	160.01	0.0005	0.002993
Fe	57	3	He	2.042	0.004	190.01	0.0005	0.002993
Fe	57	3	He	0.674	0.0033	150.00	0.0005	0.002993
Co	59	3	He	0.081	0.0073	330.02	0.0524	0.003063
Co	59	3	He	0.055	0.0059	280.01	0.0524	0.003063
Co	59	3	He	0.035	0.0049	220.01	0.0524	0.003063
Ni	60	3	He	0.246	0.0139	870.06	0.0109	0.01116
Ni	60	3	He	-0.117	0.0099	630.04	0.0109	0.01116
Ni	60	3	He	0.095	0.0122	760.04	0.0109	0.01116
Cu	63	3	He	0.117	0.0183	1340.11	0.0255	0.01531
Cu	63	3	He	0.007	0.0155	1210.09	0.0255	0.01531
Cu	63	3	He	0.133	0.0187	1430.12	0.0255	0.01531
Zn	66	3	He	0.264	0.0035	260.01	0.0029	0.002787
Zn	66	3	He	0.587	0.0045	350.01	0.0029	0.002787
Zn	66	3	He	0.122	0.0031	240.01	0.0029	0.002787
As	75	3	He	0.102	0.0006	46.00	0.0021	0.0004097
As	75	3	He	0.06	0.0005	42.00	0.0021	0.0004097
As	75	3	He	0.127	0.0007	52.00	0.0021	0.0004097
Sr	88	3	He	0.008	0.001	60.00	0.0094	0.0008765
Sr	88	3	He	0.04	0.0013	80.00	0.0094	0.0008765
Sr	88	3	He	0.06	0.0014	90.00	0.0094	0.0008765
Mo	98	3	He	0.032	0.001	60.00	0.023	0.0002199
Mo	98	3	He	0.011	0.0005	30.00	0.023	0.0002199
Mo	98	3	He	0.011	0.0005	30.00	0.023	0.0002199
Ag	107	3	He	-0.001	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	-0.001	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Cd	111	3	He	0.014	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Sn	120	3	He	0.167	0.0159	1000.06	0.0148	0.01345
Sn	120	3	He	-0.124	0.0116	740.04	0.0148	0.01345
Sn	120	3	He	0.11	0.0151	940.06	0.0148	0.01345
Sb	121	3	He	-0.008	0.0003	20.00	0.0143	0.0004392
Sb	121	3	He	0.035	0.0009	60.00	0.0143	0.0004392
Sb	121	3	He	-0.008	0.0003	20.00	0.0143	0.0004392
Ba	137	3	He	0.084	0.0005	30.00	0.0044	0.0001096
Ba	137	3	He	-0.025	0	0.00	0.0044	0.0001096
Ba	137	3	He	0.012	0.0002	10.00	0.0044	0.0001096
Tl	205	3	He	0.035	0.001	240.01	0.0208	0.0002491
Tl	205	3	He	0.045	0.0012	290.01	0.0208	0.0002491
Tl	205	3	He	0.037	0.001	250.01	0.0208	0.0002491
Pb	208	3	He	0	0.0006	110.00	0.0272	0.0006218
Pb	208	3	He	-0.001	0.0006	90.00	0.0272	0.0006218
Pb	208	3	He	-0.002	0.0006	80.00	0.0272	0.0006218
U	238	3	He	0.002	0.0001	20.00	0.0275	2.763E-05
U	238	3	He	0.005	0.0002	40.00	0.0275	2.763E-05
U	238	3	He	0.002	0.0001	20.00	0.0275	2.763E-05
Sc	45	1	No Gas			2343398.87		
Sc	45	1	No Gas			2325775.90		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2346286.84		
Ge	72	1	No Gas			1038080.84		
Ge	72	1	No Gas			1029396.63		
Ge	72	1	No Gas			1035459.52		
Sc	45	2	H2			145025.87		
Sc	45	2	H2			146388.76		
Sc	45	2	H2			144219.68		
Ge	72	2	H2			119351.08		
Ge	72	2	H2			122362.01		
Ge	72	2	H2			120740.07		
In	115	2	H2			300929.76		
In	115	2	H2			301568.14		
In	115	2	H2			307210.74		
Sc	45	3	He			45263.16		
Sc	45	3	He			47319.00		
Sc	45	3	He			45042.26		
Ge	72	3	He			73297.50		
Ge	72	3	He			78190.18		
Ge	72	3	He			76471.62		
In	115	3	He			62797.15		
In	115	3	He			63740.73		
In	115	3	He			62305.44		
Tb	159	3	He			244909.37		
Tb	159	3	He			246908.49		
Tb	159	3	He			246067.91		
Bi	209	3	He			171851.44		
Bi	209	3	He			171054.74		
Bi	209	3	He			171741.99		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
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Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

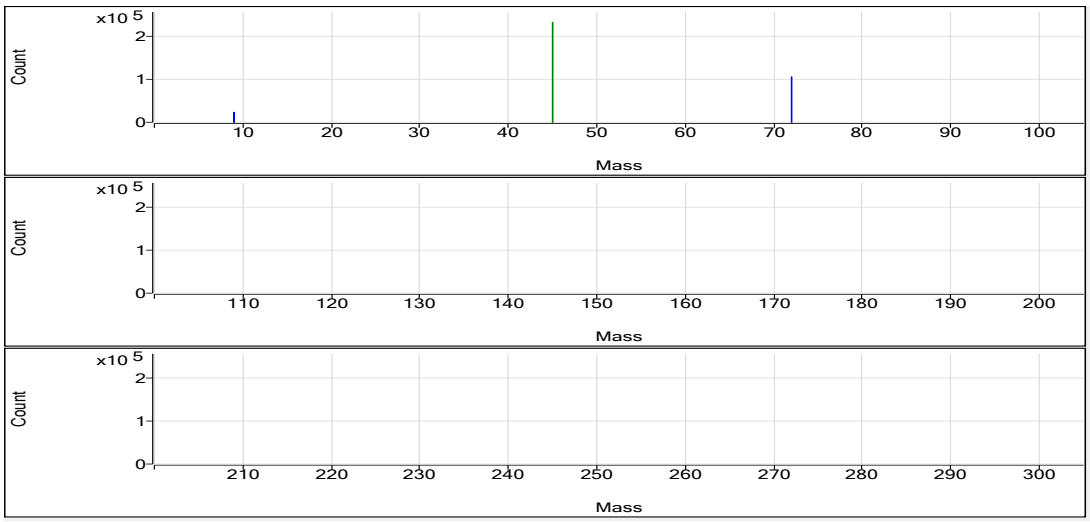
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.192	ppb	1.3	47660.16	0.0204	Pulse	0.5000	3
Se	78	72	H2	98.951	ppb	2.2	5484.50	0.0443	Pulse	1.5000	3
Na	23	45	He	4675.682	ppb	2.3	706745.46	15.0900	Pulse	0.1000	3
Mg	24	45	He	4862.040	ppb	1.9	345715.92	7.3812	Pulse	0.1000	3
Al	27	45	He	4844.129	ppb	2.4	106002.78	2.2633	Pulse	0.1000	3
K	39	45	He	4847.367	ppb	2.3	266861.86	5.6976	Pulse	0.1000	3
Ca	44	45	He	4844.478	ppb	5.1	14163.21	0.3024	Pulse	0.1000	3
Ti	47	45	He	495.606	ppb	6.0	11247.51	0.2401	Pulse	0.1000	3
V	51	45	He	490.730	ppb	1.6	484226.71	10.3384	Pulse	0.5000	3
Cr	52	45	He	490.716	ppb	2.0	614102.87	13.1118	Pulse	0.1000	3
Mn	55	45	He	490.108	ppb	3.5	248511.75	5.3067	Pulse	0.1000	3
Fe	57	45	He	4999.118	ppb	1.6	117415.34	2.5069	Pulse	0.1000	3
Co	59	45	He	479.546	ppb	1.6	1175992.14	25.1079	Pulse	0.1000	3
Ni	60	115	He	484.454	ppb	0.9	335116.35	5.3081	Pulse	0.1000	3
Cu	63	72	He	472.246	ppb	1.8	941945.46	12.0473	Pulse	0.1000	3
Zn	66	72	He	496.496	ppb	1.7	111929.89	1.4315	Pulse	0.1000	3
As	75	72	He	495.990	ppb	0.8	82586.15	1.0561	Pulse	0.5000	3
Sr	88	115	He	49.269	ppb	3.8	29374.38	0.4653	Pulse	0.1000	3
Mo	98	115	He	48.886	ppb	0.9	71114.10	1.1264	Pulse	0.1000	3
Ag	107	115	He	49.636	ppb	1.3	151412.26	2.3984	Pulse	0.1000	3
Cd	111	115	He	49.192	ppb	1.7	16566.81	0.2624	Pulse	0.5000	3
Sn	120	115	He	99.152	ppb	2.5	93524.79	1.4816	Pulse	0.1000	3
Sb	121	115	He	99.557	ppb	0.9	89957.15	1.4249	Pulse	0.1000	3
Ba	137	115	He	501.467	ppb	1.7	138087.77	2.1873	Pulse	0.1000	3
Tl	205	159	He	101.117	ppb	0.2	521853.71	2.1021	Pulse	0.1000	3
Pb	208	159	He	50.396	ppb	0.4	340717.21	1.3724	Pulse	0.1000	3
U	238	159	He	50.808	ppb	0.9	346923.00	1.3974	Pulse	0.1000	3

ISTD Table:

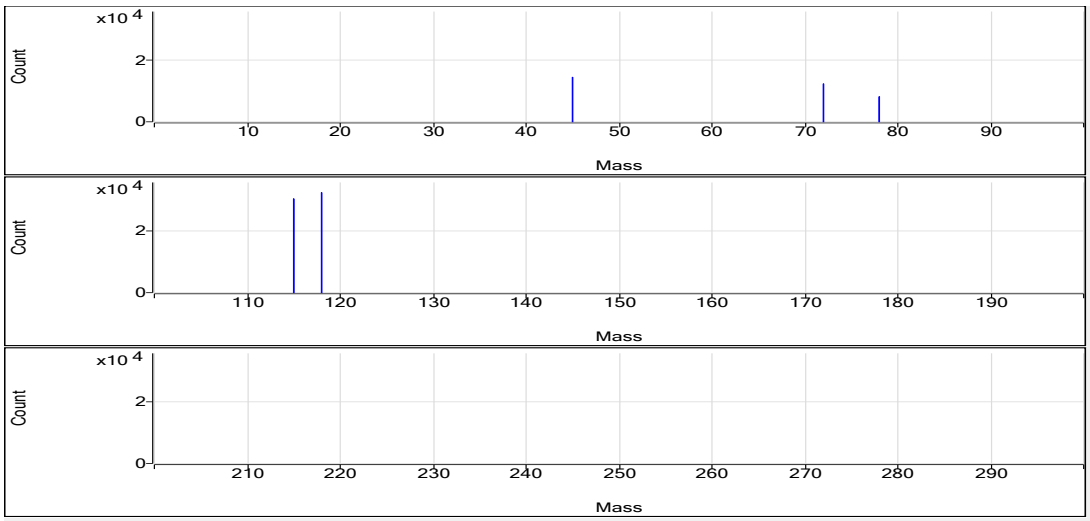
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2338675.54	1.5	101.9	Analog	0.1000	3
No Gas	Ge	72	1062979.67	0.6	102.3	Pulse	0.1000	3
H2	Sc	45	145531.47	0.6	104.7	Pulse	0.1000	3
H2	Ge	72	123927.82	1.3	105.0	Pulse	0.1000	3
H2	In	115	305828.96	0.8	103.8	Pulse	0.1000	3
He	Sc	45	46844.06	1.3	100.0	Pulse	0.1000	3
He	Ge	72	78203.65	1.8	102.3	Pulse	0.1000	3
He	In	115	63136.80	1.3	104.1	Pulse	0.1000	3
He	Tb	159	248259.74	0.3	102.9	Pulse	0.1000	3
He	Bi	209	173354.43	0.7	104.6	Pulse	0.1000	3

No Gas

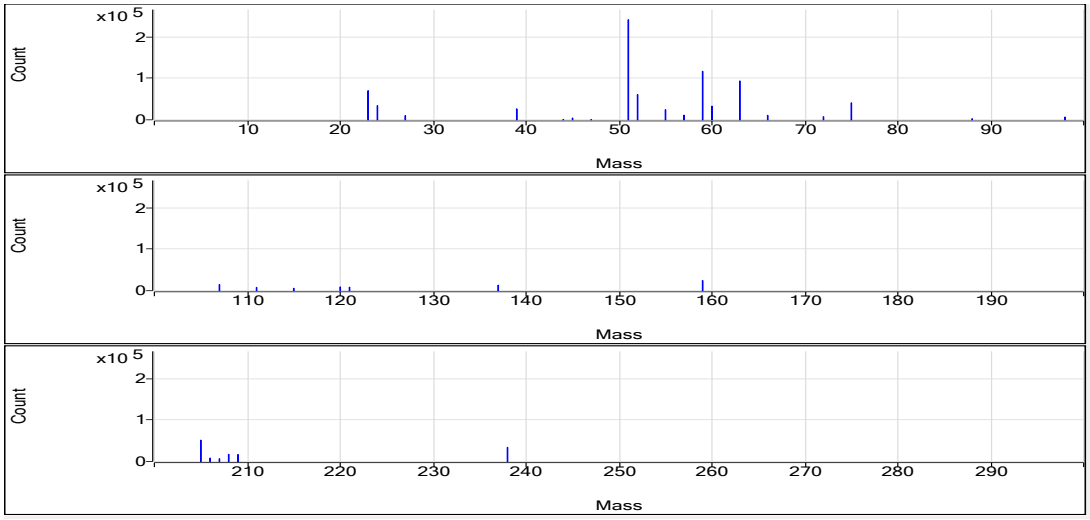


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.735	0.0202	46427.40	0.0004	9.309E-06
Be	9	1	No Gas	50.876	0.0203	47726.90	0.0004	9.309E-06
Be	9	1	No Gas	51.963	0.0207	48826.18	0.0004	9.309E-06
Se	78	2	H2	101.459	0.0454	5555.63	0.0004	5.598E-06
Se	78	2	H2	97.83	0.0438	5493.61	0.0004	5.598E-06
Se	78	2	H2	97.564	0.0436	5404.25	0.0004	5.598E-06
Na	23	3	He	4664.675	15.0556	703197.96	0.0031	0.4657
Na	23	3	He	4575.162	14.7756	702127.88	0.0031	0.4657
Na	23	3	He	4787.209	15.4388	714910.54	0.0031	0.4657
Mg	24	3	He	4831.911	7.3355	342618.12	0.0015	0.003704
Mg	24	3	He	4789.414	7.271	345514.68	0.0015	0.003704
Mg	24	3	He	4964.796	7.5371	349014.96	0.0015	0.003704
Al	27	3	He	4793.545	2.2397	104607.22	0.0005	0.0007154
Al	27	3	He	4762.304	2.2251	105733.76	0.0005	0.0007154
Al	27	3	He	4976.537	2.3251	107667.36	0.0005	0.0007154
K	39	3	He	4955.895	5.8155	271624.39	0.0011	0.4296
K	39	3	He	4730.185	5.5702	264693.80	0.0011	0.4296
K	39	3	He	4856.02	5.707	264267.38	0.0011	0.4296
Ca	44	3	He	5111.848	0.319	14897.19	0.0001	0.002924
Ca	44	3	He	4618.185	0.2884	13706.10	0.0001	0.002924
Ca	44	3	He	4803.4	0.2999	13886.34	0.0001	0.002924
Ti	47	3	He	462.524	0.224	10463.61	0.0005	0
Ti	47	3	He	519.398	0.2516	11954.71	0.0005	0
Ti	47	3	He	504.897	0.2446	11324.20	0.0005	0
V	51	3	He	492.013	10.3654	484135.16	0.021	0.009571
V	51	3	He	482.475	10.1647	483018.78	0.021	0.009571
V	51	3	He	497.703	10.4852	485526.19	0.021	0.009571
Cr	52	3	He	494.086	13.2017	616608.58	0.0267	0.01758
Cr	52	3	He	479.831	12.8213	609260.62	0.0267	0.01758
Cr	52	3	He	498.232	13.3123	616439.40	0.0267	0.01758
Mn	55	3	He	498.129	5.3935	251910.99	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	470.379	5.0932	242027.48	0.0108	0.004199
Mn	55	3	He	501.816	5.4334	251596.79	0.0108	0.004199
Fe	57	3	He	4998.82	2.5067	117080.00	0.0005	0.002993
Fe	57	3	He	4921.669	2.4681	117280.68	0.0005	0.002993
Fe	57	3	He	5076.864	2.5458	117885.35	0.0005	0.002993
Co	59	3	He	481.695	25.2204	1177963.42	0.0524	0.003063
Co	59	3	He	471.164	24.6691	1172259.59	0.0524	0.003063
Co	59	3	He	485.778	25.4341	1177753.42	0.0524	0.003063
Ni	60	3	He	488.08	5.3478	332671.44	0.0109	0.01116
Ni	60	3	He	479.415	5.253	334828.75	0.0109	0.01116
Ni	60	3	He	485.868	5.3236	337848.86	0.0109	0.01116
Cu	63	3	He	473.432	12.0775	941181.39	0.0255	0.01531
Cu	63	3	He	479.887	12.2419	942444.13	0.0255	0.01531
Cu	63	3	He	463.419	11.8224	942210.85	0.0255	0.01531
Zn	66	3	He	491.2	1.4162	110365.89	0.0029	0.002787
Zn	66	3	He	506.504	1.4603	112419.45	0.0029	0.002787
Zn	66	3	He	491.783	1.4179	113004.32	0.0029	0.002787
As	75	3	He	495.83	1.0558	82276.58	0.0021	0.0004097
As	75	3	He	499.947	1.0646	81954.84	0.0021	0.0004097
As	75	3	He	492.193	1.0481	83527.04	0.0021	0.0004097
Sr	88	3	He	49.24	0.465	28926.90	0.0094	0.0008765
Sr	88	3	He	47.421	0.4479	28546.29	0.0094	0.0008765
Sr	88	3	He	51.145	0.483	30649.96	0.0094	0.0008765
Mo	98	3	He	49.393	1.1381	70799.57	0.023	0.0002199
Mo	98	3	He	48.526	1.1182	71271.34	0.023	0.0002199
Mo	98	3	He	48.738	1.123	71271.39	0.023	0.0002199
Ag	107	3	He	50.38	2.4344	151435.99	0.0483	0.0008224
Ag	107	3	He	49.156	2.3752	151395.99	0.0483	0.0008224
Ag	107	3	He	49.373	2.3857	151404.79	0.0483	0.0008224
Cd	111	3	He	50.048	0.267	16608.86	0.0053	2.193E-05
Cd	111	3	He	49.115	0.262	16700.94	0.0053	2.193E-05
Cd	111	3	He	48.413	0.2583	16390.63	0.0053	2.193E-05
Sn	120	3	He	101.411	1.515	94245.70	0.0148	0.01345
Sn	120	3	He	96.521	1.4426	91952.51	0.0148	0.01345
Sn	120	3	He	99.526	1.4871	94376.16	0.0148	0.01345
Sb	121	3	He	99.993	1.4311	89025.11	0.0143	0.0004392
Sb	121	3	He	98.504	1.4098	89860.25	0.0143	0.0004392
Sb	121	3	He	100.175	1.4337	90986.10	0.0143	0.0004392
Ba	137	3	He	505.568	2.2052	137179.13	0.0044	0.0001096
Ba	137	3	He	491.886	2.1455	136755.49	0.0044	0.0001096
Ba	137	3	He	506.947	2.2112	140328.70	0.0044	0.0001096
Tl	205	3	He	100.879	2.0971	521634.80	0.0208	0.0002491
Tl	205	3	He	101.262	2.1051	523228.98	0.0208	0.0002491
Tl	205	3	He	101.21	2.104	520697.34	0.0208	0.0002491
Pb	208	3	He	50.19	1.3668	179381.91	0.0272	0.0006218
Pb	208	3	He	50.634	1.3789	181090.84	0.0272	0.0006218
Pb	208	3	He	50.365	1.3716	180101.25	0.0272	0.0006218
U	238	3	He	50.628	1.3925	346365.42	0.0275	2.763E-05
U	238	3	He	50.462	1.3879	344982.96	0.0275	2.763E-05
U	238	3	He	51.334	1.4119	349420.62	0.0275	2.763E-05
Sc	45	1	No Gas			2298860.12		
Sc	45	1	No Gas			2356645.12		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2360521.37		
Ge	72	1	No Gas			1056524.52		
Ge	72	1	No Gas			1064071.86		
Ge	72	1	No Gas			1068342.64		
Sc	45	2	H2			144663.64		
Sc	45	2	H2			145480.64		
Sc	45	2	H2			146450.13		
Ge	72	2	H2			122413.87		
Ge	72	2	H2			125537.08		
Ge	72	2	H2			123832.50		
In	115	2	H2			307901.17		
In	115	2	H2			306577.22		
In	115	2	H2			303008.49		
Sc	45	3	He			46706.80		
Sc	45	3	He			47519.39		
Sc	45	3	He			46305.99		
Ge	72	3	He			77928.66		
Ge	72	3	He			76984.94		
Ge	72	3	He			79697.35		
In	115	3	He			62867.23		
In	115	3	He			64383.90		
In	115	3	He			64123.28		
Tb	159	3	He			248740.23		
Tb	159	3	He			248558.04		
Tb	159	3	He			247480.95		
Bi	209	3	He			174584.26		
Bi	209	3	He			172318.71		
Bi	209	3	He			173160.33		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 11:36:41 AM
Sample Name	LCSD 410-529311/3-A
Sample Type	Sample
Comment	D2
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

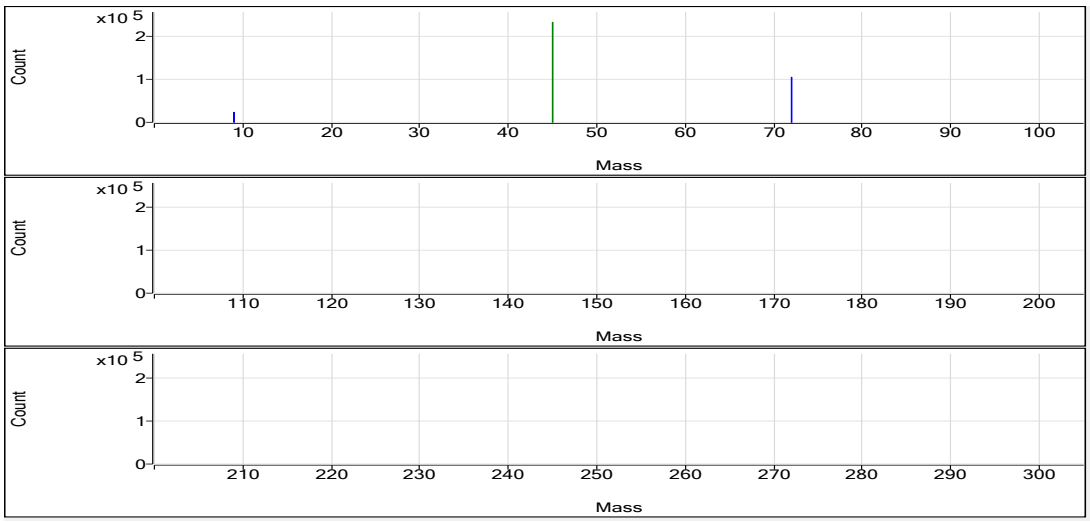
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.801	ppb	1.3	47187.45	0.0202	Pulse	0.5000	3
Se	78	72	H2	100.291	ppb	1.8	5540.96	0.0449	Pulse	1.5000	3
Na	23	45	He	4678.771	ppb	2.2	703638.87	15.0997	Pulse	0.1000	3
Mg	24	45	He	4884.866	ppb	1.9	345590.40	7.4159	Pulse	0.1000	3
Al	27	45	He	4832.044	ppb	1.9	105215.53	2.2576	Pulse	0.1000	3
K	39	45	He	4918.868	ppb	2.5	269113.00	5.7753	Pulse	0.1000	3
Ca	44	45	He	4919.636	ppb	1.8	14309.94	0.3071	Pulse	0.1000	3
Ti	47	45	He	528.473	ppb	0.5	11931.38	0.2560	Pulse	0.1000	3
V	51	45	He	492.109	ppb	1.4	483156.84	10.3674	Pulse	0.5000	3
Cr	52	45	He	494.905	ppb	1.3	616284.09	13.2235	Pulse	0.1000	3
Mn	55	45	He	491.480	ppb	2.5	247960.62	5.3215	Pulse	0.1000	3
Fe	57	45	He	4983.619	ppb	1.8	116461.71	2.4991	Pulse	0.1000	3
Co	59	45	He	481.973	ppb	2.4	1175848.53	25.2349	Pulse	0.1000	3
Ni	60	115	He	495.388	ppb	1.7	334392.53	5.4277	Pulse	0.1000	3
Cu	63	72	He	470.710	ppb	2.2	942314.31	12.0081	Pulse	0.1000	3
Zn	66	72	He	492.733	ppb	2.7	111486.01	1.4207	Pulse	0.1000	3
As	75	72	He	496.890	ppb	1.9	83032.40	1.0581	Pulse	0.5000	3
Sr	88	115	He	49.277	ppb	2.9	28666.55	0.4654	Pulse	0.1000	3
Mo	98	115	He	49.014	ppb	2.5	69573.67	1.1294	Pulse	0.1000	3
Ag	107	115	He	50.547	ppb	1.4	150480.95	2.4424	Pulse	0.1000	3
Cd	111	115	He	50.477	ppb	3.2	16587.49	0.2693	Pulse	0.5000	3
Sn	120	115	He	100.122	ppb	2.2	92156.68	1.4959	Pulse	0.1000	3
Sb	121	115	He	100.157	ppb	1.4	88314.46	1.4334	Pulse	0.1000	3
Ba	137	115	He	503.580	ppb	1.5	135326.29	2.1965	Pulse	0.1000	3
Tl	205	159	He	100.334	ppb	0.9	520138.47	2.0858	Pulse	0.1000	3
Pb	208	159	He	49.990	ppb	0.5	339496.05	1.3614	Pulse	0.1000	3
U	238	159	He	50.918	ppb	0.6	349244.70	1.4005	Pulse	0.1000	3

ISTD Table:

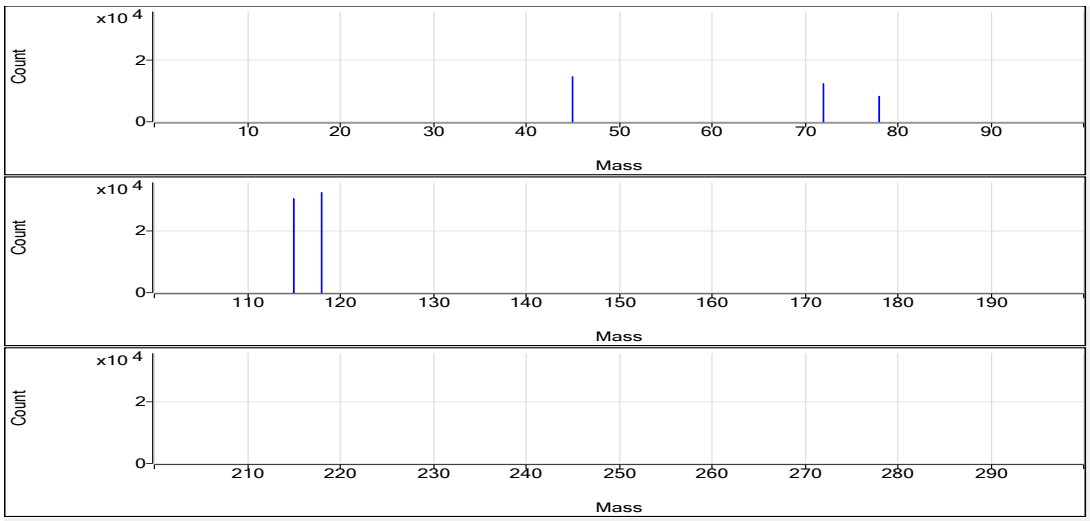
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2333713.35	1.4	101.7	Analog	0.1000	3
No Gas	Ge	72	1054590.56	0.8	101.5	Pulse	0.1000	3
H2	Sc	45	146041.48	2.4	105.0	Pulse	0.1000	3
H2	Ge	72	123532.45	1.3	104.6	Pulse	0.1000	3
H2	In	115	304274.18	0.9	103.3	Pulse	0.1000	3
He	Sc	45	46613.81	2.3	99.5	Pulse	0.1000	3
He	Ge	72	78501.45	2.5	102.7	Pulse	0.1000	3
He	In	115	61619.83	1.6	101.6	Pulse	0.1000	3
He	Tb	159	249382.68	0.5	103.4	Pulse	0.1000	3
He	Bi	209	172598.99	0.9	104.2	Pulse	0.1000	3

No Gas

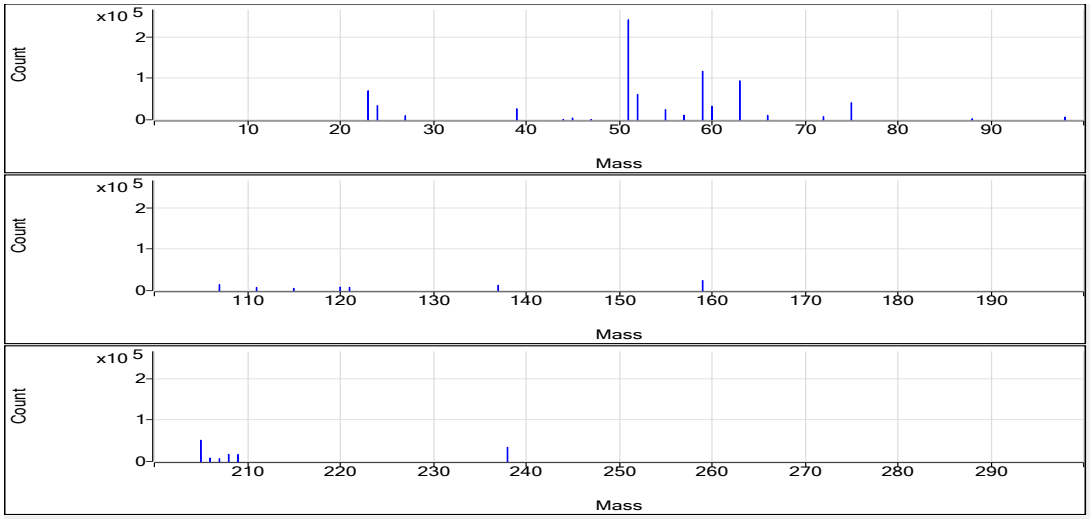


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.054	0.0199	47229.71	0.0004	9.309E-06
Be	9	1	No Gas	51.254	0.0204	47221.48	0.0004	9.309E-06
Be	9	1	No Gas	51.097	0.0203	47111.17	0.0004	9.309E-06
Se	78	2	H2	102.347	0.0458	5569.64	0.0004	5.598E-06
Se	78	2	H2	99.229	0.0444	5514.95	0.0004	5.598E-06
Se	78	2	H2	99.295	0.0444	5538.29	0.0004	5.598E-06
Na	23	3	He	4796.966	15.4694	703142.49	0.0031	0.4657
Na	23	3	He	4619.487	14.9142	697500.69	0.0031	0.4657
Na	23	3	He	4619.858	14.9154	710273.43	0.0031	0.4657
Mg	24	3	He	4990.091	7.5755	344337.22	0.0015	0.003704
Mg	24	3	He	4828.995	7.3311	342855.85	0.0015	0.003704
Mg	24	3	He	4835.514	7.341	349578.12	0.0015	0.003704
Al	27	3	He	4928.146	2.3025	104658.78	0.0005	0.0007154
Al	27	3	He	4750.979	2.2198	103813.19	0.0005	0.0007154
Al	27	3	He	4817.008	2.2506	107174.61	0.0005	0.0007154
K	39	3	He	5055.325	5.9236	269249.70	0.0011	0.4296
K	39	3	He	4879.406	5.7324	268089.33	0.0011	0.4296
K	39	3	He	4821.874	5.6699	269999.96	0.0011	0.4296
Ca	44	3	He	5018.973	0.3132	14236.59	0.0001	0.002924
Ca	44	3	He	4876.65	0.3044	14236.50	0.0001	0.002924
Ca	44	3	He	4863.286	0.3036	14456.73	0.0001	0.002924
Ti	47	3	He	530.732	0.2571	11684.60	0.0005	0
Ti	47	3	He	525.54	0.2546	11904.65	0.0005	0
Ti	47	3	He	529.146	0.2563	12204.88	0.0005	0
V	51	3	He	499.699	10.5272	478501.81	0.021	0.009571
V	51	3	He	490.994	10.344	483760.88	0.021	0.009571
V	51	3	He	485.633	10.2311	487207.84	0.021	0.009571
Cr	52	3	He	500.353	13.3689	607668.94	0.0267	0.01758
Cr	52	3	He	496.229	13.2589	620082.92	0.0267	0.01758
Cr	52	3	He	488.132	13.0428	621100.42	0.0267	0.01758
Mn	55	3	He	505.207	5.47	248634.39	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	487.834	5.2821	247029.33	0.0108	0.004199
Mn	55	3	He	481.4	5.2125	248218.14	0.0108	0.004199
Fe	57	3	He	5058.047	2.5364	115287.71	0.0005	0.002993
Fe	57	3	He	5007.342	2.511	117431.57	0.0005	0.002993
Fe	57	3	He	4885.467	2.4499	116665.84	0.0005	0.002993
Co	59	3	He	494.5	25.8907	1176834.83	0.0524	0.003063
Co	59	3	He	480.193	25.1418	1175815.53	0.0524	0.003063
Co	59	3	He	471.225	24.6722	1174895.22	0.0524	0.003063
Ni	60	3	He	504.744	5.53	334621.87	0.0109	0.01116
Ni	60	3	He	489.492	5.3632	335179.72	0.0109	0.01116
Ni	60	3	He	491.928	5.3898	333376.01	0.0109	0.01116
Cu	63	3	He	482.289	12.3031	938865.45	0.0255	0.01531
Cu	63	3	He	461.987	11.7859	942381.08	0.0255	0.01531
Cu	63	3	He	467.855	11.9354	945696.39	0.0255	0.01531
Zn	66	3	He	502.177	1.4478	110485.42	0.0029	0.002787
Zn	66	3	He	477.346	1.3764	110052.88	0.0029	0.002787
Zn	66	3	He	498.675	1.4378	113919.72	0.0029	0.002787
As	75	3	He	507.483	1.0806	82461.61	0.0021	0.0004097
As	75	3	He	488.823	1.0409	83227.22	0.0021	0.0004097
As	75	3	He	494.364	1.0527	83408.36	0.0021	0.0004097
Sr	88	3	He	50.923	0.4809	29097.41	0.0094	0.0008765
Sr	88	3	He	48.588	0.4589	28676.53	0.0094	0.0008765
Sr	88	3	He	48.321	0.4563	28225.71	0.0094	0.0008765
Mo	98	3	He	50.381	1.1609	70246.65	0.023	0.0002199
Mo	98	3	He	47.964	1.1052	69071.28	0.023	0.0002199
Mo	98	3	He	48.696	1.1221	69403.09	0.023	0.0002199
Ag	107	3	He	51.124	2.4703	149477.71	0.0483	0.0008224
Ag	107	3	He	49.784	2.4056	150337.87	0.0483	0.0008224
Ag	107	3	He	50.733	2.4514	151627.26	0.0483	0.0008224
Cd	111	3	He	52.289	0.2789	16879.15	0.0053	2.193E-05
Cd	111	3	He	49.306	0.263	16438.64	0.0053	2.193E-05
Cd	111	3	He	49.837	0.2659	16444.68	0.0053	2.193E-05
Sn	120	3	He	102.64	1.5332	92776.46	0.0148	0.01345
Sn	120	3	He	98.307	1.4691	91810.99	0.0148	0.01345
Sn	120	3	He	99.417	1.4855	91882.58	0.0148	0.01345
Sb	121	3	He	101.776	1.4566	88140.10	0.0143	0.0004392
Sb	121	3	He	99.036	1.4174	88582.32	0.0143	0.0004392
Sb	121	3	He	99.658	1.4263	88220.96	0.0143	0.0004392
Ba	137	3	He	511.758	2.2322	135071.11	0.0044	0.0001096
Ba	137	3	He	496.306	2.1648	135290.99	0.0044	0.0001096
Ba	137	3	He	502.676	2.1926	135616.78	0.0044	0.0001096
Tl	205	3	He	99.297	2.0642	517694.60	0.0208	0.0002491
Tl	205	3	He	100.777	2.095	520196.87	0.0208	0.0002491
Tl	205	3	He	100.927	2.0981	522523.94	0.0208	0.0002491
Pb	208	3	He	49.744	1.3547	178875.72	0.0272	0.0006218
Pb	208	3	He	49.988	1.3613	177640.66	0.0272	0.0006218
Pb	208	3	He	50.239	1.3681	180192.89	0.0272	0.0006218
U	238	3	He	50.664	1.3935	349480.50	0.0275	2.763E-05
U	238	3	He	51.265	1.41	350113.24	0.0275	2.763E-05
U	238	3	He	50.824	1.3979	348140.35	0.0275	2.763E-05
Sc	45	1	No Gas			2370404.65		
Sc	45	1	No Gas			2314534.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2316200.75		
Ge	72	1	No Gas			1058881.55		
Ge	72	1	No Gas			1060098.11		
Ge	72	1	No Gas			1044792.02		
Sc	45	2	H2			144117.10		
Sc	45	2	H2			150009.13		
Sc	45	2	H2			143998.22		
Ge	72	2	H2			121658.26		
Ge	72	2	H2			124248.19		
Ge	72	2	H2			124690.90		
In	115	2	H2			301758.69		
In	115	2	H2			307421.56		
In	115	2	H2			303642.30		
Sc	45	3	He			45453.90		
Sc	45	3	He			46767.42		
Sc	45	3	He			47620.12		
Ge	72	3	He			76311.16		
Ge	72	3	He			79958.49		
Ge	72	3	He			79234.69		
In	115	3	He			61160.09		
In	115	3	He			63138.82		
In	115	3	He			62495.89		
Tb	159	3	He			250795.15		
Tb	159	3	He			248305.43		
Tb	159	3	He			249047.46		
Bi	209	3	He			170994.90		
Bi	209	3	He			172633.49		
Bi	209	3	He			174168.57		

Quantitation Report

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Sample Type	Sample
Comment	D2
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

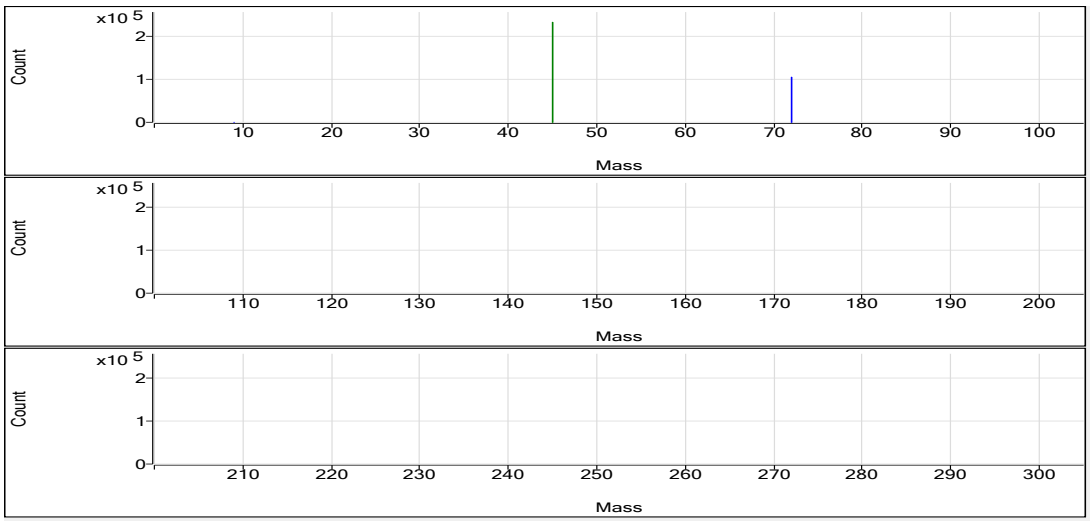
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.109	ppb	17.9	123.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	2.347	ppb	8.0	130.22	0.0011	Pulse	1.5000	3
Na	23	45	He	73919.022	ppb	1.1	10707260.67	231.6655	Analog	0.1000	3
Mg	24	45	He	45080.576	ppb	1.3	3161800.68	68.4077	Analog	0.1000	3
Al	27	45	He	15.048	ppb	27.7	356.68	0.0077	Pulse	0.1000	3
K	39	45	He	18698.793	ppb	2.1	958931.58	20.7508	Pulse	0.1000	3
Ca	44	45	He	227649.104	ppb	2.3	650496.80	14.0767	Pulse	0.1000	3
Ti	47	45	He	1.049	ppb	90.0	23.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.448	ppb	31.3	876.70	0.0190	Pulse	0.5000	3
Cr	52	45	He	0.274	ppb	35.0	1150.08	0.0249	Pulse	0.1000	3
Mn	55	45	He	348.307	ppb	1.2	174357.82	3.7725	Pulse	0.1000	3
Fe	57	45	He	36.278	ppb	20.2	976.73	0.0212	Pulse	0.1000	3
Co	59	45	He	0.331	ppb	22.3	940.06	0.0204	Pulse	0.1000	3
Ni	60	115	He	0.964	ppb	18.4	1353.44	0.0217	Pulse	0.1000	3
Cu	63	72	He	0.526	ppb	17.6	2246.89	0.0287	Pulse	0.1000	3
Zn	66	72	He	1.462	ppb	29.8	546.70	0.0070	Pulse	0.1000	3
As	75	72	He	0.964	ppb	5.1	192.67	0.0025	Pulse	0.5000	3
Sr	88	115	He	3398.677	ppb	2.2	1996427.68	32.0361	Analog	0.1000	3
Mo	98	115	He	311.309	ppb	2.1	446952.56	7.1721	Pulse	0.1000	3
Ag	107	115	He	0.055	ppb	11.9	216.68	0.0035	Pulse	0.1000	3
Cd	111	115	He	0.078	ppb	21.7	27.33	0.0004	Pulse	0.5000	3
Sn	120	115	He	0.775	ppb	8.1	1553.47	0.0249	Pulse	0.1000	3
Sb	121	115	He	0.477	ppb	19.9	453.36	0.0073	Pulse	0.1000	3
Ba	137	115	He	29.602	ppb	4.4	8055.71	0.1292	Pulse	0.1000	3
Tl	205	159	He	0.134	ppb	17.4	753.38	0.0030	Pulse	0.1000	3
Pb	208	159	He	0.042	ppb	17.0	440.02	0.0018	Pulse	0.1000	3
U	238	159	He	1.368	ppb	5.7	9353.36	0.0377	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2332843.97	1.7	101.7	Analog	0.1000	3
No Gas	Ge	72	1055031.31	1.0	101.5	Pulse	0.1000	3
H2	Sc	45	145742.35	1.1	104.8	Pulse	0.1000	3
H2	Ge	72	123498.38	1.8	104.6	Pulse	0.1000	3
H2	In	115	298982.95	1.2	101.5	Pulse	0.1000	3
He	Sc	45	46225.87	2.2	98.7	Pulse	0.1000	3
He	Ge	72	78183.38	2.7	102.2	Pulse	0.1000	3
He	In	115	62327.95	1.2	102.8	Pulse	0.1000	3
He	Tb	159	248402.31	0.6	103.0	Pulse	0.1000	3
He	Bi	209	171515.88	0.7	103.5	Pulse	0.1000	3

No Gas



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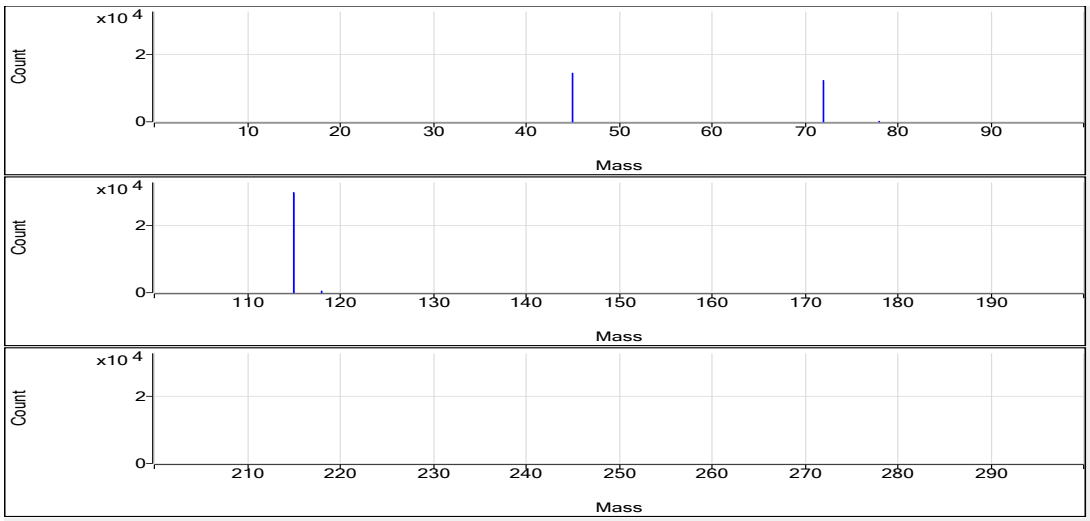
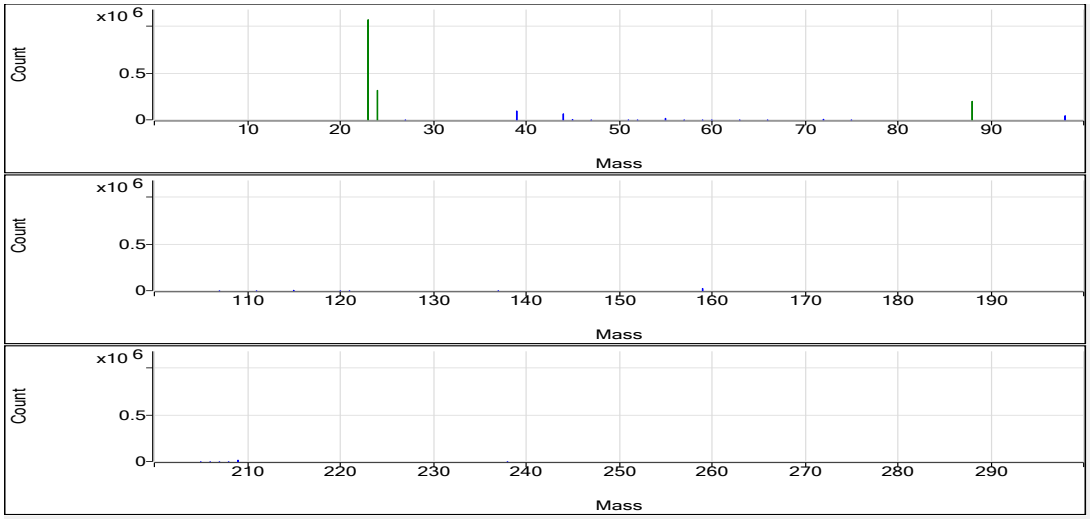


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.126	0.0001	138.00	0.0004	9.309E-06
Be	9	1	No Gas	0.114	0.0001	130.00	0.0004	9.309E-06
Be	9	1	No Gas	0.088	0	102.00	0.0004	9.309E-06
Se	78	2	H2	2.24	0.001	126.00	0.0004	5.598E-06
Se	78	2	H2	2.564	0.0012	139.33	0.0004	5.598E-06
Se	78	2	H2	2.238	0.001	125.33	0.0004	5.598E-06
Na	23	3	He	74819.08	234.4807	10578014.84	0.0031	0.4657
Na	23	3	He	73296.883	229.7196	10819377.34	0.0031	0.4657
Na	23	3	He	73641.102	230.7963	10724389.84	0.0031	0.4657
Mg	24	3	He	45364.628	68.8387	3105487.45	0.0015	0.003704
Mg	24	3	He	44423.348	67.4104	3174908.70	0.0015	0.003704
Mg	24	3	He	45453.753	68.9739	3205005.89	0.0015	0.003704
Al	27	3	He	19.826	0.01	450.02	0.0005	0.0007154
Al	27	3	He	12.106	0.0064	300.01	0.0005	0.0007154
Al	27	3	He	13.213	0.0069	320.01	0.0005	0.0007154
K	39	3	He	19123.284	21.2121	956932.88	0.0011	0.4296
K	39	3	He	18329.157	20.3491	958405.85	0.0011	0.4296
K	39	3	He	18643.937	20.6912	961456.00	0.0011	0.4296
Ca	44	3	He	232944.468	14.4041	649806.16	0.0001	0.002924
Ca	44	3	He	222627.986	13.7663	648369.09	0.0001	0.002924
Ca	44	3	He	227374.859	14.0598	653315.15	0.0001	0.002924
Ti	47	3	He	1.831	0.0009	40.00	0.0005	0
Ti	47	3	He	1.315	0.0006	30.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	0.586	0.0219	988.04	0.021	0.009571
V	51	3	He	0.451	0.0191	898.03	0.021	0.009571
V	51	3	He	0.306	0.016	744.02	0.021	0.009571
Cr	52	3	He	0.338	0.0266	1200.08	0.0267	0.01758
Cr	52	3	He	0.32	0.0261	1230.10	0.0267	0.01758
Cr	52	3	He	0.164	0.022	1020.06	0.0267	0.01758
Mn	55	3	He	353.05	3.8238	172503.26	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	344.84	3.735	175913.02	0.0108	0.004199
Mn	55	3	He	347.032	3.7587	174657.17	0.0108	0.004199
Fe	57	3	He	39.17	0.0226	1020.06	0.0005	0.002993
Fe	57	3	He	27.94	0.017	800.05	0.0005	0.002993
Fe	57	3	He	41.722	0.0239	1110.08	0.0005	0.002993
Co	59	3	He	0.416	0.0248	1120.07	0.0524	0.003063
Co	59	3	He	0.282	0.0178	840.05	0.0524	0.003063
Co	59	3	He	0.295	0.0185	860.05	0.0524	0.003063
Ni	60	3	He	0.856	0.0205	1290.10	0.0109	0.01116
Ni	60	3	He	0.869	0.0207	1270.09	0.0109	0.01116
Ni	60	3	He	1.169	0.0239	1500.12	0.0109	0.01116
Cu	63	3	He	0.456	0.0269	2040.19	0.0255	0.01531
Cu	63	3	He	0.631	0.0314	2480.28	0.0255	0.01531
Cu	63	3	He	0.491	0.0278	2220.21	0.0255	0.01531
Zn	66	3	He	1.371	0.0067	510.03	0.0029	0.002787
Zn	66	3	He	1.935	0.0084	660.04	0.0029	0.002787
Zn	66	3	He	1.079	0.0059	470.02	0.0029	0.002787
As	75	3	He	0.911	0.0023	178.00	0.0021	0.0004097
As	75	3	He	0.973	0.0025	196.00	0.0021	0.0004097
As	75	3	He	1.009	0.0026	204.00	0.0021	0.0004097
Sr	88	3	He	3323.962	31.3319	1969745.75	0.0094	0.0008765
Sr	88	3	He	3470.376	32.7119	2010509.66	0.0094	0.0008765
Sr	88	3	He	3401.693	32.0646	2009027.63	0.0094	0.0008765
Mo	98	3	He	305.001	7.0268	441753.04	0.023	0.0002199
Mo	98	3	He	317.769	7.3209	449951.09	0.023	0.0002199
Mo	98	3	He	311.158	7.1686	449153.55	0.023	0.0002199
Ag	107	3	He	0.062	0.0038	240.01	0.0483	0.0008224
Ag	107	3	He	0.054	0.0034	210.01	0.0483	0.0008224
Ag	107	3	He	0.049	0.0032	200.01	0.0483	0.0008224
Cd	111	3	He	0.067	0.0004	24.00	0.0053	2.193E-05
Cd	111	3	He	0.069	0.0004	24.00	0.0053	2.193E-05
Cd	111	3	He	0.098	0.0005	34.00	0.0053	2.193E-05
Sn	120	3	He	0.714	0.024	1510.12	0.0148	0.01345
Sn	120	3	He	0.839	0.0259	1590.14	0.0148	0.01345
Sn	120	3	He	0.773	0.0249	1560.14	0.0148	0.01345
Sb	121	3	He	0.581	0.0087	550.03	0.0143	0.0004392
Sb	121	3	He	0.458	0.007	430.02	0.0143	0.0004392
Sb	121	3	He	0.393	0.0061	380.02	0.0143	0.0004392
Ba	137	3	He	31.093	0.1357	8532.65	0.0044	0.0001096
Ba	137	3	He	28.931	0.1263	7762.21	0.0044	0.0001096
Ba	137	3	He	28.782	0.1256	7872.27	0.0044	0.0001096
Tl	205	3	He	0.138	0.0031	780.05	0.0208	0.0002491
Tl	205	3	He	0.109	0.0025	620.03	0.0208	0.0002491
Tl	205	3	He	0.155	0.0035	860.05	0.0208	0.0002491
Pb	208	3	He	0.049	0.002	230.01	0.0272	0.0006218
Pb	208	3	He	0.043	0.0018	200.01	0.0272	0.0006218
Pb	208	3	He	0.035	0.0016	250.01	0.0272	0.0006218
U	238	3	He	1.369	0.0377	9413.43	0.0275	2.763E-05
U	238	3	He	1.446	0.0398	9833.63	0.0275	2.763E-05
U	238	3	He	1.289	0.0355	8813.02	0.0275	2.763E-05
Sc	45	1	No Gas			2316829.65		
Sc	45	1	No Gas			2379222.62		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2302479.65		
Ge	72	1	No Gas			1051356.55		
Ge	72	1	No Gas			1066794.44		
Ge	72	1	No Gas			1046942.95		
Sc	45	2	H2			147215.42		
Sc	45	2	H2			144037.42		
Sc	45	2	H2			145974.21		
Ge	72	2	H2			125062.70		
Ge	72	2	H2			120902.45		
Ge	72	2	H2			124530.00		
In	115	2	H2			302082.57		
In	115	2	H2			295131.25		
In	115	2	H2			299735.02		
Sc	45	3	He			45112.52		
Sc	45	3	He			47098.18		
Sc	45	3	He			46466.91		
Ge	72	3	He			75768.50		
Ge	72	3	He			79003.74		
Ge	72	3	He			79777.90		
In	115	3	He			62877.70		
In	115	3	He			61472.15		
In	115	3	He			62666.63		
Tb	159	3	He			249847.67		
Tb	159	3	He			247023.84		
Tb	159	3	He			248335.41		
Bi	209	3	He			171000.70		
Bi	209	3	He			170701.66		
Bi	209	3	He			172845.27		

Quantitation Report

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Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

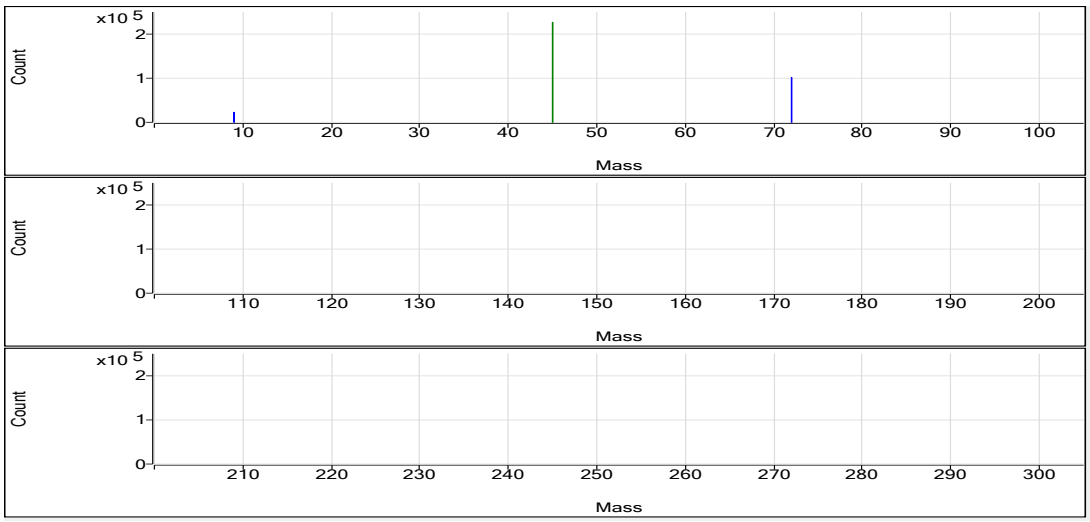
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.111	ppb	2.5	46480.23	0.0203	Pulse	0.5000	3
Se	78	72	H2	52.607	ppb	0.7	2716.90	0.0235	Pulse	1.5000	3
Na	23	45	He	4994.181	ppb	0.7	724589.26	16.0862	Pulse	0.1000	3
Mg	24	45	He	5123.696	ppb	1.3	350352.92	7.7783	Pulse	0.1000	3
Al	27	45	He	5039.040	ppb	1.4	106057.61	2.3543	Pulse	0.1000	3
K	39	45	He	5173.923	ppb	1.2	272623.06	6.0525	Pulse	0.1000	3
Ca	44	45	He	5069.729	ppb	3.3	14249.93	0.3163	Pulse	0.1000	3
Ti	47	45	He	5133.856	ppb	0.6	112011.25	2.4866	Pulse	0.1000	3
V	51	45	He	518.180	ppb	0.8	491709.19	10.9162	Pulse	0.5000	3
Cr	52	45	He	516.245	ppb	1.1	621278.50	13.7930	Pulse	0.1000	3
Mn	55	45	He	512.685	ppb	1.4	250030.24	5.5509	Pulse	0.1000	3
Fe	57	45	He	5272.244	ppb	2.2	119080.47	2.6436	Pulse	0.1000	3
Co	59	45	He	505.039	ppb	0.7	1191074.31	26.4425	Pulse	0.1000	3
Ni	60	115	He	515.362	ppb	1.5	339189.47	5.6461	Pulse	0.1000	3
Cu	63	72	He	494.625	ppb	2.1	952221.11	12.6174	Pulse	0.1000	3
Zn	66	72	He	516.657	ppb	1.3	112423.11	1.4895	Pulse	0.1000	3
As	75	72	He	522.226	ppb	1.1	83933.69	1.1120	Pulse	0.5000	3
Sr	88	115	He	51.907	ppb	1.5	29451.31	0.4901	Pulse	0.1000	3
Mo	98	115	He	51.693	ppb	3.5	71542.55	1.1911	Pulse	0.1000	3
Ag	107	115	He	52.218	ppb	1.8	151573.10	2.5231	Pulse	0.1000	3
Cd	111	115	He	51.123	ppb	0.6	16385.92	0.2727	Pulse	0.5000	3
Sn	120	115	He	51.963	ppb	1.9	47028.27	0.7829	Pulse	0.1000	3
Sb	121	115	He	52.352	ppb	2.8	45022.87	0.7495	Pulse	0.1000	3
Ba	137	115	He	515.074	ppb	0.9	134977.29	2.2466	Pulse	0.1000	3
Tl	205	159	He	51.982	ppb	0.5	258938.43	1.0807	Pulse	0.1000	3
Pb	208	159	He	52.019	ppb	0.6	339404.33	1.4166	Pulse	0.1000	3
U	238	159	He	52.621	ppb	1.8	346734.49	1.4473	Pulse	0.1000	3

ISTD Table:

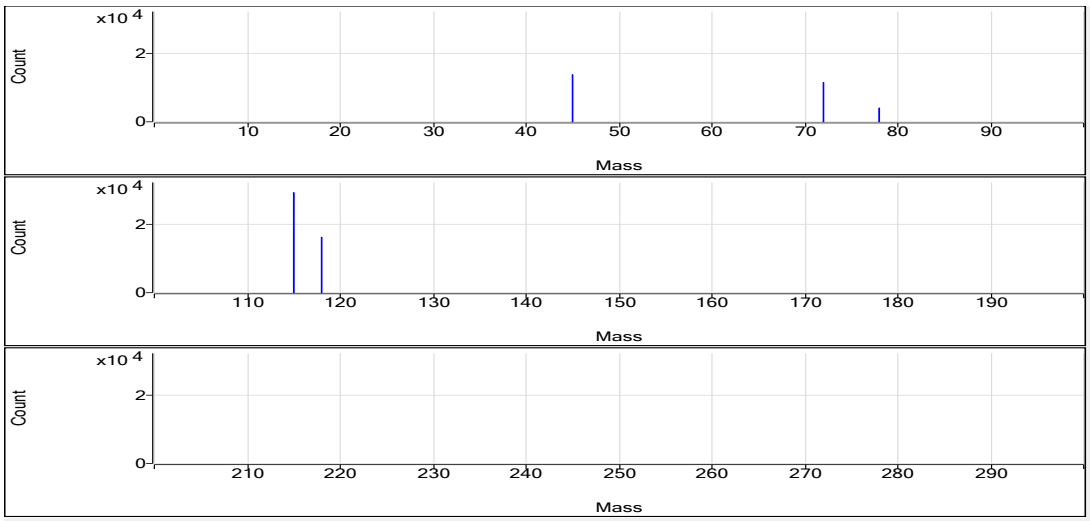
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2284724.03	1.0	99.6	Analog	0.1000	3
No Gas	Ge	72	1024025.48	1.0	98.6	Pulse	0.1000	3
H2	Sc	45	138047.93	1.3	99.3	Pulse	0.1000	3
H2	Ge	72	115446.32	0.7	97.8	Pulse	0.1000	3
H2	In	115	292752.76	0.5	99.4	Pulse	0.1000	3
He	Sc	45	45045.76	0.8	96.2	Pulse	0.1000	3
He	Ge	72	75491.04	2.1	98.7	Pulse	0.1000	3
He	In	115	60085.23	1.7	99.1	Pulse	0.1000	3
He	Tb	159	239603.14	1.1	99.4	Pulse	0.1000	3
He	Bi	209	166491.26	1.0	100.5	Pulse	0.1000	3

No Gas

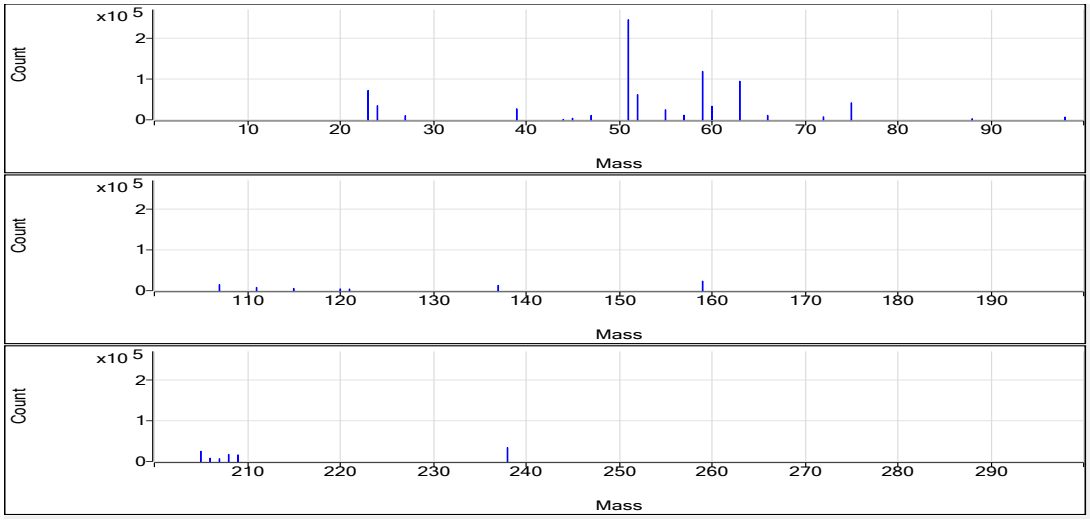


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.642	0.0198	45378.70	0.0004	9.309E-06
Be	9	1	No Gas	51.805	0.0206	46589.73	0.0004	9.309E-06
Be	9	1	No Gas	51.886	0.0207	47472.26	0.0004	9.309E-06
Se	78	2	H2	52.91	0.0237	2730.90	0.0004	5.598E-06
Se	78	2	H2	52.75	0.0236	2706.90	0.0004	5.598E-06
Se	78	2	H2	52.161	0.0233	2712.90	0.0004	5.598E-06
Na	23	3	He	5027.021	16.1889	723509.75	0.0031	0.4657
Na	23	3	He	4994.285	16.0865	724093.11	0.0031	0.4657
Na	23	3	He	4961.237	15.9832	726164.91	0.0031	0.4657
Mg	24	3	He	5188.476	7.8766	352016.44	0.0015	0.003704
Mg	24	3	He	5124.465	7.7794	350170.62	0.0015	0.003704
Mg	24	3	He	5058.147	7.6788	348871.71	0.0015	0.003704
Al	27	3	He	5027.189	2.3488	104971.26	0.0005	0.0007154
Al	27	3	He	4977.43	2.3255	104678.42	0.0005	0.0007154
Al	27	3	He	5112.501	2.3886	108523.15	0.0005	0.0007154
K	39	3	He	5211.606	6.0934	272325.21	0.0011	0.4296
K	39	3	He	5205.095	6.0863	273961.01	0.0011	0.4296
K	39	3	He	5105.07	5.9776	271582.95	0.0011	0.4296
Ca	44	3	He	4971.357	0.3103	13866.30	0.0001	0.002924
Ca	44	3	He	5262.865	0.3283	14777.01	0.0001	0.002924
Ca	44	3	He	4974.965	0.3105	14106.48	0.0001	0.002924
Ti	47	3	He	5160.044	2.4993	111698.64	0.0005	0
Ti	47	3	He	5101.112	2.4708	111215.36	0.0005	0
Ti	47	3	He	5140.413	2.4898	113119.75	0.0005	0
V	51	3	He	522.78	11.013	492189.31	0.021	0.009571
V	51	3	He	516.153	10.8735	489443.25	0.021	0.009571
V	51	3	He	515.606	10.862	493495.00	0.021	0.009571
Cr	52	3	He	521.768	13.9403	623017.69	0.0267	0.01758
Cr	52	3	He	516.246	13.793	620855.97	0.0267	0.01758
Cr	52	3	He	510.722	13.6456	619961.83	0.0267	0.01758
Mn	55	3	He	521.092	5.6419	252146.09	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	508.581	5.5065	247862.57	0.0108	0.004199
Mn	55	3	He	508.383	5.5044	250082.07	0.0108	0.004199
Fe	57	3	He	5381.083	2.6982	120585.42	0.0005	0.002993
Fe	57	3	He	5146.986	2.5809	116173.07	0.0005	0.002993
Fe	57	3	He	5288.664	2.6519	120482.92	0.0005	0.002993
Co	59	3	He	508.88	26.6435	1190745.06	0.0524	0.003063
Co	59	3	He	504.546	26.4166	1189076.39	0.0524	0.003063
Co	59	3	He	501.691	26.2672	1193401.47	0.0524	0.003063
Ni	60	3	He	515.022	5.6423	340971.91	0.0109	0.01116
Ni	60	3	He	523.204	5.7318	337736.09	0.0109	0.01116
Ni	60	3	He	507.861	5.5641	338860.42	0.0109	0.01116
Cu	63	3	He	487.642	12.4395	948779.13	0.0255	0.01531
Cu	63	3	He	506.848	12.9289	952463.42	0.0255	0.01531
Cu	63	3	He	489.385	12.4839	955420.77	0.0255	0.01531
Zn	66	3	He	513.001	1.479	112803.39	0.0029	0.002787
Zn	66	3	He	524.448	1.5119	111382.03	0.0029	0.002787
Zn	66	3	He	512.523	1.4776	113083.91	0.0029	0.002787
As	75	3	He	522.829	1.1133	84910.04	0.0021	0.0004097
As	75	3	He	527.442	1.1231	82736.94	0.0021	0.0004097
As	75	3	He	516.406	1.0996	84154.09	0.0021	0.0004097
Sr	88	3	He	52.802	0.4986	30129.54	0.0094	0.0008765
Sr	88	3	He	51.503	0.4863	28656.37	0.0094	0.0008765
Sr	88	3	He	51.415	0.4855	29568.02	0.0094	0.0008765
Mo	98	3	He	50.361	1.1604	70125.81	0.023	0.0002199
Mo	98	3	He	53.73	1.238	72949.37	0.023	0.0002199
Mo	98	3	He	50.989	1.1749	71552.48	0.023	0.0002199
Ag	107	3	He	51.716	2.4989	151010.20	0.0483	0.0008224
Ag	107	3	He	53.303	2.5755	151758.93	0.0483	0.0008224
Ag	107	3	He	51.636	2.495	151950.16	0.0483	0.0008224
Cd	111	3	He	50.861	0.2713	16396.61	0.0053	2.193E-05
Cd	111	3	He	51.436	0.2744	16168.35	0.0053	2.193E-05
Cd	111	3	He	51.072	0.2725	16592.81	0.0053	2.193E-05
Sn	120	3	He	51.496	0.7759	46891.09	0.0148	0.01345
Sn	120	3	He	53.113	0.7999	47132.01	0.0148	0.01345
Sn	120	3	He	51.28	0.7727	47061.70	0.0148	0.01345
Sb	121	3	He	50.805	0.7273	43953.31	0.0143	0.0004392
Sb	121	3	He	53.712	0.7689	45307.11	0.0143	0.0004392
Sb	121	3	He	52.541	0.7522	45808.20	0.0143	0.0004392
Ba	137	3	He	515.609	2.249	135908.05	0.0044	0.0001096
Ba	137	3	He	519.508	2.266	133519.12	0.0044	0.0001096
Ba	137	3	He	510.105	2.225	135504.71	0.0044	0.0001096
Tl	205	3	He	51.694	1.0748	260760.09	0.0208	0.0002491
Tl	205	3	He	52.219	1.0857	259170.64	0.0208	0.0002491
Tl	205	3	He	52.032	1.0818	256884.57	0.0208	0.0002491
Pb	208	3	He	51.688	1.4076	180017.91	0.0272	0.0006218
Pb	208	3	He	52.06	1.4177	178793.98	0.0272	0.0006218
Pb	208	3	He	52.309	1.4245	178116.89	0.0272	0.0006218
U	238	3	He	51.667	1.4211	344782.10	0.0275	2.763E-05
U	238	3	He	52.618	1.4472	345479.92	0.0275	2.763E-05
U	238	3	He	53.579	1.4736	349941.44	0.0275	2.763E-05
Sc	45	1	No Gas			2296395.75		
Sc	45	1	No Gas			2259288.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2298487.78		
Ge	72	1	No Gas			1025143.58		
Ge	72	1	No Gas			1013173.58		
Ge	72	1	No Gas			1033759.28		
Sc	45	2	H2			137745.96		
Sc	45	2	H2			136454.92		
Sc	45	2	H2			139942.90		
Ge	72	2	H2			115373.54		
Ge	72	2	H2			114706.83		
Ge	72	2	H2			116258.60		
In	115	2	H2			291647.83		
In	115	2	H2			292223.61		
In	115	2	H2			294386.83		
Sc	45	3	He			44691.70		
Sc	45	3	He			45012.42		
Sc	45	3	He			45433.15		
Ge	72	3	He			76271.39		
Ge	72	3	He			73669.59		
Ge	72	3	He			76532.13		
In	115	3	He			60759.14		
In	115	3	He			59253.03		
In	115	3	He			61231.12		
Tb	159	3	He			242622.11		
Tb	159	3	He			238720.91		
Tb	159	3	He			237466.40		
Bi	209	3	He			164770.88		
Bi	209	3	He			166492.03		
Bi	209	3	He			168210.88		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 11:44:44 AM
Sample Name	CCB 6148203
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

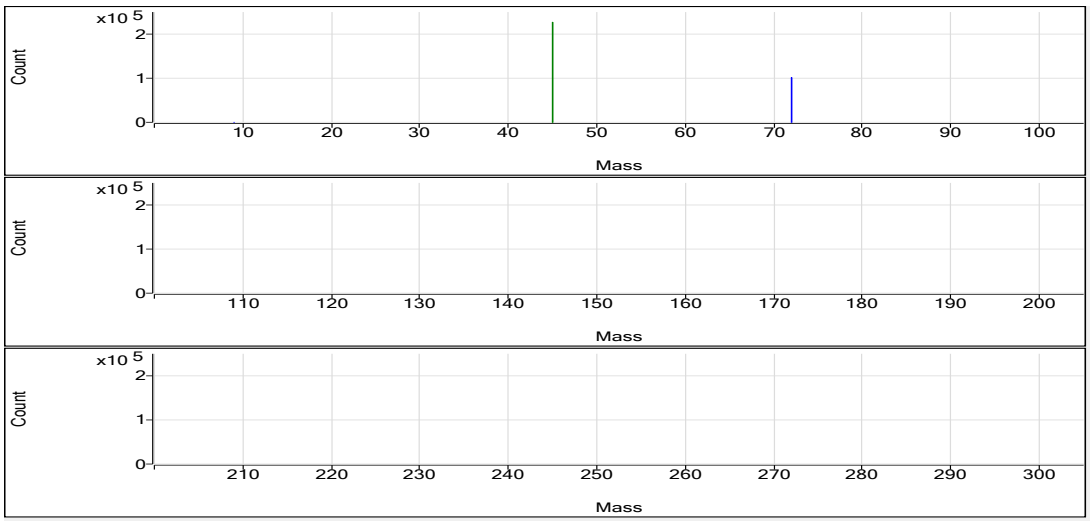
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.058	ppb	19.9	73.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.099	ppb	18.9	5.78	0.0000	Pulse	1.5000	3
Na	23	45	He	10.857	ppb	40.8	22131.84	0.4996	Pulse	0.1000	3
Mg	24	45	He	8.124	ppb	12.0	710.04	0.0160	Pulse	0.1000	3
Al	27	45	He	1.376	ppb	128.7	60.00	0.0014	Pulse	0.1000	3
K	39	45	He	-6.073	ppb	N/A	18724.64	0.4230	Pulse	0.1000	3
Ca	44	45	He	18.351	ppb	141.3	180.01	0.0041	Pulse	0.1000	3
Ti	47	45	He	3.585	ppb	62.5	76.67	0.0017	Pulse	0.1000	3
V	51	45	He	0.219	ppb	5.3	628.02	0.0142	Pulse	0.5000	3
Cr	52	45	He	0.263	ppb	28.5	1090.07	0.0246	Pulse	0.1000	3
Mn	55	45	He	0.356	ppb	14.5	356.68	0.0081	Pulse	0.1000	3
Fe	57	45	He	4.388	ppb	8.4	230.01	0.0052	Pulse	0.1000	3
Co	59	45	He	0.200	ppb	8.8	600.03	0.0135	Pulse	0.1000	3
Ni	60	115	He	0.356	ppb	12.5	903.39	0.0151	Pulse	0.1000	3
Cu	63	72	He	0.186	ppb	33.7	1503.45	0.0201	Pulse	0.1000	3
Zn	66	72	He	0.483	ppb	42.7	313.35	0.0042	Pulse	0.1000	3
As	75	72	He	0.384	ppb	24.8	92.00	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.267	ppb	27.8	203.34	0.0034	Pulse	0.1000	3
Mo	98	115	He	0.085	ppb	38.9	130.00	0.0022	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	228.1	63.34	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.029	ppb	68.1	10.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.173	ppb	60.1	960.06	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.024	ppb	76.2	46.67	0.0008	Pulse	0.1000	3
Ba	137	115	He	0.192	ppb	12.1	56.67	0.0009	Pulse	0.1000	3
Tl	205	159	He	0.378	ppb	8.3	1910.19	0.0081	Pulse	0.1000	3
Pb	208	159	He	0.044	ppb	67.5	426.68	0.0018	Pulse	0.1000	3
U	238	159	He	0.025	ppb	17.4	166.68	0.0007	Pulse	0.1000	3

ISTD Table:

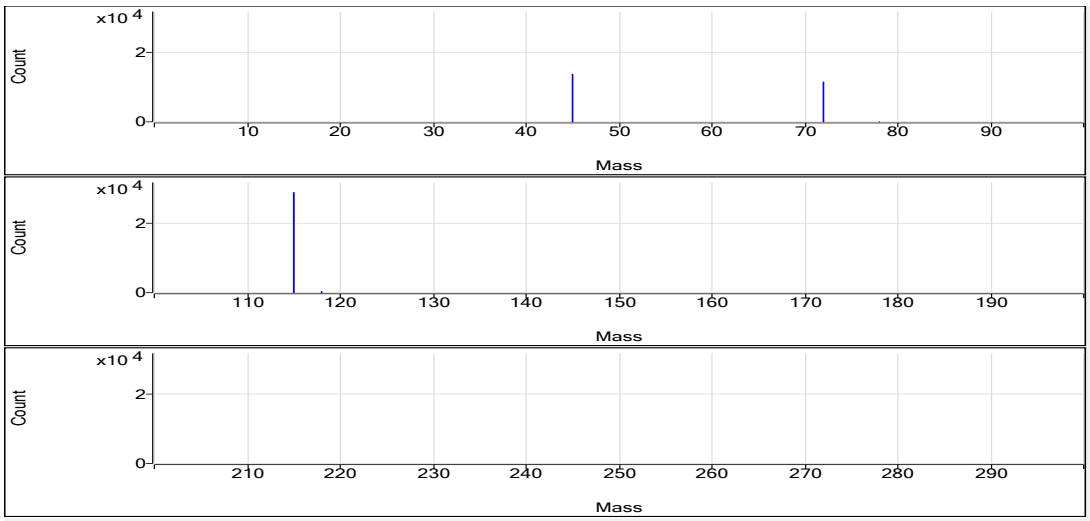
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2269381.42	2.0	98.9	Analog	0.1000	3
No Gas	Ge	72	1016077.69	0.4	97.8	Pulse	0.1000	3
H2	Sc	45	138543.93	1.4	99.6	Pulse	0.1000	3
H2	Ge	72	115794.18	0.9	98.1	Pulse	0.1000	3
H2	In	115	290544.23	0.2	98.6	Pulse	0.1000	3
He	Sc	45	44303.96	0.8	94.6	Pulse	0.1000	3
He	Ge	72	74968.28	0.8	98.0	Pulse	0.1000	3
He	In	115	59969.08	0.6	98.9	Pulse	0.1000	3
He	Tb	159	235893.26	0.5	97.8	Pulse	0.1000	3
He	Bi	209	165490.24	1.0	99.9	Pulse	0.1000	3

No Gas

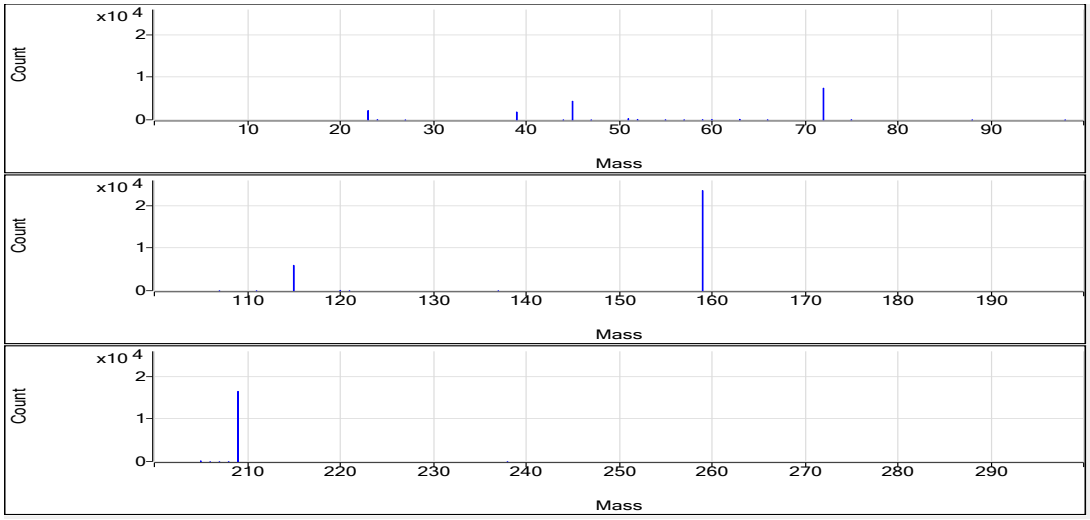


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.069	0	82.00	0.0004	9.309E-06
Be	9	1	No Gas	0.059	0	76.00	0.0004	9.309E-06
Be	9	1	No Gas	0.046	0	62.00	0.0004	9.309E-06
Se	78	2	H2	0.115	0.0001	6.67	0.0004	5.598E-06
Se	78	2	H2	0.078	0	4.67	0.0004	5.598E-06
Se	78	2	H2	0.104	0.0001	6.00	0.0004	5.598E-06
Na	23	3	He	15.501	0.5141	22565.69	0.0031	0.4657
Na	23	3	He	10.4	0.4982	22125.24	0.0031	0.4657
Na	23	3	He	6.67	0.4865	21704.58	0.0031	0.4657
Mg	24	3	He	8.521	0.0166	730.04	0.0015	0.003704
Mg	24	3	He	8.838	0.0171	760.04	0.0015	0.003704
Mg	24	3	He	7.014	0.0143	640.03	0.0015	0.003704
Al	27	3	He	3.346	0.0023	100.00	0.0005	0.0007154
Al	27	3	He	-0.085	0.0007	30.00	0.0005	0.0007154
Al	27	3	He	0.868	0.0011	50.00	0.0005	0.0007154
K	39	3	He	64.132	0.4993	21915.23	0.0011	0.4296
K	39	3	He	-20.926	0.4069	18070.35	0.0011	0.4296
K	39	3	He	-61.426	0.3629	16188.35	0.0011	0.4296
Ca	44	3	He	11.67	0.0036	160.01	0.0001	0.002924
Ca	44	3	He	-3.591	0.0027	120.01	0.0001	0.002924
Ca	44	3	He	46.975	0.0058	260.01	0.0001	0.002924
Ti	47	3	He	6.115	0.003	130.00	0.0005	0
Ti	47	3	He	2.789	0.0014	60.00	0.0005	0
Ti	47	3	He	1.851	0.0009	40.00	0.0005	0
V	51	3	He	0.223	0.0143	626.02	0.021	0.009571
V	51	3	He	0.228	0.0144	638.02	0.021	0.009571
V	51	3	He	0.206	0.0139	620.02	0.021	0.009571
Cr	52	3	He	0.246	0.0242	1060.06	0.0267	0.01758
Cr	52	3	He	0.346	0.0268	1190.09	0.0267	0.01758
Cr	52	3	He	0.198	0.0229	1020.07	0.0267	0.01758
Mn	55	3	He	0.37	0.0082	360.02	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.299	0.0074	330.01	0.0108	0.004199
Mn	55	3	He	0.399	0.0085	380.01	0.0108	0.004199
Fe	57	3	He	4.033	0.005	220.01	0.0005	0.002993
Fe	57	3	He	4.365	0.0052	230.01	0.0005	0.002993
Fe	57	3	He	4.766	0.0054	240.01	0.0005	0.002993
Co	59	3	He	0.181	0.0125	550.03	0.0524	0.003063
Co	59	3	He	0.204	0.0137	610.03	0.0524	0.003063
Co	59	3	He	0.216	0.0143	640.03	0.0524	0.003063
Ni	60	3	He	0.352	0.015	900.06	0.0109	0.01116
Ni	60	3	He	0.314	0.0146	870.05	0.0109	0.01116
Ni	60	3	He	0.403	0.0156	940.06	0.0109	0.01116
Cu	63	3	He	0.152	0.0192	1450.11	0.0255	0.01531
Cu	63	3	He	0.259	0.0219	1640.13	0.0255	0.01531
Cu	63	3	He	0.148	0.0191	1420.10	0.0255	0.01531
Zn	66	3	He	0.595	0.0045	340.02	0.0029	0.002787
Zn	66	3	He	0.609	0.0045	340.01	0.0029	0.002787
Zn	66	3	He	0.245	0.0035	260.01	0.0029	0.002787
As	75	3	He	0.491	0.0015	110.00	0.0021	0.0004097
As	75	3	He	0.347	0.0011	86.00	0.0021	0.0004097
As	75	3	He	0.312	0.0011	80.00	0.0021	0.0004097
Sr	88	3	He	0.35	0.0042	250.01	0.0094	0.0008765
Sr	88	3	He	0.245	0.0032	190.01	0.0094	0.0008765
Sr	88	3	He	0.206	0.0028	170.01	0.0094	0.0008765
Mo	98	3	He	0.048	0.0013	80.00	0.023	0.0002199
Mo	98	3	He	0.092	0.0023	140.00	0.023	0.0002199
Mo	98	3	He	0.113	0.0028	170.01	0.023	0.0002199
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	-0.003	0.0007	40.00	0.0483	0.0008224
Ag	107	3	He	0.017	0.0017	100.01	0.0483	0.0008224
Cd	111	3	He	0.015	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.021	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.052	0.0003	18.00	0.0053	2.193E-05
Sn	120	3	He	0.106	0.015	900.05	0.0148	0.01345
Sn	120	3	He	0.293	0.0178	1060.07	0.0148	0.01345
Sn	120	3	He	0.121	0.0152	920.06	0.0148	0.01345
Sb	121	3	He	0.028	0.0008	50.00	0.0143	0.0004392
Sb	121	3	He	0.04	0.001	60.00	0.0143	0.0004392
Sb	121	3	He	0.004	0.0005	30.00	0.0143	0.0004392
Ba	137	3	He	0.204	0.001	60.00	0.0044	0.0001096
Ba	137	3	He	0.206	0.001	60.00	0.0044	0.0001096
Ba	137	3	He	0.165	0.0008	50.00	0.0044	0.0001096
Tl	205	3	He	0.406	0.0087	2060.22	0.0208	0.0002491
Tl	205	3	He	0.344	0.0074	1740.16	0.0208	0.0002491
Tl	205	3	He	0.383	0.0082	1930.19	0.0208	0.0002491
Pb	208	3	He	0.038	0.0016	190.01	0.0272	0.0006218
Pb	208	3	He	0.018	0.0011	120.00	0.0272	0.0006218
Pb	208	3	He	0.076	0.0027	370.02	0.0272	0.0006218
U	238	3	He	0.03	0.0008	200.01	0.0275	2.763E-05
U	238	3	He	0.022	0.0006	150.01	0.0275	2.763E-05
U	238	3	He	0.022	0.0006	150.01	0.0275	2.763E-05
Sc	45	1	No Gas			2236043.56		
Sc	45	1	No Gas			2321668.56		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2250432.15		
Ge	72	1	No Gas			1011617.41		
Ge	72	1	No Gas			1020238.19		
Ge	72	1	No Gas			1016377.48		
Sc	45	2	H2			139034.29		
Sc	45	2	H2			136382.79		
Sc	45	2	H2			140214.71		
Ge	72	2	H2			116951.93		
Ge	72	2	H2			114898.71		
Ge	72	2	H2			115531.90		
In	115	2	H2			290637.57		
In	115	2	H2			289932.98		
In	115	2	H2			291062.14		
Sc	45	3	He			43889.56		
Sc	45	3	He			44410.98		
Sc	45	3	He			44611.34		
Ge	72	3	He			75567.68		
Ge	72	3	He			74894.47		
Ge	72	3	He			74442.69		
In	115	3	He			59945.26		
In	115	3	He			59604.24		
In	115	3	He			60377.90		
Tb	159	3	He			237299.78		
Tb	159	3	He			235424.90		
Tb	159	3	He			234955.09		
Bi	209	3	He			163537.44		
Bi	209	3	He			166764.37		
Bi	209	3	He			166168.92		

Quantitation Report

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Sample Type	Sample
Comment	D6
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

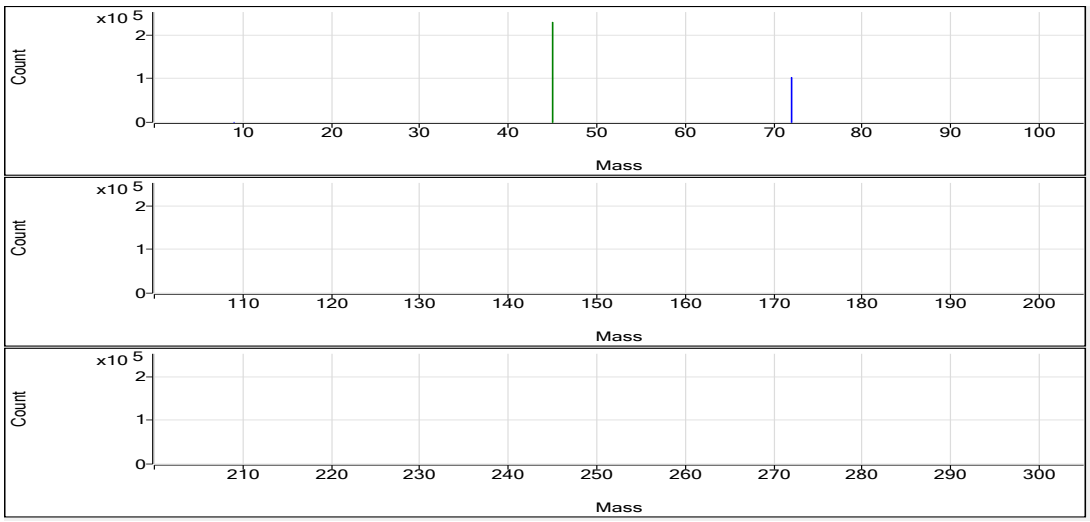
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.002	ppb	N/A	19.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.028	ppb	47.6	2.00	0.0000	Pulse	1.5000	3
Na	23	45	He	-4.379	ppb	N/A	20800.09	0.4520	Pulse	0.1000	3
Mg	24	45	He	1.711	ppb	24.2	290.01	0.0063	Pulse	0.1000	3
Al	27	45	He	2.501	ppb	21.8	86.67	0.0019	Pulse	0.1000	3
K	39	45	He	-11.824	ppb	N/A	19178.52	0.4168	Pulse	0.1000	3
Ca	44	45	He	5.396	ppb	167.1	150.01	0.0033	Pulse	0.1000	3
Ti	47	45	He	0.597	ppb	86.6	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	-0.063	ppb	N/A	379.34	0.0082	Pulse	0.5000	3
Cr	52	45	He	0.063	ppb	277.4	886.72	0.0193	Pulse	0.1000	3
Mn	55	45	He	0.288	ppb	16.5	336.68	0.0073	Pulse	0.1000	3
Fe	57	45	He	-0.191	ppb	N/A	133.34	0.0029	Pulse	0.1000	3
Co	59	45	He	-0.013	ppb	N/A	110.00	0.0024	Pulse	0.1000	3
Ni	60	115	He	0.015	ppb	866.3	686.70	0.0113	Pulse	0.1000	3
Cu	63	72	He	-0.002	ppb	N/A	1153.41	0.0153	Pulse	0.1000	3
Zn	66	72	He	1.178	ppb	13.3	466.69	0.0062	Pulse	0.1000	3
As	75	72	He	0.106	ppb	36.1	48.00	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.070	ppb	35.5	93.33	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.022	ppb	78.2	43.33	0.0007	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	666.3	53.33	0.0009	Pulse	0.1000	3
Cd	111	115	He	-0.004	ppb	N/A	0.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.132	ppb	N/A	696.70	0.0115	Pulse	0.1000	3
Sb	121	115	He	0.038	ppb	58.6	60.00	0.0010	Pulse	0.1000	3
Ba	137	115	He	4.587	ppb	1.4	1220.09	0.0201	Pulse	0.1000	3
Tl	205	159	He	0.052	ppb	15.8	313.35	0.0013	Pulse	0.1000	3
Pb	208	159	He	-0.005	ppb	N/A	116.67	0.0005	Pulse	0.1000	3
U	238	159	He	0.000	ppb	N/A	3.33	0.0000	Pulse	0.1000	3

ISTD Table:

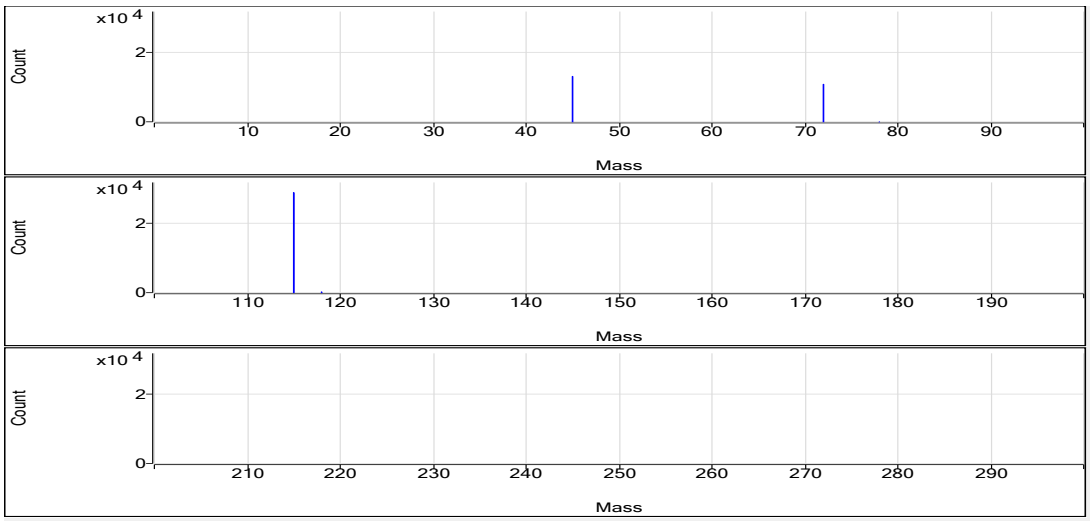
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2296494.13	2.3	100.1	Analog	0.1000	3
No Gas	Ge	72	1029867.22	1.9	99.1	Pulse	0.1000	3
H2	Sc	45	131722.19	0.5	94.7	Pulse	0.1000	3
H2	Ge	72	109024.73	0.5	92.3	Pulse	0.1000	3
H2	In	115	289950.30	0.6	98.4	Pulse	0.1000	3
He	Sc	45	46018.60	0.5	98.3	Pulse	0.1000	3
He	Ge	72	75550.88	1.2	98.8	Pulse	0.1000	3
He	In	115	60647.31	1.1	100.0	Pulse	0.1000	3
He	Tb	159	234022.52	0.9	97.0	Pulse	0.1000	3
He	Bi	209	164181.90	1.8	99.1	Pulse	0.1000	3

No Gas

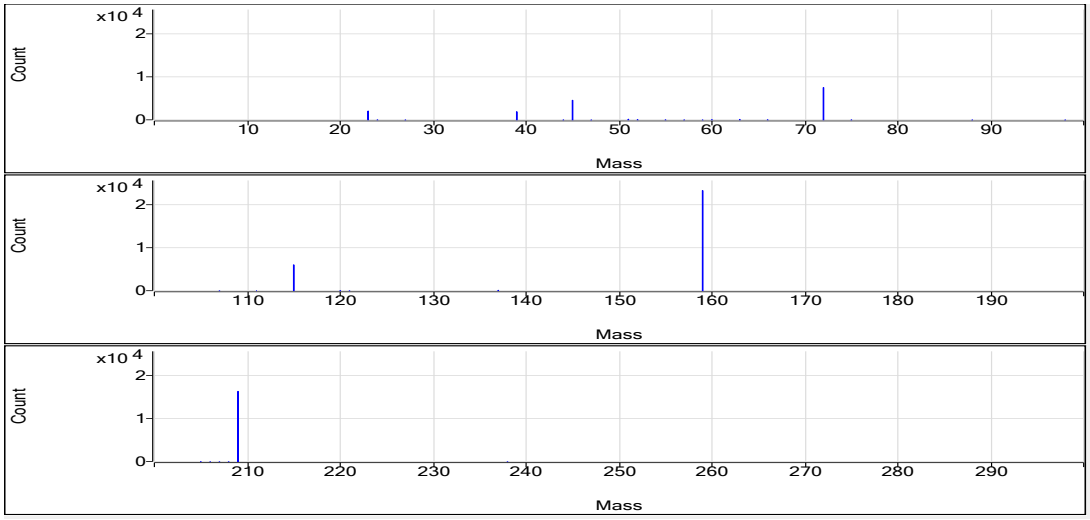


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.006	0	16.00	0.0004	9.309E-06
Be	9	1	No Gas	0.001	0	22.00	0.0004	9.309E-06
Be	9	1	No Gas	-0.002	0	20.00	0.0004	9.309E-06
Se	78	2	H2	0.042	0	2.67	0.0004	5.598E-06
Se	78	2	H2	0.015	0	1.33	0.0004	5.598E-06
Se	78	2	H2	0.029	0	2.00	0.0004	5.598E-06
Na	23	3	He	-4.364	0.452	20763.28	0.0031	0.4657
Na	23	3	He	-1.901	0.4597	21274.08	0.0031	0.4657
Na	23	3	He	-6.872	0.4442	20362.90	0.0031	0.4657
Mg	24	3	He	1.29	0.0057	260.01	0.0015	0.003704
Mg	24	3	He	2.117	0.0069	320.01	0.0015	0.003704
Mg	24	3	He	1.728	0.0063	290.01	0.0015	0.003704
Al	27	3	He	3.129	0.0022	100.00	0.0005	0.0007154
Al	27	3	He	2.169	0.0017	80.00	0.0005	0.0007154
Al	27	3	He	2.204	0.0017	80.00	0.0005	0.0007154
K	39	3	He	46.681	0.4804	22065.38	0.0011	0.4296
K	39	3	He	-31.434	0.3955	18300.76	0.0011	0.4296
K	39	3	He	-50.718	0.3745	17169.41	0.0011	0.4296
Ca	44	3	He	2.002	0.003	140.01	0.0001	0.002924
Ca	44	3	He	15.62	0.0039	180.01	0.0001	0.002924
Ca	44	3	He	-1.433	0.0028	130.00	0.0001	0.002924
Ti	47	3	He	0.899	0.0004	20.00	0.0005	0
Ti	47	3	He	0.892	0.0004	20.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
V	51	3	He	-0.058	0.0084	384.01	0.021	0.009571
V	51	3	He	-0.05	0.0085	394.01	0.021	0.009571
V	51	3	He	-0.082	0.0079	360.01	0.021	0.009571
Cr	52	3	He	0.231	0.0237	1090.06	0.0267	0.01758
Cr	52	3	He	0.078	0.0197	910.06	0.0267	0.01758
Cr	52	3	He	-0.119	0.0144	660.04	0.0267	0.01758
Mn	55	3	He	0.296	0.0074	340.01	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.331	0.0078	360.01	0.0108	0.004199
Mn	55	3	He	0.237	0.0068	310.01	0.0108	0.004199
Fe	57	3	He	1.414	0.0037	170.01	0.0005	0.002993
Fe	57	3	He	-0.366	0.0028	130.00	0.0005	0.002993
Fe	57	3	He	-1.62	0.0022	100.00	0.0005	0.002993
Co	59	3	He	-0.021	0.002	90.00	0.0524	0.003063
Co	59	3	He	-0.001	0.003	140.01	0.0524	0.003063
Co	59	3	He	-0.017	0.0022	100.00	0.0524	0.003063
Ni	60	3	He	0.167	0.013	780.04	0.0109	0.01116
Ni	60	3	He	-0.069	0.0104	630.03	0.0109	0.01116
Ni	60	3	He	-0.052	0.0106	650.04	0.0109	0.01116
Cu	63	3	He	-0.038	0.0143	1070.06	0.0255	0.01531
Cu	63	3	He	-0.067	0.0136	1030.07	0.0255	0.01531
Cu	63	3	He	0.099	0.0178	1360.11	0.0255	0.01531
Zn	66	3	He	1.221	0.0063	470.02	0.0029	0.002787
Zn	66	3	He	1.005	0.0057	430.02	0.0029	0.002787
Zn	66	3	He	1.308	0.0066	500.03	0.0029	0.002787
As	75	3	He	0.11	0.0006	48.00	0.0021	0.0004097
As	75	3	He	0.143	0.0007	54.00	0.0021	0.0004097
As	75	3	He	0.066	0.0006	42.00	0.0021	0.0004097
Sr	88	3	He	0.048	0.0013	80.00	0.0094	0.0008765
Sr	88	3	He	0.065	0.0015	90.00	0.0094	0.0008765
Sr	88	3	He	0.097	0.0018	110.00	0.0094	0.0008765
Mo	98	3	He	0.041	0.0012	70.00	0.023	0.0002199
Mo	98	3	He	0.012	0.0005	30.00	0.023	0.0002199
Mo	98	3	He	0.012	0.0005	30.00	0.023	0.0002199
Ag	107	3	He	-0.003	0.0007	40.00	0.0483	0.0008224
Ag	107	3	He	0.01	0.0013	80.00	0.0483	0.0008224
Ag	107	3	He	-0.004	0.0007	40.00	0.0483	0.0008224
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Sn	120	3	He	-0.043	0.0128	770.04	0.0148	0.01345
Sn	120	3	He	-0.172	0.0109	660.03	0.0148	0.01345
Sn	120	3	He	-0.182	0.0108	660.04	0.0148	0.01345
Sb	121	3	He	0.039	0.001	60.00	0.0143	0.0004392
Sb	121	3	He	0.015	0.0007	40.00	0.0143	0.0004392
Sb	121	3	He	0.06	0.0013	80.00	0.0143	0.0004392
Ba	137	3	He	4.518	0.0198	1190.08	0.0044	0.0001096
Ba	137	3	He	4.596	0.0202	1220.09	0.0044	0.0001096
Ba	137	3	He	4.647	0.0204	1250.10	0.0044	0.0001096
Tl	205	3	He	0.06	0.0015	350.02	0.0208	0.0002491
Tl	205	3	He	0.044	0.0012	270.01	0.0208	0.0002491
Tl	205	3	He	0.053	0.0014	320.02	0.0208	0.0002491
Pb	208	3	He	-0.009	0.0004	50.00	0.0272	0.0006218
Pb	208	3	He	-0.001	0.0006	70.00	0.0272	0.0006218
Pb	208	3	He	-0.004	0.0005	70.01	0.0272	0.0006218
U	238	3	He	0.001	0	10.00	0.0275	2.763E-05
U	238	3	He	-0.001	0	0.00	0.0275	2.763E-05
U	238	3	He	-0.001	0	0.00	0.0275	2.763E-05
Sc	45	1	No Gas			2267593.09		
Sc	45	1	No Gas			2264794.97		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2357094.34		
Ge	72	1	No Gas			1019364.52		
Ge	72	1	No Gas			1017231.70		
Ge	72	1	No Gas			1053005.45		
Sc	45	2	H2			131243.25		
Sc	45	2	H2			131472.01		
Sc	45	2	H2			132451.32		
Ge	72	2	H2			109633.01		
Ge	72	2	H2			108595.04		
Ge	72	2	H2			108846.13		
In	115	2	H2			288645.87		
In	115	2	H2			289121.38		
In	115	2	H2			292083.65		
Sc	45	3	He			45934.96		
Sc	45	3	He			46276.11		
Sc	45	3	He			45844.72		
Ge	72	3	He			74593.13		
Ge	72	3	He			75738.02		
Ge	72	3	He			76321.50		
In	115	3	He			60066.58		
In	115	3	He			60538.41		
In	115	3	He			61351.58		
Tb	159	3	He			232893.34		
Tb	159	3	He			232670.37		
Tb	159	3	He			236503.84		
Bi	209	3	He			166280.47		
Bi	209	3	He			165423.32		
Bi	209	3	He			160841.92		

Quantitation Report

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Sample Type	Sample
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

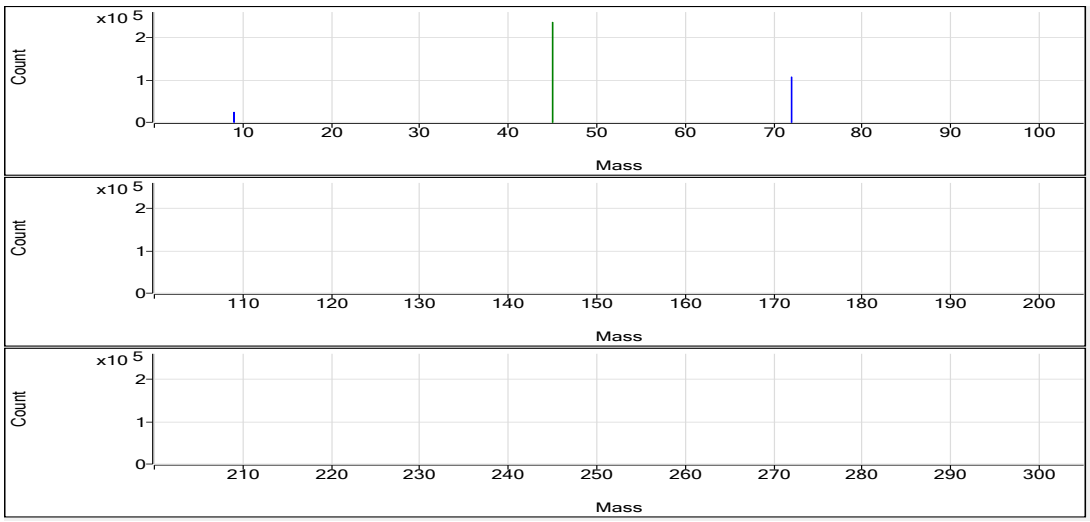
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.474	ppb	2.5	48639.53	0.0205	Pulse	0.5000	3
Se	78	72	H2	106.569	ppb	1.2	5648.33	0.0477	Pulse	1.5000	3
Na	23	45	He	4963.357	ppb	0.6	744171.89	15.9898	Pulse	0.1000	3
Mg	24	45	He	5125.753	ppb	0.8	362140.84	7.7814	Pulse	0.1000	3
Al	27	45	He	5093.831	ppb	0.7	110760.50	2.3799	Pulse	0.1000	3
K	39	45	He	5143.418	ppb	2.0	280140.39	6.0193	Pulse	0.1000	3
Ca	44	45	He	5129.125	ppb	2.0	14893.85	0.3200	Pulse	0.1000	3
Ti	47	45	He	527.914	ppb	4.4	11901.35	0.2557	Pulse	0.1000	3
V	51	45	He	518.932	ppb	0.2	508771.14	10.9320	Pulse	0.5000	3
Cr	52	45	He	524.496	ppb	0.2	652170.52	14.0131	Pulse	0.1000	3
Mn	55	45	He	519.541	ppb	0.7	261788.69	5.6251	Pulse	0.1000	3
Fe	57	45	He	5216.554	ppb	0.6	121737.05	2.6158	Pulse	0.1000	3
Co	59	45	He	511.465	ppb	0.4	1246288.58	26.7788	Pulse	0.1000	3
Ni	60	115	He	525.542	ppb	0.9	353278.17	5.7574	Pulse	0.1000	3
Cu	63	72	He	507.511	ppb	0.6	999195.92	12.9457	Pulse	0.1000	3
Zn	66	72	He	535.147	ppb	1.4	119066.52	1.5427	Pulse	0.1000	3
As	75	72	He	523.638	ppb	0.2	86060.24	1.1150	Pulse	0.5000	3
Sr	88	115	He	51.657	ppb	3.2	29929.00	0.4878	Pulse	0.1000	3
Mo	98	115	He	51.526	ppb	1.8	72845.44	1.1873	Pulse	0.1000	3
Ag	107	115	He	53.810	ppb	1.1	159542.41	2.6000	Pulse	0.1000	3
Cd	111	115	He	52.431	ppb	1.1	17163.44	0.2797	Pulse	0.5000	3
Sn	120	115	He	104.620	ppb	1.4	95875.60	1.5625	Pulse	0.1000	3
Sb	121	115	He	103.869	ppb	1.7	91207.79	1.4865	Pulse	0.1000	3
Ba	137	115	He	528.740	ppb	1.6	141505.30	2.3063	Pulse	0.1000	3
Tl	205	159	He	106.007	ppb	0.2	536761.14	2.2037	Pulse	0.1000	3
Pb	208	159	He	52.846	ppb	1.2	350537.17	1.4391	Pulse	0.1000	3
U	238	159	He	53.781	ppb	0.4	360298.18	1.4792	Pulse	0.1000	3

ISTD Table:

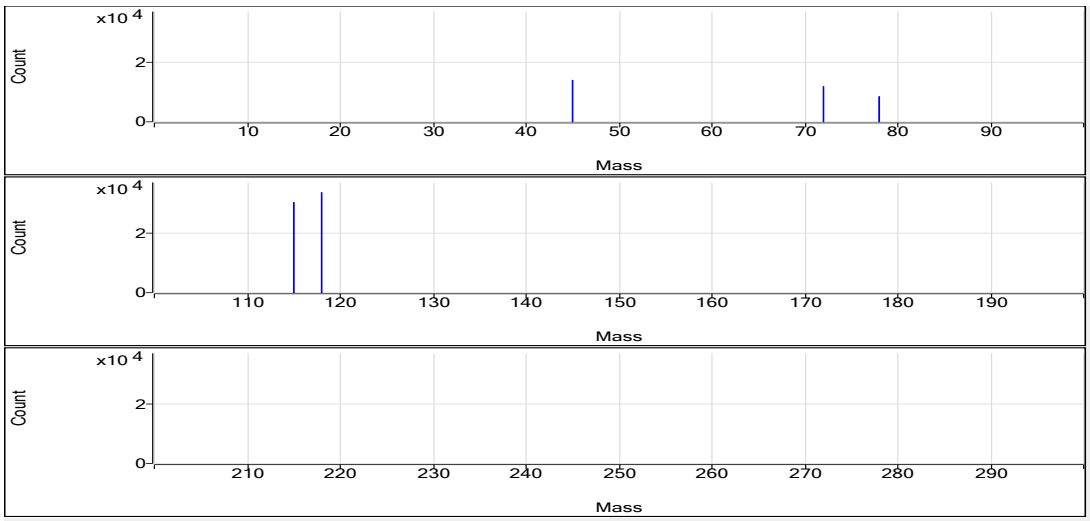
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2374352.36	1.7	103.5	Analog	0.1000	3
No Gas	Ge	72	1076767.01	1.0	103.6	Pulse	0.1000	3
H2	Sc	45	139708.02	2.0	100.5	Pulse	0.1000	3
H2	Ge	72	118488.39	0.6	100.4	Pulse	0.1000	3
H2	In	115	302727.89	0.6	102.7	Pulse	0.1000	3
He	Sc	45	46539.84	0.3	99.4	Pulse	0.1000	3
He	Ge	72	77185.06	0.7	100.9	Pulse	0.1000	3
He	In	115	61365.99	1.5	101.2	Pulse	0.1000	3
He	Tb	159	243575.55	0.4	101.0	Pulse	0.1000	3
He	Bi	209	169577.01	0.6	102.3	Pulse	0.1000	3

No Gas

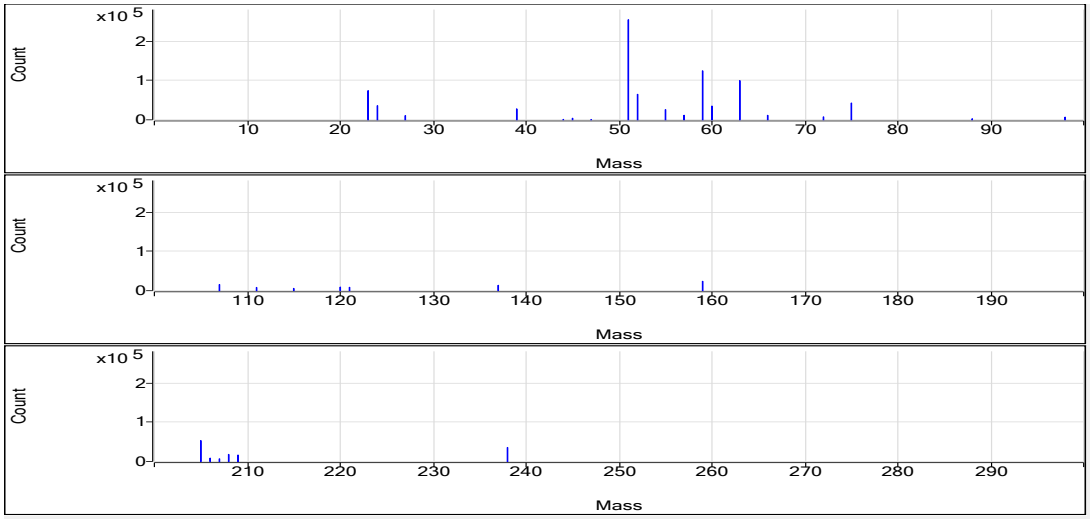


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.458	0.0201	47760.98	0.0004	9.309E-06
Be	9	1	No Gas	51.037	0.0203	49012.60	0.0004	9.309E-06
Be	9	1	No Gas	52.927	0.0211	49145.02	0.0004	9.309E-06
Se	78	2	H2	105.391	0.0471	5598.98	0.0004	5.598E-06
Se	78	2	H2	106.308	0.0476	5594.98	0.0004	5.598E-06
Se	78	2	H2	108.007	0.0483	5751.04	0.0004	5.598E-06
Na	23	3	He	4994.201	16.0863	750534.68	0.0031	0.4657
Na	23	3	He	4929.89	15.8851	736527.33	0.0031	0.4657
Na	23	3	He	4965.982	15.998	745453.66	0.0031	0.4657
Mg	24	3	He	5141.133	7.8047	364143.74	0.0015	0.003704
Mg	24	3	He	5156.379	7.8278	362945.23	0.0015	0.003704
Mg	24	3	He	5079.746	7.7116	359333.55	0.0015	0.003704
Al	27	3	He	5117.808	2.3911	111561.89	0.0005	0.0007154
Al	27	3	He	5107.68	2.3864	110646.75	0.0005	0.0007154
Al	27	3	He	5056.006	2.3622	110072.87	0.0005	0.0007154
K	39	3	He	5246.765	6.1316	286082.77	0.0011	0.4296
K	39	3	He	5140.685	6.0163	278953.26	0.0011	0.4296
K	39	3	He	5042.804	5.91	275385.13	0.0011	0.4296
Ca	44	3	He	5238.807	0.3268	15247.48	0.0001	0.002924
Ca	44	3	He	5114.844	0.3191	14797.05	0.0001	0.002924
Ca	44	3	He	5033.724	0.3141	14637.02	0.0001	0.002924
Ti	47	3	He	539.631	0.2614	12194.95	0.0005	0
Ti	47	3	He	501.127	0.2427	11254.19	0.0005	0
Ti	47	3	He	542.984	0.263	12254.91	0.0005	0
V	51	3	He	517.8	10.9082	508941.56	0.021	0.009571
V	51	3	He	520.178	10.9582	508088.16	0.021	0.009571
V	51	3	He	518.818	10.9296	509283.69	0.021	0.009571
Cr	52	3	He	524.301	14.0079	653566.63	0.0267	0.01758
Cr	52	3	He	523.629	13.99	648659.56	0.0267	0.01758
Cr	52	3	He	525.557	14.0415	654285.38	0.0267	0.01758
Mn	55	3	He	515.248	5.5787	260283.55	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	522.474	5.6568	262284.86	0.0108	0.004199
Mn	55	3	He	520.901	5.6398	262797.65	0.0108	0.004199
Fe	57	3	He	5190.816	2.6029	121441.58	0.0005	0.002993
Fe	57	3	He	5203.897	2.6094	120987.96	0.0005	0.002993
Fe	57	3	He	5254.947	2.635	122781.61	0.0005	0.002993
Co	59	3	He	513.838	26.9031	1255214.75	0.0524	0.003063
Co	59	3	He	510.766	26.7423	1239929.20	0.0524	0.003063
Co	59	3	He	509.79	26.6912	1243721.78	0.0524	0.003063
Ni	60	3	He	520.354	5.7006	355191.28	0.0109	0.01116
Ni	60	3	He	528.894	5.794	350446.09	0.0109	0.01116
Ni	60	3	He	527.38	5.7775	354197.14	0.0109	0.01116
Cu	63	3	He	505.163	12.8859	994083.50	0.0255	0.01531
Cu	63	3	He	511.176	13.0391	999742.80	0.0255	0.01531
Cu	63	3	He	506.194	12.9122	1003761.47	0.0255	0.01531
Zn	66	3	He	532.494	1.5351	118422.61	0.0029	0.002787
Zn	66	3	He	543.356	1.5663	120094.11	0.0029	0.002787
Zn	66	3	He	529.59	1.5267	118682.85	0.0029	0.002787
As	75	3	He	524.903	1.1177	86223.09	0.0021	0.0004097
As	75	3	He	522.839	1.1133	85358.30	0.0021	0.0004097
As	75	3	He	523.174	1.114	86599.34	0.0021	0.0004097
Sr	88	3	He	50.1	0.4731	29478.30	0.0094	0.0008765
Sr	88	3	He	51.472	0.486	29397.90	0.0094	0.0008765
Sr	88	3	He	53.398	0.5042	30910.79	0.0094	0.0008765
Mo	98	3	He	50.441	1.1623	72417.25	0.023	0.0002199
Mo	98	3	He	52.206	1.2029	72758.40	0.023	0.0002199
Mo	98	3	He	51.932	1.1966	73360.66	0.023	0.0002199
Ag	107	3	He	53.162	2.5687	160050.30	0.0483	0.0008224
Ag	107	3	He	53.897	2.6043	157515.95	0.0483	0.0008224
Ag	107	3	He	54.371	2.6271	161060.99	0.0483	0.0008224
Cd	111	3	He	51.883	0.2768	17245.50	0.0053	2.193E-05
Cd	111	3	He	52.361	0.2793	16895.16	0.0053	2.193E-05
Cd	111	3	He	53.049	0.283	17349.65	0.0053	2.193E-05
Sn	120	3	He	102.927	1.5375	95795.53	0.0148	0.01345
Sn	120	3	He	105.36	1.5735	95171.33	0.0148	0.01345
Sn	120	3	He	105.574	1.5767	96659.94	0.0148	0.01345
Sb	121	3	He	102.01	1.46	90965.95	0.0143	0.0004392
Sb	121	3	He	105.599	1.5113	91409.38	0.0143	0.0004392
Sb	121	3	He	103.997	1.4884	91248.05	0.0143	0.0004392
Ba	137	3	He	522.328	2.2783	141953.91	0.0044	0.0001096
Ba	137	3	He	538.029	2.3468	141942.13	0.0044	0.0001096
Ba	137	3	He	525.865	2.2937	140619.85	0.0044	0.0001096
Tl	205	3	He	105.706	2.1974	537073.31	0.0208	0.0002491
Tl	205	3	He	106.128	2.2062	534878.16	0.0208	0.0002491
Tl	205	3	He	106.187	2.2074	538331.95	0.0208	0.0002491
Pb	208	3	He	52.792	1.4376	186188.55	0.0272	0.0006218
Pb	208	3	He	52.247	1.4228	181073.94	0.0272	0.0006218
Pb	208	3	He	53.499	1.4569	187987.91	0.0272	0.0006218
U	238	3	He	53.554	1.473	360008.82	0.0275	2.763E-05
U	238	3	He	53.756	1.4785	358455.97	0.0275	2.763E-05
U	238	3	He	54.033	1.4861	362429.76	0.0275	2.763E-05
Sc	45	1	No Gas			2377858.09		
Sc	45	1	No Gas			2412530.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2332668.56		
Ge	72	1	No Gas			1086370.53		
Ge	72	1	No Gas			1079091.70		
Ge	72	1	No Gas			1064838.81		
Sc	45	2	H2			136585.95		
Sc	45	2	H2			140395.61		
Sc	45	2	H2			142142.49		
Ge	72	2	H2			118767.17		
Ge	72	2	H2			117659.05		
Ge	72	2	H2			119038.95		
In	115	2	H2			301203.69		
In	115	2	H2			302375.62		
In	115	2	H2			304604.35		
Sc	45	3	He			46656.90		
Sc	45	3	He			46365.91		
Sc	45	3	He			46596.70		
Ge	72	3	He			77144.97		
Ge	72	3	He			76672.63		
Ge	72	3	He			77737.57		
In	115	3	He			62977.79		
In	115	3	He			61150.31		
In	115	3	He			61983.27		
Tb	159	3	He			244410.23		
Tb	159	3	He			242443.34		
Tb	159	3	He			243873.08		
Bi	209	3	He			169910.21		
Bi	209	3	He			170335.17		
Bi	209	3	He			168485.64		

Quantitation Report

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Sample Name	410-178963-V-1-A
Sample Type	Sample
Comment	D6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

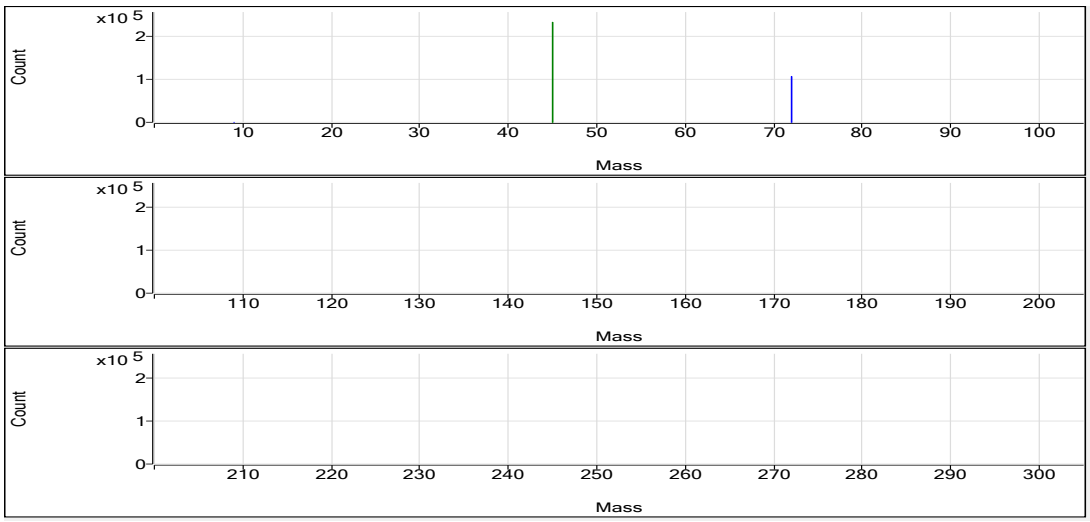
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.083	ppb	6.8	98.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.280	ppb	18.0	16.22	0.0001	Pulse	1.5000	3
Na	23	45	He	13584.383	ppb	1.9	1960719.45	42.9542	Analog	0.1000	3
Mg	24	45	He	10470.335	ppb	1.4	725408.56	15.8911	Pulse	0.1000	3
Al	27	45	He	4.412	ppb	13.5	126.67	0.0028	Pulse	0.1000	3
K	39	45	He	1860.735	ppb	4.3	111908.16	2.4518	Pulse	0.1000	3
Ca	44	45	He	38866.953	ppb	1.6	109819.01	2.4058	Pulse	0.1000	3
Ti	47	45	He	0.905	ppb	1.3	20.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.358	ppb	10.5	781.36	0.0171	Pulse	0.5000	3
Cr	52	45	He	0.660	ppb	8.8	1606.80	0.0352	Pulse	0.1000	3
Mn	55	45	He	0.969	ppb	7.7	670.03	0.0147	Pulse	0.1000	3
Fe	57	45	He	43.162	ppb	3.3	1123.41	0.0246	Pulse	0.1000	3
Co	59	45	He	0.364	ppb	6.9	1010.06	0.0221	Pulse	0.1000	3
Ni	60	115	He	0.519	ppb	24.4	1033.40	0.0168	Pulse	0.1000	3
Cu	63	72	He	3.546	ppb	2.4	8279.02	0.1056	Pulse	0.1000	3
Zn	66	72	He	153.620	ppb	3.8	34858.43	0.4448	Pulse	0.1000	3
As	75	72	He	1.342	ppb	3.3	256.00	0.0033	Pulse	0.5000	3
Sr	88	115	He	1412.892	ppb	1.3	817631.34	13.3185	Pulse	0.1000	3
Mo	98	115	He	0.865	ppb	3.0	1236.75	0.0201	Pulse	0.1000	3
Ag	107	115	He	0.039	ppb	26.2	166.67	0.0027	Pulse	0.1000	3
Cd	111	115	He	0.108	ppb	23.9	36.67	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.126	ppb	83.8	940.07	0.0153	Pulse	0.1000	3
Sb	121	115	He	0.201	ppb	16.4	203.34	0.0033	Pulse	0.1000	3
Ba	137	115	He	127.115	ppb	0.9	34045.17	0.5545	Pulse	0.1000	3
Tl	205	159	He	0.905	ppb	2.0	4717.57	0.0191	Pulse	0.1000	3
Pb	208	159	He	0.551	ppb	1.8	3866.99	0.0156	Pulse	0.1000	3
U	238	159	He	2.940	ppb	3.2	20024.55	0.0809	Pulse	0.1000	3

ISTD Table:

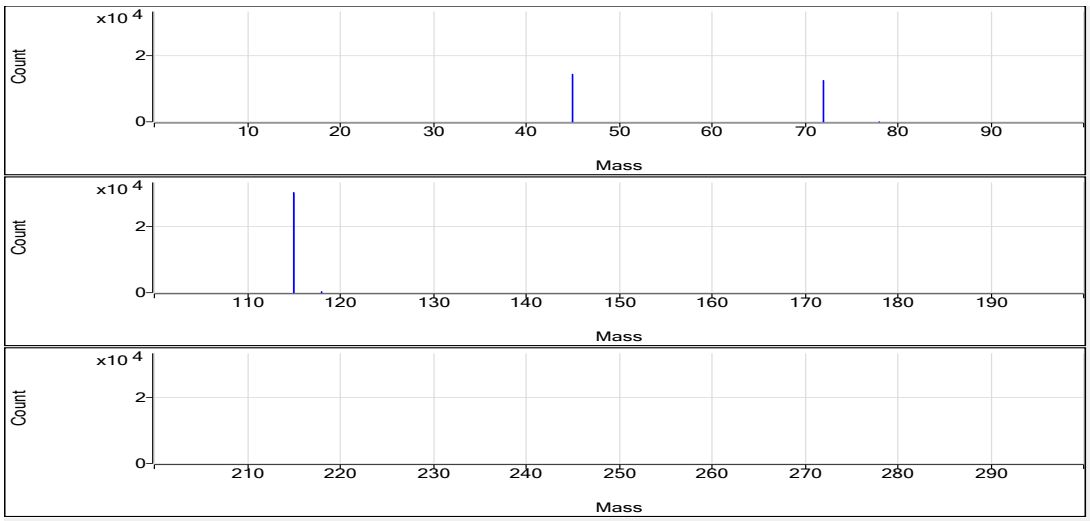
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2317894.97	1.9	101.0	Analog	0.1000	3
No Gas	Ge	72	1062614.46	1.0	102.3	Pulse	0.1000	3
H2	Sc	45	143467.19	1.0	103.2	Pulse	0.1000	3
H2	Ge	72	124284.29	0.6	105.3	Pulse	0.1000	3
H2	In	115	300968.01	0.7	102.1	Pulse	0.1000	3
He	Sc	45	45654.28	1.3	97.5	Pulse	0.1000	3
He	Ge	72	78364.54	1.3	102.5	Pulse	0.1000	3
He	In	115	61395.18	0.9	101.3	Pulse	0.1000	3
He	Tb	159	247550.42	0.7	102.7	Pulse	0.1000	3
He	Bi	209	172982.46	0.6	104.4	Pulse	0.1000	3

No Gas

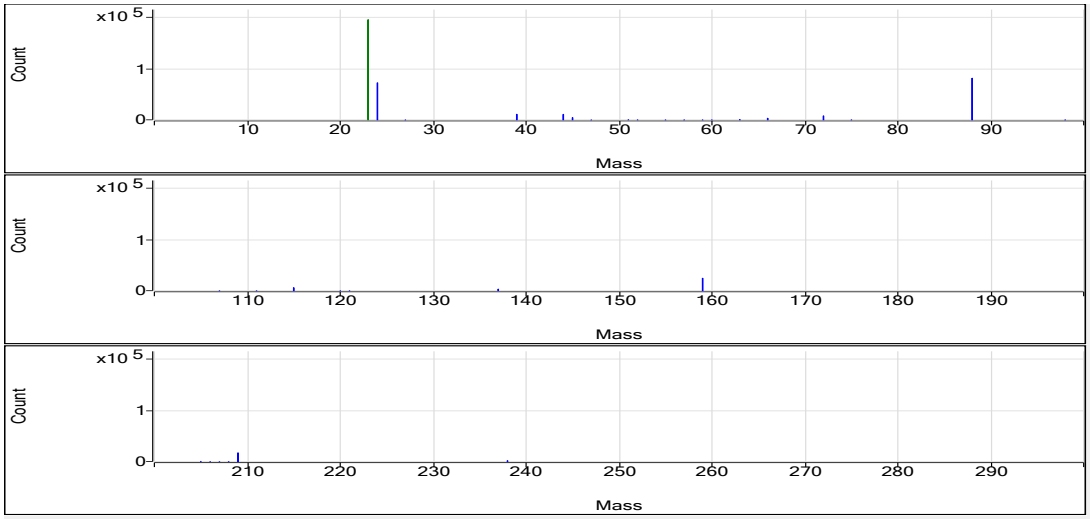


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.081	0	98.00	0.0004	9.309E-06
Be	9	1	No Gas	0.078	0	92.00	0.0004	9.309E-06
Be	9	1	No Gas	0.089	0	104.00	0.0004	9.309E-06
Se	78	2	H2	0.338	0.0002	19.33	0.0004	5.598E-06
Se	78	2	H2	0.25	0.0001	14.67	0.0004	5.598E-06
Se	78	2	H2	0.251	0.0001	14.67	0.0004	5.598E-06
Na	23	3	He	13775.389	43.5516	1968677.94	0.0031	0.4657
Na	23	3	He	13287.944	42.027	1946950.60	0.0031	0.4657
Na	23	3	He	13689.817	43.2839	1966529.81	0.0031	0.4657
Mg	24	3	He	10589.377	16.0717	726496.08	0.0015	0.003704
Mg	24	3	He	10306.248	15.6421	724639.91	0.0015	0.003704
Mg	24	3	He	10515.382	15.9594	725089.68	0.0015	0.003704
Al	27	3	He	5.099	0.0031	140.00	0.0005	0.0007154
Al	27	3	He	4.014	0.0026	120.00	0.0005	0.0007154
Al	27	3	He	4.123	0.0026	120.00	0.0005	0.0007154
K	39	3	He	1949.902	2.5487	115210.48	0.0011	0.4296
K	39	3	He	1798.658	2.3843	110457.85	0.0011	0.4296
K	39	3	He	1833.644	2.4224	110056.14	0.0011	0.4296
Ca	44	3	He	39327.873	2.4343	110037.18	0.0001	0.002924
Ca	44	3	He	38176.661	2.3631	109473.43	0.0001	0.002924
Ca	44	3	He	39096.324	2.42	109946.42	0.0001	0.002924
Ti	47	3	He	0.913	0.0004	20.00	0.0005	0
Ti	47	3	He	0.891	0.0004	20.00	0.0005	0
Ti	47	3	He	0.909	0.0004	20.00	0.0005	0
V	51	3	He	0.384	0.0177	798.02	0.021	0.009571
V	51	3	He	0.376	0.0175	810.03	0.021	0.009571
V	51	3	He	0.315	0.0162	736.02	0.021	0.009571
Cr	52	3	He	0.643	0.0347	1570.13	0.0267	0.01758
Cr	52	3	He	0.725	0.0369	1710.14	0.0267	0.01758
Cr	52	3	He	0.612	0.0339	1540.13	0.0267	0.01758
Mn	55	3	He	0.982	0.0148	670.04	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.889	0.0138	640.03	0.0108	0.004199
Mn	55	3	He	1.036	0.0154	700.03	0.0108	0.004199
Fe	57	3	He	44.822	0.0254	1150.07	0.0005	0.002993
Fe	57	3	He	42.298	0.0242	1120.08	0.0005	0.002993
Fe	57	3	He	42.367	0.0242	1100.07	0.0005	0.002993
Co	59	3	He	0.368	0.0223	1010.06	0.0524	0.003063
Co	59	3	He	0.337	0.0207	960.06	0.0524	0.003063
Co	59	3	He	0.387	0.0233	1060.07	0.0524	0.003063
Ni	60	3	He	0.605	0.0178	1080.07	0.0109	0.01116
Ni	60	3	He	0.373	0.0152	940.06	0.0109	0.01116
Ni	60	3	He	0.578	0.0175	1080.07	0.0109	0.01116
Cu	63	3	He	3.644	0.1082	8462.38	0.0255	0.01531
Cu	63	3	He	3.503	0.1046	8302.37	0.0255	0.01531
Cu	63	3	He	3.49	0.1042	8072.32	0.0255	0.01531
Zn	66	3	He	160.446	0.4645	36341.38	0.0029	0.002787
Zn	66	3	He	150.36	0.4355	34577.78	0.0029	0.002787
Zn	66	3	He	150.052	0.4346	33656.14	0.0029	0.002787
As	75	3	He	1.297	0.0032	248.00	0.0021	0.0004097
As	75	3	He	1.346	0.0033	260.00	0.0021	0.0004097
As	75	3	He	1.385	0.0034	260.00	0.0021	0.0004097
Sr	88	3	He	1433.359	13.5114	820987.33	0.0094	0.0008765
Sr	88	3	He	1403.66	13.2315	815939.75	0.0094	0.0008765
Sr	88	3	He	1401.657	13.2126	815966.94	0.0094	0.0008765
Mo	98	3	He	0.876	0.0204	1240.09	0.023	0.0002199
Mo	98	3	He	0.835	0.0195	1200.07	0.023	0.0002199
Mo	98	3	He	0.883	0.0206	1270.09	0.023	0.0002199
Ag	107	3	He	0.051	0.0033	200.01	0.0483	0.0008224
Ag	107	3	He	0.033	0.0024	150.00	0.0483	0.0008224
Ag	107	3	He	0.033	0.0024	150.01	0.0483	0.0008224
Cd	111	3	He	0.138	0.0008	46.00	0.0053	2.193E-05
Cd	111	3	He	0.093	0.0005	32.00	0.0053	2.193E-05
Cd	111	3	He	0.093	0.0005	32.00	0.0053	2.193E-05
Sn	120	3	He	0.247	0.0171	1040.07	0.0148	0.01345
Sn	120	3	He	0.077	0.0146	900.07	0.0148	0.01345
Sn	120	3	He	0.054	0.0143	880.06	0.0148	0.01345
Sb	121	3	He	0.165	0.0028	170.01	0.0143	0.0004392
Sb	121	3	He	0.207	0.0034	210.01	0.0143	0.0004392
Sb	121	3	He	0.23	0.0037	230.01	0.0143	0.0004392
Ba	137	3	He	127.467	0.5561	33787.96	0.0044	0.0001096
Ba	137	3	He	125.784	0.5487	33838.10	0.0044	0.0001096
Ba	137	3	He	128.093	0.5588	34509.44	0.0044	0.0001096
Tl	205	3	He	0.918	0.0193	4760.89	0.0208	0.0002491
Tl	205	3	He	0.885	0.0186	4650.89	0.0208	0.0002491
Tl	205	3	He	0.912	0.0192	4740.94	0.0208	0.0002491
Pb	208	3	He	0.561	0.0159	1950.20	0.0272	0.0006218
Pb	208	3	He	0.552	0.0156	1940.19	0.0272	0.0006218
Pb	208	3	He	0.541	0.0153	1800.17	0.0272	0.0006218
U	238	3	He	2.971	0.0817	20124.69	0.0275	2.763E-05
U	238	3	He	2.834	0.078	19453.68	0.0275	2.763E-05
U	238	3	He	3.016	0.083	20495.28	0.0275	2.763E-05
Sc	45	1	No Gas			2359661.37		
Sc	45	1	No Gas			2271905.75		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2322117.78		
Ge	72	1	No Gas			1063994.52		
Ge	72	1	No Gas			1051819.67		
Ge	72	1	No Gas			1072029.20		
Sc	45	2	H2			142193.22		
Sc	45	2	H2			143252.30		
Sc	45	2	H2			144956.06		
Ge	72	2	H2			123421.74		
Ge	72	2	H2			124822.06		
Ge	72	2	H2			124609.07		
In	115	2	H2			301543.28		
In	115	2	H2			298658.51		
In	115	2	H2			302702.24		
Sc	45	3	He			45203.37		
Sc	45	3	He			46326.22		
Sc	45	3	He			45433.26		
Ge	72	3	He			78240.97		
Ge	72	3	He			79405.72		
Ge	72	3	He			77446.92		
In	115	3	He			60769.70		
In	115	3	He			61672.78		
In	115	3	He			61762.81		
Tb	159	3	He			246200.07		
Tb	159	3	He			249470.35		
Tb	159	3	He			246980.84		
Bi	209	3	He			171822.01		
Bi	209	3	He			173310.47		
Bi	209	3	He			173814.90		

Quantitation Report

Data File Name	131SMPL.d
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Sample Type	Sample
Comment	D6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

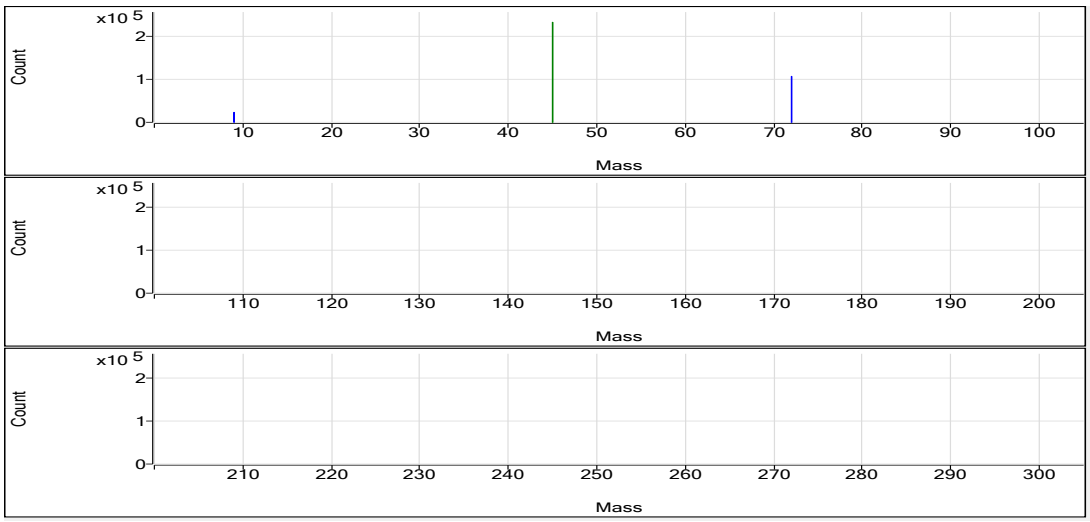
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.518	ppb	1.7	46906.72	0.0201	Pulse	0.5000	3
Se	78	72	H2	98.150	ppb	2.4	5391.80	0.0439	Pulse	1.5000	3
Na	23	45	He	18054.860	ppb	0.9	2592831.37	56.9367	Analog	0.1000	3
Mg	24	45	He	15091.409	ppb	1.1	1042896.39	22.9030	Pulse	0.1000	3
Al	27	45	He	4883.993	ppb	0.4	103910.16	2.2819	Pulse	0.1000	3
K	39	45	He	6675.852	ppb	0.6	349935.18	7.6847	Pulse	0.1000	3
Ca	44	45	He	42815.067	ppb	0.6	120664.88	2.6499	Pulse	0.1000	3
Ti	47	45	He	506.576	ppb	4.0	11174.16	0.2454	Pulse	0.1000	3
V	51	45	He	496.202	ppb	0.8	476015.91	10.4536	Pulse	0.5000	3
Cr	52	45	He	494.595	ppb	0.9	601774.47	13.2152	Pulse	0.1000	3
Mn	55	45	He	496.794	ppb	1.0	244938.21	5.3790	Pulse	0.1000	3
Fe	57	45	He	5066.219	ppb	0.8	115686.00	2.5405	Pulse	0.1000	3
Co	59	45	He	477.903	ppb	0.7	1139436.94	25.0218	Pulse	0.1000	3
Ni	60	115	He	485.039	ppb	0.8	325092.10	5.3145	Pulse	0.1000	3
Cu	63	72	He	462.562	ppb	2.0	925480.01	11.8005	Pulse	0.1000	3
Zn	66	72	He	628.101	ppb	1.2	141989.68	1.8102	Pulse	0.1000	3
As	75	72	He	492.152	ppb	1.9	82190.84	1.0480	Pulse	0.5000	3
Sr	88	115	He	1438.181	ppb	0.6	829270.14	13.5569	Pulse	0.1000	3
Mo	98	115	He	49.089	ppb	2.5	69178.75	1.1311	Pulse	0.1000	3
Ag	107	115	He	43.442	ppb	1.1	128413.56	2.0992	Pulse	0.1000	3
Cd	111	115	He	49.266	ppb	0.9	16076.96	0.2628	Pulse	0.5000	3
Sn	120	115	He	97.456	ppb	0.4	89095.62	1.4565	Pulse	0.1000	3
Sb	121	115	He	99.026	ppb	0.6	86695.75	1.4173	Pulse	0.1000	3
Ba	137	115	He	630.077	ppb	0.6	168110.22	2.7482	Pulse	0.1000	3
Tl	205	159	He	98.927	ppb	0.1	504360.71	2.0565	Pulse	0.1000	3
Pb	208	159	He	50.283	ppb	0.4	335817.33	1.3693	Pulse	0.1000	3
U	238	159	He	53.873	ppb	0.8	363382.78	1.4817	Pulse	0.1000	3

ISTD Table:

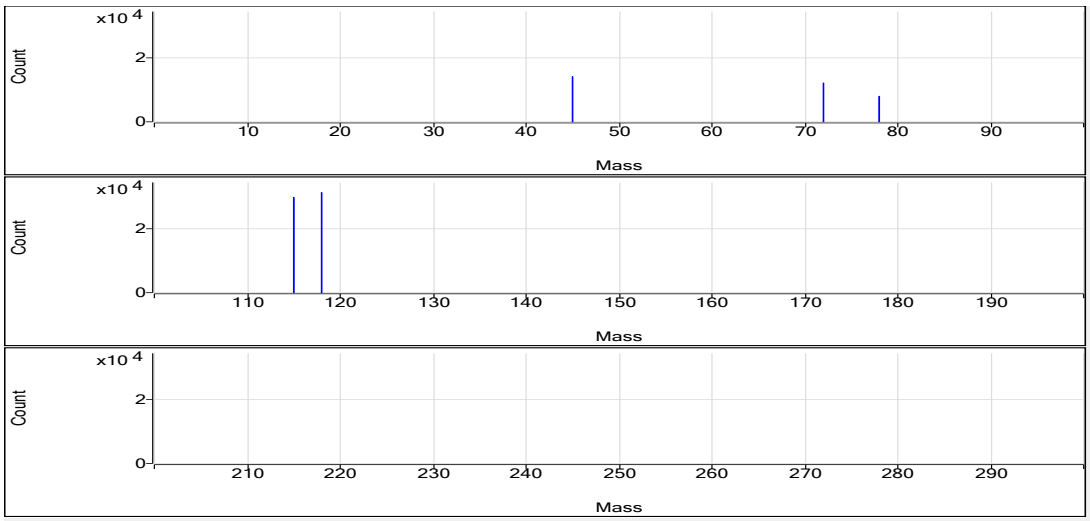
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2332626.16	0.7	101.7	Analog	0.1000	3
No Gas	Ge	72	1072194.62	0.5	103.2	Pulse	0.1000	3
H2	Sc	45	142803.48	0.3	102.7	Pulse	0.1000	3
H2	Ge	72	122836.69	1.4	104.0	Pulse	0.1000	3
H2	In	115	300708.49	1.2	102.1	Pulse	0.1000	3
He	Sc	45	45537.43	0.6	97.2	Pulse	0.1000	3
He	Ge	72	78451.19	2.3	102.6	Pulse	0.1000	3
He	In	115	61172.76	1.3	100.9	Pulse	0.1000	3
He	Tb	159	245246.90	0.7	101.7	Pulse	0.1000	3
He	Bi	209	169462.60	0.5	102.3	Pulse	0.1000	3

No Gas

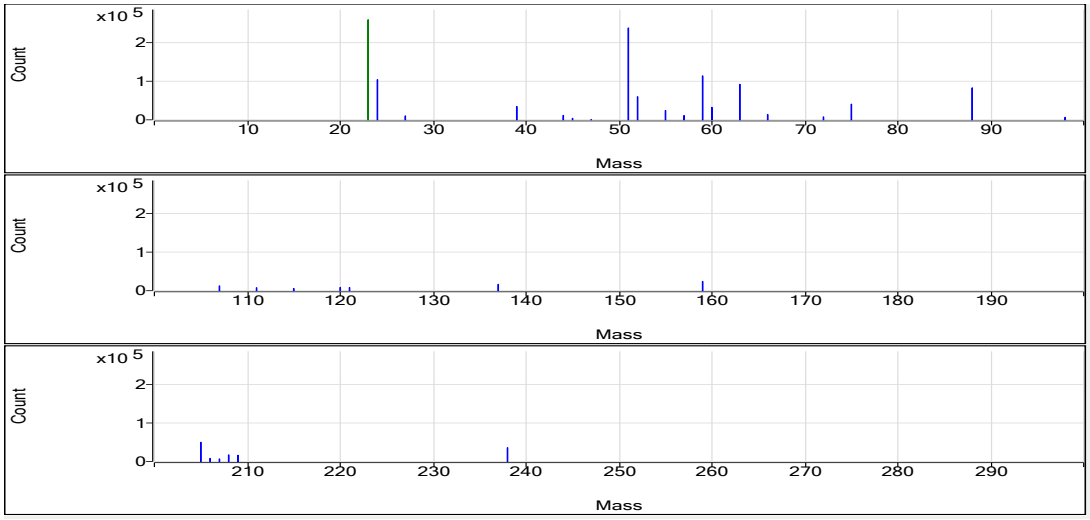


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.657	0.0198	46371.29	0.0004	9.309E-06
Be	9	1	No Gas	50.541	0.0201	46595.82	0.0004	9.309E-06
Be	9	1	No Gas	51.356	0.0204	47753.04	0.0004	9.309E-06
Se	78	2	H2	96.613	0.0432	5358.23	0.0004	5.598E-06
Se	78	2	H2	100.89	0.0451	5456.27	0.0004	5.598E-06
Se	78	2	H2	96.946	0.0434	5360.90	0.0004	5.598E-06
Na	23	3	He	17862.873	56.3362	2553337.15	0.0031	0.4657
Na	23	3	He	18189.317	57.3572	2630692.15	0.0031	0.4657
Na	23	3	He	18112.39	57.1166	2594464.81	0.0031	0.4657
Mg	24	3	He	15151.094	22.9935	1042141.47	0.0015	0.003704
Mg	24	3	He	14897.027	22.608	1036918.66	0.0015	0.003704
Mg	24	3	He	15226.107	23.1074	1049629.05	0.0015	0.003704
Al	27	3	He	4898.583	2.2887	103732.06	0.0005	0.0007154
Al	27	3	He	4860.43	2.2709	104154.84	0.0005	0.0007154
Al	27	3	He	4892.968	2.2861	103843.58	0.0005	0.0007154
K	39	3	He	6723.369	7.7363	350636.21	0.0011	0.4296
K	39	3	He	6644.961	7.6511	350919.88	0.0011	0.4296
K	39	3	He	6659.226	7.6666	348249.45	0.0011	0.4296
Ca	44	3	He	42900.635	2.6551	120339.78	0.0001	0.002924
Ca	44	3	He	42531.805	2.6323	120732.63	0.0001	0.002924
Ca	44	3	He	43012.761	2.6621	120922.24	0.0001	0.002924
Ti	47	3	He	483.94	0.2344	10623.79	0.0005	0
Ti	47	3	He	513.804	0.2489	11414.23	0.0005	0
Ti	47	3	He	521.985	0.2528	11484.46	0.0005	0
V	51	3	He	496.314	10.4559	473896.69	0.021	0.009571
V	51	3	He	492.02	10.3656	475416.69	0.021	0.009571
V	51	3	He	500.271	10.5392	478734.34	0.021	0.009571
Cr	52	3	He	493.656	13.1902	597822.41	0.0267	0.01758
Cr	52	3	He	490.812	13.1143	601489.37	0.0267	0.01758
Cr	52	3	He	499.315	13.3412	606011.63	0.0267	0.01758
Mn	55	3	He	497.065	5.3819	243927.30	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	491.584	5.3226	244123.63	0.0108	0.004199
Mn	55	3	He	501.733	5.4325	246763.69	0.0108	0.004199
Fe	57	3	He	5100.522	2.5576	115920.46	0.0005	0.002993
Fe	57	3	He	5074.873	2.5448	116717.08	0.0005	0.002993
Fe	57	3	He	5023.262	2.5189	114420.47	0.0005	0.002993
Co	59	3	He	474.615	24.8497	1126269.91	0.0524	0.003063
Co	59	3	He	478.009	25.0274	1147883.58	0.0524	0.003063
Co	59	3	He	481.084	25.1884	1144157.33	0.0524	0.003063
Ni	60	3	He	488.354	5.3508	322672.59	0.0109	0.01116
Ni	60	3	He	481.096	5.2714	323564.57	0.0109	0.01116
Ni	60	3	He	485.668	5.3214	329039.14	0.0109	0.01116
Cu	63	3	He	465.537	11.8763	926101.70	0.0255	0.01531
Cu	63	3	He	470.126	11.9932	922924.13	0.0255	0.01531
Cu	63	3	He	452.022	11.532	927414.20	0.0255	0.01531
Zn	66	3	He	634.872	1.8297	142675.15	0.0029	0.002787
Zn	66	3	He	629.722	1.8148	139659.23	0.0029	0.002787
Zn	66	3	He	619.71	1.786	143634.65	0.0029	0.002787
As	75	3	He	494.856	1.0537	82168.02	0.0021	0.0004097
As	75	3	He	499.696	1.064	81880.61	0.0021	0.0004097
As	75	3	He	481.902	1.0261	82523.88	0.0021	0.0004097
Sr	88	3	He	1448.012	13.6496	823122.25	0.0094	0.0008765
Sr	88	3	He	1434.616	13.5233	830074.21	0.0094	0.0008765
Sr	88	3	He	1431.916	13.4978	834613.97	0.0094	0.0008765
Mo	98	3	He	50.475	1.163	70136.47	0.023	0.0002199
Mo	98	3	He	48.587	1.1196	68719.92	0.023	0.0002199
Mo	98	3	He	48.204	1.1107	68679.86	0.023	0.0002199
Ag	107	3	He	43.4	2.0972	126468.77	0.0483	0.0008224
Ag	107	3	He	43.93	2.1228	130298.17	0.0483	0.0008224
Ag	107	3	He	42.997	2.0777	128473.73	0.0483	0.0008224
Cd	111	3	He	49.592	0.2646	15954.15	0.0053	2.193E-05
Cd	111	3	He	48.783	0.2602	15974.20	0.0053	2.193E-05
Cd	111	3	He	49.422	0.2637	16302.52	0.0053	2.193E-05
Sn	120	3	He	97.589	1.4584	87948.92	0.0148	0.01345
Sn	120	3	He	97	1.4497	88984.87	0.0148	0.01345
Sn	120	3	He	97.779	1.4612	90353.07	0.0148	0.01345
Sb	121	3	He	99.48	1.4238	85857.95	0.0143	0.0004392
Sb	121	3	He	98.339	1.4074	86389.99	0.0143	0.0004392
Sb	121	3	He	99.259	1.4206	87839.32	0.0143	0.0004392
Ba	137	3	He	632.989	2.7609	166495.97	0.0044	0.0001096
Ba	137	3	He	631.809	2.7558	169154.06	0.0044	0.0001096
Ba	137	3	He	625.434	2.728	168680.64	0.0044	0.0001096
Tl	205	3	He	98.815	2.0542	499559.88	0.0208	0.0002491
Tl	205	3	He	98.9	2.056	505404.48	0.0208	0.0002491
Tl	205	3	He	99.066	2.0594	508117.77	0.0208	0.0002491
Pb	208	3	He	50.505	1.3754	176496.31	0.0272	0.0006218
Pb	208	3	He	50.185	1.3667	176505.64	0.0272	0.0006218
Pb	208	3	He	50.159	1.366	177379.04	0.0272	0.0006218
U	238	3	He	54.285	1.4931	363097.73	0.0275	2.763E-05
U	238	3	He	53.428	1.4695	361241.05	0.0275	2.763E-05
U	238	3	He	53.906	1.4826	365809.56	0.0275	2.763E-05
Sc	45	1	No Gas			2345914.65		
Sc	45	1	No Gas			2316046.68		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2335917.15		
Ge	72	1	No Gas			1069682.95		
Ge	72	1	No Gas			1068764.20		
Ge	72	1	No Gas			1078136.70		
Sc	45	2	H2			143250.99		
Sc	45	2	H2			142765.34		
Sc	45	2	H2			142394.11		
Ge	72	2	H2			123985.55		
Ge	72	2	H2			120902.41		
Ge	72	2	H2			123622.12		
In	115	2	H2			303642.28		
In	115	2	H2			301599.45		
In	115	2	H2			296883.75		
Sc	45	3	He			45323.22		
Sc	45	3	He			45865.06		
Sc	45	3	He			45424.00		
Ge	72	3	He			77978.86		
Ge	72	3	He			76953.73		
Ge	72	3	He			80420.99		
In	115	3	He			60919.61		
In	115	3	He			62004.03		
In	115	3	He			62465.65		
Tb	159	3	He			243189.31		
Tb	159	3	He			245823.24		
Tb	159	3	He			246728.14		
Bi	209	3	He			170284.02		
Bi	209	3	He			168567.73		
Bi	209	3	He			169536.05		

Quantitation Report

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Comment	D6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

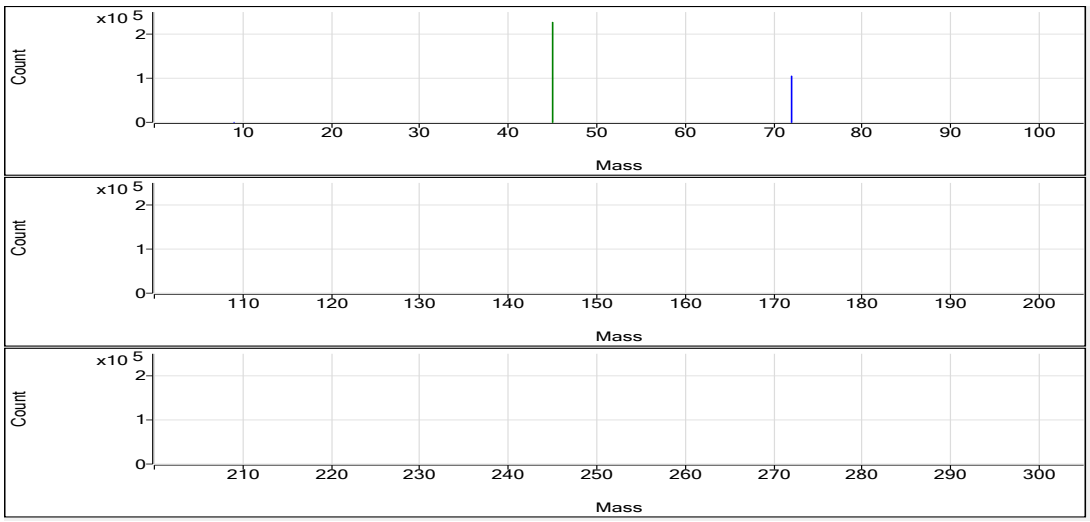
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.104	ppb	19.3	114.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.285	ppb	10.5	15.56	0.0001	Pulse	1.5000	3
Na	23	45	He	2522.427	ppb	2.9	383119.46	8.3552	Pulse	0.1000	3
Mg	24	45	He	2044.730	ppb	1.9	142457.52	3.1063	Pulse	0.1000	3
Al	27	45	He	6.565	ppb	12.1	173.34	0.0038	Pulse	0.1000	3
K	39	45	He	345.844	ppb	13.7	36938.88	0.8055	Pulse	0.1000	3
Ca	44	45	He	7475.321	ppb	3.4	21324.40	0.4651	Pulse	0.1000	3
Ti	47	45	He	1.516	ppb	71.6	33.33	0.0007	Pulse	0.1000	3
V	51	45	He	0.688	ppb	4.7	1103.38	0.0241	Pulse	0.5000	3
Cr	52	45	He	0.736	ppb	7.9	1706.82	0.0372	Pulse	0.1000	3
Mn	55	45	He	0.914	ppb	9.1	646.70	0.0141	Pulse	0.1000	3
Fe	57	45	He	11.598	ppb	28.9	403.35	0.0088	Pulse	0.1000	3
Co	59	45	He	0.555	ppb	9.9	1473.45	0.0321	Pulse	0.1000	3
Ni	60	115	He	0.861	ppb	4.3	1210.09	0.0206	Pulse	0.1000	3
Cu	63	72	He	1.340	ppb	4.0	3783.88	0.0495	Pulse	0.1000	3
Zn	66	72	He	31.583	ppb	5.2	7165.16	0.0937	Pulse	0.1000	3
As	75	72	He	0.843	ppb	13.6	168.67	0.0022	Pulse	0.5000	3
Sr	88	115	He	286.675	ppb	1.4	158941.18	2.7030	Pulse	0.1000	3
Mo	98	115	He	0.259	ppb	4.4	363.35	0.0062	Pulse	0.1000	3
Ag	107	115	He	0.043	ppb	17.6	170.01	0.0029	Pulse	0.1000	3
Cd	111	115	He	0.100	ppb	41.8	32.67	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.155	ppb	51.5	926.73	0.0158	Pulse	0.1000	3
Sb	121	115	He	0.215	ppb	9.3	206.68	0.0035	Pulse	0.1000	3
Ba	137	115	He	25.392	ppb	4.4	6518.25	0.1109	Pulse	0.1000	3
Tl	205	159	He	0.918	ppb	4.2	4664.22	0.0193	Pulse	0.1000	3
Pb	208	159	He	0.168	ppb	4.3	1250.07	0.0052	Pulse	0.1000	3
U	238	159	He	0.639	ppb	4.6	4244.10	0.0176	Pulse	0.1000	3

ISTD Table:

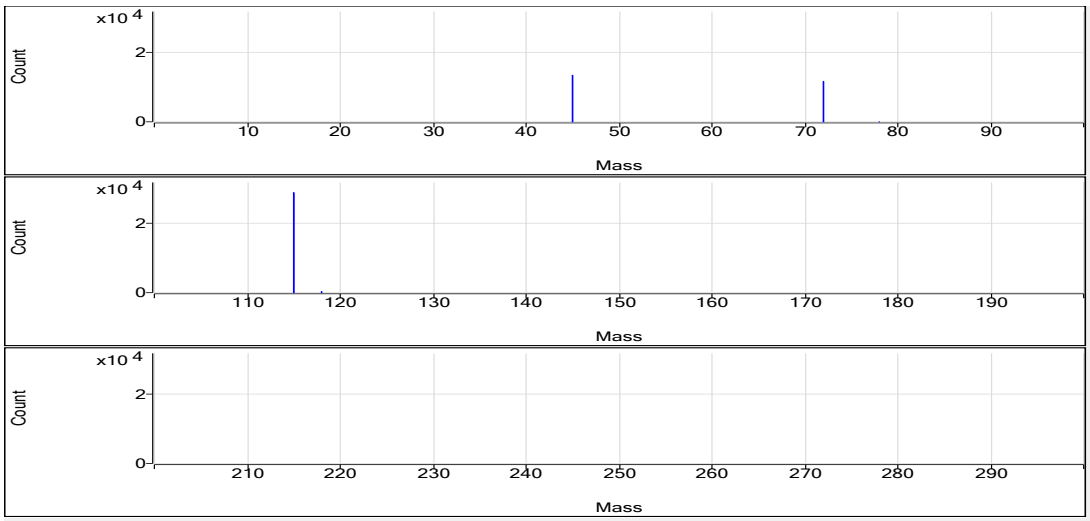
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2262668.46	0.1	98.6	Analog	0.1000	3
No Gas	Ge	72	1047561.08	0.4	100.8	Pulse	0.1000	3
H2	Sc	45	135096.36	0.5	97.2	Pulse	0.1000	3
H2	Ge	72	117048.20	0.5	99.1	Pulse	0.1000	3
H2	In	115	289784.96	0.7	98.4	Pulse	0.1000	3
He	Sc	45	45874.90	2.5	98.0	Pulse	0.1000	3
He	Ge	72	76512.38	0.7	100.1	Pulse	0.1000	3
He	In	115	58805.07	0.9	97.0	Pulse	0.1000	3
He	Tb	159	241268.50	0.4	100.0	Pulse	0.1000	3
He	Bi	209	168312.66	0.7	101.6	Pulse	0.1000	3

No Gas

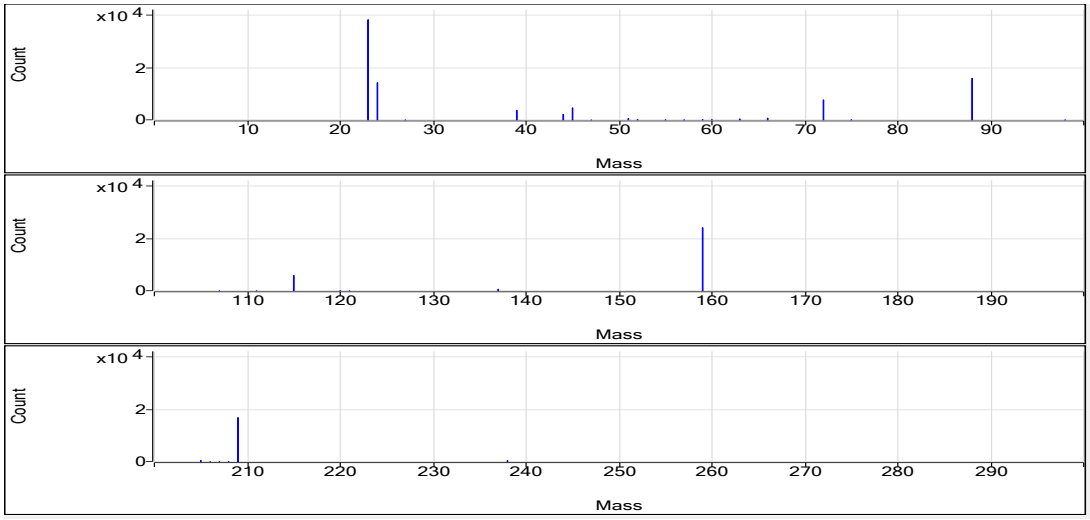


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.101	0	112.00	0.0004	9.309E-06
Be	9	1	No Gas	0.125	0.0001	134.00	0.0004	9.309E-06
Be	9	1	No Gas	0.086	0	98.00	0.0004	9.309E-06
Se	78	2	H2	0.266	0.0001	14.67	0.0004	5.598E-06
Se	78	2	H2	0.319	0.0001	17.33	0.0004	5.598E-06
Se	78	2	H2	0.269	0.0001	14.67	0.0004	5.598E-06
Na	23	3	He	2518.558	8.3431	382735.81	0.0031	0.4657
Na	23	3	He	2451.64	8.1338	382435.38	0.0031	0.4657
Na	23	3	He	2597.084	8.5887	384187.18	0.0031	0.4657
Mg	24	3	He	2035.213	3.0919	141838.90	0.0015	0.003704
Mg	24	3	He	2010.948	3.0551	143643.45	0.0015	0.003704
Mg	24	3	He	2088.03	3.172	141890.21	0.0015	0.003704
Al	27	3	He	7.336	0.0041	190.01	0.0005	0.0007154
Al	27	3	He	5.754	0.0034	160.01	0.0005	0.0007154
Al	27	3	He	6.605	0.0038	170.01	0.0005	0.0007154
K	39	3	He	397.534	0.8617	39528.22	0.0011	0.4296
K	39	3	He	304.889	0.761	35779.60	0.0011	0.4296
K	39	3	He	335.11	0.7938	35508.83	0.0011	0.4296
Ca	44	3	He	7616.405	0.4738	21734.92	0.0001	0.002924
Ca	44	3	He	7181.953	0.4469	21013.86	0.0001	0.002924
Ca	44	3	He	7627.606	0.4745	21224.41	0.0001	0.002924
Ti	47	3	He	0.9	0.0004	20.00	0.0005	0
Ti	47	3	He	0.878	0.0004	20.00	0.0005	0
Ti	47	3	He	2.769	0.0013	60.00	0.0005	0
V	51	3	He	0.724	0.0248	1138.05	0.021	0.009571
V	51	3	He	0.661	0.0235	1104.05	0.021	0.009571
V	51	3	He	0.68	0.0239	1068.04	0.021	0.009571
Cr	52	3	He	0.787	0.0386	1770.15	0.0267	0.01758
Cr	52	3	He	0.672	0.0355	1670.15	0.0267	0.01758
Cr	52	3	He	0.749	0.0376	1680.16	0.0267	0.01758
Mn	55	3	He	0.881	0.0137	630.04	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.008	0.0151	710.04	0.0108	0.004199
Mn	55	3	He	0.852	0.0134	600.03	0.0108	0.004199
Fe	57	3	He	7.952	0.007	320.01	0.0005	0.002993
Fe	57	3	He	12.285	0.0091	430.02	0.0005	0.002993
Fe	57	3	He	14.557	0.0103	460.02	0.0005	0.002993
Co	59	3	He	0.612	0.0351	1610.13	0.0524	0.003063
Co	59	3	He	0.502	0.0294	1380.11	0.0524	0.003063
Co	59	3	He	0.552	0.032	1430.10	0.0524	0.003063
Ni	60	3	He	0.885	0.0208	1230.09	0.0109	0.01116
Ni	60	3	He	0.818	0.0201	1190.08	0.0109	0.01116
Ni	60	3	He	0.88	0.0208	1210.09	0.0109	0.01116
Cu	63	3	He	1.395	0.0509	3920.57	0.0255	0.01531
Cu	63	3	He	1.336	0.0493	3750.54	0.0255	0.01531
Cu	63	3	He	1.289	0.0481	3680.53	0.0255	0.01531
Zn	66	3	He	29.691	0.0882	6801.69	0.0029	0.002787
Zn	66	3	He	32.557	0.0965	7331.87	0.0029	0.002787
Zn	66	3	He	32.5	0.0963	7361.92	0.0029	0.002787
As	75	3	He	0.856	0.0022	172.00	0.0021	0.0004097
As	75	3	He	0.722	0.0019	148.00	0.0021	0.0004097
As	75	3	He	0.951	0.0024	186.00	0.0021	0.0004097
Sr	88	3	He	282.745	2.666	157332.95	0.0094	0.0008765
Sr	88	3	He	286.514	2.7015	159866.93	0.0094	0.0008765
Sr	88	3	He	290.767	2.7416	159623.65	0.0094	0.0008765
Mo	98	3	He	0.27	0.0064	380.02	0.023	0.0002199
Mo	98	3	He	0.247	0.0059	350.02	0.023	0.0002199
Mo	98	3	He	0.259	0.0062	360.01	0.023	0.0002199
Ag	107	3	He	0.043	0.0029	170.01	0.0483	0.0008224
Ag	107	3	He	0.035	0.0025	150.00	0.0483	0.0008224
Ag	107	3	He	0.051	0.0033	190.01	0.0483	0.0008224
Cd	111	3	He	0.072	0.0004	24.00	0.0053	2.193E-05
Cd	111	3	He	0.148	0.0008	48.00	0.0053	2.193E-05
Cd	111	3	He	0.08	0.0004	26.00	0.0053	2.193E-05
Sn	120	3	He	0.247	0.0171	1010.07	0.0148	0.01345
Sn	120	3	He	0.119	0.0152	900.06	0.0148	0.01345
Sn	120	3	He	0.101	0.0149	870.05	0.0148	0.01345
Sb	121	3	He	0.218	0.0036	210.01	0.0143	0.0004392
Sb	121	3	He	0.194	0.0032	190.01	0.0143	0.0004392
Sb	121	3	He	0.233	0.0038	220.01	0.0143	0.0004392
Ba	137	3	He	26.205	0.1144	6751.70	0.0044	0.0001096
Ba	137	3	He	24.118	0.1053	6231.43	0.0044	0.0001096
Ba	137	3	He	25.853	0.1129	6571.63	0.0044	0.0001096
Tl	205	3	He	0.877	0.0185	4480.83	0.0208	0.0002491
Tl	205	3	He	0.922	0.0194	4680.88	0.0208	0.0002491
Tl	205	3	He	0.955	0.0201	4830.95	0.0208	0.0002491
Pb	208	3	He	0.168	0.0052	730.05	0.0272	0.0006218
Pb	208	3	He	0.16	0.005	700.04	0.0272	0.0006218
Pb	208	3	He	0.174	0.0054	660.04	0.0272	0.0006218
U	238	3	He	0.643	0.0177	4290.77	0.0275	2.763E-05
U	238	3	He	0.666	0.0183	4420.83	0.0275	2.763E-05
U	238	3	He	0.607	0.0167	4020.71	0.0275	2.763E-05
Sc	45	1	No Gas			2264512.47		
Sc	45	1	No Gas			2264140.28		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2259352.62		
Ge	72	1	No Gas			1052226.78		
Ge	72	1	No Gas			1047197.33		
Ge	72	1	No Gas			1043259.13		
Sc	45	2	H2			134448.11		
Sc	45	2	H2			134981.44		
Sc	45	2	H2			135859.52		
Ge	72	2	H2			117648.88		
Ge	72	2	H2			116833.34		
Ge	72	2	H2			116662.37		
In	115	2	H2			291969.27		
In	115	2	H2			288140.54		
In	115	2	H2			289245.07		
Sc	45	3	He			45874.68		
Sc	45	3	He			47018.22		
Sc	45	3	He			44731.80		
Ge	72	3	He			77095.41		
Ge	72	3	He			76000.37		
Ge	72	3	He			76441.37		
In	115	3	He			59022.15		
In	115	3	He			59183.34		
In	115	3	He			58229.19		
Tb	159	3	He			242412.24		
Tb	159	3	He			241039.33		
Tb	159	3	He			240353.92		
Bi	209	3	He			169264.37		
Bi	209	3	He			168644.68		
Bi	209	3	He			167028.92		

Quantitation Report

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Sample Type	Sample
Comment	D6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

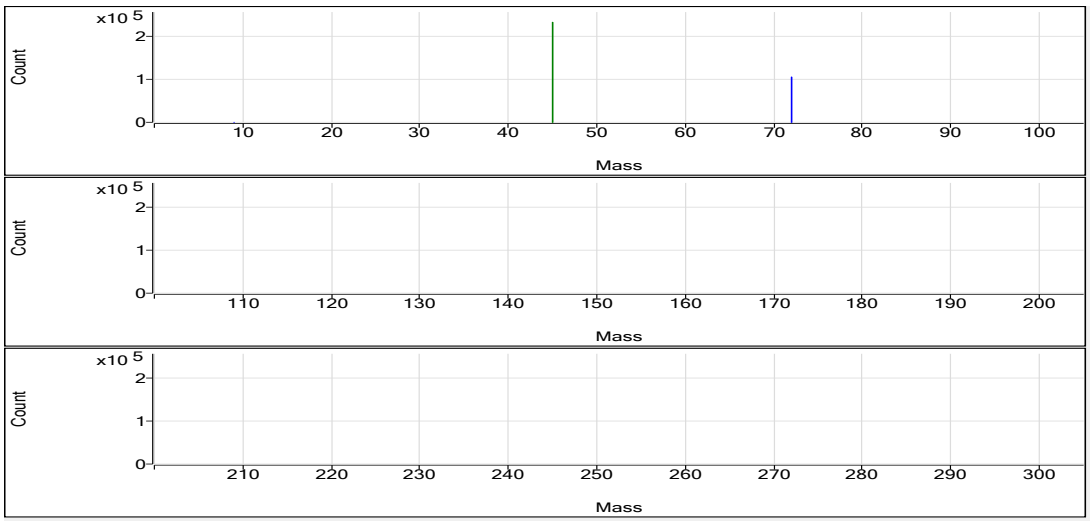
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.012	ppb	70.4	32.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.186	ppb	6.7	10.67	0.0001	Pulse	1.5000	3
Na	23	45	He	13776.632	ppb	2.2	1993545.49	43.5555	Analog	0.1000	3
Mg	24	45	He	10566.341	ppb	1.4	734075.14	16.0368	Pulse	0.1000	3
Al	27	45	He	2.363	ppb	29.4	83.33	0.0018	Pulse	0.1000	3
K	39	45	He	1863.955	ppb	2.9	112402.19	2.4553	Pulse	0.1000	3
Ca	44	45	He	39248.510	ppb	1.9	111195.79	2.4294	Pulse	0.1000	3
Ti	47	45	He	0.153	ppb	173.2	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.102	ppb	25.5	536.68	0.0117	Pulse	0.5000	3
Cr	52	45	He	0.503	ppb	14.5	1420.11	0.0310	Pulse	0.1000	3
Mn	55	45	He	0.742	ppb	12.7	560.03	0.0122	Pulse	0.1000	3
Fe	57	45	He	38.092	ppb	9.8	1010.06	0.0221	Pulse	0.1000	3
Co	59	45	He	0.072	ppb	48.4	313.35	0.0068	Pulse	0.1000	3
Ni	60	115	He	0.123	ppb	74.4	770.04	0.0125	Pulse	0.1000	3
Cu	63	72	He	3.200	ppb	6.3	7431.92	0.0968	Pulse	0.1000	3
Zn	66	72	He	154.303	ppb	2.4	34280.56	0.4468	Pulse	0.1000	3
As	75	72	He	1.085	ppb	1.0	208.67	0.0027	Pulse	0.5000	3
Sr	88	115	He	1425.113	ppb	1.0	826828.35	13.4337	Pulse	0.1000	3
Mo	98	115	He	0.708	ppb	2.5	1016.74	0.0165	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	40.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.083	ppb	12.1	28.67	0.0005	Pulse	0.5000	3
Sn	120	115	He	0.068	ppb	93.3	890.06	0.0145	Pulse	0.1000	3
Sb	121	115	He	0.090	ppb	30.5	106.67	0.0017	Pulse	0.1000	3
Ba	137	115	He	127.720	ppb	1.2	34292.43	0.5572	Pulse	0.1000	3
Tl	205	159	He	0.067	ppb	33.1	406.69	0.0016	Pulse	0.1000	3
Pb	208	159	He	0.611	ppb	4.0	4267.05	0.0173	Pulse	0.1000	3
U	238	159	He	2.912	ppb	2.7	19800.91	0.0801	Pulse	0.1000	3

ISTD Table:

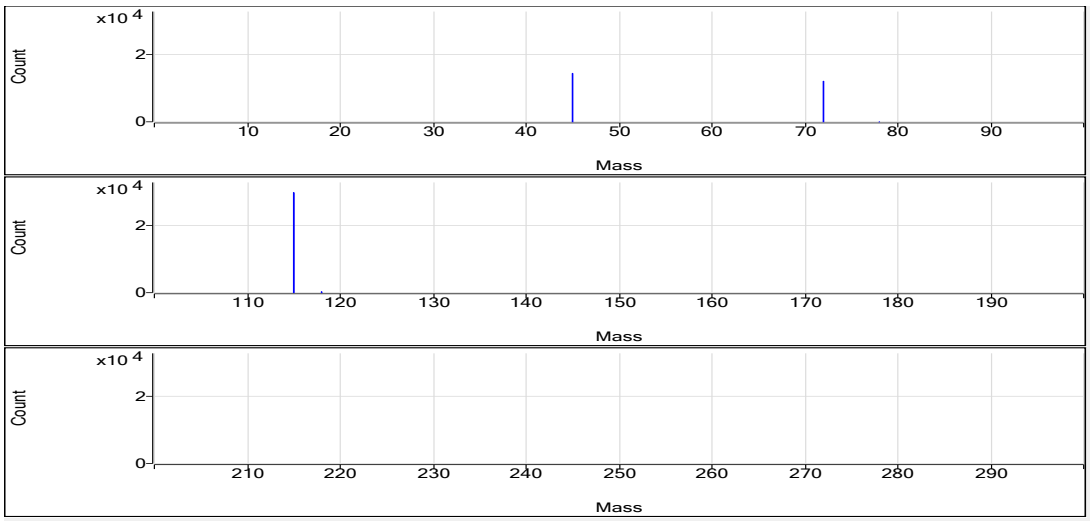
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2341965.64	1.6	102.1	Analog	0.1000	3
No Gas	Ge	72	1061417.07	0.9	102.2	Pulse	0.1000	3
H2	Sc	45	143358.46	1.7	103.1	Pulse	0.1000	3
H2	Ge	72	120335.61	1.2	101.9	Pulse	0.1000	3
H2	In	115	295914.40	0.9	100.4	Pulse	0.1000	3
He	Sc	45	45781.26	1.6	97.8	Pulse	0.1000	3
He	Ge	72	76713.09	1.3	100.3	Pulse	0.1000	3
He	In	115	61552.56	1.0	101.5	Pulse	0.1000	3
He	Tb	159	247178.72	0.9	102.5	Pulse	0.1000	3
He	Bi	209	171461.81	1.2	103.5	Pulse	0.1000	3

No Gas

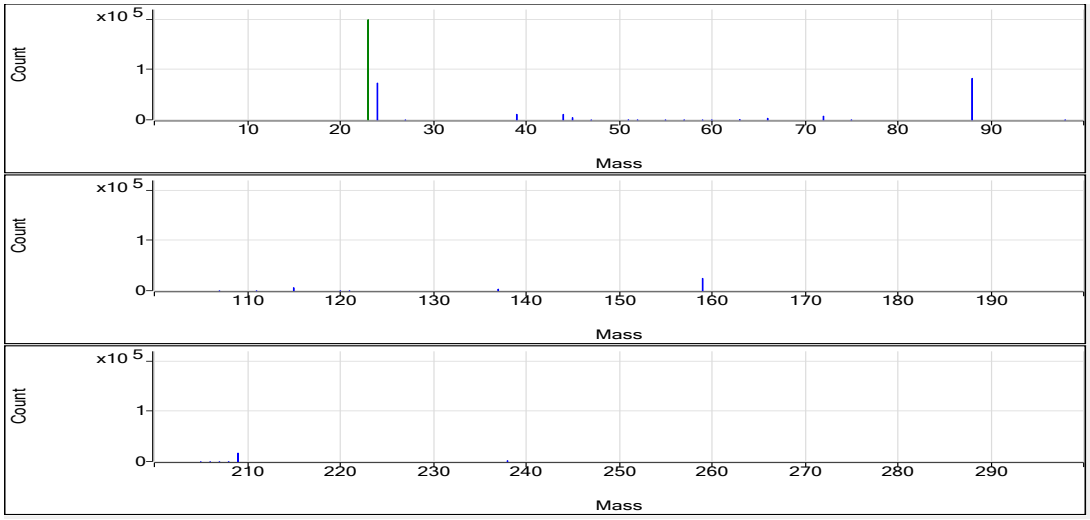


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.013	0	34.00	0.0004	9.309E-06
Be	9	1	No Gas	0.019	0	40.00	0.0004	9.309E-06
Be	9	1	No Gas	0.003	0	24.00	0.0004	9.309E-06
Se	78	2	H2	0.172	0.0001	10.00	0.0004	5.598E-06
Se	78	2	H2	0.188	0.0001	10.67	0.0004	5.598E-06
Se	78	2	H2	0.197	0.0001	11.33	0.0004	5.598E-06
Na	23	3	He	13696.103	43.3036	1984822.47	0.0031	0.4657
Na	23	3	He	13516.08	42.7405	1987709.03	0.0031	0.4657
Na	23	3	He	14117.712	44.6223	2008104.97	0.0031	0.4657
Mg	24	3	He	10585.017	16.0651	736345.22	0.0015	0.003704
Mg	24	3	He	10413.417	15.8047	735021.47	0.0015	0.003704
Mg	24	3	He	10700.59	16.2405	730858.74	0.0015	0.003704
Al	27	3	He	3.139	0.0022	100.00	0.0005	0.0007154
Al	27	3	He	2.151	0.0017	80.00	0.0005	0.0007154
Al	27	3	He	1.799	0.0016	70.00	0.0005	0.0007154
K	39	3	He	1925.082	2.5217	115584.15	0.0011	0.4296
K	39	3	He	1820.852	2.4085	112009.22	0.0011	0.4296
K	39	3	He	1845.932	2.4357	109613.19	0.0011	0.4296
Ca	44	3	He	39183.382	2.4253	111165.45	0.0001	0.002924
Ca	44	3	He	38525.912	2.3847	110903.43	0.0001	0.002924
Ca	44	3	He	40036.234	2.4781	111518.49	0.0001	0.002924
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.459	0.0002	10.00	0.0005	0
V	51	3	He	0.132	0.0123	566.01	0.021	0.009571
V	51	3	He	0.091	0.0115	534.01	0.021	0.009571
V	51	3	He	0.084	0.0113	510.01	0.021	0.009571
Cr	52	3	He	0.568	0.0327	1500.12	0.0267	0.01758
Cr	52	3	He	0.518	0.0314	1460.11	0.0267	0.01758
Cr	52	3	He	0.424	0.0289	1300.09	0.0267	0.01758
Mn	55	3	He	0.761	0.0124	570.03	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.824	0.0131	610.03	0.0108	0.004199
Mn	55	3	He	0.639	0.0111	500.02	0.0108	0.004199
Fe	57	3	He	34.102	0.0201	920.05	0.0005	0.002993
Fe	57	3	He	38.676	0.0224	1040.06	0.0005	0.002993
Fe	57	3	He	41.499	0.0238	1070.07	0.0005	0.002993
Co	59	3	He	0.104	0.0085	390.02	0.0524	0.003063
Co	59	3	He	0.077	0.0071	330.01	0.0524	0.003063
Co	59	3	He	0.035	0.0049	220.01	0.0524	0.003063
Ni	60	3	He	0.039	0.0116	710.04	0.0109	0.01116
Ni	60	3	He	0.221	0.0136	830.04	0.0109	0.01116
Ni	60	3	He	0.11	0.0124	770.04	0.0109	0.01116
Cu	63	3	He	2.972	0.091	6881.64	0.0255	0.01531
Cu	63	3	He	3.27	0.0986	7621.99	0.0255	0.01531
Cu	63	3	He	3.357	0.1008	7792.13	0.0255	0.01531
Zn	66	3	He	151.121	0.4376	33084.79	0.0029	0.002787
Zn	66	3	He	153.403	0.4442	34327.24	0.0029	0.002787
Zn	66	3	He	158.384	0.4585	35429.66	0.0029	0.002787
As	75	3	He	1.075	0.0027	204.00	0.0021	0.0004097
As	75	3	He	1.096	0.0027	212.00	0.0021	0.0004097
As	75	3	He	1.084	0.0027	210.00	0.0021	0.0004097
Sr	88	3	He	1426.013	13.4422	823396.71	0.0094	0.0008765
Sr	88	3	He	1438.32	13.5582	828736.71	0.0094	0.0008765
Sr	88	3	He	1411.006	13.3007	828351.63	0.0094	0.0008765
Mo	98	3	He	0.713	0.0167	1020.07	0.023	0.0002199
Mo	98	3	He	0.722	0.0169	1030.07	0.023	0.0002199
Mo	98	3	He	0.687	0.0161	1000.07	0.023	0.0002199
Ag	107	3	He	-0.004	0.0007	40.00	0.0483	0.0008224
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Cd	111	3	He	0.082	0.0005	28.00	0.0053	2.193E-05
Cd	111	3	He	0.094	0.0005	32.00	0.0053	2.193E-05
Cd	111	3	He	0.074	0.0004	26.00	0.0053	2.193E-05
Sn	120	3	He	0.007	0.0136	830.05	0.0148	0.01345
Sn	120	3	He	0.064	0.0144	880.06	0.0148	0.01345
Sn	120	3	He	0.132	0.0154	960.06	0.0148	0.01345
Sb	121	3	He	0.095	0.0018	110.00	0.0143	0.0004392
Sb	121	3	He	0.061	0.0013	80.00	0.0143	0.0004392
Sb	121	3	He	0.115	0.0021	130.01	0.0143	0.0004392
Ba	137	3	He	128.543	0.5608	34349.25	0.0044	0.0001096
Ba	137	3	He	128.704	0.5615	34319.07	0.0044	0.0001096
Ba	137	3	He	125.913	0.5493	34208.96	0.0044	0.0001096
Tl	205	3	He	0.091	0.0021	530.03	0.0208	0.0002491
Tl	205	3	He	0.046	0.0012	300.02	0.0208	0.0002491
Tl	205	3	He	0.065	0.0016	390.02	0.0208	0.0002491
Pb	208	3	He	0.596	0.0168	2240.24	0.0272	0.0006218
Pb	208	3	He	0.639	0.018	2340.27	0.0272	0.0006218
Pb	208	3	He	0.599	0.0169	2300.24	0.0272	0.0006218
U	238	3	He	2.947	0.0811	20174.84	0.0275	2.763E-05
U	238	3	He	2.822	0.0776	19253.51	0.0275	2.763E-05
U	238	3	He	2.966	0.0816	19974.39	0.0275	2.763E-05
Sc	45	1	No Gas			2342641.68		
Sc	45	1	No Gas			2379248.25		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2304007.00		
Ge	72	1	No Gas			1056156.00		
Ge	72	1	No Gas			1072880.37		
Ge	72	1	No Gas			1055214.83		
Sc	45	2	H2			140778.79		
Sc	45	2	H2			143694.33		
Sc	45	2	H2			145602.26		
Ge	72	2	H2			121134.98		
Ge	72	2	H2			118706.73		
Ge	72	2	H2			121165.13		
In	115	2	H2			294773.84		
In	115	2	H2			293938.18		
In	115	2	H2			299031.19		
Sc	45	3	He			45835.06		
Sc	45	3	He			46506.43		
Sc	45	3	He			45002.30		
Ge	72	3	He			75597.45		
Ge	72	3	He			77276.47		
Ge	72	3	He			77265.35		
In	115	3	He			61260.46		
In	115	3	He			61130.59		
In	115	3	He			62285.33		
Tb	159	3	He			248780.84		
Tb	159	3	He			247998.77		
Tb	159	3	He			244756.54		
Bi	209	3	He			171854.18		
Bi	209	3	He			169241.85		
Bi	209	3	He			173289.39		

Quantitation Report

Data File Name	134SMPL.d
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Sample Type	Sample
Comment	D6
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

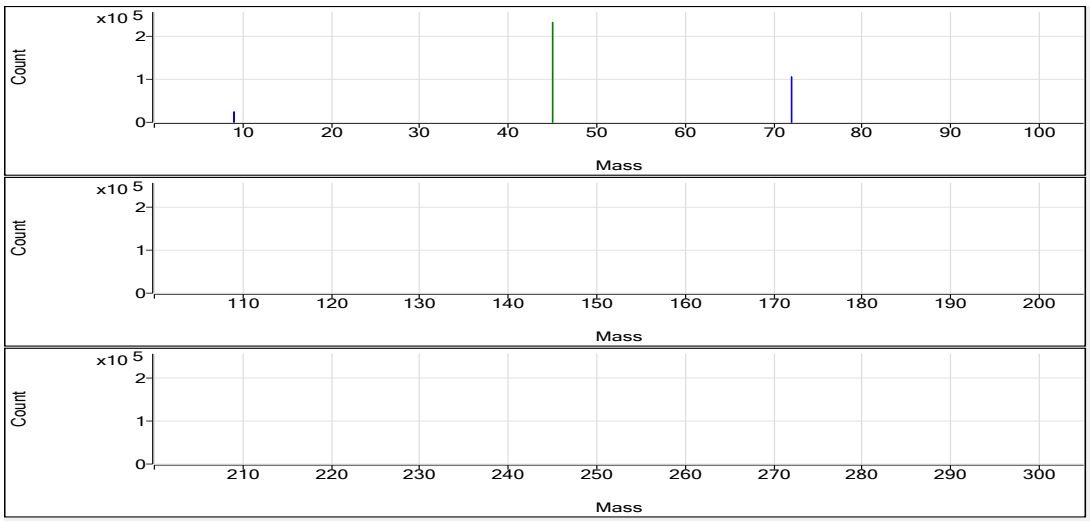
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	53.223	ppb	1.2	49159.68	0.0212	Pulse	0.5000	3
Se	78	72	H2	106.484	ppb	0.7	5723.69	0.0476	Pulse	1.5000	3
Na	23	45	He	18390.617	ppb	0.7	2677887.36	57.9868	Analog	0.1000	3
Mg	24	45	He	15310.452	ppb	0.5	1073033.24	23.2353	Pulse	0.1000	3
Al	27	45	He	5131.864	ppb	2.4	110716.48	2.3977	Pulse	0.1000	3
K	39	45	He	6912.443	ppb	0.6	366767.39	7.9418	Pulse	0.1000	3
Ca	44	45	He	43640.453	ppb	2.2	124717.51	2.7009	Pulse	0.1000	3
Ti	47	45	He	533.161	ppb	3.1	11924.66	0.2582	Pulse	0.1000	3
V	51	45	He	519.678	ppb	0.9	505563.78	10.9477	Pulse	0.5000	3
Cr	52	45	He	520.157	ppb	1.0	641781.78	13.8973	Pulse	0.1000	3
Mn	55	45	He	516.112	ppb	1.0	258058.79	5.5880	Pulse	0.1000	3
Fe	57	45	He	5270.025	ppb	0.5	122035.09	2.6425	Pulse	0.1000	3
Co	59	45	He	501.029	ppb	1.5	1211380.45	26.2325	Pulse	0.1000	3
Ni	60	115	He	513.055	ppb	1.0	342797.21	5.6208	Pulse	0.1000	3
Cu	63	72	He	494.787	ppb	2.1	978641.34	12.6215	Pulse	0.1000	3
Zn	66	72	He	666.543	ppb	0.9	148941.49	1.9208	Pulse	0.1000	3
As	75	72	He	524.669	ppb	0.5	86628.62	1.1172	Pulse	0.5000	3
Sr	88	115	He	1464.844	ppb	1.2	842080.25	13.8082	Pulse	0.1000	3
Mo	98	115	He	52.572	ppb	0.4	73879.90	1.2114	Pulse	0.1000	3
Ag	107	115	He	52.985	ppb	1.5	156124.07	2.5602	Pulse	0.1000	3
Cd	111	115	He	52.204	ppb	0.8	16985.24	0.2785	Pulse	0.5000	3
Sn	120	115	He	103.608	ppb	2.0	94369.93	1.5476	Pulse	0.1000	3
Sb	121	115	He	104.468	ppb	1.2	91177.27	1.4951	Pulse	0.1000	3
Ba	137	115	He	657.078	ppb	1.6	174780.34	2.8660	Pulse	0.1000	3
Tl	205	159	He	106.433	ppb	0.3	542499.98	2.2126	Pulse	0.1000	3
Pb	208	159	He	53.461	ppb	0.4	356958.96	1.4558	Pulse	0.1000	3
U	238	159	He	56.805	ppb	0.4	383095.44	1.5624	Pulse	0.1000	3

ISTD Table:

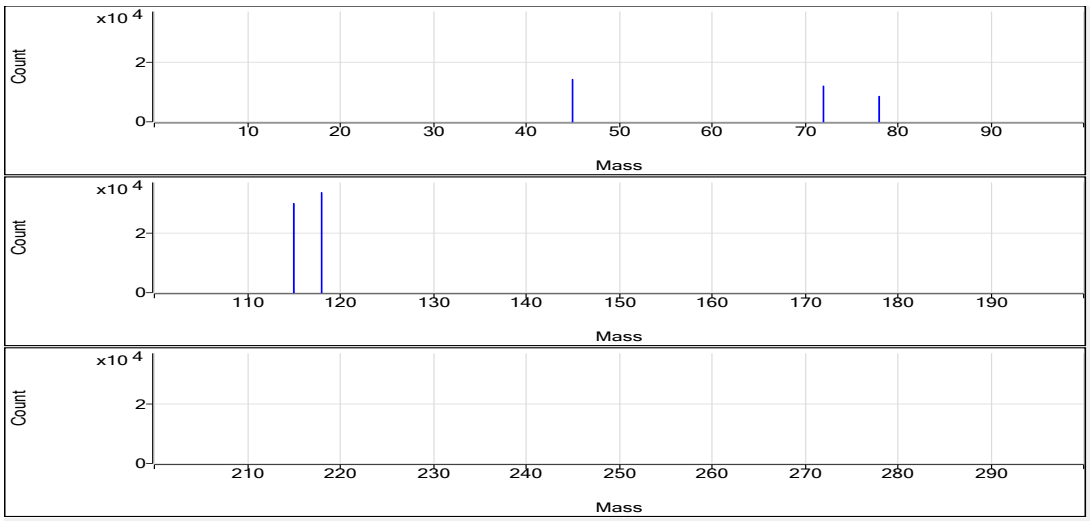
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2320620.38	1.1	101.2	Analog	0.1000	3
No Gas	Ge	72	1056051.67	1.0	101.6	Pulse	0.1000	3
H2	Sc	45	142541.30	0.9	102.5	Pulse	0.1000	3
H2	Ge	72	120166.47	0.1	101.8	Pulse	0.1000	3
H2	In	115	298820.23	1.0	101.4	Pulse	0.1000	3
He	Sc	45	46182.34	0.8	98.6	Pulse	0.1000	3
He	Ge	72	77543.86	0.6	101.4	Pulse	0.1000	3
He	In	115	60988.57	1.1	100.6	Pulse	0.1000	3
He	Tb	159	245194.02	0.5	101.7	Pulse	0.1000	3
He	Bi	209	171342.20	0.5	103.4	Pulse	0.1000	3

No Gas

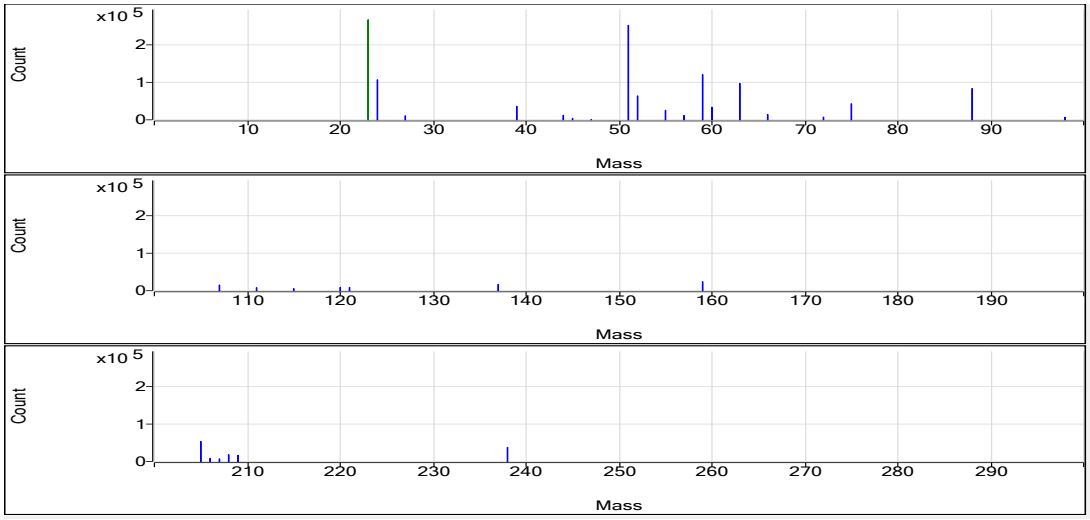


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	53.051	0.0211	48978.41	0.0004	9.309E-06
Be	9	1	No Gas	52.696	0.021	49217.18	0.0004	9.309E-06
Be	9	1	No Gas	53.921	0.0215	49283.45	0.0004	9.309E-06
Se	78	2	H2	105.994	0.0474	5696.35	0.0004	5.598E-06
Se	78	2	H2	106.092	0.0475	5698.35	0.0004	5.598E-06
Se	78	2	H2	107.366	0.048	5776.38	0.0004	5.598E-06
Na	23	3	He	18436.655	58.1308	2694721.83	0.0031	0.4657
Na	23	3	He	18244.131	57.5287	2672569.34	0.0031	0.4657
Na	23	3	He	18491.065	58.301	2666370.90	0.0031	0.4657
Mg	24	3	He	15244.126	23.1347	1072436.23	0.0015	0.003704
Mg	24	3	He	15286.321	23.1987	1077727.56	0.0015	0.003704
Mg	24	3	He	15400.91	23.3726	1068935.92	0.0015	0.003704
Al	27	3	He	5033.424	2.3517	109015.71	0.0005	0.0007154
Al	27	3	He	5093.062	2.3796	110545.30	0.0005	0.0007154
Al	27	3	He	5269.107	2.4618	112588.42	0.0005	0.0007154
K	39	3	He	6945.334	7.9776	369809.64	0.0011	0.4296
K	39	3	He	6865.766	7.8911	366591.44	0.0011	0.4296
K	39	3	He	6926.227	7.9568	363901.09	0.0011	0.4296
Ca	44	3	He	43310.707	2.6805	124257.59	0.0001	0.002924
Ca	44	3	He	42873.596	2.6535	123270.64	0.0001	0.002924
Ca	44	3	He	44737.058	2.7687	126624.29	0.0001	0.002924
Ti	47	3	He	515.94	0.2499	11584.42	0.0005	0
Ti	47	3	He	534.839	0.2591	12034.71	0.0005	0
Ti	47	3	He	548.703	0.2658	12154.85	0.0005	0
V	51	3	He	517.244	10.8965	505118.88	0.021	0.009571
V	51	3	He	516.528	10.8814	505509.66	0.021	0.009571
V	51	3	He	525.261	11.0652	506062.81	0.021	0.009571
Cr	52	3	He	515.255	13.7666	638164.60	0.0267	0.01758
Cr	52	3	He	519.675	13.8845	645022.26	0.0267	0.01758
Cr	52	3	He	525.54	14.041	642158.47	0.0267	0.01758
Mn	55	3	He	510.549	5.5278	256249.00	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	517.426	5.6022	260259.00	0.0108	0.004199
Mn	55	3	He	520.362	5.634	257668.36	0.0108	0.004199
Fe	57	3	He	5263.949	2.6395	122356.79	0.0005	0.002993
Fe	57	3	He	5246.603	2.6308	122217.52	0.0005	0.002993
Fe	57	3	He	5299.523	2.6573	121530.96	0.0005	0.002993
Co	59	3	He	496.537	25.9974	1205137.33	0.0524	0.003063
Co	59	3	He	496.963	26.0197	1208777.64	0.0524	0.003063
Co	59	3	He	509.588	26.6806	1220226.39	0.0524	0.003063
Ni	60	3	He	516.287	5.6562	340627.14	0.0109	0.01116
Ni	60	3	He	515.995	5.653	347580.03	0.0109	0.01116
Ni	60	3	He	506.882	5.5533	340184.45	0.0109	0.01116
Cu	63	3	He	485.522	12.3855	966561.39	0.0255	0.01531
Cu	63	3	He	505.898	12.9046	994751.47	0.0255	0.01531
Cu	63	3	He	492.94	12.5745	974611.16	0.0255	0.01531
Zn	66	3	He	662.999	1.9106	149103.00	0.0029	0.002787
Zn	66	3	He	673.727	1.9415	149658.03	0.0029	0.002787
Zn	66	3	He	662.902	1.9103	148063.44	0.0029	0.002787
As	75	3	He	521.945	1.1114	86731.88	0.0021	0.0004097
As	75	3	He	527.114	1.1224	86518.60	0.0021	0.0004097
As	75	3	He	524.949	1.1178	86635.37	0.0021	0.0004097
Sr	88	3	He	1483.273	13.9819	842020.22	0.0094	0.0008765
Sr	88	3	He	1461.034	13.7723	846803.74	0.0094	0.0008765
Sr	88	3	He	1450.227	13.6704	837416.78	0.0094	0.0008765
Mo	98	3	He	52.592	1.2118	72978.73	0.023	0.0002199
Mo	98	3	He	52.774	1.216	74767.37	0.023	0.0002199
Mo	98	3	He	52.351	1.2063	73893.61	0.023	0.0002199
Ag	107	3	He	53.84	2.6015	156667.85	0.0483	0.0008224
Ag	107	3	He	52.335	2.5288	155483.49	0.0483	0.0008224
Ag	107	3	He	52.779	2.5502	156220.88	0.0483	0.0008224
Cd	111	3	He	52.159	0.2783	16756.99	0.0053	2.193E-05
Cd	111	3	He	52.649	0.2809	17269.54	0.0053	2.193E-05
Cd	111	3	He	51.804	0.2764	16929.20	0.0053	2.193E-05
Sn	120	3	He	106.014	1.5832	95342.03	0.0148	0.01345
Sn	120	3	He	102.38	1.5294	94034.60	0.0148	0.01345
Sn	120	3	He	102.432	1.5301	93733.15	0.0148	0.01345
Sb	121	3	He	105.754	1.5135	91147.04	0.0143	0.0004392
Sb	121	3	He	103.19	1.4768	90804.51	0.0143	0.0004392
Sb	121	3	He	104.46	1.495	91580.27	0.0143	0.0004392
Ba	137	3	He	666.49	2.9071	175069.57	0.0044	0.0001096
Ba	137	3	He	658.524	2.8723	176607.48	0.0044	0.0001096
Ba	137	3	He	646.22	2.8187	172663.96	0.0044	0.0001096
Tl	205	3	He	106.841	2.221	542639.76	0.0208	0.0002491
Tl	205	3	He	106.156	2.2068	544249.64	0.0208	0.0002491
Tl	205	3	He	106.304	2.2099	540610.54	0.0208	0.0002491
Pb	208	3	He	53.543	1.4581	190440.56	0.0272	0.0006218
Pb	208	3	He	53.227	1.4495	190004.78	0.0272	0.0006218
Pb	208	3	He	53.613	1.46	189425.92	0.0272	0.0006218
U	238	3	He	56.601	1.5568	380349.41	0.0275	2.763E-05
U	238	3	He	57.072	1.5697	387135.23	0.0275	2.763E-05
U	238	3	He	56.744	1.5607	381801.67	0.0275	2.763E-05
Sc	45	1	No Gas			2319345.43		
Sc	45	1	No Gas			2346351.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2296164.65		
Ge	72	1	No Gas			1067700.84		
Ge	72	1	No Gas			1052222.87		
Ge	72	1	No Gas			1048231.31		
Sc	45	2	H2			141082.14		
Sc	45	2	H2			143180.84		
Sc	45	2	H2			143360.91		
Ge	72	2	H2			120145.97		
Ge	72	2	H2			120076.47		
Ge	72	2	H2			120276.98		
In	115	2	H2			299565.02		
In	115	2	H2			295607.42		
In	115	2	H2			301288.26		
Sc	45	3	He			46356.16		
Sc	45	3	He			46456.31		
Sc	45	3	He			45734.56		
Ge	72	3	He			78039.77		
Ge	72	3	He			77084.80		
Ge	72	3	He			77507.01		
In	115	3	He			60889.51		
In	115	3	He			62144.27		
In	115	3	He			61913.69		
Tb	159	3	He			244320.50		
Tb	159	3	He			246625.91		
Tb	159	3	He			244635.66		
Bi	209	3	He			170630.39		
Bi	209	3	He			172168.94		
Bi	209	3	He			171227.26		

Quantitation Report

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Sample Type	Sample
Comment	D6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

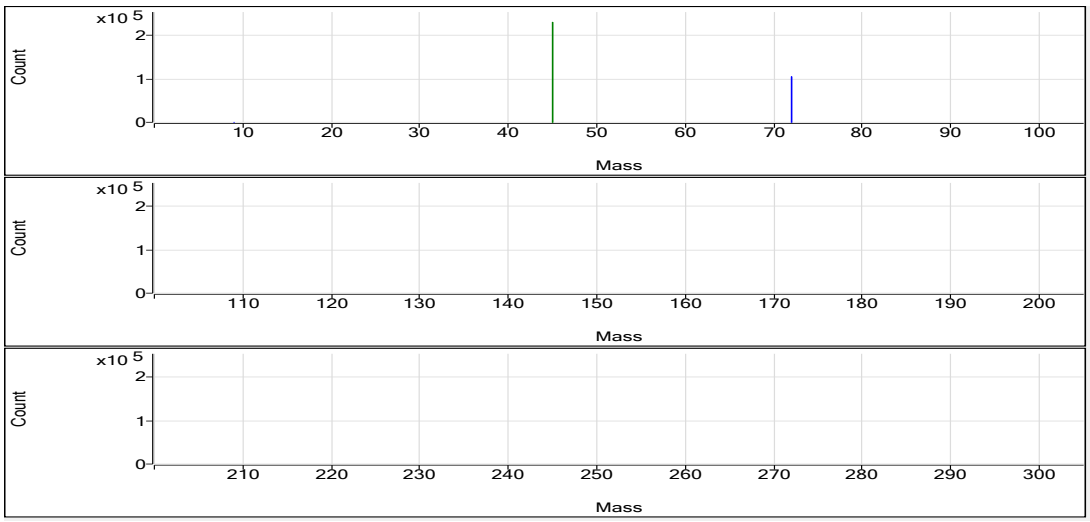
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.066	ppb	22.7	82.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.168	ppb	24.3	9.78	0.0001	Pulse	1.5000	3
Na	23	45	He	12680.451	ppb	1.7	1803887.37	40.1269	Analog	0.1000	3
Mg	24	45	He	6932.758	ppb	1.7	473064.24	10.5233	Pulse	0.1000	3
Al	27	45	He	4.499	ppb	4.8	126.67	0.0028	Pulse	0.1000	3
K	39	45	He	1213.443	ppb	6.5	78570.52	1.7484	Pulse	0.1000	3
Ca	44	45	He	32661.009	ppb	2.5	90894.36	2.0221	Pulse	0.1000	3
Ti	47	45	He	0.301	ppb	173.2	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.319	ppb	15.5	731.35	0.0163	Pulse	0.5000	3
Cr	52	45	He	0.318	ppb	36.2	1170.08	0.0261	Pulse	0.1000	3
Mn	55	45	He	299.526	ppb	0.9	145878.65	3.2448	Pulse	0.1000	3
Fe	57	45	He	185.902	ppb	5.2	4320.73	0.0961	Pulse	0.1000	3
Co	59	45	He	0.354	ppb	14.9	970.06	0.0216	Pulse	0.1000	3
Ni	60	115	He	0.921	ppb	27.9	1290.10	0.0212	Pulse	0.1000	3
Cu	63	72	He	54.944	ppb	0.8	110089.47	1.4152	Pulse	0.1000	3
Zn	66	72	He	818.125	ppb	1.2	183353.79	2.3570	Pulse	0.1000	3
As	75	72	He	1.366	ppb	8.2	258.00	0.0033	Pulse	0.5000	3
Sr	88	115	He	368.290	ppb	2.7	211028.43	3.4723	Pulse	0.1000	3
Mo	98	115	He	0.657	ppb	8.6	933.40	0.0154	Pulse	0.1000	3
Ag	107	115	He	0.048	ppb	23.1	190.01	0.0031	Pulse	0.1000	3
Cd	111	115	He	0.084	ppb	34.8	28.67	0.0005	Pulse	0.5000	3
Sn	120	115	He	0.103	ppb	52.7	910.06	0.0150	Pulse	0.1000	3
Sb	121	115	He	0.168	ppb	29.9	173.34	0.0028	Pulse	0.1000	3
Ba	137	115	He	220.916	ppb	2.0	58569.54	0.9637	Pulse	0.1000	3
Tl	205	159	He	0.843	ppb	4.3	4330.82	0.0178	Pulse	0.1000	3
Pb	208	159	He	12.946	ppb	0.6	85987.16	0.3530	Pulse	0.1000	3
U	238	159	He	0.935	ppb	4.7	6268.25	0.0257	Pulse	0.1000	3

ISTD Table:

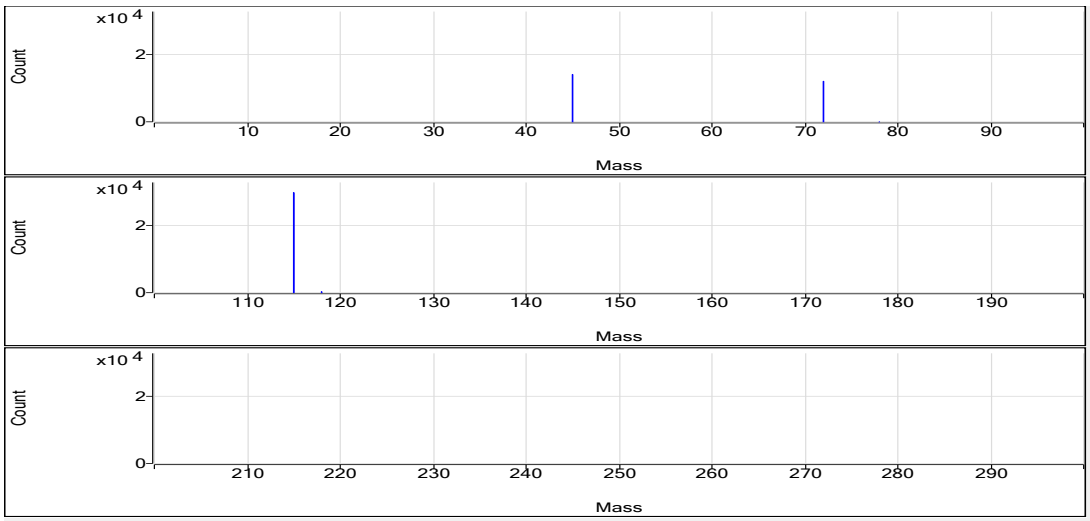
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2310749.97	1.9	100.7	Analog	0.1000	3
No Gas	Ge	72	1054088.63	0.5	101.4	Pulse	0.1000	3
H2	Sc	45	141196.77	0.8	101.5	Pulse	0.1000	3
H2	Ge	72	121026.26	1.0	102.5	Pulse	0.1000	3
H2	In	115	298234.57	0.6	101.2	Pulse	0.1000	3
He	Sc	45	44962.21	1.6	96.0	Pulse	0.1000	3
He	Ge	72	77792.02	0.2	101.7	Pulse	0.1000	3
He	In	115	60792.62	1.7	100.3	Pulse	0.1000	3
He	Tb	159	243576.31	1.0	101.0	Pulse	0.1000	3
He	Bi	209	171721.14	1.2	103.6	Pulse	0.1000	3

No Gas

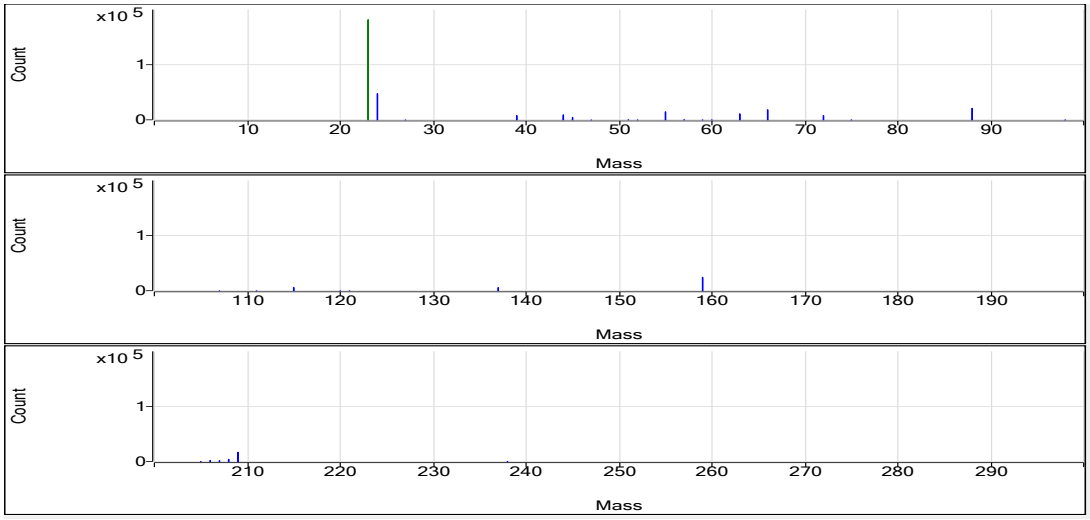


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.069	0	86.00	0.0004	9.309E-06
Be	9	1	No Gas	0.079	0	92.00	0.0004	9.309E-06
Be	9	1	No Gas	0.05	0	68.00	0.0004	9.309E-06
Se	78	2	H2	0.199	0.0001	11.33	0.0004	5.598E-06
Se	78	2	H2	0.122	0.0001	7.33	0.0004	5.598E-06
Se	78	2	H2	0.184	0.0001	10.67	0.0004	5.598E-06
Na	23	3	He	12798.172	40.4951	1795977.79	0.0031	0.4657
Na	23	3	He	12812.327	40.5394	1815421.54	0.0031	0.4657
Na	23	3	He	12430.855	39.3462	1800262.79	0.0031	0.4657
Mg	24	3	He	7025.451	10.6639	472950.46	0.0015	0.003704
Mg	24	3	He	6972.607	10.5837	473957.88	0.0015	0.003704
Mg	24	3	He	6800.217	10.3222	472284.37	0.0015	0.003704
Al	27	3	He	4.261	0.0027	120.00	0.0005	0.0007154
Al	27	3	He	4.683	0.0029	130.00	0.0005	0.0007154
Al	27	3	He	4.551	0.0028	130.00	0.0005	0.0007154
K	39	3	He	1294.153	1.8361	81430.63	0.0011	0.4296
K	39	3	He	1208.929	1.7435	78074.73	0.0011	0.4296
K	39	3	He	1137.246	1.6655	76206.21	0.0011	0.4296
Ca	44	3	He	33388.205	2.0671	91675.37	0.0001	0.002924
Ca	44	3	He	32811.911	2.0314	90971.19	0.0001	0.002924
Ca	44	3	He	31782.912	1.9678	90036.51	0.0001	0.002924
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.902	0.0004	20.00	0.0005	0
V	51	3	He	0.351	0.017	752.02	0.021	0.009571
V	51	3	He	0.343	0.0168	752.02	0.021	0.009571
V	51	3	He	0.262	0.0151	690.02	0.021	0.009571
Cr	52	3	He	0.381	0.0277	1230.10	0.0267	0.01758
Cr	52	3	He	0.387	0.0279	1250.08	0.0267	0.01758
Cr	52	3	He	0.185	0.0225	1030.07	0.0267	0.01758
Mn	55	3	He	301.594	3.2671	144899.75	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	300.33	3.2535	145696.13	0.0108	0.004199
Mn	55	3	He	296.652	3.2137	147040.08	0.0108	0.004199
Fe	57	3	He	194.39	0.1004	4450.80	0.0005	0.002993
Fe	57	3	He	175.512	0.0909	4070.65	0.0005	0.002993
Fe	57	3	He	187.804	0.0971	4440.74	0.0005	0.002993
Co	59	3	He	0.398	0.0239	1060.07	0.0524	0.003063
Co	59	3	He	0.296	0.0185	830.04	0.0524	0.003063
Co	59	3	He	0.367	0.0223	1020.07	0.0524	0.003063
Ni	60	3	He	0.625	0.018	1100.09	0.0109	0.01116
Ni	60	3	He	1.081	0.023	1370.10	0.0109	0.01116
Ni	60	3	He	1.057	0.0227	1400.11	0.0109	0.01116
Cu	63	3	He	54.866	1.4132	110214.47	0.0255	0.01531
Cu	63	3	He	55.442	1.4279	110927.60	0.0255	0.01531
Cu	63	3	He	54.524	1.4045	109126.33	0.0255	0.01531
Zn	66	3	He	815.536	2.3495	183238.75	0.0029	0.002787
Zn	66	3	He	828.559	2.387	185441.83	0.0029	0.002787
Zn	66	3	He	810.279	2.3344	181380.80	0.0029	0.002787
As	75	3	He	1.494	0.0036	280.00	0.0021	0.0004097
As	75	3	He	1.295	0.0032	246.00	0.0021	0.0004097
As	75	3	He	1.307	0.0032	248.00	0.0021	0.0004097
Sr	88	3	He	369.218	3.4811	212809.86	0.0094	0.0008765
Sr	88	3	He	377.902	3.5629	212412.67	0.0094	0.0008765
Sr	88	3	He	357.75	3.373	207862.75	0.0094	0.0008765
Mo	98	3	He	0.708	0.0165	1010.07	0.023	0.0002199
Mo	98	3	He	0.668	0.0156	930.07	0.023	0.0002199
Mo	98	3	He	0.596	0.014	860.05	0.023	0.0002199
Ag	107	3	He	0.041	0.0028	170.01	0.0483	0.0008224
Ag	107	3	He	0.042	0.0029	170.01	0.0483	0.0008224
Ag	107	3	He	0.06	0.0037	230.01	0.0483	0.0008224
Cd	111	3	He	0.063	0.0004	22.00	0.0053	2.193E-05
Cd	111	3	He	0.071	0.0004	24.00	0.0053	2.193E-05
Cd	111	3	He	0.118	0.0006	40.00	0.0053	2.193E-05
Sn	120	3	He	0.152	0.0157	960.07	0.0148	0.01345
Sn	120	3	He	0.111	0.0151	900.07	0.0148	0.01345
Sn	120	3	He	0.045	0.0141	870.05	0.0148	0.01345
Sb	121	3	He	0.118	0.0021	130.00	0.0143	0.0004392
Sb	121	3	He	0.169	0.0029	170.01	0.0143	0.0004392
Sb	121	3	He	0.219	0.0036	220.01	0.0143	0.0004392
Ba	137	3	He	220.095	0.9601	58693.01	0.0044	0.0001096
Ba	137	3	He	225.694	0.9845	58693.31	0.0044	0.0001096
Ba	137	3	He	216.957	0.9464	58322.31	0.0044	0.0001096
Tl	205	3	He	0.862	0.0182	4470.84	0.0208	0.0002491
Tl	205	3	He	0.802	0.0169	4080.76	0.0208	0.0002491
Tl	205	3	He	0.866	0.0182	4440.85	0.0208	0.0002491
Pb	208	3	He	13.026	0.3552	45772.49	0.0272	0.0006218
Pb	208	3	He	12.868	0.3509	44438.60	0.0272	0.0006218
Pb	208	3	He	12.944	0.353	45310.93	0.0272	0.0006218
U	238	3	He	0.902	0.0248	6111.52	0.0275	2.763E-05
U	238	3	He	0.917	0.0252	6091.51	0.0275	2.763E-05
U	238	3	He	0.985	0.0271	6601.71	0.0275	2.763E-05
Sc	45	1	No Gas			2329857.62		
Sc	45	1	No Gas			2259455.44		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2342936.84		
Ge	72	1	No Gas			1060252.33		
Ge	72	1	No Gas			1051170.45		
Ge	72	1	No Gas			1050843.11		
Sc	45	2	H2			140669.77		
Sc	45	2	H2			140367.15		
Sc	45	2	H2			142553.40		
Ge	72	2	H2			119642.12		
Ge	72	2	H2			121970.35		
Ge	72	2	H2			121466.32		
In	115	2	H2			298524.72		
In	115	2	H2			299765.05		
In	115	2	H2			296413.94		
Sc	45	3	He			44350.51		
Sc	45	3	He			44781.70		
Sc	45	3	He			45754.41		
Ge	72	3	He			77989.33		
Ge	72	3	He			77687.91		
Ge	72	3	He			77698.82		
In	115	3	He			61140.52		
In	115	3	He			59624.15		
In	115	3	He			61632.31		
Tb	159	3	He			246082.28		
Tb	159	3	He			241270.02		
Tb	159	3	He			243376.64		
Bi	209	3	He			171044.31		
Bi	209	3	He			170011.97		
Bi	209	3	He			174107.15		

Quantitation Report

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Sample Type	CCV
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

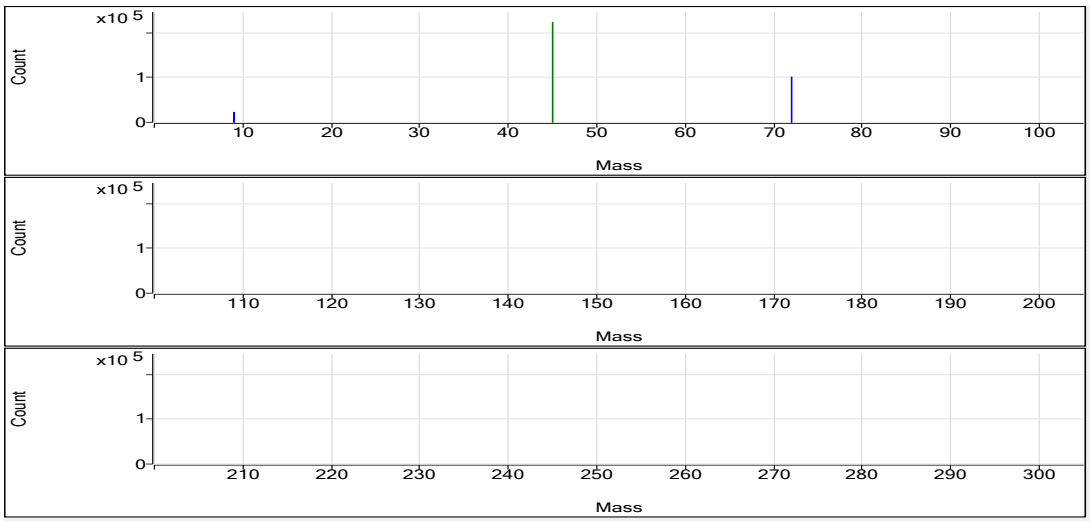
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.595	ppb	1.2	45180.05	0.0201	Pulse	0.5000	3
Se	78	72	H2	52.129	ppb	1.4	2641.55	0.0233	Pulse	1.5000	3
Na	23	45	He	5006.521	ppb	1.1	714570.27	16.1248	Pulse	0.1000	3
Mg	24	45	He	5083.684	ppb	2.2	341958.79	7.7175	Pulse	0.1000	3
Al	27	45	He	5002.320	ppb	0.9	103574.93	2.3372	Pulse	0.1000	3
K	39	45	He	5044.703	ppb	2.7	261953.43	5.9120	Pulse	0.1000	3
Ca	44	45	He	4901.360	ppb	2.4	13562.66	0.3059	Pulse	0.1000	3
Ti	47	45	He	5089.800	ppb	0.7	109256.49	2.4653	Pulse	0.1000	3
V	51	45	He	510.195	ppb	1.1	476305.17	10.7481	Pulse	0.5000	3
Cr	52	45	He	514.719	ppb	1.8	609385.75	13.7522	Pulse	0.1000	3
Mn	55	45	He	511.666	ppb	1.2	245498.86	5.5399	Pulse	0.1000	3
Fe	57	45	He	5149.216	ppb	2.1	114414.40	2.5820	Pulse	0.1000	3
Co	59	45	He	501.173	ppb	1.1	1162839.02	26.2401	Pulse	0.1000	3
Ni	60	115	He	519.962	ppb	1.0	331365.78	5.6964	Pulse	0.1000	3
Cu	63	72	He	493.700	ppb	1.0	929084.31	12.5938	Pulse	0.1000	3
Zn	66	72	He	517.826	ppb	1.4	110134.62	1.4929	Pulse	0.1000	3
As	75	72	He	512.641	ppb	1.5	80529.87	1.0916	Pulse	0.5000	3
Sr	88	115	He	50.950	ppb	4.8	27992.14	0.4811	Pulse	0.1000	3
Mo	98	115	He	51.365	ppb	1.3	68847.56	1.1836	Pulse	0.1000	3
Ag	107	115	He	51.483	ppb	0.9	144706.56	2.4876	Pulse	0.1000	3
Cd	111	115	He	51.342	ppb	0.7	15932.81	0.2739	Pulse	0.5000	3
Sn	120	115	He	51.960	ppb	2.6	45534.24	0.7828	Pulse	0.1000	3
Sb	121	115	He	51.540	ppb	2.4	42920.13	0.7378	Pulse	0.1000	3
Ba	137	115	He	515.934	ppb	0.4	130911.77	2.2504	Pulse	0.1000	3
Tl	205	159	He	51.172	ppb	0.9	253652.64	1.0639	Pulse	0.1000	3
Pb	208	159	He	50.880	ppb	1.6	330335.47	1.3856	Pulse	0.1000	3
U	238	159	He	51.808	ppb	0.7	339732.55	1.4249	Pulse	0.1000	3

ISTD Table:

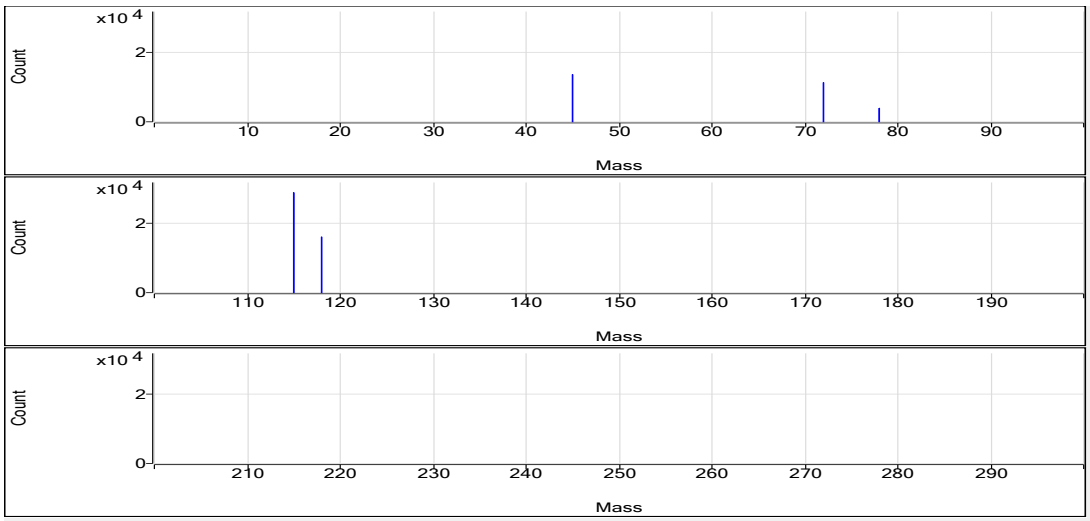
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2243294.34	0.2	97.8	Analog	0.1000	3
No Gas	Ge	72	1016203.40	0.2	97.8	Pulse	0.1000	3
H2	Sc	45	136434.20	2.3	98.1	Pulse	0.1000	3
H2	Ge	72	113262.89	0.9	95.9	Pulse	0.1000	3
H2	In	115	288656.73	1.4	98.0	Pulse	0.1000	3
He	Sc	45	44320.61	1.7	94.6	Pulse	0.1000	3
He	Ge	72	73779.92	1.4	96.5	Pulse	0.1000	3
He	In	115	58171.89	0.5	96.0	Pulse	0.1000	3
He	Tb	159	238427.98	0.8	98.9	Pulse	0.1000	3
He	Bi	209	165104.34	1.7	99.6	Pulse	0.1000	3

No Gas

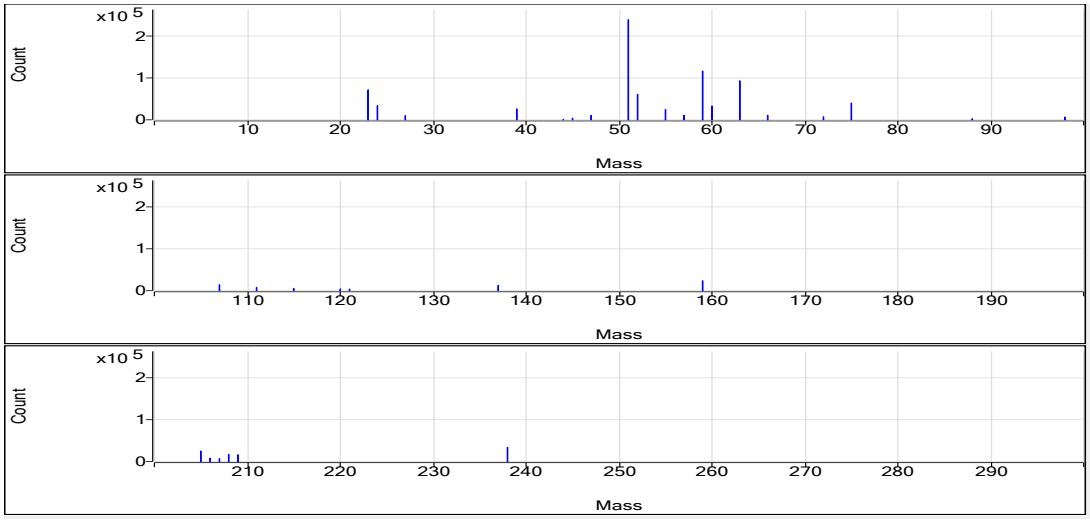


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.933	0.0199	44672.75	0.0004	9.309E-06
Be	9	1	No Gas	50.684	0.0202	45220.12	0.0004	9.309E-06
Be	9	1	No Gas	51.169	0.0204	45647.29	0.0004	9.309E-06
Se	78	2	H2	52.883	0.0237	2708.23	0.0004	5.598E-06
Se	78	2	H2	51.442	0.023	2596.88	0.0004	5.598E-06
Se	78	2	H2	52.062	0.0233	2619.55	0.0004	5.598E-06
Na	23	3	He	5063.627	16.3034	709497.88	0.0031	0.4657
Na	23	3	He	4948.52	15.9434	717807.72	0.0031	0.4657
Na	23	3	He	5007.416	16.1276	716405.22	0.0031	0.4657
Mg	24	3	He	5201.931	7.897	343663.32	0.0015	0.003704
Mg	24	3	He	4974.009	7.5511	339969.14	0.0015	0.003704
Mg	24	3	He	5075.112	7.7045	342243.90	0.0015	0.003704
Al	27	3	He	5055.767	2.3621	102796.31	0.0005	0.0007154
Al	27	3	He	4976.846	2.3253	104689.17	0.0005	0.0007154
Al	27	3	He	4974.347	2.3241	103239.30	0.0005	0.0007154
K	39	3	He	5203.582	6.0847	264796.32	0.0011	0.4296
K	39	3	He	4954.95	5.8145	261782.01	0.0011	0.4296
K	39	3	He	4975.576	5.8369	259281.95	0.0011	0.4296
Ca	44	3	He	4768.137	0.2977	12955.52	0.0001	0.002924
Ca	44	3	He	4966.851	0.31	13956.34	0.0001	0.002924
Ca	44	3	He	4969.091	0.3101	13776.12	0.0001	0.002924
Ti	47	3	He	5107.66	2.4739	107662.00	0.0005	0
Ti	47	3	He	5047.406	2.4448	110068.65	0.0005	0
Ti	47	3	He	5114.334	2.4772	110038.82	0.0005	0
V	51	3	He	515.43	10.8583	472535.78	0.021	0.009571
V	51	3	He	504.42	10.6265	478431.91	0.021	0.009571
V	51	3	He	510.735	10.7595	477947.81	0.021	0.009571
Cr	52	3	He	524.092	14.0024	609360.58	0.0267	0.01758
Cr	52	3	He	505.937	13.5179	608607.80	0.0267	0.01758
Cr	52	3	He	514.128	13.7365	610188.86	0.0267	0.01758
Mn	55	3	He	518.373	5.6125	244246.21	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	506.174	5.4805	246744.84	0.0108	0.004199
Mn	55	3	He	510.452	5.5268	245505.52	0.0108	0.004199
Fe	57	3	He	5218.514	2.6167	113876.21	0.0005	0.002993
Fe	57	3	He	5027.487	2.5211	113503.94	0.0005	0.002993
Fe	57	3	He	5201.646	2.6083	115863.05	0.0005	0.002993
Co	59	3	He	506.036	26.4946	1153004.67	0.0524	0.003063
Co	59	3	He	495.456	25.9408	1167913.26	0.0524	0.003063
Co	59	3	He	502.027	26.2848	1167599.12	0.0524	0.003063
Ni	60	3	He	521.23	5.7102	330183.04	0.0109	0.01116
Ni	60	3	He	524.41	5.745	335243.51	0.0109	0.01116
Ni	60	3	He	514.246	5.6339	328670.78	0.0109	0.01116
Cu	63	3	He	499.513	12.742	924866.86	0.0255	0.01531
Cu	63	3	He	490.924	12.5231	930243.97	0.0255	0.01531
Cu	63	3	He	490.662	12.5165	932142.10	0.0255	0.01531
Zn	66	3	He	523.295	1.5086	109500.42	0.0029	0.002787
Zn	66	3	He	509.848	1.4699	109187.22	0.0029	0.002787
Zn	66	3	He	520.336	1.5001	111716.22	0.0029	0.002787
As	75	3	He	518.418	1.1039	80123.97	0.0021	0.0004097
As	75	3	He	503.933	1.073	79707.70	0.0021	0.0004097
As	75	3	He	515.572	1.0978	81757.93	0.0021	0.0004097
Sr	88	3	He	48.184	0.4551	26312.56	0.0094	0.0008765
Sr	88	3	He	52.808	0.4986	29097.30	0.0094	0.0008765
Sr	88	3	He	51.857	0.4897	28566.55	0.0094	0.0008765
Mo	98	3	He	52.022	1.1987	69312.62	0.023	0.0002199
Mo	98	3	He	51.363	1.1835	69061.89	0.023	0.0002199
Mo	98	3	He	50.711	1.1685	68168.18	0.023	0.0002199
Ag	107	3	He	51.856	2.5056	144883.82	0.0483	0.0008224
Ag	107	3	He	51.628	2.4946	145570.62	0.0483	0.0008224
Ag	107	3	He	50.965	2.4626	143665.24	0.0483	0.0008224
Cd	111	3	He	51.63	0.2754	15926.15	0.0053	2.193E-05
Cd	111	3	He	51.462	0.2745	16020.23	0.0053	2.193E-05
Cd	111	3	He	50.935	0.2717	15852.06	0.0053	2.193E-05
Sn	120	3	He	53.496	0.8056	46580.24	0.0148	0.01345
Sn	120	3	He	51.516	0.7762	45296.85	0.0148	0.01345
Sn	120	3	He	50.869	0.7667	44725.62	0.0148	0.01345
Sb	121	3	He	52.139	0.7464	43160.74	0.0143	0.0004392
Sb	121	3	He	50.092	0.7171	41847.18	0.0143	0.0004392
Sb	121	3	He	52.388	0.75	43752.47	0.0143	0.0004392
Ba	137	3	He	513.667	2.2405	129553.60	0.0044	0.0001096
Ba	137	3	He	518.07	2.2597	131863.62	0.0044	0.0001096
Ba	137	3	He	516.064	2.251	131318.08	0.0044	0.0001096
Tl	205	3	He	51.368	1.068	255601.07	0.0208	0.0002491
Tl	205	3	He	51.489	1.0705	252755.31	0.0208	0.0002491
Tl	205	3	He	50.657	1.0532	252601.54	0.0208	0.0002491
Pb	208	3	He	50.269	1.3689	171214.72	0.0272	0.0006218
Pb	208	3	He	51.789	1.4103	176832.34	0.0272	0.0006218
Pb	208	3	He	50.583	1.3775	173657.73	0.0272	0.0006218
U	238	3	He	51.829	1.4255	341174.10	0.0275	2.763E-05
U	238	3	He	52.166	1.4348	338769.80	0.0275	2.763E-05
U	238	3	He	51.428	1.4145	339253.74	0.0275	2.763E-05
Sc	45	1	No Gas			2247476.06		
Sc	45	1	No Gas			2241344.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2241062.31		
Ge	72	1	No Gas			1018796.70		
Ge	72	1	No Gas			1015434.05		
Ge	72	1	No Gas			1014379.44		
Sc	45	2	H2			139659.85		
Sc	45	2	H2			133259.15		
Sc	45	2	H2			136383.60		
Ge	72	2	H2			114474.60		
Ge	72	2	H2			112843.01		
Ge	72	2	H2			112471.06		
In	115	2	H2			289535.89		
In	115	2	H2			284218.80		
In	115	2	H2			292215.50		
Sc	45	3	He			43518.40		
Sc	45	3	He			45022.32		
Sc	45	3	He			44421.10		
Ge	72	3	He			72584.37		
Ge	72	3	He			74282.04		
Ge	72	3	He			74473.36		
In	115	3	He			58149.22		
In	115	3	He			58671.13		
In	115	3	He			58651.54		
Tb	159	3	He			239330.56		
Tb	159	3	He			236112.59		
Tb	159	3	He			239840.78		
Bi	209	3	He			165622.89		
Bi	209	3	He			162023.99		
Bi	209	3	He			167666.13		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

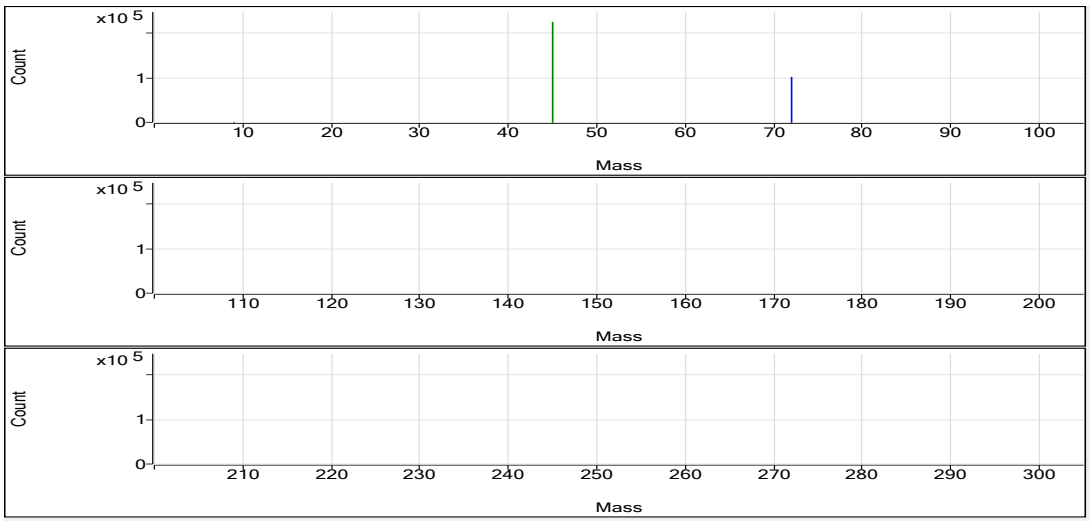
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.081	ppb	3.7	93.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.113	ppb	39.3	6.22	0.0001	Pulse	1.5000	3
Na	23	45	He	0.352	ppb	566.3	21007.01	0.4668	Pulse	0.1000	3
Mg	24	45	He	7.371	ppb	0.3	670.03	0.0149	Pulse	0.1000	3
Al	27	45	He	3.544	ppb	41.3	106.67	0.0024	Pulse	0.1000	3
K	39	45	He	-10.171	ppb	N/A	18838.24	0.4186	Pulse	0.1000	3
Ca	44	45	He	26.971	ppb	53.5	206.68	0.0046	Pulse	0.1000	3
Ti	47	45	He	4.587	ppb	36.0	100.00	0.0022	Pulse	0.1000	3
V	51	45	He	0.345	ppb	14.5	757.36	0.0168	Pulse	0.5000	3
Cr	52	45	He	0.182	ppb	81.6	1010.06	0.0224	Pulse	0.1000	3
Mn	55	45	He	0.372	ppb	42.0	370.02	0.0082	Pulse	0.1000	3
Fe	57	45	He	5.557	ppb	41.1	260.01	0.0058	Pulse	0.1000	3
Co	59	45	He	0.243	ppb	19.5	710.04	0.0158	Pulse	0.1000	3
Ni	60	115	He	0.315	ppb	54.6	850.05	0.0146	Pulse	0.1000	3
Cu	63	72	He	0.225	ppb	56.7	1513.46	0.0210	Pulse	0.1000	3
Zn	66	72	He	0.463	ppb	6.4	296.68	0.0041	Pulse	0.1000	3
As	75	72	He	0.377	ppb	20.7	87.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.289	ppb	42.3	210.01	0.0036	Pulse	0.1000	3
Mo	98	115	He	0.050	ppb	24.4	80.00	0.0014	Pulse	0.1000	3
Ag	107	115	He	0.018	ppb	69.6	96.67	0.0017	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	39.3	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.166	ppb	52.9	926.72	0.0159	Pulse	0.1000	3
Sb	121	115	He	0.106	ppb	26.8	113.34	0.0020	Pulse	0.1000	3
Ba	137	115	He	0.146	ppb	33.9	43.33	0.0007	Pulse	0.1000	3
Tl	205	159	He	0.394	ppb	6.4	1990.21	0.0084	Pulse	0.1000	3
Pb	208	159	He	0.051	ppb	15.5	473.35	0.0020	Pulse	0.1000	3
U	238	159	He	0.034	ppb	19.6	230.01	0.0010	Pulse	0.1000	3

ISTD Table:

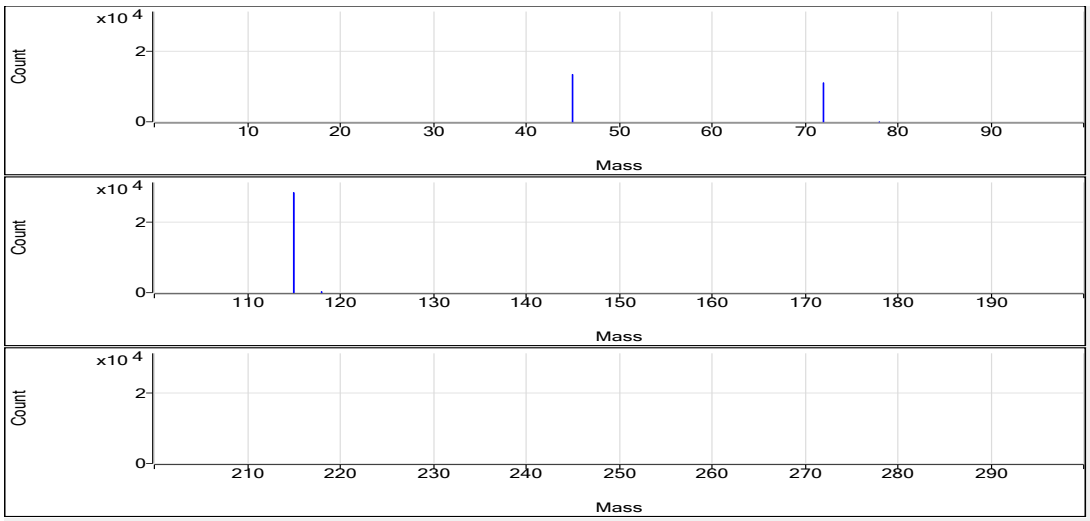
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2247329.34	1.6	98.0	Analog	0.1000	3
No Gas	Ge	72	1012965.72	0.8	97.5	Pulse	0.1000	3
H2	Sc	45	135098.88	0.7	97.2	Pulse	0.1000	3
H2	Ge	72	111252.95	0.9	94.2	Pulse	0.1000	3
H2	In	115	285392.34	1.1	96.9	Pulse	0.1000	3
He	Sc	45	45005.86	0.2	96.1	Pulse	0.1000	3
He	Ge	72	72038.39	1.2	94.2	Pulse	0.1000	3
He	In	115	58316.56	2.9	96.2	Pulse	0.1000	3
He	Tb	159	235601.36	1.5	97.7	Pulse	0.1000	3
He	Bi	209	163309.71	0.9	98.6	Pulse	0.1000	3

No Gas

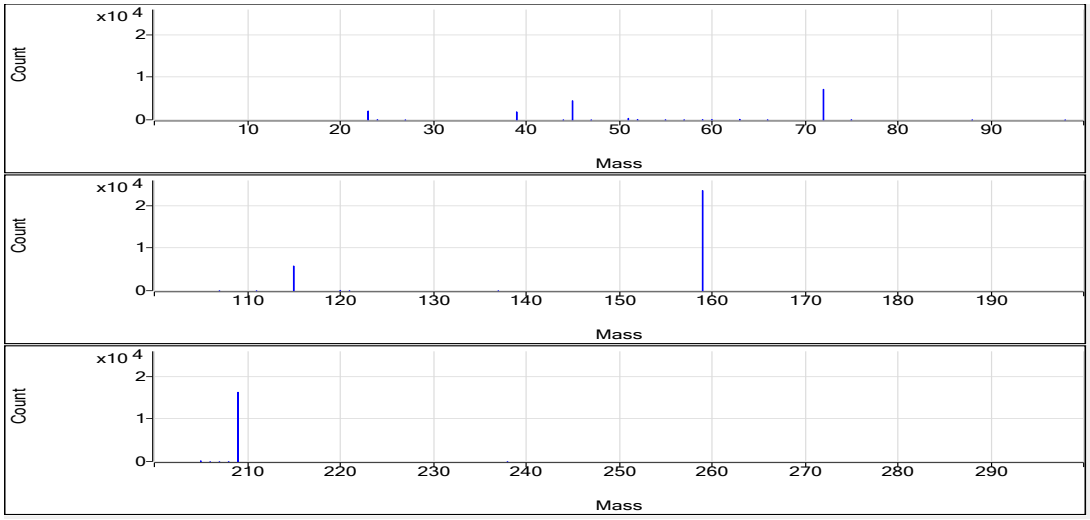


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.079	0	90.00	0.0004	9.309E-06
Be	9	1	No Gas	0.084	0	98.00	0.0004	9.309E-06
Be	9	1	No Gas	0.08	0	92.00	0.0004	9.309E-06
Se	78	2	H2	0.163	0.0001	8.67	0.0004	5.598E-06
Se	78	2	H2	0.081	0	4.67	0.0004	5.598E-06
Se	78	2	H2	0.095	0	5.33	0.0004	5.598E-06
Na	23	3	He	2.229	0.4726	21284.03	0.0031	0.4657
Na	23	3	He	0.563	0.4674	20983.71	0.0031	0.4657
Na	23	3	He	-1.737	0.4602	20753.30	0.0031	0.4657
Mg	24	3	He	7.365	0.0149	670.03	0.0015	0.003704
Mg	24	3	He	7.395	0.0149	670.03	0.0015	0.003704
Mg	24	3	He	7.352	0.0149	670.03	0.0015	0.003704
Al	27	3	He	2.272	0.0018	80.00	0.0005	0.0007154
Al	27	3	He	5.145	0.0031	140.00	0.0005	0.0007154
Al	27	3	He	3.216	0.0022	100.00	0.0005	0.0007154
K	39	3	He	63.314	0.4984	22445.93	0.0011	0.4296
K	39	3	He	-29.451	0.3976	17850.15	0.0011	0.4296
K	39	3	He	-64.375	0.3597	16218.64	0.0011	0.4296
Ca	44	3	He	13.766	0.0038	170.01	0.0001	0.002924
Ca	44	3	He	24.766	0.0045	200.01	0.0001	0.002924
Ca	44	3	He	42.38	0.0055	250.01	0.0001	0.002924
Ti	47	3	He	2.751	0.0013	60.00	0.0005	0
Ti	47	3	He	5.059	0.0025	110.01	0.0005	0
Ti	47	3	He	5.952	0.0029	130.00	0.0005	0
V	51	3	He	0.396	0.0179	806.03	0.021	0.009571
V	51	3	He	0.343	0.0168	754.02	0.021	0.009571
V	51	3	He	0.295	0.0158	712.02	0.021	0.009571
Cr	52	3	He	0.298	0.0255	1150.07	0.0267	0.01758
Cr	52	3	He	0.235	0.0238	1070.07	0.0267	0.01758
Cr	52	3	He	0.014	0.018	810.05	0.0267	0.01758
Mn	55	3	He	0.207	0.0064	290.01	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.518	0.0098	440.02	0.0108	0.004199
Mn	55	3	He	0.391	0.0084	380.02	0.0108	0.004199
Fe	57	3	He	4.223	0.0051	230.01	0.0005	0.002993
Fe	57	3	He	4.255	0.0051	230.01	0.0005	0.002993
Fe	57	3	He	8.194	0.0071	320.01	0.0005	0.002993
Co	59	3	He	0.294	0.0184	830.05	0.0524	0.003063
Co	59	3	He	0.235	0.0154	690.04	0.0524	0.003063
Co	59	3	He	0.2	0.0135	610.03	0.0524	0.003063
Ni	60	3	He	0.428	0.0158	910.05	0.0109	0.01116
Ni	60	3	He	0.117	0.0124	750.04	0.0109	0.01116
Ni	60	3	He	0.401	0.0156	890.06	0.0109	0.01116
Cu	63	3	He	0.247	0.0216	1540.12	0.0255	0.01531
Cu	63	3	He	0.339	0.024	1720.15	0.0255	0.01531
Cu	63	3	He	0.087	0.0175	1280.11	0.0255	0.01531
Zn	66	3	He	0.494	0.0042	300.01	0.0029	0.002787
Zn	66	3	He	0.435	0.004	290.01	0.0029	0.002787
Zn	66	3	He	0.46	0.0041	300.01	0.0029	0.002787
As	75	3	He	0.308	0.0011	76.00	0.0021	0.0004097
As	75	3	He	0.462	0.0014	100.00	0.0021	0.0004097
As	75	3	He	0.361	0.0012	86.00	0.0021	0.0004097
Sr	88	3	He	0.424	0.0049	280.01	0.0094	0.0008765
Sr	88	3	He	0.259	0.0033	200.01	0.0094	0.0008765
Sr	88	3	He	0.185	0.0026	150.00	0.0094	0.0008765
Mo	98	3	He	0.058	0.0016	90.00	0.023	0.0002199
Mo	98	3	He	0.055	0.0015	90.00	0.023	0.0002199
Mo	98	3	He	0.036	0.001	60.00	0.023	0.0002199
Ag	107	3	He	0.026	0.0021	120.00	0.0483	0.0008224
Ag	107	3	He	0.004	0.001	60.00	0.0483	0.0008224
Ag	107	3	He	0.023	0.0019	110.00	0.0483	0.0008224
Cd	111	3	He	0.009	0.0001	4.00	0.0053	2.193E-05
Cd	111	3	He	0.021	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.016	0.0001	6.00	0.0053	2.193E-05
Sn	120	3	He	0.232	0.0169	970.06	0.0148	0.01345
Sn	120	3	He	0.066	0.0144	870.05	0.0148	0.01345
Sn	120	3	He	0.201	0.0164	940.06	0.0148	0.01345
Sb	121	3	He	0.127	0.0023	130.01	0.0143	0.0004392
Sb	121	3	He	0.074	0.0015	90.00	0.0143	0.0004392
Sb	121	3	He	0.116	0.0021	120.00	0.0143	0.0004392
Ba	137	3	He	0.174	0.0009	50.00	0.0044	0.0001096
Ba	137	3	He	0.089	0.0005	30.00	0.0044	0.0001096
Ba	137	3	He	0.175	0.0009	50.00	0.0044	0.0001096
Tl	205	3	He	0.366	0.0079	1820.17	0.0208	0.0002491
Tl	205	3	He	0.402	0.0086	2050.23	0.0208	0.0002491
Tl	205	3	He	0.414	0.0089	2100.23	0.0208	0.0002491
Pb	208	3	He	0.056	0.0022	250.01	0.0272	0.0006218
Pb	208	3	He	0.042	0.0018	250.01	0.0272	0.0006218
Pb	208	3	He	0.055	0.0021	290.01	0.0272	0.0006218
U	238	3	He	0.029	0.0008	190.01	0.0275	2.763E-05
U	238	3	He	0.033	0.0009	220.01	0.0275	2.763E-05
U	238	3	He	0.042	0.0012	280.01	0.0275	2.763E-05
Sc	45	1	No Gas			2215532.62		
Sc	45	1	No Gas			2286625.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2239829.97		
Ge	72	1	No Gas			1003961.16		
Ge	72	1	No Gas			1019181.63		
Ge	72	1	No Gas			1015754.36		
Sc	45	2	H2			135283.69		
Sc	45	2	H2			135907.97		
Sc	45	2	H2			134104.97		
Ge	72	2	H2			110266.87		
Ge	72	2	H2			112168.59		
Ge	72	2	H2			111323.38		
In	115	2	H2			285850.76		
In	115	2	H2			288354.86		
In	115	2	H2			281971.40		
Sc	45	3	He			45032.55		
Sc	45	3	He			44891.99		
Sc	45	3	He			45093.05		
Ge	72	3	He			71289.39		
Ge	72	3	He			71820.27		
Ge	72	3	He			73005.52		
In	115	3	He			57455.91		
In	115	3	He			60277.28		
In	115	3	He			57235.95		
Tb	159	3	He			231582.89		
Tb	159	3	He			238204.37		
Tb	159	3	He			237016.83		
Bi	209	3	He			164349.10		
Bi	209	3	He			164002.48		
Bi	209	3	He			161577.54		

Quantitation Report

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Acq Mode	Spectrum
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Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

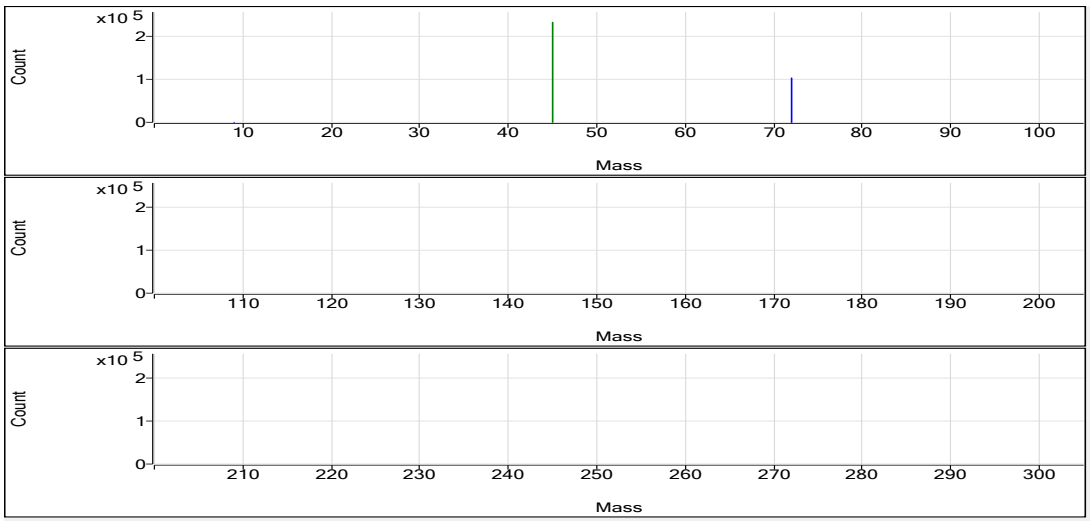
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.023	ppb	54.9	42.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.502	ppb	19.3	27.33	0.0002	Pulse	1.5000	3
Na	23	45	He	239514.283	ppb	1.9	33035162.84	749.6053	Analog	0.1000	3
Mg	24	45	He	13197.374	ppb	1.4	882727.12	20.0290	Pulse	0.1000	3
Al	27	45	He	28.740	ppb	9.2	623.37	0.0141	Pulse	0.1000	3
K	39	45	He	5273.311	ppb	2.2	271488.58	6.1605	Pulse	0.1000	3
Ca	44	45	He	76712.253	ppb	0.7	209163.13	4.7455	Pulse	0.1000	3
Ti	47	45	He	1.092	ppb	24.1	23.33	0.0005	Pulse	0.1000	3
V	51	45	He	3.351	ppb	6.1	3529.07	0.0801	Pulse	0.5000	3
Cr	52	45	He	0.036	ppb	78.9	816.72	0.0185	Pulse	0.1000	3
Mn	55	45	He	924.233	ppb	1.4	440881.03	10.0035	Pulse	0.1000	3
Fe	57	45	He	10.607	ppb	35.2	366.68	0.0083	Pulse	0.1000	3
Co	59	45	He	0.421	ppb	11.6	1106.74	0.0251	Pulse	0.1000	3
Ni	60	115	He	0.472	ppb	11.8	970.06	0.0163	Pulse	0.1000	3
Cu	63	72	He	0.797	ppb	4.7	2686.99	0.0356	Pulse	0.1000	3
Zn	66	72	He	7.727	ppb	6.2	1886.83	0.0250	Pulse	0.1000	3
As	75	72	He	5.113	ppb	4.1	852.03	0.0113	Pulse	0.5000	3
Sr	88	115	He	649.341	ppb	0.6	363840.53	6.1214	Pulse	0.1000	3
Mo	98	115	He	1.128	ppb	9.4	1556.79	0.0262	Pulse	0.1000	3
Ag	107	115	He	-0.007	ppb	N/A	30.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.009	ppb	148.9	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.095	ppb	N/A	716.71	0.0120	Pulse	0.1000	3
Sb	121	115	He	0.942	ppb	9.3	826.72	0.0139	Pulse	0.1000	3
Ba	137	115	He	1846.066	ppb	0.6	478569.06	8.0519	Pulse	0.1000	3
Tl	205	159	He	0.043	ppb	20.3	276.68	0.0011	Pulse	0.1000	3
Pb	208	159	He	0.594	ppb	1.6	4047.03	0.0168	Pulse	0.1000	3
U	238	159	He	2.857	ppb	1.3	18939.82	0.0786	Pulse	0.1000	3

ISTD Table:

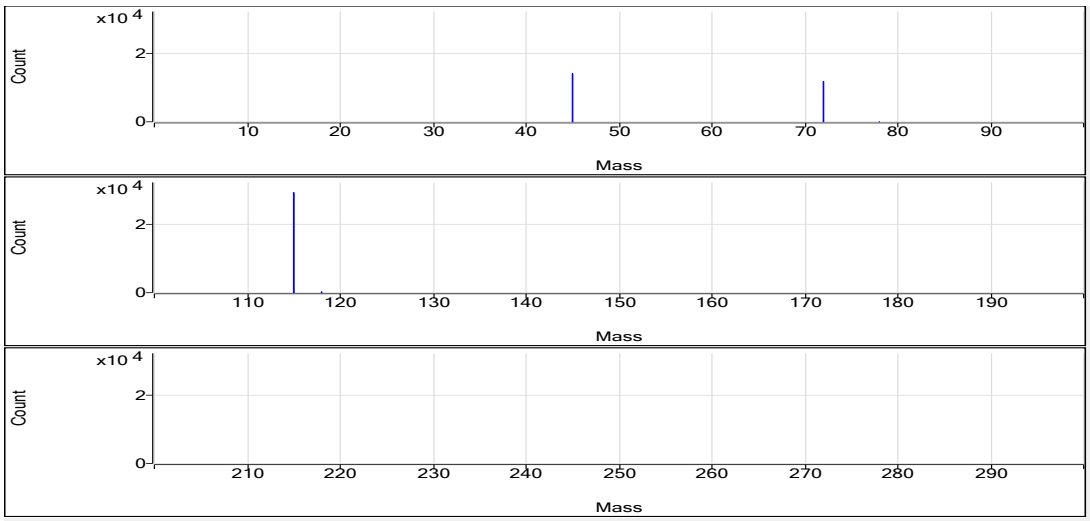
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2327696.95	1.4	101.5	Analog	0.1000	3
No Gas	Ge	72	1032301.31	0.9	99.4	Pulse	0.1000	3
H2	Sc	45	141960.17	0.9	102.1	Pulse	0.1000	3
H2	Ge	72	118565.00	0.7	100.4	Pulse	0.1000	3
H2	In	115	294066.63	1.0	99.8	Pulse	0.1000	3
He	Sc	45	44079.87	1.8	94.1	Pulse	0.1000	3
He	Ge	72	75433.90	1.1	98.6	Pulse	0.1000	3
He	In	115	59438.94	1.3	98.0	Pulse	0.1000	3
He	Tb	159	240970.01	0.4	99.9	Pulse	0.1000	3
He	Bi	209	166677.80	0.4	100.6	Pulse	0.1000	3

No Gas

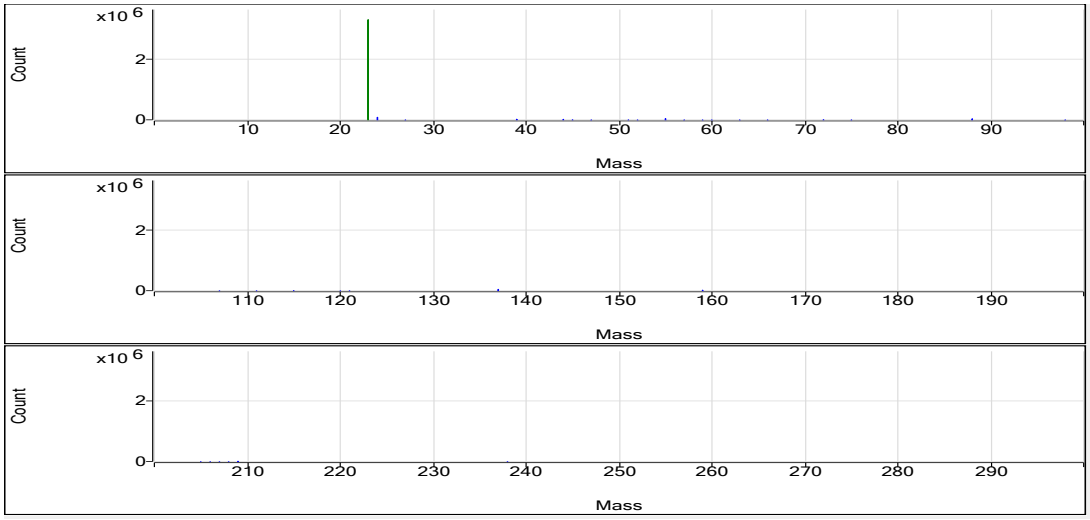


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.011	0	32.00	0.0004	9.309E-06
Be	9	1	No Gas	0.021	0	42.00	0.0004	9.309E-06
Be	9	1	No Gas	0.036	0	54.00	0.0004	9.309E-06
Se	78	2	H2	0.577	0.0003	31.33	0.0004	5.598E-06
Se	78	2	H2	0.538	0.0002	29.33	0.0004	5.598E-06
Se	78	2	H2	0.393	0.0002	21.33	0.0004	5.598E-06
Na	23	3	He	244827.539	766.2239	33099054.51	0.0031	0.4657
Na	23	3	He	236803.163	741.1256	33092364.51	0.0031	0.4657
Na	23	3	He	236912.146	741.4665	32914069.51	0.0031	0.4657
Mg	24	3	He	13415.642	20.3602	879513.19	0.0015	0.003704
Mg	24	3	He	13060.351	19.8211	885042.10	0.0015	0.003704
Mg	24	3	He	13116.13	19.9057	883626.08	0.0015	0.003704
Al	27	3	He	27.712	0.0137	590.03	0.0005	0.0007154
Al	27	3	He	26.76	0.0132	590.03	0.0005	0.0007154
Al	27	3	He	31.749	0.0155	690.04	0.0005	0.0007154
K	39	3	He	5406.607	6.3053	272375.70	0.0011	0.4296
K	39	3	He	5200.34	6.0812	271533.51	0.0011	0.4296
K	39	3	He	5212.987	6.0949	270556.54	0.0011	0.4296
Ca	44	3	He	77319.275	4.783	206613.86	0.0001	0.002924
Ca	44	3	He	76458.826	4.7298	211192.42	0.0001	0.002924
Ca	44	3	He	76358.659	4.7236	209683.10	0.0001	0.002924
Ti	47	3	He	0.956	0.0005	20.00	0.0005	0
Ti	47	3	He	0.925	0.0004	20.00	0.0005	0
Ti	47	3	He	1.395	0.0007	30.00	0.0005	0
V	51	3	He	3.587	0.0851	3674.43	0.021	0.009571
V	51	3	He	3.208	0.0771	3442.38	0.021	0.009571
V	51	3	He	3.26	0.0782	3470.39	0.021	0.009571
Cr	52	3	He	0.044	0.0188	810.05	0.0267	0.01758
Cr	52	3	He	0.004	0.0177	790.05	0.0267	0.01758
Cr	52	3	He	0.059	0.0191	850.05	0.0267	0.01758
Mn	55	3	He	939.272	10.1662	439155.38	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	917.443	9.93	443390.27	0.0108	0.004199
Mn	55	3	He	915.983	9.9142	440097.45	0.0108	0.004199
Fe	57	3	He	7.429	0.0067	290.01	0.0005	0.002993
Fe	57	3	He	9.675	0.0078	350.01	0.0005	0.002993
Fe	57	3	He	14.715	0.0104	460.02	0.0005	0.002993
Co	59	3	He	0.446	0.0264	1140.08	0.0524	0.003063
Co	59	3	He	0.365	0.0222	990.07	0.0524	0.003063
Co	59	3	He	0.454	0.0268	1190.08	0.0524	0.003063
Ni	60	3	He	0.526	0.0169	990.06	0.0109	0.01116
Ni	60	3	He	0.414	0.0157	940.06	0.0109	0.01116
Ni	60	3	He	0.476	0.0164	980.06	0.0109	0.01116
Cu	63	3	He	0.841	0.0367	2760.33	0.0255	0.01531
Cu	63	3	He	0.771	0.035	2670.34	0.0255	0.01531
Cu	63	3	He	0.78	0.0352	2630.30	0.0255	0.01531
Zn	66	3	He	8.049	0.0259	1950.18	0.0029	0.002787
Zn	66	3	He	7.176	0.0234	1790.14	0.0029	0.002787
Zn	66	3	He	7.957	0.0257	1920.17	0.0029	0.002787
As	75	3	He	5.221	0.0115	866.03	0.0021	0.0004097
As	75	3	He	5.245	0.0116	884.03	0.0021	0.0004097
As	75	3	He	4.872	0.0108	806.02	0.0021	0.0004097
Sr	88	3	He	651.934	6.1459	359822.22	0.0094	0.0008765
Sr	88	3	He	645.1	6.0815	364224.80	0.0094	0.0008765
Sr	88	3	He	650.989	6.137	367474.56	0.0094	0.0008765
Mo	98	3	He	1.192	0.0277	1620.13	0.023	0.0002199
Mo	98	3	He	1.005	0.0234	1400.11	0.023	0.0002199
Mo	98	3	He	1.187	0.0276	1650.14	0.023	0.0002199
Ag	107	3	He	-0.013	0.0002	10.00	0.0483	0.0008224
Ag	107	3	He	0.007	0.0012	70.00	0.0483	0.0008224
Ag	107	3	He	-0.014	0.0002	10.00	0.0483	0.0008224
Cd	111	3	He	0.022	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Sn	120	3	He	-0.251	0.0097	570.03	0.0148	0.01345
Sn	120	3	He	-0.209	0.0104	620.03	0.0148	0.01345
Sn	120	3	He	0.174	0.016	960.06	0.0148	0.01345
Sb	121	3	He	1.032	0.0152	890.06	0.0143	0.0004392
Sb	121	3	He	0.856	0.0127	760.04	0.0143	0.0004392
Sb	121	3	He	0.938	0.0139	830.05	0.0143	0.0004392
Ba	137	3	He	1859.606	8.1109	474870.27	0.0044	0.0001096
Ba	137	3	He	1841.264	8.0309	480981.36	0.0044	0.0001096
Ba	137	3	He	1837.327	8.0138	479855.54	0.0044	0.0001096
Tl	205	3	He	0.044	0.0012	280.01	0.0208	0.0002491
Tl	205	3	He	0.034	0.001	230.01	0.0208	0.0002491
Tl	205	3	He	0.052	0.0013	320.02	0.0208	0.0002491
Pb	208	3	He	0.583	0.0165	2090.20	0.0272	0.0006218
Pb	208	3	He	0.601	0.017	2020.23	0.0272	0.0006218
Pb	208	3	He	0.598	0.0169	2210.26	0.0272	0.0006218
U	238	3	He	2.821	0.0776	18722.90	0.0275	2.763E-05
U	238	3	He	2.895	0.0797	19103.36	0.0275	2.763E-05
U	238	3	He	2.854	0.0785	18993.19	0.0275	2.763E-05
Sc	45	1	No Gas			2340857.47		
Sc	45	1	No Gas			2352666.06		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2289567.31		
Ge	72	1	No Gas			1037981.08		
Ge	72	1	No Gas			1036942.95		
Ge	72	1	No Gas			1021979.91		
Sc	45	2	H2			143131.60		
Sc	45	2	H2			140557.35		
Sc	45	2	H2			142191.56		
Ge	72	2	H2			118827.59		
Ge	72	2	H2			119179.66		
Ge	72	2	H2			117687.76		
In	115	2	H2			292046.38		
In	115	2	H2			292695.91		
In	115	2	H2			297457.61		
Sc	45	3	He			43197.63		
Sc	45	3	He			44651.49		
Sc	45	3	He			44390.50		
Ge	72	3	He			75155.92		
Ge	72	3	He			76381.50		
Ge	72	3	He			74764.27		
In	115	3	He			58550.88		
In	115	3	He			59895.39		
In	115	3	He			59885.59		
Tb	159	3	He			241209.86		
Tb	159	3	He			239820.48		
Tb	159	3	He			241879.70		
Bi	209	3	He			167099.74		
Bi	209	3	He			165864.24		
Bi	209	3	He			167069.43		

Quantitation Report

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Sample Type	Sample
Comment	D6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

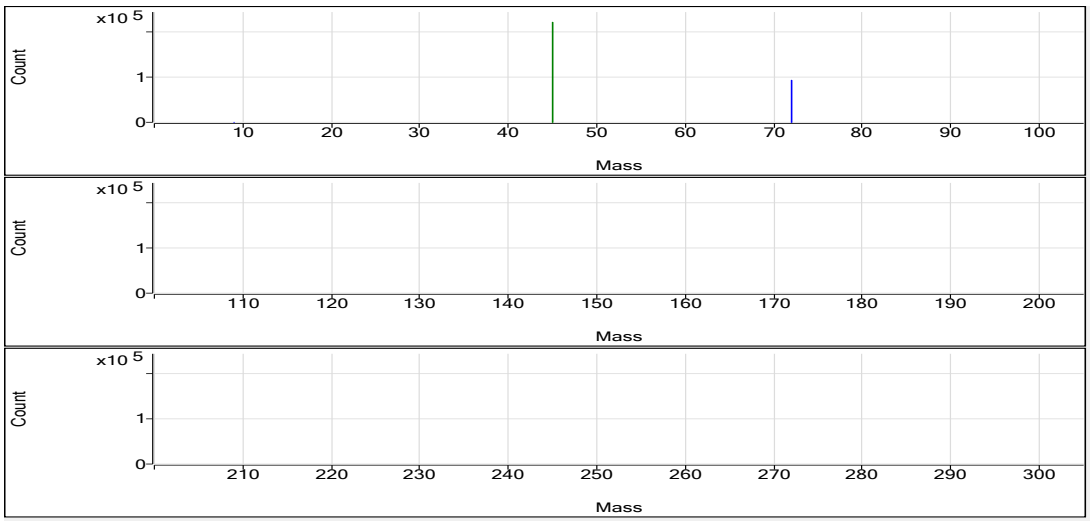
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.006	ppb	110.6	26.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.237	ppb	18.8	12.45	0.0001	Pulse	1.5000	3
Na	23	45	He	602843.555	ppb	1.0	83229777.09	1,886.0068	Analog	0.1000	3
Mg	24	45	He	2606.434	ppb	0.6	174702.13	3.9586	Pulse	0.1000	3
Al	27	45	He	330.155	ppb	2.0	6838.27	0.1549	Pulse	0.1000	3
K	39	45	He	1833425.621	ppb	1.3	87949288.69	1,992.9313	Analog	0.1000	3
Ca	44	45	He	700546.432	ppb	0.7	1911538.67	43.3124	Analog	0.1000	3
Ti	47	45	He	1.873	ppb	25.8	40.00	0.0009	Pulse	0.1000	3
V	51	45	He	0.043	ppb	67.7	462.01	0.0105	Pulse	0.5000	3
Cr	52	45	He	2.482	ppb	11.6	3697.19	0.0838	Pulse	0.1000	3
Mn	55	45	He	2.180	ppb	6.9	1226.76	0.0278	Pulse	0.1000	3
Fe	57	45	He	90.856	ppb	3.7	2140.22	0.0485	Pulse	0.1000	3
Co	59	45	He	0.296	ppb	18.1	820.05	0.0186	Pulse	0.1000	3
Ni	60	115	He	3.465	ppb	8.4	2903.69	0.0490	Pulse	0.1000	3
Cu	63	72	He	2.803	ppb	6.4	6134.68	0.0867	Pulse	0.1000	3
Zn	66	72	He	1.454	ppb	17.6	493.36	0.0070	Pulse	0.1000	3
As	75	72	He	155.500	ppb	0.3	23446.41	0.3314	Pulse	0.5000	3
Sr	88	115	He	3097.930	ppb	1.6	1728271.12	29.2013	Analog	0.1000	3
Mo	98	115	He	6.486	ppb	1.7	8856.09	0.1496	Pulse	0.1000	3
Ag	107	115	He	0.045	ppb	43.9	176.68	0.0030	Pulse	0.1000	3
Cd	111	115	He	0.025	ppb	29.5	9.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.114	ppb	N/A	696.70	0.0118	Pulse	0.1000	3
Sb	121	115	He	193.769	ppb	1.1	164110.14	2.7728	Pulse	0.1000	3
Ba	137	115	He	71.564	ppb	4.0	18478.32	0.3122	Pulse	0.1000	3
Tl	205	159	He	0.219	ppb	8.2	1140.08	0.0048	Pulse	0.1000	3
Pb	208	159	He	0.017	ppb	67.9	256.67	0.0011	Pulse	0.1000	3
U	238	159	He	0.036	ppb	10.6	243.34	0.0010	Pulse	0.1000	3

ISTD Table:

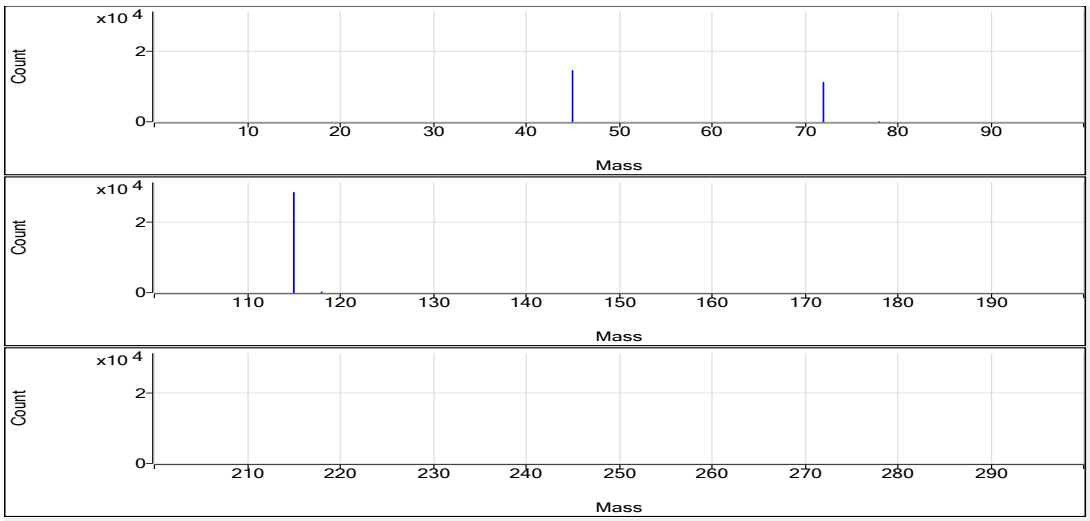
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2207416.32	0.2	96.2	Analog	0.1000	3
No Gas	Ge	72	929798.32	0.5	89.5	Pulse	0.1000	3
H2	Sc	45	144108.50	1.1	103.6	Pulse	0.1000	3
H2	Ge	72	111438.08	1.0	94.4	Pulse	0.1000	3
H2	In	115	282043.10	1.4	95.7	Pulse	0.1000	3
He	Sc	45	44133.46	1.1	94.2	Pulse	0.1000	3
He	Ge	72	70749.48	0.7	92.5	Pulse	0.1000	3
He	In	115	59188.12	0.6	97.6	Pulse	0.1000	3
He	Tb	159	237325.97	0.8	98.4	Pulse	0.1000	3
He	Bi	209	160287.36	1.1	96.7	Pulse	0.1000	3

No Gas

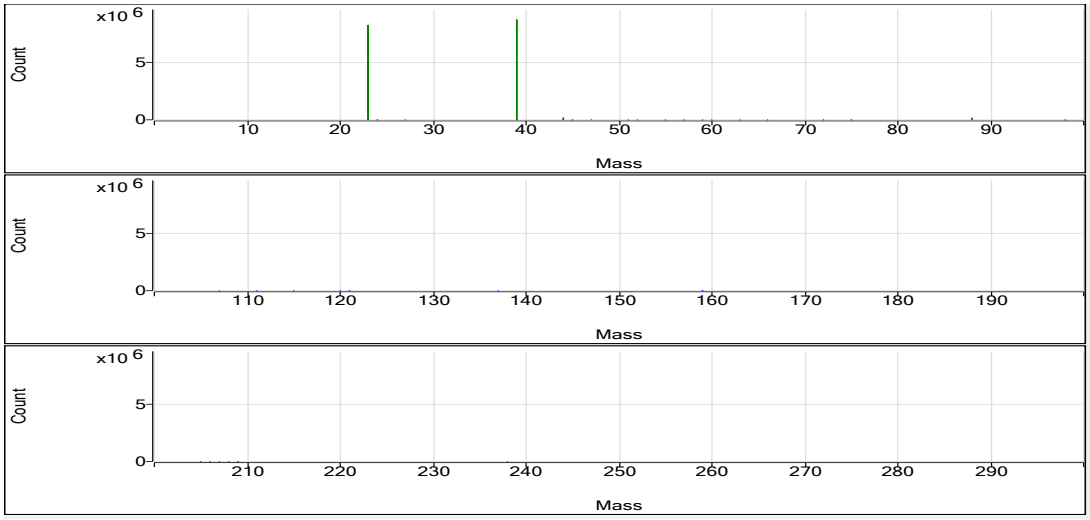


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.013	0	32.00	0.0004	9.309E-06
Be	9	1	No Gas	0.006	0	26.00	0.0004	9.309E-06
Be	9	1	No Gas	-0.001	0	20.00	0.0004	9.309E-06
Se	78	2	H2	0.279	0.0001	14.67	0.0004	5.598E-06
Se	78	2	H2	0.19	0.0001	10.00	0.0004	5.598E-06
Se	78	2	H2	0.241	0.0001	12.67	0.0004	5.598E-06
Na	23	3	He	608546.179	1903.8431	83043523.76	0.0031	0.4657
Na	23	3	He	596090.476	1864.8849	83157658.76	0.0031	0.4657
Na	23	3	He	603894.009	1889.2923	83488148.76	0.0031	0.4657
Mg	24	3	He	2624.031	3.9853	173835.82	0.0015	0.003704
Mg	24	3	He	2601.709	3.9515	176200.93	0.0015	0.003704
Mg	24	3	He	2593.563	3.9391	174069.65	0.0015	0.003704
Al	27	3	He	322.986	0.1516	6611.48	0.0005	0.0007154
Al	27	3	He	336.084	0.1577	7031.67	0.0005	0.0007154
Al	27	3	He	331.396	0.1555	6871.66	0.0005	0.0007154
K	39	3	He	1842247.478	2002.5186	87347638.70	0.0011	0.4296
K	39	3	He	1807042.765	1964.2594	87588898.69	0.0011	0.4296
K	39	3	He	1850986.619	2012.016	88911328.68	0.0011	0.4296
Ca	44	3	He	697583.534	43.1292	1881249.66	0.0001	0.002924
Ca	44	3	He	697784.725	43.1417	1923744.03	0.0001	0.002924
Ca	44	3	He	706271.038	43.6663	1929622.31	0.0001	0.002924
Ti	47	3	He	2.367	0.0011	50.00	0.0005	0
Ti	47	3	He	1.852	0.0009	40.00	0.0005	0
Ti	47	3	He	1.402	0.0007	30.00	0.0005	0
V	51	3	He	0.064	0.0109	476.01	0.021	0.009571
V	51	3	He	0.055	0.0107	478.01	0.021	0.009571
V	51	3	He	0.01	0.0098	432.01	0.021	0.009571
Cr	52	3	He	2.469	0.0835	3640.51	0.0267	0.01758
Cr	52	3	He	2.199	0.0763	3400.47	0.0267	0.01758
Cr	52	3	He	2.776	0.0917	4050.59	0.0267	0.01758
Mn	55	3	He	2.007	0.0259	1130.09	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.265	0.0287	1280.09	0.0108	0.004199
Mn	55	3	He	2.268	0.0287	1270.09	0.0108	0.004199
Fe	57	3	He	90.617	0.0484	2110.24	0.0005	0.002993
Fe	57	3	He	87.614	0.0469	2090.21	0.0005	0.002993
Fe	57	3	He	94.337	0.0502	2220.22	0.0005	0.002993
Co	59	3	He	0.318	0.0197	860.05	0.0524	0.003063
Co	59	3	He	0.336	0.0206	920.06	0.0524	0.003063
Co	59	3	He	0.235	0.0154	680.04	0.0524	0.003063
Ni	60	3	He	3.586	0.0504	2990.38	0.0109	0.01116
Ni	60	3	He	3.677	0.0514	3050.40	0.0109	0.01116
Ni	60	3	He	3.132	0.0454	2670.29	0.0109	0.01116
Cu	63	3	He	2.769	0.0859	6101.33	0.0255	0.01531
Cu	63	3	He	2.997	0.0917	6431.45	0.0255	0.01531
Cu	63	3	He	2.643	0.0827	5871.27	0.0255	0.01531
Zn	66	3	He	1.721	0.0077	550.03	0.0029	0.002787
Zn	66	3	He	1.211	0.0063	440.02	0.0029	0.002787
Zn	66	3	He	1.429	0.0069	490.02	0.0029	0.002787
As	75	3	He	155.864	0.3322	23603.32	0.0021	0.0004097
As	75	3	He	154.912	0.3301	23160.63	0.0021	0.0004097
As	75	3	He	155.724	0.3319	23575.29	0.0021	0.0004097
Sr	88	3	He	3080.819	29.0401	1724063.41	0.0094	0.0008765
Sr	88	3	He	3058.854	28.833	1712369.51	0.0094	0.0008765
Sr	88	3	He	3154.117	29.731	1748380.44	0.0094	0.0008765
Mo	98	3	He	6.412	0.1479	8782.70	0.023	0.0002199
Mo	98	3	He	6.432	0.1484	8812.73	0.023	0.0002199
Mo	98	3	He	6.614	0.1526	8972.85	0.023	0.0002199
Ag	107	3	He	0.039	0.0027	160.01	0.0483	0.0008224
Ag	107	3	He	0.067	0.004	240.01	0.0483	0.0008224
Ag	107	3	He	0.029	0.0022	130.01	0.0483	0.0008224
Cd	111	3	He	0.021	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.021	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.034	0.0002	12.00	0.0053	2.193E-05
Sn	120	3	He	-0.09	0.0121	720.04	0.0148	0.01345
Sn	120	3	He	-0.147	0.0113	670.04	0.0148	0.01345
Sn	120	3	He	-0.105	0.0119	700.03	0.0148	0.01345
Sb	121	3	He	192.232	2.7508	163311.14	0.0143	0.0004392
Sb	121	3	He	192.987	2.7616	164009.88	0.0143	0.0004392
Sb	121	3	He	196.087	2.806	165009.39	0.0143	0.0004392
Ba	137	3	He	71.039	0.31	18401.51	0.0044	0.0001096
Ba	137	3	He	68.966	0.3009	17870.96	0.0044	0.0001096
Ba	137	3	He	74.685	0.3259	19162.49	0.0044	0.0001096
Tl	205	3	He	0.211	0.0046	1090.08	0.0208	0.0002491
Tl	205	3	He	0.207	0.0045	1080.07	0.0208	0.0002491
Tl	205	3	He	0.24	0.0052	1250.08	0.0208	0.0002491
Pb	208	3	He	0.005	0.0008	80.00	0.0272	0.0006218
Pb	208	3	He	0.028	0.0014	200.01	0.0272	0.0006218
Pb	208	3	He	0.017	0.0011	120.01	0.0272	0.0006218
U	238	3	He	0.041	0.0011	270.01	0.0275	2.763E-05
U	238	3	He	0.034	0.001	230.01	0.0275	2.763E-05
U	238	3	He	0.034	0.001	230.01	0.0275	2.763E-05
Sc	45	1	No Gas			2205405.44		
Sc	45	1	No Gas			2205379.81		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2211463.72		
Ge	72	1	No Gas			925531.78		
Ge	72	1	No Gas			929398.42		
Ge	72	1	No Gas			934464.75		
Sc	45	2	H2			145662.43		
Sc	45	2	H2			144269.60		
Sc	45	2	H2			142393.47		
Ge	72	2	H2			112512.06		
Ge	72	2	H2			110226.11		
Ge	72	2	H2			111576.08		
In	115	2	H2			284842.93		
In	115	2	H2			277494.08		
In	115	2	H2			283792.30		
Sc	45	3	He			43618.89		
Sc	45	3	He			44591.31		
Sc	45	3	He			44190.17		
Ge	72	3	He			71057.87		
Ge	72	3	He			70153.13		
Ge	72	3	He			71037.43		
In	115	3	He			59373.49		
In	115	3	He			59393.87		
In	115	3	He			58811.64		
Tb	159	3	He			235116.58		
Tb	159	3	He			237820.50		
Tb	159	3	He			239040.82		
Bi	209	3	He			158919.69		
Bi	209	3	He			159688.20		
Bi	209	3	He			162254.20		

Quantitation Report

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Sample Type	Sample
Comment	D6
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

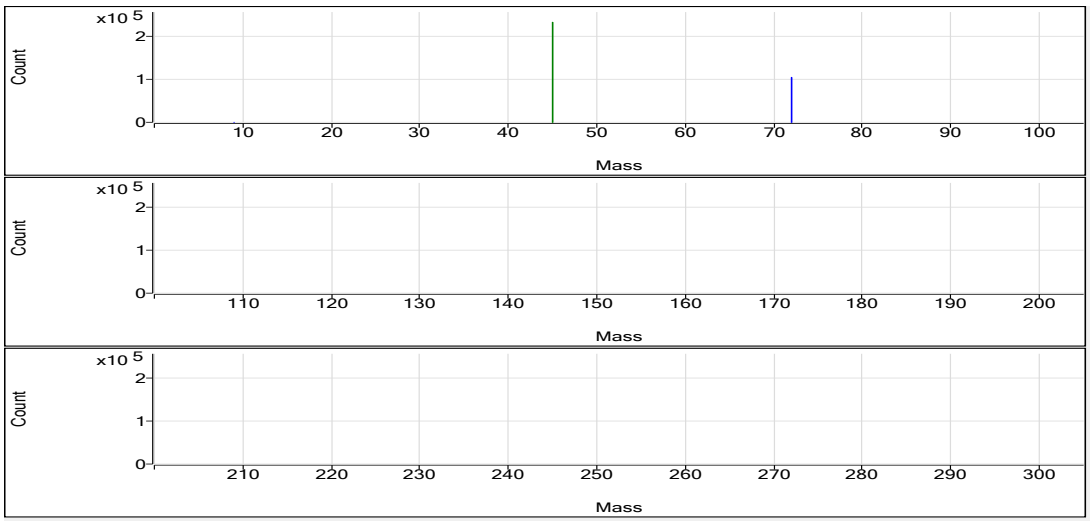
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.008	ppb	14.2	29.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.088	ppb	55.6	5.56	0.0000	Pulse	1.5000	3
Na	23	45	He	235415.953	ppb	1.0	33528401.17	736.7868	Analog	0.1000	3
Mg	24	45	He	9342.063	ppb	1.7	645180.58	14.1791	Pulse	0.1000	3
Al	27	45	He	7.418	ppb	24.1	190.01	0.0042	Pulse	0.1000	3
K	39	45	He	6008.737	ppb	2.9	316647.22	6.9597	Pulse	0.1000	3
Ca	44	45	He	33384.475	ppb	2.9	94042.51	2.0668	Pulse	0.1000	3
Ti	47	45	He	0.454	ppb	1.6	10.00	0.0002	Pulse	0.1000	3
V	51	45	He	0.049	ppb	49.5	482.68	0.0106	Pulse	0.5000	3
Cr	52	45	He	0.175	ppb	42.3	1013.41	0.0223	Pulse	0.1000	3
Mn	55	45	He	3038.841	ppb	2.6	1496032.11	32.8814	Analog	0.1000	3
Fe	57	45	He	2806.161	ppb	1.1	64093.46	1.4085	Pulse	0.1000	3
Co	59	45	He	0.045	ppb	19.9	246.68	0.0054	Pulse	0.1000	3
Ni	60	115	He	0.401	ppb	36.8	936.72	0.0156	Pulse	0.1000	3
Cu	63	72	He	0.970	ppb	2.9	3073.72	0.0400	Pulse	0.1000	3
Zn	66	72	He	25.015	ppb	7.2	5741.20	0.0748	Pulse	0.1000	3
As	75	72	He	0.378	ppb	26.9	93.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	216.717	ppb	0.6	123060.36	2.0436	Pulse	0.1000	3
Mo	98	115	He	0.421	ppb	4.4	596.70	0.0099	Pulse	0.1000	3
Ag	107	115	He	-0.004	ppb	N/A	36.67	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	91.1	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.049	ppb	N/A	766.71	0.0127	Pulse	0.1000	3
Sb	121	115	He	0.314	ppb	30.1	296.68	0.0049	Pulse	0.1000	3
Ba	137	115	He	26.524	ppb	7.7	6971.80	0.1158	Pulse	0.1000	3
Tl	205	159	He	0.016	ppb	56.8	143.34	0.0006	Pulse	0.1000	3
Pb	208	159	He	0.516	ppb	1.7	3620.30	0.0147	Pulse	0.1000	3
U	238	159	He	0.016	ppb	14.3	116.67	0.0005	Pulse	0.1000	3

ISTD Table:

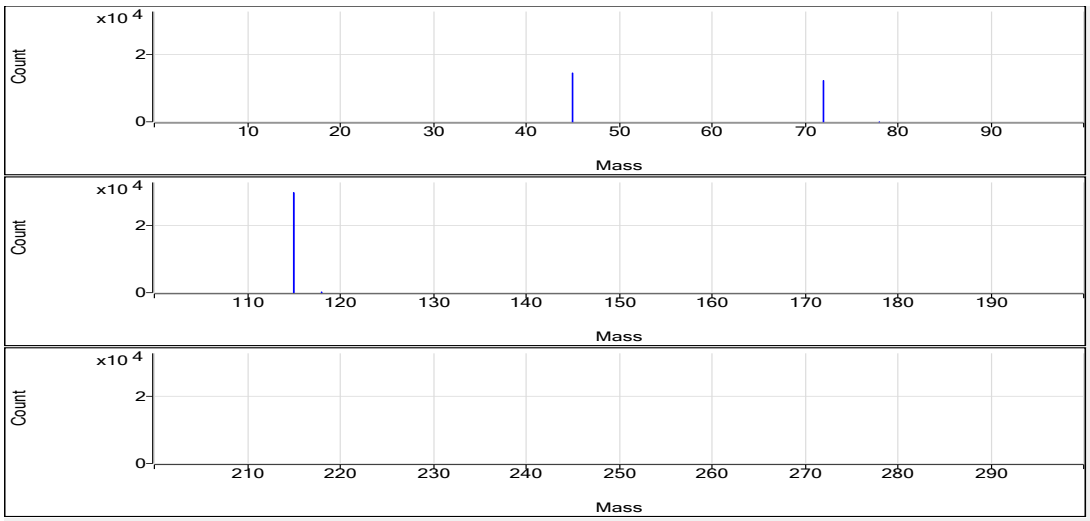
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2324466.74	0.3	101.3	Analog	0.1000	3
No Gas	Ge	72	1044601.26	0.4	100.5	Pulse	0.1000	3
H2	Sc	45	145887.74	0.7	104.9	Pulse	0.1000	3
H2	Ge	72	123239.95	0.2	104.4	Pulse	0.1000	3
H2	In	115	298676.59	1.1	101.4	Pulse	0.1000	3
He	Sc	45	45510.51	1.6	97.2	Pulse	0.1000	3
He	Ge	72	76816.72	1.2	100.5	Pulse	0.1000	3
He	In	115	60218.22	0.4	99.3	Pulse	0.1000	3
He	Tb	159	246621.28	0.7	102.3	Pulse	0.1000	3
He	Bi	209	169352.87	1.5	102.2	Pulse	0.1000	3

No Gas

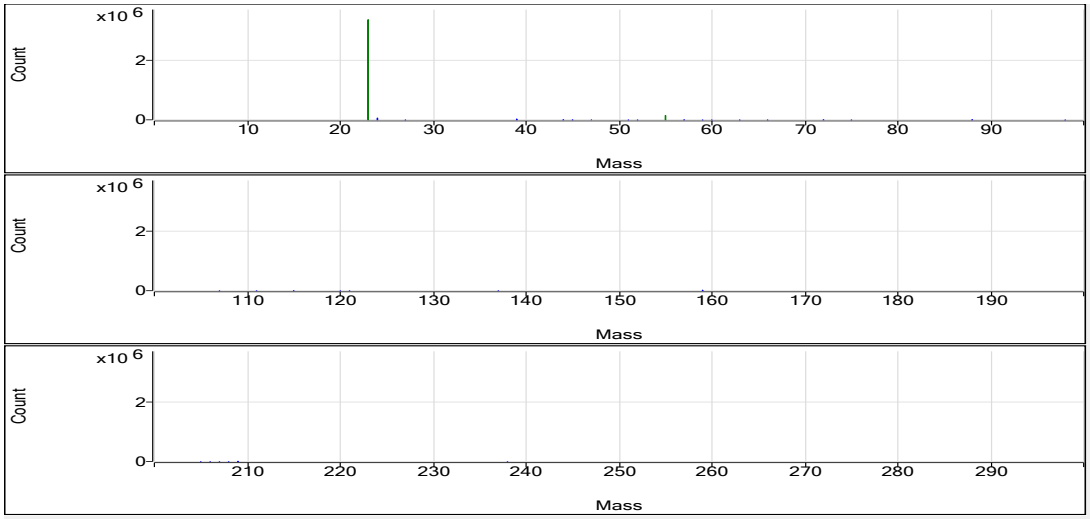


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	30.00	0.0004	9.309E-06
Be	9	1	No Gas	0.007	0	28.00	0.0004	9.309E-06
Be	9	1	No Gas	0.009	0	30.00	0.0004	9.309E-06
Se	78	2	H2	0.06	0	4.00	0.0004	5.598E-06
Se	78	2	H2	0.145	0.0001	8.67	0.0004	5.598E-06
Se	78	2	H2	0.06	0	4.00	0.0004	5.598E-06
Na	23	3	He	238076.092	745.107	33457109.50	0.0031	0.4657
Na	23	3	He	234636.453	734.3487	33253587.00	0.0031	0.4657
Na	23	3	He	233535.315	730.9047	33874507.00	0.0031	0.4657
Mg	24	3	He	9468.244	14.3705	645272.41	0.0015	0.003704
Mg	24	3	He	9387.867	14.2486	645220.19	0.0015	0.003704
Mg	24	3	He	9170.077	13.9181	645049.13	0.0015	0.003704
Al	27	3	He	9.435	0.0051	230.01	0.0005	0.0007154
Al	27	3	He	6.034	0.0035	160.01	0.0005	0.0007154
Al	27	3	He	6.784	0.0039	180.01	0.0005	0.0007154
K	39	3	He	6169.731	7.1347	320364.16	0.0011	0.4296
K	39	3	He	6031.1	6.984	316257.89	0.0011	0.4296
K	39	3	He	5825.379	6.7604	313319.60	0.0011	0.4296
Ca	44	3	He	33335.991	2.0638	92671.26	0.0001	0.002924
Ca	44	3	He	34370.518	2.1278	96353.09	0.0001	0.002924
Ca	44	3	He	32446.915	2.0089	93103.17	0.0001	0.002924
Ti	47	3	He	0.46	0.0002	10.00	0.0005	0
Ti	47	3	He	0.456	0.0002	10.00	0.0005	0
Ti	47	3	He	0.445	0.0002	10.00	0.0005	0
V	51	3	He	0.072	0.0111	498.01	0.021	0.009571
V	51	3	He	0.024	0.0101	456.01	0.021	0.009571
V	51	3	He	0.052	0.0107	494.01	0.021	0.009571
Cr	52	3	He	0.092	0.02	900.06	0.0267	0.01758
Cr	52	3	He	0.235	0.0239	1080.08	0.0267	0.01758
Cr	52	3	He	0.198	0.0229	1060.08	0.0267	0.01758
Mn	55	3	He	3092.581	33.4628	1502562.79	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3075.107	33.2738	1506740.45	0.0108	0.004199
Mn	55	3	He	2948.836	31.9077	1478793.10	0.0108	0.004199
Fe	57	3	He	2839.597	1.4252	63996.41	0.0005	0.002993
Fe	57	3	He	2802.832	1.4068	63705.12	0.0005	0.002993
Fe	57	3	He	2776.054	1.3934	64578.84	0.0005	0.002993
Co	59	3	He	0.039	0.0051	230.01	0.0524	0.003063
Co	59	3	He	0.055	0.006	270.01	0.0524	0.003063
Co	59	3	He	0.04	0.0052	240.01	0.0524	0.003063
Ni	60	3	He	0.389	0.0154	930.06	0.0109	0.01116
Ni	60	3	He	0.555	0.0172	1040.07	0.0109	0.01116
Ni	60	3	He	0.26	0.014	840.04	0.0109	0.01116
Cu	63	3	He	0.989	0.0405	3080.39	0.0255	0.01531
Cu	63	3	He	0.937	0.0392	3050.38	0.0255	0.01531
Cu	63	3	He	0.983	0.0404	3090.39	0.0255	0.01531
Zn	66	3	He	27.099	0.0808	6141.36	0.0029	0.002787
Zn	66	3	He	23.946	0.0717	5581.12	0.0029	0.002787
Zn	66	3	He	24.001	0.0719	5501.12	0.0029	0.002787
As	75	3	He	0.45	0.0014	104.00	0.0021	0.0004097
As	75	3	He	0.423	0.0013	102.00	0.0021	0.0004097
As	75	3	He	0.262	0.001	74.00	0.0021	0.0004097
Sr	88	3	He	216.237	2.0391	123002.47	0.0094	0.0008765
Sr	88	3	He	215.705	2.0341	122801.73	0.0094	0.0008765
Sr	88	3	He	218.207	2.0577	123376.87	0.0094	0.0008765
Mo	98	3	He	0.437	0.0103	620.04	0.023	0.0002199
Mo	98	3	He	0.4	0.0094	570.03	0.023	0.0002199
Mo	98	3	He	0.425	0.01	600.03	0.023	0.0002199
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Ag	107	3	He	-0.003	0.0007	40.00	0.0483	0.0008224
Ag	107	3	He	-0.003	0.0007	40.00	0.0483	0.0008224
Cd	111	3	He	0.021	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Sn	120	3	He	-0.136	0.0114	690.04	0.0148	0.01345
Sn	120	3	He	-0.025	0.0131	790.05	0.0148	0.01345
Sn	120	3	He	0.015	0.0137	820.05	0.0148	0.01345
Sb	121	3	He	0.305	0.0048	290.01	0.0143	0.0004392
Sb	121	3	He	0.224	0.0036	220.01	0.0143	0.0004392
Sb	121	3	He	0.412	0.0063	380.02	0.0143	0.0004392
Ba	137	3	He	24.724	0.1079	6511.58	0.0044	0.0001096
Ba	137	3	He	26.109	0.114	6881.75	0.0044	0.0001096
Ba	137	3	He	28.738	0.1255	7522.06	0.0044	0.0001096
Tl	205	3	He	0.006	0.0004	90.00	0.0208	0.0002491
Tl	205	3	He	0.023	0.0007	180.01	0.0208	0.0002491
Tl	205	3	He	0.019	0.0006	160.01	0.0208	0.0002491
Pb	208	3	He	0.526	0.015	1820.17	0.0272	0.0006218
Pb	208	3	He	0.513	0.0146	1870.18	0.0272	0.0006218
Pb	208	3	He	0.51	0.0145	1850.20	0.0272	0.0006218
U	238	3	He	0.017	0.0005	120.00	0.0275	2.763E-05
U	238	3	He	0.014	0.0004	100.00	0.0275	2.763E-05
U	238	3	He	0.018	0.0005	130.00	0.0275	2.763E-05
Sc	45	1	No Gas			2322336.06		
Sc	45	1	No Gas			2318164.50		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2332899.65		
Ge	72	1	No Gas			1047351.70		
Ge	72	1	No Gas			1039925.61		
Ge	72	1	No Gas			1046526.47		
Sc	45	2	H2			145319.85		
Sc	45	2	H2			147094.23		
Sc	45	2	H2			145249.15		
Ge	72	2	H2			123391.01		
Ge	72	2	H2			122978.01		
Ge	72	2	H2			123350.84		
In	115	2	H2			300566.73		
In	115	2	H2			300602.69		
In	115	2	H2			294860.35		
Sc	45	3	He			44902.42		
Sc	45	3	He			45283.10		
Sc	45	3	He			46346.00		
Ge	72	3	He			76039.95		
Ge	72	3	He			77847.93		
Ge	72	3	He			76562.27		
In	115	3	He			60327.22		
In	115	3	He			60377.89		
In	115	3	He			59965.64		
Tb	159	3	He			244791.48		
Tb	159	3	He			248335.54		
Tb	159	3	He			246736.83		
Bi	209	3	He			169909.31		
Bi	209	3	He			171517.87		
Bi	209	3	He			166631.42		

Quantitation Report

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Sample Type	Sample
Comment	D6
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

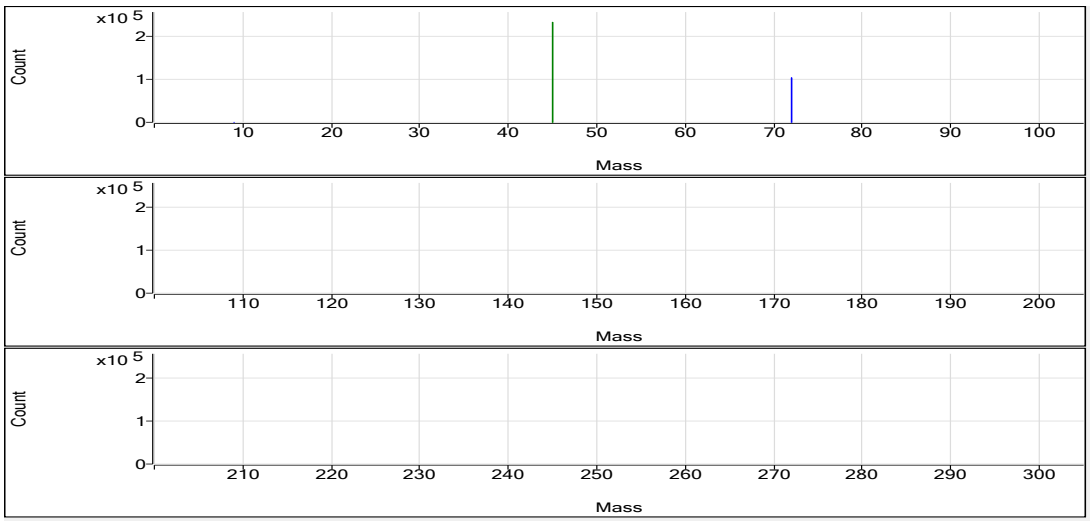
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.009	ppb	25.1	30.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.835	ppb	5.0	100.67	0.0008	Pulse	1.5000	3
Na	23	45	He	364785.362	ppb	1.3	51570434.23	1,141.4214	Analog	0.1000	3
Mg	24	45	He	39296.443	ppb	1.7	2694104.54	59.6310	Analog	0.1000	3
Al	27	45	He	1641.015	ppb	0.3	34663.43	0.7672	Pulse	0.1000	3
K	39	45	He	71785.632	ppb	1.5	3544072.24	78.4437	Analog	0.1000	3
Ca	44	45	He	217872.492	ppb	0.4	608709.98	13.4723	Pulse	0.1000	3
Ti	47	45	He	11.868	ppb	33.7	260.01	0.0057	Pulse	0.1000	3
V	51	45	He	1.090	ppb	4.5	1468.74	0.0325	Pulse	0.5000	3
Cr	52	45	He	3.531	ppb	3.5	5050.94	0.1118	Pulse	0.1000	3
Mn	55	45	He	938.280	ppb	0.9	458836.58	10.1555	Pulse	0.1000	3
Fe	57	45	He	276.293	ppb	1.5	6388.10	0.1414	Pulse	0.1000	3
Co	59	45	He	5.408	ppb	1.9	12932.27	0.2862	Pulse	0.1000	3
Ni	60	115	He	13.421	ppb	4.5	9633.17	0.1579	Pulse	0.1000	3
Cu	63	72	He	70.774	ppb	1.1	141153.56	1.8185	Pulse	0.1000	3
Zn	66	72	He	345.456	ppb	1.2	77389.03	0.9969	Pulse	0.1000	3
As	75	72	He	2.727	ppb	9.4	482.01	0.0062	Pulse	0.5000	3
Sr	88	115	He	1455.400	ppb	1.4	837285.85	13.7192	Pulse	0.1000	3
Mo	98	115	He	19.972	ppb	2.2	28099.19	0.4603	Pulse	0.1000	3
Ag	107	115	He	0.073	ppb	4.5	266.68	0.0044	Pulse	0.1000	3
Cd	111	115	He	0.793	ppb	11.6	260.00	0.0043	Pulse	0.5000	3
Sn	120	115	He	3.931	ppb	6.2	4374.09	0.0717	Pulse	0.1000	3
Sb	121	115	He	28.791	ppb	3.5	25161.10	0.4124	Pulse	0.1000	3
Ba	137	115	He	406.868	ppb	2.1	108300.55	1.7747	Pulse	0.1000	3
Tl	205	159	He	0.094	ppb	9.8	543.36	0.0022	Pulse	0.1000	3
Pb	208	159	He	21.040	ppb	1.3	140827.65	0.5733	Pulse	0.1000	3
U	238	159	He	0.852	ppb	3.2	5761.36	0.0235	Pulse	0.1000	3

ISTD Table:

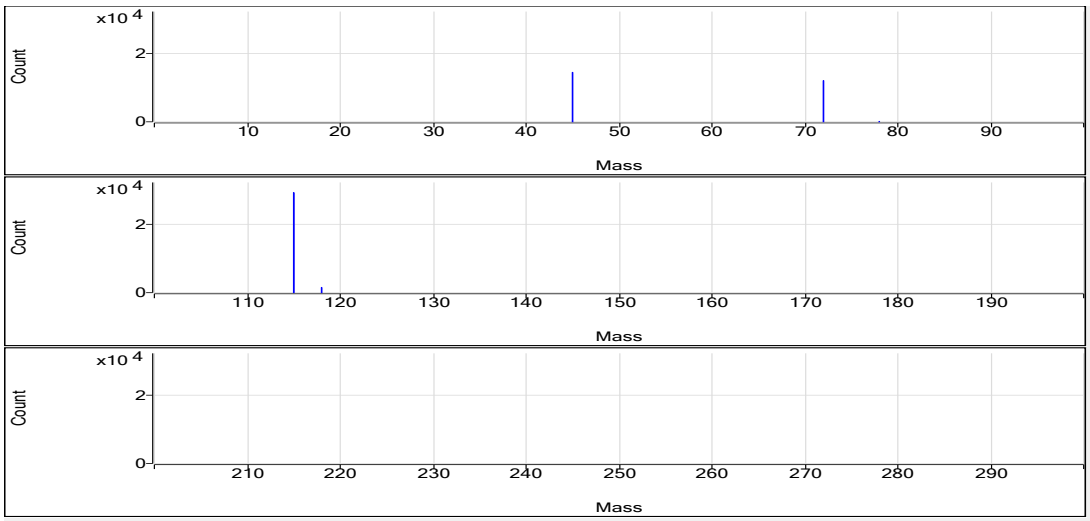
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2333237.57	1.1	101.7	Analog	0.1000	3
No Gas	Ge	72	1039514.36	0.6	100.0	Pulse	0.1000	3
H2	Sc	45	146254.06	1.3	105.2	Pulse	0.1000	3
H2	Ge	72	121832.81	1.0	103.2	Pulse	0.1000	3
H2	In	115	295569.24	0.3	100.3	Pulse	0.1000	3
He	Sc	45	45182.70	0.7	96.5	Pulse	0.1000	3
He	Ge	72	77627.59	1.3	101.5	Pulse	0.1000	3
He	In	115	61043.33	2.3	100.7	Pulse	0.1000	3
He	Tb	159	245647.83	0.9	101.9	Pulse	0.1000	3
He	Bi	209	166080.56	1.3	100.2	Pulse	0.1000	3

No Gas

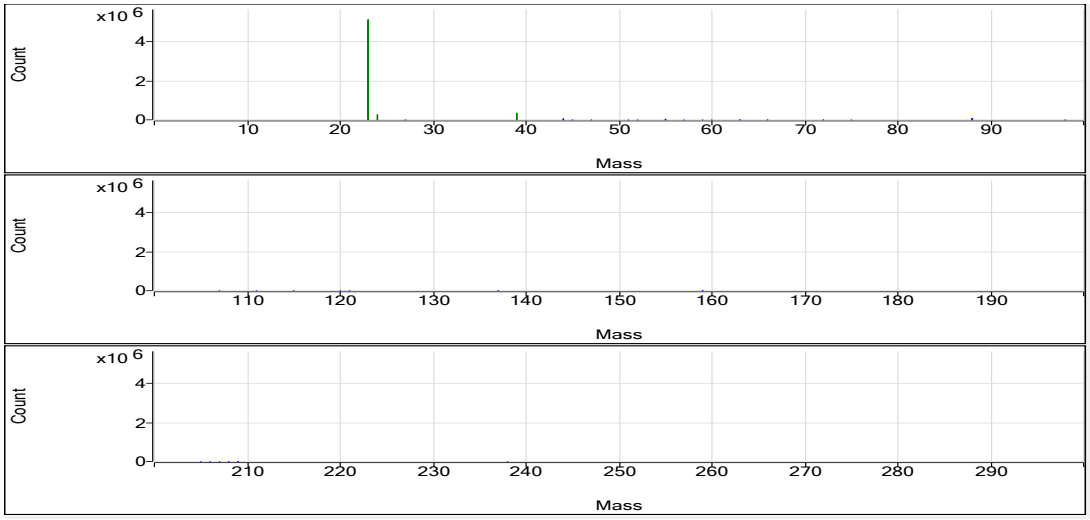


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	30.00	0.0004	9.309E-06
Be	9	1	No Gas	0.011	0	32.00	0.0004	9.309E-06
Be	9	1	No Gas	0.007	0	28.00	0.0004	9.309E-06
Se	78	2	H2	1.73	0.0008	96.00	0.0004	5.598E-06
Se	78	2	H2	1.894	0.0009	103.33	0.0004	5.598E-06
Se	78	2	H2	1.883	0.0008	102.67	0.0004	5.598E-06
Na	23	3	He	359253.512	1124.1192	51016259.24	0.0031	0.4657
Na	23	3	He	368207.407	1152.1247	51663009.23	0.0031	0.4657
Na	23	3	He	366895.167	1148.0203	52032034.22	0.0031	0.4657
Mg	24	3	He	38603.11	58.579	2658508.09	0.0015	0.003704
Mg	24	3	He	39971.736	60.6557	2719892.46	0.0015	0.003704
Mg	24	3	He	39314.482	59.6584	2703913.08	0.0015	0.003704
Al	27	3	He	1640.506	0.767	34806.90	0.0005	0.0007154
Al	27	3	He	1645.53	0.7693	34496.59	0.0005	0.0007154
Al	27	3	He	1637.008	0.7653	34686.80	0.0005	0.0007154
K	39	3	He	70788.136	77.3597	3510838.07	0.0011	0.4296
K	39	3	He	72955.747	79.7153	3574556.20	0.0011	0.4296
K	39	3	He	71613.012	78.2561	3546822.45	0.0011	0.4296
Ca	44	3	He	216784.69	13.4051	608367.18	0.0001	0.002924
Ca	44	3	He	218385.649	13.5041	605542.37	0.0001	0.002924
Ca	44	3	He	218447.139	13.5079	612220.38	0.0001	0.002924
Ti	47	3	He	16.378	0.0079	360.02	0.0005	0
Ti	47	3	He	8.748	0.0042	190.01	0.0005	0
Ti	47	3	He	10.478	0.0051	230.01	0.0005	0
V	51	3	He	1.047	0.0316	1434.07	0.021	0.009571
V	51	3	He	1.08	0.0323	1448.07	0.021	0.009571
V	51	3	He	1.143	0.0336	1524.08	0.021	0.009571
Cr	52	3	He	3.421	0.1089	4940.88	0.0267	0.01758
Cr	52	3	He	3.504	0.1111	4980.91	0.0267	0.01758
Cr	52	3	He	3.667	0.1154	5231.02	0.0267	0.01758
Mn	55	3	He	929.146	10.0566	456403.55	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	945.466	10.2332	458872.06	0.0108	0.004199
Mn	55	3	He	940.229	10.1765	461234.13	0.0108	0.004199
Fe	57	3	He	280.926	0.1437	6521.47	0.0005	0.002993
Fe	57	3	He	272.814	0.1396	6261.42	0.0005	0.002993
Fe	57	3	He	275.137	0.1408	6381.42	0.0005	0.002993
Co	59	3	He	5.517	0.2919	13245.86	0.0524	0.003063
Co	59	3	He	5.307	0.2809	12595.33	0.0524	0.003063
Co	59	3	He	5.402	0.2858	12955.62	0.0524	0.003063
Ni	60	3	He	14.118	0.1655	9833.32	0.0109	0.01116
Ni	60	3	He	13.092	0.1543	9543.01	0.0109	0.01116
Ni	60	3	He	13.054	0.1539	9523.17	0.0109	0.01116
Cu	63	3	He	70.936	1.8226	140020.40	0.0255	0.01531
Cu	63	3	He	71.454	1.8358	141845.98	0.0255	0.01531
Cu	63	3	He	69.932	1.797	141594.29	0.0255	0.01531
Zn	66	3	He	340.728	0.9833	75537.09	0.0029	0.002787
Zn	66	3	He	347.675	1.0032	77516.44	0.0029	0.002787
Zn	66	3	He	347.963	1.0041	79113.55	0.0029	0.002787
As	75	3	He	2.853	0.0065	498.01	0.0021	0.0004097
As	75	3	He	2.896	0.0066	508.01	0.0021	0.0004097
As	75	3	He	2.431	0.0056	440.01	0.0021	0.0004097
Sr	88	3	He	1478.516	13.9371	827924.21	0.0094	0.0008765
Sr	88	3	He	1446.445	13.6348	843224.13	0.0094	0.0008765
Sr	88	3	He	1441.238	13.5857	840709.21	0.0094	0.0008765
Mo	98	3	He	19.993	0.4608	27374.62	0.023	0.0002199
Mo	98	3	He	19.514	0.4498	27815.48	0.023	0.0002199
Mo	98	3	He	20.408	0.4704	29107.48	0.023	0.0002199
Ag	107	3	He	0.07	0.0042	250.01	0.0483	0.0008224
Ag	107	3	He	0.077	0.0045	280.01	0.0483	0.0008224
Ag	107	3	He	0.073	0.0044	270.01	0.0483	0.0008224
Cd	111	3	He	0.703	0.0038	224.00	0.0053	2.193E-05
Cd	111	3	He	0.887	0.0048	294.00	0.0053	2.193E-05
Cd	111	3	He	0.79	0.0042	262.00	0.0053	2.193E-05
Sn	120	3	He	3.947	0.0719	4270.71	0.0148	0.01345
Sn	120	3	He	3.679	0.0679	4200.71	0.0148	0.01345
Sn	120	3	He	4.167	0.0752	4650.84	0.0148	0.01345
Sb	121	3	He	29.762	0.4263	25321.41	0.0143	0.0004392
Sb	121	3	He	27.749	0.3975	24580.26	0.0143	0.0004392
Sb	121	3	He	28.863	0.4134	25581.63	0.0143	0.0004392
Ba	137	3	He	416.177	1.8153	107836.98	0.0044	0.0001096
Ba	137	3	He	399.391	1.7421	107736.92	0.0044	0.0001096
Ba	137	3	He	405.038	1.7667	109327.76	0.0044	0.0001096
Tl	205	3	He	0.084	0.002	490.02	0.0208	0.0002491
Tl	205	3	He	0.102	0.0024	590.03	0.0208	0.0002491
Tl	205	3	He	0.097	0.0023	550.03	0.0208	0.0002491
Pb	208	3	He	21.06	0.5739	74530.85	0.0272	0.0006218
Pb	208	3	He	20.767	0.5659	75023.28	0.0272	0.0006218
Pb	208	3	He	21.292	0.5802	73706.35	0.0272	0.0006218
U	238	3	He	0.878	0.0242	5921.44	0.0275	2.763E-05
U	238	3	He	0.854	0.0235	5831.42	0.0275	2.763E-05
U	238	3	He	0.823	0.0227	5531.23	0.0275	2.763E-05
Sc	45	1	No Gas			2305367.62		
Sc	45	1	No Gas			2342089.65		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2352255.43		
Ge	72	1	No Gas			1044735.53		
Ge	72	1	No Gas			1041183.58		
Ge	72	1	No Gas			1032623.97		
Sc	45	2	H2			145237.77		
Sc	45	2	H2			145036.71		
Sc	45	2	H2			148487.69		
Ge	72	2	H2			123200.26		
Ge	72	2	H2			121193.46		
Ge	72	2	H2			121104.70		
In	115	2	H2			295119.00		
In	115	2	H2			295083.75		
In	115	2	H2			296504.96		
Sc	45	3	He			45383.32		
Sc	45	3	He			44841.51		
Sc	45	3	He			45323.27		
Ge	72	3	He			76823.84		
Ge	72	3	He			77266.03		
Ge	72	3	He			78792.90		
In	115	3	He			59434.35		
In	115	3	He			61873.01		
In	115	3	He			61914.47		
Tb	159	3	He			244958.26		
Tb	159	3	He			248059.49		
Tb	159	3	He			243925.74		
Bi	209	3	He			166563.10		
Bi	209	3	He			168009.39		
Bi	209	3	He			163669.18		

Quantitation Report

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Acq Time	7/17/2024 12:37:11 PM
Sample Name	410-178967-V-1-A
Sample Type	Sample
Comment	D6
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

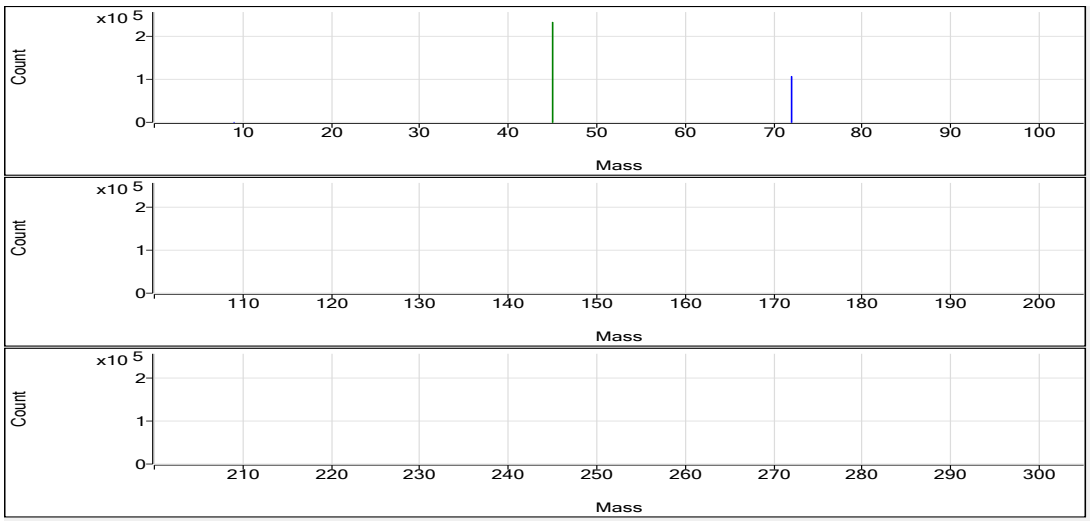
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	-0.008	ppb	N/A	14.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.241	ppb	43.5	14.00	0.0001	Pulse	1.5000	3
Na	23	45	He	20779.990	ppb	2.3	2981026.52	65.4602	Analog	0.1000	3
Mg	24	45	He	8457.782	ppb	2.9	584555.84	12.8373	Pulse	0.1000	3
Al	27	45	He	4.581	ppb	10.9	130.00	0.0029	Pulse	0.1000	3
K	39	45	He	2184.449	ppb	4.3	127654.78	2.8036	Pulse	0.1000	3
Ca	44	45	He	43290.229	ppb	3.6	121991.14	2.6792	Pulse	0.1000	3
Ti	47	45	He	0.299	ppb	86.6	6.67	0.0001	Pulse	0.1000	3
V	51	45	He	0.034	ppb	191.0	469.34	0.0103	Pulse	0.5000	3
Cr	52	45	He	0.058	ppb	173.0	870.05	0.0191	Pulse	0.1000	3
Mn	55	45	He	1.018	ppb	7.3	693.37	0.0152	Pulse	0.1000	3
Fe	57	45	He	4.394	ppb	38.8	236.68	0.0052	Pulse	0.1000	3
Co	59	45	He	0.021	ppb	71.5	190.01	0.0042	Pulse	0.1000	3
Ni	60	115	He	0.319	ppb	19.3	900.06	0.0147	Pulse	0.1000	3
Cu	63	72	He	15.001	ppb	2.3	30636.32	0.3975	Pulse	0.1000	3
Zn	66	72	He	12.386	ppb	9.1	2960.36	0.0384	Pulse	0.1000	3
As	75	72	He	1.412	ppb	4.8	263.33	0.0034	Pulse	0.5000	3
Sr	88	115	He	1843.416	ppb	1.2	1067271.60	17.3765	Pulse	0.1000	3
Mo	98	115	He	0.351	ppb	5.3	510.03	0.0083	Pulse	0.1000	3
Ag	107	115	He	-0.006	ppb	N/A	33.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	151.0	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.263	ppb	N/A	586.70	0.0096	Pulse	0.1000	3
Sb	121	115	He	0.148	ppb	26.7	156.67	0.0025	Pulse	0.1000	3
Ba	137	115	He	187.501	ppb	1.1	50236.59	0.8179	Pulse	0.1000	3
Tl	205	159	He	0.010	ppb	21.2	113.34	0.0005	Pulse	0.1000	3
Pb	208	159	He	0.228	ppb	2.5	1683.42	0.0068	Pulse	0.1000	3
U	238	159	He	1.477	ppb	2.6	10030.54	0.0406	Pulse	0.1000	3

ISTD Table:

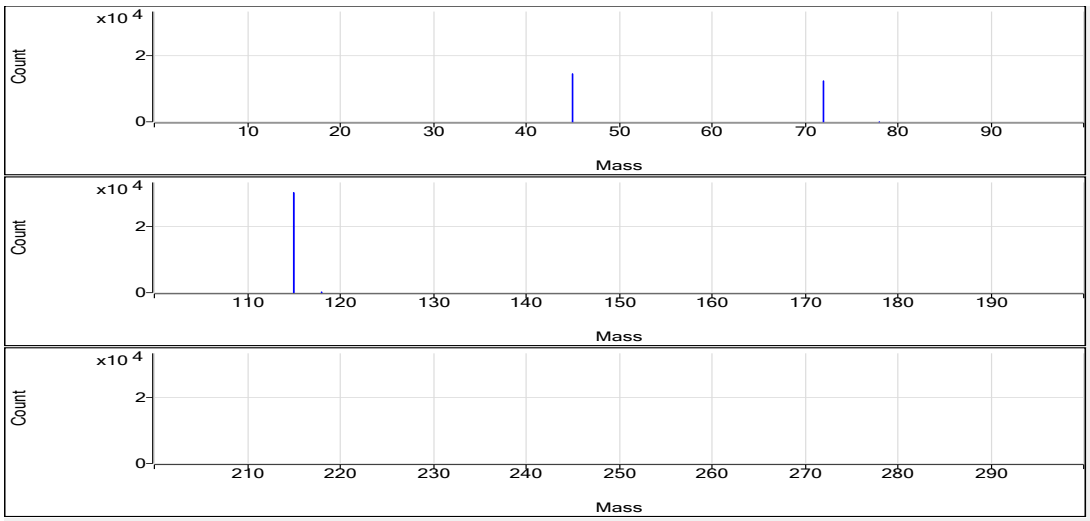
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2323029.13	0.4	101.3	Analog	0.1000	3
No Gas	Ge	72	1065547.41	0.7	102.6	Pulse	0.1000	3
H2	Sc	45	144822.00	1.1	104.2	Pulse	0.1000	3
H2	Ge	72	123444.46	0.4	104.6	Pulse	0.1000	3
H2	In	115	301728.19	1.4	102.4	Pulse	0.1000	3
He	Sc	45	45554.17	2.1	97.3	Pulse	0.1000	3
He	Ge	72	77071.47	0.8	100.8	Pulse	0.1000	3
He	In	115	61421.03	0.3	101.3	Pulse	0.1000	3
He	Tb	159	246761.59	0.8	102.3	Pulse	0.1000	3
He	Bi	209	172146.76	1.0	103.9	Pulse	0.1000	3

No Gas

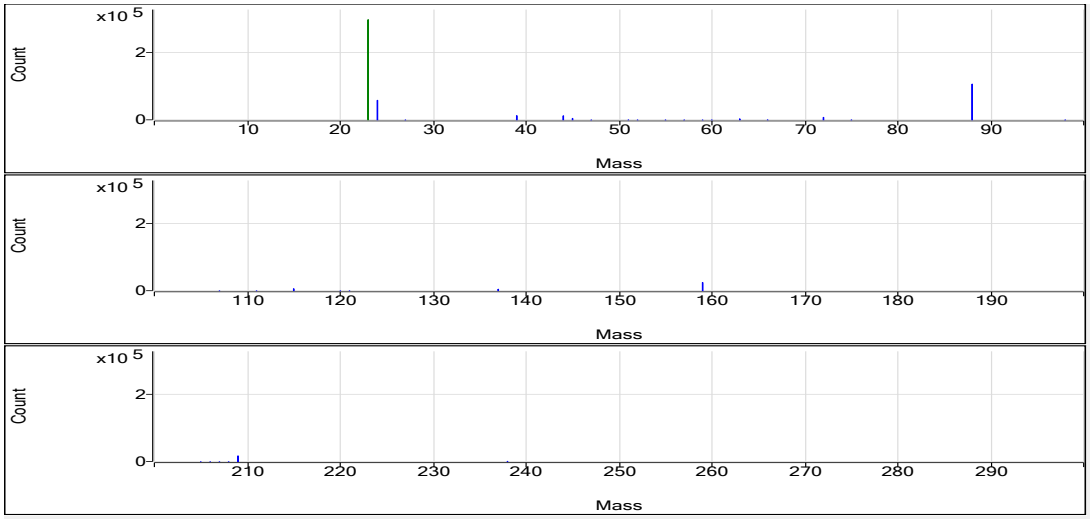


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	-0.004	0	18.00	0.0004	9.309E-06
Be	9	1	No Gas	-0.006	0	16.00	0.0004	9.309E-06
Be	9	1	No Gas	-0.013	0	10.00	0.0004	9.309E-06
Se	78	2	H2	0.121	0.0001	7.33	0.0004	5.598E-06
Se	78	2	H2	0.313	0.0001	18.00	0.0004	5.598E-06
Se	78	2	H2	0.288	0.0001	16.67	0.0004	5.598E-06
Na	23	3	He	20657.847	65.0781	2991979.64	0.0031	0.4657
Na	23	3	He	21317.778	67.1422	2985222.14	0.0031	0.4657
Na	23	3	He	20364.343	64.1601	2965877.77	0.0031	0.4657
Mg	24	3	He	8337.226	12.6544	581787.14	0.0015	0.003704
Mg	24	3	He	8740.236	13.2659	589816.87	0.0015	0.003704
Mg	24	3	He	8295.885	12.5916	582063.51	0.0015	0.003704
Al	27	3	He	4.988	0.003	140.01	0.0005	0.0007154
Al	27	3	He	4.728	0.0029	130.00	0.0005	0.0007154
Al	27	3	He	4.026	0.0026	120.00	0.0005	0.0007154
K	39	3	He	2180.098	2.7989	128679.19	0.0011	0.4296
K	39	3	He	2281.14	2.9087	129323.83	0.0011	0.4296
K	39	3	He	2092.108	2.7033	124961.33	0.0011	0.4296
Ca	44	3	He	42263.176	2.6157	120258.98	0.0001	0.002924
Ca	44	3	He	45059.565	2.7886	123985.13	0.0001	0.002924
Ca	44	3	He	42547.945	2.6333	121729.32	0.0001	0.002924
Ti	47	3	He	0.449	0.0002	10.00	0.0005	0
Ti	47	3	He	0	0	0.00	0.0005	0
Ti	47	3	He	0.447	0.0002	10.00	0.0005	0
V	51	3	He	-0.017	0.0092	424.01	0.021	0.009571
V	51	3	He	0.011	0.0098	436.01	0.021	0.009571
V	51	3	He	0.109	0.0119	548.01	0.021	0.009571
Cr	52	3	He	-0.056	0.0161	740.04	0.0267	0.01758
Cr	52	3	He	0.134	0.0211	940.06	0.0267	0.01758
Cr	52	3	He	0.095	0.0201	930.06	0.0267	0.01758
Mn	55	3	He	1.019	0.0152	700.04	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.942	0.0144	640.04	0.0108	0.004199
Mn	55	3	He	1.092	0.016	740.04	0.0108	0.004199
Fe	57	3	He	2.711	0.0044	200.01	0.0005	0.002993
Fe	57	3	He	4.354	0.0052	230.01	0.0005	0.002993
Fe	57	3	He	6.119	0.0061	280.01	0.0005	0.002993
Co	59	3	He	0.004	0.0033	150.01	0.0524	0.003063
Co	59	3	He	0.032	0.0047	210.01	0.0524	0.003063
Co	59	3	He	0.028	0.0045	210.01	0.0524	0.003063
Ni	60	3	He	0.364	0.0151	930.07	0.0109	0.01116
Ni	60	3	He	0.249	0.0139	850.05	0.0109	0.01116
Ni	60	3	He	0.345	0.0149	920.05	0.0109	0.01116
Cu	63	3	He	14.671	0.3891	29818.17	0.0255	0.01531
Cu	63	3	He	14.983	0.3971	30869.92	0.0255	0.01531
Cu	63	3	He	15.348	0.4063	31220.86	0.0255	0.01531
Zn	66	3	He	13.182	0.0407	3120.40	0.0029	0.002787
Zn	66	3	He	11.101	0.0347	2700.30	0.0029	0.002787
Zn	66	3	He	12.873	0.0398	3060.37	0.0029	0.002787
As	75	3	He	1.34	0.0033	250.00	0.0021	0.0004097
As	75	3	He	1.475	0.0035	276.00	0.0021	0.0004097
As	75	3	He	1.422	0.0034	264.00	0.0021	0.0004097
Sr	88	3	He	1821.81	17.1729	1054711.62	0.0094	0.0008765
Sr	88	3	He	1865.867	17.5882	1076876.39	0.0094	0.0008765
Sr	88	3	He	1842.57	17.3686	1070226.78	0.0094	0.0008765
Mo	98	3	He	0.33	0.0078	480.02	0.023	0.0002199
Mo	98	3	He	0.359	0.0085	520.03	0.023	0.0002199
Mo	98	3	He	0.364	0.0086	530.03	0.023	0.0002199
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Cd	111	3	He	-0.004	0	0.00	0.0053	2.193E-05
Cd	111	3	He	0.02	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Sn	120	3	He	-0.172	0.0109	670.04	0.0148	0.01345
Sn	120	3	He	-0.291	0.0091	560.03	0.0148	0.01345
Sn	120	3	He	-0.328	0.0086	530.03	0.0148	0.01345
Sb	121	3	He	0.151	0.0026	160.01	0.0143	0.0004392
Sb	121	3	He	0.106	0.002	120.00	0.0143	0.0004392
Sb	121	3	He	0.185	0.0031	190.01	0.0143	0.0004392
Ba	137	3	He	185.178	0.8078	49611.69	0.0044	0.0001096
Ba	137	3	He	189.431	0.8263	50593.93	0.0044	0.0001096
Ba	137	3	He	187.894	0.8196	50504.14	0.0044	0.0001096
Tl	205	3	He	0.011	0.0005	120.00	0.0208	0.0002491
Tl	205	3	He	0.008	0.0004	100.01	0.0208	0.0002491
Tl	205	3	He	0.011	0.0005	120.01	0.0208	0.0002491
Pb	208	3	He	0.234	0.007	860.05	0.0272	0.0006218
Pb	208	3	He	0.223	0.0067	810.04	0.0272	0.0006218
Pb	208	3	He	0.226	0.0068	880.06	0.0272	0.0006218
U	238	3	He	1.499	0.0413	10144.03	0.0275	2.763E-05
U	238	3	He	1.433	0.0394	9673.57	0.0275	2.763E-05
U	238	3	He	1.498	0.0412	10274.03	0.0275	2.763E-05
Sc	45	1	No Gas			2329305.59		
Sc	45	1	No Gas			2326045.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2313736.37		
Ge	72	1	No Gas			1070841.00		
Ge	72	1	No Gas			1068489.44		
Ge	72	1	No Gas			1057311.78		
Sc	45	2	H2			144634.26		
Sc	45	2	H2			146509.87		
Sc	45	2	H2			143321.87		
Ge	72	2	H2			122967.96		
Ge	72	2	H2			123501.25		
Ge	72	2	H2			123864.16		
In	115	2	H2			304343.26		
In	115	2	H2			304030.41		
In	115	2	H2			296810.89		
Sc	45	3	He			45975.18		
Sc	45	3	He			44461.16		
Sc	45	3	He			46226.17		
Ge	72	3	He			76632.17		
Ge	72	3	He			77748.12		
Ge	72	3	He			76834.11		
In	115	3	He			61421.91		
In	115	3	He			61231.23		
In	115	3	He			61622.27		
Tb	159	3	He			245915.37		
Tb	159	3	He			245221.70		
Tb	159	3	He			249147.71		
Bi	209	3	He			170244.39		
Bi	209	3	He			173097.24		
Bi	209	3	He			173098.65		

Quantitation Report

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Sample Type	Sample
Comment	D6
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

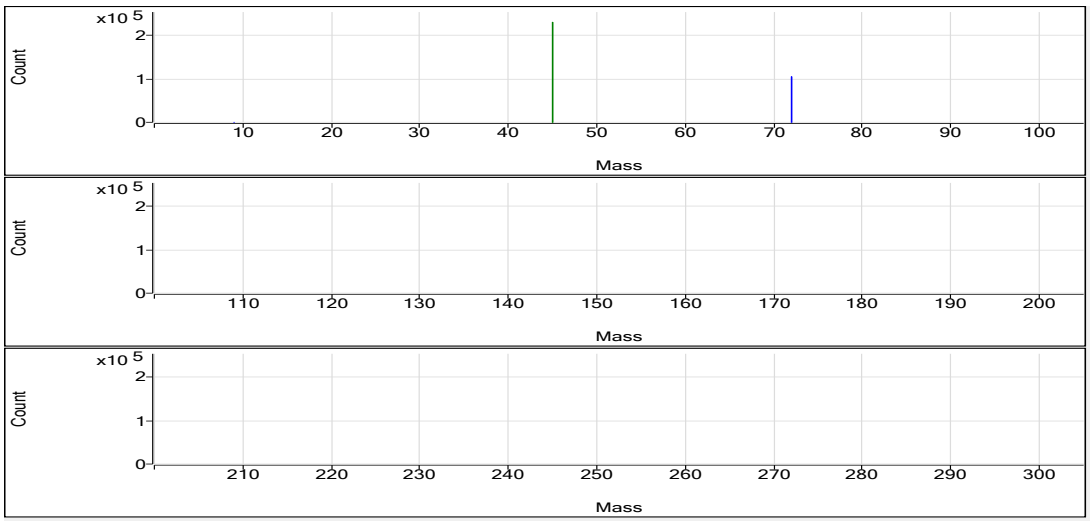
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.014	ppb	27.6	34.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.016	ppb	116.5	1.56	0.0000	Pulse	1.5000	3
Na	23	45	He	87609.116	ppb	2.2	12473873.14	274.4847	Analog	0.1000	3
Mg	24	45	He	156.604	ppb	2.4	10967.24	0.2413	Pulse	0.1000	3
Al	27	45	He	36.713	ppb	14.4	813.42	0.0179	Pulse	0.1000	3
K	39	45	He	1120.605	ppb	3.3	74903.66	1.6475	Pulse	0.1000	3
Ca	44	45	He	1106.130	ppb	11.7	3237.11	0.0713	Pulse	0.1000	3
Ti	47	45	He	0.603	ppb	41.6	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.049	ppb	46.9	481.34	0.0106	Pulse	0.5000	3
Cr	52	45	He	0.133	ppb	25.1	960.06	0.0211	Pulse	0.1000	3
Mn	55	45	He	7.711	ppb	4.9	3980.62	0.0876	Pulse	0.1000	3
Fe	57	45	He	56.385	ppb	2.4	1420.11	0.0312	Pulse	0.1000	3
Co	59	45	He	0.028	ppb	95.2	206.68	0.0045	Pulse	0.1000	3
Ni	60	115	He	0.081	ppb	219.2	736.71	0.0120	Pulse	0.1000	3
Cu	63	72	He	2.353	ppb	6.9	5904.58	0.0753	Pulse	0.1000	3
Zn	66	72	He	1.142	ppb	21.9	476.69	0.0061	Pulse	0.1000	3
As	75	72	He	1.560	ppb	12.9	292.67	0.0037	Pulse	0.5000	3
Sr	88	115	He	56.518	ppb	1.4	32611.16	0.5336	Pulse	0.1000	3
Mo	98	115	He	1.141	ppb	9.1	1620.14	0.0265	Pulse	0.1000	3
Ag	107	115	He	-0.007	ppb	N/A	30.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	57.8	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.091	ppb	N/A	740.04	0.0121	Pulse	0.1000	3
Sb	121	115	He	0.068	ppb	69.2	86.67	0.0014	Pulse	0.1000	3
Ba	137	115	He	45.399	ppb	1.2	12108.52	0.1981	Pulse	0.1000	3
Tl	205	159	He	0.006	ppb	151.0	90.00	0.0004	Pulse	0.1000	3
Pb	208	159	He	0.131	ppb	6.9	1030.06	0.0042	Pulse	0.1000	3
U	238	159	He	0.435	ppb	5.6	2947.07	0.0120	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2315297.93	0.8	100.9	Analog	0.1000	3
No Gas	Ge	72	1056152.61	1.7	101.6	Pulse	0.1000	3
H2	Sc	45	143765.01	0.5	103.4	Pulse	0.1000	3
H2	Ge	72	122255.41	0.3	103.6	Pulse	0.1000	3
H2	In	115	300131.82	1.2	101.9	Pulse	0.1000	3
He	Sc	45	45457.22	1.9	97.1	Pulse	0.1000	3
He	Ge	72	78481.53	1.1	102.6	Pulse	0.1000	3
He	In	115	61112.01	0.9	100.8	Pulse	0.1000	3
He	Tb	159	245865.35	0.5	102.0	Pulse	0.1000	3
He	Bi	209	175782.45	0.7	106.1	Pulse	0.1000	3

No Gas



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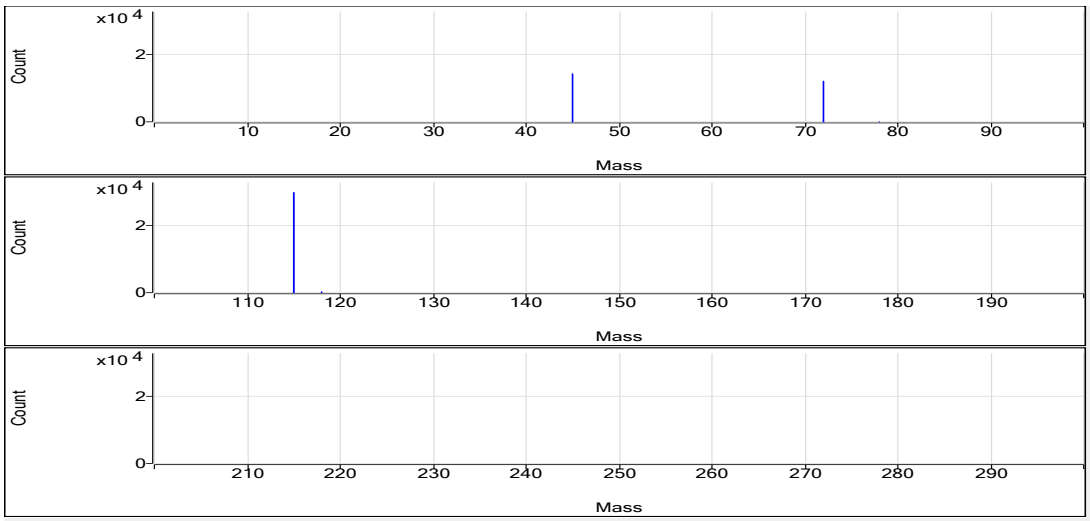
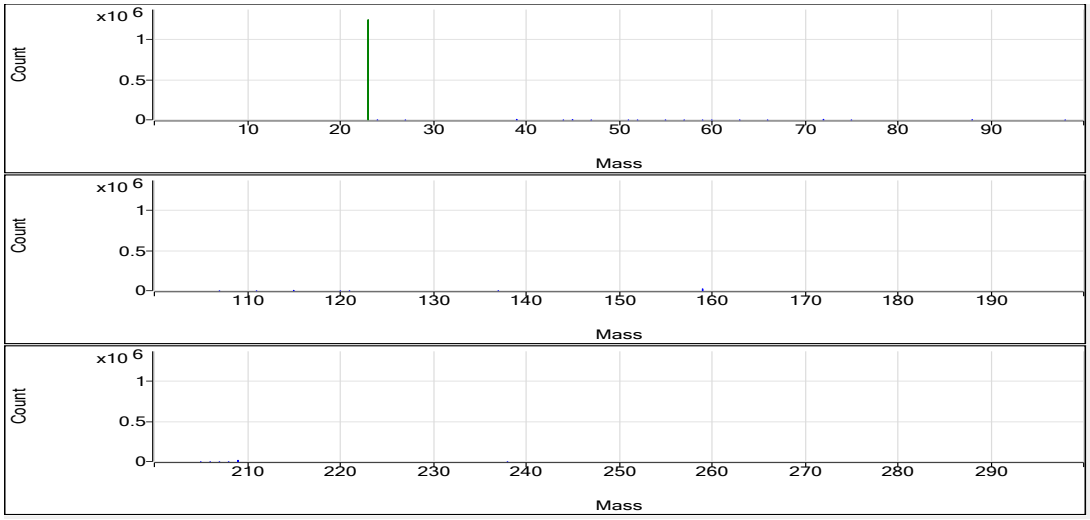


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.009	0	30.00	0.0004	9.309E-06
Be	9	1	No Gas	0.016	0	36.00	0.0004	9.309E-06
Be	9	1	No Gas	0.015	0	36.00	0.0004	9.309E-06
Se	78	2	H2	0	0	0.67	0.0004	5.598E-06
Se	78	2	H2	0.036	0	2.67	0.0004	5.598E-06
Se	78	2	H2	0.012	0	1.33	0.0004	5.598E-06
Na	23	3	He	85784.28	268.777	12427237.31	0.0031	0.4657
Na	23	3	He	87474.726	274.0643	12503954.81	0.0031	0.4657
Na	23	3	He	89568.343	280.6126	12490427.31	0.0031	0.4657
Mg	24	3	He	154.975	0.2389	11043.94	0.0015	0.003704
Mg	24	3	He	153.907	0.2372	10823.76	0.0015	0.003704
Mg	24	3	He	160.929	0.2479	11034.01	0.0015	0.003704
Al	27	3	He	40.61	0.0197	910.09	0.0005	0.0007154
Al	27	3	He	38.831	0.0189	860.13	0.0005	0.0007154
Al	27	3	He	30.697	0.0151	670.04	0.0005	0.0007154
K	39	3	He	1162.27	1.6927	78266.12	0.0011	0.4296
K	39	3	He	1091.972	1.6163	73744.46	0.0011	0.4296
K	39	3	He	1107.574	1.6333	72700.39	0.0011	0.4296
Ca	44	3	He	963.871	0.0625	2890.37	0.0001	0.002924
Ca	44	3	He	1137.009	0.0732	3340.46	0.0001	0.002924
Ca	44	3	He	1217.51	0.0782	3480.50	0.0001	0.002924
Ti	47	3	He	0.893	0.0004	20.00	0.0005	0
Ti	47	3	He	0.453	0.0002	10.00	0.0005	0
Ti	47	3	He	0.464	0.0002	10.00	0.0005	0
V	51	3	He	0.039	0.0104	480.01	0.021	0.009571
V	51	3	He	0.033	0.0103	468.01	0.021	0.009571
V	51	3	He	0.075	0.0111	496.01	0.021	0.009571
Cr	52	3	He	0.095	0.0201	930.06	0.0267	0.01758
Cr	52	3	He	0.146	0.0215	980.06	0.0267	0.01758
Cr	52	3	He	0.158	0.0218	970.06	0.0267	0.01758
Mn	55	3	He	7.349	0.0837	3870.58	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	7.676	0.0872	3980.63	0.0108	0.004199
Mn	55	3	He	8.106	0.0919	4090.65	0.0108	0.004199
Fe	57	3	He	57.939	0.032	1480.12	0.0005	0.002993
Fe	57	3	He	55.733	0.0309	1410.12	0.0005	0.002993
Fe	57	3	He	55.481	0.0308	1370.10	0.0005	0.002993
Co	59	3	He	0.057	0.0061	280.01	0.0524	0.003063
Co	59	3	He	0.004	0.0033	150.01	0.0524	0.003063
Co	59	3	He	0.023	0.0043	190.01	0.0524	0.003063
Ni	60	3	He	-0.018	0.011	670.03	0.0109	0.01116
Ni	60	3	He	-0.024	0.0109	660.03	0.0109	0.01116
Ni	60	3	He	0.284	0.0143	880.06	0.0109	0.01116
Cu	63	3	He	2.309	0.0741	5811.22	0.0255	0.01531
Cu	63	3	He	2.532	0.0798	6201.35	0.0255	0.01531
Cu	63	3	He	2.218	0.0718	5701.17	0.0255	0.01531
Zn	66	3	He	1.426	0.0069	540.03	0.0029	0.002787
Zn	66	3	He	0.955	0.0055	430.02	0.0029	0.002787
Zn	66	3	He	1.046	0.0058	460.02	0.0029	0.002787
As	75	3	He	1.354	0.0033	258.00	0.0021	0.0004097
As	75	3	He	1.755	0.0041	322.01	0.0021	0.0004097
As	75	3	He	1.571	0.0038	298.00	0.0021	0.0004097
Sr	88	3	He	55.741	0.5263	32163.70	0.0094	0.0008765
Sr	88	3	He	56.512	0.5335	32313.71	0.0094	0.0008765
Sr	88	3	He	57.302	0.541	33356.06	0.0094	0.0008765
Mo	98	3	He	1.155	0.0268	1640.14	0.023	0.0002199
Mo	98	3	He	1.03	0.0239	1450.11	0.023	0.0002199
Mo	98	3	He	1.237	0.0287	1770.16	0.023	0.0002199
Ag	107	3	He	-0.014	0.0002	10.00	0.0483	0.0008224
Ag	107	3	He	-0.007	0.0005	30.00	0.0483	0.0008224
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Cd	111	3	He	0.02	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Sn	120	3	He	-0.047	0.0128	780.05	0.0148	0.01345
Sn	120	3	He	-0.217	0.0102	620.03	0.0148	0.01345
Sn	120	3	He	-0.01	0.0133	820.05	0.0148	0.01345
Sb	121	3	He	0.107	0.002	120.00	0.0143	0.0004392
Sb	121	3	He	0.015	0.0007	40.00	0.0143	0.0004392
Sb	121	3	He	0.083	0.0016	100.00	0.0143	0.0004392
Ba	137	3	He	45.538	0.1987	12145.25	0.0044	0.0001096
Ba	137	3	He	44.815	0.1956	11844.92	0.0044	0.0001096
Ba	137	3	He	45.845	0.2001	12335.40	0.0044	0.0001096
Tl	205	3	He	0	0.0002	60.00	0.0208	0.0002491
Tl	205	3	He	0.015	0.0006	140.01	0.0208	0.0002491
Tl	205	3	He	0.002	0.0003	70.00	0.0208	0.0002491
Pb	208	3	He	0.122	0.0039	610.04	0.0272	0.0006218
Pb	208	3	He	0.14	0.0044	560.03	0.0272	0.0006218
Pb	208	3	He	0.132	0.0042	520.03	0.0272	0.0006218
U	238	3	He	0.431	0.0119	2930.40	0.0275	2.763E-05
U	238	3	He	0.461	0.0127	3130.45	0.0275	2.763E-05
U	238	3	He	0.413	0.0114	2780.37	0.0275	2.763E-05
Sc	45	1	No Gas			2312119.03		
Sc	45	1	No Gas			2298603.40		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2335171.37		
Ge	72	1	No Gas			1067812.95		
Ge	72	1	No Gas			1035184.91		
Ge	72	1	No Gas			1065459.98		
Sc	45	2	H2			143129.69		
Sc	45	2	H2			143533.40		
Sc	45	2	H2			144631.93		
Ge	72	2	H2			121990.19		
Ge	72	2	H2			122604.66		
Ge	72	2	H2			122171.38		
In	115	2	H2			298370.17		
In	115	2	H2			297760.76		
In	115	2	H2			304264.53		
Sc	45	3	He			46236.23		
Sc	45	3	He			45624.16		
Sc	45	3	He			44511.28		
Ge	72	3	He			78381.09		
Ge	72	3	He			77687.89		
Ge	72	3	He			79375.60		
In	115	3	He			61120.38		
In	115	3	He			60568.58		
In	115	3	He			61662.61		
Tb	159	3	He			246748.32		
Tb	159	3	He			246516.48		
Tb	159	3	He			244331.25		
Bi	209	3	He			175091.36		
Bi	209	3	He			175151.05		
Bi	209	3	He			177104.94		

Quantitation Report

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Sample Type	Sample
Comment	D6
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

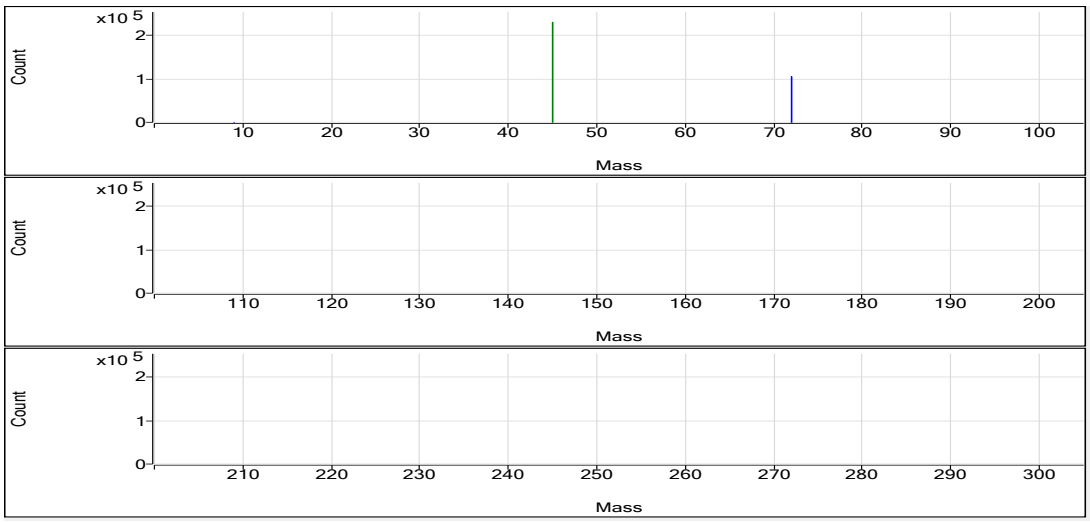
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.001	ppb	103.7	22.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.189	ppb	31.6	11.11	0.0001	Pulse	1.5000	3
Na	23	45	He	14361.331	ppb	3.9	2059637.68	45.3843	Analog	0.1000	3
Mg	24	45	He	10339.392	ppb	2.2	712357.75	15.6924	Pulse	0.1000	3
Al	27	45	He	3.815	ppb	50.8	113.33	0.0025	Pulse	0.1000	3
K	39	45	He	1926.546	ppb	3.0	114549.45	2.5233	Pulse	0.1000	3
Ca	44	45	He	39382.683	ppb	2.7	110651.68	2.4377	Pulse	0.1000	3
Ti	47	45	He	0.609	ppb	45.0	13.33	0.0003	Pulse	0.1000	3
V	51	45	He	0.042	ppb	86.0	474.68	0.0105	Pulse	0.5000	3
Cr	52	45	He	0.243	ppb	56.1	1090.07	0.0241	Pulse	0.1000	3
Mn	55	45	He	0.224	ppb	67.9	300.01	0.0066	Pulse	0.1000	3
Fe	57	45	He	3.555	ppb	20.1	216.68	0.0048	Pulse	0.1000	3
Co	59	45	He	0.006	ppb	423.7	153.34	0.0034	Pulse	0.1000	3
Ni	60	115	He	0.055	ppb	50.2	730.04	0.0118	Pulse	0.1000	3
Cu	63	72	He	3.899	ppb	3.9	8899.41	0.1147	Pulse	0.1000	3
Zn	66	72	He	10.863	ppb	3.0	2643.63	0.0340	Pulse	0.1000	3
As	75	72	He	1.406	ppb	14.4	264.00	0.0034	Pulse	0.5000	3
Sr	88	115	He	1229.231	ppb	0.9	718811.99	11.5874	Pulse	0.1000	3
Mo	98	115	He	0.907	ppb	8.4	1310.09	0.0211	Pulse	0.1000	3
Ag	107	115	He	-0.006	ppb	N/A	33.33	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	76.1	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.078	ppb	N/A	763.38	0.0123	Pulse	0.1000	3
Sb	121	115	He	0.127	ppb	46.7	140.01	0.0023	Pulse	0.1000	3
Ba	137	115	He	115.060	ppb	1.9	31138.93	0.5020	Pulse	0.1000	3
Tl	205	159	He	0.000	ppb	272.2	63.33	0.0003	Pulse	0.1000	3
Pb	208	159	He	0.075	ppb	16.8	656.69	0.0027	Pulse	0.1000	3
U	238	159	He	2.988	ppb	4.7	20228.28	0.0822	Pulse	0.1000	3

ISTD Table:

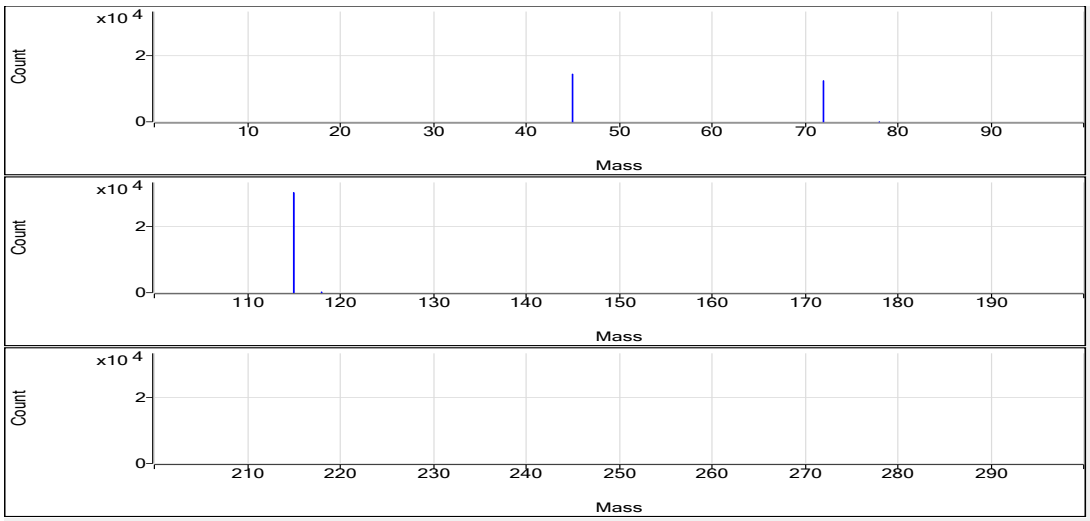
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2315635.96	0.6	100.9	Analog	0.1000	3
No Gas	Ge	72	1058715.77	0.4	101.9	Pulse	0.1000	3
H2	Sc	45	143725.75	1.5	103.4	Pulse	0.1000	3
H2	Ge	72	123528.39	1.3	104.6	Pulse	0.1000	3
H2	In	115	300829.30	1.1	102.1	Pulse	0.1000	3
He	Sc	45	45410.42	2.4	97.0	Pulse	0.1000	3
He	Ge	72	77637.81	1.5	101.5	Pulse	0.1000	3
He	In	115	62035.51	0.4	102.3	Pulse	0.1000	3
He	Tb	159	246079.51	0.7	102.0	Pulse	0.1000	3
He	Bi	209	172935.34	0.6	104.4	Pulse	0.1000	3

No Gas

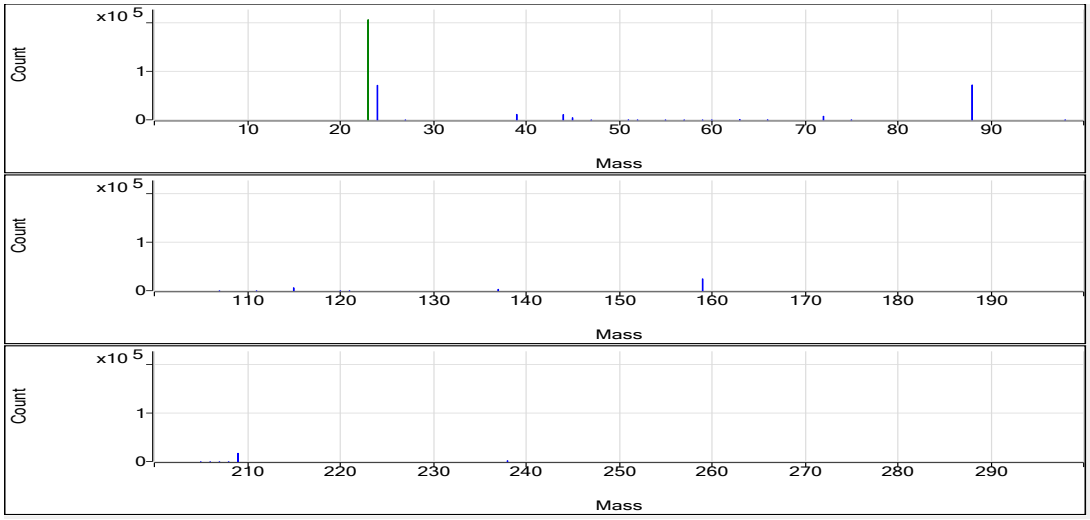


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0	0	22.00	0.0004	9.309E-06
Be	9	1	No Gas	0.003	0	24.00	0.0004	9.309E-06
Be	9	1	No Gas	0.001	0	22.00	0.0004	9.309E-06
Se	78	2	H2	0.214	0.0001	12.67	0.0004	5.598E-06
Se	78	2	H2	0.232	0.0001	13.33	0.0004	5.598E-06
Se	78	2	H2	0.12	0.0001	7.33	0.0004	5.598E-06
Na	23	3	He	14609.298	46.1598	2076386.38	0.0031	0.4657
Na	23	3	He	14759.982	46.6311	2079832.31	0.0031	0.4657
Na	23	3	He	13714.714	43.3618	2022694.34	0.0031	0.4657
Mg	24	3	He	10361.942	15.7266	707423.35	0.0015	0.003704
Mg	24	3	He	10553.974	16.018	714431.86	0.0015	0.003704
Mg	24	3	He	10102.261	15.3326	715218.04	0.0015	0.003704
Al	27	3	He	1.8	0.0016	70.00	0.0005	0.0007154
Al	27	3	He	5.669	0.0034	150.00	0.0005	0.0007154
Al	27	3	He	3.976	0.0026	120.00	0.0005	0.0007154
K	39	3	He	1983.456	2.5852	116287.98	0.0011	0.4296
K	39	3	He	1928.996	2.526	112663.90	0.0011	0.4296
K	39	3	He	1867.186	2.4588	114696.47	0.0011	0.4296
Ca	44	3	He	40259.755	2.4919	112091.12	0.0001	0.002924
Ca	44	3	He	39698.525	2.4572	109594.83	0.0001	0.002924
Ca	44	3	He	38189.77	2.3639	110269.08	0.0001	0.002924
Ti	47	3	He	0.459	0.0002	10.00	0.0005	0
Ti	47	3	He	0.926	0.0004	20.00	0.0005	0
Ti	47	3	He	0.443	0.0002	10.00	0.0005	0
V	51	3	He	0.023	0.01	452.01	0.021	0.009571
V	51	3	He	0.084	0.0113	506.01	0.021	0.009571
V	51	3	He	0.02	0.01	466.01	0.021	0.009571
Cr	52	3	He	0.366	0.0273	1230.09	0.0267	0.01758
Cr	52	3	He	0.266	0.0247	1100.07	0.0267	0.01758
Cr	52	3	He	0.096	0.0202	940.05	0.0267	0.01758
Mn	55	3	He	0.372	0.0082	370.02	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.234	0.0067	300.01	0.0108	0.004199
Mn	55	3	He	0.068	0.0049	230.01	0.0108	0.004199
Fe	57	3	He	2.902	0.0044	200.01	0.0005	0.002993
Fe	57	3	He	4.321	0.0052	230.01	0.0005	0.002993
Fe	57	3	He	3.442	0.0047	220.01	0.0005	0.002993
Co	59	3	He	0.035	0.0049	220.01	0.0524	0.003063
Co	59	3	He	0.001	0.0031	140.00	0.0524	0.003063
Co	59	3	He	-0.018	0.0021	100.00	0.0524	0.003063
Ni	60	3	He	0.036	0.0116	720.04	0.0109	0.01116
Ni	60	3	He	0.087	0.0121	750.04	0.0109	0.01116
Ni	60	3	He	0.043	0.0116	720.04	0.0109	0.01116
Cu	63	3	He	3.984	0.1168	9092.83	0.0255	0.01531
Cu	63	3	He	3.725	0.1102	8672.65	0.0255	0.01531
Cu	63	3	He	3.99	0.117	8932.76	0.0255	0.01531
Zn	66	3	He	10.595	0.0333	2590.30	0.0029	0.002787
Zn	66	3	He	11.221	0.0351	2760.31	0.0029	0.002787
Zn	66	3	He	10.773	0.0338	2580.28	0.0029	0.002787
As	75	3	He	1.594	0.0038	296.00	0.0021	0.0004097
As	75	3	He	1.193	0.0029	232.00	0.0021	0.0004097
As	75	3	He	1.432	0.0035	264.00	0.0021	0.0004097
Sr	88	3	He	1216.977	11.4719	714807.25	0.0094	0.0008765
Sr	88	3	He	1235.93	11.6505	721254.05	0.0094	0.0008765
Sr	88	3	He	1234.785	11.6397	720374.68	0.0094	0.0008765
Mo	98	3	He	0.82	0.0191	1190.09	0.023	0.0002199
Mo	98	3	He	0.958	0.0223	1380.10	0.023	0.0002199
Mo	98	3	He	0.944	0.022	1360.09	0.023	0.0002199
Ag	107	3	He	-0.004	0.0006	40.00	0.0483	0.0008224
Ag	107	3	He	-0.004	0.0006	40.00	0.0483	0.0008224
Ag	107	3	He	-0.01	0.0003	20.00	0.0483	0.0008224
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Cd	111	3	He	0.008	0.0001	4.00	0.0053	2.193E-05
Cd	111	3	He	0.014	0.0001	6.00	0.0053	2.193E-05
Sn	120	3	He	-0.02	0.0132	820.05	0.0148	0.01345
Sn	120	3	He	0.051	0.0142	880.07	0.0148	0.01345
Sn	120	3	He	-0.265	0.0095	590.03	0.0148	0.01345
Sb	121	3	He	0.171	0.0029	180.01	0.0143	0.0004392
Sb	121	3	He	0.06	0.0013	80.00	0.0143	0.0004392
Sb	121	3	He	0.15	0.0026	160.01	0.0143	0.0004392
Ba	137	3	He	115.009	0.5017	31262.77	0.0044	0.0001096
Ba	137	3	He	117.314	0.5118	31683.31	0.0044	0.0001096
Ba	137	3	He	112.856	0.4923	30470.72	0.0044	0.0001096
Tl	205	3	He	0	0.0002	60.00	0.0208	0.0002491
Tl	205	3	He	0	0.0002	60.00	0.0208	0.0002491
Tl	205	3	He	0.002	0.0003	70.00	0.0208	0.0002491
Pb	208	3	He	0.089	0.003	360.02	0.0272	0.0006218
Pb	208	3	He	0.074	0.0026	380.02	0.0272	0.0006218
Pb	208	3	He	0.063	0.0023	330.01	0.0272	0.0006218
U	238	3	He	3.147	0.0866	21136.44	0.0275	2.763E-05
U	238	3	He	2.934	0.0807	19934.57	0.0275	2.763E-05
U	238	3	He	2.884	0.0793	19613.84	0.0275	2.763E-05
Sc	45	1	No Gas			2328163.25		
Sc	45	1	No Gas			2316893.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2301850.75		
Ge	72	1	No Gas			1059566.23		
Ge	72	1	No Gas			1062857.80		
Ge	72	1	No Gas			1053723.27		
Sc	45	2	H2			144947.08		
Sc	45	2	H2			144956.56		
Sc	45	2	H2			141273.62		
Ge	72	2	H2			125245.15		
Ge	72	2	H2			122089.82		
Ge	72	2	H2			123250.21		
In	115	2	H2			304234.70		
In	115	2	H2			300330.50		
In	115	2	H2			297922.71		
Sc	45	3	He			44982.54		
Sc	45	3	He			44601.80		
Sc	45	3	He			46646.92		
Ge	72	3	He			77849.16		
Ge	72	3	He			78692.58		
Ge	72	3	He			76371.69		
In	115	3	He			62315.38		
In	115	3	He			61913.67		
In	115	3	He			61893.50		
Tb	159	3	He			244083.65		
Tb	159	3	He			246966.64		
Tb	159	3	He			247188.24		
Bi	209	3	He			174160.51		
Bi	209	3	He			172500.78		
Bi	209	3	He			172144.74		

Quantitation Report

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Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

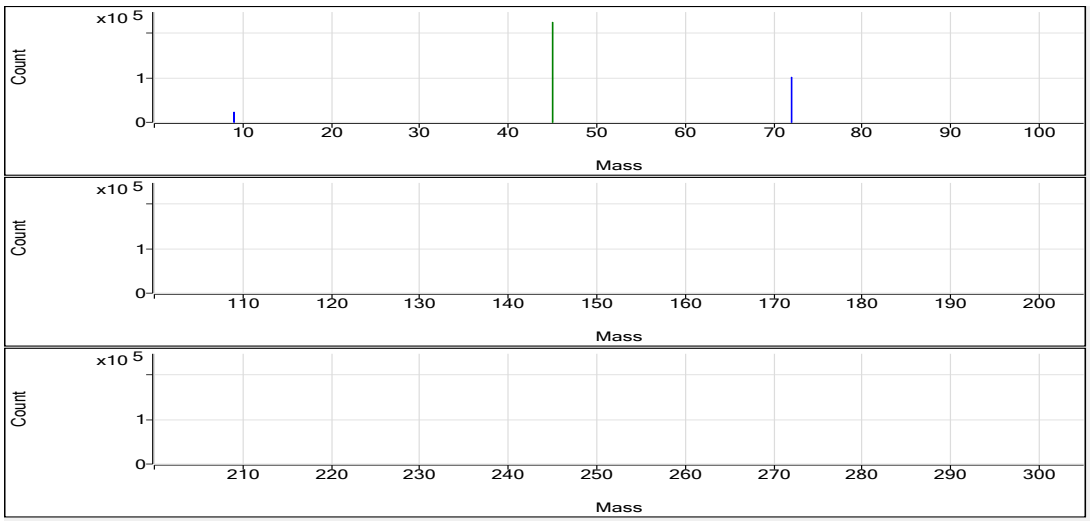
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.822	ppb	2.0	46509.67	0.0206	Pulse	0.5000	3
Se	78	72	H2	53.531	ppb	1.5	2736.68	0.0239	Pulse	1.5000	3
Na	23	45	He	5082.952	ppb	1.9	724888.51	16.3638	Pulse	0.1000	3
Mg	24	45	He	5119.354	ppb	1.4	344289.24	7.7717	Pulse	0.1000	3
Al	27	45	He	5066.161	ppb	3.1	104839.84	2.3670	Pulse	0.1000	3
K	39	45	He	5116.439	ppb	2.8	265327.28	5.9900	Pulse	0.1000	3
Ca	44	45	He	5069.232	ppb	1.3	14013.05	0.3163	Pulse	0.1000	3
Ti	47	45	He	5094.602	ppb	2.7	109300.47	2.4676	Pulse	0.1000	3
V	51	45	He	514.355	ppb	1.3	480032.43	10.8357	Pulse	0.5000	3
Cr	52	45	He	513.970	ppb	1.4	608341.43	13.7323	Pulse	0.1000	3
Mn	55	45	He	509.297	ppb	1.2	244294.23	5.5143	Pulse	0.1000	3
Fe	57	45	He	5190.722	ppb	2.8	115286.95	2.6028	Pulse	0.1000	3
Co	59	45	He	500.186	ppb	1.1	1160183.94	26.1884	Pulse	0.1000	3
Ni	60	115	He	514.766	ppb	1.4	331610.79	5.6395	Pulse	0.1000	3
Cu	63	72	He	498.263	ppb	0.5	937037.10	12.7101	Pulse	0.1000	3
Zn	66	72	He	519.568	ppb	0.6	110432.54	1.4979	Pulse	0.1000	3
As	75	72	He	515.516	ppb	0.7	80927.82	1.0977	Pulse	0.5000	3
Sr	88	115	He	50.045	ppb	2.7	27788.28	0.4726	Pulse	0.1000	3
Mo	98	115	He	51.139	ppb	1.5	69286.33	1.1784	Pulse	0.1000	3
Ag	107	115	He	51.369	ppb	0.6	145954.85	2.4821	Pulse	0.1000	3
Cd	111	115	He	51.298	ppb	0.7	16092.30	0.2737	Pulse	0.5000	3
Sn	120	115	He	51.585	ppb	3.4	45701.26	0.7773	Pulse	0.1000	3
Sb	121	115	He	51.706	ppb	1.4	43525.15	0.7402	Pulse	0.1000	3
Ba	137	115	He	518.037	ppb	1.4	132861.09	2.2596	Pulse	0.1000	3
Tl	205	159	He	51.144	ppb	1.1	255281.90	1.0633	Pulse	0.1000	3
Pb	208	159	He	50.755	ppb	1.3	331843.96	1.3822	Pulse	0.1000	3
U	238	159	He	51.561	ppb	1.0	340476.39	1.4182	Pulse	0.1000	3

ISTD Table:

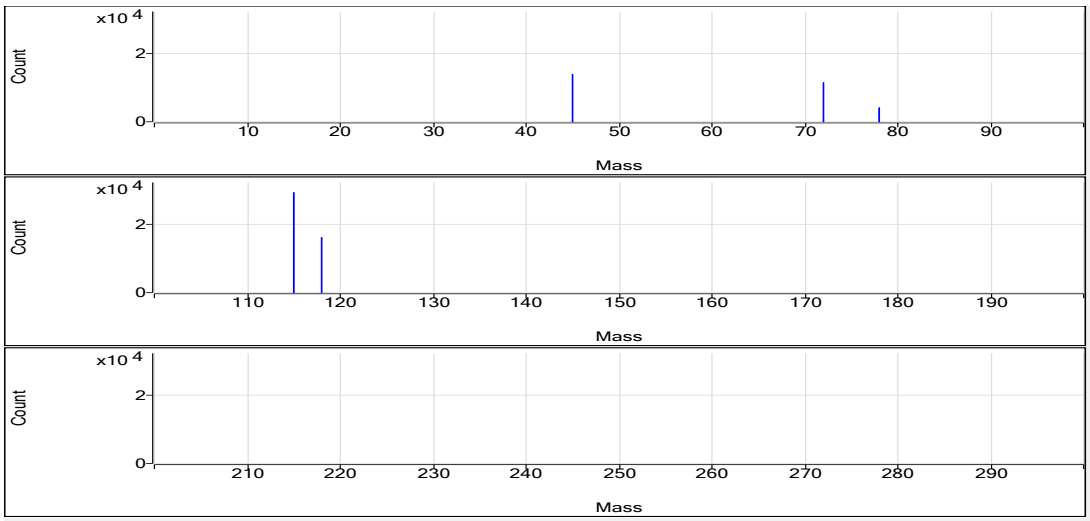
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2255141.37	1.8	98.3	Analog	0.1000	3
No Gas	Ge	72	1019347.93	1.1	98.1	Pulse	0.1000	3
H2	Sc	45	138686.95	2.1	99.7	Pulse	0.1000	3
H2	Ge	72	114291.09	1.2	96.8	Pulse	0.1000	3
H2	In	115	291738.96	0.5	99.0	Pulse	0.1000	3
He	Sc	45	44307.11	1.7	94.6	Pulse	0.1000	3
He	Ge	72	73725.91	1.1	96.4	Pulse	0.1000	3
He	In	115	58803.10	0.7	97.0	Pulse	0.1000	3
He	Tb	159	240092.19	0.6	99.6	Pulse	0.1000	3
He	Bi	209	166623.07	1.6	100.6	Pulse	0.1000	3

No Gas

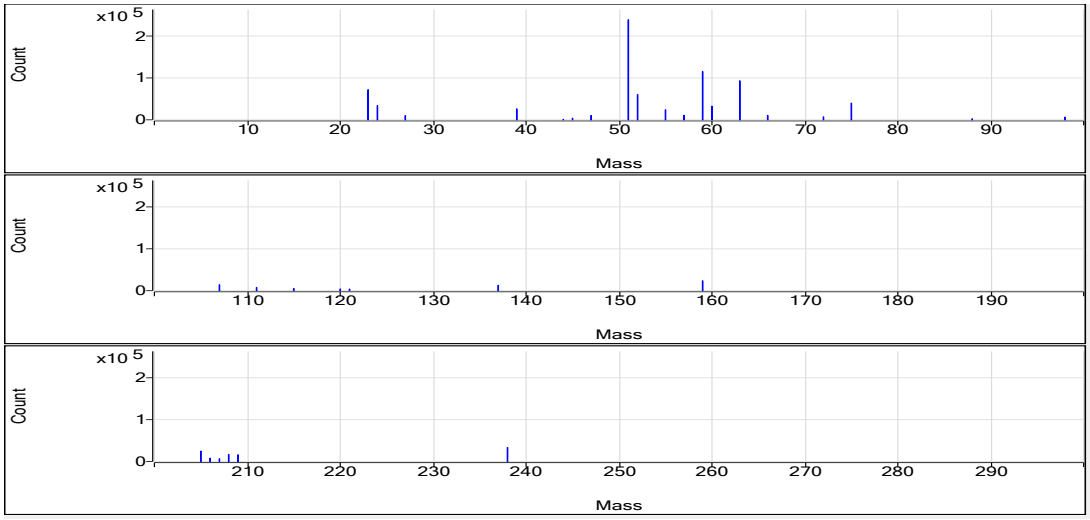


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.713	0.0202	46491.62	0.0004	9.309E-06
Be	9	1	No Gas	52.061	0.0207	46190.73	0.0004	9.309E-06
Be	9	1	No Gas	52.693	0.021	46846.65	0.0004	9.309E-06
Se	78	2	H2	52.658	0.0236	2727.57	0.0004	5.598E-06
Se	78	2	H2	54.204	0.0242	2740.24	0.0004	5.598E-06
Se	78	2	H2	53.731	0.024	2742.24	0.0004	5.598E-06
Na	23	3	He	5151.725	16.5789	728135.15	0.0031	0.4657
Na	23	3	He	5124.172	16.4928	723029.13	0.0031	0.4657
Na	23	3	He	4972.959	16.0198	723501.24	0.0031	0.4657
Mg	24	3	He	5183.14	7.8685	345576.67	0.0015	0.003704
Mg	24	3	He	5135.27	7.7958	341762.07	0.0015	0.003704
Mg	24	3	He	5039.65	7.6507	345528.98	0.0015	0.003704
Al	27	3	He	5191.633	2.4256	106530.30	0.0005	0.0007154
Al	27	3	He	5116.131	2.3903	104790.00	0.0005	0.0007154
Al	27	3	He	4890.718	2.285	103199.22	0.0005	0.0007154
K	39	3	He	5233.811	6.1175	268678.26	0.0011	0.4296
K	39	3	He	5156.392	6.0334	264499.82	0.0011	0.4296
K	39	3	He	4959.113	5.819	262803.75	0.0011	0.4296
Ca	44	3	He	5085.39	0.3173	13936.26	0.0001	0.002924
Ca	44	3	He	5128.045	0.32	14026.45	0.0001	0.002924
Ca	44	3	He	4994.262	0.3117	14076.45	0.0001	0.002924
Ti	47	3	He	5186.506	2.5121	110330.97	0.0005	0
Ti	47	3	He	5160.393	2.4995	109575.27	0.0005	0
Ti	47	3	He	4936.907	2.3912	107995.18	0.0005	0
V	51	3	He	519.355	10.9409	480516.09	0.021	0.009571
V	51	3	He	516.652	10.884	477145.72	0.021	0.009571
V	51	3	He	507.06	10.6821	482435.47	0.021	0.009571
Cr	52	3	He	518.607	13.856	608544.76	0.0267	0.01758
Cr	52	3	He	517.715	13.8322	606392.22	0.0267	0.01758
Cr	52	3	He	505.588	13.5086	610087.30	0.0267	0.01758
Mn	55	3	He	515.527	5.5817	245143.49	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	509.248	5.5138	241718.28	0.0108	0.004199
Mn	55	3	He	503.116	5.4474	246020.91	0.0108	0.004199
Fe	57	3	He	5251.93	2.6335	115660.23	0.0005	0.002993
Fe	57	3	He	5297.722	2.6564	116454.76	0.0005	0.002993
Fe	57	3	He	5022.514	2.5186	113745.86	0.0005	0.002993
Co	59	3	He	502.925	26.3318	1156473.50	0.0524	0.003063
Co	59	3	He	503.991	26.3876	1156810.61	0.0524	0.003063
Co	59	3	He	493.64	25.8457	1167267.72	0.0524	0.003063
Ni	60	3	He	506.234	5.5463	327776.17	0.0109	0.01116
Ni	60	3	He	519.808	5.6947	335841.87	0.0109	0.01116
Ni	60	3	He	518.255	5.6777	331214.33	0.0109	0.01116
Cu	63	3	He	500.405	12.7647	936511.55	0.0255	0.01531
Cu	63	3	He	498.682	12.7208	930738.74	0.0255	0.01531
Cu	63	3	He	495.703	12.6449	943861.00	0.0255	0.01531
Zn	66	3	He	516.169	1.4881	109177.27	0.0029	0.002787
Zn	66	3	He	522.036	1.505	110113.96	0.0029	0.002787
Zn	66	3	He	520.498	1.5005	112006.39	0.0029	0.002787
As	75	3	He	519.59	1.1064	81171.18	0.0021	0.0004097
As	75	3	He	512.843	1.092	79898.65	0.0021	0.0004097
As	75	3	He	514.116	1.0947	81713.63	0.0021	0.0004097
Sr	88	3	He	50.577	0.4776	28225.71	0.0094	0.0008765
Sr	88	3	He	48.521	0.4582	27023.49	0.0094	0.0008765
Sr	88	3	He	51.039	0.482	28115.65	0.0094	0.0008765
Mo	98	3	He	50.915	1.1732	69333.61	0.023	0.0002199
Mo	98	3	He	50.489	1.1634	68609.62	0.023	0.0002199
Mo	98	3	He	52.014	1.1985	69915.75	0.023	0.0002199
Ag	107	3	He	50.995	2.4641	145621.97	0.0483	0.0008224
Ag	107	3	He	51.538	2.4903	146863.12	0.0483	0.0008224
Ag	107	3	He	51.576	2.4921	145379.47	0.0483	0.0008224
Cd	111	3	He	51.671	0.2756	16290.52	0.0053	2.193E-05
Cd	111	3	He	51.194	0.2731	16106.32	0.0053	2.193E-05
Cd	111	3	He	51.027	0.2722	15880.07	0.0053	2.193E-05
Sn	120	3	He	52.185	0.7861	46460.04	0.0148	0.01345
Sn	120	3	He	49.621	0.7482	44123.53	0.0148	0.01345
Sn	120	3	He	52.949	0.7975	46520.21	0.0148	0.01345
Sb	121	3	He	51.061	0.731	43200.96	0.0143	0.0004392
Sb	121	3	He	51.608	0.7388	43571.81	0.0143	0.0004392
Sb	121	3	He	52.45	0.7509	43802.69	0.0143	0.0004392
Ba	137	3	He	512.162	2.2339	132023.07	0.0044	0.0001096
Ba	137	3	He	515.715	2.2494	132660.23	0.0044	0.0001096
Ba	137	3	He	526.233	2.2953	133899.98	0.0044	0.0001096
Tl	205	3	He	51.606	1.0729	256143.71	0.0208	0.0002491
Tl	205	3	He	50.483	1.0496	253697.59	0.0208	0.0002491
Tl	205	3	He	51.342	1.0674	256004.39	0.0208	0.0002491
Pb	208	3	He	51.406	1.3999	173226.15	0.0272	0.0006218
Pb	208	3	He	50.787	1.3831	175798.04	0.0272	0.0006218
Pb	208	3	He	50.071	1.3636	172429.51	0.0272	0.0006218
U	238	3	He	52.092	1.4328	342046.21	0.0275	2.763E-05
U	238	3	He	51.046	1.404	339360.66	0.0275	2.763E-05
U	238	3	He	51.547	1.4178	340022.30	0.0275	2.763E-05
Sc	45	1	No Gas			2303044.34		
Sc	45	1	No Gas			2228919.97		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2233459.81		
Ge	72	1	No Gas			1028660.22		
Ge	72	1	No Gas			1022762.72		
Ge	72	1	No Gas			1006620.84		
Sc	45	2	H2			135497.21		
Sc	45	2	H2			141043.19		
Sc	45	2	H2			139520.45		
Ge	72	2	H2			115784.58		
Ge	72	2	H2			113005.40		
Ge	72	2	H2			114083.29		
In	115	2	H2			290923.75		
In	115	2	H2			290925.35		
In	115	2	H2			293367.77		
Sc	45	3	He			43919.26		
Sc	45	3	He			43839.16		
Sc	45	3	He			45162.90		
Ge	72	3	He			73367.32		
Ge	72	3	He			73166.75		
Ge	72	3	He			74643.66		
In	115	3	He			59423.81		
In	115	3	He			59283.53		
In	115	3	He			58661.69		
Tb	159	3	He			238733.88		
Tb	159	3	He			241713.32		
Tb	159	3	He			239829.37		
Bi	209	3	He			168898.75		
Bi	209	3	He			163660.08		
Bi	209	3	He			167310.37		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

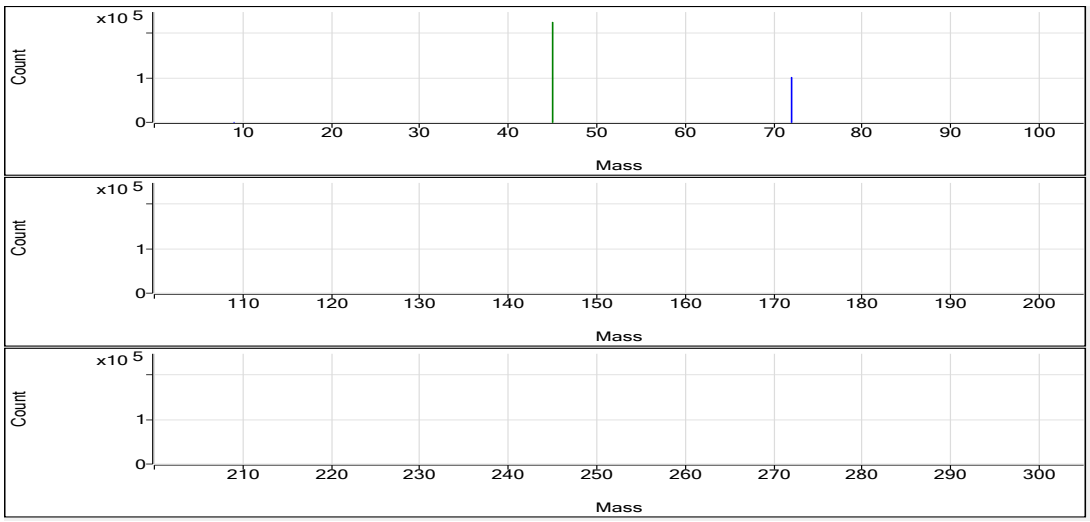
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.067	ppb	17.0	80.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.077	ppb	53.3	4.44	0.0000	Pulse	1.5000	3
Na	23	45	He	28.156	ppb	15.0	24505.15	0.5537	Pulse	0.1000	3
Mg	24	45	He	6.210	ppb	21.4	580.03	0.0131	Pulse	0.1000	3
Al	27	45	He	1.853	ppb	69.2	70.00	0.0016	Pulse	0.1000	3
K	39	45	He	21.179	ppb	265.7	20042.85	0.4526	Pulse	0.1000	3
Ca	44	45	He	25.913	ppb	42.1	200.01	0.0045	Pulse	0.1000	3
Ti	47	45	He	3.560	ppb	51.2	76.67	0.0017	Pulse	0.1000	3
V	51	45	He	0.257	ppb	18.5	662.69	0.0150	Pulse	0.5000	3
Cr	52	45	He	0.326	ppb	5.7	1163.41	0.0263	Pulse	0.1000	3
Mn	55	45	He	0.335	ppb	22.4	346.68	0.0078	Pulse	0.1000	3
Fe	57	45	He	3.783	ppb	62.8	216.68	0.0049	Pulse	0.1000	3
Co	59	45	He	0.219	ppb	7.7	643.37	0.0145	Pulse	0.1000	3
Ni	60	115	He	0.212	ppb	130.5	796.72	0.0135	Pulse	0.1000	3
Cu	63	72	He	0.282	ppb	30.3	1656.81	0.0225	Pulse	0.1000	3
Zn	66	72	He	0.637	ppb	79.0	340.02	0.0046	Pulse	0.1000	3
As	75	72	He	0.304	ppb	9.8	78.00	0.0011	Pulse	0.5000	3
Sr	88	115	He	0.278	ppb	37.7	206.68	0.0035	Pulse	0.1000	3
Mo	98	115	He	0.064	ppb	13.4	100.00	0.0017	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	163.2	63.33	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.038	ppb	19.2	13.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.195	ppb	93.2	966.73	0.0163	Pulse	0.1000	3
Sb	121	115	He	0.071	ppb	60.2	86.67	0.0015	Pulse	0.1000	3
Ba	137	115	He	0.311	ppb	32.4	86.67	0.0015	Pulse	0.1000	3
Tl	205	159	He	0.418	ppb	10.1	2126.89	0.0089	Pulse	0.1000	3
Pb	208	159	He	0.037	ppb	24.4	390.01	0.0016	Pulse	0.1000	3
U	238	159	He	0.028	ppb	41.9	186.67	0.0008	Pulse	0.1000	3

ISTD Table:

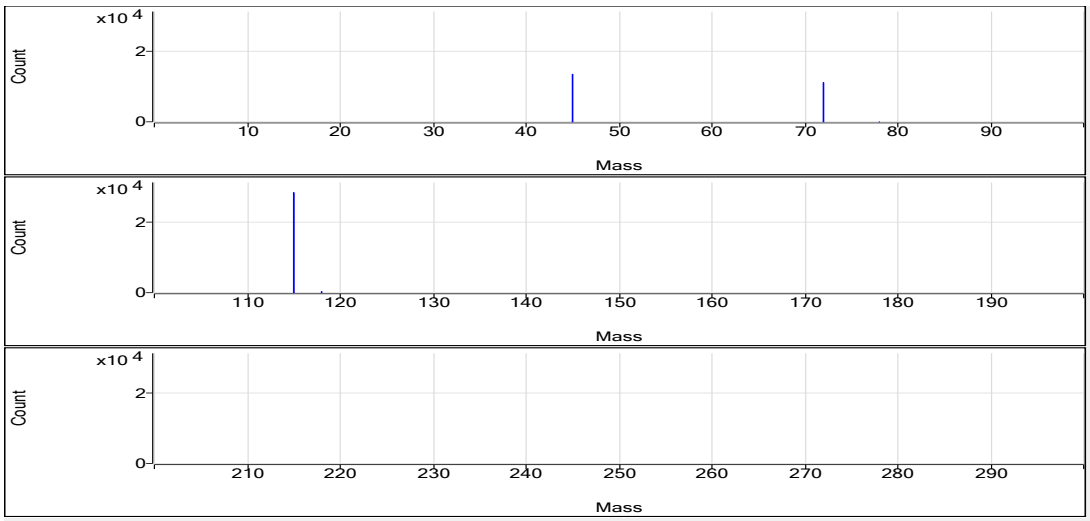
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2249204.18	1.1	98.0	Analog	0.1000	3
No Gas	Ge	72	1011005.17	1.0	97.3	Pulse	0.1000	3
H2	Sc	45	135805.19	1.5	97.7	Pulse	0.1000	3
H2	Ge	72	112259.84	2.5	95.1	Pulse	0.1000	3
H2	In	115	285750.02	0.6	97.0	Pulse	0.1000	3
He	Sc	45	44267.36	1.8	94.5	Pulse	0.1000	3
He	Ge	72	73736.23	1.1	96.4	Pulse	0.1000	3
He	In	115	59243.38	1.7	97.7	Pulse	0.1000	3
He	Tb	159	237989.85	1.3	98.7	Pulse	0.1000	3
He	Bi	209	162983.54	0.5	98.4	Pulse	0.1000	3

No Gas

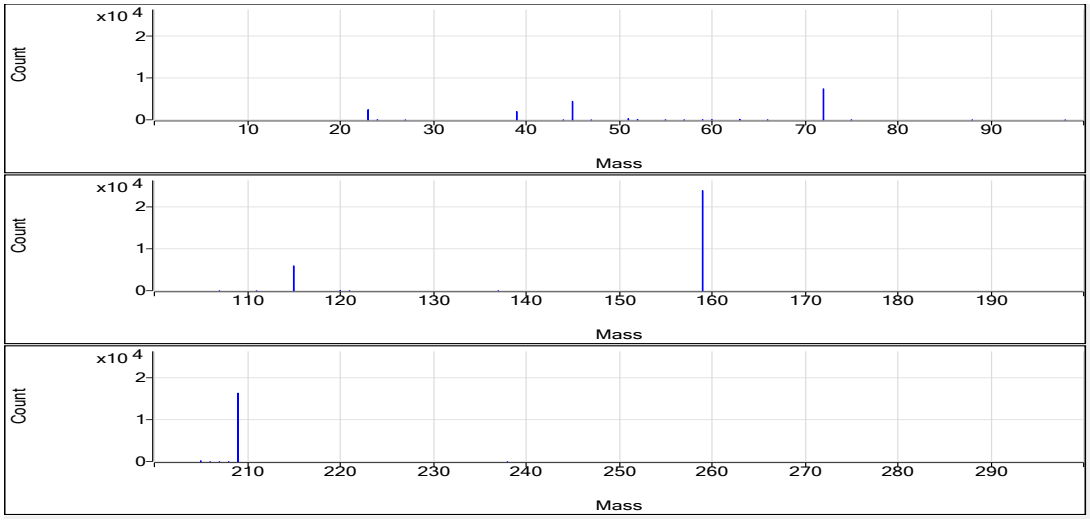


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.078	0	92.00	0.0004	9.309E-06
Be	9	1	No Gas	0.066	0	80.00	0.0004	9.309E-06
Be	9	1	No Gas	0.056	0	70.00	0.0004	9.309E-06
Se	78	2	H2	0.052	0	3.33	0.0004	5.598E-06
Se	78	2	H2	0.124	0.0001	6.67	0.0004	5.598E-06
Se	78	2	H2	0.054	0	3.33	0.0004	5.598E-06
Na	23	3	He	27.906	0.5529	24418.33	0.0031	0.4657
Na	23	3	He	24.063	0.5409	24408.40	0.0031	0.4657
Na	23	3	He	32.498	0.5673	24688.73	0.0031	0.4657
Mg	24	3	He	6.663	0.0138	610.03	0.0015	0.003704
Mg	24	3	He	4.716	0.0109	490.02	0.0015	0.003704
Mg	24	3	He	7.252	0.0147	640.04	0.0015	0.003704
Al	27	3	He	3.316	0.0023	100.00	0.0005	0.0007154
Al	27	3	He	1.315	0.0013	60.00	0.0005	0.0007154
Al	27	3	He	0.928	0.0011	50.00	0.0005	0.0007154
K	39	3	He	83.644	0.5205	22986.73	0.0011	0.4296
K	39	3	He	5.42	0.4355	19652.07	0.0011	0.4296
K	39	3	He	-25.527	0.4019	17489.74	0.0011	0.4296
Ca	44	3	He	29.624	0.0048	210.01	0.0001	0.002924
Ca	44	3	He	13.643	0.0038	170.01	0.0001	0.002924
Ca	44	3	He	34.474	0.0051	220.01	0.0001	0.002924
Ti	47	3	He	1.87	0.0009	40.00	0.0005	0
Ti	47	3	He	5.491	0.0027	120.00	0.0005	0
Ti	47	3	He	3.321	0.0016	70.00	0.0005	0
V	51	3	He	0.225	0.0143	632.02	0.021	0.009571
V	51	3	He	0.234	0.0145	654.02	0.021	0.009571
V	51	3	He	0.312	0.0161	702.02	0.021	0.009571
Cr	52	3	He	0.343	0.0267	1180.08	0.0267	0.01758
Cr	52	3	He	0.33	0.0264	1190.08	0.0267	0.01758
Cr	52	3	He	0.306	0.0257	1120.08	0.0267	0.01758
Mn	55	3	He	0.261	0.007	310.01	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.411	0.0086	390.02	0.0108	0.004199
Mn	55	3	He	0.334	0.0078	340.01	0.0108	0.004199
Fe	57	3	He	1.259	0.0036	160.01	0.0005	0.002993
Fe	57	3	He	5.972	0.006	270.01	0.0005	0.002993
Fe	57	3	He	4.119	0.0051	220.01	0.0005	0.002993
Co	59	3	He	0.223	0.0147	650.03	0.0524	0.003063
Co	59	3	He	0.234	0.0153	690.04	0.0524	0.003063
Co	59	3	He	0.2	0.0136	590.03	0.0524	0.003063
Ni	60	3	He	0.471	0.0163	950.06	0.0109	0.01116
Ni	60	3	He	-0.079	0.0103	620.04	0.0109	0.01116
Ni	60	3	He	0.244	0.0138	820.05	0.0109	0.01116
Cu	63	3	He	0.236	0.0213	1580.12	0.0255	0.01531
Cu	63	3	He	0.38	0.025	1820.17	0.0255	0.01531
Cu	63	3	He	0.229	0.0211	1570.13	0.0255	0.01531
Zn	66	3	He	0.861	0.0053	390.02	0.0029	0.002787
Zn	66	3	He	0.988	0.0056	410.02	0.0029	0.002787
Zn	66	3	He	0.061	0.003	220.01	0.0029	0.002787
As	75	3	He	0.29	0.001	76.00	0.0021	0.0004097
As	75	3	He	0.285	0.001	74.00	0.0021	0.0004097
As	75	3	He	0.339	0.0011	84.00	0.0021	0.0004097
Sr	88	3	He	0.399	0.0046	270.01	0.0094	0.0008765
Sr	88	3	He	0.224	0.003	180.01	0.0094	0.0008765
Sr	88	3	He	0.211	0.0029	170.01	0.0094	0.0008765
Mo	98	3	He	0.072	0.0019	110.00	0.023	0.0002199
Mo	98	3	He	0.055	0.0015	90.00	0.023	0.0002199
Mo	98	3	He	0.064	0.0017	100.00	0.023	0.0002199
Ag	107	3	He	0.015	0.0015	90.00	0.0483	0.0008224
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Ag	107	3	He	0	0.0008	50.00	0.0483	0.0008224
Cd	111	3	He	0.035	0.0002	12.00	0.0053	2.193E-05
Cd	111	3	He	0.033	0.0002	12.00	0.0053	2.193E-05
Cd	111	3	He	0.046	0.0003	16.00	0.0053	2.193E-05
Sn	120	3	He	0.332	0.0184	1070.07	0.0148	0.01345
Sn	120	3	He	-0.011	0.0133	800.05	0.0148	0.01345
Sn	120	3	He	0.265	0.0174	1030.07	0.0148	0.01345
Sb	121	3	He	0.041	0.001	60.00	0.0143	0.0004392
Sb	121	3	He	0.12	0.0022	130.00	0.0143	0.0004392
Sb	121	3	He	0.052	0.0012	70.00	0.0143	0.0004392
Ba	137	3	He	0.408	0.0019	110.00	0.0044	0.0001096
Ba	137	3	He	0.318	0.0015	90.00	0.0044	0.0001096
Ba	137	3	He	0.207	0.001	60.00	0.0044	0.0001096
Tl	205	3	He	0.46	0.0098	2370.28	0.0208	0.0002491
Tl	205	3	He	0.417	0.0089	2110.22	0.0208	0.0002491
Tl	205	3	He	0.376	0.0081	1900.18	0.0208	0.0002491
Pb	208	3	He	0.029	0.0014	190.01	0.0272	0.0006218
Pb	208	3	He	0.047	0.0019	220.01	0.0272	0.0006218
Pb	208	3	He	0.036	0.0016	200.01	0.0272	0.0006218
U	238	3	He	0.019	0.0005	130.00	0.0275	2.763E-05
U	238	3	He	0.024	0.0007	160.01	0.0275	2.763E-05
U	238	3	He	0.041	0.0011	270.01	0.0275	2.763E-05
Sc	45	1	No Gas			2276013.09		
Sc	45	1	No Gas			2243513.87		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2228085.59		
Ge	72	1	No Gas			1021039.20		
Ge	72	1	No Gas			1011585.77		
Ge	72	1	No Gas			1000390.53		
Sc	45	2	H2			136735.72		
Sc	45	2	H2			133499.48		
Sc	45	2	H2			137180.38		
Ge	72	2	H2			115209.58		
Ge	72	2	H2			109530.91		
Ge	72	2	H2			112039.03		
In	115	2	H2			284397.42		
In	115	2	H2			285109.80		
In	115	2	H2			287742.83		
Sc	45	3	He			44160.12		
Sc	45	3	He			45123.15		
Sc	45	3	He			43518.82		
Ge	72	3	He			74081.01		
Ge	72	3	He			72825.35		
Ge	72	3	He			74302.32		
In	115	3	He			58249.78		
In	115	3	He			60227.05		
In	115	3	He			59273.62		
Tb	159	3	He			241533.73		
Tb	159	3	He			236668.96		
Tb	159	3	He			235766.87		
Bi	209	3	He			162012.08		
Bi	209	3	He			163418.56		
Bi	209	3	He			163519.98		

Quantitation Report

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Auto Dilution	1.0000
Total Dilution	1.0000
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Acq Mode	Spectrum
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Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

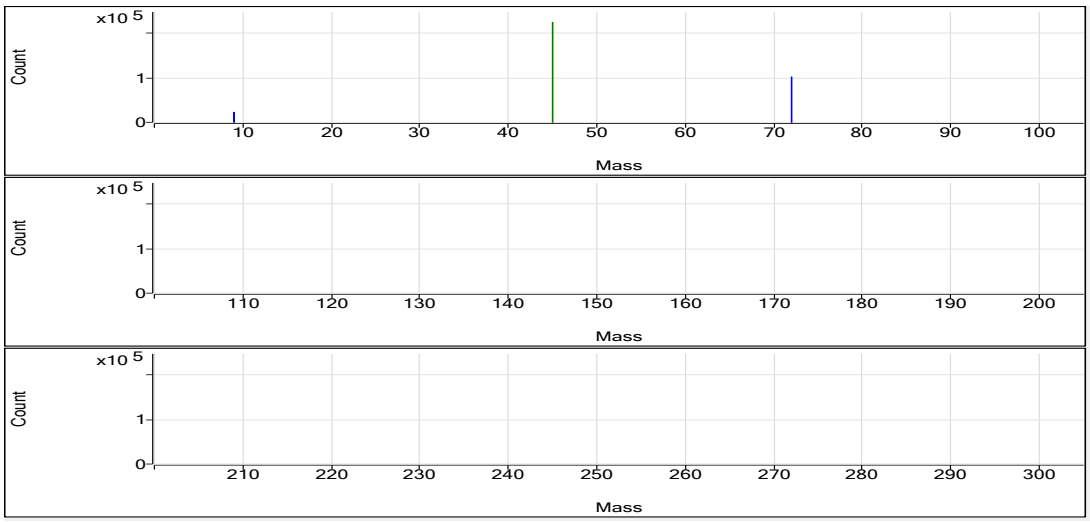
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.471	ppb	2.3	46025.60	0.0205	Pulse	0.5000	3
Se	78	72	H2	51.473	ppb	2.9	2620.66	0.0230	Pulse	1.5000	3
Na	23	45	He	5104.108	ppb	1.5	717735.80	16.4300	Pulse	0.1000	3
Mg	24	45	He	5164.681	ppb	0.9	342528.25	7.8404	Pulse	0.1000	3
Al	27	45	He	5057.775	ppb	1.1	103242.37	2.3631	Pulse	0.1000	3
K	39	45	He	5133.536	ppb	1.7	262475.71	6.0086	Pulse	0.1000	3
Ca	44	45	He	4997.367	ppb	1.7	13629.42	0.3119	Pulse	0.1000	3
Ti	47	45	He	5138.415	ppb	1.9	108716.02	2.4888	Pulse	0.1000	3
V	51	45	He	519.375	ppb	1.7	477946.22	10.9413	Pulse	0.5000	3
Cr	52	45	He	518.929	ppb	1.1	605693.90	13.8646	Pulse	0.1000	3
Mn	55	45	He	515.612	ppb	1.9	243863.75	5.5826	Pulse	0.1000	3
Fe	57	45	He	5203.261	ppb	1.4	113977.47	2.6091	Pulse	0.1000	3
Co	59	45	He	508.005	ppb	1.8	1161855.48	26.5977	Pulse	0.1000	3
Ni	60	115	He	511.767	ppb	0.8	331587.17	5.6068	Pulse	0.1000	3
Cu	63	72	He	495.007	ppb	0.8	932899.62	12.6272	Pulse	0.1000	3
Zn	66	72	He	510.605	ppb	2.1	108754.46	1.4721	Pulse	0.1000	3
As	75	72	He	509.360	ppb	1.0	80129.22	1.0846	Pulse	0.5000	3
Sr	88	115	He	50.686	ppb	2.6	28305.85	0.4786	Pulse	0.1000	3
Mo	98	115	He	50.258	ppb	1.4	68485.99	1.1581	Pulse	0.1000	3
Ag	107	115	He	51.401	ppb	1.1	146889.12	2.4836	Pulse	0.1000	3
Cd	111	115	He	50.743	ppb	1.0	16009.56	0.2707	Pulse	0.5000	3
Sn	120	115	He	50.640	ppb	0.6	45139.65	0.7633	Pulse	0.1000	3
Sb	121	115	He	51.173	ppb	3.0	43324.61	0.7326	Pulse	0.1000	3
Ba	137	115	He	509.325	ppb	1.1	131379.25	2.2216	Pulse	0.1000	3
Tl	205	159	He	51.826	ppb	0.6	254873.26	1.0775	Pulse	0.1000	3
Pb	208	159	He	50.998	ppb	0.7	328518.69	1.3888	Pulse	0.1000	3
U	238	159	He	52.239	ppb	0.5	339868.08	1.4368	Pulse	0.1000	3

ISTD Table:

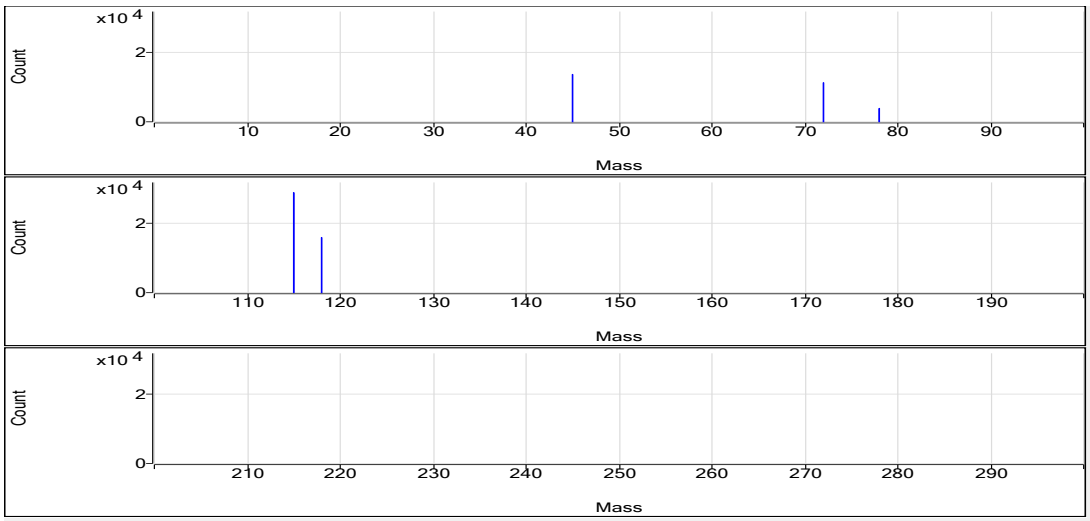
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2246495.90	0.9	97.9	Analog	0.1000	3
No Gas	Ge	72	1019391.11	0.1	98.1	Pulse	0.1000	3
H2	Sc	45	137922.90	2.2	99.2	Pulse	0.1000	3
H2	Ge	72	113841.29	1.6	96.4	Pulse	0.1000	3
H2	In	115	290841.50	0.6	98.7	Pulse	0.1000	3
He	Sc	45	43692.28	1.9	93.3	Pulse	0.1000	3
He	Ge	72	73883.26	0.8	96.6	Pulse	0.1000	3
He	In	115	59141.34	0.8	97.6	Pulse	0.1000	3
He	Tb	159	236547.96	0.6	98.1	Pulse	0.1000	3
He	Bi	209	163788.22	0.8	98.8	Pulse	0.1000	3

No Gas

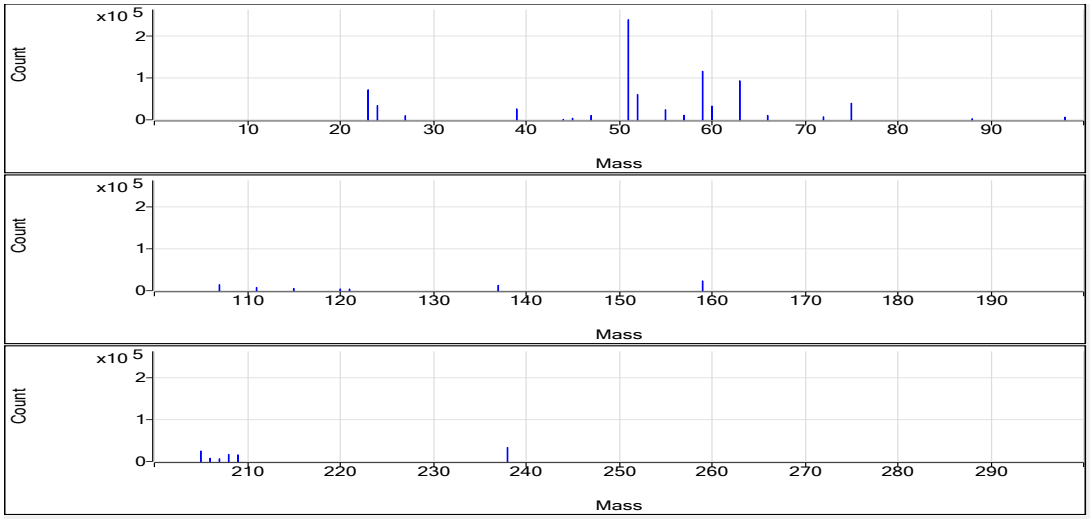


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	50.307	0.02	44877.17	0.0004	9.309E-06
Be	9	1	No Gas	51.469	0.0205	46507.53	0.0004	9.309E-06
Be	9	1	No Gas	52.637	0.021	46692.10	0.0004	9.309E-06
Se	78	2	H2	50.378	0.0225	2602.21	0.0004	5.598E-06
Se	78	2	H2	53.162	0.0238	2659.56	0.0004	5.598E-06
Se	78	2	H2	50.88	0.0228	2600.22	0.0004	5.598E-06
Na	23	3	He	5189.756	16.6979	713441.94	0.0031	0.4657
Na	23	3	He	5056.594	16.2814	718660.07	0.0031	0.4657
Na	23	3	He	5065.973	16.3107	721105.38	0.0031	0.4657
Mg	24	3	He	5217.88	7.9212	338443.32	0.0015	0.003704
Mg	24	3	He	5129.729	7.7874	343735.70	0.0015	0.003704
Mg	24	3	He	5146.435	7.8128	345405.74	0.0015	0.003704
Al	27	3	He	5080.42	2.3736	101417.61	0.0005	0.0007154
Al	27	3	He	5096.303	2.3811	105100.17	0.0005	0.0007154
Al	27	3	He	4996.602	2.3345	103209.34	0.0005	0.0007154
K	39	3	He	5232.726	6.1164	261330.80	0.0011	0.4296
K	39	3	He	5107.383	5.9802	263963.53	0.0011	0.4296
K	39	3	He	5060.5	5.9292	262132.81	0.0011	0.4296
Ca	44	3	He	4899.071	0.3058	13065.61	0.0001	0.002924
Ca	44	3	He	5041.443	0.3146	13886.36	0.0001	0.002924
Ca	44	3	He	5051.588	0.3152	13936.28	0.0001	0.002924
Ti	47	3	He	5253.878	2.5448	108728.74	0.0005	0
Ti	47	3	He	5081.44	2.4612	108639.06	0.0005	0
Ti	47	3	He	5079.926	2.4605	108780.26	0.0005	0
V	51	3	He	529.732	11.1593	476798.06	0.021	0.009571
V	51	3	He	514.162	10.8316	478106.25	0.021	0.009571
V	51	3	He	514.231	10.8331	478934.34	0.021	0.009571
Cr	52	3	He	525.364	14.0363	599720.85	0.0267	0.01758
Cr	52	3	He	514.073	13.735	606262.18	0.0267	0.01758
Cr	52	3	He	517.351	13.8225	611098.66	0.0267	0.01758
Mn	55	3	He	525.988	5.6949	243321.32	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	506.928	5.4887	242268.65	0.0108	0.004199
Mn	55	3	He	513.922	5.5643	246001.29	0.0108	0.004199
Fe	57	3	He	5285.292	2.6502	113232.93	0.0005	0.002993
Fe	57	3	He	5172.761	2.5938	114491.09	0.0005	0.002993
Fe	57	3	He	5151.732	2.5833	114208.40	0.0005	0.002993
Co	59	3	He	518.201	27.1315	1159232.48	0.0524	0.003063
Co	59	3	He	504.389	26.4084	1165665.92	0.0524	0.003063
Co	59	3	He	501.425	26.2532	1160668.03	0.0524	0.003063
Ni	60	3	He	509.075	5.5773	327938.55	0.0109	0.01116
Ni	60	3	He	516.677	5.6604	333719.25	0.0109	0.01116
Ni	60	3	He	509.55	5.5825	333103.71	0.0109	0.01116
Cu	63	3	He	490.559	12.5138	931183.11	0.0255	0.01531
Cu	63	3	He	498.026	12.7041	930157.02	0.0255	0.01531
Cu	63	3	He	496.435	12.6635	937358.74	0.0255	0.01531
Zn	66	3	He	511.12	1.4736	109651.08	0.0029	0.002787
Zn	66	3	He	520.816	1.5015	109932.95	0.0029	0.002787
Zn	66	3	He	499.88	1.4412	106679.35	0.0029	0.002787
As	75	3	He	507.125	1.0798	80353.02	0.0021	0.0004097
As	75	3	He	515.302	1.0972	80336.94	0.0021	0.0004097
As	75	3	He	505.652	1.0767	79697.70	0.0021	0.0004097
Sr	88	3	He	49.824	0.4705	27664.95	0.0094	0.0008765
Sr	88	3	He	52.231	0.4932	29077.31	0.0094	0.0008765
Sr	88	3	He	50.003	0.4722	28175.30	0.0094	0.0008765
Mo	98	3	He	51.04	1.1761	69151.63	0.023	0.0002199
Mo	98	3	He	49.817	1.1479	67676.27	0.023	0.0002199
Mo	98	3	He	49.916	1.1502	68630.07	0.023	0.0002199
Ag	107	3	He	50.772	2.4533	144248.74	0.0483	0.0008224
Ag	107	3	He	51.908	2.5081	147870.69	0.0483	0.0008224
Ag	107	3	He	51.522	2.4895	148547.92	0.0483	0.0008224
Cd	111	3	He	50.358	0.2686	15796.01	0.0053	2.193E-05
Cd	111	3	He	51.312	0.2737	16138.36	0.0053	2.193E-05
Cd	111	3	He	50.561	0.2697	16094.32	0.0053	2.193E-05
Sn	120	3	He	50.659	0.7635	44895.42	0.0148	0.01345
Sn	120	3	He	50.946	0.7678	45267.00	0.0148	0.01345
Sn	120	3	He	50.315	0.7585	45256.53	0.0148	0.01345
Sb	121	3	He	50.166	0.7182	42228.42	0.0143	0.0004392
Sb	121	3	He	52.955	0.7581	44694.96	0.0143	0.0004392
Sb	121	3	He	50.396	0.7215	43050.44	0.0143	0.0004392
Ba	137	3	He	513.956	2.2418	131812.98	0.0044	0.0001096
Ba	137	3	He	511.008	2.2289	131408.91	0.0044	0.0001096
Ba	137	3	He	503.01	2.194	130915.86	0.0044	0.0001096
Tl	205	3	He	51.779	1.0765	254788.30	0.0208	0.0002491
Tl	205	3	He	52.142	1.0841	254948.51	0.0208	0.0002491
Tl	205	3	He	51.557	1.0719	254882.98	0.0208	0.0002491
Pb	208	3	He	50.572	1.3772	172084.29	0.0272	0.0006218
Pb	208	3	He	51.164	1.3933	173977.61	0.0272	0.0006218
Pb	208	3	He	51.259	1.3959	176004.37	0.0272	0.0006218
U	238	3	He	52.099	1.4329	339148.78	0.0275	2.763E-05
U	238	3	He	52.53	1.4448	339789.29	0.0275	2.763E-05
U	238	3	He	52.088	1.4327	340666.17	0.0275	2.763E-05
Sc	45	1	No Gas			2241010.90		
Sc	45	1	No Gas			2269993.25		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2228483.56		
Ge	72	1	No Gas			1020946.16		
Ge	72	1	No Gas			1019144.52		
Ge	72	1	No Gas			1018082.64		
Sc	45	2	H2			141313.42		
Sc	45	2	H2			136757.20		
Sc	45	2	H2			135698.09		
Ge	72	2	H2			115462.29		
Ge	72	2	H2			111827.09		
Ge	72	2	H2			114234.50		
In	115	2	H2			289801.07		
In	115	2	H2			289773.67		
In	115	2	H2			292949.76		
Sc	45	3	He			42726.45		
Sc	45	3	He			44139.93		
Sc	45	3	He			44210.47		
Ge	72	3	He			74412.26		
Ge	72	3	He			73217.24		
Ge	72	3	He			74020.28		
In	115	3	He			59112.84		
In	115	3	He			59273.28		
In	115	3	He			59985.85		
Tb	159	3	He			236679.41		
Tb	159	3	He			235178.04		
Tb	159	3	He			237786.44		
Bi	209	3	He			162438.53		
Bi	209	3	He			165025.15		
Bi	209	3	He			163900.99		

Quantitation Report

Data File Name	156_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 1:16:12 PM
Sample Name	CCB 6148203
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

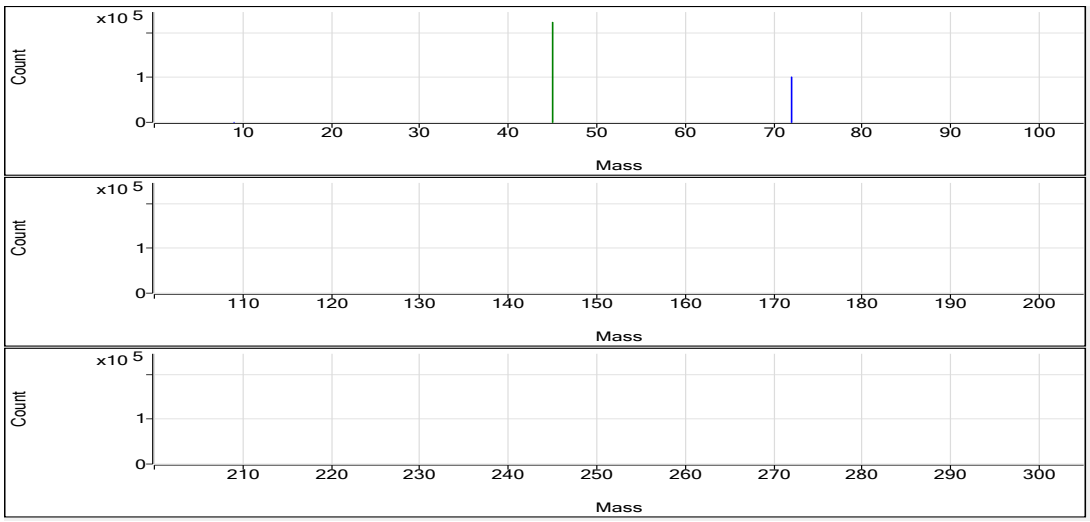
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.081	ppb	3.9	93.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.073	ppb	39.7	4.22	0.0000	Pulse	1.5000	3
Na	23	45	He	2.855	ppb	319.4	20639.93	0.4746	Pulse	0.1000	3
Mg	24	45	He	5.925	ppb	22.0	553.36	0.0127	Pulse	0.1000	3
Al	27	45	He	2.887	ppb	58.1	90.00	0.0021	Pulse	0.1000	3
K	39	45	He	2.853	ppb	1589.2	18858.09	0.4327	Pulse	0.1000	3
Ca	44	45	He	20.830	ppb	4.2	183.34	0.0042	Pulse	0.1000	3
Ti	47	45	He	4.096	ppb	33.4	86.67	0.0020	Pulse	0.1000	3
V	51	45	He	0.297	ppb	12.6	688.69	0.0158	Pulse	0.5000	3
Cr	52	45	He	0.183	ppb	56.3	976.73	0.0225	Pulse	0.1000	3
Mn	55	45	He	0.319	ppb	17.3	333.34	0.0077	Pulse	0.1000	3
Fe	57	45	He	2.743	ppb	17.5	190.01	0.0044	Pulse	0.1000	3
Co	59	45	He	0.212	ppb	5.4	616.70	0.0142	Pulse	0.1000	3
Ni	60	115	He	0.343	ppb	63.1	870.05	0.0149	Pulse	0.1000	3
Cu	63	72	He	0.273	ppb	7.0	1620.13	0.0223	Pulse	0.1000	3
Zn	66	72	He	0.449	ppb	33.1	296.68	0.0041	Pulse	0.1000	3
As	75	72	He	0.298	ppb	19.2	76.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.211	ppb	14.4	166.68	0.0029	Pulse	0.1000	3
Mo	98	115	He	0.040	ppb	20.1	66.67	0.0011	Pulse	0.1000	3
Ag	107	115	He	0.022	ppb	56.2	110.01	0.0019	Pulse	0.1000	3
Cd	111	115	He	0.017	ppb	43.2	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.255	ppb	77.7	1003.40	0.0172	Pulse	0.1000	3
Sb	121	115	He	0.049	ppb	61.6	66.67	0.0011	Pulse	0.1000	3
Ba	137	115	He	0.185	ppb	32.5	53.33	0.0009	Pulse	0.1000	3
Tl	205	159	He	0.377	ppb	6.6	1896.85	0.0081	Pulse	0.1000	3
Pb	208	159	He	0.044	ppb	55.2	426.68	0.0018	Pulse	0.1000	3
U	238	159	He	0.032	ppb	56.8	210.01	0.0009	Pulse	0.1000	3

ISTD Table:

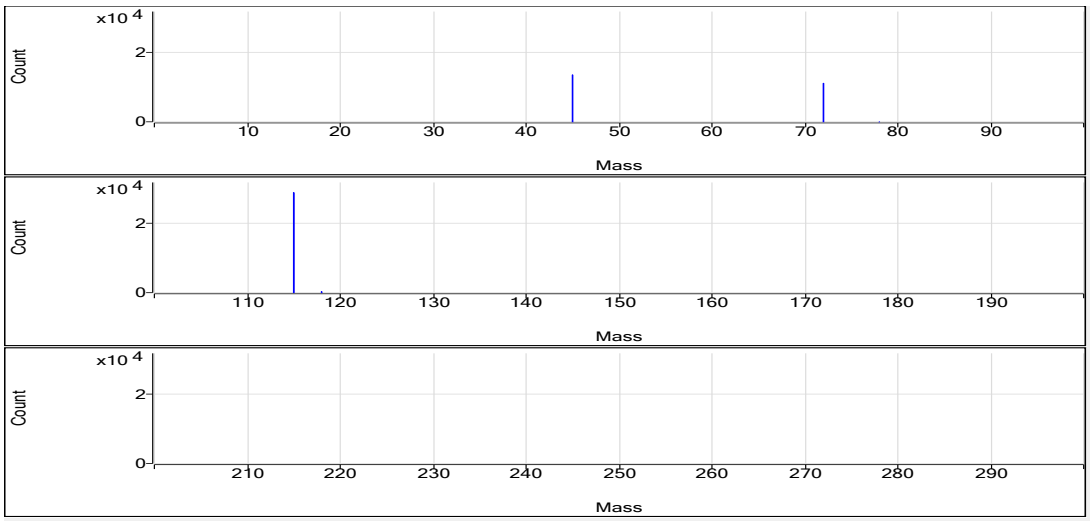
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2239787.26	0.5	97.6	Analog	0.1000	3
No Gas	Ge	72	1015487.35	0.7	97.7	Pulse	0.1000	3
H2	Sc	45	134958.09	1.5	97.1	Pulse	0.1000	3
H2	Ge	72	111061.61	1.5	94.1	Pulse	0.1000	3
H2	In	115	287728.15	0.4	97.7	Pulse	0.1000	3
He	Sc	45	43521.85	1.9	92.9	Pulse	0.1000	3
He	Ge	72	72731.36	0.4	95.1	Pulse	0.1000	3
He	In	115	58269.28	1.4	96.1	Pulse	0.1000	3
He	Tb	159	234644.35	1.1	97.3	Pulse	0.1000	3
He	Bi	209	164819.90	1.0	99.5	Pulse	0.1000	3

No Gas

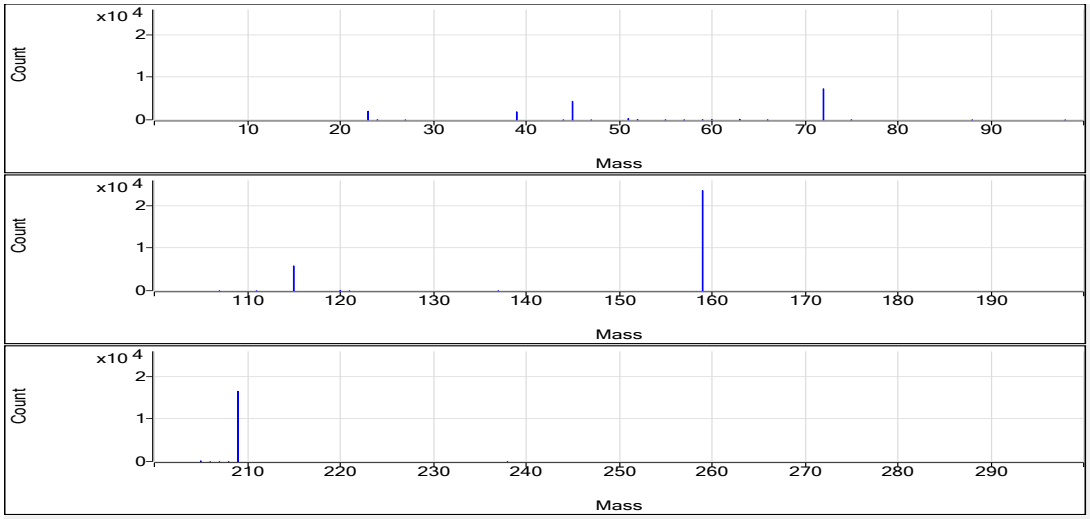


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.083	0	94.00	0.0004	9.309E-06
Be	9	1	No Gas	0.084	0	96.00	0.0004	9.309E-06
Be	9	1	No Gas	0.078	0	90.00	0.0004	9.309E-06
Se	78	2	H2	0.097	0	5.33	0.0004	5.598E-06
Se	78	2	H2	0.081	0	4.67	0.0004	5.598E-06
Se	78	2	H2	0.041	0	2.67	0.0004	5.598E-06
Na	23	3	He	-7.676	0.4417	19632.13	0.0031	0.4657
Na	23	3	He	8.086	0.491	21163.88	0.0031	0.4657
Na	23	3	He	8.154	0.4912	21123.77	0.0031	0.4657
Mg	24	3	He	7.197	0.0146	650.03	0.0015	0.003704
Mg	24	3	He	4.592	0.0107	460.02	0.0015	0.003704
Mg	24	3	He	5.988	0.0128	550.03	0.0015	0.003704
Al	27	3	He	3.766	0.0025	110.00	0.0005	0.0007154
Al	27	3	He	0.952	0.0012	50.00	0.0005	0.0007154
Al	27	3	He	3.944	0.0026	110.00	0.0005	0.0007154
K	39	3	He	50.662	0.4847	21544.86	0.0011	0.4296
K	39	3	He	-2.551	0.4269	18400.76	0.0011	0.4296
K	39	3	He	-39.551	0.3866	16628.66	0.0011	0.4296
Ca	44	3	He	21.842	0.0043	190.01	0.0001	0.002924
Ca	44	3	He	20.245	0.0042	180.01	0.0001	0.002924
Ca	44	3	He	20.402	0.0042	180.01	0.0001	0.002924
Ti	47	3	He	5.574	0.0027	120.00	0.0005	0
Ti	47	3	He	2.874	0.0014	60.00	0.0005	0
Ti	47	3	He	3.84	0.0019	80.00	0.0005	0
V	51	3	He	0.276	0.0154	684.02	0.021	0.009571
V	51	3	He	0.275	0.0154	662.02	0.021	0.009571
V	51	3	He	0.341	0.0167	720.02	0.021	0.009571
Cr	52	3	He	0.075	0.0196	870.05	0.0267	0.01758
Cr	52	3	He	0.28	0.0251	1080.07	0.0267	0.01758
Cr	52	3	He	0.195	0.0228	980.06	0.0267	0.01758
Mn	55	3	He	0.36	0.0081	360.01	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.341	0.0079	340.01	0.0108	0.004199
Mn	55	3	He	0.257	0.007	300.01	0.0108	0.004199
Fe	57	3	He	2.559	0.0043	190.01	0.0005	0.002993
Fe	57	3	He	3.289	0.0046	200.01	0.0005	0.002993
Fe	57	3	He	2.382	0.0042	180.01	0.0005	0.002993
Co	59	3	He	0.217	0.0144	640.04	0.0524	0.003063
Co	59	3	He	0.221	0.0146	630.03	0.0524	0.003063
Co	59	3	He	0.199	0.0135	580.04	0.0524	0.003063
Ni	60	3	He	0.238	0.0138	790.04	0.0109	0.01116
Ni	60	3	He	0.592	0.0176	1040.07	0.0109	0.01116
Ni	60	3	He	0.199	0.0133	780.05	0.0109	0.01116
Cu	63	3	He	0.291	0.0227	1660.13	0.0255	0.01531
Cu	63	3	He	0.277	0.0224	1620.13	0.0255	0.01531
Cu	63	3	He	0.253	0.0217	1580.12	0.0255	0.01531
Zn	66	3	He	0.553	0.0044	320.01	0.0029	0.002787
Zn	66	3	He	0.279	0.0036	260.01	0.0029	0.002787
Zn	66	3	He	0.514	0.0043	310.01	0.0029	0.002787
As	75	3	He	0.347	0.0011	84.00	0.0021	0.0004097
As	75	3	He	0.236	0.0009	66.00	0.0021	0.0004097
As	75	3	He	0.312	0.0011	78.00	0.0021	0.0004097
Sr	88	3	He	0.24	0.0031	180.01	0.0094	0.0008765
Sr	88	3	He	0.213	0.0029	170.01	0.0094	0.0008765
Sr	88	3	He	0.179	0.0026	150.01	0.0094	0.0008765
Mo	98	3	He	0.036	0.001	60.00	0.023	0.0002199
Mo	98	3	He	0.049	0.0014	80.00	0.023	0.0002199
Mo	98	3	He	0.035	0.001	60.00	0.023	0.0002199
Ag	107	3	He	0.008	0.0012	70.00	0.0483	0.0008224
Ag	107	3	He	0.032	0.0024	140.01	0.0483	0.0008224
Ag	107	3	He	0.025	0.0021	120.01	0.0483	0.0008224
Cd	111	3	He	0.022	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.021	0.0001	8.00	0.0053	2.193E-05
Cd	111	3	He	0.009	0.0001	4.00	0.0053	2.193E-05
Sn	120	3	He	0.351	0.0186	1070.08	0.0148	0.01345
Sn	120	3	He	0.386	0.0192	1130.08	0.0148	0.01345
Sn	120	3	He	0.027	0.0139	810.05	0.0148	0.01345
Sb	121	3	He	0.055	0.0012	70.00	0.0143	0.0004392
Sb	121	3	He	0.017	0.0007	40.00	0.0143	0.0004392
Sb	121	3	He	0.077	0.0015	90.00	0.0143	0.0004392
Ba	137	3	He	0.175	0.0009	50.00	0.0044	0.0001096
Ba	137	3	He	0.13	0.0007	40.00	0.0044	0.0001096
Ba	137	3	He	0.249	0.0012	70.00	0.0044	0.0001096
Tl	205	3	He	0.403	0.0086	2010.20	0.0208	0.0002491
Tl	205	3	He	0.373	0.008	1900.18	0.0208	0.0002491
Tl	205	3	He	0.355	0.0076	1780.18	0.0208	0.0002491
Pb	208	3	He	0.053	0.0021	320.02	0.0272	0.0006218
Pb	208	3	He	0.062	0.0023	270.01	0.0272	0.0006218
Pb	208	3	He	0.016	0.0011	140.00	0.0272	0.0006218
U	238	3	He	0.046	0.0013	300.01	0.0275	2.763E-05
U	238	3	He	0.037	0.0011	250.01	0.0275	2.763E-05
U	238	3	He	0.011	0.0003	80.00	0.0275	2.763E-05
Sc	45	1	No Gas			2229625.90		
Sc	45	1	No Gas			2252883.72		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2236852.15		
Ge	72	1	No Gas			1011976.39		
Ge	72	1	No Gas			1023305.53		
Ge	72	1	No Gas			1011180.14		
Sc	45	2	H2			136100.07		
Sc	45	2	H2			132643.57		
Sc	45	2	H2			136130.63		
Ge	72	2	H2			109239.66		
Ge	72	2	H2			111554.94		
Ge	72	2	H2			112390.22		
In	115	2	H2			287488.18		
In	115	2	H2			286676.91		
In	115	2	H2			289019.37		
Sc	45	3	He			44450.94		
Sc	45	3	He			43107.40		
Sc	45	3	He			43007.22		
Ge	72	3	He			73086.38		
Ge	72	3	He			72443.43		
Ge	72	3	He			72664.26		
In	115	3	He			57386.66		
In	115	3	He			58962.26		
In	115	3	He			58479.98		
Tb	159	3	He			232801.89		
Tb	159	3	He			237452.67		
Tb	159	3	He			233678.49		
Bi	209	3	He			163276.75		
Bi	209	3	He			164528.59		
Bi	209	3	He			166654.37		

Quantitation Report

Data File Name	157SMPL.d
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Acq Time	7/17/2024 1:26:08 PM
Sample Name	410-176789-B-32-E
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

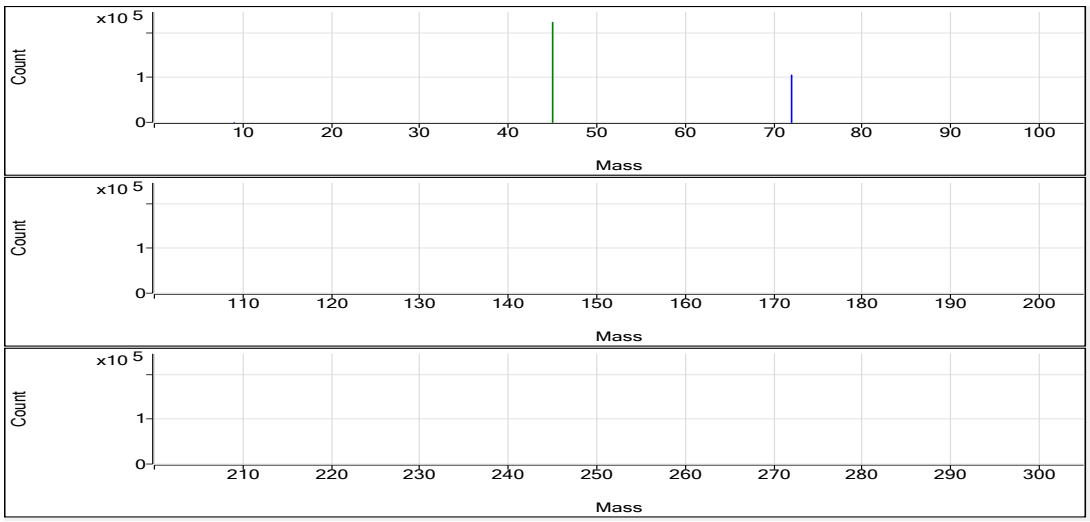
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.015	ppb	30.5	34.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.768	ppb	7.1	91.33	0.0008	Pulse	1.5000	3
Na	23	45	He	365245.226	ppb	0.4	50010147.59	1,142.8597	Analog	0.1000	3
Mg	24	45	He	409.557	ppb	1.1	27356.40	0.6252	Pulse	0.1000	3
Al	27	45	He	564.926	ppb	2.9	11577.68	0.2646	Pulse	0.1000	3
K	39	45	He	340.897	ppb	17.3	35018.17	0.8001	Pulse	0.1000	3
Ca	44	45	He	3465.109	ppb	2.9	9503.00	0.2171	Pulse	0.1000	3
Ti	47	45	He	83.216	ppb	6.1	1763.49	0.0403	Pulse	0.1000	3
V	51	45	He	1.787	ppb	8.3	2064.14	0.0472	Pulse	0.5000	3
Cr	52	45	He	13.020	ppb	3.6	15971.59	0.3650	Pulse	0.1000	3
Mn	55	45	He	79.406	ppb	0.8	37777.88	0.8633	Pulse	0.1000	3
Fe	57	45	He	957.353	ppb	2.1	21114.33	0.4825	Pulse	0.1000	3
Co	59	45	He	7.032	ppb	1.2	16241.99	0.3712	Pulse	0.1000	3
Ni	60	115	He	1.860	ppb	5.7	2843.68	0.0315	Pulse	0.1000	3
Cu	63	72	He	13.687	ppb	0.8	27821.23	0.3640	Pulse	0.1000	3
Zn	66	72	He	32616.013	ppb	0.3	7173075.31	93.8571	Analog	0.1000	3
As	75	72	He	47.937	ppb	2.5	7829.27	0.1024	Pulse	0.5000	3
Sr	88	115	He	9.836	ppb	1.2	8449.15	0.0936	Pulse	0.1000	3
Mo	98	115	He	0.279	ppb	6.9	600.03	0.0066	Pulse	0.1000	3
Ag	107	115	He	-0.012	ppb	N/A	23.33	0.0003	Pulse	0.1000	3
Cd	111	115	He	73.368	ppb	0.6	35331.71	0.3914	Pulse	0.5000	3
Sn	120	115	He	2.356	ppb	3.0	4364.06	0.0483	Pulse	0.1000	3
Sb	121	115	He	30.141	ppb	0.8	38969.58	0.4317	Pulse	0.1000	3
Ba	137	115	He	8.488	ppb	9.2	3350.48	0.0371	Pulse	0.1000	3
Tl	205	159	He	0.163	ppb	17.2	840.05	0.0036	Pulse	0.1000	3
Pb	208	159	He	24535.277	ppb	0.5	153852491.88	667.8553	Analog	0.1000	3
U	238	159	He	0.085	ppb	9.2	546.70	0.0024	Pulse	0.1000	3

ISTD Table:

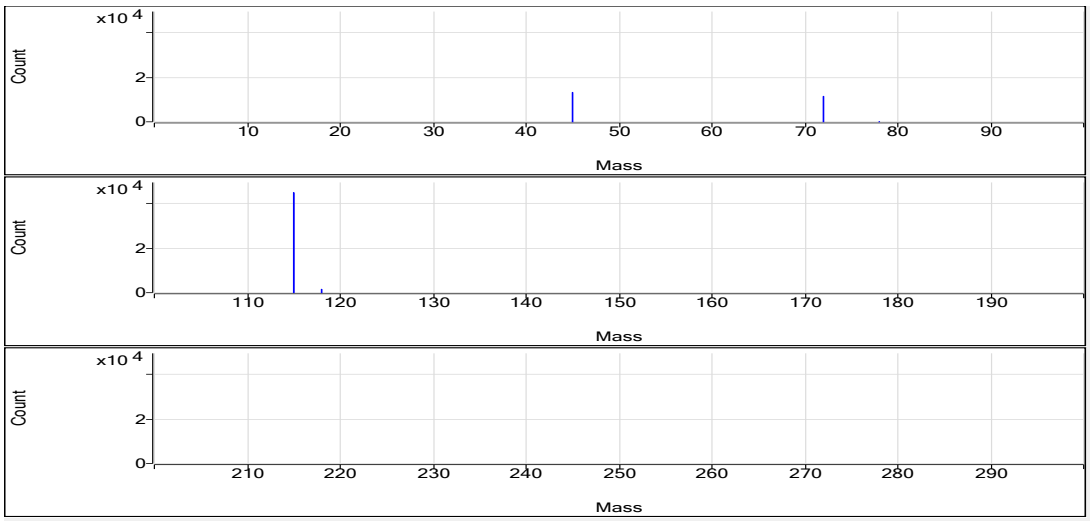
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2235825.38	0.6	97.5	Analog	0.1000	3
No Gas	Ge	72	1057298.63	0.5	101.8	Pulse	0.1000	3
H2	Sc	45	132202.19	1.6	95.1	Pulse	0.1000	3
H2	Ge	72	114707.64	0.9	97.2	Pulse	0.1000	3
H2	In	115	448957.80	1.0	152.4	Pulse	0.1000	3
He	Sc	45	43759.20	0.5	93.4	Pulse	0.1000	3
He	Ge	72	76425.07	0.2	99.9	Pulse	0.1000	3
He	In	115	90274.69	0.7	148.9	Pulse	0.1000	3
He	Tb	159	230369.61	0.3	95.5	Pulse	0.1000	3
He	Bi	209	216114.46	0.7	130.4	Pulse	0.1000	3

No Gas

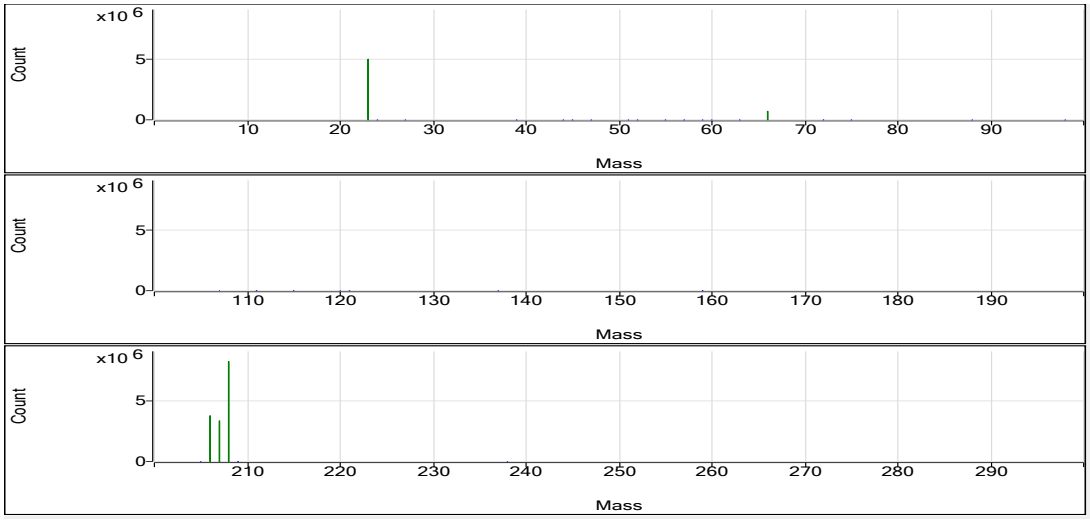


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.01	0	30.00	0.0004	9.309E-06
Be	9	1	No Gas	0.019	0	38.00	0.0004	9.309E-06
Be	9	1	No Gas	0.015	0	34.00	0.0004	9.309E-06
Se	78	2	H2	1.824	0.0008	93.33	0.0004	5.598E-06
Se	78	2	H2	1.624	0.0007	84.67	0.0004	5.598E-06
Se	78	2	H2	1.856	0.0008	96.00	0.0004	5.598E-06
Na	23	3	He	365526.291	1143.7388	50210019.25	0.0031	0.4657
Na	23	3	He	363658.822	1137.8978	49919009.26	0.0031	0.4657
Na	23	3	He	366550.566	1146.9425	49901414.26	0.0031	0.4657
Mg	24	3	He	405.635	0.6192	27182.94	0.0015	0.003704
Mg	24	3	He	414.641	0.6329	27763.60	0.0015	0.003704
Mg	24	3	He	408.396	0.6234	27122.67	0.0015	0.003704
Al	27	3	He	548.793	0.257	11284.15	0.0005	0.0007154
Al	27	3	He	581.896	0.2725	11954.61	0.0005	0.0007154
Al	27	3	He	564.088	0.2642	11494.29	0.0005	0.0007154
K	39	3	He	408.202	0.8733	38335.59	0.0011	0.4296
K	39	3	He	315.42	0.7724	33885.59	0.0011	0.4296
K	39	3	He	299.068	0.7546	32833.34	0.0011	0.4296
Ca	44	3	He	3557.384	0.2229	9783.11	0.0001	0.002924
Ca	44	3	He	3482.422	0.2182	9573.03	0.0001	0.002924
Ca	44	3	He	3355.523	0.2104	9152.86	0.0001	0.002924
Ti	47	3	He	83.249	0.0403	1770.16	0.0005	0
Ti	47	3	He	78.13	0.0378	1660.15	0.0005	0
Ti	47	3	He	88.27	0.0428	1860.16	0.0005	0
V	51	3	He	1.734	0.0461	2022.14	0.021	0.009571
V	51	3	He	1.672	0.0448	1964.13	0.021	0.009571
V	51	3	He	1.954	0.0507	2206.16	0.021	0.009571
Cr	52	3	He	13.229	0.3706	16268.49	0.0267	0.01758
Cr	52	3	He	12.486	0.3508	15387.71	0.0267	0.01758
Cr	52	3	He	13.346	0.3737	16258.58	0.0267	0.01758
Mn	55	3	He	79.631	0.8657	38005.14	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	79.918	0.8688	38115.22	0.0108	0.004199
Mn	55	3	He	78.669	0.8553	37213.28	0.0108	0.004199
Fe	57	3	He	949.293	0.4785	21004.16	0.0005	0.002993
Fe	57	3	He	980.029	0.4938	21664.94	0.0005	0.002993
Fe	57	3	He	942.738	0.4752	20673.90	0.0005	0.002993
Co	59	3	He	6.955	0.3672	16118.60	0.0524	0.003063
Co	59	3	He	7.016	0.3704	16248.60	0.0524	0.003063
Co	59	3	He	7.124	0.376	16358.77	0.0524	0.003063
Ni	60	3	He	1.934	0.0323	2920.36	0.0109	0.01116
Ni	60	3	He	1.909	0.032	2870.35	0.0109	0.01116
Ni	60	3	He	1.738	0.0302	2740.32	0.0109	0.01116
Cu	63	3	He	13.806	0.3671	28054.90	0.0255	0.01531
Cu	63	3	He	13.587	0.3615	27694.29	0.0255	0.01531
Cu	63	3	He	13.669	0.3636	27714.50	0.0255	0.01531
Zn	66	3	He	32605.088	93.8257	7171243.02	0.0029	0.002787
Zn	66	3	He	32728.176	94.1799	7215372.39	0.0029	0.002787
Zn	66	3	He	32514.775	93.5658	7132610.52	0.0029	0.002787
As	75	3	He	46.559	0.0995	7605.82	0.0021	0.0004097
As	75	3	He	48.62	0.1039	7960.00	0.0021	0.0004097
As	75	3	He	48.631	0.1039	7921.99	0.0021	0.0004097
Sr	88	3	He	9.888	0.0941	8502.49	0.0094	0.0008765
Sr	88	3	He	9.701	0.0923	8272.36	0.0094	0.0008765
Sr	88	3	He	9.918	0.0944	8572.61	0.0094	0.0008765
Mo	98	3	He	0.293	0.007	630.03	0.023	0.0002199
Mo	98	3	He	0.257	0.0061	550.03	0.023	0.0002199
Mo	98	3	He	0.287	0.0068	620.03	0.023	0.0002199
Ag	107	3	He	-0.012	0.0002	20.00	0.0483	0.0008224
Ag	107	3	He	-0.015	0.0001	10.00	0.0483	0.0008224
Ag	107	3	He	-0.008	0.0004	40.00	0.0483	0.0008224
Cd	111	3	He	73.346	0.3913	35359.83	0.0053	2.193E-05
Cd	111	3	He	73.791	0.3936	35273.56	0.0053	2.193E-05
Cd	111	3	He	72.968	0.3893	35361.75	0.0053	2.193E-05
Sn	120	3	He	2.403	0.049	4430.76	0.0148	0.01345
Sn	120	3	He	2.393	0.0489	4380.73	0.0148	0.01345
Sn	120	3	He	2.274	0.0471	4280.68	0.0148	0.01345
Sb	121	3	He	30.387	0.4352	39330.50	0.0143	0.0004392
Sb	121	3	He	30.123	0.4314	38658.87	0.0143	0.0004392
Sb	121	3	He	29.913	0.4284	38919.36	0.0143	0.0004392
Ba	137	3	He	8.044	0.0352	3180.44	0.0044	0.0001096
Ba	137	3	He	9.392	0.0411	3680.56	0.0044	0.0001096
Ba	137	3	He	8.027	0.0351	3190.44	0.0044	0.0001096
Tl	205	3	He	0.188	0.0042	960.06	0.0208	0.0002491
Tl	205	3	He	0.17	0.0038	870.06	0.0208	0.0002491
Tl	205	3	He	0.133	0.003	690.04	0.0208	0.0002491
Pb	208	3	He	24535.556	667.8629	82565878.77	0.0272	0.0006218
Pb	208	3	He	24422.69	664.7907	82085598.78	0.0272	0.0006218
Pb	208	3	He	24647.586	670.9124	82604428.77	0.0272	0.0006218
U	238	3	He	0.089	0.0025	570.03	0.0275	2.763E-05
U	238	3	He	0.076	0.0021	490.03	0.0275	2.763E-05
U	238	3	He	0.091	0.0025	580.03	0.0275	2.763E-05
Sc	45	1	No Gas			2246183.56		
Sc	45	1	No Gas			2241742.47		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2219550.12		
Ge	72	1	No Gas			1059812.72		
Ge	72	1	No Gas			1061100.61		
Ge	72	1	No Gas			1050982.56		
Sc	45	2	H2			131835.91		
Sc	45	2	H2			130283.27		
Sc	45	2	H2			134487.40		
Ge	72	2	H2			113620.10		
Ge	72	2	H2			115654.00		
Ge	72	2	H2			114848.81		
In	115	2	H2			444225.77		
In	115	2	H2			452635.38		
In	115	2	H2			450012.26		
Sc	45	3	He			43899.90		
Sc	45	3	He			43869.50		
Sc	45	3	He			43508.21		
Ge	72	3	He			76431.56		
Ge	72	3	He			76612.68		
Ge	72	3	He			76230.96		
In	115	3	He			90402.93		
In	115	3	He			89638.15		
In	115	3	He			90874.65		
Tb	159	3	He			231005.25		
Tb	159	3	He			230581.07		
Tb	159	3	He			229522.52		
Bi	209	3	He			216609.65		
Bi	209	3	He			214501.97		
Bi	209	3	He			217231.75		

Quantitation Report

Data File Name	158SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 1:28:09 PM
Sample Name	410-176789-B-31-E
Sample Type	Sample
Comment	T31
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

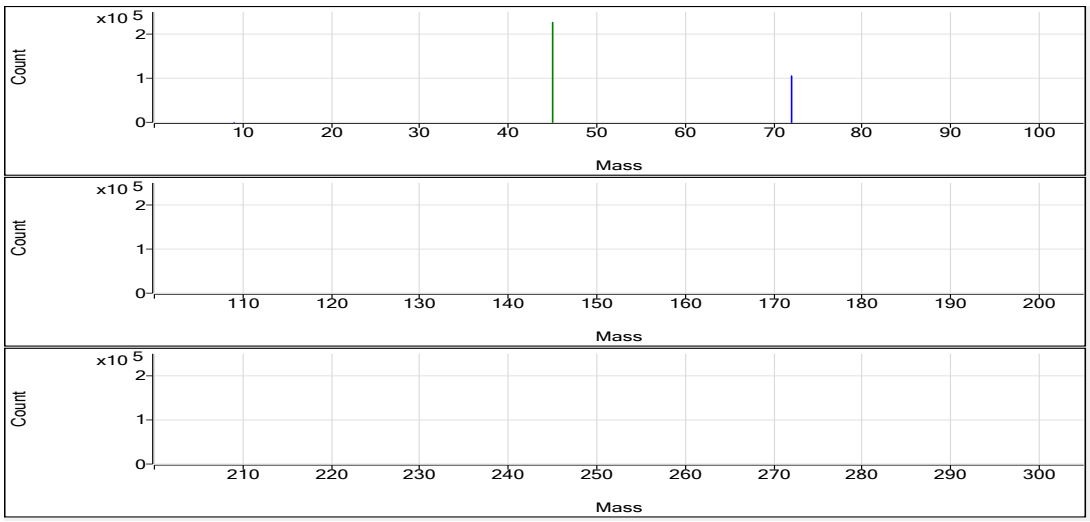
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.021	ppb	45.3	40.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	1.110	ppb	8.4	58.89	0.0005	Pulse	1.5000	3
Na	23	45	He	342081.061	ppb	1.2	48485537.61	1,070.4081	Analog	0.1000	3
Mg	24	45	He	477.393	ppb	2.6	32976.52	0.7281	Pulse	0.1000	3
Al	27	45	He	275.783	ppb	7.3	5864.56	0.1295	Pulse	0.1000	3
K	39	45	He	335.196	ppb	17.8	35980.16	0.7939	Pulse	0.1000	3
Ca	44	45	He	12415.415	ppb	2.8	34897.73	0.7705	Pulse	0.1000	3
Ti	47	45	He	43.468	ppb	5.5	953.39	0.0211	Pulse	0.1000	3
V	51	45	He	0.536	ppb	2.1	944.70	0.0209	Pulse	0.5000	3
Cr	52	45	He	4.563	ppb	3.0	6311.41	0.1393	Pulse	0.1000	3
Mn	55	45	He	111.110	ppb	2.6	54635.56	1.2063	Pulse	0.1000	3
Fe	57	45	He	437.036	ppb	6.9	10050.09	0.2219	Pulse	0.1000	3
Co	59	45	He	11.402	ppb	1.4	27176.66	0.6000	Pulse	0.1000	3
Ni	60	115	He	0.904	ppb	17.3	1636.80	0.0210	Pulse	0.1000	3
Cu	63	72	He	0.983	ppb	0.3	3150.42	0.0404	Pulse	0.1000	3
Zn	66	72	He	25875.018	ppb	1.3	5811811.79	74.4595	Analog	0.1000	3
As	75	72	He	91.853	ppb	0.8	15292.64	0.1959	Pulse	0.5000	3
Sr	88	115	He	15.648	ppb	1.6	11541.23	0.1484	Pulse	0.1000	3
Mo	98	115	He	0.493	ppb	4.8	900.06	0.0116	Pulse	0.1000	3
Ag	107	115	He	-0.013	ppb	N/A	16.67	0.0002	Pulse	0.1000	3
Cd	111	115	He	50.099	ppb	0.6	20789.83	0.2673	Pulse	0.5000	3
Sn	120	115	He	2.797	ppb	6.4	4267.39	0.0549	Pulse	0.1000	3
Sb	121	115	He	26.383	ppb	2.0	29395.32	0.3779	Pulse	0.1000	3
Ba	137	115	He	3.826	ppb	10.8	1306.77	0.0168	Pulse	0.1000	3
Tl	205	159	He	0.037	ppb	32.1	240.01	0.0010	Pulse	0.1000	3
Pb	208	159	He	12381.004	ppb	0.7	80242137.13	337.0138	Analog	0.1000	3
U	238	159	He	0.066	ppb	15.6	436.69	0.0018	Pulse	0.1000	3

ISTD Table:

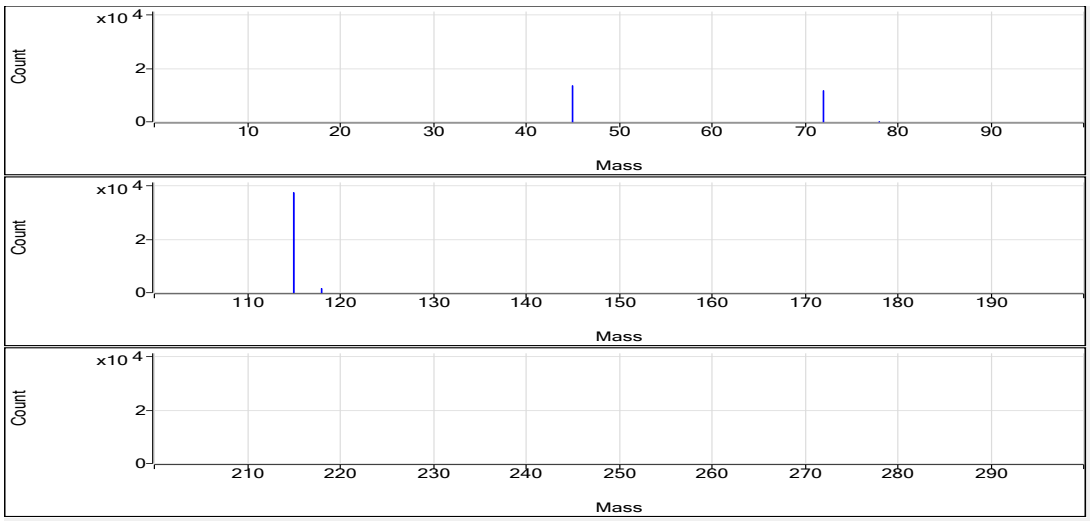
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2274943.40	0.7	99.2	Analog	0.1000	3
No Gas	Ge	72	1056563.84	0.2	101.7	Pulse	0.1000	3
H2	Sc	45	135959.73	1.3	97.8	Pulse	0.1000	3
H2	Ge	72	117342.81	0.6	99.4	Pulse	0.1000	3
H2	In	115	376436.17	0.9	127.8	Pulse	0.1000	3
He	Sc	45	45300.19	1.1	96.7	Pulse	0.1000	3
He	Ge	72	78059.85	1.1	102.1	Pulse	0.1000	3
He	In	115	77787.96	0.5	128.3	Pulse	0.1000	3
He	Tb	159	238107.91	1.0	98.7	Pulse	0.1000	3
He	Bi	209	239348.91	0.5	144.4	Pulse	0.1000	3

No Gas

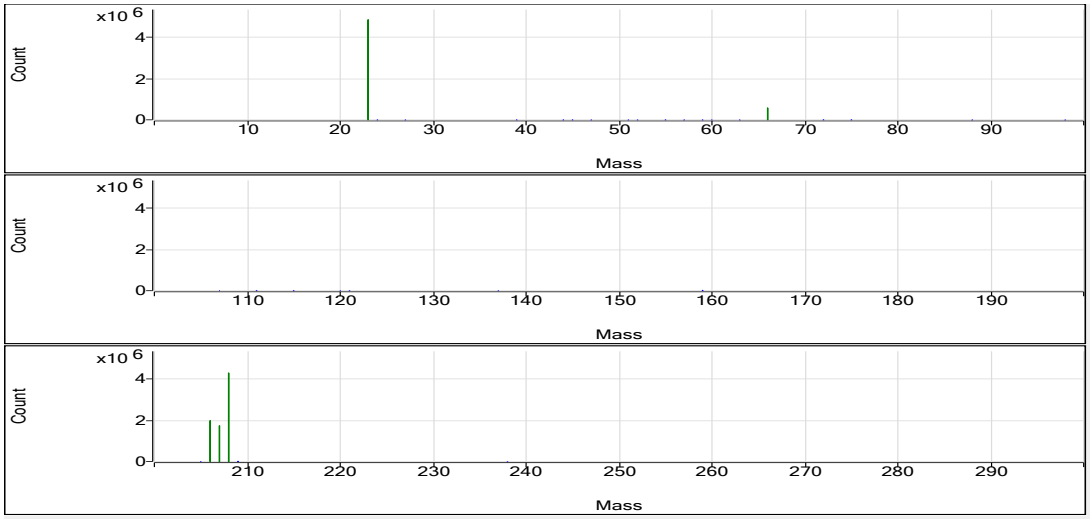


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.017	0	36.00	0.0004	9.309E-06
Be	9	1	No Gas	0.014	0	34.00	0.0004	9.309E-06
Be	9	1	No Gas	0.032	0	50.00	0.0004	9.309E-06
Se	78	2	H2	1.214	0.0005	64.00	0.0004	5.598E-06
Se	78	2	H2	1.081	0.0005	57.33	0.0004	5.598E-06
Se	78	2	H2	1.035	0.0005	55.33	0.0004	5.598E-06
Na	23	3	He	339477.583	1062.2651	48539884.28	0.0031	0.4657
Na	23	3	He	339792.104	1063.2488	48317769.28	0.0031	0.4657
Na	23	3	He	346973.496	1085.7104	48598959.28	0.0031	0.4657
Mg	24	3	He	469.361	0.7159	32712.81	0.0015	0.003704
Mg	24	3	He	471.239	0.7187	32662.48	0.0015	0.003704
Mg	24	3	He	491.577	0.7496	33554.28	0.0015	0.003704
Al	27	3	He	259.03	0.1217	5561.13	0.0005	0.0007154
Al	27	3	He	270.366	0.127	5771.16	0.0005	0.0007154
Al	27	3	He	297.951	0.1399	6261.40	0.0005	0.0007154
K	39	3	He	403.683	0.8683	39678.48	0.0011	0.4296
K	39	3	He	305.813	0.762	34626.93	0.0011	0.4296
K	39	3	He	296.093	0.7514	33635.08	0.0011	0.4296
Ca	44	3	He	12408.878	0.7701	35188.18	0.0001	0.002924
Ca	44	3	He	12071.213	0.7492	34046.11	0.0001	0.002924
Ca	44	3	He	12766.154	0.7922	35458.91	0.0001	0.002924
Ti	47	3	He	41.57	0.0201	920.05	0.0005	0
Ti	47	3	He	42.709	0.0207	940.06	0.0005	0
Ti	47	3	He	46.126	0.0223	1000.07	0.0005	0
V	51	3	He	0.546	0.0211	962.04	0.021	0.009571
V	51	3	He	0.539	0.0209	950.03	0.021	0.009571
V	51	3	He	0.524	0.0206	922.03	0.021	0.009571
Cr	52	3	He	4.427	0.1357	6201.32	0.0267	0.01758
Cr	52	3	He	4.563	0.1393	6331.46	0.0267	0.01758
Cr	52	3	He	4.701	0.143	6401.46	0.0267	0.01758
Mn	55	3	He	108.781	1.1811	53970.15	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	110.242	1.1969	54391.84	0.0108	0.004199
Mn	55	3	He	114.306	1.2409	55544.70	0.0108	0.004199
Fe	57	3	He	453.406	0.2301	10513.70	0.0005	0.002993
Fe	57	3	He	402.309	0.2045	9292.90	0.0005	0.002993
Fe	57	3	He	455.391	0.2311	10343.67	0.0005	0.002993
Co	59	3	He	11.322	0.5958	27223.52	0.0524	0.003063
Co	59	3	He	11.3	0.5947	27023.11	0.0524	0.003063
Co	59	3	He	11.584	0.6095	27283.34	0.0524	0.003063
Ni	60	3	He	0.96	0.0217	1690.14	0.0109	0.01116
Ni	60	3	He	0.727	0.0191	1490.11	0.0109	0.01116
Ni	60	3	He	1.024	0.0224	1730.15	0.0109	0.01116
Cu	63	3	He	0.981	0.0403	3150.44	0.0255	0.01531
Cu	63	3	He	0.986	0.0404	3120.41	0.0255	0.01531
Cu	63	3	He	0.982	0.0403	3180.41	0.0255	0.01531
Zn	66	3	He	26038.789	74.9308	5855832.41	0.0029	0.002787
Zn	66	3	He	26110.083	75.136	5798700.54	0.0029	0.002787
Zn	66	3	He	25476.181	73.3119	5780902.41	0.0029	0.002787
As	75	3	He	91.457	0.1951	15245.27	0.0021	0.0004097
As	75	3	He	92.71	0.1977	15261.24	0.0021	0.0004097
As	75	3	He	91.391	0.1949	15371.42	0.0021	0.0004097
Sr	88	3	He	15.388	0.1459	11384.51	0.0094	0.0008765
Sr	88	3	He	15.9	0.1507	11754.67	0.0094	0.0008765
Sr	88	3	He	15.655	0.1484	11484.51	0.0094	0.0008765
Mo	98	3	He	0.497	0.0117	910.06	0.023	0.0002199
Mo	98	3	He	0.514	0.0121	940.06	0.023	0.0002199
Mo	98	3	He	0.467	0.011	850.05	0.023	0.0002199
Ag	107	3	He	-0.012	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	-0.012	0.0003	20.00	0.0483	0.0008224
Ag	107	3	He	-0.014	0.0001	10.00	0.0483	0.0008224
Cd	111	3	He	49.759	0.2655	20709.75	0.0053	2.193E-05
Cd	111	3	He	50.213	0.2679	20887.95	0.0053	2.193E-05
Cd	111	3	He	50.325	0.2685	20771.78	0.0053	2.193E-05
Sn	120	3	He	2.702	0.0535	4170.70	0.0148	0.01345
Sn	120	3	He	2.686	0.0532	4150.68	0.0148	0.01345
Sn	120	3	He	3.003	0.0579	4480.78	0.0148	0.01345
Sb	121	3	He	26.441	0.3788	29548.99	0.0143	0.0004392
Sb	121	3	He	25.835	0.3701	28857.63	0.0143	0.0004392
Sb	121	3	He	26.871	0.3849	29779.33	0.0143	0.0004392
Ba	137	3	He	4.266	0.0187	1460.12	0.0044	0.0001096
Ba	137	3	He	3.445	0.0151	1180.09	0.0044	0.0001096
Ba	137	3	He	3.768	0.0165	1280.10	0.0044	0.0001096
Tl	205	3	He	0.026	0.0008	190.01	0.0208	0.0002491
Tl	205	3	He	0.049	0.0013	300.01	0.0208	0.0002491
Tl	205	3	He	0.035	0.001	230.01	0.0208	0.0002491
Pb	208	3	He	12279.278	334.2448	42829119.36	0.0272	0.0006218
Pb	208	3	He	12436.567	338.5262	42713014.36	0.0272	0.0006218
Pb	208	3	He	12427.166	338.2703	43278894.36	0.0272	0.0006218
U	238	3	He	0.076	0.0021	510.03	0.0275	2.763E-05
U	238	3	He	0.065	0.0018	430.02	0.0275	2.763E-05
U	238	3	He	0.056	0.0016	370.02	0.0275	2.763E-05
Sc	45	1	No Gas			2256503.25		
Sc	45	1	No Gas			2280261.53		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2288065.43		
Ge	72	1	No Gas			1056492.48		
Ge	72	1	No Gas			1054833.97		
Ge	72	1	No Gas			1058365.06		
Sc	45	2	H2			136776.29		
Sc	45	2	H2			137210.55		
Sc	45	2	H2			133892.35		
Ge	72	2	H2			116711.75		
Ge	72	2	H2			117194.82		
Ge	72	2	H2			118121.86		
In	115	2	H2			375300.62		
In	115	2	H2			380339.45		
In	115	2	H2			373668.43		
Sc	45	3	He			45694.70		
Sc	45	3	He			45443.52		
Sc	45	3	He			44762.36		
Ge	72	3	He			78149.87		
Ge	72	3	He			77176.11		
Ge	72	3	He			78853.57		
In	115	3	He			78045.92		
In	115	3	He			78005.69		
In	115	3	He			77401.89		
Tb	159	3	He			240581.89		
Tb	159	3	He			235859.06		
Tb	159	3	He			237882.79		
Bi	209	3	He			240427.50		
Bi	209	3	He			239602.73		
Bi	209	3	He			238016.50		

Quantitation Report

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Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\24G17A00.b
Acq Time	7/17/2024 1:32:10 PM
Sample Name	CCV 6148199
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

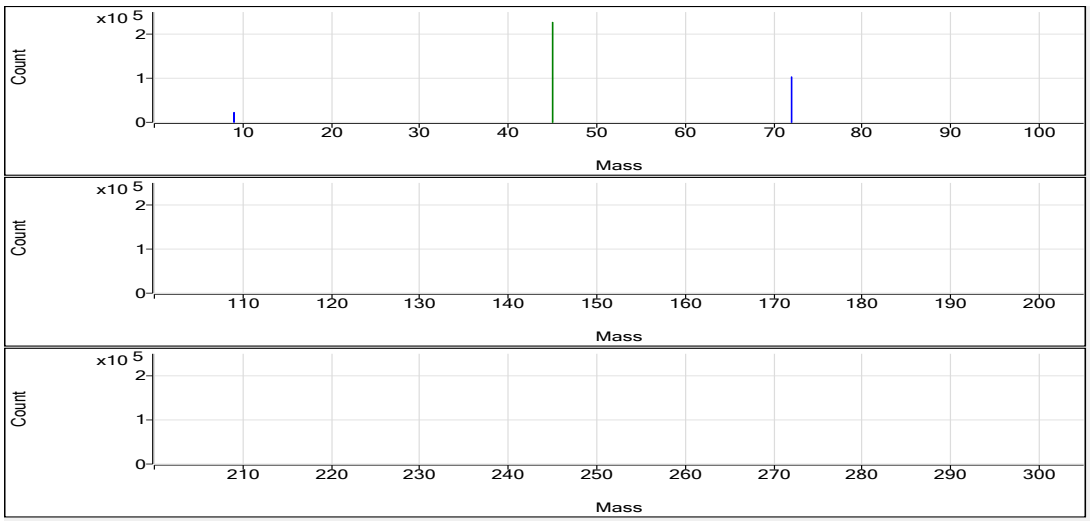
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.072	ppb	1.3	45539.02	0.0199	Pulse	0.5000	3
Se	78	72	H2	52.111	ppb	2.1	2680.45	0.0233	Pulse	1.5000	3
Na	23	45	He	5029.866	ppb	2.0	725708.53	16.1978	Pulse	0.1000	3
Mg	24	45	He	5045.043	ppb	1.5	343165.48	7.6589	Pulse	0.1000	3
Al	27	45	He	4901.696	ppb	1.6	102608.59	2.2902	Pulse	0.1000	3
K	39	45	He	5049.179	ppb	2.1	265102.19	5.9169	Pulse	0.1000	3
Ca	44	45	He	4929.512	ppb	4.0	13782.92	0.3077	Pulse	0.1000	3
Ti	47	45	He	5078.919	ppb	1.0	110225.93	2.4600	Pulse	0.1000	3
V	51	45	He	508.601	ppb	1.5	480056.98	10.7145	Pulse	0.5000	3
Cr	52	45	He	513.801	ppb	1.4	615071.19	13.7278	Pulse	0.1000	3
Mn	55	45	He	504.553	ppb	1.1	244769.35	5.4630	Pulse	0.1000	3
Fe	57	45	He	5128.829	ppb	1.5	115229.26	2.5718	Pulse	0.1000	3
Co	59	45	He	499.962	ppb	1.5	1172832.20	26.1767	Pulse	0.1000	3
Ni	60	115	He	512.546	ppb	0.8	334209.44	5.6153	Pulse	0.1000	3
Cu	63	72	He	505.055	ppb	0.5	947912.82	12.8832	Pulse	0.1000	3
Zn	66	72	He	523.094	ppb	1.2	110949.14	1.5080	Pulse	0.1000	3
As	75	72	He	516.788	ppb	0.4	80964.85	1.1004	Pulse	0.5000	3
Sr	88	115	He	50.176	ppb	0.9	28202.37	0.4738	Pulse	0.1000	3
Mo	98	115	He	50.767	ppb	1.6	69627.18	1.1698	Pulse	0.1000	3
Ag	107	115	He	50.814	ppb	0.8	146140.12	2.4553	Pulse	0.1000	3
Cd	111	115	He	50.502	ppb	2.1	16034.25	0.2694	Pulse	0.5000	3
Sn	120	115	He	50.939	ppb	1.9	45694.84	0.7677	Pulse	0.1000	3
Sb	121	115	He	50.689	ppb	0.4	43190.94	0.7257	Pulse	0.1000	3
Ba	137	115	He	504.802	ppb	0.8	131049.47	2.2018	Pulse	0.1000	3
Tl	205	159	He	51.379	ppb	0.5	253699.27	1.0682	Pulse	0.1000	3
Pb	208	159	He	53.173	ppb	0.3	343902.10	1.4480	Pulse	0.1000	3
U	238	159	He	51.479	ppb	0.5	336281.11	1.4159	Pulse	0.1000	3

ISTD Table:

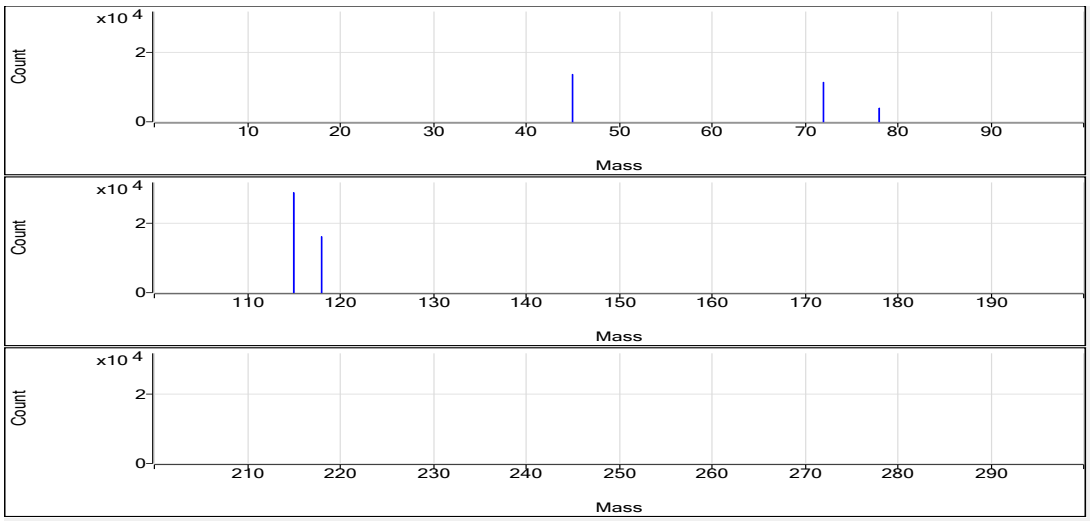
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2284642.68	1.8	99.6	Analog	0.1000	3
No Gas	Ge	72	1038375.56	0.3	99.9	Pulse	0.1000	3
H2	Sc	45	137787.79	1.0	99.1	Pulse	0.1000	3
H2	Ge	72	114965.97	1.8	97.4	Pulse	0.1000	3
H2	In	115	290311.17	1.8	98.5	Pulse	0.1000	3
He	Sc	45	44808.53	1.0	95.7	Pulse	0.1000	3
He	Ge	72	73578.61	1.0	96.2	Pulse	0.1000	3
He	In	115	59518.97	0.6	98.2	Pulse	0.1000	3
He	Tb	159	237502.46	0.2	98.5	Pulse	0.1000	3
He	Bi	209	163960.20	0.9	98.9	Pulse	0.1000	3

No Gas

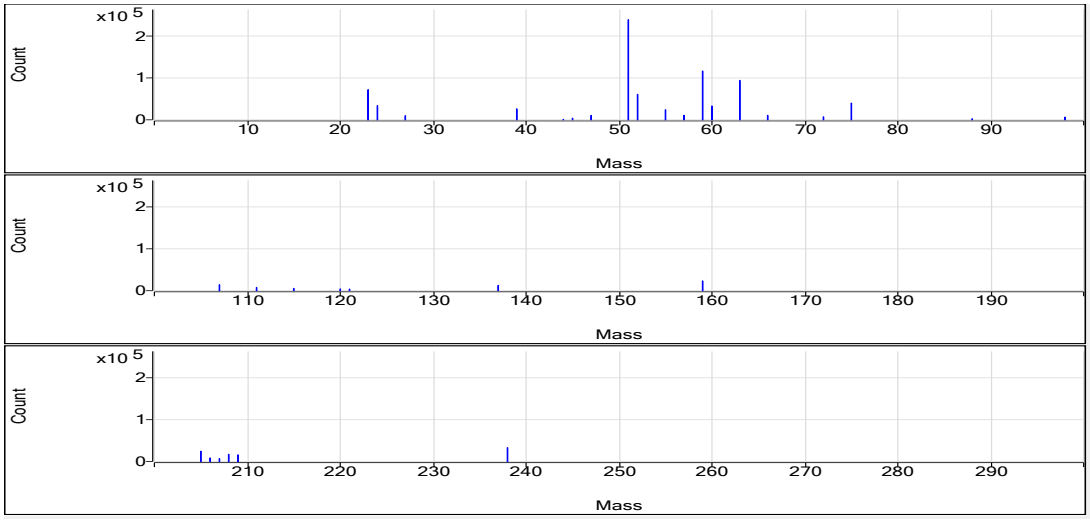


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.637	0.0198	44279.60	0.0004	9.309E-06
Be	9	1	No Gas	49.746	0.0198	46024.34	0.0004	9.309E-06
Be	9	1	No Gas	50.834	0.0202	46313.11	0.0004	9.309E-06
Se	78	2	H2	52.844	0.0236	2692.23	0.0004	5.598E-06
Se	78	2	H2	52.614	0.0235	2761.58	0.0004	5.598E-06
Se	78	2	H2	50.875	0.0228	2587.55	0.0004	5.598E-06
Na	23	3	He	5054.185	16.2739	724692.10	0.0031	0.4657
Na	23	3	He	4920.031	15.8543	718888.04	0.0031	0.4657
Na	23	3	He	5115.382	16.4653	733545.46	0.0031	0.4657
Mg	24	3	He	5006.761	7.6008	338472.38	0.0015	0.003704
Mg	24	3	He	4996.796	7.5857	343962.18	0.0015	0.003704
Mg	24	3	He	5131.572	7.7902	347061.87	0.0015	0.003704
Al	27	3	He	4924.824	2.301	102464.76	0.0005	0.0007154
Al	27	3	He	4816.097	2.2502	102031.52	0.0005	0.0007154
Al	27	3	He	4964.166	2.3194	103329.48	0.0005	0.0007154
K	39	3	He	5165.206	6.043	269100.68	0.0011	0.4296
K	39	3	He	4963.946	5.8243	264092.81	0.0011	0.4296
K	39	3	He	5018.384	5.8834	262113.08	0.0011	0.4296
Ca	44	3	He	5087.677	0.3175	14136.68	0.0001	0.002924
Ca	44	3	He	4706.388	0.2939	13325.76	0.0001	0.002924
Ca	44	3	He	4994.47	0.3117	13886.32	0.0001	0.002924
Ti	47	3	He	5140.384	2.4898	110873.02	0.0005	0
Ti	47	3	He	5049.239	2.4456	110894.12	0.0005	0
Ti	47	3	He	5047.134	2.4446	108910.65	0.0005	0
V	51	3	He	510.717	10.7591	479113.09	0.021	0.009571
V	51	3	He	500.345	10.5408	477955.97	0.021	0.009571
V	51	3	He	514.741	10.8438	483101.88	0.021	0.009571
Cr	52	3	He	513.357	13.7159	610783.27	0.0267	0.01758
Cr	52	3	He	506.742	13.5394	613923.04	0.0267	0.01758
Cr	52	3	He	521.306	13.928	620507.26	0.0267	0.01758
Mn	55	3	He	506.038	5.479	243986.58	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	498.32	5.3955	244652.07	0.0108	0.004199
Mn	55	3	He	509.301	5.5143	245669.39	0.0108	0.004199
Fe	57	3	He	5128.612	2.5717	114520.85	0.0005	0.002993
Fe	57	3	He	5052.581	2.5336	114883.56	0.0005	0.002993
Fe	57	3	He	5205.293	2.6101	116283.38	0.0005	0.002993
Co	59	3	He	500.414	26.2003	1166727.56	0.0524	0.003063
Co	59	3	He	492.289	25.775	1168727.09	0.0524	0.003063
Co	59	3	He	507.184	26.5547	1183041.94	0.0524	0.003063
Ni	60	3	He	515.822	5.6511	334147.65	0.0109	0.01116
Ni	60	3	He	508.263	5.5684	332319.45	0.0109	0.01116
Ni	60	3	He	513.554	5.6263	336161.21	0.0109	0.01116
Cu	63	3	He	504.5	12.869	937703.81	0.0255	0.01531
Cu	63	3	He	507.937	12.9566	952678.50	0.0255	0.01531
Cu	63	3	He	502.729	12.8239	953356.16	0.0255	0.01531
Zn	66	3	He	527.992	1.5221	110908.96	0.0029	0.002787
Zn	66	3	He	525.456	1.5148	111382.13	0.0029	0.002787
Zn	66	3	He	515.834	1.4871	110556.32	0.0029	0.002787
As	75	3	He	516.77	1.1004	80178.34	0.0021	0.0004097
As	75	3	He	519.003	1.1051	81257.66	0.0021	0.0004097
As	75	3	He	514.59	1.0957	81458.55	0.0021	0.0004097
Sr	88	3	He	49.651	0.4689	27724.83	0.0094	0.0008765
Sr	88	3	He	50.422	0.4761	28415.98	0.0094	0.0008765
Sr	88	3	He	50.453	0.4764	28466.30	0.0094	0.0008765
Mo	98	3	He	50.217	1.1571	68418.90	0.023	0.0002199
Mo	98	3	He	50.375	1.1607	69272.25	0.023	0.0002199
Mo	98	3	He	51.71	1.1915	71190.39	0.023	0.0002199
Ag	107	3	He	50.52	2.4411	144341.37	0.0483	0.0008224
Ag	107	3	He	51.251	2.4764	147790.73	0.0483	0.0008224
Ag	107	3	He	50.671	2.4484	146288.26	0.0483	0.0008224
Cd	111	3	He	51.428	0.2744	16222.43	0.0053	2.193E-05
Cd	111	3	He	49.338	0.2632	15707.93	0.0053	2.193E-05
Cd	111	3	He	50.739	0.2707	16172.39	0.0053	2.193E-05
Sn	120	3	He	50.359	0.7591	44885.69	0.0148	0.01345
Sn	120	3	He	50.398	0.7597	45337.31	0.0148	0.01345
Sn	120	3	He	52.062	0.7843	46861.53	0.0148	0.01345
Sb	121	3	He	50.892	0.7286	43080.30	0.0143	0.0004392
Sb	121	3	He	50.705	0.7259	43321.46	0.0143	0.0004392
Sb	121	3	He	50.471	0.7226	43171.05	0.0143	0.0004392
Ba	137	3	He	507.868	2.2152	130985.18	0.0044	0.0001096
Ba	137	3	He	500.367	2.1825	130249.67	0.0044	0.0001096
Ba	137	3	He	506.173	2.2078	131913.56	0.0044	0.0001096
Tl	205	3	He	51.642	1.0737	255426.30	0.0208	0.0002491
Tl	205	3	He	51.209	1.0647	252958.45	0.0208	0.0002491
Tl	205	3	He	51.285	1.0662	252713.06	0.0208	0.0002491
Pb	208	3	He	53.013	1.4436	180415.33	0.0272	0.0006218
Pb	208	3	He	53.253	1.4502	179958.51	0.0272	0.0006218
Pb	208	3	He	53.252	1.4502	180032.42	0.0272	0.0006218
U	238	3	He	51.542	1.4176	337257.81	0.0275	2.763E-05
U	238	3	He	51.708	1.4222	337907.14	0.0275	2.763E-05
U	238	3	He	51.187	1.4079	333678.39	0.0275	2.763E-05
Sc	45	1	No Gas			2240972.31		
Sc	45	1	No Gas			2324209.97		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2288745.75		
Ge	72	1	No Gas			1037578.11		
Ge	72	1	No Gas			1035628.66		
Ge	72	1	No Gas			1041919.91		
Sc	45	2	H2			139398.22		
Sc	45	2	H2			137239.81		
Sc	45	2	H2			136725.33		
Ge	72	2	H2			113881.57		
Ge	72	2	H2			117325.92		
Ge	72	2	H2			113690.42		
In	115	2	H2			287971.13		
In	115	2	H2			296263.16		
In	115	2	H2			286699.23		
Sc	45	3	He			44531.03		
Sc	45	3	He			45343.50		
Sc	45	3	He			44551.05		
Ge	72	3	He			72865.13		
Ge	72	3	He			73528.52		
Ge	72	3	He			74342.19		
In	115	3	He			59443.90		
In	115	3	He			59996.39		
In	115	3	He			60076.20		
Tb	159	3	He			237901.01		
Tb	159	3	He			237595.11		
Tb	159	3	He			237011.25		
Bi	209	3	He			164802.93		
Bi	209	3	He			162215.17		
Bi	209	3	He			164862.50		

Quantitation Report

Data File Name	161_CCB.d
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Sample Type	CCB
Comment	---
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

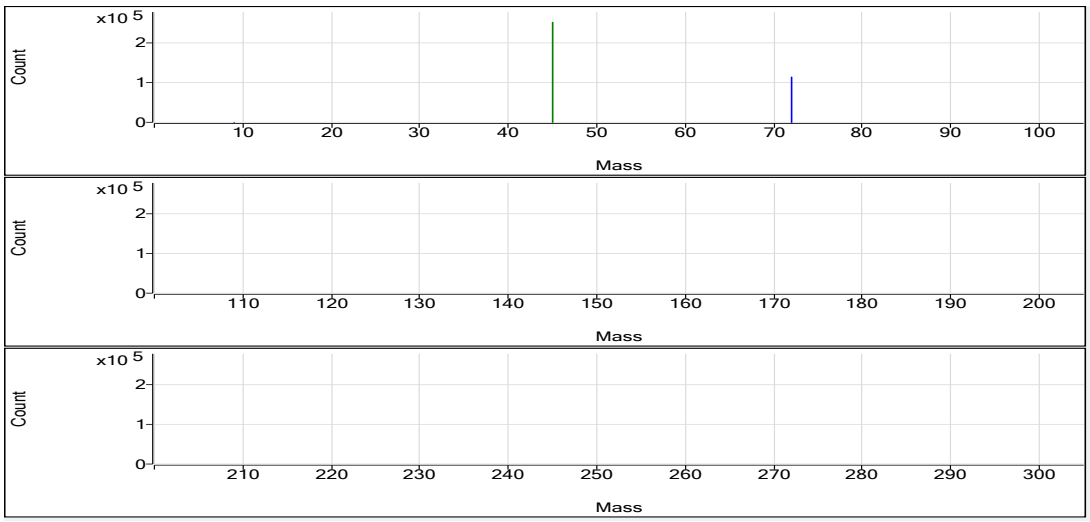
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.015	ppb	78.5	38.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.086	ppb	7.6	5.55	0.0000	Pulse	1.5000	3
Na	23	45	He	-9.413	ppb	N/A	21698.24	0.4362	Pulse	0.1000	3
Mg	24	45	He	2.243	ppb	94.5	353.35	0.0071	Pulse	0.1000	3
Al	27	45	He	3.178	ppb	56.5	110.01	0.0022	Pulse	0.1000	3
K	39	45	He	-60.906	ppb	N/A	18093.85	0.3634	Pulse	0.1000	3
Ca	44	45	He	-1.703	ppb	N/A	140.00	0.0028	Pulse	0.1000	3
Ti	47	45	He	2.883	ppb	64.8	70.00	0.0014	Pulse	0.1000	3
V	51	45	He	0.158	ppb	82.2	642.69	0.0129	Pulse	0.5000	3
Cr	52	45	He	0.220	ppb	96.6	1170.09	0.0234	Pulse	0.1000	3
Mn	55	45	He	0.157	ppb	36.9	293.35	0.0059	Pulse	0.1000	3
Fe	57	45	He	0.722	ppb	93.1	166.68	0.0034	Pulse	0.1000	3
Co	59	45	He	0.203	ppb	32.1	683.37	0.0137	Pulse	0.1000	3
Ni	60	115	He	0.279	ppb	35.4	930.06	0.0142	Pulse	0.1000	3
Cu	63	72	He	0.211	ppb	54.6	1696.81	0.0207	Pulse	0.1000	3
Zn	66	72	He	3.394	ppb	14.0	1030.07	0.0126	Pulse	0.1000	3
As	75	72	He	0.246	ppb	64.2	76.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.015	ppb	222.2	66.67	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.037	ppb	37.2	70.00	0.0011	Pulse	0.1000	3
Ag	107	115	He	0.014	ppb	67.4	96.67	0.0015	Pulse	0.1000	3
Cd	111	115	He	0.026	ppb	69.7	10.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.183	ppb	246.0	1057.20	0.0162	Pulse	0.1000	3
Sb	121	115	He	0.041	ppb	54.7	66.67	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.279	ppb	135.9	86.69	0.0013	Pulse	0.1000	3
Tl	205	159	He	0.207	ppb	30.8	1216.78	0.0045	Pulse	0.1000	3
Pb	208	159	He	1.119	ppb	17.0	8311.50	0.0311	Pulse	0.1000	3
U	238	159	He	0.025	ppb	39.0	193.34	0.0007	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2518431.11	2.8	109.8	Analog	0.1000	3
No Gas	Ge	72	1141022.53	2.0	109.8	Pulse	0.1000	3
H2	Sc	45	153632.79	2.0	110.5	Pulse	0.1000	3
H2	Ge	72	126618.80	0.4	107.2	Pulse	0.1000	3
H2	In	115	325524.89	2.3	110.5	Pulse	0.1000	3
He	Sc	45	49729.64	2.2	106.2	Pulse	0.1000	3
He	Ge	72	81942.82	2.4	107.2	Pulse	0.1000	3
He	In	115	65384.34	1.1	107.8	Pulse	0.1000	3
He	Tb	159	267145.08	0.9	110.8	Pulse	0.1000	3
He	Bi	209	186316.94	1.3	112.4	Pulse	0.1000	3

No Gas



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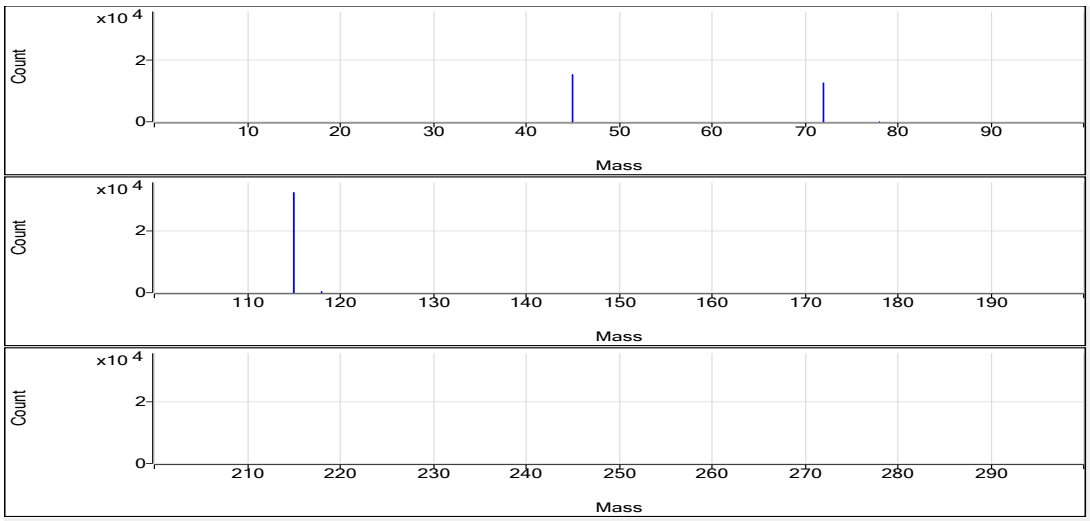
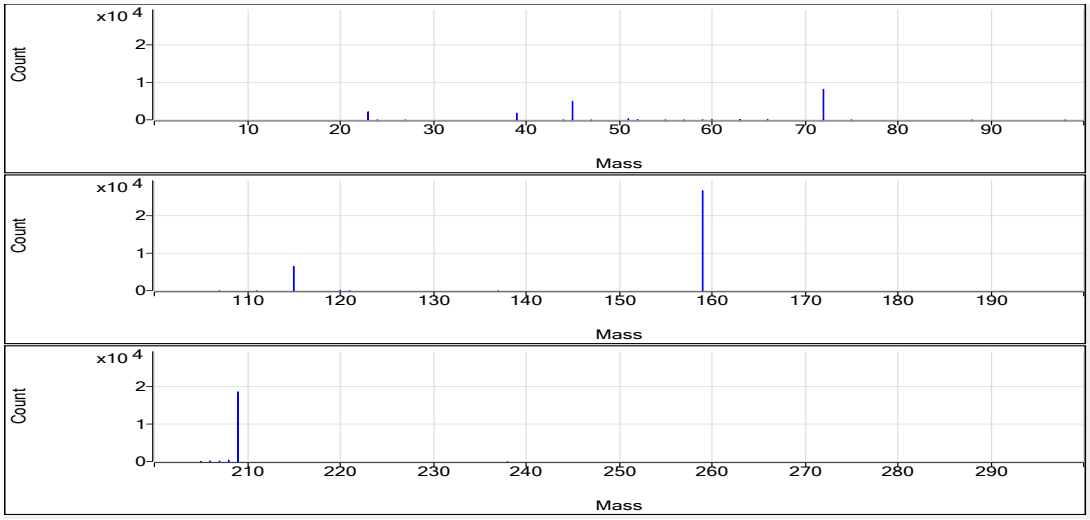


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.028	0	50.00	0.0004	9.309E-06
Be	9	1	No Gas	0.015	0	38.00	0.0004	9.309E-06
Be	9	1	No Gas	0.004	0	28.00	0.0004	9.309E-06
Se	78	2	H2	0.082	0	5.33	0.0004	5.598E-06
Se	78	2	H2	0.082	0	5.33	0.0004	5.598E-06
Se	78	2	H2	0.093	0	6.00	0.0004	5.598E-06
Na	23	3	He	-12.687	0.426	21524.57	0.0031	0.4657
Na	23	3	He	-2.485	0.4579	22966.76	0.0031	0.4657
Na	23	3	He	-13.069	0.4248	20603.38	0.0031	0.4657
Mg	24	3	He	4.081	0.0099	500.03	0.0015	0.003704
Mg	24	3	He	-0.076	0.0036	180.01	0.0015	0.003704
Mg	24	3	He	2.723	0.0078	380.02	0.0015	0.003704
Al	27	3	He	4.401	0.0028	140.01	0.0005	0.0007154
Al	27	3	He	4.018	0.0026	130.01	0.0005	0.0007154
Al	27	3	He	1.117	0.0012	60.00	0.0005	0.0007154
K	39	3	He	-20.675	0.4072	20573.47	0.0011	0.4296
K	39	3	He	-76.676	0.3463	17369.66	0.0011	0.4296
K	39	3	He	-85.366	0.3369	16338.42	0.0011	0.4296
Ca	44	3	He	-5.685	0.0026	130.00	0.0001	0.002924
Ca	44	3	He	-2.152	0.0028	140.00	0.0001	0.002924
Ca	44	3	He	2.727	0.0031	150.01	0.0001	0.002924
Ti	47	3	He	3.269	0.0016	80.00	0.0005	0
Ti	47	3	He	4.528	0.0022	110.00	0.0005	0
Ti	47	3	He	0.851	0.0004	20.00	0.0005	0
V	51	3	He	0.168	0.0131	662.02	0.021	0.009571
V	51	3	He	0.282	0.0155	778.03	0.021	0.009571
V	51	3	He	0.023	0.0101	488.01	0.021	0.009571
Cr	52	3	He	0.335	0.0265	1340.10	0.0267	0.01758
Cr	52	3	He	0.35	0.0269	1350.11	0.0267	0.01758
Cr	52	3	He	-0.025	0.0169	820.05	0.0267	0.01758
Mn	55	3	He	0.106	0.0053	270.01	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.22	0.0066	330.02	0.0108	0.004199
Mn	55	3	He	0.145	0.0058	280.01	0.0108	0.004199
Fe	57	3	He	-0.048	0.003	150.01	0.0005	0.002993
Fe	57	3	He	1.19	0.0036	180.01	0.0005	0.002993
Fe	57	3	He	1.023	0.0035	170.01	0.0005	0.002993
Co	59	3	He	0.202	0.0137	690.05	0.0524	0.003063
Co	59	3	He	0.269	0.0171	860.05	0.0524	0.003063
Co	59	3	He	0.138	0.0103	500.02	0.0524	0.003063
Ni	60	3	He	0.321	0.0147	970.06	0.0109	0.01116
Ni	60	3	He	0.35	0.015	980.07	0.0109	0.01116
Ni	60	3	He	0.166	0.013	840.04	0.0109	0.01116
Cu	63	3	He	0.238	0.0214	1800.15	0.0255	0.01531
Cu	63	3	He	0.311	0.0232	1880.17	0.0255	0.01531
Cu	63	3	He	0.085	0.0175	1410.10	0.0255	0.01531
Zn	66	3	He	3.777	0.0137	1150.09	0.0029	0.002787
Zn	66	3	He	3.543	0.013	1050.08	0.0029	0.002787
Zn	66	3	He	2.864	0.011	890.05	0.0029	0.002787
As	75	3	He	0.332	0.0011	94.00	0.0021	0.0004097
As	75	3	He	0.342	0.0011	92.00	0.0021	0.0004097
As	75	3	He	0.064	0.0005	44.00	0.0021	0.0004097
Sr	88	3	He	0.003	0.0009	60.00	0.0094	0.0008765
Sr	88	3	He	0.053	0.0014	90.00	0.0094	0.0008765
Sr	88	3	He	-0.011	0.0008	50.00	0.0094	0.0008765
Mo	98	3	He	0.023	0.0008	50.00	0.023	0.0002199
Mo	98	3	He	0.037	0.0011	70.00	0.023	0.0002199
Mo	98	3	He	0.051	0.0014	90.00	0.023	0.0002199
Ag	107	3	He	0.008	0.0012	80.00	0.0483	0.0008224
Ag	107	3	He	0.024	0.002	130.00	0.0483	0.0008224
Ag	107	3	He	0.009	0.0012	80.00	0.0483	0.0008224
Cd	111	3	He	0.013	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.048	0.0003	18.00	0.0053	2.193E-05
Cd	111	3	He	0.019	0.0001	8.00	0.0053	2.193E-05
Sn	120	3	He	-0.081	0.0123	810.05	0.0148	0.01345
Sn	120	3	He	0.705	0.0239	1561.49	0.0148	0.01345
Sn	120	3	He	-0.073	0.0124	800.06	0.0148	0.01345
Sb	121	3	He	0.033	0.0009	60.00	0.0143	0.0004392
Sb	121	3	He	0.066	0.0014	90.00	0.0143	0.0004392
Sb	121	3	He	0.023	0.0008	50.00	0.0143	0.0004392
Ba	137	3	He	0.114	0.0006	40.00	0.0044	0.0001096
Ba	137	3	He	0.712	0.0032	210.06	0.0044	0.0001096
Ba	137	3	He	0.01	0.0002	10.00	0.0044	0.0001096
Tl	205	3	He	0.227	0.005	1330.14	0.0208	0.0002491
Tl	205	3	He	0.258	0.0056	1510.16	0.0208	0.0002491
Tl	205	3	He	0.135	0.0031	810.05	0.0208	0.0002491
Pb	208	3	He	1.168	0.0324	4701.13	0.0272	0.0006218
Pb	208	3	He	1.28	0.0355	4891.22	0.0272	0.0006218
Pb	208	3	He	0.909	0.0254	3650.67	0.0272	0.0006218
U	238	3	He	0.029	0.0008	220.01	0.0275	2.763E-05
U	238	3	He	0.033	0.0009	250.01	0.0275	2.763E-05
U	238	3	He	0.014	0.0004	110.00	0.0275	2.763E-05
Sc	45	1	No Gas			2449239.65		
Sc	45	1	No Gas			2515354.96		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2590698.71		
Ge	72	1	No Gas			1128794.12		
Ge	72	1	No Gas			1126967.17		
Ge	72	1	No Gas			1167306.31		
Sc	45	2	H2			152116.57		
Sc	45	2	H2			151631.11		
Sc	45	2	H2			157150.69		
Ge	72	2	H2			126125.59		
Ge	72	2	H2			126608.76		
Ge	72	2	H2			127122.04		
In	115	2	H2			323246.66		
In	115	2	H2			319478.80		
In	115	2	H2			333849.21		
Sc	45	3	He			50528.93		
Sc	45	3	He			50157.52		
Sc	45	3	He			48502.46		
Ge	72	3	He			84231.07		
Ge	72	3	He			80894.68		
Ge	72	3	He			80702.72		
In	115	3	He			66091.86		
In	115	3	He			65378.47		
In	115	3	He			64704.88		
Tb	159	3	He			267601.40		
Tb	159	3	He			269297.89		
Tb	159	3	He			264535.95		
Bi	209	3	He			189059.39		
Bi	209	3	He			185257.54		
Bi	209	3	He			184633.90		

Quantitation Report

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Sample Type	Sample
Comment	E1
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

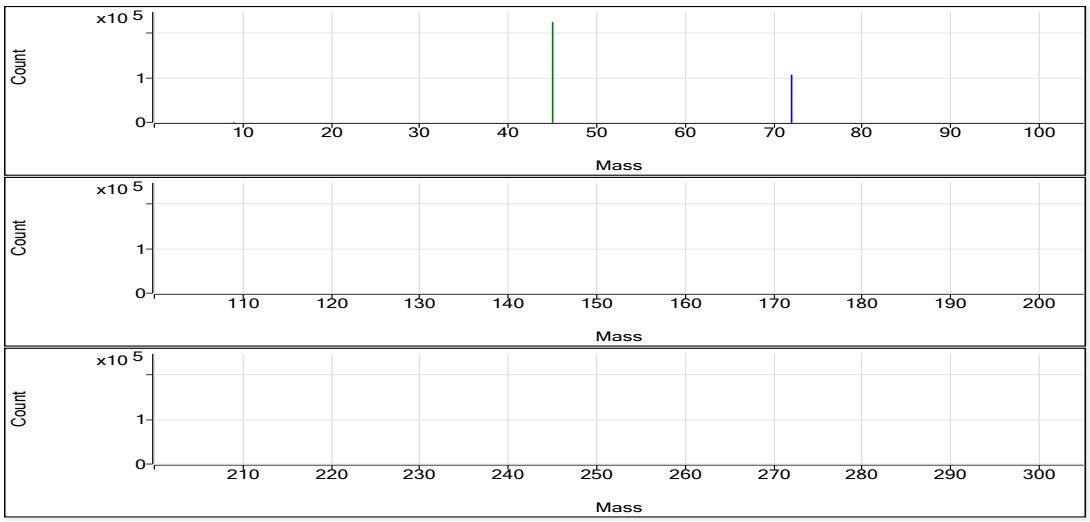
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.017	ppb	73.7	36.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.060	ppb	55.8	3.55	0.0000	Pulse	1.5000	3
Na	23	45	He	12550.208	ppb	2.3	1808866.48	39.7195	Analog	0.1000	3
Mg	24	45	He	1679.685	ppb	2.9	116230.26	2.5524	Pulse	0.1000	3
Al	27	45	He	37.320	ppb	11.5	826.72	0.0181	Pulse	0.1000	3
K	39	45	He	735.359	ppb	8.4	55952.56	1.2288	Pulse	0.1000	3
Ca	44	45	He	2088.378	ppb	6.0	6011.27	0.1320	Pulse	0.1000	3
Ti	47	45	He	4.243	ppb	33.6	93.33	0.0021	Pulse	0.1000	3
V	51	45	He	2.218	ppb	1.3	2562.22	0.0563	Pulse	0.5000	3
Cr	52	45	He	0.778	ppb	7.4	1746.82	0.0383	Pulse	0.1000	3
Mn	55	45	He	9.240	ppb	4.4	4744.20	0.1042	Pulse	0.1000	3
Fe	57	45	He	43.658	ppb	9.0	1133.41	0.0249	Pulse	0.1000	3
Co	59	45	He	0.055	ppb	68.0	270.01	0.0059	Pulse	0.1000	3
Ni	60	115	He	0.621	ppb	3.2	1036.73	0.0180	Pulse	0.1000	3
Cu	63	72	He	0.050	ppb	34.9	1293.44	0.0166	Pulse	0.1000	3
Zn	66	72	He	1.750	ppb	16.9	610.03	0.0078	Pulse	0.1000	3
As	75	72	He	0.201	ppb	60.1	65.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	17.209	ppb	2.4	9416.44	0.1631	Pulse	0.1000	3
Mo	98	115	He	0.206	ppb	10.8	286.68	0.0050	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	46.67	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	3.5	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.094	ppb	N/A	696.70	0.0121	Pulse	0.1000	3
Sb	121	115	He	0.018	ppb	134.6	40.00	0.0007	Pulse	0.1000	3
Ba	137	115	He	1.046	ppb	32.2	270.01	0.0047	Pulse	0.1000	3
Tl	205	159	He	0.042	ppb	25.9	256.68	0.0011	Pulse	0.1000	3
Pb	208	159	He	0.580	ppb	13.7	3743.65	0.0164	Pulse	0.1000	3
U	238	159	He	0.018	ppb	17.6	120.00	0.0005	Pulse	0.1000	3

ISTD Table:

Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2255977.00	2.0	98.3	Analog	0.1000	3
No Gas	Ge	72	1067217.90	1.0	102.7	Pulse	0.1000	3
H2	Sc	45	125658.83	0.4	90.4	Pulse	0.1000	3
H2	Ge	72	109484.35	1.1	92.7	Pulse	0.1000	3
H2	In	115	284479.59	0.2	96.6	Pulse	0.1000	3
He	Sc	45	45553.98	1.9	97.3	Pulse	0.1000	3
He	Ge	72	77979.87	0.7	102.0	Pulse	0.1000	3
He	In	115	57732.74	1.3	95.2	Pulse	0.1000	3
He	Tb	159	228291.38	1.1	94.7	Pulse	0.1000	3
He	Bi	209	159819.58	1.5	96.4	Pulse	0.1000	3

No Gas



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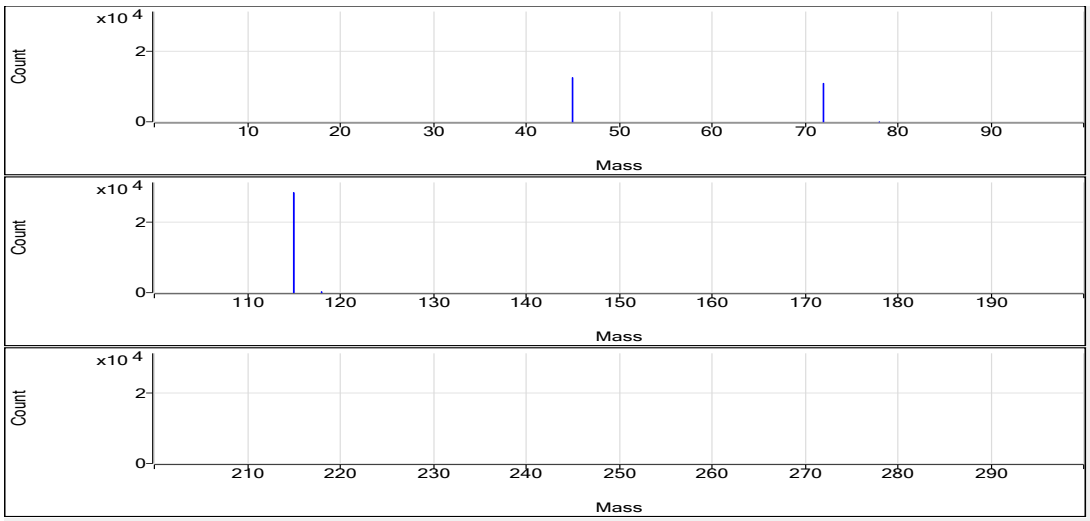
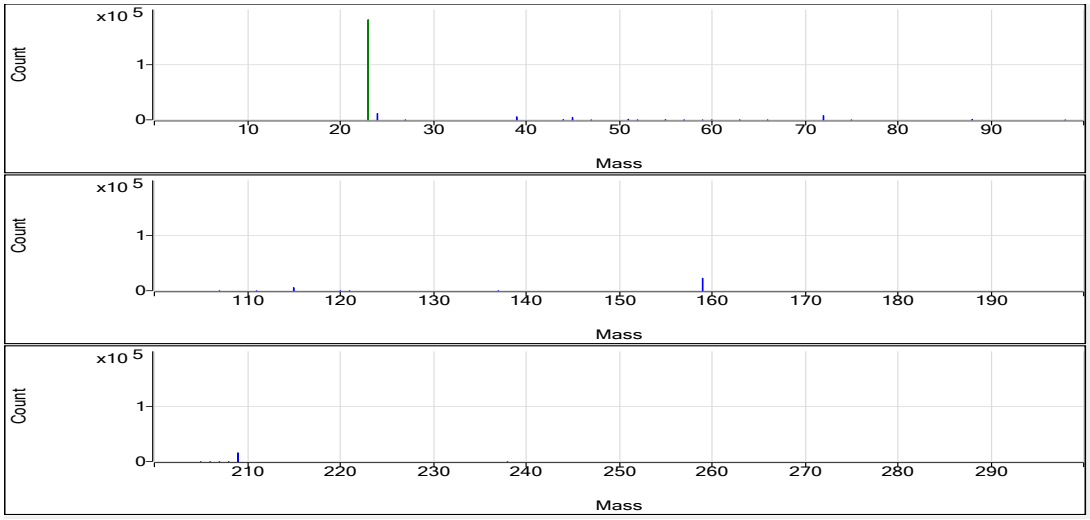


Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.019	0	38.00	0.0004	9.309E-06
Be	9	1	No Gas	0.029	0	48.00	0.0004	9.309E-06
Be	9	1	No Gas	0.004	0	24.00	0.0004	9.309E-06
Se	78	2	H2	0.029	0	2.00	0.0004	5.598E-06
Se	78	2	H2	0.056	0	3.33	0.0004	5.598E-06
Se	78	2	H2	0.095	0	5.33	0.0004	5.598E-06
Na	23	3	He	12638.854	39.9968	1819607.16	0.0031	0.4657
Na	23	3	He	12788.016	40.4633	1809582.47	0.0031	0.4657
Na	23	3	He	12223.755	38.6985	1797409.82	0.0031	0.4657
Mg	24	3	He	1672.298	2.5412	115609.00	0.0015	0.003704
Mg	24	3	He	1732.08	2.6319	117703.20	0.0015	0.003704
Mg	24	3	He	1634.676	2.4841	115378.59	0.0015	0.003704
Al	27	3	He	42.237	0.0204	930.05	0.0005	0.0007154
Al	27	3	He	34.376	0.0168	750.05	0.0005	0.0007154
Al	27	3	He	35.347	0.0172	800.05	0.0005	0.0007154
K	39	3	He	793.676	1.2922	58785.77	0.0011	0.4296
K	39	3	He	741.315	1.2353	55242.99	0.0011	0.4296
K	39	3	He	671.086	1.1589	53828.92	0.0011	0.4296
Ca	44	3	He	2189.602	0.1383	6291.38	0.0001	0.002924
Ca	44	3	He	2126.918	0.1344	6011.27	0.0001	0.002924
Ca	44	3	He	1948.615	0.1234	5731.15	0.0001	0.002924
Ti	47	3	He	5.446	0.0026	120.00	0.0005	0
Ti	47	3	He	4.617	0.0022	100.00	0.0005	0
Ti	47	3	He	2.667	0.0013	60.00	0.0005	0
V	51	3	He	2.227	0.0565	2568.22	0.021	0.009571
V	51	3	He	2.24	0.0567	2536.21	0.021	0.009571
V	51	3	He	2.187	0.0556	2582.22	0.021	0.009571
Cr	52	3	He	0.758	0.0378	1720.15	0.0267	0.01758
Cr	52	3	He	0.732	0.0371	1660.13	0.0267	0.01758
Cr	52	3	He	0.842	0.04	1860.18	0.0267	0.01758
Mn	55	3	He	9.671	0.1088	4950.91	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	9.183	0.1035	4630.82	0.0108	0.004199
Mn	55	3	He	8.867	0.1001	4650.87	0.0108	0.004199
Fe	57	3	He	40.987	0.0235	1070.07	0.0005	0.002993
Fe	57	3	He	41.797	0.0239	1070.07	0.0005	0.002993
Fe	57	3	He	48.191	0.0271	1260.09	0.0005	0.002993
Co	59	3	He	0.097	0.0081	370.02	0.0524	0.003063
Co	59	3	He	0.027	0.0045	200.01	0.0524	0.003063
Co	59	3	He	0.04	0.0052	240.01	0.0524	0.003063
Ni	60	3	He	0.599	0.0177	1010.06	0.0109	0.01116
Ni	60	3	He	0.635	0.0181	1060.07	0.0109	0.01116
Ni	60	3	He	0.629	0.018	1040.07	0.0109	0.01116
Cu	63	3	He	0.07	0.0171	1330.09	0.0255	0.01531
Cu	63	3	He	0.044	0.0164	1290.11	0.0255	0.01531
Cu	63	3	He	0.037	0.0162	1260.11	0.0255	0.01531
Zn	66	3	He	1.443	0.0069	540.03	0.0029	0.002787
Zn	66	3	He	1.775	0.0079	620.03	0.0029	0.002787
Zn	66	3	He	2.033	0.0086	670.03	0.0029	0.002787
As	75	3	He	0.315	0.0011	84.00	0.0021	0.0004097
As	75	3	He	0.214	0.0009	68.00	0.0021	0.0004097
As	75	3	He	0.074	0.0006	44.00	0.0021	0.0004097
Sr	88	3	He	17.157	0.1626	9273.08	0.0094	0.0008765
Sr	88	3	He	17.642	0.1672	9783.30	0.0094	0.0008765
Sr	88	3	He	16.827	0.1595	9192.93	0.0094	0.0008765
Mo	98	3	He	0.196	0.0047	270.01	0.023	0.0002199
Mo	98	3	He	0.191	0.0046	270.01	0.023	0.0002199
Mo	98	3	He	0.231	0.0056	320.01	0.023	0.0002199
Ag	107	3	He	-0.01	0.0004	20.00	0.0483	0.0008224
Ag	107	3	He	0.011	0.0014	80.00	0.0483	0.0008224
Ag	107	3	He	-0.003	0.0007	40.00	0.0483	0.0008224
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Cd	111	3	He	0.002	0	2.00	0.0053	2.193E-05
Sn	120	3	He	-0.103	0.0119	680.03	0.0148	0.01345
Sn	120	3	He	-0.089	0.0121	710.04	0.0148	0.01345
Sn	120	3	He	-0.088	0.0121	700.04	0.0148	0.01345
Sb	121	3	He	0.018	0.0007	40.00	0.0143	0.0004392
Sb	121	3	He	0.041	0.001	60.00	0.0143	0.0004392
Sb	121	3	He	-0.006	0.0003	20.00	0.0143	0.0004392
Ba	137	3	He	0.739	0.0033	190.01	0.0044	0.0001096
Ba	137	3	He	0.993	0.0044	260.01	0.0044	0.0001096
Ba	137	3	He	1.407	0.0062	360.01	0.0044	0.0001096
Tl	205	3	He	0.047	0.0012	280.01	0.0208	0.0002491
Tl	205	3	He	0.05	0.0013	290.01	0.0208	0.0002491
Tl	205	3	He	0.03	0.0009	200.01	0.0208	0.0002491
Pb	208	3	He	0.623	0.0176	1950.20	0.0272	0.0006218
Pb	208	3	He	0.629	0.0177	2060.22	0.0272	0.0006218
Pb	208	3	He	0.489	0.0139	1810.16	0.0272	0.0006218
U	238	3	He	0.021	0.0006	140.00	0.0275	2.763E-05
U	238	3	He	0.015	0.0004	100.00	0.0275	2.763E-05
U	238	3	He	0.018	0.0005	120.00	0.0275	2.763E-05
Sc	45	1	No Gas			2274999.03		
Sc	45	1	No Gas			2287295.43		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2205636.53		
Ge	72	1	No Gas			1078799.59		
Ge	72	1	No Gas			1064309.98		
Ge	72	1	No Gas			1058544.12		
Sc	45	2	H2			125094.77		
Sc	45	2	H2			126182.83		
Sc	45	2	H2			125698.88		
Ge	72	2	H2			108534.77		
Ge	72	2	H2			109098.12		
Ge	72	2	H2			110820.15		
In	115	2	H2			284237.69		
In	115	2	H2			283991.30		
In	115	2	H2			285209.78		
Sc	45	3	He			45493.84		
Sc	45	3	He			44721.55		
Sc	45	3	He			46446.55		
Ge	72	3	He			77819.16		
Ge	72	3	He			78552.43		
Ge	72	3	He			77568.01		
In	115	3	He			57035.08		
In	115	3	He			58530.81		
In	115	3	He			57646.96		
Tb	159	3	He			227025.68		
Tb	159	3	He			226539.00		
Tb	159	3	He			231309.47		
Bi	209	3	He			162268.07		
Bi	209	3	He			159565.82		
Bi	209	3	He			157624.86		

Quantitation Report

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Sample Type	CCV
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Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

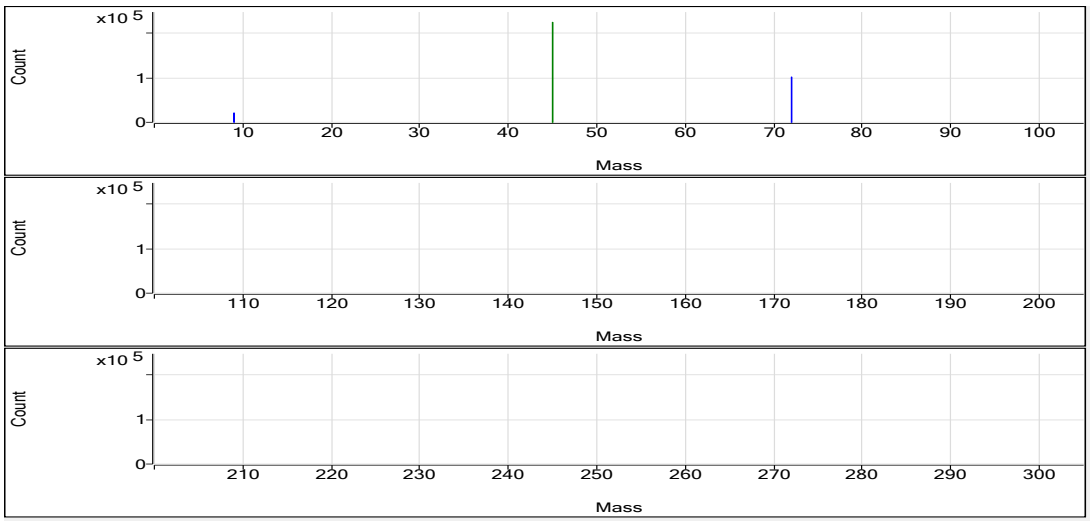
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	47.641	ppb	1.3	42706.39	0.0190	Pulse	0.5000	3
Se	78	72	H2	52.824	ppb	1.9	2551.99	0.0236	Pulse	1.5000	3
Na	23	45	He	5020.720	ppb	1.5	737807.86	16.1692	Pulse	0.1000	3
Mg	24	45	He	5008.372	ppb	1.8	346929.23	7.6033	Pulse	0.1000	3
Al	27	45	He	4845.466	ppb	2.7	103289.58	2.2639	Pulse	0.1000	3
K	39	45	He	4981.229	ppb	2.0	266619.74	5.8431	Pulse	0.1000	3
Ca	44	45	He	4929.687	ppb	4.9	14036.36	0.3077	Pulse	0.1000	3
Ti	47	45	He	4994.429	ppb	0.4	110397.08	2.4191	Pulse	0.1000	3
V	51	45	He	502.251	ppb	1.6	482806.56	10.5809	Pulse	0.5000	3
Cr	52	45	He	507.568	ppb	1.9	618790.23	13.5614	Pulse	0.1000	3
Mn	55	45	He	495.700	ppb	3.4	244873.55	5.3672	Pulse	0.1000	3
Fe	57	45	He	5044.032	ppb	1.3	115417.48	2.5293	Pulse	0.1000	3
Co	59	45	He	489.973	ppb	1.3	1170620.76	25.6537	Pulse	0.1000	3
Ni	60	115	He	524.428	ppb	0.5	334325.15	5.7452	Pulse	0.1000	3
Cu	63	72	He	500.356	ppb	1.9	942299.39	12.7634	Pulse	0.1000	3
Zn	66	72	He	521.377	ppb	2.5	110963.30	1.5031	Pulse	0.1000	3
As	75	72	He	517.084	ppb	2.4	81284.96	1.1010	Pulse	0.5000	3
Sr	88	115	He	49.930	ppb	0.7	27437.67	0.4715	Pulse	0.1000	3
Mo	98	115	He	51.255	ppb	1.6	68723.69	1.1810	Pulse	0.1000	3
Ag	107	115	He	52.082	ppb	1.0	146440.09	2.5166	Pulse	0.1000	3
Cd	111	115	He	51.539	ppb	0.8	16000.21	0.2749	Pulse	0.5000	3
Sn	120	115	He	51.045	ppb	0.8	44768.62	0.7693	Pulse	0.1000	3
Sb	121	115	He	50.583	ppb	2.2	42137.83	0.7242	Pulse	0.1000	3
Ba	137	115	He	502.852	ppb	0.2	127637.87	2.1933	Pulse	0.1000	3
Tl	205	159	He	50.239	ppb	0.6	240239.05	1.0445	Pulse	0.1000	3
Pb	208	159	He	50.380	ppb	0.3	315557.27	1.3720	Pulse	0.1000	3
U	238	159	He	49.982	ppb	0.3	316191.88	1.3747	Pulse	0.1000	3

ISTD Table:

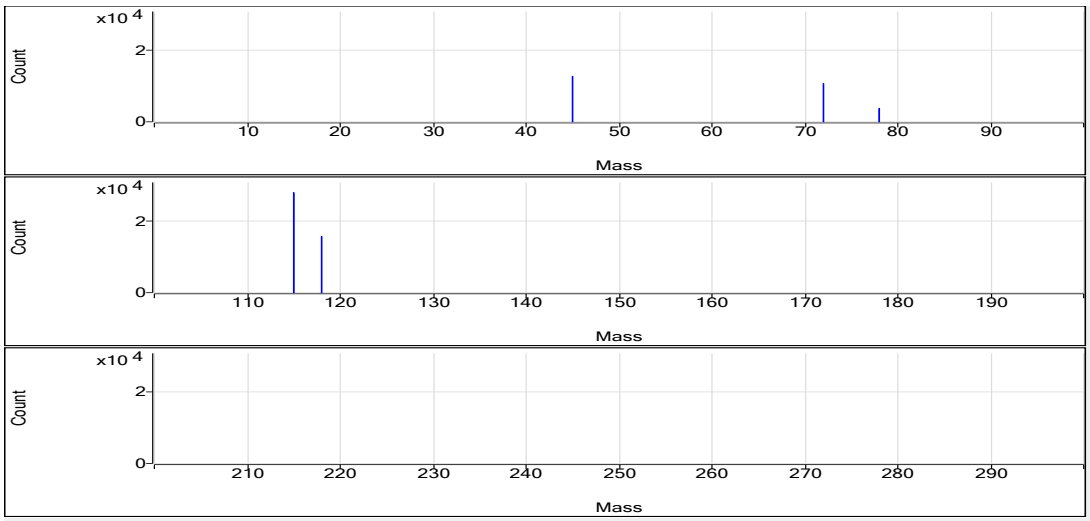
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2251737.05	0.8	98.2	Analog	0.1000	3
No Gas	Ge	72	1020874.65	0.9	98.3	Pulse	0.1000	3
H2	Sc	45	128262.10	1.0	92.2	Pulse	0.1000	3
H2	Ge	72	107984.24	0.8	91.5	Pulse	0.1000	3
H2	In	115	281750.68	1.4	95.6	Pulse	0.1000	3
He	Sc	45	45637.40	1.6	97.5	Pulse	0.1000	3
He	Ge	72	73839.75	1.3	96.6	Pulse	0.1000	3
He	In	115	58193.82	0.9	96.0	Pulse	0.1000	3
He	Tb	159	230002.29	0.4	95.4	Pulse	0.1000	3
He	Bi	209	157211.42	1.9	94.9	Pulse	0.1000	3

No Gas

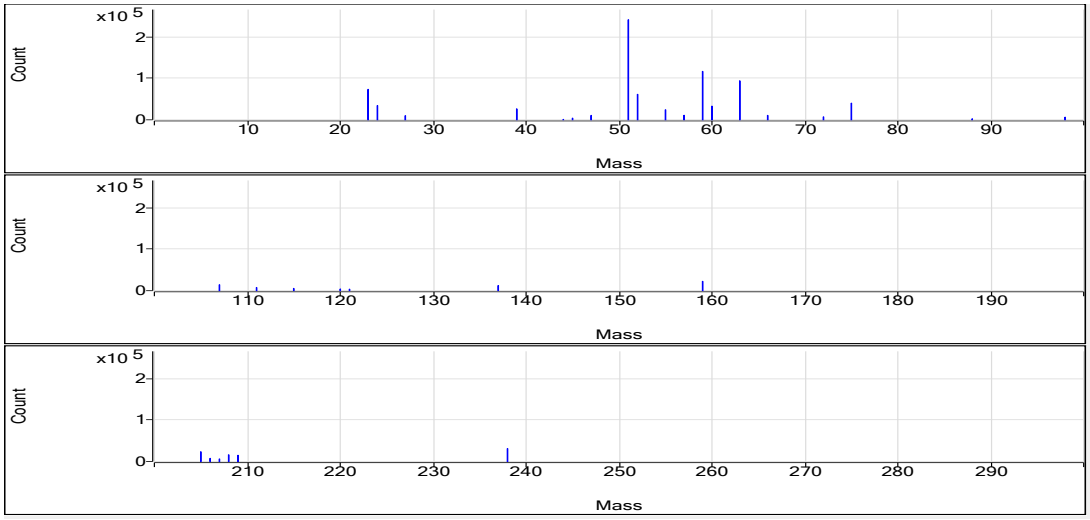


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.944	0.0187	41707.33	0.0004	9.309E-06
Be	9	1	No Gas	48.025	0.0191	43086.64	0.0004	9.309E-06
Be	9	1	No Gas	47.954	0.0191	43325.20	0.0004	9.309E-06
Se	78	2	H2	52.113	0.0233	2520.20	0.0004	5.598E-06
Se	78	2	H2	53.997	0.0242	2626.89	0.0004	5.598E-06
Se	78	2	H2	52.361	0.0234	2508.87	0.0004	5.598E-06
Na	23	3	He	5082.377	16.362	737961.79	0.0031	0.4657
Na	23	3	He	4936.059	15.9044	738705.38	0.0031	0.4657
Na	23	3	He	5043.724	16.2412	736756.40	0.0031	0.4657
Mg	24	3	He	5064.725	7.6888	346779.45	0.0015	0.003704
Mg	24	3	He	4905.029	7.4465	345862.57	0.0015	0.003704
Mg	24	3	He	5055.362	7.6746	348145.66	0.0015	0.003704
Al	27	3	He	4935.522	2.306	104004.03	0.0005	0.0007154
Al	27	3	He	4693.344	2.1929	101850.70	0.0005	0.0007154
Al	27	3	He	4907.532	2.2929	104014.00	0.0005	0.0007154
K	39	3	He	5088.977	5.9601	268814.96	0.0011	0.4296
K	39	3	He	4900.094	5.7549	267294.51	0.0011	0.4296
K	39	3	He	4954.617	5.8141	263749.74	0.0011	0.4296
Ca	44	3	He	4957.959	0.3094	13956.26	0.0001	0.002924
Ca	44	3	He	4677.154	0.2921	13566.00	0.0001	0.002924
Ca	44	3	He	5153.948	0.3216	14586.83	0.0001	0.002924
Ti	47	3	He	5014.959	2.429	109554.75	0.0005	0
Ti	47	3	He	4974.954	2.4097	111920.73	0.0005	0
Ti	47	3	He	4993.376	2.4186	109715.75	0.0005	0
V	51	3	He	506.219	10.6644	480987.31	0.021	0.009571
V	51	3	He	492.9	10.3841	482305.00	0.021	0.009571
V	51	3	He	507.634	10.6942	485127.38	0.021	0.009571
Cr	52	3	He	512.728	13.6991	617858.04	0.0267	0.01758
Cr	52	3	He	496.505	13.2662	616171.32	0.0267	0.01758
Cr	52	3	He	513.472	13.719	622341.32	0.0267	0.01758
Mn	55	3	He	497.588	5.3876	242992.05	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	478.095	5.1767	240440.72	0.0108	0.004199
Mn	55	3	He	511.417	5.5372	251187.87	0.0108	0.004199
Fe	57	3	He	5106.371	2.5606	115486.91	0.0005	0.002993
Fe	57	3	He	4974.445	2.4945	115860.70	0.0005	0.002993
Fe	57	3	He	5051.28	2.533	114904.82	0.0005	0.002993
Co	59	3	He	492.309	25.776	1162550.92	0.0524	0.003063
Co	59	3	He	482.613	25.2685	1173633.89	0.0524	0.003063
Co	59	3	He	494.998	25.9168	1175677.48	0.0524	0.003063
Ni	60	3	He	522.255	5.7214	335238.86	0.0109	0.01116
Ni	60	3	He	527.221	5.7757	332800.46	0.0109	0.01116
Ni	60	3	He	523.808	5.7384	334936.13	0.0109	0.01116
Cu	63	3	He	491.78	12.5449	939289.05	0.0255	0.01531
Cu	63	3	He	498.458	12.7151	936838.42	0.0255	0.01531
Cu	63	3	He	510.832	13.0303	950770.69	0.0255	0.01531
Zn	66	3	He	506.839	1.4612	109409.12	0.0029	0.002787
Zn	66	3	He	525.712	1.5156	111664.89	0.0029	0.002787
Zn	66	3	He	531.581	1.5324	111815.89	0.0029	0.002787
As	75	3	He	507.831	1.0813	80964.09	0.0021	0.0004097
As	75	3	He	511.991	1.0902	80324.74	0.0021	0.0004097
As	75	3	He	531.43	1.1316	82566.04	0.0021	0.0004097
Sr	88	3	He	49.635	0.4687	27464.32	0.0094	0.0008765
Sr	88	3	He	50.29	0.4749	27364.20	0.0094	0.0008765
Sr	88	3	He	49.864	0.4709	27484.49	0.0094	0.0008765
Mo	98	3	He	50.349	1.1601	67977.20	0.023	0.0002199
Mo	98	3	He	51.843	1.1946	68831.02	0.023	0.0002199
Mo	98	3	He	51.575	1.1884	69362.86	0.023	0.0002199
Ag	107	3	He	51.888	2.5072	146905.36	0.0483	0.0008224
Ag	107	3	He	52.677	2.5453	146662.18	0.0483	0.0008224
Ag	107	3	He	51.68	2.4972	145752.73	0.0483	0.0008224
Cd	111	3	He	51.937	0.2771	16234.46	0.0053	2.193E-05
Cd	111	3	He	51.537	0.2749	15842.03	0.0053	2.193E-05
Cd	111	3	He	51.142	0.2728	15924.15	0.0053	2.193E-05
Sn	120	3	He	51.498	0.776	45467.47	0.0148	0.01345
Sn	120	3	He	50.714	0.7644	44043.07	0.0148	0.01345
Sn	120	3	He	50.924	0.7675	44795.32	0.0148	0.01345
Sb	121	3	He	49.3	0.7058	41355.78	0.0143	0.0004392
Sb	121	3	He	51.325	0.7348	42338.23	0.0143	0.0004392
Sb	121	3	He	51.125	0.7319	42719.47	0.0143	0.0004392
Ba	137	3	He	502.69	2.1926	128474.34	0.0044	0.0001096
Ba	137	3	He	503.759	2.1973	126609.52	0.0044	0.0001096
Ba	137	3	He	502.106	2.1901	127829.74	0.0044	0.0001096
Tl	205	3	He	50.016	1.0399	238654.68	0.0208	0.0002491
Tl	205	3	He	50.602	1.0521	241478.16	0.0208	0.0002491
Tl	205	3	He	50.1	1.0416	240584.31	0.0208	0.0002491
Pb	208	3	He	50.372	1.3718	167838.20	0.0272	0.0006218
Pb	208	3	He	50.253	1.3685	165311.07	0.0272	0.0006218
Pb	208	3	He	50.514	1.3756	167605.27	0.0272	0.0006218
U	238	3	He	49.904	1.3726	315009.35	0.0275	2.763E-05
U	238	3	He	49.907	1.3727	315066.93	0.0275	2.763E-05
U	238	3	He	50.136	1.3789	318499.37	0.0275	2.763E-05
Sc	45	1	No Gas			2231820.75		
Sc	45	1	No Gas			2253769.34		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2269621.06		
Ge	72	1	No Gas			1014623.81		
Ge	72	1	No Gas			1030814.44		
Ge	72	1	No Gas			1017185.69		
Sc	45	2	H2			129580.30		
Sc	45	2	H2			128237.47		
Sc	45	2	H2			126968.54		
Ge	72	2	H2			108101.27		
Ge	72	2	H2			108745.72		
Ge	72	2	H2			107105.73		
In	115	2	H2			286134.14		
In	115	2	H2			279007.05		
In	115	2	H2			280110.86		
Sc	45	3	He			45102.05		
Sc	45	3	He			46446.60		
Sc	45	3	He			45363.56		
Ge	72	3	He			74874.00		
Ge	72	3	He			73679.33		
Ge	72	3	He			72965.92		
In	115	3	He			58911.82		
In	115	3	He			57928.82		
In	115	3	He			58680.95		
Tb	159	3	He			229503.92		
Tb	159	3	He			229529.98		
Tb	159	3	He			230972.98		
Bi	209	3	He			160152.44		
Bi	209	3	He			154309.59		
Bi	209	3	He			157172.24		

Quantitation Report

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Sample Type	CCB
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Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	7/17/2024 7:50:11 AM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

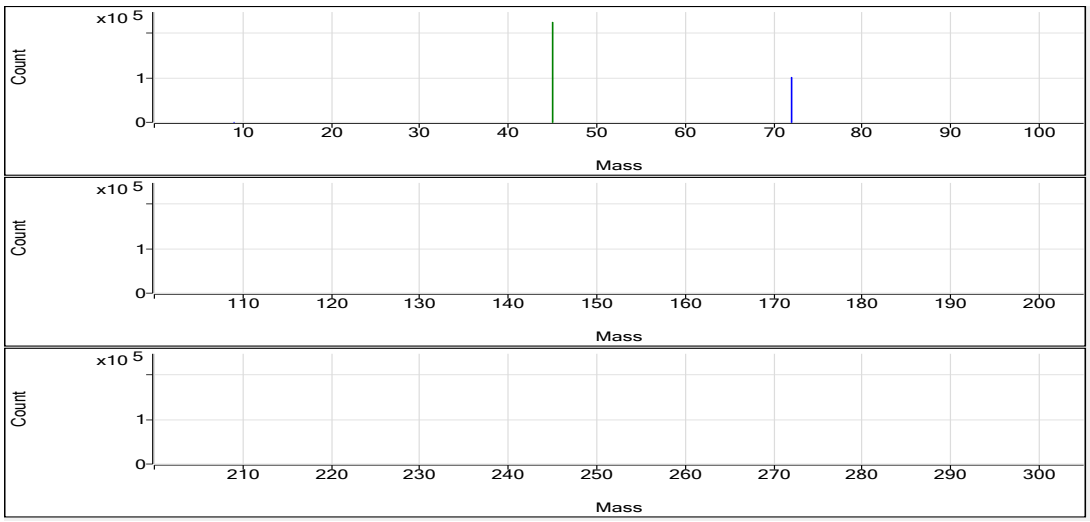
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.095	ppb	7.7	106.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.104	ppb	32.8	5.55	0.0001	Pulse	1.5000	3
Na	23	45	He	1.432	ppb	416.1	20776.76	0.4701	Pulse	0.1000	3
Mg	24	45	He	4.371	ppb	15.0	456.69	0.0103	Pulse	0.1000	3
Al	27	45	He	3.484	ppb	36.9	103.33	0.0023	Pulse	0.1000	3
K	39	45	He	-2.700	ppb	N/A	18838.17	0.4267	Pulse	0.1000	3
Ca	44	45	He	20.941	ppb	31.5	186.68	0.0042	Pulse	0.1000	3
Ti	47	45	He	5.627	ppb	42.8	120.00	0.0027	Pulse	0.1000	3
V	51	45	He	0.357	ppb	29.5	754.02	0.0171	Pulse	0.5000	3
Cr	52	45	He	0.314	ppb	36.8	1146.75	0.0260	Pulse	0.1000	3
Mn	55	45	He	0.246	ppb	40.5	303.35	0.0069	Pulse	0.1000	3
Fe	57	45	He	5.488	ppb	40.6	253.34	0.0057	Pulse	0.1000	3
Co	59	45	He	0.336	ppb	28.6	910.06	0.0206	Pulse	0.1000	3
Ni	60	115	He	0.407	ppb	9.7	903.39	0.0156	Pulse	0.1000	3
Cu	63	72	He	0.293	ppb	28.5	1670.15	0.0228	Pulse	0.1000	3
Zn	66	72	He	1.198	ppb	18.6	456.69	0.0062	Pulse	0.1000	3
As	75	72	He	0.418	ppb	5.1	95.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.170	ppb	26.7	143.34	0.0025	Pulse	0.1000	3
Mo	98	115	He	0.061	ppb	44.5	93.34	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	44.8	83.33	0.0014	Pulse	0.1000	3
Cd	111	115	He	0.024	ppb	42.3	8.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.200	ppb	36.8	950.06	0.0164	Pulse	0.1000	3
Sb	121	115	He	0.038	ppb	46.6	56.67	0.0010	Pulse	0.1000	3
Ba	137	115	He	0.320	ppb	63.3	86.67	0.0015	Pulse	0.1000	3
Tl	205	159	He	0.410	ppb	7.4	2006.88	0.0088	Pulse	0.1000	3
Pb	208	159	He	0.243	ppb	7.9	1656.77	0.0072	Pulse	0.1000	3
U	238	159	He	0.032	ppb	21.6	206.68	0.0009	Pulse	0.1000	3

ISTD Table:

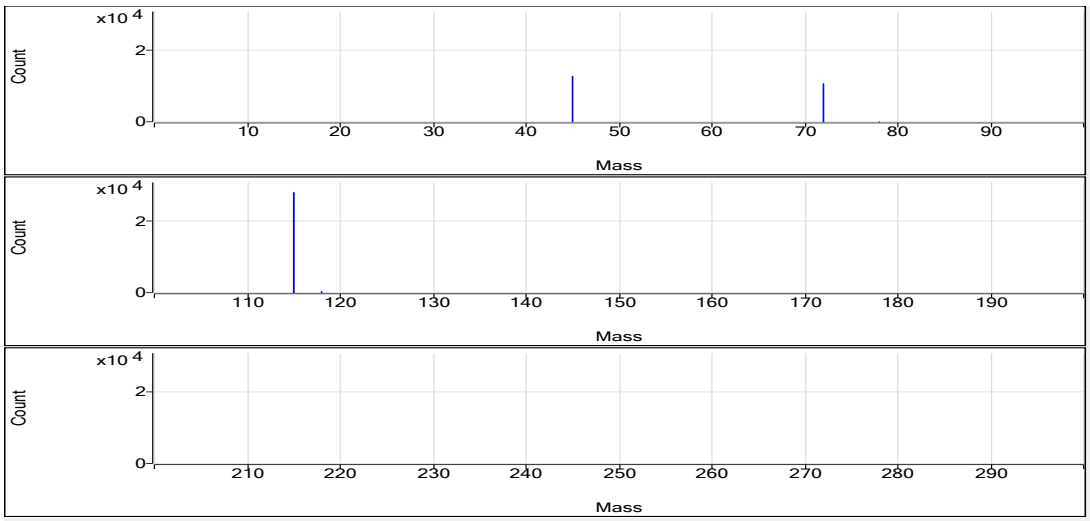
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	2246692.67	1.2	97.9	Analog	0.1000	3
No Gas	Ge	72	1010256.99	1.0	97.2	Pulse	0.1000	3
H2	Sc	45	127244.00	1.0	91.5	Pulse	0.1000	3
H2	Ge	72	106014.84	1.4	89.8	Pulse	0.1000	3
H2	In	115	278501.81	0.3	94.5	Pulse	0.1000	3
He	Sc	45	44207.00	1.4	94.4	Pulse	0.1000	3
He	Ge	72	73334.51	1.5	95.9	Pulse	0.1000	3
He	In	115	57838.29	1.6	95.4	Pulse	0.1000	3
He	Tb	159	228918.44	2.0	94.9	Pulse	0.1000	3
He	Bi	209	156068.73	2.4	94.2	Pulse	0.1000	3

No Gas

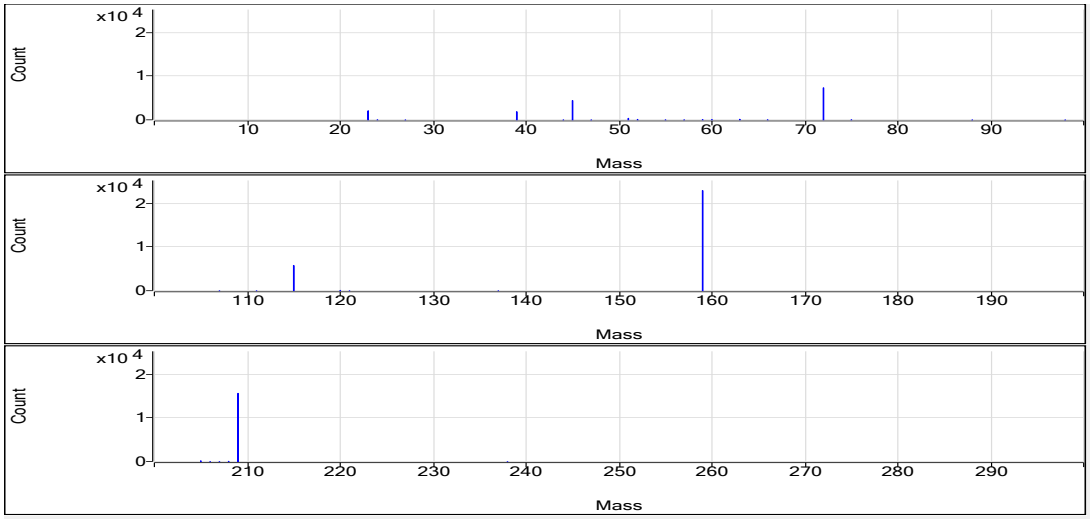


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.09	0	102.00	0.0004	9.309E-06
Be	9	1	No Gas	0.104	0.0001	114.00	0.0004	9.309E-06
Be	9	1	No Gas	0.092	0	102.00	0.0004	9.309E-06
Se	78	2	H2	0.099	0	5.33	0.0004	5.598E-06
Se	78	2	H2	0.073	0	4.00	0.0004	5.598E-06
Se	78	2	H2	0.141	0.0001	7.33	0.0004	5.598E-06
Na	23	3	He	3.467	0.4765	20813.43	0.0031	0.4657
Na	23	3	He	6.107	0.4848	21344.19	0.0031	0.4657
Na	23	3	He	-5.278	0.4492	20172.66	0.0031	0.4657
Mg	24	3	He	5.104	0.0114	500.02	0.0015	0.003704
Mg	24	3	He	3.846	0.0095	420.02	0.0015	0.003704
Mg	24	3	He	4.163	0.01	450.02	0.0015	0.003704
Al	27	3	He	4.84	0.003	130.00	0.0005	0.0007154
Al	27	3	He	3.331	0.0023	100.00	0.0005	0.0007154
Al	27	3	He	2.282	0.0018	80.00	0.0005	0.0007154
K	39	3	He	69.935	0.5056	22085.48	0.0011	0.4296
K	39	3	He	-26.68	0.4006	17639.96	0.0011	0.4296
K	39	3	He	-51.355	0.3738	16789.07	0.0011	0.4296
Ca	44	3	He	15.658	0.0039	170.01	0.0001	0.002924
Ca	44	3	He	18.83	0.0041	180.01	0.0001	0.002924
Ca	44	3	He	28.335	0.0047	210.01	0.0001	0.002924
Ti	47	3	He	8.036	0.0039	170.01	0.0005	0
Ti	47	3	He	5.627	0.0027	120.00	0.0005	0
Ti	47	3	He	3.218	0.0016	70.00	0.0005	0
V	51	3	He	0.472	0.0195	852.03	0.021	0.009571
V	51	3	He	0.331	0.0165	728.02	0.021	0.009571
V	51	3	He	0.267	0.0152	682.02	0.021	0.009571
Cr	52	3	He	0.405	0.0284	1240.09	0.0267	0.01758
Cr	52	3	He	0.354	0.027	1190.08	0.0267	0.01758
Cr	52	3	He	0.184	0.0225	1010.07	0.0267	0.01758
Mn	55	3	He	0.331	0.0078	340.01	0.0108	0.004199

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.137	0.0057	250.01	0.0108	0.004199
Mn	55	3	He	0.27	0.0071	320.02	0.0108	0.004199
Fe	57	3	He	6.824	0.0064	280.01	0.0005	0.002993
Fe	57	3	He	6.722	0.0064	280.01	0.0005	0.002993
Fe	57	3	He	2.916	0.0045	200.01	0.0005	0.002993
Co	59	3	He	0.431	0.0256	1120.07	0.0524	0.003063
Co	59	3	He	0.336	0.0207	910.06	0.0524	0.003063
Co	59	3	He	0.239	0.0156	700.04	0.0524	0.003063
Ni	60	3	He	0.363	0.0151	870.05	0.0109	0.01116
Ni	60	3	He	0.42	0.0158	900.06	0.0109	0.01116
Ni	60	3	He	0.439	0.016	940.06	0.0109	0.01116
Cu	63	3	He	0.356	0.0244	1770.15	0.0255	0.01531
Cu	63	3	He	0.198	0.0204	1480.13	0.0255	0.01531
Cu	63	3	He	0.325	0.0236	1760.16	0.0255	0.01531
Zn	66	3	He	1.328	0.0066	480.02	0.0029	0.002787
Zn	66	3	He	1.325	0.0066	480.02	0.0029	0.002787
Zn	66	3	He	0.941	0.0055	410.02	0.0029	0.002787
As	75	3	He	0.441	0.0013	98.00	0.0021	0.0004097
As	75	3	He	0.415	0.0013	94.00	0.0021	0.0004097
As	75	3	He	0.399	0.0013	94.00	0.0021	0.0004097
Sr	88	3	He	0.147	0.0023	130.01	0.0094	0.0008765
Sr	88	3	He	0.223	0.003	170.01	0.0094	0.0008765
Sr	88	3	He	0.141	0.0022	130.00	0.0094	0.0008765
Mo	98	3	He	0.089	0.0023	130.01	0.023	0.0002199
Mo	98	3	He	0.059	0.0016	90.00	0.023	0.0002199
Mo	98	3	He	0.035	0.001	60.00	0.023	0.0002199
Ag	107	3	He	0.019	0.0017	100.00	0.0483	0.0008224
Ag	107	3	He	0.012	0.0014	80.00	0.0483	0.0008224
Ag	107	3	He	0.008	0.0012	70.00	0.0483	0.0008224
Cd	111	3	He	0.015	0.0001	6.00	0.0053	2.193E-05
Cd	111	3	He	0.035	0.0002	12.00	0.0053	2.193E-05
Cd	111	3	He	0.021	0.0001	8.00	0.0053	2.193E-05
Sn	120	3	He	0.149	0.0157	900.06	0.0148	0.01345
Sn	120	3	He	0.167	0.0159	910.06	0.0148	0.01345
Sn	120	3	He	0.284	0.0177	1040.06	0.0148	0.01345
Sb	121	3	He	0.042	0.001	60.00	0.0143	0.0004392
Sb	121	3	He	0.018	0.0007	40.00	0.0143	0.0004392
Sb	121	3	He	0.052	0.0012	70.00	0.0143	0.0004392
Ba	137	3	He	0.533	0.0024	140.01	0.0044	0.0001096
Ba	137	3	He	0.296	0.0014	80.00	0.0044	0.0001096
Ba	137	3	He	0.131	0.0007	40.00	0.0044	0.0001096
Tl	205	3	He	0.439	0.0094	2100.22	0.0208	0.0002491
Tl	205	3	He	0.378	0.0081	1860.18	0.0208	0.0002491
Tl	205	3	He	0.413	0.0088	2060.25	0.0208	0.0002491
Pb	208	3	He	0.243	0.0072	800.06	0.0272	0.0006218
Pb	208	3	He	0.224	0.0067	880.06	0.0272	0.0006218
Pb	208	3	He	0.262	0.0078	930.06	0.0272	0.0006218
U	238	3	He	0.036	0.001	230.01	0.0275	2.763E-05
U	238	3	He	0.035	0.001	230.01	0.0275	2.763E-05
U	238	3	He	0.024	0.0007	160.01	0.0275	2.763E-05
Sc	45	1	No Gas			2266874.18		
Sc	45	1	No Gas			2257542.94		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			2215660.90		
Ge	72	1	No Gas			1010549.44		
Ge	72	1	No Gas			1020125.84		
Ge	72	1	No Gas			1000095.69		
Sc	45	2	H2			127846.80		
Sc	45	2	H2			128157.31		
Sc	45	2	H2			125727.88		
Ge	72	2	H2			106994.90		
Ge	72	2	H2			104336.78		
Ge	72	2	H2			106712.83		
In	115	2	H2			278493.02		
In	115	2	H2			279282.26		
In	115	2	H2			277730.15		
Sc	45	3	He			43678.83		
Sc	45	3	He			44029.92		
Sc	45	3	He			44912.24		
Ge	72	3	He			72645.00		
Ge	72	3	He			72725.22		
Ge	72	3	He			74633.30		
In	115	3	He			57497.16		
In	115	3	He			57145.14		
In	115	3	He			58892.53		
Tb	159	3	He			224263.41		
Tb	159	3	He			229300.95		
Tb	159	3	He			233190.95		
Bi	209	3	He			153198.27		
Bi	209	3	He			154754.24		
Bi	209	3	He			160253.67		

US EPA Tune Check Report

Operator Name	us19_usr_ins23851
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA_ICPMS.b
Acq. Date-Time	7/17/2024 7:05:53 AM
Report Comment	E08 Tune Report
Instrument Name	G8403A SG19504696

[No Gas]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	3043	30430.47			0.547	5.000
24	10.00	17644	176440.62			0.612	5.000
25	10.00	2400	23999.89			1.009	5.000
26	10.00	2845	28447.33			0.556	5.000
59	10.00	31817	318171.75			0.141	5.000
115	10.00	43332	433324.79			0.710	5.000
206	10.00	8912	89123.32			0.928	5.000
207	10.00	7315	73145.26			0.730	5.000
208	10.00	17956	179555.02			0.810	5.000

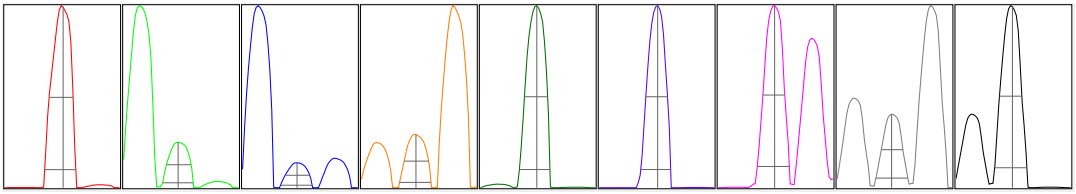
Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	3058	3040	3062	3030	3025
24	17724	17643	17677	17716	17460
25	2393	2443	2387	2385	2392
26	2854	2859	2853	2836	2821
59	31859	31786	31870	31798	31771
115	42790	43390	43506	43524	43451
206	8818	8830	8962	8949	9001
207	7274	7242	7341	7360	7356
208	17743	17886	18121	18000	18028

Integration Time [sec] 0.1

Resolution/Axis

US EPA Tune Check Report



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	5219.64	9.05	8.90 - 9.10	
24	29229.87	23.95	23.90 - 24.10	
25	4001.18	24.95	24.90 - 25.10	
26	4716.41	25.95	25.90 - 26.10	
59	55256.80	59.00	58.90 - 59.10	
115	79793.65	115.05	114.90 - 115.10	
206	15434.31	206.00	205.90 - 206.10	
207	12678.96	206.95	206.90 - 207.10	
208	31196.04	208.00	207.90 - 208.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
9	0.62	0.800	0.900	
24	0.63	0.786	0.900	
25	0.63	0.812	0.900	
26	0.63	0.810	0.900	
59	0.60	0.785	0.900	
115	0.56	0.770	0.900	
206	0.56	0.825	0.900	
207	0.56	0.821	0.900	
208	0.58	0.828	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	1.05 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	15.4 V
Extract 2	-225.0 V	Cell Entrance	-24 V	Plate Bias	-45 V
Omega Bias	-90 V	Cell Exit	-54 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V

US EPA Tune Check Report

He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	150 V		

QP Parameters

Mass Gain	143	Axis Gain	0.9994	QP Bias	-3.0 V
Mass Offset	123	Axis Offset	0.09		

Hardware Settings

Torch

Torch H	-0.4 mm	Torch V	0.3 mm		

EM

Discriminator	2.1 mV	Analog HV	2224 V	Pulse HV	1892 V

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG No.: 410-179201

Project: TDSS MW Sampling 3Q-2024 / Baseline

Client Sample ID	Lab Sample ID
TDSS-MW01-3Q24	410-179201-1
TDSS-MW02-3Q24	410-179201-2
TDSS-ER-3Q24	410-179201-3

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: TDSS-MW01-3Q24 Lab Sample ID: 410-179201-1

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG ID.: 410-179201

Matrix: Water Date Sampled: 07/07/2024 10:30

Reporting Basis: WET Date Received: 07/10/2024 09:35

Preparation Batch Number: Instrument ID: OI 3700 - C07

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Ammonia as N	0.090	0.10	0.090	0.050	mg/L	U		1	EPA 350.1
Turbidity	2.5	1.0	0.70	1.0	NTU		H H3	1	180.1
Total Alkalinity as CaCO3 to pH 4.5	69	8.0	6.0	2.6	mg/L		Q	1	2320B-2011
Carbonate Alkalinity as CaCO3	6.0	8.0	6.0	2.6	mg/L	U		1	2320B-2011
Bicarbonate Alkalinity as CaCO3	69	8.0	6.0	2.6	mg/L			1	2320B-2011
Total Dissolved Solids	210	30	25	12	mg/L			1	2540C - 2015
pH	7.2	0.01	0.01	0.01	S.U.		HF	1	9040C
Total Organic Carbon	4.6	2.0	1.0	0.50	mg/L			1	SM5310C
TOC Result 1	4.5	2.0	1.0	0.50	mg/L			1	SM5310C
TOC Result 2	4.4	2.0	1.0	0.50	mg/L			1	SM5310C
TOC Result 3	4.9	2.0	1.0	0.50	mg/L			1	SM5310C

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: TDSS-MW02-3Q24 Lab Sample ID: 410-179201-2

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG ID.: 410-179201

Matrix: Water Date Sampled: 07/07/2024 15:28

Reporting Basis: WET Date Received: 07/10/2024 09:35

Preparation Batch Number: Instrument ID: OI 3700 - C07

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Ammonia as N	0.050	0.10	0.090	0.050	mg/L	J		1	EPA 350.1
Turbidity	18	1.0	0.70	1.0	NTU		H H3	1	180.1
Total Alkalinity as CaCO3 to pH 4.5	67	8.0	6.0	2.6	mg/L		Q	1	2320B-2011
Carbonate Alkalinity as CaCO3	6.0	8.0	6.0	2.6	mg/L	U		1	2320B-2011
Bicarbonate Alkalinity as CaCO3	67	8.0	6.0	2.6	mg/L			1	2320B-2011
Total Dissolved Solids	350	60	50	24	mg/L			1	2540C - 2015
pH	7.5	0.01	0.01	0.01	S.U.		HF	1	9040C
Total Organic Carbon	0.58	2.0	1.0	0.50	mg/L	J		1	SM5310C
TOC Result 1	0.64	2.0	1.0	0.50	mg/L	J		1	SM5310C
TOC Result 2	0.67	2.0	1.0	0.50	mg/L	J		1	SM5310C
TOC Result 3	1.0	2.0	1.0	0.50	mg/L	U		1	SM5310C

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: TDSS-ER-3Q24 | Lab Sample ID: 410-179201-3

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC | Job No.: 410-179201-1

SDG ID.: 410-179201

Matrix: Water | Date Sampled: 07/07/2024 17:10

Reporting Basis: WET | Date Received: 07/10/2024 09:35

Preparation Batch Number: | Instrument ID: OI 3700 - C07

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Ammonia as N	0.056	0.10	0.090	0.050	mg/L	J		1	EPA 350.1
Turbidity	3.0	1.0	0.70	1.0	NTU		H H3	1	180.1
Total Alkalinity as CaCO3 to pH 4.5	2.8	8.0	6.0	2.6	mg/L	J	Q	1	2320B-2011
Carbonate Alkalinity as CaCO3	6.0	8.0	6.0	2.6	mg/L	U		1	2320B-2011
Bicarbonate Alkalinity as CaCO3	2.8	8.0	6.0	2.6	mg/L	J		1	2320B-2011
Total Dissolved Solids	14000	3000	2500	1200	mg/L			1	2540C - 2015
pH	6.4	0.01	0.01	0.01	S.U.		HF	1	9040C
Total Organic Carbon	0.86	2.0	1.0	0.50	mg/L	J		1	SM5310C
TOC Result 1	0.86	2.0	1.0	0.50	mg/L	J		1	SM5310C
TOC Result 2	0.86	2.0	1.0	0.50	mg/L	J		1	SM5310C
TOC Result 3	0.85	2.0	1.0	0.50	mg/L	J		1	SM5310C

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Analyst: JCG7 Batch Start Date: 07/12/2024

Reporting Units: mg/L Analytical Batch No.: 527694

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	10:58	Ammonia as N	1.93	2.00	97	90-110		WC_FL_CCV_NH3_00764
14	ICB	11:00	Ammonia as N	0.090				U	
25	CCV	11:23	Ammonia as N	2.01	2.00	100	90-110		WC_FL_CCV_NH3_00764
26	CCB	11:25	Ammonia as N	0.090				U	
33	CCV	11:40	Ammonia as N	1.98	2.00	99	90-110		WC_FL_CCV_NH3_00764
34	CCB	11:42	Ammonia as N	0.090				U	
45	CCV	12:07	Ammonia as N	1.93	2.00	97	90-110		WC_FL_CCV_NH3_00764
46	CCB	12:09	Ammonia as N	0.090				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Analyst: UDS7 Batch Start Date: 07/10/2024

Reporting Units: NTU Analytical Batch No.: 526892

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	23:54	Turbidity	10	10.0	101	90-110		WC_4000_NTU_00003
2	CCB	23:54	Turbidity	0.70				U	
13	CCV	23:54	Turbidity	10	10.0	100	90-110		WC_4000_NTU_00003
14	CCB	23:54	Turbidity	0.70				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Analyst: DI9Q Batch Start Date: 07/10/2024

Reporting Units: SU Analytical Batch No.: 527234

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
2	ICV	19:56	pH	7.0	7.00	100	99-101		WC_pH7_CRM_00008
126	CCV	07:58	pH	7.0	7.00	100	95-105		WC_pHBuffer7_00029
138	CCV	09:16	pH	7.0	7.00	100	95-105		WC_pHBuffer7_00029
147	CCV	10:15	pH	7.0	7.00	100	95-105		WC_pHBuffer7_00029

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Analyst: P684 Batch Start Date: 07/11/2024

Reporting Units: mg/L Analytical Batch No.: 527445

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
23	CCV	17:03	Total Organic Carbon	48.6	50.0	97	85-115		WC_TOC_QC_STD_00062
			TOC Result 1	47.4	50.0	95	85-115		WC_TOC_QC_STD_00062
			TOC Result 2	50.3	50.0	100	85-115		WC_TOC_QC_STD_00062
			TOC Result 3	48.1	50.0	96	85-115		WC_TOC_QC_STD_00062
24	CCB	17:23	Total Organic Carbon	1.0				U	
			TOC Result 1	1.0				U	
			TOC Result 2	1.0				U	
			TOC Result 3	1.0				U	
35	CCV	20:58	Total Organic Carbon	23.0	25.0	92	85-115		WC_TOC_QC_STD_00062
			TOC Result 1	22.6	25.0	90	85-115		WC_TOC_QC_STD_00062
			TOC Result 2	23.6	25.0	94	85-115		WC_TOC_QC_STD_00062
			TOC Result 3	23.0	25.0	92	85-115		WC_TOC_QC_STD_00062
36	CCB	21:18	Total Organic Carbon	1.0				U	
			TOC Result 1	1.0				U	
			TOC Result 2	1.0				U	
			TOC Result 3	1.0				U	
47	CCVL	00:50	Total Organic Carbon	4.57	5.00	91			WC_TOC_QC_STD_00062
			TOC Result 1	4.52	5.00	90			WC_TOC_QC_STD_00062
			TOC Result 2	4.70	5.00	94			WC_TOC_QC_STD_00062
			TOC Result 3	4.48	5.00	89			WC_TOC_QC_STD_00062

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Method	Lab Sample ID	Analyte	Result	Qual	Units	LOQ	Dil
Batch ID: 526892	Date: 07/10/2024 23:54						
180.1	MB 410-526892/3	Turbidity	0.70	U	NTU	1.0	1
Batch ID: 527232	Date: 07/11/2024 08:11						
2320B-2011	MB 410-527232/128	Total Alkalinity as CaCO3 to pH 4.5	6.0	U	mg/L	8.0	1
Batch ID: 527364	Date: 07/11/2024 21:54						
2540C - 2015	MB 410-527364/1	Total Dissolved Solids	25	U	mg/L	30	1
Batch ID: 527694	Date: 07/12/2024 11:06						
EPA 350.1	MB 410-527694/17	Ammonia as N	0.090	U	mg/L	0.10	1
Batch ID: 527445	Date: 07/11/2024 18:02						
SM5310C	MB 410-527445/26	Total Organic Carbon	1.0	U	mg/L	2.0	1
SM5310C	MB 410-527445/26	TOC Result 1	1.0	U	mg/L	2.0	1
SM5310C	MB 410-527445/26	TOC Result 2	1.0	U	mg/L	2.0	1
SM5310C	MB 410-527445/26	TOC Result 3	1.0	U	mg/L	2.0	1

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 526892	Date: 07/10/2024 23:54										
						LCS Source: WC_4000_NTU_00003					
180.1	LCS 410-526892/4	Turbidity	1.1		NTU	1.00	112	88-139			
Batch ID: 527232	Date: 07/11/2024 08:28										
						LCS Source: WC_Alk_LCS_00018					
2320B-2011	LCS 410-527232/131	Total Alkalinity as CaCO3 to pH 4.5	208		mg/L	189	110	80-110	12	10	
Batch ID: 527364	Date: 07/11/2024 21:54										
						LCS Source: WC_TDS_LCS_00235					
2540C - 2015	LCS 410-527364/2	Total Dissolved Solids	197		mg/L	200	99	90-110			
Batch ID: 527234	Date: 07/11/2024 08:15										
						LCS Source: WC_pHBuffer7_00029					
9040C	LCS 410-527234/129	pH	7.0		S.U.	7.00	100	95-105	0	3	
Batch ID: 527694	Date: 07/12/2024 11:02										
						LCS Source: WC_FL_CCV_NH3_00764					
EPA 350.1	LCS 410-527694/15	Ammonia as N	2.04		mg/L	2.00	102	90-110	3	15	
Batch ID: 527445	Date: 07/11/2024 17:42										
						LCS Source: WC_TOC_QC_STD_00062					
SM5310C	LCS 410-527445/25	Total Organic Carbon	49.2		mg/L	50.0	98	90-110			
SM5310C	LCS 410-527445/25	TOC Result 1	48.4		mg/L	50.0	97	90-110			
SM5310C	LCS 410-527445/25	TOC Result 2	51.1		mg/L	50.0	102	90-110			
SM5310C	LCS 410-527445/25	TOC Result 3	48.1		mg/L	50.0	96	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE DUPLICATE
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 527232 Date: 07/11/2024 08:36											
						LCSD Source: WC_Alk_LCS_00018					
2320B-2011	LCSD 410-527232/132	Total Alkalinity as CaCO3 to pH 4.5	184		mg/L	189	98	80-110	12	10	Q
Batch ID: 527234 Date: 07/11/2024 08:20											
						LCSD Source: WC_pHBuffer7_00029					
9040C	LCSD 410-527234/130	pH	7.0		S.U.	7.00	100	95-105	0	3	
Batch ID: 527694 Date: 07/12/2024 11:04											
						LCSD Source: WC_FL_CCV_NH3_00764					
EPA 350.1	LCSD 410-527694/16	Ammonia as N	1.99		mg/L	2.00	100	90-110	3	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
METHOD REPORTING LIMIT CHECK
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 527445 Date: 07/11/2024 11:33											
						LCS Source: WC_TOC_QC_STD_00062					
SM5310C	MRL 410-527445/3	Total Organic Carbon	0.633	J	mg/L	1.00	63	50-150			
SM5310C	MRL 410-527445/3	TOC Result 1	0.725	J	mg/L	1.00	72				
SM5310C	MRL 410-527445/3	TOC Result 2	0.533	J	mg/L	1.00	53				
SM5310C	MRL 410-527445/3	TOC Result 3	0.640	J	mg/L	1.00	64				

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: 25924

Method: EPA 350.1 DL Date: 11/29/2018 15:24

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Ammonia as N		0.1	0.05

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: 25924

Method: EPA 350.1 XMDL Date: 11/29/2018 08:52

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Ammonia as N		0.1	0.05

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: NOEQUIP

Method: 180.1 DL Date: 08/10/2023 16:25

Analyte	Wavelength/ Mass	LOQ (NTU)	DL (NTU)
Turbidity		1	0.36

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: NOEQUIP

Method: 180.1 XMDL Date: 08/10/2023 16:27

Analyte	Wavelength/ Mass	XRL (NTU)	XMDL (NTU)
Turbidity		1	0.36

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: 19074

Method: 2320B-2011 DL Date: 06/03/2019 10:35

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Bicarbonate Alkalinity as CaCO3		8	2.6
Carbonate Alkalinity as CaCO3		8	2.6
Total Alkalinity as CaCO3 to pH 4.5		8	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: 19074

Method: 2320B-2011 XMDL Date: 06/03/2019 08:47

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bicarbonate Alkalinity as CaCO3		8	2.6
Carbonate Alkalinity as CaCO3		8	2.6
Total Alkalinity as CaCO3 to pH 4.5		8	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: NOEQUIP

Method: 2540C - 2015 DL Date: 05/07/2021 16:37

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Total Dissolved Solids		30	12

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: NOEQUIP

Method: 2540C - 2015 XMDL Date: 04/26/2021 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		30	12

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: 19074

Method: 9040C DL Date: 01/01/2018 22:58

Analyte	Wavelength/ Mass	LOQ (S.U.)	DL (S.U.)
pH		0.01	0.01

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: 19074

Method: 9040C XMDL Date: 01/01/2018 11:23

Analyte	Wavelength/ Mass	XRL (SU)	XMDL (SU)
pH		0.01	0.01

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: 26070

Method: SM5310C DL Date: 03/03/2021 12:57

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
TOC Result 1		2	0.5
TOC Result 2		2	0.5
TOC Result 3		2	0.5
Total Organic Carbon		2	0.5

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job Number: 410-179201-1

SDG Number: 410-179201

Matrix: Water Instrument ID: 26070

Method: SM5310C XMDL Date: 03/03/2021 12:50

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
TOC Result 1		2	0.5
TOC Result 2		2	0.5
TOC Result 3		2	0.5
Total Organic Carbon		2	0.5

11-IN
LINEAR RANGES
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No: 410-179201-1

SDG No.: 410-179201

Instrument ID: 19074 Date: 06/23/2019 22:41

Analyte	Integ. Time (Sec.)	Concentration (S.U.)	Method
pH		10.01	9040C

11-IN
LINEAR RANGES
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No: 410-179201-1

SDG No.: 410-179201

Instrument ID: 26070 Date: 11/20/2020 16:40

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Total Organic Carbon		100	SM5310C
TOC Result 1		100	SM5310C
TOC Result 2		100	SM5310C
TOC Result 3		100	SM5310C

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 25924 Analysis Method: EPA 350.1

Start Date: 07/12/2024 10:33 End Date: 07/12/2024 13:47

Lab Sample Id	D/F	Type	Time	Analytes																								
				NH3																								
ZZZZZZ			10:33																									
ZZZZZZ			10:35																									
ZZZZZZ			10:37																									
IC 410-527694/4			10:39	X																								
IC 410-527694/5			10:41	X																								
IC 410-527694/6			10:43	X																								
IC 410-527694/7			10:46	X																								
IC 410-527694/8			10:48	X																								
IC 410-527694/9			10:50	X																								
IC 410-527694/10			10:52	X																								
RINSE 410-527694/11			10:54																									
ZZZZZZ			10:56																									
ICV 410-527694/13	1		10:58	X																								
ICB 410-527694/14	1		11:00	X																								
LCS 410-527694/15	1	T	11:02	X																								
LCSD 410-527694/16	1	T	11:04	X																								
MB 410-527694/17	1	T	11:06	X																								
ZZZZZZ			11:08																									
ZZZZZZ			11:11																									
ZZZZZZ			11:13																									
ZZZZZZ			11:15																									
ZZZZZZ			11:17																									
ZZZZZZ			11:19																									
ZZZZZZ			11:21																									
CCV 410-527694/25	1		11:23	X																								
CCB 410-527694/26	1		11:25	X																								
ZZZZZZ			11:27																									
ZZZZZZ			11:29																									
410-179201-1	1	T	11:31	X																								
410-179201-2	1	T	11:33	X																								
ZZZZZZ			11:36																									
ZZZZZZ			11:38																									
CCV 410-527694/33	1		11:40	X																								
CCB 410-527694/34	1		11:42	X																								
ZZZZZZ			11:44																									
ZZZZZZ			11:46																									
ZZZZZZ			11:48																									
410-179201-3	1	T	11:50	X																								
ZZZZZZ			11:52																									
ZZZZZZ			11:54																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 25924 Analysis Method: EPA 350.1

Start Date: 07/12/2024 10:33 End Date: 07/12/2024 13:47

Lab Sample Id	D/F	Type	Time	Analytes																								
				NH3																								
ZZZZZZ			11:56																									
ZZZZZZ			11:58																									
ZZZZZZ			12:01																									
ZZZZZZ			12:05																									
CCV 410-527694/45	1		12:07	X																								
CCB 410-527694/46	1		12:09	X																								
ZZZZZZ			12:11																									
ZZZZZZ			12:13																									
CCV 410-527694/49			12:15																									
CCB 410-527694/50			12:17																									
ZZZZZZ			12:19																									
ZZZZZZ			12:21																									
ZZZZZZ			12:23																									
ZZZZZZ			12:26																									
ZZZZZZ			12:28																									
ZZZZZZ			12:30																									
ZZZZZZ			12:32																									
ZZZZZZ			12:34																									
ZZZZZZ			12:36																									
ZZZZZZ			12:38																									
CCV 410-527694/61			12:40																									
CCB 410-527694/62			12:42																									
ZZZZZZ			12:44																									
ZZZZZZ			12:46																									
ZZZZZZ			12:48																									
ZZZZZZ			12:51																									
ZZZZZZ			12:53																									
ZZZZZZ			12:55																									
ZZZZZZ			12:57																									
ZZZZZZ			12:59																									
ZZZZZZ			13:01																									
ZZZZZZ			13:03																									
CCV 410-527694/73			13:05																									
CCB 410-527694/74			13:07																									
ZZZZZZ			13:09																									
ZZZZZZ			13:11																									
ZZZZZZ			13:13																									
ZZZZZZ			13:16																									
ZZZZZZ			13:18																									
ZZZZZZ			13:20																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 25924 Analysis Method: EPA 350.1

Start Date: 07/12/2024 10:33 End Date: 07/12/2024 13:47

Lab Sample Id	D/F	Type	Time	Analytes																									
				NH3																									
ZZZZZZ			13:22																										
ZZZZZZ			13:24																										
ZZZZZZ			13:26																										
CCV 410-527694/84			13:28																										
CCB 410-527694/85			13:30																										
ZZZZZZ			13:32																										
ZZZZZZ			13:34																										
ZZZZZZ			13:36																										
ZZZZZZ			13:39																										
ZZZZZZ			13:41																										
ZZZZZZ			13:43																										
ZZZZZZ			13:45																										
ZZZZZZ			13:47																										

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: NOEQUIP Analysis Method: 180.1

Start Date: 07/10/2024 23:54 End Date: 07/10/2024 23:56

Lab Sample Id	D/F	Type	Time	Analytes																								
				Turb																								
CCV 410-526892/1	1		23:54	X																								
CCB 410-526892/2	1		23:54	X																								
MB 410-526892/3	1	T	23:54	X																								
LCS 410-526892/4	1	T	23:54	X																								
410-179201-1	1	T	23:54	X																								
410-179201-2	1	T	23:54	X																								
410-179201-3	1	T	23:54	X																								
ZZZZZZ			23:54																									
ZZZZZZ			23:54																									
ZZZZZZ			23:54																									
ZZZZZZ			23:54																									
ZZZZZZ			23:54																									
CCV 410-526892/13	1		23:54	X																								
CCB 410-526892/14	1		23:54	X																								
ZZZZZZ			23:54																									
ZZZZZZ			23:54																									
ZZZZZZ			23:56																									
CCV 410-526892/18			23:56																									
CCB 410-526892/19			23:56																									
ZZZZZZ			23:56																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 19074 Analysis Method: 2320B-2011

Start Date: 07/10/2024 19:52 End Date: 07/11/2024 15:00

Lab Sample Id	D/F	Type	Time	Analytes																									
				Alk	BALKCC	CarAlk																							
ZZZZZZ			19:52																										
ZZZZZZ			19:56																										
ZZZZZZ			20:01																										
ZZZZZZ			20:05																										
ZZZZZZ			20:09																										
ZZZZZZ			20:13																										
ZZZZZZ			20:18																										
ZZZZZZ			20:22																										
ZZZZZZ			20:27																										
ZZZZZZ			20:31																										
ZZZZZZ			20:36																										
ZZZZZZ			20:40																										
ZZZZZZ			20:46																										
ZZZZZZ			20:50																										
ZZZZZZ			20:55																										
ZZZZZZ			20:59																										
ZZZZZZ			21:04																										
ZZZZZZ			21:08																										
ZZZZZZ			21:15																										
ZZZZZZ			21:21																										
ZZZZZZ			21:25																										
ZZZZZZ			21:30																										
ZZZZZZ			21:38																										
ZZZZZZ			21:46																										
ZZZZZZ			21:52																										
ZZZZZZ			21:59																										
ZZZZZZ			22:06																										
ZZZZZZ			22:14																										
ZZZZZZ			22:18																										
ZZZZZZ			22:24																										
ZZZZZZ			22:31																										
ZZZZZZ			22:38																										
ZZZZZZ			22:45																										
ZZZZZZ			22:51																										
ZZZZZZ			22:57																										
ZZZZZZ			23:05																										
ZZZZZZ			23:13																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 19074 Analysis Method: 2320B-2011

Start Date: 07/10/2024 19:52 End Date: 07/11/2024 15:00

Lab Sample Id	D/F	Type	Time	Analytes																										
				Alk	BALKCC	CarAlk																								
ZZZZZZ			23:20																											
ZZZZZZ			23:27																											
ZZZZZZ			23:37																											
ZZZZZZ			23:41																											
ZZZZZZ			23:47																											
ZZZZZZ			23:54																											
ZZZZZZ			00:00																											
ZZZZZZ			00:06																											
ZZZZZZ			00:11																											
ZZZZZZ			00:17																											
ZZZZZZ			00:21																											
ZZZZZZ			00:26																											
ZZZZZZ			00:30																											
ZZZZZZ			00:35																											
ZZZZZZ			00:39																											
ZZZZZZ			00:44																											
ZZZZZZ			00:48																											
ZZZZZZ			00:53																											
ZZZZZZ			00:57																											
ZZZZZZ			01:02																											
ZZZZZZ			01:06																											
ZZZZZZ			01:11																											
ZZZZZZ			01:15																											
ZZZZZZ			01:20																											
ZZZZZZ			01:24																											
ZZZZZZ			01:29																											
ZZZZZZ			01:34																											
ZZZZZZ			01:38																											
ZZZZZZ			01:43																											
ZZZZZZ			01:47																											
ZZZZZZ			01:52																											
ZZZZZZ			01:58																											
ZZZZZZ			02:04																											
ZZZZZZ			02:09																											
ZZZZZZ			02:13																											
ZZZZZZ			02:20																											
ZZZZZZ			02:28																											

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 19074 Analysis Method: 2320B-2011

Start Date: 07/10/2024 19:52 End Date: 07/11/2024 15:00

Lab Sample Id	D/F	Type	Time	Analytes																										
				Alk	BALKCC	CarAlk																								
ZZZZZZ			02:36																											
ZZZZZZ			02:43																											
ZZZZZZ			02:51																											
ZZZZZZ			02:58																											
ZZZZZZ			03:06																											
ZZZZZZ			03:11																											
ZZZZZZ			03:17																											
ZZZZZZ			03:25																											
ZZZZZZ			03:32																											
ZZZZZZ			03:40																											
ZZZZZZ			03:47																											
ZZZZZZ			03:54																											
ZZZZZZ			04:01																											
ZZZZZZ			04:08																											
ZZZZZZ			04:15																											
ZZZZZZ			04:22																											
ZZZZZZ			04:26																											
ZZZZZZ			04:33																											
ZZZZZZ			04:40																											
ZZZZZZ			04:47																											
ZZZZZZ			04:54																											
ZZZZZZ			05:01																											
ZZZZZZ			05:08																											
ZZZZZZ			05:15																											
ZZZZZZ			05:20																											
ZZZZZZ			05:26																											
ZZZZZZ			05:32																											
ZZZZZZ			05:37																											
ZZZZZZ			05:41																											
ZZZZZZ			05:49																											
ZZZZZZ			05:56																											
ZZZZZZ			06:02																											
ZZZZZZ			06:08																											
ZZZZZZ			06:16																											
ZZZZZZ			06:20																											
ZZZZZZ			06:26																											
ZZZZZZ			06:33																											

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 19074 Analysis Method: 2320B-2011

Start Date: 07/10/2024 19:52 End Date: 07/11/2024 15:00

Lab Sample Id	D/F	Type	Time	Analytes																										
				Alk	BALKCC	CarAlk																								
ZZZZZZ			06:40																											
ZZZZZZ			06:48																											
ZZZZZZ			06:55																											
ZZZZZZ			07:02																											
ZZZZZZ			07:09																											
ZZZZZZ			07:17																											
ZZZZZZ			07:21																											
ZZZZZZ			07:27																											
ZZZZZZ			07:32																											
ZZZZZZ			07:36																											
ZZZZZZ			07:40																											
ZZZZZZ			07:45																											
ZZZZZZ			07:49																											
ZZZZZZ			07:54																											
ZZZZZZ			07:58																											
ZZZZZZ			08:05																											
MB 410-527232/128	1	T	08:11	X																										
ZZZZZZ			08:15																											
ZZZZZZ			08:20																											
LCS 410-527232/131	1	T	08:28	X																										
LCSD 410-527232/132	1	T	08:36	X																										
ZZZZZZ			08:43																											
ZZZZZZ			08:50																											
ZZZZZZ			08:57																											
ZZZZZZ			09:04																											
ZZZZZZ			09:12																											
ZZZZZZ			09:16																											
ZZZZZZ			09:22																											
ZZZZZZ			09:29																											
ZZZZZZ			09:36																											
ZZZZZZ			09:43																											
ZZZZZZ			09:50																											
410-179201-1	1	T	09:57	X	X	X																								
410-179201-3	1	T	10:04	X	X	X																								
410-179201-2	1	T	10:11	X	X	X																								
ZZZZZZ			10:15																											
ZZZZZZ			10:22																											

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 19074 Analysis Method: 2320B-2011

Start Date: 07/10/2024 19:52 End Date: 07/11/2024 15:00

Lab Sample Id	D/F	Type	Time	Analytes																									
				Alk	BALKCC	CarAlk																							
ZZZZZZ			10:29																										
ZZZZZZ			10:36																										
ZZZZZZ			10:43																										
ZZZZZZ			10:50																										
ZZZZZZ			10:57																										
ZZZZZZ			11:05																										
ZZZZZZ			11:13																										
ZZZZZZ			11:20																										
ZZZZZZ			11:25																										
ZZZZZZ			11:31																										
ZZZZZZ			11:37																										
ZZZZZZ			11:42																										
ZZZZZZ			11:47																										
ZZZZZZ			11:54																										
ZZZZZZ			12:01																										
ZZZZZZ			12:09																										
ZZZZZZ			12:16																										
ZZZZZZ			12:24																										
ZZZZZZ			12:28																										
ZZZZZZ			12:35																										
ZZZZZZ			12:41																										
ZZZZZZ			12:48																										
ZZZZZZ			12:55																										
ZZZZZZ			13:01																										
ZZZZZZ			13:09																										
ZZZZZZ			13:16																										
ZZZZZZ			13:23																										
ZZZZZZ			13:30																										
ZZZZZZ			13:38																										
ZZZZZZ			13:45																										
ZZZZZZ			13:49																										
ZZZZZZ			13:55																										
ZZZZZZ			14:02																										
ZZZZZZ			14:09																										
ZZZZZZ			14:17																										
ZZZZZZ			14:24																										
ZZZZZZ			14:33																										

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 19074 Analysis Method: 2320B-2011

Start Date: 07/10/2024 19:52 End Date: 07/11/2024 15:00

Lab Sample Id	D/F	Type	Time	Analytes																									
				Alk	BALKCC	CarAlk																							
ZZZZZZ			14:41																										
ZZZZZZ			14:49																										
ZZZZZZ			14:54																										
ZZZZZZ			15:00																										

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC

Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: NOEQUIP

Analysis Method: 2540C - 2015

Start Date: 07/11/2024 21:54

End Date: 07/11/2024 21:54

Lab Sample Id	D/F	Type	Time	Analytes
				TDS
MB 410-527364/1	1	T	21:54	X
LCS 410-527364/2	1	T	21:54	X
410-179201-1	1	T	21:54	X
410-179201-2	1	T	21:54	X
410-179201-3	1	T	21:54	X
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	
ZZZZZZ			21:54	

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 19074 Analysis Method: 9040C

Start Date: 07/10/2024 19:52 End Date: 07/11/2024 15:00

Lab Sample Id	D/F	Type	Time	Analytes																										
				pH																										
ZZZZZZ			19:52																											
ICV 410-527234/2	1		19:56	X																										
ZZZZZZ			20:01																											
ZZZZZZ			20:05																											
ZZZZZZ			20:09																											
ZZZZZZ			20:13																											
ZZZZZZ			20:18																											
CCV 410-527234/8			20:22																											
ZZZZZZ			20:27																											
ZZZZZZ			20:31																											
ZZZZZZ			20:36																											
ZZZZZZ			20:40																											
ZZZZZZ			20:46																											
ZZZZZZ			20:50																											
ZZZZZZ			20:55																											
ZZZZZZ			20:59																											
ZZZZZZ			21:04																											
CCV 410-527234/18			21:08																											
ZZZZZZ			21:15																											
ZZZZZZ			21:21																											
ZZZZZZ			21:25																											
ZZZZZZ			21:30																											
ZZZZZZ			21:38																											
ZZZZZZ			21:46																											
ZZZZZZ			21:52																											
ZZZZZZ			21:59																											
ZZZZZZ			22:06																											
ZZZZZZ			22:14																											
CCV 410-527234/29			22:18																											
ZZZZZZ			22:24																											
ZZZZZZ			22:31																											
ZZZZZZ			22:38																											
ZZZZZZ			22:45																											
ZZZZZZ			22:51																											
ZZZZZZ			22:57																											
ZZZZZZ			23:05																											
ZZZZZZ			23:13																											
ZZZZZZ			23:20																											
ZZZZZZ			23:27																											
ZZZZZZ			23:37																											
CCV 410-527234/41			23:41																											

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 19074 Analysis Method: 9040C

Start Date: 07/10/2024 19:52 End Date: 07/11/2024 15:00

Lab Sample Id	D/F	Type	Time	Analytes																									
				pH																									
ZZZZZZ			23:47																										
ZZZZZZ			23:54																										
ZZZZZZ			00:00																										
ZZZZZZ			00:06																										
CCV 410-527234/46			00:11																										
ZZZZZZ			00:17																										
ZZZZZZ			00:21																										
ZZZZZZ			00:26																										
ZZZZZZ			00:30																										
ZZZZZZ			00:35																										
ZZZZZZ			00:39																										
ZZZZZZ			00:44																										
ZZZZZZ			00:48																										
ZZZZZZ			00:53																										
ZZZZZZ			00:57																										
ZZZZZZ			01:02																										
CCV 410-527234/58			01:06																										
ZZZZZZ			01:11																										
ZZZZZZ			01:15																										
ZZZZZZ			01:20																										
ZZZZZZ			01:24																										
ZZZZZZ			01:29																										
ZZZZZZ			01:34																										
ZZZZZZ			01:38																										
ZZZZZZ			01:43																										
ZZZZZZ			01:47																										
CCV 410-527234/68			01:52																										
ZZZZZZ			01:58																										
ZZZZZZ			02:04																										
ZZZZZZ			02:09																										
ZZZZZZ			02:13																										
ZZZZZZ			02:20																										
ZZZZZZ			02:28																										
ZZZZZZ			02:36																										
ZZZZZZ			02:43																										
ZZZZZZ			02:51																										
ZZZZZZ			02:58																										
ZZZZZZ			03:06																										
CCV 410-527234/80			03:11																										
ZZZZZZ			03:17																										
ZZZZZZ			03:25																										

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 19074 Analysis Method: 9040C

Start Date: 07/10/2024 19:52 End Date: 07/11/2024 15:00

Lab Sample Id	D/F	Type	Time	Analytes																									
				pH																									
ZZZZZZ			03:32																										
ZZZZZZ			03:40																										
ZZZZZZ			03:47																										
ZZZZZZ			03:54																										
ZZZZZZ			04:01																										
ZZZZZZ			04:08																										
ZZZZZZ			04:15																										
ZZZZZZ			04:22																										
CCV 410-527234/91			04:26																										
ZZZZZZ			04:33																										
ZZZZZZ			04:40																										
ZZZZZZ			04:47																										
ZZZZZZ			04:54																										
ZZZZZZ			05:01																										
ZZZZZZ			05:08																										
ZZZZZZ			05:15																										
CCV 410-527234/99			05:20																										
ZZZZZZ			05:26																										
ZZZZZZ			05:32																										
ZZZZZZ			05:37																										
ZZZZZZ			05:41																										
ZZZZZZ			05:49																										
ZZZZZZ			05:56																										
ZZZZZZ			06:02																										
ZZZZZZ			06:08																										
ZZZZZZ			06:16																										
ZZZZZZ			06:20																										
ZZZZZZ			06:26																										
ZZZZZZ			06:33																										
ZZZZZZ			06:40																										
ZZZZZZ			06:48																										
ZZZZZZ			06:55																										
ZZZZZZ			07:02																										
ZZZZZZ			07:09																										
ZZZZZZ			07:17																										
CCV 410-527234/118			07:21																										
ZZZZZZ			07:27																										
ZZZZZZ			07:32																										
ZZZZZZ			07:36																										
ZZZZZZ			07:40																										
ZZZZZZ			07:45																										

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 19074 Analysis Method: 9040C

Start Date: 07/10/2024 19:52 End Date: 07/11/2024 15:00

Lab Sample Id	D/F	Type	Time	Analytes																									
				pH																									
ZZZZZZ			07:49																										
ZZZZZZ			07:54																										
CCV 410-527234/126	1		07:58	X																									
ZZZZZZ			08:05																										
ZZZZZZ			08:11																										
LCS 410-527234/129	1	T	08:15	X																									
LCSD 410-527234/130	1	T	08:20	X																									
ZZZZZZ			08:28																										
ZZZZZZ			08:36																										
ZZZZZZ			08:43																										
ZZZZZZ			08:50																										
ZZZZZZ			08:57																										
ZZZZZZ			09:04																										
ZZZZZZ			09:12																										
CCV 410-527234/138	1		09:16	X																									
ZZZZZZ			09:22																										
ZZZZZZ			09:29																										
ZZZZZZ			09:36																										
ZZZZZZ			09:43																										
ZZZZZZ			09:50																										
410-179201-1	1	T	09:57	X																									
410-179201-3	1	T	10:04	X																									
410-179201-2	1	T	10:11	X																									
CCV 410-527234/147	1		10:15	X																									
ZZZZZZ			10:22																										
ZZZZZZ			10:29																										
ZZZZZZ			10:36																										
ZZZZZZ			10:43																										
ZZZZZZ			10:50																										
ZZZZZZ			10:57																										
ZZZZZZ			11:05																										
ZZZZZZ			11:13																										
ZZZZZZ			11:20																										
CCV 410-527234/157			11:25																										
ZZZZZZ			11:31																										
ZZZZZZ			11:37																										
ZZZZZZ			11:42																										
ZZZZZZ			11:47																										
ZZZZZZ			11:54																										
ZZZZZZ			12:01																										
ZZZZZZ			12:09																										

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 19074 Analysis Method: 9040C

Start Date: 07/10/2024 19:52 End Date: 07/11/2024 15:00

Lab Sample Id	D/F	Type	Time	Analytes																									
				pH																									
ZZZZZZ			12:16																										
ZZZZZZ			12:24																										
CCV 410-527234/167			12:28																										
ZZZZZZ			12:35																										
ZZZZZZ			12:41																										
ZZZZZZ			12:48																										
ZZZZZZ			12:55																										
ZZZZZZ			13:01																										
ZZZZZZ			13:09																										
ZZZZZZ			13:16																										
ZZZZZZ			13:23																										
ZZZZZZ			13:30																										
ZZZZZZ			13:38																										
ZZZZZZ			13:45																										
CCV 410-527234/179			13:49																										
ZZZZZZ			13:55																										
ZZZZZZ			14:02																										
ZZZZZZ			14:09																										
ZZZZZZ			14:17																										
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ZZZZZZ			14:41																										
ZZZZZZ			14:49																										
ZZZZZZ			14:54																										
ZZZZZZ			15:00																										

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 26070 Analysis Method: SM5310C

Start Date: 07/11/2024 10:54 End Date: 07/12/2024 03:07

Lab Sample Id	D/F	Type	Time	Analytes																									
				TOC	TOC1	TOC2	TOC3																						
ZZZZZZ			10:54																										
CCB 410-527445/2			11:13																										
MRL 410-527445/3	1	T	11:33	X	X	X	X																						
ZZZZZZ			12:11																										
ZZZZZZ			12:26																										
ZZZZZZ			12:41																										
ZZZZZZ			12:57																										
ZZZZZZ			13:12																										
ZZZZZZ			13:27																										
ZZZZZZ			13:43																										
ZZZZZZ			13:58																										
ZZZZZZ			14:13																										
ZZZZZZ			14:29																										
ZZZZZZ			14:44																										
ZZZZZZ			14:59																										
ZZZZZZ			15:15																										
ZZZZZZ			15:30																										
ZZZZZZ			15:45																										
ZZZZZZ			16:00																										
ZZZZZZ			16:16																										
ZZZZZZ			16:31																										
ZZZZZZ			16:46																										
CCV 410-527445/23	1		17:03	X	X	X	X																						
CCB 410-527445/24	1		17:23	X	X	X	X																						
LCS 410-527445/25	1	T	17:42	X	X	X	X																						
MB 410-527445/26	1	T	18:02	X	X	X	X																						
ZZZZZZ			18:22																										
ZZZZZZ			18:41																										
ZZZZZZ			19:01																										
ZZZZZZ			19:21																										
410-179201-1	1	T	19:40	X	X	X	X																						
410-179201-2	1	T	20:00	X	X	X	X																						
410-179201-3	1	T	20:20	X	X	X	X																						
ZZZZZZ			20:39																										
CCV 410-527445/35	1		20:58	X	X	X	X																						
CCB 410-527445/36	1		21:18	X	X	X	X																						
ZZZZZZ			21:38																										
ZZZZZZ			21:57																										
ZZZZZZ			22:16																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-179201-1

SDG No.: 410-179201

Instrument ID: 26070
Analysis Method: SM5310C

Start Date: 07/11/2024 10:54
End Date: 07/12/2024 03:07

Lab Sample Id	D/F	Type	Time	Analytes																									
				TOC	TOC1	TOC2	TOC3																						
ZZZZZZ			22:35																										
ZZZZZZ			22:54																										
ZZZZZZ			23:14																										
ZZZZZZ			23:33																										
ZZZZZZ			23:53																										
ZZZZZZ			00:12																										
ZZZZZZ			00:31																										
CCVL 410-527445/47	1		00:50	X	X	X	X																						
CCB 410-527445/48			01:10																										
ZZZZZZ			01:29																										
ZZZZZZ			01:49																										
ZZZZZZ			02:09																										
ZZZZZZ			02:28																										
CCV 410-527445/53			02:48																										
CCB 410-527445/54			03:07																										

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-179201-1

SDG No.: 410-179201

Batch Number: 527694 Batch Start Date: 07/12/24 10:33 Batch Analyst: Hess, Elena

Batch Method: EPA 350.1 Batch End Date: 07/12/24 13:47

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	WC_FL_CCV_NH3 00764					
ICV 410-527694/13		EPA 350.1			# mL					
LCS 410-527694/15		EPA 350.1			# mL					
LCSD 410-527694/16		EPA 350.1			# mL					
CCV 410-527694/25		EPA 350.1			# mL					
CCV 410-527694/33		EPA 350.1			# mL					
CCV 410-527694/45		EPA 350.1			# mL					

Batch Notes	
Hypochlorite ID	6164178
Carrier Identification	di water
Sodium Salicylate ID	6153267
Pipette/Syringe/Dispenser ID	h13525
Pipette Tip Lot ID	k1991909p
Complexing Reagent	6164229 %

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-179201-1

SDG No.: 410-179201

Batch Number: 526892 Batch Start Date: 07/10/24 23:54 Batch Analyst: Smith, Daniel S

Batch Method: 180.1 Batch End Date: 07/10/24 23:56

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	FinalAmount	WC_4000_NTU 00003				
CCV 410-526892/1		180.1			200 mL	0.5 mL				
CCB 410-526892/2		180.1			100 mL					
MB 410-526892/3		180.1			100 mL					
LCS 410-526892/4		180.1			200 mL	0.05 mL				
410-179201-E-1	TDSS-MW01-3Q24	180.1	Water	T	100 mL					
410-179201-E-2	TDSS-MW02-3Q24	180.1	Water	T	100 mL					
410-179201-E-3	TDSS-ER-3Q24	180.1	Water	T	100 mL					
CCV 410-526892/13		180.1			200 mL	0.5 mL				
CCB 410-526892/14		180.1			100 mL					

Batch Notes	
Instrument ID	1572
Calibration Date	07/03/2024

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-179201-1

SDG No.: 410-179201

Batch Number: 527232 Batch Start Date: 07/10/24 19:52 Batch Analyst: Bolf, Jeremy

Batch Method: 2320B-2011 Batch End Date: 07/10/24 19:52

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	CalcMsg	WC_Alk_LCS 00018				
MB 410-527232/128		2320B-2011			InitialAmount is blank					
LCS 410-527232/131		2320B-2011			InitialAmount is blank	# mL				
LCSD 410-527232/132		2320B-2011			InitialAmount is blank	# mL				
410-179201-J-1	TDSS-MW01-3Q24	2320B-2011	Water	T	InitialAmount is blank					
410-179201-J-3	TDSS-ER-3Q24	2320B-2011	Water	T	InitialAmount is blank					
410-179201-J-2	TDSS-MW02-3Q24	2320B-2011	Water	T	InitialAmount is blank					

Batch Notes	
Nominal Amount Used	10 mL
pH Meter ID	19074
Acid ID	6076537
Normality of First Titrant	0.0222 N
Titrant ID	6076537
Titrant Standardization Date	06/10/2024
pH Buffer 1 ID	2404F63
pH Buffer 2 ID	4402K49
pH Buffer 3 ID	2401G60

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-179201-1

SDG No.: 410-179201

Batch Number: 527364 Batch Start Date: 07/11/24 21:54 Batch Analyst: Arosemena, Olivia C

Batch Method: 2540C - 2015 Batch End Date: 07/12/24 10:25

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	Conductivity	CrucibleID	TareWeight	InitialAmount	Weight1	Weight2
MB 410-527364/1		2540C - 2015				B1470059	3.7756 g	200 mL	3.7757 g	3.7757 g
LCS 410-527364/2		2540C - 2015				B1469887	3.8619 g	100 mL	3.8815 g	3.8816 g
410-179201-F-1	TDSS-MW01-3Q24	2540C - 2015	Water	T	578 umhos/cm	B1469875	3.8812 g	200 mL	3.9234 g	3.9234 g
410-179201-F-2	TDSS-MW02-3Q24	2540C - 2015	Water	T	861 umhos/cm	B1469878	3.9218 g	100 mL	3.9567 g	3.9569 g
410-179201-F-3	TDSS-ER-3Q24	2540C - 2015	Water	T	210us umhos/cm	B1469879	3.9943 g	2.00 mL	4.0213 g	4.0215 g

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 410-527364/1		2540C - 2015			Pass No Unit	N/A No Unit	N/A	0.0001 g	0.0001 g	N/A g
LCS 410-527364/2		2540C - 2015			Pass No Unit	N/A No Unit	N/A	0.0196 g	0.0197 g	N/A g
410-179201-F-1	TDSS-MW01-3Q24	2540C - 2015	Water	T	Pass No Unit	N/A No Unit	N/A	0.0422 g	0.0422 g	N/A g
410-179201-F-2	TDSS-MW02-3Q24	2540C - 2015	Water	T	Pass No Unit	N/A No Unit	N/A	0.0349 g	0.0351 g	N/A g
410-179201-F-3	TDSS-ER-3Q24	2540C - 2015	Water	T	Pass No Unit	N/A No Unit	N/A	0.027 g	0.0272 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	Residue4	FinalAmount	CalcMsg	WC_TDS_LCS_00235	AnalysisComment	
MB 410-527364/1		2540C - 2015			N/A g	200 mL	OK			
LCS 410-527364/2		2540C - 2015			N/A g	200 mL	OK	100 mL		
410-179201-F-1	TDSS-MW01-3Q24	2540C - 2015	Water	T	N/A g	200 mL	OK			
410-179201-F-2	TDSS-MW02-3Q24	2540C - 2015	Water	T	N/A g	200 mL	OK			
410-179201-F-3	TDSS-ER-3Q24	2540C - 2015	Water	T	N/A g	200 mL	OK		2<200 (Used 200 ml) 100x	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-179201-1

SDG No.: 410-179201

Batch Number: 527364 Batch Start Date: 07/11/24 21:54 Batch Analyst: Arosemena, Olivia C

Batch Method: 2540C - 2015 Batch End Date: 07/12/24 10:25

Batch Notes	
Nominal Amount Used	200 mL
Conductivity Meter ID	2303F39
Filter ID	18144908
Balance ID	27505
Balance is Level? (Y/N)	yes
Vessel Lot ID	202406001-4114-WP
Oven ID	6605
Thermometer ID	1006
Weight(WT1) Start Date/Time	07/12/2024 06:00
Uncorrected Weight(WT1) Start Temp	180 Celsius
Weight(WT1) Start Temp	180 Celsius
Weight(WT1) Date/Time Out	07/12/2024 07:05
Uncorrected Weight(WT1) Temp Out	180 Celsius
Weight(WT1) Temp Out	180 Celsius
Date/Time - In - CW (WT2)	07/12/2024 07:42
Temperature - Start-CW(WT2) -Uncorrected	180 Celsius
Temperature - Start - CW (WT2) - Correct	180 Celsius
Date/Time - Out - CW (WT2)	07/12/2024 08:45
Temperature - End-CW(WT2) -Uncorrected	180 Celsius
Temperature - End - CW (WT2) - Correct	180 Celsius
Date/Time - In - CW (WT3)	07/12/2024 09:23
Temperature - Start-CW(WT3) -Uncorrected	180 Celsius
Temperature - Start - CW (WT3) - Correct	180 Celsius
Date/Time - Out - CW (WT3)	07/12/2024 10:25
Temperature - End-CW(WT3) -Uncorrected	180 Celsius
Temperature - End - CW (WT3) - Correct	180 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-179201-1

SDG No.: 410-179201

Batch Number: 527234 Batch Start Date: 07/10/24 19:52 Batch Analyst: Bolf, Jeremy

Batch Method: 9040C Batch End Date: 07/10/24 19:52

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	WC_pH7_CRM 00008	WC_pHBuffer7 00029				
ICV 410-527234/2		9040C			# mL					
CCV 410-527234/126		9040C				# mL				
LCS 410-527234/129		9040C				# mL				
LCSD 410-527234/130		9040C				# mL				
CCV 410-527234/138		9040C				# mL				
CCV 410-527234/147		9040C				# mL				

Batch Notes	
pH Meter ID	19074
pH Buffer 1 ID	2404F63
pH Buffer 2 ID	4402K49
pH Buffer 3 ID	2401G60
pH Meter Calibration Slope	See attached document
Calibration Date and Time	See attached document
Sufficient volume for sample dup	No

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-179201-1

SDG No.: 410-179201

Batch Number: 527445 Batch Start Date: 07/11/24 10:54 Batch Analyst: Cornelius, Ashlynn M

Batch Method: SM5310C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount	Res1&2RPD	RPDOK	WC_TOC_QC_STD 00062	
MRL 410-527445/3		SM5310C			100 mL	100 mL	31 %	TOC Fail	0.2 mL	
CCV 410-527445/23		SM5310C			500 mL	500 mL	6 %	TOC Pass	50 mL	
CCB 410-527445/24		SM5310C						TOC Pass		
LCS 410-527445/25		SM5310C			500 mL	500 mL	5 %	TOC Pass	50 mL	
MB 410-527445/26		SM5310C						TOC Pass		
410-179201-A-1	TDSS-MW01-3Q24	SM5310C	Water	T			2 %	TOC Pass		
410-179201-A-2	TDSS-MW02-3Q24	SM5310C	Water	T			5 %	TOC Pass		
410-179201-A-3	TDSS-ER-3Q24	SM5310C	Water	T			0 %	TOC Pass		
CCV 410-527445/35		SM5310C			500 mL	500 mL	4 %	TOC Pass	25 mL	
CCB 410-527445/36		SM5310C						TOC Pass		
CCVL 410-527445/47		SM5310C			500 mL	500 mL	4 %	TOC Pass	5 mL	

Batch Notes	
Phosphoric Acid ID	6076270
Sodium Persulfate ID	6076271
Pipette/Syringe/Dispenser ID	TOC
Vial Lot Number	2754
Pipette Tip Lot ID	K199109P

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method:	350.1
Analyte:	Ammonia
Calibration Date and Time :	7/12/2024 10:52AM
Run ID:	24194NH3A
Instrument ID:	25924

Curve Type: Linear

				Percent Error		
Cal Point	**Xi = True Value**	**Units**	**X'I = Measured Value**	**(X'i - (Xi / Xi)) x 100**	**Criteria**	**Pass/Fail**
LOW	0.1	mg/L	0.1211	-21%	50%	PASS
MID	1	mg/L	0.9546	5%	10%	PASS

FlowView - Result

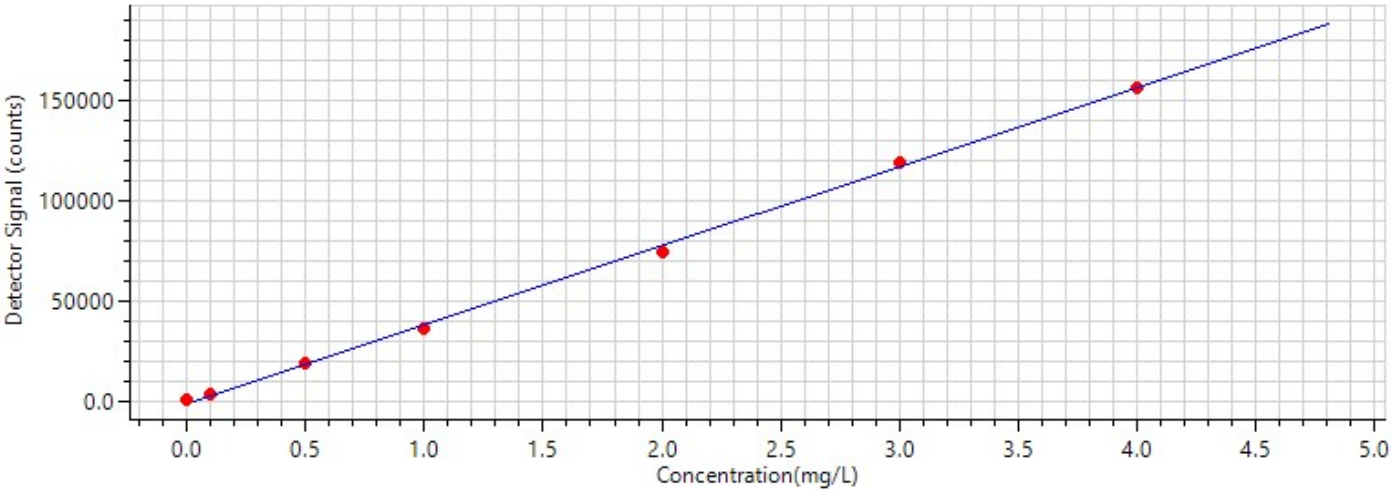
InstrumentID: 25924
Operator ID: 36672
File Version: 110
Created On: 7/12/2024 10:33:18 AM
Last Modified On: 7/12/2024 1:56:42 PM
Exported on 7/12/2024 2:36:21 PM

Calibration Results - Channel2

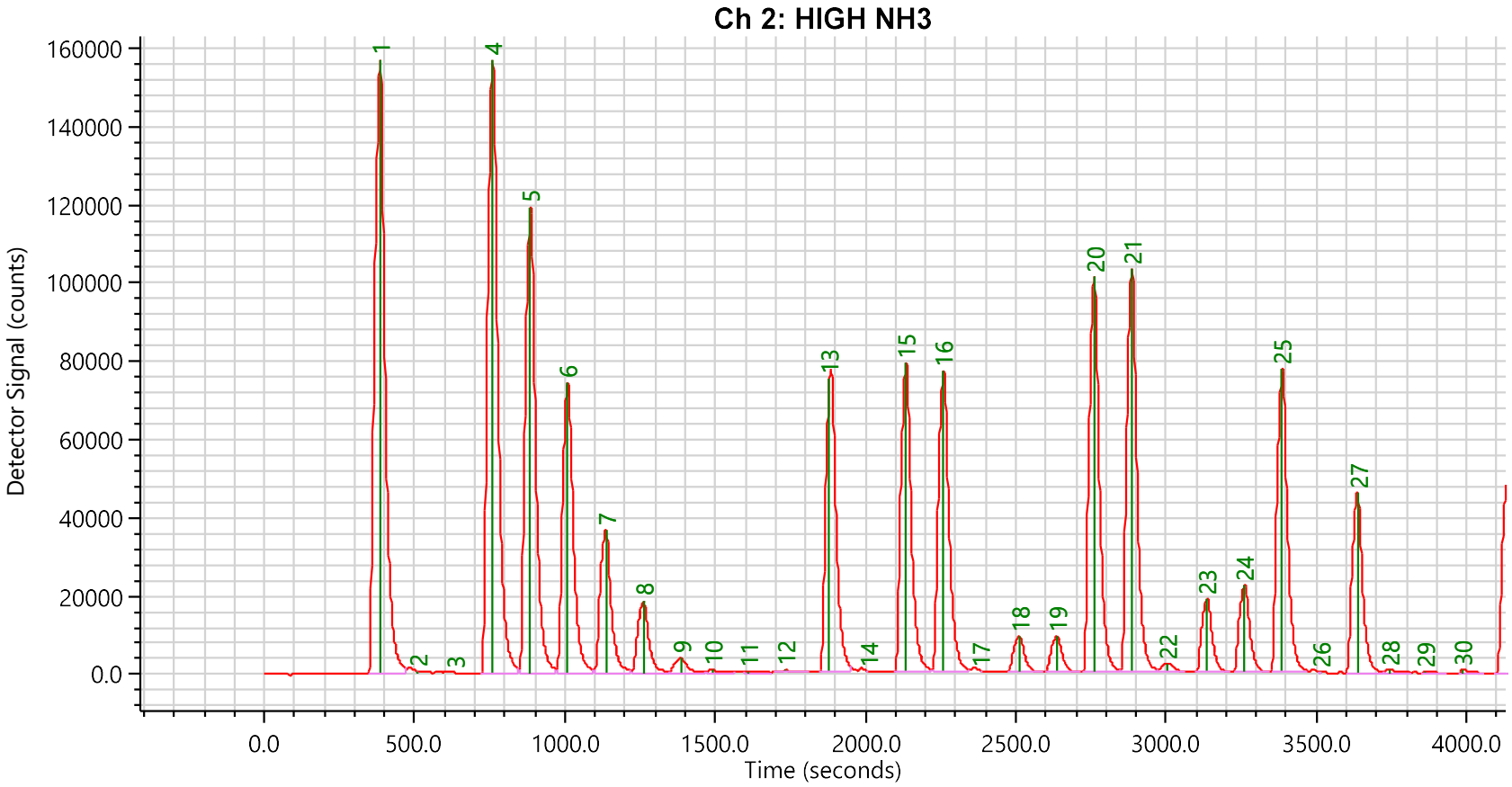
Calibration Summary

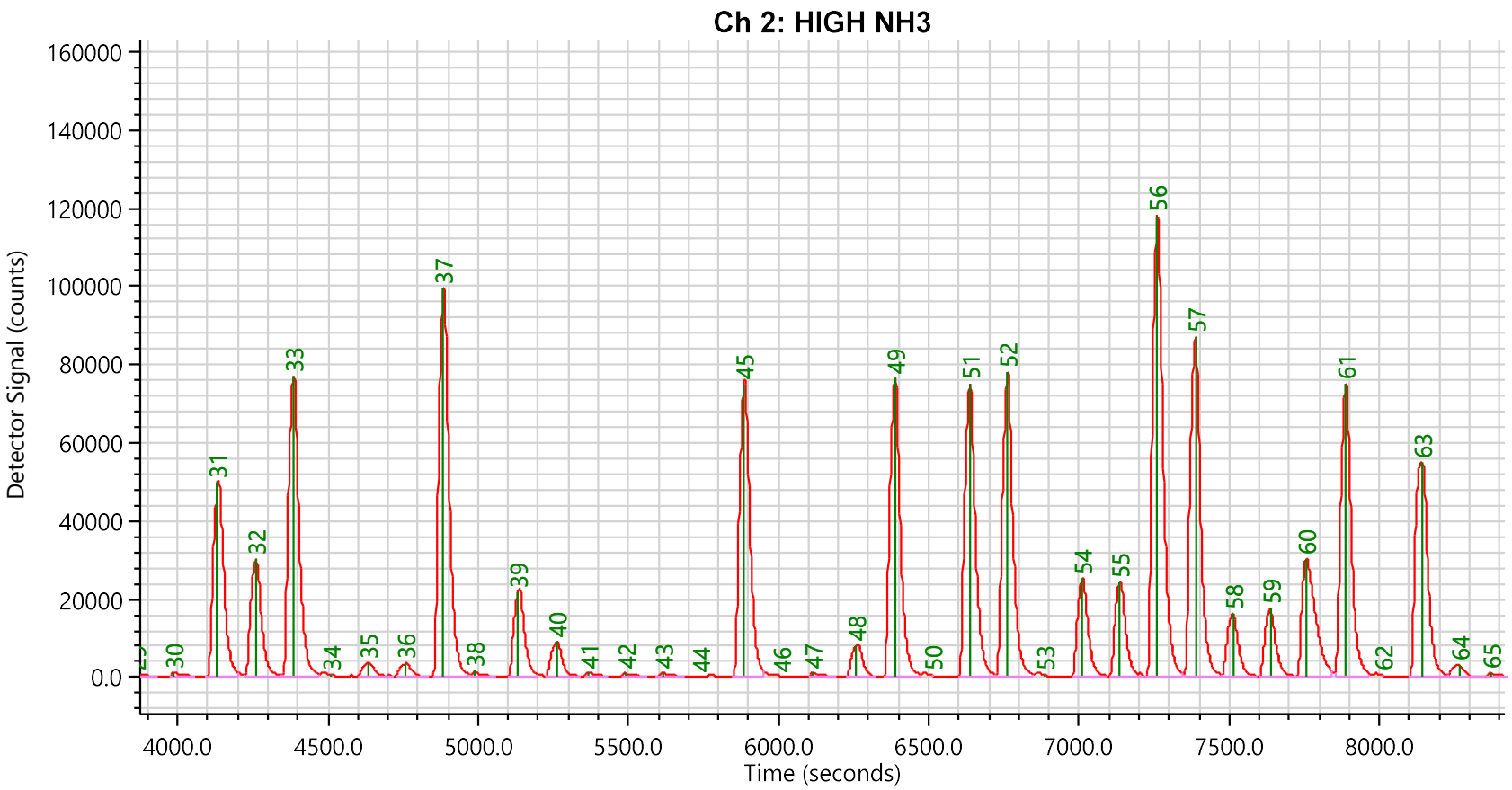
Curve Fit: =	Linear		
R^2: =	0.99884965	a: =	n/a
RF: =	2.546761E-005	b: =	n/a
Offset:	0.02506403	c:	n/a
HLCAVG:	0.00000000	LHCAVG:	0.00000000

Calibration Details



Name	Type	Std Conc(mg/L)	Avg Height	Calc Avg Conc(mg/L)	%RSD	Flags	Date/Time
S1	STD1	4.0000	156451.6	4.0095	0.0		07/12/2024 10:39:47 AM
S2	STD2	3.0000	119217.0	3.0612	0.0		07/12/2024 10:41:52 AM
S3	STD3	2.0000	74113.0	1.9125	0.0		07/12/2024 10:43:57 AM
S4	STD4	1.0000	36499.6	0.9546	0.0		07/12/2024 10:46:02 AM
S5	STD5	0.5000	18367.2	0.4928	0.0		07/12/2024 10:48:07 AM
S6	STD6	0.1000	3770.4	0.1211	0.0		07/12/2024 10:50:12 AM
S7	STD7	0.0000	907.0	0.0482	0.0		07/12/2024 10:52:17 AM


Ch 2: HIGH NH3
Detector Signal (counts)
160000
140000
120000
100000
80000
60000
40000
20000
0.0
0.0
500.0
1000.0
1500.0
2000.0
2500.0
3000.0
3500.0
4000.0
Time (seconds)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30


Ch 2: HIGH NH3
Detector Signal (counts)
160000
140000
120000
100000
80000
60000
40000
20000
0.0
4000.0
4500.0
5000.0
5500.0
6000.0
6500.0
7000.0
7500.0
8000.0
Time (seconds)
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
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58
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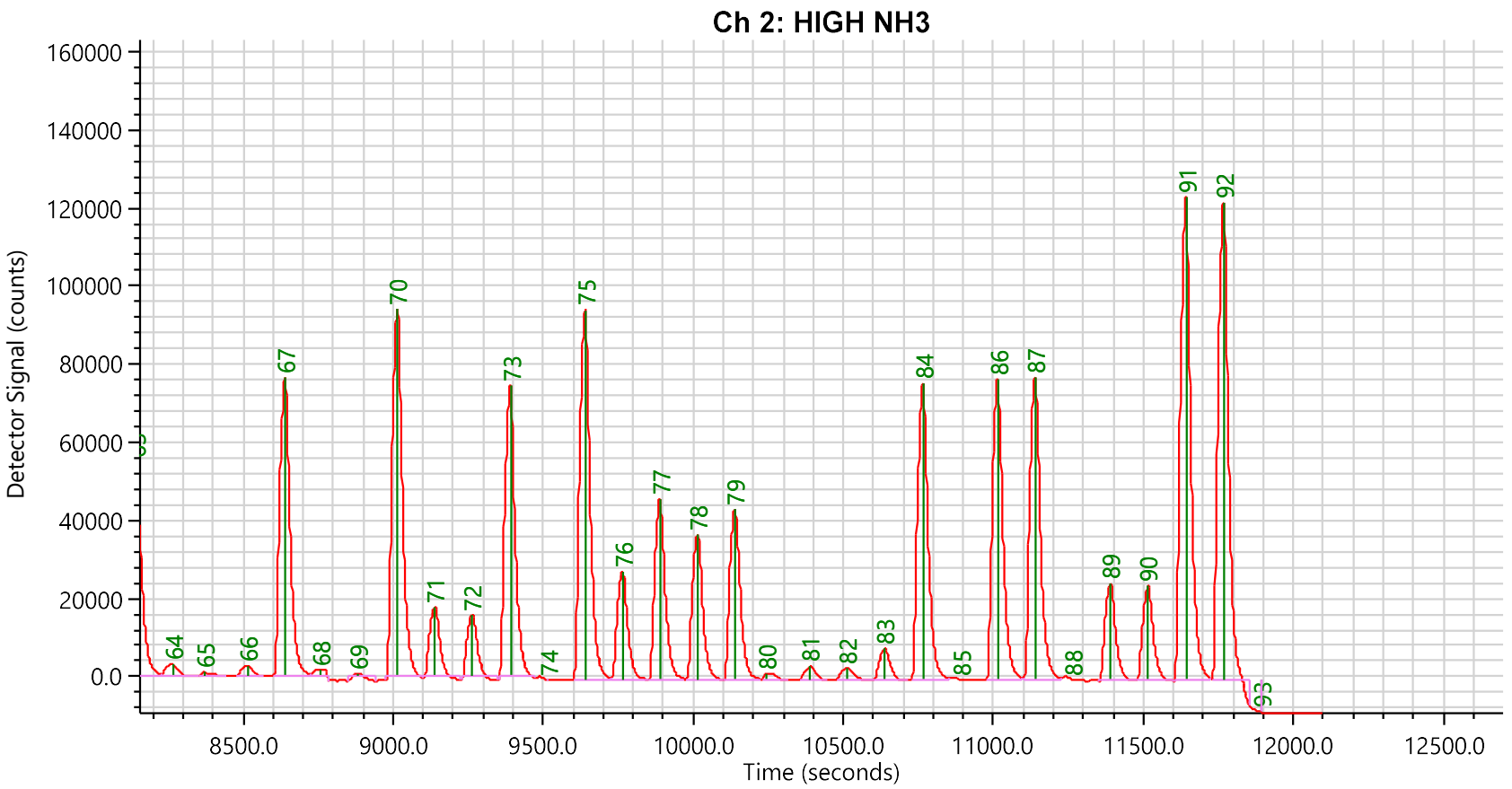
62
63
64
65


Ch 2: HIGH NH3
Detector Signal (counts)
160000
140000
120000
100000
80000
60000
40000
20000
0.0
8500.0
9000.0
9500.0
10000.0
10500.0
11000.0
11500.0
12000.0
12500.0
Time (seconds)
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93

FlowView - Result

InstrumentID: 25924
Operator ID: 36672
Methodology: EPA 3247.1 2009
File Version: 110
Created On: 7/12/2024 10:33:18 AM
Last Modified On: 7/12/2024 1:56:42 PM
Exported on 7/12/2024 2:35:56 PM

Date/Time	Peak #	Cup #	Type	Sample Name	Peak Response	Calc (mg/L)	M-Dil	Channel Results	Channe
7/12/2024 10:33:32 AM	1	107	SYNC	Sync	156558.6	0.0000	1	Ch 2	HIGH NH
7/12/2024 10:35:37 AM	2	900	SPL	carrover	552.2	0.0000	1	Ch 2	HIGH NH
7/12/2024 10:37:42 AM	3	900	RB	BLANK	173.8	0.0000	1	Ch 2	HIGH NH
7/12/2024 10:39:47 AM	4	107	STD1	S1	156451.6	4.0000	1	Ch 2	HIGH NH
7/12/2024 10:41:52 AM	5	106	STD2	S2	119217.0	3.0000	1	Ch 2	HIGH NH
7/12/2024 10:43:57 AM	6	105	STD3	S3	74113.0	2.0000	1	Ch 2	HIGH NH
7/12/2024 10:46:02 AM	7	104	STD4	S4	36499.6	1.0000	1	Ch 2	HIGH NH
7/12/2024 10:48:07 AM	8	103	STD5	S5	18367.2	0.5000	1	Ch 2	HIGH NH
7/12/2024 10:50:12 AM	9	102	STD6	S6	3770.4	0.1000	1	Ch 2	HIGH NH
7/12/2024 10:52:17 AM	10	101	STD7	S7	907.0	0.0000	1	Ch 2	HIGH NH
7/12/2024 10:54:22 AM	11	900	SPL	RINSE	638.8	0.0413	1	Ch 2	HIGH NH
7/12/2024 10:56:27 AM	12	900	RB	BLANK	688.2	0.0426	1	Ch 2	HIGH NH
7/12/2024 10:58:32 AM	13	110	ICV	ICV	74973.8	1.9345	1	Ch 2	HIGH NH
7/12/2024 11:00:37 AM	14	900	RB	ICB	432.6	0.0361	1	Ch 2	HIGH NH
7/12/2024 11:02:42 AM	15	110	SPL	LCS	79175.0	2.0415	1	Ch 2	HIGH NH
7/12/2024 11:04:47 AM	16	110	SPL	LCSD	77111.8	1.9889	1	Ch 2	HIGH NH
7/12/2024 11:06:52 AM	17	900	SPL	MB	379.8	0.0347	1	Ch 2	HIGH NH
7/12/2024 11:08:57 AM	18	116	SPL	410-178698-s-4	9281.8	1.3072	5	Ch 2	HIGH NH
7/12/2024 11:11:02 AM	19	116	SPL	410-178698-c-4 du	9256.0	1.3040	5	Ch 2	HIGH NH
7/12/2024 11:13:07 AM	20	117	SPL	410-178698-s-4 ms	101374.0	13.0341	5	Ch 2	HIGH NH
7/12/2024 11:15:12 AM	21	118	SPL	410-178698-q-4 msd	103297.2	13.2790	5	Ch 2	HIGH NH
7/12/2024 11:17:17 AM	22	119	SPL	620-19584-a-1	2091.8	0.0783	1	Ch 2	HIGH NH
7/12/2024 11:19:22 AM	23	120	SPL	410-178698-s-2	18910.2	0.5067	1	Ch 2	HIGH NH
7/12/2024 11:21:27 AM	24	121	SPL	410-178698-s-3	22361.8	0.5946	1	Ch 2	HIGH NH
7/12/2024 11:23:32 AM	25	110	CCV2	CCV	77758.6	2.0054	1	Ch 2	HIGH NH
7/12/2024 11:25:38 AM	26	900	RB	CCB	284.2	0.0323	1	Ch 2	HIGH NH
7/12/2024 11:27:43 AM	27	122	SPL	410-178698-s-5	46268.2	1.2034	1	Ch 2	HIGH NH
7/12/2024 11:29:48 AM	28	123	SPL	410-178698-w-7	878.8	0.0474	1	Ch 2	HIGH NH
7/12/2024 11:31:53 AM	29	124	SPL	410-179201-i-1	594.8	0.0402	1	Ch 2	HIGH NH
7/12/2024 11:33:58 AM	30	125	SPL	410-179201-i-2	968.0	0.0497	1	Ch 2	HIGH NH
7/12/2024 11:36:03 AM	31	126	SPL	410-178698-s-1	49627.6	25.7792	20	Ch 2	HIGH NH
7/12/2024 11:38:08 AM	32	127	SPL	410-178698-t-6	29919.2	15.7407	20	Ch 2	HIGH NH
7/12/2024 11:40:13 AM	33	110	CCV2	CCV	76898.2	1.9835	1	Ch 2	HIGH NH
7/12/2024 11:42:18 AM	34	900	RB	CCB	318.6	0.0332	1	Ch 2	HIGH NH
7/12/2024 11:44:23 AM	35	128	SPL	630-90454-g-1	3364.2	0.1107	1	Ch 2	HIGH NH
7/12/2024 11:46:28 AM	36	128	SPL	630-90454-g-1 DU	3196.8	0.1065	1	Ch 2	HIGH NH
7/12/2024 11:48:33 AM	37	129	SPL	630-90454-g-1 MS	99273.2	2.5533	1	Ch 2	HIGH NH
7/12/2024 11:50:38 AM	38	130	SPL	410-179201-i-3	1203.4	0.0557	1	Ch 2	HIGH NH
7/12/2024 11:52:43 AM	39	131	SPL	630-90424-f-1	21638.6	0.5761	1	Ch 2	HIGH NH
7/12/2024 11:54:48 AM	40	132	SPL	630-90454-g-2	8856.0	0.2506	1	Ch 2	HIGH NH
7/12/2024 11:56:53 AM	41	133	SPL	630-90463-g-1	899.0	0.0480	1	Ch 2	HIGH NH
7/12/2024 11:58:58 AM	42	134	SPL	630-90463-g-2	704.8	0.0430	1	Ch 2	HIGH NH
7/12/2024 12:01:03 PM	43	135	SPL	630-90463-g-3	772.8	0.0447	1	Ch 2	HIGH NH
7/12/2024 12:05:13 PM	44	36	SPL	630-90463-g-4	-48.2	0.0238	1	Ch 2	HIGH NH
7/12/2024 12:07:18 PM	45	110	CCV2	CCV	74984.4	1.9347	1	Ch 2	HIGH NH
7/12/2024 12:09:23 PM	46	900	RB	CCB	208.2	0.0304	1	Ch 2	HIGH NH
7/12/2024 12:11:28 PM	47	137	SPL	630-90476-d-3	1129.2	0.0538	1	Ch 2	HIGH NH
7/12/2024 12:13:33 PM	48	138	SPL	620-19620-e-2	8314.6	1.1841	5	Ch 2	HIGH NH
7/12/2024 12:15:38 PM	49	110	CCV2	CCV	76528.4	1.9741	1	Ch 2	HIGH NH

Date/Time	Peak #	Cup #	Type	Sample Name	Peak Response	Calc (mg/L)	M-Dil	Channel Results	Channe
7/12/2024 12:17:43 PM	50	900	RB	CCB	312.6	0.0330	1	Ch 2	HIGH NH
7/12/2024 12:19:48 PM	51	110	SPL	LCS	74739.0	1.9285	1	Ch 2	HIGH NH
7/12/2024 12:21:53 PM	52	110	SPL	LCSD	77723.2	2.0045	1	Ch 2	HIGH NH
7/12/2024 12:23:58 PM	53	900	SPL	MB	387.8	0.0349	1	Ch 2	HIGH NH
7/12/2024 12:26:03 PM	54	139	SPL	410-179365-p-1	25317.0	0.6698	1	Ch 2	HIGH NH
7/12/2024 12:28:08 PM	55	139	SPL	410-179365-p-1 DU	24383.2	0.6460	1	Ch 2	HIGH NH
7/12/2024 12:30:13 PM	56	140	SPL	410-179365-p-1 MS	117860.0	3.0267	1	Ch 2	HIGH NH
7/12/2024 12:32:19 PM	57	141	SPL	410-179365-p-2	86855.4	2.2371	1	Ch 2	HIGH NH
7/12/2024 12:34:24 PM	58	142	SPL	410-179365-p-4	16055.6	0.4340	1	Ch 2	HIGH NH
7/12/2024 12:36:29 PM	59	143	SPL	410-179365-q-7	17401.2	0.4682	1	Ch 2	HIGH NH
7/12/2024 12:38:34 PM	60	144	SPL	410-179365-q-8	30281.0	0.7962	1	Ch 2	HIGH NH
7/12/2024 12:40:39 PM	61	110	CCV2	CCV	75039.0	1.9361	1	Ch 2	HIGH NH
7/12/2024 12:42:44 PM	62	900	RB	CCB	324.4	0.0333	1	Ch 2	HIGH NH
7/12/2024 12:44:49 PM	63	145	SPL	410-179392-m-1	54900.8	1.4233	1	Ch 2	HIGH NH
7/12/2024 12:46:54 PM	64	146	SPL	410-179424-b-2	2908.6	0.0991	1	Ch 2	HIGH NH
7/12/2024 12:48:59 PM	65	147	SPL	410-179426-c-1	915.4	0.0484	1	Ch 2	HIGH NH
7/12/2024 12:51:04 PM	66	148	SPL	410-179428-c-1	2483.0	0.0883	1	Ch 2	HIGH NH
7/12/2024 12:53:09 PM	67	149	SPL	410-179365-p-3	76311.4	9.8427	5	Ch 2	HIGH NH
7/12/2024 12:55:14 PM	68	150	SPL	410-179429-b-1	1828.2	0.0716	1	Ch 2	HIGH NH
7/12/2024 12:57:19 PM	69	150	SPL	410-179429-b-1 DU	508.0	0.0380	1	Ch 2	HIGH NH
7/12/2024 12:59:24 PM	70	151	SPL	410-179429-b-1 MS	93888.6	2.4162	1	Ch 2	HIGH NH
7/12/2024 1:01:29 PM	71	152	SPL	410-179365-q-5	17831.0	2.3959	5	Ch 2	HIGH NH
7/12/2024 1:03:34 PM	72	153	SPL	630-90507-e-2	15766.0	2.1329	5	Ch 2	HIGH NH
7/12/2024 1:05:39 PM	73	110	CCV2	CCV	74404.0	1.9200	1	Ch 2	HIGH NH
7/12/2024 1:07:44 PM	74	900	RB	CCB	258.4	0.0316	1	Ch 2	HIGH NH
7/12/2024 1:09:49 PM	75	154	SPL	410-179365-q-6	94859.8	24.4092	10	Ch 2	HIGH NH
7/12/2024 1:11:54 PM	76	155	SPL	410-179423-b-1	27988.8	14.7574	20	Ch 2	HIGH NH
7/12/2024 1:13:59 PM	77	156	SPL	410-179424-b-1	46321.8	24.0954	20	Ch 2	HIGH NH
7/12/2024 1:16:04 PM	78	157	SPL	410-179425-b-1	37535.0	19.6198	20	Ch 2	HIGH NH
7/12/2024 1:18:09 PM	79	158	SPL	410-179392-m-2	43742.6	113.9084	100	Ch 2	HIGH NH
7/12/2024 1:20:14 PM	80	136	SPL	630-90463-g-4	1647.4	0.0670	1	Ch 2	HIGH NH
7/12/2024 1:22:19 PM	81	159	SPL	410-178127-A-1 MDLS	3531.0	0.1150	1	Ch 2	HIGH NH
7/12/2024 1:24:25 PM	82	159	SPL	410-178127-A-2 MDLS	3276.0	0.1085	1	Ch 2	HIGH NH
7/12/2024 1:26:30 PM	83	160	SPL	630-90543-f-2	8120.2	0.2319	1	Ch 2	HIGH NH
7/12/2024 1:28:35 PM	84	110	CCV2	CCV	75938.0	1.9590	1	Ch 2	HIGH NH
7/12/2024 1:30:40 PM	85	900	RB	CCB	282.6	0.0323	1	Ch 2	HIGH NH
7/12/2024 1:32:45 PM	86	110	SPL	LCS	77151.0	1.9899	1	Ch 2	HIGH NH
7/12/2024 1:34:50 PM	87	110	SPL	LCSD	77398.6	1.9962	1	Ch 2	HIGH NH
7/12/2024 1:36:55 PM	88	900	SPL	MB	299.4	0.0327	1	Ch 2	HIGH NH
7/12/2024 1:39:00 PM	89	161	SPL	410-179520-d-10	24874.2	0.6586	1	Ch 2	HIGH NH
7/12/2024 1:41:05 PM	90	161	SPL	410-179520-d-10 DU	24439.6	0.6475	1	Ch 2	HIGH NH
7/12/2024 1:43:10 PM	91	162	SPL	410-179520-c-10 ms	123719.0	3.1759	1	Ch 2	HIGH NH
7/12/2024 1:45:15 PM	92	163	SPL	410-179520-c-10 msd	122429.0	3.1430	1	Ch 2	HIGH NH
7/12/2024 1:47:20 PM	93	164	SPL	630-90573-ay-1	-8069.6	-0.1804	1	Ch 2	HIGH NH

General Chemistry Raw Data Report

Job ID: 410-179201-1
SDG: 410-179201

Batch: 526892 **Analyst Initials: UDS7**
Method: 180.1 **Instrument: NONE**

Lab Sample ID: CCV 410-526892/1 **Analysis Date: Jul 10, 2024 23:54**

Analyte	Detector	Dilution	Raw Result	Unit	Final Amount
Turbidity	None	1	10.1	NTU	200 mL

Lab Sample ID: CCB 410-526892/2 **Analysis Date: Jul 10, 2024 23:54**

Analyte	Detector	Dilution	Raw Result	Unit	Final Amount
Turbidity	None	1	.071	NTU	100 mL

Lab Sample ID: MB 410-526892/3 **Analysis Date: Jul 10, 2024 23:54**

Analyte	Detector	Dilution	Raw Result	Unit	Final Amount
Turbidity	None	1	.084	NTU	100 mL

Lab Sample ID: LCS 410-526892/4 **Analysis Date: Jul 10, 2024 23:54**

Analyte	Detector	Dilution	Raw Result	Unit	Final Amount
Turbidity	None	1	1.12	NTU	200 mL

Lab Sample ID: 410-179201-E-1 **Analysis Date: Jul 10, 2024 23:54**

Analyte	Detector	Dilution	Raw Result	Unit	Final Amount
Turbidity	None	1	2.49	NTU	100 mL

Lab Sample ID: 410-179201-E-2 **Analysis Date: Jul 10, 2024 23:54**

Analyte	Detector	Dilution	Raw Result	Unit	Final Amount
Turbidity	None	1	17.7	NTU	100 mL

Lab Sample ID: 410-179201-E-3 **Analysis Date: Jul 10, 2024 23:54**

Analyte	Detector	Dilution	Raw Result	Unit	Final Amount
Turbidity	None	1	3.02	NTU	100 mL

Lab Sample ID: CCV 410-526892/13 **Analysis Date: Jul 10, 2024 23:54**

Analyte	Detector	Dilution	Raw Result	Unit	Final Amount
Turbidity	None	1	10.0	NTU	200 mL

Lab Sample ID: CCB 410-526892/14 **Analysis Date: Jul 10, 2024 23:54**

Analyte	Detector	Dilution	Raw Result	Unit	Final Amount
Turbidity	None	1	.087	NTU	100 mL

PC-TitratION PLUS

Water Analysis Report

Run Number 7957 **Order Number** 20240710-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Alk4.5	Alk8.3	Alk4.2	HDMLS	Total Hardness		8.3	Hacid
Tap	7/10/2024	7:52 PM	23.76	-1.00	7.59	.00	298.17	298.17	.00	.00	2.69	.00	-1.00	116.25	-1.00	-1.00	-1.00	-1.00
ICVpH	7/10/2024	7:56 PM	23.54	-1.00	6.99	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	528.44	-1.00	-1.00	-1.00	-1.00
lcsph	7/10/2024	8:01 PM	23.36	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	799.55	-1.00	-1.00	-1.00	-1.00
lcsdph	7/10/2024	8:05 PM	23.28	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,070.72	-1.00	-1.00	-1.00	-1.00
410-178625-D-2	7/10/2024	8:09 PM	23.23	-1.00	8.97	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,314.06	-1.00	-1.00	-1.00	-1.00
410-178625-C-3	7/10/2024	8:13 PM	23.30	-1.00	1.21	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,550.81	-1.00	-1.00	-1.00	-1.00
410-178625-C-1	7/10/2024	8:18 PM	23.35	-1.00	1.38	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,822.66	-1.00	-1.00	-1.00	-1.00
ccvph	7/10/2024	8:22 PM	23.28	-1.00	7.05	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,094.47	-1.00	-1.00	-1.00	-1.00
410-177173-E-1	7/10/2024	8:27 PM	23.43	-1.00	6.78	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,333.38	-1.00	-1.00	-1.00	-1.00
410-177173-E-2	7/10/2024	8:31 PM	23.44	-1.00	7.14	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,604.49	-1.00	-1.00	-1.00	-1.00
410-177173-E-3	7/10/2024	8:36 PM	23.39	-1.00	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,875.64	-1.00	-1.00	-1.00	-1.00
410-177173-E-4	7/10/2024	8:40 PM	23.27	-1.00	7.17	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,146.94	-1.00	-1.00	-1.00	-1.00
410-177173-E-5	7/10/2024	8:46 PM	23.28	-1.00	7.39	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,482.55	-1.00	-1.00	-1.00	-1.00
410-178697-F-2	7/10/2024	8:50 PM	23.31	-1.00	6.84	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,753.99	-1.00	-1.00	-1.00	-1.00
240-207126-G-1	7/10/2024	8:55 PM	23.46	-1.00	7.15	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,025.66	-1.00	-1.00	-1.00	-1.00
410-178432-C-2	7/10/2024	8:59 PM	23.52	-1.00	9.92	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,297.45	-1.00	-1.00	-1.00	-1.00
410-178432-B-2	7/10/2024	9:04 PM	23.49	-1.00	6.45	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,569.33	-1.00	-1.00	-1.00	-1.00
ccvph	7/10/2024	9:08 PM	23.65	-1.00	7.05	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,840.75	-1.00	-1.00	-1.00	-1.00
ccbx	7/10/2024	9:15 PM	23.65	-1.00	5.97	.00	1.57	1.57	.00	.00	.03	.00	.04	5,111.48	-1.00	-1.00	-1.00	-1.00
mb	7/10/2024	9:21 PM	23.67	-1.00	5.52	.00	.51	.51	.00	.00	.02	.00	.03	5,499.88	-1.00	-1.00	-1.00	-1.00
lcsph	7/10/2024	9:25 PM	23.64	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	5,864.83	-1.00	-1.00	-1.00	-1.00
lcsdph	7/10/2024	9:30 PM	23.43	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6,135.92	-1.00	-1.00	-1.00	-1.00
lcsak	7/10/2024	9:38 PM	23.22	-1.00	10.38	88.61	184.05	6.83	177.22	.00	1.66	.80	-1.00	6,407.33	-1.00	-1.00	-1.00	-1.00
lcsdak	7/10/2024	9:46 PM	23.31	-1.00	10.41	89.08	185.56	7.40	178.16	.00	1.67	.80	-1.00	6,904.23	-1.00	-1.00	-1.00	-1.00
410-177638-L-1^10	7/10/2024	9:52 PM	23.56	-1.00	6.34	.00	1.79	1.79	.00	.00	.03	.00	.04	7,373.28	-1.00	-1.00	-1.00	-1.00
410-177638-I-2^10	7/10/2024	9:59 PM	23.83	-1.00	6.42	.00	2.86	2.86	.00	.00	.04	.00	.05	7,762.52	-1.00	-1.00	-1.00	-1.00
410-177638-J-3^10	7/10/2024	10:06 PM	23.68	-1.00	5.73	.00	.64	.64	.00	.00	.02	.00	.03	8,175.38	-1.00	-1.00	-1.00	-1.00

Run Number 7957 **Order Number** 20240710-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Alk4.5	Alk8.3	Alk4.2	HDMLS	Total Hardness		8.3	Hacid
410-177638-E-4^20	7/10/2024	10:14 PM	23.72	-1.00	6.49	.00	8.90	8.90	.00	.00	.11	.00	.15	3,552.63	-1.00	-1.00	-1.00	-1.00
ccvph	7/10/2024	10:18 PM	23.65	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	9,034.47	-1.00	-1.00	-1.00	-1.00
ccbx	7/10/2024	10:24 PM	23.54	-1.00	6.04	.00	1.07	1.07	.00	.00	.02	.00	.03	9,304.56	-1.00	-1.00	-1.00	-1.00
620-19545-E-3	7/10/2024	10:31 PM	23.76	-1.00	6.39	.00	25.55	25.55	.00	.00	.23	.00	-1.00	9,681.41	-1.00	-1.00	-1.00	-1.00
620-19545-E-4	7/10/2024	10:38 PM	23.65	-1.00	6.65	.00	28.71	28.71	.00	.00	.26	.00	-1.00	0,095.5	-1.00	-1.00	-1.00	-1.00
620-19545-E-5	7/10/2024	10:45 PM	23.44	-1.00	6.65	.00	28.03	28.03	.00	.00	.25	.00	-1.00	0,496.3	-1.00	-1.00	-1.00	-1.00
620-19545-E-2	7/10/2024	10:51 PM	23.64	-1.00	6.51	.00	167.01	167.01	.00	.00	1.50	.00	-1.00	0,908.9	-1.00	-1.00	-1.00	-1.00
620-19545-E-1	7/10/2024	10:57 PM	23.76	-1.00	6.51	.00	172.53	172.53	.00	.00	1.55	.00	-1.00	1,278.5	-1.00	-1.00	-1.00	-1.00
410-179095-D-1	7/10/2024	11:05 PM	23.56	-1.00	8.46	11.69	412.86	389.48	23.38	.00	3.72	.11	-1.00	1,658.2	-1.00	-1.00	-1.00	-1.00
410-179095-D-2	7/10/2024	11:13 PM	23.49	-1.00	9.57	82.46	279.96	115.04	164.93	.00	2.52	.74	-1.00	2,106.6	-1.00	-1.00	-1.00	-1.00
630-90347-F-1	7/10/2024	11:20 PM	23.96	-1.00	7.26	.00	25.81	25.81	.00	.00	.23	.00	-1.00	2,574.0	-1.00	-1.00	-1.00	-1.00
410-179113-O-3	7/10/2024	11:27 PM	23.89	-1.00	5.72	.00	15.24	15.24	.00	.00	.16	.00	.18	3,020.9	-1.00	-1.00	-1.00	-1.00
410-179113-O-5	7/10/2024	11:37 PM	23.60	-1.00	6.56	.00	1,762.61	1,762.61	.00	.00	15.88	.00	-1.00	3,405.8	-1.00	-1.00	-1.00	-1.00
ccvph	7/10/2024	11:41 PM	23.84	-1.00	6.94	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,024.2	-1.00	-1.00	-1.00	-1.00
ccbx	7/10/2024	11:47 PM	23.76	-1.00	5.82	.00	1.08	1.08	.00	.00	.02	.00	.03	4,295.5	-1.00	-1.00	-1.00	-1.00
410-179113-O-2	7/10/2024	11:54 PM	23.64	-1.00	5.60	.00	.71	.71	.00	.00	.02	.00	.03	4,661.0	-1.00	-1.00	-1.00	-1.00
410-179113-O-4	7/11/2024	12:00 AM	23.47	-1.00	6.11	.00	42.40	42.40	.00	.00	.38	.00	-1.00	5,026.6	-1.00	-1.00	-1.00	-1.00
410-179113-O-6	7/11/2024	12:06 AM	23.41	-1.00	6.11	.00	43.52	43.52	.00	.00	.39	.00	-1.00	5,396.3	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	12:11 AM	23.64	-1.00	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	5,775.8	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	12:17 AM	23.68	-1.00	6.12	.00	1.01	1.01	.00	.00	.02	.00	.03	6,047.9	-1.00	-1.00	-1.00	-1.00
lcsph	7/11/2024	12:21 AM	23.73	-1.00	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6,413.5	-1.00	-1.00	-1.00	-1.00
lcsdph	7/11/2024	12:26 AM	23.54	-1.00	6.99	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6,681.4	-1.00	-1.00	-1.00	-1.00
410-179003-Q-1	7/11/2024	12:30 AM	23.51	-1.00	5.78	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6,952.5	-1.00	-1.00	-1.00	-1.00
630-90185-E-3	7/11/2024	12:35 AM	23.59	-1.00	7.65	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	7,223.8	-1.00	-1.00	-1.00	-1.00
630-90185-E-4	7/11/2024	12:39 AM	23.70	-1.00	7.59	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	7,495.0	-1.00	-1.00	-1.00	-1.00
410-179151-D-2	7/11/2024	12:44 AM	23.72	-1.00	7.43	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	7,766.5	-1.00	-1.00	-1.00	-1.00
410-179151-W-1	7/11/2024	12:48 AM	23.59	-1.00	7.37	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	8,038.2	-1.00	-1.00	-1.00	-1.00
410-179149-R-1	7/11/2024	12:53 AM	23.41	-1.00	8.20	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	8,310.0	-1.00	-1.00	-1.00	-1.00
410-179149-G-2	7/11/2024	12:57 AM	23.36	-1.00	8.22	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	8,582.0	-1.00	-1.00	-1.00	-1.00
410-179007-D-1	7/11/2024	1:02 AM	23.54	-1.00	7.47	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	8,854.2	-1.00	-1.00	-1.00	-1.00

Run Number 7957 **Order Number** 20240710-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Alk4.5	Alk8.3	Alk4.2	HDMLS	Total Hardness		8.3	Hacid
ccvph	7/11/2024	1:06 AM	23.83	-1.00	7.06	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	9,126.0	-1.00	-1.00	-1.00	-1.00
410-178797-D-1	7/11/2024	1:11 AM	23.88	-1.00	6.97	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	9,397.0	-1.00	-1.00	-1.00	-1.00
630-90013-G-1	7/11/2024	1:15 AM	23.72	-1.00	6.60	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	9,668.3	-1.00	-1.00	-1.00	-1.00
410-178824-P-1	7/11/2024	1:20 AM	23.56	-1.00	7.84	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	9,939.6	-1.00	-1.00	-1.00	-1.00
410-178648-J-1	7/11/2024	1:24 AM	23.59	-1.00	7.33	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	0,211.0	-1.00	-1.00	-1.00	-1.00
410-178648-P-6	7/11/2024	1:29 AM	23.67	-1.00	7.20	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	0,482.5	-1.00	-1.00	-1.00	-1.00
410-178648-P-7	7/11/2024	1:34 AM	23.70	-1.00	7.31	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	0,754.1	-1.00	-1.00	-1.00	-1.00
410-178648-N-2	7/11/2024	1:38 AM	23.73	-1.00	7.34	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,025.9	-1.00	-1.00	-1.00	-1.00
410-178540-I-1	7/11/2024	1:43 AM	23.57	-1.00	7.54	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,297.8	-1.00	-1.00	-1.00	-1.00
410-178540-I-3	7/11/2024	1:47 AM	23.43	-1.00	7.56	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,569.9	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	1:52 AM	23.70	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,841.9	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	1:58 AM	23.76	-1.00	6.51	.00	1.79	1.79	.00	.00	.03	.00	.04	2,113.2	-1.00	-1.00	-1.00	-1.00
mb	7/11/2024	2:04 AM	23.92	-1.00	5.47	.00	.30	.30	.00	.00	.02	.00	.03	2,513.9	-1.00	-1.00	-1.00	-1.00
lcsph	7/11/2024	2:09 AM	23.94	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,879.3	-1.00	-1.00	-1.00	-1.00
lcsdph	7/11/2024	2:13 AM	23.84	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,150.8	-1.00	-1.00	-1.00	-1.00
lcsak	7/11/2024	2:20 AM	23.44	-1.00	10.23	80.89	185.18	23.40	161.77	.00	1.67	.73	-1.00	3,399.1	-1.00	-1.00	-1.00	-1.00
lcsdak	7/11/2024	2:28 AM	23.49	-1.00	10.29	81.09	184.85	22.67	162.19	.00	1.67	.73	-1.00	3,838.2	-1.00	-1.00	-1.00	-1.00
410-178873-O-11	7/11/2024	2:36 AM	23.70	-1.00	6.95	.00	16.62	16.62	.00	.00	.16	.00	.18	4,294.0	-1.00	-1.00	-1.00	-1.00
410-178873-R-12	7/11/2024	2:43 AM	23.83	-1.00	6.93	.00	16.29	16.29	.00	.00	.16	.00	.18	4,748.2	-1.00	-1.00	-1.00	-1.00
410-178873-R-10	7/11/2024	2:51 AM	23.92	-1.00	6.95	.00	16.42	16.42	.00	.00	.16	.00	.18	5,216.0	-1.00	-1.00	-1.00	-1.00
410-178873-R-8	7/11/2024	2:58 AM	23.84	-1.00	6.95	.00	16.90	16.90	.00	.00	.17	.00	.18	5,681.9	-1.00	-1.00	-1.00	-1.00
410-178873-R-7	7/11/2024	3:06 AM	23.76	-1.00	6.97	.00	17.15	17.15	.00	.00	.17	.00	.18	6,123.7	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	3:11 AM	23.78	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6,587.0	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	3:17 AM	23.68	-1.00	6.35	.00	1.02	1.02	.00	.00	.02	.00	.03	6,858.6	-1.00	-1.00	-1.00	-1.00
410-178873-Q-6	7/11/2024	3:25 AM	23.84	-1.00	6.84	.00	16.56	16.56	.00	.00	.16	.00	.18	7,236.0	-1.00	-1.00	-1.00	-1.00
410-178873-S-5	7/11/2024	3:32 AM	23.99	-1.00	6.88	.00	17.18	17.18	.00	.00	.17	.00	.18	7,689.8	-1.00	-1.00	-1.00	-1.00
410-178873-R-4	7/11/2024	3:40 AM	23.91	-1.00	6.93	.00	17.50	17.50	.00	.00	.17	.00	.19	8,141.8	-1.00	-1.00	-1.00	-1.00
410-178873-S-2	7/11/2024	3:47 AM	23.60	-1.00	6.94	.00	20.92	20.92	.00	.00	.19	.00	-1.00	8,595.9	-1.00	-1.00	-1.00	-1.00
410-178873-R-1	7/11/2024	3:54 AM	23.54	-1.00	7.05	.00	22.90	22.90	.00	.00	.21	.00	-1.00	9,034.5	-1.00	-1.00	-1.00	-1.00
410-178889-L-1	7/11/2024	4:01 AM	23.64	-1.00	7.77	.00	287.86	287.86	.00	.00	2.59	.00	-1.00	9,473.1	-1.00	-1.00	-1.00	-1.00

Run Number 7957 **Order Number** 20240710-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Alk4.5	Alk8.3	Alk4.2	HDMLS	Total Hardness		8.3	Hacid
410-178876-O-1	7/11/2024	4:08 AM	23.88	-1.00	7.79	.00	230.57	230.57	.00	.00	2.08	.00	-1.00	9,892.4	-1.00	-1.00	-1.00	-1.00
410-178876-O-2	7/11/2024	4:15 AM	23.89	-1.00	7.60	.00	216.24	216.24	.00	.00	1.95	.00	-1.00	0,311.1	-1.00	-1.00	-1.00	-1.00
10-178835-G-1^100	7/11/2024	4:22 AM	23.94	-1.00	6.70	.00	2.78	2.78	.00	.00	.04	.00	.05	0,729.9	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	4:26 AM	23.88	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,142.5	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	4:33 AM	23.75	-1.00	6.33	.00	1.13	1.13	.00	.00	.02	.00	.03	1,404.5	-1.00	-1.00	-1.00	-1.00
630-89833-C-1	7/11/2024	4:40 AM	23.80	-1.00	7.31	.00	118.25	118.25	.00	.00	1.07	.00	-1.00	1,782.2	-1.00	-1.00	-1.00	-1.00
410-178476-N-1	7/11/2024	4:47 AM	23.84	-1.00	7.62	.00	103.46	103.46	.00	.00	.93	.00	-1.00	2,206.4	-1.00	-1.00	-1.00	-1.00
410-179190-J-4	7/11/2024	4:54 AM	23.83	-1.00	7.60	.00	246.96	246.96	.00	.00	2.22	.00	-1.00	2,627.5	-1.00	-1.00	-1.00	-1.00
410-179190-J-5	7/11/2024	5:01 AM	23.83	-1.00	7.71	.00	246.83	246.83	.00	.00	2.22	.00	-1.00	3,047.1	-1.00	-1.00	-1.00	-1.00
410-178634-N-2	7/11/2024	5:08 AM	23.83	-1.00	7.74	.00	219.93	219.93	.00	.00	1.98	.00	-1.00	3,466.6	-1.00	-1.00	-1.00	-1.00
410-178634-N-1	7/11/2024	5:15 AM	23.96	-1.00	8.22	.00	219.26	219.26	.00	.00	1.98	.00	-1.00	3,886.2	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	5:20 AM	23.96	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,324.5	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	5:26 AM	23.83	-1.00	6.52	.00	1.57	1.57	.00	.00	.03	.00	.04	4,596.4	-1.00	-1.00	-1.00	-1.00
mb	7/11/2024	5:32 AM	23.88	-1.00	5.37	.00	.39	.39	.00	.00	.02	.00	.03	4,985.7	-1.00	-1.00	-1.00	-1.00
lcsph	7/11/2024	5:37 AM	23.83	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	5,351.5	-1.00	-1.00	-1.00	-1.00
lcsdph	7/11/2024	5:41 AM	23.73	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	5,623.5	-1.00	-1.00	-1.00	-1.00
lcsak	7/11/2024	5:49 AM	23.39	-1.00	10.12	76.23	184.94	32.49	152.45	.00	1.67	.69	-1.00	5,890.1	-1.00	-1.00	-1.00	-1.00
lcsdak	7/11/2024	5:56 AM	23.46	-1.00	10.17	77.15	185.82	31.52	154.30	.00	1.67	.70	-1.00	6,343.2	-1.00	-1.00	-1.00	-1.00
410-178951-O-3	7/11/2024	6:02 AM	23.60	-1.00	5.46	.00	29.09	29.09	.00	.00	.26	.00	-1.00	6,787.3	-1.00	-1.00	-1.00	-1.00
410-178951-O-5	7/11/2024	6:08 AM	23.59	-1.00	4.99	.00	1.32	1.32	.00	.00	.03	.00	.04	7,147.8	-1.00	-1.00	-1.00	-1.00
630-90152-D-1	7/11/2024	6:16 AM	23.78	-1.00	7.11	.00	72.63	72.63	.00	.00	.65	.00	-1.00	7,526.0	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	6:20 AM	23.80	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	7,948.5	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	6:26 AM	23.70	-1.00	6.39	.00	1.20	1.20	.00	.00	.02	.00	.04	8,220.7	-1.00	-1.00	-1.00	-1.00
410-178951-O-2	7/11/2024	6:33 AM	23.78	-1.00	5.82	.00	.76	.76	.00	.00	.02	.00	.03	8,598.5	-1.00	-1.00	-1.00	-1.00
410-178964-T-1	7/11/2024	6:40 AM	23.80	-1.00	7.59	.00	112.46	112.46	.00	.00	1.01	.00	-1.00	8,976.4	-1.00	-1.00	-1.00	-1.00
410-178968-T-1	7/11/2024	6:48 AM	23.84	-1.00	8.72	7.90	164.59	148.80	15.79	.00	1.48	.07	-1.00	9,395.8	-1.00	-1.00	-1.00	-1.00
410-178966-T-1	7/11/2024	6:55 AM	23.88	-1.00	7.87	.00	137.28	137.28	.00	.00	1.24	.00	-1.00	9,871.4	-1.00	-1.00	-1.00	-1.00
410-178963-T-1	7/11/2024	7:02 AM	23.91	-1.00	7.90	.00	136.30	136.30	.00	.00	1.23	.00	-1.00	0,306.0	-1.00	-1.00	-1.00	-1.00
410-178967-T-1	7/11/2024	7:09 AM	23.56	-1.00	7.81	.00	121.25	121.25	.00	.00	1.09	.00	-1.00	0,739.1	-1.00	-1.00	-1.00	-1.00
410-178965-T-1	7/11/2024	7:17 AM	23.47	-1.00	8.69	6.97	153.54	139.60	13.95	.00	1.38	.06	-1.00	1,172.4	-1.00	-1.00	-1.00	-1.00

Run Number 7957 **Order Number** 20240710-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Alk4.5	Alk8.3	Alk4.2	HDMLS	Total Hardness		8.3	Hacid
ccvph	7/11/2024	7:21 AM	23.68	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,608.3	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	7:27 AM	23.67	-1.00	6.38	.00	1.16	1.16	.00	.00	.02	.00	.03	1,880.2	-1.00	-1.00	-1.00	-1.00
410-178947-J-6	7/11/2024	7:32 AM	23.76	-1.00	3.93	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,257.9	-1.00	-1.00	-1.00	-1.00
410-178947-J-2	7/11/2024	7:36 AM	23.64	-1.00	3.96	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,529.9	-1.00	-1.00	-1.00	-1.00
410-178947-J-1	7/11/2024	7:40 AM	23.65	-1.00	6.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,756.1	-1.00	-1.00	-1.00	-1.00
410-178947-J-4	7/11/2024	7:45 AM	23.59	-1.00	7.75	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,028.4	-1.00	-1.00	-1.00	-1.00
410-178947-J-5	7/11/2024	7:49 AM	23.36	-1.00	8.07	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,300.7	-1.00	-1.00	-1.00	-1.00
410-178947-J-3	7/11/2024	7:54 AM	23.39	-1.00	7.83	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,573.2	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	7:58 AM	23.46	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,845.7	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	8:05 AM	23.57	-1.00	6.34	.00	1.44	1.44	.00	.00	.02	.00	.03	4,118.4	-1.00	-1.00	-1.00	-1.00
mb	7/11/2024	8:11 AM	23.89	-1.00	5.45	.00	.38	.38	.00	.00	.02	.00	.03	4,496.9	-1.00	-1.00	-1.00	-1.00
lcsph	7/11/2024	8:15 AM	23.62	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,862.8	-1.00	-1.00	-1.00	-1.00
lcsdph	7/11/2024	8:20 AM	23.49	-1.00	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	5,135.2	-1.00	-1.00	-1.00	-1.00
lcsak	7/11/2024	8:28 AM	23.54	-1.00	10.06	72.04	207.89	63.81	144.09	.00	1.87	.65	-1.00	5,407.6	-1.00	-1.00	-1.00	-1.00
lcsdak	7/11/2024	8:36 AM	23.81	-1.00	10.11	72.68	184.33	38.97	145.36	.00	1.66	.65	-1.00	5,920.2	-1.00	-1.00	-1.00	-1.00
630-90302-AU-1	7/11/2024	8:43 AM	23.67	-1.00	7.24	.00	181.65	181.65	.00	.00	1.64	.00	-1.00	6,366.7	-1.00	-1.00	-1.00	-1.00
630-90228-E-1	7/11/2024	8:50 AM	23.57	-1.00	7.32	.00	84.93	84.93	.00	.00	.77	.00	-1.00	6,776.6	-1.00	-1.00	-1.00	-1.00
630-90241-E-3	7/11/2024	8:57 AM	23.73	-1.00	7.78	.00	103.85	103.85	.00	.00	.94	.00	-1.00	7,209.9	-1.00	-1.00	-1.00	-1.00
410-179177-X-1	7/11/2024	9:04 AM	23.89	-1.00	7.42	.00	67.47	67.47	.00	.00	.61	.00	-1.00	7,655.0	-1.00	-1.00	-1.00	-1.00
410-179176-X-1	7/11/2024	9:12 AM	23.57	-1.00	7.90	.00	53.01	53.01	.00	.00	.48	.00	-1.00	8,067.0	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	9:16 AM	23.67	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	8,516.0	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	9:22 AM	23.67	-1.00	6.39	.00	1.10	1.10	.00	.00	.02	.00	.03	8,788.2	-1.00	-1.00	-1.00	-1.00
620-19593-M-2	7/11/2024	9:29 AM	23.76	-1.00	6.61	.00	289.22	289.22	.00	.00	2.61	.00	-1.00	9,166.2	-1.00	-1.00	-1.00	-1.00
620-19593-M-1	7/11/2024	9:36 AM	23.52	-1.00	7.23	.00	46.46	46.46	.00	.00	.42	.00	-1.00	9,556.1	-1.00	-1.00	-1.00	-1.00
620-19593-M-4	7/11/2024	9:43 AM	23.64	-1.00	7.27	.00	47.01	47.01	.00	.00	.42	.00	-1.00	9,969.6	-1.00	-1.00	-1.00	-1.00
620-19593-N-3	7/11/2024	9:50 AM	23.83	-1.00	7.10	.00	26.49	26.49	.00	.00	.24	.00	-1.00	0,381.3	-1.00	-1.00	-1.00	-1.00
410-179201-J-1	7/11/2024	9:57 AM	23.52	-1.00	7.21	.00	68.99	68.99	.00	.00	.62	.00	-1.00	0,818.3	-1.00	-1.00	-1.00	-1.00
410-179201-J-3	7/11/2024	10:04 AM	23.59	-1.00	6.36	.00	2.77	2.77	.00	.00	.04	.00	.05	1,230.3	-1.00	-1.00	-1.00	-1.00
410-179201-J-2	7/11/2024	10:11 AM	23.89	-1.00	7.45	.00	66.86	66.86	.00	.00	.60	.00	-1.00	1,643.8	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	10:15 AM	23.65	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,067.4	-1.00	-1.00	-1.00	-1.00

Run Number 7957 **Order Number** 20240710-3

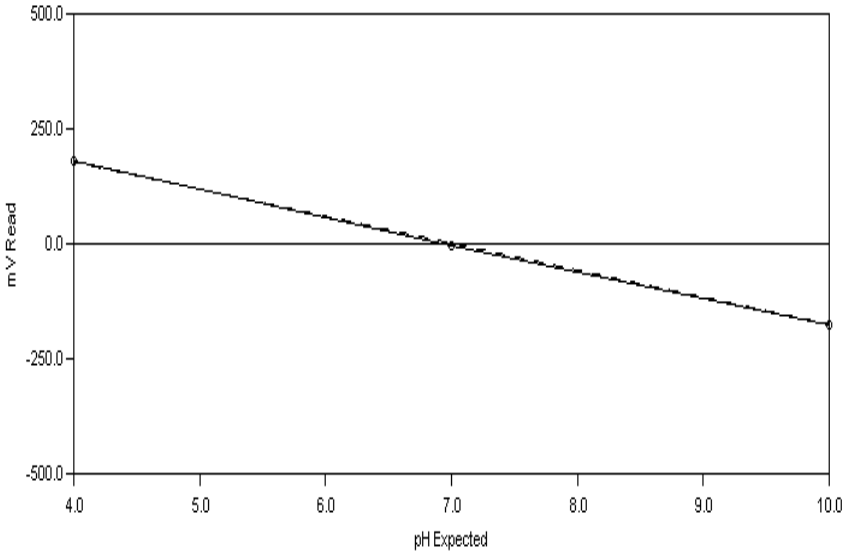
SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Alk4.5	Alk8.3	Alk4.2	HDMLS	Total Hardness		8.3	Hacid
ccbx	7/11/2024	10:22 AM	23.47	-1.00	6.40	.00	1.21	1.21	.00	.00	.02	.00	.03	2,340.4	-1.00	-1.00	-1.00	-1.00
410-179175-T-1	7/11/2024	10:29 AM	23.64	-1.00	7.82	.00	143.79	143.79	.00	.00	1.30	.00	-1.00	2,718.5	-1.00	-1.00	-1.00	-1.00
630-90241-E-1	7/11/2024	10:36 AM	23.81	-1.00	7.31	.00	83.22	83.22	.00	.00	.75	.00	-1.00	3,151.7	-1.00	-1.00	-1.00	-1.00
630-90241-E-2	7/11/2024	10:43 AM	23.47	-1.00	7.80	.00	102.64	102.64	.00	.00	.92	.00	-1.00	3,563.4	-1.00	-1.00	-1.00	-1.00
410-179099-C-1	7/11/2024	10:50 AM	23.65	-1.00	8.03	.00	237.50	237.50	.00	.00	2.14	.00	-1.00	4,006.5	-1.00	-1.00	-1.00	-1.00
410-179099-C-2	7/11/2024	10:57 AM	23.81	-1.00	7.92	.00	170.24	170.24	.00	.00	1.53	.00	-1.00	4,436.1	-1.00	-1.00	-1.00	-1.00
630-90302-BP-2	7/11/2024	11:05 AM	23.46	-1.00	7.29	.00	49.67	49.67	.00	.00	.45	.00	-1.00	4,867.7	-1.00	-1.00	-1.00	-1.00
630-90212-E-1	7/11/2024	11:13 AM	23.56	-1.00	6.83	.00	14.16	14.16	.00	.00	.15	.00	.16	5,291.4	-1.00	-1.00	-1.00	-1.00
630-90327-F-2	7/11/2024	11:20 AM	23.76	-1.00	6.81	.00	8.52	8.52	.00	.00	.09	.00	.10	5,773.7	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	11:25 AM	23.49	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6,246.1	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	11:31 AM	23.47	-1.00	6.38	.00	1.13	1.13	.00	.00	.02	.00	.03	6,519.3	-1.00	-1.00	-1.00	-1.00
mb	7/11/2024	11:37 AM	23.64	-1.00	5.47	.00	.21	.21	.00	.00	.01	.00	.03	6,897.4	-1.00	-1.00	-1.00	-1.00
lcsph	7/11/2024	11:42 AM	23.72	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	7,263.8	-1.00	-1.00	-1.00	-1.00
lcsdph	7/11/2024	11:47 AM	23.39	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	7,536.5	-1.00	-1.00	-1.00	-1.00
410-178839-D-1	7/11/2024	11:54 AM	23.31	-1.00	7.86	.00	118.59	118.59	.00	.00	1.07	.00	-1.00	7,809.3	-1.00	-1.00	-1.00	-1.00
410-178839-E-2	7/11/2024	12:01 PM	23.59	-1.00	7.86	.00	128.65	128.65	.00	.00	1.16	.00	-1.00	8,252.7	-1.00	-1.00	-1.00	-1.00
410-178858-T-1	7/11/2024	12:09 PM	23.68	-1.00	7.83	.00	110.08	110.08	.00	.00	.99	.00	-1.00	8,696.0	-1.00	-1.00	-1.00	-1.00
410-178857-X-1	7/11/2024	12:16 PM	23.47	-1.00	6.68	.00	8.62	8.62	.00	.00	.09	.00	.11	9,129.7	-1.00	-1.00	-1.00	-1.00
630-90014-G-2	7/11/2024	12:24 PM	23.68	-1.00	7.62	.00	140.84	140.84	.00	.00	1.27	.00	-1.00	9,602.2	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	12:28 PM	23.62	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	0,038.8	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	12:35 PM	23.38	-1.00	6.16	.00	1.43	1.43	.00	.00	.02	.00	.03	0,312.2	-1.00	-1.00	-1.00	-1.00
410-178495-J-1	7/11/2024	12:41 PM	23.56	-1.00	7.05	.00	53.93	53.93	.00	.00	.49	.00	-1.00	0,690.6	-1.00	-1.00	-1.00	-1.00
410-178495-I-2	7/11/2024	12:48 PM	23.83	-1.00	7.23	.00	66.92	66.92	.00	.00	.60	.00	-1.00	1,080.9	-1.00	-1.00	-1.00	-1.00
410-178495-J-3	7/11/2024	12:55 PM	23.54	-1.00	7.20	.00	65.33	65.33	.00	.00	.59	.00	-1.00	1,491.2	-1.00	-1.00	-1.00	-1.00
410-178495-J-4	7/11/2024	1:01 PM	23.59	-1.00	7.07	.00	38.83	38.83	.00	.00	.35	.00	-1.00	1,891.5	-1.00	-1.00	-1.00	-1.00
410-178495-J-5	7/11/2024	1:09 PM	23.84	-1.00	7.55	.00	60.65	60.65	.00	.00	.55	.00	-1.00	2,293.9	-1.00	-1.00	-1.00	-1.00
410-178495-J-6	7/11/2024	1:16 PM	23.54	-1.00	7.49	.00	58.61	58.61	.00	.00	.53	.00	-1.00	2,729.5	-1.00	-1.00	-1.00	-1.00
410-178495-J-7	7/11/2024	1:23 PM	23.59	-1.00	6.57	.00	6.18	6.18	.00	.00	.07	.00	.08	3,153.6	-1.00	-1.00	-1.00	-1.00
460-306705-H-1	7/11/2024	1:30 PM	23.86	-1.00	7.54	.00	61.09	61.09	.00	.00	.55	.00	-1.00	3,614.3	-1.00	-1.00	-1.00	-1.00
460-306705-H-2	7/11/2024	1:38 PM	23.51	-1.00	7.77	.00	51.83	51.83	.00	.00	.47	.00	-1.00	4,038.5	-1.00	-1.00	-1.00	-1.00

Run Number 7957 **Order Number** 20240710-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Alk4.5	Alk8.3	Alk4.2	HDMLS	Total Hardness		8.3	Hacid
410-178592-E-1	7/11/2024	1:45 PM	23.72	-1.00	7.52	.00	83.50	83.50	.00	.00	.75	.00	-1.00	4,484.3	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	1:49 PM	23.86	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,895.9	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	1:55 PM	23.56	-1.00	6.27	.00	1.14	1.14	.00	.00	.02	.00	.03	5,168.8	-1.00	-1.00	-1.00	-1.00
410-178592-E-2	7/11/2024	2:02 PM	23.56	-1.00	7.55	.00	116.72	116.72	.00	.00	1.05	.00	-1.00	5,547.5	-1.00	-1.00	-1.00	-1.00
410-178592-E-3	7/11/2024	2:09 PM	23.81	-1.00	7.73	.00	144.53	144.53	.00	.00	1.30	.00	-1.00	5,959.5	-1.00	-1.00	-1.00	-1.00
410-178592-E-4	7/11/2024	2:17 PM	23.67	-1.00	7.77	.00	144.95	144.95	.00	.00	1.31	.00	-1.00	6,381.4	-1.00	-1.00	-1.00	-1.00
410-178496-N-3	7/11/2024	2:24 PM	23.62	-1.00	7.59	.00	322.79	322.79	.00	.00	2.91	.00	-1.00	6,813.4	-1.00	-1.00	-1.00	-1.00
410-178496-N-1	7/11/2024	2:33 PM	23.84	-1.00	7.85	.00	1,464.13	1,464.13	.00	.00	13.19	.00	-1.00	7,233.6	-1.00	-1.00	-1.00	-1.00
LCSALK	7/11/2024	2:41 PM	23.80	-1.00	10.09	67.60	197.19	61.98	135.20	.00	1.78	.61	-1.00	7,805.5	-1.00	-1.00	-1.00	-1.00
LCSDALK	7/11/2024	2:49 PM	23.86	-1.00	10.05	64.99	186.57	56.59	129.97	.00	1.68	.59	-1.00	8,296.2	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	2:54 PM	23.76	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	8,785.0	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	3:00 PM	23.49	-1.00	6.44	.00	1.12	1.12	.00	.00	.02	.00	.03	9,058.0	-1.00	-1.00	-1.00	-1.00

PC-TitratION PLUS
Calibration Report

Calibration Record # 1910



Calibration Settings

Calibration ID	PH	Date	07/10/2024	
Channel	1	Time	5:39 PM	
Probe Type	pH	Temperature	296.62 K	23.47 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit	

Calibration Results

Slope	-59.082	CorrCoeff	0.9999
Intercept	0.450	Equation:	Y = (-59.082) X + (0.450)

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-59.082	-60.00	-54.00
Intercept	0.450	-100.00	100.00
Correlation Coefficient	0.9999	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	4.00	179.32
	7.00	-2.80
	10.00	-175.17

General Chemistry Raw Data Report

Job ID: 410-179201-1
SDG: 410-179201

Batch: 527364
Method: 2540C - 2015

Analyst Initials: UOCA
Instrument: NONE

Lab Sample ID: MB 410-527364/1

Analysis Date: Jul 11, 2024 21:54

Analyte	Detector	Dilution	Raw Result	Unit	Initial Amount	Final Amount
Total Dissolved Solids	None	1	0.5	mg/L	200 mL	200 mL

Lab Sample ID: LCS 410-527364/2

Analysis Date: Jul 11, 2024 21:54

Analyte	Detector	Dilution	Raw Result	Unit	Initial Amount	Final Amount
Total Dissolved Solids	None	1	98.5	mg/L	100 mL	200 mL

Lab Sample ID: 410-179201-F-1

Analysis Date: Jul 11, 2024 21:54

Analyte	Detector	Dilution	Raw Result	Unit	Initial Amount	Final Amount
Total Dissolved Solids	None	1	211	mg/L	200 mL	200 mL

Lab Sample ID: 410-179201-F-2

Analysis Date: Jul 11, 2024 21:54

Analyte	Detector	Dilution	Raw Result	Unit	Initial Amount	Final Amount
Total Dissolved Solids	None	1	175.5	mg/L	100 mL	200 mL

Lab Sample ID: 410-179201-F-3

Analysis Date: Jul 11, 2024 21:54

Analyte	Detector	Dilution	Raw Result	Unit	Initial Amount	Final Amount
Total Dissolved Solids	None	1	136	mg/L	2.00 mL	200 mL

PC-TitratION PLUS

Water Analysis Report

Run Number 7957 **Order Number** 20240710-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Alk4.5	Alk8.3	Alk4.2	HDMLS	Total Hardness		8.3	Hacid
Tap	7/10/2024	7:52 PM	23.76	-1.00	7.59	.00	298.17	298.17	.00	.00	2.69	.00	-1.00	116.25	-1.00	-1.00	-1.00	-1.00
ICVpH	7/10/2024	7:56 PM	23.54	-1.00	6.99	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	528.44	-1.00	-1.00	-1.00	-1.00
lcsph	7/10/2024	8:01 PM	23.36	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	799.55	-1.00	-1.00	-1.00	-1.00
lcsdph	7/10/2024	8:05 PM	23.28	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,070.72	-1.00	-1.00	-1.00	-1.00
410-178625-D-2	7/10/2024	8:09 PM	23.23	-1.00	8.97	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,314.06	-1.00	-1.00	-1.00	-1.00
410-178625-C-3	7/10/2024	8:13 PM	23.30	-1.00	1.21	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,550.81	-1.00	-1.00	-1.00	-1.00
410-178625-C-1	7/10/2024	8:18 PM	23.35	-1.00	1.38	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,822.66	-1.00	-1.00	-1.00	-1.00
ccvph	7/10/2024	8:22 PM	23.28	-1.00	7.05	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,094.47	-1.00	-1.00	-1.00	-1.00
410-177173-E-1	7/10/2024	8:27 PM	23.43	-1.00	6.78	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,333.38	-1.00	-1.00	-1.00	-1.00
410-177173-E-2	7/10/2024	8:31 PM	23.44	-1.00	7.14	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,604.49	-1.00	-1.00	-1.00	-1.00
410-177173-E-3	7/10/2024	8:36 PM	23.39	-1.00	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,875.64	-1.00	-1.00	-1.00	-1.00
410-177173-E-4	7/10/2024	8:40 PM	23.27	-1.00	7.17	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,146.94	-1.00	-1.00	-1.00	-1.00
410-177173-E-5	7/10/2024	8:46 PM	23.28	-1.00	7.39	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,482.55	-1.00	-1.00	-1.00	-1.00
410-178697-F-2	7/10/2024	8:50 PM	23.31	-1.00	6.84	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,753.99	-1.00	-1.00	-1.00	-1.00
240-207126-G-1	7/10/2024	8:55 PM	23.46	-1.00	7.15	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,025.66	-1.00	-1.00	-1.00	-1.00
410-178432-C-2	7/10/2024	8:59 PM	23.52	-1.00	9.92	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,297.45	-1.00	-1.00	-1.00	-1.00
410-178432-B-2	7/10/2024	9:04 PM	23.49	-1.00	6.45	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,569.33	-1.00	-1.00	-1.00	-1.00
ccvph	7/10/2024	9:08 PM	23.65	-1.00	7.05	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,840.75	-1.00	-1.00	-1.00	-1.00
ccbx	7/10/2024	9:15 PM	23.65	-1.00	5.97	.00	1.57	1.57	.00	.00	.03	.00	.04	5,111.48	-1.00	-1.00	-1.00	-1.00
mb	7/10/2024	9:21 PM	23.67	-1.00	5.52	.00	.51	.51	.00	.00	.02	.00	.03	5,499.88	-1.00	-1.00	-1.00	-1.00
lcsph	7/10/2024	9:25 PM	23.64	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	5,864.83	-1.00	-1.00	-1.00	-1.00
lcsdph	7/10/2024	9:30 PM	23.43	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6,135.92	-1.00	-1.00	-1.00	-1.00
lcsak	7/10/2024	9:38 PM	23.22	-1.00	10.38	88.61	184.05	6.83	177.22	.00	1.66	.80	-1.00	6,407.33	-1.00	-1.00	-1.00	-1.00
lcsdak	7/10/2024	9:46 PM	23.31	-1.00	10.41	89.08	185.56	7.40	178.16	.00	1.67	.80	-1.00	6,904.23	-1.00	-1.00	-1.00	-1.00
410-177638-L-1^10	7/10/2024	9:52 PM	23.56	-1.00	6.34	.00	1.79	1.79	.00	.00	.03	.00	.04	7,373.28	-1.00	-1.00	-1.00	-1.00
410-177638-I-2^10	7/10/2024	9:59 PM	23.83	-1.00	6.42	.00	2.86	2.86	.00	.00	.04	.00	.05	7,762.52	-1.00	-1.00	-1.00	-1.00
410-177638-J-3^10	7/10/2024	10:06 PM	23.68	-1.00	5.73	.00	.64	.64	.00	.00	.02	.00	.03	3,175.38	-1.00	-1.00	-1.00	-1.00

Run Number 7957 **Order Number** 20240710-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Alk4.5	Alk8.3	Alk4.2	HDMLS	Total Hardness		8.3	Hacid
410-177638-E-4^20	7/10/2024	10:14 PM	23.72	-1.00	6.49	.00	8.90	8.90	.00	.00	.11	.00	.15	3,552.63	-1.00	-1.00	-1.00	-1.00
ccvph	7/10/2024	10:18 PM	23.65	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	9,034.47	-1.00	-1.00	-1.00	-1.00
ccbx	7/10/2024	10:24 PM	23.54	-1.00	6.04	.00	1.07	1.07	.00	.00	.02	.00	.03	9,304.56	-1.00	-1.00	-1.00	-1.00
620-19545-E-3	7/10/2024	10:31 PM	23.76	-1.00	6.39	.00	25.55	25.55	.00	.00	.23	.00	-1.00	9,681.41	-1.00	-1.00	-1.00	-1.00
620-19545-E-4	7/10/2024	10:38 PM	23.65	-1.00	6.65	.00	28.71	28.71	.00	.00	.26	.00	-1.00	0,095.5	-1.00	-1.00	-1.00	-1.00
620-19545-E-5	7/10/2024	10:45 PM	23.44	-1.00	6.65	.00	28.03	28.03	.00	.00	.25	.00	-1.00	0,496.3	-1.00	-1.00	-1.00	-1.00
620-19545-E-2	7/10/2024	10:51 PM	23.64	-1.00	6.51	.00	167.01	167.01	.00	.00	1.50	.00	-1.00	0,908.9	-1.00	-1.00	-1.00	-1.00
620-19545-E-1	7/10/2024	10:57 PM	23.76	-1.00	6.51	.00	172.53	172.53	.00	.00	1.55	.00	-1.00	1,278.5	-1.00	-1.00	-1.00	-1.00
410-179095-D-1	7/10/2024	11:05 PM	23.56	-1.00	8.46	11.69	412.86	389.48	23.38	.00	3.72	.11	-1.00	1,658.2	-1.00	-1.00	-1.00	-1.00
410-179095-D-2	7/10/2024	11:13 PM	23.49	-1.00	9.57	82.46	279.96	115.04	164.93	.00	2.52	.74	-1.00	2,106.6	-1.00	-1.00	-1.00	-1.00
630-90347-F-1	7/10/2024	11:20 PM	23.96	-1.00	7.26	.00	25.81	25.81	.00	.00	.23	.00	-1.00	2,574.0	-1.00	-1.00	-1.00	-1.00
410-179113-O-3	7/10/2024	11:27 PM	23.89	-1.00	5.72	.00	15.24	15.24	.00	.00	.16	.00	.18	3,020.9	-1.00	-1.00	-1.00	-1.00
410-179113-O-5	7/10/2024	11:37 PM	23.60	-1.00	6.56	.00	1,762.61	1,762.61	.00	.00	15.88	.00	-1.00	3,405.8	-1.00	-1.00	-1.00	-1.00
ccvph	7/10/2024	11:41 PM	23.84	-1.00	6.94	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,024.2	-1.00	-1.00	-1.00	-1.00
ccbx	7/10/2024	11:47 PM	23.76	-1.00	5.82	.00	1.08	1.08	.00	.00	.02	.00	.03	4,295.5	-1.00	-1.00	-1.00	-1.00
410-179113-O-2	7/10/2024	11:54 PM	23.64	-1.00	5.60	.00	.71	.71	.00	.00	.02	.00	.03	4,661.0	-1.00	-1.00	-1.00	-1.00
410-179113-O-4	7/11/2024	12:00 AM	23.47	-1.00	6.11	.00	42.40	42.40	.00	.00	.38	.00	-1.00	5,026.6	-1.00	-1.00	-1.00	-1.00
410-179113-O-6	7/11/2024	12:06 AM	23.41	-1.00	6.11	.00	43.52	43.52	.00	.00	.39	.00	-1.00	5,396.3	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	12:11 AM	23.64	-1.00	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	5,775.8	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	12:17 AM	23.68	-1.00	6.12	.00	1.01	1.01	.00	.00	.02	.00	.03	6,047.9	-1.00	-1.00	-1.00	-1.00
lcsph	7/11/2024	12:21 AM	23.73	-1.00	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6,413.5	-1.00	-1.00	-1.00	-1.00
lcsdph	7/11/2024	12:26 AM	23.54	-1.00	6.99	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6,681.4	-1.00	-1.00	-1.00	-1.00
410-179003-Q-1	7/11/2024	12:30 AM	23.51	-1.00	5.78	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6,952.5	-1.00	-1.00	-1.00	-1.00
630-90185-E-3	7/11/2024	12:35 AM	23.59	-1.00	7.65	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	7,223.8	-1.00	-1.00	-1.00	-1.00
630-90185-E-4	7/11/2024	12:39 AM	23.70	-1.00	7.59	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	7,495.0	-1.00	-1.00	-1.00	-1.00
410-179151-D-2	7/11/2024	12:44 AM	23.72	-1.00	7.43	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	7,766.5	-1.00	-1.00	-1.00	-1.00
410-179151-W-1	7/11/2024	12:48 AM	23.59	-1.00	7.37	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	8,038.2	-1.00	-1.00	-1.00	-1.00
410-179149-R-1	7/11/2024	12:53 AM	23.41	-1.00	8.20	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	8,310.0	-1.00	-1.00	-1.00	-1.00
410-179149-G-2	7/11/2024	12:57 AM	23.36	-1.00	8.22	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	8,582.0	-1.00	-1.00	-1.00	-1.00
410-179007-D-1	7/11/2024	1:02 AM	23.54	-1.00	7.47	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	8,854.2	-1.00	-1.00	-1.00	-1.00

Run Number 7957 **Order Number** 20240710-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Alk4.5	Alk8.3	Alk4.2	HDMLS	Total Hardness		8.3	Hacid
ccvph	7/11/2024	1:06 AM	23.83	-1.00	7.06	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	9,126.0	-1.00	-1.00	-1.00	-1.00
410-178797-D-1	7/11/2024	1:11 AM	23.88	-1.00	6.97	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	9,397.0	-1.00	-1.00	-1.00	-1.00
630-90013-G-1	7/11/2024	1:15 AM	23.72	-1.00	6.60	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	9,668.3	-1.00	-1.00	-1.00	-1.00
410-178824-P-1	7/11/2024	1:20 AM	23.56	-1.00	7.84	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	9,939.6	-1.00	-1.00	-1.00	-1.00
410-178648-J-1	7/11/2024	1:24 AM	23.59	-1.00	7.33	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	0,211.0	-1.00	-1.00	-1.00	-1.00
410-178648-P-6	7/11/2024	1:29 AM	23.67	-1.00	7.20	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	0,482.5	-1.00	-1.00	-1.00	-1.00
410-178648-P-7	7/11/2024	1:34 AM	23.70	-1.00	7.31	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	0,754.1	-1.00	-1.00	-1.00	-1.00
410-178648-N-2	7/11/2024	1:38 AM	23.73	-1.00	7.34	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,025.9	-1.00	-1.00	-1.00	-1.00
410-178540-I-1	7/11/2024	1:43 AM	23.57	-1.00	7.54	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,297.8	-1.00	-1.00	-1.00	-1.00
410-178540-I-3	7/11/2024	1:47 AM	23.43	-1.00	7.56	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,569.9	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	1:52 AM	23.70	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,841.9	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	1:58 AM	23.76	-1.00	6.51	.00	1.79	1.79	.00	.00	.03	.00	.04	2,113.2	-1.00	-1.00	-1.00	-1.00
mb	7/11/2024	2:04 AM	23.92	-1.00	5.47	.00	.30	.30	.00	.00	.02	.00	.03	2,513.9	-1.00	-1.00	-1.00	-1.00
lcsph	7/11/2024	2:09 AM	23.94	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,879.3	-1.00	-1.00	-1.00	-1.00
lcsdph	7/11/2024	2:13 AM	23.84	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,150.8	-1.00	-1.00	-1.00	-1.00
lcsak	7/11/2024	2:20 AM	23.44	-1.00	10.23	80.89	185.18	23.40	161.77	.00	1.67	.73	-1.00	3,399.1	-1.00	-1.00	-1.00	-1.00
lcsdak	7/11/2024	2:28 AM	23.49	-1.00	10.29	81.09	184.85	22.67	162.19	.00	1.67	.73	-1.00	3,838.2	-1.00	-1.00	-1.00	-1.00
410-178873-O-11	7/11/2024	2:36 AM	23.70	-1.00	6.95	.00	16.62	16.62	.00	.00	.16	.00	.18	4,294.0	-1.00	-1.00	-1.00	-1.00
410-178873-R-12	7/11/2024	2:43 AM	23.83	-1.00	6.93	.00	16.29	16.29	.00	.00	.16	.00	.18	4,748.2	-1.00	-1.00	-1.00	-1.00
410-178873-R-10	7/11/2024	2:51 AM	23.92	-1.00	6.95	.00	16.42	16.42	.00	.00	.16	.00	.18	5,216.0	-1.00	-1.00	-1.00	-1.00
410-178873-R-8	7/11/2024	2:58 AM	23.84	-1.00	6.95	.00	16.90	16.90	.00	.00	.17	.00	.18	5,681.9	-1.00	-1.00	-1.00	-1.00
410-178873-R-7	7/11/2024	3:06 AM	23.76	-1.00	6.97	.00	17.15	17.15	.00	.00	.17	.00	.18	6,123.7	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	3:11 AM	23.78	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6,587.0	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	3:17 AM	23.68	-1.00	6.35	.00	1.02	1.02	.00	.00	.02	.00	.03	6,858.6	-1.00	-1.00	-1.00	-1.00
410-178873-Q-6	7/11/2024	3:25 AM	23.84	-1.00	6.84	.00	16.56	16.56	.00	.00	.16	.00	.18	7,236.0	-1.00	-1.00	-1.00	-1.00
410-178873-S-5	7/11/2024	3:32 AM	23.99	-1.00	6.88	.00	17.18	17.18	.00	.00	.17	.00	.18	7,689.8	-1.00	-1.00	-1.00	-1.00
410-178873-R-4	7/11/2024	3:40 AM	23.91	-1.00	6.93	.00	17.50	17.50	.00	.00	.17	.00	.19	8,141.8	-1.00	-1.00	-1.00	-1.00
410-178873-S-2	7/11/2024	3:47 AM	23.60	-1.00	6.94	.00	20.92	20.92	.00	.00	.19	.00	-1.00	8,595.9	-1.00	-1.00	-1.00	-1.00
410-178873-R-1	7/11/2024	3:54 AM	23.54	-1.00	7.05	.00	22.90	22.90	.00	.00	.21	.00	-1.00	9,034.5	-1.00	-1.00	-1.00	-1.00
410-178889-L-1	7/11/2024	4:01 AM	23.64	-1.00	7.77	.00	287.86	287.86	.00	.00	2.59	.00	-1.00	9,473.1	-1.00	-1.00	-1.00	-1.00

Run Number 7957 **Order Number** 20240710-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Alk4.5	Alk8.3	Alk4.2	HDMLS	Total Hardness		8.3	Hacid
410-178876-O-1	7/11/2024	4:08 AM	23.88	-1.00	7.79	.00	230.57	230.57	.00	.00	2.08	.00	-1.00	9,892.4	-1.00	-1.00	-1.00	-1.00
410-178876-O-2	7/11/2024	4:15 AM	23.89	-1.00	7.60	.00	216.24	216.24	.00	.00	1.95	.00	-1.00	0,311.1	-1.00	-1.00	-1.00	-1.00
10-178835-G-1^100	7/11/2024	4:22 AM	23.94	-1.00	6.70	.00	2.78	2.78	.00	.00	.04	.00	.05	0,729.9	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	4:26 AM	23.88	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,142.5	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	4:33 AM	23.75	-1.00	6.33	.00	1.13	1.13	.00	.00	.02	.00	.03	1,404.5	-1.00	-1.00	-1.00	-1.00
630-89833-C-1	7/11/2024	4:40 AM	23.80	-1.00	7.31	.00	118.25	118.25	.00	.00	1.07	.00	-1.00	1,782.2	-1.00	-1.00	-1.00	-1.00
410-178476-N-1	7/11/2024	4:47 AM	23.84	-1.00	7.62	.00	103.46	103.46	.00	.00	.93	.00	-1.00	2,206.4	-1.00	-1.00	-1.00	-1.00
410-179190-J-4	7/11/2024	4:54 AM	23.83	-1.00	7.60	.00	246.96	246.96	.00	.00	2.22	.00	-1.00	2,627.5	-1.00	-1.00	-1.00	-1.00
410-179190-J-5	7/11/2024	5:01 AM	23.83	-1.00	7.71	.00	246.83	246.83	.00	.00	2.22	.00	-1.00	3,047.1	-1.00	-1.00	-1.00	-1.00
410-178634-N-2	7/11/2024	5:08 AM	23.83	-1.00	7.74	.00	219.93	219.93	.00	.00	1.98	.00	-1.00	3,466.6	-1.00	-1.00	-1.00	-1.00
410-178634-N-1	7/11/2024	5:15 AM	23.96	-1.00	8.22	.00	219.26	219.26	.00	.00	1.98	.00	-1.00	3,886.2	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	5:20 AM	23.96	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,324.5	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	5:26 AM	23.83	-1.00	6.52	.00	1.57	1.57	.00	.00	.03	.00	.04	4,596.4	-1.00	-1.00	-1.00	-1.00
mb	7/11/2024	5:32 AM	23.88	-1.00	5.37	.00	.39	.39	.00	.00	.02	.00	.03	4,985.7	-1.00	-1.00	-1.00	-1.00
lcsph	7/11/2024	5:37 AM	23.83	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	5,351.5	-1.00	-1.00	-1.00	-1.00
lcsdph	7/11/2024	5:41 AM	23.73	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	5,623.5	-1.00	-1.00	-1.00	-1.00
lcsak	7/11/2024	5:49 AM	23.39	-1.00	10.12	76.23	184.94	32.49	152.45	.00	1.67	.69	-1.00	5,890.1	-1.00	-1.00	-1.00	-1.00
lcsdak	7/11/2024	5:56 AM	23.46	-1.00	10.17	77.15	185.82	31.52	154.30	.00	1.67	.70	-1.00	6,343.2	-1.00	-1.00	-1.00	-1.00
410-178951-O-3	7/11/2024	6:02 AM	23.60	-1.00	5.46	.00	29.09	29.09	.00	.00	.26	.00	-1.00	6,787.3	-1.00	-1.00	-1.00	-1.00
410-178951-O-5	7/11/2024	6:08 AM	23.59	-1.00	4.99	.00	1.32	1.32	.00	.00	.03	.00	.04	7,147.8	-1.00	-1.00	-1.00	-1.00
630-90152-D-1	7/11/2024	6:16 AM	23.78	-1.00	7.11	.00	72.63	72.63	.00	.00	.65	.00	-1.00	7,526.0	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	6:20 AM	23.80	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	7,948.5	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	6:26 AM	23.70	-1.00	6.39	.00	1.20	1.20	.00	.00	.02	.00	.04	8,220.7	-1.00	-1.00	-1.00	-1.00
410-178951-O-2	7/11/2024	6:33 AM	23.78	-1.00	5.82	.00	.76	.76	.00	.00	.02	.00	.03	8,598.5	-1.00	-1.00	-1.00	-1.00
410-178964-T-1	7/11/2024	6:40 AM	23.80	-1.00	7.59	.00	112.46	112.46	.00	.00	1.01	.00	-1.00	8,976.4	-1.00	-1.00	-1.00	-1.00
410-178968-T-1	7/11/2024	6:48 AM	23.84	-1.00	8.72	7.90	164.59	148.80	15.79	.00	1.48	.07	-1.00	9,395.8	-1.00	-1.00	-1.00	-1.00
410-178966-T-1	7/11/2024	6:55 AM	23.88	-1.00	7.87	.00	137.28	137.28	.00	.00	1.24	.00	-1.00	9,871.4	-1.00	-1.00	-1.00	-1.00
410-178963-T-1	7/11/2024	7:02 AM	23.91	-1.00	7.90	.00	136.30	136.30	.00	.00	1.23	.00	-1.00	0,306.0	-1.00	-1.00	-1.00	-1.00
410-178967-T-1	7/11/2024	7:09 AM	23.56	-1.00	7.81	.00	121.25	121.25	.00	.00	1.09	.00	-1.00	0,739.1	-1.00	-1.00	-1.00	-1.00
410-178965-T-1	7/11/2024	7:17 AM	23.47	-1.00	8.69	6.97	153.54	139.60	13.95	.00	1.38	.06	-1.00	1,172.4	-1.00	-1.00	-1.00	-1.00

Run Number 7957 **Order Number** 20240710-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Alk4.5	Alk8.3	Alk4.2	HDMLS	Total Hardness		8.3	Hacid
ccvph	7/11/2024	7:21 AM	23.68	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1,608.3	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	7:27 AM	23.67	-1.00	6.38	.00	1.16	1.16	.00	.00	.02	.00	.03	1,880.2	-1.00	-1.00	-1.00	-1.00
410-178947-J-6	7/11/2024	7:32 AM	23.76	-1.00	3.93	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,257.9	-1.00	-1.00	-1.00	-1.00
410-178947-J-2	7/11/2024	7:36 AM	23.64	-1.00	3.96	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,529.9	-1.00	-1.00	-1.00	-1.00
410-178947-J-1	7/11/2024	7:40 AM	23.65	-1.00	6.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,756.1	-1.00	-1.00	-1.00	-1.00
410-178947-J-4	7/11/2024	7:45 AM	23.59	-1.00	7.75	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,028.4	-1.00	-1.00	-1.00	-1.00
410-178947-J-5	7/11/2024	7:49 AM	23.36	-1.00	8.07	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,300.7	-1.00	-1.00	-1.00	-1.00
410-178947-J-3	7/11/2024	7:54 AM	23.39	-1.00	7.83	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,573.2	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	7:58 AM	23.46	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3,845.7	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	8:05 AM	23.57	-1.00	6.34	.00	1.44	1.44	.00	.00	.02	.00	.03	4,118.4	-1.00	-1.00	-1.00	-1.00
mb	7/11/2024	8:11 AM	23.89	-1.00	5.45	.00	.38	.38	.00	.00	.02	.00	.03	4,496.9	-1.00	-1.00	-1.00	-1.00
lcsph	7/11/2024	8:15 AM	23.62	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,862.8	-1.00	-1.00	-1.00	-1.00
lcsdph	7/11/2024	8:20 AM	23.49	-1.00	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	5,135.2	-1.00	-1.00	-1.00	-1.00
lcsak	7/11/2024	8:28 AM	23.54	-1.00	10.06	72.04	207.89	63.81	144.09	.00	1.87	.65	-1.00	5,407.6	-1.00	-1.00	-1.00	-1.00
lcsdak	7/11/2024	8:36 AM	23.81	-1.00	10.11	72.68	184.33	38.97	145.36	.00	1.66	.65	-1.00	5,920.2	-1.00	-1.00	-1.00	-1.00
630-90302-AU-1	7/11/2024	8:43 AM	23.67	-1.00	7.24	.00	181.65	181.65	.00	.00	1.64	.00	-1.00	6,366.7	-1.00	-1.00	-1.00	-1.00
630-90228-E-1	7/11/2024	8:50 AM	23.57	-1.00	7.32	.00	84.93	84.93	.00	.00	.77	.00	-1.00	6,776.6	-1.00	-1.00	-1.00	-1.00
630-90241-E-3	7/11/2024	8:57 AM	23.73	-1.00	7.78	.00	103.85	103.85	.00	.00	.94	.00	-1.00	7,209.9	-1.00	-1.00	-1.00	-1.00
410-179177-X-1	7/11/2024	9:04 AM	23.89	-1.00	7.42	.00	67.47	67.47	.00	.00	.61	.00	-1.00	7,655.0	-1.00	-1.00	-1.00	-1.00
410-179176-X-1	7/11/2024	9:12 AM	23.57	-1.00	7.90	.00	53.01	53.01	.00	.00	.48	.00	-1.00	8,067.0	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	9:16 AM	23.67	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	8,516.0	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	9:22 AM	23.67	-1.00	6.39	.00	1.10	1.10	.00	.00	.02	.00	.03	8,788.2	-1.00	-1.00	-1.00	-1.00
620-19593-M-2	7/11/2024	9:29 AM	23.76	-1.00	6.61	.00	289.22	289.22	.00	.00	2.61	.00	-1.00	9,166.2	-1.00	-1.00	-1.00	-1.00
620-19593-M-1	7/11/2024	9:36 AM	23.52	-1.00	7.23	.00	46.46	46.46	.00	.00	.42	.00	-1.00	9,556.1	-1.00	-1.00	-1.00	-1.00
620-19593-M-4	7/11/2024	9:43 AM	23.64	-1.00	7.27	.00	47.01	47.01	.00	.00	.42	.00	-1.00	9,969.6	-1.00	-1.00	-1.00	-1.00
620-19593-N-3	7/11/2024	9:50 AM	23.83	-1.00	7.10	.00	26.49	26.49	.00	.00	.24	.00	-1.00	0,381.3	-1.00	-1.00	-1.00	-1.00
410-179201-J-1	7/11/2024	9:57 AM	23.52	-1.00	7.21	.00	68.99	68.99	.00	.00	.62	.00	-1.00	0,818.3	-1.00	-1.00	-1.00	-1.00
410-179201-J-3	7/11/2024	10:04 AM	23.59	-1.00	6.36	.00	2.77	2.77	.00	.00	.04	.00	.05	1,230.3	-1.00	-1.00	-1.00	-1.00
410-179201-J-2	7/11/2024	10:11 AM	23.89	-1.00	7.45	.00	66.86	66.86	.00	.00	.60	.00	-1.00	1,643.8	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	10:15 AM	23.65	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2,067.4	-1.00	-1.00	-1.00	-1.00

Run Number 7957 **Order Number** 20240710-3

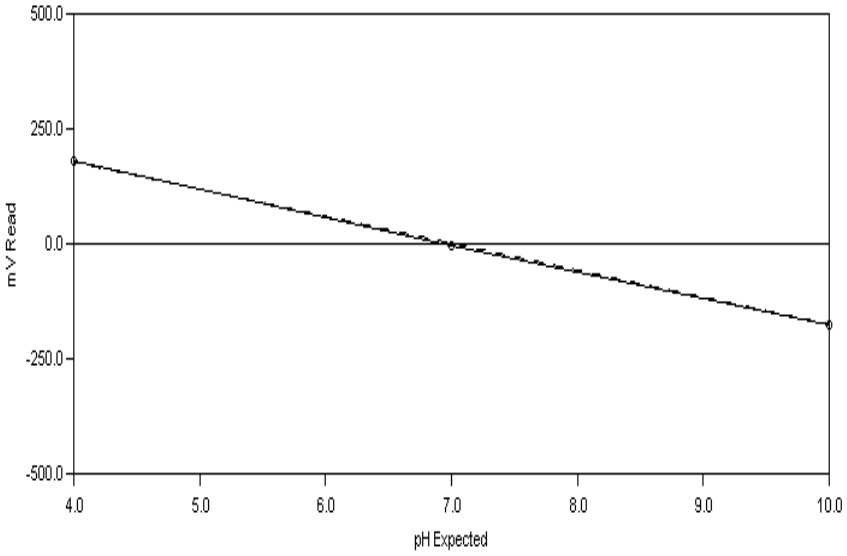
SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Alk4.5	Alk8.3	Alk4.2	HDMLS	Total Hardness		8.3	Hacid
ccbx	7/11/2024	10:22 AM	23.47	-1.00	6.40	.00	1.21	1.21	.00	.00	.02	.00	.03	2,340.4	-1.00	-1.00	-1.00	-1.00
410-179175-T-1	7/11/2024	10:29 AM	23.64	-1.00	7.82	.00	143.79	143.79	.00	.00	1.30	.00	-1.00	2,718.5	-1.00	-1.00	-1.00	-1.00
630-90241-E-1	7/11/2024	10:36 AM	23.81	-1.00	7.31	.00	83.22	83.22	.00	.00	.75	.00	-1.00	3,151.7	-1.00	-1.00	-1.00	-1.00
630-90241-E-2	7/11/2024	10:43 AM	23.47	-1.00	7.80	.00	102.64	102.64	.00	.00	.92	.00	-1.00	3,563.4	-1.00	-1.00	-1.00	-1.00
410-179099-C-1	7/11/2024	10:50 AM	23.65	-1.00	8.03	.00	237.50	237.50	.00	.00	2.14	.00	-1.00	4,006.5	-1.00	-1.00	-1.00	-1.00
410-179099-C-2	7/11/2024	10:57 AM	23.81	-1.00	7.92	.00	170.24	170.24	.00	.00	1.53	.00	-1.00	4,436.1	-1.00	-1.00	-1.00	-1.00
630-90302-BP-2	7/11/2024	11:05 AM	23.46	-1.00	7.29	.00	49.67	49.67	.00	.00	.45	.00	-1.00	4,867.7	-1.00	-1.00	-1.00	-1.00
630-90212-E-1	7/11/2024	11:13 AM	23.56	-1.00	6.83	.00	14.16	14.16	.00	.00	.15	.00	.16	5,291.4	-1.00	-1.00	-1.00	-1.00
630-90327-F-2	7/11/2024	11:20 AM	23.76	-1.00	6.81	.00	8.52	8.52	.00	.00	.09	.00	.10	5,773.7	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	11:25 AM	23.49	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6,246.1	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	11:31 AM	23.47	-1.00	6.38	.00	1.13	1.13	.00	.00	.02	.00	.03	6,519.3	-1.00	-1.00	-1.00	-1.00
mb	7/11/2024	11:37 AM	23.64	-1.00	5.47	.00	.21	.21	.00	.00	.01	.00	.03	6,897.4	-1.00	-1.00	-1.00	-1.00
lcsph	7/11/2024	11:42 AM	23.72	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	7,263.8	-1.00	-1.00	-1.00	-1.00
lcsdph	7/11/2024	11:47 AM	23.39	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	7,536.5	-1.00	-1.00	-1.00	-1.00
410-178839-D-1	7/11/2024	11:54 AM	23.31	-1.00	7.86	.00	118.59	118.59	.00	.00	1.07	.00	-1.00	7,809.3	-1.00	-1.00	-1.00	-1.00
410-178839-E-2	7/11/2024	12:01 PM	23.59	-1.00	7.86	.00	128.65	128.65	.00	.00	1.16	.00	-1.00	8,252.7	-1.00	-1.00	-1.00	-1.00
410-178858-T-1	7/11/2024	12:09 PM	23.68	-1.00	7.83	.00	110.08	110.08	.00	.00	.99	.00	-1.00	8,696.0	-1.00	-1.00	-1.00	-1.00
410-178857-X-1	7/11/2024	12:16 PM	23.47	-1.00	6.68	.00	8.62	8.62	.00	.00	.09	.00	.11	9,129.7	-1.00	-1.00	-1.00	-1.00
630-90014-G-2	7/11/2024	12:24 PM	23.68	-1.00	7.62	.00	140.84	140.84	.00	.00	1.27	.00	-1.00	9,602.2	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	12:28 PM	23.62	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	0,038.8	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	12:35 PM	23.38	-1.00	6.16	.00	1.43	1.43	.00	.00	.02	.00	.03	0,312.2	-1.00	-1.00	-1.00	-1.00
410-178495-J-1	7/11/2024	12:41 PM	23.56	-1.00	7.05	.00	53.93	53.93	.00	.00	.49	.00	-1.00	0,690.6	-1.00	-1.00	-1.00	-1.00
410-178495-I-2	7/11/2024	12:48 PM	23.83	-1.00	7.23	.00	66.92	66.92	.00	.00	.60	.00	-1.00	1,080.9	-1.00	-1.00	-1.00	-1.00
410-178495-J-3	7/11/2024	12:55 PM	23.54	-1.00	7.20	.00	65.33	65.33	.00	.00	.59	.00	-1.00	1,491.2	-1.00	-1.00	-1.00	-1.00
410-178495-J-4	7/11/2024	1:01 PM	23.59	-1.00	7.07	.00	38.83	38.83	.00	.00	.35	.00	-1.00	1,891.5	-1.00	-1.00	-1.00	-1.00
410-178495-J-5	7/11/2024	1:09 PM	23.84	-1.00	7.55	.00	60.65	60.65	.00	.00	.55	.00	-1.00	2,293.9	-1.00	-1.00	-1.00	-1.00
410-178495-J-6	7/11/2024	1:16 PM	23.54	-1.00	7.49	.00	58.61	58.61	.00	.00	.53	.00	-1.00	2,729.5	-1.00	-1.00	-1.00	-1.00
410-178495-J-7	7/11/2024	1:23 PM	23.59	-1.00	6.57	.00	6.18	6.18	.00	.00	.07	.00	.08	3,153.6	-1.00	-1.00	-1.00	-1.00
460-306705-H-1	7/11/2024	1:30 PM	23.86	-1.00	7.54	.00	61.09	61.09	.00	.00	.55	.00	-1.00	3,614.3	-1.00	-1.00	-1.00	-1.00
460-306705-H-2	7/11/2024	1:38 PM	23.51	-1.00	7.77	.00	51.83	51.83	.00	.00	.47	.00	-1.00	4,038.5	-1.00	-1.00	-1.00	-1.00

Run Number 7957 **Order Number** 20240710-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Alk4.5	Alk8.3	Alk4.2	HDMLS	Total Hardness		8.3	Hacid
410-178592-E-1	7/11/2024	1:45 PM	23.72	-1.00	7.52	.00	83.50	83.50	.00	.00	.75	.00	-1.00	4,484.3	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	1:49 PM	23.86	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4,895.9	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	1:55 PM	23.56	-1.00	6.27	.00	1.14	1.14	.00	.00	.02	.00	.03	5,168.8	-1.00	-1.00	-1.00	-1.00
410-178592-E-2	7/11/2024	2:02 PM	23.56	-1.00	7.55	.00	116.72	116.72	.00	.00	1.05	.00	-1.00	5,547.5	-1.00	-1.00	-1.00	-1.00
410-178592-E-3	7/11/2024	2:09 PM	23.81	-1.00	7.73	.00	144.53	144.53	.00	.00	1.30	.00	-1.00	5,959.5	-1.00	-1.00	-1.00	-1.00
410-178592-E-4	7/11/2024	2:17 PM	23.67	-1.00	7.77	.00	144.95	144.95	.00	.00	1.31	.00	-1.00	6,381.4	-1.00	-1.00	-1.00	-1.00
410-178496-N-3	7/11/2024	2:24 PM	23.62	-1.00	7.59	.00	322.79	322.79	.00	.00	2.91	.00	-1.00	6,813.4	-1.00	-1.00	-1.00	-1.00
410-178496-N-1	7/11/2024	2:33 PM	23.84	-1.00	7.85	.00	1,464.13	1,464.13	.00	.00	13.19	.00	-1.00	7,233.6	-1.00	-1.00	-1.00	-1.00
LCSALK	7/11/2024	2:41 PM	23.80	-1.00	10.09	67.60	197.19	61.98	135.20	.00	1.78	.61	-1.00	7,805.5	-1.00	-1.00	-1.00	-1.00
LCSDALK	7/11/2024	2:49 PM	23.86	-1.00	10.05	64.99	186.57	56.59	129.97	.00	1.68	.59	-1.00	8,296.2	-1.00	-1.00	-1.00	-1.00
ccvph	7/11/2024	2:54 PM	23.76	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	8,785.0	-1.00	-1.00	-1.00	-1.00
ccbx	7/11/2024	3:00 PM	23.49	-1.00	6.44	.00	1.12	1.12	.00	.00	.02	.00	.03	9,058.0	-1.00	-1.00	-1.00	-1.00

PC-TitratION PLUS
Calibration Report

Calibration Record # 1910



Calibration Settings

Calibration ID	PH	Date	07/10/2024	
Channel	1	Time	5:39 PM	
Probe Type	pH	Temperature	296.62 K	23.47 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit	

Calibration Results

Slope	-59.082	CorrCoeff	0.9999
Intercept	0.450	Equation:	Y = (-59.082) X + (0.450)

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-59.082	-60.00	-54.00
Intercept	0.450	-100.00	100.00
Correlation Coefficient	0.9999	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	4.00	179.32
	7.00	-2.80
	10.00	-175.17

Method:	5310C/9060/415.1
Analyte:	Total Organic Carbon
Calibration Date and Time:	7/9/2024 1203
Run Name:	24191CALG07
Instrument:	26070
RF:	0.3294
Volume:	2
Offset/RB area	5550

Curve Type: Linear

CAL PT	Xi = True Value	Units	Area Ct	Corrected Area Ct (Area Ct - Offset/RB area)	X'I = Measured Value	Percent Error (X'i - (Xi / Xi)) x 100	Criteria	Pass/Fail
1	1	mg/L	10305	4755	0.78	-21.7%	50%	PASS
2	7.5	mg/L	51475	45925	7.56	0.9%	10%	PASS
3	10	mg/L	64819	59269	9.76	-2.4%	10%	PASS
4	25	mg/L	157477	151927	25.02	0.1%	10%	PASS
5	50	mg/L	314747	309197	50.92	1.8%	10%	PASS
6	100	mg/L	610057	604507	99.56	-0.4%	10%	PASS

Calculation spreadsheet based off of NELAC Calculation Spreadsheet https://nelac-institute.org/news.php?id=2847

OI Corporation
151 Graham Rd
College Station, TX
77845
USA

Date Prepared: 07/09/2024 **By:** TOC

Date Approved: **By:**

Sample Results Summary

Spl #	Vial #	Sample ID	Num Rep	Act Rep	Method	Type	Dil	Cust ID	Mode	Avg. Area (cts)	Avg. Mass (ug)	Avg. Conc (PPM)	Std. Dev	% RSD	Notes
1	-	Clean Up	2	2	DefaultCleanUpMethod	Clean Up	1 : 1	00000000	TC	20 146	0.000	0.000	395	1.96	
2	1	RINSE	1	1	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	2 548	0.813	0.407	0	0.00	Pass
3	2	METHOD BLANK	1	1	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	QC Blank	1 : 1	00000000	TOC	2 748	0.000	0.000	0	0.00	
5	3	TOC-RW	1	1	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Std	1 : 1	00000000	TOC	4 915	0.000	0.000	0	0.00	
6	4	TOC-Std#1-1.000 PPM	1	1	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Std	1 : 1	00000000	TOC	10 305	2.000	1.000	0	0.00	
7	5	TOC-Std#2-7.500 PPM	1	1	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Std	1 : 1	00000000	TOC	51 475	15.000	7.500	0	0.00	
8	6	TOC-Std#3-10.000 PPM	1	1	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Std	1 : 1	00000000	TOC	64 819	20.000	10.000	0	0.00	
9	7	TOC-Std#4-25.000 PPM	1	1	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Std	1 : 1	00000000	TOC	157 477	50.000	25.000	0	0.00	
10	8	TOC-Std#5-50.000 PPM	1	1	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Std	1 : 1	00000000	TOC	314 747	100.000	50.000	0	0.00	
11	9	TOC-Std#6-100.000 PPM	1	1	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Std	1 : 1	00000000	TOC	610 057	200.000	100.000	0	0.00	
12	10	RINSE	2	2	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	3 041	0.000	0.000	539	17.73	Pass
13	11	ICV	1	1	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	151 787	48.167	24.084	0	0.00	Pass
14	12	ICB	1	1	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	3 022	0.000	0.000	0	0.00	Pass

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Date Prepared: 07/09/2024 By: TOC

Date Approved: By:

Sample Results

Spl #: 1 Sample ID : Clean Up Type : Clean Up Date: 07/09/2024 Status:
Vial #: - Method : DefaultCleanUpMethod Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/09/2024	9:34 am	-	-	-	20 425	0.000	0.000
2	07/09/2024	9:40 am	-	-	-	19 867	0.000	0.000
		Avg.	-	-	-	20 146	0.000	0.000
		Std.Dev.						
		% RSD.				1.96		

Spl #: 2 Sample ID : RINSE Type : Sample Date: 07/09/2024 Status: Pass
Vial #: 1 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/09/2024	9:48 am	-	-	-	2 548	0.813	0.407
		Avg.	-	-	-	2 548	0.813	0.407
		Std.Dev.						
		% RSD.				0.00		

Spl #: 3 Sample ID : METHOD BLANK Type : QC Blank Date: 07/09/2024 Status:
Vial #: 2 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/09/2024	9:58 am	-	-	-	2 748	0.000	0.000
		Avg.	-	-	-	2 748	0.000	0.000
		Std.Dev.						
		% RSD.				0.00		

Denotes Excluded Replicates
Denotes First Failed Samples

OI Corporation
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USA

Date Prepared: 07/09/2024 By: TOC

Date Approved: By:

Spl #: 5 Sample ID : TOC-RW Type : Std Date: 07/09/2024 Status:
Vial #: 3 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/09/2024	11:03 am	-	-	-	4 915	0.000	0.000
		Avg.	-	-	-	4 915	0.000	0.000
		Std.Dev.						
		% RSD.				0.00		

Spl #: 6 Sample ID : TOC-Std#1-1.000 PPM Type : Std Date: 07/09/2024 Status:
Vial #: 4 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/09/2024	11:16 am	-	-	-	10 305	2.000	1.000
		Avg.	-	-	-	10 305	2.000	1.000
		Std.Dev.						
		% RSD.				0.00		

Spl #: 7 Sample ID : TOC-Std#2-7.500 PPM Type : Std Date: 07/09/2024 Status:
Vial #: 5 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/09/2024	11:25 am	-	-	-	51 475	15.000	7.500
		Avg.	-	-	-	51 475	15.000	7.500
		Std.Dev.						
		% RSD.				0.00		

Denotes Excluded Replicates
Denotes First Failed Samples

Spl #: 8 Sample ID : TOC-Std#3-10.000 PPM Type : Std Date: 07/09/2024 Status:
Vial #: 6 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/09/2024	11:35 am	-	-	-	64 819	20.000	10.000
		Avg.	-	-	-	64 819	20.000	10.000
		Std.Dev.						
		% RSD.				0.00		

Spl #: 9 Sample ID : TOC-Std#4-25.000 PPM Type : Std Date: 07/09/2024 Status:
Vial #: 7 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/09/2024	11:44 am	-	-	-	157 477	50.000	25.000
		Avg.	-	-	-	157 477	50.000	25.000
		Std.Dev.						
		% RSD.				0.00		

Spl #: 10 Sample ID : TOC-Std#5-50.000 PPM Type : Std Date: 07/09/2024 Status:
Vial #: 8 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/09/2024	11:54 am	-	-	-	314 747	100.000	50.000
		Avg.	-	-	-	314 747	100.000	50.000
		Std.Dev.						
		% RSD.				0.00		

Spl #: 11 Sample ID : TOC-Std#6-100.000 PPM Type : Std Date: 07/09/2024 Status:
Vial #: 9 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/09/2024	12:03 pm	-	-	-	610 057	200.000	100.000
		Avg.	-	-	-	610 057	200.000	100.000
		Std.Dev.						
		% RSD.				0.00		

Spl #: 12 Sample ID : RINSE Type : Sample Date: 07/09/2024 Status: Pass
Vial #: 10 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/09/2024	12:16 pm	-	-	-	3 423	0.000	0.000
2	07/09/2024	12:24 pm	-	-	-	2 660	0.000	0.000
		Avg.	-	-	-	3 041	0.000	0.000
		Std.Dev.						
		% RSD.				17.73		

Spl #: 13 Sample ID : ICV Type : Sample Date: 07/09/2024 Status: Pass
Vial #: 11 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/09/2024	12:33 pm	-	-	-	151 787	48.167	24.084
		Avg.	-	-	-	151 787	48.167	24.084
		Std.Dev.						
		% RSD.				0.00		

OI Corporation
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77845
USA

Date Prepared: 07/09/2024 **By:** TOC

Date Approved: **By:**

Spl #:	14	**Sample ID :**	ICB	**Type :**	Sample	**Date:**	07/09/2024	**Status:**	Pass
Vial #:	12	**Method :**	LLTOC DEC 1 - Dec 01, 2021; 10-	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/09/2024	12:43 pm	-	-	-	3 022	0.000	0.000
		Avg.	-	-	-	3 022	0.000	0.000
		Std.Dev.						
		% RSD.				0.00		

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USA

Date Prepared: 07/09/2024 **By:** TOC

Date Approved: **By:**

Method Summary

Method Details

Method Name:	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM
Date Created:	12/01/2021
Time Created:	10:36
Created By:	toc
Analysis Mode:	NPOC Only
Sparging Mode:	Internal
Pre-Acid Volume (mL):	1.000
Sparge Time (mm:ss):	02:00

Volumes

Sample Volume (mL):	2.000
Acid Volume (mL):	0.500
Persulfate Volume (mL):	2.500

Other

SysPressure:	20.00

Pre-Processing

Sample Dilution:	Disabled
Dilution Mode:	Automatic
Dilution Factor:	1 : 1

Times

	React	Detect
TIC	01:30	03:00
TOC	02:00	03:00

Temp

	React	Detect
TIC	70	70
TOC	98	98

Outlier Removal Criteria

Enabled:	No
Additional Replicates:	1
Max. % RSD.	10.00

Rinses

Rinse Volume (mL):	15.000
Rinses Per Sample:	1
Rinses Per Replicate:	0

Max. Std. Dev. 100 Use Modified Oxidant: No

Calibration Summary

Calibration Generation

Generation Mode:	Manual
# of Stds:	5
Dilution Factor:	10 : 1
Dilution Volume (mL):	1.000
Add Zero as Std #1:	No

Calibration Mode

Primary Mode:	TOC
User for ALL Modes:	Enabled

Calibration Pass/Fail Criteria

Parameter	Enabled	Low	High	Failure
R² (ugC/K-cts)	Yes	0.1000	0.3000	Continue
	Yes	0.950	1.000	Continue
Offset (area) (cts)	No	-	-	-
Offset (mass) (ugC)	No	-	-	-
QC Blank(cts)	No	-	-	-

Checks, QC's and Actions

Type	Target (PPM)	Tolerance (+/- %)	1st Failure	2nd Failure
CK Std	n/a	10.00	Re-run	Continue
QC #1	0.000	10.00	Re-run	Continue
QC #2	0.000	10.00	Re-run	Continue
QC #3	0.000	10.00	Re-run	Continue
QC #4	0.000	10.00	Re-run	Continue
SST	0.000	15.00	Abort	Abort

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Date Prepared: 07/09/2024 **By:** TOC

Date Approved: **By:**

Calibration Details

Calibration Mode:	TOC
Date Calibrated:	06/10/2024
Time Calibrated:	8:37 am
Calibrated By:	toc
RF (ugC/k-cts):	0.3129
R2:	0.9997
R:	0.9999
QC Blank(cts):	0
Offset (cts):	-51
Offset (ugC):	0.016
Reagent Blank (cts):	1 365
Units of Measure:	PPM->mg/L C

Calibration Settings

Stock Conc. For Dilutions:	(PPM)	1 000.000
# of Reagent Blanks:		3
EFC Enabled:		No
Total Flowrate w/EFC:		50 ml/min
Check Standards:		Subtract Offset
Samples:		Substract Offset
Regression type:		Unweighted Linear

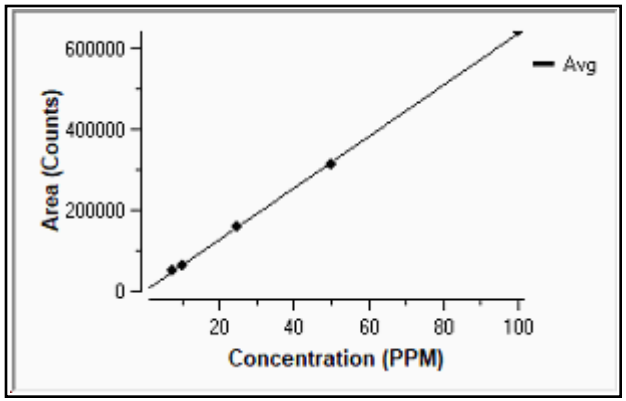
Calculations:

$$Concentration = \frac{\frac{RF}{1000} \times Area}{volume}$$

Samples: $Area = Area_{Peak} - Area_{Offset}$ *or* $Area = Area_{Peak} - Area_{RB}$

CHK Stds: $Area = Area_{Peak} - Area_{Offset}$ *or* $Area = Area_{Peak} - Area_{RW}$

QC Samples: $Area = Area_{Peak} - Area_{QCBlank}$



$$y = m \times x + b$$

$y \Rightarrow Area$ $\quad m \Rightarrow \frac{1000}{RF \times volume}$ $\quad b \Rightarrow 0$

Denotes Excluded Replicates

Denotes First Failed Samples

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Date Prepared: 07/09/2024 **By:** TOC

Date Approved: **By:**

Calibration Details

Calibration Mode:	TOC
Date Calibrated:	07/09/2024
Time Calibrated:	12:03 pm
Calibrated By:	toc
RF (ugC/k-cts):	0.3294
R2:	0.9999
R:	0.9999
QC Blank(cts):	0
Offset (cts):	5550
Offset (ugC):	-1.828
Reagent Blank (cts):	1 941
Units of Measure:	PPM->mg/L C

Calibration Settings

Stock Conc. For Dilutions:	(PPM)	1 000.000
# of Reagent Blanks:		3
EFC Enabled:		No
Total Flowrate w/EFC:		50 ml/min
Check Standards:		Subtract Offset
Samples:		Substract Offset
Regression type:		Unweighted Linear

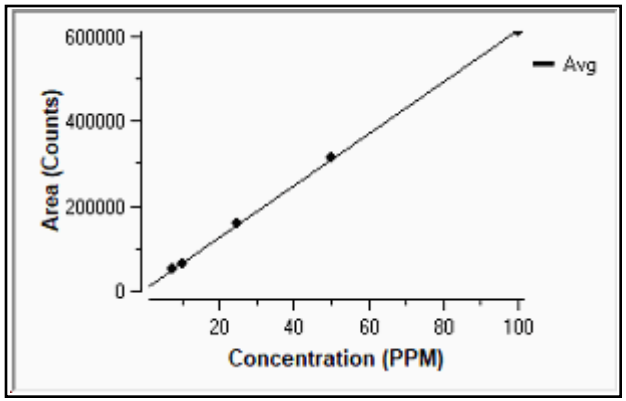
Calculations:

$$Concentration = \frac{\frac{RF}{1000} \times Area}{volume}$$

Samples: $Area = Area_{Peak} - Area_{Offset}$ *or* $Area = Area_{Peak} - Area_{RB}$

CHK Stds: $Area = Area_{Peak} - Area_{Offset}$ *or* $Area = Area_{Peak} - Area_{RW}$

QC Samples: $Area = Area_{Peak} - Area_{QCBlank}$



$$y = m \times x + b$$

$y \Rightarrow Area$ $\quad m \Rightarrow \frac{1000}{RF \times volume}$ $\quad b \Rightarrow 0$

Denotes Excluded Replicates

Denotes First Failed Samples

OI Corporation
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College Station, TX
77845
USA

Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Sample Results Summary

Spl #	Vial #	Sample ID	Num Rep	Act Rep	Method	Type	Dil	Cust ID	Mode	Avg. Area (cts)	Avg. Mass (ug)	Avg. Conc (PPM)	Std. Dev	% RSD	Notes
1	-	Clean Up	2	2	DefaultCleanUpMethod	Clean Up	1 : 1	00000000	TC	15 294	0.000	0.000	1 235	8.08	
2	1	100 CHECK	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	624 329	203.812	101.906	29 729	4.76	RANGE
3	2	CCB	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	2 748	0.000	0.000	649	23.60	Pass
4	3	MRL	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	9 390	1.265	0.633	584	6.22	Pass
5	4	25 TIC CHECK	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	149 244	47.330	23.665	2 864	1.92	Pass
6	5	CCV	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	54 033	24.239	24.239	986	1.82	Pass
7	6	CCB	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	2 562	0.000	0.000	375	14.64	Pass
8	7	LCS	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	54 992	24.698	24.698	154	0.28	Pass
9	8	MB	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	2 434	0.000	0.000	426	17.48	Pass
10	9	410-178584-f-5^100	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	4 999	0.786	0.786	191	3.82	Pass
11	10	410-178584-f-5 du^100	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	4 812	0.697	0.697	211	4.39	Pass
12	11	410-178584-f-5 ms^100	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	38 217	16.675	16.675	670	1.75	Pass
13	12	860-77430-c-1	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	60 527	27.345	27.345	4 255	7.03	Pass
14	13	410-178584-f-1^100	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	8 131	2.284	2.284	163	2.00	Pass
15	14	410-178584-f-3	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	2 869	0.000	0.000	301	10.50	Pass
16	15	CCV	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	53 300	23.889	23.889	1 184	2.22	Pass
17	16	CCB	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	2 306	0.000	0.000	366	15.86	Pass
18	17	410-178584-f-2^100	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	14 993	5.566	5.566	903	6.02	Pass
19	18	410-178584-f-4^100	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	5 430	0.993	0.993	156	2.87	Pass
20	19	410-178584-f-6^100	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	8 698	2.556	2.556	311	3.57	Pass
21	20	410-178584-f-7^100	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	8 437	2.431	2.431	328	3.89	Pass
22	21	410-178584-f-8	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	2 634	0.000	0.000	146	5.56	Pass
23	22	CCV	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	53 052	23.770	23.770	1 537	2.90	Pass

24	23	CCB	3	3	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM	Sample	1 : 1	00000000	TC	2 306	0.000	0.000	277	12.02	Pass
25	24	CCV	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	300 597	97.182	48.591	9 054	3.01	Pass
26	25	CCB	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	2 324	0.000	0.000	176	7.57	Pass
27	26	LCS	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	304 093	98.334	49.167	9 949	3.27	Pass
28	27	MB	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	2 231	0.000	0.000	147	6.60	Pass
29	28	410-178439-b-1	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	38 661	10.906	5.453	613	1.59	Pass
30	29	410-178439-c-1 DU	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	39 289	11.113	5.556	1 636	4.16	Pass
31	30	410-178439-c-1 MS	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	106 013	33.090	16.545	1 545	1.46	Pass
32	31	410-178439-a-2	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	18 821	4.371	2.186	929	4.94	Pass
33	32	410-179201-a-1	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	33 337	9.152	4.576	1 673	5.02	Pass
34	33	410-179201-a-2	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	9 077	1.162	0.581	792	8.72	Pass
35	34	410-179201-a-3	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	10 773	1.720	0.860	36	0.33	Pass
36	35	410-178735-a-1	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	38 275	10.779	5.389	760	1.99	Pass
37	36	CCV	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	145 501	46.097	23.048	2 892	1.99	Pass
38	37	CCB	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	2 512	0.000	0.000	172	6.84	Pass
39	38	410-178735-a-2	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	34 170	9.427	4.713	265	0.77	Pass
40	39	410-178584-d-1	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	163 605	52.060	26.030	2 658	1.62	Pass
41	40	410-178584-d-2	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	108 613	33.947	16.974	21 448	19.75	Pass
42	41	410-178584-d-3	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	4 352	0.000	0.000	417	9.58	Pass
43	42	410-178584-d-5	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	64 020	19.259	9.629	9 433	14.74	Pass
44	43	410-178584-d-5 du	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	58 210	17.345	8.672	7 727	13.27	Pass
45	44	410-178584-d-5 ms	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	117 366	36.830	18.414	4 315	3.68	Pass
46	45	410-178584-d-4	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	52 878	15.589	7.794	11 773	22.26	Pass
47	46	410-178584-d-6	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	63 825	19.195	9.597	11 464	17.96	Pass
48	47	410-178584-d-7	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	62 565	18.779	9.390	4 612	7.37	Pass

49	48	CCVL	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	33 269	9.130	4.565	712	2.14	Pass
50	49	CCB	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	2 891	0.000	0.000	275	9.50	Pass
51	50	410-178584-d-8	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	2 730	0.000	0.000	295	10.82	Pass
52	51	410-178581-b-1^5	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	135 600	42.836	21.418	4 094	3.02	Pass
53	52	580-141791-d-2	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	3 760 331	1 236.741	618.371	224 832	5.98	RANGE
54	53	410-178835-F-1^10000	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	110 638	34.614	17.307	2 875	2.60	Pass
55	54	CCV	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	149 288	47.344	23.672	1 900	1.27	Pass
56	55	CCB	3	3	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM	Sample	1 : 1	00000000	TOC	2 984	0.000	0.000	450	15.08	Pass

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Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Sample Results

Spl #: 1 **Sample ID :** Clean Up **Type :** Clean Up **Date:** 07/11/2024 **Status:**
Vial #: - **Method :** DefaultCleanUpMethod **Dilution :** 1 : 1 **Customer ID:** 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	10:43 am	-	-	-	16 167	0.000	0.000
2	07/11/2024	10:47 am	-	-	-	14 420	0.000	0.000
		Avg.	-	-	-	15 294	0.000	0.000
		Std.Dev.						
		% RSD.				8.08		

Spl #: 2 **Sample ID :** 100 CHECK **Type :** Sample **Date:** 07/11/2024 **Status:** RANGE
Vial #: 1 **Method :** LLTOC DEC 1 - Dec 01, 2021; 10- **Dilution :** 1 : 1 **Customer ID:** 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	10:54 am	-	-	-	640 226	209.048	104.524
2	07/11/2024	11:00 am	-	-	-	590 031	192.515	96.258
3	07/11/2024	11:05 am	-	-	-	642 729	209.873	104.936
		Avg.	-	-	-	624 329	203.812	101.906
		Std.Dev.						
		% RSD.				4.76		

Spl #: 3 Sample ID : CCB Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 2 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	11:13 am	-	-	-	2 546	0.000	0.000
2	07/11/2024	11:20 am	-	-	-	3 474	0.000	0.000
3	07/11/2024	11:25 am	-	-	-	2 225	0.000	0.000
		Avg.	-	-	-	2 748	0.000	0.000
		Std.Dev.						
		% RSD.				23.60		

Spl #: 4 Sample ID : MRL Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 3 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	11:33 am	-	-	-	9 951	1.450	0.725
2	07/11/2024	11:39 am	-	-	-	8 785	1.065	0.533
3	07/11/2024	11:45 am	-	-	-	9 433	1.279	0.640
		Avg.	-	-	-	9 390	1.265	0.633
		Std.Dev.						
		% RSD.				6.22		

Spl #: 5 Sample ID : 25 TIC CHECK Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 4 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	11:53 am	-	-	-	146 628	46.468	23.234
2	07/11/2024	11:58 am	-	-	-	152 304	48.337	24.169
3	07/11/2024	12:04 pm	-	-	-	148 801	47.184	23.592
		Avg.	-	-	-	149 244	47.330	23.665
		Std.Dev.						
		% RSD.				1.92		

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Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Spl #: 6 **Sample ID :** CCV **Type :** Sample **Date:** 07/11/2024 **Status:** Pass
Vial #: 5 **Method :** LLTC ARP 14 20 - Apr 14, 2021; 0 **Dilution :** 1 : 1 **Customer ID:** 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	12:11 pm	-	-	-	53 453	23.962	23.962
2	07/11/2024	12:15 pm	-	-	-	55 172	24.784	24.784
3	07/11/2024	12:20 pm	-	-	-	53 475	23.972	23.972
		Avg.	-	-	-	54 033	24.239	24.239
		Std.Dev.						
		% RSD.				1.82		

Spl #: 7 **Sample ID :** CCB **Type :** Sample **Date:** 07/11/2024 **Status:** Pass
Vial #: 6 **Method :** LLTC ARP 14 20 - Apr 14, 2021; 0 **Dilution :** 1 : 1 **Customer ID:** 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	12:26 pm	-	-	-	2 250	0.000	0.000
2	07/11/2024	12:31 pm	-	-	-	2 978	0.000	0.000
3	07/11/2024	12:35 pm	-	-	-	2 458	0.000	0.000
		Avg.	-	-	-	2 562	0.000	0.000
		Std.Dev.						
		% RSD.				14.64		

Denotes Excluded Replicates
Denotes First Failed Samples

Spl #: 8 Sample ID : LCS Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 7 Method : LLTC ARP 14 20 - Apr 14, 2021; 0 Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	12:41 pm	-	-	-	55 023	24.713	24.713
2	07/11/2024	12:46 pm	-	-	-	55 127	24.763	24.763
3	07/11/2024	12:50 pm	-	-	-	54 825	24.618	24.618
		Avg.	-	-	-	54 992	24.698	24.698
		Std.Dev.						
		% RSD.				0.28		

Spl #: 9 Sample ID : MB Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 8 Method : LLTC ARP 14 20 - Apr 14, 2021; 0 Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	12:57 pm	-	-	-	2 116	0.000	0.000
2	07/11/2024	1:02 pm	-	-	-	2 917	0.000	0.000
3	07/11/2024	1:06 pm	-	-	-	2 268	0.000	0.000
		Avg.	-	-	-	2 434	0.000	0.000
		Std.Dev.						
		% RSD.				17.48		

Spl #: 10 Sample ID : 410-178584-f-5^100 Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 9 Method : LLTC ARP 14 20 - Apr 14, 2021; 0 Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	1:12 pm	-	-	-	5 148	0.857	0.857
2	07/11/2024	1:17 pm	-	-	-	4 783	0.683	0.683
3	07/11/2024	1:21 pm	-	-	-	5 066	0.818	0.818
		Avg.	-	-	-	4 999	0.786	0.786
		Std.Dev.						
		% RSD.				3.82		

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USA

Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Spl #:	11	**Sample ID :**	410-178584-f-5 du^100	**Type :**	Sample	**Date:**	07/11/2024	**Status:**	Pass
Vial #:	10	**Method :**	LLTC ARP 14 20 - Apr 14, 2021; 0	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	1:27 pm	-	-	-	4 664	0.626	0.626
2	07/11/2024	1:32 pm	-	-	-	5 054	0.813	0.813
3	07/11/2024	1:36 pm	-	-	-	4 719	0.653	0.653
		Avg.	-	-	-	4 812	0.697	0.697
		Std.Dev.						
		% RSD.				4.39		

Spl #:	12	**Sample ID :**	410-178584-f-5 ms^100	**Type :**	Sample	**Date:**	07/11/2024	**Status:**	Pass
Vial #:	11	**Method :**	LLTC ARP 14 20 - Apr 14, 2021; 0	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	1:43 pm	-	-	-	38 430	16.776	16.776
2	07/11/2024	1:47 pm	-	-	-	37 467	16.316	16.316
3	07/11/2024	1:52 pm	-	-	-	38 755	16.932	16.932
		Avg.	-	-	-	38 217	16.675	16.675
		Std.Dev.						
		% RSD.				1.75		

Denotes Excluded Replicates

Denotes First Failed Samples

Spl #: 13 Sample ID : 860-77430-c-1 Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 12 Method : LLTC ARP 14 20 - Apr 14, 2021; 0 Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	1:58 pm	-	-	-	63 450	28.743	28.743
2	07/11/2024	2:02 pm	-	-	-	55 645	25.010	25.010
3	07/11/2024	2:07 pm	-	-	-	62 485	28.282	28.282
		Avg.	-	-	-	60 527	27.345	27.345
		Std.Dev.						
		% RSD.				7.03		

Spl #: 14 Sample ID : 410-178584-f-1^100 Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 13 Method : LLTC ARP 14 20 - Apr 14, 2021; 0 Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	2:13 pm	-	-	-	8 226	2.330	2.330
2	07/11/2024	2:18 pm	-	-	-	7 943	2.194	2.194
3	07/11/2024	2:22 pm	-	-	-	8 223	2.328	2.329
		Avg.	-	-	-	8 131	2.284	2.284
		Std.Dev.						
		% RSD.				2.00		

Spl #: 15 Sample ID : 410-178584-f-3 Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 14 Method : LLTC ARP 14 20 - Apr 14, 2021; 0 Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	2:29 pm	-	-	-	2 573	0.000	0.000
2	07/11/2024	2:33 pm	-	-	-	3 176	0.000	0.000
3	07/11/2024	2:38 pm	-	-	-	2 858	0.000	0.000
		Avg.	-	-	-	2 869	0.000	0.000
		Std.Dev.						
		% RSD.				10.50		

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Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Spl #: 16 **Sample ID :** CCV **Type :** Sample **Date:** 07/11/2024 **Status:** Pass
Vial #: 15 **Method :** LLTC ARP 14 20 - Apr 14, 2021; 0 **Dilution :** 1 : 1 **Customer ID:** 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	2:44 pm	-	-	-	53 326	23.901	23.901
2	07/11/2024	2:48 pm	-	-	-	54 471	24.449	24.449
3	07/11/2024	2:53 pm	-	-	-	52 103	23.316	23.316
		Avg.	-	-	-	53 300	23.889	23.889
		Std.Dev.						
		% RSD.				2.22		

Spl #: 17 **Sample ID :** CCB **Type :** Sample **Date:** 07/11/2024 **Status:** Pass
Vial #: 16 **Method :** LLTC ARP 14 20 - Apr 14, 2021; 0 **Dilution :** 1 : 1 **Customer ID:** 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	2:59 pm	-	-	-	2 065	0.000	0.000
2	07/11/2024	3:04 pm	-	-	-	2 726	0.000	0.000
3	07/11/2024	3:09 pm	-	-	-	2 125	0.000	0.000
		Avg.	-	-	-	2 306	0.000	0.000
		Std.Dev.						
		% RSD.				15.86		

Denotes Excluded Replicates
Denotes First Failed Samples

Spl #: 18 Sample ID : 410-178584-f-2^100 Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 17 Method : LLTC ARP 14 20 - Apr 14, 2021; 0 Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	3:15 pm	-	-	-	14 158	5.167	5.167
2	07/11/2024	3:19 pm	-	-	-	15 951	6.024	6.025
3	07/11/2024	3:24 pm	-	-	-	14 869	5.507	5.507
		Avg.	-	-	-	14 993	5.566	5.566
		Std.Dev.						
		% RSD.				6.02		

Spl #: 19 Sample ID : 410-178584-f-4^100 Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 18 Method : LLTC ARP 14 20 - Apr 14, 2021; 0 Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	3:30 pm	-	-	-	5 358	0.958	0.958
2	07/11/2024	3:34 pm	-	-	-	5 609	1.078	1.078
3	07/11/2024	3:39 pm	-	-	-	5 324	0.942	0.942
		Avg.	-	-	-	5 430	0.993	0.993
		Std.Dev.						
		% RSD.				2.87		

Spl #: 20 Sample ID : 410-178584-f-6^100 Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 19 Method : LLTC ARP 14 20 - Apr 14, 2021; 0 Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	3:45 pm	-	-	-	8 871	2.638	2.638
2	07/11/2024	3:50 pm	-	-	-	8 885	2.645	2.645
3	07/11/2024	3:54 pm	-	-	-	8 340	2.384	2.384
		Avg.	-	-	-	8 698	2.556	2.556
		Std.Dev.						
		% RSD.				3.57		

Denotes Excluded Replicates
Denotes First Failed Samples

OI Corporation
151 Graham Rd
College Station, TX
77845
USA

Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Spl #:	21	**Sample ID :**	410-178584-f-7^100	**Type :**	Sample	**Date:**	07/11/2024	**Status:**	Pass
Vial #:	20	**Method :**	LLTC ARP 14 20 - Apr 14, 2021; 0	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	4:00 pm	-	-	-	8 706	2.559	2.560
2	07/11/2024	4:05 pm	-	-	-	8 072	2.256	2.256
3	07/11/2024	4:09 pm	-	-	-	8 534	2.477	2.477
		Avg.	-	-	-	8 437	2.431	2.431
		Std.Dev.						
		% RSD.				3.89		

Spl #:	22	**Sample ID :**	410-178584-f-8	**Type :**	Sample	**Date:**	07/11/2024	**Status:**	Pass
Vial #:	21	**Method :**	LLTC ARP 14 20 - Apr 14, 2021; 0	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	4:16 pm	-	-	-	2 633	0.000	0.000
2	07/11/2024	4:20 pm	-	-	-	2 488	0.000	0.000
3	07/11/2024	4:25 pm	-	-	-	2 781	0.000	0.000
		Avg.	-	-	-	2 634	0.000	0.000
		Std.Dev.						
		% RSD.				5.56		

Denotes Excluded Replicates

Denotes First Failed Samples

Spl #: 23 Sample ID : CCV Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 22 Method : LLTC ARP 14 20 - Apr 14, 2021; 0 Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	4:31 pm	-	-	-	54 510	24.467	24.468
2	07/11/2024	4:35 pm	-	-	-	51 447	23.002	23.003
3	07/11/2024	4:40 pm	-	-	-	53 199	23.840	23.840
		Avg.	-	-	-	53 052	23.770	23.770
		Std.Dev.						
		% RSD.				2.90		

Spl #: 24 Sample ID : CCB Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 23 Method : LLTC ARP 14 20 - Apr 14, 2021; 0 Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TC Area (cts)	TC Mass (ugC)	TC Conc (PPM)
1	07/11/2024	4:46 pm	-	-	-	2 408	0.000	0.000
2	07/11/2024	4:51 pm	-	-	-	1 992	0.000	0.000
3	07/11/2024	4:55 pm	-	-	-	2 518	0.000	0.000
		Avg.	-	-	-	2 306	0.000	0.000
		Std.Dev.						
		% RSD.				12.02		

Spl #: 25 Sample ID : CCV Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 24 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	5:03 pm	-	-	-	293 492	94.842	47.421
2	07/11/2024	5:09 pm	-	-	-	310 791	100.540	50.270
3	07/11/2024	5:14 pm	-	-	-	297 508	96.165	48.082
		Avg.	-	-	-	300 597	97.182	48.591
		Std.Dev.						
		% RSD.				3.01		

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OI Corporation
151 Graham Rd
College Station, TX
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USA

Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Spl #:	26	**Sample ID :**	CCB	**Type :**	Sample	**Date:**	07/11/2024	**Status:**	Pass
Vial #:	25	**Method :**	LLTOC DEC 1 - Dec 01, 2021; 10-	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	5:23 pm	-	-	-	2 408	0.000	0.000
2	07/11/2024	5:28 pm	-	-	-	2 122	0.000	0.000
3	07/11/2024	5:34 pm	-	-	-	2 443	0.000	0.000
		Avg.	-	-	-	2 324	0.000	0.000
		Std.Dev.						
		% RSD.				7.57		

Spl #:	27	**Sample ID :**	LCS	**Type :**	Sample	**Date:**	07/11/2024	**Status:**	Pass
Vial #:	26	**Method :**	LLTOC DEC 1 - Dec 01, 2021; 10-	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	5:42 pm	-	-	-	299 257	96.741	48.370
2	07/11/2024	5:48 pm	-	-	-	315 536	102.102	51.051
3	07/11/2024	5:54 pm	-	-	-	297 487	96.158	48.079
		Avg.	-	-	-	304 093	98.334	49.167
		Std.Dev.						
		% RSD.				3.27		

Spl #: 28 Sample ID : MB Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 27 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	6:02 pm	-	-	-	2 376	0.000	0.000
2	07/11/2024	6:08 pm	-	-	-	2 082	0.000	0.000
3	07/11/2024	6:13 pm	-	-	-	2 236	0.000	0.000
		Avg.	-	-	-	2 231	0.000	0.000
		Std.Dev.						
		% RSD.				6.60		

Spl #: 29 Sample ID : 410-178439-b-1 Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 28 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	6:22 pm	-	-	-	39 053	11.035	5.518
2	07/11/2024	6:27 pm	-	-	-	38 976	11.010	5.505
3	07/11/2024	6:33 pm	-	-	-	37 954	10.673	5.337
		Avg.	-	-	-	38 661	10.906	5.453
		Std.Dev.						
		% RSD.				1.59		

Spl #: 30 Sample ID : 410-178439-c-1 DU Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 29 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	6:41 pm	-	-	-	40 103	11.381	5.690
2	07/11/2024	6:47 pm	-	-	-	37 406	10.493	5.246
3	07/11/2024	6:53 pm	-	-	-	40 358	11.465	5.733
		Avg.	-	-	-	39 289	11.113	5.556
		Std.Dev.						
		% RSD.				4.16		

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OI Corporation
151 Graham Rd
College Station, TX
77845
USA

Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Spl #:	31	**Sample ID :**	410-178439-c-1 MS	**Type :**	Sample	**Date:**	07/11/2024	**Status:**	Pass
Vial #:	30	**Method :**	LLTOC DEC 1 - Dec 01, 2021; 10-	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	7:01 pm	-	-	-	104 874	32.715	16.358
2	07/11/2024	7:07 pm	-	-	-	107 771	33.669	16.835
3	07/11/2024	7:12 pm	-	-	-	105 392	32.886	16.443
		Avg.	-	-	-	106 013	33.090	16.545
		Std.Dev.						
		% RSD.				1.46		

Spl #:	32	**Sample ID :**	410-178439-a-2	**Type :**	Sample	**Date:**	07/11/2024	**Status:**	Pass
Vial #:	31	**Method :**	LLTOC DEC 1 - Dec 01, 2021; 10-	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	7:21 pm	-	-	-	19 849	4.710	2.355
2	07/11/2024	7:26 pm	-	-	-	18 040	4.114	2.057
3	07/11/2024	7:32 pm	-	-	-	18 573	4.289	2.145
		Avg.	-	-	-	18 821	4.371	2.186
		Std.Dev.						
		% RSD.				4.94		

Denotes Excluded Replicates

Denotes First Failed Samples

Spl #: 33 Sample ID : 410-179201-a-1 Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 32 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	7:40 pm	-	-	-	32 709	8.946	4.473
2	07/11/2024	7:46 pm	-	-	-	32 069	8.735	4.367
3	07/11/2024	7:51 pm	-	-	-	35 233	9.777	4.889
		Avg.	-	-	-	33 337	9.152	4.576
		Std.Dev.						
		% RSD.				5.02		

Spl #: 34 Sample ID : 410-179201-a-2 Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 33 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	8:00 pm	-	-	-	9 428	1.277	0.639
2	07/11/2024	8:05 pm	-	-	-	9 633	1.345	0.672
3	07/11/2024	8:11 pm	-	-	-	8 171	0.863	0.432
		Avg.	-	-	-	9 077	1.162	0.581
		Std.Dev.						
		% RSD.				8.72		

Spl #: 35 Sample ID : 410-179201-a-3 Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 34 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	8:20 pm	-	-	-	10 796	1.728	0.863
2	07/11/2024	8:25 pm	-	-	-	10 792	1.726	0.863
3	07/11/2024	8:31 pm	-	-	-	10 732	1.707	0.853
		Avg.	-	-	-	10 773	1.720	0.860
		Std.Dev.						
		% RSD.				0.33		

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OI Corporation
151 Graham Rd
College Station, TX
77845
USA

Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Spl #:	36	**Sample ID :**	410-178735-a-1	**Type :**	Sample	**Date:**	07/11/2024	**Status:**	Pass
Vial #:	35	**Method :**	LLTOC DEC 1 - Dec 01, 2021; 10-	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	8:39 pm	-	-	-	38 275	10.779	5.389
2	07/11/2024	8:44 pm	-	-	-	37 515	10.529	5.264
3	07/11/2024	8:50 pm	-	-	-	39 035	11.029	5.515
		Avg.	-	-	-	38 275	10.779	5.389
		Std.Dev.						
		% RSD.				1.99		

Spl #:	37	**Sample ID :**	CCV	**Type :**	Sample	**Date:**	07/11/2024	**Status:**	Pass
Vial #:	36	**Method :**	LLTOC DEC 1 - Dec 01, 2021; 10-	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	8:58 pm	-	-	-	142 811	45.211	22.605
2	07/11/2024	9:04 pm	-	-	-	148 559	47.104	23.551
3	07/11/2024	9:10 pm	-	-	-	145 132	45.975	22.988
		Avg.	-	-	-	145 501	46.097	23.048
		Std.Dev.						
		% RSD.				1.99		

Denotes Excluded Replicates

Denotes First Failed Samples

Spl #: 38 Sample ID : CCB Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 37 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	9:18 pm	-	-	-	2 710	0.000	0.000
2	07/11/2024	9:24 pm	-	-	-	2 404	0.000	0.000
3	07/11/2024	9:30 pm	-	-	-	2 421	0.000	0.000
		Avg.	-	-	-	2 512	0.000	0.000
		Std.Dev.						
		% RSD.				6.84		

Spl #: 39 Sample ID : 410-178735-a-2 Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 38 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	9:38 pm	-	-	-	34 022	9.378	4.689
2	07/11/2024	9:44 pm	-	-	-	34 011	9.375	4.687
3	07/11/2024	9:49 pm	-	-	-	34 475	9.527	4.764
		Avg.	-	-	-	34 170	9.427	4.713
		Std.Dev.						
		% RSD.				0.77		

Spl #: 40 Sample ID : 410-178584-d-1 Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 39 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	9:57 pm	-	-	-	166 562	53.034	26.517
2	07/11/2024	10:03 pm	-	-	-	161 412	51.337	25.669
3	07/11/2024	10:09 pm	-	-	-	162 843	51.809	25.904
		Avg.	-	-	-	163 605	52.060	26.030
		Std.Dev.						
		% RSD.				1.62		

Denotes Excluded Replicates
Denotes First Failed Samples

OI Corporation
151 Graham Rd
College Station, TX
77845
USA

Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Spl #:	41	**Sample ID :**	410-178584-d-2	**Type :**	Sample	**Date:**	07/11/2024	**Status:**	Pass
Vial #:	40	**Method :**	LLTOC DEC 1 - Dec 01, 2021; 10-	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	10:16 pm	-	-	-	110 189	34.466	17.233
2	07/11/2024	10:22 pm	-	-	-	86 421	26.637	13.319
3	07/11/2024	10:27 pm	-	-	-	129 229	40.737	20.369
		Avg.	-	-	-	108 613	33.947	16.974
		Std.Dev.						
		% RSD.				19.75		

Spl #:	42	**Sample ID :**	410-178584-d-3	**Type :**	Sample	**Date:**	07/11/2024	**Status:**	Pass
Vial #:	41	**Method :**	LLTOC DEC 1 - Dec 01, 2021; 10-	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	10:35 pm	-	-	-	4 514	0.000	0.000
2	07/11/2024	10:41 pm	-	-	-	4 663	0.000	0.000
3	07/11/2024	10:47 pm	-	-	-	3 878	0.000	0.000
		Avg.	-	-	-	4 352	0.000	0.000
		Std.Dev.						
		% RSD.				9.58		

Denotes Excluded Replicates

Denotes First Failed Samples

Spl #: 43 Sample ID : 410-178584-d-5 Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 42 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	10:54 pm	-	-	-	69 963	21.216	10.608
2	07/11/2024	11:00 pm	-	-	-	53 143	15.676	7.838
3	07/11/2024	11:06 pm	-	-	-	68 955	20.884	10.442
		Avg.	-	-	-	64 020	19.259	9.629
		Std.Dev.						
		% RSD.				14.74		

Spl #: 44 Sample ID : 410-178584-d-5 du Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 43 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	11:14 pm	-	-	-	52 034	15.311	7.655
2	07/11/2024	11:20 pm	-	-	-	66 874	20.199	10.099
3	07/11/2024	11:25 pm	-	-	-	55 721	16.525	8.263
		Avg.	-	-	-	58 210	17.345	8.672
		Std.Dev.						
		% RSD.				13.27		

Spl #: 45 Sample ID : 410-178584-d-5 ms Type : Sample Date: 07/11/2024 Status: Pass
Vial #: 44 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	11:33 pm	-	-	-	121 686	38.252	19.126
2	07/11/2024	11:39 pm	-	-	-	113 056	35.410	17.704
3	07/11/2024	11:44 pm	-	-	-	117 356	36.826	18.413
		Avg.	-	-	-	117 366	36.830	18.414
		Std.Dev.						
		% RSD.				3.68		

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Denotes First Failed Samples

OI Corporation
151 Graham Rd
College Station, TX
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USA

Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Spl #:	46	**Sample ID :**	410-178584-d-4	**Type :**	Sample	**Date:**	07/12/2024	**Status:**	Pass
Vial #:	45	**Method :**	LLTOC DEC 1 - Dec 01, 2021; 10-	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/11/2024	11:53 pm	-	-	-	45 407	13.128	6.564
2	07/11/2024	11:58 pm	-	-	-	66 449	20.059	10.029
3	07/12/2024	12:04 am	-	-	-	46 777	13.579	6.790
		Avg.	-	-	-	52 878	15.589	7.794
		Std.Dev.						
		% RSD.				22.26		

Spl #:	47	**Sample ID :**	410-178584-d-6	**Type :**	Sample	**Date:**	07/12/2024	**Status:**	Pass
Vial #:	46	**Method :**	LLTOC DEC 1 - Dec 01, 2021; 10-	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/12/2024	12:12 am	-	-	-	71 312	21.661	10.830
2	07/12/2024	12:18 am	-	-	-	50 627	14.847	7.424
3	07/12/2024	12:23 am	-	-	-	69 536	21.075	10.538
		Avg.	-	-	-	63 825	19.195	9.597
		Std.Dev.						
		% RSD.				17.96		

Spl #: 48 Sample ID : 410-178584-d-7 Type : Sample Date: 07/12/2024 Status: Pass
Vial #: 47 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/12/2024	12:31 am	-	-	-	63 435	19.066	9.533
2	07/12/2024	12:36 am	-	-	-	66 679	20.135	10.067
3	07/12/2024	12:42 am	-	-	-	57 580	17.138	8.569
		Avg.	-	-	-	62 565	18.779	9.390
		Std.Dev.						
		% RSD.				7.37		

Spl #: 49 Sample ID : CCVL Type : Sample Date: 07/12/2024 Status: Pass
Vial #: 48 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/12/2024	12:50 am	-	-	-	33 009	9.044	4.522
2	07/12/2024	12:56 am	-	-	-	34 075	9.395	4.698
3	07/12/2024	1:01 am	-	-	-	32 725	8.951	4.475
		Avg.	-	-	-	33 269	9.130	4.565
		Std.Dev.						
		% RSD.				2.14		

Spl #: 50 Sample ID : CCB Type : Sample Date: 07/12/2024 Status: Pass
Vial #: 49 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/12/2024	1:10 am	-	-	-	3 151	0.000	0.000
2	07/12/2024	1:15 am	-	-	-	2 604	0.000	0.000
3	07/12/2024	1:21 am	-	-	-	2 918	0.000	0.000
		Avg.	-	-	-	2 891	0.000	0.000
		Std.Dev.						
		% RSD.				9.50		

OI Corporation
151 Graham Rd
College Station, TX
77845
USA

Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Spl #:	51	**Sample ID :**	410-178584-d-8	**Type :**	Sample	**Date:**	07/12/2024	**Status:**	Pass
Vial #:	50	**Method :**	LLTOC DEC 1 - Dec 01, 2021; 10-	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/12/2024	1:29 am	-	-	-	2 596	0.000	0.000
2	07/12/2024	1:34 am	-	-	-	3 069	0.000	0.000
3	07/12/2024	1:40 am	-	-	-	2 526	0.000	0.000
		Avg.	-	-	-	2 730	0.000	0.000
		Std.Dev.						
		% RSD.				10.82		

Spl #:	52	**Sample ID :**	410-178581-b-1^5	**Type :**	Sample	**Date:**	07/12/2024	**Status:**	Pass
Vial #:	51	**Method :**	LLTOC DEC 1 - Dec 01, 2021; 10-	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/12/2024	1:49 am	-	-	-	134 861	42.592	21.296
2	07/12/2024	1:54 am	-	-	-	131 926	41.625	20.813
3	07/12/2024	2:00 am	-	-	-	140 014	44.289	22.145
		Avg.	-	-	-	135 600	42.836	21.418
		Std.Dev.						
		% RSD.				3.02		

Spl #: 53 Sample ID : 580-141791-d-2 Type : Sample Date: 07/12/2024 Status: RANGE
Vial #: 52 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/12/2024	2:09 am	-	-	-	4 017 139	1 321.328	660.664
2	07/12/2024	2:15 am	-	-	-	3 598 963	1 183.590	591.795
3	07/12/2024	2:20 am	-	-	-	3 664 890	1 205.305	602.653
		Avg.	-	-	-	3 760 331	1 236.741	618.371
		Std.Dev.						
		% RSD.				5.98		

Spl #: 54 Sample ID : 410-178835-F-1^10000 Type : Sample Date: 07/12/2024 Status: Pass
Vial #: 53 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/12/2024	2:28 am	-	-	-	107 408	33.550	16.775
2	07/12/2024	2:34 am	-	-	-	111 592	34.928	17.464
3	07/12/2024	2:39 am	-	-	-	112 915	35.364	17.682
		Avg.	-	-	-	110 638	34.614	17.307
		Std.Dev.						
		% RSD.				2.60		

Spl #: 55 Sample ID : CCV Type : Sample Date: 07/12/2024 Status: Pass
Vial #: 54 Method : LLTOC DEC 1 - Dec 01, 2021; 10- Dilution : 1 : 1 Customer ID: 00000000

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/12/2024	2:48 am	-	-	-	147 331	46.699	23.350
2	07/12/2024	2:53 am	-	-	-	149 407	47.383	23.692
3	07/12/2024	2:59 am	-	-	-	151 126	47.949	23.975
		Avg.	-	-	-	149 288	47.344	23.672
		Std.Dev.						
		% RSD.				1.27		

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USA

Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Spl #:	56	**Sample ID :**	CCB	**Type :**	Sample	**Date:**	07/12/2024	**Status:**	Pass
Vial #:	55	**Method :**	LLTOC DEC 1 - Dec 01, 2021; 10-	**Dilution :**	1 : 1	**Customer ID:**	00000000		

Rep #	Date	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	07/12/2024	3:07 am	-	-	-	3 499	0.000	0.000
2	07/12/2024	3:13 am	-	-	-	2 786	0.000	0.000
3	07/12/2024	3:18 am	-	-	-	2 667	0.000	0.000
		Avg.	-	-	-	2 984	0.000	0.000
		Std.Dev.						
		% RSD.				15.08		

Denotes Excluded Replicates

Denotes First Failed Samples

OI Corporation
151 Graham Rd
College Station, TX
77845
USA

Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Method Summary

Method Details

Method Name:	LLTC ARP 14 20 - Apr 14, 2021; 03-40-20 PM
Date Created:	04/14/2021
Time Created:	15:43
Created By:	toc

Analysis Mode: TC Only

Sparging Mode:	n/a
Pre-Acid Volume (mL):	n/a
Sparge Time (mm:ss):	n/a

Volumes

Sample Volume (mL):	1.000
Acid Volume (mL):	0.000
Persulfate Volume (mL):	2.500

Other

SysPressure:	20.00

Pre-Processing

Sample Dilution:	Disabled
Dilution Mode:	Automatic
Dilution Factor:	1 : 1

Times

	React	Detect
TIC	02:30	04:00
TOC	03:00	04:00

Temp

	React	Detect
TIC	70	70
TOC	98	98

Outlier Removal Criteria

Enabled:	No
Additional Replicates:	1
Max. % RSD.	10.00

Rinses

Rinse Volume (mL):	15.000
Rinses Per Sample:	1
Rinses Per Replicate:	0

Max. Std. Dev. 100 Use Modified Oxidant: No

Calibration Summary

Calibration Generation

Generation Mode:	Manual
# of Stds:	5
Dilution Factor:	10 : 1
Dilution Volume (mL):	1.000
Add Zero as Std #1:	No

Calibration Mode

Primary Mode:	TC
User for ALL Modes:	Enabled

Calibration Pass/Fail Criteria

Parameter	Enabled	Low	High	Failure
R² (ugC/K-cts)	Yes	0.1000	0.3000	Continue
	Yes	0.950	1.000	Continue
Offset (area) (cts)	No	-	-	-
Offset (mass) (ugC)	No	-	-	-
QC Blank(cts)	No	-	-	-

Checks, QC's and Actions

Type	Target (PPM)	Tolerance (+/- %)	1st Failure	2nd Failure
CK Std	n/a	10.00	Re-run	Continue
QC #1	0.000	10.00	Re-run	Continue
QC #2	0.000	10.00	Re-run	Continue
QC #3	0.000	10.00	Re-run	Continue
QC #4	0.000	10.00	Re-run	Continue
SST	0.000	15.00	Abort	Abort

Denotes Excluded Replicates

Denotes First Failed Samples

OI Corporation
151 Graham Rd
College Station, TX
77845
USA

Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Calibration Details

Calibration Mode:	TC
Date Calibrated:	01/18/2024
Time Calibrated:	6:56 am
Calibrated By:	toc
RF (ugC/k-cts):	0.4783
R2:	0.9998
R:	0.9999
QC Blank(cts):	0
Offset (cts):	3355
Offset (ugC):	-1.605
Reagent Blank (cts):	1 546
Units of Measure:	PPM->mg/L C

Calibration Settings

Stock Conc. For Dilutions:	(PPM)	1 000.000
# of Reagent Blanks:		3
EFC Enabled:		No
Total Flowrate w/EFC:		50 ml/min
Check Standards:		Subtract Offset
Samples:		Substract Offset
Regression type:		Unweighted Linear

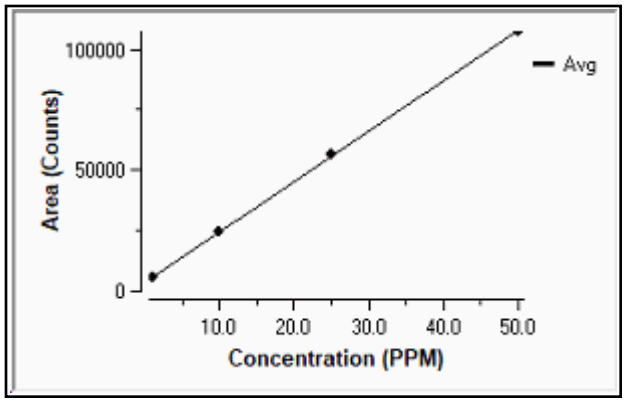
Calculations:

$$Concentration = \frac{\frac{RF}{1000} \times Area}{volume}$$

Samples: $Area = Area_{Peak} - Area_{Offset}$ *or* $Area = Area_{Peak} - Area_{RB}$

CHK Stds: $Area = Area_{Peak} - Area_{Offset}$ *or* $Area = Area_{Peak} - Area_{RW}$

QC Samples: $Area = Area_{Peak} - Area_{QCBlank}$



$$y = m \times x + b$$

$y \Rightarrow Area$ $\quad m \Rightarrow \frac{1000}{RF \times volume}$ $\quad b \Rightarrow 0$

Denotes Excluded Replicates

Denotes First Failed Samples

OI Corporation
151 Graham Rd
College Station, TX
77845
USA

Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Method Summary

Method Details

Method Name:	LLTOC DEC 1 - Dec 01, 2021; 10-27-16 AM
Date Created:	12/01/2021
Time Created:	10:36
Created By:	toc

Analysis Mode: NPOC Only

Sparging Mode:	Internal
Pre-Acid Volume (mL):	1.000
Sparge Time (mm:ss):	02:00

Volumes

Sample Volume (mL):	2.000
Acid Volume (mL):	0.500
Persulfate Volume (mL):	2.500

Other

SysPressure:	20.00

Pre-Processing

Sample Dilution:	Disabled
Dilution Mode:	Automatic
Dilution Factor:	1 : 1

Times

	React	Detect
TIC	01:30	03:00
TOC	02:00	03:00

Temp

	React	Detect
TIC	70	70
TOC	98	98

Outlier Removal Criteria

Enabled:	No
Additional Replicates:	1
Max. % RSD.	10.00

Rinses

Rinse Volume (mL):	15.000
Rinses Per Sample:	1
Rinses Per Replicate:	0

Max. Std. Dev. 100 Use Modified Oxidant: No

Calibration Summary

Calibration Generation

Generation Mode:	Manual
# of Stds:	5
Dilution Factor:	10 : 1
Dilution Volume (mL):	1.000
Add Zero as Std #1:	No

Calibration Mode

Primary Mode:	TOC
User for ALL Modes:	Enabled

Calibration Pass/Fail Criteria

Parameter	Enabled	Low	High	Failure
R² (ugC/K-cts)	Yes	0.1000	0.3000	Continue
	Yes	0.950	1.000	Continue
Offset (area) (cts)	No	-	-	-
Offset (mass) (ugC)	No	-	-	-
QC Blank(cts)	No	-	-	-

Checks, QC's and Actions

Type	Target (PPM)	Tolerance (+/- %)	1st Failure	2nd Failure
CK Std	n/a	10.00	Re-run	Continue
QC #1	0.000	10.00	Re-run	Continue
QC #2	0.000	10.00	Re-run	Continue
QC #3	0.000	10.00	Re-run	Continue
QC #4	0.000	10.00	Re-run	Continue
SST	0.000	15.00	Abort	Abort

Denotes Excluded Replicates

Denotes First Failed Samples

OI Corporation
151 Graham Rd
College Station, TX
77845
USA

Date Prepared: 07/12/2024 **By:** TOC

Date Approved: **By:**

Calibration Details

Calibration Mode:	TOC
Date Calibrated:	07/09/2024
Time Calibrated:	12:03 pm
Calibrated By:	toc
RF (ugC/k-cts):	0.3294
R2:	0.9999
R:	0.9999
QC Blank(cts):	0
Offset (cts):	5550
Offset (ugC):	-1.828
Reagent Blank (cts):	1 941
Units of Measure:	PPM->mg/L C

Calibration Settings

Stock Conc. For Dilutions:	(PPM)	1 000.000
# of Reagent Blanks:		3
EFC Enabled:		No
Total Flowrate w/EFC:		50 ml/min
Check Standards:		Subtract Offset
Samples:		Substract Offset
Regression type:		Unweighted Linear

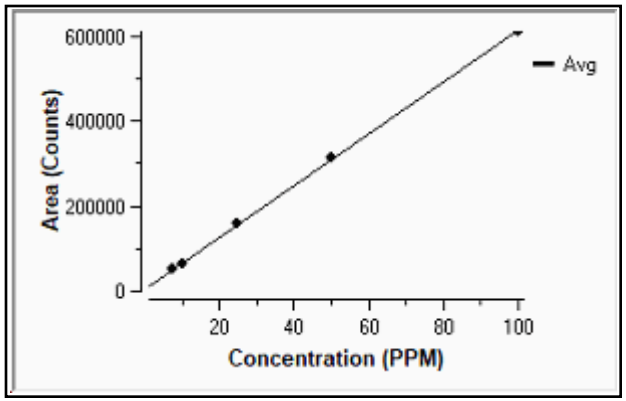
Calculations:

$$Concentration = \frac{\frac{RF}{1000} \times Area}{volume}$$

Samples: $Area = Area_{Peak} - Area_{Offset}$ *or* $Area = Area_{Peak} - Area_{RB}$

CHK Stds: $Area = Area_{Peak} - Area_{Offset}$ *or* $Area = Area_{Peak} - Area_{RW}$

QC Samples: $Area = Area_{Peak} - Area_{QCBlank}$



$$y = m \times x + b$$

$y \Rightarrow Area$ $\quad m \Rightarrow \frac{1000}{RF \times volume}$ $\quad b \Rightarrow 0$

Denotes Excluded Replicates

Denotes First Failed Samples

Shipping and Receiving Documents

Revised COC rec'd 07/10/24 EPM

COC NO. 3Q-2024

Page 1 of 1

Laboratory Name: Eurofins - Lancaster Laboratories, Inc

Address : 2425 New Holland Pike / Lancaster, PA / 17601

Contact : Katie Grant /

Phone: 717-656-2300

Project Location:

ECC

75 Kupuohi St, Suite 103

Lahaina, Hawaii, 96761

TAT: 5-DAY

Project Contact: Kane McNeill, 650-228-6950

Project Name: TDSS MW Sampling 3Q-2024 / Baseline

Site: TDSS Olowalu

Project Number: 4344-401

Event: Groundwater Sampling 3Q2024

Sampler Print: Mike Martinaro Tetra Tech

Sampler Sign:

Sample Number	Low Flow	Date	Time	Matrix	Site Type	Media Type	# of Bottles	6020B Metals - Mg, Na, Ca, K, Fe, As, Pb, Sb, Co, Cu (250mL x1 HNO3)	180.1 – Turbidity (250mL x1 -)	2320B – Total, Bicarbonate, and Carbonate Alkalinity (250mL x2 -)	300.0 Anions – Chloride / Sulfate (50mL x2 -)	350.1 – Ammonia (500mL x1 H2SO4)	SM5310C – TOC (40mL x2 H3PO4)	2540C – TDS (-)	9040C – pH (-)					Comments
TDSS-MW01-3Q24	x	07-07-2024	1030	Water	MW	W	9	x	x	x	x	x	x	x	x					
TDSS-MW02-3Q24	x	07-07-2024	1528	Water	MW	W	9	x	x	x	x	x	x	x	x					
TDSS-ER-3Q24		07-07-2024	1710	Water	Rinsate	W	9	x	x	x	x	x	x	x	x					Sample pumped though bladder post-decon

Relinquished By: Mike Martinaro Tetra Tech

Date/Time 7-8-2024/0900

Received By:

Date/Time

Special Instructions

Samples on ice

Relinquished By:

Date/Time

Received From Laboratory By:

Date/Time

COC NO. 3Q-2024

Page 1 of 1

410-179201 Chain of Custody

...ories, Inc

...r, PA / 17601

Phone: 717-656-2300

Project Location:

ECC

75 Kupuohi St, Suite 103

Lahaina, Hawaii, 96761

TAT: 5-DAY

Project Contact: Kane McNeill, 650-228-6950

Project Name: TDSS MW Sampling 3Q-2024 / Baseline

Site: TDSS Olowalu

Project Number: 4344-401

Event: Groundwater Sampling 3Q2024

Sampler Print: Mike Marinaro TETRA TECH

Sampler Sign:

Sample Number	Low Flow	Date	Time	Matrix	Site Type	Media Type	# of Bottles	6010D CAM 17 Metals 250mL x1 HNO3	180.1 Turbitity 250mL x1	9040C pH; 2320B; 5040C TD 250mL x2	300 Sulfate; 9056A NO2 NO3 50mL x2	SM-4500 Ammonia 500mL x1 H2SO4	5310C TOC 40mL x2 H3PO4	Comments
TDSS-MW01-3Q24	x	07-07-2024	1030	Water	MW	W	9	X	X	X	X	X	X	
TDSS-MW02-3Q24	x	07-07-2024	1528	Water	MW	W	9	X	X	X	X	X	X	
TDSS-ER-3Q24		07-07-2024	1710	Water	Rinsate	W	9	X	X	X	X	X	X	Sample pumped though bladder post-decon

Relinquished By: Mike Marinaro TETRA TECH

Date/Time 7-8-2024/0900

Received By:

Date/Time

Special Instructions

Samples on ice

Relinquished By:

Date/Time

Received From Laboratory By:

Date/Time 7/10/24 0935

N

R: 3.9 C: 3.8

Login Sample Receipt Checklist

Client: Environmental Chemical Corp.

Job Number: 410-179201-1
SDG Number: 410-179201

Login Number: 179201
List Number: 1
Creator: Santiago, Nathaniel

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	