

DATA PACKAGE METALS

PROJECT NAME : R37063 - PA

**TETRA TECH, EMI
240 Continental Drive, Suite 200**

**Newark, DE - 19713
Phone No: 302-738-7551**

**ORDER ID : Q3291
ATTENTION : Ava Heiss**



Laboratory Certification ID # 20012



1) METALS DATA	2
2) Signature Page	4
3) Case Narrative	5
4) Qualifier Page	7
5) Conformance/Non Conformance	8
6) QA Checklist	10
7) Chronicle	11
8) Hit Summary	12
9) Sample Data	14
9.1) MC0AX0	15
9.2) MC0AX1	16
9.3) MC0AX2	17
9.4) MC0AX3	18
10) METALS CALIBRATION DATA	19
10.1) Initial and Continuing Calibration Verification	20
10.2) CRDL Standard For AA & ICP	26
10.3) Initial and Continuing Calibration Blank Summary	27
10.4) Preparation Blank Summary	32
10.5) Interference Check Sample	34
11) METALS QC DATA	36
11.1) Matrix Spike Summary	37
11.2) Post Digest Spike Summary	41
11.3) Duplicate Sample Summary	42
11.4) Laboratory Control Sample Summary	46
11.5) Internal Standard Relative Intensity Summary8A	48
11.6) Internal Standard Relative Intensity Summary8B	52
11.7) ICP Serial Dilutions	56
12) METALS PREPARATION & INSTRUMENT DATA	58
13) PREPARATION & ANALYTICAL SUMMARY	59
13.1) Sample Preparation Summary	60
13.2) Analysis Run Log	62
14) METALS RAW DATA	64
14.1) METALS RAW DATA - ANALYTICAL	65
14.2) LB137441	65
14.3) LB137449	67

14.4) METALS RAW DATA - PREP	346
14.4.1) PB170005	346
14.4.2) PB170000	349
15) Analytical Runlogs	352
16) Standard Prep Logs	358
17) Shipping Document	514
17.1) Chain Of Custody	515
17.2) Lab Certificate	516

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

Cover Page

Order ID : Q3291

Project ID : R37063 - PA

Client : Tetra Tech, EMI

Lab Sample Number

Q3291-05
Q3291-06
Q3291-07
Q3291-08

Client Sample Number

MC0AX0
MC0AX1
MC0AX2
MC0AX3

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _____

Date: 10/10/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CASE NARRATIVE

Tetra Tech, EMI

Project Name: R37063 - PA

Project Manager : Ava Heiss

Order ID # Q3291

Test Name: Dissolved ICP-TAL Metals,Dissolved Mercury,Mercury,Metals ICP-TAL

A. Number of Samples and Date of Receipt:

4 Water samples were received on 10/06/2025.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: Dissolved ICP-TAL Metals,Dissolved Mercury,Mercury,Metals ICP-TAL. This data package contains results for Dissolved ICP-TAL Metals,Dissolved Mercury, Mercury, Metals ICP-TAL.

C. Analytical Techniques:

The analysis of Dissolved ICP-TAL Metals,Metals ICP-TAL was based on method 6020B, digestion based on method 3010 (waters). The analysis and digestion of Dissolved Mercury,Mercury was based on method 7470A.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Blank Spike met requirements for all compounds.

The Duplicate analysis met criteria for all compounds.

The Matrix Spike (MC0AX2MS) analysis met criteria for all compounds except for Silver due to Chemical Interference during Digestion Process.

The Matrix Spike Duplicate (MC0AX2MSD) analysis met criteria for all compounds except for Silver due to Chemical Interference during Digestion Process.

The Blank analysis did not indicate the presence of lab contamination.

The Calibration met the requirements.

The Serial Dilution met the acceptable requirements.

E. Additional Comments:

The Post Digest Spike (MC0AX2A) analysis met criteria for all compounds except for Silver due to unknown chemical interference of matrix with the addition of spike amount after digestion and before analysis; matrix has suppression effect during addition of spike.

Collision cell is being used to remove potential interferences. The analytes Na, Mg, Al, K, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As are being analyzed with collision cell and analytes Be, B, Ca, Ti, Se, Sr, Zr, Mo, Ag, Cd, Sn, Sb, Ba, Tl, Pb, U are being analyzed with Non-Collision Cell. Helium gas is used for the Collision Cell analysis.



The laboratory certifies that the all-electronic diskette deliverable exactly match the data summary forms (i.e. Form Is).

Sample Q3291-05, Q3291-07 were analyzed as Total Metal and Sample Q3291-06, Q3291-08 were analyzed as Dissolved Metal.

Internal standard 89Y(1 and 2) were out Side qc limit for samples Q3291-07+Qcs and Q3291-08 in Original so for these samples affected parameters are reported from 5X Dilution.

The temperature of the samples at the time of receipt was 11.3°C.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers “P” for ICP instrument “PM” for ICP when Microwave Digestion is used “CV” for Manual Cold Vapor AA “AV” for automated Cold Vapor AA “CA” for MIDI-Distillation Spectrophotometric “AS” for Semi -Automated Spectrophotometric “C” for Manual Spectrophotometric “T” for Titrimetric “NR” for analyte not required to be analyzed
OR	Indicates the analyte’s concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

ORDER ID: Q3291

MATRIX: Water

METHOD: 6020B,7470A

	NA	NO	YES
1. Calibration Summary met criteria.			✓
2. ICP Interference Check Sample Results Summary Submitted.			✓
3. Serial Dilution Summary (if applicable) Submitted.			✓
4. Laboratory Control Sample Summary (if applicable) Submitted.			✓
5. Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
6. Matrix Spike/Matrix Spike Duplicate Recoveries Met Criteria		✓	
If not met, list those compounds and their recoveries which fall outside the acceptable range.			
The Matrix Spike (MC0AX2MS) analysis met criteria for all compounds except for Silver due to Chemical Interference during Digestion Process. The Matrix Spike Duplicate (MC0AX2MSD) analysis met criteria for all compounds except for Silver due to Chemical Interference during Digestion Process.			
7. Sample Duplicate Analysis Met QC Criteria			✓
If not met, list those compounds and their recoveries which fall outside the acceptable range.			
8. Digestion Holding Time Met			✓
If not met, list number of days exceeded for each sample:			
9. Analysis Holding Time Met			✓
If not met, list those compounds and their recoveries which fall outside the acceptable range.			

ADDITIONAL COMMENTS:

The Post Digest Spike (MC0AX2A) analysis met criteria for all compounds except for Silver due to unknown chemical interference of matrix with the addition of spike amount after digestion and before analysis; matrix has suppression effect during addition of spike.

Collision cell is being used to remove potential interferences. The analytes Na, Mg, Al, K, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As are being analyzed with collision cell and analytes Be, B, Ca, Ti, Se, Sr, Zr, Mo, Ag, Cd, Sn, Sb, Ba, Tl, Pb, U are being analyzed with Non-Collision Cell. Helium gas is used for the Collision Cell analysis.

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY (CONTINUED)

NA NO YES

Sample Q3291-05, Q3291-07 were analyzed as Total Metal and Sample Q3291-06, Q3291-08 were analyzed as Dissolved Metal.

Internal standard 89Y(1 and 2) were out Side qc limit for samples Q3291-07+Qcs and Q3291-08 in Original so for these samples affected parameters are reported from 5X Dilution.

The laboratory certifies that the all-electronic diskette deliverable exactly match the data summary forms (i.e. Form Is).

The temperature of the samples at the time of receipt was 11.3°C.

QA REVIEW

Date

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q3291

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: SOHIL JODHANI

Date: 10/10/2025

LAB CHRONICLE

OrderID:	Q3291	OrderDate:	10/6/2025 10:30:11 AM
Client:	Tetra Tech, EMI	Project:	R37063 - PA
Contact:	Ava Heiss	Location:	D21

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3291-05	MC0AX0	Water	Mercury	7470A	10/03/25	10/06/25	10/07/25	10/06/25
			Metals ICP-TAL	6020B		10/06/25	10/07/25	
Q3291-06	MC0AX1	Water	Dissolved ICP-TAL Metals	6020B	10/03/25	10/06/25	10/07/25	10/06/25
			Dissolved Mercury	7470A		10/06/25	10/07/25	
Q3291-07	MC0AX2	Water	Mercury	7470A	10/03/25	10/06/25	10/07/25	10/06/25
			Metals ICP-TAL	6020B		10/06/25	10/07/25	
Q3291-08	MC0AX3	Water	Dissolved ICP-TAL Metals	6020B	10/03/25	10/06/25	10/07/25	10/06/25
			Dissolved Mercury	7470A		10/06/25	10/07/25	

Hit Summary Sheet SW-846

SDG No.: Q3291 **Order ID:** Q3291
Client: Tetra Tech, EMI **Project ID:** R37063 - PA

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : MC0AX0								
Q3291-05	MC0AX0	Water	Aluminum	22.6		1.94	20.0	ug/L
Q3291-05	MC0AX0	Water	Antimony	3.64		0.11	2.00	ug/L
Q3291-05	MC0AX0	Water	Arsenic	40.5		0.089	1.00	ug/L
Q3291-05	MC0AX0	Water	Barium	13.9		0.21	10.0	ug/L
Q3291-05	MC0AX0	Water	Calcium	88400		45.7	500	ug/L
Q3291-05	MC0AX0	Water	Chromium	0.86	J	0.21	2.00	ug/L
Q3291-05	MC0AX0	Water	Cobalt	0.54	J	0.070	1.00	ug/L
Q3291-05	MC0AX0	Water	Copper	2.61		0.30	2.00	ug/L
Q3291-05	MC0AX0	Water	Iron	864		7.81	50.0	ug/L
Q3291-05	MC0AX0	Water	Lead	0.29	J	0.21	1.00	ug/L
Q3291-05	MC0AX0	Water	Magnesium	17700		19.5	500	ug/L
Q3291-05	MC0AX0	Water	Manganese	266		0.43	1.00	ug/L
Q3291-05	MC0AX0	Water	Nickel	2.58		0.27	1.00	ug/L
Q3291-05	MC0AX0	Water	Potassium	15300		36.4	500	ug/L
Q3291-05	MC0AX0	Water	Silver	0.080	J	0.060	1.00	ug/L
Q3291-05	MC0AX0	Water	Sodium	325000		128	500	ug/L
Q3291-05	MC0AX0	Water	Thallium	0.18	J	0.060	1.00	ug/L
Q3291-05	MC0AX0	Water	Vanadium	2.45	J	0.077	5.00	ug/L
Q3291-05	MC0AX0	Water	Zinc	6.44		1.25	5.00	ug/L
Client ID : MC0AX1								
Q3291-06	MC0AX1	Water	Aluminum	15.1	J	1.94	20.0	ug/L
Q3291-06	MC0AX1	Water	Antimony	3.46		0.11	2.00	ug/L
Q3291-06	MC0AX1	Water	Arsenic	41.0		0.089	1.00	ug/L
Q3291-06	MC0AX1	Water	Barium	13.6		0.21	10.0	ug/L
Q3291-06	MC0AX1	Water	Calcium	87400		45.7	500	ug/L
Q3291-06	MC0AX1	Water	Chromium	0.40	J	0.21	2.00	ug/L
Q3291-06	MC0AX1	Water	Cobalt	0.45	J	0.070	1.00	ug/L
Q3291-06	MC0AX1	Water	Copper	1.58	J	0.30	2.00	ug/L
Q3291-06	MC0AX1	Water	Iron	838		7.81	50.0	ug/L
Q3291-06	MC0AX1	Water	Magnesium	17100		19.5	500	ug/L
Q3291-06	MC0AX1	Water	Manganese	262		0.43	1.00	ug/L
Q3291-06	MC0AX1	Water	Nickel	1.89		0.27	1.00	ug/L
Q3291-06	MC0AX1	Water	Potassium	14700		36.4	500	ug/L
Q3291-06	MC0AX1	Water	Sodium	322000		128	500	ug/L
Q3291-06	MC0AX1	Water	Thallium	0.15	J	0.060	1.00	ug/L
Q3291-06	MC0AX1	Water	Vanadium	2.49	J	0.077	5.00	ug/L
Q3291-06	MC0AX1	Water	Zinc	3.03	J	1.25	5.00	ug/L

Hit Summary Sheet SW-846

SDG No.: Q3291

Order ID: Q3291

Client: Tetra Tech, EMI

Project ID: R37063 - PA

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : MC0AX2								
Q3291-07	MC0AX2	Water	Aluminum	21.0		1.94	20.0	ug/L
Q3291-07	MC0AX2	Water	Antimony	3.45		0.11	2.00	ug/L
Q3291-07	MC0AX2	Water	Arsenic	43.0	D	0.45	5.00	ug/L
Q3291-07	MC0AX2	Water	Barium	13.9		0.21	10.0	ug/L
Q3291-07	MC0AX2	Water	Calcium	87500		45.7	500	ug/L
Q3291-07	MC0AX2	Water	Chromium	0.83	J	0.21	2.00	ug/L
Q3291-07	MC0AX2	Water	Cobalt	0.51	J	0.070	1.00	ug/L
Q3291-07	MC0AX2	Water	Copper	2.49		0.30	2.00	ug/L
Q3291-07	MC0AX2	Water	Iron	849		7.81	50.0	ug/L
Q3291-07	MC0AX2	Water	Lead	0.43	J	0.21	1.00	ug/L
Q3291-07	MC0AX2	Water	Magnesium	17400		19.5	500	ug/L
Q3291-07	MC0AX2	Water	Manganese	270		0.43	1.00	ug/L
Q3291-07	MC0AX2	Water	Nickel	2.03		0.27	1.00	ug/L
Q3291-07	MC0AX2	Water	Potassium	15300		36.4	500	ug/L
Q3291-07	MC0AX2	Water	Sodium	324000		128	500	ug/L
Q3291-07	MC0AX2	Water	Thallium	0.16	J	0.060	1.00	ug/L
Q3291-07	MC0AX2	Water	Vanadium	2.49	J	0.077	5.00	ug/L
Q3291-07	MC0AX2	Water	Zinc	5.06		1.25	5.00	ug/L
Client ID : MC0AX3								
Q3291-08	MC0AX3	Water	Aluminum	16.8	J	1.94	20.0	ug/L
Q3291-08	MC0AX3	Water	Antimony	3.58		0.11	2.00	ug/L
Q3291-08	MC0AX3	Water	Arsenic	43.3	D	0.45	5.00	ug/L
Q3291-08	MC0AX3	Water	Barium	14.1		0.21	10.0	ug/L
Q3291-08	MC0AX3	Water	Calcium	91100		45.7	500	ug/L
Q3291-08	MC0AX3	Water	Chromium	0.44	J	0.21	2.00	ug/L
Q3291-08	MC0AX3	Water	Cobalt	0.51	J	0.070	1.00	ug/L
Q3291-08	MC0AX3	Water	Copper	1.97	J	0.30	2.00	ug/L
Q3291-08	MC0AX3	Water	Iron	851		7.81	50.0	ug/L
Q3291-08	MC0AX3	Water	Lead	0.38	J	0.21	1.00	ug/L
Q3291-08	MC0AX3	Water	Magnesium	17700		19.5	500	ug/L
Q3291-08	MC0AX3	Water	Manganese	267		0.43	1.00	ug/L
Q3291-08	MC0AX3	Water	Nickel	2.03		0.27	1.00	ug/L
Q3291-08	MC0AX3	Water	Potassium	15100		36.4	500	ug/L
Q3291-08	MC0AX3	Water	Silver	0.070	J	0.060	1.00	ug/L
Q3291-08	MC0AX3	Water	Sodium	332000		128	500	ug/L
Q3291-08	MC0AX3	Water	Thallium	0.22	J	0.060	1.00	ug/L
Q3291-08	MC0AX3	Water	Vanadium	2.46	J	0.077	5.00	ug/L
Q3291-08	MC0AX3	Water	Zinc	3.73	J	1.25	5.00	ug/L



SAMPLE DATA

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Report of Analysis

Client:	Tetra Tech, EMI	Date Collected:	10/03/25
Project:	R37063 - PA	Date Received:	10/06/25
Client Sample ID:	MC0AX0	SDG No.:	Q3291
Lab Sample ID:	Q3291-05	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	22.6		1	1.94	20.0	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-36-0	Antimony	3.64		1	0.11	2.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-38-2	Arsenic	40.5		1	0.089	1.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-39-3	Barium	13.9		1	0.21	10.0	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-41-7	Beryllium	0.32	U	1	0.32	1.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-43-9	Cadmium	0.34	U	1	0.34	1.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-70-2	Calcium	88400		1	45.7	500	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-47-3	Chromium	0.86	J	1	0.21	2.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-48-4	Cobalt	0.54	J	1	0.070	1.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-50-8	Copper	2.61		1	0.30	2.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7439-89-6	Iron	864		1	7.81	50.0	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7439-92-1	Lead	0.29	J	1	0.21	1.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7439-95-4	Magnesium	17700		1	19.5	500	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7439-96-5	Manganese	266		1	0.43	1.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7439-97-6	Mercury	0.076	U	1	0.076	0.20	ug/L	10/06/25 14:20	10/07/25 11:18	7470A	
7440-02-0	Nickel	2.58		1	0.27	1.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-09-7	Potassium	15300		1	36.4	500	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7782-49-2	Selenium	2.90	U	1	2.90	5.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-22-4	Silver	0.080	JN	1	0.060	1.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-23-5	Sodium	325000		1	128	500	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-28-0	Thallium	0.18	J	1	0.060	1.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-62-2	Vanadium	2.45	J	1	0.077	5.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A
7440-66-6	Zinc	6.44		1	1.25	5.00	ug/L	10/06/25 16:15	10/07/25 17:57	6020B	3010A

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	METALS-TAL			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Tetra Tech, EMI	Date Collected:	10/03/25
Project:	R37063 - PA	Date Received:	10/06/25
Client Sample ID:	MC0AX1	SDG No.:	Q3291
Lab Sample ID:	Q3291-06	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	15.1	J	1	1.94	20.0	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-36-0	Antimony	3.46		1	0.11	2.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-38-2	Arsenic	41.0		1	0.089	1.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-39-3	Barium	13.6		1	0.21	10.0	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-41-7	Beryllium	0.32	U	1	0.32	1.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-43-9	Cadmium	0.34	U	1	0.34	1.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-70-2	Calcium	87400		1	45.7	500	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-47-3	Chromium	0.40	J	1	0.21	2.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-48-4	Cobalt	0.45	J	1	0.070	1.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-50-8	Copper	1.58	J	1	0.30	2.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7439-89-6	Iron	838		1	7.81	50.0	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7439-92-1	Lead	0.21	U	1	0.21	1.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7439-95-4	Magnesium	17100		1	19.5	500	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7439-96-5	Manganese	262		1	0.43	1.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7439-97-6	Mercury	0.076	U	1	0.076	0.20	ug/L	10/06/25 14:20	10/07/25 11:27	7470A	
7440-02-0	Nickel	1.89		1	0.27	1.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-09-7	Potassium	14700		1	36.4	500	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7782-49-2	Selenium	2.90	U	1	2.90	5.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-22-4	Silver	0.060	UN	1	0.060	1.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-23-5	Sodium	322000		1	128	500	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-28-0	Thallium	0.15	J	1	0.060	1.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-62-2	Vanadium	2.49	J	1	0.077	5.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A
7440-66-6	Zinc	3.03	J	1	1.25	5.00	ug/L	10/06/25 16:15	10/07/25 18:01	6020B	3010A

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	DISSOLVED METALS-TAL			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Tetra Tech, EMI	Date Collected:	10/03/25
Project:	R37063 - PA	Date Received:	10/06/25
Client Sample ID:	MC0AX2	SDG No.:	Q3291
Lab Sample ID:	Q3291-07	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	21.0		1	1.94	20.0	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7440-36-0	Antimony	3.45		1	0.11	2.00	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7440-38-2	Arsenic	43.0	D	5	0.45	5.00	ug/L	10/06/25 16:15	10/07/25 18:35	6020B	3010A
7440-39-3	Barium	13.9		1	0.21	10.0	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7440-41-7	Beryllium	0.32	U	1	0.32	1.00	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7440-43-9	Cadmium	0.34	U	1	0.34	1.00	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7440-70-2	Calcium	87500		1	45.7	500	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7440-47-3	Chromium	0.83	J	1	0.21	2.00	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7440-48-4	Cobalt	0.51	J	1	0.070	1.00	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7440-50-8	Copper	2.49		1	0.30	2.00	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7439-89-6	Iron	849		1	7.81	50.0	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7439-92-1	Lead	0.43	J	1	0.21	1.00	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7439-95-4	Magnesium	17400		1	19.5	500	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7439-96-5	Manganese	270		1	0.43	1.00	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7439-97-6	Mercury	0.076	U	1	0.076	0.20	ug/L	10/06/25 14:20	10/07/25 11:29	7470A	
7440-02-0	Nickel	2.03		1	0.27	1.00	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7440-09-7	Potassium	15300		1	36.4	500	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7782-49-2	Selenium	14.5	UD	5	14.5	25.0	ug/L	10/06/25 16:15	10/07/25 18:35	6020B	3010A
7440-22-4	Silver	0.060	UN	1	0.060	1.00	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7440-23-5	Sodium	324000		1	128	500	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7440-28-0	Thallium	0.16	J	1	0.060	1.00	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7440-62-2	Vanadium	2.49	J	1	0.077	5.00	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A
7440-66-6	Zinc	5.06		1	1.25	5.00	ug/L	10/06/25 16:15	10/07/25 18:04	6020B	3010A

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	METALS-TAL			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Tetra Tech, EMI	Date Collected:	10/03/25
Project:	R37063 - PA	Date Received:	10/06/25
Client Sample ID:	MC0AX3	SDG No.:	Q3291
Lab Sample ID:	Q3291-08	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	16.8	J	1	1.94	20.0	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7440-36-0	Antimony	3.58		1	0.11	2.00	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7440-38-2	Arsenic	43.3	D	5	0.45	5.00	ug/L	10/06/25 16:15	10/07/25 18:54	6020B	3010A
7440-39-3	Barium	14.1		1	0.21	10.0	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7440-41-7	Beryllium	0.32	U	1	0.32	1.00	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7440-43-9	Cadmium	0.34	U	1	0.34	1.00	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7440-70-2	Calcium	91100		1	45.7	500	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7440-47-3	Chromium	0.44	J	1	0.21	2.00	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7440-48-4	Cobalt	0.51	J	1	0.070	1.00	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7440-50-8	Copper	1.97	J	1	0.30	2.00	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7439-89-6	Iron	851		1	7.81	50.0	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7439-92-1	Lead	0.38	J	1	0.21	1.00	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7439-95-4	Magnesium	17700		1	19.5	500	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7439-96-5	Manganese	267		1	0.43	1.00	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7439-97-6	Mercury	0.076	U	1	0.076	0.20	ug/L	10/06/25 14:20	10/07/25 11:32	7470A	
7440-02-0	Nickel	2.03		1	0.27	1.00	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7440-09-7	Potassium	15100		1	36.4	500	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7782-49-2	Selenium	14.5	UD	5	14.5	25.0	ug/L	10/06/25 16:15	10/07/25 18:54	6020B	3010A
7440-22-4	Silver	0.070	JN	1	0.060	1.00	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7440-23-5	Sodium	332000		1	128	500	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7440-28-0	Thallium	0.22	J	1	0.060	1.00	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7440-62-2	Vanadium	2.46	J	1	0.077	5.00	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A
7440-66-6	Zinc	3.73	J	1	1.25	5.00	ug/L	10/06/25 16:15	10/07/25 18:28	6020B	3010A

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	DISSOLVED METALS-TAL			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
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METAL CALIBRATION DATA

1
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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, EMISDG No.: Q3291Contract: TETR16Lab Code: ACEInitial Calibration Source: EPAContinuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV61	Mercury	3.79	4.0	95	90 - 110	CV	10/07/2025	10:04	LB137441

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, EMI

SDG No.: Q3291

Contract: TETR16

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV90	Mercury	4.93	5.0	99	90 - 110	CV	10/07/2025	10:09	LB137441
CCV91	Mercury	4.88	5.0	98	90 - 110	CV	10/07/2025	10:45	LB137441
CCV92	Mercury	4.57	5.0	91	90 - 110	CV	10/07/2025	11:13	LB137441
CCV93	Mercury	4.74	5.0	95	90 - 110	CV	10/07/2025	11:37	LB137441
CCV94	Mercury	4.84	5.0	97	90 - 110	CV	10/07/2025	11:53	LB137441

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, EMI

SDG No.: Q3291

Contract: TETR16

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Aluminum	1490	1600	93	90 - 110	P	10/07/2025	17:26	LB137449
	Antimony	434	400	108	90 - 110	P	10/07/2025	17:26	LB137449
	Arsenic	403	400	101	90 - 110	P	10/07/2025	17:26	LB137449
	Barium	1660	1600	104	90 - 110	P	10/07/2025	17:26	LB137449
	Beryllium	42.8	40.0	107	90 - 110	P	10/07/2025	17:26	LB137449
	Cadmium	215	200	108	90 - 110	P	10/07/2025	17:26	LB137449
	Calcium	3980	4000	99	90 - 110	P	10/07/2025	17:26	LB137449
	Chromium	161	160	100	90 - 110	P	10/07/2025	17:26	LB137449
	Cobalt	406	400	102	90 - 110	P	10/07/2025	17:26	LB137449
	Copper	187	200	93	90 - 110	P	10/07/2025	17:26	LB137449
	Iron	862	800	108	90 - 110	P	10/07/2025	17:26	LB137449
	Lead	390	400	98	90 - 110	P	10/07/2025	17:26	LB137449
	Magnesium	3600	4000	90	90 - 110	P	10/07/2025	17:26	LB137449
	Manganese	402	400	100	90 - 110	P	10/07/2025	17:26	LB137449
	Nickel	411	400	103	90 - 110	P	10/07/2025	17:26	LB137449
	Potassium	4160	4000	104	90 - 110	P	10/07/2025	17:26	LB137449
	Selenium	420	400	105	90 - 110	P	10/07/2025	17:26	LB137449
	Silver	185	200	92	90 - 110	P	10/07/2025	17:26	LB137449
	Sodium	3960	4000	99	90 - 110	P	10/07/2025	17:26	LB137449
	Thallium	390	400	97	90 - 110	P	10/07/2025	17:26	LB137449
	Vanadium	399	400	100	90 - 110	P	10/07/2025	17:26	LB137449
	Zinc	369	400	92	90 - 110	P	10/07/2025	17:26	LB137449

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, EMI

SDG No.: Q3291

Contract: TETR16

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Aluminum	19.3	20.0	97	80 - 120	P	10/07/2025	17:29	LB137449
	Antimony	2.16	2.0	108	80 - 120	P	10/07/2025	17:29	LB137449
	Arsenic	1.04	1.0	104	80 - 120	P	10/07/2025	17:29	LB137449
	Barium	9.85	10.0	98	80 - 120	P	10/07/2025	17:29	LB137449
	Beryllium	1.09	1.0	109	80 - 120	P	10/07/2025	17:29	LB137449
	Cadmium	1.00	1.0	100	80 - 120	P	10/07/2025	17:29	LB137449
	Calcium	482	500	96	80 - 120	P	10/07/2025	17:29	LB137449
	Chromium	1.96	2.0	98	80 - 120	P	10/07/2025	17:29	LB137449
	Cobalt	1.04	1.0	104	80 - 120	P	10/07/2025	17:29	LB137449
	Copper	1.79	2.0	90	80 - 120	P	10/07/2025	17:29	LB137449
	Iron	53.2	50.0	106	80 - 120	P	10/07/2025	17:29	LB137449
	Lead	0.85	1.0	85	80 - 120	P	10/07/2025	17:29	LB137449
	Magnesium	456	500	91	80 - 120	P	10/07/2025	17:29	LB137449
	Manganese	1.02	1.0	102	80 - 120	P	10/07/2025	17:29	LB137449
	Nickel	0.95	1.0	95	80 - 120	P	10/07/2025	17:29	LB137449
	Potassium	499	500	100	80 - 120	P	10/07/2025	17:29	LB137449
	Selenium	5.68	5.0	114	80 - 120	P	10/07/2025	17:29	LB137449
	Silver	1.13	1.0	113	80 - 120	P	10/07/2025	17:29	LB137449
	Sodium	489	500	98	80 - 120	P	10/07/2025	17:29	LB137449
	Thallium	0.99	1.0	99	80 - 120	P	10/07/2025	17:29	LB137449
	Vanadium	4.83	5.0	97	80 - 120	P	10/07/2025	17:29	LB137449
	Zinc	4.29	5.0	86	80 - 120	P	10/07/2025	17:29	LB137449

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, EMI

SDG No.: Q3291

Contract: TETR16

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Aluminum	47600	50000	95	90 - 110	P	10/07/2025	17:42	LB137449
	Antimony	520	500	104	90 - 110	P	10/07/2025	17:42	LB137449
	Arsenic	490	500	98	90 - 110	P	10/07/2025	17:42	LB137449
	Barium	2580	2500	103	90 - 110	P	10/07/2025	17:42	LB137449
	Beryllium	516	500	103	90 - 110	P	10/07/2025	17:42	LB137449
	Cadmium	509	500	102	90 - 110	P	10/07/2025	17:42	LB137449
	Calcium	241000	250000	96	90 - 110	P	10/07/2025	17:42	LB137449
	Chromium	501	500	100	90 - 110	P	10/07/2025	17:42	LB137449
	Cobalt	497	500	99	90 - 110	P	10/07/2025	17:42	LB137449
	Copper	4930	5000	99	90 - 110	P	10/07/2025	17:42	LB137449
	Iron	126000	125000	101	90 - 110	P	10/07/2025	17:42	LB137449
	Lead	2550	2500	102	90 - 110	P	10/07/2025	17:42	LB137449
	Magnesium	239000	250000	96	90 - 110	P	10/07/2025	17:42	LB137449
	Manganese	4960	5000	99	90 - 110	P	10/07/2025	17:42	LB137449
	Nickel	500	500	100	90 - 110	P	10/07/2025	17:42	LB137449
	Potassium	124000	125000	99	90 - 110	P	10/07/2025	17:42	LB137449
	Selenium	484	500	97	90 - 110	P	10/07/2025	17:42	LB137449
	Silver	523	500	105	90 - 110	P	10/07/2025	17:42	LB137449
	Sodium	244000	250000	98	90 - 110	P	10/07/2025	17:42	LB137449
	Thallium	512	500	102	90 - 110	P	10/07/2025	17:42	LB137449
	Vanadium	503	500	100	90 - 110	P	10/07/2025	17:42	LB137449
	Zinc	4790	5000	96	90 - 110	P	10/07/2025	17:42	LB137449
CCV02	Aluminum	48000	50000	96	90 - 110	P	10/07/2025	18:19	LB137449
	Antimony	520	500	104	90 - 110	P	10/07/2025	18:19	LB137449
	Arsenic	495	500	99	90 - 110	P	10/07/2025	18:19	LB137449
	Barium	2590	2500	104	90 - 110	P	10/07/2025	18:19	LB137449
	Beryllium	510	500	102	90 - 110	P	10/07/2025	18:19	LB137449
	Cadmium	514	500	103	90 - 110	P	10/07/2025	18:19	LB137449
	Calcium	243000	250000	97	90 - 110	P	10/07/2025	18:19	LB137449
	Chromium	498	500	100	90 - 110	P	10/07/2025	18:19	LB137449
	Cobalt	504	500	101	90 - 110	P	10/07/2025	18:19	LB137449
	Copper	4920	5000	98	90 - 110	P	10/07/2025	18:19	LB137449
	Iron	126000	125000	101	90 - 110	P	10/07/2025	18:19	LB137449
	Lead	2590	2500	104	90 - 110	P	10/07/2025	18:19	LB137449

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, EMI

Contract: TETR16

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

SDG No.: Q3291

Lab Code: ACE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV02	Magnesium	239000	250000	96	90 - 110	P	10/07/2025	18:19	LB137449
	Manganese	4950	5000	99	90 - 110	P	10/07/2025	18:19	LB137449
	Nickel	494	500	99	90 - 110	P	10/07/2025	18:19	LB137449
	Potassium	124000	125000	99	90 - 110	P	10/07/2025	18:19	LB137449
	Selenium	494	500	99	90 - 110	P	10/07/2025	18:19	LB137449
	Silver	518	500	104	90 - 110	P	10/07/2025	18:19	LB137449
	Sodium	246000	250000	98	90 - 110	P	10/07/2025	18:19	LB137449
	Thallium	523	500	105	90 - 110	P	10/07/2025	18:19	LB137449
	Vanadium	503	500	100	90 - 110	P	10/07/2025	18:19	LB137449
	Zinc	4810	5000	96	90 - 110	P	10/07/2025	18:19	LB137449
CCV03	Aluminum	48700	50000	97	90 - 110	P	10/07/2025	18:57	LB137449
	Antimony	524	500	105	90 - 110	P	10/07/2025	18:57	LB137449
	Arsenic	485	500	97	90 - 110	P	10/07/2025	18:57	LB137449
	Barium	2610	2500	104	90 - 110	P	10/07/2025	18:57	LB137449
	Beryllium	509	500	102	90 - 110	P	10/07/2025	18:57	LB137449
	Cadmium	506	500	101	90 - 110	P	10/07/2025	18:57	LB137449
	Calcium	240000	250000	96	90 - 110	P	10/07/2025	18:57	LB137449
	Chromium	504	500	101	90 - 110	P	10/07/2025	18:57	LB137449
	Cobalt	500	500	100	90 - 110	P	10/07/2025	18:57	LB137449
	Copper	5000	5000	100	90 - 110	P	10/07/2025	18:57	LB137449
	Iron	127000	125000	102	90 - 110	P	10/07/2025	18:57	LB137449
	Lead	2520	2500	101	90 - 110	P	10/07/2025	18:57	LB137449
	Magnesium	242000	250000	97	90 - 110	P	10/07/2025	18:57	LB137449
	Manganese	5000	5000	100	90 - 110	P	10/07/2025	18:57	LB137449
	Nickel	497	500	99	90 - 110	P	10/07/2025	18:57	LB137449
	Potassium	125000	125000	100	90 - 110	P	10/07/2025	18:57	LB137449
	Selenium	481	500	96	90 - 110	P	10/07/2025	18:57	LB137449
	Silver	519	500	104	90 - 110	P	10/07/2025	18:57	LB137449
	Sodium	247000	250000	99	90 - 110	P	10/07/2025	18:57	LB137449
	Thallium	512	500	102	90 - 110	P	10/07/2025	18:57	LB137449
	Vanadium	502	500	100	90 - 110	P	10/07/2025	18:57	LB137449
	Zinc	4830	5000	97	90 - 110	P	10/07/2025	18:57	LB137449

Metals

- 2b -

CRDL STANDARD FOR AA & ICP

Client: Tetra Tech, EMI

SDG No.: Q3291

Contract: TETR16

Lab Code: ACE

Initial Calibration Source:

Continuing Calibration Source:

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRA	Mercury	0.18	0.2	92	70 - 130	CV	10/07/2025	10:13	LB137441
CRI01	Aluminum	19.2	20.0	96	70 - 130	P	10/07/2025	17:48	LB137449
	Antimony	2.09	2.0	104	70 - 130	P	10/07/2025	17:48	LB137449
	Arsenic	1.22	1.0	122	70 - 130	P	10/07/2025	17:48	LB137449
	Barium	9.83	10.0	98	70 - 130	P	10/07/2025	17:48	LB137449
	Beryllium	1.08	1.0	108	70 - 130	P	10/07/2025	17:48	LB137449
	Cadmium	1.05	1.0	105	70 - 130	P	10/07/2025	17:48	LB137449
	Calcium	485	500	97	70 - 130	P	10/07/2025	17:48	LB137449
	Chromium	1.95	2.0	98	70 - 130	P	10/07/2025	17:48	LB137449
	Cobalt	1.05	1.0	105	50 - 150	P	10/07/2025	17:48	LB137449
	Copper	2.02	2.0	101	70 - 130	P	10/07/2025	17:48	LB137449
	Iron	57.4	50.0	115	70 - 130	P	10/07/2025	17:48	LB137449
	Lead	0.87	1.0	87	70 - 130	P	10/07/2025	17:48	LB137449
	Magnesium	463	500	93	70 - 130	P	10/07/2025	17:48	LB137449
	Manganese	1.05	1.0	105	50 - 150	P	10/07/2025	17:48	LB137449
	Nickel	0.93	1.0	93	70 - 130	P	10/07/2025	17:48	LB137449
	Potassium	522	500	104	70 - 130	P	10/07/2025	17:48	LB137449
	Selenium	4.94	5.0	99	70 - 130	P	10/07/2025	17:48	LB137449
	Silver	1.11	1.0	111	70 - 130	P	10/07/2025	17:48	LB137449
	Sodium	515	500	103	70 - 130	P	10/07/2025	17:48	LB137449
	Thallium	1.06	1.0	106	70 - 130	P	10/07/2025	17:48	LB137449
	Vanadium	4.84	5.0	97	70 - 130	P	10/07/2025	17:48	LB137449
	Zinc	4.36	5.0	87	50 - 150	P	10/07/2025	17:48	LB137449



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, EMI

SDG No.: Q3291

Contract: TETR16

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB61	Mercury	0.076	+/-0.2	U	0.20	CV	10/07/2025	10:06	LB137441

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, EMI **SDG No.:** Q3291
Contract: TETR16 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB90	Mercury	0.076	+/-0.2	U	0.20	CV	10/07/2025	10:11	LB137441
CCB91	Mercury	0.076	+/-0.2	U	0.20	CV	10/07/2025	10:47	LB137441
CCB92	Mercury	0.076	+/-0.2	U	0.20	CV	10/07/2025	11:16	LB137441
CCB93	Mercury	0.076	+/-0.2	U	0.20	CV	10/07/2025	11:39	LB137441
CCB94	Mercury	0.076	+/-0.2	U	0.20	CV	10/07/2025	11:57	LB137441

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, EMI

SDG No.: Q3291

Contract: TETR16

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	1.94	+/-10	U	20.0	P	10/07/2025	17:33	LB137449
	Antimony	0.11	+/-1	U	2.00	P	10/07/2025	17:33	LB137449
	Arsenic	0.089	+/-0.5	U	1.00	P	10/07/2025	17:33	LB137449
	Barium	0.21	+/-5	U	10.0	P	10/07/2025	17:33	LB137449
	Beryllium	0.32	+/-0.5	U	1.00	P	10/07/2025	17:33	LB137449
	Cadmium	0.34	+/-0.5	U	1.00	P	10/07/2025	17:33	LB137449
	Calcium	45.7	+/-250	U	500	P	10/07/2025	17:33	LB137449
	Chromium	0.21	+/-1	U	2.00	P	10/07/2025	17:33	LB137449
	Cobalt	0.070	+/-0.5	U	1.00	P	10/07/2025	17:33	LB137449
	Copper	0.30	+/-1	U	2.00	P	10/07/2025	17:33	LB137449
	Iron	7.81	+/-25	U	50.0	P	10/07/2025	17:33	LB137449
	Lead	0.21	+/-0.5	U	1.00	P	10/07/2025	17:33	LB137449
	Magnesium	19.5	+/-250	U	500	P	10/07/2025	17:33	LB137449
	Manganese	0.43	+/-0.5	U	1.00	P	10/07/2025	17:33	LB137449
	Nickel	0.27	+/-0.5	U	1.00	P	10/07/2025	17:33	LB137449
	Potassium	36.4	+/-250	U	500	P	10/07/2025	17:33	LB137449
	Selenium	2.90	+/-2.5	U	5.00	P	10/07/2025	17:33	LB137449
	Silver	0.060	+/-0.5	U	1.00	P	10/07/2025	17:33	LB137449
	Sodium	128	+/-250	U	500	P	10/07/2025	17:33	LB137449
	Thallium	0.060	+/-0.5	U	1.00	P	10/07/2025	17:33	LB137449
	Vanadium	0.077	+/-2.5	U	5.00	P	10/07/2025	17:33	LB137449
	Zinc	1.25	+/-2.5	U	5.00	P	10/07/2025	17:33	LB137449

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, EMI

SDG No.: Q3291

Contract: TETR16

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	1.94	+/-10	U	20.0	P	10/07/2025	17:45	LB137449
	Antimony	0.17	+/-1	J	2.00	P	10/07/2025	17:45	LB137449
	Arsenic	0.089	+/-0.5	U	1.00	P	10/07/2025	17:45	LB137449
	Barium	0.21	+/-5	U	10.0	P	10/07/2025	17:45	LB137449
	Beryllium	0.32	+/-0.5	U	1.00	P	10/07/2025	17:45	LB137449
	Cadmium	0.34	+/-0.5	U	1.00	P	10/07/2025	17:45	LB137449
	Calcium	45.7	+/-250	U	500	P	10/07/2025	17:45	LB137449
	Chromium	0.21	+/-1	U	2.00	P	10/07/2025	17:45	LB137449
	Cobalt	0.070	+/-0.5	U	1.00	P	10/07/2025	17:45	LB137449
	Copper	0.30	+/-1	U	2.00	P	10/07/2025	17:45	LB137449
	Iron	7.81	+/-25	U	50.0	P	10/07/2025	17:45	LB137449
	Lead	0.21	+/-0.5	U	1.00	P	10/07/2025	17:45	LB137449
	Magnesium	19.5	+/-250	U	500	P	10/07/2025	17:45	LB137449
	Manganese	0.43	+/-0.5	U	1.00	P	10/07/2025	17:45	LB137449
	Nickel	0.27	+/-0.5	U	1.00	P	10/07/2025	17:45	LB137449
	Potassium	36.4	+/-250	U	500	P	10/07/2025	17:45	LB137449
	Selenium	2.90	+/-2.5	U	5.00	P	10/07/2025	17:45	LB137449
	Silver	0.060	+/-0.5	J	1.00	P	10/07/2025	17:45	LB137449
	Sodium	128	+/-250	U	500	P	10/07/2025	17:45	LB137449
	Thallium	0.11	+/-0.5	J	1.00	P	10/07/2025	17:45	LB137449
	Vanadium	0.077	+/-2.5	U	5.00	P	10/07/2025	17:45	LB137449
	Zinc	1.25	+/-2.5	U	5.00	P	10/07/2025	17:45	LB137449
CCB02	Aluminum	1.94	+/-10	U	20.0	P	10/07/2025	18:22	LB137449
	Antimony	0.17	+/-1	J	2.00	P	10/07/2025	18:22	LB137449
	Arsenic	0.089	+/-0.5	U	1.00	P	10/07/2025	18:22	LB137449
	Barium	0.21	+/-5	U	10.0	P	10/07/2025	18:22	LB137449
	Beryllium	0.32	+/-0.5	U	1.00	P	10/07/2025	18:22	LB137449
	Cadmium	0.34	+/-0.5	U	1.00	P	10/07/2025	18:22	LB137449
	Calcium	45.7	+/-250	U	500	P	10/07/2025	18:22	LB137449
	Chromium	0.21	+/-1	U	2.00	P	10/07/2025	18:22	LB137449
	Cobalt	0.070	+/-0.5	U	1.00	P	10/07/2025	18:22	LB137449
	Copper	0.31	+/-1	J	2.00	P	10/07/2025	18:22	LB137449
	Iron	7.81	+/-25	U	50.0	P	10/07/2025	18:22	LB137449
	Lead	0.21	+/-0.5	U	1.00	P	10/07/2025	18:22	LB137449
	Magnesium	19.5	+/-250	U	500	P	10/07/2025	18:22	LB137449
	Manganese	0.43	+/-0.5	U	1.00	P	10/07/2025	18:22	LB137449
	Nickel	0.27	+/-0.5	U	1.00	P	10/07/2025	18:22	LB137449
	Potassium	36.4	+/-250	U	500	P	10/07/2025	18:22	LB137449
	Selenium	2.90	+/-2.5	U	5.00	P	10/07/2025	18:22	LB137449

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, EMI

SDG No.: Q3291

Contract: TETR16

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	0.17	+/-0.5	J	1.00	P	10/07/2025	18:22	LB137449
	Sodium	146	+/-250	J	500	P	10/07/2025	18:22	LB137449
	Thallium	0.090	+/-0.5	J	1.00	P	10/07/2025	18:22	LB137449
	Vanadium	0.077	+/-2.5	U	5.00	P	10/07/2025	18:22	LB137449
	Zinc	1.25	+/-2.5	U	5.00	P	10/07/2025	18:22	LB137449
CCB03	Aluminum	1.94	+/-10	U	20.0	P	10/07/2025	19:09	LB137449
	Antimony	0.11	+/-1	U	2.00	P	10/07/2025	19:09	LB137449
	Arsenic	0.089	+/-0.5	U	1.00	P	10/07/2025	19:09	LB137449
	Barium	0.21	+/-5	U	10.0	P	10/07/2025	19:09	LB137449
	Beryllium	0.32	+/-0.5	U	1.00	P	10/07/2025	19:09	LB137449
	Cadmium	0.34	+/-0.5	U	1.00	P	10/07/2025	19:09	LB137449
	Calcium	45.7	+/-250	U	500	P	10/07/2025	19:09	LB137449
	Chromium	0.21	+/-1	U	2.00	P	10/07/2025	19:09	LB137449
	Cobalt	0.070	+/-0.5	U	1.00	P	10/07/2025	19:09	LB137449
	Copper	0.30	+/-1	U	2.00	P	10/07/2025	19:09	LB137449
	Iron	7.81	+/-25	U	50.0	P	10/07/2025	19:09	LB137449
	Lead	0.21	+/-0.5	U	1.00	P	10/07/2025	19:09	LB137449
	Magnesium	19.5	+/-250	U	500	P	10/07/2025	19:09	LB137449
	Manganese	0.43	+/-0.5	U	1.00	P	10/07/2025	19:09	LB137449
	Nickel	0.27	+/-0.5	U	1.00	P	10/07/2025	19:09	LB137449
	Potassium	36.4	+/-250	U	500	P	10/07/2025	19:09	LB137449
	Selenium	2.90	+/-2.5	U	5.00	P	10/07/2025	19:09	LB137449
	Silver	0.060	+/-0.5	U	1.00	P	10/07/2025	19:09	LB137449
	Sodium	128	+/-250	U	500	P	10/07/2025	19:09	LB137449
	Thallium	0.060	+/-0.5	U	1.00	P	10/07/2025	19:09	LB137449
	Vanadium	0.077	+/-2.5	U	5.00	P	10/07/2025	19:09	LB137449
	Zinc	1.25	+/-2.5	U	5.00	P	10/07/2025	19:09	LB137449

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Tetra Tech, EMI

SDG No.: Q3291

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB170005BL		WATER		Batch Number:	PB170005		Prep Date:	10/06/2025	
	Mercury	0.076	<0.2	U	0.20	CV	10/07/2025	11:09	LB137441

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Tetra Tech, EMI

SDG No.: Q3291

Instrument: P7

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB170000BL	WATER			Batch Number:	PB170000		Prep Date:	10/06/2025	
	Aluminum	1.94	<10	U	20.0	P	10/07/2025	17:51	LB137449
	Antimony	0.11	<1	U	2.00	P	10/07/2025	17:51	LB137449
	Arsenic	0.089	<0.5	U	1.00	P	10/07/2025	17:51	LB137449
	Barium	0.21	<5	U	10.0	P	10/07/2025	17:51	LB137449
	Beryllium	0.32	<0.5	U	1.00	P	10/07/2025	17:51	LB137449
	Cadmium	0.34	<0.5	U	1.00	P	10/07/2025	17:51	LB137449
	Calcium	45.7	<250	U	500	P	10/07/2025	17:51	LB137449
	Chromium	0.21	<1	U	2.00	P	10/07/2025	17:51	LB137449
	Cobalt	0.070	<0.5	U	1.00	P	10/07/2025	17:51	LB137449
	Copper	0.30	<1	U	2.00	P	10/07/2025	17:51	LB137449
	Iron	7.81	<25	U	50.0	P	10/07/2025	17:51	LB137449
	Lead	0.21	<0.5	U	1.00	P	10/07/2025	17:51	LB137449
	Magnesium	19.5	<250	U	500	P	10/07/2025	17:51	LB137449
	Manganese	0.43	<0.5	U	1.00	P	10/07/2025	17:51	LB137449
	Nickel	0.27	<0.5	U	1.00	P	10/07/2025	17:51	LB137449
	Potassium	36.4	<250	U	500	P	10/07/2025	17:51	LB137449
	Selenium	2.90	<2.5	U	5.00	P	10/07/2025	17:51	LB137449
	Silver	0.060	<0.5	U	1.00	P	10/07/2025	17:51	LB137449
	Sodium	128	<250	U	500	P	10/07/2025	17:51	LB137449
	Thallium	0.060	<0.5	U	1.00	P	10/07/2025	17:51	LB137449
	Vanadium	0.077	<2.5	U	5.00	P	10/07/2025	17:51	LB137449
	Zinc	1.25	<2.5	U	5.00	P	10/07/2025	17:51	LB137449

Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: <u>Tetra Tech, EMI</u>	SDG No.: <u>Q3291</u>
Contract: <u>TETR16</u>	Lab Code: <u>ACE</u>
ICS Source: <u>EPA</u>	Instrument ID: <u>P7</u>

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Aluminum	86800	100000	87	0	0	10/07/2025	17:36	LB137449
	Antimony	1.13	1.5	75	-2.5	5.5	10/07/2025	17:36	LB137449
	Arsenic	0.33	0.1	330	-1.9	2.1	10/07/2025	17:36	LB137449
	Barium	1.39	1.2	116	-18.8	21.2	10/07/2025	17:36	LB137449
	Beryllium	0.30			-2	2	10/07/2025	17:36	LB137449
	Cadmium	0.36	0.7	51	-1.3	2.7	10/07/2025	17:36	LB137449
	Calcium	94300	100000	94	0	0	10/07/2025	17:36	LB137449
	Chromium	19.5	21.0	93	17	25	10/07/2025	17:36	LB137449
	Cobalt	1.29	1.0	129	-1	3	10/07/2025	17:36	LB137449
	Copper	7.12	8.0	89	4	12	10/07/2025	17:36	LB137449
	Iron	96400	100000	96	0	0	10/07/2025	17:36	LB137449
	Lead	4.28	4.0	107	2	6	10/07/2025	17:36	LB137449
	Magnesium	88100	100000	88	0	0	10/07/2025	17:36	LB137449
	Manganese	7.36	7.0	105	5	9	10/07/2025	17:36	LB137449
	Nickel	5.58	6.0	93	4	8	10/07/2025	17:36	LB137449
	Potassium	95700	100000	96	0	0	10/07/2025	17:36	LB137449
	Selenium	0.59	0.3	197	-9.7	10	10/07/2025	17:36	LB137449
	Silver	0.050			-2	2	10/07/2025	17:36	LB137449
	Sodium	95800	100000	96	0	0	10/07/2025	17:36	LB137449
	Thallium	0.060			-2	2	10/07/2025	17:36	LB137449
	Vanadium	0.20	0.5	40	-9.5	10.5	10/07/2025	17:36	LB137449
	Zinc	9.96	11.0	90	1	21	10/07/2025	17:36	LB137449
ICSAB01	Aluminum	87700	100000	88	0	0	10/07/2025	17:39	LB137449
	Antimony	21.7	22.0	99	18	26	10/07/2025	17:39	LB137449
	Arsenic	20.0	19.0	105	16.2	21.9	10/07/2025	17:39	LB137449
	Barium	22.1	22.0	100	2	42	10/07/2025	17:39	LB137449
	Beryllium	21.7	19.0	114	16.2	21.9	10/07/2025	17:39	LB137449
	Cadmium	21.1	20.0	106	17	23	10/07/2025	17:39	LB137449
	Calcium	94400	100000	94	0	0	10/07/2025	17:39	LB137449
	Chromium	40.2	40.0	100	34	46	10/07/2025	17:39	LB137449
	Cobalt	21.5	20.0	108	17	23	10/07/2025	17:39	LB137449
	Copper	26.3	25.0	105	21	29	10/07/2025	17:39	LB137449
	Iron	96400	100000	96	0	0	10/07/2025	17:39	LB137449
	Lead	26.3	25.0	105	21.3	28.8	10/07/2025	17:39	LB137449
	Magnesium	88600	100000	89	0	0	10/07/2025	17:39	LB137449
	Manganese	25.7	27.0	95	23	31.1	10/07/2025	17:39	LB137449
	Nickel	25.8	24.0	108	20.4	27.6	10/07/2025	17:39	LB137449
	Potassium	96500	100000	96	0	0	10/07/2025	17:39	LB137449
	Selenium	19.8	19.0	104	9	29	10/07/2025	17:39	LB137449
	Silver	20.5	18.0	114	15.3	20.7	10/07/2025	17:39	LB137449
	Sodium	95900	100000	96	0	0	10/07/2025	17:39	LB137449
	Thallium	20.1	21.0	96	17.9	24.2	10/07/2025	17:39	LB137449

Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Tetra Tech, EMI **SDG No.:** Q3291
Contract: TETR16 **Lab Code:** ACE
ICS Source: EPA **Instrument ID:** P7

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSAB01	Vanadium	20.0	19.0	105	9	29	10/07/2025	17:39	LB137449
	Zinc	28.2	29.0	97	19	39	10/07/2025	17:39	LB137449



METAL QC DATA

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metals
- 5a -
MATRIX SPIKE SUMMARY

client: <u>Tetra Tech, EMI</u>	level: <u>low</u>	sdg no.: <u>Q3291</u>
contract: <u>TETR16</u>		lab code: <u>ACE</u>
matrix: <u>Water</u>	sample id: <u>Q3291-05</u>	client id: <u>MC0AX0MS</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q3291-05MS</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75 - 125	3.84		0.20	U	4.0	96		CV

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: <u>Tetra Tech, EMI</u>	level: <u>low</u>	sdg no.: <u>Q3291</u>
contract: <u>TETR16</u>		lab code: <u>ACE</u>
matrix: <u>Water</u>	sample id: <u>Q3291-05</u>	client id: <u>MC0AX0MSD</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q3291-05MSD</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75 - 125	3.29		0.20	U	4.0	82		CV

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Tetra Tech, EMI **level:** low **sdg no.:** Q3291
contract: TETR16 **lab code:** ACE
matrix: Water **sample id:** Q3291-07 **client id:** MC0AX2MS
Percent Solids for Sample: NA **Spiked ID:** Q3291-07MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75 - 125	8240		21.0		10000	82		P
Antimony	ug/L	75 - 125	493		3.45		500	98		P
Arsenic	ug/L	75 - 125	550	D	43.0	D	500	101		P
Barium	ug/L	75 - 125	2220		13.9		2500	88		P
Beryllium	ug/L	75 - 125	488		1.00	U	500	98		P
Cadmium	ug/L	75 - 125	483		1.00	U	500	97		P
Calcium	ug/L	75 - 125	128000		87500		50000	82		P
Chromium	ug/L	75 - 125	447		0.83	J	500	89		P
Cobalt	ug/L	75 - 125	466		0.51	J	500	93		P
Copper	ug/L	75 - 125	4350		2.49		5000	87		P
Iron	ug/L	75 - 125	22500		849		25000	86		P
Lead	ug/L	75 - 125	2450		0.43	J	2500	98		P
Magnesium	ug/L	75 - 125	64700		17400		50000	95		P
Manganese	ug/L	75 - 125	4590		270		5000	86		P
Nickel	ug/L	75 - 125	462		2.03		500	92		P
Potassium	ug/L	75 - 125	35400		15300		25000	80		P
Selenium	ug/L	75 - 125	488	D	25.0	UD	500	97		P
Silver	ug/L	75 - 125	78.9		1.00	U	500	16	N	P
Sodium	ug/L	75 - 125	347000		324000		50000	45		P
Thallium	ug/L	75 - 125	476		0.16	J	500	95		P
Vanadium	ug/L	75 - 125	475		2.49	J	500	94		P
Zinc	ug/L	75 - 125	4360		5.06		5000	87		P

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: <u>Tetra Tech, EMI</u>	level: <u>low</u>	sdg no.: <u>Q3291</u>
contract: <u>TETR16</u>		lab code: <u>ACE</u>
matrix: <u>Water</u>	sample id: <u>Q3291-07</u>	client id: <u>MC0AX2MSD</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q3291-07MSD</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75 - 125	8080		21.0		10000	81		P
Antimony	ug/L	75 - 125	496		3.45		500	98		P
Arsenic	ug/L	75 - 125	531	D	43.0	D	500	98		P
Barium	ug/L	75 - 125	2200		13.9		2500	87		P
Beryllium	ug/L	75 - 125	482		1.00	U	500	96		P
Cadmium	ug/L	75 - 125	482		1.00	U	500	96		P
Calcium	ug/L	75 - 125	127000		87500		50000	80		P
Chromium	ug/L	75 - 125	447		0.83	J	500	89		P
Cobalt	ug/L	75 - 125	463		0.51	J	500	93		P
Copper	ug/L	75 - 125	4330		2.49		5000	87		P
Iron	ug/L	75 - 125	22100		849		25000	85		P
Lead	ug/L	75 - 125	2410		0.43	J	2500	96		P
Magnesium	ug/L	75 - 125	63700		17400		50000	93		P
Manganese	ug/L	75 - 125	4520		270		5000	85		P
Nickel	ug/L	75 - 125	461		2.03		500	92		P
Potassium	ug/L	75 - 125	35000		15300		25000	79		P
Selenium	ug/L	75 - 125	487	D	25.0	UD	500	97		P
Silver	ug/L	75 - 125	78.9		1.00	U	500	16	N	P
Sodium	ug/L	75 - 125	346000		324000		50000	43		P
Thallium	ug/L	75 - 125	480		0.16	J	500	96		P
Vanadium	ug/L	75 - 125	473		2.49	J	500	94		P
Zinc	ug/L	75 - 125	4230		5.06		5000	85		P

Metals
- 5b -
POST DIGEST SPIKE SUMMARY

Client:	<u>Tetra Tech, EMI</u>	SDG No.:	<u>Q3291</u>
Contract:	<u>TETR16</u>	Lab Code:	<u>ACE</u>
Matrix:	<u>Water</u>	Level:	<u>LOW</u>
Sample ID:	<u>Q3291-07</u>	Client ID:	<u>MC0AX2A</u>
	Spiked ID:	<u>Q3291-07A</u>	

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Silver	ug/L	75 - 125	77.9		1.00	U	500	16	N	P

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client:	<u>Tetra Tech, EMI</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q3291</u>
Contract:	<u>TETR16</u>			Lab Code:	<u>ACE</u>
Matrix:	<u>Water</u>	Sample ID:	<u>Q3291-05</u>	Client ID:	<u>MC0AX0DUP</u>
Percent Solids for Sample:	NA	Duplicate ID	Q3291-05DUP	Percent Solids for Spike Sample:	NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L	20	0.20	U	0.20	U			CV

“A control limit of $\pm 20\%$ RPD for each matrix applies for sample values greater than 10 times Detection Limit”

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client:	<u>Tetra Tech, EMI</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q3291</u>
Contract:	<u>TETR16</u>			Lab Code:	<u>ACE</u>
Matrix:	<u>Water</u>	Sample ID:	<u>Q3291-05MS</u>	Client ID:	<u>MC0AX0MSD</u>
Percent Solids for Sample:	NA	Duplicate ID	Q3291-05MSD	Percent Solids for Spike Sample:	NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L	20	3.84		3.29		15		CV

“A control limit of $\pm 20\%$ RPD for each matrix applies for sample values greater than 10 times Detection Limit”

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech, EMI **Level:** LOW **SDG No.:** Q3291
Contract: TETR16 **Lab Code:** ACE
Matrix: Water **Sample ID:** Q3291-07 **Client ID:** MC0AX2DUP
Percent Solids for Sample: NA **Duplicate ID** Q3291-07DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L	20	21.0		20.8		1		P
Antimony	ug/L	20	3.45		3.53		2		P
Arsenic	ug/L	20	43.0	D	43.8	D	2		P
Barium	ug/L	20	13.9		14.1		1		P
Beryllium	ug/L	20	1.00	U	1.00	U			P
Cadmium	ug/L	20	1.00	U	1.00	U			P
Calcium	ug/L	20	87500		90000		3		P
Chromium	ug/L	20	0.83	J	0.78	J	6		P
Cobalt	ug/L	20	0.51	J	0.51	J	0		P
Copper	ug/L	20	2.49		2.65		6		P
Iron	ug/L	20	849		863		2		P
Lead	ug/L	20	0.43	J	0.34	J	23		P
Magnesium	ug/L	20	17400		17700		2		P
Manganese	ug/L	20	270		274		1		P
Nickel	ug/L	20	2.03		1.91		6		P
Potassium	ug/L	20	15300		15300		0		P
Selenium	ug/L	20	25.0	UD	25.0	UD			P
Silver	ug/L	20	1.00	U	1.00	U			P
Sodium	ug/L	20	324000		328000		1		P
Thallium	ug/L	20	0.16	J	0.15	J	6		P
Vanadium	ug/L	20	2.49	J	2.54	J	2		P
Zinc	ug/L	20	5.06		5.34		5		P

“A control limit of $\pm 20\%$ RPD for each matrix applies for sample values greater than 10 times Detection Limit”

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech, EMI **Level:** LOW **SDG No.:** Q3291
Contract: TETR16 **Lab Code:** ACE
Matrix: Water **Sample ID:** Q3291-07MS **Client ID:** MC0AX2MSD
Percent Solids for Sample: NA **Duplicate ID** Q3291-07MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L	20	8240		8080		2		P
Antimony	ug/L	20	493		496		1		P
Arsenic	ug/L	20	550	D	531	D	4		P
Barium	ug/L	20	2220		2200		1		P
Beryllium	ug/L	20	488		482		1		P
Cadmium	ug/L	20	483		482		0		P
Calcium	ug/L	20	128000		127000		1		P
Chromium	ug/L	20	447		447		0		P
Cobalt	ug/L	20	466		463		1		P
Copper	ug/L	20	4350		4330		0		P
Iron	ug/L	20	22500		22100		2		P
Lead	ug/L	20	2450		2410		2		P
Magnesium	ug/L	20	64700		63700		2		P
Manganese	ug/L	20	4590		4520		2		P
Nickel	ug/L	20	462		461		0		P
Potassium	ug/L	20	35400		35000		1		P
Selenium	ug/L	20	488	D	487	D	0		P
Silver	ug/L	20	78.9		78.9		0		P
Sodium	ug/L	20	347000		346000		0		P
Thallium	ug/L	20	476		480		1		P
Vanadium	ug/L	20	475		473		0		P
Zinc	ug/L	20	4360		4230		3		P

“A control limit of $\pm 20\%$ RPD for each matrix applies for sample values greater than 10 times Detection Limit”

Metals

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client:	<u>Tetra Tech, EMI</u>	SDG No.:	<u>Q3291</u>
Contract:	<u>TETR16</u>	Lab Code:	<u>ACE</u>

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB170000BS							
Aluminum	ug/L	10000	10000		100	80 - 120	P
Antimony	ug/L	500	532		106	80 - 120	P
Arsenic	ug/L	500	503		101	80 - 120	P
Barium	ug/L	2500	2600		104	80 - 120	P
Beryllium	ug/L	500	513		103	80 - 120	P
Cadmium	ug/L	500	531		106	80 - 120	P
Calcium	ug/L	50000	48800		98	80 - 120	P
Chromium	ug/L	500	506		101	80 - 120	P
Cobalt	ug/L	500	511		102	80 - 120	P
Copper	ug/L	5000	5110		102	80 - 120	P
Iron	ug/L	25000	27000		108	80 - 120	P
Lead	ug/L	2500	2540		102	80 - 120	P
Magnesium	ug/L	50000	49000		98	80 - 120	P
Manganese	ug/L	5000	5100		102	80 - 120	P
Nickel	ug/L	500	511		102	80 - 120	P
Potassium	ug/L	25000	25400		102	80 - 120	P
Selenium	ug/L	500	518		104	80 - 120	P
Silver	ug/L	500	538		108	80 - 120	P
Sodium	ug/L	50000	50600		101	80 - 120	P
Thallium	ug/L	500	507		101	80 - 120	P
Vanadium	ug/L	500	502		100	80 - 120	P
Zinc	ug/L	5000	5100		102	80 - 120	P

Metals

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: Tetra Tech, EMI

SDG No.: Q3291

Contract: TETR16

Lab Code: ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB170005BS Mercury	ug/L	4.0	3.79		95	80 - 120	CV

FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Tetra Tech, EMI

Contract: TETR16

Lab Code: ACE

SDG No.: Q3291

Instrument ID: P7

Start Date : 10/07/2025

Run Number: LB137449

End Date : 10/07/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Non-Collision Cell									
			Element 6Li	Q	Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q
S0	S0	1642	100		100		100		100		100	
S2	S2	1646	106		106		105		105		103	
S3	S3	1649	102		102		101		102		101	
S4	S4	1652	103		102		104		102		102	
S5	S5	1655	102		99		100		97		99	
S6	S6	1658	99		97		98		97		99	
S7	S7	1701	100		99		101		98		103	
S8	S8	1704	112		117		117		109		119	
ICV01	ICV01	1726	94		108		109		106		104	
LLICV01	LLICV01	1729	94		107		106		106		102	
ICB01	ICB01	1733	93		106		105		105		101	
ICSA01	ICSA01	1736	92		105		107		102		105	
ICSAB01	ICSAB01	1739	91		108		111		107		106	
CCV01	CCV01	1742	92		108		111		104		106	
CCB01	CCB01	1745	90		107		108		107		105	
CRI01	CRI01	1748	91		108		109		107		103	
PB170000BL	PB170000BL	1751	90		107		108		107		103	
PB170000BS	PB170000BS	1755	93		107		109		106		104	
Q3291-05	MC0AX0	1757	105		124		127		121		121	
Q3291-06	MC0AX1	1801	107		128		130		124		124	
Q3291-07	MC0AX2	1804	107		127		130		124		123	
Q3291-07DUP	MC0AX2DUP	1807	107		127		131	*	124		123	
Q3291-07L	MC0AX2L	1810	91		107		111		111		110	
Q3291-07MS	MC0AX2MS	1814	102		121		125		117		117	
Q3291-07MSD	MC0AX2MSD	1816	104		123		126		120		120	
CCV02	CCV02	1819	92		108		110		103		106	
CCB02	CCB02	1822	92		106		109		107		103	
Q3291-07A	MC0AX2A	1825	105		122		125		118		120	
Q3291-08	MC0AX3	1828	108		128		131	*	125		125	
Q3291-06	MC0AX1	1831	94		109		113		114		112	
Q3291-07	MC0AX2	1835	94		109		111		111		110	
Q3291-07DUP	MC0AX2DUP	1838	95		109		111		110		108	
Q3291-07L	MC0AX2L	1841	93		106		109		109		105	
Q3291-07MS	MC0AX2MS	1844	96		109		112		109		108	
Q3291-07MSD	MC0AX2MSD	1848	96		110		113		109		109	
Q3291-07A	MC0AX2A	1851	95		109		112		110		107	

Internal Standard %RI Limit: 70 - 130

FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Tetra Tech, EMI
Lab Code: ACE
Instrument ID: P7
Run Number: LB137449

Contract: TETR16
SDG No.: Q3291
Start Date : 10/07/2025
End Date : 10/07/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Non-Collision Cell									
			Element 6Li	Q	Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q
Q3291-08	MC0AX3	1854	97		112		116		112		109	
CCV03	CCV03	1857	93		106		109		102		104	
CCB03	CCB03	1909	89		105		107		106		101	

FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Tetra Tech, EMI

Contract: TETR16

Lab Code: ACE

SDG No.: Q3291

Instrument ID: P7

Start Date : 10/07/2025

Run Number: LB137449

End Date : 10/07/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Collision Cell									
			Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q	Element 165Ho	Q
S0	S0	1642	100		100		100		100		100	
S2	S2	1646	100		103		100		102		101	
S3	S3	1649	102		102		101		102		102	
S4	S4	1652	100		100		99		101		98	
S5	S5	1655	99		101		100		100		102	
S6	S6	1658	98		100		97		100		100	
S7	S7	1701	99		101		98		103		103	
S8	S8	1704	118		122		111		118		118	
ICV01	ICV01	1726	107		111		108		108		108	
LLICV01	LLICV01	1729	105		109		108		105		105	
ICB01	ICB01	1733	105		109		106		104		106	
ICSA01	ICSA01	1736	104		108		104		106		104	
ICSAB01	ICSAB01	1739	106		110		105		107		107	
CCV01	CCV01	1742	107		110		104		107		106	
CCB01	CCB01	1745	104		110		108		104		103	
CRI01	CRI01	1748	104		108		107		105		104	
PB170000BL	PB170000BL	1751	104		109		107		105		103	
PB170000BS	PB170000BS	1755	105		108		105		106		106	
Q3291-05	MC0AX0	1757	123		129		124		124		123	
Q3291-06	MC0AX1	1801	123		130		124		124		124	
Q3291-07	MC0AX2	1804	125		131	*	124		124		123	
Q3291-07DUP	MC0AX2DUP	1807	124		130		124		125		125	
Q3291-07L	MC0AX2L	1810	108		114		110		110		109	
Q3291-07MS	MC0AX2MS	1814	120		124		119		120		119	
Q3291-07MSD	MC0AX2MSD	1816	122		125		119		121		119	
CCV02	CCV02	1819	107		110		105		109		108	
CCB02	CCB02	1822	105		109		109		107		106	
Q3291-07A	MC0AX2A	1825	121		126		119		121		122	
Q3291-08	MC0AX3	1828	127		132	*	127		128		126	
Q3291-06	MC0AX1	1831	110		115		113		110		109	
Q3291-07	MC0AX2	1835	110		114		114		112		112	
Q3291-07DUP	MC0AX2DUP	1838	110		114		114		111		110	
Q3291-07L	MC0AX2L	1841	107		113		112		109		107	
Q3291-07MS	MC0AX2MS	1844	109		115		112		111		110	
Q3291-07MSD	MC0AX2MSD	1848	109		116		113		111		111	
Q3291-07A	MC0AX2A	1851	110		115		113		112		111	

Internal Standard %RI Limit: 70 - 130

FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Tetra Tech, EMI
Lab Code: ACE
Instrument ID: P7
Run Number: LB137449

Contract: TETR16
SDG No.: Q3291
Start Date : 10/07/2025
End Date : 10/07/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Collision Cell									
			Element 45Sc	Q	Element 89Y	Q	Element 103Rh	Q	Element 159Tb	Q	Element 165Ho	Q
Q3291-08	MC0AX3	1854	113		118		116		114		113	
CCV03	CCV03	1857	106		111		105		106		106	
CCB03	CCB03	1909	103		108		107		105		104	

FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Tetra Tech, EMI
Lab Code: ACE
Instrument ID: P7
Run Number: LB137449

Contract: TETR16
SDG No.: Q3291
Start Date : 10/07/2025
End Date : 10/07/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Non-Collision Cell									
			Element 165Ho	Q	Element 209Bi	Q	Element	Q	Element	Q	Element	Q
S0	S0	1642	100		100							
S2	S2	1646	106		106							
S3	S3	1649	102		102							
S4	S4	1652	105		103							
S5	S5	1655	100		100							
S6	S6	1658	101		100							
S7	S7	1701	105		103							
S8	S8	1704	120		109							
ICV01	ICV01	1726	105		103							
LLICV01	LLICV01	1729	104		103							
ICB01	ICB01	1733	103		102							
ICSA01	ICSA01	1736	106		101							
ICSAB01	ICSAB01	1739	108		101							
CCV01	CCV01	1742	108		101							
CCB01	CCB01	1745	104		102							
CRI01	CRI01	1748	105		101							
PB170000BL	PB170000BL	1751	102		101							
PB170000BS	PB170000BS	1755	107		103							
Q3291-05	MC0AX0	1757	123		115							
Q3291-06	MC0AX1	1801	124		117							
Q3291-07	MC0AX2	1804	126		117							
Q3291-07DUP	MC0AX2DUP	1807	125		118							
Q3291-07L	MC0AX2L	1810	105		103							
Q3291-07MS	MC0AX2MS	1814	121		112							
Q3291-07MSD	MC0AX2MSD	1816	122		114							
CCV02	CCV02	1819	108		100							
CCB02	CCB02	1822	104		104							
Q3291-07A	MC0AX2A	1825	120		114							
Q3291-08	MC0AX3	1828	127		119							
Q3291-06	MC0AX1	1831	110		105							
Q3291-07	MC0AX2	1835	108		102							
Q3291-07DUP	MC0AX2DUP	1838	109		105							
Q3291-07L	MC0AX2L	1841	107		104							
Q3291-07MS	MC0AX2MS	1844	107		105							

Internal Standard %RI Limit: 70 -130

FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Tetra Tech, EMI
Lab Code: ACE
Instrument ID: P7
Run Number: LB137449

Contract: TETR16
SDG No.: Q3291
Start Date : 10/07/2025
End Date : 10/07/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Non-Collision Cell									
			Element 165Ho	Q	Element 209Bi	Q	Element	Q	Element	Q	Element	Q
Q3291-07MSD	MC0AX2MSD	1848	109		106							
Q3291-07A	MC0AX2A	1851	109		105							
Q3291-08	MC0AX3	1854	111		108							
CCV03	CCV03	1857	106		100							
CCB03	CCB03	1909	102		100							

FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Tetra Tech, EMI
Lab Code: ACE
Instrument ID: P7
Run Number: LB137449

Contract: TETR16
SDG No.: Q3291
Start Date : 10/07/2025
End Date : 10/07/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Collision Cell									
			Element 209Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	S0	1642	100									
S2	S2	1646	100									
S3	S3	1649	102									
S4	S4	1652	98									
S5	S5	1655	100									
S6	S6	1658	98									
S7	S7	1701	101									
S8	S8	1704	109									
ICV01	ICV01	1726	106									
LLICV01	LLICV01	1729	104									
ICB01	ICB01	1733	103									
ICSA01	ICSA01	1736	101									
ICSAB01	ICSAB01	1739	101									
CCV01	CCV01	1742	99									
CCB01	CCB01	1745	103									
CRI01	CRI01	1748	101									
PB170000BL	PB170000BL	1751	102									
PB170000BS	PB170000BS	1755	102									
Q3291-05	MC0AX0	1757	117									
Q3291-06	MC0AX1	1801	116									
Q3291-07	MC0AX2	1804	118									
Q3291-07DUP	MC0AX2DUP	1807	117									
Q3291-07L	MC0AX2L	1810	107									
Q3291-07MS	MC0AX2MS	1814	115									
Q3291-07MSD	MC0AX2MSD	1816	114									
CCV02	CCV02	1819	100									
CCB02	CCB02	1822	105									
Q3291-07A	MC0AX2A	1825	115									
Q3291-08	MC0AX3	1828	120									
Q3291-06	MC0AX1	1831	106									
Q3291-07	MC0AX2	1835	109									
Q3291-07DUP	MC0AX2DUP	1838	107									
Q3291-07L	MC0AX2L	1841	107									
Q3291-07MS	MC0AX2MS	1844	108									

Internal Standard %RI Limit: 70 -130

FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Tetra Tech, EMI
Lab Code: ACE
Instrument ID: P7
Run Number: LB137449

Contract: TETR16
SDG No.: Q3291
Start Date : 10/07/2025
End Date : 10/07/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Collision Cell									
			Element 209Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
Q3291-07MSD	MC0AX2MSD	1848	108									
Q3291-07A	MC0AX2A	1851	108									
Q3291-08	MC0AX3	1854	110									
CCV03	CCV03	1857	101									
CCB03	CCB03	1909	103									

Metals
-9 -
ICP SERIAL DILUTIONS

SAMPLE NO.

MC0AX0L

Lab Name: Alliance **Contract:** TETR16
Lab Code: ACE **Lb No.:** lb137441 **Lab Sample ID :** Q3291-05L **SDG No.:** Q3291
Matrix (soil/water): Water **Level (low/med):** LOW
Concentration Units: ug/L

Analyte	Initial Sample Result (I) C	Serial Dilution Result (S) C	% Differ- ence	Q	M
Mercury	0.20 U	1.00 U			CV

Metals
-9 -
ICP SERIAL DILUTIONS

SAMPLE NO.

MC0AX2L

Lab Name: Alliance **Contract:** TETR16
Lab Code: ACE **Lb No.:** lb137449 **Lab Sample ID :** Q3291-07L **SDG No.:** Q3291
Matrix (soil/water): Water **Level (low/med):** LOW
Concentration Units: ug/L

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Differ- ence	Q	M
Aluminum	21.0		18.1	J	14		P
Antimony	3.45		3.35	J	3		P
Arsenic	43.0	D	44.3	D	3		P
Barium	13.9		13.3	J	5		P
Beryllium	1.00	U	5.00	U			P
Cadmium	1.00	U	5.00	U			P
Calcium	87500		88000		1		P
Chromium	0.83	J	10.0	U	100.0		P
Cobalt	0.51	J	0.35	J	31		P
Copper	2.49		3.45	J	39		P
Iron	849		809		5		P
Lead	0.43	J	5.00	U	100.0		P
Magnesium	17400		16600		5		P
Manganese	270		267		1		P
Nickel	2.03		2.15	J	6		P
Potassium	15300		15500		2		P
Selenium	25.0	UD	125	UD			P
Silver	1.00	U	5.00	U			P
Sodium	324000		320000		1		P
Thallium	0.16	J	5.00	U	100.0		P
Vanadium	2.49	J	2.30	J	8		P
Zinc	5.06		25.0	U	100.0		P



METAL PREPARATION & INSTRUMENT DATA

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METAL PREPARATION & ANALYICAL SUMMARY

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Metals
- 13 -

SAMPLE PREPARATION SUMMARY

Client: Tetra Tech, EMI

SDG No.: Q3291

Contract: TETR16

Lab Code: ACE

Method: _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB170000							
PB170000BL	PB170000BL	MB	WATER	10/06/2025	50.0	50.0	
PB170000BS	PB170000BS	LCS	WATER	10/06/2025	50.0	50.0	
Q3291-05	MC0AX0	SAM	WATER	10/06/2025	50.0	50.0	
Q3291-06	MC0AX1	SAM	WATER	10/06/2025	50.0	50.0	
Q3291-07	MC0AX2	SAM	WATER	10/06/2025	50.0	50.0	
Q3291-07DUP	MC0AX2DUP	DUP	WATER	10/06/2025	50.0	50.0	
Q3291-07MS	MC0AX2MS	MS	WATER	10/06/2025	50.0	50.0	
Q3291-07MSD	MC0AX2MSD	MSD	WATER	10/06/2025	50.0	50.0	
Q3291-08	MC0AX3	SAM	WATER	10/06/2025	50.0	50.0	

Metals
- 13 -

SAMPLE PREPARATION SUMMARY

Client: Tetra Tech, EMI

SDG No.: Q3291

Contract: TETR16

Lab Code: ACE

Method: _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB170005							
PB170005BL	PB170005BL	MB	WATER	10/06/2025	30.0	30.0	
PB170005BS	PB170005BS	LCS	WATER	10/06/2025	30.0	30.0	
Q3291-05	MC0AX0	SAM	WATER	10/06/2025	30.0	30.0	
Q3291-05DUP	MC0AX0DUP	DUP	WATER	10/06/2025	30.0	30.0	
Q3291-05MS	MC0AX0MS	MS	WATER	10/06/2025	30.0	30.0	
Q3291-05MSD	MC0AX0MSD	MSD	WATER	10/06/2025	30.0	30.0	
Q3291-06	MC0AX1	SAM	WATER	10/06/2025	30.0	30.0	
Q3291-07	MC0AX2	SAM	WATER	10/06/2025	30.0	30.0	
Q3291-08	MC0AX3	SAM	WATER	10/06/2025	30.0	30.0	

metals
- 14 -
ANALYSIS RUN LOG

Client: Tetra Tech, EMI

Contract: TETR16

Lab code: ACE

Sdg no.: Q3291

Instrument id number: _____

Method: _____

Run number: LB137441

Start date: 10/07/2025

End date: 10/07/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	0947	HG
S0.2	S0.2	1	0949	HG
S2.5	S2.5	1	0952	HG
S5	S5	1	0954	HG
S7.5	S7.5	1	0956	HG
S10	S10	1	1001	HG
ICV61	ICV61	1	1004	HG
ICB61	ICB61	1	1006	HG
CCV90	CCV90	1	1009	HG
CCB90	CCB90	1	1011	HG
CRA	CRA	1	1013	HG
CCV91	CCV91	1	1045	HG
CCB91	CCB91	1	1047	HG
PB170005BL	PB170005BL	1	1109	HG
PB170005BS	PB170005BS	1	1111	HG
CCV92	CCV92	1	1113	HG
CCB92	CCB92	1	1116	HG
Q3291-05	MC0AX0	1	1118	HG
Q3291-05DUP	MC0AX0DUP	1	1120	HG
Q3291-05MS	MC0AX0MS	1	1122	HG
Q3291-05MSD	MC0AX0MSD	1	1125	HG
Q3291-06	MC0AX1	1	1127	HG
Q3291-07	MC0AX2	1	1129	HG
Q3291-08	MC0AX3	1	1132	HG
CCV93	CCV93	1	1137	HG
CCB93	CCB93	1	1139	HG
Q3291-05L	MC0AX0L	5	1148	HG
CCV94	CCV94	1	1153	HG
CCB94	CCB94	1	1157	HG

metals
- 14 -
ANALYSIS RUN LOG

Client: Tetra Tech, EMI

Contract: TETR16

Lab code: ACE

Sdg no.: Q3291

Instrument id number:

Method:

Run number: LB137449

Start date: 10/07/2025

End date: 10/07/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1642	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S2	S2	1	1646	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S3	S3	1	1649	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S4	S4	1	1652	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S5	S5	1	1655	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S6	S6	1	1658	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S7	S7	1	1701	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S8	S8	1	1704	Al,Ca,Fe,K,Mg,Na
ICV01	ICV01	1	1726	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
LLICV01	LLICV01	1	1729	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICB01	ICB01	1	1733	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSA01	ICSA01	1	1736	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSAB01	ICSAB01	1	1739	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV01	CCV01	1	1742	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB01	CCB01	1	1745	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CRI01	CRI01	1	1748	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB170000BL	PB170000BL	1	1751	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB170000BS	PB170000BS	1	1755	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q3291-05	MC0AX0	1	1757	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q3291-06	MC0AX1	1	1801	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q3291-07	MC0AX2	1	1804	Ag,Al,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Tl,V,Zn
Q3291-07DUP	MC0AX2DUP	1	1807	Ag,Al,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Tl,V,Zn
Q3291-07L	MC0AX2L	5	1810	Ag,Al,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Tl,V,Zn
Q3291-07MS	MC0AX2MS	1	1814	Ag,Al,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Tl,V,Zn
Q3291-07MSD	MC0AX2MSD	1	1816	Ag,Al,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Tl,V,Zn
CCV02	CCV02	1	1819	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB02	CCB02	1	1822	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q3291-07A	MC0AX2A	1	1825	Ag
Q3291-08	MC0AX3	1	1828	Ag,Al,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Tl,V,Zn
Q3291-07	MC0AX2	5	1835	As,Se
Q3291-07DUP	MC0AX2DUP	5	1838	As,Se
Q3291-07L	MC0AX2L	25	1841	As,Se
Q3291-07MS	MC0AX2MS	5	1844	As,Se
Q3291-07MSD	MC0AX2MSD	5	1848	As,Se
Q3291-08	MC0AX3	5	1854	As,Se
CCV03	CCV03	1	1857	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB03	CCB03	1	1909	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn



METAL RAW DATA

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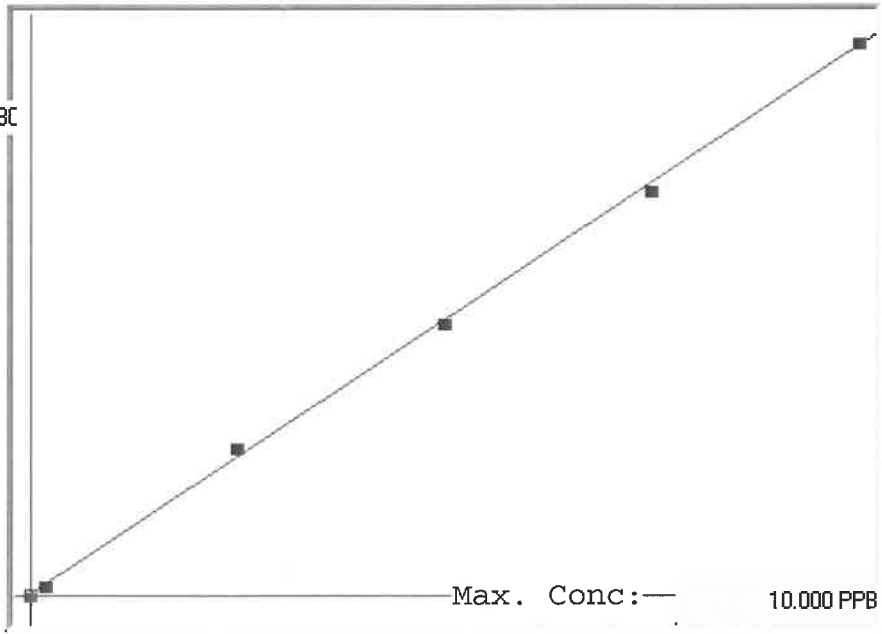
LB137441

7470A

INSTRUMENT ID: CV1

μ Abs.:

42780



Linear

A= 0.0000e+000
B= 2.3598e-004
C= -2.5824e-002
Rho= 0.9996400
Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0.0	0.000	-0.039	-0.039	-55	0.000	-55	0			
0.2	0.200	0.166	-0.034	811	0.0 %	811	0			
2.5	2.500	2.681	0.181	11472	0.0 %	11472	0			
5.0	5.000	4.947	-0.053	21074	0.0 %	21074				
7.5	7.500	7.375	-0.125	31362	0.0 %	31362				
10.0	10.000	10.070	0.070	42780	0.0 %	42780				

LB137441 INSTRUMENT ID : CV1

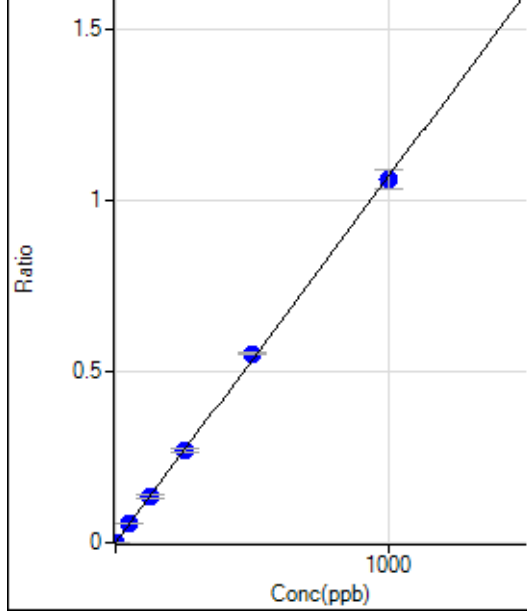
Method: 7470A		Operator: Admin		Date of Analysis: 07 Oct 2025 09:37:00					
Type	Sample ID	Extended ID	Conc.	μ Abs.	Units	Type	Std Conc	Method	Date
S	0.0 - 1	S#	-	-55	PPB	Std	0.0000	7470A	07 Oct 2025 09:47:28
S	0.2 - 1	S1-2	-	811	PPB	Std	0.2000	7470A	07 Oct 2025 09:49:45
S	2.5 - 1	S2-5	-	11472	PPB	Std	2.5000	7470A	07 Oct 2025 09:52:02
S	5.0 - 1	S5	-	21074	PPB	Std	5.0000	7470A	07 Oct 2025 09:54:19
S	7.5 - 1	S7-5	-	31362	PPB	Std	7.5000	7470A	07 Oct 2025 09:56:38
S	10.0 - 1	S10	-	42780	PPB	Std	10.0000	7470A	07 Oct 2025 10:01:44
U	ICV61 - 1	ICV61	3.7884	16163	PPB	SMPL	-7470A		07 Oct 2025 10:04:44
U	ICB61 - 1	ICB61	-0.0843	-248	PPB	SMPL	-7470A		07 Oct 2025 10:06:59
U	CCV90 - 1	CCV90	4.9277	20991	PPB	SMPL	-7470A		07 Oct 2025 10:09:17
U	CCB90 - 1	CCB90	-0.0895	-270	PPB	SMPL	-7470A		07 Oct 2025 10:11:32
U	CRA - 1	CRA	0.1847	892	PPB	SMPL	-7470A		07 Oct 2025 10:13:52
U	HighStd - 1	HighStd	10.0650	42761	PPB	SMPL	-7470A		07 Oct 2025 10:16:07
U	ChkStd - 1	ChkStd	6.6919	28467	PPB	SMPL	-7470A		07 Oct 2025 10:23:57
U	PB169997BL - 1	PBW	-0.0633	-159	PPB	SMPL	-7470A		07 Oct 2025 10:26:13
U	PB169997BS - 1	LCSW	4.1010	17488	PPB	SMPL	-7470A		07 Oct 2025 10:31:17
U	Q3262-03 - 1	MOO-25-0280	-0.1020	-323	PPB	SMPL	-7470A		07 Oct 2025 10:33:34
U	Q3262-06 - 1	MOO-25-0281-82	-0.0386	-54	PPB	SMPL	-7470A		07 Oct 2025 10:35:54
U	Q3262-09 - 1	279887	-0.0315	-24	PPB	SMPL	-7470A		07 Oct 2025 10:38:11
U	Q3269-03 - 1	EG1-TP1	-0.0218	17	PPB	SMPL	-7470A		07 Oct 2025 10:40:29
U	Q3269-06 - 1	EG1-TP2	-0.0251	3	PPB	SMPL	-7470A		07 Oct 2025 10:43:09
U	CCV91 - 1	CCV91	4.8772	20777	PPB	SMPL	-7470A		07 Oct 2025 10:45:32
U	CCB91 - 1	CCB91	-0.0891	-268	PPB	SMPL	-7470A		07 Oct 2025 10:47:48
U	Q3277-02 - 1	WC1	-0.0258	0	PPB	SMPL	-7470A		07 Oct 2025 10:50:06
U	Q3287-02 - 1	TSS-25-0001-0002	0.0629	376	PPB	SMPL	-7470A		07 Oct 2025 10:52:21
U	Q3289-02 - 1	VNJ-240	-0.0379	-51	PPB	SMPL	-7470A		07 Oct 2025 10:54:37
U	Q3289-04 - 1	VNJ-261	-0.0275	-7	PPB	SMPL	-7470A		07 Oct 2025 10:56:53
U	Q3289-06 - 1	72-11966	-0.0223	15	PPB	SMPL	-7470A		07 Oct 2025 10:59:08
U	Q3289-06DUP - 1	72-11966DUP	-0.0199	25	PPB	SMPL	-7470A		07 Oct 2025 11:01:24
U	Q3289-06MS - 1	72-11966MS	4.1799	17822	PPB	SMPL	-7470A		07 Oct 2025 11:03:41
U	Q3289-06MSD - 1	72-11966MSD	4.2764	18231	PPB	SMPL	-7470A		07 Oct 2025 11:05:58
U	PB170005BL - 1	PBW	-0.0603	-146	PPB	SMPL	-7470A		07 Oct 2025 11:09:06
U	PB170005BS - 1	LCSW	3.7903	16171	PPB	SMPL	-7470A		07 Oct 2025 11:11:32
U	CCV92 - 1	CCV92	4.5664	19460	PPB	SMPL	-7470A		07 Oct 2025 11:13:48
U	CCB92 - 1	CCB92	-0.0898	-271	PPB	SMPL	-7470A		07 Oct 2025 11:16:06
U	Q3291-05 - 1	MC0AX0	-0.0065	82	PPB	SMPL	-7470A		07 Oct 2025 11:18:26
U	Q3291-05DUP - 1	MC0AX0DUP	-0.0213	19	PPB	SMPL	-7470A		07 Oct 2025 11:20:42
U	Q3291-05MS - 1	MC0AX0MS	3.8375	16371	PPB	SMPL	-7470A		07 Oct 2025 11:22:57
U	Q3291-05MSD - 1	MC0AX0MSD	3.2921	14060	PPB	SMPL	-7470A		07 Oct 2025 11:25:14
U	Q3291-06 - 1	MC0AX1	-0.0808	-233	PPB	SMPL	-7470A		07 Oct 2025 11:27:33
U	Q3291-07 - 1	MC0AX2	-0.0242	7	PPB	SMPL	-7470A		07 Oct 2025 11:29:52
U	Q3291-08 - 1	MC0AX3	-0.0220	16	PPB	SMPL	-7470A		07 Oct 2025 11:32:09
U	CCV93 - 1	CCV93	4.7396	20194	PPB	SMPL	-7470A		07 Oct 2025 11:37:17
U	CCB93 - 1	CCB93	-0.0782	-222	PPB	SMPL	-7470A		07 Oct 2025 11:39:33
U	PB169971TB - 1		-0.0298	-17	PPB	SMPL	-7470A		07 Oct 2025 11:41:54
U	Q3289-06LX5 - 1		-0.0220	16	PPB	SMPL	-7470A		07 Oct 2025 11:44:10
U	Q3289-06A - 1		3.6142	15425	PPB	SMPL	-7470A		07 Oct 2025 11:46:25
U	Q3291-05LX5 - 1		-0.0664	-172	PPB	SMPL	-7470A		07 Oct 2025 11:48:41
U	Q3291-05A - 1		3.6277	15482	PPB	SMPL	-7470A		07 Oct 2025 11:50:59
U	CCV94 - 1	CCV94	4.8361	20603	PPB	SMPL	-7470A		07 Oct 2025 11:53:15
U	CCB94 - 1	CCB94	-0.0461	-86	PPB	SMPL	-7470A		07 Oct 2025 11:57:43

Batch Folder: D:\Agilent\ICPMH\1\DATA\P7100725 MS.b\
Analysis File: P7100725 MS.batch.bin
DA Date-Time: 2025-10-08 07:11:43
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	S00	2025-10-07 16:42:56
2	005CALS.d	S02	2025-10-07 16:46:13
3	006CALS.d	S03	2025-10-07 16:49:34
4	007CALS.d	S04	2025-10-07 16:52:46
5	008CALS.d	S05	2025-10-07 16:55:50
6	009CALS.d	S06	2025-10-07 16:58:43
7	010CALS.d	S07	2025-10-07 17:01:31
8	011CALS.d	S08	2025-10-07 17:04:15

Calibration for 023SMPL.d

9 Be [No Gas] ISTD:6 Li [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	8.90	0.0000	P	44.3
2	☐	1.000	1.059	685.18	0.0011	P	16.8
3	☐	50.000	52.989	32888.92	0.0567	P	2.4
4	☐	125.000	124.108	77734.83	0.1328	P	8.4
5	☐	250.000	253.325	156296.04	0.2710	P	4.9
6	☐	500.000	515.950	308646.31	0.5519	P	1.2
7	☐	1000.000	991.156	599434.61	1.0602	P	5.2
8	☐			366.55	0.0006	P	24.2

$$y = 0.0011 * x + 1.5721E-005$$

$$R = 0.9998$$

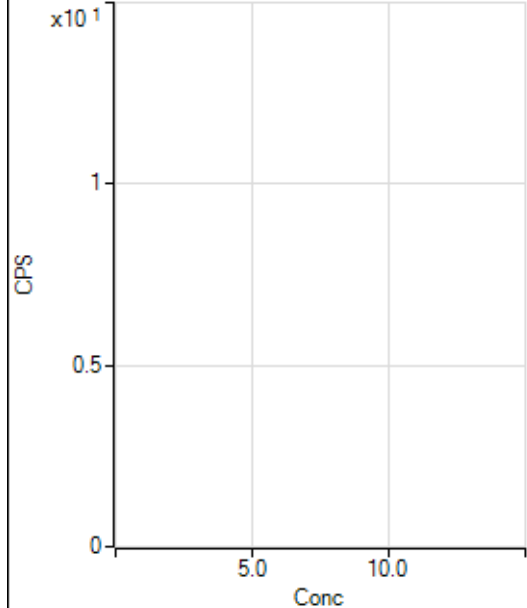
$$DL = 0.01952$$

$$BEC = 0.0147$$

Weight: <None>

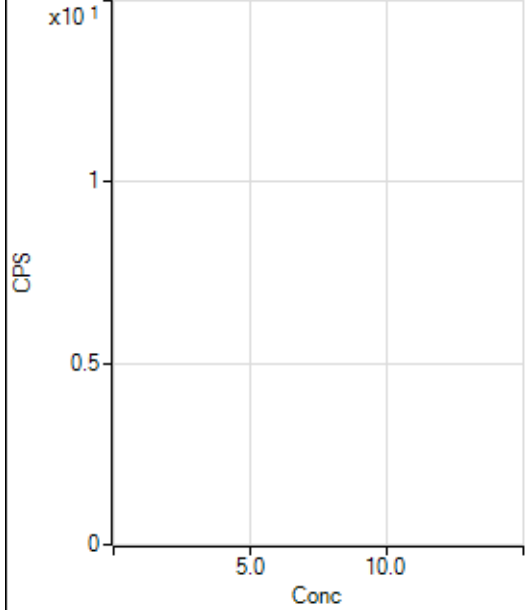
Min Conc: <None>

12 C [No Gas] No available calibration points



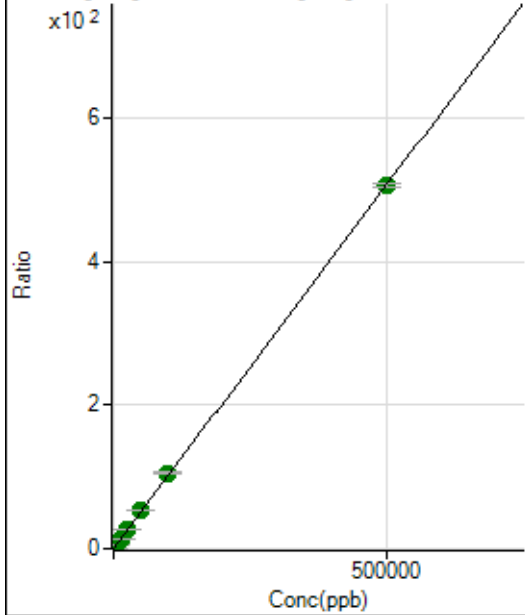
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

12 C [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

23 Na [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	15270.98	0.0504	P	0.7
2	☐	500.000	516.966	174069.99	0.5743	P	1.1
3	☐	5000.000	5282.770	1667454.56	5.4041	A	2.0
4	☐	12500.000	13082.318	4033137.96	13.3085	A	1.1
5	☐	25000.000	26669.299	8152686.06	27.0780	A	0.5
6	☐	50000.000	52649.196	15904986.01	53.4070	A	0.7
7	☐	100000.00	103859.14	31740484.25	105.3051	A	1.8
8	☐	500000.00	498862.38	181404570.6	505.6162	A	1.0

$$y = 0.0010 * x + 0.0504$$

$$R = 1.0000$$

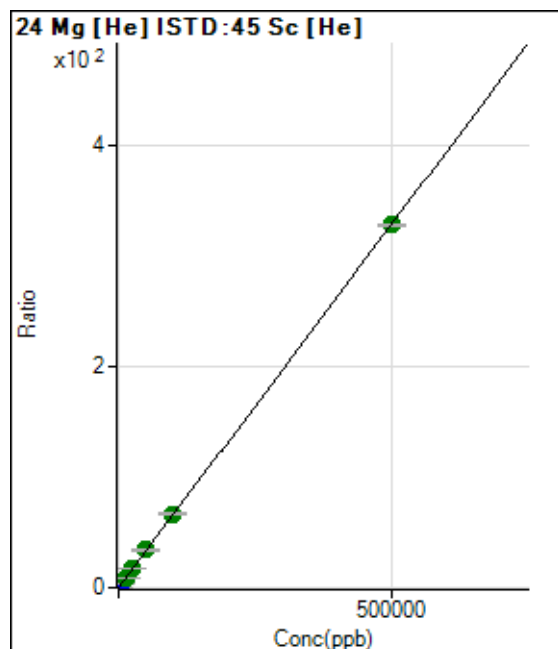
$$DL = 0.9866$$

$$BEC = 49.69$$

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	182.23	0.0006	P	20.6
2	☐	500.000	510.997	101883.36	0.3361	P	1.0
3	☐	5000.000	5118.154	1037118.23	3.3612	P	0.9
4	☐	12500.000	12997.704	2586589.65	8.5349	A	1.1
5	☐	25000.000	25911.667	5122753.95	17.0141	A	0.7
6	☐	50000.000	51869.510	10142171.52	34.0580	A	1.1
7	☐	100000.00	101700.15	20125541.37	66.7766	A	1.6
8	☐	500000.00	499413.80	117650512.6	327.9141	A	0.8

$$y = 6.5660E-004 * x + 6.0068E-004$$

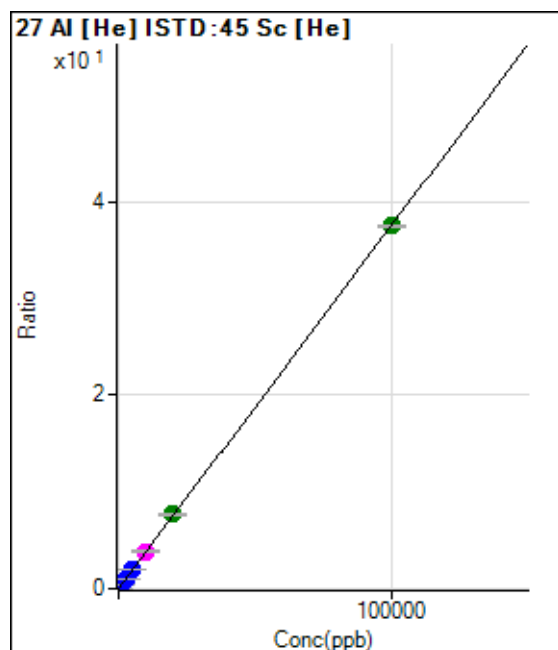
R = 1.0000

DL = 0.5647

BEC = 0.9148

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	570.01	0.0019	P	5.8
2	☐	20.000	20.288	2880.30	0.0095	P	0.6
3	☐	1000.000	1053.686	122724.25	0.3977	P	1.9
4	☐	2500.000	2579.869	294304.70	0.9711	P	0.7
5	☐	5000.000	5107.775	578346.05	1.9209	P	0.9
6	☐	10000.000	10315.318	1154646.35	3.8773	M	1.9
7	☐	20000.000	20442.094	2314969.16	7.6819	A	2.5
8	☐	100000.00	99872.127	13463303.69	37.5236	A	0.2

$$y = 3.7570E-004 * x + 0.0019$$

R = 1.0000

DL = 0.8759

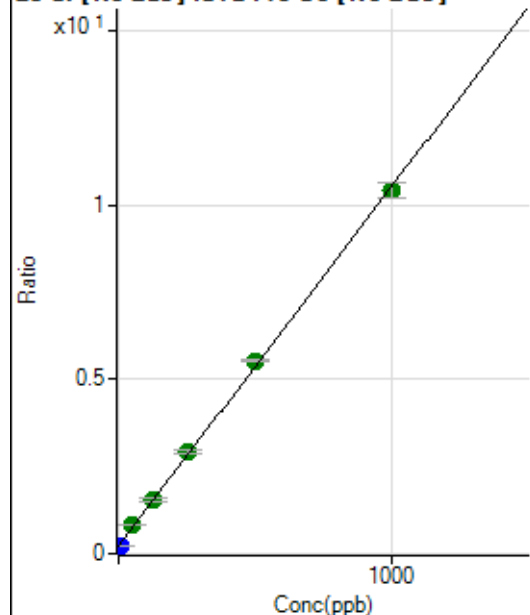
BEC = 5.004

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d

28 Si [No Gas] ISTD :45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	698718.48	0.2193	P	3.1
2	☐	10.000	-1.142	698122.70	0.2075	P	4.4
3	☐	50.000	59.110	2687406.79	0.8279	A	2.1
4	☐	125.000	130.254	5079816.31	1.5605	A	5.9
5	☐	250.000	261.644	9198453.34	2.9133	A	5.0
6	☐	500.000	514.709	17114647.94	5.5190	A	1.1
7	☐	1000.000	988.734	32905083.40	10.3997	A	4.4
8	☐			745664.05	0.2007	P	2.2

$$y = 0.0103 * x + 0.2193$$

R = 0.9996

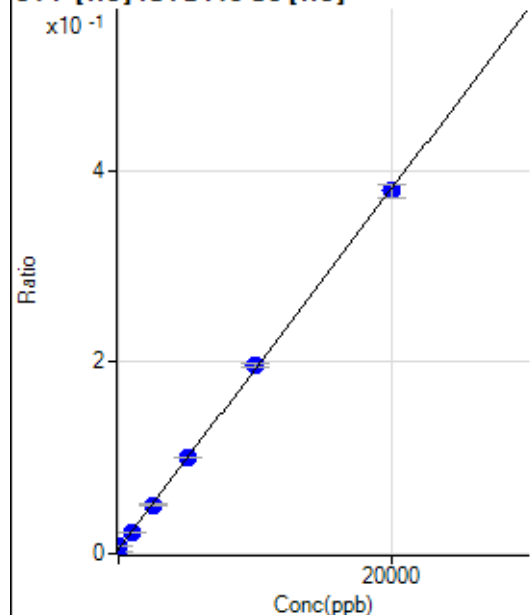
DL = 1.989

BEC = 21.3

Weight: <None>

Min Conc: <None>

31 P [He] ISTD :45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-131.982	733.36	0.0024	P	5.0
2	☐	0.000	131.982	2239.08	0.0074	P	1.3
3	☐	1000.000	899.888	6739.32	0.0218	P	2.2
4	☐	2500.000	2436.537	15381.17	0.0508	P	2.2
5	☐	5000.000	5099.310	30372.52	0.1009	P	0.9
6	☐	10000.000	10202.048	58637.71	0.1969	P	1.5
7	☐	20000.000	19887.087	114257.21	0.3792	P	3.5
8	☐			766.69	0.0021	P	6.3

$$y = 1.8821E-005 * x + 0.0049$$

R = 0.9998

DL = 17.2

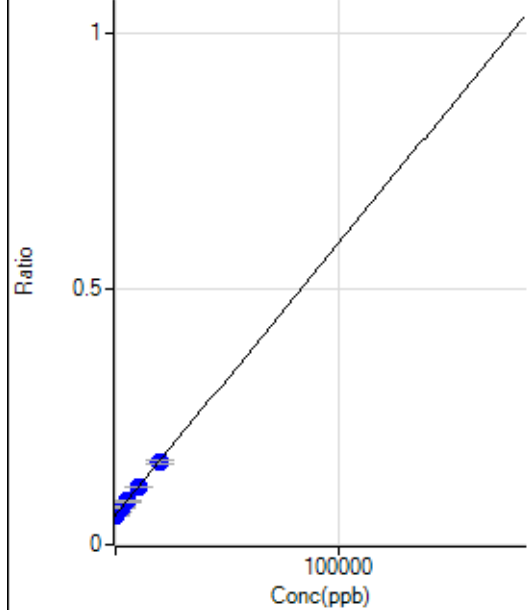
BEC = 260.5

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d

34 S [No Gas] ISTD :45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	110.191	186882.20	0.0587	P	4.4
2	☐	0.000	-110.191	193421.73	0.0575	P	4.5
3	☐	1000.000	1210.311	209442.88	0.0645	P	0.9
4	☐	2500.000	2593.454	234018.56	0.0719	P	5.2
5	☐	5000.000	5282.301	272125.02	0.0862	P	3.7
6	☐	10000.000	10457.988	352488.79	0.1137	P	0.3
7	☐	20000.000	19678.233	514688.28	0.1627	P	4.3
8	☐			179618.63	0.0484	P	1.6

$$y = 5.3143E-006 * x + 0.0581$$

$$R = 0.9994$$

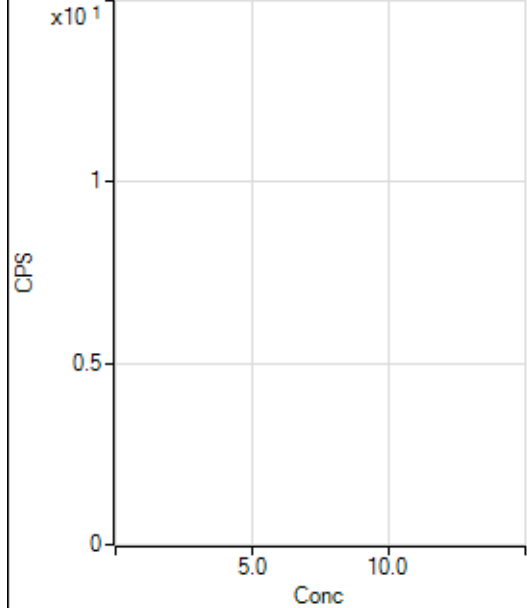
$$DL = 1461$$

$$BEC = 1.093E+04$$

Weight: <None>

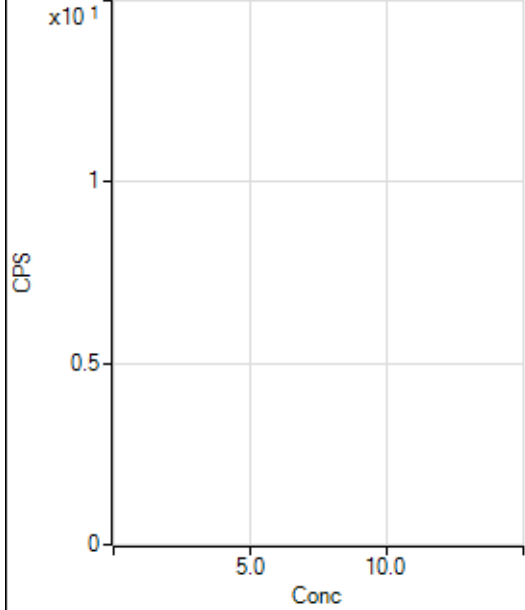
Min Conc: <None>

35 Cl [No Gas] No available calibration points



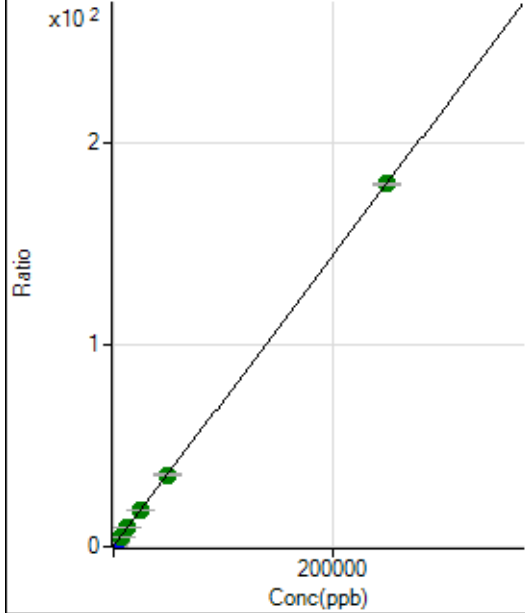
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

35 Cl [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

39 K [He] ISTD :45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	52850.21	0.1743	P	1.1
2	☐	500.000	531.102	168495.04	0.5559	P	0.8
3	☐	2500.000	2675.748	646986.34	2.0968	P	0.5
4	☐	6250.000	6298.665	1424160.62	4.6998	A	1.4
5	☐	12500.000	12805.544	2822546.55	9.3749	A	1.6
6	☐	25000.000	25171.072	5437657.80	18.2594	A	1.1
7	☐	50000.000	48931.399	10646887.76	35.3308	A	2.5
8	☐	250000.00	250178.30	64554572.93	179.9240	A	0.5

$$y = 7.1849E-004 * x + 0.1743$$

$$R = 1.0000$$

$$DL = 7.812$$

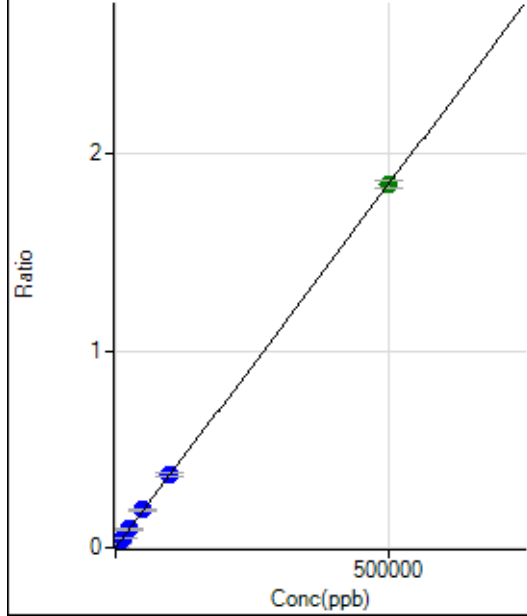
$$BEC = 242.6$$

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d

43 Ca [No Gas] ISTD:45 Sc [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	247.78	0.0001	P	6.1
2	☐	500.000	475.150	6150.19	0.0018	P	6.0
3	☐	5000.000	5254.096	63123.19	0.0194	P	2.5
4	☐	12500.000	12465.338	149787.93	0.0460	P	7.2
5	☐	25000.000	25711.237	299538.15	0.0949	P	4.7
6	☐	50000.000	51870.126	593228.03	0.1913	P	1.3
7	☐	100000.00	101717.32	1186517.42	0.3751	P	5.2
8	☐	500000.00	499432.31	6840788.86	1.8412	A	2.0

$$y = 3.6864E-006 * x + 7.7611E-005$$

$$R = 1.0000$$

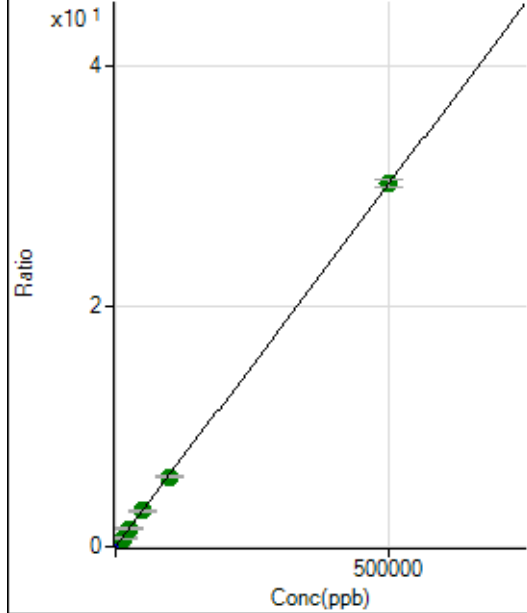
$$DL = 3.859$$

$$BEC = 21.05$$

Weight: <None>

Min Conc: <None>

44 Ca [No Gas] ISTD:45 Sc [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15452.24	0.0048	P	0.9
2	☐	500.000	474.654	112267.64	0.0334	P	7.6
3	☐	5000.000	5158.783	1023352.99	0.3153	P	1.7
4	☐	12500.000	11846.286	2334511.04	0.7177	A	8.4
5	☐	25000.000	24642.214	4696240.73	1.4876	A	6.0
6	☐	50000.000	49437.856	9240530.00	2.9796	A	1.9
7	☐	100000.00	96599.648	18405748.47	5.8175	A	4.7
8	☐	500000.00	500768.95	111974963.8	30.1373	A	2.2

$$y = 6.0172E-005 * x + 0.0048$$

$$R = 1.0000$$

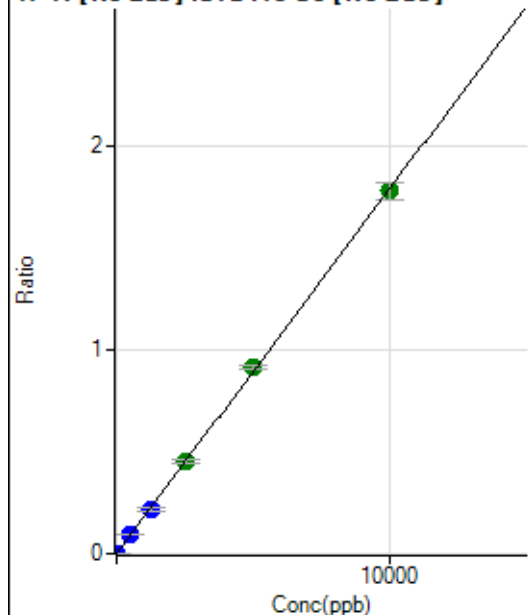
$$DL = 2.197$$

$$BEC = 80.54$$

Weight: <None>

Min Conc: <None>

47 Ti [No Gas] ISTD :45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	67.78	0.0000	P	9.7
2	☐	5.000	4.854	2990.32	0.0009	P	7.7
3	☐	500.000	513.739	298459.82	0.0919	P	2.4
4	☐	1250.000	1215.828	707903.56	0.2176	P	7.8
5	☐	2500.000	2517.257	1422347.67	0.4505	A	4.8
6	☐	5000.000	5098.636	2829420.37	0.9124	A	2.0
7	☐	10000.000	9949.953	5633333.73	1.7804	A	4.5
8	☐			2237.98	0.0006	P	38.4

$$y = 1.7894E-004 * x + 2.1227E-005$$

$$R = 0.9999$$

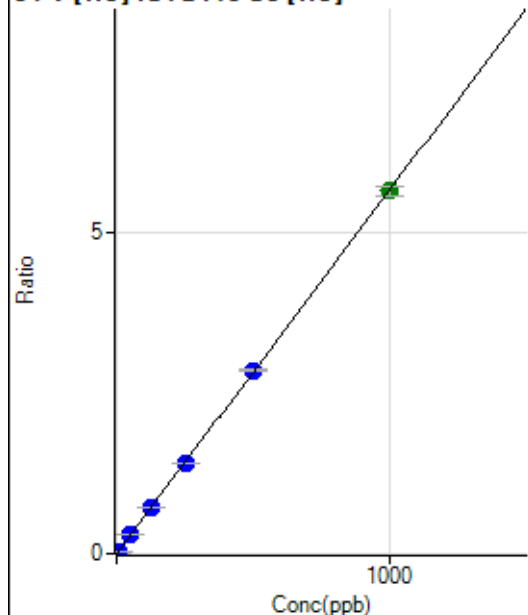
$$DL = 0.03438$$

$$BEC = 0.1186$$

Weight: <None>

Min Conc: <None>

51 V [He] ISTD :45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	16.67	0.0001	P	34.4
2	☐	5.000	5.192	8932.73	0.0295	P	1.5
3	☐	50.000	50.555	88402.89	0.2865	P	0.3
4	☐	125.000	125.302	215152.16	0.7100	P	1.1
5	☐	250.000	249.358	425393.70	1.4129	P	0.6
6	☐	500.000	503.794	850064.18	2.8545	P	0.7
7	☐	1000.000	998.197	1704601.97	5.6557	A	2.3
8	☐			3852.76	0.0107	P	3.4

$$y = 0.0057 * x + 5.4924E-005$$

$$R = 1.0000$$

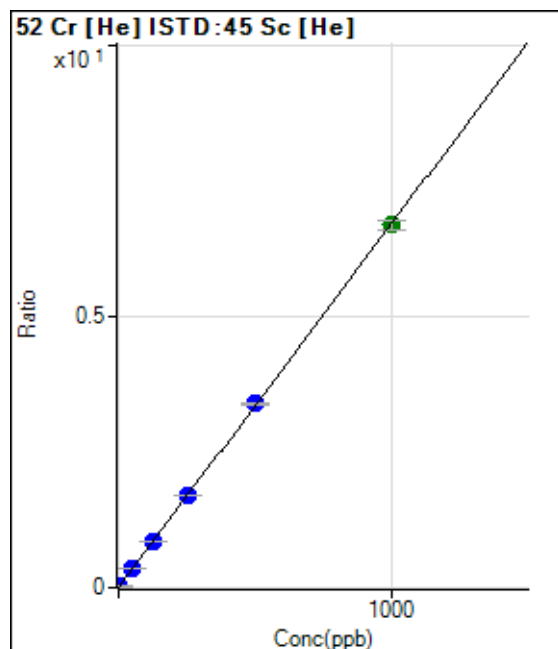
$$DL = 0.01002$$

$$BEC = 0.009694$$

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1350.07	0.0045	P	12.7
2	☐	2.000	2.000	5417.69	0.0179	P	2.4
3	☐	50.000	51.235	107485.73	0.3483	P	0.7
4	☐	125.000	126.019	257666.01	0.8503	P	1.3
5	☐	250.000	253.528	513682.62	1.7062	P	1.3
6	☐	500.000	504.330	1009414.38	3.3896	P	0.7
7	☐	1000.000	996.764	2017607.66	6.6949	A	3.0
8	☐			24129.41	0.0673	P	1.5

$$y = 0.0067 * x + 0.0045$$

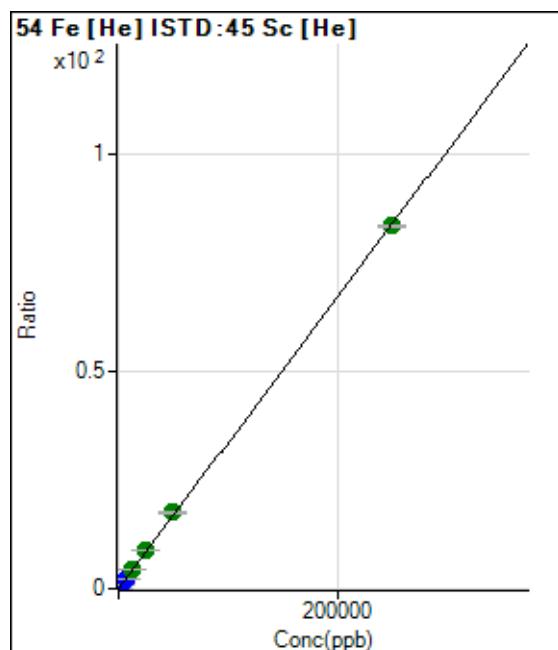
R = 1.0000

DL = 0.2527

BEC = 0.6633

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1785.68	0.0059	P	2.3
2	☐	50.000	56.940	7564.17	0.0250	P	1.7
3	☐	2500.000	2776.881	288676.64	0.9356	P	0.8
4	☐	6250.000	6908.769	702782.76	2.3189	P	1.1
5	☐	12500.000	13319.278	1344398.30	4.4651	A	1.3
6	☐	25000.000	26463.918	2640282.10	8.8658	A	0.2
7	☐	50000.000	52497.497	5297673.70	17.5817	A	3.4
8	☐	250000.00	249293.90	29948326.50	83.4679	A	0.6

$$y = 3.3479E-004 * x + 0.0059$$

R = 0.9999

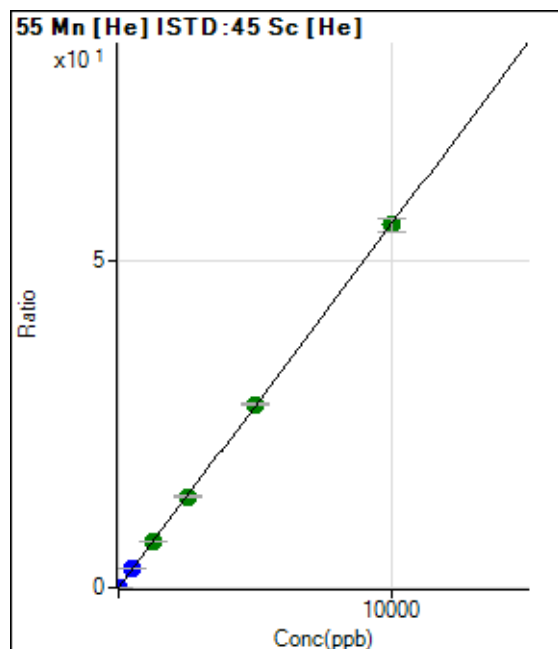
DL = 1.209

BEC = 17.59

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	346.67	0.0011	P	6.2
2	☐	1.000	1.089	2177.95	0.0072	P	8.7
3	☐	500.000	515.397	883169.39	2.8622	P	0.6
4	☐	1250.000	1264.447	2127494.17	7.0204	A	0.4
5	☐	2500.000	2509.880	4195278.10	13.9340	A	0.5
6	☐	5000.000	5034.821	8323551.19	27.9505	A	0.9
7	☐	10000.000	9977.544	16688900.45	55.3886	A	3.7
8	☐			21098.24	0.0588	P	0.7

$$y = 0.0056 * x + 0.0011$$

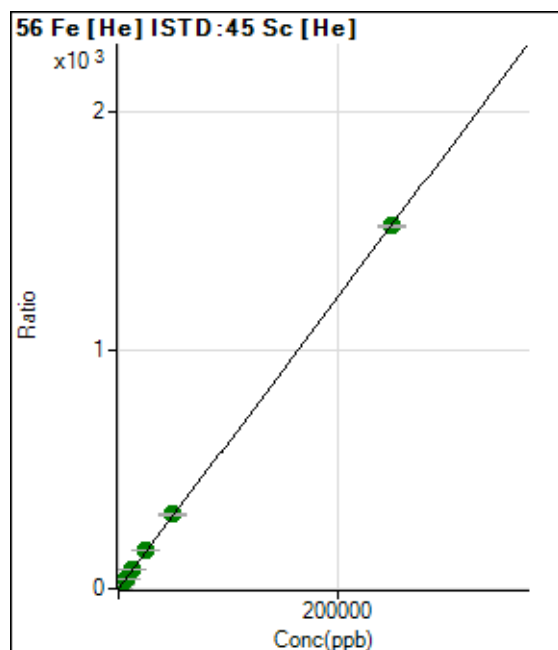
$$R = 1.0000$$

$$DL = 0.03829$$

$$BEC = 0.2059$$

Weight: <None>

Min Conc: <None>



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12239.52	0.0404	P	2.4
2	☐	50.000	54.588	112890.72	0.3724	P	0.8
3	☐	2500.000	2625.836	4941289.41	16.0135	A	0.9
4	☐	6250.000	6536.710	12062138.16	39.8037	A	0.8
5	☐	12500.000	12862.058	23570218.26	78.2813	A	0.6
6	☐	25000.000	26090.226	47274277.07	158.7494	A	1.1
7	☐	50000.000	50965.761	93414840.83	310.0693	A	4.8
8	☐	250000.00	249671.29	544928640.7	1,518.811	A	0.6

$$y = 0.0061 * x + 0.0404$$

$$R = 1.0000$$

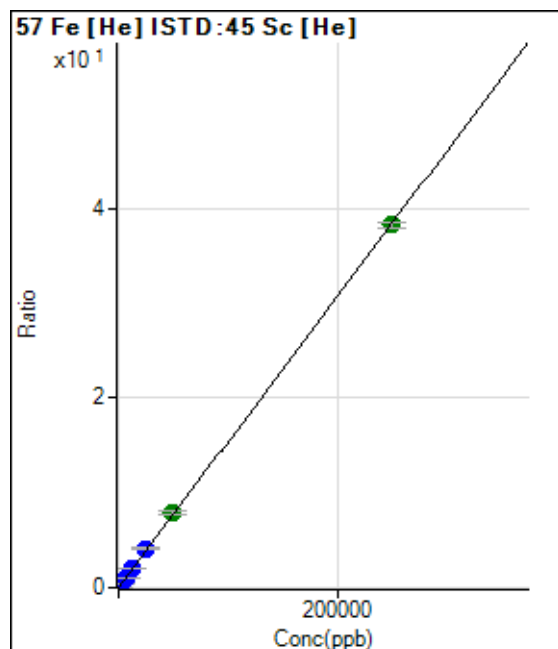
$$DL = 0.4751$$

$$BEC = 6.635$$

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1396.75	0.0046	P	5.7
2	☐	50.000	58.882	4129.49	0.0136	P	4.0
3	☐	2500.000	2742.664	131049.67	0.4247	P	0.5
4	☐	6250.000	6718.376	313223.76	1.0337	P	1.8
5	☐	12500.000	13535.506	625596.60	2.0779	P	1.1
6	☐	25000.000	27037.095	1234654.11	4.1460	P	1.0
7	☐	50000.000	51353.241	2371142.38	7.8706	A	4.7
8	☐	250000.00	249459.72	13710773.13	38.2152	A	1.5

$$y = 1.5317E-004 * x + 0.0046$$

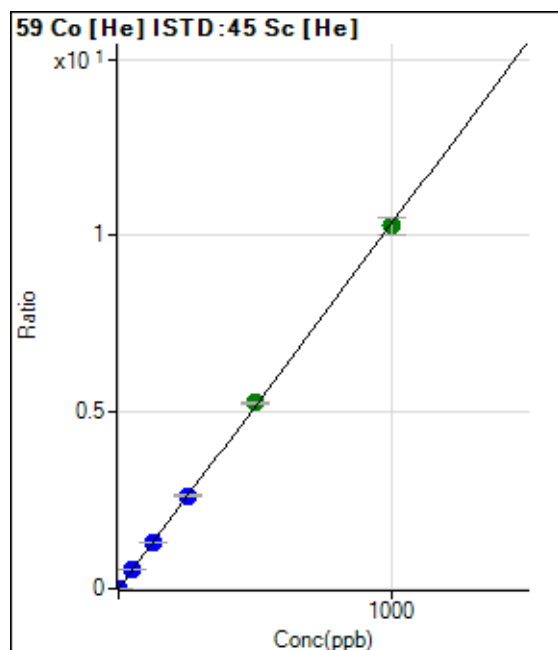
R = 1.0000

DL = 5.107

BEC = 30.07

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	168.89	0.0006	P	14.9
2	☐	1.000	1.086	3569.35	0.0118	P	2.1
3	☐	50.000	51.278	163690.55	0.5305	P	0.6
4	☐	125.000	125.885	394427.81	1.3015	P	0.3
5	☐	250.000	254.790	792942.01	2.6337	P	1.0
6	☐	500.000	509.001	1566601.85	5.2609	A	1.7
7	☐	1000.000	994.127	3095351.59	10.2744	A	4.8
8	☐			13239.29	0.0369	P	3.8

$$y = 0.0103 * x + 5.5682E-004$$

R = 0.9999

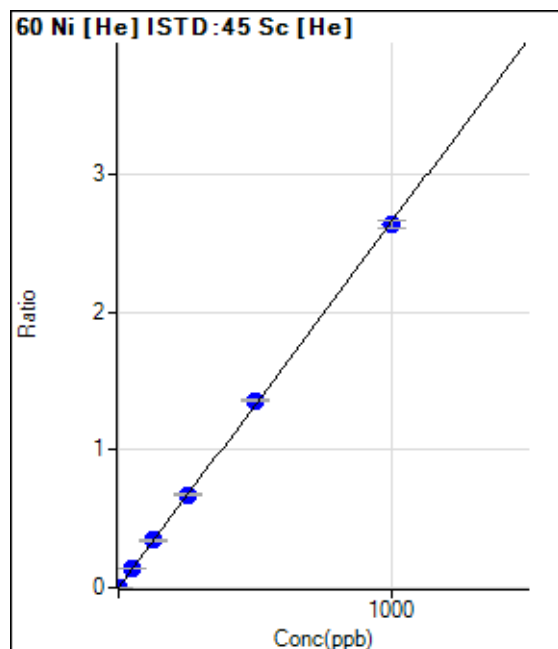
DL = 0.02404

BEC = 0.05388

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	317.78	0.0010	P	4.7
2	☐	1.000	0.980	1105.61	0.0036	P	3.5
3	☐	50.000	52.003	42895.72	0.1390	P	0.5
4	☐	125.000	128.843	103901.76	0.3429	P	1.0
5	☐	250.000	254.352	203487.52	0.6759	P	1.4
6	☐	500.000	511.672	404566.85	1.3585	P	0.8
7	☐	1000.000	992.495	793852.02	2.6342	P	2.2
8	☐			7676.48	0.0214	P	1.5

$$y = 0.0027 * x + 0.0010$$

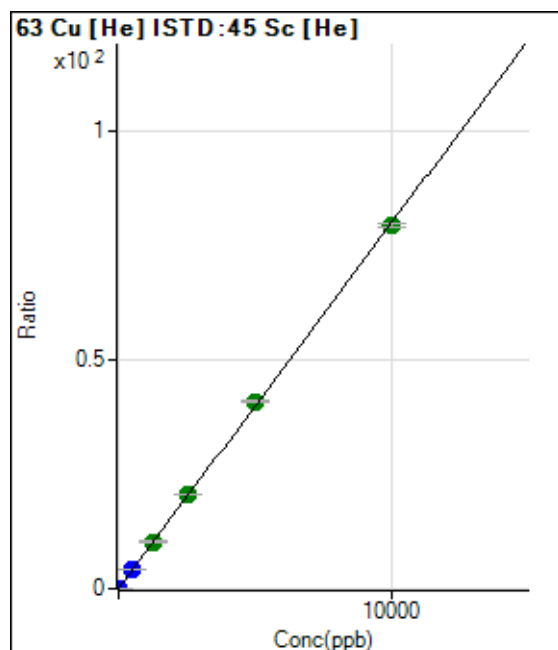
$$R = 0.9999$$

$$DL = 0.05582$$

$$BEC = 0.395$$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	772.25	0.0025	P	4.1
2	☐	2.000	2.004	5625.56	0.0186	P	6.5
3	☐	500.000	517.152	1276442.53	4.1367	P	0.5
4	☐	1250.000	1273.994	3086754.50	10.1869	A	2.3
5	☐	2500.000	2566.860	6178858.17	20.5222	A	0.7
6	☐	5000.000	5117.554	12183354.13	40.9126	A	1.6
7	☐	10000.000	9920.651	23903903.81	79.3089	A	1.1
8	☐			12092.79	0.0337	P	5.9

$$y = 0.0080 * x + 0.0025$$

$$R = 0.9999$$

$$DL = 0.03942$$

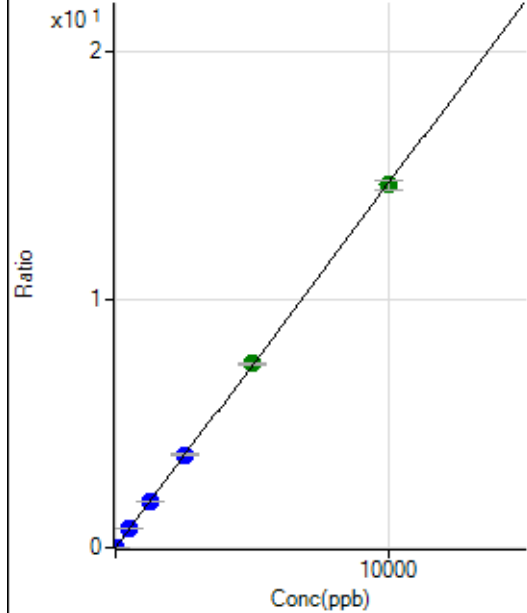
$$BEC = 0.3186$$

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d

66 Zn [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1354.52	0.0045	P	6.2
2	☐	5.000	4.475	3348.19	0.0110	P	1.7
3	☐	500.000	517.497	236105.22	0.7652	P	0.6
4	☐	1250.000	1262.353	563633.11	1.8601	P	2.0
5	☐	2500.000	2551.843	1130751.99	3.7556	P	0.7
6	☐	5000.000	5053.878	2213703.45	7.4335	A	1.1
7	☐	10000.000	9957.682	4414821.60	14.6420	A	2.7
8	☐			8653.69	0.0241	P	0.8

$$y = 0.0015 * x + 0.0045$$

R = 1.0000

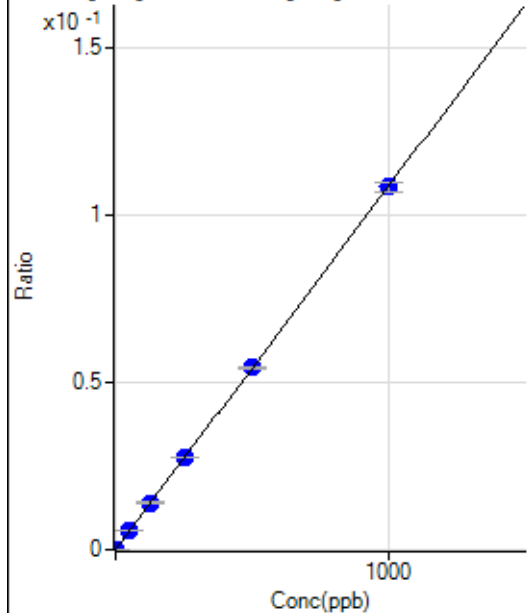
DL = 0.5621

BEC = 3.039

Weight: <None>

Min Conc: <None>

75 As [He] ISTD:89 Y [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	10.00	0.0000	P	67.1
2	☐	1.000	1.166	308.89	0.0001	P	10.2
3	☐	50.000	51.538	13158.15	0.0056	P	1.9
4	☐	125.000	128.206	32001.29	0.0139	P	2.6
5	☐	250.000	253.422	63884.86	0.0275	P	1.5
6	☐	500.000	500.780	125098.55	0.0543	P	0.6
7	☐	1000.000	998.277	251746.10	0.1083	P	2.7
8	☐			285.56	0.0001	P	18.9

$$y = 1.0848E-004 * x + 4.3556E-006$$

R = 1.0000

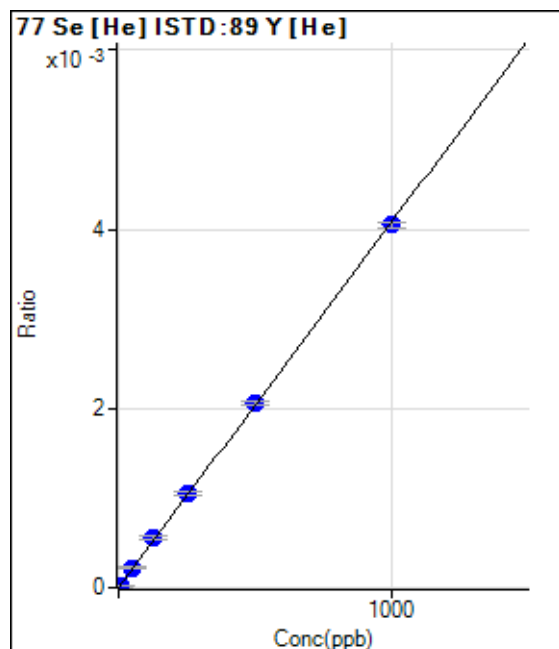
DL = 0.08082

BEC = 0.04015

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.
2	☐	5.000	5.649	55.56	0.0000	P	17.8
3	☐	50.000	54.221	521.13	0.0002	P	7.2
4	☐	125.000	136.032	1277.85	0.0006	P	6.6
5	☐	250.000	259.437	2459.12	0.0011	P	3.6
6	☐	500.000	506.181	4754.14	0.0021	P	2.0
7	☐	1000.000	992.957	9415.29	0.0040	P	1.7
8	☐			10.00	0.0000	P	58.3

$$y = 4.0780E-006 * x + 4.8566E-007$$

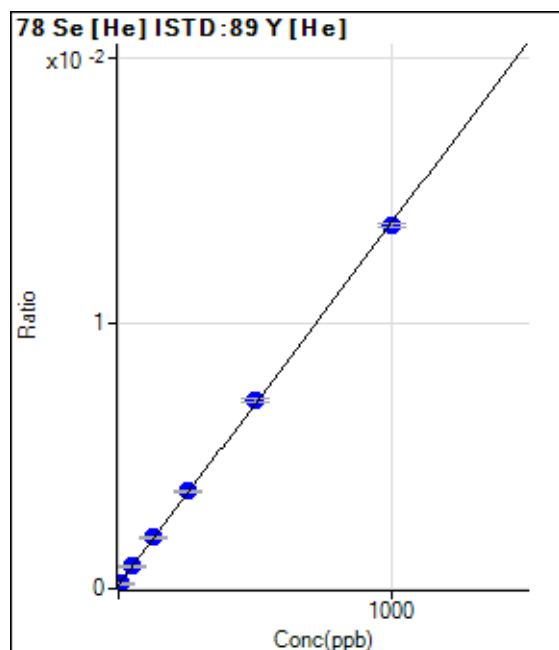
R = 0.9999

DL = 0.6188

BEC = 0.1191

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	310.01	0.0001	P	2.4
2	☐	5.000	4.760	471.12	0.0002	P	20.7
3	☐	50.000	52.028	1987.93	0.0008	P	9.4
4	☐	125.000	131.337	4437.38	0.0019	P	6.3
5	☐	250.000	259.349	8546.99	0.0037	P	3.0
6	☐	500.000	510.677	16375.85	0.0071	P	2.8
7	☐	1000.000	991.432	31810.93	0.0137	P	1.2
8	☐			350.01	0.0001	P	9.8

$$y = 1.3663E-005 * x + 1.3485E-004$$

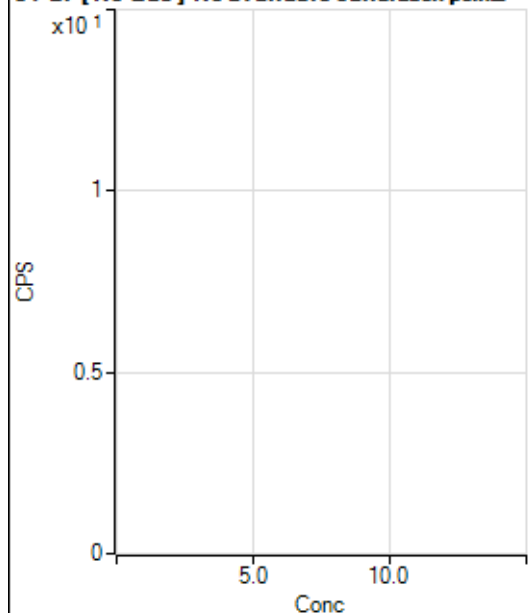
R = 0.9999

DL = 0.7076

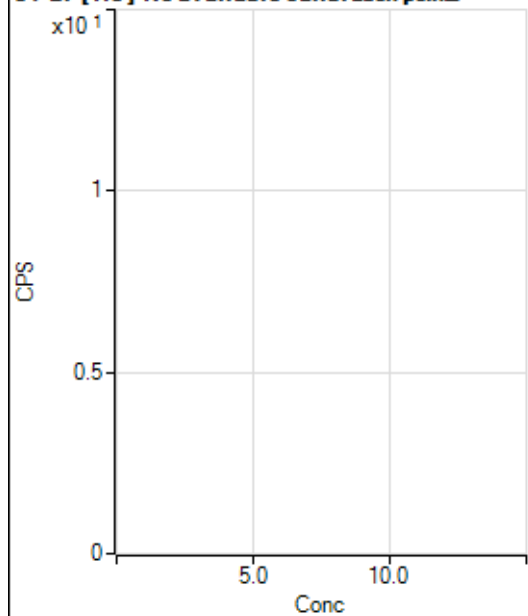
BEC = 9.87

Weight: <None>

Min Conc: <None>

81 Br [No Gas] No available calibration points

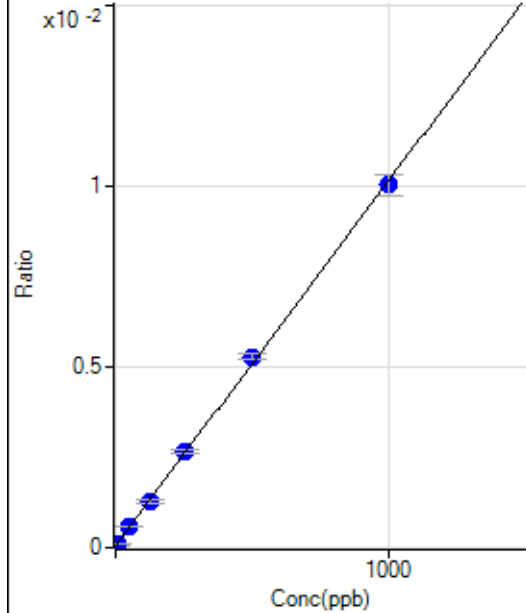
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			6742.72		P	2.2
2	☐			6870.55		P	2.0
3	☐			6840.53		P	1.4
4	☐			6651.58		P	1.4
5	☐			6611.54		P	0.5
6	☐			6624.89		P	4.6
7	☐			6727.14		P	2.4
8	☐			7209.61		P	3.6

81 Br [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			104.44		P	26.6
2	☐			116.67		P	25.4
3	☐			97.78		P	21.9
4	☐			93.34		P	9.5
5	☐			114.45		P	6.7
6	☐			95.56		P	25.7
7	☐			78.89		P	21.7
8	☐			180.00		P	11.1

Calibration for 023SMPL.d

82 Se [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	423.56	0.0001	P	7.1
2	☐	5.000	5.172	896.14	0.0001	P	4.1
3	☐	50.000	53.911	4987.81	0.0006	P	3.1
4	☐	125.000	122.919	11064.41	0.0013	P	7.5
5	☐	250.000	256.745	21829.02	0.0026	P	4.3
6	☐	500.000	518.051	42886.54	0.0053	P	3.1
7	☐	1000.000	989.352	84132.65	0.0100	P	5.6
8	☐			584.52	0.0001	P	7.3

$y = 1.0099E-005 * x + 5.1220E-005$

R = 0.9997

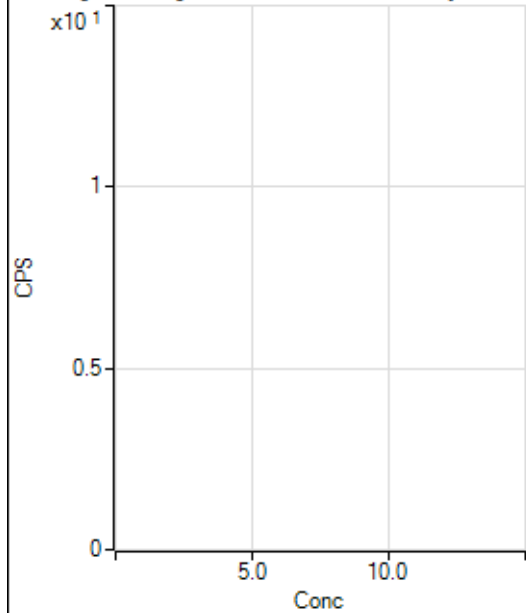
DL = 1.083

BEC = 5.072

Weight: <None>

Min Conc: <None>

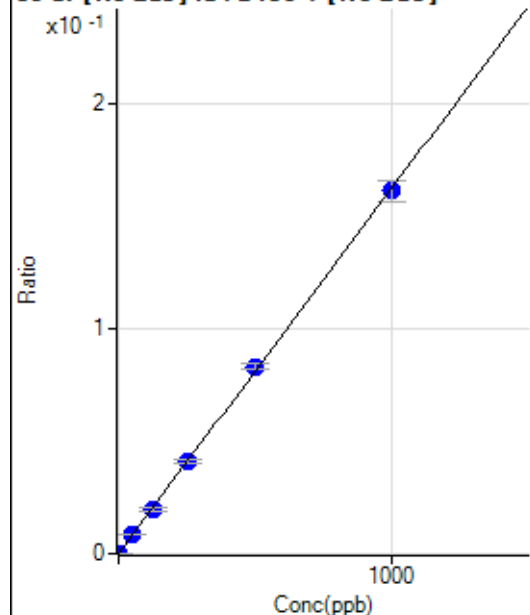
83 Kr [No Gas] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			448.90		P	5.5
2	☐			416.68		P	9.1
3	☐			388.90		P	3.0
4	☐			435.57		P	11.9
5	☐			403.34		P	13.3
6	☐			421.12		P	3.3
7	☐			377.79		P	8.0
8	☐			412.23		P	5.4

Calibration for 023SMPL.d

86 Sr [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	710.03	0.0001	P	2.7
2	☐	1.000	0.927	2041.28	0.0002	P	7.3
3	☐	50.000	51.772	71019.43	0.0085	P	2.0
4	☐	125.000	120.797	168412.22	0.0197	P	7.4
5	☐	250.000	251.728	337726.60	0.0409	P	4.2
6	☐	500.000	512.441	675313.04	0.0832	P	2.7
7	☐	1000.000	993.785	1350781.39	0.1612	P	5.7
8	☐			22160.12	0.0023	P	1.8

$$y = 1.6216E-004 * x + 8.5903E-005$$

R = 0.9999

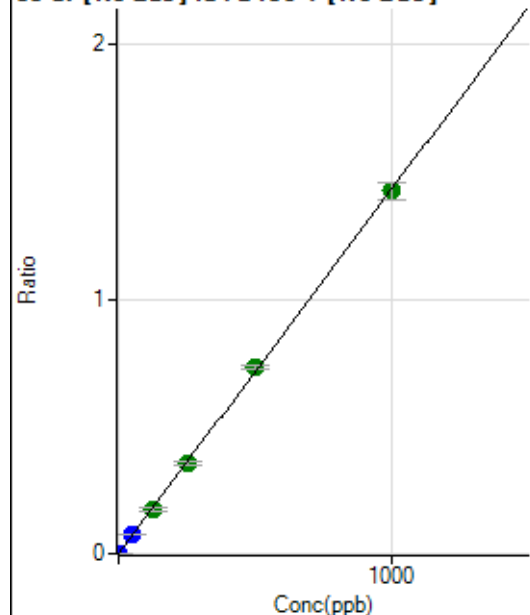
DL = 0.04339

BEC = 0.5297

Weight: <None>

Min Conc: <None>

88 Sr [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	126.67	0.0000	P	8.8
2	☐	1.000	0.948	11843.77	0.0014	P	8.7
3	☐	50.000	51.627	618848.12	0.0739	P	2.2
4	☐	125.000	120.543	1476732.18	0.1725	A	7.9
5	☐	250.000	248.303	2934204.64	0.3554	A	4.4
6	☐	500.000	510.343	5930460.12	0.7305	A	2.1
7	☐	1000.000	995.729	11944146.63	1.4252	A	4.5
8	☐			186977.36	0.0194	P	2.8

$$y = 0.0014 * x + 1.5338E-005$$

R = 0.9999

DL = 0.002841

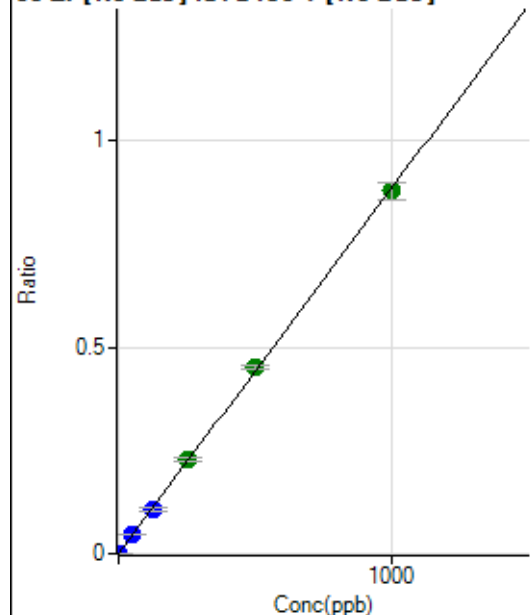
BEC = 0.01072

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d

90 Zr [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	338.90	0.0000	P	6.7
2	☐	1.000	0.942	7540.89	0.0009	P	10.8
3	☐	50.000	51.029	378028.38	0.0451	P	2.2
4	☐	125.000	119.907	907557.55	0.1060	P	7.5
5	☐	250.000	257.252	1877763.04	0.2274	A	4.4
6	☐	500.000	511.049	3667852.17	0.4518	A	2.0
7	☐	1000.000	993.248	7356912.53	0.8780	A	4.7
8	☐			9777.81	0.0010	P	7.9

$$y = 8.8392E-004 * x + 4.0992E-005$$

$$R = 0.9999$$

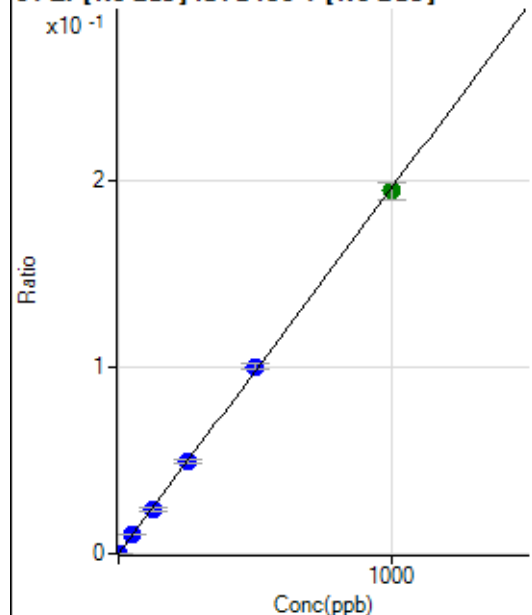
$$DL = 0.009286$$

$$BEC = 0.04638$$

Weight: <None>

Min Conc: <None>

91 Zr [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	66.67	0.0000	P	13.9
2	☐	1.000	0.985	1735.68	0.0002	P	8.6
3	☐	50.000	51.212	84035.87	0.0100	P	3.5
4	☐	125.000	121.217	203176.32	0.0237	P	8.7
5	☐	250.000	253.520	410012.25	0.0497	P	3.6
6	☐	500.000	513.094	815835.71	0.1005	P	2.7
7	☐	1000.000	992.985	1629636.40	0.1945	A	4.7
8	☐			2210.19	0.0002	P	10.1

$$y = 1.9584E-004 * x + 8.0739E-006$$

$$R = 0.9999$$

$$DL = 0.01724$$

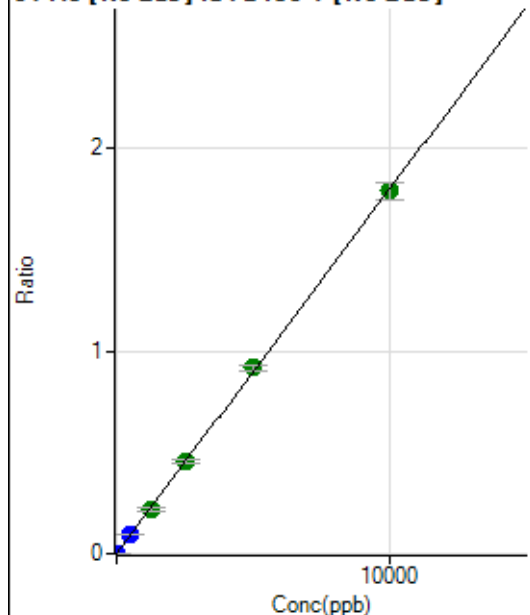
$$BEC = 0.04123$$

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d

94 Mo [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	224.45	0.0000	P	7.4
2	☐	5.000	5.856	9337.50	0.0011	P	8.3
3	☐	500.000	512.712	772931.64	0.0923	P	2.3
4	☐	1250.000	1203.157	1853589.69	0.2166	A	7.9
5	☐	2500.000	2515.873	3739071.96	0.4529	A	3.7
6	☐	5000.000	5093.795	7443586.07	0.9169	A	2.5
7	☐	10000.000	9954.353	15013443.80	1.7917	A	4.8
8	☐			10788.62	0.0011	P	19.6

$$y = 1.7999E-004 * x + 2.7186E-005$$

R = 0.9999

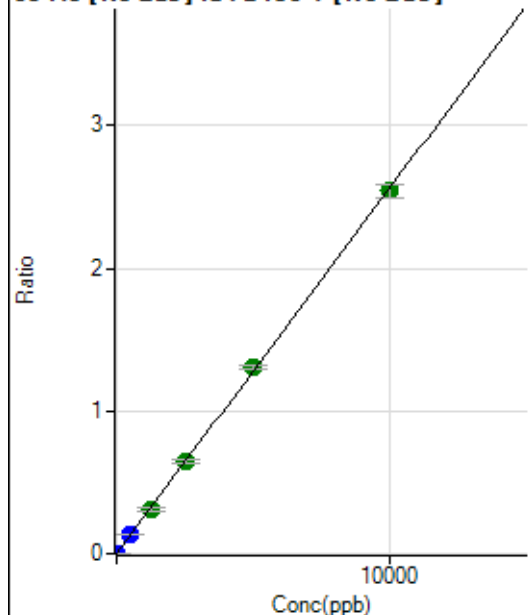
DL = 0.03368

BEC = 0.151

Weight: <None>

Min Conc: <None>

95 Mo [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	175.56	0.0000	P	22.8
2	☐	5.000	4.957	11153.22	0.0013	P	5.7
3	☐	500.000	514.409	1103199.79	0.1317	P	2.0
4	☐	1250.000	1219.048	2671247.64	0.3122	A	8.5
5	☐	2500.000	2529.489	5348679.61	0.6477	A	3.0
6	☐	5000.000	5127.254	10659919.22	1.3130	A	1.9
7	☐	10000.000	9932.149	21314796.07	2.5433	A	3.9
8	☐			12405.59	0.0013	P	23.8

$$y = 2.5607E-004 * x + 2.1269E-005$$

R = 0.9999

DL = 0.0567

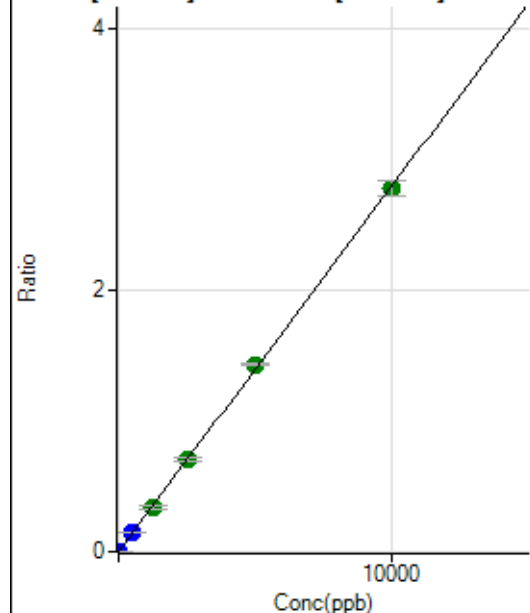
BEC = 0.08306

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d

96 Mo [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.67	0.0000	P	9.0
2	☐	5.000	5.044	12377.56	0.0014	P	9.3
3	☐	500.000	516.888	1210857.63	0.1446	P	2.9
4	☐	1250.000	1227.509	2939668.19	0.3434	A	7.4
5	☐	2500.000	2528.897	5841512.07	0.7075	A	3.4
6	☐	5000.000	5123.876	11637913.30	1.4334	A	1.7
7	☐	10000.000	9932.804	23285361.88	2.7787	A	4.2
8	☐			16576.40	0.0017	P	17.8

$$y = 2.7975E-004 * x + 2.2565E-005$$

R = 0.9999

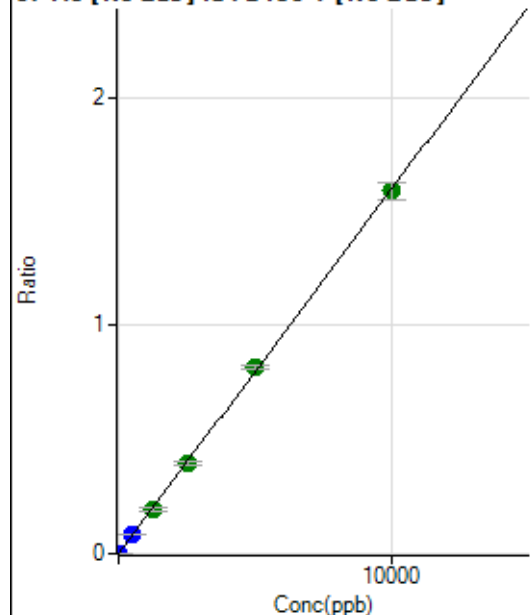
DL = 0.02167

BEC = 0.08066

Weight: <None>

Min Conc: <None>

97 Mo [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	108.89	0.0000	P	13.3
2	☐	5.000	4.841	6799.42	0.0008	P	6.1
3	☐	500.000	519.255	694961.73	0.0830	P	2.7
4	☐	1250.000	1206.273	1649999.47	0.1928	A	8.1
5	☐	2500.000	2489.777	3285644.01	0.3979	A	3.6
6	☐	5000.000	5111.582	6632723.72	0.8170	A	2.0
7	☐	10000.000	9951.268	13325832.58	1.5904	A	4.9
8	☐			7936.75	0.0008	P	23.6

$$y = 1.5982E-004 * x + 1.3170E-005$$

R = 0.9999

DL = 0.03282

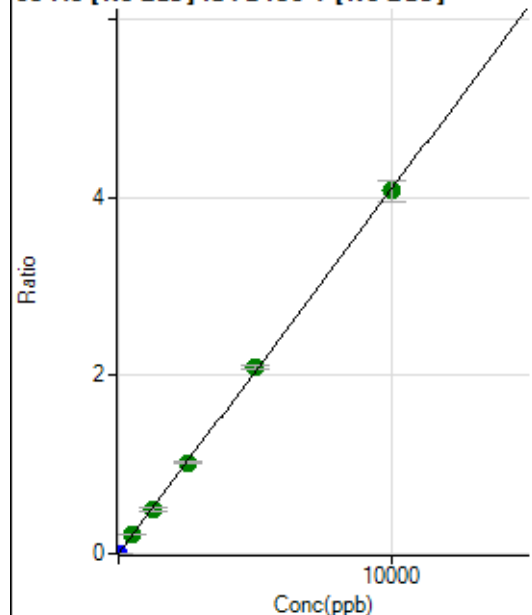
BEC = 0.0824

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d

98 Mo [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	248.89	0.0000	P	4.2
2	☐	5.000	4.872	17486.17	0.0020	P	9.9
3	☐	500.000	515.449	1768090.53	0.2112	A	2.3
4	☐	1250.000	1204.781	4223477.75	0.4935	A	8.1
5	☐	2500.000	2500.421	8456744.53	1.0242	A	3.5
6	☐	5000.000	5103.675	16972289.75	2.0905	A	2.3
7	☐	10000.000	9952.937	34149918.38	4.0768	A	6.1
8	☐			19782.99	0.0021	P	24.3

$$y = 4.0960E-004 * x + 3.0132E-005$$

$$R = 0.9999$$

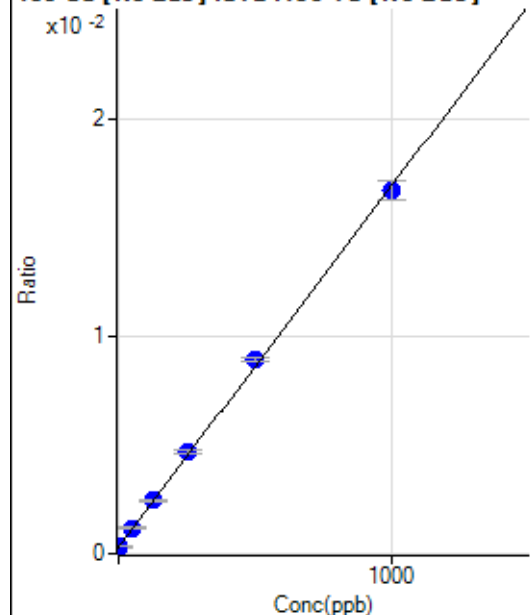
$$DL = 0.009359$$

$$BEC = 0.07356$$

Weight: <None>

Min Conc: <None>

106 Cd [No Gas] ISTD:159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	2010.16	0.0003	P	3.8
2	☐	1.000	1.969	2285.76	0.0003	P	3.8
3	☐	50.000	53.299	7857.75	0.0012	P	2.2
4	☐	125.000	129.433	16416.04	0.0025	P	4.8
5	☐	250.000	262.487	30207.11	0.0047	P	4.4
6	☐	500.000	518.542	57681.95	0.0089	P	2.5
7	☐	1000.000	986.887	112051.16	0.0167	P	5.5
8	☐			2733.62	0.0004	P	1.2

$$y = 1.6627E-005 * x + 3.0790E-004$$

$$R = 0.9997$$

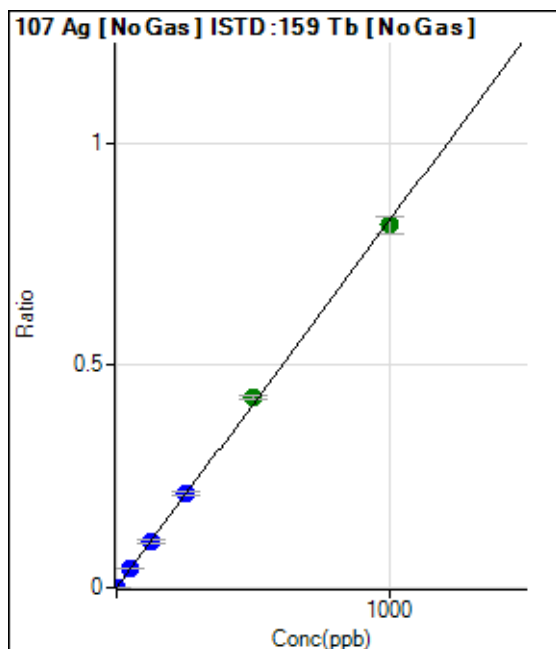
$$DL = 2.092$$

$$BEC = 18.52$$

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	43.33	0.0000	P	29.0
2	☐	1.000	1.050	5849.01	0.0009	P	7.2
3	☐	50.000	53.123	288694.78	0.0439	P	2.3
4	☐	125.000	126.239	694853.68	0.1042	P	7.9
5	☐	250.000	258.672	1381040.90	0.2136	P	4.0
6	☐	500.000	518.726	2766888.33	0.4283	A	2.3
7	☐	1000.000	988.158	5469301.52	0.8159	A	5.1
8	☐			2630.27	0.0003	P	26.2

$$y = 8.2570E-004 * x + 6.6179E-006$$

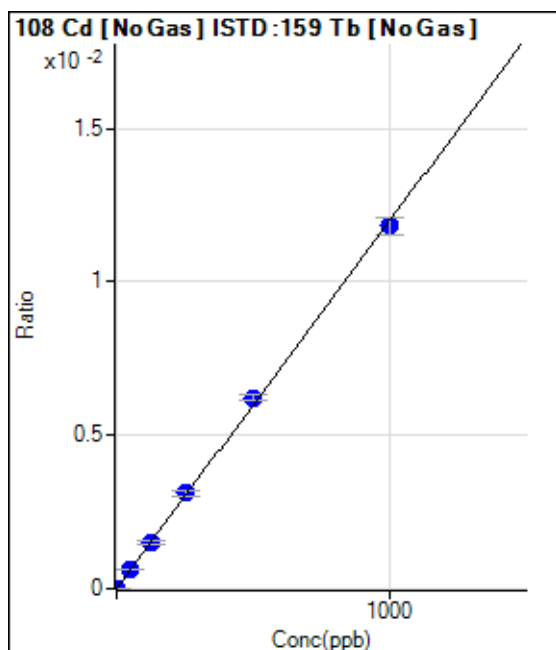
$$R = 0.9997$$

$$DL = 0.006972$$

$$BEC = 0.008015$$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	4.44	0.0000	P	44.1
2	☐	1.000	1.174	98.89	0.0000	P	14.1
3	☐	50.000	53.080	4188.42	0.0006	P	4.6
4	☐	125.000	126.411	10100.28	0.0015	P	7.4
5	☐	250.000	259.860	20121.87	0.0031	P	6.3
6	☐	500.000	520.338	40268.23	0.0062	P	2.9
7	☐	1000.000	987.036	79264.68	0.0118	P	4.7
8	☐			73.33	0.0000	P	12.5

$$y = 1.1979E-005 * x + 6.8202E-007$$

$$R = 0.9996$$

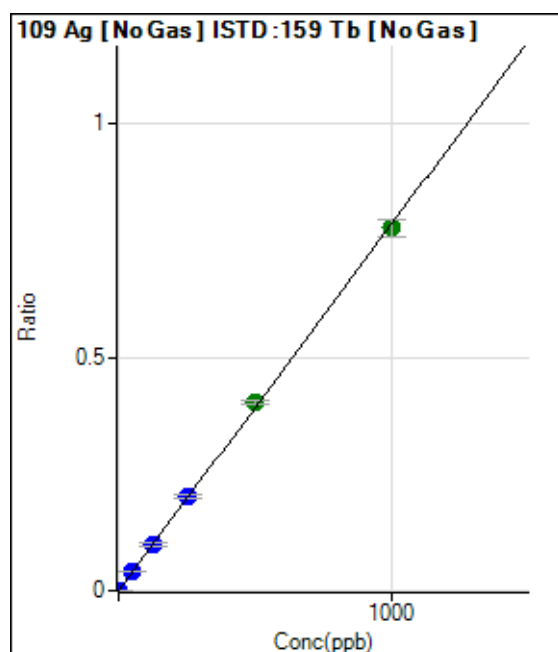
$$DL = 0.07529$$

$$BEC = 0.05694$$

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	27.78	0.0000	P	4.6
2	☐	1.000	1.038	5487.77	0.0008	P	7.0
3	☐	50.000	53.033	274018.32	0.0416	P	1.7
4	☐	125.000	125.631	657433.65	0.0986	P	8.1
5	☐	250.000	257.009	1304421.79	0.2018	P	5.0
6	☐	500.000	515.864	2616355.20	0.4050	A	1.8
7	☐	1000.000	990.085	5210472.87	0.7773	A	5.0
8	☐			2388.00	0.0003	P	23.5

$$y = 7.8508E-004 * x + 4.2525E-006$$

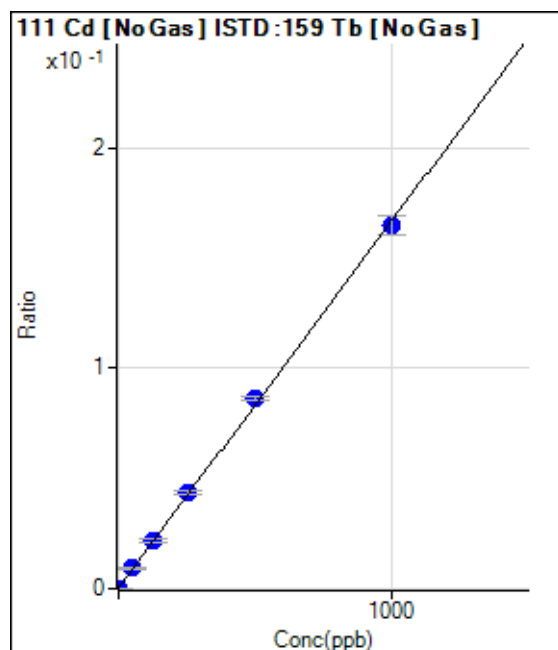
$$R = 0.9998$$

$$DL = 0.0007486$$

$$BEC = 0.005417$$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1410.67	0.0002	P	3.8
2	☐	1.000	0.986	2547.52	0.0004	P	7.0
3	☐	50.000	53.757	60314.49	0.0092	P	2.1
4	☐	125.000	128.129	143649.07	0.0215	P	7.5
5	☐	250.000	260.982	282315.28	0.0437	P	4.2
6	☐	500.000	518.444	558949.17	0.0865	P	2.3
7	☐	1000.000	987.454	1103365.66	0.1646	P	5.5
8	☐			2597.78	0.0003	P	6.1

$$y = 1.6648E-004 * x + 2.1606E-004$$

$$R = 0.9997$$

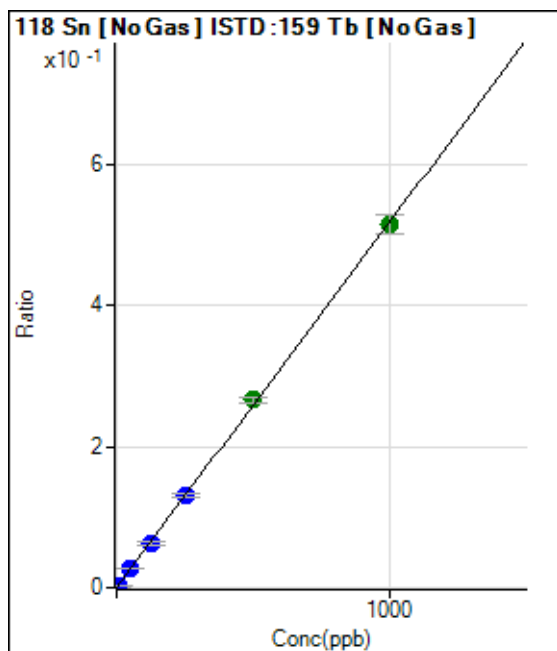
$$DL = 0.1488$$

$$BEC = 1.298$$

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	963.38	0.0001	P	10.9
2	☐	5.000	4.887	17919.01	0.0027	P	6.5
3	☐	50.000	51.609	176634.23	0.0268	P	1.5
4	☐	125.000	122.447	423019.37	0.0635	P	8.6
5	☐	250.000	251.966	843405.26	0.1305	P	5.1
6	☐	500.000	513.395	1716200.58	0.2657	A	3.1
7	☐	1000.000	993.050	3443793.35	0.5138	A	5.3
8	☐			3512.69	0.0005	P	17.6

$$y = 5.1721\text{E-}004 * x + 1.4779\text{E-}004$$

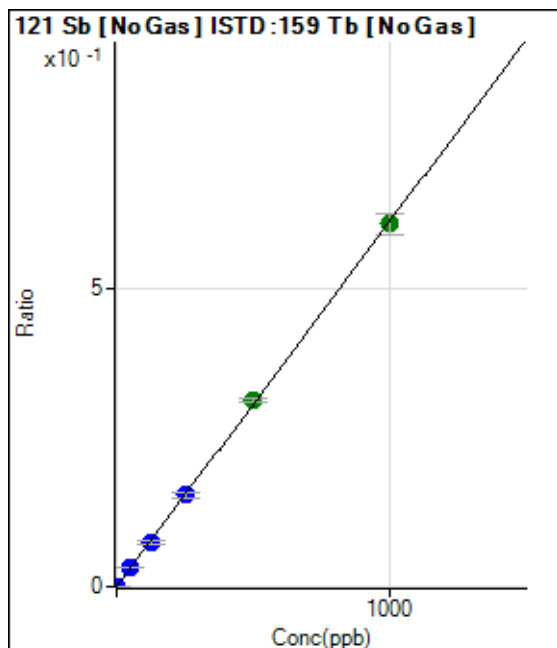
R = 0.9999

DL = 0.09342

BEC = 0.2857

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18.89	0.0000	P	34.4
2	☐	2.000	2.011	8278.00	0.0012	P	6.7
3	☐	50.000	51.611	208353.91	0.0317	P	1.5
4	☐	125.000	122.441	500760.45	0.0751	P	7.2
5	☐	250.000	251.500	997270.23	0.1543	P	5.3
6	☐	500.000	511.159	2025626.91	0.3135	A	1.6
7	☐	1000.000	994.285	4087603.62	0.6099	A	6.0
8	☐			4977.57	0.0006	P	13.0

$$y = 6.1339\text{E-}004 * x + 2.8801\text{E-}006$$

R = 0.9999

DL = 0.004847

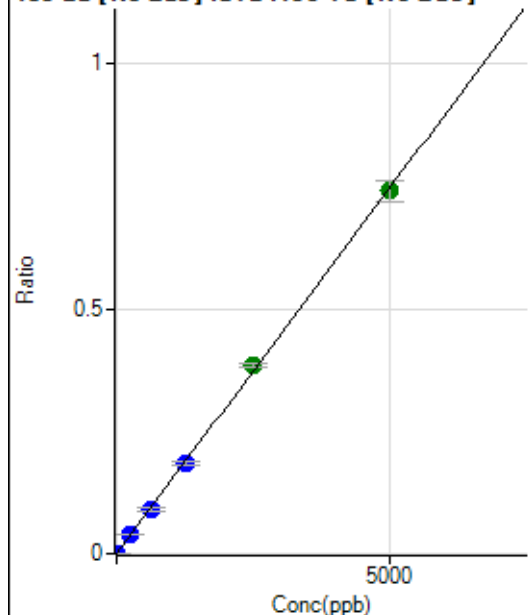
BEC = 0.004695

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d

135 Ba [No Gas] ISTD :159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	52.22	0.0000	P	52.0
2	☐	10.000	9.466	9509.93	0.0014	P	7.6
3	☐	250.000	253.891	249338.82	0.0379	P	2.1
4	☐	625.000	602.274	599166.08	0.0899	P	7.4
5	☐	1250.000	1241.967	1198110.50	0.1853	P	4.6
6	☐	2500.000	2580.925	2487620.62	0.3851	A	2.5
7	☐	5000.000	4964.193	4964339.79	0.7407	A	6.1
8	☐			10323.85	0.0013	P	12.0

$$y = 1.4920E-004 * x + 8.0440E-006$$

$$R = 0.9998$$

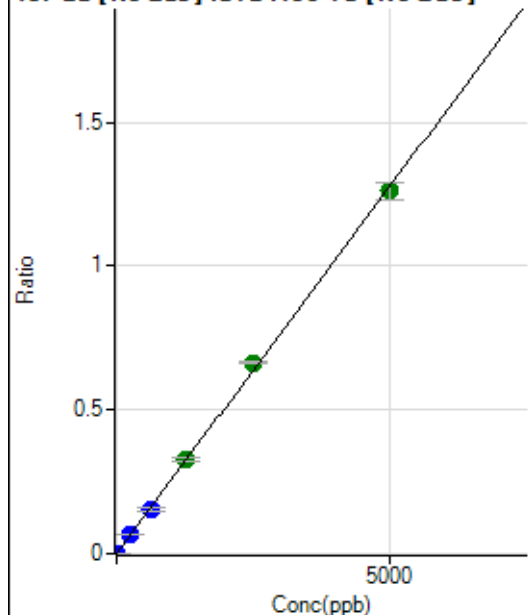
$$DL = 0.08415$$

$$BEC = 0.05391$$

Weight: <None>

Min Conc: <None>

137 Ba [No Gas] ISTD :159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	64.44	0.0000	P	23.6
2	☐	10.000	9.703	16638.76	0.0025	P	8.1
3	☐	250.000	258.640	434353.01	0.0660	P	1.7
4	☐	625.000	610.999	1039277.21	0.1559	P	7.8
5	☐	1250.000	1278.928	2109800.58	0.3263	A	4.6
6	☐	2500.000	2599.508	4285206.64	0.6633	A	1.3
7	☐	5000.000	4944.332	8457363.49	1.2616	A	4.9
8	☐			18341.99	0.0024	P	7.5

$$y = 2.5516E-004 * x + 9.8662E-006$$

$$R = 0.9997$$

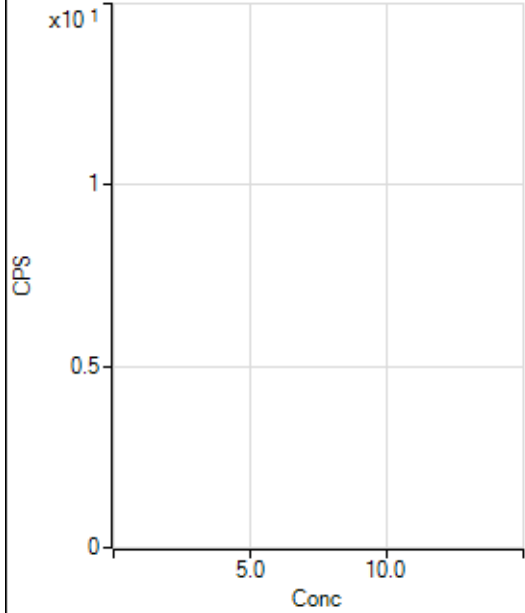
$$DL = 0.02733$$

$$BEC = 0.03867$$

Weight: <None>

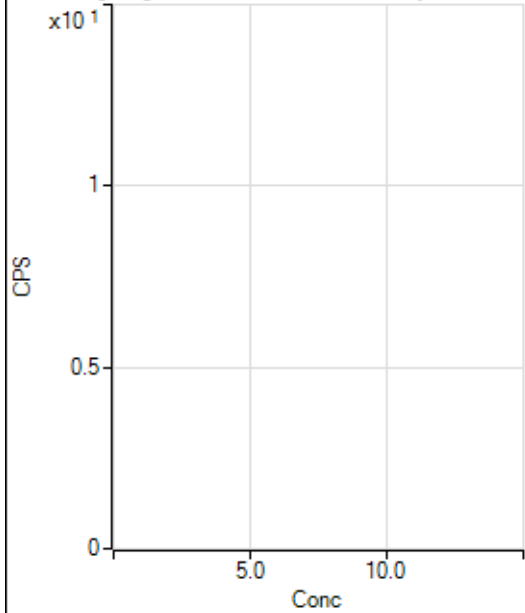
Min Conc: <None>

150 Nd [No Gas] No available calibration points

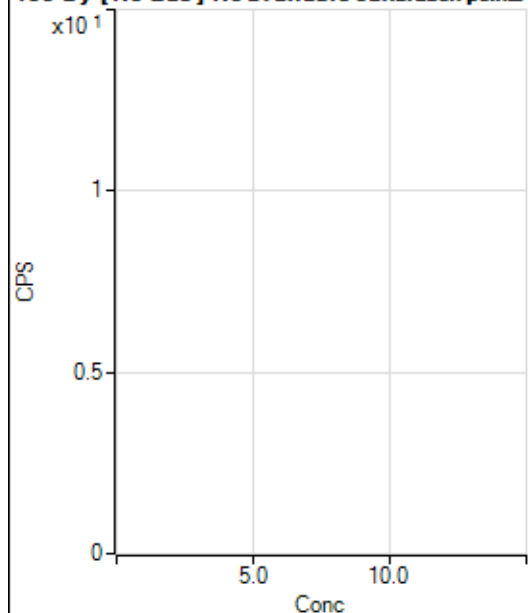


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	43.4
2	☐			3.33		P	100.
3	☐			12.22		P	41.7
4	☐			26.67		P	45.1
5	☐			52.22		P	35.2
6	☐			98.89		P	7.8
7	☐			181.12		P	5.9
8	☐			127.78		P	38.0

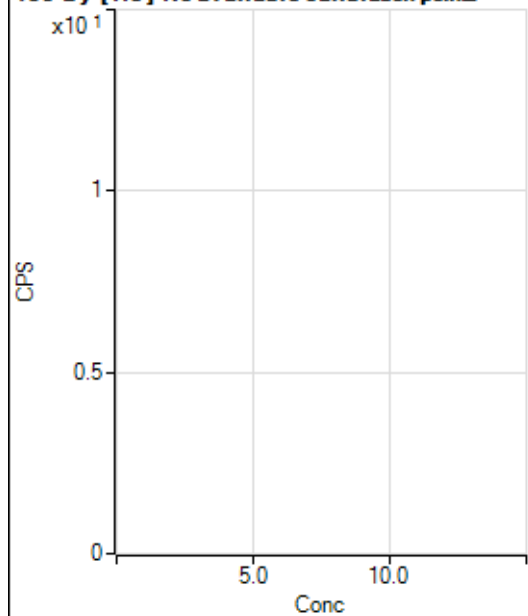
150 Nd [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	173.
2	☐			4.45		P	86.6
3	☐			7.78		P	107.
4	☐			5.56		P	91.6
5	☐			20.00		P	44.1
6	☐			22.22		P	17.3
7	☐			78.89		P	20.8
8	☐			66.67		P	18.0

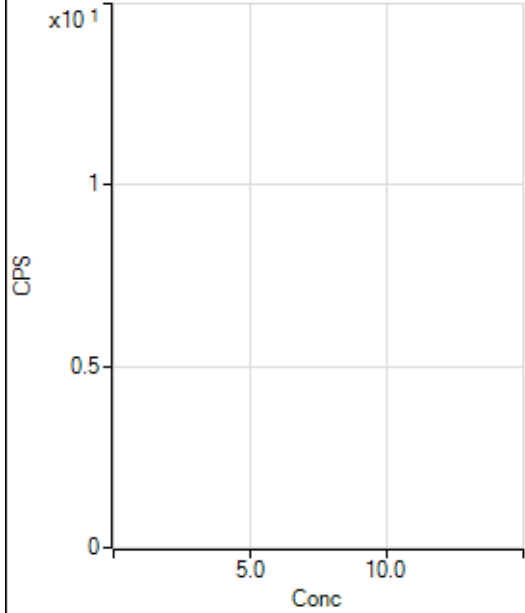
156 Dy [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			6.67		P	50.0
2	☐			5.56		P	34.7
3	☐			6.67		P	86.6
4	☐			14.45		P	26.7
5	☐			37.78		P	28.4
6	☐			68.89		P	24.4
7	☐			110.00		P	21.9
8	☐			247.78		P	18.3

156 Dy [He] No available calibration points

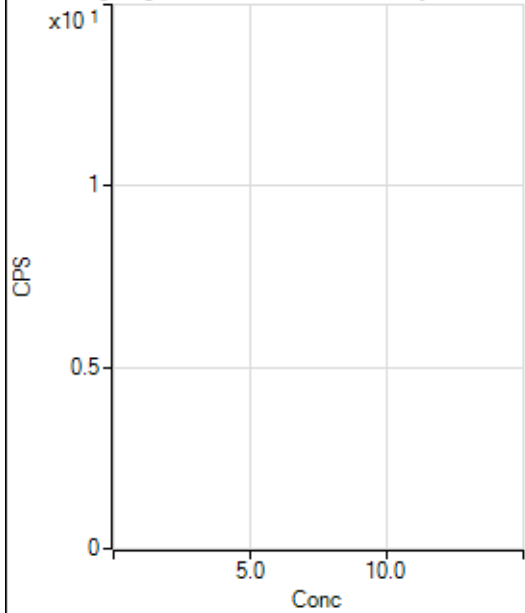
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			7.78		P	24.7
2	☐			1.11		P	173.
3	☐			26.67		P	45.1
4	☐			58.89		P	25.5
5	☐			118.89		P	19.7
6	☐			187.78		P	29.9
7	☐			371.12		P	8.5
8	☐			267.78		P	9.5

160 Gd [No Gas] Noavailable calibration poin...



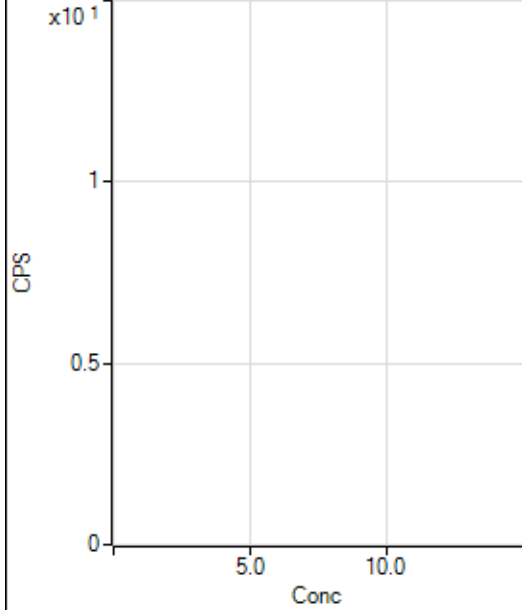
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			58.89		P	8.6
2	☐			46.67		P	37.8
3	☐			45.56		P	25.7
4	☐			48.89		P	34.3
5	☐			62.22		P	17.2
6	☐			72.22		P	2.7
7	☐			127.78		P	6.6
8	☐			328.89		P	7.1

160 Gd [He] No available calibration points



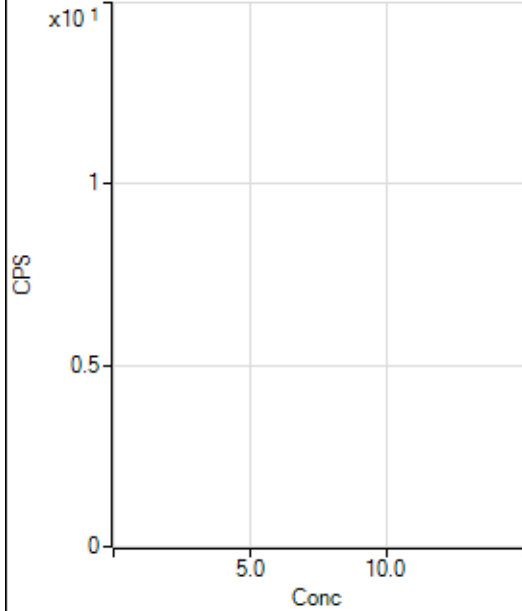
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			373.34		P	10.1
2	☐			435.57		P	8.9
3	☐			400.01		P	8.5
4	☐			426.68		P	2.8
5	☐			382.23		P	4.8
6	☐			438.90		P	8.9
7	☐			454.46		P	5.4
8	☐			635.58		P	3.2

164 Er [No Gas] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			27.78		P	13.9
2	☐			37.78		P	25.5
3	☐			52.22		P	9.7
4	☐			73.33		P	13.6
5	☐			67.78		P	30.1
6	☐			122.22		P	21.9
7	☐			192.23		P	16.7
8	☐			598.91		P	6.7

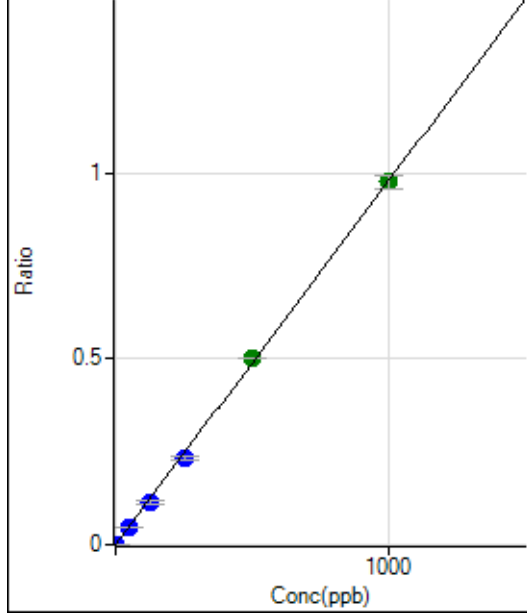
164 Er [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			20.00		P	33.4
2	☐			20.00		P	33.4
3	☐			31.11		P	16.4
4	☐			34.44		P	14.8
5	☐			38.89		P	42.3
6	☐			67.78		P	24.3
7	☐			133.34		P	18.9
8	☐			411.12		P	5.7

Calibration for 023SMPL.d

203 Tl [No Gas] ISTD :209 Bi [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	197.78	0.0000	P	21.2
2	☐	1.000	0.959	4354.08	0.0010	P	9.6
3	☐	50.000	48.645	203444.57	0.0477	P	1.9
4	☐	125.000	116.722	490930.93	0.1143	P	7.6
5	☐	250.000	239.383	985286.98	0.2344	P	4.5
6	☐	500.000	512.190	2110727.56	0.5014	A	0.6
7	☐	1000.000	997.662	4217108.65	0.9766	A	3.9
8	☐			6250.39	0.0014	P	5.4

$$y = 9.7888E-004 * x + 4.7025E-005$$

$$R = 0.9998$$

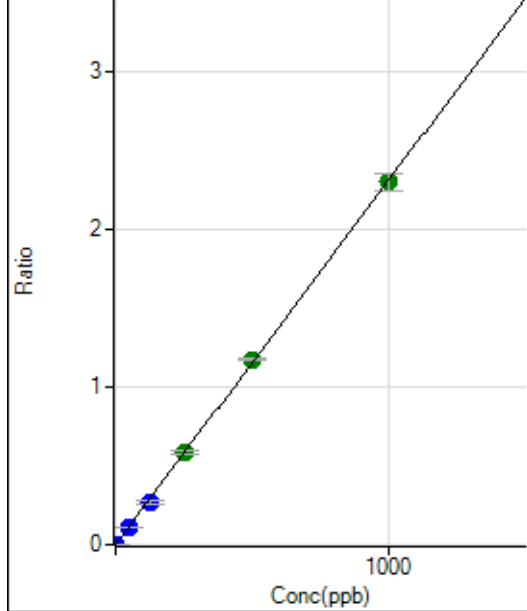
$$DL = 0.03056$$

$$BEC = 0.04804$$

Weight: <None>

Min Conc: <None>

205 Tl [No Gas] ISTD :209 Bi [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	478.90	0.0001	P	5.3
2	☐	1.000	0.956	10238.39	0.0023	P	8.2
3	☐	50.000	48.797	480730.88	0.1126	P	1.9
4	☐	125.000	116.716	1156134.48	0.2692	P	8.1
5	☐	250.000	251.695	2440383.30	0.5805	A	4.1
6	☐	500.000	509.225	4942991.01	1.1743	A	1.3
7	☐	1000.000	996.060	9917002.63	2.2968	A	5.1
8	☐			14678.06	0.0032	P	7.5

$$y = 0.0023 * x + 1.1421E-004$$

$$R = 0.9999$$

$$DL = 0.007806$$

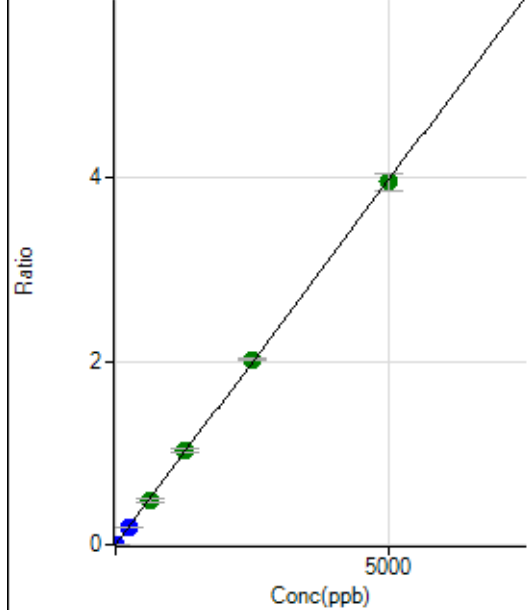
$$BEC = 0.04953$$

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d

206 [Pb] [No Gas] ISTD :209 Bi [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	526.68	0.0001	P	6.8
2	☐	1.000	0.836	3490.49	0.0008	P	7.6
3	☐	250.000	244.881	831042.93	0.1947	P	2.4
4	☐	625.000	605.620	2067392.31	0.4814	A	7.7
5	☐	1250.000	1281.354	4281137.82	1.0183	A	4.0
6	☐	2500.000	2541.567	8501286.68	2.0197	A	1.1
7	☐	5000.000	4974.056	17067371.00	3.9526	A	5.0
8	☐			9437.93	0.0021	P	21.9

$$y = 7.9461E-004 * x + 1.2541E-004$$

$$R = 0.9999$$

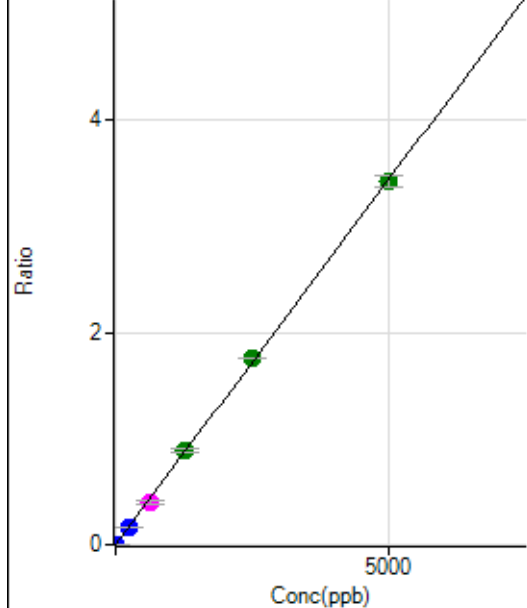
$$DL = 0.03233$$

$$BEC = 0.1578$$

Weight: <None>

Min Conc: <None>

207 [Pb] [No Gas] ISTD :209 Bi [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	436.68	0.0001	P	2.2
2	☐	1.000	0.783	2838.11	0.0006	P	11.6
3	☐	250.000	244.287	717499.96	0.1681	P	2.4
4	☐	625.000	585.935	1730602.32	0.4031	M	8.6
5	☐	1250.000	1284.520	3713833.56	0.8835	A	5.0
6	☐	2500.000	2551.353	7387132.32	1.7548	A	0.2
7	☐	5000.000	4970.862	14762539.23	3.4188	A	3.2
8	☐			8232.67	0.0018	P	23.1

$$y = 6.8774E-004 * x + 1.0408E-004$$

$$R = 0.9998$$

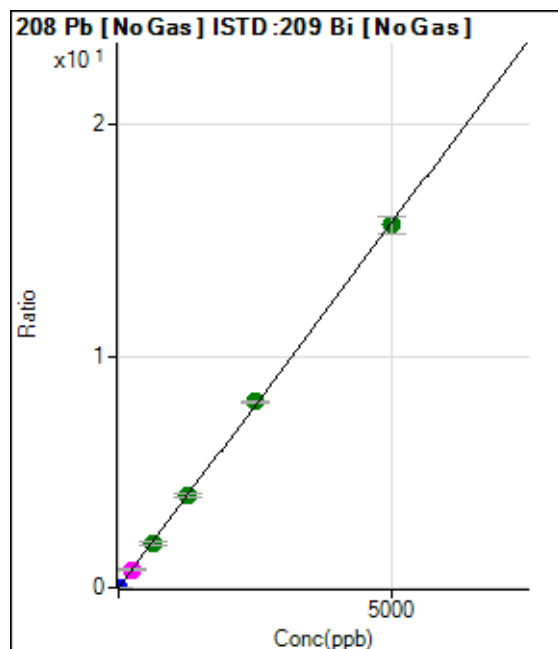
$$DL = 0.0101$$

$$BEC = 0.1513$$

Weight: <None>

Min Conc: <None>

Calibration for 023SMPL.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	2064.53	0.0005	P	5.0
2	☐	1.000	0.808	13430.53	0.0030	P	7.9
3	☐	250.000	246.624	3321897.38	0.7783	M	3.6
4	☐	625.000	604.722	8191807.73	1.9078	A	8.3
5	☐	1250.000	1271.678	16864781.94	4.0114	A	3.9
6	☐	2500.000	2547.096	33820650.68	8.0341	A	0.3
7	☐	5000.000	4973.736	67738434.41	15.6878	A	4.5
8	☐			37357.77	0.0081	P	22.6

$$y = 0.0032 * x + 4.9176E-004$$

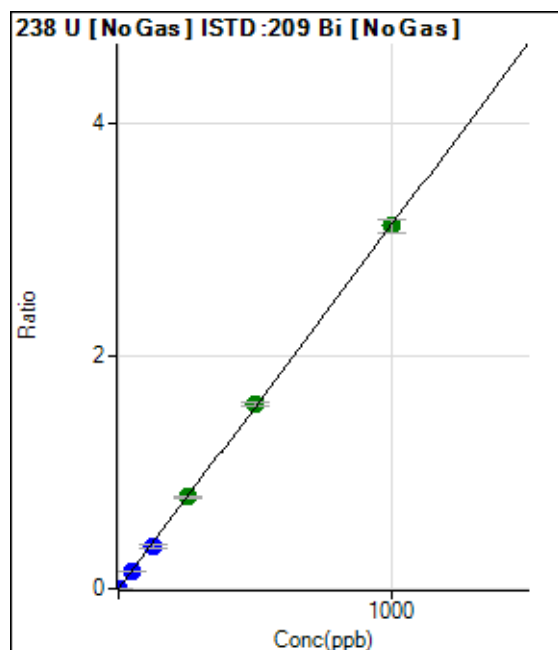
$$R = 0.9999$$

$$DL = 0.02337$$

$$BEC = 0.1559$$

Weight: <None>

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	13.33	0.0000	P	44.5
2	☐	1.000	0.908	12534.92	0.0028	P	9.9
3	☐	50.000	48.080	640543.37	0.1501	P	2.7
4	☐	125.000	114.901	1540114.89	0.3587	P	8.2
5	☐	250.000	251.681	3303180.23	0.7856	A	3.2
6	☐	500.000	506.681	6656764.20	1.5816	A	1.6
7	☐	1000.000	997.598	13447436.19	3.1140	A	4.0
8	☐			4180.78	0.0009	P	40.6

$$y = 0.0031 * x + 3.1883E-006$$

$$R = 0.9999$$

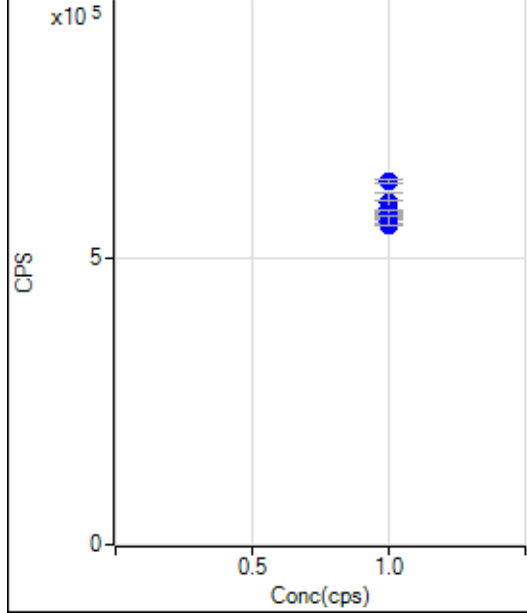
$$DL = 0.001364$$

$$BEC = 0.001021$$

Weight: <None>

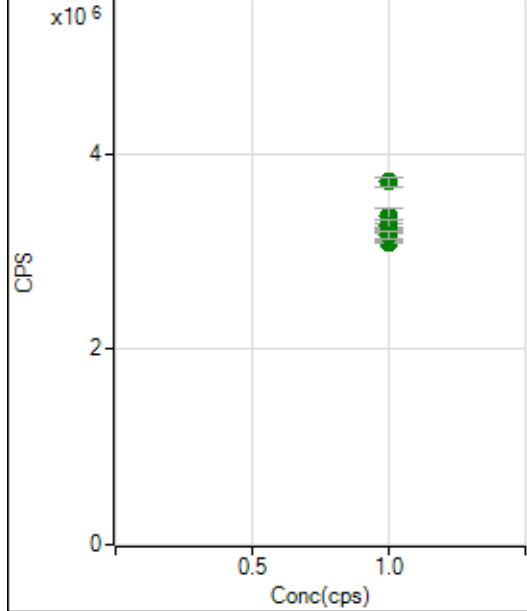
Min Conc: <None>

6 Li (ISTD) [No Gas]



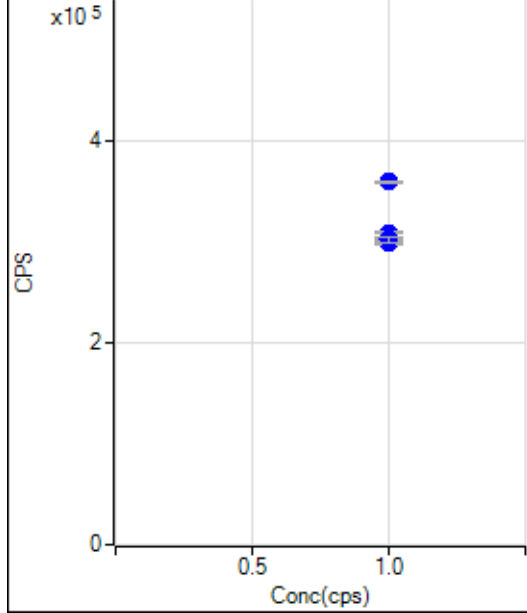
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		567746.53		P	1.5
2	☐	1.000		599344.23		P	5.1
3	☐	1.000		580194.55		P	1.1
4	☐	1.000		587157.88		P	5.0
5	☐	1.000		577299.18		P	2.7
6	☐	1.000		559274.24		P	0.5
7	☐	1.000		565974.94		P	2.8
8	☐	1.000		634750.03		P	1.1

45 Sc (ISTD) [No Gas]



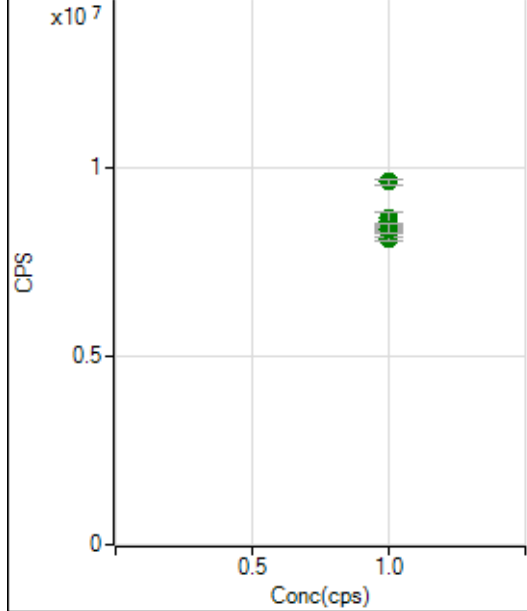
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3188525.99		A	3.7
2	☐	1.000		3368166.76		A	4.5
3	☐	1.000		3246244.95		A	0.7
4	☐	1.000		3261118.49		A	4.5
5	☐	1.000		3160852.97		A	3.3
6	☐	1.000		3101106.62		A	0.3
7	☐	1.000		3166379.15		A	2.5
8	☐	1.000		3715298.21		A	2.6

45 Sc (ISTD) [He]



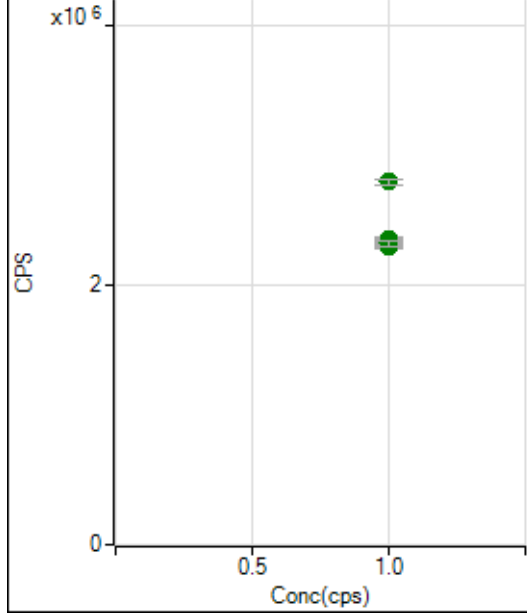
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		303255.81		P	0.3
2	☐	1.000		303133.52		P	0.8
3	☐	1.000		308567.33		P	0.6
4	☐	1.000		303049.31		P	0.9
5	☐	1.000		301088.65		P	0.7
6	☐	1.000		297805.68		P	0.7
7	☐	1.000		301441.62		P	1.8
8	☐	1.000		358795.83		P	0.7

89 Y (ISTD) [No Gas]



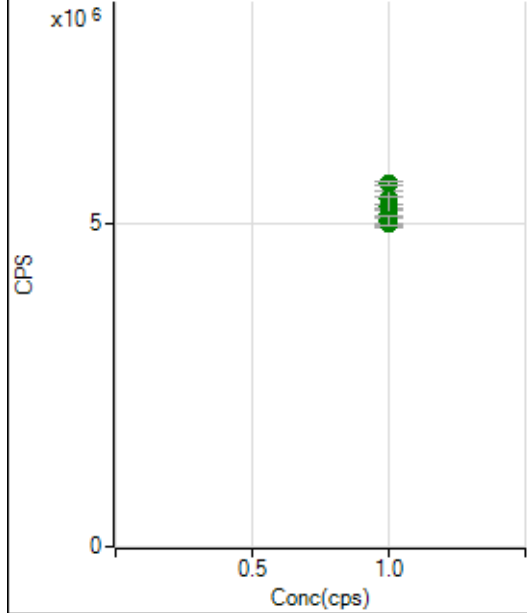
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8263787.94		A	1.9
2	☐	1.000		8657606.19		A	4.6
3	☐	1.000		8375228.56		A	1.6
4	☐	1.000		8582301.96		A	5.3
5	☐	1.000		8260418.90		A	1.9
6	☐	1.000		8120281.55		A	1.3
7	☐	1.000		8386210.57		A	2.8
8	☐	1.000		9634297.01		A	1.3

89 Y(ISTD) [He]



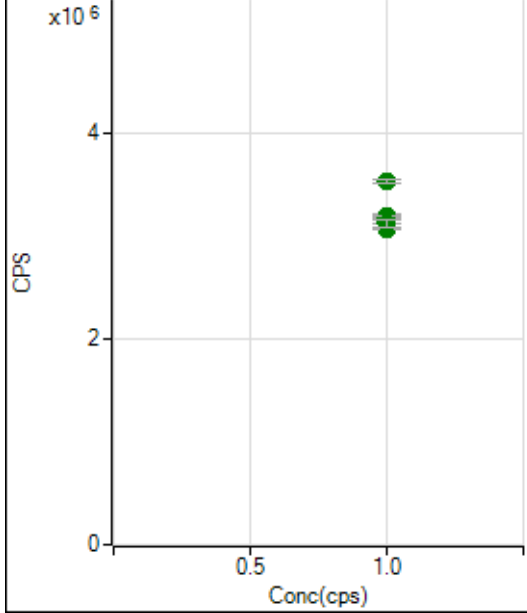
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2298668.89		A	0.6
2	☐	1.000		2360839.29		A	1.2
3	☐	1.000		2351911.25		A	0.9
4	☐	1.000		2300896.84		A	1.7
5	☐	1.000		2323643.56		A	0.9
6	☐	1.000		2302657.47		A	0.9
7	☐	1.000		2325377.01		A	1.9
8	☐	1.000		2799623.88		A	1.3

103 Rh(ISTD) [No Gas]



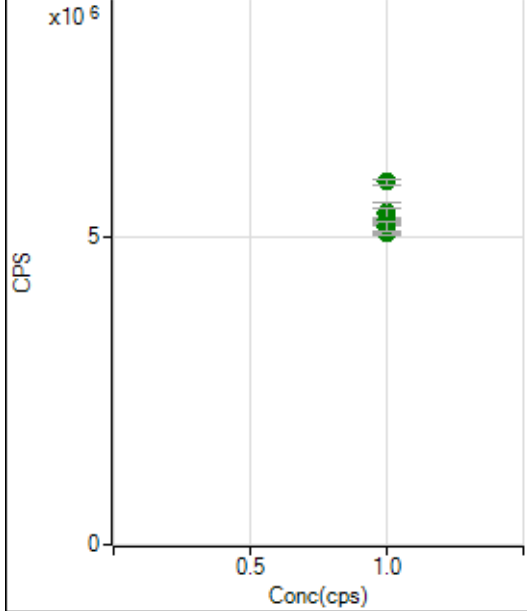
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5145889.92		A	2.1
2	☐	1.000		5388011.03		A	4.2
3	☐	1.000		5226269.47		A	0.3
4	☐	1.000		5249235.90		A	6.5
5	☐	1.000		5006687.91		A	3.2
6	☐	1.000		4980200.83		A	0.6
7	☐	1.000		5037274.72		A	2.9
8	☐	1.000		5605247.35		A	1.1

103 Rh (ISTD) [He]



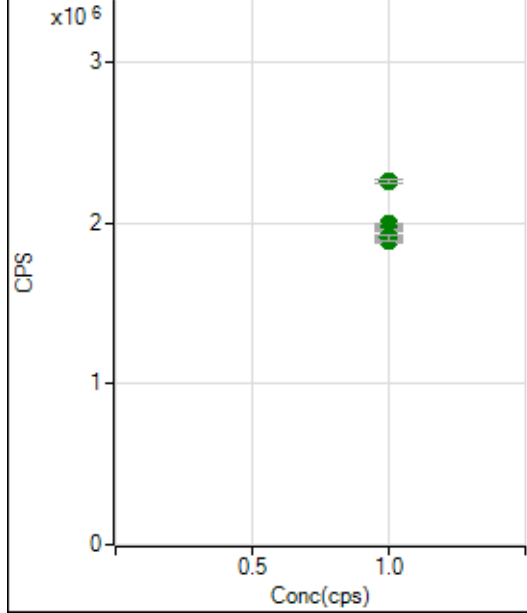
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3178007.69		A	0.6
2	☐	1.000		3193447.31		A	1.0
3	☐	1.000		3208810.82		A	1.1
4	☐	1.000		3149842.10		A	1.3
5	☐	1.000		3182031.34		A	1.3
6	☐	1.000		3073661.73		A	0.7
7	☐	1.000		3126472.18		A	2.1
8	☐	1.000		3531644.74		A	1.1

115 In (ISTD) [No Gas]



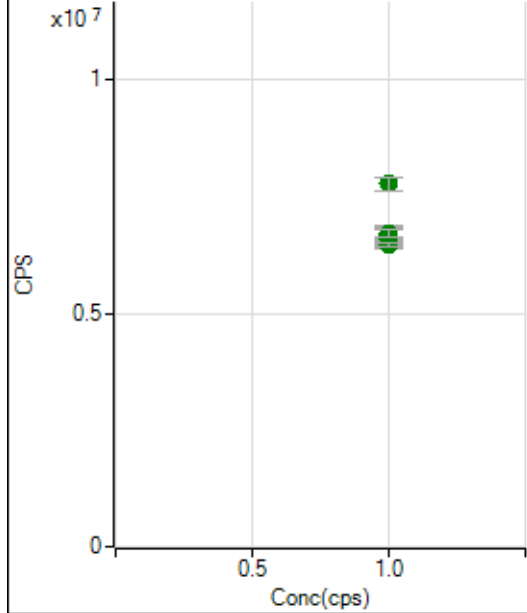
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5255259.92		A	1.9
2	☐	1.000		5409838.00		A	5.5
3	☐	1.000		5273363.83		A	0.7
4	☐	1.000		5354763.46		A	4.4
5	☐	1.000		5144251.82		A	1.6
6	☐	1.000		5043647.92		A	1.1
7	☐	1.000		5169108.20		A	2.9
8	☐	1.000		5890255.63		A	1.7

115 In (ISTD) [He]



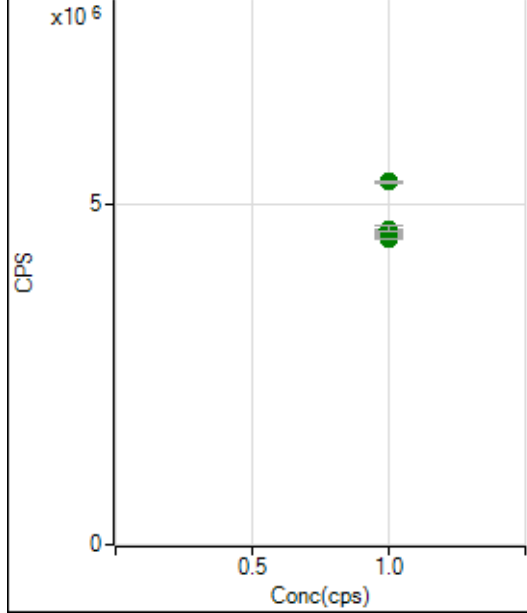
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1973848.19		A	0.6
2	☐	1.000		1967766.30		A	0.7
3	☐	1.000		1995612.57		A	0.9
4	☐	1.000		1931364.78		A	1.8
5	☐	1.000		1958537.94		A	0.6
6	☐	1.000		1893379.83		A	1.7
7	☐	1.000		1911665.61		A	2.2
8	☐	1.000		2259243.26		A	1.0

159 Tb (ISTD) [No Gas]



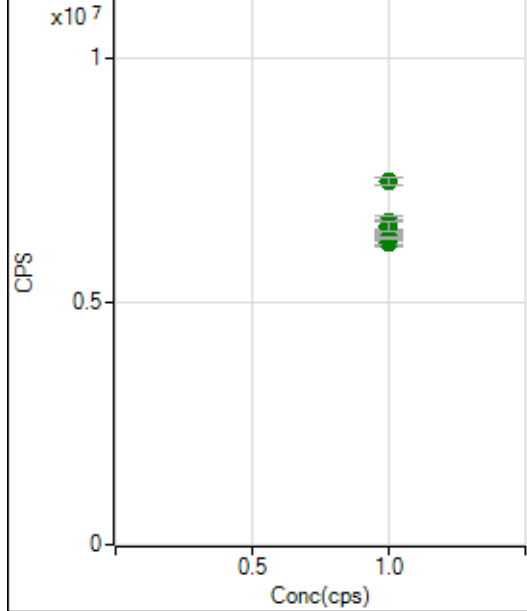
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6528249.49		A	2.4
2	☐	1.000		6710342.75		A	4.5
3	☐	1.000		6581451.15		A	1.0
4	☐	1.000		6685118.86		A	5.5
5	☐	1.000		6470873.37		A	2.9
6	☐	1.000		6461128.03		A	1.4
7	☐	1.000		6709278.72		A	2.7
8	☐	1.000		7776075.09		A	3.4

159 Tb (ISTD) [He]



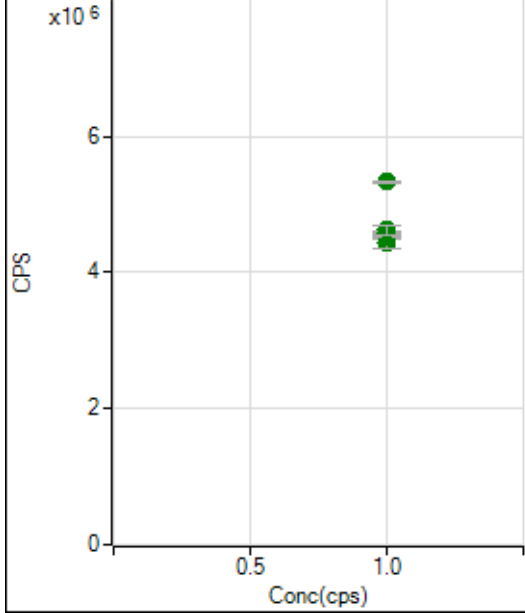
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4514873.23		A	0.8
2	☐	1.000		4592153.16		A	0.3
3	☐	1.000		4595432.81		A	1.8
4	☐	1.000		4564375.70		A	2.3
5	☐	1.000		4532517.33		A	0.9
6	☐	1.000		4502762.05		A	0.2
7	☐	1.000		4646819.17		A	1.7
8	☐	1.000		5334633.32		A	0.3

165 Ho (ISTD) [No Gas]



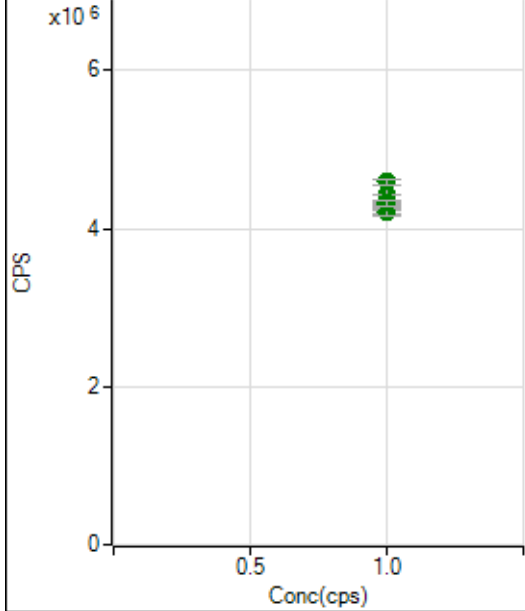
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6235577.06		A	3.0
2	☐	1.000		6634235.18		A	4.0
3	☐	1.000		6379922.20		A	0.7
4	☐	1.000		6541118.86		A	4.1
5	☐	1.000		6217848.52		A	1.5
6	☐	1.000		6296508.80		A	0.3
7	☐	1.000		6545274.69		A	2.6
8	☐	1.000		7457896.62		A	2.3

165 Ho (ISTD) [He]

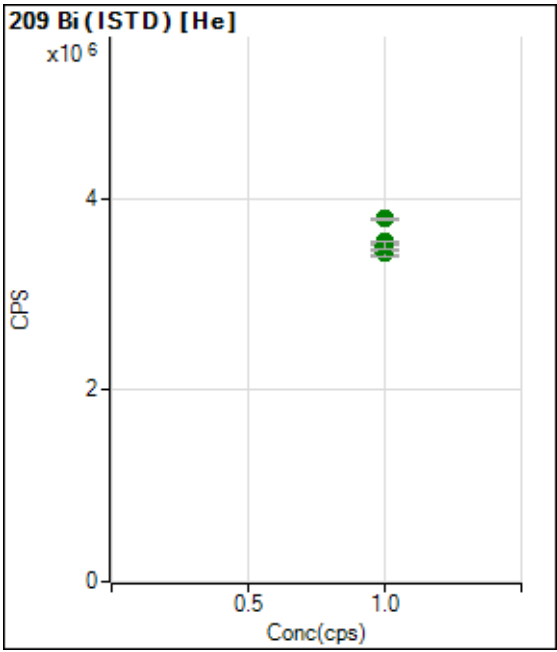


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4507401.77		A	0.9
2	☐	1.000		4567723.51		A	1.5
3	☐	1.000		4588406.88		A	1.1
4	☐	1.000		4426625.49		A	3.6
5	☐	1.000		4576505.14		A	1.0
6	☐	1.000		4508774.34		A	0.1
7	☐	1.000		4625350.94		A	2.8
8	☐	1.000		5330084.54		A	0.4

209 Bi (ISTD) [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4195962.78		A	1.9
2	☐	1.000		4429515.07		A	4.9
3	☐	1.000		4269137.75		A	1.6
4	☐	1.000		4306911.53		A	5.5
5	☐	1.000		4206486.71		A	2.2
6	☐	1.000		4209837.44		A	2.2
7	☐	1.000		4319079.62		A	1.4
8	☐	1.000		4589066.74		A	1.7



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3492753.01		A	2.3
2	☐	1.000		3481715.74		A	0.2
3	☐	1.000		3552698.56		A	0.5
4	☐	1.000		3436838.11		A	1.2
5	☐	1.000		3496540.82		A	0.7
6	☐	1.000		3428097.07		A	1.5
7	☐	1.000		3514758.25		A	2.2
8	☐	1.000		3790732.31		A	0.8

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US EPA Tune Check Report

Reviewed By:janvi
On:10/8/2025 11:5
AM
Inst Id :P7
LB :LB137449

Operator Name Jaswal

Acq/Data Batch D:\Agilent\ICPMH\1\DATA\P7100725 MS.b

Acq. Date-Time 2025-10-07 16:08:23

Report Comment ---

Instrument Name G8403A JP14410463

[No Gas]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9		4878	48779.82			0.293	5.000
24		55075	550753.82			0.466	5.000
25		7470	74698.12			0.652	5.000
26		9254	92535.71			0.691	5.000
59		66581	665807.35			0.286	5.000
113		7966	79659.04			0.650	5.000
115		94332	943321.05			0.379	5.000
206		20236	202358.41			0.880	5.000
207		17508	175084.04			0.599	5.000
208		42274	422743.23			0.997	5.000
220		0	2.40			27.163	

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
113	
115	
206	
207	
208	
220	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	4880	4895	4856	4875	4883
24	54739	54870	55197	55237	55335
25	7416	7429	7497	7473	7535
26	9142	9270	9268	9300	9287
59	66260	66557	66726	66697	66663
113	8027	7988	7892	7984	7938
115	93720	94379	94388	94586	94588
206	20093	20178	20120	20535	20253
207	17444	17416	17438	17606	17638
208	41696	42231	42093	42772	42580

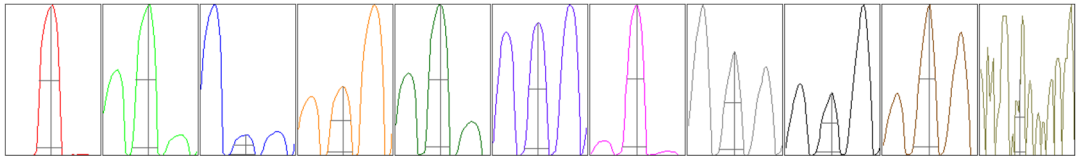
US EPA Tune Check Report

Reviewed By:janvi
On:10/8/2025 11:5
AM
Inst Id :P7
LB :LB137449

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
220	0	0	0	0	0

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	8170.34	8.95	8.90 - 9.10	
24	93772.42	23.95	23.90 - 24.10	
25	12537.20	24.95	24.90 - 25.10	
26	14594.17	25.95	25.90 - 26.10	
59	113173.88	58.95	58.90 - 59.10	
113	14905.15	112.95	112.90 - 113.10	
115	178834.11	115.00	114.90 - 115.10	
206	40779.33	206.00	205.90 - 206.10	
207	35236.16	207.00	206.90 - 207.10	
208	85081.88	208.00	207.90 - 208.10	
220	0.35	219.80	-	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.63	0.787	0.900	
24	0.63	0.805	0.900	
25	0.63	0.787	0.900	
26	0.65	0.789	0.900	
59	0.62	0.780	0.900	
113	0.54	0.774	0.900	
115	0.53	0.763	0.900	
206	0.52	0.779	0.900	
207	0.52	0.748	0.900	
208	0.51	0.801	0.900	
220	0.30	0.345		

Integration Time [sec] 0.1
Acquisition Time [sec] 256.770000000002
Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode --- Nebulizer Gas 0.87 L/min Dilution Gas 0.40 L/min

US EPA Tune Check Report

Reviewed By:janvi
On:10/8/2025 11:5
AM
Inst Id :P7
LB :LB137449

RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0
Sample Depth	9.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.7 V	Deflect	15.4 V
Extract 2	-150.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-75 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	190 V		

QP Parameters

Mass Gain	138	Axis Gain	0.9978	QP Bias	-3.0 V
Mass Offset	128	Axis Offset	0.08		

Hardware Settings

Torch

Torch H	-1.7 mm	Torch V	0.2 mm
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EM

Discriminator	4.8 mV	Analog HV	2290 V	Pulse HV	1215 V
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[He]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
59		22880	228798.36			0.933	
89		60468	604675.90			0.420	
205		22434	224337.99			1.366	

Mass	RSD% (Flag)
59	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	23212	22938	22646	22771	22831
89	60873	60414	60224	60528	60299
205	22973	22214	22290	22332	22360

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.87 L/min	Dilution Gas	0.40 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	9.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.8 V	Deflect	3.2 V
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US EPA Tune Check Report

Reviewed By:janvi
On:10/8/2025 11:5
AM
Inst Id :P7
LB :LB137449

Extract 2	-165.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-80 V	Cell Exit	-60 V		
Cell Parameters					
Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	3.9 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		
QP Parameters					
Mass Gain	138	Axis Gain	0.9978	QP Bias	-13.0 V
Mass Offset	128	Axis Offset	0.08		
Hardware Settings					
Torch					
Torch H	-1.7 mm	Torch V	0.2 mm		
EM					
Discriminator	4.8 mV	Analog HV	2290 V	Pulse HV	1215 V

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:42:56 DataFile Name : 004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.31	-0.27	-0.04	0.00	N/A	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	N/A	ppb
Arsenic	75-2	0.00	-0.03	0.03	0.00	N/A	ppb
Barium	135-1	-0.03	0.00	0.03	0.00	N/A	ppb
Barium	137-1	0.00	0.01	-0.01	0.00	N/A	ppb
Beryllium	9-1	0.00	0.00	0.01	0.00	N/A	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.02	-0.01	0.03	0.00	N/A	ppb
Cadmium	106-1	0.30	0.50	-0.80	0.00	N/A	ppb
Cadmium	111-1	0.02	0.03	-0.06	0.00	N/A	ppb
Calcium	43-1	1.00	-1.45	0.45	0.00	N/A	ppb
Calcium	44-1	-0.07	0.77	-0.69	0.00	N/A	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.00	-0.08	0.09	0.00	N/A	ppb
Cobalt	59-2	-0.01	0.00	0.01	0.00	N/A	ppb
Copper	63-2	0.01	-0.02	0.01	0.00	N/A	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				100		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	56-2	-0.06	0.18	-0.12	0.00	N/A	ppb
Iron	57-2	-1.41	1.89	-0.48	0.00	N/A	ppb
Iron	54-2	0.46	-0.18	-0.28	0.00	N/A	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:42:56 DataFile Name : 004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.01	-0.01	-0.01	0.00	N/A	ppb
Lead	207-1	0.00	0.00	0.00	0.00	N/A	ppb
Lead	208-1	0.01	0.00	-0.01	0.00	N/A	ppb
Lithium	6-1				100		%
Magnesium	24-2	-0.21	0.05	0.15	0.00	N/A	ppb
Manganese	55-2	0.01	-0.01	0.00	0.00	N/A	ppb
Molybdenum	94-1	-0.01	0.01	0.00	0.00	N/A	ppb
Molybdenum	95-1	0.00	0.02	-0.02	0.00	N/A	ppb
Molybdenum	96-1	0.01	0.00	0.00	0.00	N/A	ppb
Molybdenum	97-1	0.00	-0.01	0.01	0.00	N/A	ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00	N/A	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.00	-0.02	0.02	0.00	N/A	ppb
Phosphorus	31-2	-135.08	-136.26	-124.60	-131.98		ppb
Potassium	39-2	2.53	0.14	-2.67	0.00	N/A	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	0.39	-0.06	-0.33	0.00	N/A	ppb
Selenium	77-2	-0.12	-0.12	0.24	0.00	N/A	ppb
Selenium	78-2	0.26	-0.21	-0.05	0.00	N/A	ppb
Silicon	28-1	-0.69	0.63	0.06	0.00	N/A	ppb
Silver	107-1	0.00	0.00	0.00	0.00	N/A	ppb
Silver	109-1	0.00	0.00	0.00	0.00	N/A	ppb
Sodium	23-2	0.05	0.30	-0.35	0.00	N/A	ppb
Strontium	86-1	0.00	-0.02	0.01	0.00	N/A	ppb
Strontium	88-1	0.00	0.00	0.00	0.00	N/A	ppb
Sulfur	34-1	-432.27	494.52	268.32	110.19	438.51	ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.01	-0.01	0.00	0.00	N/A	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	N/A	ppb
Tin	118-1	-0.03	0.01	0.03	0.00	N/A	ppb
Titanium	47-1	0.01	0.00	-0.01	0.00	N/A	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:42:56 DataFile Name : 004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	N/A	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	N/A	ppb
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	0.19	-0.02	-0.18	0.00	N/A	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	N/A	ppb
Zirconium	91-1	0.00	0.00	0.01	0.00	N/A	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S2 Instrumnet Name : P7
Client Sample ID : S2 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:46:13 DataFile Name : 005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20.41	20.13	20.32	20.29	0.70	ppb
Antimony	121-1	1.86	2.07	2.11	2.01	6.75	ppb
Arsenic	75-2	1.06	1.30	1.13	1.17	10.51	ppb
Barium	135-1	8.63	9.91	9.86	9.47	7.63	ppb
Barium	137-1	8.79	10.24	10.07	9.70	8.16	ppb
Beryllium	9-1	0.90	1.02	1.25	1.06	17.05	ppb
Bismuth	209-1				106		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.17	1.00	1.35	1.17	14.78	ppb
Cadmium	106-1	1.90	2.78	1.22	1.97	39.65	ppb
Cadmium	111-1	0.86	1.16	0.94	0.99	16.22	ppb
Calcium	43-1	440.80	488.56	496.09	475.15	6.31	ppb
Calcium	44-1	427.50	487.14	509.32	474.65	8.91	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.07	1.98	1.95	2.00	3.19	ppb
Cobalt	59-2	1.08	1.07	1.11	1.09	2.22	ppb
Copper	63-2	2.18	1.90	1.94	2.00	7.59	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				101		%
Indium	115-1				103		%
Indium	115-2				100		%
Iron	56-2	55.08	54.54	54.15	54.59	0.86	ppb
Iron	57-2	62.76	58.08	55.80	58.88	6.02	ppb
Iron	54-2	56.76	58.26	55.80	56.94	2.17	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S2 Instrumnet Name : P7
Client Sample ID : S2 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:46:13 DataFile Name : 005CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.75	0.85	0.90	0.84	9.08	ppb
Lead	207-1	0.66	0.85	0.84	0.78	13.81	ppb
Lead	208-1	0.72	0.82	0.87	0.81	9.46	ppb
Lithium	6-1				106		%
Magnesium	24-2	515.84	505.61	511.54	511.00	1.00	ppb
Manganese	55-2	1.16	0.96	1.15	1.09	10.34	ppb
Molybdenum	94-1	5.29	6.06	6.22	5.86	8.55	ppb
Molybdenum	95-1	4.66	4.98	5.23	4.96	5.84	ppb
Molybdenum	96-1	4.50	5.21	5.42	5.04	9.49	ppb
Molybdenum	97-1	4.51	4.91	5.10	4.84	6.18	ppb
Molybdenum	98-1	4.38	4.87	5.36	4.87	10.03	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.95	1.04	0.96	0.98	4.97	ppb
Phosphorus	31-2	131.99	137.03	126.93	131.98	3.83	ppb
Potassium	39-2	537.54	525.61	530.16	531.10	1.13	ppb
Rhodium	103-1				105		%
Rhodium	103-2				100		%
Scandium	45-1				106		%
Scandium	45-2				100		%
Selenium	82-1	5.24	5.55	4.72	5.17	8.10	ppb
Selenium	77-2	4.71	6.74	5.50	5.65	18.13	ppb
Selenium	78-2	3.82	2.31	8.15	4.76	63.64	ppb
Silicon	28-1	-2.16	-0.74	-0.52	-1.14		ppb
Silver	107-1	0.97	1.06	1.12	1.05	7.24	ppb
Silver	109-1	0.96	1.07	1.09	1.04	7.08	ppb
Sodium	23-2	521.72	509.66	519.52	516.97	1.24	ppb
Strontium	86-1	0.81	1.00	0.98	0.93	11.46	ppb
Strontium	88-1	0.85	0.98	1.01	0.95	8.84	ppb
Sulfur	34-1	-637.14	-26.69	333.25	-110.19		ppb
Terbium	159-1				103		%
Terbium	159-2				102		%
Thallium	203-1	0.86	0.97	1.05	0.96	10.06	ppb
Thallium	205-1	0.86	0.99	1.02	0.96	8.59	ppb
Tin	118-1	4.51	4.99	5.16	4.89	6.87	ppb
Titanium	47-1	4.45	4.91	5.20	4.85	7.86	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S2 Instrumnet Name : P7
Client Sample ID : S2 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:46:13 DataFile Name : 005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.81	0.93	0.98	0.91	9.91	ppb
Vanadium	51-2	5.28	5.12	5.18	5.19	1.54	ppb
Yttrium	89-1				105		%
Yttrium	89-2				103		%
Zinc	66-2	4.55	4.54	4.33	4.48	2.80	ppb
Zirconium	90-1	0.84	0.94	1.05	0.94	11.31	ppb
Zirconium	91-1	0.88	1.02	1.05	0.99	8.97	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S3 Instrumnet Name : P7
Client Sample ID : S3 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:49:34 DataFile Name : 006CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1036.92	1048.26	1075.87	1053.69	1.90	ppb
Antimony	121-1	51.04	51.34	52.46	51.61	1.46	ppb
Arsenic	75-2	50.41	52.03	52.18	51.54	1.91	ppb
Barium	135-1	250.01	251.58	260.09	253.89	2.14	ppb
Barium	137-1	256.91	255.41	263.60	258.64	1.69	ppb
Beryllium	9-1	52.36	52.13	54.48	52.99	2.44	ppb
Bismuth	209-1				102		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	50.49	53.35	55.40	53.08	4.64	ppb
Cadmium	106-1	52.35	52.44	55.11	53.30	2.95	ppb
Cadmium	111-1	53.08	53.12	55.07	53.76	2.11	ppb
Calcium	43-1	5106.61	5304.72	5350.96	5254.10	2.47	ppb
Calcium	44-1	5057.73	5216.96	5201.66	5158.78	1.70	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	50.83	51.51	51.37	51.23	0.70	ppb
Cobalt	59-2	51.07	51.64	51.12	51.28	0.62	ppb
Copper	63-2	516.05	520.27	515.13	517.15	0.53	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				102		%
Indium	115-1				100		%
Indium	115-2				101		%
Iron	56-2	2633.56	2599.26	2644.68	2625.84	0.90	ppb
Iron	57-2	2732.50	2758.26	2737.24	2742.66	0.50	ppb
Iron	54-2	2749.97	2789.28	2791.39	2776.88	0.84	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S3 Instrumnet Name : P7
Client Sample ID : S3 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:49:34 DataFile Name : 006CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	238.25	246.86	249.54	244.88	2.41	ppb
Lead	207-1	237.80	245.62	249.44	244.29	2.43	ppb
Lead	208-1	236.65	254.03	249.19	246.62	3.64	ppb
Lithium	6-1				102		%
Magnesium	24-2	5083.90	5103.13	5167.43	5118.15	0.85	ppb
Manganese	55-2	512.43	514.91	518.85	515.40	0.63	ppb
Molybdenum	94-1	499.50	522.78	515.85	512.71	2.33	ppb
Molybdenum	95-1	502.45	519.20	521.58	514.41	2.03	ppb
Molybdenum	96-1	499.66	528.31	522.70	516.89	2.94	ppb
Molybdenum	97-1	503.32	529.65	524.79	519.25	2.70	ppb
Molybdenum	98-1	504.63	528.52	513.20	515.45	2.35	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	52.02	52.25	51.74	52.00	0.49	ppb
Phosphorus	31-2	928.72	892.84	878.10	899.89	2.89	ppb
Potassium	39-2	2667.40	2668.40	2691.44	2675.75	0.51	ppb
Rhodium	103-1				102		%
Rhodium	103-2				101		%
Scandium	45-1				102		%
Scandium	45-2				102		%
Selenium	82-1	52.18	53.76	55.79	53.91	3.35	ppb
Selenium	77-2	51.83	52.07	58.77	54.22	7.27	ppb
Selenium	78-2	45.27	55.47	55.34	52.03	11.24	ppb
Silicon	28-1	57.30	60.53	59.50	59.11	2.79	ppb
Silver	107-1	52.08	52.82	54.47	53.12	2.31	ppb
Silver	109-1	52.43	52.63	54.04	53.03	1.66	ppb
Sodium	23-2	5221.88	5223.00	5403.43	5282.77	1.98	ppb
Strontium	86-1	50.58	52.25	52.49	51.77	2.02	ppb
Strontium	88-1	50.33	52.53	52.02	51.63	2.24	ppb
Sulfur	34-1	1104.22	1315.82	1210.89	1210.31	8.74	ppb
Terbium	159-1				101		%
Terbium	159-2				102		%
Thallium	203-1	47.65	48.75	49.54	48.65	1.95	ppb
Thallium	205-1	47.76	49.10	49.53	48.80	1.89	ppb
Tin	118-1	51.01	51.35	52.47	51.61	1.48	ppb
Titanium	47-1	499.25	521.83	520.13	513.74	2.45	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S3 Instrumnet Name : P7
Client Sample ID : S3 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:49:34 DataFile Name : 006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	46.67	48.27	49.29	48.08	2.75	ppb
Vanadium	51-2	50.54	50.40	50.73	50.56	0.33	ppb
Yttrium	89-1				101		%
Yttrium	89-2				102		%
Zinc	66-2	516.12	515.31	521.07	517.50	0.60	ppb
Zirconium	90-1	49.77	51.83	51.48	51.03	2.16	ppb
Zirconium	91-1	49.15	52.51	51.98	51.21	3.53	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S4 Instrumnet Name : P7
Client Sample ID : S4 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:52:46 DataFile Name : 007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2573.28	2565.82	2600.50	2579.87	0.71	ppb
Antimony	121-1	112.27	128.54	126.52	122.44	7.24	ppb
Arsenic	75-2	124.42	129.93	130.26	128.21	2.56	ppb
Barium	135-1	551.39	632.03	623.40	602.27	7.35	ppb
Barium	137-1	555.94	642.65	634.41	611.00	7.83	ppb
Beryllium	9-1	112.11	128.76	131.45	124.11	8.44	ppb
Bismuth	209-1				103		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	115.66	130.93	132.64	126.41	7.40	ppb
Cadmium	106-1	121.39	134.91	132.00	129.43	5.50	ppb
Cadmium	111-1	116.96	134.05	133.38	128.13	7.55	ppb
Calcium	43-1	11439.67	12853.74	13102.60	12465.34	7.20	ppb
Calcium	44-1	10728.56	12139.57	12670.73	11846.29	8.47	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	127.97	124.84	125.25	126.02	1.35	ppb
Cobalt	59-2	125.81	126.35	125.50	125.89	0.34	ppb
Copper	63-2	1305.50	1268.09	1248.39	1273.99	2.28	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				98		%
Indium	115-1				102		%
Indium	115-2				98		%
Iron	56-2	6575.90	6480.14	6554.09	6536.71	0.77	ppb
Iron	57-2	6857.11	6661.14	6636.88	6718.38	1.80	ppb
Iron	54-2	6829.03	6918.73	6978.55	6908.77	1.09	ppb
Krypton	83-1						cps

LB Number :LB137449Operator :Jaswal

Lab Sample ID :S4Instrumnet Name :P7

Client Sample ID :S4Dilution Factor :1

Date & Time Acquired :2025-10-07 16:52:46DataFile Name :007CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	552.10	632.70	632.07	605.62	7.65	ppb
Lead	207-1	528.12	620.82	608.86	585.94	8.61	ppb
Lead	208-1	546.60	633.68	633.88	604.72	8.32	ppb
Lithium	6-1				103		%
Magnesium	24-2	12895.41	12929.09	13168.61	12997.70	1.15	ppb
Manganese	55-2	1266.99	1259.24	1267.12	1264.45	0.36	ppb
Molybdenum	94-1	1093.23	1261.87	1254.38	1203.16	7.92	ppb
Molybdenum	95-1	1100.71	1263.05	1293.38	1219.05	8.50	ppb
Molybdenum	96-1	1124.75	1263.84	1293.94	1227.51	7.35	ppb
Molybdenum	97-1	1095.56	1244.80	1278.45	1206.27	8.07	ppb
Molybdenum	98-1	1094.13	1242.78	1277.44	1204.78	8.08	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	130.30	127.84	128.38	128.84	1.00	ppb
Phosphorus	31-2	2489.27	2373.57	2446.77	2436.54	2.40	ppb
Potassium	39-2	6396.20	6219.23	6280.56	6298.67	1.43	ppb
Rhodium	103-1				102		%
Rhodium	103-2				99		%
Scandium	45-1				102		%
Scandium	45-2				100		%
Selenium	82-1	112.10	130.32	126.33	122.92	7.79	ppb
Selenium	77-2	138.88	125.95	143.26	136.03	6.62	ppb
Selenium	78-2	126.04	141.63	126.34	131.34	6.79	ppb
Silicon	28-1	120.23	133.04	137.49	130.25	6.88	ppb
Silver	107-1	114.74	132.33	131.65	126.24	7.89	ppb
Silver	109-1	113.92	131.50	131.47	125.63	8.07	ppb
Sodium	23-2	13079.41	12933.49	13234.06	13082.32	1.15	ppb
Strontium	86-1	110.52	125.37	126.50	120.80	7.39	ppb
Strontium	88-1	109.66	125.08	126.88	120.54	7.85	ppb
Sulfur	34-1	1811.13	2802.60	3166.63	2593.45	27.05	ppb
Terbium	159-1				102		%
Terbium	159-2				101		%
Thallium	203-1	106.48	121.20	122.48	116.72	7.62	ppb
Thallium	205-1	105.76	121.49	122.90	116.72	8.15	ppb
Tin	118-1	110.28	128.96	128.10	122.45	8.61	ppb
Titanium	47-1	1109.53	1248.18	1289.78	1215.83	7.76	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S4 Instrumnet Name : P7
Client Sample ID : S4 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:52:46 DataFile Name : 007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	104.02	119.39	121.29	114.90	8.24	ppb
Vanadium	51-2	126.86	124.77	124.28	125.30	1.09	ppb
Yttrium	89-1				104		%
Yttrium	89-2				100		%
Zinc	66-2	1291.93	1249.65	1245.48	1262.35	2.04	ppb
Zirconium	90-1	109.53	124.93	125.26	119.91	7.50	ppb
Zirconium	91-1	108.99	127.12	127.54	121.22	8.74	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S5 Instrumnet Name : P7
Client Sample ID : S5 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:55:50 DataFile Name : 008CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5127.23	5142.49	5053.60	5107.78	0.93	ppb
Antimony	121-1	236.16	260.98	257.36	251.50	5.33	ppb
Arsenic	75-2	253.91	257.03	249.33	253.42	1.53	ppb
Barium	135-1	1176.00	1282.75	1267.15	1241.97	4.64	ppb
Barium	137-1	1212.89	1327.61	1296.29	1278.93	4.64	ppb
Beryllium	9-1	238.89	261.02	260.07	253.33	4.94	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	243.80	276.35	259.43	259.86	6.26	ppb
Cadmium	106-1	248.75	273.15	265.56	262.49	4.76	ppb
Cadmium	111-1	248.54	270.06	264.34	260.98	4.27	ppb
Calcium	43-1	24366.69	26685.71	26081.31	25711.24	4.68	ppb
Calcium	44-1	22968.54	25736.79	25221.31	24642.21	5.97	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	249.84	255.13	255.61	253.53	1.26	ppb
Cobalt	59-2	252.02	257.13	255.22	254.79	1.01	ppb
Copper	63-2	2560.49	2587.93	2552.15	2566.86	0.73	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				102		%
Indium	115-1				98		%
Indium	115-2				99		%
Iron	56-2	12943.73	12804.21	12838.23	12862.06	0.57	ppb
Iron	57-2	13411.17	13703.74	13491.60	13535.51	1.12	ppb
Iron	54-2	13429.62	13412.45	13115.77	13319.28	1.32	ppb
Krypton	83-1						cps

LB Number :LB137449Operator :Jaswal

Lab Sample ID :S5Instrumnet Name :P7

Client Sample ID :S5Dilution Factor :1

Date & Time Acquired :2025-10-07 16:55:50DataFile Name :008CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1224.35	1323.10	1296.61	1281.35	3.99	ppb
Lead	207-1	1217.51	1345.03	1291.01	1284.52	4.98	ppb
Lead	208-1	1216.88	1312.88	1285.27	1271.68	3.89	ppb
Lithium	6-1				102		%
Magnesium	24-2	26005.20	26032.97	25696.83	25911.67	0.72	ppb
Manganese	55-2	2498.81	2524.83	2506.00	2509.88	0.54	ppb
Molybdenum	94-1	2408.82	2585.34	2553.46	2515.87	3.74	ppb
Molybdenum	95-1	2446.39	2598.50	2543.58	2529.49	3.05	ppb
Molybdenum	96-1	2429.29	2588.80	2568.61	2528.90	3.43	ppb
Molybdenum	97-1	2385.74	2541.03	2542.57	2489.78	3.62	ppb
Molybdenum	98-1	2405.95	2581.44	2513.87	2500.42	3.54	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	254.55	257.85	250.65	254.35	1.42	ppb
Phosphorus	31-2	5084.51	5060.38	5153.04	5099.31	0.94	ppb
Potassium	39-2	12589.21	12825.09	13002.33	12805.54	1.62	ppb
Rhodium	103-1				97		%
Rhodium	103-2				100		%
Scandium	45-1				99		%
Scandium	45-2				99		%
Selenium	82-1	243.77	263.95	262.52	256.75	4.39	ppb
Selenium	77-2	254.90	270.26	253.15	259.44	3.63	ppb
Selenium	78-2	250.64	266.87	260.53	259.35	3.15	ppb
Silicon	28-1	246.45	274.68	263.81	261.64	5.44	ppb
Silver	107-1	247.10	267.49	261.43	258.67	4.05	ppb
Silver	109-1	242.48	266.78	261.77	257.01	4.99	ppb
Sodium	23-2	26537.39	26824.24	26646.27	26669.30	0.54	ppb
Strontium	86-1	239.62	258.81	256.76	251.73	4.18	ppb
Strontium	88-1	235.77	256.01	253.13	248.30	4.41	ppb
Sulfur	34-1	4684.64	5884.27	5278.00	5282.30	11.36	ppb
Terbium	159-1				99		%
Terbium	159-2				100		%
Thallium	203-1	227.41	247.90	242.83	239.38	4.46	ppb
Thallium	205-1	239.80	259.28	256.00	251.70	4.14	ppb
Tin	118-1	237.20	261.57	257.13	251.97	5.15	ppb
Titanium	47-1	2385.37	2620.94	2545.47	2517.26	4.78	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S5 Instrumnet Name : P7
Client Sample ID : S5 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:55:50 DataFile Name : 008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	243.65	259.53	251.87	251.68	3.16	ppb
Vanadium	51-2	248.51	251.14	248.42	249.36	0.62	ppb
Yttrium	89-1				100		%
Yttrium	89-2				101		%
Zinc	66-2	2534.31	2552.09	2569.12	2551.84	0.68	ppb
Zirconium	90-1	244.71	260.48	266.57	257.25	4.39	ppb
Zirconium	91-1	243.03	258.95	258.58	253.52	3.59	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S6 Instrumnet Name : P7
Client Sample ID : S6 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:58:43 DataFile Name : 009CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10534.36	10237.49	10174.10	10315.32	1.86	ppb
Antimony	121-1	502.01	516.44	515.03	511.16	1.56	ppb
Arsenic	75-2	504.26	500.24	497.84	500.78	0.65	ppb
Barium	135-1	2508.23	2602.38	2632.17	2580.93	2.51	ppb
Barium	137-1	2560.62	2616.68	2621.23	2599.51	1.30	ppb
Beryllium	9-1	511.32	513.45	523.08	515.95	1.21	ppb
Bismuth	209-1				100		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	503.29	530.57	527.16	520.34	2.86	ppb
Cadmium	106-1	504.73	519.16	531.73	518.54	2.61	ppb
Cadmium	111-1	505.74	520.56	529.03	518.44	2.27	ppb
Calcium	43-1	51067.05	52272.00	52271.33	51870.13	1.34	ppb
Calcium	44-1	48829.74	50525.09	48958.74	49437.86	1.91	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	507.04	505.27	500.68	504.33	0.65	ppb
Cobalt	59-2	513.74	513.97	499.29	509.00	1.65	ppb
Copper	63-2	5198.45	5121.34	5032.88	5117.55	1.62	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				100		%
Indium	115-1				96		%
Indium	115-2				96		%
Iron	56-2	26240.68	26257.85	25772.14	26090.23	1.06	ppb
Iron	57-2	27300.04	27035.61	26775.63	27037.09	0.97	ppb
Iron	54-2	26437.73	26518.39	26435.64	26463.92	0.18	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S6 Instrumnet Name : P7
Client Sample ID : S6 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:58:43 DataFile Name : 009CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2560.66	2508.40	2555.65	2541.57	1.13	ppb
Lead	207-1	2554.35	2547.03	2552.68	2551.35	0.15	ppb
Lead	208-1	2554.20	2537.66	2549.43	2547.10	0.33	ppb
Lithium	6-1				99		%
Magnesium	24-2	52129.62	52244.96	51233.95	51869.51	1.07	ppb
Manganese	55-2	5020.51	5083.39	5000.57	5034.82	0.86	ppb
Molybdenum	94-1	4953.45	5196.76	5131.17	5093.80	2.47	ppb
Molybdenum	95-1	5021.80	5209.09	5150.88	5127.25	1.87	ppb
Molybdenum	96-1	5024.94	5181.10	5165.60	5123.88	1.68	ppb
Molybdenum	97-1	4994.65	5186.11	5153.99	5111.58	2.01	ppb
Molybdenum	98-1	4977.21	5211.73	5122.08	5103.67	2.32	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	512.17	515.50	507.35	511.67	0.80	ppb
Phosphorus	31-2	10282.24	10299.63	10024.27	10202.05	1.51	ppb
Potassium	39-2	25481.22	25027.00	25004.99	25171.07	1.07	ppb
Rhodium	103-1				97		%
Rhodium	103-2				97		%
Scandium	45-1				97		%
Scandium	45-2				98		%
Selenium	82-1	499.56	525.41	529.17	518.05	3.11	ppb
Selenium	77-2	517.91	498.46	502.18	506.18	2.04	ppb
Selenium	78-2	501.87	527.43	502.72	510.68	2.84	ppb
Silicon	28-1	512.74	510.21	521.18	514.71	1.12	ppb
Silver	107-1	505.66	522.16	528.36	518.73	2.26	ppb
Silver	109-1	504.96	520.45	522.19	515.86	1.84	ppb
Sodium	23-2	53016.82	52320.24	52610.53	52649.20	0.66	ppb
Strontium	86-1	496.75	519.10	521.47	512.44	2.66	ppb
Strontium	88-1	498.37	518.88	513.78	510.34	2.09	ppb
Sulfur	34-1	10468.26	10395.82	10509.89	10457.99	0.55	ppb
Terbium	159-1				99		%
Terbium	159-2				100		%
Thallium	203-1	514.01	508.69	513.87	512.19	0.59	ppb
Thallium	205-1	509.61	502.42	515.64	509.22	1.30	ppb
Tin	118-1	495.17	522.71	522.30	513.40	3.07	ppb
Titanium	47-1	4995.16	5195.55	5105.20	5098.64	1.97	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S6 Instrumnet Name : P7
Client Sample ID : S6 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:58:43 DataFile Name : 009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	516.01	500.81	503.22	506.68	1.61	ppb
Vanadium	51-2	507.41	503.72	500.25	503.79	0.71	ppb
Yttrium	89-1				98		%
Yttrium	89-2				100		%
Zinc	66-2	5114.92	5032.70	5014.01	5053.88	1.06	ppb
Zirconium	90-1	499.64	518.58	514.92	511.05	1.97	ppb
Zirconium	91-1	497.15	522.52	519.62	513.09	2.71	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S7 Instrumnet Name : P7
Client Sample ID : S7 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:01:31 DataFile Name : 010CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20636.98	19862.80	20826.50	20442.09	2.50	ppb
Antimony	121-1	928.61	1044.97	1009.28	994.28	6.00	ppb
Arsenic	75-2	1021.42	968.27	1005.14	998.28	2.73	ppb
Barium	135-1	4624.25	5196.64	5071.69	4964.19	6.06	ppb
Barium	137-1	4671.53	5128.05	5033.42	4944.33	4.87	ppb
Beryllium	9-1	931.71	1022.04	1019.71	991.16	5.20	ppb
Bismuth	209-1				103		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	935.37	1025.68	1000.06	987.04	4.72	ppb
Cadmium	106-1	925.06	1030.21	1005.39	986.89	5.57	ppb
Cadmium	111-1	926.58	1029.62	1006.16	987.45	5.47	ppb
Calcium	43-1	95560.42	104684.20	104907.35	101717.32	5.24	ppb
Calcium	44-1	91304.04	99231.52	99263.38	96599.65	4.75	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1022.72	964.46	1003.11	996.76	2.97	ppb
Cobalt	59-2	985.44	951.35	1045.59	994.13	4.80	ppb
Copper	63-2	9911.06	9820.26	10030.64	9920.65	1.06	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				103		%
Indium	115-1				98		%
Indium	115-2				97		%
Iron	56-2	50247.75	48948.17	53701.37	50965.76	4.82	ppb
Iron	57-2	51286.21	48974.07	53799.44	51353.24	4.70	ppb
Iron	54-2	52212.53	50867.94	54412.02	52497.50	3.41	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S7 Instrumnet Name : P7
Client Sample ID : S7 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:01:31 DataFile Name : 010CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	4688.50	5149.22	5084.45	4974.06	5.01	ppb
Lead	207-1	4802.94	5122.96	4986.68	4970.86	3.23	ppb
Lead	208-1	4729.26	5160.97	5030.97	4973.74	4.45	ppb
Lithium	6-1				100		%
Magnesium	24-2	102438.40	99841.49	102820.58	101700.15	1.59	ppb
Manganese	55-2	9910.53	9642.47	10379.63	9977.54	3.74	ppb
Molybdenum	94-1	9410.88	10129.17	10323.01	9954.35	4.83	ppb
Molybdenum	95-1	9500.19	10052.10	10244.15	9932.15	3.89	ppb
Molybdenum	96-1	9470.19	10042.08	10286.14	9932.80	4.22	ppb
Molybdenum	97-1	9428.20	10021.93	10403.67	9951.27	4.94	ppb
Molybdenum	98-1	9364.61	9915.30	10578.90	9952.94	6.11	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	985.24	975.28	1016.96	992.50	2.19	ppb
Phosphorus	31-2	19653.77	19323.01	20684.49	19887.09	3.57	ppb
Potassium	39-2	48847.91	47733.89	50212.39	48931.40	2.54	ppb
Rhodium	103-1				98		%
Rhodium	103-2				98		%
Scandium	45-1				99		%
Scandium	45-2				99		%
Selenium	82-1	929.16	999.64	1039.25	989.35	5.64	ppb
Selenium	77-2	1009.65	976.51	992.70	992.96	1.67	ppb
Selenium	78-2	1004.06	990.53	979.71	991.43	1.23	ppb
Silicon	28-1	937.51	1017.78	1010.91	988.73	4.50	ppb
Silver	107-1	936.84	1037.15	990.48	988.16	5.08	ppb
Silver	109-1	935.93	1033.54	1000.78	990.09	5.02	ppb
Sodium	23-2	105936.08	102147.13	103494.23	103859.15	1.85	ppb
Strontium	86-1	933.74	1001.54	1046.07	993.78	5.69	ppb
Strontium	88-1	944.36	1023.22	1019.61	995.73	4.47	ppb
Sulfur	34-1	18179.03	20591.40	20264.27	19678.23	6.65	ppb
Terbium	159-1				103		%
Terbium	159-2				103		%
Thallium	203-1	954.75	1032.08	1006.15	997.66	3.94	ppb
Thallium	205-1	940.20	1038.73	1009.25	996.06	5.08	ppb
Tin	118-1	934.40	1035.47	1009.28	993.05	5.28	ppb
Titanium	47-1	9431.58	10198.34	10219.94	9949.95	4.51	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S7 Instrumnet Name : P7
Client Sample ID : S7 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:01:31 DataFile Name : 010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	951.53	1021.37	1019.89	997.60	4.00	ppb
Vanadium	51-2	1021.16	974.95	998.48	998.20	2.32	ppb
Yttrium	89-1				101		%
Yttrium	89-2				101		%
Zinc	66-2	10151.41	10072.87	9648.77	9957.68	2.72	ppb
Zirconium	90-1	942.30	1003.80	1033.64	993.25	4.69	ppb
Zirconium	91-1	940.10	1011.24	1027.61	992.99	4.69	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S8 Instrumnet Name : P7
Client Sample ID : S8 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:04:15 DataFile Name : 011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	100017.04	99952.88	99646.46	99872.13	0.20	ppb
Antimony	121-1	0.90	1.04	1.18	1.04	13.10	ppb
Arsenic	75-2	0.87	1.09	0.74	0.90	19.72	ppb
Barium	135-1	7.72	9.03	9.85	8.87	12.09	ppb
Barium	137-1	8.42	9.61	9.63	9.22	7.53	ppb
Beryllium	9-1	0.39	0.65	0.53	0.53	24.83	ppb
Bismuth	209-1				109		%
Bismuth	209-2				109		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.64	0.73	0.83	0.73	13.43	ppb
Cadmium	106-1	2.48	2.93	2.46	2.62	9.98	ppb
Cadmium	111-1	0.57	0.78	0.78	0.71	17.32	ppb
Calcium	43-1	488488.31	507654.75	502153.87	499432.31	1.98	ppb
Calcium	44-1	488333.18	509430.83	504542.85	500768.95	2.21	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	9.31	9.53	9.23	9.36	1.63	ppb
Cobalt	59-2	3.60	3.59	3.36	3.52	3.82	ppb
Copper	63-2	4.04	4.04	3.61	3.90	6.40	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				120		%
Holmium	165-2				118		%
Indium	115-1				112		%
Indium	115-2				114		%
Iron	56-2	248769.46	251336.94	248907.49	249671.30	0.58	ppb
Iron	57-2	249523.92	253249.04	245606.24	249459.73	1.53	ppb
Iron	54-2	248811.85	248072.92	250996.95	249293.91	0.61	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S8 Instrumnet Name : P7
Client Sample ID : S8 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:04:15 DataFile Name : 011CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.78	2.67	2.83	2.43	23.32	ppb
Lead	207-1	1.76	2.76	2.85	2.46	24.58	ppb
Lead	208-1	1.75	2.75	2.77	2.42	24.02	ppb
Lithium	6-1				112		%
Magnesium	24-2	498139.58	503673.23	496428.59	499413.80	0.76	ppb
Manganese	55-2	10.32	10.46	10.38	10.39	0.70	ppb
Molybdenum	94-1	4.66	6.75	6.79	6.07	20.08	ppb
Molybdenum	95-1	3.57	5.47	5.78	4.94	24.23	ppb
Molybdenum	96-1	4.81	6.64	6.75	6.07	17.99	ppb
Molybdenum	97-1	3.67	5.65	5.88	5.07	23.96	ppb
Molybdenum	98-1	3.54	5.50	5.77	4.93	24.69	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	7.59	7.81	7.61	7.67	1.55	ppb
Phosphorus	31-2	-154.49	-146.02	-140.24	-146.92		ppb
Potassium	39-2	249575.39	251593.70	249365.81	250178.30	0.49	ppb
Rhodium	103-1				109		%
Rhodium	103-2				111		%
Scandium	45-1				117		%
Scandium	45-2				118		%
Selenium	82-1	0.47	1.34	1.00	0.94	46.95	ppb
Selenium	77-2	0.17	1.06	1.05	0.76	67.42	ppb
Selenium	78-2	-0.93	0.27	-1.48	-0.72		ppb
Silicon	28-1	-2.15	-1.31	-1.95	-1.80		ppb
Silver	107-1	0.28	0.43	0.49	0.40	26.76	ppb
Silver	109-1	0.28	0.44	0.44	0.39	23.86	ppb
Sodium	23-2	496194.86	504798.87	495593.43	498862.38	1.03	ppb
Strontium	86-1	13.81	13.79	13.36	13.66	1.85	ppb
Strontium	88-1	13.29	13.98	13.38	13.55	2.75	ppb
Sulfur	34-1	-1856.33	-1673.37	-1964.04	-1831.25		ppb
Terbium	159-1				119		%
Terbium	159-2				118		%
Thallium	203-1	1.26	1.41	1.35	1.34	5.60	ppb
Thallium	205-1	1.22	1.43	1.36	1.34	7.79	ppb
Tin	118-1	0.41	0.67	0.69	0.59	26.07	ppb
Titanium	47-1	1.79	3.67	4.25	3.24	39.77	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S8 Instrumnet Name : P7
Client Sample ID : S8 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:04:15 DataFile Name : 011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.15	0.36	0.36	0.29	40.70	ppb
Vanadium	51-2	1.81	1.93	1.91	1.89	3.39	ppb
Yttrium	89-1				117		%
Yttrium	89-2				122		%
Zinc	66-2	13.49	13.22	13.39	13.37	1.02	ppb
Zirconium	90-1	1.00	1.11	1.19	1.10	8.26	ppb
Zirconium	91-1	1.05	1.27	1.08	1.13	10.43	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICV01 Instrumnet Name : P7
Client Sample ID : ICV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:26:33 DataFile Name : 013ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1495.73	1482.58	1486.51	1488.27	0.45	ppb
Antimony	121-1	424.84	439.69	437.67	434.07	1.86	ppb
Arsenic	75-2	403.75	405.72	399.56	403.01	0.78	ppb
Barium	135-1	1645.12	1622.18	1656.82	1641.37	1.07	ppb
Barium	137-1	1656.24	1689.05	1643.12	1662.81	1.42	ppb
Beryllium	9-1	41.80	42.72	43.78	42.77	2.32	ppb
Bismuth	209-1				103		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	191.42	201.58	196.32	196.44	2.59	ppb
Cadmium	106-1	186.07	196.96	190.40	191.15	2.87	ppb
Cadmium	111-1	214.07	217.36	213.74	215.05	0.93	ppb
Calcium	43-1	3876.18	4061.13	3985.64	3974.32	2.34	ppb
Calcium	44-1	3885.31	4014.68	4031.81	3977.27	2.01	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	161.07	159.99	160.57	160.54	0.34	ppb
Cobalt	59-2	408.66	402.90	406.95	406.17	0.73	ppb
Copper	63-2	187.26	186.27	186.79	186.77	0.27	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				108		%
Indium	115-1				105		%
Indium	115-2				109		%
Iron	56-2	818.74	811.44	818.95	816.37	0.52	ppb
Iron	57-2	859.92	857.47	869.24	862.21	0.72	ppb
Iron	54-2	957.24	949.72	953.13	953.36	0.39	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICV01 Instrumnet Name : P7
Client Sample ID : ICV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:26:33 DataFile Name : 013ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	378.61	377.28	389.00	381.63	1.68	ppb
Lead	207-1	375.85	375.21	387.08	379.38	1.76	ppb
Lead	208-1	390.27	386.78	393.91	390.32	0.91	ppb
Lithium	6-1				94		%
Magnesium	24-2	3628.06	3568.07	3615.00	3603.71	0.88	ppb
Manganese	55-2	403.24	399.02	403.37	401.88	0.62	ppb
Molybdenum	94-1	0.36	0.34	0.31	0.34	6.74	ppb
Molybdenum	95-1	0.43	0.35	0.36	0.38	11.68	ppb
Molybdenum	96-1	0.37	0.34	0.39	0.36	7.62	ppb
Molybdenum	97-1	0.37	0.41	0.36	0.38	6.50	ppb
Molybdenum	98-1	0.41	0.38	0.44	0.41	6.85	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	409.79	410.80	411.06	410.55	0.16	ppb
Phosphorus	31-2	-140.35	-157.85	-149.19	-149.13		ppb
Potassium	39-2	4168.86	4148.15	4165.21	4160.74	0.27	ppb
Rhodium	103-1				106		%
Rhodium	103-2				108		%
Scandium	45-1				108		%
Scandium	45-2				107		%
Selenium	82-1	411.45	418.54	431.14	420.38	2.37	ppb
Selenium	77-2	395.66	443.79	407.78	415.74	6.02	ppb
Selenium	78-2	412.98	426.05	395.48	411.51	3.73	ppb
Silicon	28-1	-0.11	0.07	-0.30	-0.11		ppb
Silver	107-1	182.38	184.77	186.65	184.60	1.16	ppb
Silver	109-1	182.20	184.88	185.24	184.11	0.90	ppb
Sodium	23-2	4019.50	3911.60	3939.28	3956.79	1.42	ppb
Strontium	86-1	0.06	-0.01	0.04	0.03	108.32	ppb
Strontium	88-1	0.07	0.05	0.07	0.06	10.87	ppb
Sulfur	34-1	-917.42	-1028.71	-1173.59	-1039.91		ppb
Terbium	159-1				104		%
Terbium	159-2				108		%
Thallium	203-1	362.69	367.86	373.68	368.08	1.49	ppb
Thallium	205-1	389.94	380.33	399.10	389.79	2.41	ppb
Tin	118-1	0.31	0.32	0.34	0.32	5.40	ppb
Titanium	47-1	0.34	0.28	0.37	0.33	13.88	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICV01 Instrumnet Name : P7
Client Sample ID : ICV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:26:33 DataFile Name : 013ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	55.92	ppb
Vanadium	51-2	401.95	396.79	399.43	399.39	0.65	ppb
Yttrium	89-1				109		%
Yttrium	89-2				111		%
Zinc	66-2	370.22	370.55	366.03	368.93	0.68	ppb
Zirconium	90-1	0.02	0.00	0.02	0.01	67.38	ppb
Zirconium	91-1	0.10	0.10	0.07	0.09	18.81	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : LLICV01 Instrumnet Name : P7
Client Sample ID : LLICV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:29:42 DataFile Name : 014LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	18.67	19.74	19.54	19.32	2.96	ppb
Antimony	121-1	2.10	2.20	2.19	2.16	2.42	ppb
Arsenic	75-2	0.91	1.02	1.20	1.04	14.28	ppb
Barium	135-1	9.39	10.02	9.83	9.75	3.31	ppb
Barium	137-1	9.09	10.25	10.20	9.85	6.66	ppb
Beryllium	9-1	0.93	1.14	1.19	1.09	12.41	ppb
Bismuth	209-1				103		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.09	1.11	0.63	0.94	28.74	ppb
Cadmium	106-1	1.06	0.42	2.79	1.42	86.37	ppb
Cadmium	111-1	0.87	0.96	1.16	1.00	14.93	ppb
Calcium	43-1	457.17	489.32	491.28	479.26	4.00	ppb
Calcium	44-1	460.03	496.45	488.61	481.70	3.98	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.98	1.84	2.06	1.96	5.64	ppb
Cobalt	59-2	1.08	0.97	1.08	1.04	5.93	ppb
Copper	63-2	1.82	1.74	1.83	1.79	2.71	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				105		%
Indium	115-1				104		%
Indium	115-2				106		%
Iron	56-2	52.09	51.76	50.67	51.51	1.44	ppb
Iron	57-2	46.30	60.98	52.28	53.19	13.88	ppb
Iron	54-2	55.18	50.60	53.05	52.94	4.32	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : LLICV01 Instrumnet Name : P7
Client Sample ID : LLICV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:29:42 DataFile Name : 014LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.86	0.90	0.90	0.89	2.44	ppb
Lead	207-1	0.77	0.91	0.82	0.83	8.61	ppb
Lead	208-1	0.81	0.89	0.85	0.85	4.54	ppb
Lithium	6-1				94		%
Magnesium	24-2	458.55	458.05	452.18	456.26	0.78	ppb
Manganese	55-2	0.98	1.02	1.08	1.02	5.01	ppb
Molybdenum	94-1	5.46	5.78	5.57	5.61	2.89	ppb
Molybdenum	95-1	4.45	4.80	4.98	4.75	5.68	ppb
Molybdenum	96-1	4.70	5.06	5.11	4.95	4.48	ppb
Molybdenum	97-1	4.49	4.94	4.87	4.77	5.12	ppb
Molybdenum	98-1	4.54	4.88	5.05	4.83	5.32	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.93	0.98	0.94	0.95	2.37	ppb
Phosphorus	31-2	92.53	80.45	85.53	86.17	7.04	ppb
Potassium	39-2	501.99	502.66	492.95	499.20	1.09	ppb
Rhodium	103-1				106		%
Rhodium	103-2				108		%
Scandium	45-1				107		%
Scandium	45-2				105		%
Selenium	82-1	5.17	5.99	5.86	5.68	7.77	ppb
Selenium	77-2	4.78	5.05	5.82	5.21	10.31	ppb
Selenium	78-2	7.58	6.13	6.17	6.63	12.42	ppb
Silicon	28-1	-0.10	0.66	0.47	0.34	116.04	ppb
Silver	107-1	1.11	1.15	1.14	1.13	1.61	ppb
Silver	109-1	1.08	1.13	1.16	1.12	3.36	ppb
Sodium	23-2	488.16	486.39	491.11	488.55	0.49	ppb
Strontium	86-1	0.78	0.95	1.00	0.91	12.36	ppb
Strontium	88-1	0.91	0.94	0.97	0.94	2.96	ppb
Sulfur	34-1	-1280.48	-863.49	-1020.51	-1054.83		ppb
Terbium	159-1				102		%
Terbium	159-2				105		%
Thallium	203-1	0.95	1.03	0.98	0.99	4.23	ppb
Thallium	205-1	0.96	1.01	0.98	0.99	2.42	ppb
Tin	118-1	4.79	4.96	5.04	4.93	2.57	ppb
Titanium	47-1	4.55	4.97	5.08	4.86	5.79	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : LLICV01 Instrumnet Name : P7
Client Sample ID : LLICV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:29:42 DataFile Name : 014LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.86	0.87	0.86	0.86	0.97	ppb
Vanadium	51-2	4.93	4.74	4.82	4.83	1.99	ppb
Yttrium	89-1				106		%
Yttrium	89-2				109		%
Zinc	66-2	4.01	4.53	4.32	4.29	6.14	ppb
Zirconium	90-1	0.91	1.03	1.04	0.99	7.21	ppb
Zirconium	91-1	0.99	0.98	0.93	0.97	3.55	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICB01 Instrumnet Name : P7
Client Sample ID : ICB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:33:00 DataFile Name : 015CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.69	-0.30	0.07	-0.31		ppb
Antimony	121-1	0.04	0.03	0.05	0.04	35.39	ppb
Arsenic	75-2	0.00	0.02	0.03	0.02	110.89	ppb
Barium	135-1	-0.02	-0.01	-0.01	-0.02		ppb
Barium	137-1	-0.01	-0.01	0.00	-0.01		ppb
Beryllium	9-1	0.02	0.01	0.00	0.01	133.80	ppb
Bismuth	209-1				102		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.15	0.11	0.07	0.11	37.70	ppb
Cadmium	106-1	0.68	-0.38	0.26	0.18	290.85	ppb
Cadmium	111-1	0.04	-0.03	0.02	0.01	310.41	ppb
Calcium	43-1	-1.65	-4.53	-0.64	-2.27		ppb
Calcium	44-1	6.60	6.07	7.30	6.65	9.26	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.00	-0.03	0.02	0.00		ppb
Cobalt	59-2	-0.01	-0.01	-0.01	-0.01		ppb
Copper	63-2	0.00	0.00	0.01	0.00	627.41	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				106		%
Indium	115-1				102		%
Indium	115-2				107		%
Iron	56-2	0.35	0.58	0.38	0.44	28.28	ppb
Iron	57-2	2.42	-2.28	2.39	0.84	319.98	ppb
Iron	54-2	1.52	-2.03	1.40	0.30	682.81	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICB01 Instrumnet Name : P7
Client Sample ID : ICB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:33:00 DataFile Name : 015CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.02	0.02	0.02	0.02	6.62	ppb
Lead	207-1	0.02	0.04	0.03	0.03	32.99	ppb
Lead	208-1	0.02	0.03	0.02	0.02	26.92	ppb
Lithium	6-1				93		%
Magnesium	24-2	0.10	0.15	0.11	0.12	22.50	ppb
Manganese	55-2	-0.03	-0.02	-0.01	-0.02		ppb
Molybdenum	94-1	-0.03	0.00	0.05	0.01	639.88	ppb
Molybdenum	95-1	-0.02	0.01	0.00	0.00		ppb
Molybdenum	96-1	0.03	0.02	0.01	0.02	60.71	ppb
Molybdenum	97-1	0.01	0.00	0.00	0.00	372.57	ppb
Molybdenum	98-1	0.00	0.02	0.01	0.01	102.04	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.03	0.02	0.04	0.03	30.77	ppb
Phosphorus	31-2	-149.94	-149.88	-139.98	-146.60		ppb
Potassium	39-2	-1.26	-1.65	4.36	0.48	694.03	ppb
Rhodium	103-1				105		%
Rhodium	103-2				106		%
Scandium	45-1				106		%
Scandium	45-2				105		%
Selenium	82-1	0.30	0.17	0.57	0.35	58.71	ppb
Selenium	77-2	-0.12	-0.12	-0.12	-0.12		ppb
Selenium	78-2	0.83	1.16	0.08	0.69	80.36	ppb
Silicon	28-1	7.07	0.07	-0.07	2.36	173.22	ppb
Silver	107-1	0.01	0.01	0.01	0.01	40.75	ppb
Silver	109-1	0.02	0.01	0.02	0.02	24.67	ppb
Sodium	23-2	21.61	20.26	24.44	22.10	9.64	ppb
Strontium	86-1	-0.04	0.07	0.00	0.01	614.29	ppb
Strontium	88-1	0.00	0.00	0.00	0.00		ppb
Sulfur	34-1	-1227.49	-966.45	-1082.57	-1092.17		ppb
Terbium	159-1				101		%
Terbium	159-2				104		%
Thallium	203-1	0.01	0.01	0.01	0.01	21.81	ppb
Thallium	205-1	0.00	0.01	0.01	0.01	61.89	ppb
Tin	118-1	-0.02	-0.02	-0.02	-0.02		ppb
Titanium	47-1	-0.01	0.02	-0.01	0.00		ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICB01 Instrumnet Name : P7
Client Sample ID : ICB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:33:00 DataFile Name : 015CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	990.50	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00		ppb
Yttrium	89-1				105		%
Yttrium	89-2				109		%
Zinc	66-2	0.18	-0.36	-0.21	-0.13		ppb
Zirconium	90-1	0.00	0.02	0.01	0.01	92.35	ppb
Zirconium	91-1	0.00	0.00	0.01	0.00	156.04	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICSA01 Instrumnet Name : P7
Client Sample ID : ICSA01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:36:16 DataFile Name : 016ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	88682.29	86204.52	85417.57	86768.13	1.96	ppb
Antimony	121-1	1.10	1.09	1.20	1.13	5.50	ppb
Arsenic	75-2	0.36	0.35	0.27	0.33	15.09	ppb
Barium	135-1	1.35	1.42	1.39	1.38	2.65	ppb
Barium	137-1	1.36	1.41	1.41	1.39	1.96	ppb
Beryllium	9-1	0.35	0.32	0.24	0.30	17.96	ppb
Bismuth	209-1				101		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	7.87	6.87	8.04	7.59	8.28	ppb
Cadmium	106-1	1.60	-0.20	0.17	0.53	180.40	ppb
Cadmium	111-1	0.44	0.33	0.31	0.36	18.86	ppb
Calcium	43-1	96449.36	97990.93	93716.58	96052.29	2.25	ppb
Calcium	44-1	93814.95	95020.09	94104.22	94313.09	0.67	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	19.40	19.79	19.42	19.53	1.14	ppb
Cobalt	59-2	1.28	1.34	1.25	1.29	3.82	ppb
Copper	63-2	7.18	7.12	7.07	7.12	0.76	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				104		%
Indium	115-1				104		%
Indium	115-2				105		%
Iron	56-2	98332.63	97668.40	97196.90	97732.65	0.58	ppb
Iron	57-2	97557.99	95929.55	95623.26	96370.27	1.08	ppb
Iron	54-2	98088.80	96751.52	96513.29	97117.87	0.87	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICSA01 Instrumnet Name : P7
Client Sample ID : ICSA01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:36:16 DataFile Name : 016ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	4.25	4.50	4.60	4.45	3.97	ppb
Lead	207-1	4.17	4.22	4.26	4.22	1.08	ppb
Lead	208-1	4.15	4.33	4.34	4.28	2.47	ppb
Lithium	6-1				92		%
Magnesium	24-2	88484.91	87581.79	88329.18	88131.96	0.55	ppb
Manganese	55-2	7.29	7.34	7.45	7.36	1.10	ppb
Molybdenum	94-1	1540.57	1575.70	1561.09	1559.12	1.13	ppb
Molybdenum	95-1	1888.47	1927.75	1935.60	1917.28	1.32	ppb
Molybdenum	96-1	1871.72	1880.48	1931.70	1894.63	1.71	ppb
Molybdenum	97-1	1897.50	1965.77	1944.49	1935.92	1.80	ppb
Molybdenum	98-1	1907.79	1940.93	1929.53	1926.08	0.87	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	5.57	5.52	5.66	5.58	1.28	ppb
Phosphorus	31-2	99539.94	95782.07	96600.05	97307.35	2.03	ppb
Potassium	39-2	97105.35	94558.92	95326.09	95663.45	1.37	ppb
Rhodium	103-1				102		%
Rhodium	103-2				104		%
Scandium	45-1				105		%
Scandium	45-2				104		%
Selenium	82-1	1.28	0.97	-0.49	0.59	161.77	ppb
Selenium	77-2	-0.12	-0.12	-0.12	-0.12		ppb
Selenium	78-2	0.21	-0.17	0.76	0.27	173.82	ppb
Silicon	28-1	0.41	0.77	0.23	0.47	57.54	ppb
Silver	107-1	0.08	0.04	0.04	0.05	43.66	ppb
Silver	109-1	0.08	0.05	0.04	0.06	42.52	ppb
Sodium	23-2	97255.62	95112.00	95070.35	95812.66	1.30	ppb
Strontium	86-1	31.80	31.97	32.57	32.11	1.26	ppb
Strontium	88-1	31.32	32.07	32.36	31.92	1.69	ppb
Sulfur	34-1	100693.78	103746.82	97471.43	100637.34	3.12	ppb
Terbium	159-1				105		%
Terbium	159-2				106		%
Thallium	203-1	0.05	0.08	0.07	0.07	21.89	ppb
Thallium	205-1	0.05	0.06	0.08	0.06	20.38	ppb
Tin	118-1	0.43	0.70	0.79	0.64	28.99	ppb
Titanium	47-1	1928.81	1993.83	1930.76	1951.14	1.90	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICSA01 Instrumnet Name : P7
Client Sample ID : ICSA01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:36:16 DataFile Name : 016ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.02	0.02	0.01	0.02	6.35	ppb
Vanadium	51-2	0.19	0.22	0.19	0.20	8.63	ppb
Yttrium	89-1				107		%
Yttrium	89-2				108		%
Zinc	66-2	10.20	10.06	9.62	9.96	3.03	ppb
Zirconium	90-1	0.02	0.02	0.03	0.02	20.46	ppb
Zirconium	91-1	0.01	0.03	0.02	0.02	39.62	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICSAB01 Instrumnet Name : P7
Client Sample ID : ICSAB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:39:24 DataFile Name : 017ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	87063.64	88199.15	87792.45	87685.08	0.66	ppb
Antimony	121-1	20.47	22.05	22.48	21.67	4.89	ppb
Arsenic	75-2	19.57	19.77	20.71	20.02	3.06	ppb
Barium	135-1	21.06	21.84	22.66	21.86	3.65	ppb
Barium	137-1	21.00	22.24	22.89	22.05	4.36	ppb
Beryllium	9-1	22.36	21.44	21.29	21.69	2.67	ppb
Bismuth	209-1				101		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	26.55	27.12	27.87	27.18	2.44	ppb
Cadmium	106-1	18.30	20.21	18.45	18.99	5.57	ppb
Cadmium	111-1	19.83	21.56	21.94	21.11	5.34	ppb
Calcium	43-1	94622.64	93474.87	98463.78	95520.43	2.74	ppb
Calcium	44-1	93094.37	93658.63	96524.63	94425.88	1.95	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	40.44	40.05	40.20	40.23	0.48	ppb
Cobalt	59-2	21.68	21.52	21.34	21.51	0.80	ppb
Copper	63-2	25.90	26.43	26.42	26.25	1.17	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				107		%
Indium	115-1				107		%
Indium	115-2				106		%
Iron	56-2	97888.15	100162.29	99412.97	99154.47	1.17	ppb
Iron	57-2	96505.79	95936.53	96672.99	96371.77	0.40	ppb
Iron	54-2	97617.94	97585.36	99468.45	98223.92	1.10	ppb
Krypton	83-1						cps

LB Number :LB137449Operator :Jaswal

Lab Sample ID :ICSAB01Instrumnet Name :P7

Client Sample ID :ICSAB01Dilution Factor :1

Date & Time Acquired :2025-10-07 17:39:24DataFile Name :017ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	26.43	27.74	26.79	26.99	2.51	ppb
Lead	207-1	26.15	26.86	26.06	26.36	1.66	ppb
Lead	208-1	25.88	26.81	26.14	26.27	1.82	ppb
Lithium	6-1				91		%
Magnesium	24-2	87800.50	89321.14	88775.64	88632.43	0.87	ppb
Manganese	55-2	25.51	25.56	26.02	25.69	1.10	ppb
Molybdenum	94-1	1544.28	1586.25	1630.62	1587.05	2.72	ppb
Molybdenum	95-1	1872.10	1923.68	1977.22	1924.33	2.73	ppb
Molybdenum	96-1	1860.07	1891.06	1991.51	1914.21	3.59	ppb
Molybdenum	97-1	1910.02	1924.42	2003.61	1946.01	2.59	ppb
Molybdenum	98-1	1922.69	1921.48	1974.74	1939.64	1.57	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	25.27	25.54	26.57	25.79	2.66	ppb
Phosphorus	31-2	98524.14	99316.86	97885.49	98575.49	0.73	ppb
Potassium	39-2	96647.47	96561.16	96412.96	96540.53	0.12	ppb
Rhodium	103-1				107		%
Rhodium	103-2				105		%
Scandium	45-1				108		%
Scandium	45-2				106		%
Selenium	82-1	19.68	19.67	20.18	19.84	1.48	ppb
Selenium	77-2	22.91	19.29	22.47	21.56	9.18	ppb
Selenium	78-2	17.53	16.34	19.15	17.67	8.00	ppb
Silicon	28-1	0.51	0.36	0.68	0.52	30.57	ppb
Silver	107-1	19.23	20.83	21.38	20.48	5.44	ppb
Silver	109-1	19.47	20.76	20.86	20.36	3.81	ppb
Sodium	23-2	94664.65	96236.77	96880.22	95927.21	1.19	ppb
Strontium	86-1	31.44	32.40	32.53	32.13	1.85	ppb
Strontium	88-1	31.30	32.32	33.43	32.35	3.30	ppb
Sulfur	34-1	102308.83	99763.40	99605.85	100559.36	1.51	ppb
Terbium	159-1				106		%
Terbium	159-2				107		%
Thallium	203-1	19.97	20.60	19.96	20.18	1.82	ppb
Thallium	205-1	19.78	20.60	19.89	20.09	2.20	ppb
Tin	118-1	0.51	0.77	0.91	0.73	27.62	ppb
Titanium	47-1	1970.86	1951.67	2010.15	1977.56	1.51	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICSAB01 Instrumnet Name : P7
Client Sample ID : ICSAB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:39:24 DataFile Name : 017ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.02	0.02	0.01	0.02	26.09	ppb
Vanadium	51-2	20.08	20.14	19.82	20.01	0.84	ppb
Yttrium	89-1				111		%
Yttrium	89-2				110		%
Zinc	66-2	28.25	28.14	28.30	28.23	0.29	ppb
Zirconium	90-1	0.01	0.03	0.02	0.02	49.40	ppb
Zirconium	91-1	0.02	0.03	0.02	0.02	8.76	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV01 Instrumnet Name : P7
Client Sample ID : CCV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:42:30 DataFile Name : 018CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	48004.15	46539.17	48136.44	47559.92	1.86	ppb
Antimony	121-1	507.05	520.09	533.69	520.27	2.56	ppb
Arsenic	75-2	493.47	485.32	492.51	490.43	0.91	ppb
Barium	135-1	2536.29	2592.88	2624.77	2584.64	1.73	ppb
Barium	137-1	2531.75	2592.63	2625.45	2583.28	1.84	ppb
Beryllium	9-1	499.73	520.77	528.20	516.23	2.86	ppb
Bismuth	209-1				101		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	497.66	516.99	522.05	512.23	2.51	ppb
Cadmium	106-1	491.17	512.00	519.97	507.71	2.93	ppb
Cadmium	111-1	494.94	509.40	521.17	508.50	2.58	ppb
Calcium	43-1	232418.00	247976.46	250477.61	243624.02	4.02	ppb
Calcium	44-1	231335.16	245498.30	245741.73	240858.40	3.42	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	505.22	487.41	510.42	501.02	2.41	ppb
Cobalt	59-2	500.99	486.13	502.86	496.66	1.85	ppb
Copper	63-2	4985.96	4848.84	4957.11	4930.64	1.47	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				106		%
Indium	115-1				106		%
Indium	115-2				104		%
Iron	56-2	126231.34	127732.52	126548.09	126837.32	0.62	ppb
Iron	57-2	127190.80	121078.94	129677.95	125982.56	3.51	ppb
Iron	54-2	127841.27	125872.44	126582.32	126765.34	0.79	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV01 Instrumnet Name : P7
Client Sample ID : CCV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:42:30 DataFile Name : 018CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2436.59	2585.62	2575.56	2532.59	3.29	ppb
Lead	207-1	2476.91	2615.23	2566.82	2552.99	2.75	ppb
Lead	208-1	2471.92	2598.96	2568.94	2546.60	2.61	ppb
Lithium	6-1				92		%
Magnesium	24-2	239177.45	235729.07	243488.92	239465.15	1.62	ppb
Manganese	55-2	4992.18	4882.55	5008.77	4961.17	1.38	ppb
Molybdenum	94-1	4849.45	5055.33	5081.20	4995.33	2.54	ppb
Molybdenum	95-1	4818.01	5129.98	5064.05	5004.02	3.29	ppb
Molybdenum	96-1	4874.22	5164.42	5166.13	5068.26	3.32	ppb
Molybdenum	97-1	4852.58	5008.73	5090.02	4983.77	2.42	ppb
Molybdenum	98-1	4917.32	5096.65	5120.87	5044.95	2.20	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	504.81	489.45	504.77	499.68	1.77	ppb
Phosphorus	31-2	9958.46	9542.45	10084.81	9861.90	2.88	ppb
Potassium	39-2	126594.69	121554.81	123701.29	123950.26	2.04	ppb
Rhodium	103-1				104		%
Rhodium	103-2				104		%
Scandium	45-1				108		%
Scandium	45-2				107		%
Selenium	82-1	471.55	490.62	488.69	483.62	2.17	ppb
Selenium	77-2	488.80	471.58	485.33	481.90	1.89	ppb
Selenium	78-2	478.82	479.19	464.83	474.28	1.73	ppb
Silicon	28-1	441.10	470.83	466.08	459.34	3.48	ppb
Silver	107-1	498.73	538.36	532.54	523.21	4.09	ppb
Silver	109-1	495.03	520.30	520.18	511.84	2.84	ppb
Sodium	23-2	242918.50	243766.90	246025.11	244236.84	0.66	ppb
Strontium	86-1	490.29	518.89	512.13	507.10	2.95	ppb
Strontium	88-1	499.72	515.30	512.51	509.17	1.63	ppb
Sulfur	34-1	7537.06	8514.17	8327.77	8126.33	6.38	ppb
Terbium	159-1				106		%
Terbium	159-2				107		%
Thallium	203-1	495.90	519.02	513.09	509.34	2.36	ppb
Thallium	205-1	492.88	527.87	515.21	511.98	3.46	ppb
Tin	118-1	505.90	522.46	524.27	517.54	1.96	ppb
Titanium	47-1	4807.26	5129.64	5104.13	5013.68	3.57	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV01 Instrumnet Name : P7
Client Sample ID : CCV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:42:30 DataFile Name : 018CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	487.02	524.88	515.30	509.06	3.87	ppb
Vanadium	51-2	510.55	486.57	510.51	502.54	2.75	ppb
Yttrium	89-1				111		%
Yttrium	89-2				110		%
Zinc	66-2	4873.33	4689.23	4812.35	4791.64	1.96	ppb
Zirconium	90-1	492.32	522.85	513.13	509.43	3.06	ppb
Zirconium	91-1	485.39	515.93	511.76	504.36	3.28	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB01 Instrumnet Name : P7
Client Sample ID : CCB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:45:18 DataFile Name : 019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.03	0.01	0.72	0.23	182.44	ppb
Antimony	121-1	0.15	0.18	0.18	0.17	8.36	ppb
Arsenic	75-2	0.01	0.02	0.00	0.01	140.53	ppb
Barium	135-1	-0.03	-0.01	-0.01	-0.02		ppb
Barium	137-1	0.01	0.00	0.02	0.01	146.30	ppb
Beryllium	9-1	0.03	0.03	0.02	0.03	21.15	ppb
Bismuth	209-1				102		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.02	0.07	-0.02	0.01	428.75	ppb
Cadmium	106-1	1.84	0.19	0.19	0.74	128.88	ppb
Cadmium	111-1	0.15	0.05	0.04	0.08	79.61	ppb
Calcium	43-1	-1.36	-1.78	-3.47	-2.20		ppb
Calcium	44-1	8.93	11.61	10.42	10.32	13.03	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.04	0.06	0.04	0.05	26.11	ppb
Cobalt	59-2	-0.02	-0.01	-0.02	-0.02		ppb
Copper	63-2	0.26	0.27	0.28	0.27	3.93	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				103		%
Indium	115-1				106		%
Indium	115-2				106		%
Iron	56-2	1.76	1.66	1.90	1.77	6.79	ppb
Iron	57-2	2.10	3.50	6.93	4.18	59.48	ppb
Iron	54-2	1.48	0.90	2.34	1.57	46.28	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB01 Instrumnet Name : P7
Client Sample ID : CCB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:45:18 DataFile Name : 019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.08	0.08	0.05	0.07	19.66	ppb
Lead	207-1	0.09	0.09	0.08	0.09	6.57	ppb
Lead	208-1	0.07	0.08	0.06	0.07	13.60	ppb
Lithium	6-1				90		%
Magnesium	24-2	1.95	2.19	2.04	2.06	6.12	ppb
Manganese	55-2	0.03	0.01	0.00	0.01	147.50	ppb
Molybdenum	94-1	0.21	0.23	0.21	0.22	4.90	ppb
Molybdenum	95-1	0.18	0.21	0.13	0.17	21.99	ppb
Molybdenum	96-1	0.23	0.16	0.17	0.19	19.01	ppb
Molybdenum	97-1	0.19	0.17	0.16	0.18	8.68	ppb
Molybdenum	98-1	0.22	0.17	0.21	0.20	11.80	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.05	0.01	0.00	0.02	128.83	ppb
Phosphorus	31-2	-162.92	-167.72	-170.98	-167.21		ppb
Potassium	39-2	38.39	32.43	32.06	34.29	10.37	ppb
Rhodium	103-1				107		%
Rhodium	103-2				108		%
Scandium	45-1				107		%
Scandium	45-2				104		%
Selenium	82-1	-0.54	1.10	1.00	0.52	176.65	ppb
Selenium	77-2	0.20	0.20	-0.12	0.10	194.99	ppb
Selenium	78-2	-1.72	-0.35	0.08	-0.66		ppb
Silicon	28-1	-0.63	-0.51	-0.53	-0.56		ppb
Silver	107-1	0.07	0.05	0.05	0.06	21.04	ppb
Silver	109-1	0.07	0.04	0.04	0.05	34.64	ppb
Sodium	23-2	72.89	73.29	71.94	72.70	0.95	ppb
Strontium	86-1	-0.06	-0.02	-0.03	-0.04		ppb
Strontium	88-1	0.00	0.00	0.00	0.00	82.29	ppb
Sulfur	34-1	-1849.96	-1642.59	-1602.10	-1698.22		ppb
Terbium	159-1				105		%
Terbium	159-2				104		%
Thallium	203-1	0.11	0.09	0.09	0.10	11.83	ppb
Thallium	205-1	0.12	0.11	0.10	0.11	12.22	ppb
Tin	118-1	0.12	0.12	0.05	0.10	39.06	ppb
Titanium	47-1	-0.02	0.01	0.11	0.03	195.30	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB01 Instrumnet Name : P7
Client Sample ID : CCB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:45:18 DataFile Name : 019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.01	0.00	0.00	0.01	43.11	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00		ppb
Yttrium	89-1				108		%
Yttrium	89-2				110		%
Zinc	66-2	-0.12	-0.08	0.07	-0.04		ppb
Zirconium	90-1	0.05	0.07	0.06	0.06	10.13	ppb
Zirconium	91-1	0.03	0.04	0.11	0.06	79.06	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CRI01 Instrumnet Name : P7
Client Sample ID : CRI01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:48:35 DataFile Name : 020LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	18.91	19.92	18.68	19.17	3.43	ppb
Antimony	121-1	2.05	2.21	2.02	2.09	4.87	ppb
Arsenic	75-2	1.09	1.40	1.16	1.22	13.54	ppb
Barium	135-1	9.15	9.55	9.88	9.53	3.85	ppb
Barium	137-1	9.64	9.93	9.92	9.83	1.65	ppb
Beryllium	9-1	1.07	1.09	1.07	1.08	1.39	ppb
Bismuth	209-1				101		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.17	1.11	1.09	1.12	3.39	ppb
Cadmium	106-1	3.38	2.96	-0.26	2.03	98.17	ppb
Cadmium	111-1	1.18	1.02	0.96	1.05	10.81	ppb
Calcium	43-1	445.63	509.78	490.90	482.10	6.84	ppb
Calcium	44-1	466.68	494.12	494.34	485.05	3.28	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.98	1.89	1.97	1.95	2.53	ppb
Cobalt	59-2	1.07	0.99	1.08	1.05	4.38	ppb
Copper	63-2	1.96	2.04	2.07	2.02	2.58	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				104		%
Indium	115-1				107		%
Indium	115-2				106		%
Iron	56-2	53.49	52.81	53.11	53.13	0.64	ppb
Iron	57-2	57.74	55.46	58.99	57.40	3.11	ppb
Iron	54-2	52.95	55.43	56.60	54.99	3.39	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CRI01 Instrumnet Name : P7
Client Sample ID : CRI01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:48:35 DataFile Name : 020LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.87	0.86	0.89	0.87	1.48	ppb
Lead	207-1	0.88	0.89	1.00	0.93	7.37	ppb
Lead	208-1	0.85	0.87	0.91	0.87	3.57	ppb
Lithium	6-1				91		%
Magnesium	24-2	463.48	463.60	462.10	463.06	0.18	ppb
Manganese	55-2	1.05	1.00	1.09	1.05	4.67	ppb
Molybdenum	94-1	5.77	5.79	5.95	5.83	1.66	ppb
Molybdenum	95-1	4.60	4.83	5.07	4.83	4.83	ppb
Molybdenum	96-1	4.85	4.88	5.03	4.92	1.97	ppb
Molybdenum	97-1	4.75	5.09	4.87	4.91	3.48	ppb
Molybdenum	98-1	4.74	4.97	4.92	4.88	2.40	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.95	1.00	0.85	0.93	8.43	ppb
Phosphorus	31-2	96.54	75.81	98.78	90.38	14.02	ppb
Potassium	39-2	517.51	521.09	526.92	521.84	0.91	ppb
Rhodium	103-1				107		%
Rhodium	103-2				107		%
Scandium	45-1				108		%
Scandium	45-2				104		%
Selenium	82-1	4.74	4.65	5.43	4.94	8.68	ppb
Selenium	77-2	6.16	3.46	4.81	4.81	28.05	ppb
Selenium	78-2	6.99	4.70	4.64	5.44	24.66	ppb
Silicon	28-1	-0.58	0.06	-0.27	-0.26		ppb
Silver	107-1	1.09	1.15	1.10	1.11	2.49	ppb
Silver	109-1	1.05	1.12	1.07	1.08	3.28	ppb
Sodium	23-2	512.26	515.91	515.70	514.62	0.40	ppb
Strontium	86-1	0.75	0.98	0.92	0.88	13.60	ppb
Strontium	88-1	0.91	0.97	0.95	0.95	3.10	ppb
Sulfur	34-1	-1511.25	-1270.47	-1285.30	-1355.67		ppb
Terbium	159-1				103		%
Terbium	159-2				105		%
Thallium	203-1	1.06	1.04	1.13	1.08	4.21	ppb
Thallium	205-1	1.00	1.05	1.12	1.06	5.33	ppb
Tin	118-1	4.82	5.03	5.17	5.01	3.57	ppb
Titanium	47-1	4.98	4.88	4.94	4.93	1.02	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CRI01 Instrumnet Name : P7
Client Sample ID : CRI01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:48:35 DataFile Name : 020LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.86	0.90	0.91	0.89	3.24	ppb
Vanadium	51-2	4.88	4.71	4.93	4.84	2.40	ppb
Yttrium	89-1				109		%
Yttrium	89-2				108		%
Zinc	66-2	4.31	4.20	4.57	4.36	4.31	ppb
Zirconium	90-1	0.96	1.05	1.04	1.02	4.51	ppb
Zirconium	91-1	0.99	0.97	0.99	0.98	1.16	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : PB170000BL Instrumnet Name : P7
Client Sample ID : PB170000BL Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:51:53 DataFile Name : 021CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.65	0.02	0.07	-0.19		ppb
Antimony	121-1	0.03	0.03	0.03	0.03	15.02	ppb
Arsenic	75-2	-0.03	-0.02	-0.03	-0.02		ppb
Barium	135-1	-0.03	-0.01	-0.02	-0.02		ppb
Barium	137-1	-0.02	-0.01	-0.01	-0.01		ppb
Beryllium	9-1	0.00	0.00	0.02	0.00	283.87	ppb
Bismuth	209-1				101		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.03	-0.02	-0.02	0.00		ppb
Cadmium	106-1	0.14	0.33	-1.06	-0.20		ppb
Cadmium	111-1	0.03	0.03	-0.07	0.00		ppb
Calcium	43-1	-4.17	-4.43	-0.41	-3.00		ppb
Calcium	44-1	6.40	6.86	5.38	6.21	12.20	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.02	0.05	-0.02	0.01	601.62	ppb
Cobalt	59-2	-0.02	0.00	-0.01	-0.01		ppb
Copper	63-2	0.12	0.10	0.09	0.10	17.99	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				103		%
Indium	115-1				104		%
Indium	115-2				106		%
Iron	56-2	1.13	0.97	1.11	1.07	8.39	ppb
Iron	57-2	2.44	1.06	1.23	1.58	47.96	ppb
Iron	54-2	1.00	0.69	-0.43	0.42	177.88	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : PB170000BL Instrumnet Name : P7
Client Sample ID : PB170000BL Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:51:53 DataFile Name : 021CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.04	0.03	0.03	0.04	14.47	ppb
Lead	207-1	0.03	0.00	0.06	0.03	94.41	ppb
Lead	208-1	0.02	0.02	0.03	0.02	30.64	ppb
Lithium	6-1				90		%
Magnesium	24-2	0.90	1.18	0.84	0.97	18.31	ppb
Manganese	55-2	0.00	0.03	0.05	0.02	105.14	ppb
Molybdenum	94-1	0.01	0.02	0.04	0.03	55.62	ppb
Molybdenum	95-1	0.01	0.04	0.02	0.03	54.78	ppb
Molybdenum	96-1	0.01	0.03	0.05	0.03	68.57	ppb
Molybdenum	97-1	0.02	0.03	-0.01	0.02	140.34	ppb
Molybdenum	98-1	0.04	0.03	0.04	0.04	5.30	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.02	0.00	0.00	0.00		ppb
Phosphorus	31-2	-159.57	-166.38	-160.39	-162.11		ppb
Potassium	39-2	22.35	12.78	10.27	15.13	42.10	ppb
Rhodium	103-1				107		%
Rhodium	103-2				107		%
Scandium	45-1				107		%
Scandium	45-2				104		%
Selenium	82-1	-0.38	-0.32	-0.28	-0.33		ppb
Selenium	77-2	-0.12	-0.12	-0.12	-0.12		ppb
Selenium	78-2	0.20	0.37	0.79	0.45	67.11	ppb
Silicon	28-1	-0.76	-0.40	-0.53	-0.56		ppb
Silver	107-1	0.02	0.02	0.01	0.02	34.18	ppb
Silver	109-1	0.02	0.02	0.01	0.02	16.78	ppb
Sodium	23-2	42.34	39.13	39.01	40.16	4.71	ppb
Strontium	86-1	-0.05	-0.03	-0.02	-0.03		ppb
Strontium	88-1	0.00	0.00	0.00	0.00	2191.64	ppb
Sulfur	34-1	-1500.44	-1270.20	-1455.82	-1408.82		ppb
Terbium	159-1				103		%
Terbium	159-2				105		%
Thallium	203-1	0.06	0.06	0.06	0.06	5.63	ppb
Thallium	205-1	0.05	0.05	0.06	0.05	2.38	ppb
Tin	118-1	-0.03	-0.03	0.00	-0.02		ppb
Titanium	47-1	-0.02	0.05	-0.01	0.01	652.76	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : PB170000BL Instrumnet Name : P7
Client Sample ID : PB170000BL Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:51:53 DataFile Name : 021CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	108.84	ppb
Vanadium	51-2	0.01	0.00	-0.01	0.00	3481.05	ppb
Yttrium	89-1				108		%
Yttrium	89-2				109		%
Zinc	66-2	-0.40	-0.29	0.04	-0.22		ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	1.15	ppb
Zirconium	91-1	0.01	0.00	0.03	0.01	116.70	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : PB170000BS Instrumnet Name : P7
Client Sample ID : PB170000BS Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:55:09 DataFile Name : 022LCS6.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10192.34	10013.92	9906.45	10037.57	1.44	ppb
Antimony	121-1	534.77	544.19	516.18	531.71	2.68	ppb
Arsenic	75-2	496.45	505.50	507.75	503.23	1.19	ppb
Barium	135-1	2577.95	2641.17	2606.16	2608.43	1.21	ppb
Barium	137-1	2565.90	2650.78	2590.12	2602.27	1.68	ppb
Beryllium	9-1	498.88	524.28	515.98	513.05	2.52	ppb
Bismuth	209-1				103		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	540.99	536.68	528.61	535.42	1.17	ppb
Cadmium	106-1	534.23	539.90	525.50	533.21	1.36	ppb
Cadmium	111-1	525.98	539.99	527.45	531.14	1.45	ppb
Calcium	43-1	49677.86	51137.28	52176.83	50997.32	2.46	ppb
Calcium	44-1	47091.79	49166.55	50120.53	48792.96	3.17	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	504.53	504.21	510.35	506.36	0.68	ppb
Cobalt	59-2	509.29	508.13	514.97	510.80	0.72	ppb
Copper	63-2	5084.65	5119.74	5137.35	5113.91	0.52	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				106		%
Indium	115-1				106		%
Indium	115-2				105		%
Iron	56-2	26269.81	26465.90	26099.44	26278.38	0.70	ppb
Iron	57-2	26972.36	27051.81	26960.41	26994.86	0.18	ppb
Iron	54-2	26643.30	26832.11	26952.90	26809.44	0.58	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : PB170000BS Instrumnet Name : P7
Client Sample ID : PB170000BS Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:55:09 DataFile Name : 022LCS6.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2505.06	2599.17	2510.77	2538.34	2.08	ppb
Lead	207-1	2493.74	2624.67	2544.02	2554.14	2.59	ppb
Lead	208-1	2499.54	2601.98	2524.87	2542.13	2.10	ppb
Lithium	6-1				93		%
Magnesium	24-2	49321.21	49026.47	48585.11	48977.60	0.76	ppb
Manganese	55-2	5099.16	5157.25	5055.39	5103.93	1.00	ppb
Molybdenum	94-1	4988.45	4975.18	5124.84	5029.49	1.65	ppb
Molybdenum	95-1	4969.41	5089.56	5171.62	5076.86	2.00	ppb
Molybdenum	96-1	4951.38	5072.61	5138.52	5054.17	1.88	ppb
Molybdenum	97-1	5013.41	5005.37	5165.94	5061.57	1.79	ppb
Molybdenum	98-1	4992.23	5096.73	5207.35	5098.77	2.11	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	508.60	512.70	512.31	511.21	0.44	ppb
Phosphorus	31-2	9665.11	9907.48	9724.66	9765.75	1.29	ppb
Potassium	39-2	25216.19	25686.56	25229.10	25377.29	1.06	ppb
Rhodium	103-1				106		%
Rhodium	103-2				105		%
Scandium	45-1				107		%
Scandium	45-2				105		%
Selenium	82-1	512.88	515.35	524.62	517.62	1.20	ppb
Selenium	77-2	496.35	496.04	535.17	509.19	4.42	ppb
Selenium	78-2	509.33	512.41	510.25	510.67	0.31	ppb
Silicon	28-1	481.57	493.19	507.16	493.97	2.59	ppb
Silver	107-1	533.10	551.12	530.72	538.31	2.07	ppb
Silver	109-1	542.88	543.65	524.14	536.89	2.06	ppb
Sodium	23-2	50736.50	50226.45	50876.73	50613.22	0.68	ppb
Strontium	86-1	500.96	508.71	523.25	510.97	2.21	ppb
Strontium	88-1	490.09	507.30	520.27	505.88	2.99	ppb
Sulfur	34-1	8120.21	8318.65	8556.72	8331.86	2.62	ppb
Terbium	159-1				104		%
Terbium	159-2				106		%
Thallium	203-1	502.35	519.49	492.56	504.80	2.70	ppb
Thallium	205-1	496.58	523.08	501.68	507.11	2.77	ppb
Tin	118-1	533.97	537.41	520.50	530.63	1.68	ppb
Titanium	47-1	4914.62	5044.78	5164.12	5041.17	2.48	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : PB170000BS Instrumnet Name : P7
Client Sample ID : PB170000BS Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:55:09 DataFile Name : 022LCS6.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	488.41	514.67	484.25	495.78	3.33	ppb
Vanadium	51-2	499.88	502.38	502.67	501.64	0.31	ppb
Yttrium	89-1				109		%
Yttrium	89-2				108		%
Zinc	66-2	5059.46	5080.19	5155.38	5098.34	0.99	ppb
Zirconium	90-1	502.96	509.26	512.87	508.36	0.99	ppb
Zirconium	91-1	496.79	504.32	512.34	504.49	1.54	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-05 Instrumnet Name : P7
Client Sample ID : MC0AX0 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:57:59 DataFile Name : 023SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	22.43	22.36	22.87	22.55	1.22	ppb
Antimony	121-1	3.63	3.71	3.58	3.64	1.71	ppb
Arsenic	75-2	41.41	40.76	39.16	40.45	2.87	ppb
Barium	135-1	13.66	14.24	13.77	13.89	2.20	ppb
Barium	137-1	13.78	14.05	13.99	13.94	1.01	ppb
Beryllium	9-1	0.12	0.07	0.07	0.08	32.83	ppb
Bismuth	209-1				115		%
Bismuth	209-2				117		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.43	0.33	0.58	0.45	27.37	ppb
Cadmium	106-1	0.46	1.39	0.21	0.69	90.33	ppb
Cadmium	111-1	0.06	0.18	0.06	0.10	65.95	ppb
Calcium	43-1	90209.29	88306.38	91402.29	89972.66	1.74	ppb
Calcium	44-1	88238.96	88717.78	88366.56	88441.10	0.28	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.91	0.80	0.87	0.86	6.78	ppb
Cobalt	59-2	0.56	0.52	0.53	0.54	3.54	ppb
Copper	63-2	2.65	2.63	2.56	2.61	1.86	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				123		%
Holmium	165-2				123		%
Indium	115-1				123		%
Indium	115-2				123		%
Iron	56-2	94.11	91.22	92.60	92.64	1.56	ppb
Iron	57-2	848.44	860.24	884.78	864.49	2.14	ppb
Iron	54-2	93.13	88.98	90.13	90.75	2.36	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-05 Instrumnet Name : P7
Client Sample ID : MC0AX0 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:57:59 DataFile Name : 023SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.26	0.31	0.28	0.29	9.20	ppb
Lead	207-1	0.31	0.30	0.26	0.29	8.23	ppb
Lead	208-1	0.30	0.28	0.28	0.29	4.00	ppb
Lithium	6-1				105		%
Magnesium	24-2	17509.89	17754.10	17756.72	17673.57	0.80	ppb
Manganese	55-2	265.72	264.69	268.16	266.19	0.67	ppb
Molybdenum	94-1	70.07	71.92	72.00	71.33	1.53	ppb
Molybdenum	95-1	85.61	87.38	87.22	86.74	1.13	ppb
Molybdenum	96-1	83.64	85.24	86.06	84.98	1.45	ppb
Molybdenum	97-1	86.34	87.31	87.72	87.12	0.81	ppb
Molybdenum	98-1	85.45	86.88	88.28	86.87	1.63	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.55	2.71	2.49	2.58	4.51	ppb
Phosphorus	31-2	1155.34	1083.00	1160.73	1133.02	3.83	ppb
Potassium	39-2	15335.65	15155.26	15471.20	15320.70	1.03	ppb
Rhodium	103-1				121		%
Rhodium	103-2				124		%
Scandium	45-1				124		%
Scandium	45-2				123		%
Selenium	82-1	0.75	1.96	2.02	1.58	45.64	ppb
Selenium	77-2	1.56	3.74	2.06	2.45	46.58	ppb
Selenium	78-2	1.71	0.65	0.05	0.80	105.19	ppb
Silicon	28-1	827.78	830.94	838.27	832.33	0.65	ppb
Silver	107-1	0.12	0.07	0.06	0.08	40.91	ppb
Silver	109-1	0.11	0.07	0.05	0.08	40.15	ppb
Sodium	23-2	327039.81	319622.63	327665.52	324775.99	1.38	ppb
Strontium	86-1	439.16	445.62	451.82	445.53	1.42	ppb
Strontium	88-1	446.66	452.46	456.11	451.74	1.06	ppb
Sulfur	34-1	121593.81	121286.96	124752.64	122544.47	1.57	ppb
Terbium	159-1				121		%
Terbium	159-2				124		%
Thallium	203-1	0.18	0.20	0.18	0.19	5.59	ppb
Thallium	205-1	0.18	0.18	0.18	0.18	2.08	ppb
Tin	118-1	0.70	0.78	0.81	0.76	7.08	ppb
Titanium	47-1	1.26	1.14	1.39	1.26	9.68	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-05 Instrumnet Name : P7
Client Sample ID : MC0AX0 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:57:59 DataFile Name : 023SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.18	0.18	0.16	0.18	6.01	ppb
Vanadium	51-2	2.42	2.53	2.39	2.45	3.06	ppb
Yttrium	89-1				127		%
Yttrium	89-2				129		%
Zinc	66-2	6.39	6.29	6.65	6.44	2.88	ppb
Zirconium	90-1	0.46	0.40	0.40	0.42	8.96	ppb
Zirconium	91-1	0.48	0.52	0.32	0.44	24.57	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-06 Instrumnet Name : P7
Client Sample ID : MC0AX1 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:01:09 DataFile Name : 024SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	16.14	14.64	14.44	15.07	6.14	ppb
Antimony	121-1	3.39	3.44	3.54	3.46	2.16	ppb
Arsenic	75-2	41.21	40.46	41.43	41.03	1.24	ppb
Barium	135-1	13.28	13.25	13.30	13.28	0.18	ppb
Barium	137-1	13.51	13.38	13.77	13.55	1.49	ppb
Beryllium	9-1	0.07	0.12	0.02	0.07	67.29	ppb
Bismuth	209-1				117		%
Bismuth	209-2				116		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.39	0.50	0.53	0.47	16.08	ppb
Cadmium	106-1	1.61	0.23	0.90	0.91	75.67	ppb
Cadmium	111-1	0.17	0.04	0.11	0.11	62.47	ppb
Calcium	43-1	86721.89	90828.54	88321.67	88624.03	2.34	ppb
Calcium	44-1	85644.07	88418.70	88060.63	87374.47	1.73	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.39	0.38	0.44	0.40	8.51	ppb
Cobalt	59-2	0.47	0.45	0.41	0.45	6.69	ppb
Copper	63-2	1.58	1.59	1.57	1.58	0.63	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				124		%
Holmium	165-2				124		%
Indium	115-1				127		%
Indium	115-2				123		%
Iron	56-2	79.43	79.44	78.42	79.09	0.74	ppb
Iron	57-2	846.03	829.59	839.01	838.21	0.98	ppb
Iron	54-2	82.64	78.57	77.21	79.47	3.55	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-06 Instrumnet Name : P7
Client Sample ID : MC0AX1 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:01:09 DataFile Name : 024SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.17	0.17	0.19	0.18	5.85	ppb
Lead	207-1	0.17	0.16	0.18	0.17	6.22	ppb
Lead	208-1	0.17	0.18	0.18	0.18	0.68	ppb
Lithium	6-1				107		%
Magnesium	24-2	17279.05	16850.66	17143.21	17090.98	1.28	ppb
Manganese	55-2	262.99	260.55	262.31	261.95	0.48	ppb
Molybdenum	94-1	69.05	71.67	71.35	70.69	2.02	ppb
Molybdenum	95-1	83.33	86.45	86.27	85.35	2.05	ppb
Molybdenum	96-1	81.90	85.61	85.17	84.23	2.41	ppb
Molybdenum	97-1	83.95	86.77	86.41	85.71	1.80	ppb
Molybdenum	98-1	82.89	86.78	86.79	85.49	2.63	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.03	1.81	1.84	1.89	6.36	ppb
Phosphorus	31-2	364.46	353.23	360.76	359.48	1.59	ppb
Potassium	39-2	14765.75	14760.02	14603.49	14709.75	0.63	ppb
Rhodium	103-1				124		%
Rhodium	103-2				124		%
Scandium	45-1				128		%
Scandium	45-2				123		%
Selenium	82-1	1.26	1.21	2.21	1.56	35.80	ppb
Selenium	77-2	0.43	1.81	1.53	1.25	58.08	ppb
Selenium	78-2	0.09	1.29	-0.30	0.36	229.44	ppb
Silicon	28-1	807.45	824.37	828.99	820.27	1.38	ppb
Silver	107-1	0.02	0.02	0.02	0.02	13.49	ppb
Silver	109-1	0.02	0.02	0.03	0.02	6.03	ppb
Sodium	23-2	326526.83	319854.47	319947.47	322109.59	1.19	ppb
Strontium	86-1	427.51	447.16	439.91	438.19	2.27	ppb
Strontium	88-1	432.69	447.66	444.64	441.67	1.79	ppb
Sulfur	34-1	121054.78	122203.26	121314.74	121524.26	0.50	ppb
Terbium	159-1				124		%
Terbium	159-2				124		%
Thallium	203-1	0.15	0.17	0.17	0.16	7.46	ppb
Thallium	205-1	0.14	0.16	0.15	0.15	6.08	ppb
Tin	118-1	0.43	0.51	0.55	0.50	11.74	ppb
Titanium	47-1	0.97	0.89	1.01	0.95	6.73	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-06 Instrumnet Name : P7
Client Sample ID : MC0AX1 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:01:09 DataFile Name : 024SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.14	0.14	0.14	0.14	1.22	ppb
Vanadium	51-2	2.48	2.49	2.49	2.49	0.27	ppb
Yttrium	89-1				130		%
Yttrium	89-2				130		%
Zinc	66-2	2.85	3.32	2.93	3.03	8.39	ppb
Zirconium	90-1	0.54	0.60	0.60	0.58	5.73	ppb
Zirconium	91-1	0.57	0.63	0.62	0.61	5.45	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07 Instrumnet Name : P7
Client Sample ID : MC0AX2 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:04:24 DataFile Name : 025SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19.18	23.62	20.33	21.04	10.94	ppb
Antimony	121-1	3.46	3.41	3.47	3.45	0.83	ppb
Arsenic	75-2	40.60	40.95	40.69	40.75	0.45	ppb
Barium	135-1	13.53	13.59	13.89	13.67	1.42	ppb
Barium	137-1	14.09	13.61	13.98	13.89	1.80	ppb
Beryllium	9-1	0.06	0.05	0.11	0.07	40.80	ppb
Bismuth	209-1				117		%
Bismuth	209-2				118		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.70	0.39	0.50	0.53	29.05	ppb
Cadmium	106-1	0.57	0.27	0.32	0.39	41.09	ppb
Cadmium	111-1	0.06	0.09	0.10	0.08	24.68	ppb
Calcium	43-1	87515.37	89695.50	89756.71	88989.19	1.43	ppb
Calcium	44-1	86733.81	88407.46	87441.21	87527.49	0.96	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.83	0.84	0.82	0.83	1.31	ppb
Cobalt	59-2	0.51	0.54	0.47	0.51	6.96	ppb
Copper	63-2	2.47	2.46	2.54	2.49	1.77	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				126		%
Holmium	165-2				123		%
Indium	115-1				124		%
Indium	115-2				125		%
Iron	56-2	86.75	87.19	86.65	86.86	0.33	ppb
Iron	57-2	813.04	854.80	879.99	849.28	3.98	ppb
Iron	54-2	86.17	84.82	84.93	85.30	0.88	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07 Instrumnet Name : P7
Client Sample ID : MC0AX2 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:04:24 DataFile Name : 025SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.43	0.40	0.47	0.43	8.67	ppb
Lead	207-1	0.42	0.39	0.44	0.42	6.30	ppb
Lead	208-1	0.43	0.40	0.46	0.43	7.32	ppb
Lithium	6-1				107		%
Magnesium	24-2	17366.35	17474.29	17297.59	17379.41	0.51	ppb
Manganese	55-2	266.62	271.77	272.81	270.40	1.23	ppb
Molybdenum	94-1	69.43	69.28	71.08	69.93	1.43	ppb
Molybdenum	95-1	84.98	84.94	85.41	85.11	0.30	ppb
Molybdenum	96-1	82.61	83.81	85.47	83.96	1.71	ppb
Molybdenum	97-1	84.75	85.40	85.49	85.21	0.47	ppb
Molybdenum	98-1	85.01	85.66	86.33	85.67	0.77	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.95	2.04	2.09	2.03	3.53	ppb
Phosphorus	31-2	1080.77	1149.78	1137.45	1122.67	3.28	ppb
Potassium	39-2	15170.15	15383.24	15292.37	15281.92	0.70	ppb
Rhodium	103-1				124		%
Rhodium	103-2				124		%
Scandium	45-1				127		%
Scandium	45-2				125		%
Selenium	82-1	2.00	1.66	1.64	1.77	11.62	ppb
Selenium	77-2	2.64	1.49	1.52	1.88	34.90	ppb
Selenium	78-2	1.26	1.89	3.09	2.08	44.84	ppb
Silicon	28-1	829.17	836.94	834.46	833.52	0.48	ppb
Silver	107-1	0.02	0.02	0.02	0.02	4.58	ppb
Silver	109-1	0.02	0.02	0.02	0.02	10.07	ppb
Sodium	23-2	325166.20	322318.03	325906.49	324463.57	0.58	ppb
Strontium	86-1	435.55	440.91	447.09	441.18	1.31	ppb
Strontium	88-1	438.74	439.71	450.31	442.92	1.45	ppb
Sulfur	34-1	120350.12	125584.66	123134.59	123023.12	2.13	ppb
Terbium	159-1				123		%
Terbium	159-2				124		%
Thallium	203-1	0.16	0.16	0.15	0.16	4.35	ppb
Thallium	205-1	0.16	0.15	0.15	0.16	1.89	ppb
Tin	118-1	1.21	1.28	1.35	1.28	5.46	ppb
Titanium	47-1	1.18	1.08	1.08	1.11	5.14	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07 Instrumnet Name : P7
Client Sample ID : MC0AX2 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:04:24 DataFile Name : 025SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.15	0.16	0.18	0.16	6.96	ppb
Vanadium	51-2	2.44	2.52	2.51	2.49	1.58	ppb
Yttrium	89-1				130		%
Yttrium	89-2				131		%
Zinc	66-2	4.99	4.91	5.27	5.06	3.77	ppb
Zirconium	90-1	0.25	0.30	0.32	0.29	12.01	ppb
Zirconium	91-1	0.34	0.33	0.32	0.33	3.03	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DUP Instrumnet Name : P7
Client Sample ID : MC0AX2DUP Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:07:34 DataFile Name : 026SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19.44	22.37	20.68	20.83	7.08	ppb
Antimony	121-1	3.46	3.64	3.49	3.53	2.80	ppb
Arsenic	75-2	42.50	42.32	42.63	42.48	0.37	ppb
Barium	135-1	14.03	14.27	13.94	14.08	1.22	ppb
Barium	137-1	13.84	14.15	14.19	14.06	1.37	ppb
Beryllium	9-1	0.09	0.07	0.03	0.06	43.06	ppb
Bismuth	209-1				118		%
Bismuth	209-2				117		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.63	0.67	0.58	0.63	7.73	ppb
Cadmium	106-1	1.18	0.93	-0.08	0.67	98.84	ppb
Cadmium	111-1	0.13	0.09	0.04	0.09	52.04	ppb
Calcium	43-1	89598.31	92275.44	92237.95	91370.56	1.68	ppb
Calcium	44-1	88775.78	90106.25	90971.46	89951.16	1.23	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.75	0.81	0.79	0.78	3.49	ppb
Cobalt	59-2	0.48	0.51	0.53	0.51	4.78	ppb
Copper	63-2	2.68	2.66	2.60	2.65	1.65	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				125		%
Holmium	165-2				125		%
Indium	115-1				126		%
Indium	115-2				125		%
Iron	56-2	87.49	87.20	86.23	86.97	0.76	ppb
Iron	57-2	868.75	862.80	856.84	862.80	0.69	ppb
Iron	54-2	87.91	87.91	83.56	86.46	2.90	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DUP Instrumnet Name : P7
Client Sample ID : MC0AX2DUP Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:07:34 DataFile Name : 026SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.29	0.41	0.37	0.35	16.54	ppb
Lead	207-1	0.37	0.33	0.37	0.36	7.38	ppb
Lead	208-1	0.33	0.36	0.34	0.34	5.33	ppb
Lithium	6-1				107		%
Magnesium	24-2	17718.79	17853.71	17558.80	17710.43	0.83	ppb
Manganese	55-2	275.01	272.10	273.73	273.61	0.53	ppb
Molybdenum	94-1	71.21	71.31	71.26	71.26	0.07	ppb
Molybdenum	95-1	86.37	86.79	86.37	86.51	0.28	ppb
Molybdenum	96-1	85.82	85.11	85.45	85.46	0.42	ppb
Molybdenum	97-1	86.82	87.36	86.45	86.88	0.52	ppb
Molybdenum	98-1	86.91	86.80	86.93	86.88	0.08	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.94	1.97	1.83	1.91	3.66	ppb
Phosphorus	31-2	1152.06	1106.45	1148.35	1135.62	2.23	ppb
Potassium	39-2	15445.98	15367.58	15072.89	15295.49	1.29	ppb
Rhodium	103-1				124		%
Rhodium	103-2				124		%
Scandium	45-1				127		%
Scandium	45-2				124		%
Selenium	82-1	2.05	2.49	2.90	2.48	17.20	ppb
Selenium	77-2	2.36	2.35	0.69	1.80	53.24	ppb
Selenium	78-2	-1.06	2.09	1.79	0.94	185.50	ppb
Silicon	28-1	831.97	840.20	854.50	842.23	1.35	ppb
Silver	107-1	0.02	0.02	0.02	0.02	15.78	ppb
Silver	109-1	0.02	0.02	0.02	0.02	1.53	ppb
Sodium	23-2	327148.67	328569.31	327642.82	327786.93	0.22	ppb
Strontium	86-1	448.91	446.75	448.10	447.92	0.24	ppb
Strontium	88-1	459.15	444.29	448.27	450.57	1.71	ppb
Sulfur	34-1	122652.51	126035.80	126044.65	124910.99	1.57	ppb
Terbium	159-1				123		%
Terbium	159-2				125		%
Thallium	203-1	0.15	0.14	0.15	0.15	4.93	ppb
Thallium	205-1	0.15	0.15	0.15	0.15	1.82	ppb
Tin	118-1	1.21	1.24	1.31	1.25	4.27	ppb
Titanium	47-1	1.33	1.17	1.31	1.27	7.02	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DUP Instrumnet Name : P7
Client Sample ID : MC0AX2DUP Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:07:34 DataFile Name : 026SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.17	0.16	0.17	0.17	2.89	ppb
Vanadium	51-2	2.56	2.58	2.49	2.54	1.92	ppb
Yttrium	89-1				131		%
Yttrium	89-2				130		%
Zinc	66-2	5.31	5.66	5.03	5.34	5.91	ppb
Zirconium	90-1	0.25	0.27	0.32	0.28	13.03	ppb
Zirconium	91-1	0.33	0.26	0.27	0.29	14.19	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07LX5 Instrumnet Name : P7
Client Sample ID : MC0AX2L Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:10:50 DataFile Name : 027SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3.53	3.56	3.74	3.61	3.22	ppb
Antimony	121-1	0.64	0.73	0.64	0.67	7.51	ppb
Arsenic	75-2	7.60	8.10	7.87	7.86	3.18	ppb
Barium	135-1	2.48	2.61	2.46	2.52	3.19	ppb
Barium	137-1	2.68	2.67	2.60	2.65	1.57	ppb
Beryllium	9-1	0.01	0.03	0.00	0.01	126.66	ppb
Bismuth	209-1				103		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.13	-0.06	0.14	0.07	155.81	ppb
Cadmium	106-1	0.76	1.49	0.10	0.78	88.90	ppb
Cadmium	111-1	0.07	0.13	0.04	0.08	63.70	ppb
Calcium	43-1	17984.86	18605.10	18684.00	18424.65	2.08	ppb
Calcium	44-1	17220.33	17769.98	17810.68	17600.33	1.87	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.17	0.15	0.16	0.16	5.41	ppb
Cobalt	59-2	0.07	0.06	0.07	0.07	4.65	ppb
Copper	63-2	0.70	0.71	0.64	0.69	5.80	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				109		%
Indium	115-1				107		%
Indium	115-2				110		%
Iron	56-2	17.70	18.05	17.18	17.64	2.48	ppb
Iron	57-2	162.36	162.60	160.47	161.81	0.72	ppb
Iron	54-2	19.27	16.61	15.26	17.05	11.97	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07LX5 Instrumnet Name : P7
Client Sample ID : MC0AX2L Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:10:50 DataFile Name : 027SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.04	0.05	0.06	0.05	20.95	ppb
Lead	207-1	0.04	0.07	0.07	0.06	26.64	ppb
Lead	208-1	0.05	0.06	0.05	0.05	16.92	ppb
Lithium	6-1				91		%
Magnesium	24-2	3305.55	3363.03	3284.62	3317.73	1.22	ppb
Manganese	55-2	54.01	53.69	52.47	53.39	1.52	ppb
Molybdenum	94-1	13.71	13.99	13.99	13.90	1.15	ppb
Molybdenum	95-1	16.55	16.42	16.76	16.58	1.06	ppb
Molybdenum	96-1	17.00	16.75	17.37	17.04	1.84	ppb
Molybdenum	97-1	16.46	17.21	17.06	16.91	2.32	ppb
Molybdenum	98-1	16.51	16.80	17.02	16.78	1.51	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.33	0.43	0.52	0.43	22.16	ppb
Phosphorus	31-2	74.15	101.39	74.82	83.45	18.62	ppb
Potassium	39-2	3124.39	3127.66	3077.22	3109.75	0.91	ppb
Rhodium	103-1				111		%
Rhodium	103-2				110		%
Scandium	45-1				107		%
Scandium	45-2				108		%
Selenium	82-1	1.16	0.30	0.90	0.79	56.43	ppb
Selenium	77-2	0.19	0.20	0.81	0.40	89.19	ppb
Selenium	78-2	0.89	1.15	1.79	1.28	36.23	ppb
Silicon	28-1	167.50	167.11	173.07	169.22	1.97	ppb
Silver	107-1	0.01	0.02	0.01	0.02	20.41	ppb
Silver	109-1	0.02	0.01	0.01	0.01	30.25	ppb
Sodium	23-2	64396.07	64969.09	62827.61	64064.26	1.73	ppb
Strontium	86-1	89.07	88.01	90.02	89.03	1.13	ppb
Strontium	88-1	86.74	88.76	87.81	87.77	1.15	ppb
Sulfur	34-1	22867.82	23132.90	23588.85	23196.52	1.57	ppb
Terbium	159-1				110		%
Terbium	159-2				110		%
Thallium	203-1	0.06	0.06	0.06	0.06	6.26	ppb
Thallium	205-1	0.05	0.05	0.04	0.05	5.47	ppb
Tin	118-1	0.29	0.30	0.27	0.29	4.52	ppb
Titanium	47-1	0.29	0.26	0.27	0.27	4.35	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07LX5 Instrumnet Name : P7
Client Sample ID : MC0AX2L Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:10:50 DataFile Name : 027SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.03	0.03	0.03	0.03	3.92	ppb
Vanadium	51-2	0.50	0.48	0.41	0.46	9.88	ppb
Yttrium	89-1				111		%
Yttrium	89-2				114		%
Zinc	66-2	0.95	0.93	0.96	0.95	1.52	ppb
Zirconium	90-1	0.06	0.03	0.06	0.05	29.53	ppb
Zirconium	91-1	0.06	0.16	0.04	0.09	74.89	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MS Instrumnet Name : P7
Client Sample ID : MC0AX2MS Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:14:04 DataFile Name : 028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8237.99	8262.99	8210.86	8237.28	0.32	ppb
Antimony	121-1	481.20	502.88	494.69	492.92	2.22	ppb
Arsenic	75-2	545.88	549.46	540.69	545.34	0.81	ppb
Barium	135-1	2157.26	2223.23	2270.30	2216.93	2.56	ppb
Barium	137-1	2168.87	2241.10	2238.77	2216.24	1.85	ppb
Beryllium	9-1	484.03	495.58	484.36	487.99	1.35	ppb
Bismuth	209-1				112		%
Bismuth	209-2				115		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	458.90	474.63	467.79	467.11	1.69	ppb
Cadmium	106-1	468.16	483.14	484.46	478.59	1.89	ppb
Cadmium	111-1	474.68	488.07	485.83	482.86	1.49	ppb
Calcium	43-1	129032.38	129139.89	132430.36	130200.88	1.48	ppb
Calcium	44-1	126407.98	127381.67	131070.22	128286.62	1.92	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	449.40	448.23	444.49	447.37	0.57	ppb
Cobalt	59-2	471.84	463.22	464.42	466.49	1.00	ppb
Copper	63-2	4374.81	4407.05	4275.05	4352.31	1.58	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				121		%
Holmium	165-2				119		%
Indium	115-1				119		%
Indium	115-2				119		%
Iron	56-2	21287.79	21386.10	21037.09	21236.99	0.85	ppb
Iron	57-2	22550.75	22551.23	22258.84	22453.61	0.75	ppb
Iron	54-2	21569.80	21203.48	21433.16	21402.15	0.86	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MS Instrumnet Name : P7
Client Sample ID : MC0AX2MS Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:14:04 DataFile Name : 028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2401.98	2424.09	2445.83	2423.97	0.90	ppb
Lead	207-1	2501.75	2414.06	2514.20	2476.67	2.20	ppb
Lead	208-1	2443.88	2435.80	2477.26	2452.31	0.90	ppb
Lithium	6-1				102		%
Magnesium	24-2	65163.88	63890.92	64917.14	64657.31	1.04	ppb
Manganese	55-2	4628.18	4591.25	4542.82	4587.42	0.93	ppb
Molybdenum	94-1	2274.69	2284.97	2263.45	2274.37	0.47	ppb
Molybdenum	95-1	1758.10	1806.60	1795.39	1786.70	1.42	ppb
Molybdenum	96-1	1829.85	1855.64	1853.58	1846.36	0.78	ppb
Molybdenum	97-1	1781.42	1783.55	1795.21	1786.73	0.42	ppb
Molybdenum	98-1	1732.59	1770.70	1790.81	1764.70	1.68	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	464.45	461.19	459.56	461.74	0.54	ppb
Phosphorus	31-2	1074.25	1023.23	1019.84	1039.11	2.93	ppb
Potassium	39-2	35540.31	35571.01	35061.43	35390.92	0.81	ppb
Rhodium	103-1				117		%
Rhodium	103-2				119		%
Scandium	45-1				121		%
Scandium	45-2				120		%
Selenium	82-1	459.70	468.05	462.52	463.42	0.92	ppb
Selenium	77-2	452.98	449.86	479.44	460.76	3.53	ppb
Selenium	78-2	468.44	458.69	461.37	462.83	1.09	ppb
Silicon	28-1	780.40	791.34	814.04	795.26	2.16	ppb
Silver	107-1	77.33	80.02	79.23	78.86	1.75	ppb
Silver	109-1	76.54	80.11	79.51	78.72	2.43	ppb
Sodium	23-2	346807.45	348592.43	345167.20	346855.69	0.49	ppb
Strontium	86-1	959.84	978.32	960.60	966.26	1.08	ppb
Strontium	88-1	934.98	966.49	954.77	952.08	1.67	ppb
Sulfur	34-1	113314.86	115917.31	121467.45	116899.87	3.56	ppb
Terbium	159-1				117		%
Terbium	159-2				120		%
Thallium	203-1	472.17	475.66	486.73	478.19	1.59	ppb
Thallium	205-1	471.24	474.43	483.72	476.46	1.36	ppb
Tin	118-1	431.02	445.71	450.17	442.30	2.27	ppb
Titanium	47-1	2.84	2.98	2.79	2.87	3.51	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MS Instrumnet Name : P7
Client Sample ID : MC0AX2MS Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:14:04 DataFile Name : 028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	473.48	462.33	465.09	466.97	1.24	ppb
Vanadium	51-2	477.37	473.94	472.19	474.50	0.56	ppb
Yttrium	89-1				125		%
Yttrium	89-2				124		%
Zinc	66-2	4386.04	4341.06	4344.60	4357.23	0.57	ppb
Zirconium	90-1	451.65	461.86	462.26	458.59	1.31	ppb
Zirconium	91-1	445.06	455.91	453.54	451.50	1.26	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSD Instrumnet Name : P7
Client Sample ID : MC0AX2MSD Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:16:54 DataFile Name : 029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8066.30	8065.36	8105.42	8079.03	0.28	ppb
Antimony	121-1	486.07	510.21	490.45	495.58	2.60	ppb
Arsenic	75-2	544.01	554.42	546.04	548.16	1.01	ppb
Barium	135-1	2181.22	2216.91	2208.58	2202.24	0.85	ppb
Barium	137-1	2157.68	2226.83	2214.68	2199.73	1.68	ppb
Beryllium	9-1	475.82	485.36	483.57	481.58	1.05	ppb
Bismuth	209-1				114		%
Bismuth	209-2				114		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	454.47	480.76	473.38	469.54	2.89	ppb
Cadmium	106-1	464.70	481.34	490.49	478.84	2.73	ppb
Cadmium	111-1	470.28	487.43	486.96	481.56	2.03	ppb
Calcium	43-1	128214.57	130321.77	129178.49	129238.28	0.82	ppb
Calcium	44-1	125573.30	129274.98	127205.56	127351.28	1.46	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	448.05	444.48	449.61	447.38	0.59	ppb
Cobalt	59-2	467.53	454.92	467.67	463.37	1.58	ppb
Copper	63-2	4350.80	4324.68	4323.19	4332.89	0.36	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				122		%
Holmium	165-2				119		%
Indium	115-1				121		%
Indium	115-2				119		%
Iron	56-2	20761.92	20574.69	20735.02	20690.54	0.49	ppb
Iron	57-2	22162.89	22062.14	22157.50	22127.51	0.26	ppb
Iron	54-2	21360.43	21273.04	21017.94	21217.14	0.84	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSD Instrumnet Name : P7
Client Sample ID : MC0AX2MSD Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:16:54 DataFile Name : 029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2379.84	2387.22	2409.25	2392.11	0.64	ppb
Lead	207-1	2362.92	2461.28	2456.40	2426.87	2.28	ppb
Lead	208-1	2363.29	2428.44	2441.57	2411.10	1.74	ppb
Lithium	6-1				104		%
Magnesium	24-2	64133.79	63497.44	63330.94	63654.05	0.67	ppb
Manganese	55-2	4553.52	4470.70	4539.93	4521.38	0.98	ppb
Molybdenum	94-1	2252.22	2284.47	2294.03	2276.91	0.96	ppb
Molybdenum	95-1	1786.74	1801.23	1793.32	1793.77	0.40	ppb
Molybdenum	96-1	1826.31	1822.45	1860.97	1836.58	1.15	ppb
Molybdenum	97-1	1728.72	1773.82	1789.30	1763.95	1.78	ppb
Molybdenum	98-1	1760.30	1798.60	1795.59	1784.83	1.19	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	464.44	456.85	461.91	461.07	0.84	ppb
Phosphorus	31-2	1028.60	1003.32	1033.58	1021.83	1.59	ppb
Potassium	39-2	35246.61	35029.39	34701.43	34992.48	0.78	ppb
Rhodium	103-1				120		%
Rhodium	103-2				119		%
Scandium	45-1				123		%
Scandium	45-2				122		%
Selenium	82-1	470.91	476.28	474.86	474.01	0.59	ppb
Selenium	77-2	452.03	454.31	484.75	463.70	3.94	ppb
Selenium	78-2	454.77	468.61	471.23	464.87	1.90	ppb
Silicon	28-1	786.13	803.55	780.63	790.10	1.51	ppb
Silver	107-1	77.50	79.97	79.29	78.92	1.62	ppb
Silver	109-1	77.11	80.09	79.80	79.00	2.08	ppb
Sodium	23-2	341327.66	346568.52	350029.86	345975.35	1.27	ppb
Strontium	86-1	967.38	976.83	984.09	976.10	0.86	ppb
Strontium	88-1	950.07	960.37	965.99	958.81	0.84	ppb
Sulfur	34-1	116633.49	117165.39	117537.24	117112.04	0.39	ppb
Terbium	159-1				120		%
Terbium	159-2				121		%
Thallium	203-1	476.29	478.38	485.48	480.05	1.00	ppb
Thallium	205-1	481.40	481.66	476.52	479.86	0.60	ppb
Tin	118-1	429.18	437.77	447.62	438.19	2.11	ppb
Titanium	47-1	2.75	3.05	2.69	2.83	6.93	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSD Instrumnet Name : P7
Client Sample ID : MC0AX2MSD Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:16:54 DataFile Name : 029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	468.87	470.06	475.64	471.52	0.77	ppb
Vanadium	51-2	473.32	471.52	473.36	472.74	0.22	ppb
Yttrium	89-1				126		%
Yttrium	89-2				125		%
Zinc	66-2	4311.94	4205.32	4174.77	4230.68	1.70	ppb
Zirconium	90-1	459.74	467.38	473.72	466.95	1.50	ppb
Zirconium	91-1	454.07	463.11	465.31	460.83	1.29	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV02 Instrumnet Name : P7
Client Sample ID : CCV02 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:19:43 DataFile Name : 030CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	48522.17	46806.53	48745.02	48024.57	2.21	ppb
Antimony	121-1	512.65	527.85	520.94	520.48	1.46	ppb
Arsenic	75-2	491.82	494.13	498.72	494.89	0.71	ppb
Barium	135-1	2568.13	2667.32	2653.11	2629.52	2.04	ppb
Barium	137-1	2536.22	2659.05	2584.69	2593.32	2.39	ppb
Beryllium	9-1	497.81	512.86	518.07	509.58	2.06	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	500.00	524.98	528.64	517.87	3.01	ppb
Cadmium	106-1	505.62	516.19	522.46	514.75	1.65	ppb
Cadmium	111-1	504.05	522.48	516.61	514.38	1.83	ppb
Calcium	43-1	233946.32	245495.95	248273.20	242571.82	3.13	ppb
Calcium	44-1	237647.33	244050.45	246004.61	242567.46	1.80	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	504.37	496.34	494.43	498.38	1.06	ppb
Cobalt	59-2	508.63	503.81	499.14	503.86	0.94	ppb
Copper	63-2	4932.51	4849.20	4981.62	4921.11	1.36	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				108		%
Indium	115-1				104		%
Indium	115-2				105		%
Iron	56-2	126958.56	125364.05	126114.63	126145.75	0.63	ppb
Iron	57-2	127759.59	123784.03	126088.27	125877.30	1.59	ppb
Iron	54-2	126961.76	125151.18	128518.06	126877.00	1.33	ppb
Krypton	83-1						cps

LB Number :

LB137449

Operator :

Jaswal

Lab Sample ID :

CCV02

Instrumnet Name :

P7

Client Sample ID :

CCV02

Dilution Factor :

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Date & Time Acquired :

2025-10-07 18:19:43

DataFile Name :

030CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2557.43	2617.42	2595.12	2589.99	1.17	ppb
Lead	207-1	2585.47	2647.53	2580.66	2604.55	1.43	ppb
Lead	208-1	2574.94	2618.99	2573.62	2589.19	1.00	ppb
Lithium	6-1				92		%
Magnesium	24-2	242294.42	235421.36	240503.14	239406.31	1.49	ppb
Manganese	55-2	4964.12	4886.51	4997.79	4949.48	1.15	ppb
Molybdenum	94-1	5000.33	5094.04	5125.37	5073.25	1.28	ppb
Molybdenum	95-1	5006.33	5144.35	5011.40	5054.03	1.55	ppb
Molybdenum	96-1	5016.71	5168.55	5184.56	5123.27	1.81	ppb
Molybdenum	97-1	5031.46	5105.36	5164.37	5100.40	1.31	ppb
Molybdenum	98-1	5013.57	5107.62	5102.47	5074.55	1.04	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	501.52	486.05	493.67	493.75	1.57	ppb
Phosphorus	31-2	9822.67	9619.28	9951.72	9797.89	1.71	ppb
Potassium	39-2	123174.17	124450.74	123551.70	123725.53	0.53	ppb
Rhodium	103-1				103		%
Rhodium	103-2				105		%
Scandium	45-1				108		%
Scandium	45-2				107		%
Selenium	82-1	487.60	498.17	496.02	493.93	1.13	ppb
Selenium	77-2	468.51	509.63	496.73	491.62	4.28	ppb
Selenium	78-2	479.98	474.61	469.66	474.75	1.09	ppb
Silicon	28-1	448.52	470.47	460.61	459.87	2.39	ppb
Silver	107-1	518.14	519.90	515.84	517.96	0.39	ppb
Silver	109-1	517.38	527.75	531.19	525.44	1.37	ppb
Sodium	23-2	250921.38	240082.94	245965.78	245656.70	2.21	ppb
Strontium	86-1	503.44	522.14	516.28	513.95	1.86	ppb
Strontium	88-1	506.05	521.78	516.86	514.90	1.56	ppb
Sulfur	34-1	8408.96	8737.07	8918.05	8688.03	2.97	ppb
Terbium	159-1				106		%
Terbium	159-2				109		%
Thallium	203-1	507.29	523.30	520.74	517.11	1.66	ppb
Thallium	205-1	514.16	527.03	528.70	523.30	1.52	ppb
Tin	118-1	514.80	523.41	530.81	523.01	1.53	ppb
Titanium	47-1	4890.13	5044.08	5074.47	5002.89	1.98	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV02 Instrumnet Name : P7
Client Sample ID : CCV02 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:19:43 DataFile Name : 030CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	503.88	526.51	526.70	519.03	2.53	ppb
Vanadium	51-2	508.83	491.66	507.00	502.50	1.88	ppb
Yttrium	89-1				110		%
Yttrium	89-2				110		%
Zinc	66-2	4861.25	4734.71	4826.69	4807.55	1.36	ppb
Zirconium	90-1	499.84	521.69	512.15	511.23	2.14	ppb
Zirconium	91-1	501.81	515.94	513.67	510.47	1.49	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB02 Instrumnet Name : P7
Client Sample ID : CCB02 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:22:32 DataFile Name : 031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.19	0.98	-0.52	0.09	892.19	ppb
Antimony	121-1	0.19	0.17	0.16	0.17	10.08	ppb
Arsenic	75-2	0.01	-0.02	0.02	0.00	398.42	ppb
Barium	135-1	0.04	-0.01	0.02	0.02	128.30	ppb
Barium	137-1	0.02	0.01	0.02	0.02	32.55	ppb
Beryllium	9-1	0.02	0.00	0.01	0.01	64.32	ppb
Bismuth	209-1				104		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.15	0.06	0.07	0.09	50.81	ppb
Cadmium	106-1	1.11	0.65	-0.70	0.35	266.52	ppb
Cadmium	111-1	0.15	0.10	-0.01	0.08	99.96	ppb
Calcium	43-1	-0.62	-3.89	-2.13	-2.22		ppb
Calcium	44-1	20.02	18.21	19.25	19.16	4.75	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.01	0.11	0.02	0.05	114.41	ppb
Cobalt	59-2	-0.03	-0.04	-0.03	-0.03		ppb
Copper	63-2	0.32	0.30	0.31	0.31	3.62	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				106		%
Indium	115-1				107		%
Indium	115-2				107		%
Iron	56-2	1.69	1.48	1.42	1.53	9.33	ppb
Iron	57-2	4.32	3.24	3.74	3.77	14.36	ppb
Iron	54-2	0.88	0.69	0.94	0.84	15.65	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB02 Instrumnet Name : P7
Client Sample ID : CCB02 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:22:32 DataFile Name : 031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.07	0.03	0.04	0.04	46.24	ppb
Lead	207-1	0.11	0.05	0.04	0.06	59.95	ppb
Lead	208-1	0.07	0.03	0.04	0.05	44.86	ppb
Lithium	6-1				92		%
Magnesium	24-2	2.08	1.91	2.22	2.07	7.47	ppb
Manganese	55-2	0.07	0.06	0.07	0.07	11.67	ppb
Molybdenum	94-1	0.37	0.25	0.26	0.30	22.06	ppb
Molybdenum	95-1	0.23	0.21	0.18	0.20	13.33	ppb
Molybdenum	96-1	0.27	0.22	0.20	0.23	15.80	ppb
Molybdenum	97-1	0.24	0.20	0.18	0.21	14.55	ppb
Molybdenum	98-1	0.24	0.21	0.18	0.21	12.98	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.03	0.00	0.02	0.01	90.17	ppb
Phosphorus	31-2	-158.81	-169.00	-174.86	-167.56		ppb
Potassium	39-2	34.12	26.01	28.30	29.48	14.18	ppb
Rhodium	103-1				107		%
Rhodium	103-2				109		%
Scandium	45-1				106		%
Scandium	45-2				105		%
Selenium	82-1	0.46	0.87	0.38	0.57	46.64	ppb
Selenium	77-2	0.20	0.20	0.21	0.21	1.11	ppb
Selenium	78-2	1.54	1.92	0.50	1.32	55.52	ppb
Silicon	28-1	-0.12	-0.50	-0.10	-0.24		ppb
Silver	107-1	0.17	0.18	0.16	0.17	6.66	ppb
Silver	109-1	0.16	0.15	0.16	0.16	4.11	ppb
Sodium	23-2	152.94	141.85	143.99	146.26	4.02	ppb
Strontium	86-1	-0.05	-0.04	-0.07	-0.05		ppb
Strontium	88-1	0.01	0.01	0.01	0.01	36.65	ppb
Sulfur	34-1	-1585.25	-1492.30	-1249.59	-1442.38		ppb
Terbium	159-1				103		%
Terbium	159-2				107		%
Thallium	203-1	0.11	0.09	0.10	0.10	13.49	ppb
Thallium	205-1	0.10	0.08	0.08	0.09	13.80	ppb
Tin	118-1	0.25	0.20	0.17	0.21	17.81	ppb
Titanium	47-1	0.08	0.07	0.07	0.07	8.12	ppb

LB Number :

LB137449

Operator :

Jaswal

Lab Sample ID :

CCB02

Instrumnet Name :

P7

Client Sample ID :

CCB02

Dilution Factor :

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Date & Time Acquired :

2025-10-07 18:22:32

DataFile Name :

031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.01	0.01	0.01	0.01	43.87	ppb
Vanadium	51-2	0.01	0.00	0.00	0.01	130.87	ppb
Yttrium	89-1				109		%
Yttrium	89-2				109		%
Zinc	66-2	-0.14	0.10	-0.04	-0.03		ppb
Zirconium	90-1	0.07	0.06	0.06	0.06	10.02	ppb
Zirconium	91-1	0.06	0.07	0.06	0.06	14.26	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07A Instrumnet Name : P7
Client Sample ID : MC0AX2A Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:25:49 DataFile Name : 032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8322.43	8162.50	8370.17	8285.04	1.31	ppb
Antimony	121-1	495.39	483.93	482.13	487.15	1.48	ppb
Arsenic	75-2	535.68	537.75	531.78	535.07	0.57	ppb
Barium	135-1	2166.34	2230.88	2143.97	2180.40	2.07	ppb
Barium	137-1	2167.46	2198.50	2133.70	2166.55	1.50	ppb
Beryllium	9-1	480.78	486.48	487.99	485.08	0.78	ppb
Bismuth	209-1				114		%
Bismuth	209-2				115		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	458.36	468.31	461.30	462.66	1.10	ppb
Cadmium	106-1	472.98	468.92	470.36	470.75	0.44	ppb
Cadmium	111-1	467.32	480.75	467.13	471.73	1.66	ppb
Calcium	43-1	128768.67	130559.99	129448.14	129592.27	0.70	ppb
Calcium	44-1	127283.47	130814.42	126686.98	128261.62	1.74	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	447.12	451.08	448.61	448.94	0.45	ppb
Cobalt	59-2	472.59	475.21	470.15	472.65	0.54	ppb
Copper	63-2	4409.70	4385.90	4322.44	4372.68	1.03	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				120		%
Holmium	165-2				122		%
Indium	115-1				119		%
Indium	115-2				120		%
Iron	56-2	20960.13	20993.67	20472.29	20808.70	1.40	ppb
Iron	57-2	22286.01	22317.38	22162.21	22255.20	0.37	ppb
Iron	54-2	21053.01	21559.67	20917.70	21176.79	1.60	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07A Instrumnet Name : P7
Client Sample ID : MC0AX2A Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:25:49 DataFile Name : 032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2373.30	2493.05	2461.33	2442.56	2.54	ppb
Lead	207-1	2428.39	2499.73	2505.30	2477.80	1.73	ppb
Lead	208-1	2412.21	2468.21	2460.01	2446.81	1.24	ppb
Lithium	6-1				105		%
Magnesium	24-2	64303.57	63922.53	65124.28	64450.12	0.95	ppb
Manganese	55-2	4526.11	4561.05	4508.40	4531.86	0.59	ppb
Molybdenum	94-1	2248.08	2296.38	2314.93	2286.46	1.51	ppb
Molybdenum	95-1	1770.39	1773.65	1798.54	1780.86	0.86	ppb
Molybdenum	96-1	1867.74	1827.45	1845.44	1846.88	1.09	ppb
Molybdenum	97-1	1774.92	1765.60	1790.78	1777.10	0.72	ppb
Molybdenum	98-1	1764.02	1766.75	1791.07	1773.95	0.84	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	461.09	462.46	460.47	461.34	0.22	ppb
Phosphorus	31-2	1031.20	1022.09	1047.37	1033.55	1.24	ppb
Potassium	39-2	34961.69	35251.82	34919.97	35044.50	0.52	ppb
Rhodium	103-1				118		%
Rhodium	103-2				119		%
Scandium	45-1				122		%
Scandium	45-2				121		%
Selenium	82-1	463.68	463.96	472.31	466.65	1.05	ppb
Selenium	77-2	446.84	450.77	440.56	446.06	1.15	ppb
Selenium	78-2	458.68	459.77	450.10	456.19	1.16	ppb
Silicon	28-1	809.26	800.80	808.12	806.06	0.57	ppb
Silver	107-1	76.84	79.22	77.48	77.85	1.58	ppb
Silver	109-1	77.37	78.62	76.37	77.46	1.46	ppb
Sodium	23-2	353088.00	358292.80	350153.26	353844.69	1.16	ppb
Strontium	86-1	967.14	990.91	984.58	980.88	1.25	ppb
Strontium	88-1	960.92	962.45	972.79	965.39	0.67	ppb
Sulfur	34-1	115109.14	116348.60	117094.04	116183.93	0.86	ppb
Terbium	159-1				120		%
Terbium	159-2				121		%
Thallium	203-1	472.14	475.13	481.99	476.42	1.06	ppb
Thallium	205-1	475.74	483.96	479.48	479.73	0.86	ppb
Tin	118-1	435.82	431.74	430.97	432.84	0.60	ppb
Titanium	47-1	2.98	3.17	2.92	3.03	4.19	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07A Instrumnet Name : P7
Client Sample ID : MC0AX2A Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:25:49 DataFile Name : 032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	456.72	490.36	479.09	475.39	3.60	ppb
Vanadium	51-2	472.47	474.85	474.36	473.89	0.27	ppb
Yttrium	89-1				125		%
Yttrium	89-2				126		%
Zinc	66-2	4354.71	4393.38	4258.46	4335.52	1.60	ppb
Zirconium	90-1	459.91	460.94	462.23	461.03	0.25	ppb
Zirconium	91-1	453.49	457.26	463.54	458.10	1.11	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-08 Instrumnet Name : P7
Client Sample ID : MC0AX3 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:28:40 DataFile Name : 033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	16.14	17.49	16.78	16.80	4.03	ppb
Antimony	121-1	3.62	3.57	3.55	3.58	1.08	ppb
Arsenic	75-2	42.41	41.43	42.32	42.05	1.29	ppb
Barium	135-1	14.27	13.83	14.29	14.13	1.83	ppb
Barium	137-1	14.12	14.20	14.11	14.14	0.34	ppb
Beryllium	9-1	0.11	0.10	0.06	0.09	29.84	ppb
Bismuth	209-1				119		%
Bismuth	209-2				120		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.76	0.45	0.46	0.56	32.20	ppb
Cadmium	106-1	1.67	0.39	0.43	0.83	87.71	ppb
Cadmium	111-1	0.19	0.09	0.10	0.13	44.30	ppb
Calcium	43-1	89208.09	91901.83	93959.36	91689.76	2.60	ppb
Calcium	44-1	89813.30	90289.52	93066.12	91056.31	1.93	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.44	0.41	0.47	0.44	7.17	ppb
Cobalt	59-2	0.50	0.51	0.51	0.51	1.10	ppb
Copper	63-2	1.89	2.08	1.95	1.97	4.96	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				127		%
Holmium	165-2				126		%
Indium	115-1				128		%
Indium	115-2				127		%
Iron	56-2	77.98	77.12	76.34	77.15	1.06	ppb
Iron	57-2	850.51	858.54	845.36	851.47	0.78	ppb
Iron	54-2	79.73	76.28	80.14	78.72	2.70	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-08 Instrumnet Name : P7
Client Sample ID : MC0AX3 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:28:40 DataFile Name : 033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.38	0.39	0.39	0.39	1.47	ppb
Lead	207-1	0.38	0.38	0.38	0.38	0.43	ppb
Lead	208-1	0.39	0.38	0.39	0.38	1.36	ppb
Lithium	6-1				108		%
Magnesium	24-2	17738.67	17955.29	17472.21	17722.06	1.37	ppb
Manganese	55-2	267.29	266.70	266.98	266.99	0.11	ppb
Molybdenum	94-1	72.03	73.67	73.74	73.14	1.32	ppb
Molybdenum	95-1	85.74	89.19	88.93	87.96	2.19	ppb
Molybdenum	96-1	85.22	87.97	88.94	87.37	2.21	ppb
Molybdenum	97-1	85.91	90.36	90.51	88.93	2.93	ppb
Molybdenum	98-1	86.60	89.17	89.84	88.54	1.93	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.96	2.15	1.99	2.03	4.95	ppb
Phosphorus	31-2	367.27	352.23	356.02	358.51	2.18	ppb
Potassium	39-2	15068.83	15080.86	15209.94	15119.88	0.52	ppb
Rhodium	103-1				125		%
Rhodium	103-2				127		%
Scandium	45-1				128		%
Scandium	45-2				127		%
Selenium	82-1	2.63	1.71	2.40	2.25	21.36	ppb
Selenium	77-2	0.97	2.02	0.42	1.14	71.47	ppb
Selenium	78-2	1.12	0.49	1.44	1.02	47.67	ppb
Silicon	28-1	844.72	861.45	869.34	858.51	1.46	ppb
Silver	107-1	0.08	0.07	0.05	0.07	29.15	ppb
Silver	109-1	0.09	0.06	0.05	0.06	28.93	ppb
Sodium	23-2	334419.39	330417.43	330289.11	331708.64	0.71	ppb
Strontium	86-1	442.45	453.21	460.31	451.99	1.99	ppb
Strontium	88-1	438.26	456.27	464.68	453.07	2.98	ppb
Sulfur	34-1	124442.38	128056.44	130321.42	127606.75	2.32	ppb
Terbium	159-1				125		%
Terbium	159-2				128		%
Thallium	203-1	0.25	0.20	0.20	0.21	12.91	ppb
Thallium	205-1	0.24	0.21	0.22	0.22	6.52	ppb
Tin	118-1	1.39	1.23	1.21	1.27	7.66	ppb
Titanium	47-1	0.90	1.00	1.17	1.02	13.42	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-08 Instrumnet Name : P7
Client Sample ID : MC0AX3 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:28:40 DataFile Name : 033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.16	0.15	0.16	0.15	3.68	ppb
Vanadium	51-2	2.39	2.51	2.48	2.46	2.65	ppb
Yttrium	89-1				131		%
Yttrium	89-2				132		%
Zinc	66-2	3.71	3.74	3.75	3.73	0.51	ppb
Zirconium	90-1	1.01	0.83	0.78	0.87	13.88	ppb
Zirconium	91-1	1.05	0.91	0.87	0.94	10.22	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-06DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX1DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:31:51 DataFile Name : 034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2.43	3.31	2.97	2.90	15.31	ppb
Antimony	121-1	0.76	0.72	0.76	0.75	2.74	ppb
Arsenic	75-2	8.72	9.06	8.07	8.62	5.82	ppb
Barium	135-1	2.81	2.79	2.67	2.76	2.85	ppb
Barium	137-1	2.75	2.73	2.99	2.82	5.20	ppb
Beryllium	9-1	0.04	0.02	0.02	0.03	38.10	ppb
Bismuth	209-1				105		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.25	0.25	0.13	0.21	32.02	ppb
Cadmium	106-1	-0.67	-0.95	0.77	-0.28		ppb
Cadmium	111-1	-0.02	-0.05	0.07	0.00	3013.23	ppb
Calcium	43-1	18792.94	19469.23	19882.59	19381.59	2.84	ppb
Calcium	44-1	18168.15	18433.54	18902.45	18501.38	2.01	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.10	0.18	0.09	0.12	38.47	ppb
Cobalt	59-2	0.08	0.07	0.07	0.07	7.43	ppb
Copper	63-2	0.60	0.58	0.57	0.58	2.56	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				110		%
Holmium	165-2				109		%
Indium	115-1				111		%
Indium	115-2				111		%
Iron	56-2	17.42	17.36	17.62	17.47	0.76	ppb
Iron	57-2	170.58	177.17	177.14	174.96	2.17	ppb
Iron	54-2	16.90	18.46	15.24	16.86	9.55	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-06DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX1DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:31:51 DataFile Name : 034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.04	0.02	0.00	0.02	93.61	ppb
Lead	207-1	0.05	0.02	0.05	0.04	52.92	ppb
Lead	208-1	0.04	0.03	0.03	0.03	16.99	ppb
Lithium	6-1				94		%
Magnesium	24-2	3560.16	3527.63	3543.37	3543.72	0.46	ppb
Manganese	55-2	54.69	55.07	55.74	55.17	0.97	ppb
Molybdenum	94-1	14.76	14.92	14.86	14.85	0.55	ppb
Molybdenum	95-1	18.27	17.88	18.14	18.10	1.10	ppb
Molybdenum	96-1	17.39	18.38	18.41	18.06	3.21	ppb
Molybdenum	97-1	17.81	18.62	18.09	18.18	2.27	ppb
Molybdenum	98-1	18.09	18.23	17.99	18.10	0.67	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.44	0.34	0.43	0.40	13.22	ppb
Phosphorus	31-2	-43.83	-54.57	-45.70	-48.03		ppb
Potassium	39-2	3248.54	3239.30	3258.07	3248.64	0.29	ppb
Rhodium	103-1				114		%
Rhodium	103-2				113		%
Scandium	45-1				109		%
Scandium	45-2				110		%
Selenium	82-1	0.55	0.76	0.48	0.60	24.49	ppb
Selenium	77-2	0.19	0.19	0.50	0.29	61.09	ppb
Selenium	78-2	-0.92	0.08	-1.67	-0.84		ppb
Silicon	28-1	179.75	185.51	178.45	181.24	2.07	ppb
Silver	107-1	0.02	0.03	0.02	0.02	13.83	ppb
Silver	109-1	0.02	0.02	0.02	0.02	4.88	ppb
Sodium	23-2	68493.41	68444.40	69052.76	68663.52	0.49	ppb
Strontium	86-1	94.22	95.65	94.34	94.74	0.84	ppb
Strontium	88-1	90.96	93.14	93.74	92.61	1.57	ppb
Sulfur	34-1	23128.55	24795.48	25271.20	24398.41	4.61	ppb
Terbium	159-1				112		%
Terbium	159-2				110		%
Thallium	203-1	0.09	0.08	0.09	0.09	3.55	ppb
Thallium	205-1	0.08	0.09	0.07	0.08	10.20	ppb
Tin	118-1	0.16	0.22	0.21	0.20	15.64	ppb
Titanium	47-1	0.21	0.22	0.26	0.23	11.30	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-06DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX1DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:31:51 DataFile Name : 034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.03	0.03	0.03	0.03	7.70	ppb
Vanadium	51-2	0.50	0.58	0.46	0.51	11.47	ppb
Yttrium	89-1				113		%
Yttrium	89-2				115		%
Zinc	66-2	0.91	0.37	0.74	0.67	41.03	ppb
Zirconium	90-1	0.14	0.15	0.12	0.14	8.60	ppb
Zirconium	91-1	0.16	0.16	0.13	0.15	11.07	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:35:08 DataFile Name : 035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2.96	12.06	3.40	6.14	83.62	ppb
Antimony	121-1	0.73	0.71	0.76	0.73	3.30	ppb
Arsenic	75-2	8.48	9.09	8.22	8.60	5.24	ppb
Barium	135-1	2.57	2.72	2.98	2.76	7.55	ppb
Barium	137-1	2.82	2.84	2.97	2.88	2.89	ppb
Beryllium	9-1	0.03	0.04	0.05	0.04	27.55	ppb
Bismuth	209-1				102		%
Bismuth	209-2				109		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.06	0.52	0.22	0.23	126.25	ppb
Cadmium	106-1	1.01	1.21	0.58	0.93	34.66	ppb
Cadmium	111-1	0.10	0.09	0.05	0.08	27.91	ppb
Calcium	43-1	19383.12	19294.84	18243.07	18973.68	3.34	ppb
Calcium	44-1	18339.58	18835.55	18163.10	18446.08	1.89	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.24	0.19	0.22	0.22	13.34	ppb
Cobalt	59-2	0.08	0.07	0.05	0.07	19.43	ppb
Copper	63-2	0.66	0.61	0.64	0.64	3.73	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				112		%
Indium	115-1				110		%
Indium	115-2				112		%
Iron	56-2	19.39	19.55	19.19	19.38	0.91	ppb
Iron	57-2	171.44	175.18	180.79	175.81	2.68	ppb
Iron	54-2	18.37	23.75	18.27	20.13	15.59	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:35:08 DataFile Name : 035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.07	0.07	0.08	0.07	9.77	ppb
Lead	207-1	0.07	0.07	0.04	0.06	25.51	ppb
Lead	208-1	0.07	0.06	0.06	0.07	9.36	ppb
Lithium	6-1				94		%
Magnesium	24-2	3546.85	3565.57	3542.18	3551.53	0.35	ppb
Manganese	55-2	57.33	57.64	56.16	57.04	1.37	ppb
Molybdenum	94-1	14.94	14.78	14.13	14.62	2.95	ppb
Molybdenum	95-1	17.86	18.02	18.04	17.97	0.56	ppb
Molybdenum	96-1	18.31	18.44	17.33	18.03	3.39	ppb
Molybdenum	97-1	17.81	17.72	17.27	17.60	1.64	ppb
Molybdenum	98-1	17.88	17.89	18.52	18.10	2.02	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.38	0.41	0.41	0.40	3.94	ppb
Phosphorus	31-2	88.28	114.16	80.76	94.40	18.56	ppb
Potassium	39-2	3302.65	3352.05	3270.86	3308.52	1.24	ppb
Rhodium	103-1				111		%
Rhodium	103-2				114		%
Scandium	45-1				109		%
Scandium	45-2				110		%
Selenium	82-1	0.28	-0.08	0.63	0.28	127.99	ppb
Selenium	77-2	0.51	0.82	0.19	0.51	62.13	ppb
Selenium	78-2	1.51	2.05	1.41	1.66	20.53	ppb
Silicon	28-1	179.54	174.78	177.18	177.17	1.34	ppb
Silver	107-1	0.01	0.01	0.02	0.01	38.64	ppb
Silver	109-1	0.02	0.02	0.02	0.02	21.49	ppb
Sodium	23-2	67823.02	69348.13	68176.66	68449.27	1.17	ppb
Strontium	86-1	95.51	95.98	93.47	94.98	1.41	ppb
Strontium	88-1	93.19	93.81	90.80	92.60	1.71	ppb
Sulfur	34-1	25131.15	24419.79	22255.91	23935.61	6.26	ppb
Terbium	159-1				110		%
Terbium	159-2				112		%
Thallium	203-1	0.07	0.06	0.06	0.06	9.30	ppb
Thallium	205-1	0.05	0.06	0.06	0.06	6.53	ppb
Tin	118-1	0.26	0.24	0.26	0.25	5.23	ppb
Titanium	47-1	0.31	0.26	0.29	0.29	9.04	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:35:08 DataFile Name : 035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.04	0.03	0.04	0.04	8.55	ppb
Vanadium	51-2	0.50	0.50	0.52	0.51	1.70	ppb
Yttrium	89-1				111		%
Yttrium	89-2				114		%
Zinc	66-2	1.07	1.37	0.95	1.13	19.12	ppb
Zirconium	90-1	0.07	0.09	0.07	0.07	15.63	ppb
Zirconium	91-1	0.08	0.10	0.05	0.07	30.38	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DUPDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2DUPDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:38:22 DataFile Name : 036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3.67	5.02	4.15	4.28	16.02	ppb
Antimony	121-1	0.68	0.76	0.73	0.72	5.47	ppb
Arsenic	75-2	9.07	8.66	8.53	8.75	3.26	ppb
Barium	135-1	2.72	2.85	2.83	2.80	2.56	ppb
Barium	137-1	2.86	2.96	3.00	2.94	2.38	ppb
Beryllium	9-1	0.04	0.02	0.01	0.02	72.57	ppb
Bismuth	209-1				105		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.10	0.19	0.02	0.10	82.68	ppb
Cadmium	106-1	-0.15	0.75	0.71	0.44	115.54	ppb
Cadmium	111-1	0.01	0.09	0.08	0.06	74.02	ppb
Calcium	43-1	18435.53	19849.45	19856.95	19380.64	4.22	ppb
Calcium	44-1	18148.67	18708.47	19044.32	18633.82	2.43	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.17	0.21	0.19	0.19	11.81	ppb
Cobalt	59-2	0.09	0.09	0.09	0.09	3.40	ppb
Copper	63-2	0.69	0.64	0.72	0.68	6.40	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				109		%
Holmium	165-2				110		%
Indium	115-1				109		%
Indium	115-2				112		%
Iron	56-2	28.16	28.46	28.08	28.24	0.72	ppb
Iron	57-2	182.06	191.60	192.47	188.71	3.06	ppb
Iron	54-2	26.79	29.12	28.43	28.11	4.26	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DUPDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2DUPDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:38:22 DataFile Name : 036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.05	0.04	0.04	0.04	16.03	ppb
Lead	207-1	0.05	0.05	0.04	0.05	17.90	ppb
Lead	208-1	0.06	0.05	0.04	0.05	12.78	ppb
Lithium	6-1				95		%
Magnesium	24-2	3547.03	3569.81	3569.79	3562.21	0.37	ppb
Manganese	55-2	57.39	57.81	56.70	57.30	0.98	ppb
Molybdenum	94-1	14.56	14.61	15.15	14.77	2.23	ppb
Molybdenum	95-1	18.26	17.84	17.56	17.89	1.97	ppb
Molybdenum	96-1	17.82	17.50	18.26	17.86	2.15	ppb
Molybdenum	97-1	17.81	18.51	18.28	18.20	1.96	ppb
Molybdenum	98-1	18.21	17.62	17.72	17.85	1.79	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.54	0.54	0.52	0.53	1.59	ppb
Phosphorus	31-2	78.89	86.21	85.68	83.60	4.88	ppb
Potassium	39-2	3297.34	3323.77	3311.05	3310.72	0.40	ppb
Rhodium	103-1				110		%
Rhodium	103-2				114		%
Scandium	45-1				109		%
Scandium	45-2				110		%
Selenium	82-1	0.48	2.09	0.50	1.02	90.21	ppb
Selenium	77-2	1.14	0.19	0.19	0.51	108.20	ppb
Selenium	78-2	1.14	1.25	1.20	1.20	4.80	ppb
Silicon	28-1	178.53	175.78	180.57	178.29	1.35	ppb
Silver	107-1	0.02	0.01	0.01	0.01	41.70	ppb
Silver	109-1	0.01	0.02	0.01	0.01	51.25	ppb
Sodium	23-2	68817.14	68346.19	67930.13	68364.49	0.65	ppb
Strontium	86-1	95.38	91.67	94.42	93.82	2.05	ppb
Strontium	88-1	91.32	94.16	94.24	93.24	1.79	ppb
Sulfur	34-1	23325.60	23243.02	25402.79	23990.47	5.10	ppb
Terbium	159-1				108		%
Terbium	159-2				111		%
Thallium	203-1	0.05	0.04	0.05	0.05	8.19	ppb
Thallium	205-1	0.04	0.05	0.04	0.04	12.94	ppb
Tin	118-1	0.23	0.23	0.25	0.24	3.78	ppb
Titanium	47-1	0.28	0.14	0.14	0.19	43.47	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DUPDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2DUPDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:38:22 DataFile Name : 036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.03	0.03	0.03	0.03	7.24	ppb
Vanadium	51-2	0.55	0.49	0.51	0.51	6.37	ppb
Yttrium	89-1				111		%
Yttrium	89-2				114		%
Zinc	66-2	1.15	1.52	1.52	1.40	15.27	ppb
Zirconium	90-1	0.05	0.06	0.10	0.07	44.29	ppb
Zirconium	91-1	0.06	0.10	0.08	0.08	27.10	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07LDLX25 Instrumnet Name : P7
Client Sample ID : MC0AX2LDL Dilution Factor : 25
Date & Time Acquired : 2025-10-07 18:41:40 DataFile Name : 037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.36	1.36	0.91	0.64	139.65	ppb
Antimony	121-1	0.15	0.16	0.17	0.16	4.74	ppb
Arsenic	75-2	1.92	1.69	1.70	1.77	7.18	ppb
Barium	135-1	0.57	0.60	0.57	0.58	2.71	ppb
Barium	137-1	0.56	0.56	0.55	0.56	1.42	ppb
Beryllium	9-1	0.00	0.00	0.01	0.00	193.19	ppb
Bismuth	209-1				104		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.19	0.07	0.11	0.12	52.32	ppb
Cadmium	106-1	0.42	0.00	0.90	0.44	102.68	ppb
Cadmium	111-1	0.04	0.01	0.09	0.05	77.99	ppb
Calcium	43-1	3909.34	3784.35	3888.32	3860.67	1.73	ppb
Calcium	44-1	3891.08	3869.48	3860.83	3873.80	0.40	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.06	0.03	0.09	0.06	41.72	ppb
Cobalt	59-2	-0.02	-0.01	-0.02	-0.02		ppb
Copper	63-2	0.15	0.21	0.18	0.18	15.51	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				107		%
Indium	115-1				107		%
Indium	115-2				110		%
Iron	56-2	5.07	5.16	5.05	5.10	1.13	ppb
Iron	57-2	37.31	37.95	36.12	37.13	2.50	ppb
Iron	54-2	5.19	4.63	4.10	4.64	11.73	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07LDLX25 Instrumnet Name : P7
Client Sample ID : MC0AX2LDL Dilution Factor : 25
Date & Time Acquired : 2025-10-07 18:41:40 DataFile Name : 037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.00	-0.02	0.00	0.00		ppb
Lead	207-1	-0.03	-0.02	-0.01	-0.02		ppb
Lead	208-1	-0.01	-0.01	0.00	-0.01		ppb
Lithium	6-1				93		%
Magnesium	24-2	720.18	724.46	722.01	722.22	0.30	ppb
Manganese	55-2	11.52	11.60	11.59	11.57	0.38	ppb
Molybdenum	94-1	2.93	3.05	2.81	2.93	4.00	ppb
Molybdenum	95-1	3.64	3.63	3.50	3.59	2.17	ppb
Molybdenum	96-1	3.50	3.55	3.48	3.51	1.14	ppb
Molybdenum	97-1	3.66	3.70	3.66	3.67	0.70	ppb
Molybdenum	98-1	3.57	3.69	3.68	3.65	1.84	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.06	0.12	0.12	0.10	37.03	ppb
Phosphorus	31-2	-114.04	-110.41	-126.36	-116.94		ppb
Potassium	39-2	661.46	663.35	670.04	664.95	0.68	ppb
Rhodium	103-1				109		%
Rhodium	103-2				112		%
Scandium	45-1				106		%
Scandium	45-2				107		%
Selenium	82-1	0.94	1.85	1.17	1.32	35.87	ppb
Selenium	77-2	0.19	-0.12	-0.12	-0.01		ppb
Selenium	78-2	-1.26	0.63	-0.89	-0.51		ppb
Silicon	28-1	40.39	39.89	40.22	40.17	0.63	ppb
Silver	107-1	0.01	0.02	0.01	0.02	15.86	ppb
Silver	109-1	0.01	0.01	0.02	0.01	26.55	ppb
Sodium	23-2	13896.40	14088.92	14074.54	14019.95	0.76	ppb
Strontium	86-1	18.40	18.76	18.93	18.70	1.44	ppb
Strontium	88-1	18.19	18.74	18.68	18.53	1.62	ppb
Sulfur	34-1	3361.31	3245.36	3271.48	3292.72	1.85	ppb
Terbium	159-1				105		%
Terbium	159-2				109		%
Thallium	203-1	0.02	0.02	0.00	0.01	86.26	ppb
Thallium	205-1	0.02	0.02	0.02	0.02	5.17	ppb
Tin	118-1	0.00	0.02	0.01	0.01	79.92	ppb
Titanium	47-1	0.08	0.02	0.00	0.03	112.34	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07LDLX25 Instrumnet Name : P7
Client Sample ID : MC0AX2LDL Dilution Factor : 25
Date & Time Acquired : 2025-10-07 18:41:40 DataFile Name : 037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.01	0.01	0.01	0.01	20.93	ppb
Vanadium	51-2	0.09	0.09	0.11	0.10	8.42	ppb
Yttrium	89-1				109		%
Yttrium	89-2				113		%
Zinc	66-2	0.43	0.12	-0.13	0.14	197.57	ppb
Zirconium	90-1	0.03	0.03	0.00	0.02	68.82	ppb
Zirconium	91-1	0.01	0.03	0.00	0.01	121.49	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2MSDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:44:54 DataFile Name : 038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1689.84	1671.60	1729.17	1696.87	1.73	ppb
Antimony	121-1	95.15	99.42	97.07	97.21	2.20	ppb
Arsenic	75-2	113.23	106.06	110.87	110.05	3.32	ppb
Barium	135-1	416.95	435.68	428.23	426.95	2.21	ppb
Barium	137-1	425.17	441.70	434.59	433.82	1.91	ppb
Beryllium	9-1	95.18	98.10	97.37	96.88	1.57	ppb
Bismuth	209-1				105		%
Bismuth	209-2				108		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	89.95	97.12	99.10	95.39	5.05	ppb
Cadmium	106-1	94.63	98.12	97.97	96.91	2.04	ppb
Cadmium	111-1	95.58	100.31	97.98	97.96	2.42	ppb
Calcium	43-1	26498.37	27644.11	27513.48	27218.65	2.30	ppb
Calcium	44-1	25165.31	26274.29	26150.38	25863.33	2.35	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	91.04	94.16	93.01	92.74	1.70	ppb
Cobalt	59-2	95.73	96.64	95.91	96.09	0.50	ppb
Copper	63-2	895.80	938.84	951.63	928.75	3.15	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				110		%
Indium	115-1				108		%
Indium	115-2				111		%
Iron	56-2	4199.57	4271.16	4462.79	4311.17	3.16	ppb
Iron	57-2	4510.65	4703.21	4759.70	4657.85	2.80	ppb
Iron	54-2	4599.81	4516.93	4579.26	4565.34	0.95	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2MSDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:44:54 DataFile Name : 038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	451.38	465.81	466.88	461.35	1.88	ppb
Lead	207-1	459.81	469.04	468.97	465.94	1.14	ppb
Lead	208-1	471.65	485.22	484.89	480.59	1.61	ppb
Lithium	6-1				96		%
Magnesium	24-2	13232.12	13000.44	12944.42	13058.99	1.17	ppb
Manganese	55-2	927.95	922.13	947.85	932.64	1.45	ppb
Molybdenum	94-1	443.68	463.29	462.15	456.37	2.41	ppb
Molybdenum	95-1	349.28	360.47	358.51	356.09	1.68	ppb
Molybdenum	96-1	359.03	374.14	375.37	369.51	2.46	ppb
Molybdenum	97-1	351.12	366.05	363.99	360.39	2.25	ppb
Molybdenum	98-1	349.57	364.27	361.35	358.39	2.17	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	96.04	95.18	97.16	96.12	1.03	ppb
Phosphorus	31-2	64.49	78.02	96.08	79.53	19.93	ppb
Potassium	39-2	7253.75	7425.25	7338.35	7339.12	1.17	ppb
Rhodium	103-1				109		%
Rhodium	103-2				112		%
Scandium	45-1				109		%
Scandium	45-2				109		%
Selenium	82-1	95.37	98.65	98.66	97.56	1.95	ppb
Selenium	77-2	101.17	94.38	96.81	97.45	3.53	ppb
Selenium	78-2	99.22	95.24	90.03	94.83	4.86	ppb
Silicon	28-1	161.92	171.02	167.66	166.87	2.76	ppb
Silver	107-1	15.49	16.22	16.02	15.91	2.39	ppb
Silver	109-1	15.41	16.41	15.76	15.86	3.19	ppb
Sodium	23-2	74765.54	72082.75	70859.83	72569.37	2.75	ppb
Strontium	86-1	187.60	195.57	194.23	192.46	2.22	ppb
Strontium	88-1	190.53	198.26	193.77	194.19	2.00	ppb
Sulfur	34-1	20716.24	22234.28	21904.78	21618.43	3.69	ppb
Terbium	159-1				108		%
Terbium	159-2				111		%
Thallium	203-1	88.60	90.74	91.26	90.20	1.57	ppb
Thallium	205-1	88.96	92.31	91.48	90.91	1.92	ppb
Tin	118-1	84.19	87.08	86.91	86.06	1.89	ppb
Titanium	47-1	0.59	0.66	0.55	0.60	9.25	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2MSDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:44:54 DataFile Name : 038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	84.71	87.38	87.60	86.56	1.86	ppb
Vanadium	51-2	95.65	95.46	99.88	97.00	2.57	ppb
Yttrium	89-1				112		%
Yttrium	89-2				115		%
Zinc	66-2	895.56	935.61	927.85	919.68	2.31	ppb
Zirconium	90-1	88.35	91.41	91.57	90.44	2.00	ppb
Zirconium	91-1	88.36	92.06	91.96	90.80	2.32	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSDDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2MSDDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:48:05 DataFile Name : 039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1728.14	1681.99	1649.59	1686.57	2.34	ppb
Antimony	121-1	94.05	100.03	99.89	97.99	3.48	ppb
Arsenic	75-2	105.39	104.72	108.57	106.23	1.94	ppb
Barium	135-1	410.14	439.29	434.83	428.09	3.67	ppb
Barium	137-1	415.50	444.87	439.86	433.41	3.62	ppb
Beryllium	9-1	95.53	98.53	98.40	97.49	1.74	ppb
Bismuth	209-1				106		%
Bismuth	209-2				108		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	92.86	98.33	96.13	95.77	2.87	ppb
Cadmium	106-1	95.78	100.06	99.58	98.47	2.38	ppb
Cadmium	111-1	94.87	101.98	100.49	99.11	3.78	ppb
Calcium	43-1	25955.67	26988.04	27336.53	26760.08	2.68	ppb
Calcium	44-1	25264.19	25783.45	26121.33	25722.99	1.68	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	92.35	93.34	93.42	93.04	0.64	ppb
Cobalt	59-2	95.24	95.88	96.22	95.78	0.52	ppb
Copper	63-2	931.81	926.95	923.50	927.42	0.45	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				109		%
Holmium	165-2				111		%
Indium	115-1				109		%
Indium	115-2				112		%
Iron	56-2	4448.48	4324.33	4214.76	4329.19	2.70	ppb
Iron	57-2	4656.50	4726.98	4649.54	4677.68	0.92	ppb
Iron	54-2	4532.78	4482.09	4485.66	4500.18	0.63	ppb
Krypton	83-1						cps

LB Number :LB137449Operator :Jaswal

Lab Sample ID :Q3291-07MSDDLX5Instrumnet Name :P7

Client Sample ID :MC0AX2MSDDL Dilution Factor :5

Date & Time Acquired :2025-10-07 18:48:05DataFile Name :039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	448.08	463.53	461.42	457.68	1.83	ppb
Lead	207-1	449.22	468.27	467.15	461.55	2.32	ppb
Lead	208-1	463.90	475.33	475.55	471.59	1.41	ppb
Lithium	6-1				96		%
Magnesium	24-2	12832.48	12734.64	12862.15	12809.76	0.52	ppb
Manganese	55-2	973.34	943.98	938.49	951.94	1.97	ppb
Molybdenum	94-1	440.12	462.06	461.33	454.50	2.74	ppb
Molybdenum	95-1	340.14	361.08	360.49	353.90	3.37	ppb
Molybdenum	96-1	356.98	372.40	370.00	366.46	2.26	ppb
Molybdenum	97-1	343.78	361.07	363.64	356.17	3.03	ppb
Molybdenum	98-1	341.35	362.52	360.24	354.71	3.28	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	99.09	96.72	96.48	97.43	1.48	ppb
Phosphorus	31-2	36.12	70.65	48.11	51.62	33.96	ppb
Potassium	39-2	7134.57	7241.23	7547.57	7307.79	2.93	ppb
Rhodium	103-1				109		%
Rhodium	103-2				113		%
Scandium	45-1				110		%
Scandium	45-2				109		%
Selenium	82-1	95.46	97.11	99.33	97.30	2.00	ppb
Selenium	77-2	101.47	100.13	91.46	97.69	5.56	ppb
Selenium	78-2	89.35	94.55	95.65	93.19	3.61	ppb
Silicon	28-1	159.77	165.82	180.21	168.60	6.23	ppb
Silver	107-1	15.44	16.51	16.30	16.08	3.55	ppb
Silver	109-1	15.24	16.39	16.35	15.99	4.07	ppb
Sodium	23-2	69877.15	70341.53	71778.33	70665.67	1.40	ppb
Strontium	86-1	185.76	195.34	196.30	192.47	3.03	ppb
Strontium	88-1	187.34	194.61	197.23	193.06	2.65	ppb
Sulfur	34-1	20652.51	21705.81	22117.59	21491.97	3.52	ppb
Terbium	159-1				109		%
Terbium	159-2				111		%
Thallium	203-1	88.11	91.09	90.62	89.94	1.78	ppb
Thallium	205-1	88.11	91.69	91.32	90.37	2.18	ppb
Tin	118-1	82.19	87.39	87.37	85.65	3.50	ppb
Titanium	47-1	0.60	0.60	0.64	0.61	3.42	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSDDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2MSDDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:48:05 DataFile Name : 039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	84.32	88.31	87.32	86.65	2.40	ppb
Vanadium	51-2	99.21	98.58	95.82	97.87	1.85	ppb
Yttrium	89-1				113		%
Yttrium	89-2				116		%
Zinc	66-2	909.95	928.04	929.97	922.65	1.20	ppb
Zirconium	90-1	87.31	92.73	92.71	90.92	3.44	ppb
Zirconium	91-1	87.92	93.38	92.89	91.40	3.30	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07ADLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2ADL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:51:13 DataFile Name : 040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1628.24	1636.16	1697.81	1654.07	2.30	ppb
Antimony	121-1	100.39	98.01	99.37	99.26	1.20	ppb
Arsenic	75-2	107.67	112.53	106.95	109.05	2.78	ppb
Barium	135-1	437.07	431.12	435.82	434.67	0.72	ppb
Barium	137-1	440.14	437.20	443.93	440.42	0.77	ppb
Beryllium	9-1	97.86	99.05	97.45	98.12	0.85	ppb
Bismuth	209-1				105		%
Bismuth	209-2				108		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	98.73	99.95	100.18	99.62	0.78	ppb
Cadmium	106-1	102.09	97.15	101.93	100.39	2.80	ppb
Cadmium	111-1	101.35	99.04	100.87	100.42	1.21	ppb
Calcium	43-1	27535.19	26727.92	27128.50	27130.54	1.49	ppb
Calcium	44-1	26414.40	26012.63	25589.86	26005.63	1.59	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	91.08	89.90	90.88	90.62	0.70	ppb
Cobalt	59-2	95.74	93.69	94.76	94.73	1.08	ppb
Copper	63-2	879.17	885.11	914.50	892.93	2.12	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				109		%
Holmium	165-2				111		%
Indium	115-1				109		%
Indium	115-2				113		%
Iron	56-2	4226.48	4103.64	4353.79	4227.97	2.96	ppb
Iron	57-2	4458.81	4416.49	4698.29	4524.53	3.36	ppb
Iron	54-2	4499.34	4448.33	4557.35	4501.67	1.21	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07ADLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2ADL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:51:13 DataFile Name : 040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	465.12	467.42	454.13	462.22	1.54	ppb
Lead	207-1	462.20	468.71	460.18	463.70	0.96	ppb
Lead	208-1	483.38	482.03	463.75	476.38	2.30	ppb
Lithium	6-1				95		%
Magnesium	24-2	12983.85	12836.47	12979.01	12933.11	0.65	ppb
Manganese	55-2	932.83	906.59	946.35	928.59	2.18	ppb
Molybdenum	94-1	458.00	461.32	450.74	456.69	1.18	ppb
Molybdenum	95-1	362.71	361.77	350.25	358.25	1.94	ppb
Molybdenum	96-1	373.15	374.10	363.30	370.18	1.61	ppb
Molybdenum	97-1	363.45	362.02	351.54	359.00	1.81	ppb
Molybdenum	98-1	361.15	360.59	351.97	357.90	1.44	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	93.77	93.09	96.48	94.45	1.90	ppb
Phosphorus	31-2	67.64	58.22	81.15	69.00	16.70	ppb
Potassium	39-2	7149.58	7072.03	7175.74	7132.45	0.76	ppb
Rhodium	103-1				110		%
Rhodium	103-2				113		%
Scandium	45-1				109		%
Scandium	45-2				110		%
Selenium	82-1	102.88	103.62	96.56	101.02	3.84	ppb
Selenium	77-2	87.79	105.65	94.29	95.91	9.42	ppb
Selenium	78-2	92.72	97.59	97.90	96.07	3.02	ppb
Silicon	28-1	169.27	165.49	168.81	167.86	1.23	ppb
Silver	107-1	16.57	16.20	16.64	16.47	1.41	ppb
Silver	109-1	16.26	16.23	16.22	16.24	0.14	ppb
Sodium	23-2	71945.78	70461.14	69963.88	70790.27	1.46	ppb
Strontium	86-1	193.65	194.44	190.13	192.74	1.19	ppb
Strontium	88-1	198.00	198.35	192.91	196.42	1.55	ppb
Sulfur	34-1	22333.04	21230.51	21723.21	21762.25	2.54	ppb
Terbium	159-1				107		%
Terbium	159-2				112		%
Thallium	203-1	90.07	91.35	89.67	90.36	0.97	ppb
Thallium	205-1	90.90	92.11	89.47	90.83	1.46	ppb
Tin	118-1	88.68	87.04	88.39	88.04	0.99	ppb
Titanium	47-1	0.65	0.46	0.47	0.53	20.58	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07ADLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2ADL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:51:13 DataFile Name : 040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	86.19	87.01	85.76	86.32	0.74	ppb
Vanadium	51-2	93.27	92.78	98.44	94.83	3.31	ppb
Yttrium	89-1				112		%
Yttrium	89-2				115		%
Zinc	66-2	894.68	879.08	917.60	897.12	2.16	ppb
Zirconium	90-1	92.06	92.32	89.84	91.41	1.49	ppb
Zirconium	91-1	92.63	92.88	89.84	91.78	1.84	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-08DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX3DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:54:23 DataFile Name : 041SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1.86	3.50	3.34	2.90	31.18	ppb
Antimony	121-1	0.67	0.70	0.76	0.71	5.81	ppb
Arsenic	75-2	8.56	8.67	8.73	8.65	0.96	ppb
Barium	135-1	2.71	3.05	2.99	2.92	6.27	ppb
Barium	137-1	2.80	2.88	3.05	2.91	4.25	ppb
Beryllium	9-1	0.01	0.03	0.02	0.02	26.99	ppb
Bismuth	209-1				108		%
Bismuth	209-2				110		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.09	0.06	0.14	0.10	41.37	ppb
Cadmium	106-1	0.56	1.40	0.07	0.68	99.33	ppb
Cadmium	111-1	0.07	0.12	0.02	0.07	73.41	ppb
Calcium	43-1	18680.77	19747.00	19284.09	19237.28	2.78	ppb
Calcium	44-1	17943.55	18391.17	18280.17	18204.96	1.28	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.08	0.18	0.14	0.14	37.32	ppb
Cobalt	59-2	0.09	0.07	0.08	0.08	12.00	ppb
Copper	63-2	0.43	0.44	0.42	0.43	1.60	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				111		%
Holmium	165-2				113		%
Indium	115-1				112		%
Indium	115-2				115		%
Iron	56-2	15.84	15.23	15.69	15.59	2.05	ppb
Iron	57-2	170.90	172.60	178.52	174.01	2.30	ppb
Iron	54-2	15.21	13.99	15.68	14.96	5.84	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-08DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX3DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:54:23 DataFile Name : 041SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.04	0.01	0.05	0.03	71.95	ppb
Lead	207-1	0.05	0.00	0.01	0.02	110.87	ppb
Lead	208-1	0.04	0.02	0.03	0.03	34.21	ppb
Lithium	6-1				97		%
Magnesium	24-2	3521.63	3566.69	3475.30	3521.21	1.30	ppb
Manganese	55-2	54.65	55.28	55.14	55.02	0.61	ppb
Molybdenum	94-1	14.53	14.83	15.15	14.84	2.07	ppb
Molybdenum	95-1	17.56	17.31	17.72	17.53	1.16	ppb
Molybdenum	96-1	17.26	16.60	17.10	16.99	2.04	ppb
Molybdenum	97-1	17.54	17.37	17.79	17.57	1.20	ppb
Molybdenum	98-1	17.54	17.31	17.80	17.55	1.40	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.38	0.44	0.36	0.39	9.60	ppb
Phosphorus	31-2	-69.61	-60.35	-42.41	-57.46		ppb
Potassium	39-2	3192.23	3225.73	3201.24	3206.40	0.54	ppb
Rhodium	103-1				112		%
Rhodium	103-2				116		%
Scandium	45-1				112		%
Scandium	45-2				113		%
Selenium	82-1	0.71	1.24	0.77	0.91	32.37	ppb
Selenium	77-2	0.18	-0.12	0.79	0.29	162.60	ppb
Selenium	78-2	1.33	0.28	0.10	0.57	116.35	ppb
Silicon	28-1	176.54	172.14	173.97	174.22	1.27	ppb
Silver	107-1	0.04	0.03	0.03	0.03	23.57	ppb
Silver	109-1	0.03	0.03	0.03	0.03	6.53	ppb
Sodium	23-2	67843.88	68120.12	66637.87	67533.96	1.17	ppb
Strontium	86-1	92.11	87.58	90.35	90.01	2.54	ppb
Strontium	88-1	89.63	90.26	91.53	90.47	1.07	ppb
Sulfur	34-1	23721.15	22851.85	22762.58	23111.86	2.29	ppb
Terbium	159-1				109		%
Terbium	159-2				114		%
Thallium	203-1	0.04	0.02	0.03	0.03	28.82	ppb
Thallium	205-1	0.05	0.04	0.02	0.04	36.16	ppb
Tin	118-1	0.05	0.07	0.05	0.05	21.84	ppb
Titanium	47-1	0.18	0.21	0.18	0.19	9.83	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-08DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX3DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:54:23 DataFile Name : 041SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.03	0.02	0.03	0.03	11.97	ppb
Vanadium	51-2	0.57	0.47	0.51	0.52	9.41	ppb
Yttrium	89-1				116		%
Yttrium	89-2				118		%
Zinc	66-2	0.36	0.74	0.70	0.60	34.24	ppb
Zirconium	90-1	0.36	0.32	0.29	0.32	10.77	ppb
Zirconium	91-1	0.39	0.32	0.28	0.33	16.33	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV03 Instrumnet Name : P7
Client Sample ID : CCV03 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:57:38 DataFile Name : 042CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	48782.69	49901.79	47468.95	48717.81	2.50	ppb
Antimony	121-1	499.15	524.28	549.97	524.47	4.84	ppb
Arsenic	75-2	491.49	492.50	471.98	485.33	2.38	ppb
Barium	135-1	2466.81	2643.09	2739.94	2616.62	5.29	ppb
Barium	137-1	2497.36	2607.03	2726.97	2610.45	4.40	ppb
Beryllium	9-1	485.41	525.23	516.82	509.15	4.12	ppb
Bismuth	209-1				100		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	488.18	520.19	533.86	514.08	4.56	ppb
Cadmium	106-1	484.71	511.09	531.63	509.15	4.62	ppb
Cadmium	111-1	480.62	509.25	529.10	506.32	4.81	ppb
Calcium	43-1	237346.55	244865.97	244377.43	242196.65	1.74	ppb
Calcium	44-1	230349.88	244957.17	245505.51	240270.85	3.58	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	501.03	507.35	503.76	504.05	0.63	ppb
Cobalt	59-2	498.10	511.78	489.83	499.90	2.22	ppb
Copper	63-2	5096.20	4920.81	4977.50	4998.17	1.79	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				106		%
Indium	115-1				104		%
Indium	115-2				105		%
Iron	56-2	127057.57	126422.05	128505.74	127328.45	0.84	ppb
Iron	57-2	127207.62	129058.08	126121.22	127462.31	1.16	ppb
Iron	54-2	129251.38	127662.98	129145.00	128686.46	0.69	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV03 Instrumnet Name : P7
Client Sample ID : CCV03 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:57:38 DataFile Name : 042CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2479.59	2553.49	2539.75	2524.28	1.56	ppb
Lead	207-1	2452.25	2595.45	2528.80	2525.50	2.84	ppb
Lead	208-1	2444.29	2576.19	2524.80	2515.10	2.64	ppb
Lithium	6-1				93		%
Magnesium	24-2	245554.25	241043.11	238713.60	241770.32	1.44	ppb
Manganese	55-2	4986.26	4978.26	5037.09	5000.54	0.64	ppb
Molybdenum	94-1	4835.98	5157.18	5088.14	5027.10	3.36	ppb
Molybdenum	95-1	4857.30	5213.09	5044.35	5038.25	3.53	ppb
Molybdenum	96-1	4912.74	5237.82	5028.02	5059.53	3.26	ppb
Molybdenum	97-1	4828.47	5141.16	4946.54	4972.05	3.18	ppb
Molybdenum	98-1	4822.42	5163.35	5020.51	5002.09	3.42	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	495.25	499.05	495.97	496.75	0.41	ppb
Phosphorus	31-2	9867.78	10084.32	9900.40	9950.83	1.17	ppb
Potassium	39-2	124057.32	127323.80	124255.58	125212.24	1.46	ppb
Rhodium	103-1				102		%
Rhodium	103-2				105		%
Scandium	45-1				106		%
Scandium	45-2				106		%
Selenium	82-1	465.07	497.88	481.25	481.40	3.41	ppb
Selenium	77-2	457.19	491.48	483.86	477.51	3.77	ppb
Selenium	78-2	480.86	480.55	466.13	475.85	1.77	ppb
Silicon	28-1	447.42	466.91	471.85	462.06	2.80	ppb
Silver	107-1	500.51	520.76	537.17	519.48	3.54	ppb
Silver	109-1	489.74	512.77	532.15	511.56	4.15	ppb
Sodium	23-2	254906.65	242476.28	243191.16	246858.03	2.83	ppb
Strontium	86-1	487.12	520.44	504.70	504.09	3.31	ppb
Strontium	88-1	491.60	525.02	506.46	507.69	3.30	ppb
Sulfur	34-1	8295.53	9231.27	9064.82	8863.87	5.63	ppb
Terbium	159-1				104		%
Terbium	159-2				106		%
Thallium	203-1	503.16	520.43	518.55	514.05	1.84	ppb
Thallium	205-1	503.61	527.79	505.11	512.17	2.65	ppb
Tin	118-1	487.69	526.69	542.32	518.90	5.42	ppb
Titanium	47-1	4771.27	5110.73	5161.85	5014.62	4.23	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV03 Instrumnet Name : P7
Client Sample ID : CCV03 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:57:38 DataFile Name : 042CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	488.43	515.23	509.21	504.29	2.79	ppb
Vanadium	51-2	499.38	507.32	498.25	501.65	0.99	ppb
Yttrium	89-1				109		%
Yttrium	89-2				111		%
Zinc	66-2	4939.74	4683.16	4876.91	4833.27	2.77	ppb
Zirconium	90-1	491.26	533.32	513.36	512.65	4.10	ppb
Zirconium	91-1	482.38	522.21	504.33	502.97	3.97	ppb

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB03 Instrumnet Name : P7
Client Sample ID : CCB03 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 19:09:11 DataFile Name : 043CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.26	-0.50	-0.06	-0.28		ppb
Antimony	121-1	0.04	0.04	0.04	0.04	7.25	ppb
Arsenic	75-2	0.03	0.00	-0.03	0.00	2417.14	ppb
Barium	135-1	0.00	-0.02	-0.02	-0.01		ppb
Barium	137-1	-0.02	-0.01	-0.01	-0.01		ppb
Beryllium	9-1	0.03	0.00	0.00	0.01	166.52	ppb
Bismuth	209-1				100		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.07	-0.06	0.07	0.03	269.47	ppb
Cadmium	106-1	-1.75	-1.54	-1.86	-1.71		ppb
Cadmium	111-1	-0.12	-0.10	-0.12	-0.11		ppb
Calcium	43-1	-2.69	-2.30	-3.40	-2.80		ppb
Calcium	44-1	27.86	25.76	26.29	26.63	4.10	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	0.05	0.00	0.01	197.48	ppb
Cobalt	59-2	-0.02	-0.04	-0.03	-0.03		ppb
Copper	63-2	0.01	0.05	0.08	0.05	68.58	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				104		%
Indium	115-1				105		%
Indium	115-2				106		%
Iron	56-2	0.92	1.04	1.00	0.99	6.54	ppb
Iron	57-2	2.04	3.76	0.50	2.10	77.73	ppb
Iron	54-2	0.46	1.08	1.06	0.86	40.91	ppb
Krypton	83-1						cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB03 Instrumnet Name : P7
Client Sample ID : CCB03 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 19:09:11 DataFile Name : 043CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	-0.03	-0.02	-0.03	-0.03		ppb
Lead	207-1	-0.02	0.00	-0.01	-0.01		ppb
Lead	208-1	-0.01	-0.01	-0.02	-0.01		ppb
Lithium	6-1				89		%
Magnesium	24-2	0.67	0.38	0.34	0.46	38.70	ppb
Manganese	55-2	0.02	0.01	0.00	0.01	72.62	ppb
Molybdenum	94-1	0.05	0.02	0.04	0.04	49.50	ppb
Molybdenum	95-1	0.03	0.03	0.00	0.02	82.96	ppb
Molybdenum	96-1	0.01	0.05	0.03	0.03	68.31	ppb
Molybdenum	97-1	0.04	0.01	0.03	0.03	48.70	ppb
Molybdenum	98-1	0.01	0.02	0.02	0.02	25.53	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.05	-0.03	0.00	-0.03		ppb
Phosphorus	31-2	-181.63	-185.48	-183.15	-183.42		ppb
Potassium	39-2	22.83	25.45	19.36	22.55	13.57	ppb
Rhodium	103-1				106		%
Rhodium	103-2				107		%
Scandium	45-1				105		%
Scandium	45-2				103		%
Selenium	82-1	1.17	1.26	0.50	0.98	42.25	ppb
Selenium	77-2	0.21	-0.12	-0.12	-0.01		ppb
Selenium	78-2	-0.95	-1.51	0.70	-0.59		ppb
Silicon	28-1	-0.61	-0.76	-0.36	-0.57		ppb
Silver	107-1	0.01	0.01	0.02	0.01	38.90	ppb
Silver	109-1	0.01	0.01	0.02	0.01	28.06	ppb
Sodium	23-2	81.14	81.10	82.09	81.44	0.69	ppb
Strontium	86-1	-0.05	-0.01	-0.03	-0.03		ppb
Strontium	88-1	0.00	0.00	0.00	0.00		ppb
Sulfur	34-1	-1038.79	-1164.09	-953.81	-1052.23		ppb
Terbium	159-1				101		%
Terbium	159-2				105		%
Thallium	203-1	0.03	0.02	0.02	0.02	28.99	ppb
Thallium	205-1	0.01	0.01	0.02	0.01	35.52	ppb
Tin	118-1	-0.08	-0.06	-0.08	-0.07		ppb
Titanium	47-1	0.08	0.00	0.01	0.03	136.26	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB03 Instrumnet Name : P7
Client Sample ID : CCB03 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 19:09:11 DataFile Name : 043CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	56.77	ppb
Vanadium	51-2	-0.01	0.00	0.00	0.00		ppb
Yttrium	89-1				107		%
Yttrium	89-2				108		%
Zinc	66-2	-0.03	0.12	0.00	0.03	260.43	ppb
Zirconium	90-1	0.02	0.01	0.02	0.02	20.20	ppb
Zirconium	91-1	0.01	0.01	0.01	0.01	18.64	ppb

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:42:56 DataFile Name : 004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	603	540	567	570	5.58	cps
Antimony	121-1	27	17	13	19	36.75	cps
Arsenic	75-2	10	3	17	10	66.70	cps
Barium	135-1	27	50	80	52	51.19	cps
Barium	137-1	73	73	47	64	23.88	cps
Beryllium	9-1	7	7	13	9	43.20	cps
Bismuth	209-1	4287709	4156802	4143378	4195963	1.90	cps
Bismuth	209-2	3565428	3507405	3405426	3492753	2.32	cps
Bromine	81-1	6578	6862	6788	6743	2.18	cps
Bromine	81-2	73	113	127	104	26.58	cps
Cadmium	108-1	3	3	7	4	43.40	cps
Cadmium	106-1	2097	2023	1910	2010	4.68	cps
Cadmium	111-1	1475	1417	1339	1411	4.85	cps
Calcium	43-1	270	223	250	248	9.45	cps
Calcium	44-1	16083	15122	15152	15452	3.54	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1340	1183	1527	1350	12.73	cps
Cobalt	59-2	147	163	197	169	15.07	cps
Copper	63-2	787	737	793	772	4.01	cps
Dysprosium	156-1	10	7	3	7	50.03	cps
Dysprosium	156-2	7	10	7	8	24.71	cps
Erbium	164-1	30	30	23	28	13.86	cps
Erbium	164-2	27	13	20	20	33.35	cps
Gadolinium	160-1	60	63	53	59	8.65	cps
Gadolinium	160-2	347	417	357	373	10.14	cps
Holmium	165-1	6446935	6095261	6164536	6235577	2.99	cps
Holmium	165-2	4493740	4554475	4473991	4507402	0.93	cps
Indium	115-1	5368843	5219783	5177154	5255260	1.92	cps
Indium	115-2	1987379	1967432	1966734	1973848	0.59	cps
Iron	56-2	12098	12589	12032	12240	2.49	cps
Iron	57-2	1327	1487	1377	1397	5.86	cps
Iron	54-2	1827	1770	1760	1786	2.01	cps
Krypton	83-1	430	477	440	449	5.47	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:42:56 DataFile Name : 004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	580	503	497	527	8.79	cps
Lead	207-1	443	443	423	437	2.64	cps
Lead	208-1	2207	2057	1930	2065	6.71	cps
Lithium	6-1	577703	563971	561565	567747	1.53	cps
Magnesium	24-2	140	193	213	182	20.80	cps
Manganese	55-2	363	323	353	347	6.00	cps
Molybdenum	94-1	210	233	230	224	5.62	cps
Molybdenum	95-1	177	213	137	176	21.84	cps
Molybdenum	96-1	210	173	177	187	10.86	cps
Molybdenum	97-1	110	93	123	109	13.80	cps
Molybdenum	98-1	247	257	243	249	2.79	cps
Neodymium	150-1	7	3	3	4	43.40	cps
Neodymium	150-2	0	0	7	2	173.21	cps
Nickel	60-2	317	303	333	318	4.73	cps
Phosphorus	31-2	713	710	777	733	5.12	cps
Potassium	39-2	53233	52965	52353	52850	0.85	cps
Rhodium	103-1	5257885	5140983	5038801	5145890	2.13	cps
Rhodium	103-2	3192681	3182873	3158468	3178008	0.55	cps
Scandium	45-1	3321360	3090732	3153486	3188526	3.74	cps
Scandium	45-2	302291	303733	303743	303256	0.28	cps
Selenium	82-1	465	411	395	424	8.71	cps
Selenium	77-2	0	0	3	1	173.21	cps
Selenium	78-2	320	303	307	310	2.85	cps
Silicon	28-1	704711	697833	693611	698718	0.80	cps
Silver	107-1	57	43	30	43	30.77	cps
Silver	109-1	30	27	27	28	6.92	cps
Sodium	23-2	15238	15388	15188	15271	0.68	cps
Strontium	86-1	730	677	723	710	4.09	cps
Strontium	88-1	127	137	117	127	7.89	cps
Sulfur	34-1	185306	187661	187680	186882	0.73	cps
Terbium	159-1	6701511	6400328	6482909	6528249	2.38	cps
Terbium	159-2	4519230	4548878	4476512	4514873	0.81	cps
Thallium	203-1	247	157	190	198	23.01	cps
Thallium	205-1	460	490	487	479	3.43	cps
Tin	118-1	870	977	1043	963	9.08	cps
Titanium	47-1	77	67	60	68	12.38	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:42:56 DataFile Name : 004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	10	10	20	13	43.30	cps
Vanadium	51-2	10	20	20	17	34.64	cps
Yttrium	89-1	8434703	8123303	8233358	8263788	1.91	cps
Yttrium	89-2	2312846	2297620	2285540	2298669	0.60	cps
Zinc	66-2	1437	1350	1277	1355	5.91	cps
Zirconium	90-1	367	337	313	339	7.89	cps
Zirconium	91-1	60	63	77	67	13.23	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S2 Instrumnet Name : P7
Client Sample ID : S2 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:46:13 DataFile Name : 005CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2870	2887	2884	2880	0.31	cps
Antimony	121-1	8056	8326	8453	8278	2.45	cps
Arsenic	75-2	283	347	297	309	10.81	cps
Barium	135-1	9150	9737	9643	9510	3.32	cps
Barium	137-1	15909	17190	16817	16639	3.96	cps
Beryllium	9-1	619	653	783	685	12.63	cps
Bismuth	209-1	4661014	4395515	4232016	4429515	4.89	cps
Bismuth	209-2	3486218	3475479	3483450	3481716	0.16	cps
Bromine	81-1	7028	6758	6825	6871	2.05	cps
Bromine	81-2	150	93	107	117	25.40	cps
Cadmium	108-1	103	83	110	99	14.04	cps
Cadmium	106-1	2397	2320	2140	2286	5.76	cps
Cadmium	111-1	2532	2686	2425	2548	5.16	cps
Calcium	43-1	6018	6251	6181	6150	1.95	cps
Calcium	44-1	108053	113667	115083	112268	3.31	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	5514	5431	5308	5418	1.92	cps
Cobalt	59-2	3517	3537	3654	3569	2.07	cps
Copper	63-2	5998	5411	5468	5626	5.75	cps
Dysprosium	156-1	7	3	7	6	34.70	cps
Dysprosium	156-2	0	3	0	1	173.21	cps
Erbium	164-1	43	27	43	38	25.46	cps
Erbium	164-2	20	13	27	20	33.35	cps
Gadolinium	160-1	53	27	60	47	37.79	cps
Gadolinium	160-2	477	430	400	436	8.87	cps
Holmium	165-1	6890683	6656990	6355032	6634235	4.05	cps
Holmium	165-2	4644223	4521076	4537871	4567724	1.46	cps
Indium	115-1	5743508	5311612	5174395	5409838	5.49	cps
Indium	115-2	1980818	1967485	1954995	1967766	0.66	cps
Iron	56-2	112841	113750	112082	112891	0.74	cps
Iron	57-2	4274	4127	3987	4129	3.47	cps
Iron	54-2	7482	7762	7449	7564	2.28	cps
Krypton	83-1	390	400	460	417	9.09	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S2 Instrumnet Name : P7
Client Sample ID : S2 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:46:13 DataFile Name : 005CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	3374	3534	3564	3490	2.93	cps
Lead	207-1	2597	3034	2884	2838	7.82	cps
Lead	208-1	12946	13586	13760	13431	3.19	cps
Lithium	6-1	633909	587351	576772	599344	5.07	cps
Magnesium	24-2	101987	101664	101999	101883	0.19	cps
Manganese	55-2	2277	1977	2280	2178	8.00	cps
Molybdenum	94-1	8889	9600	9523	9338	4.18	cps
Molybdenum	95-1	11024	11131	11304	11153	1.27	cps
Molybdenum	96-1	11651	12712	12769	12378	5.09	cps
Molybdenum	97-1	6672	6852	6875	6799	1.64	cps
Molybdenum	98-1	16586	17387	18485	17486	5.45	cps
Neodymium	150-1	3	7	0	3	100.05	cps
Neodymium	150-2	7	0	7	4	86.60	cps
Nickel	60-2	1070	1160	1087	1106	4.33	cps
Phosphorus	31-2	2220	2287	2210	2239	1.86	cps
Potassium	39-2	168475	168711	168299	168495	0.12	cps
Rhodium	103-1	5646613	5282905	5234516	5388011	4.18	cps
Rhodium	103-2	3201506	3220823	3158012	3193447	1.01	cps
Scandium	45-1	3534583	3327554	3242363	3368167	4.46	cps
Scandium	45-2	300582	305681	303138	303134	0.84	cps
Selenium	82-1	946	921	822	896	7.34	cps
Selenium	77-2	47	67	53	56	18.33	cps
Selenium	78-2	443	397	573	471	19.43	cps
Silicon	28-1	696364	704347	693657	698123	0.80	cps
Silver	107-1	5695	5781	6071	5849	3.37	cps
Silver	109-1	5324	5508	5631	5488	2.81	cps
Sodium	23-2	174062	173280	174869	174070	0.46	cps
Strontium	86-1	1967	2130	2027	2041	4.05	cps
Strontium	88-1	11221	12185	12125	11844	4.56	cps
Sulfur	34-1	193353	192823	194089	193422	0.33	cps
Terbium	159-1	7059251	6551633	6520144	6710343	4.51	cps
Terbium	159-2	4581006	4606505	4588949	4592153	0.28	cps
Thallium	203-1	4141	4364	4557	4354	4.79	cps
Thallium	205-1	9797	10524	10394	10238	3.79	cps
Tin	118-1	17517	17874	18365	17919	2.38	cps
Titanium	47-1	2887	2997	3087	2990	3.35	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S2 Instrumnet Name : P7
Client Sample ID : S2 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:46:13 DataFile Name : 005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	11775	12836	12993	12535	5.28	cps
Vanadium	51-2	9003	8879	8916	8933	0.71	cps
Yttrium	89-1	9084990	8583036	8304793	8657606	4.57	cps
Yttrium	89-2	2370131	2383336	2329050	2360839	1.20	cps
Zinc	66-2	3354	3407	3284	3348	1.85	cps
Zirconium	90-1	7102	7465	8056	7541	6.38	cps
Zirconium	91-1	1647	1787	1773	1736	4.45	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S3 Instrumnet Name : P7
Client Sample ID : S3 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:49:34 DataFile Name : 006CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	121642	121746	124785	122724	1.45	cps
Antimony	121-1	206337	209243	209482	208354	0.84	cps
Arsenic	75-2	13002	13183	13289	13158	1.10	cps
Barium	135-1	245899	249464	252654	249339	1.36	cps
Barium	137-1	432104	433079	437876	434353	0.71	cps
Beryllium	9-1	32356	32762	33549	32889	1.84	cps
Bismuth	209-1	4340447	4260820	4206147	4269138	1.58	cps
Bismuth	209-2	3573129	3547801	3537166	3552699	0.52	cps
Bromine	81-1	6772	6802	6948	6841	1.38	cps
Bromine	81-2	107	73	113	98	21.92	cps
Cadmium	108-1	3991	4251	4324	4188	4.18	cps
Cadmium	106-1	7765	7839	7969	7858	1.31	cps
Cadmium	111-1	59661	60200	61082	60314	1.19	cps
Calcium	43-1	61758	63232	64380	63123	2.08	cps
Calcium	44-1	1010146	1026633	1033280	1023353	1.16	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	107400	107739	107319	107486	0.21	cps
Cobalt	59-2	164179	164367	162525	163691	0.62	cps
Copper	63-2	1282735	1280389	1266204	1276443	0.70	cps
Dysprosium	156-1	10	0	10	7	86.60	cps
Dysprosium	156-2	40	17	23	27	45.07	cps
Erbium	164-1	57	47	53	52	9.75	cps
Erbium	164-2	30	27	37	31	16.37	cps
Gadolinium	160-1	57	47	33	46	25.70	cps
Gadolinium	160-2	407	363	430	400	8.46	cps
Holmium	165-1	6430045	6340487	6369234	6379922	0.72	cps
Holmium	165-2	4595193	4635874	4534154	4588407	1.12	cps
Indium	115-1	5255367	5316510	5248214	5273364	0.71	cps
Indium	115-2	2016126	1980686	1990026	1995613	0.92	cps
Iron	56-2	4990788	4877055	4956025	4941289	1.18	cps
Iron	57-2	131494	131402	130253	131050	0.53	cps
Iron	54-2	287928	289119	288983	288677	0.23	cps
Krypton	83-1	390	400	377	389	3.01	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S3 Instrumnet Name : P7
Client Sample ID : S3 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:49:34 DataFile Name : 006CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	822250	836323	834556	831043	0.92	cps
Lead	207-1	710316	720195	721989	717500	0.88	cps
Lead	208-1	3241824	3415926	3307943	3321897	2.65	cps
Lithium	6-1	577573	587411	575599	580195	1.09	cps
Magnesium	24-2	1037488	1031073	1042793	1037118	0.57	cps
Manganese	55-2	884314	879769	885425	883169	0.34	cps
Molybdenum	94-1	765779	776960	776056	772932	0.80	cps
Molybdenum	95-1	1095743	1097649	1116207	1103200	1.02	cps
Molybdenum	96-1	1190400	1220167	1222006	1210858	1.47	cps
Molybdenum	97-1	685079	698865	700941	694962	1.24	cps
Molybdenum	98-1	1760297	1787247	1756728	1768091	0.94	cps
Neodymium	150-1	17	13	7	12	41.65	cps
Neodymium	150-2	7	17	0	8	107.84	cps
Nickel	60-2	43212	42971	42503	42896	0.84	cps
Phosphorus	31-2	6955	6678	6585	6739	2.86	cps
Potassium	39-2	649704	643475	647780	646986	0.49	cps
Rhodium	103-1	5221673	5210865	5246271	5226269	0.35	cps
Rhodium	103-2	3245685	3179470	3201278	3208811	1.05	cps
Scandium	45-1	3267154	3220669	3250912	3246245	0.73	cps
Scandium	45-2	310749	307664	307290	308567	0.62	cps
Selenium	82-1	4923	4905	5135	4988	2.57	cps
Selenium	77-2	503	497	563	521	7.05	cps
Selenium	78-2	1790	2084	2090	1988	8.62	cps
Silicon	28-1	2644056	2713569	2704596	2687407	1.41	cps
Silver	107-1	283432	289851	292802	288695	1.66	cps
Silver	109-1	271310	274551	276194	274018	0.91	cps
Sodium	23-2	1660145	1644015	1698203	1667455	1.67	cps
Strontium	86-1	70565	70645	71848	71019	1.01	cps
Strontium	88-1	613470	620809	622266	618848	0.76	cps
Sulfur	34-1	208959	209607	209763	209443	0.20	cps
Terbium	159-1	6590596	6644429	6509329	6581451	1.03	cps
Terbium	159-2	4689631	4531998	4564670	4595433	1.81	cps
Thallium	203-1	202648	203534	204152	203445	0.37	cps
Thallium	205-1	478476	482847	480870	480731	0.46	cps
Tin	118-1	174849	177436	177617	176634	0.88	cps
Titanium	47-1	291943	300800	302637	298460	1.92	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S3 Instrumnet Name : P7
Client Sample ID : S3 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:49:34 DataFile Name : 006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	632371	642055	647204	640543	1.18	cps
Vanadium	51-2	88994	87867	88347	88403	0.64	cps
Yttrium	89-1	8515040	8254730	8355916	8375229	1.57	cps
Yttrium	89-2	2375935	2333925	2345874	2351911	0.92	cps
Zinc	66-2	237147	234426	236743	236105	0.62	cps
Zirconium	90-1	374963	378526	380597	378028	0.75	cps
Zirconium	91-1	82025	84958	85125	84036	2.08	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S4 Instrumnet Name : P7
Client Sample ID : S4 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:52:46 DataFile Name : 007CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	290579	294079	298256	294305	1.31	cps
Antimony	121-1	489559	506889	505834	500760	1.94	cps
Arsenic	75-2	31681	32088	32235	32001	0.90	cps
Barium	135-1	584896	606284	606318	599166	2.06	cps
Barium	137-1	1008452	1054220	1055160	1039277	2.57	cps
Beryllium	9-1	74475	78528	80201	77735	3.79	cps
Bismuth	209-1	4578827	4172223	4169684	4306912	5.47	cps
Bismuth	209-2	3482243	3425322	3402949	3436838	1.19	cps
Bromine	81-1	6738	6662	6555	6652	1.38	cps
Bromine	81-2	90	87	103	93	9.45	cps
Cadmium	108-1	9853	10087	10360	10100	2.51	cps
Cadmium	106-1	16536	16399	16313	16416	0.69	cps
Cadmium	111-1	139953	144858	146137	143649	2.27	cps
Calcium	43-1	144775	152258	152331	149788	2.90	cps
Calcium	44-1	2228752	2358888	2415892	2334511	4.11	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	259011	256485	257501	257666	0.49	cps
Cobalt	59-2	390187	397743	395354	394428	0.98	cps
Copper	63-2	3131459	3087306	3041499	3086755	1.46	cps
Dysprosium	156-1	17	10	17	14	26.66	cps
Dysprosium	156-2	43	73	60	59	25.53	cps
Erbium	164-1	83	63	73	73	13.64	cps
Erbium	164-2	30	40	33	34	14.78	cps
Gadolinium	160-1	47	67	33	49	34.32	cps
Gadolinium	160-2	437	413	430	427	2.82	cps
Holmium	165-1	6849698	6350705	6422954	6541119	4.12	cps
Holmium	165-2	4606402	4377684	4295790	4426625	3.64	cps
Indium	115-1	5623323	5194189	5246779	5354763	4.37	cps
Indium	115-2	1958940	1893505	1941649	1931365	1.76	cps
Iron	56-2	12011904	12014495	12160015	12062138	0.70	cps
Iron	57-2	316460	312062	311149	313224	0.91	cps
Iron	54-2	687619	707065	713664	702783	1.93	cps
Krypton	83-1	393	493	420	436	11.89	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S4 Instrumnet Name : P7
Client Sample ID : S4 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:52:46 DataFile Name : 007CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2009326	2098111	2094740	2067392	2.43	cps
Lead	207-1	1663549	1781815	1746443	1730602	3.51	cps
Lead	208-1	7896171	8340793	8338459	8191808	3.13	cps
Lithium	6-1	621014	570114	570345	587158	4.99	cps
Magnesium	24-2	2540151	2584941	2634677	2586590	1.83	cps
Manganese	55-2	2110211	2128722	2143549	2127494	0.79	cps
Molybdenum	94-1	1792421	1893165	1875184	1853590	2.90	cps
Molybdenum	95-1	2567362	2695762	2750619	2671248	3.52	cps
Molybdenum	96-1	2865962	2946840	3006202	2939668	2.39	cps
Molybdenum	97-1	1594869	1658201	1696929	1649999	3.12	cps
Molybdenum	98-1	4082074	4242832	4345528	4223478	3.14	cps
Neodymium	150-1	17	23	40	27	45.07	cps
Neodymium	150-2	0	10	7	6	91.64	cps
Nickel	60-2	104018	103588	104099	103902	0.26	cps
Phosphorus	31-2	15525	15094	15525	15381	1.62	cps
Potassium	39-2	1430871	1413596	1428015	1424161	0.65	cps
Rhodium	103-1	5643806	5045872	5058030	5249236	6.51	cps
Rhodium	103-2	3189909	3110220	3149398	3149842	1.27	cps
Scandium	45-1	3426689	3208001	3148665	3261118	4.49	cps
Scandium	45-2	299982	304476	304690	303049	0.88	cps
Selenium	82-1	10778	11395	11020	11064	2.81	cps
Selenium	77-2	1330	1170	1333	1278	7.31	cps
Selenium	78-2	4357	4711	4244	4437	5.49	cps
Silicon	28-1	4993354	5098117	5147978	5079816	1.55	cps
Silver	107-1	673526	702473	708562	694854	2.69	cps
Silver	109-1	635831	663719	672751	657434	2.93	cps
Sodium	23-2	3991412	4006186	4101815	4033138	1.49	cps
Strontium	86-1	164010	170156	171071	168412	2.28	cps
Strontium	88-1	1429726	1492240	1508230	1476732	2.81	cps
Sulfur	34-1	232035	234130	235891	234019	0.82	cps
Terbium	159-1	7108728	6428663	6517966	6685119	5.53	cps
Terbium	159-2	4469752	4677031	4546344	4564376	2.30	cps
Thallium	203-1	477492	495191	500110	490931	2.42	cps
Thallium	205-1	1117161	1169211	1182031	1156134	2.97	cps
Tin	118-1	406524	429727	432808	423019	3.40	cps
Titanium	47-1	680399	716564	726748	707904	3.44	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S4 Instrumnet Name : P7
Client Sample ID : S4 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:52:46 DataFile Name : 007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1486716	1554891	1578737	1540115	3.10	cps
Vanadium	51-2	215633	215254	214570	215152	0.25	cps
Yttrium	89-1	9107976	8334381	8304548	8582302	5.31	cps
Yttrium	89-2	2346477	2275792	2280422	2300897	1.72	cps
Zinc	66-2	571037	560667	559195	563633	1.15	cps
Zirconium	90-1	882161	920725	919787	907558	2.42	cps
Zirconium	91-1	194472	207558	207499	203176	3.71	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S5 Instrumnet Name : P7
Client Sample ID : S5 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:55:50 DataFile Name : 008CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	584679	578371	571988	578346	1.10	cps
Antimony	121-1	966220	1006922	1018668	997270	2.76	cps
Arsenic	75-2	63844	64332	63478	63885	0.67	cps
Barium	135-1	1170407	1203875	1220049	1198110	2.11	cps
Barium	137-1	2064283	2130741	2134378	2109801	1.87	cps
Beryllium	9-1	151989	158105	158794	156296	2.40	cps
Bismuth	209-1	4294619	4110682	4214159	4206487	2.19	cps
Bismuth	209-2	3525261	3482097	3482264	3496541	0.71	cps
Bromine	81-1	6582	6602	6652	6612	0.55	cps
Bromine	81-2	123	110	110	114	6.73	cps
Cadmium	108-1	19483	20825	20057	20122	3.35	cps
Cadmium	106-1	29640	30502	30479	30207	1.63	cps
Cadmium	111-1	277432	284146	285368	282315	1.51	cps
Calcium	43-1	294029	301862	302723	299538	1.60	cps
Calcium	44-1	4535905	4763110	4789707	4696241	2.97	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	509859	513482	517707	513683	0.76	cps
Cobalt	59-2	789934	794888	794003	792942	0.33	cps
Copper	63-2	6207526	6187942	6141106	6178858	0.55	cps
Dysprosium	156-1	50	33	30	38	28.37	cps
Dysprosium	156-2	97	143	117	119	19.69	cps
Erbium	164-1	50	63	90	68	30.05	cps
Erbium	164-2	47	50	20	39	42.28	cps
Gadolinium	160-1	70	50	67	62	17.22	cps
Gadolinium	160-2	383	363	400	382	4.80	cps
Holmium	165-1	6314428	6128602	6210516	6217849	1.50	cps
Holmium	165-2	4599025	4522315	4608175	4576505	1.03	cps
Indium	115-1	5229718	5065217	5137821	5144252	1.60	cps
Indium	115-2	1964942	1944195	1966477	1958538	0.64	cps
Iron	56-2	23887934	23306315	23516406	23570218	1.25	cps
Iron	57-2	624303	629138	623349	625597	0.50	cps
Iron	54-2	1365155	1344703	1323337	1344398	1.56	cps
Krypton	83-1	353	397	460	403	13.30	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S5 Instrumnet Name : P7
Client Sample ID : S5 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:55:50 DataFile Name : 008CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	4178698	4322310	4342405	4281138	2.09	cps
Lead	207-1	3596462	3802942	3742097	3713834	2.86	cps
Lead	208-1	16485162	17023799	17085385	16864782	1.96	cps
Lithium	6-1	594794	566278	570826	577299	2.65	cps
Magnesium	24-2	5177821	5112222	5078219	5122754	0.99	cps
Manganese	55-2	4206587	4192054	4187194	4195278	0.24	cps
Molybdenum	94-1	3656951	3789323	3770942	3739072	1.92	cps
Molybdenum	95-1	5283710	5418337	5343992	5348680	1.26	cps
Molybdenum	96-1	5731858	5897176	5895502	5841512	1.63	cps
Molybdenum	97-1	3215964	3306952	3334016	3285644	1.88	cps
Molybdenum	98-1	8311939	8610068	8448226	8456745	1.76	cps
Neodymium	150-1	40	73	43	52	35.15	cps
Neodymium	150-2	23	27	10	20	44.10	cps
Nickel	60-2	205100	204907	200455	203488	1.29	cps
Phosphorus	31-2	30504	29949	30664	30373	1.23	cps
Potassium	39-2	2795620	2807943	2864077	2822547	1.29	cps
Rhodium	103-1	5191215	4910933	4917916	5006688	3.19	cps
Rhodium	103-2	3150626	3166416	3229052	3182031	1.30	cps
Scandium	45-1	3270489	3066067	3146003	3160853	3.26	cps
Scandium	45-2	303230	299069	300966	301089	0.69	cps
Selenium	82-1	21194	22122	22171	21829	2.52	cps
Selenium	77-2	2410	2544	2424	2459	2.99	cps
Selenium	78-2	8249	8723	8669	8547	3.04	cps
Silicon	28-1	9016285	9343785	9235290	9198453	1.81	cps
Silver	107-1	1360925	1389258	1392941	1381041	1.27	cps
Silver	109-1	1269753	1317400	1326113	1304422	2.33	cps
Sodium	23-2	8170346	8145169	8142544	8152686	0.19	cps
Strontium	86-1	328451	342432	342298	337727	2.38	cps
Strontium	88-1	2846231	2983786	2972597	2934205	2.60	cps
Sulfur	34-1	271401	273984	270991	272125	0.60	cps
Terbium	159-1	6670003	6289826	6452791	6470873	2.95	cps
Terbium	159-2	4572631	4491346	4533575	4532517	0.90	cps
Thallium	203-1	956230	997715	1001916	985287	2.56	cps
Thallium	205-1	2375111	2458009	2488029	2440383	2.40	cps
Tin	118-1	819269	851848	859098	843405	2.52	cps
Titanium	47-1	1396023	1438006	1433014	1422348	1.61	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S5 Instrumnet Name : P7
Client Sample ID : S5 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:55:50 DataFile Name : 008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	3266249	3330106	3313186	3303180	1.00	cps
Vanadium	51-2	426977	425579	423625	425394	0.40	cps
Yttrium	89-1	8434117	8142735	8204405	8260419	1.86	cps
Yttrium	89-2	2317525	2306863	2346542	2323644	0.88	cps
Zinc	66-2	1131001	1123299	1137956	1130752	0.65	cps
Zirconium	90-1	1824672	1875116	1933501	1877763	2.90	cps
Zirconium	91-1	401484	413006	415546	410012	1.83	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S6 Instrumnet Name : P7
Client Sample ID : S6 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:58:43 DataFile Name : 009CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1176654	1139804	1147481	1154646	1.68	cps
Antimony	121-1	2014814	2051129	2010937	2025627	1.09	cps
Arsenic	75-2	125362	124317	125617	125099	0.55	cps
Barium	135-1	2448738	2514165	2499959	2487621	1.38	cps
Barium	137-1	4275079	4323113	4257428	4285207	0.79	cps
Beryllium	9-1	304903	308808	312228	308646	1.19	cps
Bismuth	209-1	4114616	4302069	4212827	4209837	2.23	cps
Bismuth	209-2	3436727	3372709	3474855	3428097	1.51	cps
Bromine	81-1	6485	6972	6418	6625	4.56	cps
Bromine	81-2	123	87	77	96	25.71	cps
Cadmium	108-1	39450	41155	40199	40268	2.12	cps
Cadmium	106-1	56925	57885	58237	57682	1.18	cps
Cadmium	111-1	552310	562535	562002	558949	1.03	cps
Calcium	43-1	583126	599832	596726	593228	1.50	cps
Calcium	44-1	9112429	9474930	9134231	9240530	2.20	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1012666	1005876	1009702	1009414	0.34	cps
Cobalt	59-2	1577886	1573488	1548432	1566602	1.01	cps
Copper	63-2	12349922	12127313	12072828	12183354	1.20	cps
Dysprosium	156-1	87	67	53	69	24.36	cps
Dysprosium	156-2	227	123	213	188	29.93	cps
Erbium	164-1	97	150	120	122	21.87	cps
Erbium	164-2	57	87	60	68	24.26	cps
Gadolinium	160-1	73	73	70	72	2.66	cps
Gadolinium	160-2	423	483	410	439	8.90	cps
Holmium	165-1	6318107	6297252	6274167	6296509	0.35	cps
Holmium	165-2	4502833	4511735	4511755	4508774	0.11	cps
Indium	115-1	4980684	5082474	5067786	5043648	1.09	cps
Indium	115-2	1867954	1881938	1930247	1893380	1.73	cps
Iron	56-2	47446553	47323699	47052579	47274277	0.43	cps
Iron	57-2	1244000	1227971	1231991	1234654	0.68	cps
Iron	54-2	2632001	2631469	2657376	2640282	0.56	cps
Krypton	83-1	410	437	417	421	3.30	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S6 Instrumnet Name : P7
Client Sample ID : S6 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:58:43 DataFile Name : 009CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	8372666	8575457	8555737	8501287	1.32	cps
Lead	207-1	7228666	7536350	7396381	7387132	2.09	cps
Lead	208-1	33149408	34435199	33877345	33820651	1.91	cps
Lithium	6-1	557484	562287	558052	559274	0.47	cps
Magnesium	24-2	10171546	10161006	10093963	10142172	0.41	cps
Manganese	55-2	8282269	8358818	8329567	8323551	0.46	cps
Molybdenum	94-1	7350093	7536497	7444168	7443586	1.25	cps
Molybdenum	95-1	10601052	10747414	10631292	10659919	0.72	cps
Molybdenum	96-1	11588398	11677959	11647383	11637913	0.39	cps
Molybdenum	97-1	6580670	6678190	6639311	6632724	0.74	cps
Molybdenum	98-1	16806542	17199923	16910405	16972290	1.20	cps
Neodymium	150-1	103	90	103	99	7.78	cps
Neodymium	150-2	27	20	20	22	17.33	cps
Nickel	60-2	404102	405408	404190	404567	0.18	cps
Phosphorus	31-2	58964	58869	58080	58638	0.83	cps
Potassium	39-2	5492240	5377771	5442962	5437658	1.06	cps
Rhodium	103-1	4997342	4999869	4943391	4980201	0.64	cps
Rhodium	103-2	3059094	3098728	3063164	3073662	0.71	cps
Scandium	45-1	3096253	3111570	3095496	3101107	0.29	cps
Scandium	45-2	297164	296201	300053	297806	0.67	cps
Selenium	82-1	42011	43163	43485	42887	1.81	cps
Selenium	77-2	4841	4657	4764	4754	1.94	cps
Selenium	78-2	16022	16816	16289	16376	2.47	cps
Silicon	28-1	17025297	17028524	17290123	17114648	0.89	cps
Silver	107-1	2731948	2791664	2777053	2766888	1.13	cps
Silver	109-1	2593890	2645615	2609561	2616355	1.01	cps
Sodium	23-2	15981351	15720448	16013159	15904986	1.01	cps
Strontium	86-1	664769	678909	682261	675313	1.37	cps
Strontium	88-1	5880409	5983760	5927211	5930460	0.87	cps
Sulfur	34-1	352108	352652	352707	352489	0.09	cps
Terbium	159-1	6543089	6474873	6365422	6461128	1.39	cps
Terbium	159-2	4507813	4509691	4490782	4502762	0.23	cps
Thallium	203-1	2070460	2142399	2119323	2110728	1.74	cps
Thallium	205-1	4835303	4984314	5009355	4942991	1.90	cps
Tin	118-1	1676682	1751439	1720481	1716201	2.19	cps
Titanium	47-1	2767577	2892836	2827848	2829420	2.21	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S6 Instrumnet Name : P7
Client Sample ID : S6 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 16:58:43 DataFile Name : 009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	6627502	6725260	6617531	6656764	0.89	cps
Vanadium	51-2	854336	845377	850480	850064	0.53	cps
Yttrium	89-1	8243726	8057052	8060067	8120282	1.32	cps
Yttrium	89-2	2291491	2290675	2325806	2302657	0.87	cps
Zinc	66-2	2235643	2192598	2212870	2213703	0.97	cps
Zirconium	90-1	3641126	3693566	3668865	3667852	0.72	cps
Zirconium	91-1	802689	824543	820275	815836	1.42	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S7 Instrumnet Name : P7
Client Sample ID : S7 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:01:31 DataFile Name : 010CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2335310	2292754	2316844	2314969	0.92	cps
Antimony	121-1	3925002	4185326	4152483	4087604	3.47	cps
Arsenic	75-2	253030	249321	252888	251746	0.83	cps
Barium	135-1	4754424	5062858	5075737	4964340	3.66	cps
Barium	137-1	8213736	8543783	8614572	8457363	2.53	cps
Beryllium	9-1	582397	608456	607451	599435	2.46	cps
Bismuth	209-1	4347252	4249977	4360010	4319080	1.39	cps
Bismuth	209-2	3532400	3581329	3430546	3514758	2.19	cps
Bromine	81-1	6805	6835	6542	6727	2.40	cps
Bromine	81-2	60	83	93	79	21.68	cps
Cadmium	108-1	77212	80228	80355	79265	2.24	cps
Cadmium	106-1	108107	113857	114190	112051	3.05	cps
Cadmium	111-1	1064441	1120664	1124992	1103366	3.06	cps
Calcium	43-1	1148002	1200577	1210974	1186517	2.85	cps
Calcium	44-1	17915673	18587238	18714334	18405748	2.33	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2068498	1989824	1994501	2017608	2.19	cps
Cobalt	59-2	3066921	3020137	3198997	3095352	3.00	cps
Copper	63-2	23859240	24114258	23738213	23903904	0.80	cps
Dysprosium	156-1	90	103	137	110	21.85	cps
Dysprosium	156-2	340	370	403	371	8.54	cps
Erbium	164-1	187	227	163	192	16.66	cps
Erbium	164-2	137	157	107	133	18.87	cps
Gadolinium	160-1	120	127	137	128	6.57	cps
Gadolinium	160-2	473	427	463	454	5.41	cps
Holmium	165-1	6744261	6457191	6434372	6545275	2.64	cps
Holmium	165-2	4607756	4760431	4507866	4625351	2.75	cps
Indium	115-1	5317610	5166825	5022890	5169108	2.85	cps
Indium	115-2	1922165	1947278	1865554	1911666	2.19	cps
Iron	56-2	92056072	91471989	96716462	93414841	3.08	cps
Iron	57-2	2366972	2305605	2440851	2371142	2.86	cps
Iron	54-2	5265660	5232876	5394484	5297674	1.61	cps
Krypton	83-1	410	350	373	378	8.01	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S7 Instrumnet Name : P7
Client Sample ID : S7 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:01:31 DataFile Name : 010CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	16196453	17389925	17615735	17067371	4.47	cps
Lead	207-1	14360157	14974204	14953257	14762539	2.36	cps
Lead	208-1	64846736	69182536	69186031	67738434	3.70	cps
Lithium	6-1	584401	556586	556937	565975	2.82	cps
Magnesium	24-2	20254435	20136446	19985743	20125541	0.67	cps
Manganese	55-2	16567184	16441991	17057526	16688900	1.95	cps
Molybdenum	94-1	14571798	15348167	15120366	15013444	2.66	cps
Molybdenum	95-1	20927785	21669432	21347171	21314796	1.74	cps
Molybdenum	96-1	22790441	23649265	23416379	23285362	1.91	cps
Molybdenum	97-1	12962673	13483951	13530873	13325833	2.37	cps
Molybdenum	98-1	32997683	34190034	35262039	34149918	3.32	cps
Neodymium	150-1	193	177	173	181	5.92	cps
Neodymium	150-2	90	60	87	79	20.84	cps
Nickel	60-2	787439	795097	799019	793852	0.74	cps
Phosphorus	31-2	112864	113213	116695	114257	1.85	cps
Potassium	39-2	10621127	10588045	10731492	10646888	0.71	cps
Rhodium	103-1	5192390	5018151	4901283	5037275	2.91	cps
Rhodium	103-2	3098272	3200015	3081130	3126472	2.06	cps
Scandium	45-1	3258087	3110393	3130657	3166379	2.53	cps
Scandium	45-2	301130	307163	296031	301442	1.85	cps
Selenium	82-1	81161	85415	85822	84133	3.07	cps
Selenium	77-2	9403	9453	9390	9415	0.35	cps
Selenium	78-2	31634	32442	31357	31811	1.77	cps
Silicon	28-1	32164956	33277580	33272714	32905083	1.95	cps
Silver	107-1	5330389	5591822	5485694	5469302	2.40	cps
Silver	109-1	5063224	5298197	5269997	5210473	2.46	cps
Sodium	23-2	32344412	31812909	31064132	31740484	2.03	cps
Strontium	86-1	1303302	1367942	1381101	1350781	3.08	cps
Strontium	88-1	11627759	12328904	11875777	11944147	2.98	cps
Sulfur	34-1	504019	521047	518999	514688	1.81	cps
Terbium	159-1	6890783	6529589	6707464	6709279	2.69	cps
Terbium	159-2	4737324	4607275	4595858	4646819	1.69	cps
Thallium	203-1	4063088	4293869	4294369	4217109	3.16	cps
Thallium	205-1	9424847	10179478	10146683	9917003	4.30	cps
Tin	118-1	3331172	3497904	3502305	3443793	2.83	cps
Titanium	47-1	5498643	5676140	5725218	5633334	2.12	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S7 Instrumnet Name : P7
Client Sample ID : S7 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:01:31 DataFile Name : 010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	12912162	13549717	13880429	13447436	3.66	cps
Vanadium	51-2	1742289	1696764	1674753	1704602	2.02	cps
Yttrium	89-1	8602565	8418369	8137697	8386211	2.79	cps
Yttrium	89-2	2283470	2373506	2319155	2325377	1.95	cps
Zinc	66-2	4494906	4549494	4200064	4414822	4.26	cps
Zirconium	90-1	7165609	7469752	7435377	7356913	2.26	cps
Zirconium	91-1	1583883	1667263	1637764	1629636	2.59	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S8 Instrumnet Name : P7
Client Sample ID : S8 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:04:15 DataFile Name : 011CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	13565121	13367101	13457689	13463304	0.74	cps
Antimony	121-1	4484	5001	5448	4978	9.69	cps
Arsenic	75-2	280	340	237	286	18.17	cps
Barium	135-1	9326	10547	11098	10324	8.78	cps
Barium	137-1	17344	19156	18526	18342	5.02	cps
Beryllium	9-1	278	449	373	367	23.43	cps
Bismuth	209-1	4567651	4522385	4677164	4589067	1.73	cps
Bismuth	209-2	3821375	3788512	3762310	3790732	0.78	cps
Bromine	81-1	6915	7322	7392	7210	3.57	cps
Bromine	81-2	200	160	180	180	11.11	cps
Cadmium	108-1	67	73	80	73	9.09	cps
Cadmium	106-1	2807	2774	2620	2734	3.64	cps
Cadmium	111-1	2498	2697	2598	2598	3.82	cps
Calcium	43-1	6620298	6821162	7080907	6840789	3.38	cps
Calcium	44-1	108039822	111742182	116142888	111974964	3.62	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	24173	24343	23872	24129	0.99	cps
Cobalt	59-2	13620	13409	12689	13239	3.69	cps
Copper	63-2	12579	12412	11288	12093	5.81	cps
Dysprosium	156-1	223	300	220	248	18.27	cps
Dysprosium	156-2	273	290	240	268	9.51	cps
Erbium	164-1	603	637	557	599	6.71	cps
Erbium	164-2	433	387	413	411	5.69	cps
Gadolinium	160-1	327	353	307	329	7.12	cps
Gadolinium	160-2	617	633	657	636	3.16	cps
Holmium	165-1	7567668	7264661	7541361	7457897	2.25	cps
Holmium	165-2	5310399	5352986	5326869	5330085	0.40	cps
Indium	115-1	5960877	5775492	5934399	5890256	1.70	cps
Indium	115-2	2267509	2276059	2234161	2259243	0.98	cps
Iron	56-2	546288312	544218512	544279099	544928641	0.22	cps
Iron	57-2	13798667	13809064	13524588	13710773	1.18	cps
Iron	54-2	30072420	29564396	30208164	29948327	1.13	cps
Krypton	83-1	423	387	427	412	5.38	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S8 Instrumnet Name : P7
Client Sample ID : S8 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:04:15 DataFile Name : 011CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	7035	10171	11108	9438	22.60	cps
Lead	207-1	6005	9053	9640	8233	23.71	cps
Lead	208-1	27478	41485	43110	37358	23.01	cps
Lithium	6-1	635590	627189	641471	634750	1.13	cps
Magnesium	24-2	118070148	117714558	117166832	117650513	0.39	cps
Manganese	55-2	21092	21082	21122	21098	0.10	cps
Molybdenum	94-1	8296	11868	12202	10789	20.07	cps
Molybdenum	95-1	8963	13570	14684	12406	24.45	cps
Molybdenum	96-1	13099	17948	18682	16576	18.30	cps
Molybdenum	97-1	5748	8749	9313	7937	24.15	cps
Molybdenum	98-1	14164	21806	23379	19783	24.92	cps
Neodymium	150-1	173	133	77	128	38.01	cps
Neodymium	150-2	57	63	80	67	18.03	cps
Nickel	60-2	7649	7745	7635	7676	0.78	cps
Phosphorus	31-2	720	767	813	767	6.09	cps
Potassium	39-2	64793546	64404859	64465314	64554573	0.32	cps
Rhodium	103-1	5674667	5576819	5564256	5605247	1.08	cps
Rhodium	103-2	3563197	3486297	3545441	3531645	1.14	cps
Scandium	45-1	3676194	3644733	3824967	3715298	2.59	cps
Scandium	45-2	360985	355944	359458	358796	0.72	cps
Selenium	82-1	536	618	599	585	7.38	cps
Selenium	77-2	3	13	13	10	57.75	cps
Selenium	78-2	347	383	320	350	9.08	cps
Silicon	28-1	724950	750106	761937	745664	2.53	cps
Silver	107-1	1940	2834	3117	2630	23.35	cps
Silver	109-1	1807	2704	2654	2388	21.10	cps
Sodium	23-2	181544137	182112544	180557031	181404571	0.43	cps
Strontium	86-1	22280	22180	22020	22160	0.59	cps
Strontium	88-1	182417	191207	187308	186977	2.36	cps
Sulfur	34-1	177281	179308	182266	179619	1.40	cps
Terbium	159-1	8038152	7778841	7511232	7776075	3.39	cps
Terbium	159-2	5346169	5317177	5340554	5334633	0.29	cps
Thallium	203-1	5865	6468	6418	6250	5.36	cps
Thallium	205-1	13413	15416	15205	14678	7.50	cps
Tin	118-1	2907	3834	3797	3513	14.94	cps
Titanium	47-1	1253	2474	2987	2238	39.79	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : S8 Instrumnet Name : P7
Client Sample ID : S8 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:04:15 DataFile Name : 011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	2210	5098	5234	4181	40.85	cps
Vanadium	51-2	3727	3914	3917	3853	2.82	cps
Yttrium	89-1	9579984	9549646	9773261	9634297	1.26	cps
Yttrium	89-2	2839221	2767688	2791962	2799624	1.30	cps
Zinc	66-2	8773	8509	8679	8654	1.54	cps
Zirconium	90-1	8903	9787	10644	9778	8.90	cps
Zirconium	91-1	2040	2444	2147	2210	9.46	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICV01 Instrumnet Name : P7
Client Sample ID : ICV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:26:33 DataFile Name : 013ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	183727	182304	181062	182364	0.73	cps
Antimony	121-1	1746538	1824544	1835505	1802196	2.69	cps
Arsenic	75-2	112648	111949	111120	111905	0.68	cps
Barium	135-1	1645136	1637412	1690203	1657584	1.72	cps
Barium	137-1	2832365	2915572	2866525	2871487	1.46	cps
Beryllium	9-1	23725	24266	25184	24392	3.02	cps
Bismuth	209-1	4276887	4357970	4337387	4324081	0.97	cps
Bismuth	209-2	3703579	3727929	3691133	3707547	0.50	cps
Bromine	81-1	7615	7795	7962	7791	2.23	cps
Bromine	81-2	113	110	107	110	3.03	cps
Cadmium	108-1	15372	16339	16082	15931	3.15	cps
Cadmium	106-1	22798	24237	23750	23595	3.10	cps
Cadmium	111-1	240294	246256	244760	243770	1.27	cps
Calcium	43-1	49200	51227	51089	50505	2.24	cps
Calcium	44-1	817212	838827	855904	837315	2.32	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	353757	351751	349675	351728	0.58	cps
Cobalt	59-2	1376415	1358398	1359095	1364636	0.75	cps
Copper	63-2	488641	486543	483303	486163	0.55	cps
Dysprosium	156-1	17	10	13	13	25.01	cps
Dysprosium	156-2	120	107	120	116	6.66	cps
Erbium	164-1	37	33	27	32	15.80	cps
Erbium	164-2	23	7	23	18	54.11	cps
Gadolinium	160-1	47	40	23	37	32.79	cps
Gadolinium	160-2	423	420	490	444	8.88	cps
Holmium	165-1	6606893	6595703	6492057	6564884	0.96	cps
Holmium	165-2	4867680	4886800	4782983	4845821	1.14	cps
Indium	115-1	5583358	5479243	5540179	5534260	0.95	cps
Indium	115-2	2145292	2226767	2112019	2161359	2.73	cps
Iron	56-2	1636084	1623290	1622718	1627364	0.46	cps
Iron	57-2	44422	44345	44509	44426	0.18	cps
Iron	54-2	106350	105638	105010	105666	0.63	cps
Krypton	83-1	370	517	473	453	16.62	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICV01 Instrumnet Name : P7
Client Sample ID : ICV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:26:33 DataFile Name : 013ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1287234	1307047	1341237	1311839	2.08	cps
Lead	207-1	1105969	1125022	1155112	1128701	2.20	cps
Lead	208-1	5266631	5318490	5390895	5325339	1.17	cps
Lithium	6-1	530467	530880	537571	532972	0.75	cps
Magnesium	24-2	776452	764400	767144	769332	0.82	cps
Manganese	55-2	729800	722902	723897	725533	0.51	cps
Molybdenum	94-1	823	797	747	789	4.93	cps
Molybdenum	95-1	1177	1007	1003	1062	9.33	cps
Molybdenum	96-1	1127	1053	1173	1118	5.41	cps
Molybdenum	97-1	643	707	630	660	6.21	cps
Molybdenum	98-1	1763	1693	1870	1776	5.01	cps
Neodymium	150-1	43	57	30	43	30.77	cps
Neodymium	150-2	20	7	7	11	69.25	cps
Nickel	60-2	354618	355857	352722	354399	0.45	cps
Phosphorus	31-2	737	630	677	681	7.85	cps
Potassium	39-2	1032832	1029038	1023289	1028387	0.47	cps
Rhodium	103-1	5408913	5418615	5516797	5448108	1.10	cps
Rhodium	103-2	3474349	3434048	3408871	3439089	0.96	cps
Scandium	45-1	3424531	3404057	3458893	3429160	0.81	cps
Scandium	45-2	325861	326195	323117	325058	0.52	cps
Selenium	82-1	37643	38748	39247	38546	2.13	cps
Selenium	77-2	4151	4604	4264	4340	5.44	cps
Selenium	78-2	14858	15148	14197	14734	3.31	cps
Silicon	28-1	747068	748961	747917	747982	0.13	cps
Silver	107-1	1009305	1032127	1053758	1031730	2.15	cps
Silver	109-1	958687	981925	994331	978314	1.85	cps
Sodium	23-2	1343807	1309517	1306223	1319849	1.58	cps
Strontium	86-1	857	770	820	816	5.33	cps
Strontium	88-1	983	850	993	942	8.49	cps
Sulfur	34-1	182232	179130	179352	180238	0.96	cps
Terbium	159-1	6702037	6764902	6837006	6767982	1.00	cps
Terbium	159-2	4900234	4864970	4795796	4853667	1.09	cps
Thallium	203-1	1518630	1569462	1586779	1558290	2.27	cps
Thallium	205-1	3845850	3822192	3991865	3886636	2.36	cps
Tin	118-1	2067	2114	2227	2136	3.85	cps
Titanium	47-1	280	243	303	276	10.98	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICV01 Instrumnet Name : P7
Client Sample ID : ICV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:26:33 DataFile Name : 013ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	37	37	20	31	30.93	cps
Vanadium	51-2	742128	733354	731278	735587	0.78	cps
Yttrium	89-1	8949244	9057652	8909190	8972028	0.86	cps
Yttrium	89-2	2571640	2543291	2563375	2559436	0.57	cps
Zinc	66-2	178792	179136	175299	177742	1.19	cps
Zirconium	90-1	540	400	493	478	14.92	cps
Zirconium	91-1	240	243	190	224	13.31	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : LLICV01 Instrumnet Name : P7
Client Sample ID : LLICV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:29:42 DataFile Name : 014LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2834	2980	2917	2910	2.53	cps
Antimony	121-1	8823	9003	8746	8857	1.49	cps
Arsenic	75-2	257	290	333	293	13.11	cps
Barium	135-1	9613	10030	9560	9735	2.65	cps
Barium	137-1	15889	17521	16937	16782	4.93	cps
Beryllium	9-1	553	649	683	628	10.75	cps
Bismuth	209-1	4363985	4189518	4360405	4304636	2.32	cps
Bismuth	209-2	3622120	3671133	3625325	3639526	0.75	cps
Bromine	81-1	7966	7662	7792	7807	1.95	cps
Bromine	81-2	113	103	97	104	8.03	cps
Cadmium	108-1	93	93	53	80	28.87	cps
Cadmium	106-1	2220	2100	2297	2206	4.49	cps
Cadmium	111-1	2466	2508	2657	2544	3.96	cps
Calcium	43-1	6148	6285	6411	6281	2.10	cps
Calcium	44-1	113435	115973	116259	115222	1.35	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	5654	5391	5785	5610	3.57	cps
Cobalt	59-2	3720	3400	3717	3613	5.09	cps
Copper	63-2	5438	5271	5428	5379	1.74	cps
Dysprosium	156-1	3	10	3	6	69.34	cps
Dysprosium	156-2	3	10	7	7	50.03	cps
Erbium	164-1	37	43	63	48	29.04	cps
Erbium	164-2	23	13	17	18	28.64	cps
Gadolinium	160-1	27	37	50	38	30.98	cps
Gadolinium	160-2	440	400	447	429	5.89	cps
Holmium	165-1	6571531	6448441	6404310	6474761	1.34	cps
Holmium	165-2	4715729	4740644	4680386	4712253	0.64	cps
Indium	115-1	5706357	5390984	5347471	5481604	3.57	cps
Indium	115-2	2089708	2116373	2098709	2101597	0.65	cps
Iron	56-2	113817	113869	110285	112657	1.82	cps
Iron	57-2	3727	4471	3991	4063	9.28	cps
Iron	54-2	7762	7319	7482	7521	2.98	cps
Krypton	83-1	423	450	390	421	7.14	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : LLICV01 Instrumnet Name : P7
Client Sample ID : LLICV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:29:42 DataFile Name : 014LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	3541	3521	3671	3577	2.28	cps
Lead	207-1	2767	3064	2910	2914	5.09	cps
Lead	208-1	13336	13823	13810	13656	2.03	cps
Lithium	6-1	543968	524526	530306	532933	1.87	cps
Magnesium	24-2	96122	96602	94119	95615	1.38	cps
Manganese	55-2	2094	2174	2257	2175	3.76	cps
Molybdenum	94-1	9073	9176	8933	9061	1.35	cps
Molybdenum	95-1	10427	10737	11248	10804	3.83	cps
Molybdenum	96-1	12002	12345	12575	12307	2.35	cps
Molybdenum	97-1	6558	6898	6865	6774	2.77	cps
Molybdenum	98-1	16980	17437	18188	17535	3.48	cps
Neodymium	150-1	0	10	3	4	114.60	cps
Neodymium	150-2	0	3	0	1	173.21	cps
Nickel	60-2	1123	1167	1123	1138	2.20	cps
Phosphorus	31-2	2117	2057	2060	2078	1.62	cps
Potassium	39-2	170449	171638	167187	169758	1.36	cps
Rhodium	103-1	5515288	5406193	5419492	5446991	1.09	cps
Rhodium	103-2	3414888	3492771	3423433	3443697	1.24	cps
Scandium	45-1	3487342	3340321	3394653	3407439	2.18	cps
Scandium	45-2	318624	320559	316368	318517	0.66	cps
Selenium	82-1	929	960	957	948	1.83	cps
Selenium	77-2	50	53	60	54	9.35	cps
Selenium	78-2	597	553	543	564	5.02	cps
Silicon	28-1	761114	755163	760758	759012	0.44	cps
Silver	107-1	6311	6365	6145	6274	1.83	cps
Silver	109-1	5818	5941	5908	5889	1.08	cps
Sodium	23-2	173673	174154	173392	173739	0.22	cps
Strontium	86-1	1910	2057	2147	2038	5.86	cps
Strontium	88-1	11868	11708	12152	11909	1.89	cps
Sulfur	34-1	178846	178709	178783	178779	0.04	cps
Terbium	159-1	6820257	6671336	6482684	6658092	2.54	cps
Terbium	159-2	4780549	4804114	4694475	4759713	1.21	cps
Thallium	203-1	4247	4417	4391	4352	2.10	cps
Thallium	205-1	10187	10241	10391	10273	1.03	cps
Tin	118-1	17921	18091	17871	17961	0.64	cps
Titanium	47-1	2910	3040	3157	3036	4.07	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : LLICV01 Instrumnet Name : P7
Client Sample ID : LLICV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:29:42 DataFile Name : 014LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	11665	11402	11689	11585	1.38	cps
Vanadium	51-2	8913	8619	8649	8727	1.85	cps
Yttrium	89-1	8975800	8589817	8667953	8744523	2.33	cps
Yttrium	89-2	2503042	2530690	2479110	2504281	1.03	cps
Zinc	66-2	3300	3567	3420	3429	3.90	cps
Zirconium	90-1	7595	8136	8346	8026	4.82	cps
Zirconium	91-1	1817	1723	1647	1729	4.92	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICB01 Instrumnet Name : P7
Client Sample ID : ICB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:33:00 DataFile Name : 015CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	517	563	597	559	7.19	cps
Antimony	121-1	173	120	233	176	32.30	cps
Arsenic	75-2	10	17	20	16	32.73	cps
Barium	135-1	33	40	40	38	10.19	cps
Barium	137-1	53	53	60	56	6.93	cps
Beryllium	9-1	20	13	7	13	49.96	cps
Bismuth	209-1	4278968	4249040	4252620	4260209	0.38	cps
Bismuth	209-2	3641101	3652610	3545678	3613130	1.62	cps
Bromine	81-1	7605	7966	7489	7687	3.23	cps
Bromine	81-2	77	80	110	89	20.65	cps
Cadmium	108-1	17	13	10	13	25.01	cps
Cadmium	106-1	2120	1970	2077	2056	3.76	cps
Cadmium	111-1	1482	1383	1457	1441	3.58	cps
Calcium	43-1	243	203	253	233	11.34	cps
Calcium	44-1	17835	17398	17792	17675	1.36	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1410	1363	1430	1401	2.44	cps
Cobalt	59-2	130	140	137	136	3.76	cps
Copper	63-2	807	807	813	809	0.48	cps
Dysprosium	156-1	7	3	3	4	43.40	cps
Dysprosium	156-2	7	10	0	6	91.64	cps
Erbium	164-1	17	20	43	27	54.47	cps
Erbium	164-2	37	17	30	28	36.66	cps
Gadolinium	160-1	37	40	30	36	14.32	cps
Gadolinium	160-2	410	380	387	392	4.02	cps
Holmium	165-1	6382559	6390471	6437137	6403389	0.46	cps
Holmium	165-2	4915909	4722172	4655413	4764498	2.84	cps
Indium	115-1	5439248	5371341	5320305	5376965	1.11	cps
Indium	115-2	2115918	2161901	2083568	2120462	1.86	cps
Iron	56-2	13550	13980	13359	13630	2.33	cps
Iron	57-2	1587	1357	1557	1500	8.34	cps
Iron	54-2	2040	1660	1990	1897	10.89	cps
Krypton	83-1	440	450	440	443	1.30	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICB01 Instrumnet Name : P7
Client Sample ID : ICB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:33:00 DataFile Name : 015CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	610	603	613	609	0.84	cps
Lead	207-1	503	553	520	526	4.84	cps
Lead	208-1	2337	2487	2393	2406	3.15	cps
Lithium	6-1	522829	533772	528082	528227	1.04	cps
Magnesium	24-2	213	223	210	216	3.22	cps
Manganese	55-2	317	327	347	330	4.63	cps
Molybdenum	94-1	190	237	313	247	25.25	cps
Molybdenum	95-1	140	203	190	178	18.78	cps
Molybdenum	96-1	277	240	223	247	11.06	cps
Molybdenum	97-1	123	113	113	117	4.95	cps
Molybdenum	98-1	253	320	313	296	12.42	cps
Neodymium	150-1	0	10	3	4	114.60	cps
Neodymium	150-2	3	0	0	1	173.21	cps
Nickel	60-2	360	353	363	359	1.42	cps
Phosphorus	31-2	663	663	710	679	3.97	cps
Potassium	39-2	55290	55166	55551	55336	0.36	cps
Rhodium	103-1	5343996	5457916	5353751	5385221	1.17	cps
Rhodium	103-2	3392484	3396765	3300758	3363336	1.61	cps
Scandium	45-1	3401282	3338219	3366037	3368512	0.94	cps
Scandium	45-2	318902	318710	313116	316909	1.04	cps
Selenium	82-1	466	464	501	477	4.35	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	370	373	337	360	5.63	cps
Silicon	28-1	993461	734563	735694	821239	18.16	cps
Silver	107-1	90	123	83	99	21.68	cps
Silver	109-1	120	83	117	107	19.01	cps
Sodium	23-2	23044	22593	23521	23053	2.01	cps
Strontium	86-1	687	847	750	761	10.59	cps
Strontium	88-1	137	120	117	124	8.61	cps
Sulfur	34-1	175391	176769	176165	176108	0.39	cps
Terbium	159-1	6642777	6534509	6652334	6609873	0.99	cps
Terbium	159-2	4695846	4782502	4629488	4702612	1.63	cps
Thallium	203-1	237	240	253	243	3.63	cps
Thallium	205-1	507	547	570	541	5.92	cps
Tin	118-1	900	903	910	904	0.56	cps
Titanium	47-1	63	83	63	70	16.50	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICB01 Instrumnet Name : P7
Client Sample ID : ICB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:33:00 DataFile Name : 015CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	23	7	13	14	58.06	cps
Vanadium	51-2	13	10	10	11	17.30	cps
Yttrium	89-1	8589638	8761151	8794049	8714946	1.26	cps
Yttrium	89-2	2530820	2477121	2476763	2494902	1.25	cps
Zinc	66-2	1510	1257	1303	1357	9.94	cps
Zirconium	90-1	377	520	410	436	17.22	cps
Zirconium	91-1	77	67	87	77	13.04	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICSA01 Instrumnet Name : P7
Client Sample ID : ICSA01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:36:16 DataFile Name : 016ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	10493241	10218757	10263165	10325054	1.43	cps
Antimony	121-1	4557	4617	5084	4753	6.07	cps
Arsenic	75-2	110	107	83	100	14.53	cps
Barium	135-1	1400	1517	1480	1466	4.07	cps
Barium	137-1	2397	2557	2534	2496	3.46	cps
Beryllium	9-1	207	187	143	179	18.09	cps
Bismuth	209-1	4256012	4263338	4237864	4252405	0.31	cps
Bismuth	209-2	3523700	3537520	3495417	3518879	0.61	cps
Bromine	81-1	8216	8939	9667	8941	8.11	cps
Bromine	81-2	473	497	410	460	9.75	cps
Cadmium	108-1	637	573	667	626	7.62	cps
Cadmium	106-1	2244	2104	2137	2161	3.38	cps
Cadmium	111-1	1941	1874	1846	1887	2.60	cps
Calcium	43-1	1188193	1185640	1181619	1185150	0.28	cps
Calcium	44-1	18876822	18777957	19379184	19011321	1.70	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	42403	43316	43102	42940	1.11	cps
Cobalt	59-2	4351	4561	4301	4404	3.13	cps
Copper	63-2	18869	18772	18882	18841	0.32	cps
Dysprosium	156-1	27	30	3	20	72.66	cps
Dysprosium	156-2	37	23	7	22	67.63	cps
Erbium	164-1	40	50	80	57	36.74	cps
Erbium	164-2	27	37	50	38	30.98	cps
Gadolinium	160-1	70	60	53	61	13.73	cps
Gadolinium	160-2	460	460	403	441	7.42	cps
Holmium	165-1	6641625	6598372	6650127	6630041	0.42	cps
Holmium	165-2	4730045	4666375	4642012	4679477	0.97	cps
Indium	115-1	5431405	5488716	5460161	5460094	0.52	cps
Indium	115-2	2057399	2052511	2083213	2064374	0.80	cps
Iron	56-2	188391157	187461337	189093251	188315248	0.43	cps
Iron	57-2	4707492	4637416	4685472	4676793	0.77	cps
Iron	54-2	10343897	10221584	10335073	10300185	0.66	cps
Krypton	83-1	360	423	453	412	11.56	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICSA01 Instrumnet Name : P7
Client Sample ID : ICSA01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:36:16 DataFile Name : 016ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	14922	15789	16010	15573	3.69	cps
Lead	207-1	12646	12809	12856	12771	0.86	cps
Lead	208-1	57858	60366	60102	59442	2.32	cps
Lithium	6-1	532614	521720	520635	524990	1.26	cps
Magnesium	24-2	18297098	18143518	18547168	18329261	1.11	cps
Manganese	55-2	13106	13216	13590	13304	1.91	cps
Molybdenum	94-1	2456093	2525502	2490014	2490536	1.39	cps
Molybdenum	95-1	4283133	4395568	4392143	4356948	1.47	cps
Molybdenum	96-1	4637604	4684198	4788529	4703444	1.64	cps
Molybdenum	97-1	2686004	2797507	2753852	2745788	2.05	cps
Molybdenum	98-1	6921228	7079028	7003464	7001240	1.13	cps
Neodymium	150-1	30	37	27	31	16.37	cps
Neodymium	150-2	0	20	20	13	86.60	cps
Nickel	60-2	4984	4951	5138	5024	1.98	cps
Phosphorus	31-2	591532	570301	582979	581604	1.84	cps
Potassium	39-2	22026983	21490085	21958580	21825216	1.34	cps
Rhodium	103-1	5255675	5257008	5234200	5248961	0.24	cps
Rhodium	103-2	3347621	3308057	3287091	3314256	0.93	cps
Scandium	45-1	3341078	3281462	3419458	3347333	2.07	cps
Scandium	45-2	314927	315504	319794	316741	0.84	cps
Selenium	82-1	568	543	410	507	16.83	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	347	330	357	344	3.91	cps
Silicon	28-1	746870	745496	758128	750165	0.92	cps
Silver	107-1	487	277	267	343	36.18	cps
Silver	109-1	473	297	233	334	37.19	cps
Sodium	23-2	31055841	30427308	30827562	30770237	1.03	cps
Strontium	86-1	46437	46921	47563	46974	1.20	cps
Strontium	88-1	397100	408881	410539	405507	1.81	cps
Sulfur	34-1	1981945	1999822	1969884	1983884	0.76	cps
Terbium	159-1	6705961	6905073	6875668	6828901	1.57	cps
Terbium	159-2	4842926	4769827	4732255	4781669	1.18	cps
Thallium	203-1	410	523	507	480	12.75	cps
Thallium	205-1	990	1073	1230	1098	11.10	cps
Tin	118-1	2490	3524	3821	3278	21.30	cps
Titanium	47-1	1153205	1170804	1181452	1168487	1.22	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICSA01 Instrumnet Name : P7
Client Sample ID : ICSA01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:36:16 DataFile Name : 016ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	230	217	203	217	6.15	cps
Vanadium	51-2	360	413	363	379	7.88	cps
Yttrium	89-1	8856713	8904006	8861001	8873907	0.29	cps
Yttrium	89-2	2517632	2488777	2454983	2487131	1.26	cps
Zinc	66-2	6128	6075	5951	6051	1.50	cps
Zirconium	90-1	533	533	600	556	6.93	cps
Zirconium	91-1	93	123	110	109	13.80	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICSAB01 Instrumnet Name : P7
Client Sample ID : ICSAB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:39:24 DataFile Name : 017ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	10650787	10693398	10552479	10632222	0.68	cps
Antimony	121-1	89721	92550	92908	91726	1.90	cps
Arsenic	75-2	5361	5521	5621	5501	2.38	cps
Barium	135-1	22511	22348	22828	22562	1.08	cps
Barium	137-1	38355	38883	39411	38883	1.36	cps
Beryllium	9-1	12389	11825	11931	12048	2.49	cps
Bismuth	209-1	4259488	4141796	4298614	4233299	1.93	cps
Bismuth	209-2	3552213	3514939	3521557	3529569	0.56	cps
Bromine	81-1	9220	10240	10164	9875	5.76	cps
Bromine	81-2	480	487	560	509	8.72	cps
Cadmium	108-1	2277	2227	2254	2252	1.11	cps
Cadmium	106-1	4374	4404	4141	4306	3.35	cps
Cadmium	111-1	25127	26025	26062	25738	2.06	cps
Calcium	43-1	1204892	1200134	1246243	1217090	2.08	cps
Calcium	44-1	19361853	19640361	19953774	19651996	1.51	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	89820	88187	87741	88582	1.24	cps
Cobalt	59-2	73144	71932	70726	71934	1.68	cps
Copper	63-2	68232	69002	68389	68541	0.59	cps
Dysprosium	156-1	13	13	20	16	24.76	cps
Dysprosium	156-2	17	17	10	14	26.66	cps
Erbium	164-1	57	53	67	59	11.79	cps
Erbium	164-2	20	37	30	29	29.04	cps
Gadolinium	160-1	50	53	30	44	28.39	cps
Gadolinium	160-2	397	407	420	408	2.87	cps
Holmium	165-1	6700034	6762713	6794015	6752254	0.71	cps
Holmium	165-2	4872198	4795202	4743618	4803673	1.35	cps
Indium	115-1	5612512	5614053	5693200	5639922	0.82	cps
Indium	115-2	2103877	2088996	2098774	2097216	0.36	cps
Iron	56-2	193894210	196627857	193477277	194666448	0.88	cps
Iron	57-2	4814523	4743419	4738681	4765541	0.89	cps
Iron	54-2	10643060	10544556	10655489	10614369	0.57	cps
Krypton	83-1	443	490	480	471	5.21	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICSAB01 Instrumnet Name : P7
Client Sample ID : ICSAB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:39:24 DataFile Name : 017ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	89996	91828	92050	91291	1.23	cps
Lead	207-1	77057	76940	77496	77165	0.38	cps
Lead	208-1	349766	352208	356470	352815	0.96	cps
Lithium	6-1	517693	515265	523717	518891	0.84	cps
Magnesium	24-2	18770758	18925430	18647954	18781381	0.74	cps
Manganese	55-2	46475	46154	46572	46400	0.47	cps
Molybdenum	94-1	2589947	2636016	2667897	2631286	1.49	cps
Molybdenum	95-1	4466652	4547766	4602148	4538855	1.50	cps
Molybdenum	96-1	4848269	4883981	5063955	4932069	2.34	cps
Molybdenum	97-1	2844232	2839489	2910668	2864797	1.39	cps
Molybdenum	98-1	7337764	7266128	7352177	7318690	0.63	cps
Neodymium	150-1	30	17	30	26	30.11	cps
Neodymium	150-2	10	20	20	17	34.64	cps
Nickel	60-2	22167	22200	22884	22417	1.81	cps
Phosphorus	31-2	605351	604762	590939	600351	1.36	cps
Potassium	39-2	22666226	22443932	22216695	22442284	1.00	cps
Rhodium	103-1	5511253	5501744	5429300	5480766	0.82	cps
Rhodium	103-2	3322128	3336971	3317602	3325567	0.30	cps
Scandium	45-1	3453428	3482017	3432631	3456025	0.72	cps
Scandium	45-2	325598	322692	319915	322735	0.88	cps
Selenium	82-1	2329	2307	2318	2318	0.47	cps
Selenium	77-2	237	203	230	223	7.90	cps
Selenium	78-2	943	920	990	951	3.75	cps
Silicon	28-1	775444	776663	776822	776310	0.10	cps
Silver	107-1	113504	117694	118927	116708	2.44	cps
Silver	109-1	109223	111503	110320	110349	1.03	cps
Sodium	23-2	31253180	31488390	31425987	31389186	0.39	cps
Strontium	86-1	48306	49296	48734	48779	1.02	cps
Strontium	88-1	417527	427229	435084	426613	2.06	cps
Sulfur	34-1	2078232	2048335	2016409	2047659	1.51	cps
Terbium	159-1	7144273	6839898	6735704	6906625	3.07	cps
Terbium	159-2	4836824	4809146	4782014	4809328	0.57	cps
Thallium	203-1	83484	83733	84195	83804	0.43	cps
Thallium	205-1	194735	197161	197668	196521	0.80	cps
Tin	118-1	2957	3744	4181	3627	17.10	cps
Titanium	47-1	1217965	1216094	1234768	1222943	0.84	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : ICSAB01 Instrumnet Name : P7
Client Sample ID : ICSAB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:39:24 DataFile Name : 017ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	257	240	160	219	23.61	cps
Vanadium	51-2	37062	36838	35950	36617	1.61	cps
Yttrium	89-1	9316984	9231822	9089245	9212684	1.25	cps
Yttrium	89-2	2519996	2569635	2496668	2528766	1.47	cps
Zinc	66-2	14978	14791	14737	14835	0.85	cps
Zirconium	90-1	487	647	517	550	15.47	cps
Zirconium	91-1	117	123	117	119	3.24	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV01 Instrumnet Name : P7
Client Sample ID : CCV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:42:30 DataFile Name : 018CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5827278	5768326	5786247	5793951	0.52	cps
Antimony	121-1	2177486	2215776	2251326	2214863	1.67	cps
Arsenic	75-2	134994	134874	134164	134677	0.33	cps
Barium	135-1	2649460	2687084	2693348	2676630	0.89	cps
Barium	137-1	4522748	4594771	4607116	4574878	1.00	cps
Beryllium	9-1	281123	289129	293354	287869	2.16	cps
Bismuth	209-1	4325046	4177447	4268770	4257088	1.75	cps
Bismuth	209-2	3404635	3510839	3454813	3456762	1.54	cps
Bromine	81-1	8919	8669	8679	8756	1.62	cps
Bromine	81-2	137	173	183	164	14.94	cps
Cadmium	108-1	41740	43017	43010	42589	1.73	cps
Cadmium	106-1	59331	61265	61574	60723	2.00	cps
Cadmium	111-1	578385	590524	598176	589028	1.69	cps
Calcium	43-1	3021415	3112986	3169436	3101279	2.41	cps
Calcium	44-1	49100458	50316704	50767898	50061686	1.72	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1097025	1080667	1097467	1091720	0.88	cps
Cobalt	59-2	1672913	1657462	1662737	1664371	0.47	cps
Copper	63-2	12877991	12787334	12678382	12781236	0.78	cps
Dysprosium	156-1	150	157	173	160	7.51	cps
Dysprosium	156-2	303	317	287	302	4.97	cps
Erbium	164-1	270	287	227	261	11.86	cps
Erbium	164-2	243	220	193	219	11.43	cps
Gadolinium	160-1	220	220	140	193	23.89	cps
Gadolinium	160-2	543	487	547	526	6.42	cps
Holmium	165-1	6808903	6663510	6761932	6744782	1.10	cps
Holmium	165-2	4782964	4890498	4698038	4790500	2.01	cps
Indium	115-1	5716933	5455596	5519371	5563967	2.45	cps
Indium	115-2	2070050	2107496	2007673	2061740	2.45	cps
Iron	56-2	248094470	256326716	246287063	250236083	2.14	cps
Iron	57-2	6295711	6119355	6356081	6257049	1.97	cps
Iron	54-2	13829651	13903191	13559697	13764180	1.31	cps
Krypton	83-1	393	397	437	409	5.90	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV01 Instrumnet Name : P7
Client Sample ID : CCV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:42:30 DataFile Name : 018CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	8374484	8583374	8736908	8564922	2.12	cps
Lead	207-1	7368026	7513977	7536119	7472707	1.22	cps
Lead	208-1	33722299	34245379	34589797	34185825	1.28	cps
Lithium	6-1	525925	519057	519235	521406	0.75	cps
Magnesium	24-2	50736904	51057511	51146871	50980429	0.42	cps
Manganese	55-2	8953630	8941264	8895622	8930172	0.34	cps
Molybdenum	94-1	8129809	8269102	8346428	8248446	1.33	cps
Molybdenum	95-1	11491078	11937951	11834186	11754405	1.99	cps
Molybdenum	96-1	12699934	13129189	13188896	13006006	2.05	cps
Molybdenum	97-1	7223381	7274717	7423935	7307344	1.43	cps
Molybdenum	98-1	18759624	18971458	19141961	18957681	1.01	cps
Neodymium	150-1	173	130	173	159	15.75	cps
Neodymium	150-2	47	50	53	50	6.66	cps
Nickel	60-2	433027	428700	428768	430165	0.58	cps
Phosphorus	31-2	62136	60861	62290	61762	1.27	cps
Potassium	39-2	29442096	28867063	28489385	28932848	1.66	cps
Rhodium	103-1	5519078	5253850	5349119	5374016	2.50	cps
Rhodium	103-2	3326444	3332181	3291267	3316631	0.67	cps
Scandium	45-1	3526105	3405052	3432183	3454446	1.84	cps
Scandium	45-2	323075	329872	319919	324289	1.57	cps
Selenium	82-1	44830	45491	45505	45275	0.85	cps
Selenium	77-2	5028	4928	4971	4975	1.01	cps
Selenium	78-2	16836	17117	16286	16746	2.52	cps
Silicon	28-1	16788094	17253901	17223491	17088495	1.52	cps
Silver	107-1	2883107	3087532	3024058	2998233	3.49	cps
Silver	109-1	2720903	2837105	2808553	2788854	2.17	cps
Sodium	23-2	79551745	81509137	79781757	80280880	1.33	cps
Strontium	86-1	741292	765438	758660	755130	1.65	cps
Strontium	88-1	6661704	6702535	6694298	6686179	0.32	cps
Sulfur	34-1	346064	351865	351268	349732	0.91	cps
Terbium	159-1	7001098	6945556	6877170	6941275	0.89	cps
Terbium	159-2	4843170	4884442	4732724	4820112	1.63	cps
Thallium	203-1	2099702	2122560	2144193	2122152	1.05	cps
Thallium	205-1	4915729	5085003	5071613	5024115	1.87	cps
Tin	118-1	1832886	1877841	1865799	1858842	1.25	cps
Titanium	47-1	3033241	3125532	3134769	3097847	1.81	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV01 Instrumnet Name : P7
Client Sample ID : CCV01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:42:30 DataFile Name : 018CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	6575015	6844317	6866295	6761876	2.40	cps
Vanadium	51-2	934582	909421	925379	923127	1.38	cps
Yttrium	89-1	9313789	9087566	9125859	9175738	1.32	cps
Yttrium	89-2	2521561	2561615	2510932	2531369	1.06	cps
Zinc	66-2	2315848	2275298	2264545	2285230	1.18	cps
Zirconium	90-1	4053476	4200284	4139520	4131093	1.79	cps
Zirconium	91-1	885440	918284	914693	906139	1.99	cps

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LB Number :LB137449Operator :Jaswal

Lab Sample ID :CCB01Instrumnet Name :P7

Client Sample ID :CCB01Dilution Factor :1

Date & Time Acquired :2025-10-07 17:45:18DataFile Name :019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	590	593	677	620	7.92	cps
Antimony	121-1	683	747	770	733	6.12	cps
Arsenic	75-2	13	17	10	13	25.01	cps
Barium	135-1	27	43	47	39	27.55	cps
Barium	137-1	83	60	103	82	26.38	cps
Beryllium	9-1	23	27	20	23	14.25	cps
Bismuth	209-1	4347523	4242859	4293640	4294674	1.22	cps
Bismuth	209-2	3646387	3560350	3584638	3597125	1.23	cps
Bromine	81-1	8156	8319	8126	8200	1.27	cps
Bromine	81-2	160	133	167	153	11.50	cps
Cadmium	108-1	3	10	3	6	69.34	cps
Cadmium	106-1	2380	2084	2120	2195	7.37	cps
Cadmium	111-1	1697	1501	1515	1571	6.95	cps
Calcium	43-1	250	240	220	237	6.45	cps
Calcium	44-1	18536	18736	18572	18615	0.57	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1490	1537	1493	1507	1.73	cps
Cobalt	59-2	107	130	100	112	14.04	cps
Copper	63-2	1453	1483	1500	1479	1.60	cps
Dysprosium	156-1	0	13	3	6	124.93	cps
Dysprosium	156-2	3	0	3	2	86.60	cps
Erbium	164-1	40	50	37	42	16.43	cps
Erbium	164-2	33	43	23	33	30.00	cps
Gadolinium	160-1	47	43	23	38	33.41	cps
Gadolinium	160-2	450	423	453	442	3.72	cps
Holmium	165-1	6550733	6528925	6452844	6510834	0.79	cps
Holmium	165-2	4684713	4622129	4674019	4660287	0.72	cps
Indium	115-1	5546150	5628542	5572316	5582336	0.75	cps
Indium	115-2	2117530	2086452	2060059	2088014	1.38	cps
Iron	56-2	16142	15899	16339	16127	1.37	cps
Iron	57-2	1557	1620	1783	1653	7.07	cps
Iron	54-2	2017	1950	2100	2022	3.72	cps
Krypton	83-1	483	353	400	412	15.98	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB01 Instrumnet Name : P7
Client Sample ID : CCB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:45:18 DataFile Name : 019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	807	793	720	773	6.03	cps
Lead	207-1	733	700	690	708	3.21	cps
Lead	208-1	3154	3190	2960	3101	3.99	cps
Lithium	6-1	514409	512940	508625	511991	0.59	cps
Magnesium	24-2	593	643	610	616	4.14	cps
Manganese	55-2	413	370	357	380	7.80	cps
Molybdenum	94-1	603	610	577	597	2.96	cps
Molybdenum	95-1	630	660	487	592	15.64	cps
Molybdenum	96-1	793	607	613	671	15.78	cps
Molybdenum	97-1	403	363	343	370	8.26	cps
Molybdenum	98-1	1097	893	1013	1001	10.21	cps
Neodymium	150-1	7	0	0	2	173.21	cps
Neodymium	150-2	7	0	7	4	86.60	cps
Nickel	60-2	377	340	330	349	7.04	cps
Phosphorus	31-2	580	550	530	553	4.55	cps
Potassium	39-2	63776	62257	62096	62710	1.48	cps
Rhodium	103-1	5593100	5508481	5441511	5514364	1.38	cps
Rhodium	103-2	3457347	3411520	3409941	3426269	0.79	cps
Scandium	45-1	3442791	3378621	3393112	3404841	0.99	cps
Scandium	45-2	315936	315100	314704	315247	0.20	cps
Selenium	82-1	422	553	541	505	14.36	cps
Selenium	77-2	3	3	0	2	86.60	cps
Selenium	78-2	283	330	340	318	9.52	cps
Silicon	28-1	732596	723358	725514	727156	0.66	cps
Silver	107-1	457	323	323	368	20.93	cps
Silver	109-1	390	220	233	281	33.63	cps
Sodium	23-2	39247	39270	38792	39103	0.69	cps
Strontium	86-1	703	733	717	718	2.09	cps
Strontium	88-1	177	163	137	159	12.82	cps
Sulfur	34-1	166142	166769	168214	167042	0.64	cps
Terbium	159-1	7032512	6699859	6815056	6849142	2.47	cps
Terbium	159-2	4714210	4733888	4698569	4715556	0.38	cps
Thallium	203-1	667	557	600	608	9.12	cps
Thallium	205-1	1730	1533	1447	1570	9.25	cps
Tin	118-1	1487	1410	1200	1366	10.87	cps
Titanium	47-1	63	77	140	93	43.89	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB01 Instrumnet Name : P7
Client Sample ID : CCB01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:45:18 DataFile Name : 019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	120	60	73	84	37.31	cps
Vanadium	51-2	13	13	23	17	34.65	cps
Yttrium	89-1	9211853	8868174	8818355	8966127	2.39	cps
Yttrium	89-2	2543846	2537961	2499928	2527245	0.94	cps
Zinc	66-2	1357	1370	1440	1389	3.22	cps
Zirconium	90-1	817	877	807	833	4.54	cps
Zirconium	91-1	127	133	267	176	44.99	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CRI01 Instrumnet Name : P7
Client Sample ID : CRI01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:48:35 DataFile Name : 020LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2844	2964	2790	2866	3.10	cps
Antimony	121-1	8589	9046	8426	8687	3.70	cps
Arsenic	75-2	303	393	323	340	13.90	cps
Barium	135-1	9363	9540	10040	9648	3.64	cps
Barium	137-1	16853	16930	17217	17000	1.13	cps
Beryllium	9-1	609	616	593	606	1.98	cps
Bismuth	209-1	4363673	4245294	4154200	4254389	2.47	cps
Bismuth	209-2	3529965	3547988	3537582	3538512	0.26	cps
Bromine	81-1	8036	8092	8076	8068	0.36	cps
Bromine	81-2	93	143	87	108	28.74	cps
Cadmium	108-1	100	93	93	96	4.03	cps
Cadmium	106-1	2484	2377	2057	2306	9.63	cps
Cadmium	111-1	2815	2569	2548	2644	5.63	cps
Calcium	43-1	6005	6638	6425	6356	5.07	cps
Calcium	44-1	114925	117300	117760	116662	1.30	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	5624	5428	5534	5529	1.78	cps
Cobalt	59-2	3677	3427	3660	3588	3.90	cps
Copper	63-2	5778	5961	5978	5906	1.88	cps
Dysprosium	156-1	10	0	3	4	114.60	cps
Dysprosium	156-2	0	3	0	1	173.21	cps
Erbium	164-1	33	47	27	36	28.64	cps
Erbium	164-2	7	13	27	16	65.47	cps
Gadolinium	160-1	30	33	57	40	36.33	cps
Gadolinium	160-2	367	393	413	391	5.99	cps
Holmium	165-1	6722567	6379337	6503781	6535228	2.66	cps
Holmium	165-2	4699601	4645863	4739958	4695141	1.01	cps
Indium	115-1	5677955	5621511	5514178	5604548	1.48	cps
Indium	115-2	2051213	2094425	2113689	2086442	1.53	cps
Iron	56-2	115763	114466	113962	114730	0.81	cps
Iron	57-2	4257	4147	4277	4227	1.66	cps
Iron	54-2	7475	7739	7789	7668	2.20	cps
Krypton	83-1	417	470	430	439	6.32	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CRI01 Instrumnet Name : P7
Client Sample ID : CRI01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:48:35 DataFile Name : 020LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	3547	3444	3447	3479	1.69	cps
Lead	207-1	3104	3037	3300	3147	4.35	cps
Lead	208-1	13783	13679	13923	13795	0.89	cps
Lithium	6-1	523124	519065	512771	518320	1.01	cps
Magnesium	24-2	96518	96552	95331	96134	0.72	cps
Manganese	55-2	2210	2114	2264	2196	3.46	cps
Molybdenum	94-1	9657	9633	9803	9698	0.95	cps
Molybdenum	95-1	10884	11324	11792	11333	4.00	cps
Molybdenum	96-1	12512	12485	12772	12590	1.26	cps
Molybdenum	97-1	7008	7445	7075	7176	3.28	cps
Molybdenum	98-1	17891	18589	18272	18250	1.91	cps
Neodymium	150-1	0	7	3	3	100.05	cps
Neodymium	150-2	0	3	0	1	173.21	cps
Nickel	60-2	1127	1173	1033	1111	6.42	cps
Phosphorus	31-2	2127	2003	2120	2083	3.33	cps
Potassium	39-2	172859	173690	173362	173304	0.24	cps
Rhodium	103-1	5551185	5482619	5480619	5504808	0.73	cps
Rhodium	103-2	3432293	3421240	3389747	3414427	0.65	cps
Scandium	45-1	3490201	3392243	3404239	3428894	1.56	cps
Scandium	45-2	316534	316562	313573	315556	0.54	cps
Selenium	82-1	898	884	948	910	3.67	cps
Selenium	77-2	63	37	50	50	26.66	cps
Selenium	78-2	570	500	493	521	8.15	cps
Silicon	28-1	744428	746181	737077	742562	0.65	cps
Silver	107-1	6205	6341	6215	6254	1.22	cps
Silver	109-1	5658	5881	5725	5755	1.99	cps
Sodium	23-2	180266	181454	179673	180464	0.50	cps
Strontium	86-1	1880	2204	2107	2064	8.04	cps
Strontium	88-1	11998	12666	12282	12315	2.72	cps
Sulfur	34-1	174713	174150	174497	174453	0.16	cps
Terbium	159-1	6821046	6656709	6774554	6750769	1.25	cps
Terbium	159-2	4722077	4705347	4737475	4721633	0.34	cps
Thallium	203-1	4751	4507	4771	4676	3.14	cps
Thallium	205-1	10598	10788	11165	10850	2.66	cps
Tin	118-1	18005	18295	19129	18476	3.16	cps
Titanium	47-1	3184	3034	3080	3099	2.48	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CRI01 Instrumnet Name : P7
Client Sample ID : CRI01 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:48:35 DataFile Name : 020LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	11705	11942	11862	11837	1.02	cps
Vanadium	51-2	8776	8469	8783	8676	2.06	cps
Yttrium	89-1	9067515	9005958	8934083	9002519	0.74	cps
Yttrium	89-2	2473796	2511780	2488451	2491342	0.77	cps
Zinc	66-2	3420	3370	3507	3433	2.01	cps
Zirconium	90-1	8106	8703	8593	8467	3.75	cps
Zirconium	91-1	1837	1787	1803	1809	1.41	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : PB170000BL Instrumnet Name : P7
Client Sample ID : PB170000BL Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:51:53 DataFile Name : 021CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	517	600	600	572	8.41	cps
Antimony	121-1	127	133	160	140	12.60	cps
Arsenic	75-2	3	7	3	4	43.40	cps
Barium	135-1	23	43	30	32	31.61	cps
Barium	137-1	30	50	43	41	24.77	cps
Beryllium	9-1	7	7	17	10	57.61	cps
Bismuth	209-1	4220340	4243109	4205772	4223074	0.45	cps
Bismuth	209-2	3607635	3594316	3514418	3572123	1.41	cps
Bromine	81-1	8396	8162	8249	8269	1.43	cps
Bromine	81-2	157	117	97	123	24.77	cps
Cadmium	108-1	7	3	3	4	43.40	cps
Cadmium	106-1	2087	2130	1950	2056	4.57	cps
Cadmium	111-1	1486	1505	1369	1454	5.06	cps
Calcium	43-1	213	207	260	227	12.82	cps
Calcium	44-1	17928	17735	17668	17777	0.76	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1370	1533	1367	1423	6.69	cps
Cobalt	59-2	107	163	133	134	21.09	cps
Copper	63-2	1120	1067	1023	1070	4.53	cps
Dysprosium	156-1	13	3	0	6	124.93	cps
Dysprosium	156-2	0	0	7	2	173.21	cps
Erbium	164-1	50	37	17	34	48.70	cps
Erbium	164-2	30	23	33	29	17.63	cps
Gadolinium	160-1	30	33	60	41	40.00	cps
Gadolinium	160-2	410	383	410	401	3.84	cps
Holmium	165-1	6258745	6419084	6379547	6352459	1.31	cps
Holmium	165-2	4685266	4708389	4566179	4653278	1.64	cps
Indium	115-1	5543635	5441017	5434940	5473197	1.12	cps
Indium	115-2	2112565	2098602	2045250	2085473	1.70	cps
Iron	56-2	14924	14711	14844	14826	0.73	cps
Iron	57-2	1573	1517	1510	1533	2.27	cps
Iron	54-2	1967	1947	1810	1908	4.47	cps
Krypton	83-1	427	463	467	452	4.91	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : PB170000BL Instrumnet Name : P7
Client Sample ID : PB170000BL Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:51:53 DataFile Name : 021CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	673	643	643	653	2.65	cps
Lead	207-1	520	450	610	527	15.23	cps
Lead	208-1	2363	2327	2493	2395	3.66	cps
Lithium	6-1	507797	503384	514027	508403	1.05	cps
Magnesium	24-2	377	437	363	392	9.96	cps
Manganese	55-2	357	410	440	402	10.49	cps
Molybdenum	94-1	263	280	303	282	7.12	cps
Molybdenum	95-1	223	287	243	251	12.89	cps
Molybdenum	96-1	223	287	323	278	18.21	cps
Molybdenum	97-1	153	163	103	140	22.96	cps
Molybdenum	98-1	413	393	400	402	2.53	cps
Neodymium	150-1	0	13	3	6	124.93	cps
Neodymium	150-2	0	3	0	1	173.21	cps
Nickel	60-2	313	337	333	328	3.85	cps
Phosphorus	31-2	600	563	593	586	3.34	cps
Potassium	39-2	60138	58368	57227	58578	2.50	cps
Rhodium	103-1	5437143	5505814	5514271	5485742	0.77	cps
Rhodium	103-2	3392378	3395150	3382360	3389963	0.20	cps
Scandium	45-1	3426815	3372048	3417230	3405365	0.86	cps
Scandium	45-2	315960	318151	315021	316377	0.51	cps
Selenium	82-1	426	426	428	427	0.34	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	347	350	367	354	3.02	cps
Silicon	28-1	724654	725583	730847	727028	0.46	cps
Silver	107-1	183	180	113	159	24.85	cps
Silver	109-1	127	140	107	124	13.48	cps
Sodium	23-2	29468	28637	28316	28807	2.06	cps
Strontium	86-1	703	713	730	716	1.88	cps
Strontium	88-1	163	133	117	138	17.16	cps
Sulfur	34-1	171736	173118	172066	172307	0.42	cps
Terbium	159-1	6728588	6799152	6717303	6748347	0.66	cps
Terbium	159-2	4757716	4770785	4684523	4737675	0.98	cps
Thallium	203-1	437	457	463	452	3.07	cps
Thallium	205-1	997	1007	1017	1007	0.99	cps
Tin	118-1	903	900	983	929	5.08	cps
Titanium	47-1	60	100	67	76	28.36	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : PB170000BL Instrumnet Name : P7
Client Sample ID : PB170000BL Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:51:53 DataFile Name : 021CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	17	33	17	22	43.28	cps
Vanadium	51-2	33	13	7	18	78.05	cps
Yttrium	89-1	9000774	8872396	8851888	8908353	0.91	cps
Yttrium	89-2	2520925	2500678	2518317	2513306	0.44	cps
Zinc	66-2	1223	1287	1427	1312	7.93	cps
Zirconium	90-1	480	473	470	474	1.07	cps
Zirconium	91-1	87	73	123	94	27.42	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : PB170000BS Instrumnet Name : P7
Client Sample ID : PB170000BS Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:55:09 DataFile Name : 022LCS6.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1223046	1198280	1174044	1198457	2.04	cps
Antimony	121-1	2199953	2258578	2199254	2219262	1.53	cps
Arsenic	75-2	135608	135907	135369	135628	0.20	cps
Barium	135-1	2579716	2666466	2701031	2649071	2.36	cps
Barium	137-1	4390972	4576530	4590626	4519376	2.47	cps
Beryllium	9-1	280641	294460	291535	288879	2.52	cps
Bismuth	209-1	4307834	4263900	4403216	4324983	1.65	cps
Bismuth	209-2	3583160	3585949	3558914	3576008	0.42	cps
Bromine	81-1	8259	7342	7619	7740	6.08	cps
Bromine	81-2	160	117	103	127	23.39	cps
Cadmium	108-1	43465	43502	43987	43651	0.67	cps
Cadmium	106-1	61637	62822	62829	62429	1.10	cps
Cadmium	111-1	588716	609731	611430	603292	2.10	cps
Calcium	43-1	632449	653751	647172	644457	1.69	cps
Calcium	44-1	9798447	10272307	10159475	10076743	2.46	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1082529	1078807	1081434	1080923	0.18	cps
Cobalt	59-2	1680423	1671911	1678143	1676826	0.26	cps
Copper	63-2	12976959	13029911	12949186	12985352	0.32	cps
Dysprosium	156-1	80	103	53	79	31.71	cps
Dysprosium	156-2	167	193	260	207	23.26	cps
Erbium	164-1	90	113	83	96	16.49	cps
Erbium	164-2	60	70	90	73	20.83	cps
Gadolinium	160-1	93	83	97	91	7.62	cps
Gadolinium	160-2	437	470	433	447	4.54	cps
Holmium	165-1	6622295	6576487	6731717	6643500	1.20	cps
Holmium	165-2	4839943	4813674	4685971	4779863	1.72	cps
Indium	115-1	5483941	5610395	5550496	5548277	1.14	cps
Indium	115-2	2065739	2086630	2043050	2065139	1.06	cps
Iron	56-2	51027869	51264658	50069588	50787371	1.25	cps
Iron	57-2	1320393	1320568	1303474	1314811	0.75	cps
Iron	54-2	2849501	2861641	2846915	2852686	0.28	cps
Krypton	83-1	357	440	417	404	10.63	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : PB170000BS Instrumnet Name : P7
Client Sample ID : PB170000BS Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:55:09 DataFile Name : 022LCS6.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	8575540	8806928	8785391	8722620	1.47	cps
Lead	207-1	7388573	7697160	7704401	7596711	2.37	cps
Lead	208-1	33963496	34994717	35067152	34675121	1.78	cps
Lithium	6-1	525922	525084	528230	526412	0.31	cps
Magnesium	24-2	10338503	10247933	10058164	10214867	1.40	cps
Manganese	55-2	9036943	9114281	8848479	8999901	1.52	cps
Molybdenum	94-1	8011166	8169982	8177393	8119514	1.16	cps
Molybdenum	95-1	11353762	11890437	11739960	11661386	2.37	cps
Molybdenum	96-1	12358466	12946474	12743278	12682739	2.35	cps
Molybdenum	97-1	7148969	7298416	7319210	7255532	1.28	cps
Molybdenum	98-1	18244517	19046332	18908566	18733138	2.29	cps
Neodymium	150-1	100	110	117	109	7.71	cps
Neodymium	150-2	57	20	50	42	46.26	cps
Nickel	60-2	431101	433356	428870	431109	0.52	cps
Phosphorus	31-2	59636	60921	59251	59936	1.46	cps
Potassium	39-2	5839463	5930690	5770116	5846756	1.38	cps
Rhodium	103-1	5441880	5414826	5450547	5435751	0.34	cps
Rhodium	103-2	3334936	3351832	3340550	3342439	0.26	cps
Scandium	45-1	3452012	3466489	3363262	3427254	1.63	cps
Scandium	45-2	319240	318346	315289	317625	0.65	cps
Selenium	82-1	46669	47948	47420	47345	1.36	cps
Selenium	77-2	5098	5014	5364	5159	3.55	cps
Selenium	78-2	17861	17684	17464	17670	1.13	cps
Silicon	28-1	17873772	18363243	18300436	18179151	1.46	cps
Silver	107-1	2952182	3079075	3043921	3025059	2.17	cps
Silver	109-1	2858412	2887888	2858265	2868188	0.59	cps
Sodium	23-2	16430838	16220252	16272291	16307794	0.67	cps
Strontium	86-1	725557	753381	752947	743961	2.14	cps
Strontium	88-1	6258568	6624414	6601382	6494788	3.15	cps
Sulfur	34-1	349490	354611	348307	350803	0.96	cps
Terbium	159-1	6706656	6766236	6946025	6806306	1.83	cps
Terbium	159-2	4844241	4782934	4750788	4792654	0.99	cps
Thallium	203-1	2118528	2168476	2123229	2136744	1.29	cps
Thallium	205-1	4932995	5143195	5093951	5056714	2.17	cps
Tin	118-1	1853167	1881690	1870937	1868598	0.77	cps
Titanium	47-1	3035820	3129286	3107921	3091009	1.58	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : PB170000BS Instrumnet Name : P7
Client Sample ID : PB170000BS Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:55:09 DataFile Name : 022LCS6.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	6567634	6850074	6655853	6691187	2.16	cps
Vanadium	51-2	904181	906169	897983	902778	0.47	cps
Yttrium	89-1	8922133	9123284	8864897	8970105	1.51	cps
Yttrium	89-2	2517779	2478181	2457429	2484463	1.23	cps
Zinc	66-2	2375700	2378745	2390754	2381733	0.33	cps
Zirconium	90-1	3966901	4107137	4019164	4031067	1.76	cps
Zirconium	91-1	868121	901154	889549	886275	1.89	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-05 Instrumnet Name : P7
Client Sample ID : MC0AX0 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:57:59 DataFile Name : 023SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3814	3851	3901	3855	1.13	cps
Antimony	121-1	17681	17908	17407	17665	1.42	cps
Arsenic	75-2	13169	13143	12766	13026	1.73	cps
Barium	135-1	16213	16773	16320	16435	1.81	cps
Barium	137-1	27941	28278	28318	28179	0.74	cps
Beryllium	9-1	85	51	55	64	28.93	cps
Bismuth	209-1	4788154	4833441	4852297	4824631	0.68	cps
Bismuth	209-2	4088018	4068018	4084022	4080019	0.26	cps
Bromine	81-1	84096	115241	136159	111832	23.43	cps
Bromine	81-2	30151	31256	32041	31150	3.05	cps
Cadmium	108-1	47	37	60	48	24.50	cps
Cadmium	106-1	2500	2604	2464	2522	2.88	cps
Cadmium	111-1	1794	1934	1792	1840	4.40	cps
Calcium	43-1	1305830	1296525	1332664	1311673	1.43	cps
Calcium	44-1	20863255	21275586	21044505	21061115	0.98	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3907	3667	3837	3804	3.25	cps
Cobalt	59-2	2350	2237	2260	2282	2.62	cps
Copper	63-2	8769	8843	8563	8725	1.67	cps
Dysprosium	156-1	37	47	43	42	12.06	cps
Dysprosium	156-2	37	73	33	48	46.46	cps
Erbium	164-1	70	107	90	89	20.65	cps
Erbium	164-2	70	67	87	74	14.39	cps
Gadolinium	160-1	150	97	67	104	40.41	cps
Gadolinium	160-2	570	453	387	470	19.74	cps
Holmium	165-1	7665175	7655815	7640526	7653839	0.16	cps
Holmium	165-2	5558580	5531587	5530176	5540114	0.29	cps
Indium	115-1	6505390	6373287	6446370	6441682	1.03	cps
Indium	115-2	2413277	2414276	2438995	2422183	0.60	cps
Iron	56-2	226756	222940	224864	224853	0.85	cps
Iron	57-2	49792	51073	52197	51021	2.36	cps
Iron	54-2	13716	13363	13433	13504	1.39	cps
Krypton	83-1	477	443	433	451	5.03	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-05 Instrumnet Name : P7
Client Sample ID : MC0AX0 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:57:59 DataFile Name : 023SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1593	1810	1703	1702	6.36	cps
Lead	207-1	1507	1510	1383	1467	4.92	cps
Lead	208-1	6897	6641	6707	6749	1.97	cps
Lithium	6-1	604930	597873	593358	598721	0.97	cps
Magnesium	24-2	4254392	4366083	4343089	4321188	1.36	cps
Manganese	55-2	546235	550720	554913	550623	0.79	cps
Molybdenum	94-1	133291	136338	135672	135101	1.19	cps
Molybdenum	95-1	231423	235399	233582	233468	0.85	cps
Molybdenum	96-1	247004	250888	251772	249888	1.02	cps
Molybdenum	97-1	145670	146800	146615	146362	0.41	cps
Molybdenum	98-1	369427	374350	378096	373958	1.16	cps
Neodymium	150-1	60	53	40	51	19.92	cps
Neodymium	150-2	33	17	30	27	33.06	cps
Nickel	60-2	2890	3087	2847	2941	4.35	cps
Phosphorus	31-2	9860	9470	9963	9764	2.67	cps
Potassium	39-2	4141608	4143336	4205463	4163469	0.87	cps
Rhodium	103-1	6289093	6169103	6182577	6213591	1.06	cps
Rhodium	103-2	3910324	3934957	3952011	3932431	0.53	cps
Scandium	45-1	3925798	3981798	3954190	3953929	0.71	cps
Scandium	45-2	370026	374518	372490	372345	0.60	cps
Selenium	82-1	620	747	748	705	10.47	cps
Selenium	77-2	20	47	27	31	44.61	cps
Selenium	78-2	463	427	407	432	6.65	cps
Silicon	28-1	34321036	34940226	34996404	34752556	1.08	cps
Silver	107-1	850	497	437	594	37.57	cps
Silver	109-1	717	440	353	503	37.70	cps
Sodium	23-2	122658108	121331698	123711035	122566947	0.97	cps
Strontium	86-1	751957	760438	766370	759588	0.95	cps
Strontium	88-1	6742292	6807026	6820732	6790017	0.62	cps
Sulfur	34-1	2764839	2797785	2851213	2804612	1.55	cps
Terbium	159-1	7923650	7867431	7911276	7900786	0.37	cps
Terbium	159-2	5581632	5502881	5652835	5579116	1.34	cps
Thallium	203-1	1073	1167	1083	1108	4.63	cps
Thallium	205-1	2587	2530	2600	2572	1.45	cps
Tin	118-1	4044	4324	4464	4277	5.00	cps
Titanium	47-1	967	900	1067	978	8.58	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-05 Instrumnet Name : P7
Client Sample ID : MC0AX0 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 17:57:59 DataFile Name : 023SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	2740	2754	2494	2663	5.50	cps
Vanadium	51-2	5104	5394	5061	5186	3.50	cps
Yttrium	89-1	10546285	10510877	10447822	10501661	0.47	cps
Yttrium	89-2	2928410	2969051	3001818	2966426	1.24	cps
Zinc	66-2	5131	5134	5304	5190	1.91	cps
Zirconium	90-1	4748	4124	4104	4325	8.46	cps
Zirconium	91-1	1083	1163	737	995	22.81	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-06 Instrumnet Name : P7
Client Sample ID : MC0AX1 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:01:09 DataFile Name : 024SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2954	2774	2744	2824	4.02	cps
Antimony	121-1	16967	17040	17404	17137	1.37	cps
Arsenic	75-2	13373	13062	13416	13284	1.45	cps
Barium	135-1	16189	16009	15946	16048	0.79	cps
Barium	137-1	28128	27604	28208	27980	1.17	cps
Beryllium	9-1	54	84	24	54	55.15	cps
Bismuth	209-1	4976170	4865721	4874441	4905444	1.25	cps
Bismuth	209-2	4116842	3994947	3993073	4034954	1.76	cps
Bromine	81-1	146775	188302	214120	183066	18.56	cps
Bromine	81-2	45162	45888	47048	46033	2.07	cps
Cadmium	108-1	43	53	57	51	13.58	cps
Cadmium	106-1	2724	2514	2584	2607	4.10	cps
Cadmium	111-1	1986	1792	1876	1885	5.16	cps
Calcium	43-1	1313697	1373648	1325169	1337505	2.38	cps
Calcium	44-1	21191322	21841545	21580961	21537943	1.52	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2624	2620	2780	2675	3.42	cps
Cobalt	59-2	2020	1970	1813	1935	5.57	cps
Copper	63-2	5631	5721	5658	5670	0.82	cps
Dysprosium	156-1	63	33	40	46	34.58	cps
Dysprosium	156-2	30	10	23	21	48.24	cps
Erbium	164-1	90	70	77	79	12.91	cps
Erbium	164-2	53	77	87	72	23.69	cps
Gadolinium	160-1	43	73	73	63	27.35	cps
Gadolinium	160-2	507	463	550	507	8.55	cps
Holmium	165-1	7960499	7645140	7677833	7761157	2.23	cps
Holmium	165-2	5584601	5646804	5524877	5585427	1.09	cps
Indium	115-1	6659952	6695018	6625337	6660102	0.52	cps
Indium	115-2	2460981	2400425	2429062	2430156	1.25	cps
Iron	56-2	194693	196763	194286	195247	0.68	cps
Iron	57-2	49906	49485	49990	49793	0.54	cps
Iron	54-2	12479	12098	11918	12165	2.35	cps
Krypton	83-1	520	483	473	492	4.99	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-06 Instrumnet Name : P7
Client Sample ID : MC0AX1 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:01:09 DataFile Name : 024SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1297	1263	1337	1299	2.83	cps
Lead	207-1	1103	1050	1123	1092	3.47	cps
Lead	208-1	5174	5084	5104	5120	0.92	cps
Lithium	6-1	618121	604118	601681	607973	1.46	cps
Magnesium	24-2	4219465	4158174	4227221	4201620	0.90	cps
Manganese	55-2	543361	543986	547242	544863	0.38	cps
Molybdenum	94-1	136968	137137	137414	137173	0.16	cps
Molybdenum	95-1	234897	235060	236088	235348	0.27	cps
Molybdenum	96-1	252194	254298	254627	253706	0.52	cps
Molybdenum	97-1	147679	147258	147597	147512	0.15	cps
Molybdenum	98-1	373705	377385	379875	376988	0.82	cps
Neodymium	150-1	27	40	43	37	24.04	cps
Neodymium	150-2	17	20	13	17	20.01	cps
Nickel	60-2	2394	2197	2227	2272	4.66	cps
Phosphorus	31-2	4374	4341	4391	4368	0.58	cps
Potassium	39-2	4010202	4050868	4005626	4022232	0.62	cps
Rhodium	103-1	6421224	6424014	6373695	6406311	0.44	cps
Rhodium	103-2	3941888	3940256	3965959	3949368	0.36	cps
Scandium	45-1	4108232	4101533	4069063	4092943	0.51	cps
Scandium	45-2	371891	375806	375527	374408	0.58	cps
Selenium	82-1	704	673	785	721	7.99	cps
Selenium	77-2	7	23	20	17	52.90	cps
Selenium	78-2	407	453	390	417	7.88	cps
Silicon	28-1	35056264	35713444	35624449	35464719	1.01	cps
Silver	107-1	177	203	170	183	9.62	cps
Silver	109-1	180	180	193	184	4.18	cps
Sodium	23-2	123082885	121837278	121782225	122234129	0.60	cps
Strontium	86-1	763294	770121	762567	765327	0.54	cps
Strontium	88-1	6810516	6797129	6795049	6800898	0.12	cps
Sulfur	34-1	2881554	2901888	2859702	2881048	0.73	cps
Terbium	159-1	8137820	8063501	8003527	8068283	0.83	cps
Terbium	159-2	5605404	5578684	5603451	5595846	0.27	cps
Thallium	203-1	967	1027	1060	1018	4.65	cps
Thallium	205-1	2210	2350	2194	2251	3.82	cps
Tin	118-1	3030	3314	3457	3267	6.65	cps
Titanium	47-1	797	737	823	786	5.65	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-06 Instrumnet Name : P7
Client Sample ID : MC0AX1 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:01:09 DataFile Name : 024SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	2134	2134	2130	2132	0.09	cps
Vanadium	51-2	5248	5331	5318	5299	0.85	cps
Yttrium	89-1	10996742	10608151	10677011	10760635	1.93	cps
Yttrium	89-2	2988091	2973175	2982304	2981190	0.25	cps
Zinc	66-2	3217	3514	3294	3342	4.61	cps
Zirconium	90-1	5695	6015	6085	5931	3.51	cps
Zirconium	91-1	1310	1387	1387	1361	3.25	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07 Instrumnet Name : P7
Client Sample ID : MC0AX2 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:04:24 DataFile Name : 025SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3474	4054	3567	3698	8.43	cps
Antimony	121-1	17184	16803	16907	16965	1.16	cps
Arsenic	75-2	13049	13566	13226	13280	1.98	cps
Barium	135-1	16393	16316	16520	16410	0.63	cps
Barium	137-1	29157	27911	28402	28490	2.20	cps
Beryllium	9-1	48	45	78	57	32.44	cps
Bismuth	209-1	4988053	4915545	4826927	4910175	1.64	cps
Bismuth	209-2	4208873	4088601	4059360	4118944	1.92	cps
Bromine	81-1	142585	168498	181235	164106	12.00	cps
Bromine	81-2	36519	37030	37892	37147	1.87	cps
Cadmium	108-1	73	43	53	57	26.96	cps
Cadmium	106-1	2567	2504	2487	2519	1.68	cps
Cadmium	111-1	1829	1852	1847	1843	0.66	cps
Calcium	43-1	1315833	1332707	1330917	1326485	0.70	cps
Calcium	44-1	21300751	21455458	21178221	21311476	0.65	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3831	3814	3737	3794	1.31	cps
Cobalt	59-2	2234	2304	2020	2186	6.75	cps
Copper	63-2	8519	8376	8566	8487	1.17	cps
Dysprosium	156-1	57	53	37	49	21.91	cps
Dysprosium	156-2	67	70	70	69	2.79	cps
Erbium	164-1	100	110	93	101	8.30	cps
Erbium	164-2	87	70	97	84	15.95	cps
Gadolinium	160-1	70	87	80	79	10.64	cps
Gadolinium	160-2	543	457	403	468	15.11	cps
Holmium	165-1	7971575	7777399	7771871	7840281	1.45	cps
Holmium	165-2	5647509	5586946	5460635	5565030	1.71	cps
Indium	115-1	6641494	6517199	6438268	6532320	1.57	cps
Indium	115-2	2516684	2450830	2436323	2467946	1.74	cps
Iron	56-2	217168	215181	212659	215003	1.05	cps
Iron	57-2	49368	51100	52241	50903	2.84	cps
Iron	54-2	13279	12926	12862	13022	1.73	cps
Krypton	83-1	420	453	477	450	6.33	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07 Instrumnet Name : P7
Client Sample ID : MC0AX2 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:04:24 DataFile Name : 025SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2320	2167	2414	2300	5.42	cps
Lead	207-1	1970	1830	1970	1923	4.20	cps
Lead	208-1	9175	8585	9385	9048	4.59	cps
Lithium	6-1	616013	608858	597850	607574	1.51	cps
Magnesium	24-2	4359199	4325925	4256604	4313909	1.21	cps
Manganese	55-2	566220	569216	567977	567804	0.27	cps
Molybdenum	94-1	136271	134848	135862	135660	0.54	cps
Molybdenum	95-1	237008	234931	231969	234636	1.08	cps
Molybdenum	96-1	251706	253236	253613	252851	0.40	cps
Molybdenum	97-1	147535	147426	144912	146624	1.01	cps
Molybdenum	98-1	379234	378913	375030	377726	0.62	cps
Neodymium	150-1	53	50	57	53	6.25	cps
Neodymium	150-2	40	30	33	34	14.78	cps
Nickel	60-2	2380	2440	2474	2431	1.95	cps
Phosphorus	31-2	9650	10007	9860	9839	1.82	cps
Potassium	39-2	4233253	4232713	4182963	4216310	0.68	cps
Rhodium	103-1	6409662	6313042	6446735	6389813	1.08	cps
Rhodium	103-2	3920746	3924045	3967117	3937303	0.66	cps
Scandium	45-1	4077612	4029543	4021387	4042847	0.75	cps
Scandium	45-2	382275	377014	374762	378017	1.02	cps
Selenium	82-1	778	733	718	743	4.14	cps
Selenium	77-2	33	20	20	24	31.49	cps
Selenium	78-2	450	490	530	490	8.16	cps
Silicon	28-1	35706776	35608115	35433509	35582800	0.39	cps
Silver	107-1	190	177	183	183	3.64	cps
Silver	109-1	140	147	160	149	6.84	cps
Sodium	23-2	125992631	123170435	123797561	124320209	1.19	cps
Strontium	86-1	769457	772445	769155	770352	0.24	cps
Strontium	88-1	6833162	6791292	6829824	6818092	0.34	cps
Sulfur	34-1	2844807	2923365	2865087	2877753	1.42	cps
Terbium	159-1	8089676	8014117	7940042	8014612	0.93	cps
Terbium	159-2	5548547	5626284	5658336	5611056	1.01	cps
Thallium	203-1	1007	1000	923	977	4.74	cps
Thallium	205-1	2397	2314	2257	2322	3.03	cps
Tin	118-1	6245	6478	6702	6475	3.53	cps
Titanium	47-1	947	867	860	891	5.41	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07 Instrumnet Name : P7
Client Sample ID : MC0AX2 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:04:24 DataFile Name : 025SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	2420	2424	2654	2499	5.35	cps
Vanadium	51-2	5314	5398	5341	5351	0.80	cps
Yttrium	89-1	10881177	10790734	10596447	10756119	1.35	cps
Yttrium	89-2	2959987	3050772	2993015	3001258	1.53	cps
Zinc	66-2	4511	4404	4577	4497	1.94	cps
Zirconium	90-1	2877	3271	3448	3198	9.13	cps
Zirconium	91-1	817	777	757	783	3.90	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DUP Instrumnet Name : P7
Client Sample ID : MC0AX2DUP Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:07:34 DataFile Name : 026SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3450	3887	3644	3660	5.98	cps
Antimony	121-1	17207	17895	16923	17342	2.88	cps
Arsenic	75-2	13676	13690	13953	13773	1.13	cps
Barium	135-1	17027	17107	16510	16881	1.92	cps
Barium	137-1	28682	28963	28702	28783	0.54	cps
Beryllium	9-1	68	55	31	51	36.14	cps
Bismuth	209-1	5030052	4899790	4919187	4949676	1.42	cps
Bismuth	209-2	4133971	4077029	4027830	4079610	1.30	cps
Bromine	81-1	136628	163844	177532	159335	13.07	cps
Bromine	81-2	35556	36863	36662	36360	1.93	cps
Cadmium	108-1	67	70	60	66	7.77	cps
Cadmium	106-1	2654	2587	2424	2555	4.63	cps
Cadmium	111-1	1921	1855	1758	1845	4.45	cps
Calcium	43-1	1344745	1387233	1361761	1364580	1.57	cps
Calcium	44-1	21762955	22125780	21936790	21941841	0.83	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3577	3734	3687	3666	2.19	cps
Cobalt	59-2	2077	2210	2274	2187	4.59	cps
Copper	63-2	9016	9009	8809	8945	1.31	cps
Dysprosium	156-1	53	30	40	41	28.47	cps
Dysprosium	156-2	53	40	47	47	14.28	cps
Erbium	164-1	77	87	77	80	7.22	cps
Erbium	164-2	50	57	80	62	25.32	cps
Gadolinium	160-1	97	100	100	99	1.94	cps
Gadolinium	160-2	480	510	530	507	4.97	cps
Holmium	165-1	7722707	7863068	7739101	7774959	0.99	cps
Holmium	165-2	5697359	5544855	5616055	5619423	1.36	cps
Indium	115-1	6613824	6701117	6519897	6611613	1.37	cps
Indium	115-2	2478397	2484194	2457693	2473428	0.56	cps
Iron	56-2	215166	215725	213347	214746	0.58	cps
Iron	57-2	51735	51689	51304	51576	0.46	cps
Iron	54-2	13273	13349	12789	13137	2.31	cps
Krypton	83-1	400	433	437	423	4.79	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DUP Instrumnet Name : P7
Client Sample ID : MC0AX2DUP Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:07:34 DataFile Name : 026SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1793	2197	2047	2012	10.13	cps
Lead	207-1	1803	1610	1777	1730	6.06	cps
Lead	208-1	7654	8021	7728	7801	2.49	cps
Lithium	6-1	613615	608525	597362	606500	1.37	cps
Magnesium	24-2	4372069	4430757	4354163	4385663	0.91	cps
Manganese	55-2	574108	571310	574285	573234	0.29	cps
Molybdenum	94-1	137793	140010	138769	138857	0.80	cps
Molybdenum	95-1	237517	242158	239016	239564	0.99	cps
Molybdenum	96-1	257804	259402	258329	258512	0.32	cps
Molybdenum	97-1	149005	152116	149312	150145	1.14	cps
Molybdenum	98-1	382246	387359	384748	384784	0.66	cps
Neodymium	150-1	70	63	40	58	27.26	cps
Neodymium	150-2	23	30	17	23	28.56	cps
Nickel	60-2	2330	2367	2234	2310	2.98	cps
Phosphorus	31-2	9990	9723	10013	9909	1.63	cps
Potassium	39-2	4235777	4238908	4155632	4210106	1.12	cps
Rhodium	103-1	6420908	6412382	6376063	6403118	0.37	cps
Rhodium	103-2	3990698	3907464	3903008	3933723	1.26	cps
Scandium	45-1	4070352	4077163	4003926	4050480	1.00	cps
Scandium	45-2	375778	377945	377649	377124	0.31	cps
Selenium	82-1	772	831	870	824	5.98	cps
Selenium	77-2	30	30	10	23	49.49	cps
Selenium	78-2	357	487	480	441	16.60	cps
Silicon	28-1	35760770	36165982	36105910	36010888	0.61	cps
Silver	107-1	180	157	193	177	10.51	cps
Silver	109-1	143	140	137	140	2.38	cps
Sodium	23-2	124606268	125868778	125415721	125296923	0.51	cps
Strontium	86-1	781898	789526	785438	785620	0.49	cps
Strontium	88-1	7050516	6922153	6927136	6966601	1.04	cps
Sulfur	34-1	2889545	2967687	2914567	2923933	1.36	cps
Terbium	159-1	8102106	8002175	7905943	8003408	1.23	cps
Terbium	159-2	5649417	5550819	5664645	5621627	1.10	cps
Thallium	203-1	970	903	977	950	4.27	cps
Thallium	205-1	2327	2227	2297	2284	2.25	cps
Tin	118-1	6251	6328	6532	6370	2.27	cps
Titanium	47-1	1053	937	1023	1005	6.03	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DUP Instrumnet Name : P7
Client Sample ID : MC0AX2DUP Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:07:34 DataFile Name : 026SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	2607	2510	2660	2593	2.93	cps
Vanadium	51-2	5461	5551	5344	5452	1.90	cps
Yttrium	89-1	10728428	10885384	10796472	10803428	0.73	cps
Yttrium	89-2	2963753	2979093	3014289	2985711	0.87	cps
Zinc	66-2	4614	4834	4481	4643	3.84	cps
Zirconium	90-1	2791	3084	3498	3124	11.37	cps
Zirconium	91-1	790	647	650	696	11.76	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07LX5 Instrumnet Name : P7
Client Sample ID : MC0AX2L Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:10:50 DataFile Name : 027SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1047	1047	1093	1062	2.54	cps
Antimony	121-1	2874	3170	2850	2965	6.02	cps
Arsenic	75-2	2180	2287	2264	2244	2.50	cps
Barium	135-1	2764	2807	2690	2754	2.14	cps
Barium	137-1	5058	4884	4831	4924	2.41	cps
Beryllium	9-1	14	24	7	15	57.14	cps
Bismuth	209-1	4343735	4291559	4370395	4335230	0.92	cps
Bismuth	209-2	3687283	3738397	3737086	3720922	0.78	cps
Bromine	81-1	67082	68622	66563	67422	1.59	cps
Bromine	81-2	10607	10591	10597	10598	0.08	cps
Cadmium	108-1	17	0	17	11	86.60	cps
Cadmium	106-1	2340	2350	2220	2304	3.14	cps
Cadmium	111-1	1660	1685	1592	1646	2.91	cps
Calcium	43-1	226010	235008	232396	231138	2.00	cps
Calcium	44-1	3544634	3676229	3628276	3616380	1.84	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1820	1777	1833	1810	1.64	cps
Cobalt	59-2	413	393	420	409	3.39	cps
Copper	63-2	2670	2684	2550	2635	2.79	cps
Dysprosium	156-1	7	13	20	13	49.99	cps
Dysprosium	156-2	7	10	23	13	66.12	cps
Erbium	164-1	40	47	50	46	11.18	cps
Erbium	164-2	33	17	40	30	40.05	cps
Gadolinium	160-1	47	33	67	49	34.32	cps
Gadolinium	160-2	460	453	393	436	8.43	cps
Holmium	165-1	6561713	6427986	6625956	6538552	1.54	cps
Holmium	165-2	4940920	4878641	4889717	4903092	0.68	cps
Indium	115-1	5556432	5539361	5821334	5639042	2.80	cps
Indium	115-2	2175493	2166412	2192230	2178045	0.60	cps
Iron	56-2	48338	48883	48221	48481	0.73	cps
Iron	57-2	9626	9606	9713	9649	0.59	cps
Iron	54-2	4031	3727	3660	3806	5.18	cps
Krypton	83-1	427	433	450	437	2.75	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07LX5 Instrumnet Name : P7
Client Sample ID : MC0AX2L Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:10:50 DataFile Name : 027SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	680	720	757	719	5.33	cps
Lead	207-1	583	667	670	640	7.67	cps
Lead	208-1	2753	2957	2847	2852	3.57	cps
Lithium	6-1	516098	522510	511921	516843	1.03	cps
Magnesium	24-2	709054	718978	717968	715333	0.76	cps
Manganese	55-2	98293	97393	97323	97670	0.55	cps
Molybdenum	94-1	22871	23412	23275	23186	1.21	cps
Molybdenum	95-1	39035	38865	39437	39112	0.75	cps
Molybdenum	96-1	43789	43311	44638	43913	1.53	cps
Molybdenum	97-1	24237	25419	25048	24901	2.43	cps
Molybdenum	98-1	62259	63581	64000	63280	1.44	cps
Neodymium	150-1	13	17	17	16	12.40	cps
Neodymium	150-2	3	3	10	6	69.34	cps
Nickel	60-2	630	717	810	719	12.52	cps
Phosphorus	31-2	2057	2217	2100	2125	3.90	cps
Potassium	39-2	790083	788215	793831	790710	0.36	cps
Rhodium	103-1	5805781	5525096	5848889	5726589	3.07	cps
Rhodium	103-2	3548143	3459804	3517264	3508403	1.28	cps
Scandium	45-1	3404911	3422583	3370255	3399250	0.78	cps
Scandium	45-2	326601	325512	332813	328309	1.20	cps
Selenium	82-1	577	499	551	542	7.35	cps
Selenium	77-2	3	3	10	6	69.34	cps
Selenium	78-2	387	390	420	399	4.60	cps
Silicon	28-1	6618978	6639443	6744886	6667769	1.01	cps
Silver	107-1	137	163	130	143	12.31	cps
Silver	109-1	140	103	90	111	23.30	cps
Sodium	23-2	21330858	21448820	21207571	21329083	0.57	cps
Strontium	86-1	133150	132081	134244	133158	0.81	cps
Strontium	88-1	1137970	1168781	1149092	1151948	1.35	cps
Sulfur	34-1	611575	619570	618264	616470	0.70	cps
Terbium	159-1	7302394	7065109	7172213	7179905	1.66	cps
Terbium	159-2	4963963	4898919	4981576	4948152	0.88	cps
Thallium	203-1	447	473	467	462	3.00	cps
Thallium	205-1	987	940	943	957	2.72	cps
Tin	118-1	2190	2124	2070	2128	2.83	cps
Titanium	47-1	247	233	237	239	2.90	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07LX5 Instrumnet Name : P7
Client Sample ID : MC0AX2L Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:10:50 DataFile Name : 027SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	430	440	467	446	4.25	cps
Vanadium	51-2	940	900	793	878	8.64	cps
Yttrium	89-1	9164642	9199023	9142015	9168560	0.31	cps
Yttrium	89-2	2630621	2590160	2637158	2619313	0.97	cps
Zinc	66-2	1913	1900	1957	1923	1.54	cps
Zirconium	90-1	880	660	870	803	15.47	cps
Zirconium	91-1	190	360	137	229	50.96	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MS Instrumnet Name : P7
Client Sample ID : MC0AX2MS Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:14:04 DataFile Name : 028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1113576	1131752	1123318	1122882	0.81	cps
Antimony	121-1	2287857	2334544	2331575	2317992	1.13	cps
Arsenic	75-2	169902	169816	165703	168474	1.42	cps
Barium	135-1	2494948	2510590	2602863	2536134	2.30	cps
Barium	137-1	4289580	4327867	4389351	4335599	1.16	cps
Beryllium	9-1	303054	305334	301364	303250	0.66	cps
Bismuth	209-1	4695437	4768425	4694355	4719405	0.90	cps
Bismuth	209-2	3958255	3964270	4088080	4003535	1.83	cps
Bromine	81-1	106487	133776	154931	131731	18.44	cps
Bromine	81-2	34701	35135	36519	35451	2.68	cps
Cadmium	108-1	42613	43034	43061	42902	0.59	cps
Cadmium	106-1	62722	63127	64258	63369	1.26	cps
Cadmium	111-1	614212	616594	623129	617979	0.75	cps
Calcium	43-1	1869872	1854608	1851042	1858507	0.54	cps
Calcium	44-1	29914710	29874022	29917261	29901998	0.08	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1086246	1097774	1087389	1090470	0.58	cps
Cobalt	59-2	1753610	1744399	1746889	1748299	0.27	cps
Copper	63-2	12576382	12836905	12438053	12617113	1.61	cps
Dysprosium	156-1	90	70	137	99	34.60	cps
Dysprosium	156-2	213	247	187	216	13.95	cps
Erbium	164-1	147	110	173	143	22.19	cps
Erbium	164-2	147	77	93	106	34.64	cps
Gadolinium	160-1	117	137	127	127	7.89	cps
Gadolinium	160-2	520	557	453	510	10.27	cps
Holmium	165-1	7591916	7479806	7513205	7528309	0.76	cps
Holmium	165-2	5377405	5346371	5345913	5356563	0.34	cps
Indium	115-1	6221732	6256987	6244170	6240963	0.29	cps
Indium	115-2	2356188	2361989	2318178	2345451	1.01	cps
Iron	56-2	46578591	47413569	46586209	46859457	1.02	cps
Iron	57-2	1243711	1260215	1242461	1248796	0.79	cps
Iron	54-2	2598806	2588553	2613548	2600302	0.48	cps
Krypton	83-1	447	393	457	432	7.88	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MS Instrumnet Name : P7
Client Sample ID : MC0AX2MS Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:14:04 DataFile Name : 028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	8962530	9185624	9124023	9090726	1.27	cps
Lead	207-1	8079226	7917240	8117550	8038005	1.32	cps
Lead	208-1	36195067	36636085	36680938	36504030	0.74	cps
Lithium	6-1	585347	576006	581688	581014	0.81	cps
Magnesium	24-2	15385387	15284693	15512264	15394114	0.74	cps
Manganese	55-2	9238778	9286478	9177907	9234388	0.59	cps
Molybdenum	94-1	4212620	4233270	4222904	4222932	0.24	cps
Molybdenum	95-1	4632093	4761672	4765425	4719730	1.61	cps
Molybdenum	96-1	5266824	5343107	5374717	5328216	1.04	cps
Molybdenum	97-1	2929361	2933990	2973937	2945763	0.83	cps
Molybdenum	98-1	7301791	7465243	7603124	7456719	2.02	cps
Neodymium	150-1	70	100	110	93	22.30	cps
Neodymium	150-2	50	47	47	48	4.02	cps
Nickel	60-2	443459	446180	444096	444578	0.32	cps
Phosphorus	31-2	9033	8803	8769	8868	1.62	cps
Potassium	39-2	9244649	9375165	9231098	9283637	0.86	cps
Rhodium	103-1	6077781	5963791	6000723	6014098	0.97	cps
Rhodium	103-2	3759788	3786492	3778632	3774970	0.36	cps
Scandium	45-1	3930394	3895065	3790997	3872152	1.87	cps
Scandium	45-2	359581	364345	363924	362617	0.73	cps
Selenium	82-1	48290	49176	48943	48803	0.94	cps
Selenium	77-2	5301	5228	5524	5351	2.89	cps
Selenium	78-2	18749	18238	18188	18392	1.69	cps
Silicon	28-1	32443836	32591274	32606552	32547221	0.28	cps
Silver	107-1	494978	500100	502720	499266	0.79	cps
Silver	109-1	465799	476048	479676	473841	1.52	cps
Sodium	23-2	126399171	128732871	127320965	127484336	0.92	cps
Strontium	86-1	1602271	1633716	1615436	1617141	0.98	cps
Strontium	88-1	13768350	14237798	14164206	14056785	1.80	cps
Sulfur	34-1	2595151	2625693	2667356	2629400	1.38	cps
Terbium	159-1	7751127	7568276	7683774	7667726	1.21	cps
Terbium	159-2	5350487	5406142	5516025	5424218	1.55	cps
Thallium	203-1	2170433	2220481	2236827	2209247	1.57	cps
Thallium	205-1	5102438	5216831	5236361	5185210	1.40	cps
Tin	118-1	1729068	1745767	1790139	1754991	1.80	cps
Titanium	47-1	2080	2160	1970	2070	4.61	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MS Instrumnet Name : P7
Client Sample ID : MC0AX2MS Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:14:04 DataFile Name : 028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	6939670	6881611	6815082	6878788	0.91	cps
Vanadium	51-2	972584	978392	973654	974877	0.32	cps
Yttrium	89-1	10288518	10292430	10364860	10315270	0.42	cps
Yttrium	89-2	2868907	2848791	2824843	2847514	0.77	cps
Zinc	66-2	2319957	2326600	2325809	2324122	0.16	cps
Zirconium	90-1	4107844	4202245	4235528	4181872	1.58	cps
Zirconium	91-1	896845	919044	920704	912198	1.46	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSD Instrumnet Name : P7
Client Sample ID : MC0AX2MSD Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:16:54 DataFile Name : 029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1132329	1121248	1113407	1122328	0.85	cps
Antimony	121-1	2349844	2440689	2360048	2383527	2.09	cps
Arsenic	75-2	171167	171946	168605	170572	1.02	cps
Barium	135-1	2565018	2579647	2585164	2576610	0.40	cps
Barium	137-1	4339124	4431213	4433129	4401155	1.22	cps
Beryllium	9-1	301805	307652	306373	305277	1.01	cps
Bismuth	209-1	4758893	4844430	4803306	4802209	0.89	cps
Bismuth	209-2	3994093	4035530	3894820	3974814	1.82	cps
Bromine	81-1	131657	160015	174105	155259	13.93	cps
Bromine	81-2	37818	38427	39225	38490	1.83	cps
Cadmium	108-1	42910	44916	44488	44105	2.40	cps
Cadmium	106-1	63321	64814	66391	64842	2.37	cps
Cadmium	111-1	618746	634532	637664	630314	1.61	cps
Calcium	43-1	1841248	1877517	1881908	1866891	1.20	cps
Calcium	44-1	29449021	30413978	30262840	30041946	1.73	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1124669	1104924	1104348	1111313	1.04	cps
Cobalt	59-2	1804446	1738780	1766239	1769822	1.86	cps
Copper	63-2	12988494	12785696	12629211	12801134	1.41	cps
Dysprosium	156-1	120	80	87	96	22.43	cps
Dysprosium	156-2	183	227	260	223	17.21	cps
Erbium	164-1	110	93	150	118	24.73	cps
Erbium	164-2	80	70	83	78	8.92	cps
Gadolinium	160-1	120	143	103	122	16.44	cps
Gadolinium	160-2	523	500	517	513	2.34	cps
Holmium	165-1	7556935	7486993	7770060	7604663	1.94	cps
Holmium	165-2	5438750	5386784	5318653	5381396	1.12	cps
Indium	115-1	6287301	6398029	6413697	6366342	1.08	cps
Indium	115-2	2354591	2344943	2320457	2339997	0.75	cps
Iron	56-2	47175906	46298518	46104033	46526152	1.23	cps
Iron	57-2	1269371	1251389	1241837	1254199	1.11	cps
Iron	54-2	2672605	2635941	2573370	2627305	1.91	cps
Krypton	83-1	420	517	450	462	10.70	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSD Instrumnet Name : P7
Client Sample ID : MC0AX2MSD Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:16:54 DataFile Name : 029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	8999921	9190115	9196173	9128737	1.22	cps
Lead	207-1	7734036	8200767	8115031	8016611	3.10	cps
Lead	208-1	35474586	37107612	36991609	36524602	2.49	cps
Lithium	6-1	592998	592594	592319	592637	0.06	cps
Magnesium	24-2	15724688	15418115	15194721	15445841	1.72	cps
Manganese	55-2	9439407	9178109	9209341	9275619	1.54	cps
Molybdenum	94-1	4199414	4306728	4301031	4269058	1.41	cps
Molybdenum	95-1	4739595	4830969	4783372	4784645	0.96	cps
Molybdenum	96-1	5292460	5339759	5422722	5351647	1.23	cps
Molybdenum	97-1	2862072	2969259	2978745	2936692	2.21	cps
Molybdenum	98-1	7469089	7716124	7660988	7615400	1.70	cps
Neodymium	150-1	150	107	110	122	19.73	cps
Neodymium	150-2	50	37	40	42	16.43	cps
Nickel	60-2	460505	448602	448177	452428	1.55	cps
Phosphorus	31-2	9059	8796	8899	8918	1.49	cps
Potassium	39-2	9521485	9371696	9174086	9355756	1.86	cps
Rhodium	103-1	6075097	6235054	6208860	6173003	1.39	cps
Rhodium	103-2	3814353	3848636	3728400	3797130	1.63	cps
Scandium	45-1	3894911	3907425	3951219	3917852	0.75	cps
Scandium	45-2	373414	369803	365403	369540	1.09	cps
Selenium	82-1	49791	50911	50482	50395	1.12	cps
Selenium	77-2	5348	5298	5628	5424	3.28	cps
Selenium	78-2	18412	18689	18709	18603	0.89	cps
Silicon	28-1	32380947	33185652	32625324	32730641	1.26	cps
Silver	107-1	504412	515026	513674	511037	1.13	cps
Silver	109-1	477149	490371	491478	486333	1.64	cps
Sodium	23-2	129187908	129902775	129638938	129576540	0.28	cps
Strontium	86-1	1625845	1659907	1663062	1649605	1.25	cps
Strontium	88-1	14085951	14396288	14401220	14294486	1.26	cps
Sulfur	34-1	2640414	2659942	2697563	2665973	1.09	cps
Terbium	159-1	7881289	7798633	7844805	7841576	0.53	cps
Terbium	159-2	5401298	5523348	5531817	5485488	1.33	cps
Thallium	203-1	2218949	2268757	2282865	2256857	1.49	cps
Thallium	205-1	5282881	5380741	5278208	5313943	1.09	cps
Tin	118-1	1750601	1766908	1817329	1778279	1.96	cps
Titanium	47-1	1997	2217	1983	2066	6.34	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSD Instrumnet Name : P7
Client Sample ID : MC0AX2MSD Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:16:54 DataFile Name : 029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	6965019	7108130	7131444	7068198	1.27	cps
Vanadium	51-2	1001434	987983	980039	989819	1.09	cps
Yttrium	89-1	10358584	10473334	10415902	10415940	0.55	cps
Yttrium	89-2	2900207	2858670	2846166	2868348	0.99	cps
Zinc	66-2	2368531	2287667	2244038	2300079	2.75	cps
Zirconium	90-1	4209895	4327197	4361894	4299662	1.85	cps
Zirconium	91-1	921214	949975	949253	940147	1.74	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV02 Instrumnet Name : P7
Client Sample ID : CCV02 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:19:43 DataFile Name : 030CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5850170	5782952	5906113	5846412	1.05	cps
Antimony	121-1	2167219	2223921	2212210	2201116	1.36	cps
Arsenic	75-2	134783	134296	136391	135157	0.81	cps
Barium	135-1	2640874	2733607	2740571	2705017	2.06	cps
Barium	137-1	4460066	4660272	4565807	4562048	2.20	cps
Beryllium	9-1	277933	287842	286838	284204	1.92	cps
Bismuth	209-1	4167749	4166750	4205606	4180035	0.53	cps
Bismuth	209-2	3519996	3434646	3517727	3490790	1.39	cps
Bromine	81-1	56906	52741	46871	52173	9.66	cps
Bromine	81-2	6281	5694	5808	5928	5.25	cps
Cadmium	108-1	41282	43198	43843	42774	3.11	cps
Cadmium	106-1	60061	61065	62270	61132	1.81	cps
Cadmium	111-1	579824	598932	596909	591888	1.77	cps
Calcium	43-1	2980000	3127575	3115120	3074232	2.66	cps
Calcium	44-1	49423378	50762198	50394711	50193429	1.38	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1087751	1096927	1071617	1085431	1.18	cps
Cobalt	59-2	1686876	1712247	1663590	1687571	1.44	cps
Copper	63-2	12653448	12747503	12842655	12747869	0.74	cps
Dysprosium	156-1	133	90	200	141	39.27	cps
Dysprosium	156-2	330	333	387	350	9.09	cps
Erbium	164-1	330	300	263	298	11.21	cps
Erbium	164-2	233	210	273	239	13.41	cps
Gadolinium	160-1	173	140	203	172	18.40	cps
Gadolinium	160-2	520	563	510	531	5.34	cps
Holmium	165-1	6699958	6692409	6806787	6733051	0.95	cps
Holmium	165-2	4838723	4863391	4905806	4869306	0.70	cps
Indium	115-1	5493297	5537629	5440012	5490313	0.89	cps
Indium	115-2	2051161	2066499	2096722	2071461	1.12	cps
Iron	56-2	247829783	250771396	247400516	248667232	0.74	cps
Iron	57-2	6280929	6236077	6229453	6248820	0.45	cps
Iron	54-2	13641284	13779433	13876796	13765838	0.86	cps
Krypton	83-1	440	533	483	486	9.62	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV02 Instrumnet Name : P7
Client Sample ID : CCV02 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:19:43 DataFile Name : 030CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	8470093	8666679	8672987	8603253	1.34	cps
Lead	207-1	7411219	7587288	7464613	7487707	1.21	cps
Lead	208-1	33850196	34420942	34140095	34137078	0.84	cps
Lithium	6-1	521965	524711	517626	521434	0.69	cps
Magnesium	24-2	51049189	50828178	50922496	50933288	0.22	cps
Manganese	55-2	8842877	8919968	8946898	8903247	0.61	cps
Molybdenum	94-1	8155226	8267812	8397621	8273553	1.47	cps
Molybdenum	95-1	11616134	11878570	11681415	11725373	1.17	cps
Molybdenum	96-1	12716395	13037824	13202338	12985519	1.90	cps
Molybdenum	97-1	7286370	7357582	7513266	7385739	1.57	cps
Molybdenum	98-1	18607643	18864901	19024771	18832438	1.12	cps
Neodymium	150-1	147	147	143	146	1.32	cps
Neodymium	150-2	70	73	53	66	16.35	cps
Nickel	60-2	427285	424363	422687	424778	0.55	cps
Phosphorus	31-2	60894	61142	61979	61338	0.93	cps
Potassium	39-2	28453630	29459133	28681881	28864882	1.83	cps
Rhodium	103-1	5349927	5249516	5280817	5293420	0.97	cps
Rhodium	103-2	3348516	3337778	3313847	3333380	0.53	cps
Scandium	45-1	3455054	3455572	3403314	3437980	0.87	cps
Scandium	45-2	320882	328820	322469	324057	1.30	cps
Selenium	82-1	45082	45826	46063	45657	1.12	cps
Selenium	77-2	4828	5208	5108	5048	3.90	cps
Selenium	78-2	16906	16583	16516	16668	1.25	cps
Silicon	28-1	16713728	17497263	16886924	17032638	2.42	cps
Silver	107-1	2948590	2948590	2948719	2948633	0.00	cps
Silver	109-1	2799387	2845828	2887093	2844103	1.54	cps
Sodium	23-2	81614192	80021444	80398494	80678043	1.03	cps
Strontium	86-1	740497	764248	762856	755867	1.76	cps
Strontium	88-1	6563017	6734173	6734089	6677093	1.48	cps
Sulfur	34-1	355100	361179	358990	358423	0.86	cps
Terbium	159-1	6891891	6868608	6922986	6894495	0.40	cps
Terbium	159-2	4978045	4870359	4851920	4900108	1.39	cps
Thallium	203-1	2069802	2134617	2143973	2116130	1.91	cps
Thallium	205-1	4941482	5063943	5127395	5044274	1.87	cps
Tin	118-1	1836037	1860420	1901648	1866035	1.78	cps
Titanium	47-1	3023352	3119000	3090338	3077563	1.59	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV02 Instrumnet Name : P7
Client Sample ID : CCV02 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:19:43 DataFile Name : 030CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	6555278	6848038	6914321	6772546	2.82	cps
Vanadium	51-2	925108	916013	926344	922488	0.61	cps
Yttrium	89-1	9060994	9017109	9102694	9060266	0.47	cps
Yttrium	89-2	2526027	2505145	2520827	2517333	0.43	cps
Zinc	66-2	2294429	2290024	2289398	2291284	0.12	cps
Zirconium	90-1	4003656	4158435	4121167	4094419	1.97	cps
Zirconium	91-1	890535	911171	915776	905827	1.48	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB02 Instrumnet Name : P7
Client Sample ID : CCB02 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:22:32 DataFile Name : 031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	573	713	537	608	15.34	cps
Antimony	121-1	807	750	653	737	10.53	cps
Arsenic	75-2	13	7	17	12	41.65	cps
Barium	135-1	90	50	70	70	28.57	cps
Barium	137-1	103	87	97	96	8.78	cps
Beryllium	9-1	17	10	13	13	25.03	cps
Bismuth	209-1	4358345	4395661	4344005	4366004	0.61	cps
Bismuth	209-2	3734734	3639249	3578394	3650792	2.16	cps
Bromine	81-1	20845	19423	18028	19432	7.25	cps
Bromine	81-2	1663	1627	1440	1577	7.60	cps
Cadmium	108-1	17	10	10	12	31.50	cps
Cadmium	106-1	2190	2184	1960	2111	6.20	cps
Cadmium	111-1	1618	1591	1422	1544	6.90	cps
Calcium	43-1	260	213	233	236	9.94	cps
Calcium	44-1	20889	20038	20091	20339	2.34	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1430	1647	1470	1516	7.61	cps
Cobalt	59-2	83	60	77	73	16.39	cps
Copper	63-2	1623	1570	1593	1596	1.68	cps
Dysprosium	156-1	0	7	7	4	86.60	cps
Dysprosium	156-2	0	0	0	0	0.00	cps
Erbium	164-1	40	30	37	36	14.32	cps
Erbium	164-2	27	17	30	24	28.38	cps
Gadolinium	160-1	20	17	57	31	71.34	cps
Gadolinium	160-2	400	437	463	433	7.34	cps
Holmium	165-1	6496613	6534396	6488226	6506412	0.38	cps
Holmium	165-2	4796918	4789216	4723659	4769931	0.84	cps
Indium	115-1	5625591	5638034	5532011	5598545	1.04	cps
Indium	115-2	2120947	2125082	2099496	2115175	0.65	cps
Iron	56-2	16059	15678	15608	15782	1.54	cps
Iron	57-2	1670	1620	1650	1647	1.53	cps
Iron	54-2	1960	1943	1977	1960	0.85	cps
Krypton	83-1	413	420	440	424	3.27	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB02 Instrumnet Name : P7
Client Sample ID : CCB02 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:22:32 DataFile Name : 031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	780	643	687	703	9.93	cps
Lead	207-1	773	600	560	644	17.60	cps
Lead	208-1	3137	2580	2717	2811	10.32	cps
Lithium	6-1	526784	524108	522406	524432	0.42	cps
Magnesium	24-2	623	590	657	623	5.35	cps
Manganese	55-2	493	467	483	481	2.80	cps
Molybdenum	94-1	843	657	663	721	14.69	cps
Molybdenum	95-1	720	667	590	659	9.92	cps
Molybdenum	96-1	877	750	697	774	11.94	cps
Molybdenum	97-1	460	403	373	412	10.68	cps
Molybdenum	98-1	1137	1037	930	1034	9.99	cps
Neodymium	150-1	0	7	0	2	173.21	cps
Neodymium	150-2	0	3	0	1	173.21	cps
Nickel	60-2	353	333	347	344	2.96	cps
Phosphorus	31-2	607	547	513	556	8.51	cps
Potassium	39-2	63036	61283	62009	62109	1.42	cps
Rhodium	103-1	5513113	5510955	5433160	5485742	0.83	cps
Rhodium	103-2	3434030	3448961	3486104	3456365	0.78	cps
Scandium	45-1	3451802	3372035	3345618	3389818	1.63	cps
Scandium	45-2	317091	317581	318623	317765	0.25	cps
Selenium	82-1	502	542	490	511	5.35	cps
Selenium	77-2	3	3	3	3	0.00	cps
Selenium	78-2	393	407	353	384	7.22	cps
Silicon	28-1	752801	722139	730240	735060	2.16	cps
Silver	107-1	980	1070	910	987	8.13	cps
Silver	109-1	897	850	833	860	3.82	cps
Sodium	23-2	65114	61646	62539	63100	2.85	cps
Strontium	86-1	697	713	667	692	3.42	cps
Strontium	88-1	330	263	230	274	18.55	cps
Sulfur	34-1	171433	169137	172127	170899	0.92	cps
Terbium	159-1	6709905	6852403	6616489	6726266	1.77	cps
Terbium	159-2	4805879	4811719	4834833	4817477	0.32	cps
Thallium	203-1	690	580	627	632	8.73	cps
Thallium	205-1	1540	1317	1347	1401	8.65	cps
Tin	118-1	1847	1730	1570	1716	8.10	cps
Titanium	47-1	120	117	110	116	4.41	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB02 Instrumnet Name : P7
Client Sample ID : CCB02 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:22:32 DataFile Name : 031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	190	117	90	132	39.16	cps
Vanadium	51-2	40	23	17	27	45.07	cps
Yttrium	89-1	8977528	9024347	8898903	8966926	0.71	cps
Yttrium	89-2	2522131	2524854	2493212	2513399	0.70	cps
Zinc	66-2	1353	1463	1403	1407	3.92	cps
Zirconium	90-1	910	820	833	854	5.68	cps
Zirconium	91-1	170	203	183	186	9.04	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07A Instrumnet Name : P7
Client Sample ID : MC0AX2A Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:25:49 DataFile Name : 032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1150458	1124924	1158091	1144491	1.52	cps
Antimony	121-1	2379579	2310145	2361030	2350251	1.53	cps
Arsenic	75-2	169228	166605	166965	167599	0.85	cps
Barium	135-1	2531222	2590536	2553926	2558561	1.17	cps
Barium	137-1	4330888	4365785	4346568	4347747	0.40	cps
Beryllium	9-1	310027	307955	310785	309589	0.47	cps
Bismuth	209-1	4830507	4788820	4777561	4798963	0.58	cps
Bismuth	209-2	4041857	3969660	4053137	4021551	1.13	cps
Bromine	81-1	85434	108839	126756	107010	19.36	cps
Bromine	81-2	28484	29753	30582	29606	3.57	cps
Cadmium	108-1	43000	43662	44120	43594	1.29	cps
Cadmium	106-1	63994	63073	64895	63987	1.42	cps
Cadmium	111-1	610933	624560	622585	619359	1.19	cps
Calcium	43-1	1856337	1858485	1878598	1864473	0.66	cps
Calcium	44-1	29964959	30408370	30023881	30132403	0.80	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1105233	1111606	1109893	1108911	0.30	cps
Cobalt	59-2	1796164	1800622	1788511	1795099	0.34	cps
Copper	63-2	12963700	12854469	12718596	12845588	0.96	cps
Dysprosium	156-1	97	83	103	94	10.78	cps
Dysprosium	156-2	237	230	250	239	4.26	cps
Erbium	164-1	157	120	157	144	14.66	cps
Erbium	164-2	93	107	73	91	18.42	cps
Gadolinium	160-1	100	120	120	113	10.19	cps
Gadolinium	160-2	520	413	503	479	11.98	cps
Holmium	165-1	7474564	7488918	7443892	7469125	0.31	cps
Holmium	165-2	5515898	5454610	5463341	5477950	0.61	cps
Indium	115-1	6190661	6300228	6274294	6255061	0.92	cps
Indium	115-2	2346940	2400734	2386386	2378020	1.17	cps
Iron	56-2	46900341	46832218	45850204	46527588	1.26	cps
Iron	57-2	1256961	1254892	1251109	1254321	0.24	cps
Iron	54-2	2594029	2648309	2579684	2607341	1.39	cps
Krypton	83-1	460	443	360	421	12.72	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07A Instrumnet Name : P7
Client Sample ID : MC0AX2A Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:25:49 DataFile Name : 032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	9110257	9487324	9344590	9314057	2.04	cps
Lead	207-1	8067913	8233235	8232186	8177778	1.16	cps
Lead	208-1	36753649	37282418	37071184	37035750	0.72	cps
Lithium	6-1	602865	591818	595412	596699	0.94	cps
Magnesium	24-2	15526044	15387014	15738312	15550457	1.14	cps
Manganese	55-2	9239614	9282563	9211724	9244634	0.39	cps
Molybdenum	94-1	4146149	4306973	4284413	4245845	2.05	cps
Molybdenum	95-1	4645188	4732596	4735628	4704471	1.09	cps
Molybdenum	96-1	5353693	5326941	5308330	5329655	0.43	cps
Molybdenum	97-1	2906614	2940341	2942885	2929947	0.69	cps
Molybdenum	98-1	7403533	7540626	7543453	7495871	1.07	cps
Neodymium	150-1	120	133	113	122	8.34	cps
Neodymium	150-2	43	60	40	48	22.43	cps
Nickel	60-2	450216	450179	450020	450139	0.02	cps
Phosphorus	31-2	8939	8849	9059	8949	1.18	cps
Potassium	39-2	9301107	9349183	9298420	9316237	0.31	cps
Rhodium	103-1	6111888	6102168	6078816	6097624	0.28	cps
Rhodium	103-2	3821038	3779017	3784351	3794802	0.60	cps
Scandium	45-1	3909934	3860759	3936056	3902250	0.98	cps
Scandium	45-2	367723	366602	368053	367460	0.21	cps
Selenium	82-1	48502	49354	49568	49141	1.15	cps
Selenium	77-2	5308	5251	5201	5253	1.02	cps
Selenium	78-2	18642	18325	18188	18385	1.27	cps
Silicon	28-1	33437094	32680026	33613974	33243698	1.49	cps
Silver	107-1	496892	509130	510826	505616	1.50	cps
Silver	109-1	475716	480413	478696	478275	0.50	cps
Sodium	23-2	131601815	133134525	130625255	131787198	0.96	cps
Strontium	86-1	1607779	1675176	1642493	1641816	2.05	cps
Strontium	88-1	14092006	14353461	14316086	14253851	0.99	cps
Sulfur	34-1	2618924	2611416	2677940	2636093	1.38	cps
Terbium	159-1	7830854	7782503	7983548	7865635	1.33	cps
Terbium	159-2	5466360	5426065	5531404	5474610	0.97	cps
Thallium	203-1	2232749	2227468	2254300	2238172	0.64	cps
Thallium	205-1	5299394	5344426	5282483	5308768	0.60	cps
Tin	118-1	1766314	1738957	1780705	1761992	1.20	cps
Titanium	47-1	2170	2270	2144	2195	3.04	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07A Instrumnet Name : P7
Client Sample ID : MC0AX2A Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:25:49 DataFile Name : 032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	6886587	7329941	7144766	7120431	3.13	cps
Vanadium	51-2	984391	986352	989221	986655	0.25	cps
Yttrium	89-1	10246019	10419619	10281997	10315878	0.89	cps
Yttrium	89-2	2911945	2855768	2894045	2887253	0.99	cps
Zinc	66-2	2355554	2369214	2305594	2343454	1.43	cps
Zirconium	90-1	4165683	4245717	4201377	4204259	0.95	cps
Zirconium	91-1	910039	933171	933487	925566	1.45	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-08 Instrumnet Name : P7
Client Sample ID : MC0AX3 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:28:40 DataFile Name : 033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3064	3247	3137	3149	2.93	cps
Antimony	121-1	18102	18061	17704	17956	1.22	cps
Arsenic	75-2	13803	13773	13973	13850	0.78	cps
Barium	135-1	17384	17050	17394	17276	1.13	cps
Barium	137-1	29387	29888	29330	29535	1.04	cps
Beryllium	9-1	81	78	48	69	26.58	cps
Bismuth	209-1	5014048	5042893	4930716	4995886	1.17	cps
Bismuth	209-2	4240133	4225648	4148310	4204697	1.17	cps
Bromine	81-1	143348	188880	213141	181790	19.49	cps
Bromine	81-2	45460	46185	47489	46378	2.22	cps
Cadmium	108-1	80	50	50	60	28.87	cps
Cadmium	106-1	2730	2587	2560	2626	3.48	cps
Cadmium	111-1	2015	1899	1891	1935	3.60	cps
Calcium	43-1	1359477	1392526	1370157	1374053	1.23	cps
Calcium	44-1	22355606	22345785	22166222	22289204	0.48	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2867	2770	2927	2855	2.77	cps
Cobalt	59-2	2217	2244	2244	2235	0.69	cps
Copper	63-2	6798	7362	6952	7037	4.14	cps
Dysprosium	156-1	60	33	30	41	40.00	cps
Dysprosium	156-2	27	37	33	32	15.80	cps
Erbium	164-1	117	77	103	99	20.59	cps
Erbium	164-2	83	63	57	68	20.47	cps
Gadolinium	160-1	60	107	50	72	41.88	cps
Gadolinium	160-2	527	507	523	519	2.07	cps
Holmium	165-1	7940216	8008976	7749300	7899497	1.70	cps
Holmium	165-2	5725629	5669641	5670461	5688577	0.56	cps
Indium	115-1	6823173	6772413	6578638	6724741	1.92	cps
Indium	115-2	2489252	2526728	2505883	2507288	0.75	cps
Iron	56-2	198543	195757	193473	195924	1.30	cps
Iron	57-2	52030	52297	51398	51908	0.89	cps
Iron	54-2	12569	12075	12542	12395	2.24	cps
Krypton	83-1	400	493	427	440	10.93	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-08 Instrumnet Name : P7
Client Sample ID : MC0AX3 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:28:40 DataFile Name : 033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2154	2210	2130	2165	1.90	cps
Lead	207-1	1840	1843	1813	1832	0.90	cps
Lead	208-1	8575	8504	8471	8517	0.62	cps
Lithium	6-1	622052	615242	607047	614780	1.22	cps
Magnesium	24-2	4493063	4530046	4397587	4473566	1.53	cps
Manganese	55-2	572799	569297	568528	570208	0.40	cps
Molybdenum	94-1	143948	144563	141486	143332	1.14	cps
Molybdenum	95-1	243517	248728	242507	244918	1.36	cps
Molybdenum	96-1	264399	267978	264942	265773	0.73	cps
Molybdenum	97-1	152290	157259	154031	154527	1.63	cps
Molybdenum	98-1	393393	397687	391826	394302	0.77	cps
Neodymium	150-1	27	57	43	42	35.60	cps
Neodymium	150-2	7	17	23	16	53.90	cps
Nickel	60-2	2410	2594	2430	2478	4.06	cps
Phosphorus	31-2	4557	4431	4447	4478	1.54	cps
Potassium	39-2	4243592	4230230	4255618	4243146	0.30	cps
Rhodium	103-1	6536899	6391661	6307112	6411890	1.81	cps
Rhodium	103-2	4013752	4063790	4006190	4027911	0.78	cps
Scandium	45-1	4132939	4109353	3954821	4065704	2.38	cps
Scandium	45-2	385745	384228	383306	384426	0.32	cps
Selenium	82-1	862	745	803	803	7.27	cps
Selenium	77-2	13	27	7	16	65.47	cps
Selenium	78-2	450	433	470	451	4.07	cps
Silicon	28-1	36853124	37350739	36267349	36823737	1.47	cps
Silver	107-1	617	550	360	509	26.17	cps
Silver	109-1	580	430	343	451	26.54	cps
Sodium	23-2	130753471	128681075	128322158	129252235	1.02	cps
Strontium	86-1	795951	800516	795047	797172	0.37	cps
Strontium	88-1	6950604	7105185	7076014	7043934	1.17	cps
Sulfur	34-1	2973288	3035245	2968708	2992413	1.24	cps
Terbium	159-1	8134290	8229039	8126554	8163294	0.70	cps
Terbium	159-2	5871437	5772050	5720037	5787841	1.33	cps
Thallium	203-1	1440	1200	1200	1280	10.83	cps
Thallium	205-1	3320	3014	3037	3124	5.47	cps
Tin	118-1	7036	6448	6278	6587	6.04	cps
Titanium	47-1	753	823	913	830	9.66	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-08 Instrumnet Name : P7
Client Sample ID : MC0AX3 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:28:40 DataFile Name : 033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	2447	2337	2454	2412	2.72	cps
Vanadium	51-2	5234	5481	5418	5378	2.38	cps
Yttrium	89-1	11080421	10879857	10638946	10866408	2.03	cps
Yttrium	89-2	2997677	3061581	3040828	3033362	1.07	cps
Zinc	66-2	3827	3827	3824	3826	0.05	cps
Zirconium	90-1	10347	8456	7752	8852	15.16	cps
Zirconium	91-1	2377	2020	1903	2100	11.74	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-06DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX1DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:31:51 DataFile Name : 034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	933	1037	1000	990	5.29	cps
Antimony	121-1	3410	3257	3437	3368	2.88	cps
Arsenic	75-2	2540	2590	2330	2487	5.55	cps
Barium	135-1	3107	3097	2984	3063	2.24	cps
Barium	137-1	5164	5158	5688	5337	5.70	cps
Beryllium	9-1	30	20	20	24	24.43	cps
Bismuth	209-1	4360613	4380593	4417951	4386386	0.66	cps
Bismuth	209-2	3730905	3699812	3728428	3719715	0.46	cps
Bromine	81-1	79734	83183	82774	81897	2.30	cps
Bromine	81-2	14334	14404	13947	14228	1.73	cps
Cadmium	108-1	27	27	17	23	24.74	cps
Cadmium	106-1	2157	2130	2357	2215	5.59	cps
Cadmium	111-1	1548	1519	1675	1581	5.24	cps
Calcium	43-1	244043	251369	252923	249445	1.90	cps
Calcium	44-1	3863747	3897504	3937420	3899557	0.95	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1720	1873	1687	1760	5.66	cps
Cobalt	59-2	453	427	417	432	4.38	cps
Copper	63-2	2457	2384	2377	2406	1.85	cps
Dysprosium	156-1	13	7	10	10	33.30	cps
Dysprosium	156-2	7	0	3	3	100.05	cps
Erbium	164-1	37	23	37	32	23.90	cps
Erbium	164-2	37	27	27	30	19.24	cps
Gadolinium	160-1	60	53	47	53	12.50	cps
Gadolinium	160-2	340	403	397	380	9.16	cps
Holmium	165-1	7002317	6761112	6723844	6829091	2.21	cps
Holmium	165-2	4933390	4890460	4958172	4927341	0.70	cps
Indium	115-1	5914936	5859989	5776561	5850495	1.19	cps
Indium	115-2	2180955	2212472	2191138	2194855	0.73	cps
Iron	56-2	48926	48475	49274	48892	0.82	cps
Iron	57-2	10277	10540	10600	10473	1.64	cps
Iron	54-2	3861	4007	3670	3846	4.39	cps
Krypton	83-1	423	460	447	443	4.19	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-06DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX1DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:31:51 DataFile Name : 034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	700	607	570	626	10.72	cps
Lead	207-1	600	503	627	577	11.25	cps
Lead	208-1	2677	2533	2637	2616	2.83	cps
Lithium	6-1	535571	535204	536838	535871	0.16	cps
Magnesium	24-2	781859	769307	777272	776146	0.82	cps
Manganese	55-2	101896	101889	103729	102504	1.03	cps
Molybdenum	94-1	24714	25499	25412	25208	1.71	cps
Molybdenum	95-1	43274	43227	43869	43457	0.82	cps
Molybdenum	96-1	44996	48524	48624	47381	4.36	cps
Molybdenum	97-1	26334	28097	27309	27247	3.24	cps
Molybdenum	98-1	68490	70446	69558	69498	1.41	cps
Neodymium	150-1	3	10	13	9	57.30	cps
Neodymium	150-2	0	10	10	7	86.60	cps
Nickel	60-2	743	650	727	707	7.04	cps
Phosphorus	31-2	1363	1287	1350	1333	3.07	cps
Potassium	39-2	838746	830684	840062	836497	0.61	cps
Rhodium	103-1	5812413	5934263	5779253	5841976	1.40	cps
Rhodium	103-2	3541353	3637078	3616147	3598193	1.40	cps
Scandium	45-1	3518677	3498539	3447066	3488094	1.06	cps
Scandium	45-2	334386	332052	333999	333479	0.38	cps
Selenium	82-1	522	554	527	534	3.14	cps
Selenium	77-2	3	3	7	4	43.40	cps
Selenium	78-2	327	357	297	327	9.18	cps
Silicon	28-1	7284045	7449868	7089624	7274512	2.48	cps
Silver	107-1	163	200	193	186	10.52	cps
Silver	109-1	157	170	167	164	4.22	cps
Sodium	23-2	23227852	23049195	23390315	23222454	0.73	cps
Strontium	86-1	141471	146573	144655	144233	1.79	cps
Strontium	88-1	1198933	1252921	1261623	1237825	2.74	cps
Sulfur	34-1	636884	664231	663173	654763	2.37	cps
Terbium	159-1	7267600	7290902	7349731	7302744	0.58	cps
Terbium	159-2	4996541	4981839	4961991	4980124	0.35	cps
Thallium	203-1	577	560	590	576	2.61	cps
Thallium	205-1	1253	1393	1257	1301	6.14	cps
Tin	118-1	1683	1907	1883	1825	6.73	cps
Titanium	47-1	207	213	233	218	6.37	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-06DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX1DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:31:51 DataFile Name : 034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	417	460	490	456	8.09	cps
Vanadium	51-2	970	1107	893	990	10.92	cps
Yttrium	89-1	9207695	9397858	9402651	9336068	1.19	cps
Yttrium	89-2	2671816	2623611	2647200	2647543	0.91	cps
Zinc	66-2	1940	1663	1853	1819	7.78	cps
Zirconium	90-1	1483	1610	1417	1503	6.53	cps
Zirconium	91-1	357	373	317	349	8.35	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:35:08 DataFile Name : 035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	997	2119	1063	1393	45.20	cps
Antimony	121-1	3274	3184	3264	3240	1.52	cps
Arsenic	75-2	2417	2577	2344	2446	4.88	cps
Barium	135-1	2857	3004	3164	3008	5.10	cps
Barium	137-1	5311	5344	5364	5340	0.50	cps
Beryllium	9-1	24	30	37	30	22.06	cps
Bismuth	209-1	4299530	4351331	4229477	4293446	1.42	cps
Bismuth	209-2	3814236	3743642	3836130	3798003	1.27	cps
Bromine	81-1	43223	47881	48988	46697	6.55	cps
Bromine	81-2	8893	8886	9093	8957	1.31	cps
Cadmium	108-1	0	50	23	24	102.35	cps
Cadmium	106-1	2367	2384	2217	2322	3.95	cps
Cadmium	111-1	1693	1673	1572	1646	3.95	cps
Calcium	43-1	241674	245405	244221	243767	0.78	cps
Calcium	44-1	3744715	3922764	3981875	3883118	3.18	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2027	1883	2000	1970	3.87	cps
Cobalt	59-2	463	420	377	420	10.32	cps
Copper	63-2	2610	2464	2584	2552	3.06	cps
Dysprosium	156-1	10	17	20	16	32.73	cps
Dysprosium	156-2	23	7	10	13	66.12	cps
Erbium	164-1	47	37	37	40	14.43	cps
Erbium	164-2	33	43	30	36	19.51	cps
Gadolinium	160-1	37	63	30	43	40.70	cps
Gadolinium	160-2	373	490	400	421	14.52	cps
Holmium	165-1	6583693	6557729	7104990	6748804	4.57	cps
Holmium	165-2	5031431	5005886	5056804	5031374	0.51	cps
Indium	115-1	5619984	5706444	6073631	5800020	4.15	cps
Indium	115-2	2192290	2245737	2217919	2218648	1.20	cps
Iron	56-2	52742	52632	52926	52767	0.28	cps
Iron	57-2	10284	10390	10881	10518	3.03	cps
Iron	54-2	4011	4574	4044	4210	7.51	cps
Krypton	83-1	490	463	420	458	7.72	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:35:08 DataFile Name : 035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	790	780	807	792	1.70	cps
Lead	207-1	650	660	563	624	8.51	cps
Lead	208-1	3090	3007	2883	2993	3.47	cps
Lithium	6-1	523244	531503	546753	533833	2.23	cps
Magnesium	24-2	776108	773924	783727	777920	0.66	cps
Manganese	55-2	106410	106129	105414	105984	0.48	cps
Molybdenum	94-1	24514	24461	23996	24324	1.17	cps
Molybdenum	95-1	41469	42197	43341	42336	2.23	cps
Molybdenum	96-1	46447	47159	45474	46360	1.82	cps
Molybdenum	97-1	25809	25893	25900	25867	0.19	cps
Molybdenum	98-1	66367	66970	71116	68151	3.79	cps
Neodymium	150-1	13	17	30	20	44.10	cps
Neodymium	150-2	7	7	13	9	43.25	cps
Nickel	60-2	687	707	717	703	2.17	cps
Phosphorus	31-2	2187	2330	2164	2227	4.05	cps
Potassium	39-2	848652	853554	850417	850874	0.29	cps
Rhodium	103-1	5807728	5688036	5582801	5692855	1.98	cps
Rhodium	103-2	3606392	3611586	3650957	3622978	0.67	cps
Scandium	45-1	3378537	3446379	3627258	3484058	3.69	cps
Scandium	45-2	333172	330491	336886	333516	0.96	cps
Selenium	82-1	488	459	538	495	8.09	cps
Selenium	77-2	7	10	3	7	50.03	cps
Selenium	78-2	407	423	403	411	2.61	cps
Silicon	28-1	6986714	6957971	7412645	7119110	3.58	cps
Silver	107-1	100	110	147	119	20.67	cps
Silver	109-1	133	167	117	139	18.33	cps
Sodium	23-2	22917133	23243554	23293345	23151344	0.88	cps
Strontium	86-1	140572	142414	142344	141776	0.74	cps
Strontium	88-1	1204047	1222002	1213867	1213305	0.74	cps
Sulfur	34-1	647475	647448	639716	644880	0.69	cps
Terbium	159-1	7290489	7267243	6982490	7180074	2.39	cps
Terbium	159-2	5054299	5049436	5114066	5072600	0.71	cps
Thallium	203-1	487	447	443	459	5.26	cps
Thallium	205-1	1017	1090	1067	1058	3.54	cps
Tin	118-1	2044	1963	1977	1995	2.15	cps
Titanium	47-1	260	233	263	252	6.52	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:35:08 DataFile Name : 035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	533	480	550	521	7.02	cps
Vanadium	51-2	970	963	1010	981	2.57	cps
Yttrium	89-1	9026434	9100330	9338747	9155170	1.78	cps
Yttrium	89-2	2615330	2600381	2616259	2610657	0.34	cps
Zinc	66-2	2013	2144	1977	2045	4.28	cps
Zirconium	90-1	930	1080	927	979	8.95	cps
Zirconium	91-1	207	247	170	208	18.46	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DUPDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2DUPDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:38:22 DataFile Name : 036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1090	1247	1143	1160	6.87	cps
Antimony	121-1	3070	3164	3210	3148	2.26	cps
Arsenic	75-2	2564	2504	2437	2501	2.53	cps
Barium	135-1	3024	2930	3064	3006	2.28	cps
Barium	137-1	5414	5178	5514	5369	3.22	cps
Beryllium	9-1	34	20	14	22	45.37	cps
Bismuth	209-1	4321653	4519804	4407565	4416341	2.25	cps
Bismuth	209-2	3787451	3772112	3692028	3750530	1.37	cps
Bromine	81-1	34988	42622	43862	40491	11.87	cps
Bromine	81-2	8139	7615	7722	7825	3.54	cps
Cadmium	108-1	13	20	7	13	49.99	cps
Cadmium	106-1	2234	2167	2274	2225	2.42	cps
Cadmium	111-1	1591	1563	1627	1593	2.01	cps
Calcium	43-1	239478	255752	247590	247607	3.29	cps
Calcium	44-1	3860775	3947348	3888210	3898778	1.13	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1863	1943	1910	1906	2.11	cps
Cobalt	59-2	500	477	480	486	2.60	cps
Copper	63-2	2690	2530	2774	2665	4.64	cps
Dysprosium	156-1	10	13	10	11	17.30	cps
Dysprosium	156-2	3	10	27	13	90.16	cps
Erbium	164-1	87	20	47	51	65.65	cps
Erbium	164-2	27	33	10	23	51.50	cps
Gadolinium	160-1	50	37	57	48	21.31	cps
Gadolinium	160-2	453	380	427	420	8.84	cps
Holmium	165-1	7093571	6759930	6606263	6819922	3.65	cps
Holmium	165-2	4979236	4983182	4884055	4948825	1.13	cps
Indium	115-1	5913722	5714676	5615026	5747808	2.65	cps
Indium	115-2	2184515	2223120	2239388	2215674	1.27	cps
Iron	56-2	70817	70686	70237	70580	0.43	cps
Iron	57-2	10871	11241	11338	11150	2.21	cps
Iron	54-2	4971	5178	5124	5091	2.11	cps
Krypton	83-1	420	413	453	429	5.00	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DUPDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2DUPDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:38:22 DataFile Name : 036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	723	710	697	710	1.88	cps
Lead	207-1	607	617	570	598	4.11	cps
Lead	208-1	2880	2917	2763	2853	2.81	cps
Lithium	6-1	539763	546729	531321	539271	1.43	cps
Magnesium	24-2	779378	776209	779804	778464	0.25	cps
Manganese	55-2	106971	106628	105074	106224	0.95	cps
Molybdenum	94-1	24244	24778	25122	24714	1.79	cps
Molybdenum	95-1	43027	42796	41215	42346	2.33	cps
Molybdenum	96-1	45859	45865	46808	46177	1.18	cps
Molybdenum	97-1	26184	27706	26765	26885	2.86	cps
Molybdenum	98-1	68604	67586	66474	67555	1.58	cps
Neodymium	150-1	20	27	7	18	57.27	cps
Neodymium	150-2	10	7	10	9	21.63	cps
Nickel	60-2	827	820	810	819	1.02	cps
Phosphorus	31-2	2137	2160	2167	2155	0.73	cps
Potassium	39-2	850908	848327	849221	849486	0.15	cps
Rhodium	103-1	5865258	5523587	5660070	5682972	3.03	cps
Rhodium	103-2	3647290	3638675	3606006	3630657	0.60	cps
Scandium	45-1	3519728	3491434	3378733	3463299	2.15	cps
Scandium	45-2	334559	331073	332608	332746	0.53	cps
Selenium	82-1	513	674	513	567	16.39	cps
Selenium	77-2	13	3	3	7	86.65	cps
Selenium	78-2	390	403	397	397	1.68	cps
Silicon	28-1	7242102	7084771	7022791	7116555	1.59	cps
Silver	107-1	173	97	120	130	30.23	cps
Silver	109-1	77	147	100	108	33.07	cps
Sodium	23-2	23349609	22948292	22914444	23070782	1.05	cps
Strontium	86-1	142427	139442	140430	140766	1.08	cps
Strontium	88-1	1197098	1257107	1230442	1228216	2.45	cps
Sulfur	34-1	640761	634077	652390	642409	1.44	cps
Terbium	159-1	7311426	6765297	7112671	7063131	3.91	cps
Terbium	159-2	5050356	5038057	4907481	4998631	1.58	cps
Thallium	203-1	413	403	423	413	2.42	cps
Thallium	205-1	890	1043	930	954	8.33	cps
Tin	118-1	1953	1807	1957	1906	4.50	cps
Titanium	47-1	250	163	153	189	28.14	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07DUPDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2DUPDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:38:22 DataFile Name : 036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	433	500	427	453	8.94	cps
Vanadium	51-2	1063	933	970	989	6.78	cps
Yttrium	89-1	9158138	9326439	9120757	9201778	1.19	cps
Yttrium	89-2	2593078	2654031	2621948	2623019	1.16	cps
Zinc	66-2	2060	2220	2227	2169	4.35	cps
Zirconium	90-1	763	837	1213	938	25.75	cps
Zirconium	91-1	177	257	210	214	18.74	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07LDLX25 Instrumnet Name : P7
Client Sample ID : MC0AX2LDL Dilution Factor : 25
Date & Time Acquired : 2025-10-07 18:41:40 DataFile Name : 037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	570	770	713	684	15.06	cps
Antimony	121-1	660	693	727	693	4.81	cps
Arsenic	75-2	553	480	493	509	7.68	cps
Barium	135-1	640	663	633	646	2.44	cps
Barium	137-1	1050	1040	1027	1039	1.13	cps
Beryllium	9-1	7	10	13	10	33.09	cps
Bismuth	209-1	4251101	4410250	4408335	4356562	2.10	cps
Bismuth	209-2	3768637	3753631	3699042	3740437	0.98	cps
Bromine	81-1	21850	21429	20928	21402	2.16	cps
Bromine	81-2	2757	2634	2707	2699	2.30	cps
Cadmium	108-1	20	10	13	14	35.26	cps
Cadmium	106-1	2150	2107	2214	2157	2.49	cps
Cadmium	111-1	1524	1494	1583	1534	2.95	cps
Calcium	43-1	48293	47768	48869	48310	1.14	cps
Calcium	44-1	796547	809341	804200	803363	0.80	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1590	1510	1613	1571	3.45	cps
Cobalt	59-2	100	143	120	121	17.91	cps
Copper	63-2	1227	1353	1277	1286	4.96	cps
Dysprosium	156-1	7	7	3	6	34.70	cps
Dysprosium	156-2	3	13	7	8	65.47	cps
Erbium	164-1	43	33	53	43	23.08	cps
Erbium	164-2	33	20	37	30	29.40	cps
Gadolinium	160-1	30	43	43	39	19.79	cps
Gadolinium	160-2	363	417	450	410	10.66	cps
Holmium	165-1	6537942	6802460	6597476	6645959	2.09	cps
Holmium	165-2	4850027	4805839	4814951	4823606	0.48	cps
Indium	115-1	5586732	5674500	5624287	5628506	0.78	cps
Indium	115-2	2165203	2173230	2151372	2163268	0.51	cps
Iron	56-2	23261	23125	22821	23069	0.98	cps
Iron	57-2	3370	3357	3254	3327	1.92	cps
Iron	54-2	2490	2397	2330	2406	3.34	cps
Krypton	83-1	420	393	387	400	4.41	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07LDLX25 Instrumnet Name : P7
Client Sample ID : MC0AX2LDL Dilution Factor : 25
Date & Time Acquired : 2025-10-07 18:41:40 DataFile Name : 037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	550	500	567	539	6.44	cps
Lead	207-1	363	387	443	398	10.34	cps
Lead	208-1	1983	2070	2110	2055	3.15	cps
Lithium	6-1	530762	531089	527288	529713	0.40	cps
Magnesium	24-2	154631	153470	152335	153479	0.75	cps
Manganese	55-2	21252	21112	21011	21125	0.57	cps
Molybdenum	94-1	5024	5171	4824	5006	3.48	cps
Molybdenum	95-1	8636	8536	8299	8490	2.04	cps
Molybdenum	96-1	9056	9130	8996	9061	0.74	cps
Molybdenum	97-1	5414	5434	5404	5418	0.28	cps
Molybdenum	98-1	13510	13847	13913	13757	1.57	cps
Neodymium	150-1	7	10	7	8	24.71	cps
Neodymium	150-2	0	3	3	2	86.60	cps
Nickel	60-2	390	437	437	421	6.40	cps
Phosphorus	31-2	900	910	810	873	6.31	cps
Potassium	39-2	212129	209733	210430	210764	0.58	cps
Rhodium	103-1	5593925	5635296	5579310	5602844	0.52	cps
Rhodium	103-2	3589760	3545669	3526703	3554044	0.91	cps
Scandium	45-1	3333076	3405136	3390926	3376379	1.13	cps
Scandium	45-2	326591	322226	320928	323248	0.92	cps
Selenium	82-1	549	628	570	582	6.98	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	307	367	320	331	9.52	cps
Silicon	28-1	2117015	2145412	2147852	2136760	0.80	cps
Silver	107-1	127	153	130	137	10.63	cps
Silver	109-1	107	83	123	104	19.24	cps
Sodium	23-2	4615868	4617053	4593768	4608896	0.28	cps
Strontium	86-1	27780	28084	28528	28130	1.34	cps
Strontium	88-1	235704	240926	241786	239472	1.37	cps
Sulfur	34-1	253155	256530	255930	255205	0.71	cps
Terbium	159-1	6828669	6843315	6856159	6842714	0.20	cps
Terbium	159-2	5016651	4871824	4845330	4911268	1.88	cps
Thallium	203-1	273	313	210	266	19.62	cps
Thallium	205-1	643	660	677	660	2.52	cps
Tin	118-1	1017	1070	1043	1043	2.56	cps
Titanium	47-1	117	87	73	92	24.07	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07LDLX25 Instrumnet Name : P7
Client Sample ID : MC0AX2LDL Dilution Factor : 25
Date & Time Acquired : 2025-10-07 18:41:40 DataFile Name : 037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	140	103	147	130	17.95	cps
Vanadium	51-2	190	183	210	194	7.14	cps
Yttrium	89-1	9048604	8979582	9040192	9022793	0.42	cps
Yttrium	89-2	2606396	2556659	2607864	2590306	1.13	cps
Zinc	66-2	1667	1497	1373	1512	9.74	cps
Zirconium	90-1	600	577	403	527	20.40	cps
Zirconium	91-1	87	123	73	94	27.42	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2MSDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:44:54 DataFile Name : 038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	212408	210951	212323	211894	0.39	cps
Antimony	121-1	413564	425376	423411	420783	1.50	cps
Arsenic	75-2	31634	31661	31150	31481	0.91	cps
Barium	135-1	440838	453445	454411	449565	1.68	cps
Barium	137-1	768727	786139	788613	781160	1.39	cps
Beryllium	9-1	55223	57253	56494	56324	1.82	cps
Bismuth	209-1	4416556	4374807	4368792	4386719	0.59	cps
Bismuth	209-2	3713360	3849283	3738460	3767034	1.92	cps
Bromine	81-1	29473	37190	41368	36010	16.76	cps
Bromine	81-2	7595	7859	7952	7802	2.37	cps
Cadmium	108-1	7639	8119	8446	8068	5.03	cps
Cadmium	106-1	13330	13526	13773	13543	1.64	cps
Cadmium	111-1	114275	117984	117527	116595	1.73	cps
Calcium	43-1	342074	349458	351566	347699	1.43	cps
Calcium	44-1	5315412	5433917	5466809	5405379	1.47	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	205326	213150	204911	207796	2.23	cps
Cobalt	59-2	330203	334670	323196	329356	1.76	cps
Copper	63-2	2389649	2514301	2479975	2461308	2.62	cps
Dysprosium	156-1	20	23	27	23	14.29	cps
Dysprosium	156-2	53	37	30	40	30.04	cps
Erbium	164-1	43	80	77	67	30.42	cps
Erbium	164-2	23	57	57	46	42.25	cps
Gadolinium	160-1	53	40	67	53	25.00	cps
Gadolinium	160-2	427	450	433	437	2.75	cps
Holmium	165-1	6718030	6735606	6608322	6687319	1.03	cps
Holmium	165-2	4825112	5049445	4952110	4942222	2.28	cps
Indium	115-1	5646684	5689028	5658763	5664825	0.39	cps
Indium	115-2	2167903	2261653	2122350	2183969	3.25	cps
Iron	56-2	8535242	8714772	8860138	8703384	1.87	cps
Iron	57-2	232012	242805	239091	237969	2.30	cps
Iron	54-2	515676	508418	501537	508544	1.39	cps
Krypton	83-1	373	517	447	446	16.09	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2MSDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:44:54 DataFile Name : 038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1584638	1619824	1621327	1608596	1.29	cps
Lead	207-1	1397092	1411679	1409510	1406094	0.56	cps
Lead	208-1	6572277	6697376	6683530	6651061	1.03	cps
Lithium	6-1	542361	545576	542381	543439	0.34	cps
Magnesium	24-2	2898411	2858904	2769986	2842434	2.31	cps
Manganese	55-2	1718734	1714714	1715088	1716179	0.13	cps
Molybdenum	94-1	744249	764332	765753	758111	1.59	cps
Molybdenum	95-1	833456	845989	845048	841498	0.83	cps
Molybdenum	96-1	935918	959244	966579	953913	1.68	cps
Molybdenum	97-1	522929	536188	535479	531532	1.40	cps
Molybdenum	98-1	1334233	1367454	1362358	1354681	1.32	cps
Neodymium	150-1	13	10	30	18	60.28	cps
Neodymium	150-2	10	13	17	13	25.01	cps
Nickel	60-2	85341	84919	84343	84868	0.59	cps
Phosphorus	31-2	2040	2134	2187	2120	3.50	cps
Potassium	39-2	1796669	1845026	1775031	1805575	1.98	cps
Rhodium	103-1	5614979	5578345	5573766	5589030	0.40	cps
Rhodium	103-2	3467839	3639956	3603339	3570378	2.54	cps
Scandium	45-1	3499043	3426535	3463560	3463046	1.05	cps
Scandium	45-2	333581	334898	325886	331455	1.47	cps
Selenium	82-1	9450	9598	9641	9563	1.05	cps
Selenium	77-2	1063	1060	1023	1049	2.12	cps
Selenium	78-2	3837	3951	3534	3774	5.71	cps
Silicon	28-1	6601020	6785055	6738659	6708245	1.43	cps
Silver	107-1	90642	93462	94127	92744	1.99	cps
Silver	109-1	85759	89874	88032	87889	2.34	cps
Sodium	23-2	25292332	24481609	23418926	24397622	3.85	cps
Strontium	86-1	284210	291375	290636	288740	1.36	cps
Strontium	88-1	2540725	2600360	2552400	2564495	1.23	cps
Sulfur	34-1	588474	603922	604383	598926	1.51	cps
Terbium	159-1	7085332	6974623	7111037	7056997	1.03	cps
Terbium	159-2	5051501	5093862	4885588	5010317	2.20	cps
Thallium	203-1	383236	388810	390499	387515	0.98	cps
Thallium	205-1	906386	931634	921999	920006	1.38	cps
Tin	118-1	309555	315172	320699	315142	1.77	cps
Titanium	47-1	447	480	417	448	7.07	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2MSDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:44:54 DataFile Name : 038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1167892	1193197	1194644	1185244	1.27	cps
Vanadium	51-2	180808	181152	184436	182132	1.10	cps
Yttrium	89-1	9316414	9163093	9202740	9227416	0.86	cps
Yttrium	89-2	2574330	2750767	2588969	2638022	3.71	cps
Zinc	66-2	440636	462091	445938	449555	2.49	cps
Zirconium	90-1	727980	740720	745211	737970	1.21	cps
Zirconium	91-1	161293	165284	165818	164132	1.51	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSDDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2MSDDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:48:05 DataFile Name : 039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	214654	210204	207667	210842	1.68	cps
Antimony	121-1	420676	427416	431758	426617	1.31	cps
Arsenic	75-2	30094	30855	31550	30833	2.36	cps
Barium	135-1	446281	456622	457231	453378	1.36	cps
Barium	137-1	773123	790754	790925	784934	1.30	cps
Beryllium	9-1	56113	56634	57568	56772	1.30	cps
Bismuth	209-1	4490314	4380156	4431020	4433830	1.24	cps
Bismuth	209-2	3750010	3716461	3813820	3760097	1.32	cps
Bromine	81-1	33863	40943	44223	39676	13.35	cps
Bromine	81-2	8162	8116	8462	8247	2.28	cps
Cadmium	108-1	8116	8209	8119	8148	0.65	cps
Cadmium	106-1	13857	13733	13837	13809	0.48	cps
Cadmium	111-1	116735	119761	119403	118633	1.39	cps
Calcium	43-1	341234	346036	350574	345948	1.35	cps
Calcium	44-1	5434350	5408765	5480574	5441230	0.67	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	205803	209267	210970	208680	1.26	cps
Cobalt	59-2	324643	328812	332389	328615	1.18	cps
Copper	63-2	2456470	2458457	2467151	2460693	0.23	cps
Dysprosium	156-1	33	30	20	28	24.98	cps
Dysprosium	156-2	47	53	53	51	7.52	cps
Erbium	164-1	57	57	43	52	14.75	cps
Erbium	164-2	47	47	47	47	0.00	cps
Gadolinium	160-1	43	47	43	44	4.34	cps
Gadolinium	160-2	467	407	383	419	10.26	cps
Holmium	165-1	6768585	6761551	6857628	6795921	0.79	cps
Holmium	165-2	4919016	4949365	5090011	4986131	1.83	cps
Indium	115-1	5812853	5761198	5683976	5752675	1.13	cps
Indium	115-2	2109531	2227357	2279863	2205584	3.95	cps
Iron	56-2	8934048	8737697	8578652	8750132	2.03	cps
Iron	57-2	236649	241663	239460	239257	1.05	cps
Iron	54-2	502215	499629	503666	501837	0.41	cps
Krypton	83-1	430	463	500	464	7.54	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSDDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2MSDDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:48:05 DataFile Name : 039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1599339	1613888	1625198	1612808	0.80	cps
Lead	207-1	1387727	1411062	1424053	1407614	1.31	cps
Lead	208-1	6572245	6568832	6648238	6596438	0.68	cps
Lithium	6-1	549063	537312	546884	544420	1.15	cps
Magnesium	24-2	2777833	2773357	2821518	2790902	0.95	cps
Manganese	55-2	1781608	1738337	1740807	1753584	1.39	cps
Molybdenum	94-1	752255	764287	770383	762309	1.21	cps
Molybdenum	95-1	827022	849623	856367	844338	1.82	cps
Molybdenum	96-1	948201	957277	960215	955231	0.66	cps
Molybdenum	97-1	521689	530270	539152	530370	1.65	cps
Molybdenum	98-1	1327544	1364442	1368841	1353609	1.68	cps
Neodymium	150-1	30	27	17	24	28.38	cps
Neodymium	150-2	13	3	17	11	62.48	cps
Nickel	60-2	87008	85449	85864	86107	0.94	cps
Phosphorus	31-2	1840	2067	1940	1949	5.83	cps
Potassium	39-2	1747318	1783321	1869834	1800158	3.50	cps
Rhodium	103-1	5714740	5510007	5613909	5612885	1.82	cps
Rhodium	103-2	3532984	3594163	3654588	3593912	1.69	cps
Scandium	45-1	3563382	3475402	3476131	3504971	1.44	cps
Scandium	45-2	329660	331657	334072	331796	0.67	cps
Selenium	82-1	9638	9480	9779	9632	1.56	cps
Selenium	77-2	1090	1110	1000	1067	5.49	cps
Selenium	78-2	3567	3874	3861	3767	4.60	cps
Silicon	28-1	6643416	6695943	7212425	6850595	4.59	cps
Silver	107-1	92980	95029	94889	94299	1.21	cps
Silver	109-1	87278	89642	90468	89129	1.86	cps
Sodium	23-2	23361830	23659440	24318143	23779805	2.06	cps
Strontium	86-1	286764	291802	296037	291534	1.59	cps
Strontium	88-1	2545522	2559009	2618275	2574269	1.50	cps
Sulfur	34-1	598088	602775	610508	603790	1.04	cps
Terbium	159-1	7291729	6965704	7046557	7101330	2.39	cps
Terbium	159-2	5038789	4974722	4970666	4994726	0.77	cps
Thallium	203-1	387484	390766	393264	390505	0.74	cps
Thallium	205-1	912757	926519	933546	924274	1.14	cps
Tin	118-1	311044	315875	319465	315462	1.34	cps
Titanium	47-1	457	450	470	459	2.22	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07MSDDLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2MSDDL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:48:05 DataFile Name : 039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1181861	1207388	1207795	1199015	1.24	cps
Vanadium	51-2	185330	185266	181381	183992	1.23	cps
Yttrium	89-1	9492769	9186861	9274811	9318147	1.69	cps
Yttrium	89-2	2631241	2715163	2677750	2674718	1.57	cps
Zinc	66-2	442424	453928	458179	451511	1.81	cps
Zirconium	90-1	732963	753378	760438	748926	1.91	cps
Zirconium	91-1	163532	168082	168794	166803	1.71	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07ADLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2ADL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:51:13 DataFile Name : 040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	207692	209383	209303	208793	0.46	cps
Antimony	121-1	418335	424208	429309	423951	1.30	cps
Arsenic	75-2	31183	31804	30852	31280	1.55	cps
Barium	135-1	443069	453924	458011	451668	1.71	cps
Barium	137-1	762997	787187	797798	782660	2.28	cps
Beryllium	9-1	55632	57848	56834	56771	1.95	cps
Bismuth	209-1	4296492	4359927	4501781	4386066	2.40	cps
Bismuth	209-2	3846765	3822894	3594648	3754769	3.71	cps
Bromine	81-1	35533	41699	45226	40819	12.02	cps
Bromine	81-2	7982	8496	8016	8165	3.52	cps
Cadmium	108-1	8039	8453	8456	8316	2.88	cps
Cadmium	106-1	13623	13570	14104	13766	2.14	cps
Cadmium	111-1	116088	117863	119791	117914	1.57	cps
Calcium	43-1	344254	347999	354212	348821	1.44	cps
Calcium	44-1	5402727	5541009	5466688	5470141	1.27	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	208441	206424	201030	205298	1.87	cps
Cobalt	59-2	335095	329002	320572	328223	2.22	cps
Copper	63-2	2379735	2403658	2392611	2392002	0.50	cps
Dysprosium	156-1	20	43	23	29	43.68	cps
Dysprosium	156-2	47	37	33	39	17.85	cps
Erbium	164-1	70	53	60	61	13.73	cps
Erbium	164-2	20	63	43	42	51.37	cps
Gadolinium	160-1	73	50	40	54	31.42	cps
Gadolinium	160-2	383	430	427	413	6.30	cps
Holmium	165-1	6638213	6719917	6968041	6775390	2.54	cps
Holmium	165-2	5100096	5043708	4927175	5023660	1.76	cps
Indium	115-1	5639558	5835046	5717143	5730583	1.72	cps
Indium	115-2	2279446	2243102	2158953	2227167	2.78	cps
Iron	56-2	8715922	8490758	8678063	8628247	1.40	cps
Iron	57-2	232729	231291	236954	233658	1.26	cps
Iron	54-2	511858	507738	501109	506902	1.07	cps
Krypton	83-1	423	450	490	454	7.38	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07ADLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2ADL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:51:13 DataFile Name : 040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1588479	1619912	1625051	1611147	1.23	cps
Lead	207-1	1366182	1405888	1425197	1399089	2.15	cps
Lead	208-1	6552561	6630635	6586818	6590005	0.59	cps
Lithium	6-1	531431	545942	545174	540849	1.51	cps
Magnesium	24-2	2885776	2862379	2788308	2845488	1.79	cps
Manganese	55-2	1753136	1709430	1719106	1727224	1.33	cps
Molybdenum	94-1	741514	762728	778604	760948	2.45	cps
Molybdenum	95-1	835377	850894	860664	848978	1.50	cps
Molybdenum	96-1	938848	961212	975267	958442	1.92	cps
Molybdenum	97-1	522436	531423	539144	531001	1.57	cps
Molybdenum	98-1	1330442	1356571	1383427	1356813	1.95	cps
Neodymium	150-1	37	10	10	19	81.51	cps
Neodymium	150-2	17	17	3	12	63.01	cps
Nickel	60-2	84560	84226	84089	84291	0.29	cps
Phosphorus	31-2	2090	2037	2104	2077	1.70	cps
Potassium	39-2	1797706	1784681	1743785	1775391	1.58	cps
Rhodium	103-1	5579643	5699809	5751847	5677100	1.56	cps
Rhodium	103-2	3618849	3587935	3542915	3583233	1.07	cps
Scandium	45-1	3388851	3529104	3539110	3485688	2.41	cps
Scandium	45-2	338477	339588	327167	335077	2.05	cps
Selenium	82-1	9802	10080	9847	9910	1.50	cps
Selenium	77-2	957	1123	1023	1034	8.11	cps
Selenium	78-2	3741	3824	3914	3826	2.27	cps
Silicon	28-1	6649428	6787348	6927587	6788121	2.05	cps
Silver	107-1	93009	94456	96784	94750	2.01	cps
Silver	109-1	86759	89955	89693	88802	2.00	cps
Sodium	23-2	24696299	24266360	23213945	24058868	3.17	cps
Strontium	86-1	283138	290323	296622	290028	2.33	cps
Strontium	88-1	2548408	2607154	2649125	2601562	1.94	cps
Sulfur	34-1	599059	603175	614151	605462	1.29	cps
Terbium	159-1	6793387	7055889	7042652	6963976	2.12	cps
Terbium	159-2	5082483	5076813	4955551	5038282	1.42	cps
Thallium	203-1	379011	390080	395343	388145	2.15	cps
Thallium	205-1	901026	926488	929223	918912	1.69	cps
Tin	118-1	312586	318691	323002	318093	1.65	cps
Titanium	47-1	467	363	373	401	14.21	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-07ADLX5 Instrumnet Name : P7
Client Sample ID : MC0AX2ADL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:51:13 DataFile Name : 040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1155882	1184180	1205069	1181710	2.09	cps
Vanadium	51-2	178894	178525	182489	179969	1.22	cps
Yttrium	89-1	8992053	9182868	9593890	9256270	3.32	cps
Yttrium	89-2	2668621	2604456	2658090	2643722	1.30	cps
Zinc	66-2	446662	440340	442759	443254	0.72	cps
Zirconium	90-1	732087	749742	762254	748028	2.03	cps
Zirconium	91-1	163195	167103	168874	166391	1.75	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-08DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX3DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:54:23 DataFile Name : 041SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	890	1097	1077	1021	11.16	cps
Antimony	121-1	3087	3027	3214	3109	3.07	cps
Arsenic	75-2	2520	2610	2560	2564	1.76	cps
Barium	135-1	3057	3227	3130	3138	2.72	cps
Barium	137-1	5381	5194	5428	5334	2.32	cps
Beryllium	9-1	17	24	24	21	18.01	cps
Bismuth	209-1	4302111	4602636	4662970	4522572	4.27	cps
Bismuth	209-2	3847265	3833882	3878649	3853265	0.60	cps
Bromine	81-1	37200	48008	51961	45723	16.71	cps
Bromine	81-2	9406	9957	10144	9836	3.90	cps
Cadmium	108-1	13	10	17	13	25.01	cps
Cadmium	106-1	2354	2307	2130	2264	5.21	cps
Cadmium	111-1	1688	1641	1509	1613	5.74	cps
Calcium	43-1	242922	259762	257940	253541	3.64	cps
Calcium	44-1	3821454	3961964	4004298	3929238	2.44	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1727	1950	1863	1847	6.10	cps
Cobalt	59-2	500	433	483	472	7.35	cps
Copper	63-2	2064	2074	2037	2058	0.92	cps
Dysprosium	156-1	17	17	10	14	26.66	cps
Dysprosium	156-2	3	3	7	4	43.40	cps
Erbium	164-1	50	43	30	41	24.77	cps
Erbium	164-2	33	23	33	30	19.25	cps
Gadolinium	160-1	60	60	30	50	34.64	cps
Gadolinium	160-2	423	423	413	420	1.37	cps
Holmium	165-1	7009312	6765764	7014478	6929851	2.05	cps
Holmium	165-2	5141768	5141558	4990331	5091219	1.72	cps
Indium	115-1	6002172	5829897	5827766	5886612	1.70	cps
Indium	115-2	2279163	2249619	2289194	2272659	0.91	cps
Iron	56-2	47197	45669	46669	46512	1.67	cps
Iron	57-2	10627	10661	10977	10755	1.80	cps
Iron	54-2	3791	3630	3827	3749	2.79	cps
Krypton	83-1	463	417	440	440	5.30	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-08DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX3DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:54:23 DataFile Name : 041SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	677	597	753	676	11.60	cps
Lead	207-1	603	490	530	541	10.62	cps
Lead	208-1	2630	2547	2663	2613	2.30	cps
Lithium	6-1	537065	553657	565183	551968	2.56	cps
Magnesium	24-2	798467	804410	784231	795703	1.30	cps
Manganese	55-2	105122	105779	105568	105489	0.32	cps
Molybdenum	94-1	24858	26384	26324	25855	3.34	cps
Molybdenum	95-1	42492	43581	43568	43214	1.45	cps
Molybdenum	96-1	45631	45651	45935	45739	0.37	cps
Molybdenum	97-1	26494	27282	27296	27024	1.70	cps
Molybdenum	98-1	67830	69659	69973	69154	1.67	cps
Neodymium	150-1	7	3	3	4	43.40	cps
Neodymium	150-2	3	0	10	4	114.60	cps
Nickel	60-2	713	757	690	720	4.70	cps
Phosphorus	31-2	1240	1293	1410	1315	6.61	cps
Potassium	39-2	851961	855730	850150	852614	0.33	cps
Rhodium	103-1	5974037	5702739	5690598	5789125	2.77	cps
Rhodium	103-2	3731102	3658203	3696012	3695106	0.99	cps
Scandium	45-1	3523526	3564559	3624427	3570837	1.42	cps
Scandium	45-2	345224	343401	343588	344071	0.29	cps
Selenium	82-1	549	624	564	579	6.87	cps
Selenium	77-2	3	0	10	4	114.60	cps
Selenium	78-2	413	383	367	388	6.10	cps
Silicon	28-1	7177682	7099530	7287191	7188134	1.31	cps
Silver	107-1	287	200	193	227	22.97	cps
Silver	109-1	197	183	200	193	4.56	cps
Sodium	23-2	23753456	23724176	23220965	23566199	1.27	cps
Strontium	86-1	141277	139778	140862	140639	0.55	cps
Strontium	88-1	1206648	1264111	1252309	1241022	2.45	cps
Sulfur	34-1	648859	639948	648976	645927	0.80	cps
Terbium	159-1	7417891	6965647	6893055	7092198	4.01	cps
Terbium	159-2	5137950	5158492	5122159	5139534	0.35	cps
Thallium	203-1	373	317	373	354	9.23	cps
Thallium	205-1	1027	983	800	937	12.85	cps
Tin	118-1	1283	1277	1187	1249	4.32	cps
Titanium	47-1	187	210	193	197	6.11	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : Q3291-08DLX5 Instrumnet Name : P7
Client Sample ID : MC0AX3DL Dilution Factor : 5
Date & Time Acquired : 2025-10-07 18:54:23 DataFile Name : 041SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	427	363	437	409	9.73	cps
Vanadium	51-2	1133	940	1010	1028	9.52	cps
Yttrium	89-1	9404526	9783563	9558384	9582158	1.99	cps
Yttrium	89-2	2700426	2762912	2692259	2718532	1.42	cps
Zinc	66-2	1727	1907	1887	1840	5.36	cps
Zirconium	90-1	3367	3144	2840	3117	8.48	cps
Zirconium	91-1	790	683	607	693	13.28	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV03 Instrumnet Name : P7
Client Sample ID : CCV03 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:57:38 DataFile Name : 042CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5888532	6010672	5825807	5908337	1.59	cps
Antimony	121-1	2168414	2180238	2199218	2182623	0.71	cps
Arsenic	75-2	134692	134441	133636	134256	0.41	cps
Barium	135-1	2606732	2673652	2665158	2648514	1.38	cps
Barium	137-1	4513001	4509850	4536124	4519659	0.32	cps
Beryllium	9-1	283062	291060	286303	286808	1.40	cps
Bismuth	209-1	4258406	4154158	4182213	4198259	1.28	cps
Bismuth	209-2	3572588	3502347	3528799	3534578	1.00	cps
Bromine	81-1	19867	18712	17674	18751	5.85	cps
Bromine	81-2	1730	1610	1553	1631	5.53	cps
Cadmium	108-1	41419	42248	41693	41787	1.01	cps
Cadmium	106-1	59257	59699	59632	59530	0.40	cps
Cadmium	111-1	568204	576240	575642	573362	0.78	cps
Calcium	43-1	3074272	3005233	3007583	3029029	1.29	cps
Calcium	44-1	48713806	49083624	49330353	49042594	0.63	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1081827	1093103	1105917	1093616	1.10	cps
Cobalt	59-2	1653915	1695705	1653662	1667761	1.45	cps
Copper	63-2	13088804	12611230	12997781	12899272	1.97	cps
Dysprosium	156-1	100	153	150	134	22.22	cps
Dysprosium	156-2	237	260	277	258	7.79	cps
Erbium	164-1	297	313	290	300	4.01	cps
Erbium	164-2	203	237	177	206	14.62	cps
Gadolinium	160-1	150	190	203	181	15.33	cps
Gadolinium	160-2	467	487	477	477	2.10	cps
Holmium	165-1	6829892	6515943	6519012	6621616	2.72	cps
Holmium	165-2	4783440	4809843	4795755	4796346	0.28	cps
Indium	115-1	5706131	5377365	5307126	5463540	3.90	cps
Indium	115-2	2065066	2039213	2096888	2067055	1.40	cps
Iron	56-2	248316323	246543930	255347163	250069138	1.86	cps
Iron	57-2	6261194	6338616	6311566	6303792	0.62	cps
Iron	54-2	13903678	13703353	14124601	13910544	1.51	cps
Krypton	83-1	437	387	523	449	15.40	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV03 Instrumnet Name : P7
Client Sample ID : CCV03 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:57:38 DataFile Name : 042CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	8390944	8429484	8440744	8420390	0.31	cps
Lead	207-1	7182261	7415564	7273937	7290587	1.61	cps
Lead	208-1	32831718	33756154	33306268	33298047	1.39	cps
Lithium	6-1	545177	518085	517909	527057	2.98	cps
Magnesium	24-2	51797179	50736448	51196456	51243361	1.04	cps
Manganese	55-2	8892805	8859484	9133720	8962003	1.67	cps
Molybdenum	94-1	8046948	8154295	8199382	8133542	0.96	cps
Molybdenum	95-1	11498650	11726684	11564653	11596662	1.01	cps
Molybdenum	96-1	12705104	12871620	12592960	12723228	1.10	cps
Molybdenum	97-1	7134050	7217981	7077888	7143306	0.99	cps
Molybdenum	98-1	18260787	18578621	18411026	18416811	0.86	cps
Neodymium	150-1	183	133	177	164	16.51	cps
Neodymium	150-2	83	90	57	77	23.00	cps
Nickel	60-2	422447	424773	430136	425785	0.93	cps
Phosphorus	31-2	61239	62414	62464	62039	1.12	cps
Potassium	39-2	28691127	29381889	29217551	29096856	1.24	cps
Rhodium	103-1	5500270	5158265	5085980	5248171	4.22	cps
Rhodium	103-2	3325427	3265616	3383027	3324690	1.77	cps
Scandium	45-1	3513296	3328942	3338205	3393481	3.06	cps
Scandium	45-2	321261	320572	326635	322822	1.03	cps
Selenium	82-1	43891	44617	43969	44159	0.90	cps
Selenium	77-2	4711	5044	5151	4969	4.62	cps
Selenium	78-2	16937	16860	16973	16923	0.34	cps
Silicon	28-1	16955477	16733940	16950398	16879938	0.75	cps
Silver	107-1	2926885	2915167	2891564	2911205	0.62	cps
Silver	109-1	2723028	2729237	2723582	2725283	0.13	cps
Sodium	23-2	83008217	78791642	80518525	80772795	2.62	cps
Strontium	86-1	731038	742114	733490	735547	0.79	cps
Strontium	88-1	6504707	6601197	6489962	6531956	0.92	cps
Sulfur	34-1	358968	356686	354725	356793	0.60	cps
Terbium	159-1	7082196	6779548	6519130	6793625	4.15	cps
Terbium	159-2	4833068	4701442	4873045	4802518	1.87	cps
Thallium	203-1	2097595	2116490	2123068	2112384	0.63	cps
Thallium	205-1	4945401	5055939	4871388	4957576	1.87	cps
Tin	118-1	1787415	1847811	1829502	1821576	1.70	cps
Titanium	47-1	2999592	3044406	3083410	3042469	1.38	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCV03 Instrumnet Name : P7
Client Sample ID : CCV03 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 18:57:38 DataFile Name : 042CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	6492470	6681120	6647568	6607053	1.52	cps
Vanadium	51-2	909006	921474	922116	917532	0.81	cps
Yttrium	89-1	9244538	8784430	8952846	8993938	2.59	cps
Yttrium	89-2	2526011	2516132	2609803	2550649	2.02	cps
Zinc	66-2	2334204	2208288	2343082	2295191	3.28	cps
Zirconium	90-1	4014648	4141448	4062861	4072986	1.57	cps
Zirconium	91-1	873395	898451	884332	885393	1.42	cps

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LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB03 Instrumnet Name : P7
Client Sample ID : CCB03 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 19:09:11 DataFile Name : 043CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	560	523	587	557	5.71	cps
Antimony	121-1	187	163	173	174	6.71	cps
Arsenic	75-2	20	10	3	11	75.52	cps
Barium	135-1	50	30	37	39	26.18	cps
Barium	137-1	30	47	53	43	27.73	cps
Beryllium	9-1	23	10	7	13	65.95	cps
Bismuth	209-1	4141463	4258551	4201235	4200416	1.39	cps
Bismuth	209-2	3606470	3605367	3632568	3614802	0.43	cps
Bromine	81-1	8379	8352	8469	8400	0.73	cps
Bromine	81-2	270	213	173	219	22.19	cps
Cadmium	108-1	10	0	10	7	86.60	cps
Cadmium	106-1	1850	1863	1837	1850	0.72	cps
Cadmium	111-1	1301	1321	1302	1308	0.85	cps
Calcium	43-1	227	233	217	226	3.72	cps
Calcium	44-1	21844	21590	21406	21613	1.02	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1387	1473	1413	1425	3.12	cps
Cobalt	59-2	103	50	83	79	34.15	cps
Copper	63-2	837	907	1003	916	9.14	cps
Dysprosium	156-1	7	7	0	4	86.60	cps
Dysprosium	156-2	3	7	3	4	43.40	cps
Erbium	164-1	33	27	30	30	11.10	cps
Erbium	164-2	30	17	20	22	31.22	cps
Gadolinium	160-1	33	43	20	32	36.33	cps
Gadolinium	160-2	430	397	393	407	4.99	cps
Holmium	165-1	6365803	6305697	6396170	6355890	0.72	cps
Holmium	165-2	4659283	4687134	4760012	4702143	1.11	cps
Indium	115-1	5478397	5494282	5527371	5500017	0.45	cps
Indium	115-2	2078803	2074623	2129569	2094332	1.46	cps
Iron	56-2	14447	14450	14684	14527	0.93	cps
Iron	57-2	1547	1603	1480	1543	4.00	cps
Iron	54-2	1900	1933	1973	1936	1.90	cps
Krypton	83-1	437	450	483	457	5.26	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB03 Instrumnet Name : P7
Client Sample ID : CCB03 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 19:09:11 DataFile Name : 043CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	407	473	433	438	7.67	cps
Lead	207-1	373	453	397	408	10.09	cps
Lead	208-1	1883	1960	1857	1900	2.82	cps
Lithium	6-1	496020	514432	510452	506968	1.91	cps
Magnesium	24-2	327	263	260	283	13.26	cps
Manganese	55-2	393	373	367	378	3.67	cps
Molybdenum	94-1	320	263	303	296	9.85	cps
Molybdenum	95-1	263	247	190	233	16.48	cps
Molybdenum	96-1	223	320	270	271	17.83	cps
Molybdenum	97-1	170	133	153	152	12.06	cps
Molybdenum	98-1	313	337	343	331	4.76	cps
Neodymium	150-1	3	7	3	4	43.40	cps
Neodymium	150-2	7	3	0	3	100.05	cps
Nickel	60-2	290	300	330	307	6.79	cps
Phosphorus	31-2	467	437	460	454	3.47	cps
Potassium	39-2	59977	59586	59489	59684	0.43	cps
Rhodium	103-1	5372928	5466548	5448073	5429183	0.91	cps
Rhodium	103-2	3372465	3412432	3432188	3405695	0.89	cps
Scandium	45-1	3348842	3375230	3329923	3351331	0.68	cps
Scandium	45-2	314537	309428	316117	313361	1.12	cps
Selenium	82-1	557	560	496	538	6.75	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	300	283	360	314	12.82	cps
Silicon	28-1	713351	713950	718016	715106	0.35	cps
Silver	107-1	120	97	160	126	25.51	cps
Silver	109-1	87	90	123	100	20.28	cps
Sodium	23-2	41703	41014	42218	41645	1.45	cps
Strontium	86-1	687	740	720	716	3.77	cps
Strontium	88-1	120	120	133	124	6.19	cps
Sulfur	34-1	176045	175184	176554	175928	0.39	cps
Terbium	159-1	6635153	6599759	6631811	6622241	0.30	cps
Terbium	159-2	4801711	4686983	4763969	4750888	1.23	cps
Thallium	203-1	300	263	270	278	7.03	cps
Thallium	205-1	560	630	667	619	8.76	cps
Tin	118-1	707	773	707	729	5.28	cps
Titanium	47-1	117	73	77	89	27.13	cps

LB Number : LB137449 Operator : Jaswal
Lab Sample ID : CCB03 Instrumnet Name : P7
Client Sample ID : CCB03 Dilution Factor : 1
Date & Time Acquired : 2025-10-07 19:09:11 DataFile Name : 043CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	27	30	50	36	35.49	cps
Vanadium	51-2	7	17	13	12	41.65	cps
Yttrium	89-1	8842221	8760059	8805329	8802536	0.47	cps
Yttrium	89-2	2461504	2480969	2493978	2478817	0.66	cps
Zinc	66-2	1393	1437	1410	1413	1.55	cps
Zirconium	90-1	480	453	503	479	5.22	cps
Zirconium	91-1	87	90	93	90	3.70	cps

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SOP ID : M7470A-Mercury-20

SDG No : NA

Matrix : WATER

Pipette ID: HG A

Balance ID : N/A

Filter paper ID : NA

pH Strip ID : M6069

Hood ID : #1

Block ID: 1. HG HOT BLOCK#3 2. N/A

Start Digest Date: 10/06/2025 Time : 14:20 Temp : 95 °C

End Digest Date: 10/06/2025 Time : 16:20 Temp : 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: *[Signature]*

Supervisor Signature: *[Signature]*

Temp : 1. 95°C 2. N/A

Standardized Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP87449
CCV	30mL	MP87451
CRA	30mL	MP87453
Blank Spike	0.48mL	MP87441
Matrix Spike	0.48mL	MP87441

Chemical Used	ML/SAMPLE USED	Lot Number
HNO3/H2SO4(1:2)	2.25mL	MP87071
KMnO4 (5%)	4.5mL	MP87072
K2S2O8 (5%)	2.4mL	MP87073
Hydroxylamine HCL (12%)	1.8mL	MP87149
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
0.0 ppb	S0	30mL	MP87442
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP87443
2.5 ppb	S2.5	30mL	MP87444
5.0 ppb	S5.0	30mL	MP87445
7.5 ppb	S7.5	30mL	MP87447
10.0 ppb	S10.0	30mL	MP87448
ICV	ICV	30mL	MP87449
ICB	ICB	30mL	MP87450
CCV	CCV	30mL	MP87451
CCB	CCB	30mL	MP87452
CRI	CRI	30mL	MP87453
CHK STD	CHK STD	30mL	MP87454

Extraction Conformance/Non-Conformance Comments:

N/A		
Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/6/25 17:10	<i>[Signature]</i>	<i>[Signature]</i>
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
PB170005BL	PBW005	30	30	<2	N/A	3-17
PB170005BS	LCS005	30	30	<2	MP87441	18
Q3291-05DUP	MC0AX0DUP	30	30	<2	N/A	20
Q3291-05MS	MC0AX0MS	30	30	<2	MP87441	21
Q3291-05MSD	MC0AX0MSD	30	30	<2	MP87441	22
Q3291-05	MC0AX0	30	30	<2	N/A	19
Q3291-06	MC0AX1	30	30	<2	N/A	23
Q3291-07	MC0AX2	30	30	<2	N/A	24
Q3291-08	MC0AX3	30	30	<2	N/A	25

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 100625_7470

WorkList ID : 192294

Department : Digestion

Date : 10-06-2025 09:09:35

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3291-05	MC0AX0	Water	Mercury	1:1 HNO3 to pH < 2	TETR16	D21	10/03/2025	7470A
Q3291-06	MC0AX1	Water	Dissolved Mercury	1:1 HNO3 to pH < 2	TETR16	D21	10/03/2025	7470A
Q3291-07	MC0AX2	Water	Mercury	1:1 HNO3 to pH < 2	TETR16	D21	10/03/2025	7470A
Q3291-08	MC0AX3	Water	Dissolved Mercury	1:1 HNO3 to pH < 2	TETR16	D21	10/03/2025	7470A

Date/Time

10/6/25 @ 14:00

Raw Sample Received by:

DGS ~ 1714, 1403

Raw Sample Relinquished by:

DGS ~ 1714, 1403

Date/Time

10/6/25 @ 11:40

Raw Sample Received by:

DGS ~ 1714, 1403

Raw Sample Relinquished by:

DGS ~ 1714, 1403

SOP ID : M3010A-Digestion-17

SDG No : N/A

Matrix : WATER

Pipette ID : ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

Block ID: 1. HOT BLOCK #1 2. N/A

Start Digest Date: 10/06/2025 Time : 16:15 Temp : 95 °C

End Digest Date: 10/06/2025 Time : 18:18 Temp : 95 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: SKJ

Supervisor Signature: [Signature]

Temp : 1. 95°C 2. N/A

Standard Name	MLS USED	STD REF. # FROM LOG
Spike Sol 1	0.50	MP87093
Spike Sol 2	1.00	MP87094
Spike Sol 3	1.00	MP87095
Spike Sol 4	1.00	MP87096
Spike Sol 5	1.00mL	MP87097

Chemical Used	ML/SAMPLE USED	Lot Number
Conc. HNO3	3.00	M6158
1:1 HCL	5.00	MP87148
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#1 CELL#50 96C
X*MP87095,MP87096,MP87097

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/06/25 19:18	SKJ smc d10	[Signature]
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB170000BL	PBW000	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	1
PB170000BS	LCS000	<2	50	50	Colorless	Colorless	Clear	Clear	MP87093,MP87094,X*	2
Q3291-05	MC0AX0	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	3
Q3291-06	MC0AX1	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	4
Q3291-07	MC0AX2	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	5
Q3291-07MS	MC0AX2MS	<2	50	50	Colorless	Colorless	Clear	Clear	MP87093,MP87094,X*	7
Q3291-07MSD	MC0AX2MSD	<2	50	50	Colorless	Colorless	Clear	Clear	MP87093,MP87094,X*	8
Q3291-07DUP	MC0AX2DUP	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	6
Q3291-08	MC0AX3	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	9

WORKLIST(Hardcopy Internal Chain)

Worklist Name : PB170000

Worklist ID : 192308

Department : Digestion

Date : 10-06-2025 15:43:23

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3291-05	MC0AX0	Water	Metals ICP-TAL	1:1 HNO3 to pH < 2	TETR16	D21	10/03/2025	6020B
Q3291-06	MC0AX1	Water	Dissolved ICP-TAL Metals	1:1 HNO3 to pH < 2	TETR16	D21	10/03/2025	6020B
Q3291-07	MC0AX2	Water	Metals ICP-TAL	1:1 HNO3 to pH < 2	TETR16	D21	10/03/2025	6020B
Q3291-08	MC0AX3	Water	Dissolved ICP-TAL Metals	1:1 HNO3 to pH < 2	TETR16	D21	10/03/2025	6020B

351 of 516

Date/Time 10/06/2025 16:05
Raw Sample Received by: SLH met dig
Raw Sample Relinquished by: CACS met

Date/Time 10/06/2025 17:05
Raw Sample Received by: CPC841
Raw Sample Relinquished by: SLH met dig

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB137441

Review By	mohan	Review On	10/7/2025 4:13:47 PM
Supervise By	jaswal	Supervise On	10/7/2025 4:41:45 PM

STD. NAME	STD REF.#
ICAL Standard	MP87442,MP874423,MP87444,MP87445,MP87447,MP87448
ICV Standard	MP87449
CCV Standard	MP87451
ICSA Standard	
CRI Standard	MP87453
LCS Standard	
Chk Standard	MP87450,MP87452,MP87454,MP87459

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	10/07/25 09:47		mohan	OK
2	S0.2	S0.2	CAL2	10/07/25 09:49		mohan	OK
3	S2.5	S2.5	CAL3	10/07/25 09:52		mohan	OK
4	S5	S5	CAL4	10/07/25 09:54		mohan	OK
5	S7.5	S7.5	CAL5	10/07/25 09:56		mohan	OK
6	S10	S10	CAL6	10/07/25 10:01		mohan	OK
7	ICV61	ICV61	ICV	10/07/25 10:04		mohan	OK
8	ICB61	ICB61	ICB	10/07/25 10:06		mohan	OK
9	CCV90	CCV90	CCV	10/07/25 10:09		mohan	OK
10	CCB90	CCB90	CCB	10/07/25 10:11		mohan	OK
11	CRA	CRA	CRDL	10/07/25 10:13		mohan	OK
12	HighStd	HighStd	HIGH STD	10/07/25 10:16		mohan	OK
13	ChkStd	ChkStd	SAM	10/07/25 10:23		mohan	OK
14	PB169997BL	PB169997BL	MB	10/07/25 10:26		mohan	OK
15	PB169997BS	PB169997BS	LCS	10/07/25 10:31		mohan	OK
16	Q3262-03	MOO-25-0280	SAM	10/07/25 10:33		mohan	OK
17	Q3262-06	MOO-25-0281-82	SAM	10/07/25 10:35		mohan	OK
18	Q3262-09	279887	SAM	10/07/25 10:38		mohan	OK

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB137441

Review By	mohan	Review On	10/7/2025 4:13:47 PM
Supervise By	jaswal	Supervise On	10/7/2025 4:41:45 PM

STD. NAME	STD REF.#
ICAL Standard	MP87442,MP874423,MP87444,MP87445,MP87447,MP87448
ICV Standard	MP87449
CCV Standard	MP87451
ICSA Standard	
CRI Standard	MP87453
LCS Standard	
Chk Standard	MP87450,MP87452,MP87454,MP87459

19	Q3269-03	EG1-TP1	SAM	10/07/25 10:40		mohan	OK
20	Q3269-06	EG1-TP2	SAM	10/07/25 10:43		mohan	OK
21	CCV91	CCV91	CCV	10/07/25 10:45		mohan	OK
22	CCB91	CCB91	CCB	10/07/25 10:47		mohan	OK
23	Q3277-02	WC1	SAM	10/07/25 10:50		mohan	OK
24	Q3287-02	TSS-25-0001-0002	SAM	10/07/25 10:52		mohan	OK
25	Q3289-02	VNJ-240	SAM	10/07/25 10:54		mohan	OK
26	Q3289-04	VNJ-261	SAM	10/07/25 10:56		mohan	OK
27	Q3289-06	72-11966	SAM	10/07/25 10:59		mohan	OK
28	Q3289-06DUP	72-11966DUP	DUP	10/07/25 11:01		mohan	OK
29	Q3289-06MS	72-11966MS	MS	10/07/25 11:03		mohan	OK
30	Q3289-06MSD	72-11966MSD	MSD	10/07/25 11:05		mohan	OK
31	PB170005BL	PB170005BL	MB	10/07/25 11:09		mohan	OK
32	PB170005BS	PB170005BS	LCS	10/07/25 11:11		mohan	OK
33	CCV92	CCV92	CCV	10/07/25 11:13		mohan	OK
34	CCB92	CCB92	CCB	10/07/25 11:16		mohan	OK
35	Q3291-05	MC0AX0	SAM	10/07/25 11:18		mohan	OK
36	Q3291-05DUP	MC0AX0DUP	DUP	10/07/25 11:20		mohan	OK
37	Q3291-05MS	MC0AX0MS	MS	10/07/25 11:22		mohan	OK
38	Q3291-05MSD	MC0AX0MSD	MSD	10/07/25 11:25		mohan	OK

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB137441

Review By	mohan	Review On	10/7/2025 4:13:47 PM
Supervise By	jaswal	Supervise On	10/7/2025 4:41:45 PM

STD. NAME	STD REF.#
ICAL Standard	MP87442,MP874423,MP87444,MP87445,MP87447,MP87448
ICV Standard	MP87449
CCV Standard	MP87451
ICSA Standard	
CRI Standard	MP87453
LCS Standard	
Chk Standard	MP87450,MP87452,MP87454,MP87459

39	Q3291-06	MC0AX1	SAM	10/07/25 11:27		mohan	OK
40	Q3291-07	MC0AX2	SAM	10/07/25 11:29		mohan	OK
41	Q3291-08	MC0AX3	SAM	10/07/25 11:32		mohan	OK
42	CCV93	CCV93	CCV	10/07/25 11:37		mohan	OK
43	CCB93	CCB93	CCB	10/07/25 11:39		mohan	OK
44	PB169971TB	PB169971TB	MB	10/07/25 11:41		mohan	OK
45	Q3289-06L	72-11966L	SD	10/07/25 11:44		mohan	OK
46	Q3289-06A	72-11966A	PS	10/07/25 11:46	016mL of mp87461-10ml sample	mohan	OK
47	Q3291-05L	MC0AX0L	SD	10/07/25 11:48		mohan	OK
48	Q3291-05A	MC0AX0A	PS	10/07/25 11:50	016mL of mp87461-10ml sample	mohan	OK
49	CCV94	CCV94	CCV	10/07/25 11:53		mohan	OK
50	CCB94	CCB94	CCB	10/07/25 11:57		mohan	OK

Instrument ID: P7

Daily Analysis Runlog For Sequence/QC Batch ID # LB137449

Review By	jaswal	Review On	10/8/2025 11:54:22 AM
Supervise By	janvi	Supervise On	10/8/2025 11:59:53 AM
STD. NAME	STD REF.#		
ICAL Standard	MP87074,MP87083,MP87082,MP87080,MP87079,MP87078,MP87077,MP87076,MP87075		
ICV Standard	MP87085,MP87082		
CCV Standard	MP87086		
ICSA Standard	MP87087,MP87088		
CRI Standard	MP87082		
LCS Standard			
Chk Standard	MP87091,MP87092		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	TUNE	TUNE	TUNE	10/07/25 16:11		Jaswal	OK
2	S0	S0	CAL1	10/07/25 16:42		Jaswal	OK
3	S2	S2	CAL3	10/07/25 16:46		Jaswal	OK
4	S3	S3	CAL4	10/07/25 16:49		Jaswal	OK
5	S4	S4	CAL5	10/07/25 16:52		Jaswal	OK
6	S5	S5	CAL6	10/07/25 16:55		Jaswal	OK
7	S6	S6	CAL7	10/07/25 16:58		Jaswal	OK
8	S7	S7	CAL8	10/07/25 17:01		Jaswal	OK
9	S8	S8	CAL9	10/07/25 17:04		Jaswal	OK
10	ICV01	ICV01	ICV	10/07/25 17:26		Jaswal	OK
11	LLICV01	LLICV01	LLICV	10/07/25 17:29		Jaswal	OK
12	ICB01	ICB01	ICB	10/07/25 17:33		Jaswal	OK
13	ICSA01	ICSA01	ICSA	10/07/25 17:36		Jaswal	OK
14	ICSAB01	ICSAB01	ICSAB	10/07/25 17:39		Jaswal	OK
15	CCV01	CCV01	CCV	10/07/25 17:42		Jaswal	OK
16	CCB01	CCB01	CCB	10/07/25 17:45		Jaswal	OK
17	CRI01	CRI01	CRDL	10/07/25 17:48		Jaswal	OK
18	PB170000BL	PB170000BL	MB	10/07/25 17:51		Jaswal	OK

Instrument ID: P7

Daily Analysis Runlog For Sequence/QC Batch ID # LB137449

Review By	jaswal	Review On	10/8/2025 11:54:22 AM
Supervise By	janvi	Supervise On	10/8/2025 11:59:53 AM

STD. NAME	STD REF.#
ICAL Standard	MP87074,MP87083,MP87082,MP87080,MP87079,MP87078,MP87077,MP87076,MP87075
ICV Standard	MP87085,MP87082
CCV Standard	MP87086
ICSA Standard	MP87087,MP87088
CRI Standard	MP87082
LCS Standard	
Chk Standard	MP87091,MP87092

19	PB170000BS	PB170000BS	LCS	10/07/25 17:55		Jaswal	OK
20	Q3291-05	MC0AX0	SAM	10/07/25 17:57		Jaswal	OK
21	Q3291-06	MC0AX1	SAM	10/07/25 18:01		Jaswal	OK
22	Q3291-07	MC0AX2	SAM	10/07/25 18:04	INT_STD 89Y(1&2) Fail	Jaswal	Dilution
23	Q3291-07DUP	MC0AX2DUP	DUP	10/07/25 18:07	INT_STD 89Y(1&2) Fail	Jaswal	Dilution
24	Q3291-07L	MC0AX2L	SD	10/07/25 18:10	INT_STD 89Y(1&2) Fail	Jaswal	Dilution
25	Q3291-07MS	MC0AX2MS	MS	10/07/25 18:14	INT_STD 89Y(1&2) Fail	Jaswal	Dilution
26	Q3291-07MSD	MC0AX2MSD	MSD	10/07/25 18:16	INT_STD 89Y(1&2) Fail	Jaswal	Dilution
27	CCV02	CCV02	CCV	10/07/25 18:19		Jaswal	OK
28	CCB02	CCB02	CCB	10/07/25 18:22		Jaswal	OK
29	Q3291-07A	MC0AX2A	PS	10/07/25 18:25	INT_STD 89Y(1&2) Fail,0.1ml mp87093,0.2ml each mp87094,mp87095,mp87 096-10ml sample	Jaswal	Dilution
30	Q3291-08	MC0AX3	SAM	10/07/25 18:28	INT_STD 89Y(1&2) Fail	Jaswal	Dilution
31	Q3291-06DL	MC0AX1DL	SAM	10/07/25 18:31	Not Required	Jaswal	Not Ok
32	Q3291-07DL	MC0AX2DL	SAM	10/07/25 18:35	5X For INT_STD 89Y(1&2)	Jaswal	Confirms
33	Q3291-07DUPDL	MC0AX2DUPDL	DUP	10/07/25 18:38	5X For INT_STD 89Y(1&2)	Jaswal	Confirms
34	Q3291-07LDL	MC0AX2LDL	SD	10/07/25 18:41	25X For INT_STD 89Y(1&2)	Jaswal	Confirms
35	Q3291-07MSDL	MC0AX2MSDL	MS	10/07/25 18:44	5X For INT_STD 89Y(1&2)	Jaswal	Confirms
36	Q3291-07MSDDL	MC0AX2MSDDL	MSD	10/07/25 18:48	5X For INT_STD 89Y(1&2)	Jaswal	Confirms

Instrument ID: P7

Daily Analysis Runlog For Sequence/QCBatch ID # LB137449

Review By	jaswal	Review On	10/8/2025 11:54:22 AM
Supervise By	janvi	Supervise On	10/8/2025 11:59:53 AM

STD. NAME	STD REF.#
ICAL Standard	MP87074,MP87083,MP87082,MP87080,MP87079,MP87078,MP87077,MP87076,MP87075
ICV Standard	MP87085,MP87082
CCV Standard	MP87086
ICSA Standard	MP87087,MP87088
CRI Standard	MP87082
LCS Standard	
Chk Standard	MP87091,MP87092

37	Q3291-07ADL	MC0AX2ADL	PS	10/07/25 18:51	5X For INT_STD 89Y(1&2)	Jaswal	Confirms
38	Q3291-08DL	MC0AX3DL	SAM	10/07/25 18:54	5X For INT_STD 89Y(1&2)	Jaswal	Confirms
39	CCV03	CCV03	CCV	10/07/25 18:57		Jaswal	OK
40	CCB03	CCB03	CCB	10/07/25 19:09		Jaswal	OK

Prep Standard - Chemical Standard Summary

Order ID : Q3291

Test : Dissolved ICP-TAL Metals,Dissolved Mercury,Mercury,Metals ICP-TAL

Prepbatch ID : PB170000,PB170005,

Sequence ID/Qc Batch ID: LB137441,LB137441,LB137449,LB137449,

Standard ID :
MP87071,MP87072,MP87073,MP87074,MP87075,MP87076,MP87077,MP87078,MP87079,MP87080,MP87081,MP87082,MP87083,MP87085,MP87086,MP87087,MP87088,MP87090,MP87091,MP87092,MP87093,MP87094,MP87095,MP87096,MP87097,MP87148,MP87149,MP87441,MP87442,MP874423,MP87444,MP87445,MP87447,MP87448,MP87449,MP87450,MP87451,MP87452,MP87453,MP87454,MP87459,

Chemical ID :
M4397,M4916,M5062,M5245,M5658,M5697,M5739,M5798,M5799,M5800,M5801,M5815,M5817,M5882,M5884,M5962,M5979,M5981,M6021,M6023,M6025,M6026,M6027,M6028,M6030,M6032,M6055,M6079,M6086,M6127,M6128,M6137,M6140,M6142,M6145,M6146,M6151,M6153,M6157,M6158,M6159,M6161,M6163,M6164,M6165,M6171,M6172,M6175,M6176,M6178,M6185,M6187,M6196,M6200,W3112,

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3965	2:1 H2SO4 : HNO3	MP87071	09/04/2025	11/07/2025	Mohan Bera	None	None	Sarabjit Jaswal
								09/04/2025

FROM 1600.00000ml of M6157 + 800.00000ml of M6187 = Final Quantity: 3200.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP87072	09/04/2025	03/04/2026	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal
								09/04/2025

FROM 100.00000gram of M4916 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
66	POTASSIUM PERSULFATE SOLUTION 5 %	MP87073	09/04/2025	03/05/2026	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal
09/04/2025								

FROM 100.00000ml of M4397 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP87074	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal
09/09/2025								

FROM 25.00000ml of M6151 + 4925.00000ml of W3112 + 50.00000ml of M6187 = Final Quantity: 5000.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2902	S8 ICPMS	MP87075	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025
FROM 1.00000ml of M6159 + 2.50000ml of M6140 + 2.50000ml of M6142 + 5.00000ml of M6086 + 5.00000ml of M6171 + 5.00000ml of M6172 + 79.00000ml of MP87074 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3947	S7(SFAM,6020,200.8)	MP87076	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025
FROM 0.10000ml of M6153 + 0.40000ml of M6026 + 0.50000ml of M6151 + 1.00000ml of M5799 + 1.00000ml of M5981 + 1.00000ml of M6079 + 1.00000ml of M6137 + 1.00000ml of M6187 + 1.90000ml of M6159 + 10.00000ml of M5979 + 10.00000ml of M6178 + 2.00000ml of M5815 + 2.00000ml of M5817 + 4.00000ml of M6032 + 4.90000ml of M6140 + 4.90000ml of M6142 + 48.50000ml of W3112 + 50.00000ml of M6175 + 9.00000ml of M5697 + 9.00000ml of M6128 + 9.00000ml of M6145 + 9.90000ml of M6086 + 9.90000ml of M6171 + 9.90000ml of M6172 = Final Quantity: 100.000 ml								

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3948	S6(SFAM,6020,200.8)	MP87077	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025
FROM 0.50000ml of M6151 + 1.00000ml of M6187 + 48.50000ml of W3112 + 50.00000ml of MP87076 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3949	S5(SFAM,6020,200.8)	MP87078	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025
FROM 0.50000ml of M6151 + 1.00000ml of M6187 + 73.50000ml of W3112 + 25.00000ml of MP87076 = Final Quantity: 100.000 ml								

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3954	S4(SFAM,6020,200.8)	MP87079	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025

FROM 0.50000ml of M6151 + 1.00000ml of M6187 + 86.00000ml of W3112 + 12.50000ml of MP87076 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3951	S3(SFAM, 6020,200.8)	MP87080	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025

FROM 0.50000ml of M6151 + 1.00000ml of M6187 + 88.50000ml of W3112 + 10.00000ml of MP87077 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3955	S2CONC(SFAM,6020,200.8)	MP87081	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025
FROM 0.00500ml of M6153 + 0.05000ml of M5798 + 0.05000ml of M5800 + 0.05000ml of M5801 + 0.05000ml of M5981 + 0.05000ml of M6023 + 0.05000ml of M6025 + 0.05000ml of M6027 + 0.05000ml of M6028 + 0.05000ml of M6030 + 0.05000ml of M6079 + 0.05000ml of M6128 + 0.10000ml of M5658 + 0.10000ml of M5697 + 0.10000ml of M6146 + 0.10000ml of M6159 + 0.25000ml of M5799 + 0.25000ml of M5962 + 0.25000ml of M5979 + 0.25000ml of M6021 + 0.25000ml of M6140 + 0.25000ml of M6145 + 0.25000ml of M6178 + 0.50000ml of M6032 + 0.50000ml of M6137 + 1.25000ml of M5815 + 1.25000ml of M5817 + 1.25000ml of M6151 + 2.50000ml of M6086 + 2.50000ml of M6142 + 2.50000ml of M6171 + 2.50000ml of M6172 + 2.50000ml of M6187 + 230.04500ml of W3112 = Final Quantity: 250.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3956	S2(SFAM,6020,200.8)	MP87082	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025
FROM 0.50000ml of M6151 + 1.00000ml of M6187 + 98.00000ml of W3112 + 0.50000ml of MP87081 = Final Quantity: 100.000 ml								

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3957	S1(SFAM,6020,200.8)	MP87083	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025

FROM 0.50000ml of M6151 + 1.00000ml of M6187 + 88.50000ml of W3112 + 10.00000ml of MP87082 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4213	NEW ICV-6020B	MP87085	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025

FROM 0.00800ml of M6164 + 0.00800ml of M6165 + 0.01600ml of M6163 + 49.96800ml of MP87074 = Final Quantity: 50.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3961	CCV	MP87086	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025
FROM 0.20000ml of M6026 + 0.50000ml of M5799 + 0.50000ml of M5981 + 0.50000ml of M6079 + 0.50000ml of M6137 + 0.50000ml of M6176 + 1.00000ml of M5815 + 1.00000ml of M5817 + 10.00000ml of M6187 + 12.45000ml of M6140 + 12.45000ml of M6142 + 2.00000ml of M6032 + 24.95000ml of M6086 + 24.95000ml of M6171 + 24.95000ml of M6172 + 25.00000ml of M6175 + 4.50000ml of M5697 + 4.50000ml of M6128 + 4.50000ml of M6145 + 4.95000ml of M6159 + 5.00000ml of M6151 + 5.50000ml of M5979 + 5.50000ml of M6178 + 824.10000ml of W3112 = Final Quantity: 1000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1142	ICSA ICPMS	MP87087	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025
FROM 10.00000ml of M6185 + 90.00000ml of MP87074 = Final Quantity: 100.000 ml								

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1143	ICSAB ICPMS	MP87088	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025

FROM 10.00000ml of M5245 + 10.00000ml of M6185 + 80.00000ml of MP87074 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3962	MG 10PPM FOR TUNE	MP87090	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025

FROM 0.01000ml of M6171 + 9.99000ml of MP87074 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3894	TUNE 200PPB	MP87091	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025

FROM 2.00000ml of M6055 + 2.00000ml of MP87090 + 96.00000ml of MP87074 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3903	ISS 3PPM	MP87092	09/03/2025	10/07/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025

FROM 5.00000ml of M6187 + 75.00000ml of M5739 + 170.00000ml of MP87074 = Final Quantity: 250.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3880	M&B SPIKE-1	MP87093	09/03/2025	10/31/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025
FROM 5.00000ml of M5658 + 5.00000ml of M5798 + 5.00000ml of M5800 + 5.00000ml of M5962 + 5.00000ml of M5981 + 5.00000ml of M6021 + 5.00000ml of M6023 + 5.00000ml of M6027 + 5.00000ml of M6028 + 5.00000ml of M6030 + 5.00000ml of M6079 + 5.00000ml of M6146 + 5.00000ml of M6176 + 35.00000ml of MP87074 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3881	M&B SPIKE-2	MP87094	09/03/2025	10/31/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025
FROM 10.00000ml of M5979 + 10.00000ml of M6178 + 12.50000ml of M6032 + 12.50000ml of M6140 + 12.50000ml of M6142 + 2.50000ml of M5799 + 2.50000ml of M6137 + 5.00000ml of M6159 + 32.50000ml of MP87074 = Final Quantity: 100.000 ml								

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3882	M&B SPIKE-3	MP87095	09/03/2025	10/31/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025
FROM 0.62500ml of M6026 + 12.50000ml of M5697 + 12.50000ml of M6128 + 12.50000ml of M6145 + 11.87500ml of MP87074 = Final Quantity: 50.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3900	M&B SPIKE-4	MP87096	09/03/2025	10/31/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025
FROM 6.25000ml of M6086 + 6.25000ml of M6127 + 6.25000ml of M6172 + 6.25000ml of MP87074 = Final Quantity: 25.000 ml								

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4025	M&B SPIKE-5	MP87097	09/03/2025	10/31/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/09/2025

FROM 15.00000ml of M5979 + 15.00000ml of M6178 + 20.00000ml of MP87074 = Final Quantity: 50.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
170	1:1HCL	MP87148	09/09/2025	02/17/2026	Sagar Kanani	None	None	Sarabjit Jaswal 09/10/2025

FROM 1250.00000ml of M6151 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
67	SODIUM CHLORIDE - HYDROXYL- CHLORIDE SOLUTION	MP87149	09/09/2025	02/03/2026	Mohan Bera	METALS_SCALE_2 (M SC-2)	None	Sarabjit Jaswal
FROM 2000.00000ml of W3112 + 240.00000gram of M5884 + 240.00000ml of M6196 = Final Quantity: 2000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP87441	10/06/2025	10/07/2025	Mohan Bera	None	METALS_PIPETTE_6 (HGB)	Sarabjit Jaswal
FROM 1.00000ml of M6187 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml								

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1340	Hg 0.00 PPB STD	MP87442	10/06/2025	10/07/2025	Mohan Bera	None	METALS_PIPETTE_6 (HGB)	Sarabjit Jaswal 10/06/2025

FROM 2.50000ml of M6187 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1342	Hg 2.5 PPB STD	MP87444	10/06/2025	10/07/2025	Mohan Bera	None	METALS_PIPETTE_6 (HGB)	Sarabjit Jaswal 10/06/2025

FROM 2.50000ml of M6187 + 245.00000ml of W3112 + 2.50000ml of MP87441 = Final Quantity: 250.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1343	Hg 5.0 PPB STD	MP87445	10/06/2025	10/07/2025	Mohan Bera	None	METALS_PIPETTE_6 (HGB)	Sarabjit Jaswal 10/06/2025
FROM 2.50000ml of M6187 + 242.50000ml of W3112 + 5.00000ml of MP87441 = Final Quantity: 250.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1344	Hg 7.5 PPB STD	MP87447	10/06/2025	10/07/2025	Mohan Bera	None	METALS_PIPETTE_6 (HGB)	Sarabjit Jaswal 10/06/2025
FROM 2.50000ml of M6187 + 240.00000ml of W3112 + 7.50000ml of MP87441 = Final Quantity: 250.000 ml								

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1345	Hg 10.0 PPB STD	MP87448	10/06/2025	10/07/2025	Mohan Bera	None	METALS_PIPETTE_6 (HGB)	Sarabjit Jaswal 10/06/2025

FROM 2.50000ml of M6187 + 237.50000ml of W3112 + 10.00000ml of MP87441 = Final Quantity: 250.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1346	Hg ICV SOLUTION	MP87449	10/06/2025	10/07/2025	Mohan Bera	None	METALS_PIPETTE_6 (HGB)	Sarabjit Jaswal 10/06/2025

FROM 2.50000ml of M6161 + 2.50000ml of M6187 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1351	ICB (Hg 0.00 PPB SOLUTION)	MP87450	10/06/2025	10/07/2025	Mohan Bera	None	METALS_PIPETTE_6 (HGB)	Sarabjit Jaswal 10/06/2025

FROM 2.50000ml of M6187 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1358	CCV (Hg 5.0 PPB SOLUTION)	MP87451	10/06/2025	10/07/2025	Mohan Bera	None	METALS_PIPETTE_6 (HGB)	Sarabjit Jaswal 10/06/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6187 + 10.00000ml of MP87441 = Final Quantity: 500.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1352	CCB (Hg 0.00 PPB SOLUTION)	MP87452	10/06/2025	10/07/2025	Mohan Bera	None	METALS_PIPETTE_6 (HGB)	Sarabjit Jaswal 10/06/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6187 = Final Quantity: 500.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP87453	10/06/2025	10/07/2025	Mohan Bera	None	METALS_PIPETTE_6 (HGB)	Sarabjit Jaswal 10/06/2025

FROM 2.50000ml of M6187 + 247.30000ml of W3112 + 0.20000ml of MP87441 = Final Quantity: 250.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP87454	10/06/2025	10/07/2025	Mohan Bera	None	METALS_PIPETTE_6 (HGB)	Sarabjit Jaswal 10/06/2025

FROM 2.50000ml of M6187 + 240.50000ml of W3112 + 7.00000ml of MP87441 = Final Quantity: 250.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
68	STANNOUS CHLORIDE SOLUTION	MP87459	10/07/2025	10/08/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 10/07/2025

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6200 = Final Quantity: 500.000 ml

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3238-05 / Potassium Persulfate (2.5kg)	0000227540	09/24/2025	08/16/2019 / RICHARD	07/17/2019 / RICHARD	M4397

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3227-05 / Potassium Permanganate (2.5kg)	210800	03/31/2026	11/30/2022 / mohan	07/28/2021 / mohan	M4916

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCI 125mL 10ug/mL	S2-HG709270	09/22/2026	05/28/2022 / mohan	01/27/2022 / mohan	M5062

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSB (ICPMS) STOCK SOLUTION	CP-MS ICSB-0803	07/01/2026	07/02/2025 / jaswal	02/20/2020 / jaswal	M5245

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	6020ISS / 6020ISS, 10 ug/ml, Bi, Ho, In, 6Li, Rh, Sc, TB, Y	T2-MEB709511	09/03/2026	08/07/2024 / jaswal	04/11/2022 / jaswal	M5739

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	232820	08/31/2028	04/30/2024 / mohan	04/25/2024 / mohan	M5882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	04/30/2024 / mohan	04/25/2024 / mohan	M5884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGT11-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	08/05/2026	08/06/2025 / Janvi	02/22/2024 / Jaswal	M5979

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57092 / U, 1000 PPM, 125 ml	060724	06/07/2027	07/29/2024 / Jaswal	06/11/2024 / Jaswal	M5981

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / TI, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57082 / Pb, 1000 PPM, 125 ml	061224	11/09/2026	08/05/2024 / Jaswal	08/05/2024 / Jaswal	M6025

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57182 / Pb, 10000 PPM, 125 ml	110923	11/09/2026	12/05/2024 / janvi	08/05/2024 / Jaswal	M6026

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57028 / Ni, 1000 PPM, 125 ml	062024	06/20/2027	06/04/2025 / Janvi	08/05/2024 / Jaswal	M6027

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	010924	01/09/2027	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6032

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	IV-STOCK-12 / ICP-MS TUNING SOLUTION, 125mL	U2-MEB734294	06/21/2028	08/21/2024 / Jaswal	08/19/2024 / Jaswal	M6055

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57040 / Zr, 1000 PPM, 125 ml	071423	07/14/2026	01/15/2025 / Jaswal	09/30/2024 / Jaswal	M6079

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Calcium, 500 ml, 10000 PPM	082324	08/23/2027	03/06/2025 / JANVI	10/14/2024 / jaswal	M6086

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	112124	11/21/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6127

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	V2-SI744713	07/10/2029	01/14/2025 / Jaswal	10/03/2024 / Jaswal	M6137

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	011025	01/10/2028	06/25/2025 / Janvi	01/13/2025 / Jaswal	M6140

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58119 / K, 10000 PPM, 500 ml	103024	10/30/2027	05/06/2025 / JANVI	01/13/2025 / Jaswal	M6142

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	121724	12/17/2027	02/04/2025 / jaswal	01/13/2025 / Jaswal	M6145

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	071724	07/17/2027	01/31/2025 / kareem	10/18/2024 / kareem	M6146

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	02/17/2026	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSR10 / Strontium (SR), 125mL 10,000ppm	V2-SR754329	02/28/2026	02/28/2025 / JANVI	01/07/2025 / JANVI	M6153

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	24i1262013	11/07/2025	05/07/2025 / RUPESH	02/18/2025 / Mohan	M6157

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	10/30/2025	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011325	03/18/2026	03/18/2025 / kareem	02/09/2025 / kareem	M6159

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV 5 0415	12/31/2025	05/01/2025 / mohan	03/30/2024 / mohan	M6161

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-1-125ML / EPA CLP ICP Verification Standard1	V2-MEB744107	06/08/2026	06/09/2025 / jaswal	06/06/2025 / jaswal	M6163

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-2-125ML / EPA CLP ICP Verification Standard2	U2-MEB733713	06/08/2026	06/09/2025 / jaswal	06/09/2025 / jaswal	M6164

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-3-125ML / EPA CLP ICP Verification Standard3	V2-MEB749572	06/08/2026	06/09/2025 / jaswal	06/09/2025 / jaswal	M6165

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	011525	01/15/2028	07/15/2025 / jaswal	02/13/2025 / Janvi	M6171

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGNA10-5 / Sodium, 500 ml, 10000 PPM	V2-NA740547	07/29/2026	07/29/2025 / Janvi	01/25/2025 / Janvi	M6172

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	6020CAL-1 / Calibration Standard Method 6020	V2-MEB742014	07/17/2026	07/17/2025 / Janvi	01/27/2025 / Janvi	M6175

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	092724	09/27/2027	08/06/2025 / Janvi	08/06/2025 / Janvi	M6176

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57042 / Mo, 1000 PPM, 125 ml	080528	08/05/2028	08/06/2025 / Janvi	08/06/2025 / Janvi	M6178

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICPMS) STOCK SOLN	MS ICSA-0803	07/01/2026	07/02/2025 / jaswal	07/14/2022 / Janvi	M6185

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24H0162012	01/28/2026	08/29/2025 / Sagar	08/08/2025 / Sagar	M6187

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	H330-500 / HYDROXYLAMINE HYDROCHLORIDE ACS 500G	243373	02/03/2026	09/04/2025 / mohan	08/04/2025 / mohan	M6196

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	24D1562005	02/10/2026	09/11/2025 / Sagar	08/25/2025 / Sagar	M6200

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / lwona	07/03/2024 / lwona	W3112

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M5882
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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 – 0120633

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	T142	Quality Test / Release Date	08/17/2023
Lot Number	232820		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Aug/2028
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.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	100.65
CALCIUM	%	<= 0.005	0.0017
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	0.0011
LEAD (Pb)	%	<= 0.01	0.0006
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	0.0001
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)



Harout Sahagian - Quality Control Supervisor - Fair Lawn

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.



M6032

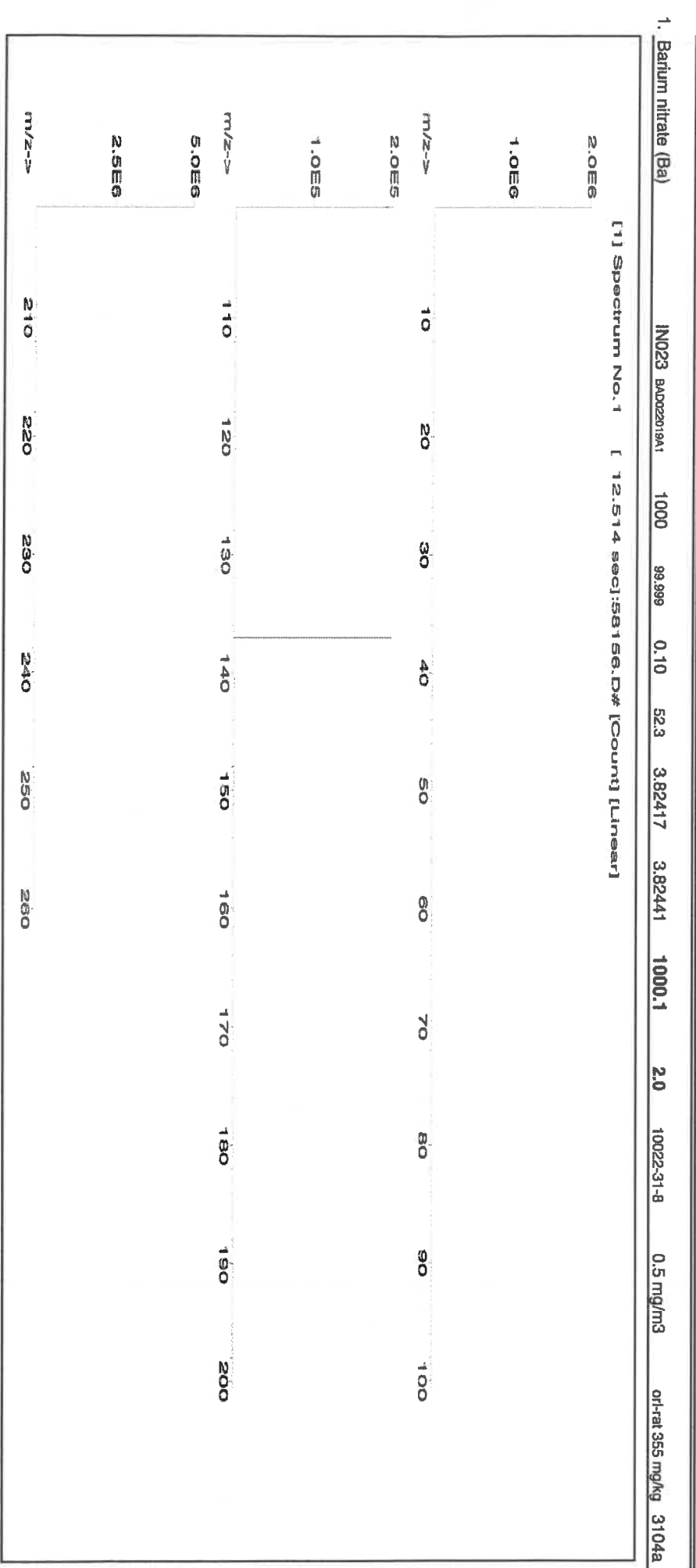


CERTIFIED WEIGHT REPORT:

Part Number: 57056
Lot Number: 010924
Description: Barium (Ba)
Solvent: Nitric Acid
Lot #
Expiration Date: 010927
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02
Balance Uncertainty: 5E-05
Flask Uncertainty: 0.058

Giovanni Caporaso	
Formulated By:	Giovanni Esposito
Reviewed By:	Pedro L. Renteria

SDS Information									
Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)
1. Barium nitrate (Ba)	IN023	BA0022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	1000.1





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).



Certified Reference Material CRM



Rev'd 2/10/14/2021 M6085 / M6086 / M6087

CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 082324
Description: Calcium (Ca)

Solvent: 24002546 Nitric Acid

Lot #

2% 80.0 (mL) Nitric Acid

Expiration Date: 082327

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 10000

NIST Test Number: 6UTB

5E-05 Balance Uncertainty

Weight shown below was diluted to (mL): 4000.1 0.15 Flask Uncertainty

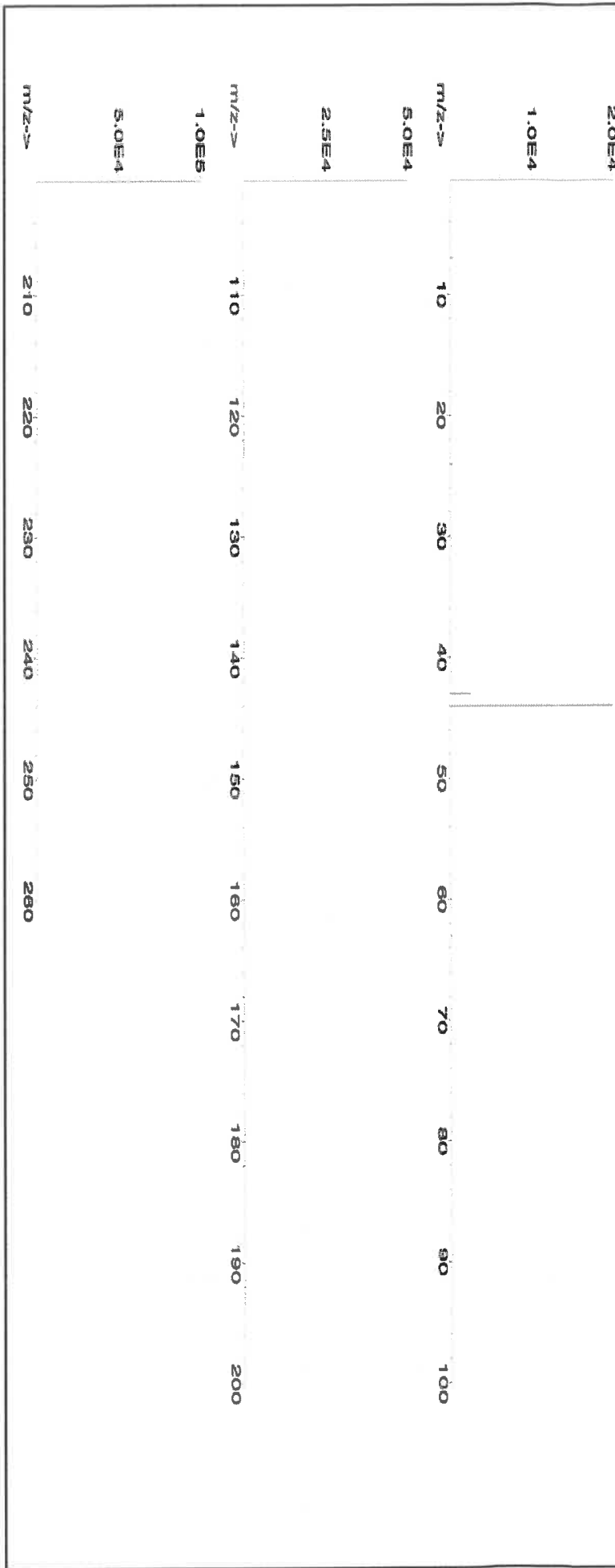
<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	Pedro L. Rentas
	082324

SDS Information

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Calcium carbonate (Ca) IN014 CAD03202383 10000 99.999 0.10 39.9 100.2537 100.2656 10001.2 20.0 471-34-1 5 mg/m3 or-rat >2000mg/kg 3109a

[1] Spectrum No. 1 [12.514 sec]: 58120.D* [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	30	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Su	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).



M6028



CERTIFIED WEIGHT REPORT:

Part Number: 57048
Lot Number: 070124
Description: Cadmium (Cd)

Lot #
Solvent: 24002546 Nitric Acid

Expiration Date: 070127

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.07

SE-05 Balance Uncertainty

0.100 Flask Uncertainty

2% 40.0 (mL) Nitric Acid

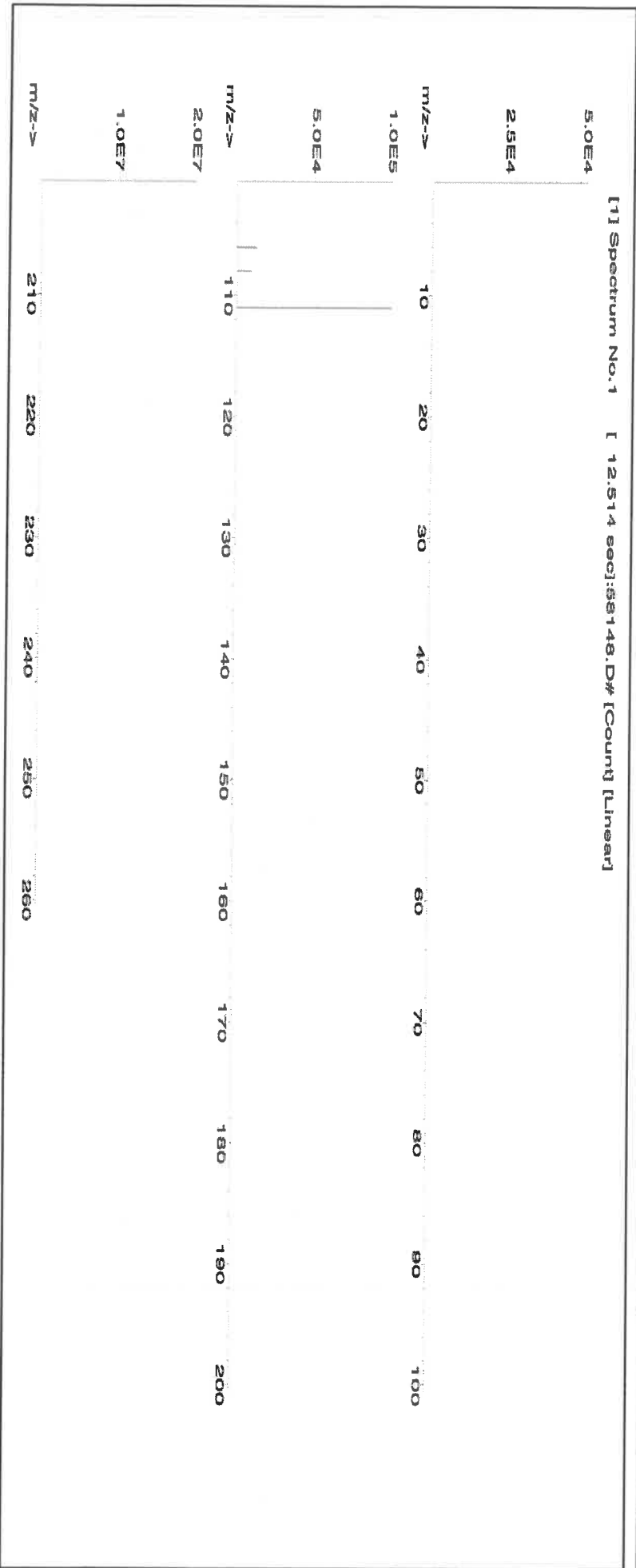
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	070124
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas
	070124

Compound

1. Cadmium nitrate tetrahydrate (Cd) IN024 CDM09221A1 1000 99.999 0.10 36.5 5.4797 5.4804 1000.1 2.0 10022-68-1 0.01 mg/m3 ref rat 60.2mg/kg 3108

Expanded
Uncertainty (µg/mL) CAS# OSHA PEL (TWA) LD50 NIST SRM

SDS Information





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.2	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Ba	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Cd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pr	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).



Instructions for QATS Reference Material: **ICP-MS ICS**

**QATS LABORATORY INORGANIC REFERENCE MATERIAL
INTERFERENCE CHECK SAMPLE SET FOR ICP-MS (ICSA WITH ICSB)**

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) SAMPLE DESCRIPTION

Enclosed is a set of one (1) or more bottles of an Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-0803" and for the ICSAB mixture use "ICSA-0803+ICSB-0803".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) BREAKAGE OR MISSING ITEMS

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

**QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120**

(C) ANALYSIS OF SAMPLES

This interference check sample set is to be used to verify elemental isobaric correction factors of inductively coupled plasma-mass spectrometers (ICP-MS). This reference material set consists of two (2) concentrated solutions. The ICSA solution contains several interferent elements and species; for a complete listing refer to the CLP SOW. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for the ICP-MS ICS Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:



ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO₃. Analyze this solution by ICP-MS.

ICSB-0803, Analytes, mixed with ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO₃. Analyze this ICSAB solution by ICP-MS.

(D) "CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-MS ICS SOLUTION(S)

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-MS ICSA-0803, AND ICSA-0803 MIXED WITH ICSB-0803							
Element	CRQL	Part A (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)	Part A +Part B (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)
Al	20	[100000]			[100000]		
Sb	2.0	(1.5)	-2.5	5.5	(22.0)	18.0	26.0
As	1.0	(0.10)	-1.9	2.1	19.0	16.2	21.9
Ba	10	(1.2)	-18.8	21.2	(22.0)	2.0	42.0
Be	1.0	(0.0)	-2.0	2.0	19.0	16.2	21.9
Cd	1.0	(0.70)	-1.3	2.7	20.0	17.0	23.0
Ca	500	[100000]			[100000]		
C		[200000]			[200000]		
Cl		[1000000]			[1000000]		
Cr	2.0	(21.0)	17.0	25.0	40.0	34.0	46.0
Co	1.0	(1.0)	-1.0	3.0	20.0	17.0	23.0
Cu	2.0	(8.0)	4.0	12.0	(25.0)	21.0	29.0
Fe	200	[100000]			[100000]		
Pb	1.0	(4.0)	2.0	6.0	25.0	21.3	28.8
Mg	500	[100000]			[100000]		
Mn	1.0	(7.0)	5.0	9.0	27.0	23.0	31.1
Mo		[2000]			[2000]		
Ni	1.0	(6.0)	4.0	8.0	24.0	20.4	27.6
P		[100000]			[100000]		
K	500	[100000]			[100000]		
Se	5.0	(0.30)	-9.7	10.0	(19.0)	9.0	29.0
Ag	1.0	(0.0)	-2.0	2.0	18.0	15.3	20.7
Na	500	[100000]			[100000]		
S		[100000]			[100000]		
Tl	1.0	(0.0)	-2.0	2.0	21.0	17.9	24.2
Ti		[2000]			[2000]		
V	5.0	(0.50)	-9.5	10.5	(19.0)	9.0	29.0
Zn	5.0	(11.0)	1.0	21.0	(29.0)	19.0	39.0

[] Indicates analytes that do not require ICP-MS determination in the ICS.

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 2 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

ICSA:
M5244

ICSB:
M5245



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

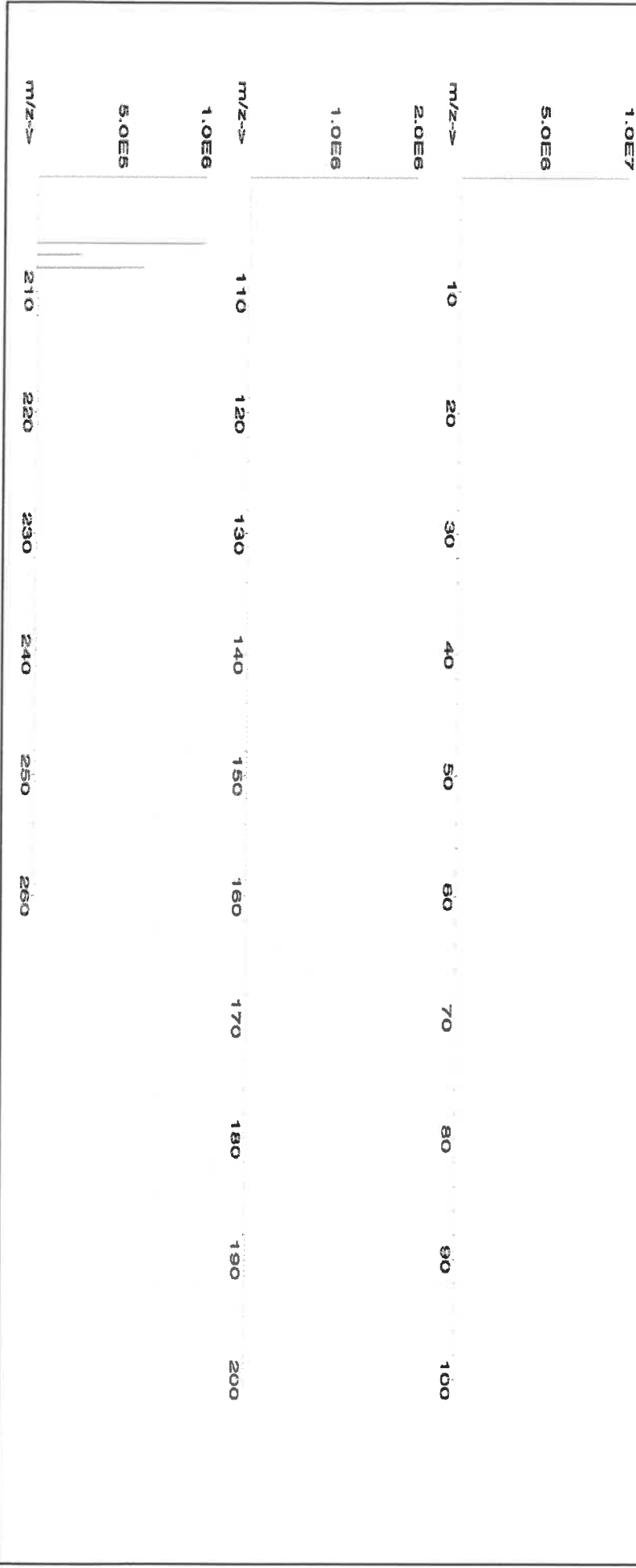
Part Number: **57182**
Lot Number: **110923**
Description: **Lead (Pb)**
Solvent: **24002546 Nitric Acid**
Lot #: **M6025**

Expiration Date: **110926**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **10000**
NIST Test Number: **6UTB**
Weight shown below was diluted to (mL): **2000.02**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas
110923	

SDS Information									
Compound	Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded
	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)
1. Lead(II) nitrate (Pb)	IN029	PED12016A1	10000	99.999	0.10	62.5	32.0006	32.0040	10001.1
									20.0
									10099-74-8
									0.05 mg/m3
									intrinsic 83 mg/kg
									3128

[1] Spectrum No.1 [17.284 sec]:58182.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

Physical Characterization:

(T)= Target analyte

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).



MC026



CERTIFIED WEIGHT REPORT:

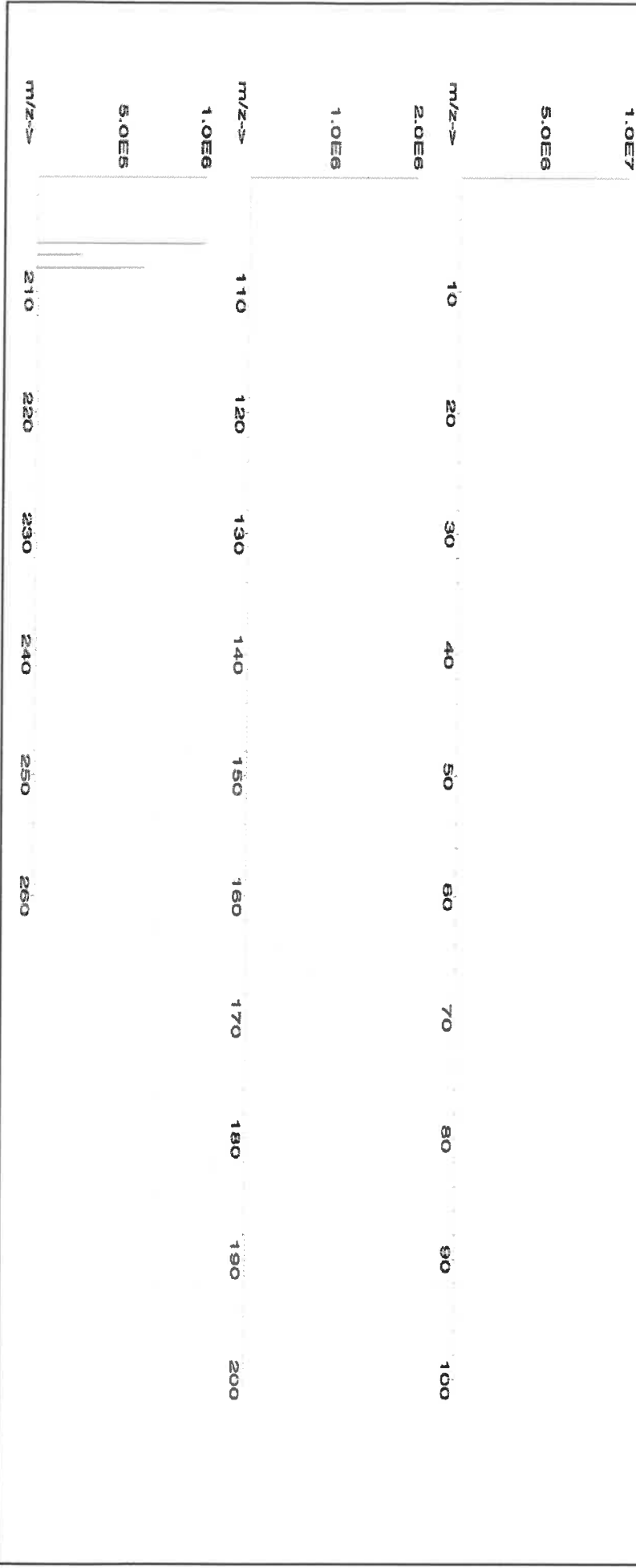
Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)
Solvent: 24002546 Nitric Acid
Lot #

Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry
110923	
Reviewed By:	Pedro L. Rentas
110923	

SDS Information									
Compound	Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded
	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)
1. Lead(II) nitrate (Pb)	IN029	PED12016A1	10000	99.999	0.10	62.5	32.0006	32.0040	10001.1
									20.0
									10099-74-8
									0.05 mg/m3
									intrinsic 83 mg/kg
									3128

[1] Spectrum No.1 [17.284 sec]:58182.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

Physical Characterization:

(T)= Target analyte

Homogeneity: No heterogeneity was observed in the preparation of this standard.

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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Potassium Permanganate
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination



M4397
Supplied - 07.17.19
Opened - 08.16.19
exp - 08.24.25

Material No.: 3227-05
Batch No.: 0000227540
Manufactured Date: 2018/09/26
Retest Date: 2025/09/24
Revision No: 1

Certificate of Analysis

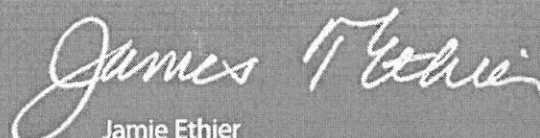
Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
ACS - Assay (KMnO ₄)	>= 99.0 %	99.0
ACS - Insoluble Matter	<= 0.2 %	< 0.1
ACS - Chloride and Chlorate (as Cl)	<= 0.005 %	0.005
ACS - Sulfate (SO ₄)	<= 0.02 %	0.02
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	0.004

For Laboratory, Research or Manufacturing Use

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

NS
08.16.19


Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087, U.S.A. Phone: 610.386.1700

M4913-16

MS

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	P279	Quality Test / Release Date	01/12/2021
Lot Number	210306		
Description	POTASSIUM PERMANGANATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Jan/2026

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Dark purple to purple green crystals
ASSAY	%	>= 99	99.3
CHLORIDE & CHLORATE	%	<= 0.005	<0.005
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
INSOLUBLE MATTER	%	<= 0.2	<0.2
MERCURY (Hg)	ppm	<= 0.05	<0.004
SULFATE (SO4)	%	<= 0.02	<0.02

Julian Burton

Julian Burton - Quality Control Manager – Fair Lawn

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.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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

MS062
MS063
MB

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).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Mass Spec Solution
Catalog Number: MSHG-10PPM
Lot Number: S2-HG709270
Matrix: 10% (v/v) HCl
Value / Analyte(s): 10 µg/mL ea:
Mercury
Starting Material: Hg metal
Starting Material Lot#: 1959
Starting Material Purity: 99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL
Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	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:

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

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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum ((w_i)^2 (u_{char i})^2)]^{1/2}$ 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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

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)

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.

O	Ag	0.000011	M	Eu	<	0.000201	O	Na	0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al	0.000001	O	Fe	0.000001	M	Nb	<	0.000201	O	Si	0.000005	M	Zr	<	0.000201	
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201		
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007		
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201		
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201		
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201		
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216		
O	Ca	0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201			
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402		
M	Ce	<	0.000201	O	K	0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508			
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201		
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058		
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201		
M	Cu	<	0.000402	O	Mg	0.000001	O	S	<	0.053950	M	W	<	0.000604			
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201		
M	Er	<	0.000201	M	Mo	0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201			

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

- 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

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO₃. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO₃ / LDPE container, stable in 10% HNO₃ packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO₃ packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO₃ / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO₃); Oxide (Soluble in HNO₃); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

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

September 22, 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

- **September 22, 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 Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





CERTIFIED WEIGHT REPORT:

Part Number: 58024
Lot Number: 060523
Description: Chromium (Cr)

Lot # 2110221 **Solvent:** Nitric Acid

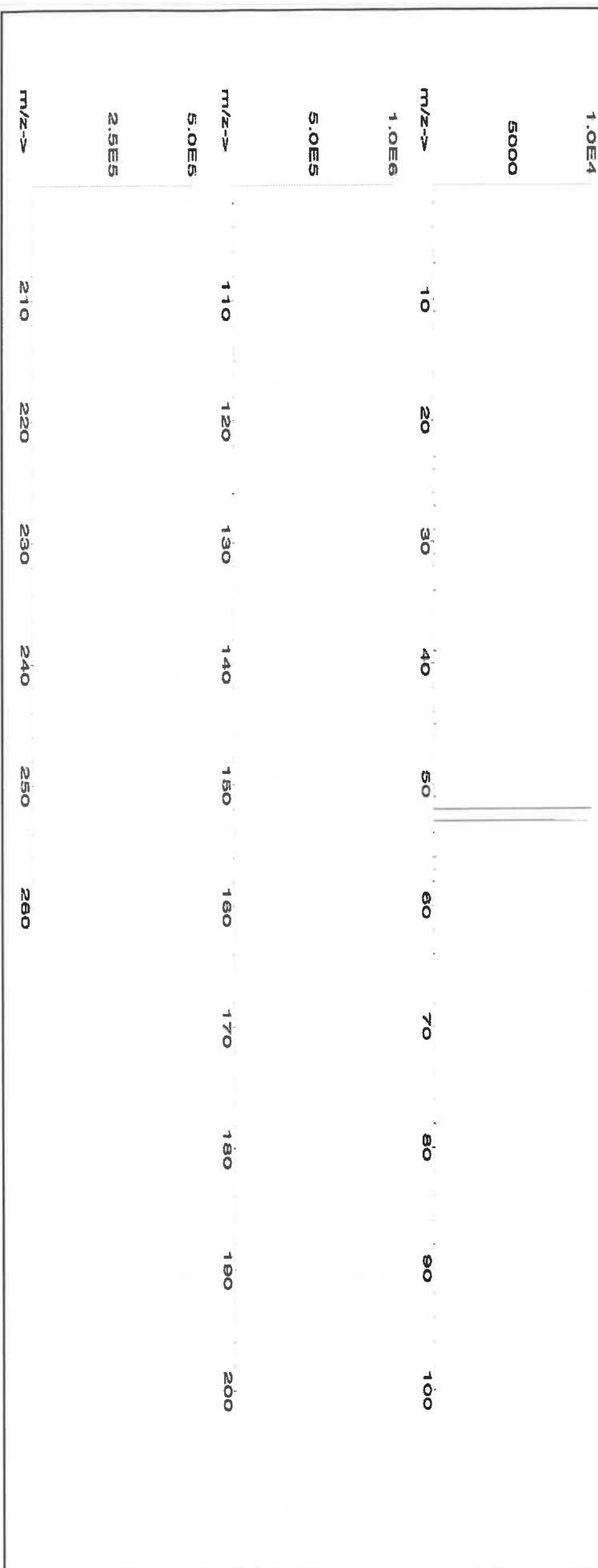
Formulated By:	Lawrence Barry
	060523
Reviewed By:	Pedro L. Ruelas
	060523

Expiration Date: 060526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.02 0.058 Balance Uncertainty
Flask Uncertainty

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
----------	-------------	------------	-----------------	-------------------	------------------	-----------------------	-----------------------	---------------------	----------------------------------	------	----------------	------	----------

1. Chromium(III) nitrate nonahydrate (Cr) 58124 071122 0.1000 200.0 0.084 1000 10000.1 1000.0 2.2 7789-02-8 0.5 mg(Cr)/m3 or rat 3250 mg/kg 3112a

[1] Spectrum No.1 [31.393 sec]:57024.D# [Count] [Linear]





Certified Reference Material CRM



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://AbsoluteStandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

58029
102523
Copper (Cu)

Lot #
Solvent:

24002546
Nitric Acid

Expiration Date:

102526

2.0%

40.0
(mL)

Nitric Acid

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

5E-05

Balance Uncertainty

Volume shown below was diluted to (mL):

2000.02

0.058

Flask Uncertainty

Formulated By:

Benson Chan

102523

Reviewed By:

Pedro L. Rentas

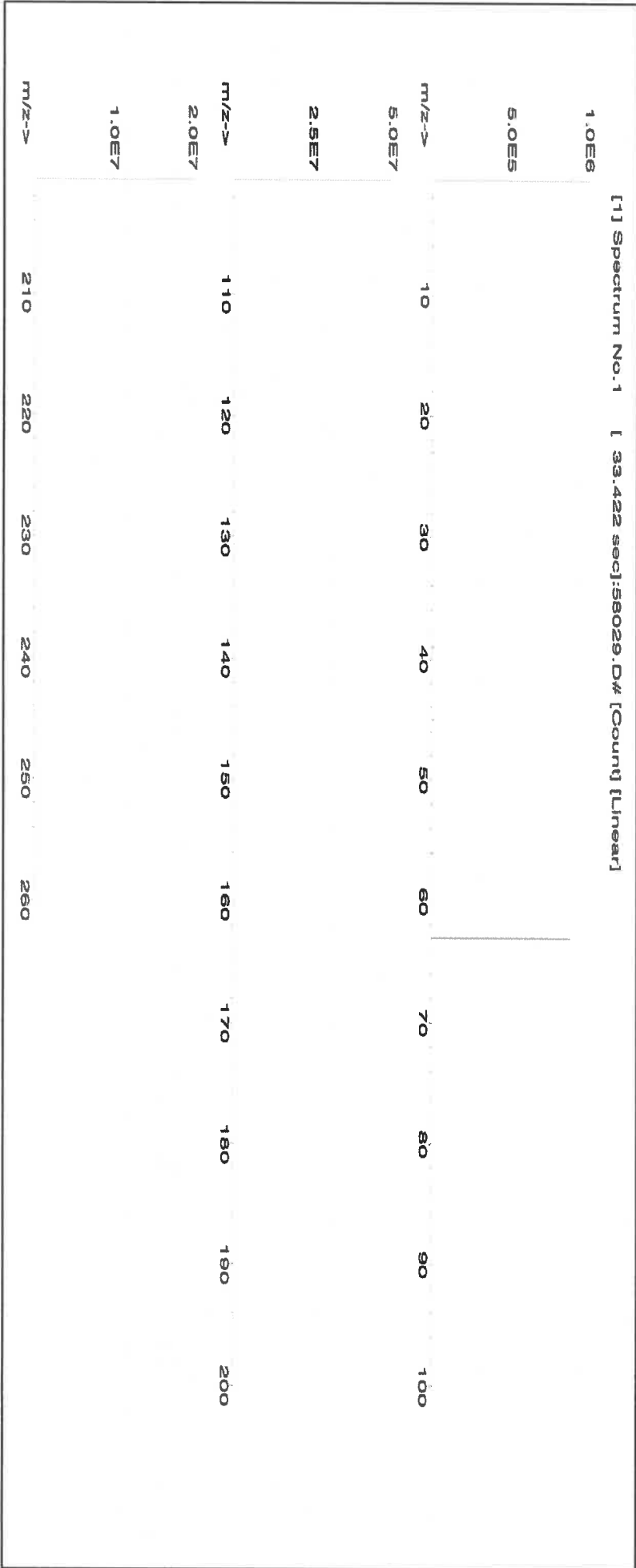
102523

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
----------	-------------	------------	-----------------	-------------------	--------------------------	-----------------------	-----------------------	---------------------	----------------------------------	------	----------------	------	----------

1. Copper(II) nitrate trihydrate (Cu) 58129 100223 0.1000 200.0 0.084 1000 10000.1 1000.0 2.2 10031-43-3 1 mg/m3 or-rat 794 mg/kg 3114

[1] Spectrum No.1 [33.422 sec]:58029.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

- * 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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number: 57004
Lot Number: 102523
Description: Beryllium (Be)

Lot # 24002546
Solvent: Nitric Acid

Expiration Date:

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL):

NIST Test Number: 6UTB

Volume shown below was diluted to (mL): 2000.02

2.0%

40.0 (mL)

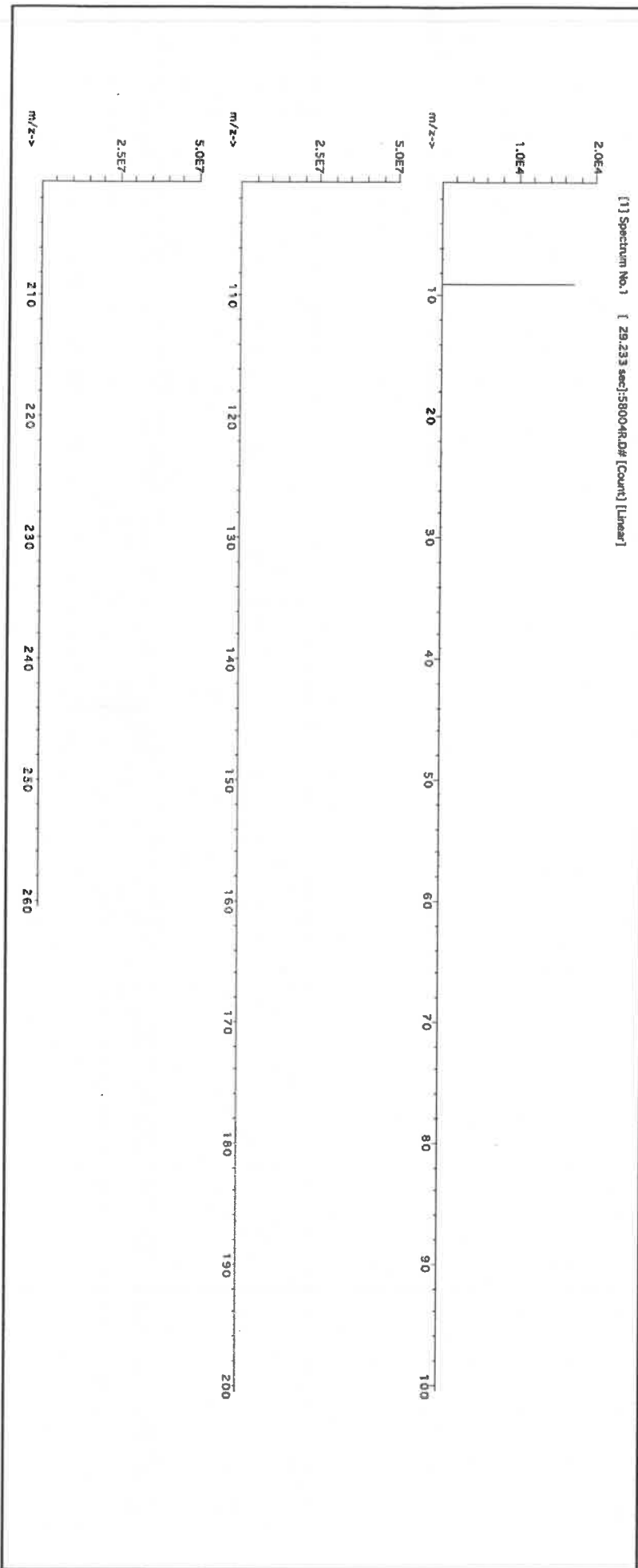
Nitric Acid

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

SDS Information

Compound	Part Number	Lot	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
----------	-------------	-----	-----------------	-------------------	--------------------------	-----------------------	-----------------------	---------------------	----------------------------------	------	----------------	------	----------

1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	1000.0	2.2	13597-99-4	0.2µg/m3	intrinsc-rat 3.16mg/kg	NA
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.02	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Ti	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.2	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Ta	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Tl	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).



Certified Reference Material CRM

CERTIFIED WEIGHT REPORT:

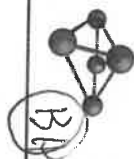
Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

Solvents: 21110221 Nitric Acid
22D0562008 Hydrochloric acid

Lot #

R-02509124

M599



Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000

2% 10.0 Nitric Acid
6% 30.0 Hydrochloric acid
(mL)

NIST Test Number: 6UTB

Weight shown below was diluted to (mL):

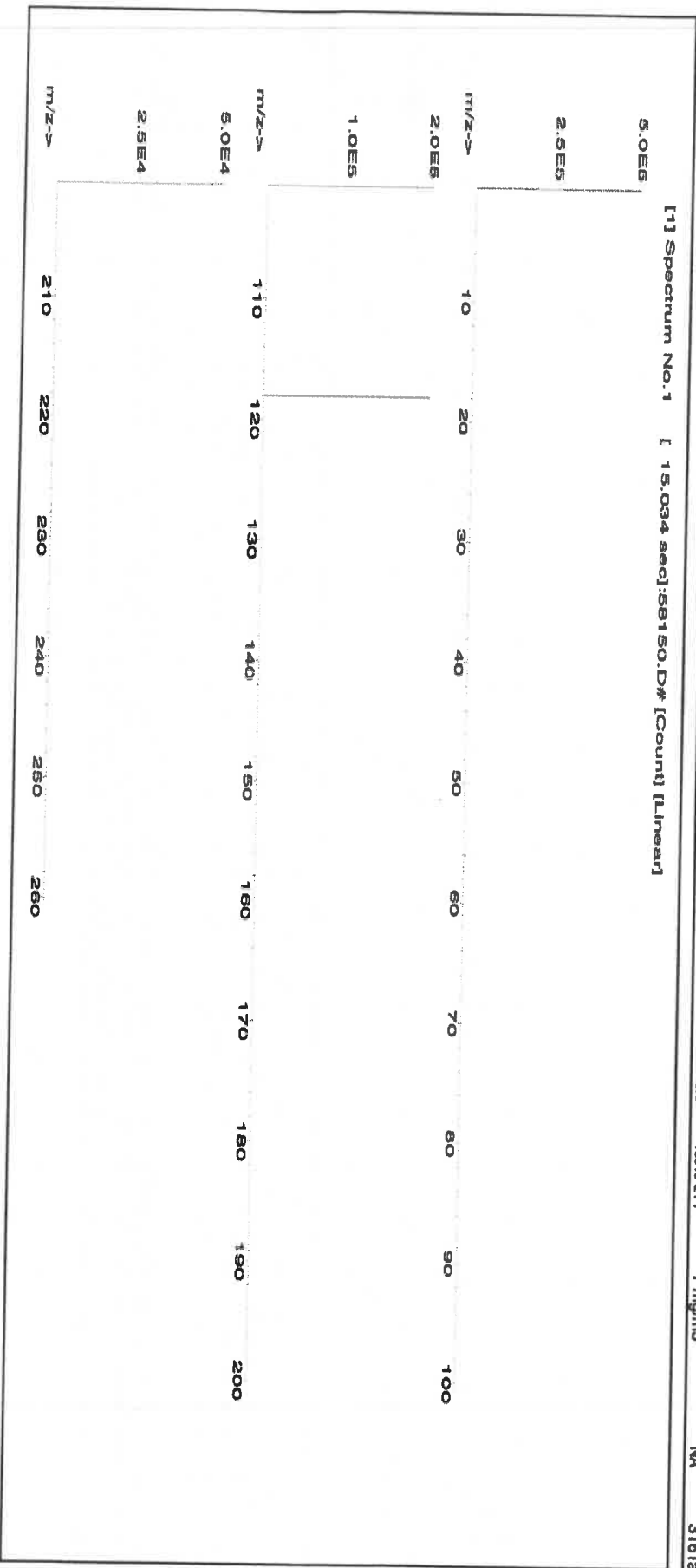
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By: Benson Chan	
071123	
Reviewed By:	Pedro L. Rentas
071123	

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Ammonium hexafluoroantimonate(V) (Sn) INO10 SMD042023A1 1000 99.999 0.10 44.2 1.13107 1.13286 1001.6 2.0 16919-24-7 7 mg/m3 NA 3161a

[1] Spectrum No. 1 [15.034 sec]:56150.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Ta	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).



R: 02/09/24 115800 (BA)

CERTIFIED WEIGHT REPORT:

Part Number: 57027
Lot Number: 091923
Description: Cobalt (Co)

Expiration Date: 091926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Volume shown below was diluted to (mL): 2000.02

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Lot # 24002546
Solvent: Nitric Acid

2.0% Nitric Acid
40.0 (mL)

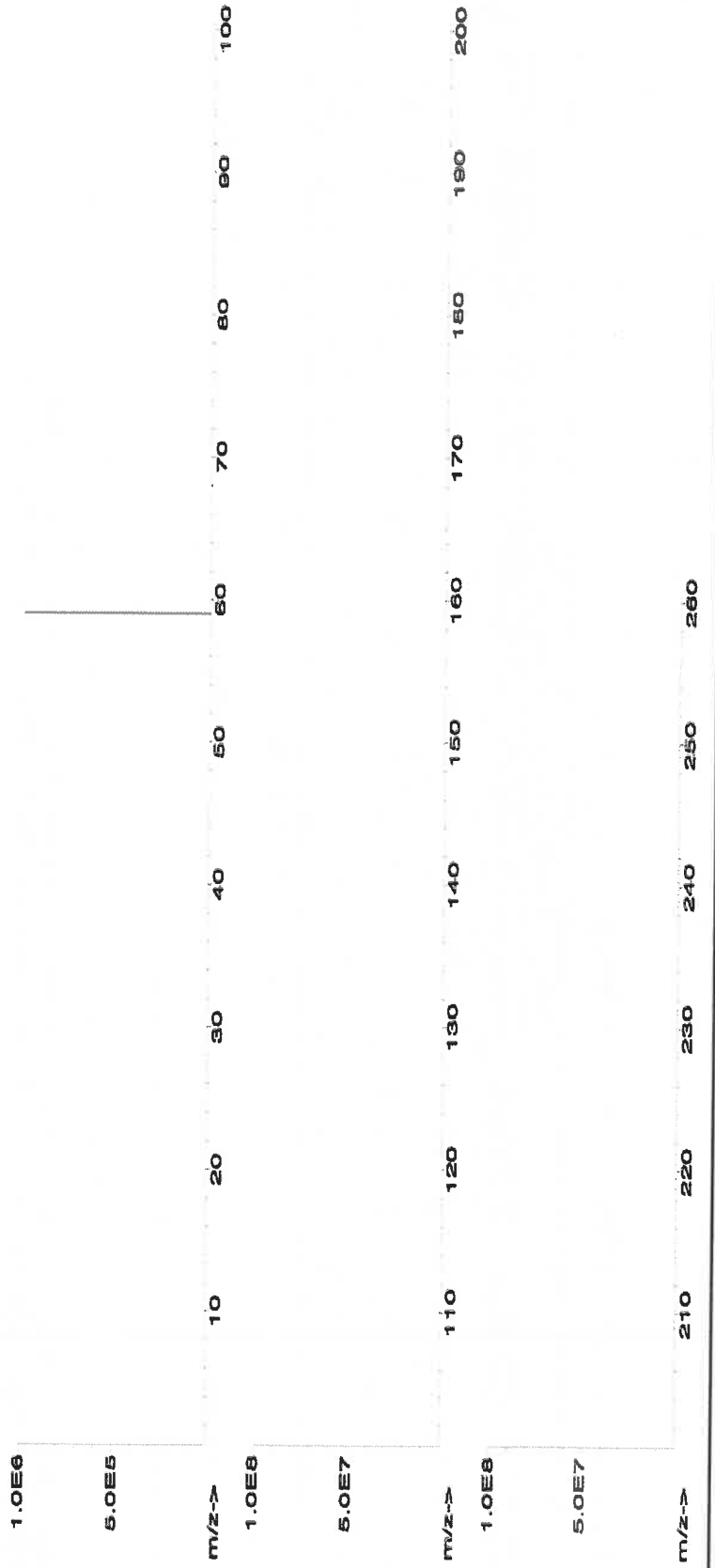
Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas

SDS Information

Expanded Uncertainty +/- (µg/mL)
(Solvent Safety Info. On Attached pg.)
NIST SRM
CAS# OSHA PEL (TWA) LD50

1. Cobalt(II) nitrate hexahydrate (Co) 58127 050923 0.1000 200.0 0.084 1000 10000.0 1000.0 2.2 10026-22-9 0.02 mg/m3 orl-rat 691 mg/kg 3113

[1] Spectrum No.1 [34.243 sec]:58027.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.2	Na	<0.02	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

[Signature]

- * 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 certified (+/-) 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).



Certified Reference Material CRM

AR: 02/09/24

M5801

BA



CERTIFIED WEIGHT REPORT:

Part Number: 57033
Lot Number: 111323
Description: Arsenic (As)

Lot # 24002546
Solvent: Nitric Acid

Expiration Date: 111326

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test Number: 6LUTB

Volume shown below was diluted to (mL): 4000.0

Balance Uncertainty: 5E-05
Flask Uncertainty: 0.06

2.0%

80.0 (mL)

Nitric Acid

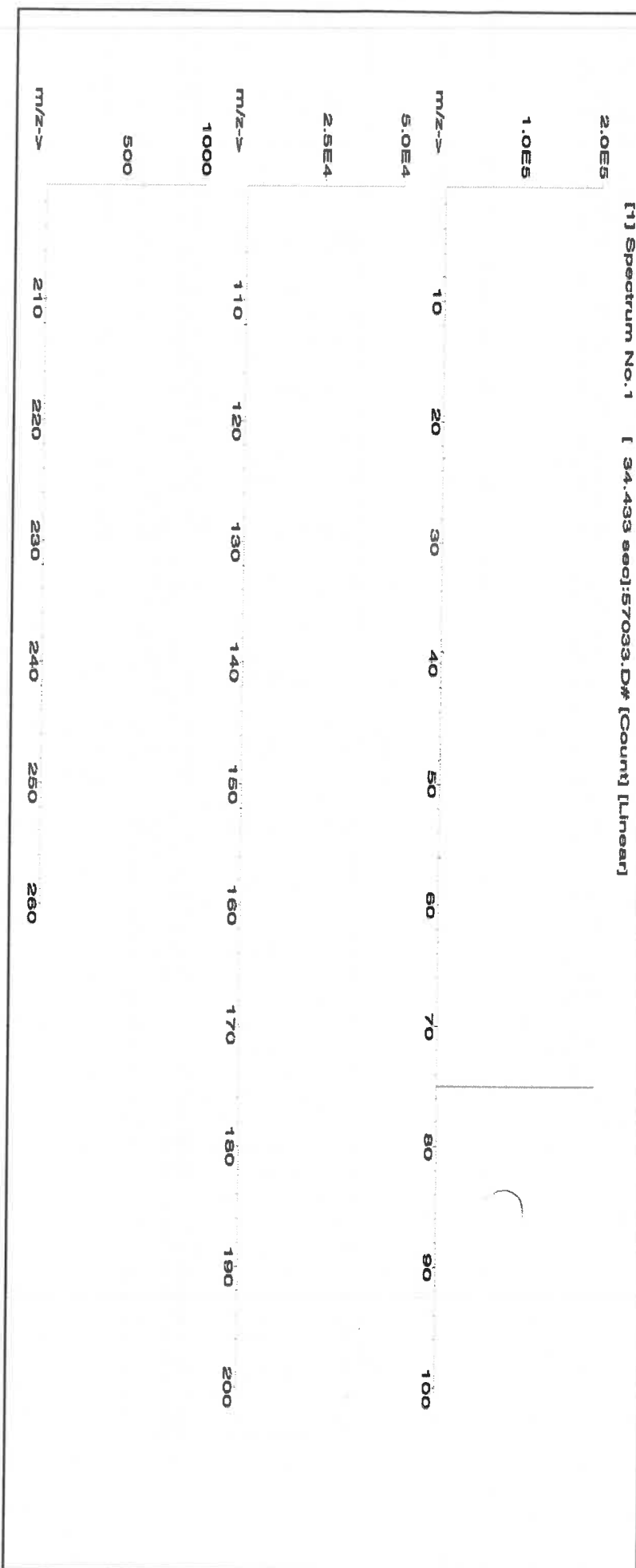
Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rendas	111323

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Arsenic (As) 58133 020522 0.1000 400.0 0.084 1000 10001.0 1000.0 2.0 7440-38-2 0.5 mg/m3 or-lat 500 mg/kg 3103a

[1] Spectrum No. 1 [34.433 sec]:57033.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Tl _h	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge [*]	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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.
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- * Standards are certified (+/-) 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).



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

Part Number: 57115
Lot Number: 041723
Description: Phosphorous (P)

Solvent: 21110221 Nitric Acid

Lot #

R102109124 M5815

Expiration Date: 041726
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

2% 40.0 (mL) Nitric Acid

Weight shown below was diluted to (mL): 2000.02 0.056 Balance Uncertainty
Flask Uncertainty

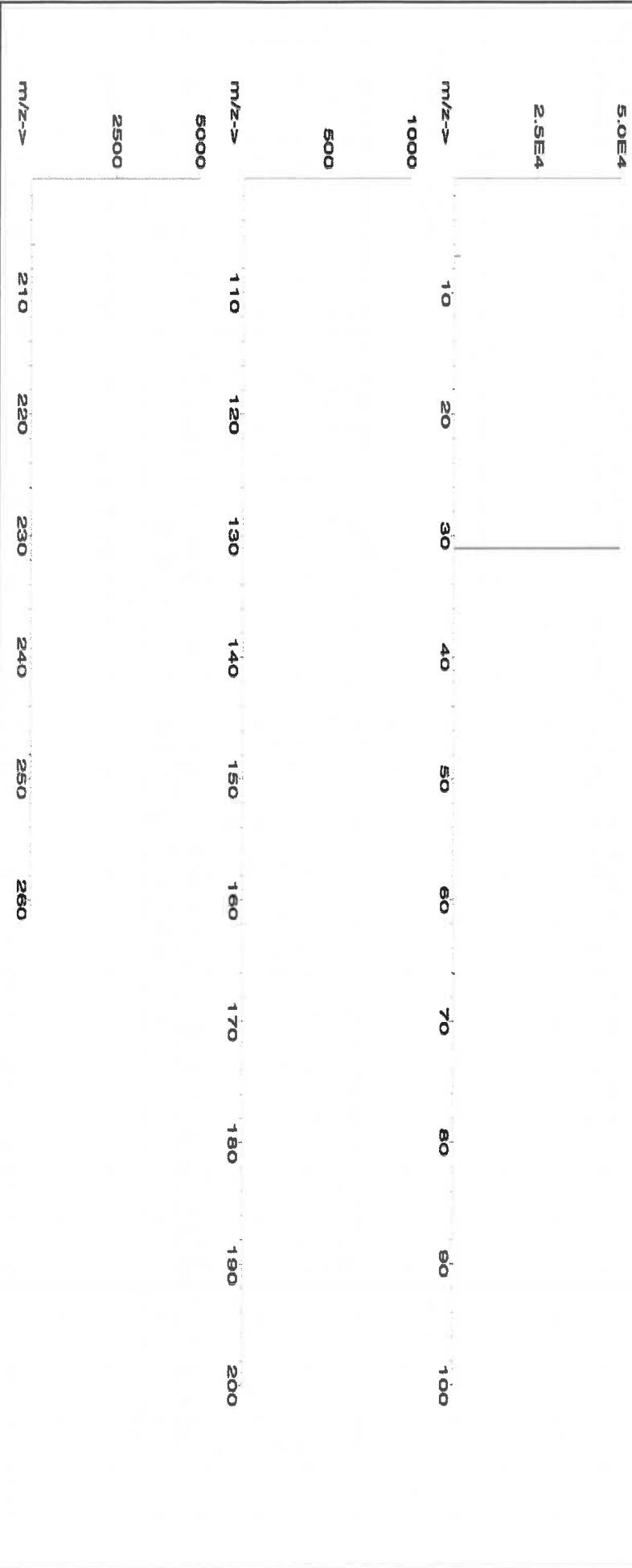
Formulated By:	Lawrence Barry
	041723
Reviewed By:	Pedro L. Rentas
	041723

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)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Ammonium dihydrogen phosphate (P) IN008 PVR2019A1 10000 99.999 0.10 27.5 72.7287 72.7289 10000.0 20.0 7722-76-1 5 mg/m3 or-hal->2000mg/kg 3186

[1] Spectrum No.1 [12.074 sec]:58115.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number: **57116**
Lot Number: **071123**
Description: **Sulfur (S)**

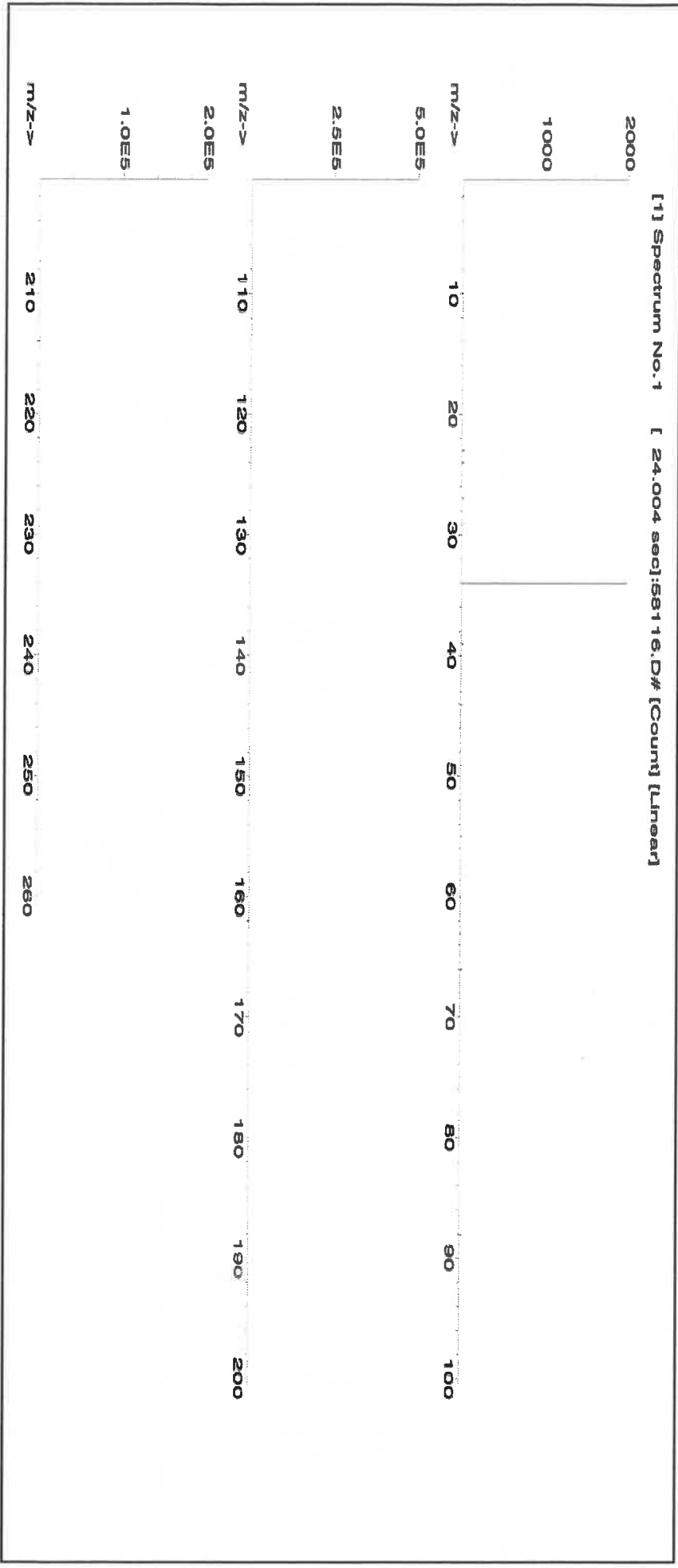
Solvent: **071123** Lot #
ASTM Type 1 Water

Formulated By:	Lawrence Barry
Reviewed By:	
Pedro L. Rentas	
071123	

Expiration Date: **071126**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **10000**
NIST Test Number: **6UTB**
Weight shown below was diluted to (mL): **1999.48**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

SDS Information									
Compound	Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded
	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)
									CAS# OSHA PEL (TWA) LD50 SRM

1. Ammonium sulfate (S)	IN117	SLBR725V	10000	99.9	0.10	24.3	82.4675	82.4692	10000.1	20.0	7783-20-2	NA	oral 4250mg/kg	3181
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Ti	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

Physical Characterization:

(T)= Target analyte

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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.
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Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent



MS824
MB

Material No.: 3624-01

Batch No.: 0000281938

Manufactured Date: 2021-06-07

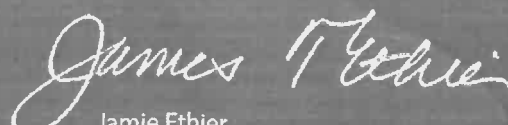
Retest Date: 2026-06-07

Revision No.: 1

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO ₃)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO ₄)	≤ 5 ppm	< 5 ppm
Sulfate (SO ₄)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory, Research, or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Mansford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

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:

57034

Lot Number:

060624

Description:

Selenium (Se)

Lot # Solvent:

24002546

Nitric Acid

2.0%

40.0 (mL)

Nitric Acid

Formulated By:

Benson Chan

060624

Expiration Date:

060627

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Volume shown below was diluted to (mL):

2000.07

SE-05 Balance Uncertainty

0.100 Flask Uncertainty

Reviewed By:

Pedro L. Rantas

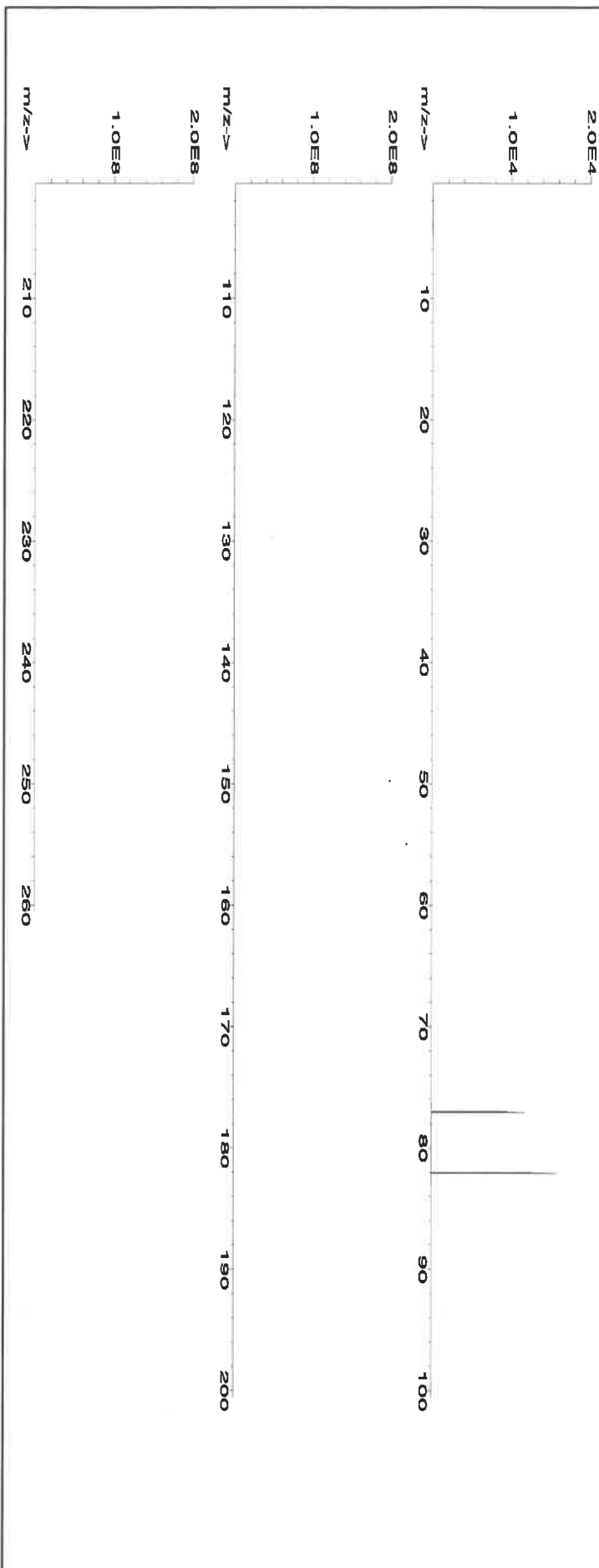
060624

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	(Solvent Safety Info. On Attached pg.)	CAS#	OSHA PEL (TWA)	LDSO	NIST SRM
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1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	1000.0	2.2	7782-49-2	0.2 mg/m3	or-tral 6700 mg/kg	3149
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[1] Spectrum No. 1 [33.702 sec]:58034.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	T	Tb	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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Certificate of Analysis



Refine your results. Redefine your industry.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

R: 2/22/24

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



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).

1.0 ACCREDITATION / REGISTRATION

2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution

Catalog Number: CGT1

Lot Number: T2-T1719972

Matrix: 2% (v/v) HNO₃

Value / Analyte(s): tr. HF

Starting Material: 1 000 µg/mL ea.

Starting Material: Titanium

Starting Material: Ti Metal

Starting Material Lot#: 2094

Starting Material Purity: 99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Method #1

1002 ± 4 µg/mL

ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

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:

$$X_{CRM/RM} = 2(w) / (2(w))$$

X_1 = mean of Assay Method 1 with standard uncertainty $u_{CRM,1}$

$$w_1 = (1/u_{CRM,1}^2) / \sum (1/u_{CRM,i}^2)$$

$$w_2 = (1/u_{CRM,2}^2) / \sum (1/u_{CRM,i}^2)$$

$u_{CRM/RM} = k(u_{CRM,1}^2 + u_{CRM,2}^2 + \dots + u_{CRM,n}^2)^{1/2}$ where $u_{CRM,i}$ are the errors from each characterization method

$u_{CRM} = (2/(n-1))^{1/2} (u_{CRM,1}^2 + u_{CRM,2}^2 + \dots + u_{CRM,n}^2)^{1/2}$ where $u_{CRM,i}$ are the errors from each characterization method

$u_{RM} = 1$ bottle to bottle homogeneity standard uncertainty

$u_{RM} = 1$ long term stability standard uncertainty (storage)

$u_{RM} = 1$ transport stability standard uncertainty

Page 1 of 4

$u_{CRM/RM} = k(u_{CRM,1}^2 + u_{CRM,2}^2 + \dots + u_{CRM,n}^2 + u_{RM}^2 + u_{RM}^2 + u_{RM}^2)^{1/2}$
k = coverage factor = 2
 $u_{CRM} = 1$ bottle to bottle homogeneity standard uncertainty
 $u_{RM} = 1$ long term stability standard uncertainty (storage)
 $u_{RM} = 1$ 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 UHPA-filtered Clean Room. An UHPA-filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag	<	0.000536	M Eu	<	0.000268	O Na	<	0.032670	M Se	<	0.001204	O Zn	<	0.003267
M Al	<	0.000872	O Fe	<	0.003225	O Nb	<	0.043560	O Si	<	0.004735	O Zr	<	0.043560
M As	<	0.008586	M Ga	<	0.000268	M Nd	<	0.000268	M Sm	<	0.000268			
M Au	<	0.004577	M Gd	<	0.000268	O Ni	<	0.010890	M Sn	<	0.00096			
O B	<	0.008929	M Ge	<	0.002146	M Os	<	0.000269	O Sr	<	0.00096			
M Ba	<	0.002683	M Hf	<	0.002161	O P	<	0.054450	M Ta	<	0.010560			
M Be	<	0.005366	M Hg	<	0.003231	M Pb	<	0.001073	M Tb	<	0.000268			
M Bi	<	0.001609	M Ho	<	0.000268	M Pd	<	0.000268	M Te	<	0.001341			
O Ca	<	0.000676	M In	<	0.002683	M Pr	<	0.000268	M Th	<	0.053663			
M Cd	<	0.000268	M Ir	<	0.000269	M Pt	<	0.000536	S Ti	<				
M Co	<	0.000268	M K	<	0.001172	M Rb	<	0.000268	M Tl	<	0.000268			
M Cr	<	0.000752	O Li	<	0.000268	M Re	<	0.000268	M Tm	<	0.000268			
M Cs	<	0.000268	M Lu	<	0.000268	M Rh	<	0.000268	M U	<	0.000268			
O Cu	<	0.010890	O Mg	<	0.005445	I S	<	0.006976	M Y	<	0.002146			
M Dy	<	0.000268	O Mn	<	0.003267	M Sb	<	0.004900	M Yb	<	0.000536			
M Er	<	0.000268	M Mo	<	0.000774	O Sc	<	0.004900	M Yb	<	0.000536			

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

- 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

Atomic Weight; Valence: Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements forming the hydrated oxide in all dilute acids except HF. Stable with most inorganic anions with a tendency to hydrolyze forming the hydrous oxide in all dilute acids except HF.

Stability: - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. - 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution - powder reacts violently): Oxide - high temperature history (~800EC) brookite (fuse in P10 with K2S2O7); Ores (fuse in P10 with K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in P10 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	14 ppt	N/A	Order Interferences (underlined indicates severe)
ICP-MS 48 amu				32S16O, 32S14N,
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL			14N16O18O,
ICP-OES 334.941 nm	0.0038 / 0.00028 µg/mL			14N17N2, 36Ar12C,
ICP-OES 336.121 nm	0.0053 / 0.00034 µg/mL			48Ca, 196X=2
HF Note: This standard should not be prepared or stored in glass.				(where X = Zr, Mo, Ru)
				Ce, Ar, Ni
				Nb, Ta, Cr, U
				W, Mo, Co

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"

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY
Inorganic Ventures, 300 Technology Drive, Chesapeake, VA 24073, USA; Telephone: 800.868.6786; 540.565.3030; Fax: 540.565.3012; info@inorganicventures.com
- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.1 Certification Issue Date

June 17, 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 17, 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

Thomas Kozlikowski
Manager, Quality Control

TD978L

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Paul R. Gaines



MS981

R: 6/11/24



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57092
060724
Uranium (U)

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

060727
Ambient (20 °C)
1000
6UTB

Volume shown below was diluted to (mL): 2000.07

5E-05 Balance Uncertainty
0.100 Flask Uncertainty

Lot # Solvent:
24002546 Nitric Acid

2.0% Nitric Acid
40.0 (mL)

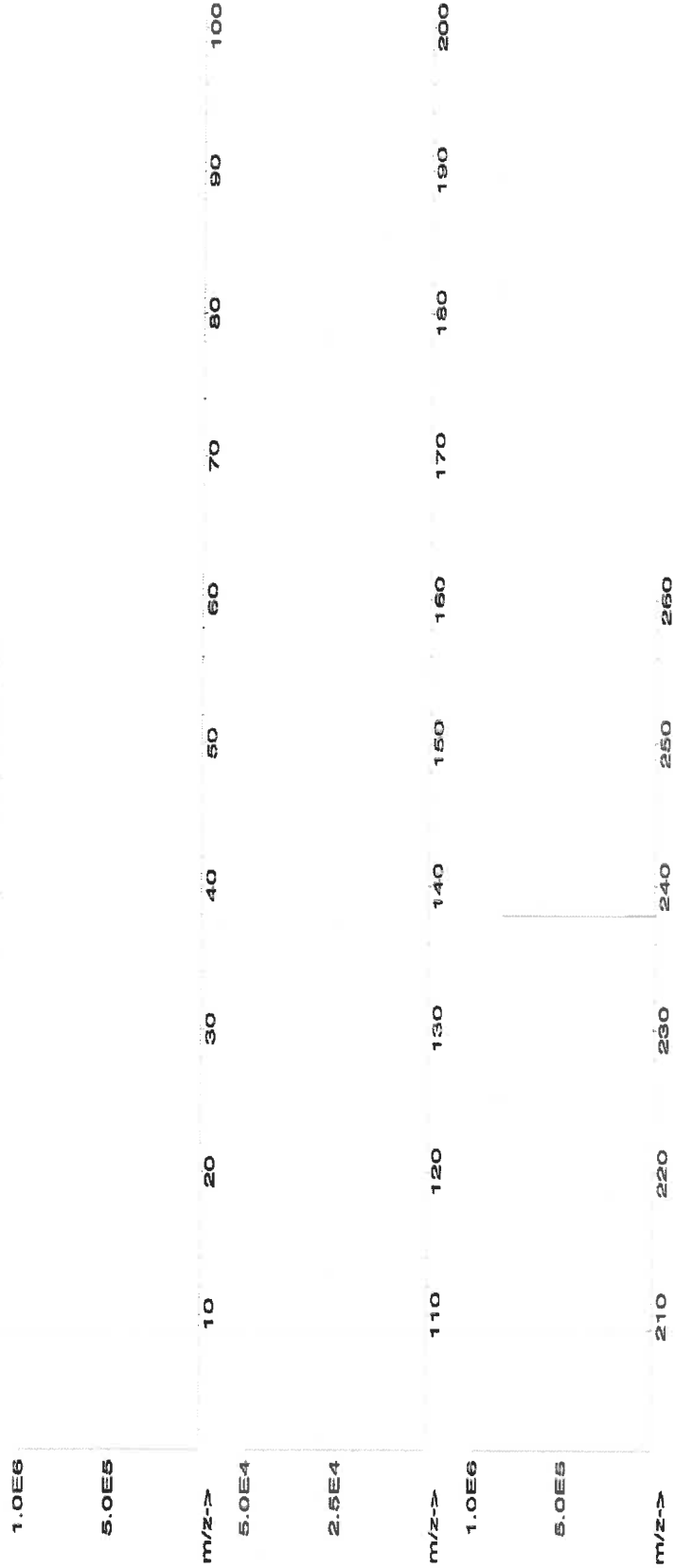
<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	Solvent Safety Info. On Attached pg.)		
										CAS#	OSHA PEL (TWA)	LD50

1. Uranyl nitrate hexahydrate (U)	58192	041524	0.1000	200.0	0.084	1000	10001.5	1000.0	2.2	13620-83-7	0.05 mg/m3	orl-rat 1040 mg/kg	3164
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[1] Spectrum No.1 [23.254 sec]:57092.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																			
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.01	Mg	<0.02	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.2	Fe	<0.2	Hg	<0.2	P	<0.2	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

[Signature]

- * 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 certified (+/-) 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).

[Handwritten notes]

8/19/24, M6055

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).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: IV-STOCK-12
Lot Number: U2-MEB734294
Matrix: 5% (v/v) HNO₃
Value / Analyte(s): 10 µg/mL ea:
Barium, Beryllium,
Bismuth, Cerium,
Cobalt, Indium,
Lithium, Nickel,
Lead, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Barium, Ba	10.01 ± 0.04 µg/mL	Beryllium, Be	10.01 ± 0.05 µg/mL
Bismuth, Bi	10.01 ± 0.06 µg/mL	Cerium, Ce	10.01 ± 0.04 µg/mL
Cobalt, Co	10.01 ± 0.05 µg/mL	Indium, In	10.01 ± 0.04 µg/mL
Lead, Pb	10.00 ± 0.04 µg/mL	Lithium, Li	10.01 ± 0.04 µg/mL
Nickel, Ni	10.01 ± 0.04 µg/mL	Uranium, U	10.01 ± 0.05 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Bi	ICP Assay	3106	180815
Ce	ICP Assay	3110	160830
Ce	EDTA	928	928
Ce	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
In	ICP Assay	3124a	110516
In	EDTA	928	928
In	Calculated		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Calculated		See Sec. 4.2
Li	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
U	ICP Assay	traceable to 3164	R2-U689597
U	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, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

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

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

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

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

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = 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

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = 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

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 21, 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

- June 21, 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





Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

Part Number: **57040**
Lot Number: **071423**
Description: **Zirconium (Zr)**

Lot # **21110221**
Solvent: **Nitric Acid**

2.0%

40.0 (mL)

Nitric Acid

Formulated By: *Benson Chan*
Benson Chan 071423

Expiration Date: 071426
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Volume shown below was diluted to (mL): 2000.02

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Reviewed By: *Pedro L. Renteria*
Pedro L. Renterias 071423

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LDSO	NIST SRM
----------	-------------	------------	-----------------	-------------------	--------------------------	-----------------------	-----------------------	---------------------	----------------------------------	------	----------------	------	----------

1. **Zirconyl chloride octahydrate (Zr)** 58140 070621 0.1000 200.0 0.084 1000 10000.3 1000.0 2.2 13520-82-8 NA NA NA

[1] Spectrum No. 1 [41.163 sec]: 57040.DW [Count] [Linear]

1.OE6	m/z->	10	20	30	40	50	60	70	80	90	100
5.OE6	m/z->	110	120	130	140	150	160	170	180	190	200
1.OE8	m/z->	210	220	230	240	250	260				
5.OE7	m/z->										



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	X	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Ti	<0.02	Y	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Tl	<0.02	Zr	T

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

[illegible]

- * 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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot # 24012496
Lot Number: 112124
Description: Magnesium (Mg)
Solvent: Nitric Acid

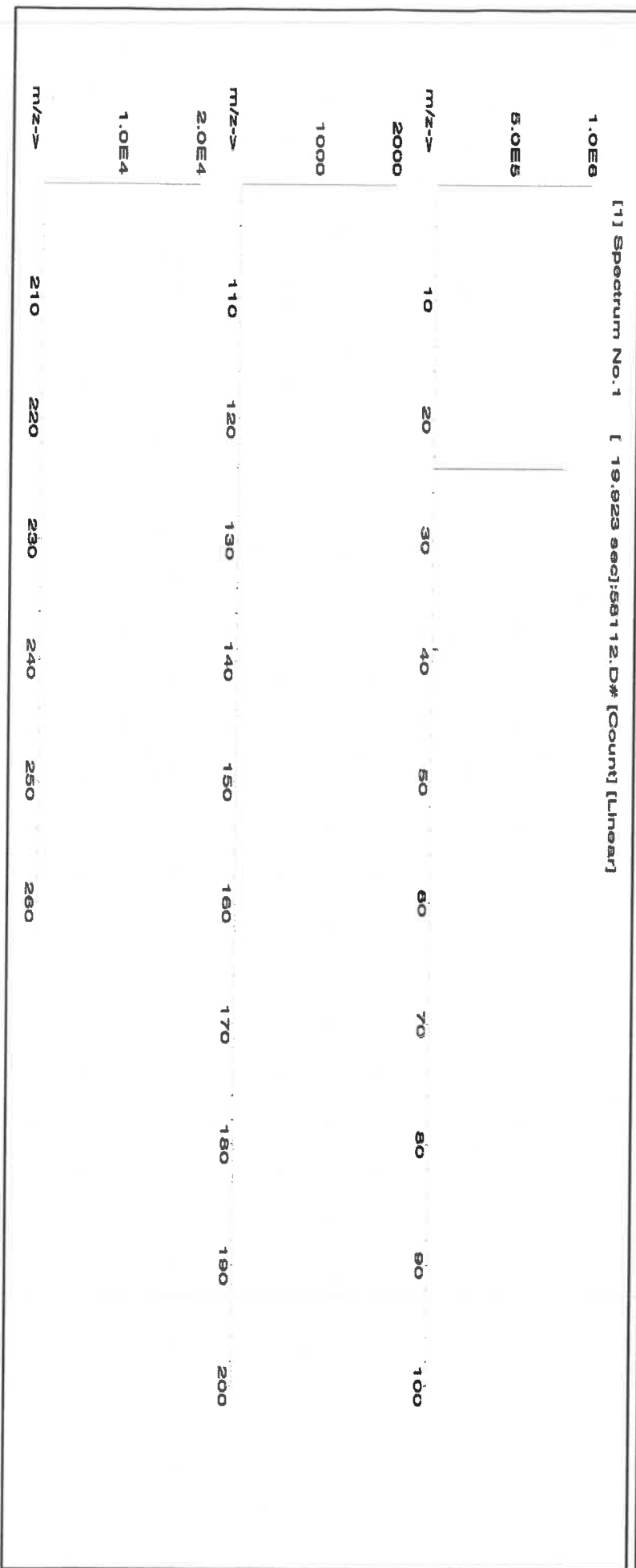
R-1113125
M 6192

Expiration Date: 11/21/27
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6LUB
Weight shown below was diluted to (mL): 2000.07
Balance Uncertainty: 5E-05
Fask Uncertainty: 0.100

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	Pedro L. Rentas
	112124

Compound	Lot	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
----------	-----	-----------------------	------------	------------------------	-----------	-------------------	-------------------	----------------------	----------------------------------	------	----------------	------	----------

1. Magnesium nitrate hexahydrate (Mg) IN030 MG000023A1 10000 99.999 0.10 8.51 234.9183 234.9459 10001.2 20.0 13446-18-9 NA off-rat 5440 mg/kg 3131a





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Rc	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rb	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Sm	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sc	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Tl	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

58025
101124
Manganese (Mn)

Lot #
Solvent: Nitric Acid

24002546
2%
80.0 (mL)
Nitric Acid

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
	101124
Reviewed By:	<i>Pedro L. Renteria</i>
	Pedro L. Renteria
	101124

Expiration Date: 101127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.2
5E-05 Balance Uncertainty
0.10 Flask Uncertainty

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)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Manganese(II) nitrate hydrate (Mn) IN031 MMN02020A1 1000 99.999 0.10 20.8 19.2322 19.2344 1000.1 2.0 15710-66-4 5 mg/m3 or-rel >300mg/kg 3132

[1] Spectrum No.1 [34.243 sec]:57025.D# [Count] [Linear]

5.0E6													
2.5E6													
m/z->	10	20	30	40	50	60	70	80	90	100			
1.0E6													
5.0E7													
m/z->	110	120	130	140	150	160	170	180	190	200			
1.0E6													
5.0E7													
m/z->	210	220	230	240	250	260							



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Ti	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).

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

M6137
R-71013124

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).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGSI1
Lot Number: V2-SI744713
Matrix: tr. HNO₃
tr. HF
Value / Analyte(s): 1 000 µg/mL ea:
Silicon
Starting Material: Silica
Starting Material Lot#: 1771
Starting Material Purity: 99.9981%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 6 µg/mL
Density: 1.003 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	999 ± 5 µg/mL ICP Assay NIST SRM Traceable to 3150 Lot Number: S2-SI702546
Assay Method #2	1000 ± 7 µg/mL Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

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:

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

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:

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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum (w_i)^2 (u_{char\ i})^2]^{1/2}$ 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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

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)

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	<	0.000310	M	Eu	<	0.000310	O	Na		0.001656	M	Se	<	0.022000	M	Zn	<	0.002500
M	Al		0.010787	M	Fe	<	0.027000	M	Nb	<	0.001300	s	Si	<		O	Zr	<	0.001900
M	As	<	0.001900	M	Ga	<	0.001300	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	M	Ni	<	0.005500	M	Sn		0.000096				
M	B		0.016180	M	Ge	<	0.001900	M	Os	<	0.000610	O	Sr		0.000092				
M	Ba		0.000096	M	Hf		0.000423	i	P	<		M	Ta		0.002542				
O	Be	<	0.000570	M	Hg	<	0.000610	M	Pb	<	0.000310	M	Tb	<	0.000310				
M	Bi	<	0.000310	M	Ho	<	0.000610	M	Pd	<	0.000610	M	Te	<	0.000910				
O	Ca		0.011557	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.001900				
M	Cd	<	0.000310	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.001078				
M	Ce	<	0.000610	O	K		0.000577	M	Rb	<	0.009100	M	Tl	<	0.000310				
M	Co	<	0.001600	M	La	<	0.000310	M	Re	<	0.000310	M	Tm	<	0.000310				
M	Cr	<	0.010000	O	Li	<	0.000460	M	Rh	<	0.000310	M	U	<	0.000310				
M	Cs	<	0.000310	M	Lu	<	0.000310	M	Ru	<	0.000310	O	V	<	0.001300				
M	Cu	<	0.002500	O	Mg		0.001348	O	S	<	0.570000	M	W	<	0.001900				
M	Dy	<	0.000310	M	Mn	<	0.002500	M	Sb	<	0.000310	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000310	O	Sc	<	0.000590	M	Yb	<	0.000310				

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

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphous (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

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

July 10, 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

- July 10, 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 Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

58126
011025
Iron (Fe)
M6140

Lot #
Solvent: 24012496 Nitric Acid

Expiration Date:

011028

2%

40.0 (mL)
Nitric Acid

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

10000

NIST Test Number:

6U7B

5E-05 Balance Uncertainty

Weight shown below was diluted to (mL):

2000.07

0.100 Flask Uncertainty

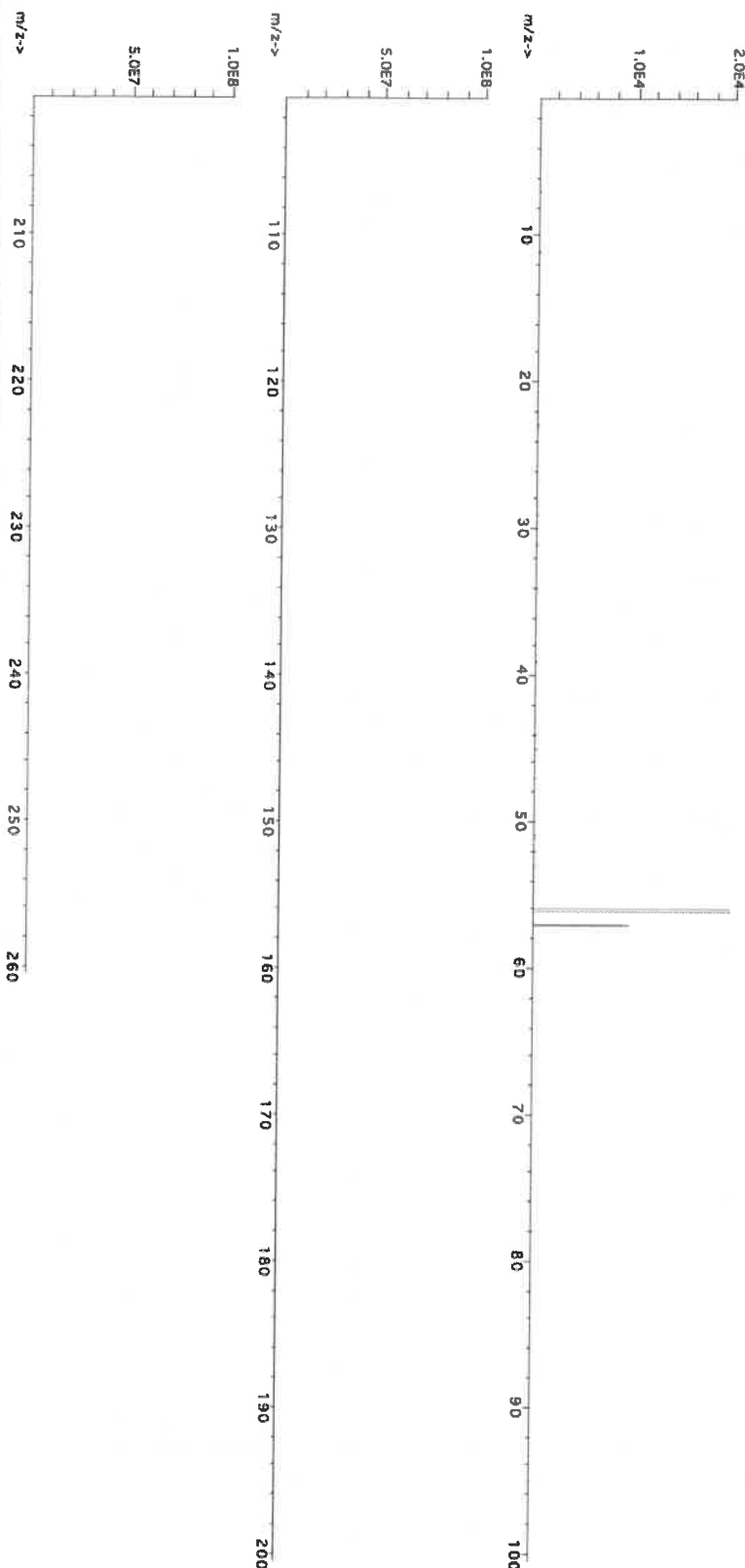
Formulated By:	Benson Chan	011025
Reviewed By:	Pedro L. Renteria	011025

Compound

Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded	SDS Information	NIST
Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	± (µg/mL)	(Solvent Safety Info. On Attached pg.)	SFM

1. Iron(III) nitrate nonahydrate (Fe) IN028 FED082023A1 10000 99.999 0.10 13.0 153.8534 ##### 10000.2 20.0 7782-61-8 1 mg/m³ or-rel 3250mg/kg 3126A

[1] Spectrum No.1 [30.763 sec]58126.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	T	Hg	<0.2	P	<0.02	Sr	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

Har P. D.

- * 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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57119
103024
Potassium (K)

R-21113125

Lot #
Solvent: 24002546
Nitric Acid

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	Pedro L. Renteria
	103024

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):

103027
Ambient (20 °C)
10000

M6141
M6142
M6143

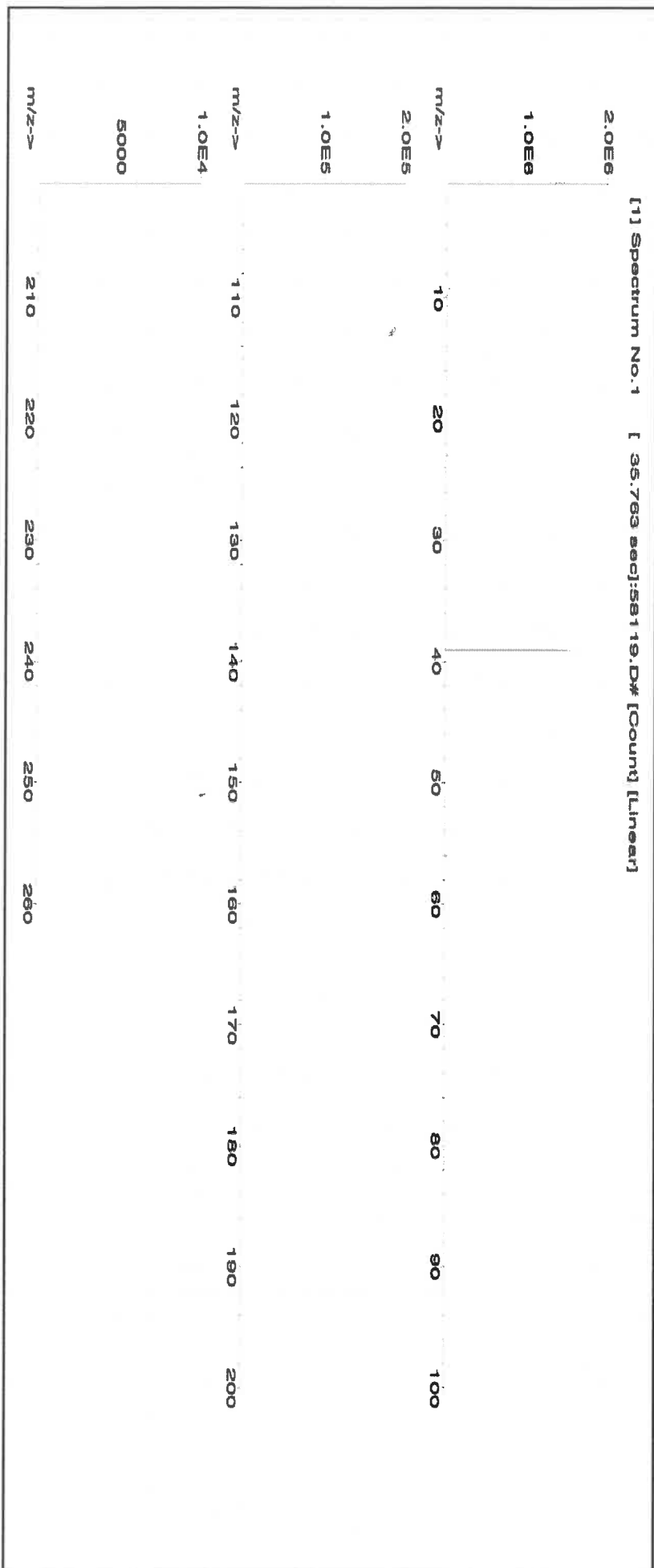
2%
80.0
(mL)
Nitric Acid

Weight shown below was diluted to (mL):

4000.1
0.15
Flask Uncertainty

Compound	SDS Information									
	Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded	
	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)	(Solvent Safety Info. On Attached pg.)
		</								

[1] Spectrum No. 1 [35.763 sec]:58119.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

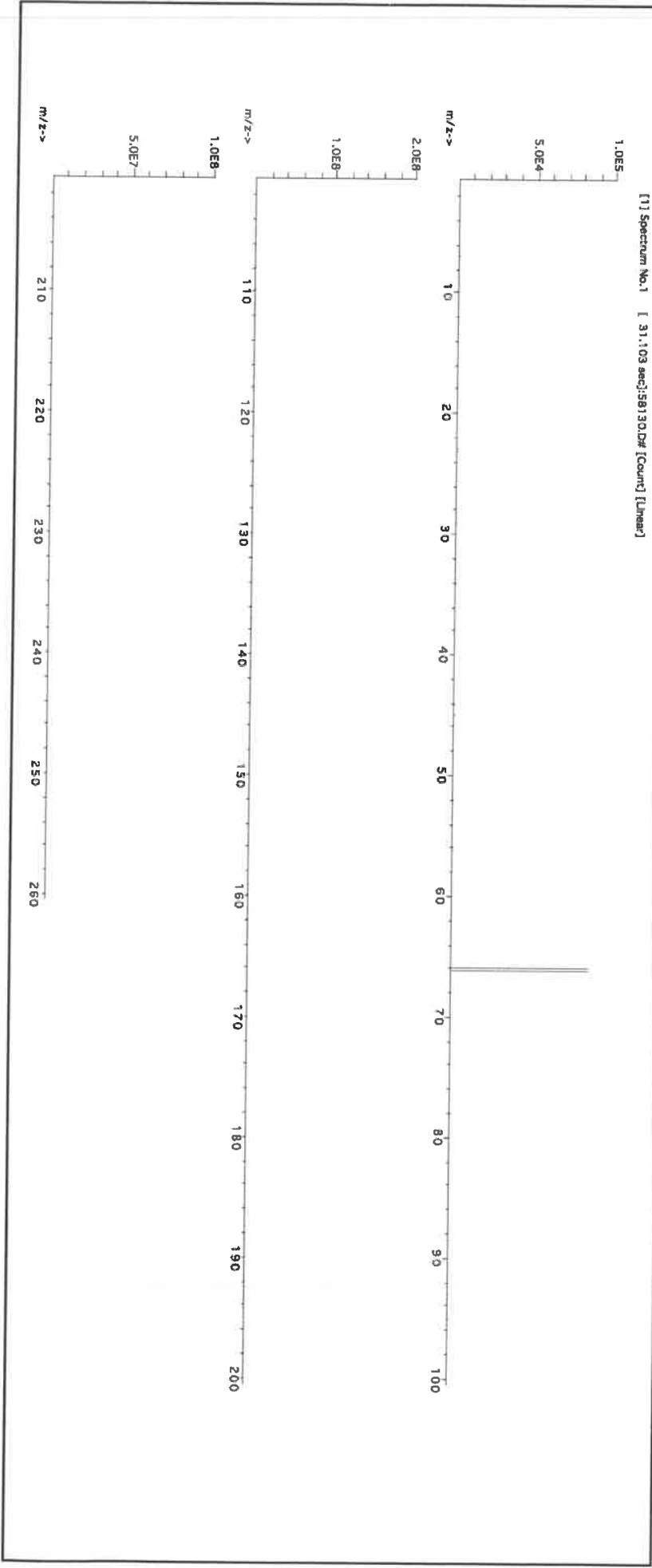
Part Number: 58030
Lot Number: 121724
Description: Zinc (Zn)
Expiration Date: 121727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.1
Balance Uncertainty: 5E-05
Flask Uncertainty: 0.10

Lot # 24012496
Nitric Acid
2%
40.0 (mL)
Nitric Acid

Aleah O'Brady
Formulated By: Aleah O'Brady
Reviewed By: Pedro L. Rentias
121724

Compound	RM#	Purity		Conc.		Weight		CAS#	NIST
		(%)	(%)	(%)	(%)	(g)	(g)		
	Number	Conc. (µg/mL)	Purity (%)	Conc. (µg/mL)	Purity (%)	Weight (g)	Weight (g)		

1. Zinc nitrate hexahydrate (Zn) IN016 ZNE0302021A1 1000 99.999 0.10 24.3 8.2308 8.2311 1000.0 2.0 10196-18-6 1 mg/m3 or-rat 1190mg/kg 3168





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™



M6151

R → 11/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid–base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl ₂)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO ₄)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO ₃)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH ₄)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™



Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA–ANALYZED® Reagent
For Trace Metal Analysis

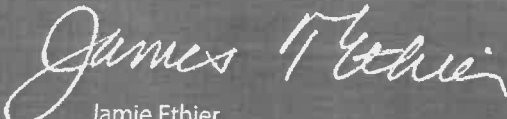


Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
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For Laboratory, Research, or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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M6153

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).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGSR10
Lot Number: V2-SR745329
Matrix: 2% (v/v) HNO₃
Value / Analyte(s): 10 000 µg/mL ea:
Strontium
Starting Material: Strontium Carbonate
Starting Material Lot#: 2647
Starting Material Purity: 99.9960%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10081 ± 39 µg/mL
Density: 1.030 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **10059 ± 50 µg/mL**
ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985

Assay Method #2 **10087 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

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:

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

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:

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

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$ 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

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

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)

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	<	0.000960	M	Eu	<	0.000480	O	Na		0.002964	M	Se	<	0.042000	M	Zn		0.004560
M	Al		0.003420	O	Fe		0.013225	M	Nb	<	0.000480	O	Si		0.012997	M	Zr		0.001847
M	As	<	0.007200	M	Ga	<	0.002900	M	Nd	<	0.000480	M	Sm	<	0.000480				
M	Au	<	0.003900	M	Gd	<	0.000480	O	Ni		0.001482	M	Sn	<	0.000480				
O	B	<	0.003200	M	Ge	<	0.004800	M	Os	<	0.001500	s	Sr	<					
M	Ba		0.638494	M	Hf	<	0.000480	O	P	<	0.017000	M	Ta	<	0.000480				
O	Be	<	0.000450	M	Hg	<	0.000960	M	Pb		0.010717	M	Tb	<	0.000480				
M	Bi	<	0.002000	M	Ho	<	0.000480	M	Pd	<	0.002000	M	Te	<	0.016000				
O	Ca		0.025083	M	In	<	0.008600	M	Pr		0.000547	M	Th	<	0.000480				
M	Cd	<	0.000960	M	Ir	<	0.000480	M	Pt	<	0.000480	M	Ti		0.004560				
M	Ce		0.000661	O	K		0.025083	M	Rb	<	0.003400	M	Tl	<	0.000480				
M	Co		0.001527	M	La	<	0.000480	M	Re	<	0.000480	M	Tm		0.004332				
O	Cr	<	0.004700	O	Li	<	0.005600	O	Rh	<	0.013000	M	U	<	0.000480				
M	Cs	<	0.000480	M	Lu	<	0.000480	M	Ru	<	0.000960	M	V	<	0.000960				
O	Cu	<	0.003800	O	Mg		0.001048	O	S	<	0.045000	M	W	<	0.002400				
M	Dy	<	0.000960	O	Mn		0.000319	M	Sb	<	0.009600	O	Y	<	0.001200				
M	Er	<	0.000480	M	Mo	<	0.002900	M	Sc	<	0.001500	M	Yb	<	0.000480				

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). <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

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 Sr(H₂O)₆+2

Chemical Compatibility - Soluble in HCl, and HNO₃. Avoid H₂SO₄, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO₃ / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO₃); Ores (Carbonate fusion in PtO followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2, 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

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

August 26, 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

- August 26, 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 Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

avantor™



MG157
MS

Material No.: 9673-33

Batch No.: 24I1262013

Manufactured Date: 2024-08-07

Retest Date: 2029-08-06

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H ₂ SO ₄)	95.0 – 98.0 %	96.2 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	<= 10	5
ACS – Residue after Ignition	<= 3 ppm	<1 ppm
ACS – Substances Reducing Permanganate(as SO ₂)	<= 2 ppm	<2 ppm
Ammonium (NH ₄)	<= 1 ppm	<1 ppm
Chloride (Cl)	<= 0.1 ppm	<0.1 ppm
Nitrate (NO ₃)	<= 0.2 ppm	0.1 ppm
Phosphate (PO ₄)	<= 0.5 ppm	<0.1 ppm
Trace Impurities – Aluminum (Al)	<= 30.0 ppb	<5.0 ppb
Arsenic & Antimony (as As)	<= 4.0 ppb	<2.0 ppb
Trace Impurities – Boron (B)	<= 10.0 ppb	<5.0 ppb
Trace Impurities – Cadmium (Cd)	<= 2.0 ppb	<1.0 ppb
Trace Impurities – Chromium (Cr)	<= 6.0 ppb	<1.0 ppb
Trace Impurities – Cobalt (Co)	<= 0.5 ppb	<0.3 ppb
Trace Impurities – Copper (Cu)	<= 1.0 ppb	<1.0 ppb
Trace Impurities – Gold (Au)	<= 10.0 ppb	<5.0 ppb
Heavy Metals (as Pb)	<= 500.0 ppb	<100.0 ppb
Trace Impurities – Iron (Fe)	<= 50.0 ppb	<1.0 ppb
Trace Impurities – Lead (Pb)	<= 0.5 ppb	<0.5 ppb
Trace Impurities – Magnesium (Mg)	<= 7.0 ppb	<1.0 ppb
Trace Impurities – Manganese (Mn)	<= 1.0 ppb	<1.0 ppb
Trace Impurities – Mercury (Hg)	<= 0.5 ppb	<0.1 ppb
Trace Impurities – Nickel (Ni)	<= 2.0 ppb	<0.3 ppb
Trace Impurities – Potassium (K)	<= 500.0 ppb	<10.0 ppb
Trace Impurities – Selenium (Se)	<= 50.0 ppb	7.2 ppb
Trace Impurities – Silicon (Si)	<= 100.0 ppb	12.8 ppb
Trace Impurities – Silver (Ag)	<= 1.0 ppb	<1.0 ppb

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1746 of 516

Sulfuric Acid

BAKER INSTRA-ANALYZED® Reagent

For Trace Metal Analysis

Low Selenium

 **avantor**™



Material No.: 9673-33

Batch No.: 24I1262013

Test	Specification	Result
Trace Impurities – Sodium (Na)	≤ 500.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 5.0 ppb	< 1.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	1.1 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	< 1.0 ppb

For Laboratory, Research, or Manufacturing Use

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Croak

Director Quality Operations, Bioscience Production

Nitric Acid 69%
CMOS

avantor™



R- 0210212025

m - 6158

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO ₃)	69.0 – 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO ₄)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™



Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

300 Technology Drive
 Christiansburg, VA 24073 USA
 inorganicventures.com

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 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).



2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution		
Catalog Number:	QCP-CICV-1		
Lot Number:	V2-MEB744107		
Matrix:	7% (v/v) HNO ₃		
Value / Analyte(s):	2 500 µg/mL ea:		
	Calcium,	Potassium,	
	Magnesium,	Sodium,	
	1 000 µg/mL ea:		
	Aluminum,	Barium,	
	500 µg/mL ea:		
	Iron,		
	250 µg/mL ea:		
	Nickel,	Vanadium,	
	Zinc,	Cobalt,	
	Manganese,		
	125 µg/mL ea:		
	Silver,	Copper,	
	100 µg/mL ea:		
	Chromium,		
	25 µg/mL ea:		
	Beryllium		

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 000 ± 4 µg/mL	Barium, Ba	1 000 ± 6 µg/mL
Beryllium, Be	24.98 ± 0.12 µg/mL	Calcium, Ca	2 500 ± 8 µg/mL
Chromium, Cr	99.9 ± 0.6 µg/mL	Cobalt, Co	250.2 ± 1.2 µg/mL
Copper, Cu	125.0 ± 0.5 µg/mL	Iron, Fe	500.0 ± 2.2 µg/mL
Magnesium, Mg	2 500 ± 11 µg/mL	Manganese, Mn	249.9 ± 1.1 µg/mL
Nickel, Ni	250.0 ± 1.2 µg/mL	Potassium, K	2 500 ± 11 µg/mL
Silver, Ag	125.0 ± 0.6 µg/mL	Sodium, Na	2 500 ± 11 µg/mL
Vanadium, V	250.0 ± 1.1 µg/mL	Zinc, Zn	249.9 ± 1.1 µg/mL

Density: 1.081 g/mL (measured at 20 ± 4 °C)

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
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	120618
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	3152a	200413
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
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, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

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

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

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

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

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = 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), <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

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

May 22, 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

- **May 22, 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 Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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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).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: QCP-CICV-2
Lot Number: U2-MEB733713
Matrix: 3% (w/v) Tartaric acid
1% (v/v) HNO₃
Value / Analyte(s): 500 µg/mL ea:
Antimony

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	500.0 ± 2.8 µg/mL		

Density: 1.017 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Sb	ICP Assay	3102a	140911

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:

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

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:

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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2(u_{char i}^2)]^{1/2}$ 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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

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

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). <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

June 01, 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

- June 01, 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



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).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
 Catalog Number: QCP-CICV-3
 Lot Number: V2-MEB749572
 Matrix: 7% (v/v) HNO₃
 Value / Analyte(s):
 500 µg/mL ea:
 Arsenic, Lead,
 Selenium, Thallium,
 250 µg/mL ea:
 Cadmium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	500.0 ± 3.1 µg/mL	Cadmium, Cd	250.1 ± 1.1 µg/mL
Lead, Pb	500.0 ± 2.3 µg/mL	Selenium, Se	500.0 ± 3.2 µg/mL
Thallium, Tl	500.0 ± 3.0 µg/mL		

Density: 1.040 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

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

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

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

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

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

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = 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), <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 02, 2025

- 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 02, 2030**

- 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 Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Certified Reference Material CRM



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://AbsoluteStandards.com

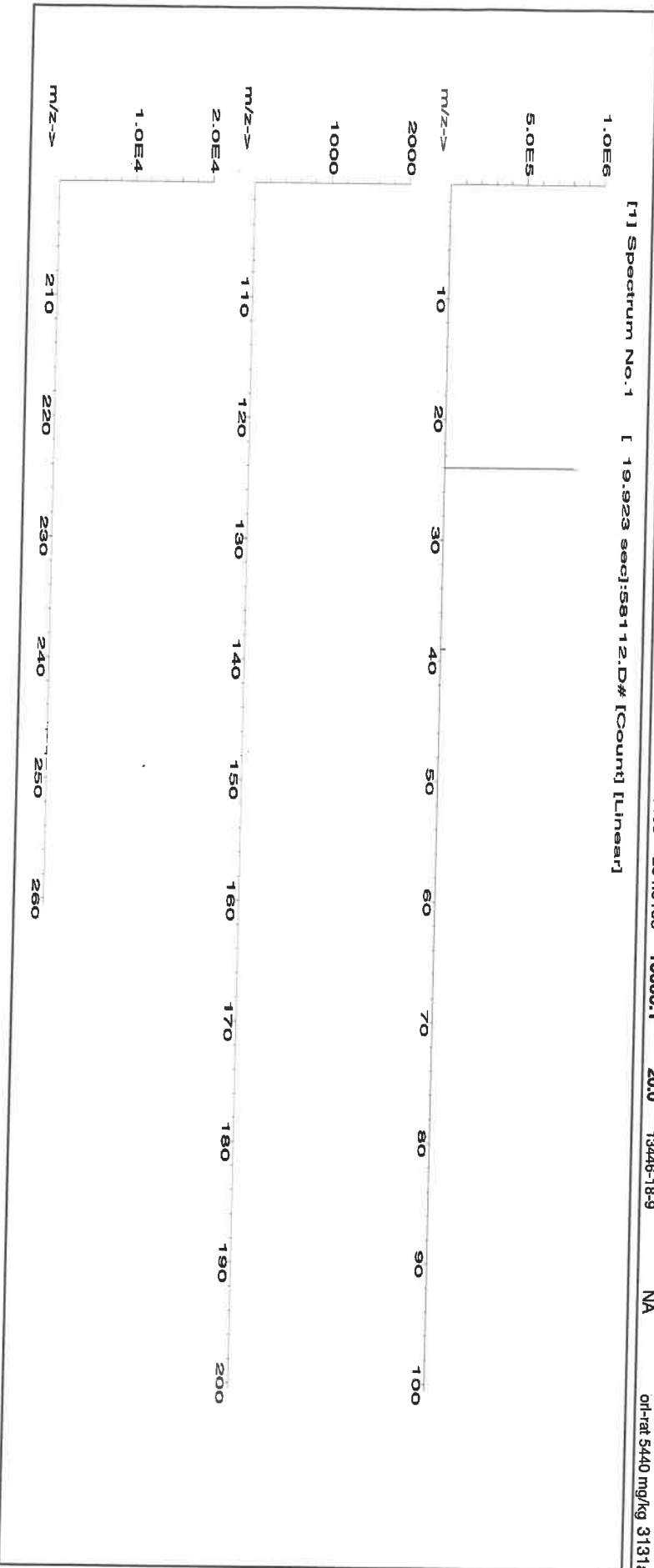
CERTIFIED WEIGHT REPORT:

Part Number: 58112 **Lot #** M 6171
Lot Number: 011525 **Solvent:** 24012496 Nitric Acid
Description: Magnesium (Mg)
Expiration Date: 011528 2% 40.0 Nitric Acid
Recommended Storage: Ambient (20 °C) (mL)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 2000.07 0.100 Flask Uncertainty

Formulated By:	Benson Chan	011525
Reviewed By:	Pedro L. Rentas	011525

Compound

1. Magnesium nitrate hexahydrate (Mg) IN030 MGD05023A1 10000 99.999 0.10 8.51 234.9183 234.9195 10000.1 20.0 13446-18-9 NA off-ret 5440 mg/kg 3131a





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ku	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).

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).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGNA10
Lot Number: V2-NA740547
Matrix: 2% (v/v) HNO₃
Value / Analyte(s): 10 000 µg/mL ea:
Sodium
Starting Material: Sodium Carbonate
Starting Material Lot#: 2453 and 2606
Starting Material Purity: 99.9976%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10018 ± 30 µg/mL
Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	10026 ± 18 µg/mL Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #2	9986 ± 66 µg/mL ICP Assay NIST SRM 3152a Lot Number: 200413
Assay Method #3	10002 ± 31 µg/mL Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

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:

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

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:

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

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k(u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2(u_{char\ i})^2]^{1/2}$ 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

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k(u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

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 errors 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 < 0.000860	M Eu < 0.000860	s Na < 0.034000	O Se < 0.000387
O Al < 0.003121	O Fe < 0.001622	M Nb < 0.000860	O Si < 0.044943
M As < 0.001800	M Ga < 0.000860	M Nd < 0.000860	M Sm < 0.000860
M Au < 0.005700	M Gd < 0.000860	O Ni < 0.000980	M Sn < 0.000860
O B < 0.025000	M Ge < 0.003500	M Os < 0.029000	M Sr < 0.000436
M Ba < 0.004494	M Hf < 0.000860	O P < 0.005742	M Ta < 0.000086
O Be < 0.000160	M Hg < 0.002900	M Pb < 0.002600	M Tb < 0.000860
M Bi < 0.000860	M Ho < 0.000860	M Pd < 0.004300	M Te < 0.004300
O Ca < 0.112358	M In < 0.000860	M Pr < 0.000860	M Th < 0.003500
O Cd < 0.000730	M Ir < 0.000940	M Pt < 0.000860	O Ti < 0.000399
M Ce < 0.000860	O K < 0.349560	M Rb < 0.000436	M Tl < 0.000860
M Co < 0.000860	M La < 0.000860	M Re < 0.000860	M Tm < 0.000860
O Cr < 0.002000	O Li < 0.000224	M Rh < 0.000860	M U < 0.000860
M Cs < 0.000287	M Lu < 0.000860	M Ru < 0.000940	O V < 0.001500
O Cu < 0.004100	M Mg < 0.097377	O S < 0.018726	M W < 0.007700
M Dy < 0.000860	M Mn < 0.007700	M Sb < 0.000860	M Y < 0.000860
M Er < 0.000860	O Mo < 0.002800	O Sc < 0.000610	M Yb < 0.000860

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). <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

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO₃, H₂SO₄ and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO₃ / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2, 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

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; info@inorganicventures.com;

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 23, 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 23, 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 Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Certificate of Analysis

P: 800-669-6799/540-585-3030

F: 540-585-3012

info@inorganicventures.com

R → 1127/25

M6175

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).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: 6020CAL-1
Lot Number: V2-MEB742014
Matrix: 5% (v/v) HNO₃
tr. HF
Value / Analyte(s): 20 µg/mL ea:
Silver, Aluminum,
Arsenic, Barium,
Beryllium, Calcium,
Cadmium, Cobalt,
Chromium, Copper,
Iron, Potassium,
Magnesium, Manganese,
Sodium, Nickel,
Lead, Antimony,
Selenium, Thallium,
Vanadium, Zinc

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	20.02 ± 0.08 µg/mL	Antimony, Sb	20.03 ± 0.11 µg/mL
Arsenic, As	20.03 ± 0.16 µg/mL	Barium, Ba	20.02 ± 0.11 µg/mL
Beryllium, Be	20.02 ± 0.15 µg/mL	Cadmium, Cd	20.02 ± 0.11 µg/mL
Calcium, Ca	20.03 ± 0.09 µg/mL	Chromium, Cr	20.03 ± 0.13 µg/mL
Cobalt, Co	20.03 ± 0.12 µg/mL	Copper, Cu	20.03 ± 0.10 µg/mL
Iron, Fe	20.04 ± 0.09 µg/mL	Lead, Pb	20.03 ± 0.11 µg/mL
Magnesium, Mg	20.03 ± 0.10 µg/mL	Manganese, Mn	20.03 ± 0.11 µg/mL
Nickel, Ni	20.03 ± 0.11 µg/mL	Potassium, K	20.03 ± 0.10 µg/mL
Selenium, Se	20.03 ± 0.13 µg/mL	Silver, Ag	20.03 ± 0.09 µg/mL
Sodium, Na	20.03 ± 0.10 µg/mL	Thallium, Tl	20.03 ± 0.10 µg/mL
Vanadium, V	20.03 ± 0.11 µg/mL	Zinc, Zn	20.03 ± 0.11 µg/mL

Density: 1.027 g/mL (measured at 20 ± 4 °C)

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	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Sb	ICP Assay	3102a	140911
Se	ICP Assay	3149	100901
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, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

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

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

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

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

$$\text{CRM/RM Expanded Uncertainty } (k) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

$$\text{CRM/RM Expanded Uncertainty } (k) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = 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). <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.

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

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

March 11, 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

- **March 11, 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 Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





CERTIFIED WEIGHT REPORT:

Part Number: **57038**
Lot Number: **092724**
Description: **Strontium (Sr)**

57038
092724
Strontium (Sr)

Lot # **24002546** Nitric Acid

Expiration Date: **092727**

092727

Recommended Storage: **Ambient (20 °C)**

2% 40.0 (mL) Nitric Acid

Nominal Concentration (µg/mL): **1000**

1000

NIST Test Number: **6UTB**

6UTB

Weight shown below was diluted to (mL): **2000.07** 0.100 Flask Uncertainty

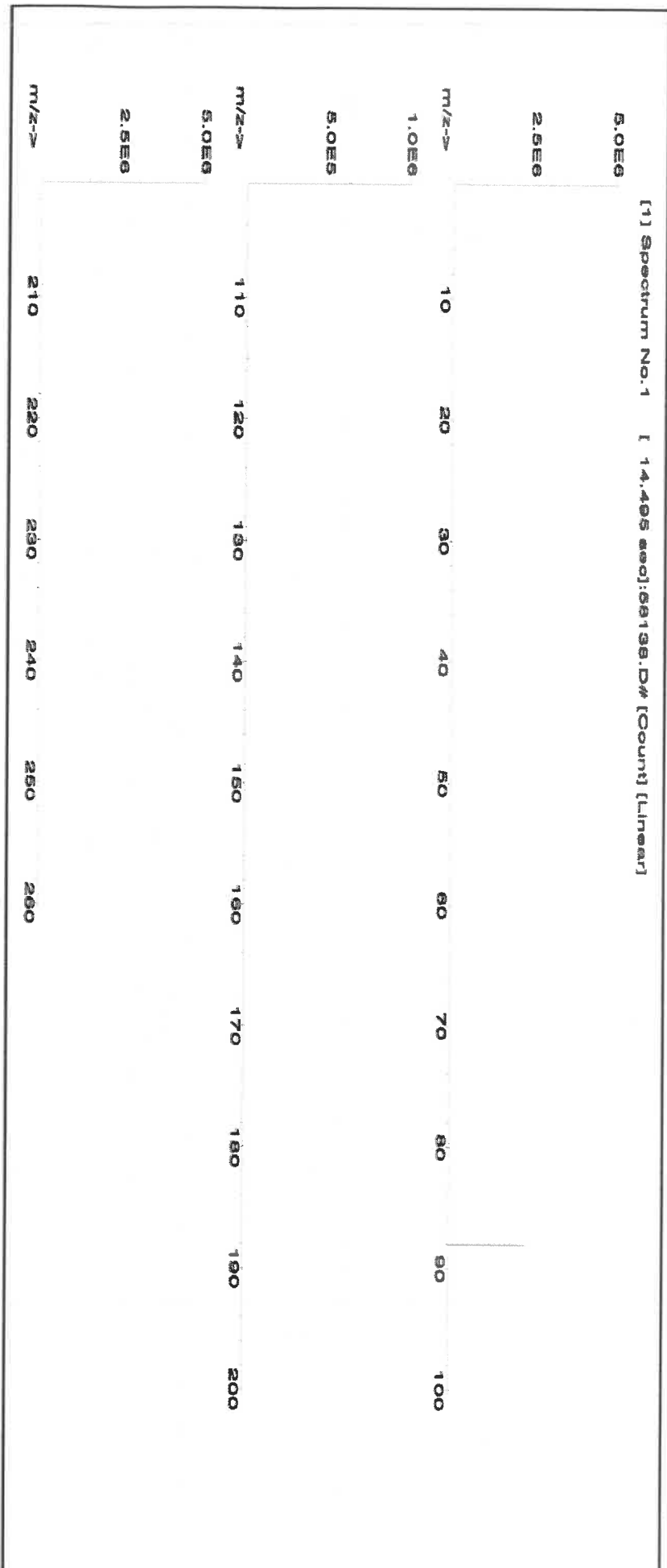
Formulated By:	Benson Chan
	092724
Reviewed By:	Pedro L. Rentas
	092724

SDS Information

Compound	Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded	Uncertainty	CAS#	OSHA PEL (TWA)	LD50	NIST
	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)	(µg/mL)				SRM

1. Strontium nitrate (Sr) IN017 SR2022018A1 1000 99.997 0.10 41.2 4.85470 4.85481 1000.0 2.0 10042-76-9 NA or-rel >2000mg/kg 3153a

[1] Spectrum No.1 [14.465 sec]:66138.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).



Certified Reference Material CRM



ANAB ISO 17034 Accredited
AFR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57082
031525
Lead (Pb)

Lot #

Nitric Acid

Expiration Date:

031528

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Weight shown below was diluted to (mL):

2000.07

0.10 Flask Uncertainty

2%

40.0 (mL)

Nitric Acid

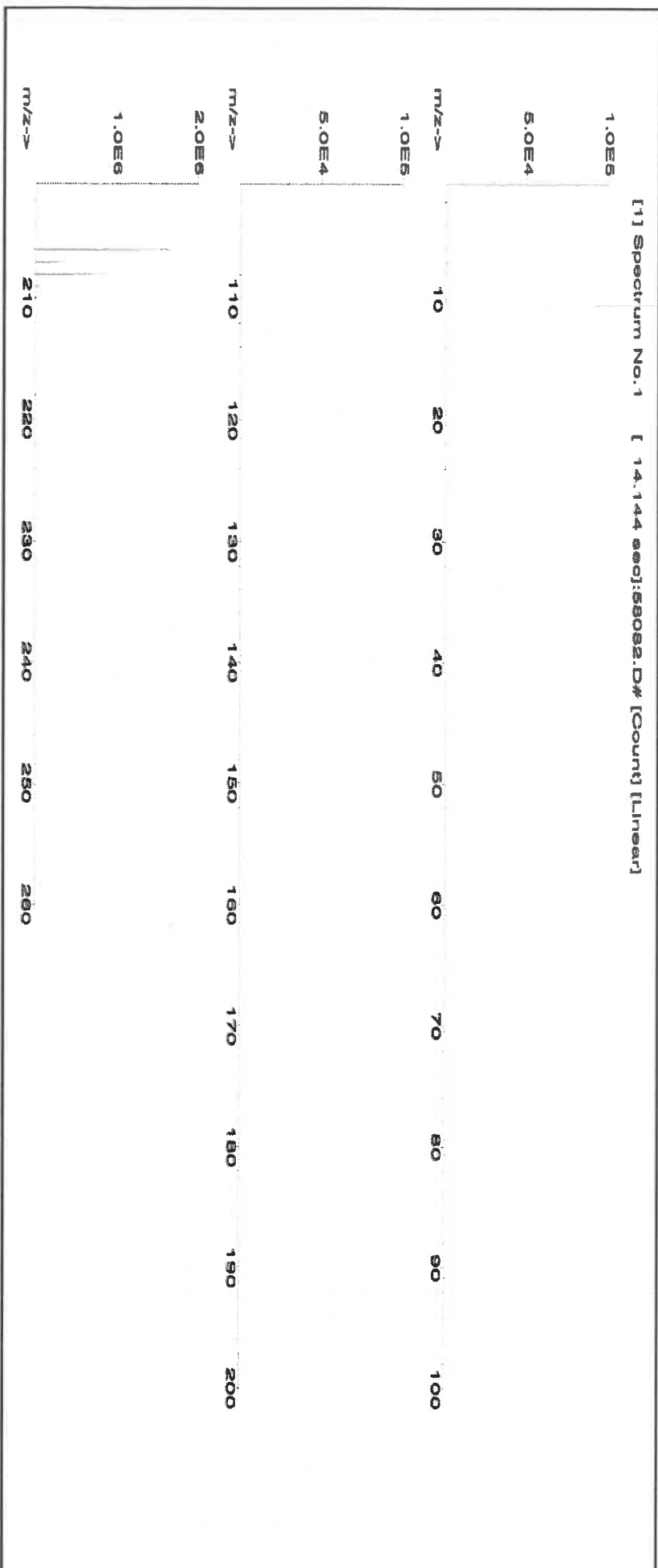
<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
	031525
Reviewed By:	<i>Pedro L. Renteria</i>
	Pedro L. Renteria
	031525

SDS Information

Compound	Lot	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Lead(II) nitrate (Pb) IN029 PBD122016A1 1000 99.999 0.10 62.5 3.20015 3.20067 1000.2 2.0 10099-74-8 0.05 mg/m3 Intra-rat 93 mg/kg 3128

[1] Spectrum No. 1 [14.144 sec]:58082.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Se	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).



QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *ICP-MS ICS*

**QATS LABORATORY INORGANIC REFERENCE MATERIAL
INTERFERENCE CHECK SAMPLE SET FOR ICP-MS (ICSA WITH ICSB)**

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.



(A) SAMPLE DESCRIPTION

Enclosed is a set of one (1) or more bottles of an Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-0803" and for the ICSAB mixture use "ICSA-0803+ICSB-0803".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) BREAKAGE OR MISSING ITEMS

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to the Contracting Officer, Ross Miller at miller.ross@epa.gov. If directed by Ross Miller, return the chain of custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) ANALYSIS OF SAMPLES

This interference check sample set is to be used to verify elemental isobaric correction factors of inductively coupled plasma-mass spectrometers (ICP-MS). This reference material set consists of two (2) concentrated solutions. The ICSA solution contains several interferent elements and species; for a complete listing refer to the CLP SOW. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for the ICP-MS ICS Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:





ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO₃. Analyze this solution by ICP-MS.

ICSB-0803, Analytes, mixed with ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO₃. Analyze this ICSAB solution by ICP-MS.

(D) "CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-MS ICS SOLUTION(S)

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-MS
ICSA-0803, AND ICSA-0803 MIXED WITH ICSB-0803

Element	CRQL	Part A (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)	Part A +Part B (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)
Al	20.0	[100000]			[100000]		
Sb	2.0	(1.5)	-2.5	5.5	(22.0)	18.0	26.0
As	1.0	(0.1)	-1.9	2.1	19.0	16.2	21.9
Ba	10.0	(1.2)	-18.8	21.2	(22.0)	2.0	42.0
Be	1.0	(0)	-2.0	2.0	19.0	16.2	21.9
Cd	1.0	(0.7)	-1.3	2.7	20.0	17.0	23.0
Ca	500	[100000]			[100000]		
C		[200000]			[200000]		
Cl		[1000000]			[1000000]		
Cr	2.0	(21.0)	17.0	25.0	40.0	34.0	46.0
Co	1.0	(1.0)	-1.0	3.0	20.0	17.0	23.0
Cu	2.0	(8.0)	4.0	12.0	(25.0)	21.0	29.0
Fe	200	[100000]			[100000]		
Pb	1.0	(4.0)	2.0	6.0	25.0	21.3	28.8
Mg	500	[100000]			[100000]		
Mn	1.0	(7.0)	5.0	9.0	27.0	23.0	31.1
Mo		[2000]			[2000]		
Ni	1.0	(6.0)	4.0	8.0	24.0	20.4	27.6
P		[100000]			[100000]		
K	500	[100000]			[100000]		
Se	5.0	(0.3)	-9.7	10.3	(19.0)	9.0	29.0
Ag	1.0	(0)	-2.0	2.0	18.0	15.3	20.7
Na	500	[100000]			[100000]		
S		[100000]			[100000]		
Tl	1.0	(0)	-2.0	2.0	21.0	17.9	24.2
Ti		[2000]			[2000]		
V	5.0	(0.5)	-9.5	10.5	(19.0)	9.0	29.0
Zn	5.0	(11.0)	1.0	21.0	(29.0)	19.0	39.0

[] Indicates analytes that do not require ICP-MS determination in the ICS.

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value $\pm$ 2 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value $\pm$ 15 percent of the listed certified value.

M6185
ICSA

Nitric Acid 69%
CMOS

avantor™



M6187

R.D :- 08/08/25

Material No.: 9606-03
Batch No.: 24H0162012
Manufactured Date: 2024-06-28
Retest Date: 2029-06-27
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO ₃)	69.0 – 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	0.03 ppm
Phosphate (PO ₄)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	0.1 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	0.1 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 1 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 1 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 1.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS



Material No.: 9606-03
Batch No.: 24H0162012

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 1 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	1 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 1.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	13 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	5 par/ml

>>> Continued on page 3 >>>



Result

cloak

Jamie Croak
Director Quality Operations, Bioscience Production

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis



M6200
R.O → 08/25/25

Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.192
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl ₂)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO ₄)	≤ 0.05 ppm	0.03 ppm
Sulfate (SO ₄)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO ₃)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH ₄)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	3 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis



Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.2 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	0.2 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 1.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.0 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.4 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis



Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
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For Laboratory, Research, or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production



Certified Reference Material CRM

M6027



CERTIFIED WEIGHT REPORT:

Part Number: **57028**
Lot Number: **062024**
Description: **Nickel (NI)**

Lot # **24002546**
Solvent: **Nitric Acid**

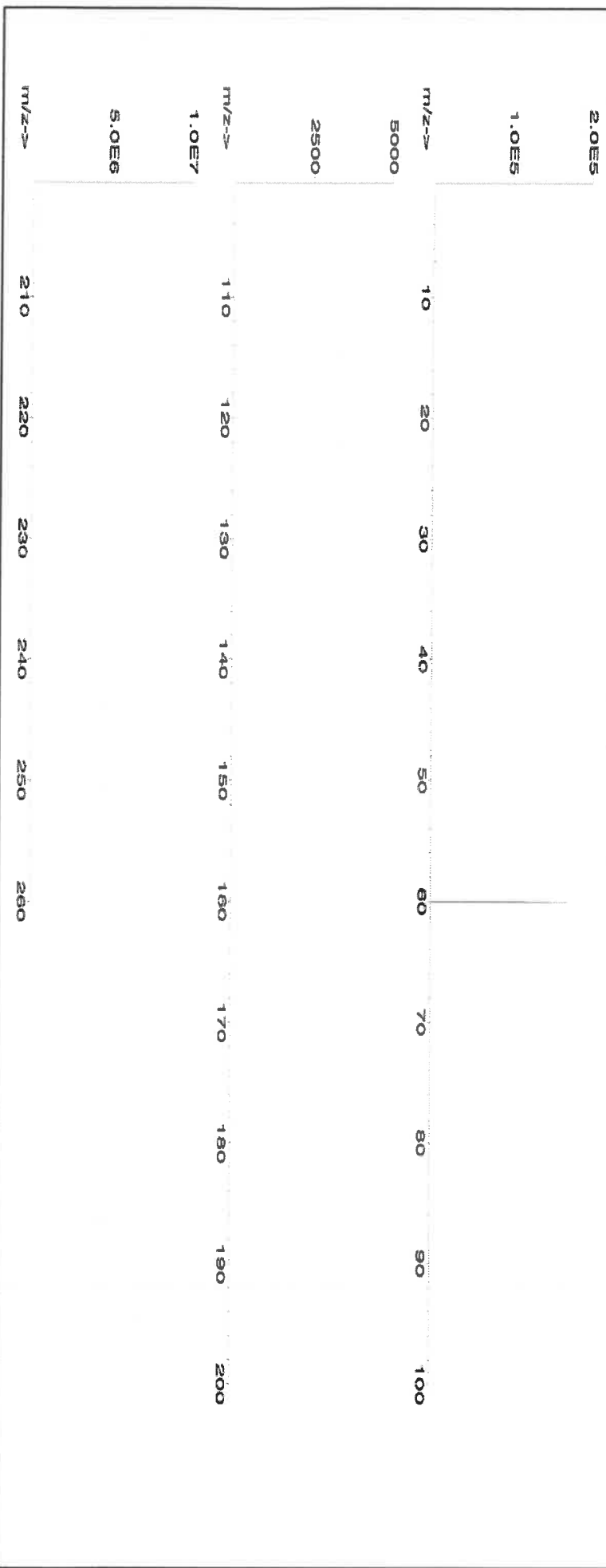
Formulated By:	Benson Chan
062024	
Reviewed By:	Pedro L. Rentes
062024	

Expiration Date: **062027**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**
Volume shown below was diluted to (mL): **2000.07** **0.100** **Flask Uncertainty**

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pippet (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

1. Nickel(II) nitrate hexahydrate (NI) 58128 062023 0.1000 200.0 0.084 1000 10000.4 1000.0 2.2 13478-00-7 1 mg/m3 orl-rat 1620 mg/kg 3136

[1] Spectrum No.1 [9.136 sec]:58028.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).

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).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: 6020ISS
Lot Number: S2-MEB709511
Matrix: 7% (v/v) HNO₃
Value / Analyte(s): 10 µg/mL ea:
Bismuth, Holmium,
Indium, 6-Lithium,
Rhodium, Scandium,
Terbium, Yttrium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
6-Lithium, Li6	10.00 ± 0.03 µg/mL	Bismuth, Bi	10.00 ± 0.05 µg/mL
Holmium, Ho	10.00 ± 0.05 µg/mL	Indium, In	10.00 ± 0.04 µg/mL
Rhodium, Rh	10.00 ± 0.07 µg/mL	Scandium, Sc	10.00 ± 0.04 µg/mL
Terbium, Tb	10.00 ± 0.04 µg/mL	Yttrium, Y	10.00 ± 0.04 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Bi	ICP Assay	3106	180815
Bi	Calculated		See Sec. 4.2
Ho	ICP Assay	3123a	090408
Ho	EDTA	928	928
In	ICP Assay	3124a	110516
In	EDTA	928	928
In	Calculated		See Sec. 4.2
Li6	Gravimetric		See Sec. 4.2
Rh	ICP Assay	3144	070619
Sc	ICP Assay	3148a	100701
Sc	EDTA	928	928
Tb	ICP Assay	3157a	100518
Tb	EDTA	928	928
Tb	Calculated		See Sec. 4.2
Y	ICP Assay	3167a	120314
Y	EDTA	928	928
Y	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:

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

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:

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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2(u_{char\ i})^2]^{1/2}$ 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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

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

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Lithium Li6	95.6 ± 0.3
Lithium Li7	4.4 ± 0.1

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

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

September 03, 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

- **September 03, 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





Certified Reference Material CRM

M6030



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
<https://absolutestandards.com>

CERTIFIED WEIGHT REPORT:

Part Number: **57047**
Lot Number: **122823**
Description: **Silver (Ag)**

Lot #
Solvent: 24002546 Nitric Acid

Expiration Date:

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL):

NIST Test Number: 6UTB

Weight shown below was diluted to (mL):

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

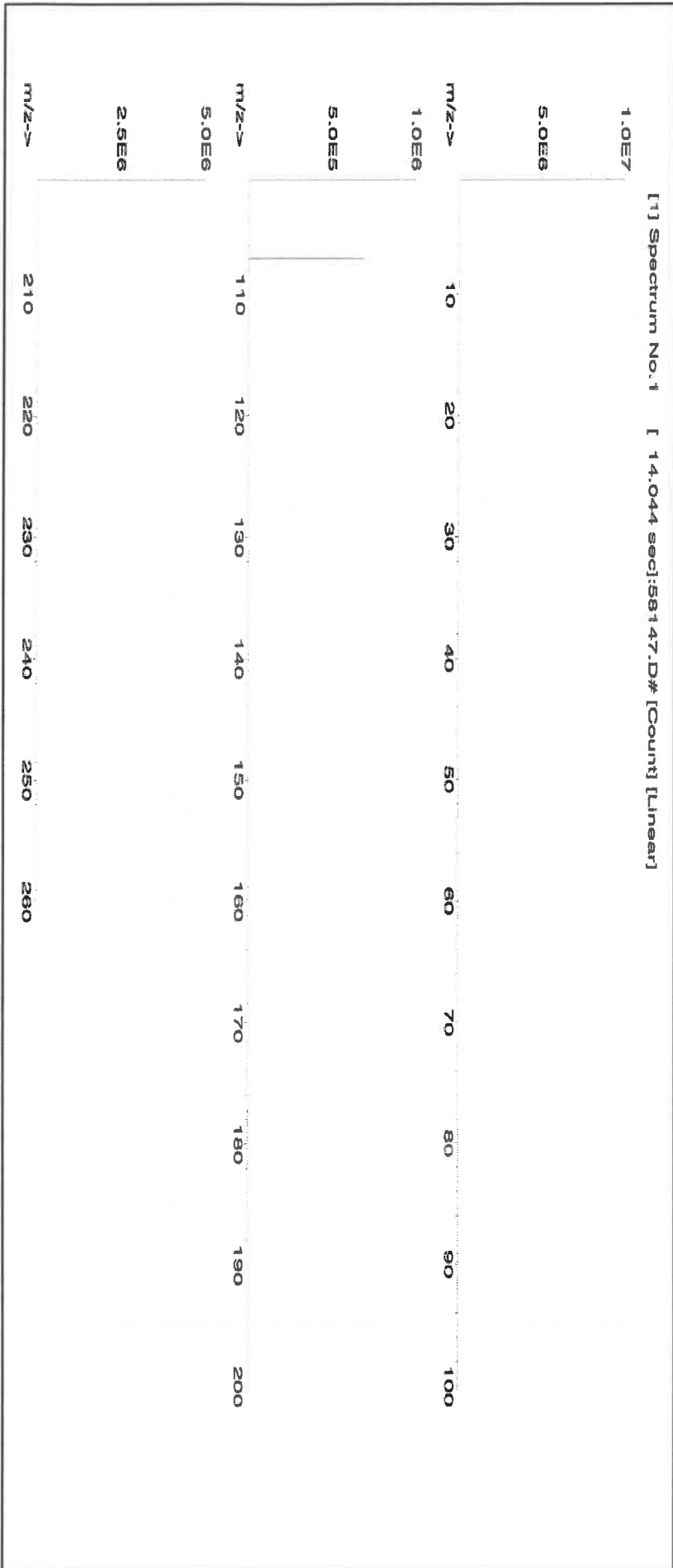
Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas
	122823

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)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Silver nitrate (Ag) IN035 J0612AGA1 1000.0 99.999 0.10 63.7 6.27992 6.27998 1000.0 2.0 7761-88-8 10 µg/m³ NA 3151

[1] Spectrum No. 1 [14.044 sec]:58147.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

Physical Characterization:

(T)= Target analyte

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 meqohm 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 certified (+/-) 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).



R: 10/18/24
Certified Reference Material CRM



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

Part Number:

57051

Lot #

24002546

Solvent:

Nitric Acid

Lot Number:

071724

Description:

Antimony (Sb)

Expiration Date:

071727

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UJB

Volume shown below was diluted to (mL):

2000.26

Balance Uncertainty

0.058

Flask Uncertainty

2.0%

40.0

(mL)

Nitric Acid

Giovanni Esposito

Formulated By:

Giovanni Esposito

071724

Pedro L. Rentas

Reviewed By:

Pedro L. Rentas

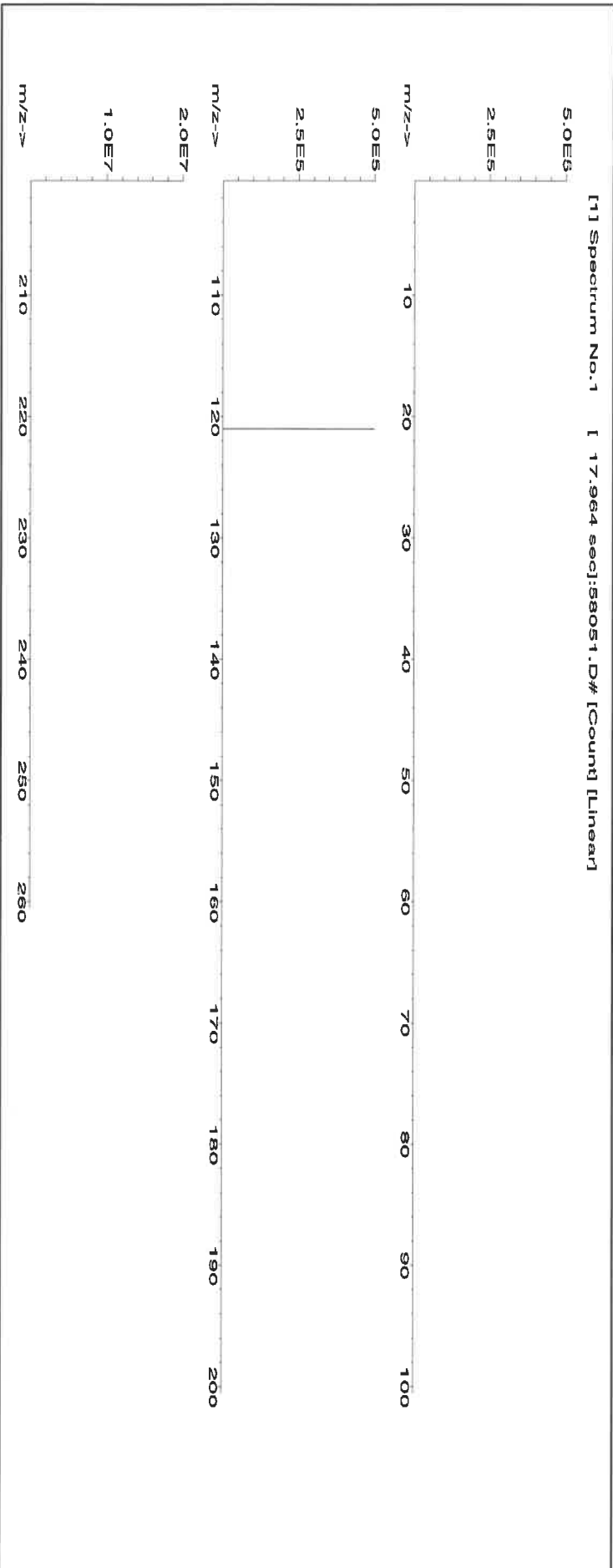
071724

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
----------	-------------	------------	-----------------	-------------------	--------------------------	-----------------------	-----------------------	---------------------	----------------------------------	------	----------------	------	----------

1. Antimony (Sb) 58151 060324 0.1000 200.0 0.084 1000 10001.4 1000.0 2.2 7440-36-0 0.5 mg/m3 orl-rat 7000 mg/kg 3102a

[1] Spectrum No.1 [17.964 sec]:58051.D# [Count] [Linear]





CERTIFIED WEIGHT REPORT:

Part Number: 57081
Lot Number: 062724
Description: Thallium (TI)

Solvent: 24002546 Nitric Acid
Lot #

Expiration Date:

062727

2% 40.0 (mL) Nitric Acid

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

5E-05 Balance Uncertainty

Weight shown below was diluted to (mL): 2000.1

0.10 Flask Uncertainty

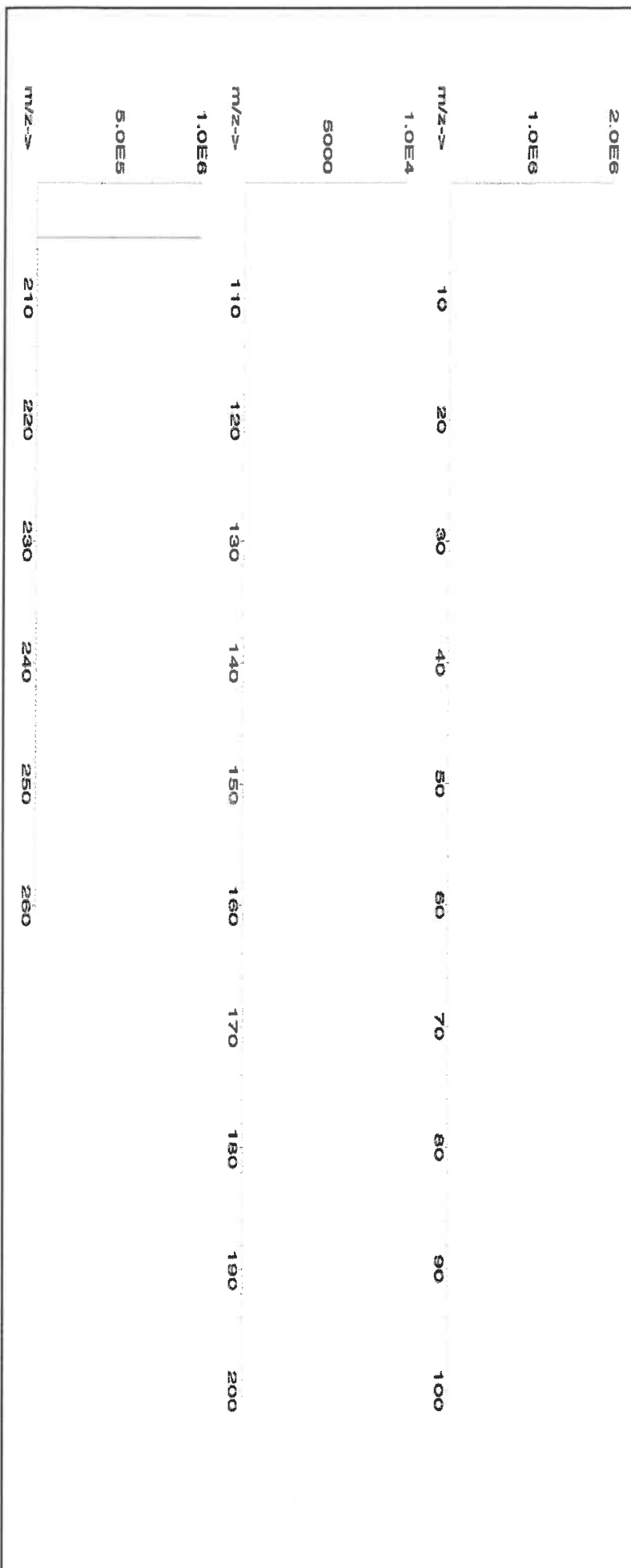
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	062724
Reviewed By:	<i>Pedro L. Renteria</i>
	Pedro L. Renteria
	062724

SDS Information

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Thallium nitrate (TI) IN037 BCCF4399 1000 99.999 0.10 77.0 2.5975 2.5977 1000.1 2.0 10102-45-1 0.1 mg/m3 or-mus 15mg/kg 3158

[1] Spectrum No.1 [14.044 sec]:57081.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Se	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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 certified (+/-) 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).



Certified Reference Material CRM

M6021



CERTIFIED WEIGHT REPORT:

Part Number: 57023
Lot Number: 062424
Description: Vanadium (V)

Lot # 24002546
Solvent: Nitric Acid

Aleah O'Brady	
Formulated By:	Aleah O'Brady
Reviewed By:	Pedro L. Rantas

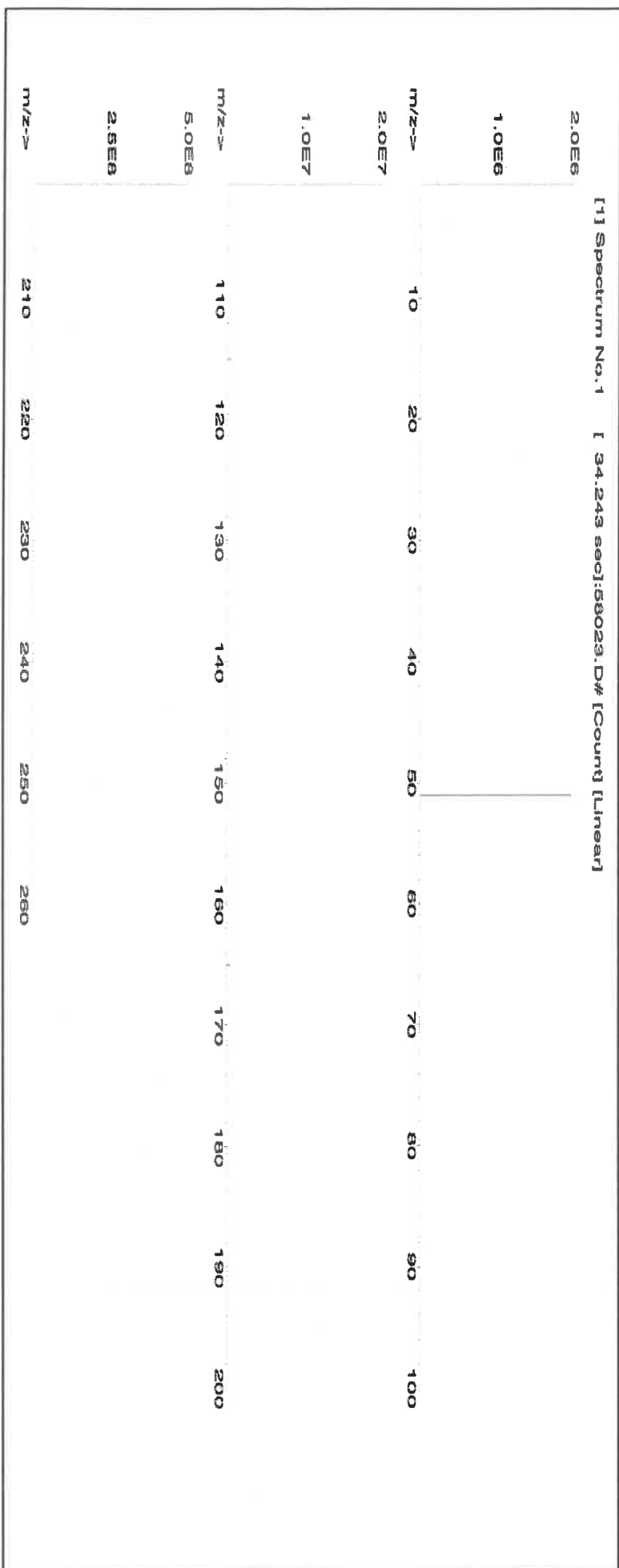
Expiration Date: 062427
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Volume shown below was diluted to (mL): 2000.3
5E-05 Balance Uncertainty
0.06 Flask Uncertainty

2.0% 40.0 (mL) Nitric Acid

Compound		Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)		58123	021224	0.1000	200.0	0.084	1000	10000.3	1000.0	2.2	7803-55-6	0.05 mg/m3	or-at 58.1mg/kg	3165

[1] Spectrum No.1 [34.243 sec]:58023.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02		<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * 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.
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- * Standards are certified (+/-) 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).



SHIPPING DOCUMENTS

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

Q3291

USEPA CLP COC (LAB COPY)

CHAIN OF CUSTODY RECORD

No: 3-100325-113651-0031

DateShipped: 10/3/2025

Lab: Alliance Technical Group

CarrierName: FedEx

Case #: R3706

Lab Contact: Yazmeen Gomez

AirbillNo: 8848 8688 4018

Cooler #: 1

Lab Phone: 908-728-3147

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
RR-SSA-GW04-RAW-20251003	MC0AX0	Ground Water/ START	Grab	ICPMS_Hg(2)	1287 (HNO3 pH<2, 6C) (1)	GW04-RAW	10/03/2025 15:30	pH 1.3
RR-SSA-GW04-RAW-FF-20250929	MC0AX1	Ground Water/ START	Grab	DISS_ICPMS_Hg(2)	1288 (HNO3 pH<2, 6C) (1)	GW04-RAW	10/03/2025 15:30	pH 1.3
RR-SSA-GW-DUP04-RAW-20251003	MC0AX2	Ground Water/ START	Grab	ICPMS_Hg(2)	1289 (HNO3 pH<2, 6C) (1)	GW03-RAW	10/03/2025 12:00	pH 1.3
RR-SSA-GW-DUP04-RAW-FF-20251003	MC0AX3	Ground Water/ START	Grab	DISS_ICPMS_Hg(2)	1290 (HNO3 pH<2, 6C) (1)	GW04-RAW	10/03/2025 12:00	pH 1.3

Special Instructions:	Shipment for Case Complete? N
	Samples Transferred From Chain of Custody #
Analysis Key: ICPMS_Hg=CLP ICP-MS Total Metals + Hg, DISS_ICPMS_Hg=CLP ICP-MS Dissolved Metals + Hg	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
Shipping	START / <i>[Signature]</i>	10/3/25 17:00	<i>[Signature]</i>	10:00 10/6/25	11.3"
					2 ft. Gun # 1

Laboratory Certification

Certified By	License No.
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255425
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	TX-C25-00189
Virginia	460312