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

DATA PACKAGE

METALS

PROJECT NAME : FT MEADE TIPTON AIRFIELD PARCEL RI - PO 0111169

WESTON SOLUTIONS

1400 Weston Way

PO Box 2653

West Chester, PA - 19380

Phone No: 610-701-7400

ORDER ID : Q1295

ATTENTION : Nathan Fretz

Laboratory Certification ID # 20012

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Cover Page

Order ID : Q1295

Project ID : Ft Meade Tipton Airfield Parcel RI - PO 0111169

Client : Weston Solutions

Lab Sample Number	Client Sample Number
Q1295-01	TAPFTA-SB01D-020425-00-T1

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: 2/18/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Weston Solutions
Project Name: Ft Meade Tipton Airfield Parcel RI - PO 0111169
Project # N/A
Chemtech Project # Q1295
Test Name: Metals ICP-TAL,Mercury

A. Number of Samples and Date of Receipt:
1 Solid sample was received on 02/05/2025.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Anions Group1, Mercury, Metals ICP-TAL, METALS-TAL, pH and TOC. This data package contains results for Metals ICP-TAL,Mercury.

C. Analytical Techniques:
The analysis of Metals ICP-TAL was based on method 6020B, digestion based on method 3050 (soils). The analysis and digestion of Mercury was based on method 7471B.

D. QA/ QC Samples:

The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike (TAPFTA-SB01D-020425-00-T1MS) analysis met criteria for all samples except for Arsenic, Iron, Potassium and Silver due to Chemical Interference during Digestion process.
The Matrix Spike Duplicate (TAPFTA-SB01D-020425-00-T1MSD) analysis met criteria for all samples except for Arsenic, Potassium and 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:

Q1295-01 and its Qcs sample analyzed Straight X5 dilution because of high interferent samples.
Internal standard 89Y(1)was out Side qc limit for samples Q1295-01 and its Qcs in Original so for these samples affected parameters are reported from 5X Dilution.

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.

Calculation for ICP-MS Soil Sample:

Conversion of Results from µg /L or ppb to mg/kg :

$$\text{Concentration (mg/kg)} = \frac{C \times Vf}{W \times S} \times DF / 1000$$

Where,

C = Instrument value in ppb (The average of all replicate integrations)
Vf = Final digestion volume (mL)
W = Initial aliquot amount (g) (Fraction of Sample amount taken in prep)
S = % Solids / 100 (Fraction of Percent Solids)
DF = Dilution Factor

Calculation for Hg Soil Sample:

Conversion of Results from µg /L or ppb to mg/kg :

$$\text{Concentration (mg/kg)} = \frac{C \times Vf}{W \times S} \times DF / 1000$$

Where,

C = Instrument response in µg/L from the calibration curve.
Vf = Final prepared (absorbing solution) volume (mL)
W = Initial aliquot amount (g) (Fraction of Sample amount taken in prep)
S = % Solids / 100 (Fraction of Percent Solids)
DF = Dilution Factor

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_____

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside NJ 07092
Tel. 908-789-8900 Fax: 908-789-8922

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

CHEMTECH PROJECT NUMBER: Q1295 MATRIX: Solid

METHOD: 6020B,7471B

		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 (TAPFTA-SB01D-020425-00-T1MS) analysis met criteria for all samples except for Arsenic, Iron, Potassium and Silver due to Chemical Interference during Digestion process. The Matrix Spike Duplicate (TAPFTA-SB01D-020425-00-T1MSD) analysis met criteria for all samples except for Arsenic, Potassium and 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:

Q1295-01 and its Qcs sample analyzed Straight X5 dilution because of high interferent samples.

Internal standard 89Y(1)was out Side qc limit for samples Q1295-01 and its Qcs in Original so for these samples affected parameters are reported from 5X Dilution.

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY (CONTINUED)

NA NO YES

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.

_____ _____

QA REVIEW Date

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1295

	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 Castody	✓
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:** 02/18/2025

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LAB CHRONICLE

OrderID:	Q1295	**OrderDate:**	2/5/2025 11:41:00 AM
Client:	Weston Solutions	**Project:**	Ft Meade Tipton Airfield Parcel RI - PO 0111169
Contact:	Nathan Fretz	**Location:**	N41

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1295-01	**TAPFTA-SB01D-02042 5-00-T1**	**SOIL**			**02/04/25**			**02/05/25**
			Mercury	7471B		02/05/25	02/06/25	
			Metals ICP-TAL	6020B		02/14/25	02/17/25	

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Hit Summary Sheet
SW-846

SDG No.: Q1295 **Order ID:** Q1295

Client: Weston Solutions **Project ID:** Ft Meade Tipton Airfield Parcel RI - PO 01

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID :	**TAPFTA-SB01D-020425-00-T1**								
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Aluminum	3400	D	1.28	2.28	4.56	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Antimony	0.032	JD	0.023	0.17	0.46	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Arsenic	0.72	D	0.021	0.057	0.23	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Barium	13.7	D	0.084	0.28	2.28	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Beryllium	0.16	JD	0.057	0.17	0.23	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Calcium	611	D	15.4	43.4	114	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Chromium	5.34	D	0.055	0.11	0.46	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Cobalt	1.08	D	0.018	0.057	0.23	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Copper	2.22	D	0.13	0.23	0.46	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Iron	4320	D	2.53	2.85	11.4	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Lead	3.39	D	0.034	0.17	0.23	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Magnesium	323	D	6.16	43.4	114	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Manganese	12.4	D	0.078	0.11	0.23	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Nickel	2.02	D	0.037	0.057	0.23	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Mercury	0.013		0.0060	0.011	0.013	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Potassium	165	D	9.08	43.4	114	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Thallium	0.050	JD	0.023	0.11	0.23	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Vanadium	7.63	D	0.018	0.057	1.14	mg/Kg
Q1295-01	TAPFTA-SB01D-020425-00-T1	SOIL	Zinc	5.97	D	0.30	0.34	1.14	mg/Kg

SAMPLE DATA

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Report of Analysis

Client:	Weston Solutions	Date Collected:	02/04/25
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	02/05/25
Client Sample ID:	TAPFTA-SB01D-020425-00-T1	SDG No.:	Q1295
Lab Sample ID:	Q1295-01	Matrix:	SOIL
Level (low/med):	low	% Solid:	90.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	3400	D	5	1.28	2.28	4.56	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7440-36-0	Antimony	0.032	JD	5	0.023	0.17	0.46	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7440-38-2	Arsenic	0.72	DN	5	0.021	0.057	0.23	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7440-39-3	Barium	13.7	D	5	0.084	0.28	2.28	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7440-41-7	Beryllium	0.16	JD	5	0.057	0.17	0.23	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7440-43-9	Cadmium	0.17	UD	5	0.062	0.17	0.23	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7440-70-2	Calcium	611	D	5	15.4	43.4	114	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7440-47-3	Chromium	5.34	D	5	0.055	0.11	0.46	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7440-48-4	Cobalt	1.08	D	5	0.018	0.057	0.23	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7440-50-8	Copper	2.22	D	5	0.13	0.23	0.46	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7439-89-6	Iron	4320	DN	5	2.53	2.85	11.4	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7439-92-1	Lead	3.39	D	5	0.034	0.17	0.23	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7439-95-4	Magnesium	323	D	5	6.16	43.4	114	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7439-96-5	Manganese	12.4	D	5	0.078	0.11	0.23	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7439-97-6	Mercury	0.013		1	0.0060	0.011	0.013	mg/Kg	02/05/25 16:30	02/06/25 15:05	SW7471B	
7440-02-0	Nickel	2.02	D	5	0.037	0.057	0.23	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7440-09-7	Potassium	165	DN	5	9.08	43.4	114	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7782-49-2	Selenium	2.05	UD	10	0.55	2.05	2.28	mg/Kg	02/14/25 09:05	02/17/25 14:10	SW6020	SW3050
7440-22-4	Silver	0.11	UDN	5	0.059	0.11	0.23	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7440-23-5	Sodium	57.1	UD	5	13.9	57.1	114	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7440-28-0	Thallium	0.050	JD	5	0.023	0.11	0.23	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7440-62-2	Vanadium	7.63	D	5	0.018	0.057	1.14	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050
7440-66-6	Zinc	5.97	D	5	0.30	0.34	1.14	mg/Kg	02/14/25 09:05	02/17/25 13:29	SW6020	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		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

METAL CALIBRATION DATA

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

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
ICV89	Mercury	3.68	4.0	92	90 - 110	CV	02/06/2025	13:40	LB134603

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

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
CCV33	Mercury	5.31	5.0	106	90 - 110	CV	02/06/2025	13:45	LB134603
CCV34	Mercury	5.18	5.0	104	90 - 110	CV	02/06/2025	14:19	LB134603
CCV35	Mercury	5.31	5.0	106	90 - 110	CV	02/06/2025	14:52	LB134603
CCV36	Mercury	5.29	5.0	106	90 - 110	CV	02/06/2025	15:15	LB134603

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

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	486	500	97	90 - 110	P	02/17/2025	12:48	LB134737
	Antimony	212	200	106	90 - 110	P	02/17/2025	12:48	LB134737
	Arsenic	210	200	105	90 - 110	P	02/17/2025	12:48	LB134737
	Barium	101	100	101	90 - 110	P	02/17/2025	12:48	LB134737
	Beryllium	102	100	102	90 - 110	P	02/17/2025	12:48	LB134737
	Cadmium	103	100	103	90 - 110	P	02/17/2025	12:48	LB134737
	Calcium	2080	2000	104	90 - 110	P	02/17/2025	12:48	LB134737
	Chromium	101	100	101	90 - 110	P	02/17/2025	12:48	LB134737
	Cobalt	104	100	104	90 - 110	P	02/17/2025	12:48	LB134737
	Copper	105	100	105	90 - 110	P	02/17/2025	12:48	LB134737
	Iron	2080	2000	104	90 - 110	P	02/17/2025	12:48	LB134737
	Lead	204	200	102	90 - 110	P	02/17/2025	12:48	LB134737
	Magnesium	1160	1200	97	90 - 110	P	02/17/2025	12:48	LB134737
	Manganese	99.7	100	100	90 - 110	P	02/17/2025	12:48	LB134737
	Nickel	105	110	96	90 - 110	P	02/17/2025	12:48	LB134737
	Potassium	1950	2000	98	90 - 110	P	02/17/2025	12:48	LB134737
	Selenium	218	200	109	90 - 110	P	02/17/2025	12:48	LB134737
	Silver	48.5	50.0	97	90 - 110	P	02/17/2025	12:48	LB134737
	Sodium	2000	2000	100	90 - 110	P	02/17/2025	12:48	LB134737
	Thallium	202	210	96	90 - 110	P	02/17/2025	12:48	LB134737
	Vanadium	98.2	100	98	90 - 110	P	02/17/2025	12:48	LB134737
	Zinc	201	200	100	90 - 110	P	02/17/2025	12:48	LB134737

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

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
LLICV	Aluminum	20.2	20.0	101	80 - 120	P	02/17/2025	12:52	LB134737
	Antimony	2.02	2.0	101	80 - 120	P	02/17/2025	12:52	LB134737
	Arsenic	1.08	1.0	108	80 - 120	P	02/17/2025	12:52	LB134737
	Barium	9.80	10.0	98	80 - 120	P	02/17/2025	12:52	LB134737
	Beryllium	1.09	1.0	109	80 - 120	P	02/17/2025	12:52	LB134737
	Cadmium	1.09	1.0	109	80 - 120	P	02/17/2025	12:52	LB134737
	Calcium	501	500	100	80 - 120	P	02/17/2025	12:52	LB134737
	Chromium	1.99	2.0	100	80 - 120	P	02/17/2025	12:52	LB134737
	Cobalt	1.07	1.0	107	80 - 120	P	02/17/2025	12:52	LB134737
	Copper	2.08	2.0	104	80 - 120	P	02/17/2025	12:52	LB134737
	Iron	54.4	50.0	109	80 - 120	P	02/17/2025	12:52	LB134737
	Lead	1.00	1.0	100	80 - 120	P	02/17/2025	12:52	LB134737
	Magnesium	510	500	102	80 - 120	P	02/17/2025	12:52	LB134737
	Manganese	1.08	1.0	108	80 - 120	P	02/17/2025	12:52	LB134737
	Nickel	1.00	1.0	100	80 - 120	P	02/17/2025	12:52	LB134737
	Potassium	495	500	99	80 - 120	P	02/17/2025	12:52	LB134737
	Selenium	5.18	5.0	104	80 - 120	P	02/17/2025	12:52	LB134737
	Silver	1.00	1.0	100	80 - 120	P	02/17/2025	12:52	LB134737
	Sodium	508	500	102	80 - 120	P	02/17/2025	12:52	LB134737
	Thallium	0.96	1.0	96	80 - 120	P	02/17/2025	12:52	LB134737
	Vanadium	4.92	5.0	98	80 - 120	P	02/17/2025	12:52	LB134737
	Zinc	5.48	5.0	110	80 - 120	P	02/17/2025	12:52	LB134737

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

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	50600	50000	101	90 - 110	P	02/17/2025	13:13	LB134737
	Antimony	496	500	99	90 - 110	P	02/17/2025	13:13	LB134737
	Arsenic	489	500	98	90 - 110	P	02/17/2025	13:13	LB134737
	Barium	2500	2500	100	90 - 110	P	02/17/2025	13:13	LB134737
	Beryllium	512	500	102	90 - 110	P	02/17/2025	13:13	LB134737
	Cadmium	488	500	98	90 - 110	P	02/17/2025	13:13	LB134737
	Calcium	253000	250000	101	90 - 110	P	02/17/2025	13:13	LB134737
	Chromium	490	500	98	90 - 110	P	02/17/2025	13:13	LB134737
	Cobalt	485	500	97	90 - 110	P	02/17/2025	13:13	LB134737
	Copper	4650	5000	93	90 - 110	P	02/17/2025	13:13	LB134737
	Iron	126000	125000	101	90 - 110	P	02/17/2025	13:13	LB134737
	Lead	2490	2500	100	90 - 110	P	02/17/2025	13:13	LB134737
	Magnesium	251000	250000	100	90 - 110	P	02/17/2025	13:13	LB134737
	Manganese	4930	5000	99	90 - 110	P	02/17/2025	13:13	LB134737
	Nickel	498	500	100	90 - 110	P	02/17/2025	13:13	LB134737
	Potassium	125000	125000	100	90 - 110	P	02/17/2025	13:13	LB134737
	Selenium	483	500	97	90 - 110	P	02/17/2025	13:13	LB134737
	Silver	488	500	98	90 - 110	P	02/17/2025	13:13	LB134737
	Sodium	252000	250000	101	90 - 110	P	02/17/2025	13:13	LB134737
	Thallium	506	500	101	90 - 110	P	02/17/2025	13:13	LB134737
	Vanadium	472	500	94	90 - 110	P	02/17/2025	13:13	LB134737
	Zinc	4760	5000	95	90 - 110	P	02/17/2025	13:13	LB134737
CCV02	Aluminum	50500	50000	101	90 - 110	P	02/17/2025	13:57	LB134737
	Antimony	489	500	98	90 - 110	P	02/17/2025	13:57	LB134737
	Arsenic	521	500	104	90 - 110	P	02/17/2025	13:57	LB134737
	Barium	2480	2500	99	90 - 110	P	02/17/2025	13:57	LB134737
	Beryllium	519	500	104	90 - 110	P	02/17/2025	13:57	LB134737
	Cadmium	489	500	98	90 - 110	P	02/17/2025	13:57	LB134737
	Calcium	252000	250000	101	90 - 110	P	02/17/2025	13:57	LB134737
	Chromium	492	500	98	90 - 110	P	02/17/2025	13:57	LB134737
	Cobalt	482	500	96	90 - 110	P	02/17/2025	13:57	LB134737
	Copper	4670	5000	93	90 - 110	P	02/17/2025	13:57	LB134737
	Iron	125000	125000	100	90 - 110	P	02/17/2025	13:57	LB134737
	Lead	2510	2500	100	90 - 110	P	02/17/2025	13:57	LB134737

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

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
CCV02	Magnesium	250000	250000	100	90 - 110	P	02/17/2025	13:57	LB134737
	Manganese	4920	5000	98	90 - 110	P	02/17/2025	13:57	LB134737
	Nickel	497	500	100	90 - 110	P	02/17/2025	13:57	LB134737
	Potassium	124000	125000	99	90 - 110	P	02/17/2025	13:57	LB134737
	Selenium	484	500	97	90 - 110	P	02/17/2025	13:57	LB134737
	Silver	483	500	97	90 - 110	P	02/17/2025	13:57	LB134737
	Sodium	249000	250000	100	90 - 110	P	02/17/2025	13:57	LB134737
	Thallium	509	500	102	90 - 110	P	02/17/2025	13:57	LB134737
	Vanadium	472	500	94	90 - 110	P	02/17/2025	13:57	LB134737
	Zinc	4790	5000	96	90 - 110	P	02/17/2025	13:57	LB134737
CCV03	Aluminum	50000	50000	100	90 - 110	P	02/17/2025	14:30	LB134737
	Antimony	482	500	96	90 - 110	P	02/17/2025	14:30	LB134737
	Arsenic	487	500	97	90 - 110	P	02/17/2025	14:30	LB134737
	Barium	2460	2500	98	90 - 110	P	02/17/2025	14:30	LB134737
	Beryllium	512	500	102	90 - 110	P	02/17/2025	14:30	LB134737
	Cadmium	479	500	96	90 - 110	P	02/17/2025	14:30	LB134737
	Calcium	253000	250000	101	90 - 110	P	02/17/2025	14:30	LB134737
	Chromium	484	500	97	90 - 110	P	02/17/2025	14:30	LB134737
	Cobalt	474	500	95	90 - 110	P	02/17/2025	14:30	LB134737
	Copper	4590	5000	92	90 - 110	P	02/17/2025	14:30	LB134737
	Iron	123000	125000	98	90 - 110	P	02/17/2025	14:30	LB134737
	Lead	2500	2500	100	90 - 110	P	02/17/2025	14:30	LB134737
	Magnesium	247000	250000	99	90 - 110	P	02/17/2025	14:30	LB134737
	Manganese	4870	5000	98	90 - 110	P	02/17/2025	14:30	LB134737
	Nickel	458	500	92	90 - 110	P	02/17/2025	14:30	LB134737
	Potassium	124000	125000	99	90 - 110	P	02/17/2025	14:30	LB134737
	Selenium	483	500	97	90 - 110	P	02/17/2025	14:30	LB134737
	Silver	476	500	95	90 - 110	P	02/17/2025	14:30	LB134737
	Sodium	246000	250000	98	90 - 110	P	02/17/2025	14:30	LB134737
	Thallium	506	500	101	90 - 110	P	02/17/2025	14:30	LB134737
	Vanadium	466	500	93	90 - 110	P	02/17/2025	14:30	LB134737
	Zinc	4690	5000	94	90 - 110	P	02/17/2025	14:30	LB134737

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CRDL STANDARD FOR AA & ICP

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

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	89	40 - 160	CV	02/06/2025	13:49	LB134603
CRI	Aluminum	19.8	20.0	99	70 - 130	P	02/17/2025	13:19	LB134737
	Antimony	2.04	2.0	102	70 - 130	P	02/17/2025	13:19	LB134737
	Arsenic	1.03	1.0	103	70 - 130	P	02/17/2025	13:19	LB134737
	Barium	10.1	10.0	101	70 - 130	P	02/17/2025	13:19	LB134737
	Beryllium	1.13	1.0	113	70 - 130	P	02/17/2025	13:19	LB134737
	Cadmium	1.08	1.0	108	70 - 130	P	02/17/2025	13:19	LB134737
	Calcium	500	500	100	70 - 130	P	02/17/2025	13:19	LB134737
	Chromium	1.96	2.0	98	70 - 130	P	02/17/2025	13:19	LB134737
	Cobalt	1.07	1.0	107	50 - 150	P	02/17/2025	13:19	LB134737
	Copper	2.06	2.0	103	70 - 130	P	02/17/2025	13:19	LB134737
	Iron	53.0	50.0	106	70 - 130	P	02/17/2025	13:19	LB134737
	Lead	1.03	1.0	103	70 - 130	P	02/17/2025	13:19	LB134737
	Magnesium	512	500	102	70 - 130	P	02/17/2025	13:19	LB134737
	Manganese	1.29	1.0	129	50 - 150	P	02/17/2025	13:19	LB134737
	Nickel	1.08	1.0	108	70 - 130	P	02/17/2025	13:19	LB134737
	Potassium	501	500	100	70 - 130	P	02/17/2025	13:19	LB134737
	Selenium	5.37	5.0	107	70 - 130	P	02/17/2025	13:19	LB134737
	Silver	0.98	1.0	98	70 - 130	P	02/17/2025	13:19	LB134737
	Sodium	526	500	105	70 - 130	P	02/17/2025	13:19	LB134737
	Thallium	0.98	1.0	98	70 - 130	P	02/17/2025	13:19	LB134737
	Vanadium	4.91	5.0	98	70 - 130	P	02/17/2025	13:19	LB134737
	Zinc	5.56	5.0	111	50 - 150	P	02/17/2025	13:19	LB134737

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB89	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	02/06/2025	13:42	LB134603

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB33	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	02/06/2025	13:47	LB134603
CCB34	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	02/06/2025	14:22	LB134603
CCB35	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	02/06/2025	14:54	LB134603
CCB36	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	02/06/2025	15:17	LB134603

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	20.0	+/-20.0	U	10.0	20.0	P	02/17/2025	12:55	LB134737
	Antimony	2.00	+/-2.00	U	0.25	2.00	P	02/17/2025	12:55	LB134737
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	12:55	LB134737
	Barium	10.0	+/-10.0	U	1.25	10.0	P	02/17/2025	12:55	LB134737
	Beryllium	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	12:55	LB134737
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	02/17/2025	12:55	LB134737
	Calcium	500	+/-500	U	190	500	P	02/17/2025	12:55	LB134737
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	02/17/2025	12:55	LB134737
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	12:55	LB134737
	Copper	2.00	+/-2.00	U	1.50	2.00	P	02/17/2025	12:55	LB134737
	Iron	50.0	+/-50.0	U	25.0	50.0	P	02/17/2025	12:55	LB134737
	Lead	1.00	+/-1.00	U	0.75	1.00	P	02/17/2025	12:55	LB134737
	Magnesium	500	+/-500	U	190	500	P	02/17/2025	12:55	LB134737
	Manganese	1.00	+/-1.00	U	0.75	1.00	P	02/17/2025	12:55	LB134737
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	12:55	LB134737
	Potassium	500	+/-500	U	190	500	P	02/17/2025	12:55	LB134737
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	02/17/2025	12:55	LB134737
	Silver	1.00	+/-1.00	U	0.50	1.00	P	02/17/2025	12:55	LB134737
	Sodium	500	+/-500	U	190	500	P	02/17/2025	12:55	LB134737
	Thallium	1.00	+/-1.00	U	0.50	1.00	P	02/17/2025	12:55	LB134737
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	02/17/2025	12:55	LB134737
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	02/17/2025	12:55	LB134737

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	20.0	+/-20.0	U	10.0	20.0	P	02/17/2025	13:16	LB134737
	Antimony	0.13	+/-2.00	J	0.25	2.00	P	02/17/2025	13:16	LB134737
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	13:16	LB134737
	Barium	0.39	+/-10.0	J	1.25	10.0	P	02/17/2025	13:16	LB134737
	Beryllium	0.27	+/-1.00	J	0.25	1.00	P	02/17/2025	13:16	LB134737
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	02/17/2025	13:16	LB134737
	Calcium	500	+/-500	U	190	500	P	02/17/2025	13:16	LB134737
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	02/17/2025	13:16	LB134737
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	13:16	LB134737
	Copper	2.00	+/-2.00	U	1.50	2.00	P	02/17/2025	13:16	LB134737
	Iron	50.0	+/-50.0	U	25.0	50.0	P	02/17/2025	13:16	LB134737
	Lead	0.20	+/-1.00	J	0.75	1.00	P	02/17/2025	13:16	LB134737
	Magnesium	500	+/-500	U	190	500	P	02/17/2025	13:16	LB134737
	Manganese	1.00	+/-1.00	U	0.75	1.00	P	02/17/2025	13:16	LB134737
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	13:16	LB134737
	Potassium	500	+/-500	U	190	500	P	02/17/2025	13:16	LB134737
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	02/17/2025	13:16	LB134737
	Silver	1.00	+/-1.00	U	0.50	1.00	P	02/17/2025	13:16	LB134737
	Sodium	500	+/-500	U	190	500	P	02/17/2025	13:16	LB134737
	Thallium	1.00	+/-1.00	U	0.50	1.00	P	02/17/2025	13:16	LB134737
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	02/17/2025	13:16	LB134737
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	02/17/2025	13:16	LB134737
CCB02	Aluminum	20.0	+/-20.0	U	10.0	20.0	P	02/17/2025	14:04	LB134737
	Antimony	2.00	+/-2.00	U	0.25	2.00	P	02/17/2025	14:04	LB134737
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	14:04	LB134737
	Barium	10.0	+/-10.0	U	1.25	10.0	P	02/17/2025	14:04	LB134737
	Beryllium	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	14:04	LB134737
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	02/17/2025	14:04	LB134737
	Calcium	500	+/-500	U	190	500	P	02/17/2025	14:04	LB134737
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	02/17/2025	14:04	LB134737
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	14:04	LB134737
	Copper	2.00	+/-2.00	U	1.50	2.00	P	02/17/2025	14:04	LB134737
	Iron	50.0	+/-50.0	U	25.0	50.0	P	02/17/2025	14:04	LB134737
	Lead	1.00	+/-1.00	U	0.75	1.00	P	02/17/2025	14:04	LB134737
	Magnesium	500	+/-500	U	190	500	P	02/17/2025	14:04	LB134737
	Manganese	1.00	+/-1.00	U	0.75	1.00	P	02/17/2025	14:04	LB134737
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	14:04	LB134737
	Potassium	500	+/-500	U	190	500	P	02/17/2025	14:04	LB134737
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	02/17/2025	14:04	LB134737

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	1.00	+/-1.00	U	0.50	1.00	P	02/17/2025	14:04	LB134737
	Sodium	500	+/-500	U	190	500	P	02/17/2025	14:04	LB134737
	Thallium	1.00	+/-1.00	U	0.50	1.00	P	02/17/2025	14:04	LB134737
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	02/17/2025	14:04	LB134737
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	02/17/2025	14:04	LB134737
CCB03	Aluminum	20.0	+/-20.0	U	10.0	20.0	P	02/17/2025	14:34	LB134737
	Antimony	2.00	+/-2.00	U	0.25	2.00	P	02/17/2025	14:34	LB134737
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	14:34	LB134737
	Barium	10.0	+/-10.0	U	1.25	10.0	P	02/17/2025	14:34	LB134737
	Beryllium	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	14:34	LB134737
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	02/17/2025	14:34	LB134737
	Calcium	500	+/-500	U	190	500	P	02/17/2025	14:34	LB134737
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	02/17/2025	14:34	LB134737
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	14:34	LB134737
	Copper	2.00	+/-2.00	U	1.50	2.00	P	02/17/2025	14:34	LB134737
	Iron	50.0	+/-50.0	U	25.0	50.0	P	02/17/2025	14:34	LB134737
	Lead	1.00	+/-1.00	U	0.75	1.00	P	02/17/2025	14:34	LB134737
	Magnesium	500	+/-500	U	190	500	P	02/17/2025	14:34	LB134737
	Manganese	1.00	+/-1.00	U	0.75	1.00	P	02/17/2025	14:34	LB134737
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	02/17/2025	14:34	LB134737
	Potassium	500	+/-500	U	190	500	P	02/17/2025	14:34	LB134737
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	02/17/2025	14:34	LB134737
	Silver	1.00	+/-1.00	U	0.50	1.00	P	02/17/2025	14:34	LB134737
	Sodium	500	+/-500	U	190	500	P	02/17/2025	14:34	LB134737
	Thallium	1.00	+/-1.00	U	0.50	1.00	P	02/17/2025	14:34	LB134737
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	02/17/2025	14:34	LB134737
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	02/17/2025	14:34	LB134737

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** Q1295

Instrument: CV1

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB166584BL		**SOLID**		**Batch Number:**		**PB166584**		**Prep Date:**	**02/05/2025**	
	Mercury	0.013	<0.013	U	0.010	0.013	CV	02/06/2025	14:03	LB134603

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** Q1295

Instrument: P8

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB166734BL		**SOLID**		**Batch Number:**		**PB166734**		**Prep Date:**	**02/14/2025**	
	Aluminum	0.87	<0.87	U	0.44	0.87	P	02/17/2025	13:23	LB134737
	Antimony	0.087	<0.087	U	0.033	0.087	P	02/17/2025	13:23	LB134737
	Arsenic	0.043	<0.043	U	0.011	0.043	P	02/17/2025	13:23	LB134737
	Barium	0.44	<0.44	U	0.054	0.44	P	02/17/2025	13:23	LB134737
	Beryllium	0.043	<0.043	U	0.033	0.043	P	02/17/2025	13:23	LB134737
	Cadmium	0.043	<0.043	U	0.033	0.043	P	02/17/2025	13:23	LB134737
	Calcium	21.7	<21.7	U	8.26	21.7	P	02/17/2025	13:23	LB134737
	Chromium	0.087	<0.087	U	0.022	0.087	P	02/17/2025	13:23	LB134737
	Cobalt	0.043	<0.043	U	0.011	0.043	P	02/17/2025	13:23	LB134737
	Copper	0.087	<0.087	U	0.043	0.087	P	02/17/2025	13:23	LB134737
	Iron	2.17	<2.17	U	0.54	2.17	P	02/17/2025	13:23	LB134737
	Lead	0.043	<0.043	U	0.033	0.043	P	02/17/2025	13:23	LB134737
	Magnesium	21.7	<21.7	U	8.26	21.7	P	02/17/2025	13:23	LB134737
	Manganese	0.043	<0.043	U	0.022	0.043	P	02/17/2025	13:23	LB134737
	Nickel	0.043	<0.043	U	0.011	0.043	P	02/17/2025	13:23	LB134737
	Potassium	21.7	<21.7	U	8.26	21.7	P	02/17/2025	13:23	LB134737
	Selenium	0.22	<0.22	U	0.20	0.22	P	02/17/2025	13:23	LB134737
	Silver	0.043	<0.043	U	0.022	0.043	P	02/17/2025	13:23	LB134737
	Sodium	21.7	<21.7	U	10.9	21.7	P	02/17/2025	13:23	LB134737
	Thallium	0.043	<0.043	U	0.022	0.043	P	02/17/2025	13:23	LB134737
	Vanadium	0.22	<0.22	U	0.011	0.22	P	02/17/2025	13:23	LB134737
	Zinc	0.22	<0.22	U	0.065	0.22	P	02/17/2025	13:23	LB134737

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

ICS Source: EPA **Instrument ID:** P8

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	99900	100000	100	0	0	02/17/2025	12:58	LB134737
	Antimony	1.13	1.5	75	-2.5	5.5	02/17/2025	12:58	LB134737
	Arsenic	0.37	0.1	370	-1.9	2.1	02/17/2025	12:58	LB134737
	Barium	1.41	1.2	118	-18.8	21.2	02/17/2025	12:58	LB134737
	Beryllium	0.31			-2	2	02/17/2025	12:58	LB134737
	Cadmium	0.64	0.7	91	-1.3	2.7	02/17/2025	12:58	LB134737
	Calcium	105000	100000	105	0	0	02/17/2025	12:58	LB134737
	Chromium	20.0	21.0	95	17	25	02/17/2025	12:58	LB134737
	Cobalt	1.19	1.0	119	-1	3	02/17/2025	12:58	LB134737
	Copper	8.22	8.0	103	4	12	02/17/2025	12:58	LB134737
	Iron	111000	100000	111	0	0	02/17/2025	12:58	LB134737
	Lead	4.40	4.0	110	2	6	02/17/2025	12:58	LB134737
	Magnesium	103000	100000	103	0	0	02/17/2025	12:58	LB134737
	Manganese	7.56	7.0	108	5	9	02/17/2025	12:58	LB134737
	Nickel	5.44	6.0	91	4	8	02/17/2025	12:58	LB134737
	Potassium	105000	100000	105	0	0	02/17/2025	12:58	LB134737
	Selenium	0.21	0.3	70	-9.7	10	02/17/2025	12:58	LB134737
	Silver	0.12			-2	2	02/17/2025	12:58	LB134737
	Sodium	109000	100000	109	0	0	02/17/2025	12:58	LB134737
	Thallium	0.17			-2	2	02/17/2025	12:58	LB134737
	Vanadium	0.14	0.5	28	-9.5	10.5	02/17/2025	12:58	LB134737
	Zinc	10.9	11.0	100	7	15	02/17/2025	12:58	LB134737
ICSAB01	Aluminum	98900	100000	99	0	0	02/17/2025	13:02	LB134737
	Antimony	21.3	22.0	97	18	26	02/17/2025	13:02	LB134737
	Arsenic	21.5	19.0	113	16.2	21.9	02/17/2025	13:02	LB134737
	Barium	21.6	22.0	98	2	42	02/17/2025	13:02	LB134737
	Beryllium	20.8	19.0	110	16.2	21.9	02/17/2025	13:02	LB134737
	Cadmium	20.0	20.0	100	17	23	02/17/2025	13:02	LB134737
	Calcium	107000	100000	107	0	0	02/17/2025	13:02	LB134737
	Chromium	39.3	40.0	98	34	46	02/17/2025	13:02	LB134737
	Cobalt	21.0	20.0	105	17	23	02/17/2025	13:02	LB134737
	Copper	27.9	25.0	112	21	29	02/17/2025	13:02	LB134737
	Iron	108000	100000	108	0	0	02/17/2025	13:02	LB134737
	Lead	24.1	25.0	96	21.3	28.8	02/17/2025	13:02	LB134737
	Magnesium	102000	100000	102	0	0	02/17/2025	13:02	LB134737
	Manganese	26.8	27.0	99	23	31.1	02/17/2025	13:02	LB134737
	Nickel	25.0	24.0	104	20.4	27.6	02/17/2025	13:02	LB134737
	Potassium	104000	100000	104	0	0	02/17/2025	13:02	LB134737
	Selenium	21.8	19.0	115	9	29	02/17/2025	13:02	LB134737
	Silver	18.9	18.0	105	15.3	20.7	02/17/2025	13:02	LB134737
	Sodium	108000	100000	108	0	0	02/17/2025	13:02	LB134737
	Thallium	20.6	21.0	98	17.9	24.2	02/17/2025	13:02	LB134737

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

ICS Source: EPA **Instrument ID:** P8

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	19.9	19.0	105	9	29	02/17/2025	13:02	LB134737
	Zinc	30.8	29.0	106	25	33	02/17/2025	13:02	LB134737

METAL QC DATA

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metals
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MATRIX SPIKE SUMMARY

client: Weston Solutions **level:** low **sdg no.:** Q1295

contract: WEST04 **lab code:** CHEM **case no.:** Q1295 **sas no.:** Q1295

matrix: Solid **sample id:** Q1288-01 **client id:** HR-01-020425MS

Percent Solids for Sample: 89 **Spiked ID:** Q1288-01MS **Percent Solids for Spike Sample:** 89

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 124	0.42		0.084		0.29	117		CV

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metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Weston Solutions **level:** low **sdg no.:** Q1295

contract: WEST04 **lab code:** CHEM **case no.:** Q1295 **sas no.:** Q1295

matrix: Solid **sample id:** Q1288-01 **client id:** HR-01-020425MSD

Percent Solids for Sample: 89 **Spiked ID:** Q1288-01MSD **Percent Solids for Spike Sample:** 89

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 124	0.40		0.084		0.3	107		CV

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metals
- 5a -
MATRIX SPIKE SUMMARY

client: Weston Solutions **level:** low **sdg no.:** Q1295

contract: WEST04 **lab code:** CHEM **case no.:** Q1295 **sas no.:** Q1295

matrix: Solid **sample id:** Q1295-01 **client id:** TAPFTA-SB01D-020425-00-T1MS

Percent Solids for Sample: 90.9 **Spiked ID:** Q1295-01MS **Percent Solids for Spike Sample:** 90.9

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	78 - 124	3570	D	3400	D	460	36		P
Antimony	mg/Kg	72 - 124	22.3	D	0.032	JD	23.0	97		P
Arsenic	mg/Kg	82 - 118	0.69	D	0.72	D	23.0	0	N	P
Barium	mg/Kg	86 - 116	116	D	13.7	D	120	89		P
Beryllium	mg/Kg	80 - 120	21.6	D	0.16	JD	23.0	93		P
Cadmium	mg/Kg	84 - 116	21.7	D	0.23	UD	23.0	94		P
Calcium	mg/Kg	86 - 118	2760	D	611	D	2300	93		P
Chromium	mg/Kg	83 - 119	25.0	D	5.34	D	23.0	85		P
Cobalt	mg/Kg	84 - 115	21.9	D	1.08	D	23.0	90		P
Copper	mg/Kg	84 - 119	228	D	2.22	D	230	98		P
Iron	mg/Kg	81 - 124	5020	D	4320	D	1200	61	N	P
Lead	mg/Kg	84 - 118	114	D	3.39	D	120	96		P
Magnesium	mg/Kg	80 - 123	2510	D	323	D	2300	95		P
Manganese	mg/Kg	85 - 116	218	D	12.4	D	230	89		P
Nickel	mg/Kg	84 - 119	23.0	D	2.02	D	23.0	91		P
Potassium	mg/Kg	85 - 119	1100	D	165	D	1200	81	N	P
Selenium	mg/Kg	80 - 119	22.1	D	2.28	UD	23.0	96		P
Silver	mg/Kg	83 - 118	3.71	D	0.23	UD	23.0	16	N	P
Sodium	mg/Kg	79 - 125	2150	D	114	UD	2300	93		P
Thallium	mg/Kg	83 - 118	22.4	D	0.050	JD	23.0	97		P
Vanadium	mg/Kg	82 - 116	28.0	D	7.63	D	23.0	89		P
Zinc	mg/Kg	82 - 119	217	D	5.97	D	230	92		P

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metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Weston Solutions **level:** low **sdg no.:** Q1295

contract: WEST04 **lab code:** CHEM **case no.:** Q1295 **sas no.:** Q1295

matrix: Solid **sample id:** Q1295-01 **client id:** TAPFTA-SB01D-020425-00-T1MSD

Percent Solids for Sample: 90.9 **Spiked ID:** Q1295-01MSD **Percent Solids for Spike Sample:** 90.9

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	78 - 124	3830	D	3400	D	480	90		P
Antimony	mg/Kg	72 - 124	23.9	D	0.032	JD	24.0	99		P
Arsenic	mg/Kg	82 - 118	0.73	D	0.72	D	24.0	0	N	P
Barium	mg/Kg	86 - 116	122	D	13.7	D	120	90		P
Beryllium	mg/Kg	80 - 120	22.3	D	0.16	JD	24.0	92		P
Cadmium	mg/Kg	84 - 116	22.4	D	0.23	UD	24.0	93		P
Calcium	mg/Kg	86 - 118	2850	D	611	D	2400	93		P
Chromium	mg/Kg	83 - 119	26.7	D	5.34	D	24.0	89		P
Cobalt	mg/Kg	84 - 115	23.4	D	1.08	D	24.0	93		P
Copper	mg/Kg	84 - 119	239	D	2.22	D	240	98		P
Iron	mg/Kg	81 - 124	5340	D	4320	D	1200	85		P
Lead	mg/Kg	84 - 118	118	D	3.39	D	120	95		P
Magnesium	mg/Kg	80 - 123	2710	D	323	D	2400	99		P
Manganese	mg/Kg	85 - 116	232	D	12.4	D	240	92		P
Nickel	mg/Kg	84 - 119	24.5	D	2.02	D	24.0	94		P
Potassium	mg/Kg	85 - 119	1160	D	165	D	1200	83	N	P
Selenium	mg/Kg	80 - 119	23.4	D	2.28	UD	24.0	97		P
Silver	mg/Kg	83 - 118	3.91	D	0.23	UD	24.0	16	N	P
Sodium	mg/Kg	79 - 125	2300	D	114	UD	2400	96		P
Thallium	mg/Kg	83 - 118	23.0	D	0.050	JD	24.0	95		P
Vanadium	mg/Kg	82 - 116	29.8	D	7.63	D	24.0	92		P
Zinc	mg/Kg	82 - 119	230	D	5.97	D	240	93		P

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Metals
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POST DIGEST SPIKE SUMMARY

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

Matrix: Solid **Level:** LOW **Client ID:** TAPFTA-SB01D-020425-00-T1A

Sample ID: Q1295-01 **Spiked ID:** Q1295-01A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/Kg	82 - 118	0.69	D	0.72	D	22.8	0		P
Iron	mg/Kg	81 - 124	5040	D	4320	D	1100	65		P
Potassium	mg/Kg	85 - 119	1100	D	165	D	1100	85		P
Silver	mg/Kg	83 - 118	3.67	D	0.23	UD	22.8	16		P

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Weston Solutions **Level:** LOW **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

Matrix: Solid **Sample ID:** Q1288-01 **Client ID:** HR-01-020425DUP

Percent Solids for Sample: 89 **Duplicate ID** Q1288-01DUP **Percent Solids for Spike Sample:** 89

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.084		0.085		1		CV

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Weston Solutions **Level:** LOW **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

Matrix: Solid **Sample ID:** Q1288-01MS **Client ID:** HR-01-020425MSD

Percent Solids for Sample: 89 **Duplicate ID** Q1288-01MSD **Percent Solids for Spike Sample:** 89

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.42		0.40		4		CV

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Weston Solutions **Level:** LOW **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

Matrix: Solid **Sample ID:** Q1295-01 **Client ID:** TAPFTA-SB01D-020425-00-T1DUP

Percent Solids for Sample: 90.9 **Duplicate ID** Q1295-01DUP **Percent Solids for Spike Sample:** 90.9

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	3400	D	3340	D	2		P
Antimony	mg/Kg	20	0.032	JD	0.45	UD	200		P
Arsenic	mg/Kg	20	0.72	D	0.69	D	4		P
Barium	mg/Kg	20	13.7	D	13.7	D	0		P
Beryllium	mg/Kg	20	0.16	JD	0.15	JD	10		P
Cadmium	mg/Kg	20	0.23	UD	0.23	UD			P
Calcium	mg/Kg	20	611	D	605	D	1		P
Chromium	mg/Kg	20	5.34	D	5.30	D	1		P
Cobalt	mg/Kg	20	1.08	D	1.06	D	2		P
Copper	mg/Kg	20	2.22	D	2.20	D	1		P
Iron	mg/Kg	20	4320	D	4260	D	1		P
Lead	mg/Kg	20	3.39	D	3.38	D	0		P
Magnesium	mg/Kg	20	323	D	316	D	2		P
Manganese	mg/Kg	20	12.4	D	12.2	D	2		P
Nickel	mg/Kg	20	2.02	D	2.04	D	1		P
Potassium	mg/Kg	20	165	D	162	D	2		P
Selenium	mg/Kg	20	2.28	UD	2.25	UD			P
Silver	mg/Kg	20	0.23	UD	0.23	UD			P
Sodium	mg/Kg	20	114	UD	113	UD			P
Thallium	mg/Kg	20	0.050	JD	0.047	JD	6		P
Vanadium	mg/Kg	20	7.63	D	7.55	D	1		P
Zinc	mg/Kg	20	5.97	D	5.90	D	1		P

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Weston Solutions **Level:** LOW **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

Matrix: Solid **Sample ID:** Q1295-01MS **Client ID:** TAPFTA-SB01D-020425-00-T1MSD

Percent Solids for Sample: 90.9 **Duplicate ID** Q1295-01MSD **Percent Solids for Spike Sample:** 90.9

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	3570	D	3830	D	7		P
Antimony	mg/Kg	20	22.3	D	23.9	D	7		P
Arsenic	mg/Kg	20	0.69	D	0.73	D	6		P
Barium	mg/Kg	20	116	D	122	D	5		P
Beryllium	mg/Kg	20	21.6	D	22.3	D	3		P
Cadmium	mg/Kg	20	21.7	D	22.4	D	3		P
Calcium	mg/Kg	20	2760	D	2850	D	3		P
Chromium	mg/Kg	20	25.0	D	26.7	D	7		P
Cobalt	mg/Kg	20	21.9	D	23.4	D	7		P
Copper	mg/Kg	20	228	D	239	D	5		P
Iron	mg/Kg	20	5020	D	5340	D	6		P
Lead	mg/Kg	20	114	D	118	D	3		P
Magnesium	mg/Kg	20	2510	D	2710	D	8		P
Manganese	mg/Kg	20	218	D	232	D	6		P
Nickel	mg/Kg	20	23.0	D	24.5	D	6		P
Potassium	mg/Kg	20	1100	D	1160	D	5		P
Selenium	mg/Kg	20	22.1	D	23.4	D	6		P
Silver	mg/Kg	20	3.71	D	3.91	D	5		P
Sodium	mg/Kg	20	2150	D	2300	D	7		P
Thallium	mg/Kg	20	22.4	D	23.0	D	3		P
Vanadium	mg/Kg	20	28.0	D	29.8	D	6		P
Zinc	mg/Kg	20	217	D	230	D	6		P

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166584BS							
Mercury	mg/Kg	0.26	0.26		101	80 - 124	CV

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Case No.:** Q1295 **SAS No.:** Q1295

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166734BS							
Aluminum	mg/Kg	430	441		103	78 - 124	P
Antimony	mg/Kg	21.7	22.7		105	72 - 124	P
Arsenic	mg/Kg	21.7	22.6		104	82 - 118	P
Barium	mg/Kg	110	115		104	86 - 116	P
Beryllium	mg/Kg	21.7	22.5		104	80 - 120	P
Cadmium	mg/Kg	21.7	23.3		107	84 - 116	P
Calcium	mg/Kg	2200	2320		106	86 - 118	P
Chromium	mg/Kg	21.7	22.7		105	83 - 119	P
Cobalt	mg/Kg	21.7	22.5		104	84 - 115	P
Copper	mg/Kg	220	228		104	84 - 119	P
Iron	mg/Kg	1100	1200		109	81 - 124	P
Lead	mg/Kg	110	111		101	84 - 118	P
Magnesium	mg/Kg	2200	2390		109	80 - 123	P
Manganese	mg/Kg	220	228		104	85 - 116	P
Nickel	mg/Kg	21.7	21.4		99	84 - 119	P
Potassium	mg/Kg	1100	1160		106	85 - 119	P
Selenium	mg/Kg	21.7	22.8		105	80 - 119	P
Silver	mg/Kg	21.7	23.5		108	83 - 118	P
Sodium	mg/Kg	2200	2350		107	79 - 125	P
Thallium	mg/Kg	21.7	22.4		103	83 - 118	P
Vanadium	mg/Kg	21.7	21.5		99	82 - 116	P
Zinc	mg/Kg	220	231		105	82 - 119	P

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FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Weston Solutions | Contract: WEST04

Lab Code: CHEM | Case no.: Q1295 | Sas No.: Q1295 | SDG No.: Q1295

Instrument ID: P8 | Start Date : 02/17/2025

Run Number: LB134737 | End Date : 02/17/2025

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	1215	100		100		100		100		100	
S2	S2	1219	100		101		100		100		100	
S3	S3	1222	101		102		101		100		101	
S4	S4	1225	100		102		100		100		101	
S5	S5	1228	100		101		100		98		101	
S6	S6	1231	100		102		101		97		101	
S7	S7	1234	98		102		100		94		100	
S8	S8	1237	90		95		93		84		93	
ICV01	ICV01	1248	106		107		105		104		103	
LLICV	LLICV	1252	105		106		104		104		103	
ICB01	ICB01	1255	104		105		101		102		102	
ICSA01	ICSA01	1258	101		103		102		94		101	
ICSAB01	ICSAB01	1302	103		106		104		96		102	
CCV01	CCV01	1313	98		101		99		90		97	
CCB01	CCB01	1316	101		103		100		100		98	
CRI	CRI	1319	106		105		103		102		100	
PB166734BL	PB166734BL	1323	104		104		102		101		99	
PB166734BS	PB166734BS	1326	101		103		100		97		98	
Q1295-01	TAPFTA-SB01	1329	104		107		103		101		99	
Q1295-01DUP	TAPFTA-SB01	1332	102		105		103		100		98	
Q1295-01L	TAPFTA-SB01	1336	103		105		102		101		99	
Q1295-01MS	TAPFTA-SB01	1339	100		103		101		96		97	
Q1295-01MSD	TAPFTA-SB01	1342	101		104		143	*	98		97	
Q1295-01A	TAPFTA-SB01	1345	102		103		102		99		98	
CCV02	CCV02	1357	92		96		94		86		93	
CCB02	CCB02	1404	101		102		100		100		98	
Q1295-01	TAPFTA-SB01	1410	105		108		105		104		101	
Q1295-01DUP	TAPFTA-SB01	1414	107		108		106		105		102	
Q1295-01L	TAPFTA-SB01	1417	105		106		104		104		102	
Q1295-01MS	TAPFTA-SB01	1420	103		106		104		101		100	
Q1295-01MSD	TAPFTA-SB01	1423	104		105		104		101		100	
Q1295-01A	TAPFTA-SB01	1426	103		106		102		102		101	
CCV03	CCV03	1430	95		99		97		88		96	
CCB03	CCB03	1434	104		106		104		104		101	

Internal Standard %RI Limit: 30 - 120

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FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Weston Solutions | Contract: WEST04

Lab Code: CHEM | Case no.: Q1295 | Sas No.: Q1295 | SDG No.: Q1295

Instrument ID: P8 | Start Date : 02/17/2025

Run Number: LB134737 | End Date : 02/17/2025

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	1215	100		100		100		100		100	
S2	S2	1219	101		104		100		100		99	
S3	S3	1222	102		106		100		102		101	
S4	S4	1225	103		108		101		102		100	
S5	S5	1228	102		106		98		102		101	
S6	S6	1231	104		108		97		103		101	
S7	S7	1234	104		107		94		101		100	
S8	S8	1237	99		103		86		97		96	
ICV01	ICV01	1248	109		114		104		106		103	
LLICV	LLICV	1252	107		111		104		105		103	
ICB01	ICB01	1255	104		110		103		103		102	
ICSA01	ICSA01	1258	103		109		94		100		99	
ICSAB01	ICSAB01	1302	108		111		95		104		102	
CCV01	CCV01	1313	107		110		92		102		99	
CCB01	CCB01	1316	107		111		103		103		102	
CRI	CRI	1319	106		111		103		103		101	
PB166734BL	PB166734BL	1323	104		111		102		100		100	
PB166734BS	PB166734BS	1326	106		110		98		101		99	
Q1295-01	TAPFTA-SB01	1329	108		112		102		103		101	
Q1295-01DUP	TAPFTA-SB01	1332	108		113		102		103		101	
Q1295-01L	TAPFTA-SB01	1336	106		111		102		102		100	
Q1295-01MS	TAPFTA-SB01	1339	107		111		98		101		99	
Q1295-01MSD	TAPFTA-SB01	1342	105		109		99		101		99	
Q1295-01A	TAPFTA-SB01	1345	106		112		99		102		101	
CCV02	CCV02	1357	101		98		88		96		95	
CCB02	CCB02	1404	104		109		100		100		98	
Q1295-01	TAPFTA-SB01	1410	110		116		104		105		103	
Q1295-01DUP	TAPFTA-SB01	1414	111		117		106		106		104	
Q1295-01L	TAPFTA-SB01	1417	107		113		102		104		102	
Q1295-01MS	TAPFTA-SB01	1420	109		112		101		103		101	
Q1295-01MSD	TAPFTA-SB01	1423	108		113		102		104		102	
Q1295-01A	TAPFTA-SB01	1426	109		114		103		105		103	
CCV03	CCV03	1430	107		110		92		101		99	
CCB03	CCB03	1434	108		115		106		104		102	

Internal Standard %RI Limit: 30 - 120

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FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Weston Solutions Contract: WEST04

Lab Code: CHEM Case no.: Q1295 Sas No.: Q1295 SDG No.: Q1295

Instrument ID: P8 Start Date : 02/17/2025

Run Number: LB134737 End Date : 02/17/2025

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	1215	100		100							
S2	S2	1219	101		101							
S3	S3	1222	102		100							
S4	S4	1225	102		99							
S5	S5	1228	101		98							
S6	S6	1231	101		96							
S7	S7	1234	101		93							
S8	S8	1237	93		82							
ICV01	ICV01	1248	104		102							
LLICV	LLICV	1252	103		102							
ICB01	ICB01	1255	101		101							
ICSA01	ICSA01	1258	101		92							
ICSAB01	ICSAB01	1302	101		93							
CCV01	CCV01	1313	97		87							
CCB01	CCB01	1316	97		96							
CRI	CRI	1319	100		99							
PB166734BL	PB166734BL	1323	99		97							
PB166734BS	PB166734BS	1326	98		93							
Q1295-01	TAPFTA-SB01I	1329	98		97							
Q1295-01DUP	TAPFTA-SB01I	1332	98		95							
Q1295-01L	TAPFTA-SB01I	1336	99		98							
Q1295-01MS	TAPFTA-SB01I	1339	96		91							
Q1295-01MSD	TAPFTA-SB01I	1342	98		93							
Q1295-01A	TAPFTA-SB01I	1345	98		95							
CCV02	CCV02	1357	93		82							
CCB02	CCB02	1404	98		95							
Q1295-01	TAPFTA-SB01I	1410	100		99							
Q1295-01DUP	TAPFTA-SB01I	1414	102		98							
Q1295-01L	TAPFTA-SB01I	1417	101		98							
Q1295-01MS	TAPFTA-SB01I	1420	100		97							
Q1295-01MSD	TAPFTA-SB01I	1423	100		97							
Q1295-01A	TAPFTA-SB01I	1426	101		98							
CCV03	CCV03	1430	96		86							
CCB03	CCB03	1434	101		99							

Internal Standard %RI Limit: 30 -120

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FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Weston Solutions Contract: WEST04

Lab Code: CHEM Case no.: Q1295 Sas No.: Q1295 SDG No.: Q1295

Instrument ID: P8 Start Date : 02/17/2025

Run Number: LB134737 End Date : 02/17/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Collision Cell									
			Element 209Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	S0	1215	100									
S2	S2	1219	99									
S3	S3	1222	99									
S4	S4	1225	99									
S5	S5	1228	97									
S6	S6	1231	96									
S7	S7	1234	94									
S8	S8	1237	83									
ICV01	ICV01	1248	102									
LLICV	LLICV	1252	102									
ICB01	ICB01	1255	101									
ICSA01	ICSA01	1258	92									
ICSAB01	ICSAB01	1302	93									
CCV01	CCV01	1313	89									
CCB01	CCB01	1316	101									
CRI	CRI	1319	100									
PB166734BL	PB166734BL	1323	99									
PB166734BS	PB166734BS	1326	93									
Q1295-01	TAPFTA-SB01I	1329	98									
Q1295-01DUP	TAPFTA-SB01I	1332	98									
Q1295-01L	TAPFTA-SB01I	1336	98									
Q1295-01MS	TAPFTA-SB01I	1339	96									
Q1295-01MSD	TAPFTA-SB01I	1342	96									
Q1295-01A	TAPFTA-SB01I	1345	96									
CCV02	CCV02	1357	86									
CCB02	CCB02	1404	98									
Q1295-01	TAPFTA-SB01I	1410	101									
Q1295-01DUP	TAPFTA-SB01I	1414	103									
Q1295-01L	TAPFTA-SB01I	1417	101									
Q1295-01MS	TAPFTA-SB01I	1420	99									
Q1295-01MSD	TAPFTA-SB01I	1423	99									
Q1295-01A	TAPFTA-SB01I	1426	99									
CCV03	CCV03	1430	89									
CCB03	CCB03	1434	102									

Internal Standard %RI Limit: 30 -120

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

HR-01-020425L

Lab Name: Chemtech Consulting Group **Contract:** WEST04

Lab Code: CHEM **Lb No.:** lb134603 **Lab Sample ID :** Q1288-01L **SDG No.:** Q1295

Matrix (soil/water): Solid **Level (low/med):** LOW

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Mercury	0.084		0.080		5		CV

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

TAPFTA-SB01D-020425-00-T1L

Lab Name: Chemtech Consulting Group **Contract:** WEST04

Lab Code: CHEM **Lb No.:** lb134737 **Lab Sample ID :** Q1295-01L **SDG No.:** Q1295

Matrix (soil/water): Solid **Level (low/med):** LOW

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	3400	D	3500	D	3		P
Antimony	0.032	JD	2.28	UD	7		P
Arsenic	0.72	D	0.84	JD	17		P
Barium	13.7	D	14.1	D	3		P
Beryllium	0.16	JD	1.14	UD	41		P
Cadmium	0.23	UD	1.14	UD	72		P
Calcium	611	D	595	D	3		P
Chromium	5.34	D	5.48	D	3		P
Cobalt	1.08	D	1.13	JD	5		P
Copper	2.22	D	2.25	JD	1		P
Iron	4320	D	4530	D	5		P
Lead	3.39	D	3.48	D	3		P
Magnesium	323	D	334	JD	3		P
Manganese	12.4	D	12.9	D	4		P
Nickel	2.02	D	2.15	D	6		P
Potassium	165	D	181	JD	9		P
Selenium	2.28	UD	11.4	UD			P
Silver	0.23	UD	1.14	UD	17		P
Sodium	114	UD	571	UD	120		P
Thallium	0.050	JD	1.14	UD	14		P
Vanadium	7.63	D	7.92	D	4		P
Zinc	5.97	D	6.68	D	12		P

METAL PREPARATION & INSTRUMENT DATA

METAL PREPARATION & ANALYICAL SUMMARY

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Metals
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SAMPLE PREPARATION SUMMARY

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Method:**

Case No.: Q1295 **SAS No.:** Q1295

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB166584**						
PB166584BL	PB166584BL	MB	SOLID	02/05/2025	0.55	35.0	100.00
PB166584BS	PB166584BS	LCS	SOLID	02/05/2025	0.53	35.0	100.00
Q1288-01DUP	HR-01-020425DUP	DUP	SOLID	02/05/2025	0.54	35.0	89.00
Q1288-01MS	HR-01-020425MS	MS	SOLID	02/05/2025	0.54	35.0	89.00
Q1288-01MSD	HR-01-020425MSD	MSD	SOLID	02/05/2025	0.53	35.0	89.00
Q1295-01	TAPFTA-SB01D-020425-00-T1	SAM	SOLID	02/05/2025	0.58	35.0	90.90

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Metals
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SAMPLE PREPARATION SUMMARY

Client: Weston Solutions **SDG No.:** Q1295

Contract: WEST04 **Lab Code:** CHEM **Method:**

Case No.: Q1295 **SAS No.:** Q1295

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB166734**						
PB166734BL	PB166734BL	MB	SOLID	02/14/2025	2.30	100.0	100.00
PB166734BS	PB166734BS	LCS	SOLID	02/14/2025	2.30	100.0	100.00
Q1295-01	TAPFTA-SB01D-020425-00-T1	SAM	SOLID	02/14/2025	2.41	100.0	90.90
Q1295-01DUP	TAPFTA-SB01D-020425-00-T1DUP	DUP	SOLID	02/14/2025	2.44	100.0	90.90
Q1295-01MS	TAPFTA-SB01D-020425-00-T1MS	MS	SOLID	02/14/2025	2.39	100.0	90.90
Q1295-01MSD	TAPFTA-SB01D-020425-00-T1MSD	MSD	SOLID	02/14/2025	2.29	100.0	90.90

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ANALYSIS RUN LOG

Client: Weston Solutions **Contract:** WEST04

Lab code: CHEM **Case no.:** Q1295 **Sas no.:** Q1295 **Sdg no.:** Q1295

Instrument id number: **Method:** **Run number:** LB134603

Start date: 02/06/2025 **End date:** 02/06/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1320	HG
S0.2	S0.2	1	1325	HG
S2.5	S2.5	1	1327	HG
S5	S5	1	1330	HG
S7.5	S7.5	1	1332	HG
S10	S10	1	1337	HG
ICV89	ICV89	1	1340	HG
ICB89	ICB89	1	1342	HG
CCV33	CCV33	1	1345	HG
CCB33	CCB33	1	1347	HG
CRA	CRA	1	1349	HG
PB166584BL	PB166584BL	1	1403	HG
PB166584BS	PB166584BS	1	1405	HG
CCV34	CCV34	1	1419	HG
CCB34	CCB34	1	1422	HG
Q1288-01DUP	HR-01-020425DUP	1	1447	HG
Q1288-01MS	HR-01-020425MS	1	1449	HG
CCV35	CCV35	1	1452	HG
CCB35	CCB35	1	1454	HG
Q1288-01MSD	HR-01-020425MSD	1	1456	HG
Q1295-01	TAPFTA-SB01D-020425-00-T1	1	1505	HG
Q1288-01L	HR-01-020425L	5	1510	HG
CCV36	CCV36	1	1515	HG
CCB36	CCB36	1	1517	HG

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ANALYSIS RUN LOG

Client: Weston Solutions **Contract:** WEST04

Lab code: CHEM **Case no.:** Q1295 **Sas no.:** Q1295 **Sdg no.:** Q1295

Instrument id number: **Method:** **Run number:** LB134737

Start date: 02/17/2025 **End date:** 02/17/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1215	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	1219	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	1222	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	1225	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	1228	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	1231	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	1234	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	1237	Al,Ca,Fe,K,Mg,Na
ICV01	ICV01	1	1248	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
LLICV	LLICV	1	1252	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	1255	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	1258	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	1302	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	1313	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	1316	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CRI	CRI	1	1319	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB166734BL	PB166734BL	1	1323	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB166734BS	PB166734BS	1	1326	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1295-01	TAPFTA-SB01D-020425-00-T1	5	1329	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Tl,V,Zn
Q1295-01DUP	TAPFTA-SB01D-020425-00-T1I	5	1332	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Tl,V,Zn
Q1295-01L	TAPFTA-SB01D-020425-00-T1I	25	1336	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Tl,V,Zn
Q1295-01MS	TAPFTA-SB01D-020425-00-T1I	5	1339	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Tl,V,Zn
Q1295-01MSD	TAPFTA-SB01D-020425-00-T1I	5	1342	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Tl,V,Zn
Q1295-01A	TAPFTA-SB01D-020425-00-T1A	5	1345	Ag,As,Fe,K
CCV02	CCV02	1	1357	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	1404	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1295-01	TAPFTA-SB01D-020425-00-T1	10	1410	Se
Q1295-01DUP	TAPFTA-SB01D-020425-00-T1I	10	1414	Se
Q1295-01L	TAPFTA-SB01D-020425-00-T1I	50	1417	Se
Q1295-01MS	TAPFTA-SB01D-020425-00-T1I	10	1420	Se
Q1295-01MSD	TAPFTA-SB01D-020425-00-T1I	10	1423	Se
CCV03	CCV03	1	1430	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	1434	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

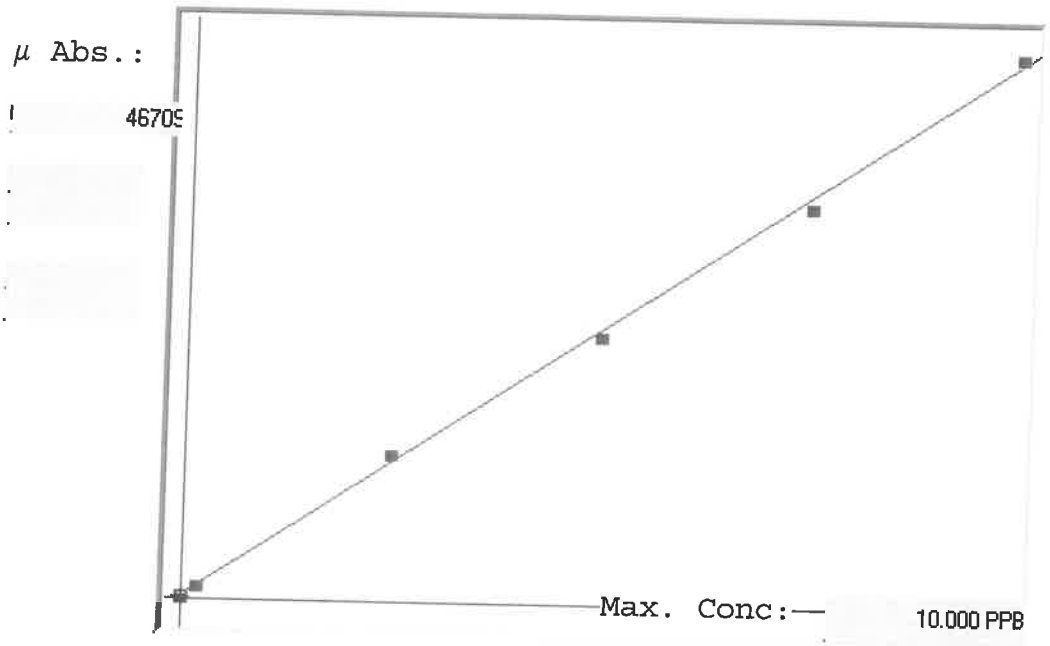
Reviewed By:jaswal
On:2/6/2025 10:39:08 PM
Inst Id :CV1
LB :LB134603

LB134603

7471B

INSTRUMENT ID: CV1

Linear



A= 0.0000e+000

B= 2.1840e-004

C= -6.9019e-002

Rho= 0.9994864

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	c/v
0.0	0.000	0.000	0.000	318	0.000	318					1
0.2	0.200	0.189	-0.011	1181	0.0 %	1181					16
2.5	2.500	2.661	0.161	12499	0.0 %	12499					6
5.0	5.000	4.875	-0.125	22639	0.0 %	22639					13
7.5	7.500	7.342	-0.158	33934	0.0 %	33934					12
10.0	10.000	10.132	0.132	46709	0.0 %	46709					1

Reviewed By:jaswal
On:2/6/2025 10:39:08 PM
Inst Id :CV1
LB :LB134603

LB134603 INSTRUMENT ID : CV1

Method: 7471B Operator: Admin Date of Analysis: 06 Feb 2025 13:14:05

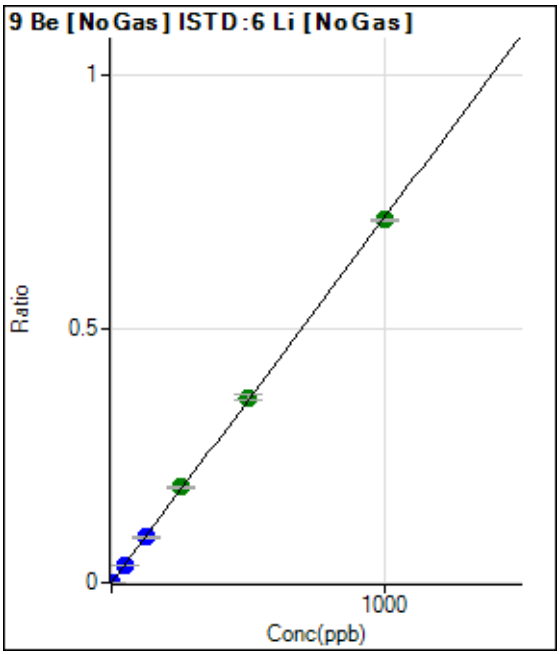
Sample ID	Extended ID	µ Abs	Conc	Stnd Conc	Method	Units	Date	Type	Type
0.0 - 1	SD	318	-	0.00000	7471B	PPB	06 Feb 2025 13:20:49	S	Std
0.2 - 1	10.2	1181	-	0.20000	7471B	PPB	06 Feb 2025 13:25:42	S	Std
2.5 - 1	52.5	12499	-	2.50000	7471B	PPB	06 Feb 2025 13:27:59	S	Std
5.0 - 1	55	22639	-	5.00000	7471B	PPB	06 Feb 2025 13:30:16	S	Std
7.5 - 1	57.5	33934	-	7.50000	7471B	PPB	06 Feb 2025 13:32:35	S	Std
10.0 - 1	510	46709	-	10.00000	7471B	PPB	06 Feb 2025 13:37:42	S	Std
ICV89 - 1	ICV89	17164	3.6796		-7471B	PPB	06 Feb 2025 13:40:33	U	SMPL
ICB89 - 1	ICB89	204	-0.0245		-7471B	PPB	06 Feb 2025 13:42:49	U	SMPL
CCV33 - 1	CCV33	24614	5.3067		-7471B	PPB	06 Feb 2025 13:45:07	U	SMPL
CCB33 - 1	CCB33	97	-0.0478		-7471B	PPB	06 Feb 2025 13:47:22	U	SMPL
CRA - 1	CRA	1131	0.1780		-7471B	PPB	06 Feb 2025 13:49:43	U	SMPL
HighStd - 1	HighStd	47776	10.3653		-7471B	PPB	06 Feb 2025 13:52:00	U	SMPL
ChkStd - 1	ChkStd	32844	7.1042		-7471B	PPB	06 Feb 2025 13:54:21	U	SMPL
PB166584BL - 1	PBS	327	0.0024		-7471B	PPB	06 Feb 2025 14:03:35	U	SMPL
PB166584BS - 1	LCSS	18487	3.9686		-7471B	PPB	06 Feb 2025 14:05:53	U	SMPL
Q1276-01 - 1	TR-05-020325	1235	0.2007		-7471B	PPB	06 Feb 2025 14:08:09	U	SMPL
Q1277-02 - 1	RT 3249	3859	0.7738		-7471B	PPB	06 Feb 2025 14:10:29	U	SMPL
Q1280-01 - 1	72-11984	4608	0.9374		-7471B	PPB	06 Feb 2025 14:12:49	U	SMPL
Q1281-01 - 1	OR-02--2-03-2025	1951	0.3571		-7471B	PPB	06 Feb 2025 14:15:09	U	SMPL
Q1284-01 - 1	SU-03-2-4-2025	1504	0.2595		-7471B	PPB	06 Feb 2025 14:17:27	U	SMPL
CCV34 - 1	CCV34	24056	5.1848		-7471B	PPB	06 Feb 2025 14:19:45	U	SMPL
CCB34 - 1	CCB34	605	0.0631		-7471B	PPB	06 Feb 2025 14:22:00	U	SMPL
Q1285-01 - 1	72-11977	5084	1.0413		-7471B	PPB	06 Feb 2025 14:24:18	U	SMPL
Q1286-01 - 1	NB-07-020425	830	0.1123		-7471B	PPB	06 Feb 2025 14:26:33	U	SMPL
Q1287-01 - 1	BAY-DRUMS-A	2364	0.4473		-7471B	PPB	06 Feb 2025 14:28:50	U	SMPL
Q1287-03 - 1	BAY-DRUMS-B	600	0.0620		-7471B	PPB	06 Feb 2025 14:31:05	U	SMPL
Q1287-05 - 1	BAY-DRUMS-C	2520	0.4814		-7471B	PPB	06 Feb 2025 14:33:22	U	SMPL
Q1287-07 - 1	BAY-DRUMS-D	1022	0.1542		-7471B	PPB	06 Feb 2025 14:35:39	U	SMPL
Q1287-09 - 1	BAY-DRUMS-E	4645	0.9455		-7471B	PPB	06 Feb 2025 14:37:56	U	SMPL
Q1288-01 - 1	HR-01-020425	5593	1.1525		-7471B	PPB	06 Feb 2025 14:45:10	U	SMPL
Q1288-01DUP - 1	HR-01-020425DUP	5665	1.1682		-7471B	PPB	06 Feb 2025 14:47:26	U	SMPL
Q1288-01MS - 1	HR-01-020425MS	26854	5.7959		-7471B	PPB	06 Feb 2025 14:49:44	U	SMPL
CCV35 - 1	CCV35	24625	5.3091		-7471B	PPB	06 Feb 2025 14:52:01	U	SMPL
CCB35 - 1	CCB35	516	0.0437		-7471B	PPB	06 Feb 2025 14:54:22	U	SMPL
Q1288-01MSD - 1	HR-01-020425MSD	25245	5.4445		-7471B	PPB	06 Feb 2025 14:56:41	U	SMPL
Q1288-04 - 1	HR-04-020425	28742	6.2083		-7471B	PPB	06 Feb 2025 14:58:56	U	SMPL
Q1289-02 - 1	FL-DRUMS-A	-64	-0.0830		-7471B	PPB	06 Feb 2025 15:01:17	U	SMPL
Q1289-04 - 1	FL-DRUMS-B	334	0.0039		-7471B	PPB	06 Feb 2025 15:03:37	U	SMPL
Q1295-01 - 1	TAPFTA-SB01D-020425-00-T1	1178	0.1883		-7471B	PPB	06 Feb 2025 15:05:53	U	SMPL
Q1304-01 - 1	RB21140	2727	0.5266		-7471B	PPB	06 Feb 2025 15:08:09	U	SMPL
Q1288-01LX5 - 1		1320	0.2193		-7471B	PPB	06 Feb 2025 15:10:26	U	SMPL
Q1288-01A - 1		24582	5.2997		-7471B	PPB	06 Feb 2025 15:12:43	U	SMPL
CCV36 - 1	CCV36	24540	5.2906		-7471B	PPB	06 Feb 2025 15:15:01	U	SMPL
CCB36 - 1	CCB36	461	0.0317		-7471B	PPB	06 Feb 2025 15:17:20	U	SMPL

Calibration for 006CALB.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\P8021725 MS-2.b\
Analysis File: P8021725 MS-2.batch.bin
DA Date-Time: 2025-02-17 15:06:45
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	S00	2025-02-17 12:15:49
2	005CALS.d	S02	2025-02-17 12:19:11
3	006CALB.d	S03	2025-02-17 12:22:35
4	007CALS.d	S04	2025-02-17 12:25:39
5	008CALS.d	S05	2025-02-17 12:28:39
6	009CALS.d	S06	2025-02-17 12:31:29
7	010CALS.d	S07	2025-02-17 12:34:16
8	011CALS.d	S08	2025-02-17 12:37:01

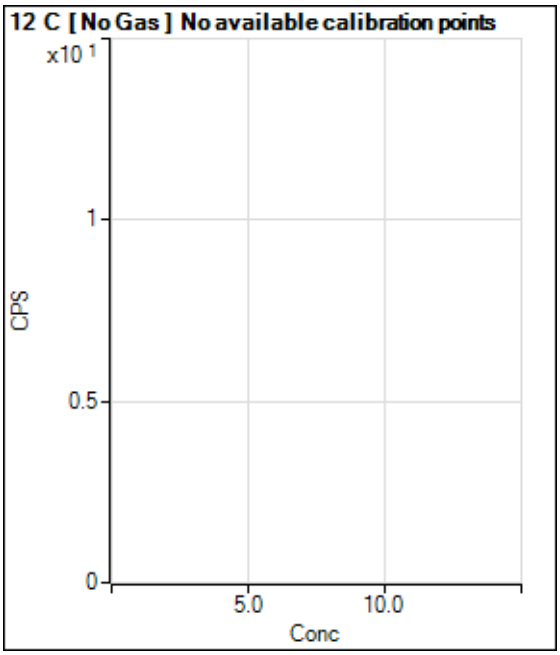
Reviewed By:
On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	427.87	0.0001	P	5.1
2	☐	1.000	1.075	6659.44	0.0008	P	1.5
3	☐	50.000	49.407	289438.28	0.0355	P	0.8
4	☐	125.000	123.715	716736.55	0.0889	P	0.4
5	☐	250.000	260.901	1509619.57	0.1875	A	1.1
6	☐	500.000	507.817	2930581.81	0.3649	A	2.3
7	☐	1000.000	993.557	5619806.85	0.7138	A	0.4
8	☐			2202.82	0.0003	P	8.8

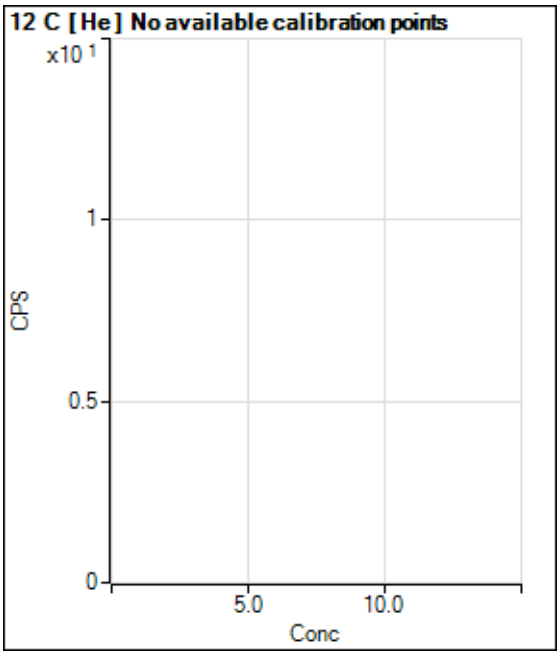
y = 7.1842E-004 * x + 5.3179E-005
R = 0.9999
DL = 0.01127
BEC = 0.07402

Weight: <None>
Min Conc: 0

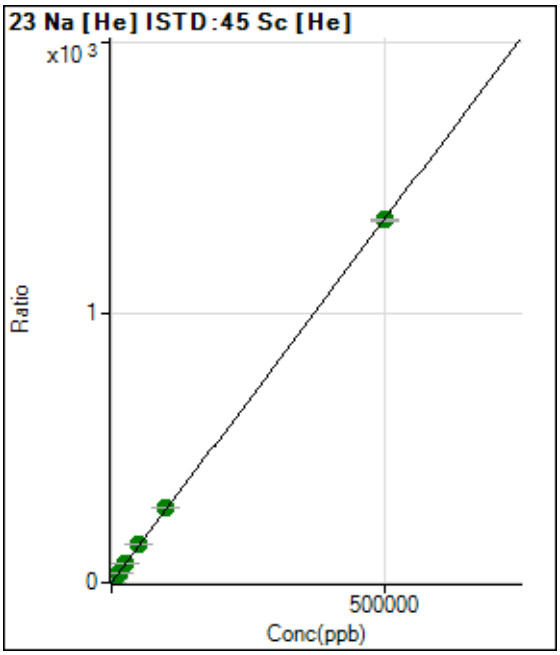


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			4102520.49		A	3.9
2	☐			4241496.32		A	4.3
3	☐			4276059.21		A	1.8
4	☐			4491316.21		A	0.2
5	☐			4699263.71		A	1.7
6	☐			5136974.40		A	1.1
7	☐			5746417.83		A	1.2
8	☐			4795425.45		A	2.6

Reviewed By:
On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			23560.04		P	2.3
2	☐			24769.82		P	1.1
3	☐			25547.78		P	0.6
4	☐			27002.59		P	0.7
5	☐			28738.13		P	0.5
6	☐			31941.35		P	2.1
7	☐			37410.86		P	0.6
8	☐			37534.51		P	1.6

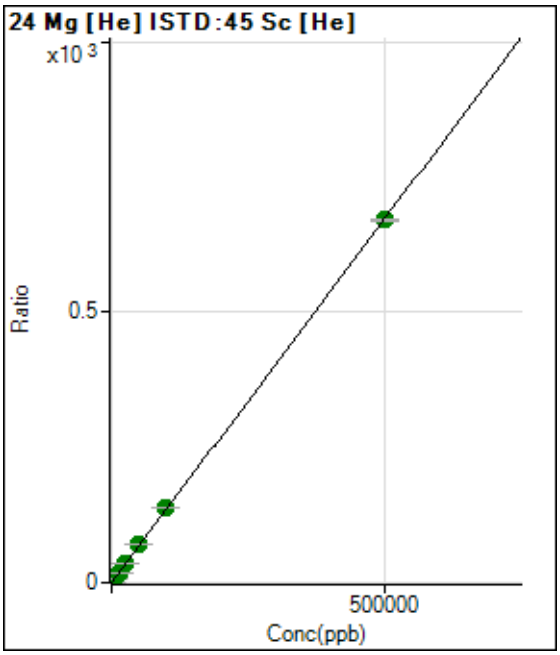


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34642.27	0.2206	P	2.2
2	☐	500.000	534.833	262782.16	1.6616	P	0.7
3	☐	5000.000	5348.920	2335497.12	14.6323	A	0.6
4	☐	12500.000	13169.255	5771203.66	35.7027	A	0.7
5	☐	25000.000	26492.620	11502603.58	71.5999	A	0.8
6	☐	50000.000	51931.305	22793015.77	140.1396	A	0.5
7	☐	100000.00	102862.25	45153495.99	277.3634	A	0.5
8	☐	500000.00	499139.53	209748947.9	1,345.057	A	0.3

y = 0.0027 * x + 0.2206
R = 1.0000
DL = 5.311
BEC = 81.88

Weight: <None>
Min Conc: 0

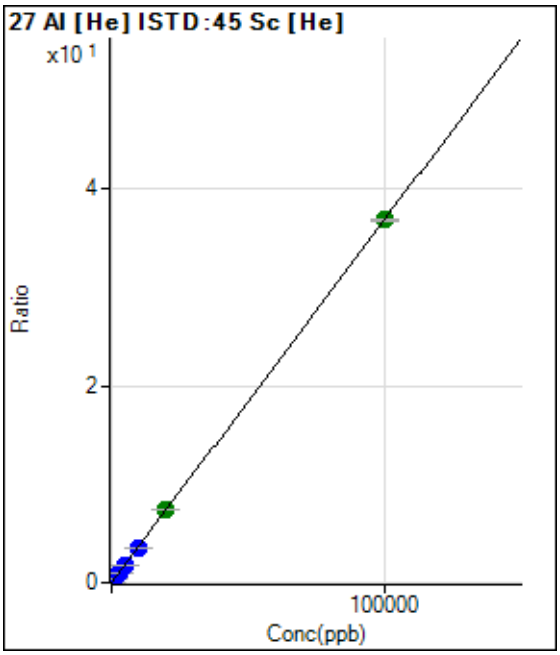
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On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3382.65	0.0215	P	1.8
2	☐	500.000	555.762	121629.85	0.7691	P	1.1
3	☐	5000.000	5528.357	1190347.42	7.4577	A	0.4
4	☐	12500.000	13566.227	2953014.89	18.2694	A	1.8
5	☐	25000.000	27111.302	5861530.68	36.4887	A	1.0
6	☐	50000.000	52101.421	11402258.44	70.1027	A	0.6
7	☐	100000.00	103434.76	22652518.83	139.1508	A	1.7
8	☐	500000.00	498965.34	104664981.7	671.1756	A	0.8

y = 0.0013 * x + 0.0215
R = 1.0000
DL = 0.8686
BEC = 16.02

Weight: <None>
Min Conc: 0

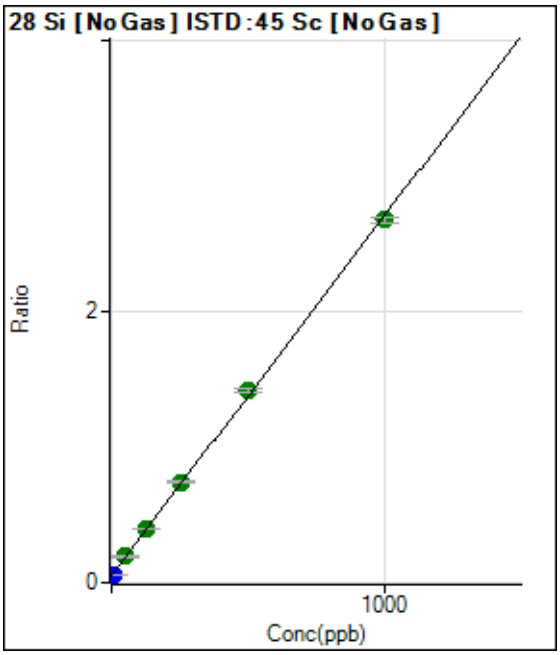


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1	☐	0.000	0.000	126.67	0.0008	P	29.3
2	☐	20.000	19.671	1274.52	0.0081	P	3.3
3	☐	1000.000	1016.199	59940.67	0.3755	P	0.3
4	☐	2500.000	2493.344	148750.25	0.9203	P	1.4
5	☐	5000.000	4980.637	295165.84	1.8375	P	1.2
6	☐	10000.000	9746.233	584676.33	3.5948	P	0.4
7	☐	20000.000	20230.408	1214594.30	7.4610	A	1.5
8	☐	100000.00	99980.268	5749431.79	36.8695	A	0.3

y = 3.6876E-004 * x + 8.0597E-004
R = 1.0000
DL = 1.922
BEC = 2.186

Weight: <None>
Min Conc: 0

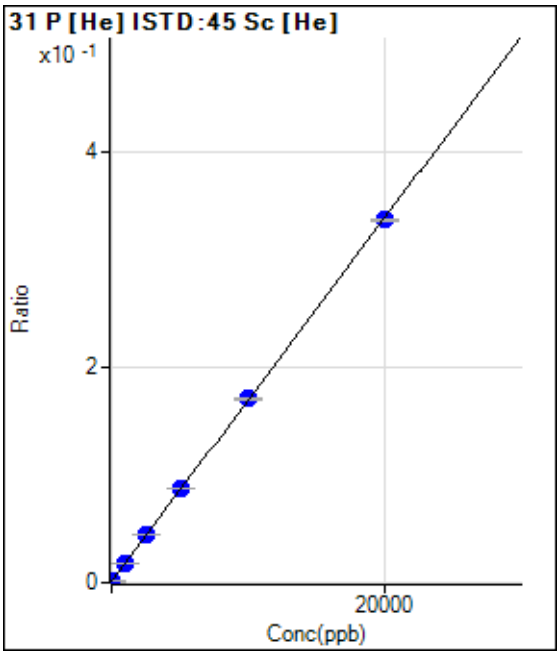
Reviewed By:
On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	514744.82	0.0530	P	1.0
2	☐	10.000	2.744	592937.93	0.0602	P	0.5
3	☐	50.000	52.345	1894036.92	0.1916	A	2.7
4	☐	125.000	129.864	3918364.84	0.3970	A	1.1
5	☐	250.000	260.709	7284437.11	0.7436	A	0.9
6	☐	500.000	515.782	14103975.35	1.4193	A	2.0
7	☐	1000.000	988.779	26485497.38	2.6723	A	1.7
8	☐			710616.87	0.0771	P	0.9

y = 0.0026 * x + 0.0530
R = 0.9997
DL = 0.6165
BEC = 19.99

Weight: <None>
Min Conc: 0

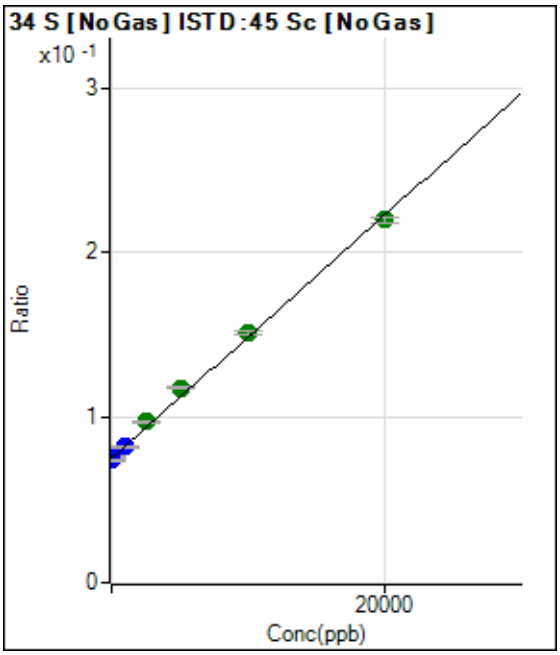


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-12.548	114.45	0.0007	P	20.3
2	☐	0.000	12.548	182.23	0.0012	P	5.3
3	☐	1000.000	1000.372	2841.42	0.0178	P	1.3
4	☐	2500.000	2580.285	7181.85	0.0444	P	1.6
5	☐	5000.000	5162.535	14131.43	0.0880	P	0.7
6	☐	10000.000	10091.180	27816.73	0.1710	P	1.2
7	☐	20000.000	19903.722	54769.59	0.3364	P	0.4
8	☐			108.89	0.0007	P	12.2

y = 1.6856E-005 * x + 9.4024E-004
R = 0.9999
DL = 18.57
BEC = 55.78

Weight: <None>
Min Conc: 0

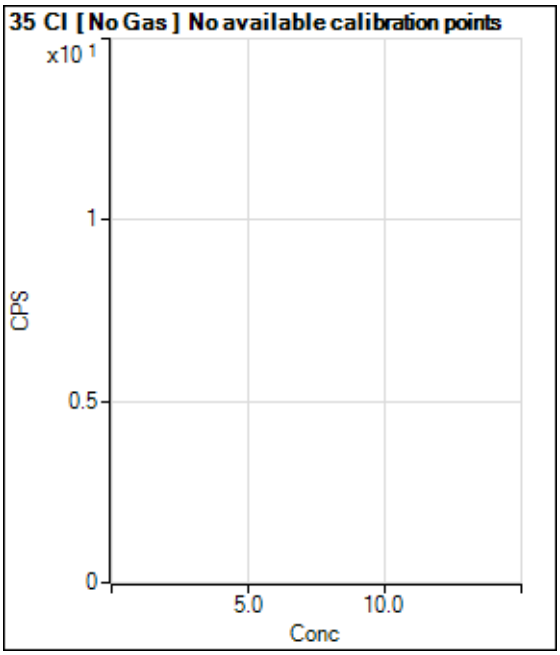
Reviewed By:
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	145.229	742169.91	0.0764	P	0.4
2	☐	0.000	-145.229	730603.52	0.0742	P	0.9
3	☐	1000.000	937.214	812550.10	0.0822	P	1.6
4	☐	2500.000	3017.063	962833.12	0.0975	A	0.7
5	☐	5000.000	5804.157	1156943.11	0.1181	A	1.3
6	☐	10000.000	10287.508	1502373.75	0.1512	A	1.6
7	☐	20000.000	19593.713	2178857.88	0.2198	A	1.3
8	☐			661784.87	0.0718	P	0.7

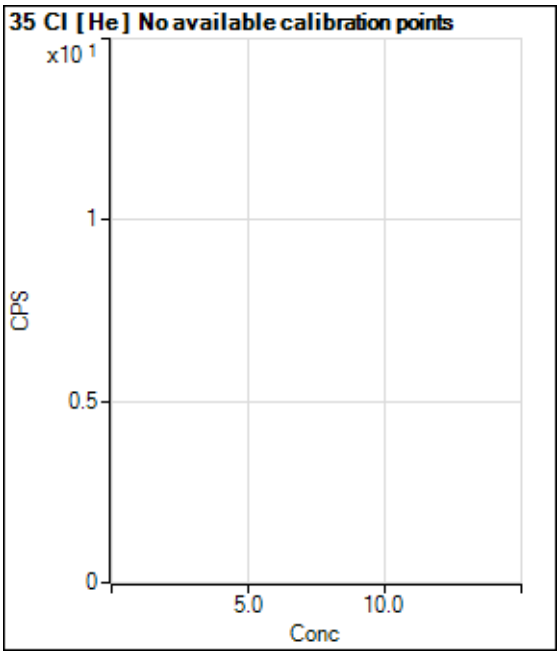
y = 7.3775E-006 * x + 0.0753
R = 0.9985
DL = 194.4
BEC = 1.02E+04

Weight: <None>
Min Conc: 0

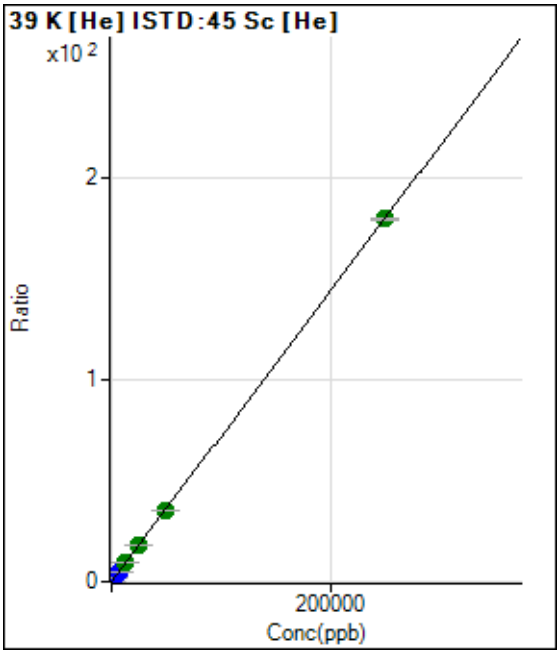


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			100305.35		P	0.8
2	☐			102760.00		P	0.5
3	☐			105813.92		P	0.5
4	☐			110814.32		P	1.0
5	☐			117458.22		P	0.8
6	☐			132128.64		P	1.7
7	☐			154050.83		P	1.9
8	☐			102030.52		P	1.7

Reviewed By:
On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			343.34		P	8.4
2	☐			343.34		P	6.4
3	☐			378.90		P	13.8
4	☐			371.12		P	14.8
5	☐			414.45		P	9.0
6	☐			453.34		P	5.1
7	☐			554.46		P	7.0
8	☐			374.45		P	4.9

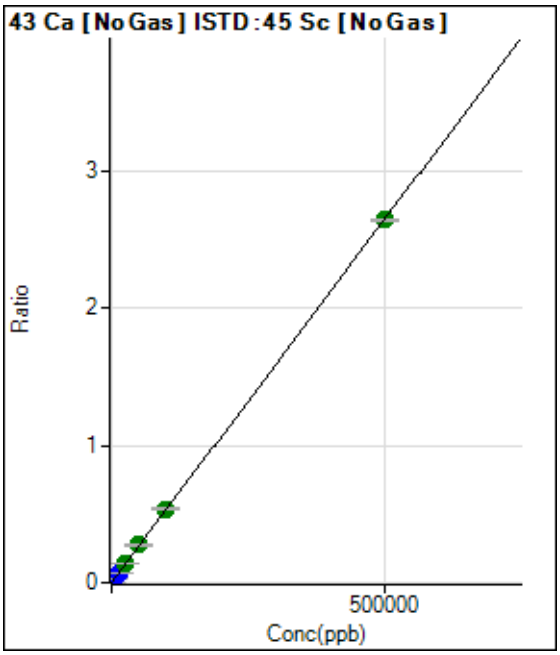


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7669.89	0.0488	P	1.3
2	☐	500.000	508.734	65597.02	0.4148	P	1.4
3	☐	2500.000	2449.964	289097.60	1.8112	P	0.1
4	☐	6250.000	6077.917	714621.93	4.4210	P	1.1
5	☐	12500.000	12895.977	1498209.00	9.3256	A	0.8
6	☐	25000.000	25233.226	2960166.20	18.2005	A	1.1
7	☐	50000.000	49320.645	5783789.15	35.5280	A	0.6
8	☐	250000.00	250097.53	28062772.08	179.9581	A	0.5

y = 7.1936E-004 * x + 0.0488
R = 1.0000
DL = 2.656
BEC = 67.9

Weight: <None>
Min Conc: 0

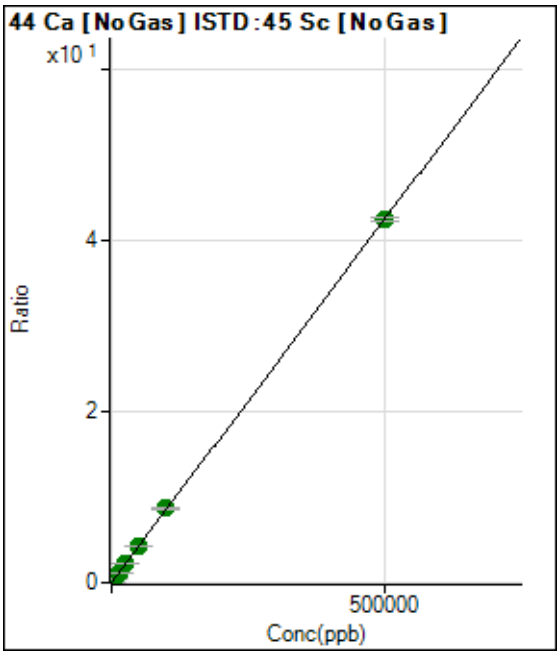
Reviewed By:
On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	678.92	0.0001	P	9.7
2	☐	500.000	530.199	28273.32	0.0029	P	2.3
3	☐	5000.000	4984.621	261105.99	0.0264	P	2.3
4	☐	12500.000	12477.840	651639.98	0.0660	P	1.0
5	☐	25000.000	26490.069	1372120.85	0.1401	A	1.9
6	☐	50000.000	51988.925	2731360.36	0.2748	A	2.5
7	☐	100000.00	101457.22	5315676.00	0.5363	A	1.0
8	☐	500000.00	499435.83	24318608.52	2.6397	A	0.3

y = 5.2853E-006 * x + 6.9858E-005
R = 1.0000
DL = 3.856
BEC = 13.22

Weight: <None>
Min Conc: 0

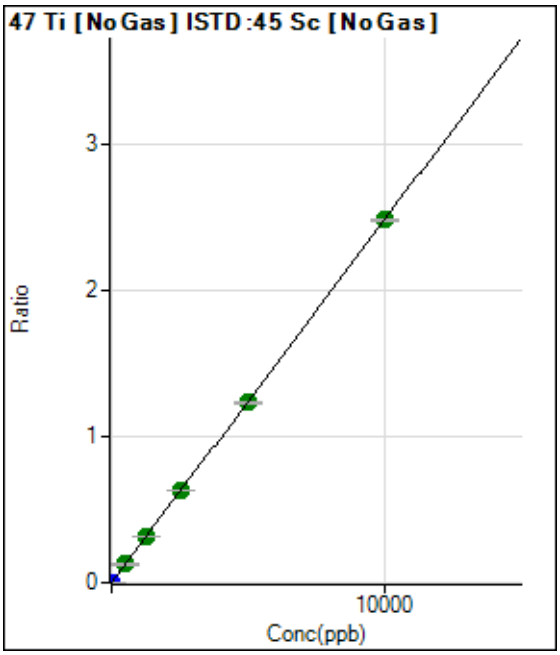


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25819.88	0.0027	P	1.1
2	☐	500.000	528.487	467381.10	0.0475	P	1.1
3	☐	5000.000	5134.624	4330791.39	0.4381	A	1.6
4	☐	12500.000	12972.391	10884791.09	1.1028	A	1.6
5	☐	25000.000	26080.112	21693429.12	2.2144	A	0.5
6	☐	50000.000	51085.353	43079149.36	4.3350	A	1.8
7	☐	100000.00	101997.47	85761855.39	8.6526	A	0.4
8	☐	500000.00	499424.78	390187163.0	42.3567	A	1.1

y = 8.4806E-005 * x + 0.0027
R = 1.0000
DL = 1.071
BEC = 31.32

Weight: <None>
Min Conc: 0

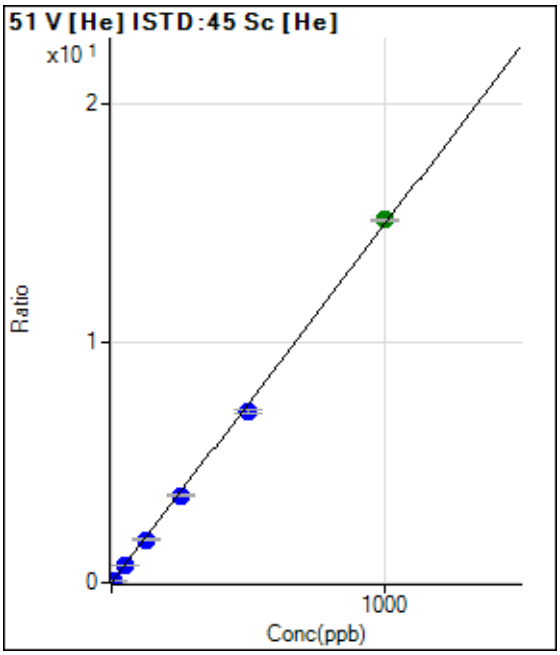
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	228.89	0.0000	P	22.6
2	☐	5.000	5.148	12811.35	0.0013	P	1.0
3	☐	500.000	507.221	1244776.65	0.1259	A	1.9
4	☐	1250.000	1277.901	3130998.88	0.3172	A	1.5
5	☐	2500.000	2531.499	6155869.35	0.6284	A	0.9
6	☐	5000.000	4976.341	12275777.73	1.2352	A	1.1
7	☐	10000.000	10000.106	24602346.86	2.4822	A	0.5
8	☐			5552.24	0.0006	P	0.7

y = 2.4821E-004 * x + 2.3550E-005
R = 1.0000
DL = 0.06446
BEC = 0.09488

Weight: <None>
Min Conc: 0

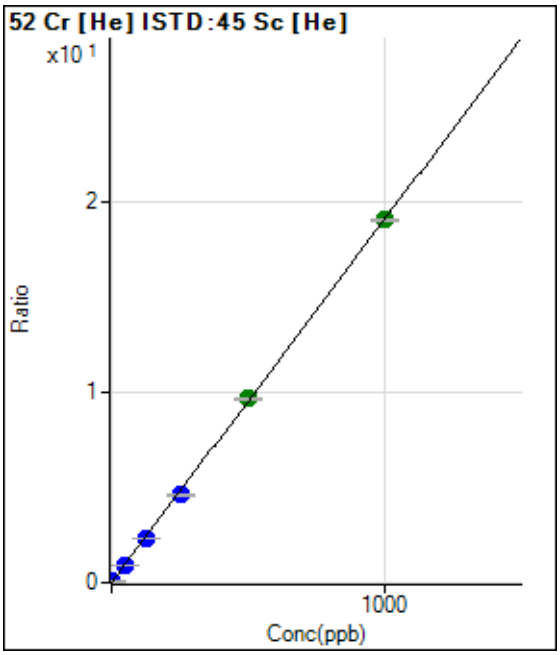


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24.45	0.0002	P	15.8
2	☐	5.000	5.268	12462.18	0.0788	P	2.3
3	☐	50.000	48.948	116670.36	0.7310	P	0.6
4	☐	125.000	120.763	291476.44	1.8032	P	1.0
5	☐	250.000	243.848	584862.73	3.6409	P	1.2
6	☐	500.000	477.865	1160353.33	7.1348	P	1.5
7	☐	1000.000	1013.186	2462738.17	15.1274	A	0.7
8	☐			586.69	0.0038	P	6.8

y = 0.0149 * x + 1.5570E-004
R = 0.9996
DL = 0.004952
BEC = 0.01043

Weight: <None>
Min Conc: 0

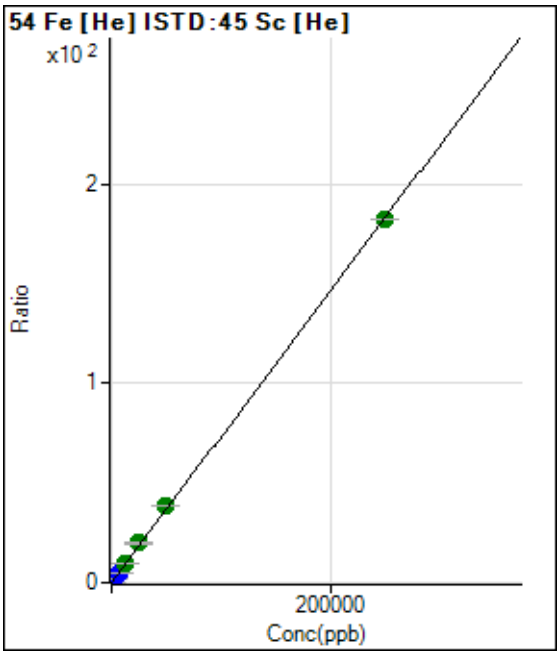
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1753.46	0.0112	P	1.3
2	☐	2.000	2.070	8003.41	0.0506	P	1.7
3	☐	50.000	49.100	151079.16	0.9465	P	0.5
4	☐	125.000	120.912	374147.86	2.3146	P	0.3
5	☐	250.000	242.131	742740.03	4.6238	P	1.6
6	☐	500.000	506.898	1572321.59	9.6677	A	0.9
7	☐	1000.000	999.074	3100197.14	19.0437	A	0.8
8	☐			10278.21	0.0659	P	2.4

y = 0.0191 * x + 0.0112
R = 0.9999
DL = 0.02204
BEC = 0.5862

Weight: <None>
Min Conc: 0

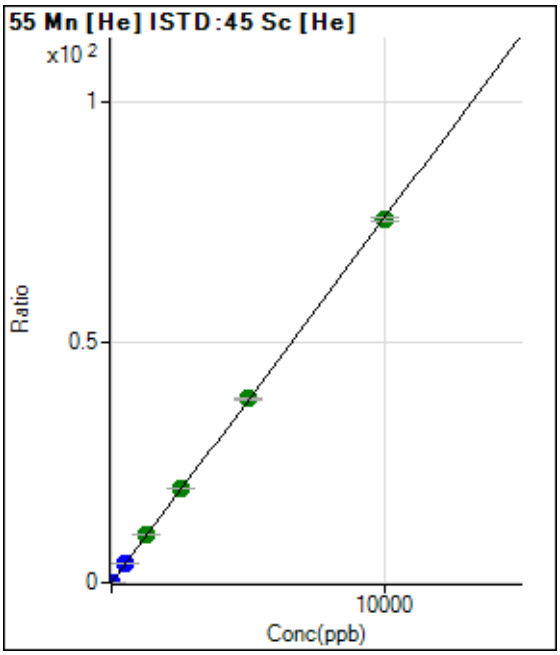


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	724.47	0.0046	P	5.2
2	☐	50.000	59.585	7617.66	0.0482	P	1.8
3	☐	2500.000	2688.020	314364.84	1.9696	P	0.3
4	☐	6250.000	6612.487	782080.90	4.8383	P	1.0
5	☐	12500.000	13751.536	1615690.57	10.0570	A	1.3
6	☐	25000.000	27083.084	3220484.40	19.8023	A	1.4
7	☐	50000.000	53053.549	6314378.80	38.7866	A	0.4
8	☐	250000.00	249107.46	28397097.08	182.1016	A	0.1

y = 7.3100E-004 * x + 0.0046
R = 0.9999
DL = 0.9796
BEC = 6.313

Weight: <None>
Min Conc: 0

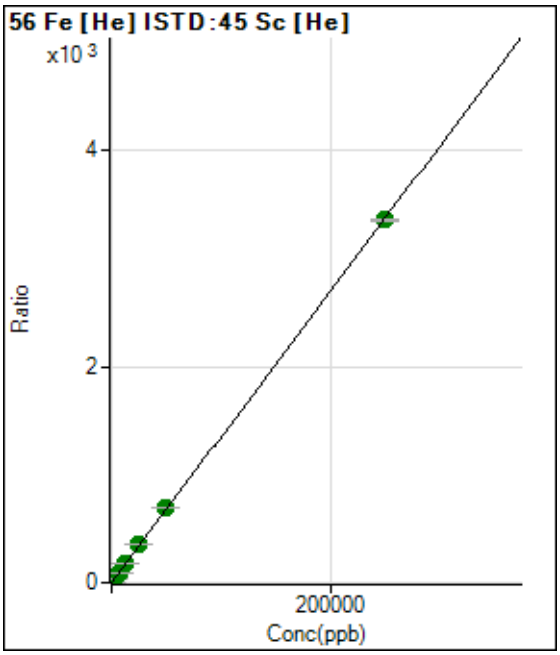
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	321.12	0.0020	P	11.6
2	☐	1.000	1.065	1603.44	0.0101	P	3.2
3	☐	500.000	502.033	609429.12	3.8182	P	0.3
4	☐	1250.000	1306.665	1605778.83	9.9344	A	1.3
5	☐	2500.000	2598.329	3173354.61	19.7528	A	0.2
6	☐	5000.000	5053.287	6247540.18	38.4137	A	0.9
7	☐	10000.000	9941.589	12302751.76	75.5713	A	1.0
8	☐			5634.50	0.0361	P	2.6

y = 0.0076 * x + 0.0020
R = 0.9999
DL = 0.09353
BEC = 0.2691

Weight: <None>
Min Conc: 0

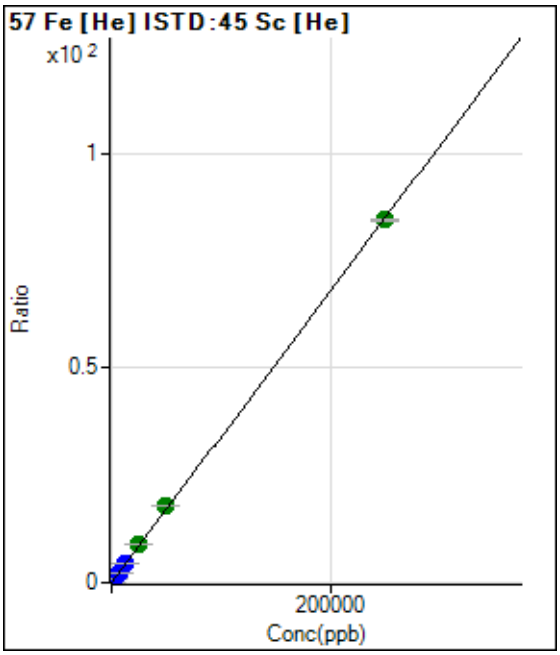


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10870.88	0.0692	P	0.7
2	☐	50.000	56.723	131576.70	0.8320	P	1.3
3	☐	2500.000	2733.480	5878292.76	36.8283	A	0.7
4	☐	6250.000	6749.397	14682173.53	90.8332	A	2.0
5	☐	12500.000	13468.226	29105797.07	181.1860	A	1.1
6	☐	25000.000	26219.947	57357616.92	352.6675	A	0.8
7	☐	50000.000	51708.128	113211054.9	695.4251	A	0.7
8	☐	250000.00	249473.14	523163383.3	3,354.911	A	0.5

y = 0.0134 * x + 0.0692
R = 1.0000
DL = 0.1121
BEC = 5.148

Weight: <None>
Min Conc: 0

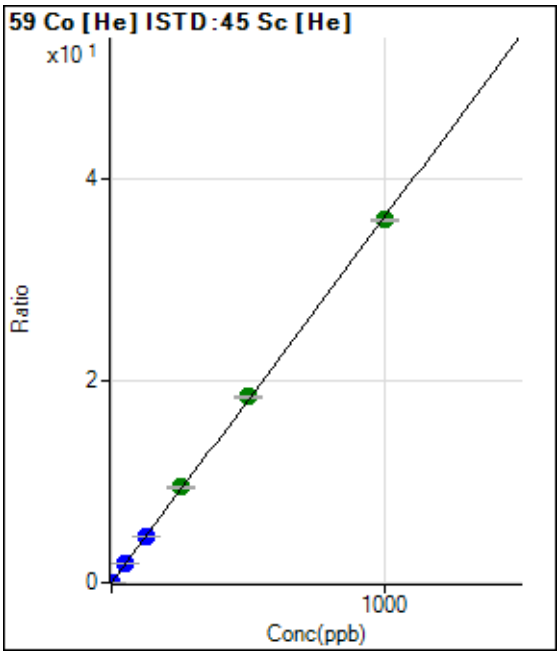
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	285.56	0.0018	P	10.4
2	☐	50.000	56.300	3308.20	0.0209	P	5.4
3	☐	2500.000	2601.338	141181.96	0.8845	P	0.1
4	☐	6250.000	6419.189	352387.69	2.1800	P	0.9
5	☐	12500.000	12822.925	699266.21	4.3530	P	1.0
6	☐	25000.000	26556.539	1465895.55	9.0132	A	0.9
7	☐	50000.000	52527.017	2902039.57	17.8257	A	0.8
8	☐	250000.00	249317.55	13192920.22	84.6024	A	0.5

y = 3.3933E-004 * x + 0.0018
R = 0.9999
DL = 1.68
BEC = 5.361

Weight: <None>
Min Conc: 0

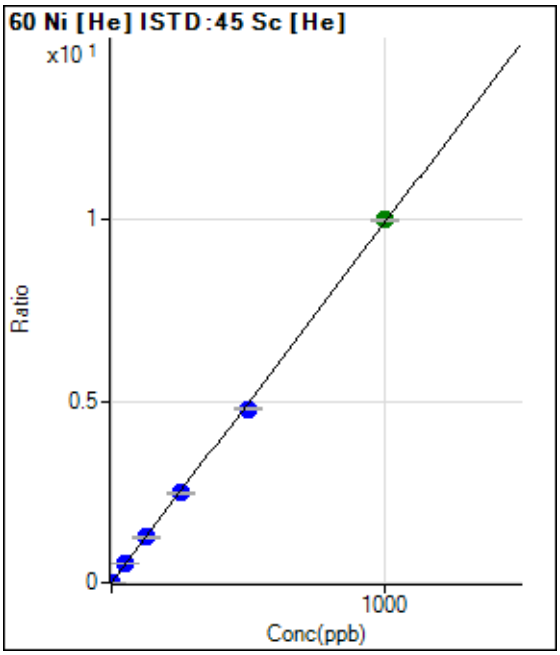


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	254.45	0.0016	P	8.4
2	☐	1.000	1.139	6767.23	0.0428	P	0.5
3	☐	50.000	50.916	293890.71	1.8413	P	0.9
4	☐	125.000	124.820	729241.48	4.5115	P	1.1
5	☐	250.000	261.635	1518841.87	9.4547	A	0.9
6	☐	500.000	508.382	2987737.00	18.3699	A	0.6
7	☐	1000.000	992.877	5840436.37	35.8752	A	0.5
8	☐			11588.14	0.0743	P	3.0

y = 0.0361 * x + 0.0016
R = 0.9999
DL = 0.01124
BEC = 0.04486

Weight: <None>
Min Conc: 0

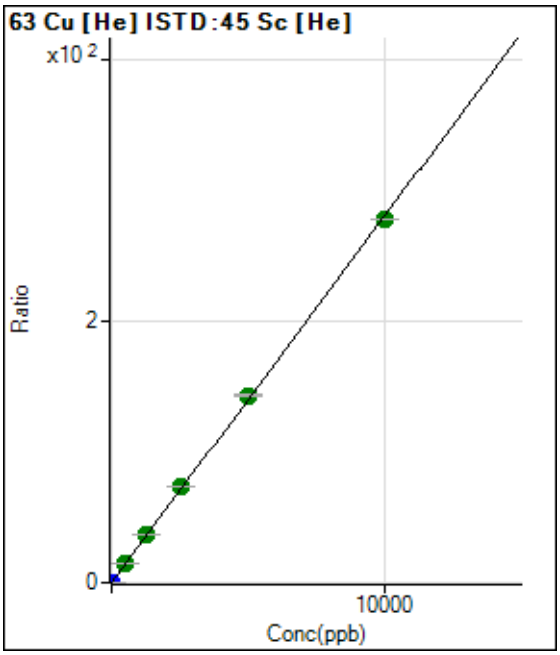
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	847.81	0.0054	P	1.6
2	☐	1.000	1.089	2559.14	0.0162	P	2.7
3	☐	50.000	51.442	82196.46	0.5150	P	0.4
4	☐	125.000	125.740	202205.05	1.2510	P	1.2
5	☐	250.000	249.835	398404.97	2.4802	P	1.6
6	☐	500.000	482.114	777607.64	4.7811	P	0.7
7	☐	1000.000	1008.820	1627757.35	9.9986	A	0.3
8	☐			5672.30	0.0364	P	1.9

y = 0.0099 * x + 0.0054
R = 0.9998
DL = 0.02675
BEC = 0.545

Weight: <None>
Min Conc: 0

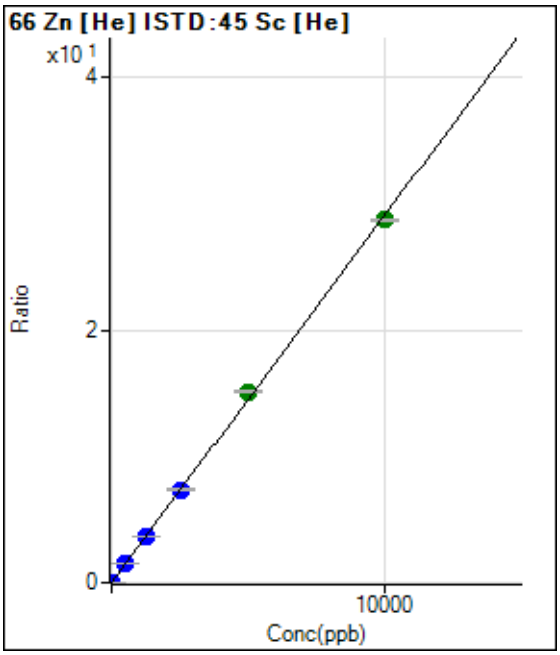


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3004.79	0.0191	P	3.6
2	☐	2.000	2.245	12963.77	0.0820	P	1.4
3	☐	500.000	543.057	2429394.51	15.2206	A	0.5
4	☐	1250.000	1312.631	5942300.74	36.7628	A	1.2
5	☐	2500.000	2625.014	11806440.38	73.4995	A	1.5
6	☐	5000.000	5113.411	23282148.54	143.1555	A	1.1
7	☐	10000.000	9902.059	45127428.77	277.2010	A	0.2
8	☐			11098.88	0.0712	P	2.7

y = 0.0280 * x + 0.0191
R = 0.9998
DL = 0.07367
BEC = 0.6835

Weight: <None>
Min Conc: 0

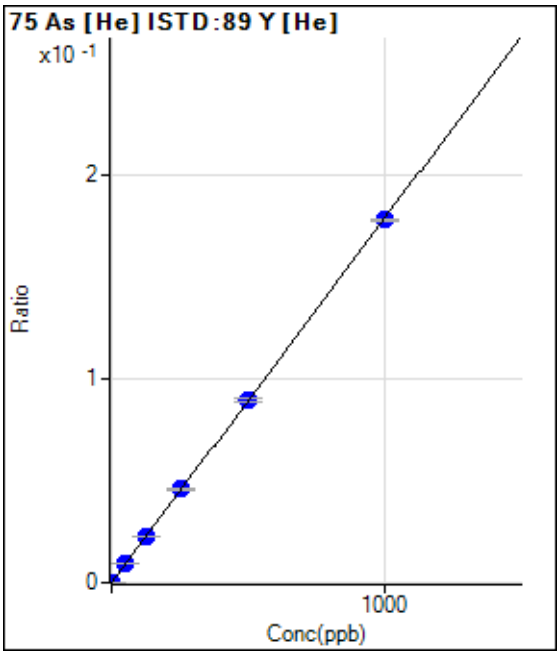
Reviewed By:
On:
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LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	216.67	0.0014	P	19.1
2	☐	2.000	5.602	2792.52	0.0177	P	5.6
3	☐	500.000	520.116	241526.93	1.5132	P	0.4
4	☐	1250.000	1268.445	596195.69	3.6884	P	1.1
5	☐	2500.000	2529.272	1181171.12	7.3532	P	1.5
6	☐	5000.000	5207.278	2461925.54	15.1374	A	1.4
7	☐	10000.000	9885.731	4678123.96	28.7363	A	0.6
8	☐			2586.93	0.0166	P	2.8

y = 0.0029 * x + 0.0014
R = 0.9997
DL = 0.2717
BEC = 0.475

Weight: <None>
Min Conc: 0

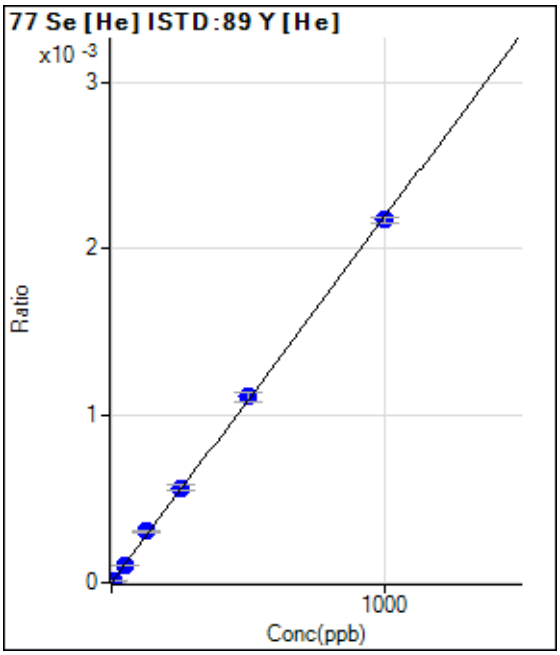


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	100.1
2	☐	1.000	1.173	308.89	0.0002	P	15.2
3	☐	50.000	51.114	13514.34	0.0091	P	1.0
4	☐	125.000	125.907	33909.71	0.0225	P	2.8
5	☐	250.000	257.362	68169.27	0.0460	P	1.3
6	☐	500.000	503.518	135115.82	0.0901	P	2.1
7	☐	1000.000	996.231	265356.40	0.1782	P	0.8
8	☐			131.11	0.0001	P	7.7

y = 1.7885E-004 * x + 2.3917E-006
R = 1.0000
DL = 0.04015
BEC = 0.01337

Weight: <None>
Min Conc: 0

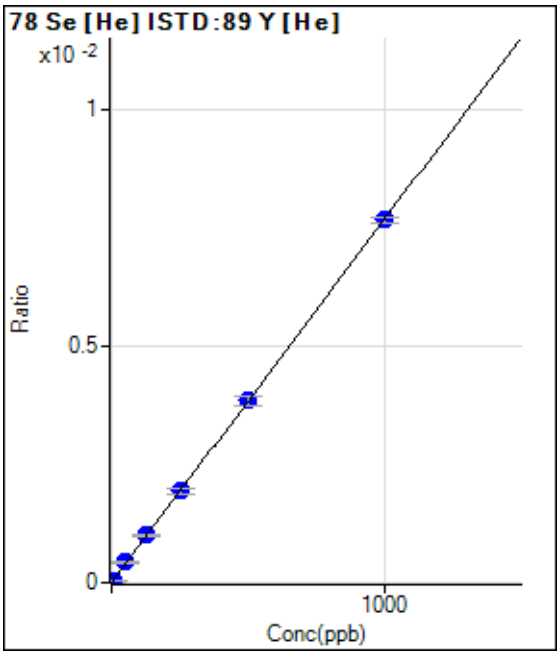
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.2
2	☐	5.000	4.505	15.56	0.0000	P	9.4
3	☐	50.000	46.654	152.23	0.0001	P	3.9
4	☐	125.000	141.073	466.68	0.0003	P	3.5
5	☐	250.000	259.907	844.48	0.0006	P	5.7
6	☐	500.000	507.280	1670.12	0.0011	P	4.2
7	☐	1000.000	992.044	3238.18	0.0022	P	1.5
8	☐			2.22	0.0000	P	86.6

y = 2.1910E-006 * x + 7.9781E-007
R = 0.9998
DL = 1.892
BEC = 0.3641

Weight: <None>
Min Conc: 0

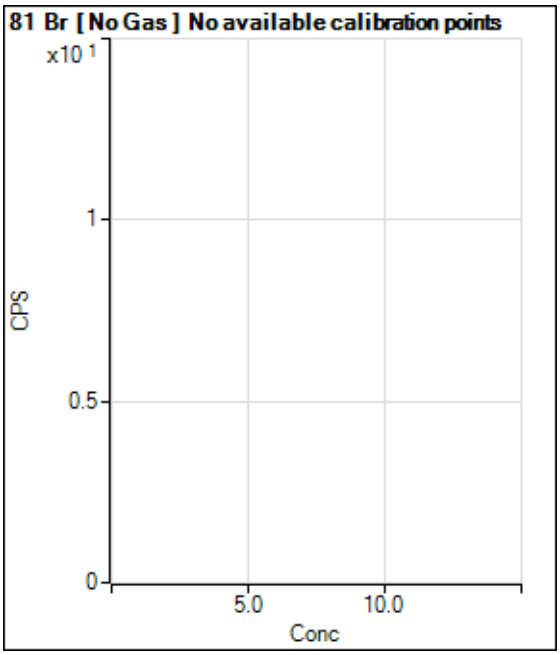


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.22	0.0000	P	86.6
2	☐	5.000	5.045	58.89	0.0000	P	20.8
3	☐	50.000	55.567	632.24	0.0004	P	4.6
4	☐	125.000	130.099	1504.54	0.0010	P	4.2
5	☐	250.000	252.549	2870.33	0.0019	P	5.8
6	☐	500.000	500.431	5757.90	0.0038	P	5.2
7	☐	1000.000	998.231	11404.70	0.0077	P	1.5
8	☐			12.22	0.0000	P	38.2

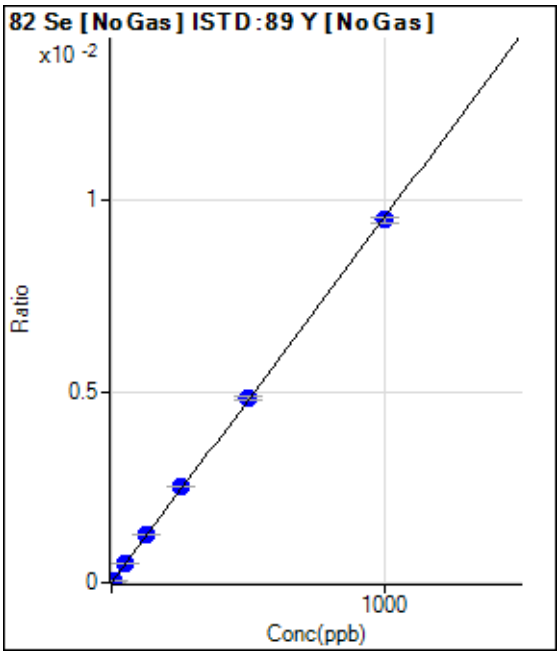
y = 7.6699E-006 * x + 1.5939E-006
R = 1.0000
DL = 0.5399
BEC = 0.2078

Weight: <None>
Min Conc: 0

Reviewed By:
On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			3880.58		P	0.5
2	☐			3896.13		P	2.2
3	☐			3875.03		P	2.8
4	☐			3907.25		P	3.0
5	☐			4107.31		P	4.4
6	☐			4178.45		P	0.7
7	☐			4469.65		P	3.4
8	☐			4578.57		P	0.5

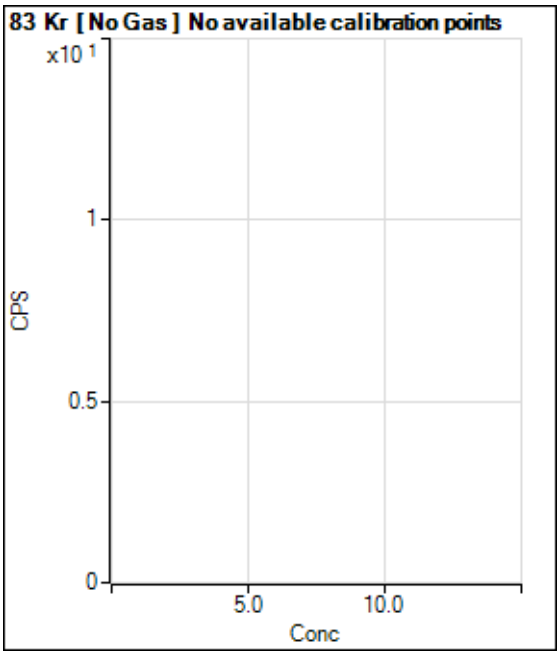


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-16.67	0.0000	P	-379.
2	☐	5.000	5.706	1306.77	0.0001	P	6.5
3	☐	50.000	50.776	11959.91	0.0005	P	3.0
4	☐	125.000	130.760	30549.44	0.0012	P	0.8
5	☐	250.000	261.876	61264.37	0.0025	P	0.9
6	☐	500.000	506.343	118863.17	0.0048	P	2.6
7	☐	1000.000	993.097	230500.55	0.0095	P	1.4
8	☐			24.44	0.0000	P	253.0

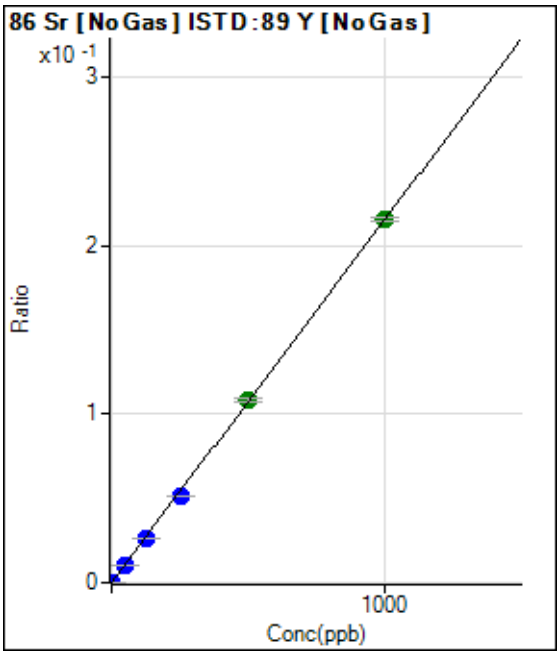
y = 9.5640E-006 * x - 6.8740E-007
R = 0.9999
DL = 0.819
BEC = -0.07187

Weight: <None>
Min Conc: 0

Reviewed By:
On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			265.56		P	18.9
2	☐			278.89		P	17.0
3	☐			292.23		P	6.5
4	☐			272.23		P	6.0
5	☐			287.78		P	13.4
6	☐			287.79		P	9.7
7	☐			351.12		P	11.0
8	☐			346.68		P	19.5

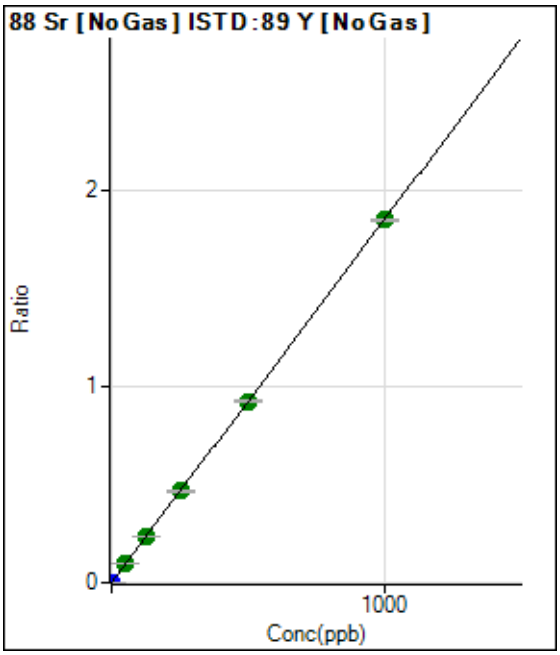


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	763.36	0.0000	P	9.1
2	☐	1.000	1.041	6190.33	0.0003	P	2.4
3	☐	50.000	47.743	254068.10	0.0103	P	1.8
4	☐	125.000	120.237	632896.66	0.0259	P	0.3
5	☐	250.000	239.153	1259488.69	0.0515	P	1.2
6	☐	500.000	505.958	2672606.52	0.1089	A	2.0
7	☐	1000.000	1000.441	5224021.14	0.2152	A	1.0
8	☐			15560.97	0.0007	P	0.4

y = 2.1511E-004 * x + 3.1325E-005
R = 0.9999
DL = 0.03993
BEC = 0.1456

Weight: <None>
Min Conc: 0

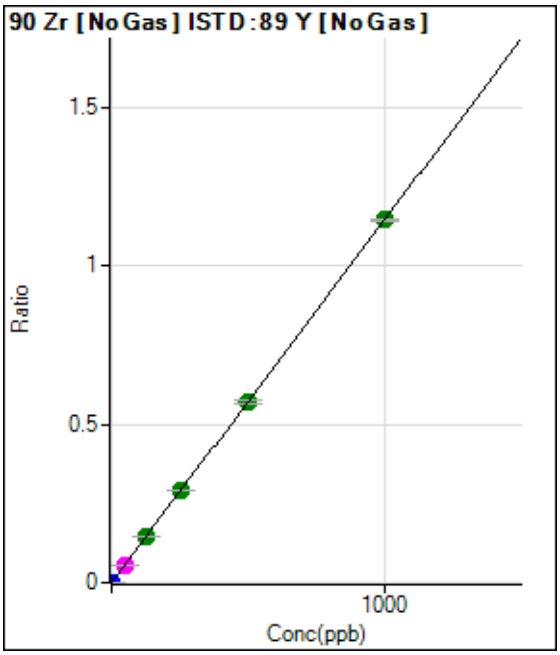
Reviewed By:
On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3322.65	0.0001	P	2.3
2	☐	1.000	1.045	50225.37	0.0021	P	0.6
3	☐	50.000	51.113	2336433.75	0.0947	A	1.9
4	☐	125.000	125.958	5700435.68	0.2333	A	1.3
5	☐	250.000	252.630	11443091.22	0.4677	A	1.6
6	☐	500.000	500.151	22727889.11	0.9258	A	1.1
7	☐	1000.000	999.092	44882341.00	1.8492	A	0.6
8	☐			130519.61	0.0058	P	0.2

y = 0.0019 * x + 1.3637E-004
R = 1.0000
DL = 0.005043
BEC = 0.07368

Weight: <None>
Min Conc: 0

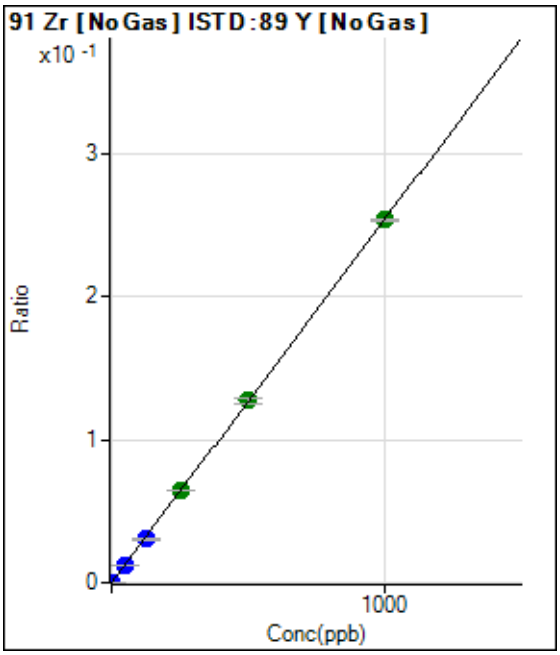


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	871.15	0.0000	P	3.7
2	☐	1.000	0.996	28520.26	0.0012	P	1.7
3	☐	50.000	49.525	1398959.34	0.0567	M	2.8
4	☐	125.000	126.178	3529237.41	0.1444	A	1.2
5	☐	250.000	252.762	7077423.85	0.2893	A	0.6
6	☐	500.000	497.854	13985186.32	0.5697	A	2.2
7	☐	1000.000	1000.259	27779829.03	1.1446	A	0.4
8	☐			41468.19	0.0018	P	2.0

y = 0.0011 * x + 3.5757E-005
R = 1.0000
DL = 0.003506
BEC = 0.03125

Weight: <None>
Min Conc: 0

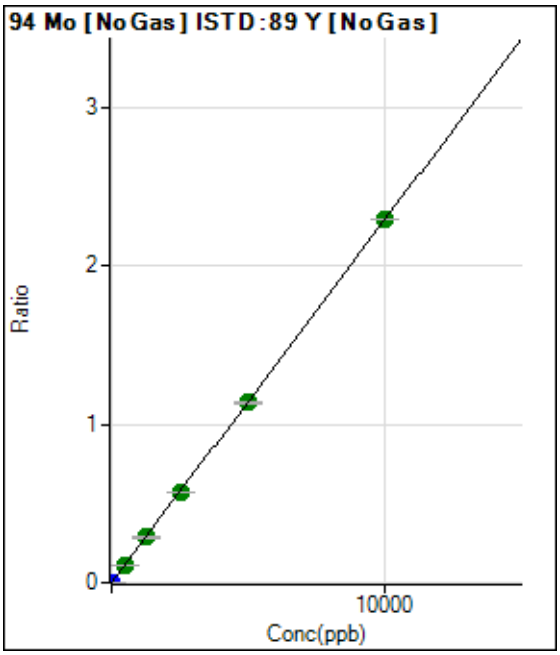
Reviewed By:
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	170.00	0.0000	P	6.2
2	☐	1.000	0.981	6205.89	0.0003	P	1.8
3	☐	50.000	47.578	297824.84	0.0121	P	1.5
4	☐	125.000	119.414	740410.29	0.0303	P	1.5
5	☐	250.000	252.743	1568788.34	0.0641	A	0.7
6	☐	500.000	500.824	3118768.60	0.1270	A	2.4
7	☐	1000.000	999.722	6154984.15	0.2536	A	0.2
8	☐			9627.90	0.0004	P	1.2

y = 2.5365E-004 * x + 6.9785E-006
R = 1.0000
DL = 0.005116
BEC = 0.02751

Weight: <None>
Min Conc: 0

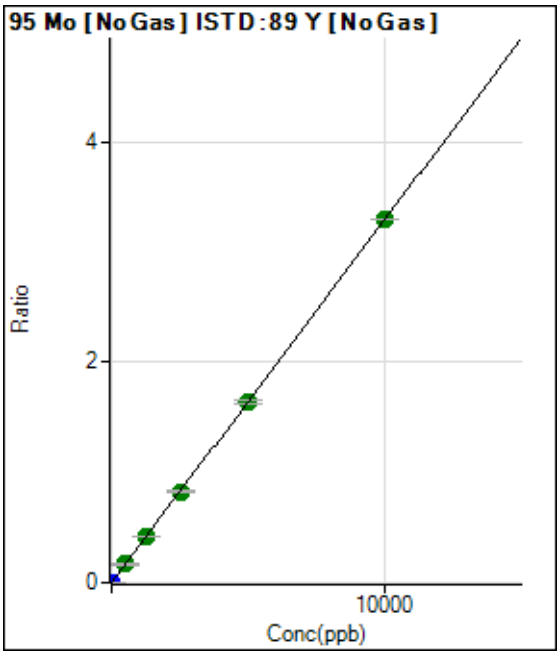


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	620.02	0.0000	P	15.7
2	☐	5.000	5.955	33689.64	0.0014	P	1.2
3	☐	500.000	500.138	2824865.51	0.1145	A	0.9
4	☐	1250.000	1256.586	7030874.90	0.2877	A	2.1
5	☐	2500.000	2496.805	13986933.26	0.5716	A	0.9
6	☐	5000.000	4980.607	27993509.03	1.1403	A	1.0
7	☐	10000.000	10009.665	55621673.06	2.2916	A	0.0
8	☐			38083.12	0.0017	P	1.4

y = 2.2894E-004 * x + 2.5458E-005
R = 1.0000
DL = 0.05236
BEC = 0.1112

Weight: <None>
Min Conc: 0

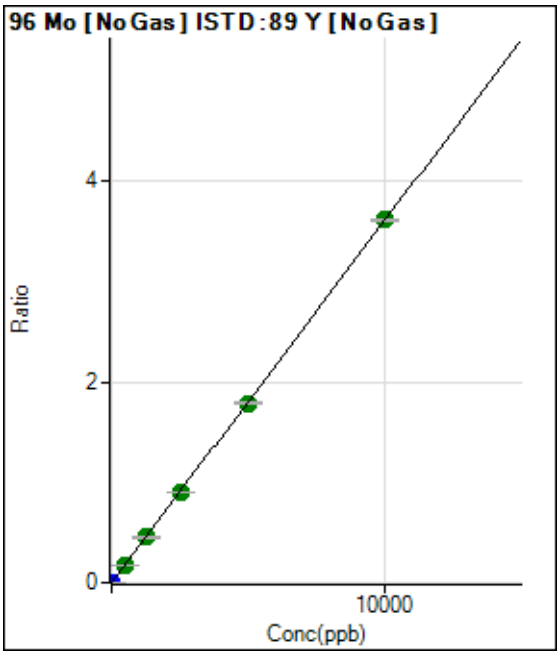
Reviewed By:
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	625.58	0.0000	P	6.8
2	☐	5.000	5.055	40941.17	0.0017	P	1.6
3	☐	500.000	503.929	4087237.37	0.1657	A	1.6
4	☐	1250.000	1253.958	10076843.53	0.4123	A	1.2
5	☐	2500.000	2515.358	20237131.36	0.8271	A	0.6
6	☐	5000.000	4985.161	40239333.85	1.6391	A	2.0
7	☐	10000.000	10002.889	79828669.37	3.2890	A	0.1
8	☐			39756.59	0.0018	P	0.8

y = 3.2880E-004 * x + 2.5679E-005
R = 1.0000
DL = 0.01601
BEC = 0.0781

Weight: <None>
Min Conc: 0

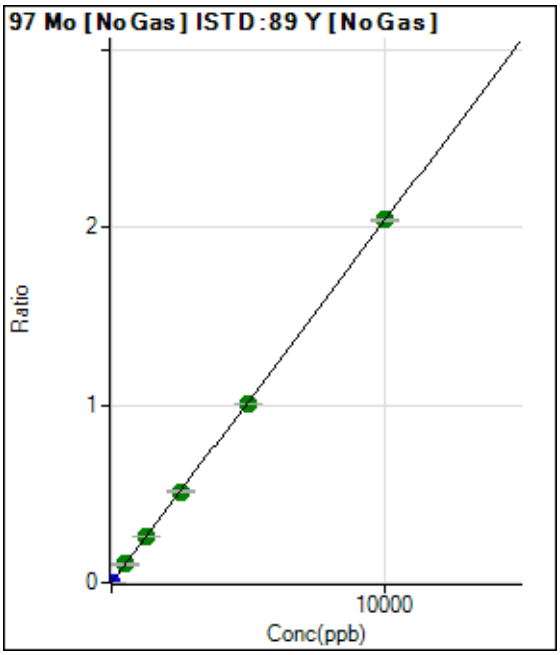


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	691.14	0.0000	P	10.1
2	☐	5.000	5.093	45266.71	0.0019	P	0.8
3	☐	500.000	498.990	4441256.18	0.1801	A	1.5
4	☐	1250.000	1248.909	11013910.18	0.4506	A	0.4
5	☐	2500.000	2491.384	21994905.09	0.8989	A	1.2
6	☐	5000.000	4956.040	43899355.73	1.7882	A	1.5
7	☐	10000.000	10024.321	87785460.91	3.6169	A	0.8
8	☐			45067.26	0.0020	P	1.2

y = 3.6081E-004 * x + 2.8374E-005
R = 1.0000
DL = 0.02391
BEC = 0.07864

Weight: <None>
Min Conc: 0

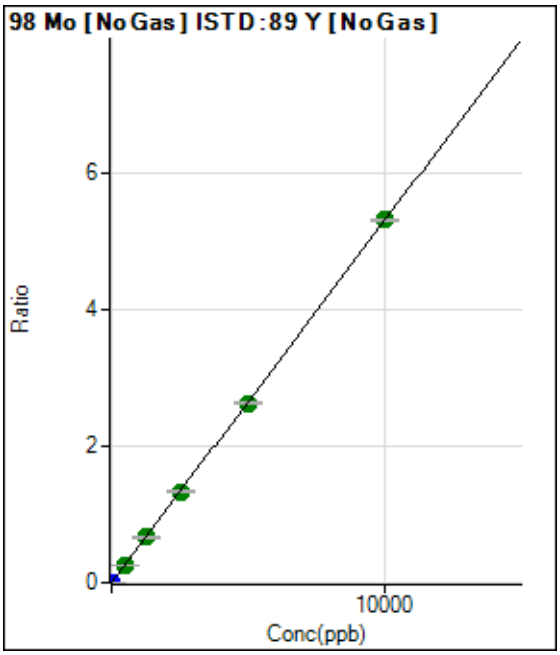
Reviewed By:
On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	368.90	0.0000	P	11.6
2	☐	5.000	5.038	25279.75	0.0010	P	1.6
3	☐	500.000	506.675	2547574.86	0.1033	A	1.9
4	☐	1250.000	1257.332	6264106.44	0.2563	A	0.6
5	☐	2500.000	2502.491	12481000.79	0.5101	A	2.0
6	☐	5000.000	4938.408	24713714.91	1.0067	A	0.6
7	☐	10000.000	10028.923	49617133.15	2.0443	A	0.7
8	☐			23956.36	0.0011	P	1.0

y = 2.0384E-004 * x + 1.5143E-005
R = 1.0000
DL = 0.02583
BEC = 0.07429

Weight: <None>
Min Conc: 0

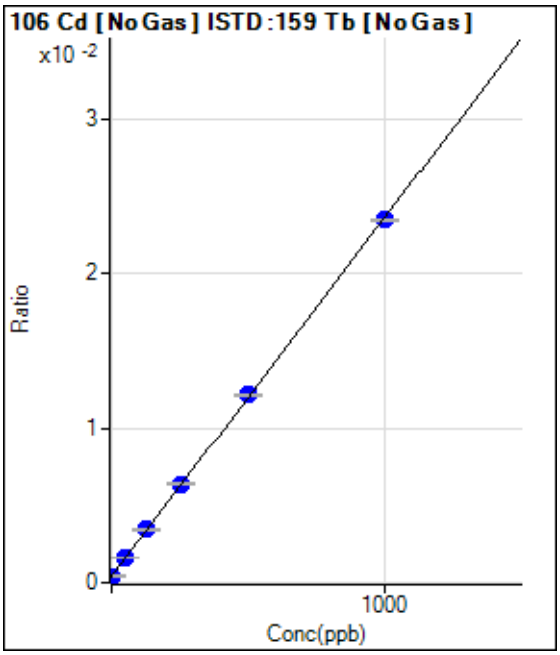


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	927.82	0.0000	P	3.3
2	☐	5.000	5.091	66292.94	0.0027	P	1.1
3	☐	500.000	499.405	6521054.77	0.2644	A	1.9
4	☐	1250.000	1253.300	16214588.93	0.6635	A	1.5
5	☐	2500.000	2515.967	32588289.79	1.3319	A	1.4
6	☐	5000.000	4949.426	64323237.38	2.6201	A	0.7
7	☐	10000.000	10020.912	128755794.7	5.3048	A	0.2
8	☐			61738.81	0.0027	P	0.4

y = 5.2937E-004 * x + 3.8082E-005
R = 1.0000
DL = 0.007044
BEC = 0.07194

Weight: <None>
Min Conc: 0

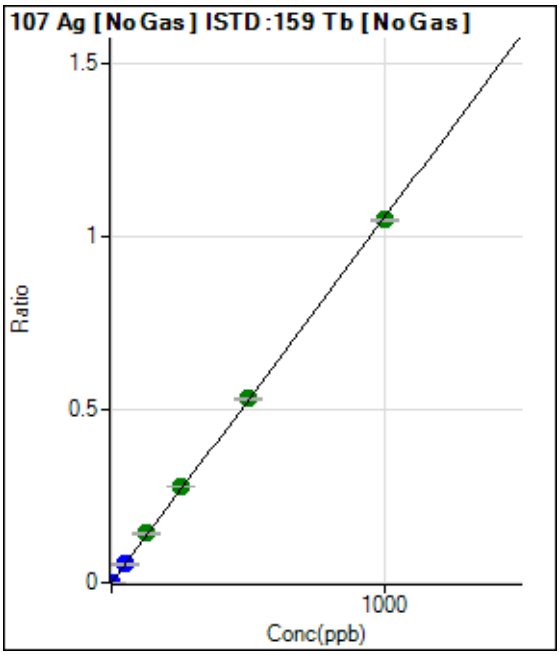
Reviewed By:
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Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7688.90	0.0004	P	3.5
2	☐	1.000	1.080	8165.81	0.0004	P	1.9
3	☐	50.000	52.850	30983.71	0.0016	P	1.8
4	☐	125.000	129.909	64964.06	0.0034	P	0.6
5	☐	250.000	257.480	121291.50	0.0064	P	0.9
6	☐	500.000	505.702	230094.04	0.0122	P	1.7
7	☐	1000.000	994.523	439764.48	0.0235	P	0.5
8	☐			7548.80	0.0004	P	1.7

y = 2.3220E-005 * x + 4.1058E-004
R = 0.9999
DL = 1.837
BEC = 17.68

Weight: <None>
Min Conc: 0

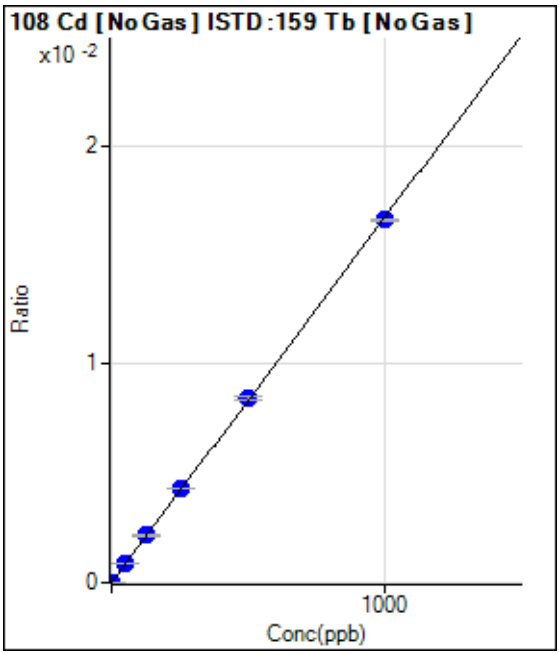


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	248.89	0.0000	P	10.1
2	☐	1.000	0.958	19171.19	0.0010	P	1.2
3	☐	50.000	50.236	1001840.23	0.0530	P	0.8
4	☐	125.000	134.420	2685507.62	0.1417	A	1.5
5	☐	250.000	262.839	5258800.76	0.2770	A	1.1
6	☐	500.000	503.522	10047059.92	0.5307	A	1.9
7	☐	1000.000	993.840	19597812.49	1.0474	A	0.8
8	☐			3305.99	0.0002	P	7.4

y = 0.0011 * x + 1.3282E-005
R = 0.9999
DL = 0.00382
BEC = 0.0126

Weight: <None>
Min Conc: 0

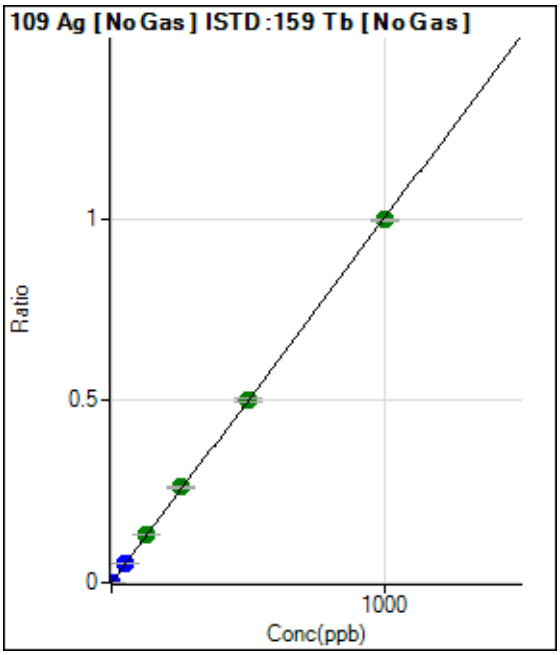
Reviewed By:
On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32.22	0.0000	P	10.9
2	☐	1.000	1.049	360.01	0.0000	P	7.1
3	☐	50.000	52.534	16603.39	0.0009	P	0.2
4	☐	125.000	129.326	40906.10	0.0022	P	1.4
5	☐	250.000	259.658	82222.19	0.0043	P	0.7
6	☐	500.000	504.322	159230.11	0.0084	P	2.2
7	☐	1000.000	994.757	310370.98	0.0166	P	0.5
8	☐			255.56	0.0000	P	7.1

y = 1.6674E-005 * x + 1.7190E-006
R = 0.9999
DL = 0.0336
BEC = 0.1031

Weight: <None>
Min Conc: 0

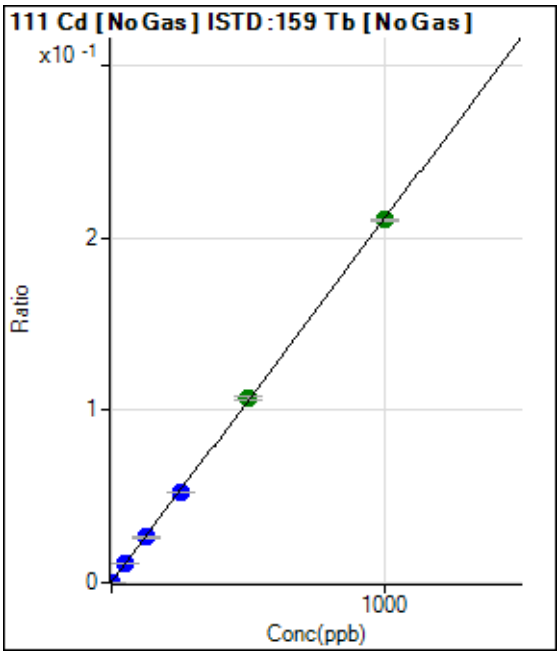


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	134.45	0.0000	P	10.3
2	☐	1.000	0.975	18421.32	0.0010	P	1.6
3	☐	50.000	50.524	956510.60	0.0506	P	0.4
4	☐	125.000	133.658	2535318.35	0.1337	A	0.5
5	☐	250.000	261.381	4965085.90	0.2615	A	0.7
6	☐	500.000	502.029	9510165.90	0.5023	A	2.3
7	☐	1000.000	995.032	18629005.00	0.9956	A	0.7
8	☐			3052.59	0.0002	P	6.0

y = 0.0010 * x + 7.1736E-006
R = 0.9999
DL = 0.002213
BEC = 0.007169

Weight: <None>
Min Conc: 0

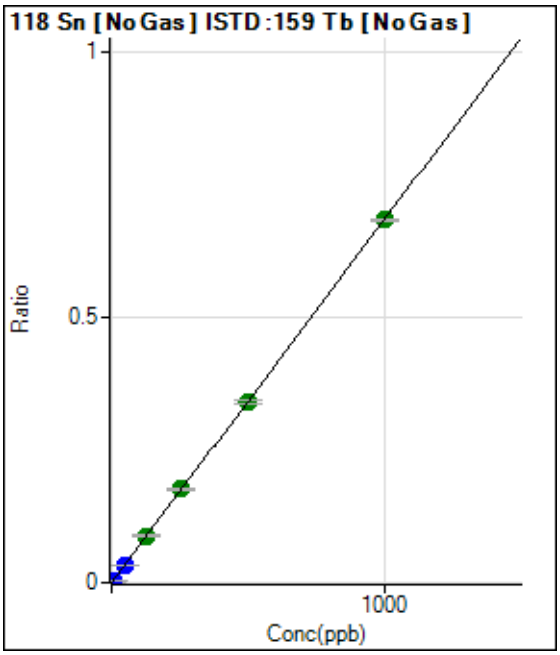
Reviewed By:
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5393.01	0.0003	P	3.7
2	☐	1.000	1.131	9865.93	0.0005	P	0.9
3	☐	50.000	50.268	205855.19	0.0109	P	0.2
4	☐	125.000	123.785	499920.14	0.0264	P	1.7
5	☐	250.000	246.839	993006.38	0.0523	P	0.8
6	☐	500.000	508.093	2032834.82	0.1074	A	1.7
7	☐	1000.000	996.882	3936235.12	0.2104	A	0.8
8	☐			6120.87	0.0004	P	1.2

y = 2.1074E-004 * x + 2.8799E-004
R = 0.9999
DL = 0.1519
BEC = 1.367

Weight: <None>
Min Conc: 0

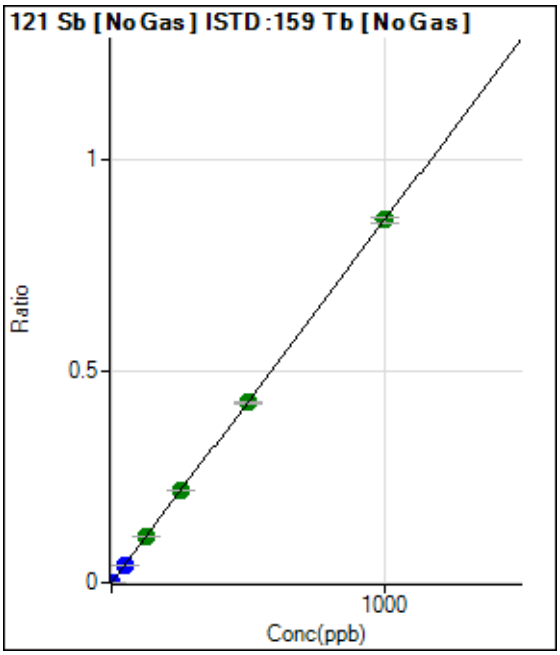


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2434.69	0.0001	P	0.7
2	☐	5.000	5.275	70071.26	0.0037	P	0.3
3	☐	50.000	49.052	637218.58	0.0337	P	0.4
4	☐	125.000	128.119	1663416.59	0.0878	A	3.1
5	☐	250.000	256.867	3337996.62	0.1758	A	1.4
6	☐	500.000	498.475	6458324.77	0.3411	A	2.1
7	☐	1000.000	998.702	12784605.08	0.6833	A	0.7
8	☐			4501.90	0.0003	P	5.1

y = 6.8403E-004 * x + 1.2999E-004
R = 1.0000
DL = 0.003988
BEC = 0.19

Weight: <None>
Min Conc: 0

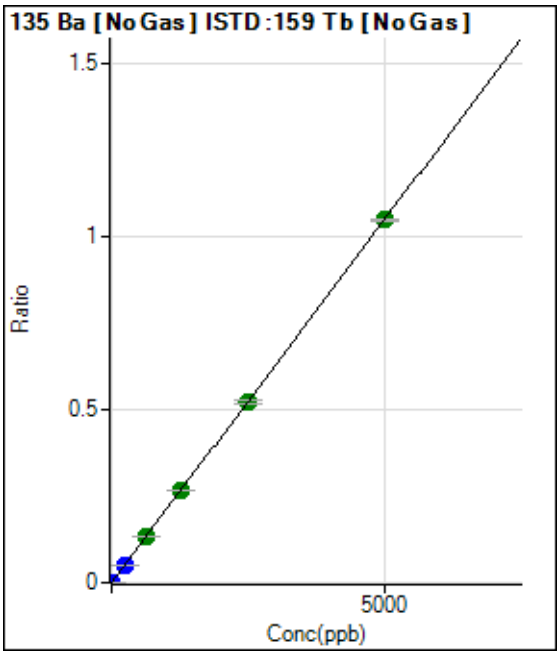
Reviewed By:
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Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	94.45	0.0000	P	30.4
2	☐	2.000	2.118	34132.58	0.0018	P	1.5
3	☐	50.000	48.788	791520.02	0.0418	P	0.3
4	☐	125.000	128.321	2085640.25	0.1100	A	2.4
5	☐	250.000	252.698	4113660.49	0.2167	A	0.5
6	☐	500.000	496.244	8056483.42	0.4255	A	1.6
7	☐	1000.000	1000.849	16057452.40	0.8582	A	1.2
8	☐			7472.33	0.0004	P	6.5

y = 8.5746E-004 * x + 5.0441E-006
R = 1.0000
DL = 0.005356
BEC = 0.005883

Weight: <None>
Min Conc: 0

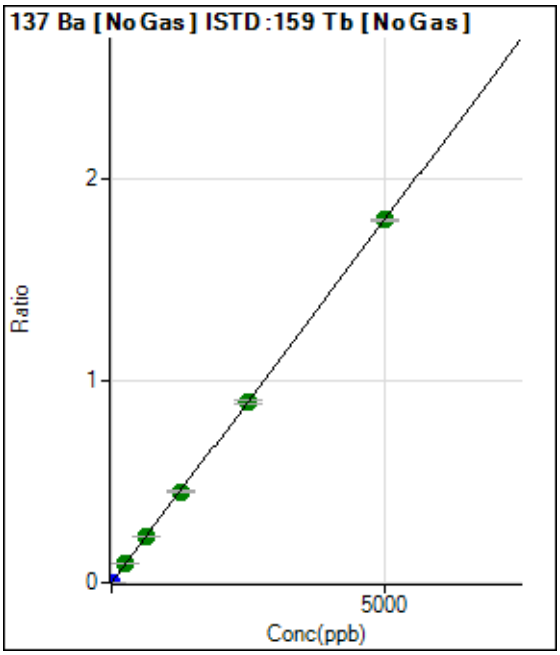


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	641.13	0.0000	P	3.3
2	☐	10.000	10.183	40736.57	0.0022	P	0.8
3	☐	250.000	242.645	964904.55	0.0510	P	0.4
4	☐	625.000	640.634	2551467.83	0.1346	A	1.4
5	☐	1250.000	1267.843	5056481.10	0.2664	A	0.9
6	☐	2500.000	2494.051	9919650.76	0.5239	A	1.9
7	☐	5000.000	4996.927	19640509.99	1.0497	A	0.3
8	☐			7919.05	0.0005	P	3.5

y = 2.1006E-004 * x + 3.4235E-005
R = 1.0000
DL = 0.01636
BEC = 0.163

Weight: <None>
Min Conc: 0

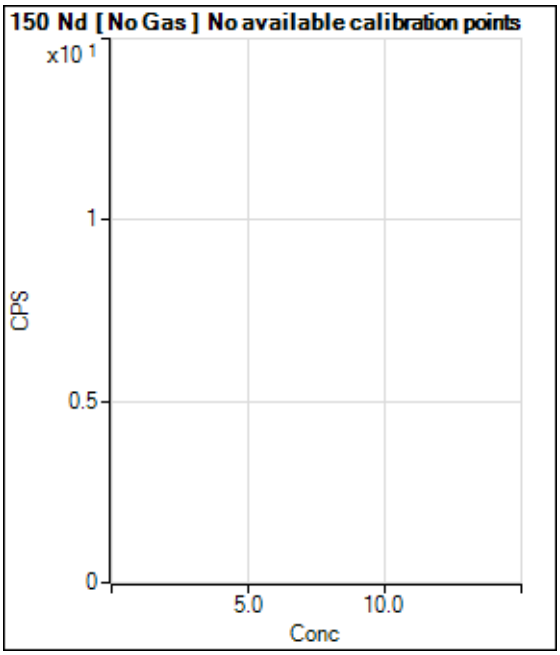
Reviewed By:
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Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1042.27	0.0001	P	1.6
2	☐	10.000	10.311	70472.06	0.0038	P	0.7
3	☐	250.000	253.556	1724309.72	0.0911	A	0.3
4	☐	625.000	632.517	4308452.16	0.2273	A	1.1
5	☐	1250.000	1255.924	8566470.22	0.4513	A	1.0
6	☐	2500.000	2491.468	16945858.36	0.8951	A	2.7
7	☐	5000.000	5001.667	33621694.50	1.7969	A	0.6
8	☐			14052.94	0.0008	P	3.0

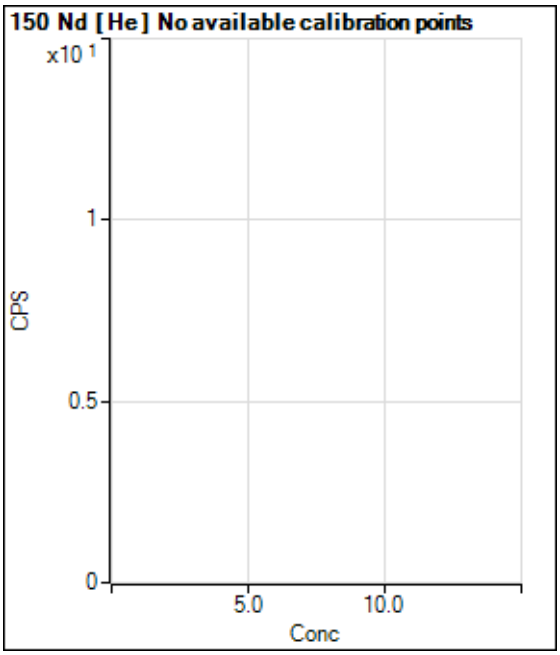
y = 3.5925E-004 * x + 5.5646E-005
R = 1.0000
DL = 0.007602
BEC = 0.1549

Weight: <None>
Min Conc: 0

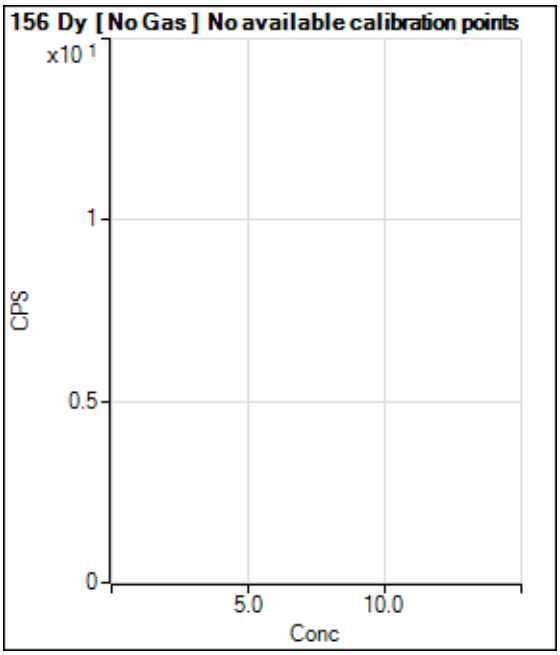


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			26.67		P	21.7
2	☐			28.89		P	46.6
3	☐			107.78		P	1.8
4	☐			172.23		P	1.1
5	☐			362.23		P	17.2
6	☐			724.47		P	1.1
7	☐			1357.86		P	2.1
8	☐			372.23		P	5.8

Reviewed By:
On:
Inst Id :P8
LB :LB134737

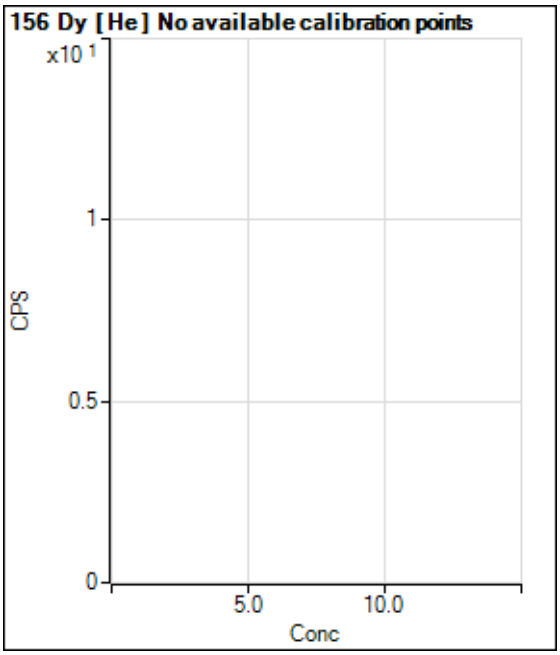


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			0.00		P	
2	☐			2.22		P	86.6
3	☐			4.44		P	43.4
4	☐			6.67		P	50.0
5	☐			15.55		P	44.6
6	☐			40.00		P	25.0
7	☐			44.44		P	33.8
8	☐			68.89		P	5.6

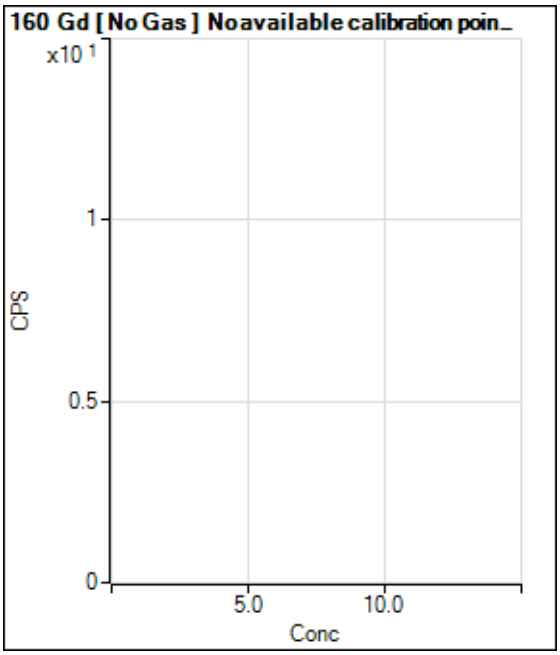


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			266.67		P	6.6
2	☐			262.23		P	6.5
3	☐			271.12		P	9.1
4	☐			246.67		P	15.2
5	☐			300.01		P	11.7
6	☐			363.34		P	7.3
7	☐			551.13		P	7.8
8	☐			658.91		P	9.9

Reviewed By:
On:
Inst Id :P8
LB :LB134737

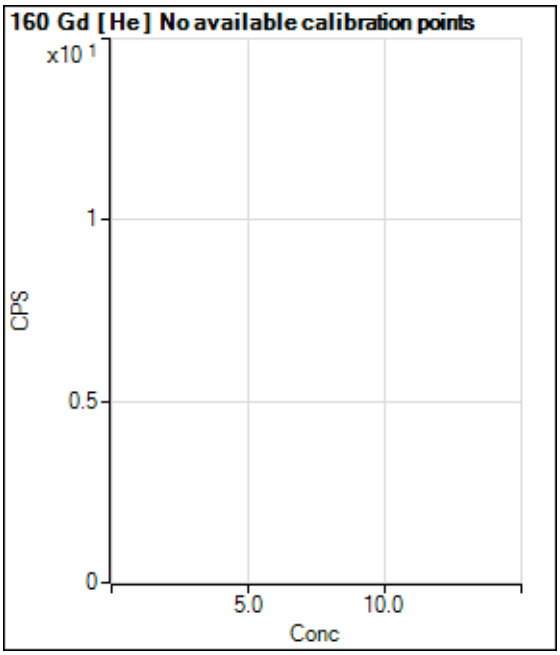


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			8.89		P	57.3
2	☐			6.66		P	86.6
3	☐			8.89		P	94.4
4	☐			18.89		P	51.0
5	☐			24.44		P	20.8
6	☐			44.44		P	31.2
7	☐			57.78		P	3.3
8	☐			161.12		P	6.7

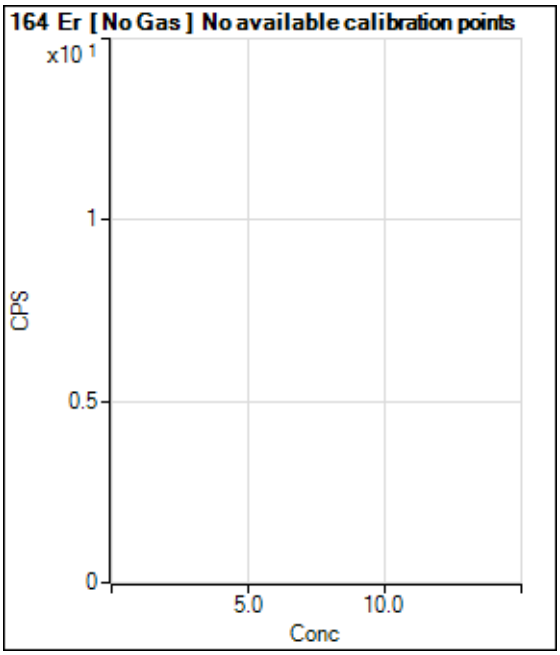


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			110.00		P	18.9
2	☐			116.67		P	9.9
3	☐			121.11		P	1.6
4	☐			117.78		P	27.2
5	☐			130.00		P	16.0
6	☐			186.67		P	15.3
7	☐			248.89		P	19.9
8	☐			613.35		P	15.2

Reviewed By:
On:
Inst Id :P8
LB :LB134737

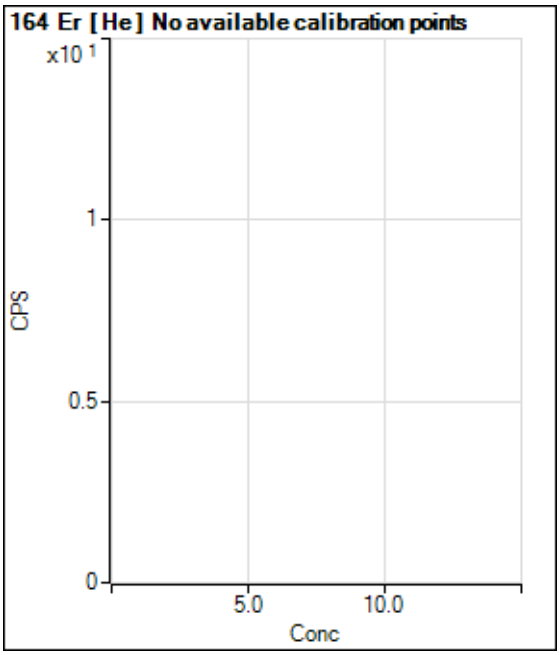


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			13.33		P	66.1
2	☐			27.78		P	27.7
3	☐			24.45		P	15.8
4	☐			21.11		P	32.9
5	☐			35.56		P	61.0
6	☐			54.45		P	7.1
7	☐			57.78		P	3.3
8	☐			234.45		P	14.5

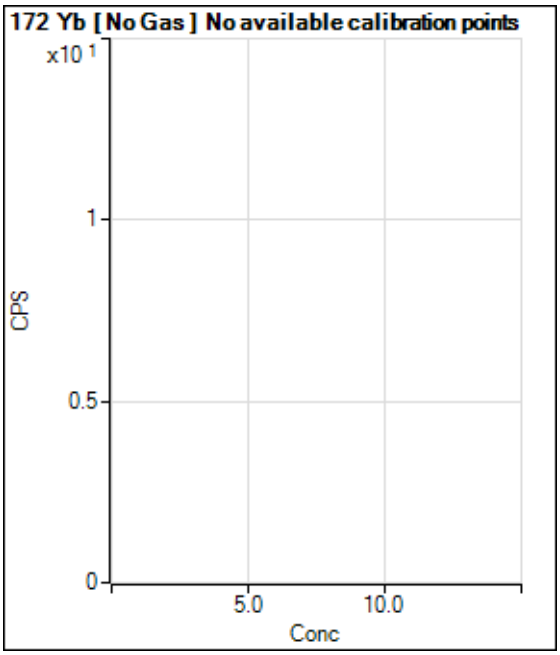


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			103.33		P	8.5
2	☐			111.11		P	14.8
3	☐			113.33		P	5.9
4	☐			103.34		P	39.2
5	☐			134.45		P	1.4
6	☐			202.23		P	18.1
7	☐			261.12		P	11.5
8	☐			685.58		P	6.8

Reviewed By:
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Inst Id :P8
LB :LB134737

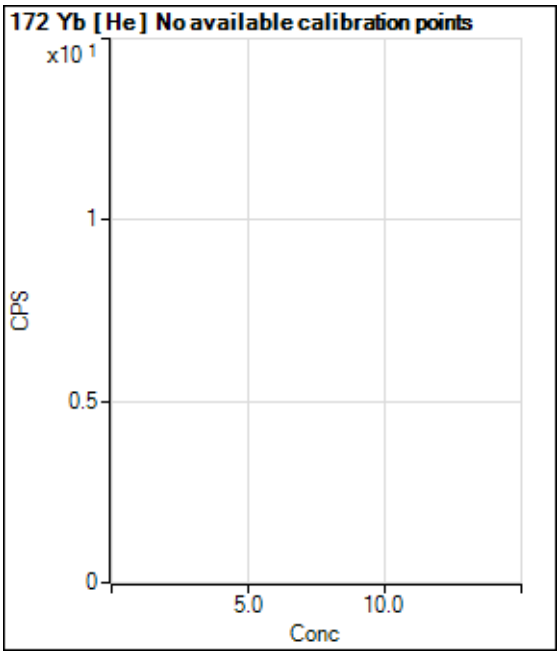


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			21.11		P	55.4
2	☐			37.78		P	10.2
3	☐			34.45		P	31.1
4	☐			43.33		P	7.7
5	☐			33.33		P	36.1
6	☐			50.00		P	20.0
7	☐			82.22		P	29.9
8	☐			228.89		P	12.4

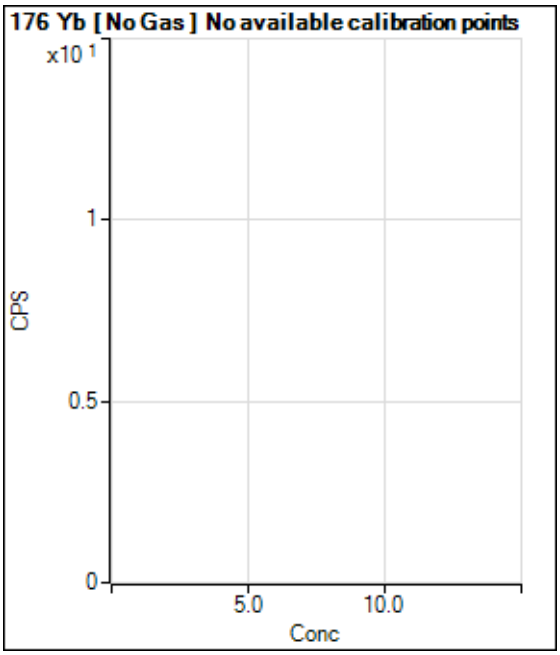


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			90.00		P	19.2
2	☐			88.89		P	19.2
3	☐			117.78		P	4.3
4	☐			145.56		P	7.4
5	☐			145.56		P	17.2
6	☐			203.34		P	10.2
7	☐			264.45		P	10.5
8	☐			790.03		P	15.2

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Inst Id :P8
LB :LB134737

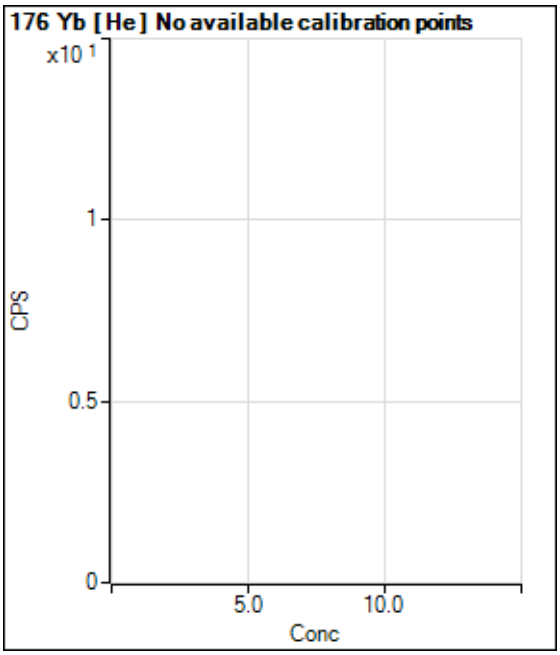


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			35.55		P	37.9
2	☐			35.56		P	21.6
3	☐			41.11		P	30.7
4	☐			41.11		P	28.5
5	☐			67.78		P	19.9
6	☐			88.89		P	37.0
7	☐			103.33		P	5.6
8	☐			315.56		P	5.0

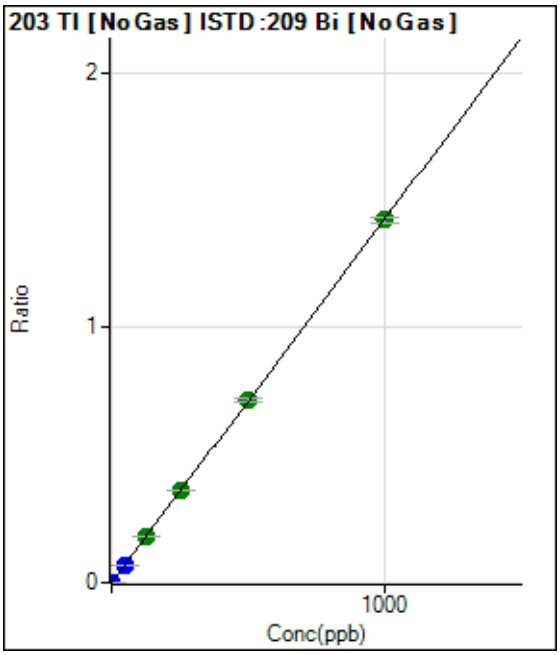


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			2132.42		P	5.9
2	☐			2167.98		P	0.9
3	☐			5547.89		P	2.4
4	☐			11530.68		P	0.4
5	☐			20687.39		P	0.4
6	☐			39083.20		P	0.6
7	☐			74759.81		P	0.9
8	☐			2435.80		P	4.1

Reviewed By:
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LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			342.23		P	2.2
2	☐			331.12		P	9.9
3	☐			1496.77		P	3.9
4	☐			3180.41		P	2.3
5	☐			6083.68		P	0.4
6	☐			11778.66		P	1.3
7	☐			22738.55		P	1.8
8	☐			462.23		P	13.0

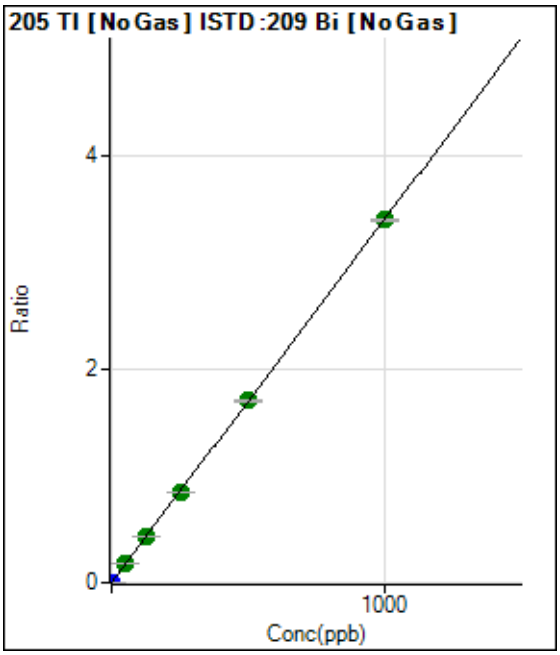


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	453.35	0.0000	P	2.1
2	☐	1.000	0.979	17123.58	0.0014	P	2.2
3	☐	50.000	47.359	798643.49	0.0675	P	1.3
4	☐	125.000	125.670	2102826.74	0.1792	A	1.4
5	☐	250.000	254.022	4213073.06	0.3622	A	0.5
6	☐	500.000	500.977	8118753.84	0.7142	A	2.4
7	☐	1000.000	998.555	15679907.82	1.4235	A	1.4
8	☐			1619.02	0.0002	P	17.7

y = 0.0014 * x + 3.8210E-005
R = 1.0000
DL = 0.001653
BEC = 0.0268

Weight: <None>
Min Conc: 0

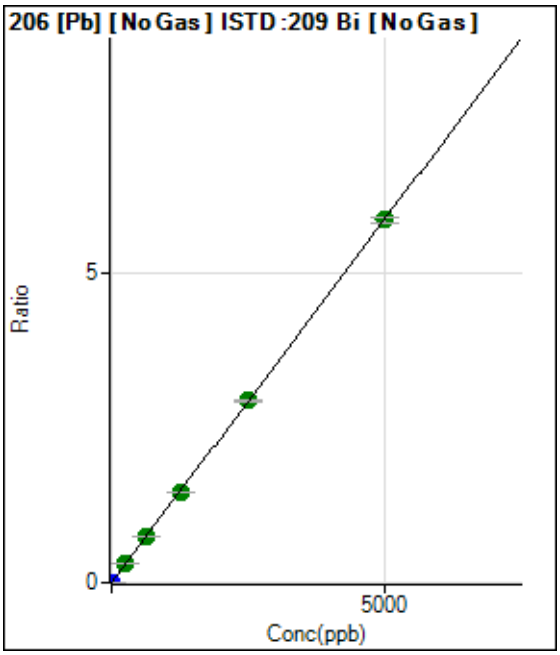
Reviewed By:
On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1121.17	0.0001	P	7.2
2	☐	1.000	0.991	41346.82	0.0035	P	0.4
3	☐	50.000	50.439	2028261.66	0.1715	A	0.5
4	☐	125.000	125.929	5024567.98	0.4281	A	0.9
5	☐	250.000	249.132	9852502.49	0.8469	A	0.9
6	☐	500.000	502.115	19406141.65	1.7068	A	1.2
7	☐	1000.000	999.021	37407578.33	3.3959	A	0.8
8	☐			3778.38	0.0004	P	12.1

y = 0.0034 * x + 9.4469E-005
R = 1.0000
DL = 0.006032
BEC = 0.02779

Weight: <None>
Min Conc: 0

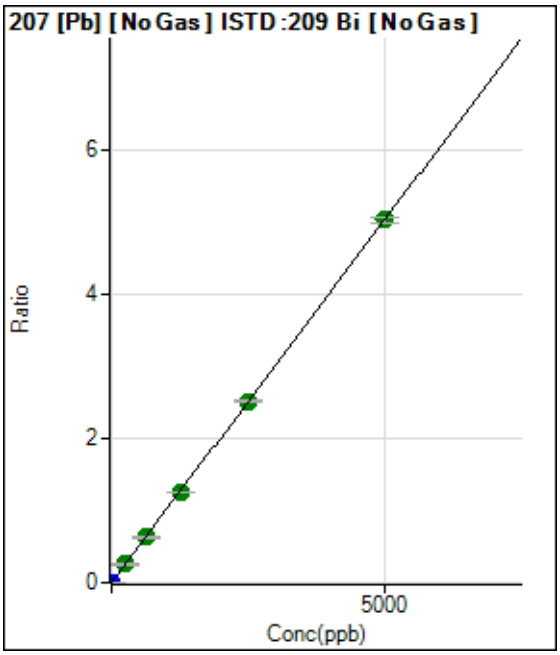


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2127.97	0.0002	P	0.9
2	☐	1.000	0.970	15721.87	0.0013	P	1.9
3	☐	250.000	254.195	3525218.87	0.2982	A	1.4
4	☐	625.000	628.295	8645261.61	0.7367	A	1.8
5	☐	1250.000	1247.539	17015970.30	1.4626	A	0.4
6	☐	2500.000	2505.907	33405613.67	2.9378	A	0.3
7	☐	5000.000	4997.040	64527348.48	5.8581	A	1.4
8	☐			12550.60	0.0013	P	2.1

y = 0.0012 * x + 1.7939E-004
R = 1.0000
DL = 0.004253
BEC = 0.153

Weight: <None>
Min Conc: 0

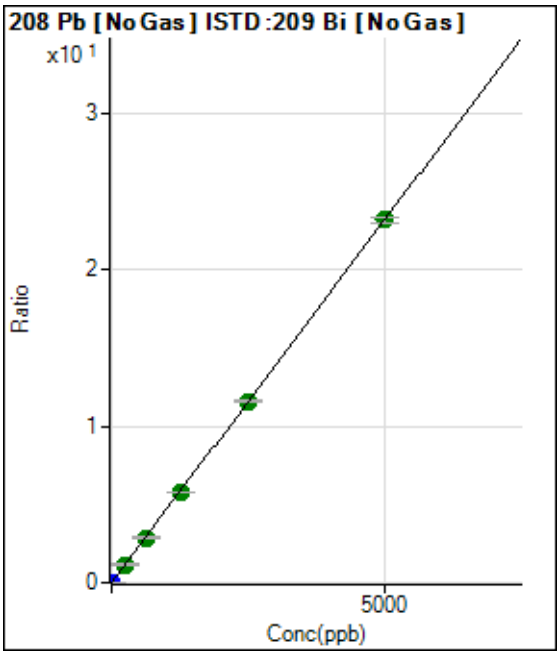
Reviewed By:
On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1820.15	0.0002	P	1.3
2	☐	1.000	0.979	13578.34	0.0011	P	2.6
3	☐	250.000	252.627	3003788.81	0.2541	A	1.3
4	☐	625.000	625.610	7380578.85	0.6289	A	1.6
5	☐	1250.000	1240.511	14506872.84	1.2470	A	0.4
6	☐	2500.000	2499.715	28568782.07	2.5125	A	0.7
7	☐	5000.000	5002.307	55382294.17	5.0278	A	1.5
8	☐			10888.03	0.0011	P	6.1

y = 0.0010 * x + 1.5344E-004
R = 1.0000
DL = 0.005893
BEC = 0.1527

Weight: <None>
Min Conc: 0

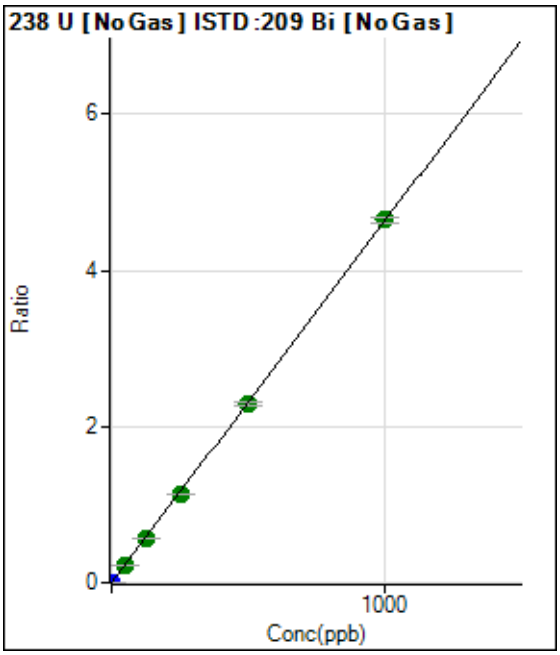


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8393.37	0.0007	P	0.2
2	☐	1.000	0.966	61941.33	0.0052	P	1.6
3	☐	250.000	251.148	13776515.07	1.1652	A	0.7
4	☐	625.000	622.552	33883164.49	2.8873	A	1.1
5	☐	1250.000	1242.908	67052525.39	5.7636	A	0.1
6	☐	2500.000	2499.107	131754908.5	11.5882	A	1.1
7	☐	5000.000	5002.468	255502713.9	23.1953	A	1.3
8	☐			50171.83	0.0052	P	4.2

y = 0.0046 * x + 7.0752E-004
R = 1.0000
DL = 0.0007537
BEC = 0.1526

Weight: <None>
Min Conc: 0

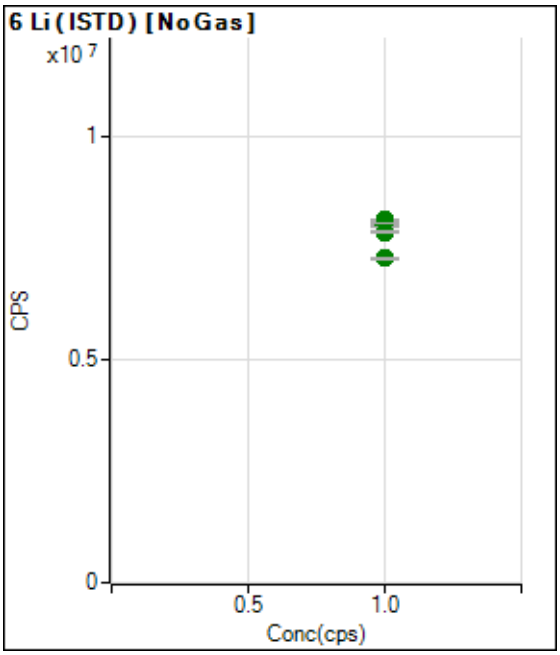
Reviewed By:
On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	328.90	0.0000	P	13.1
2	☐	1.000	0.940	52274.94	0.0044	P	0.8
3	☐	50.000	49.078	2685433.31	0.2271	A	1.1
4	☐	125.000	121.868	6618038.93	0.5639	A	1.1
5	☐	250.000	244.465	13159598.14	1.1312	A	0.9
6	☐	500.000	495.627	26070894.89	2.2934	A	2.3
7	☐	1000.000	1004.008	51171302.57	4.6457	A	1.8
8	☐			2165.77	0.0002	P	9.5

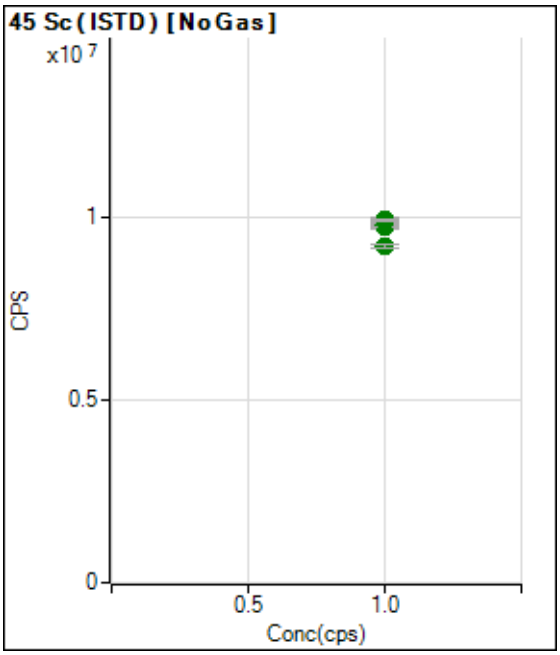
y = 0.0046 * x + 2.7752E-005
R = 1.0000
DL = 0.002363
BEC = 0.005998

Weight: <None>
Min Conc: 0

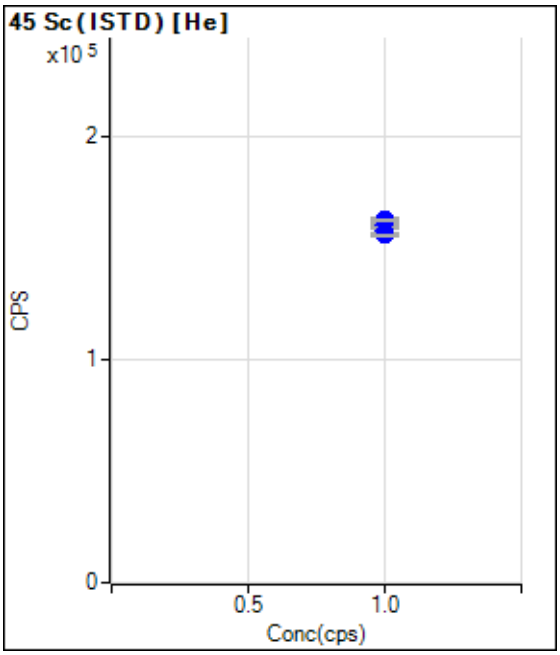


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8049469.56		A	1.6
2	☐	1.000		8068447.81		A	1.1
3	☐	1.000		8142570.63		A	0.8
4	☐	1.000		8059304.84		A	0.3
5	☐	1.000		8052237.75		A	0.8
6	☐	1.000		8032689.05		A	0.9
7	☐	1.000		7872709.26		A	0.4
8	☐	1.000		7275526.25		A	1.1

Reviewed By:
On:
Inst Id :P8
LB :LB134737

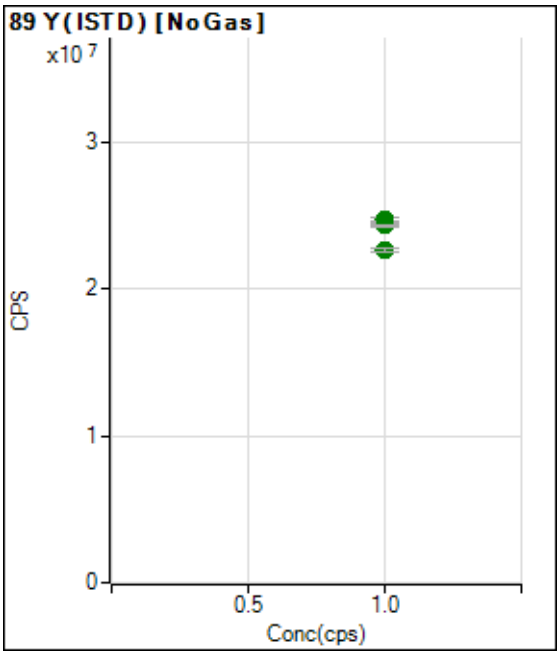


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9720089.92		A	0.3
2	☐	1.000		9845321.52		A	0.8
3	☐	1.000		9887247.91		A	1.8
4	☐	1.000		9870944.30		A	0.7
5	☐	1.000		9796784.85		A	1.1
6	☐	1.000		9939312.08		A	1.5
7	☐	1.000		9911822.63		A	0.6
8	☐	1.000		9212468.40		A	1.1

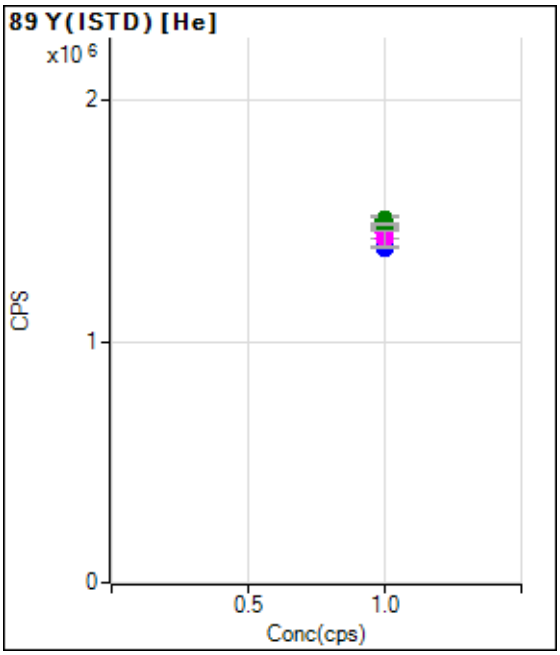


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		157023.31		P	0.5
2	☐	1.000		158157.15		P	1.3
3	☐	1.000		159612.83		P	0.1
4	☐	1.000		161653.33		P	1.1
5	☐	1.000		160652.18		P	1.2
6	☐	1.000		162648.54		P	1.1
7	☐	1.000		162797.19		P	0.4
8	☐	1.000		155940.91		P	0.5

Reviewed By:
On:
Inst Id :P8
LB :LB134737

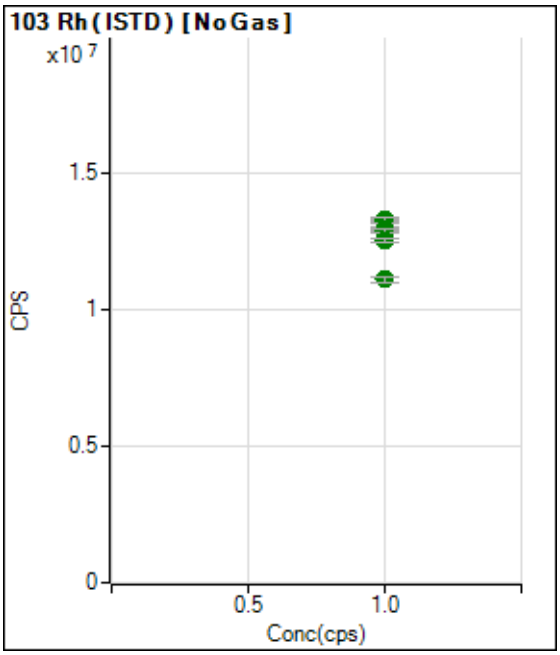


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		24363727.14		A	0.4
2	☐	1.000		24258679.91		A	0.8
3	☐	1.000		24667064.63		A	1.3
4	☐	1.000		24440507.14		A	0.9
5	☐	1.000		24468516.58		A	0.6
6	☐	1.000		24550400.75		A	0.5
7	☐	1.000		24271579.92		A	0.7
8	☐	1.000		22613419.11		A	1.3

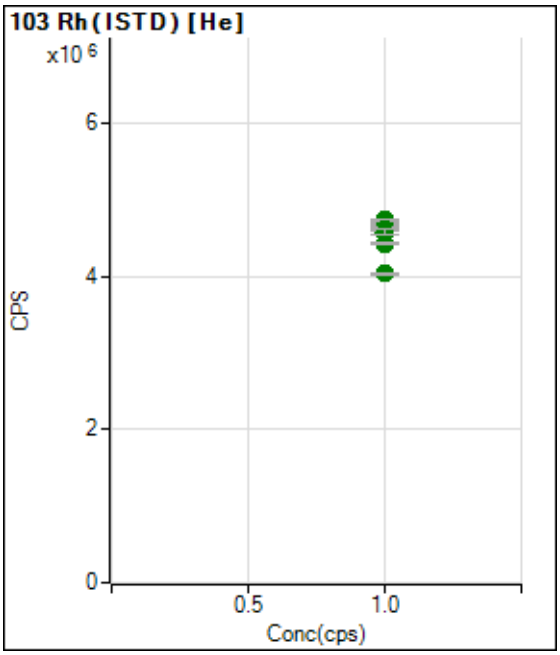


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1392991.57		P	0.1
2	☐	1.000		1455216.06		M	3.3
3	☐	1.000		1477926.92		A	0.9
4	☐	1.000		1506271.97		A	2.1
5	☐	1.000		1480979.91		A	0.8
6	☐	1.000		1500836.49		A	2.5
7	☐	1.000		1489288.80		A	0.5
8	☐	1.000		1427829.65		M	4.5

Reviewed By:
On:
Inst Id :P8
LB :LB134737

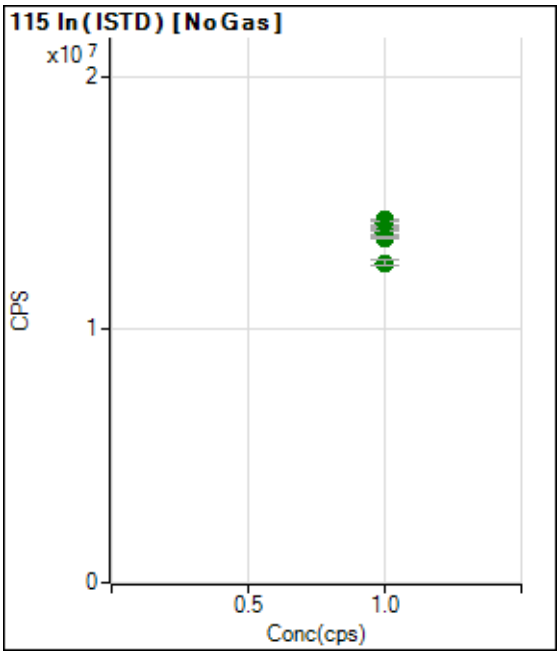


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		13259606.75		A	1.0
2	☐	1.000		13237720.91		A	0.9
3	☐	1.000		13256235.36		A	1.0
4	☐	1.000		13247441.47		A	1.1
5	☐	1.000		12942468.00		A	1.2
6	☐	1.000		12852843.97		A	1.5
7	☐	1.000		12510731.62		A	1.1
8	☐	1.000		11076229.56		A	1.6

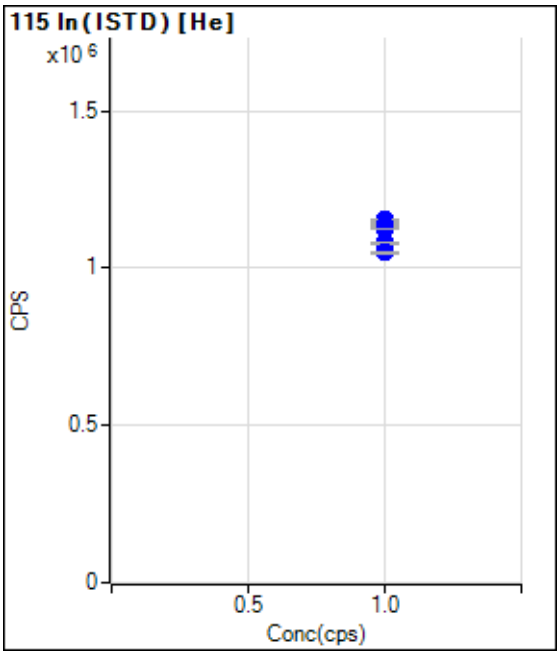


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4710261.53		A	1.3
2	☐	1.000		4691807.74		A	1.4
3	☐	1.000		4703015.31		A	0.5
4	☐	1.000		4736276.49		A	0.2
5	☐	1.000		4613576.04		A	1.3
6	☐	1.000		4573436.22		A	1.5
7	☐	1.000		4427340.32		A	0.9
8	☐	1.000		4030627.61		A	0.9

Reviewed By:
On:
Inst Id :P8
LB :LB134737

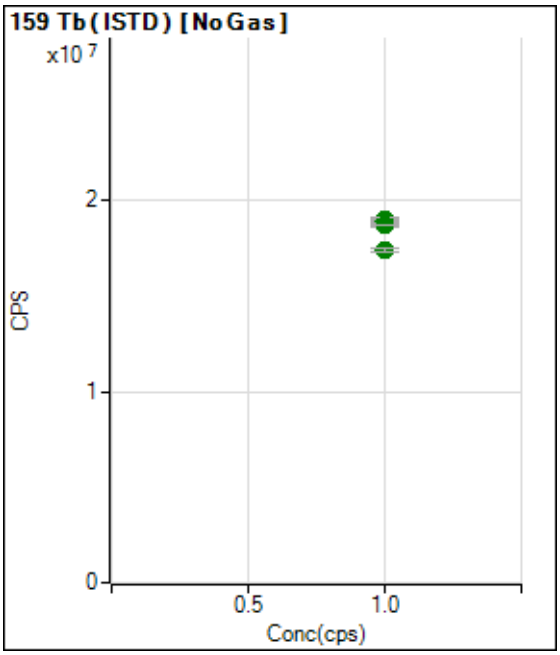


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		14037121.87		A	0.8
2	☐	1.000		14223069.17		A	1.0
3	☐	1.000		14344219.22		A	0.7
4	☐	1.000		14299837.51		A	0.2
5	☐	1.000		14025527.77		A	0.3
6	☐	1.000		13832638.55		A	1.5
7	☐	1.000		13621816.00		A	0.5
8	☐	1.000		12637023.55		A	1.7

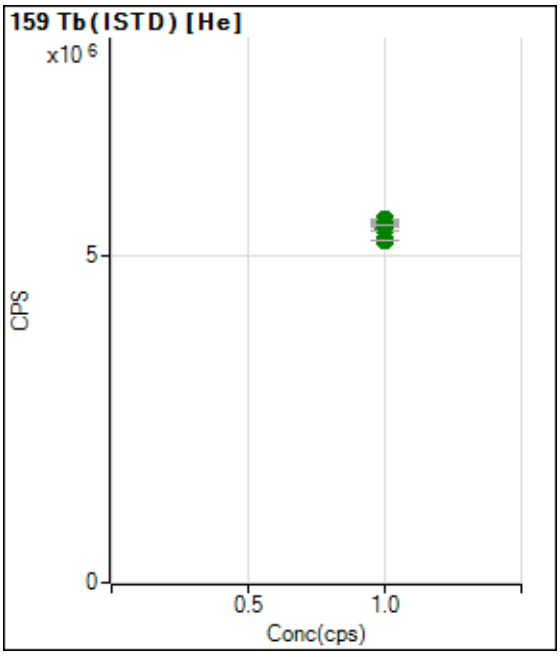


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1137303.36		P	0.7
2	☐	1.000		1142854.47		P	0.5
3	☐	1.000		1152910.33		P	0.6
4	☐	1.000		1153728.06		P	0.4
5	☐	1.000		1135675.06		P	0.2
6	☐	1.000		1124328.89		P	0.0
7	☐	1.000		1080870.31		P	0.5
8	☐	1.000		1050770.68		P	0.5

Reviewed By:
On:
Inst Id :P8
LB :LB134737

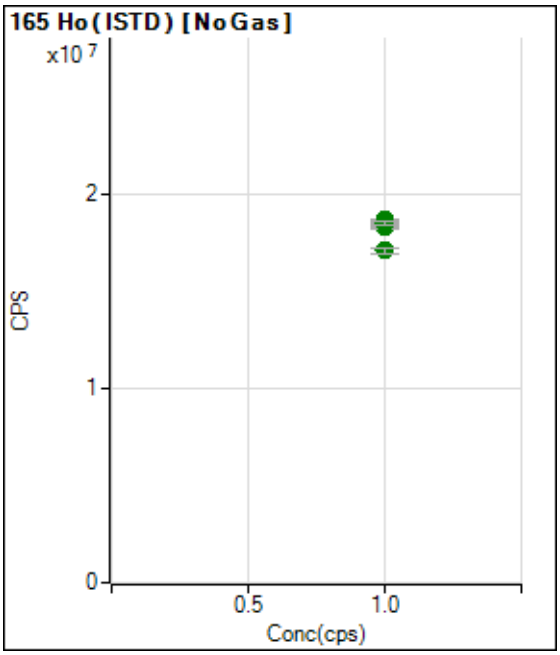


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		18730959.03		A	1.0
2		1.000		18743434.17		A	0.2
3		1.000		18918067.77		A	0.2
4		1.000		18957203.75		A	1.2
5		1.000		18984432.63		A	0.5
6		1.000		18936985.97		A	1.8
7		1.000		18710874.30		A	0.2
8		1.000		17429114.46		A	1.2

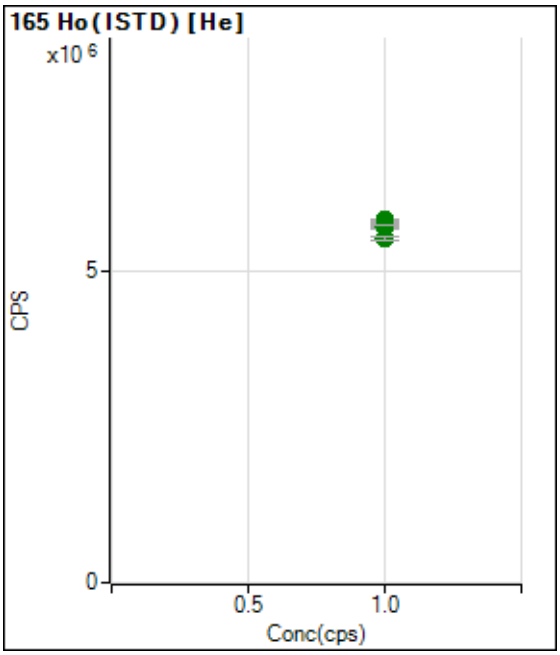


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		5411970.27		A	0.6
2		1.000		5425303.88		A	1.4
3		1.000		5501382.14		A	0.9
4		1.000		5514016.17		A	0.5
5		1.000		5525865.61		A	1.0
6		1.000		5548992.56		A	0.8
7		1.000		5469136.87		A	0.1
8		1.000		5238176.97		A	0.3

Reviewed By:
On:
Inst Id :P8
LB :LB134737

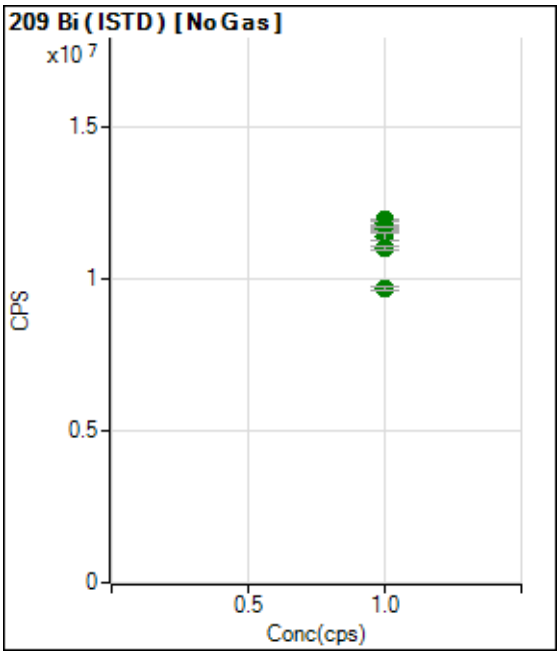


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		18351894.31		A	1.5
2	☐	1.000		18459715.42		A	1.6
3	☐	1.000		18668470.56		A	0.4
4	☐	1.000		18638925.42		A	0.5
5	☐	1.000		18590720.70		A	1.2
6	☐	1.000		18529365.70		A	0.8
7	☐	1.000		18526672.08		A	1.1
8	☐	1.000		17078995.99		A	1.3

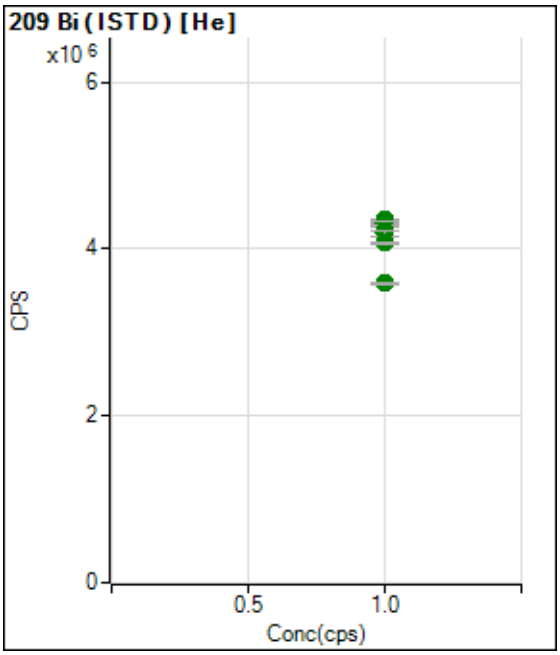


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5746301.93		A	0.9
2	☐	1.000		5709598.80		A	0.9
3	☐	1.000		5778196.30		A	0.8
4	☐	1.000		5750667.42		A	0.4
5	☐	1.000		5822275.61		A	0.7
6	☐	1.000		5784100.95		A	0.8
7	☐	1.000		5743106.44		A	0.0
8	☐	1.000		5530491.93		A	1.1

Reviewed By:
On:
Inst Id :P8
LB :LB134737



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		11863155.24		A	1.7
2	☐	1.000		11941424.68		A	0.5
3	☐	1.000		11823942.05		A	0.9
4	☐	1.000		11736375.38		A	1.1
5	☐	1.000		11633831.35		A	0.9
6	☐	1.000		11371412.74		A	2.1
7	☐	1.000		11016144.00		A	1.1
8	☐	1.000		9681097.01		A	1.0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4348627.75		A	0.5
2	☐	1.000		4298087.78		A	1.3
3	☐	1.000		4301359.87		A	0.7
4	☐	1.000		4306130.01		A	1.4
5	☐	1.000		4216311.78		A	0.3
6	☐	1.000		4187539.73		A	1.3
7	☐	1.000		4073739.24		A	0.8
8	☐	1.000		3592650.05		A	0.8

US EPA Tune Check Report

Operator Name	Jaswal
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\P8021725 MS-2.b
Acq. Date-Time	2025-02-17 11:33:37
Report Comment	---
Instrument Name	G8403A SG19224459

[No Gas]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9		33038	330384.21			0.450	5.000
24		316891	3168907.24			0.758	5.000
25		39925	399254.19			0.223	5.000
26		46868	468677.55			0.330	5.000
59		178749	1787494.60			0.444	5.000
113		20123	201227.82			0.371	5.000
115		270852	2708522.42			1.178	5.000
206		63973	639725.76			0.543	5.000
207		55817	558165.78			0.325	5.000
208		140777	1407769.31			0.566	5.000
220		0	4.50			51.520	

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

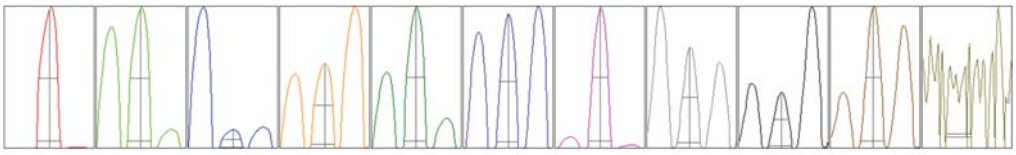
Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	33240	33017	33088	33020	32827
24	319709	316434	318566	316277	313468
25	40016	39919	39950	39963	39779
26	47048	46885	46892	46894	46619
59	178961	179641	177965	177878	179301
113	20178	20169	20182	20062	20023
115	272989	271692	271972	272397	265211
206	64410	63934	64234	63602	63682
207	55781	56105	55835	55752	55610
208	141077	139646	141718	141095	140349

US EPA Tune Check Report

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

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	57340.02	9.05	8.90 - 9.10	
24	537766.39	24.00	23.90 - 24.10	
25	69628.20	25.05	24.90 - 25.10	
26	79604.47	26.05	25.90 - 26.10	
59	324262.69	59.00	58.90 - 59.10	
113	39400.23	113.05	112.90 - 113.10	
115	535184.50	115.05	114.90 - 115.10	
206	127398.30	205.95	205.90 - 206.10	
207	109483.49	206.95	206.90 - 207.10	
208	276599.56	207.95	207.90 - 208.10	
220	0.00	220.00	-	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.62	0.780	0.900	
24	0.63	0.785	0.900	
25	0.61	0.776	0.900	
26	0.62	0.786	0.900	
59	0.59	0.740	0.900	
113	0.54	0.725	0.900	
115	0.53	0.766	0.900	
206	0.51	0.774	0.900	
207	0.51	0.783	0.900	
208	0.50	0.783	0.900	
220	0.83	0.824		

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

Tune Parameters

Plasma Parameters

Plasma Mode --- Nebulizer Gas 0.72 L/min Dilution Gas 0.40 L/min

US EPA Tune Check Report

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	-6.0 V	Omega Lens	8.2 V	Deflect	14.4 V
Extract 2	-195.0 V	Cell Entrance	-30 V	Plate Bias	-50 V
Omega Bias	-95 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	4.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	160 V		

QP Parameters

Mass Gain	103	Axis Gain	0.9959	QP Bias	-4.0 V
Mass Offset	125	Axis Offset	0.07		

Hardware Settings

Torch

Torch H	0.1 mm	Torch V	1.5 mm		

EM

Discriminator	4.0 mV	Analog HV	2188 V	Pulse HV	1093 V

[He]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
59		29770	297695.78			0.232	
89		28428	284281.16			0.413	
205		33040	330399.42			0.368	

Mass	RSD% (Flag)
59	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	29823	29769	29780	29822	29654
89	28583	28300	28418	28505	28335
205	32959	32906	33103	33214	33017

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.72 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	-6.0 V	Omega Lens	8.2 V	Deflect	3.4 V

US EPA Tune Check Report

Extract 2	-195.0 V	Cell Entrance	-50 V	Plate Bias	-60 V
Omega Bias	-95 V	Cell Exit	-70 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	4.5 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	103	Axis Gain	0.9959	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.07		

Hardware Settings

Torch

Torch H	0.1 mm	Torch V	1.5 mm

EM

Discriminator	4.0 mV	Analog HV	2188 V	Pulse HV	1093 V

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:15:49	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.35	0.39	-0.74	0.00	N/A	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	N/A	ppb
Arsenic	75-2	0.00	-0.01	0.01	0.00	N/A	ppb
Barium	135-1	0.00	0.01	0.00	0.00	N/A	ppb
Barium	137-1	0.00	0.00	0.00	0.00	N/A	ppb
Beryllium	9-1	0.00	0.00	0.00	0.00	N/A	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	0.01	-0.01	-0.01	0.00	N/A	ppb
Cadmium	106-1	-0.67	0.15	0.52	0.00	N/A	ppb
Cadmium	111-1	-0.06	0.01	0.04	0.00	N/A	ppb
Calcium	43-1	0.40	-1.44	1.03	0.00	N/A	ppb
Calcium	44-1	0.16	-0.41	0.25	0.00	N/A	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	0.00	0.01	0.00	N/A	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	N/A	ppb
Copper	63-2	0.02	0.01	-0.03	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	54-2	-0.13	-0.24	0.37	0.00	N/A	ppb
Iron	56-2	-0.03	0.04	-0.01	0.00	N/A	ppb
Iron	57-2	-0.49	-0.13	0.61	0.00	N/A	ppb
Krypton	83-1						cps
Lead	206-1	0.00	0.00	0.00	0.00	N/A	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:15:49	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.00	0.00	0.00	0.00	N/A	ppb
Lead	208-1	0.00	0.00	0.00	0.00	N/A	ppb
Lithium	6-1				100		%
Magnesium	24-2	0.21	-0.33	0.12	0.00	N/A	ppb
Manganese	55-2	-0.01	-0.03	0.03	0.00	N/A	ppb
Molybdenum	94-1	-0.02	0.02	0.00	0.00	N/A	ppb
Molybdenum	95-1	0.00	0.01	0.00	0.00	N/A	ppb
Molybdenum	96-1	-0.01	0.01	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	-0.01	0.01	0.00	0.00	N/A	ppb
Phosphorus	31-2	-21.81	-4.36	-11.47	-12.55		ppb
Potassium	39-2	1.02	-0.50	-0.52	0.00	N/A	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	0.16	-0.32	0.16	0.00	N/A	ppb
Selenium	77-2	-0.36	0.73	-0.36	0.00	N/A	ppb
Selenium	78-2	0.10	0.10	-0.21	0.00	N/A	ppb
Silicon	28-1	0.19	-0.22	0.03	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	1.96	-0.46	-1.49	0.00	N/A	ppb
Strontium	86-1	0.02	-0.01	-0.01	0.00	N/A	ppb
Strontium	88-1	0.00	0.00	0.00	0.00	N/A	ppb
Sulfur	34-1	180.73	100.17	154.79	145.23	28.31	ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.00	0.00	0.00	0.00	N/A	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	N/A	ppb
Tin	118-1	0.00	0.00	0.00	0.00	N/A	ppb
Titanium	47-1	0.02	-0.02	-0.01	0.00	N/A	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	N/A	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:15:49	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00	N/A	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	0.04	-0.10	0.06	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	0.00	0.00	N/A	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P8
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:19:11	DataFile Name :	005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19.32	20.49	19.20	19.67	3.62	ppb
Antimony	121-1	2.11	2.09	2.15	2.12	1.55	ppb
Arsenic	75-2	1.03	1.37	1.12	1.17	15.36	ppb
Barium	135-1	10.13	10.28	10.13	10.18	0.86	ppb
Barium	137-1	10.25	10.29	10.40	10.31	0.75	ppb
Beryllium	9-1	1.06	1.10	1.07	1.07	1.66	ppb
Bismuth	209-1				101		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	1.01	1.14	1.00	1.05	7.75	ppb
Cadmium	106-1	1.25	1.32	0.67	1.08	33.18	ppb
Cadmium	111-1	1.12	1.16	1.12	1.13	1.88	ppb
Calcium	43-1	516.95	541.87	531.78	530.20	2.36	ppb
Calcium	44-1	521.59	531.48	532.39	528.49	1.13	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.06	2.12	2.03	2.07	2.15	ppb
Cobalt	59-2	1.14	1.13	1.14	1.14	0.47	ppb
Copper	63-2	2.21	2.24	2.29	2.24	1.76	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				101		%
Holmium	165-2				99		%
Indium	115-1				101		%
Indium	115-2				100		%
Iron	54-2	58.38	59.60	60.77	59.59	2.01	ppb
Iron	56-2	55.95	57.50	56.72	56.72	1.37	ppb
Iron	57-2	53.57	55.28	60.05	56.30	5.96	ppb
Krypton	83-1						cps
Lead	206-1	0.99	0.96	0.96	0.97	2.20	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P8
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:19:11	DataFile Name :	005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.99	0.95	1.00	0.98	3.02	ppb
Lead	208-1	0.98	0.95	0.97	0.97	1.89	ppb
Lithium	6-1				100		%
Magnesium	24-2	550.22	554.45	562.62	555.76	1.13	ppb
Manganese	55-2	1.04	1.04	1.11	1.06	4.02	ppb
Molybdenum	94-1	5.99	5.87	6.00	5.96	1.22	ppb
Molybdenum	95-1	5.11	4.96	5.10	5.05	1.64	ppb
Molybdenum	96-1	5.07	5.07	5.14	5.09	0.81	ppb
Molybdenum	97-1	5.07	4.95	5.10	5.04	1.59	ppb
Molybdenum	98-1	5.05	5.07	5.16	5.09	1.12	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.04	1.09	1.13	1.09	4.08	ppb
Phosphorus	31-2	15.67	8.59	13.38	12.55	28.77	ppb
Potassium	39-2	500.75	517.30	508.15	508.73	1.63	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				101		%
Scandium	45-2				101		%
Selenium	82-1	5.62	5.39	6.11	5.71	6.41	ppb
Selenium	77-2	4.75	4.79	3.98	4.51	10.12	ppb
Selenium	78-2	5.93	5.38	3.83	5.04	21.63	ppb
Silicon	28-1	2.62	2.84	2.78	2.74	4.14	ppb
Silver	107-1	0.95	0.95	0.97	0.96	1.22	ppb
Silver	109-1	0.96	0.98	0.99	0.98	1.56	ppb
Sodium	23-2	530.08	536.07	538.35	534.83	0.80	ppb
Strontium	86-1	1.01	1.07	1.04	1.04	2.77	ppb
Strontium	88-1	1.04	1.05	1.05	1.05	0.61	ppb
Sulfur	34-1	-247.39	-94.26	-94.04	-145.23		ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.99	0.95	1.00	0.98	2.28	ppb
Thallium	205-1	0.99	0.99	0.99	0.99	0.37	ppb
Tin	118-1	5.28	5.26	5.29	5.28	0.30	ppb
Titanium	47-1	5.13	5.21	5.11	5.15	1.02	ppb
Uranium	238-1	0.94	0.95	0.93	0.94	0.85	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P8
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:19:11	DataFile Name :	005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	5.13	5.36	5.31	5.27	2.26	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				104		%
Zinc	66-2	5.29	5.97	5.55	5.60	6.10	ppb
Zirconium	90-1	0.99	0.98	1.02	1.00	1.79	ppb
Zirconium	91-1	0.97	0.97	1.00	0.98	1.88	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P8
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:22:35	DataFile Name :	006CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1014.38	1014.35	1019.87	1016.20	0.31	ppb
Antimony	121-1	48.61	48.90	48.85	48.79	0.32	ppb
Arsenic	75-2	51.39	50.52	51.44	51.11	1.01	ppb
Barium	135-1	241.55	242.93	243.46	242.65	0.41	ppb
Barium	137-1	254.22	252.95	253.49	253.56	0.25	ppb
Beryllium	9-1	49.00	49.84	49.37	49.41	0.85	ppb
Bismuth	209-1				100		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	52.50	52.44	52.66	52.53	0.22	ppb
Cadmium	106-1	51.42	53.53	53.59	52.85	2.34	ppb
Cadmium	111-1	50.39	50.17	50.25	50.27	0.22	ppb
Calcium	43-1	4849.16	5052.53	5052.17	4984.62	2.35	ppb
Calcium	44-1	5045.23	5210.15	5148.49	5134.62	1.62	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	49.04	49.37	48.89	49.10	0.50	ppb
Cobalt	59-2	51.41	50.54	50.80	50.92	0.88	ppb
Copper	63-2	539.72	543.99	545.46	543.06	0.55	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				101		%
Indium	115-1				102		%
Indium	115-2				101		%
Iron	54-2	2693.33	2677.54	2693.19	2688.02	0.34	ppb
Iron	56-2	2754.40	2731.21	2714.83	2733.48	0.73	ppb
Iron	57-2	2603.59	2599.31	2601.11	2601.34	0.08	ppb
Krypton	83-1						cps
Lead	206-1	249.95	256.20	256.44	254.20	1.45	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P8
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:22:35	DataFile Name :	006CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	249.45	252.38	256.04	252.63	1.31	ppb
Lead	208-1	249.24	251.24	252.97	251.15	0.74	ppb
Lithium	6-1				101		%
Magnesium	24-2	5531.47	5549.13	5504.48	5528.36	0.41	ppb
Manganese	55-2	502.56	503.26	500.28	502.03	0.31	ppb
Molybdenum	94-1	501.46	495.22	503.74	500.14	0.88	ppb
Molybdenum	95-1	499.05	499.78	512.96	503.93	1.55	ppb
Molybdenum	96-1	499.04	491.63	506.29	498.99	1.47	ppb
Molybdenum	97-1	504.35	498.19	517.48	506.67	1.94	ppb
Molybdenum	98-1	496.78	491.52	509.91	499.41	1.90	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	51.18	51.60	51.54	51.44	0.44	ppb
Phosphorus	31-2	994.48	990.09	1016.55	1000.37	1.42	ppb
Potassium	39-2	2450.91	2450.55	2448.44	2449.96	0.05	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				102		%
Scandium	45-2				102		%
Selenium	82-1	49.14	51.05	52.14	50.78	2.99	ppb
Selenium	77-2	46.68	44.78	48.50	46.65	3.98	ppb
Selenium	78-2	57.93	52.85	55.92	55.57	4.61	ppb
Silicon	28-1	50.44	54.28	52.31	52.34	3.67	ppb
Silver	107-1	49.79	50.33	50.59	50.24	0.82	ppb
Silver	109-1	50.38	50.77	50.42	50.52	0.43	ppb
Sodium	23-2	5384.18	5323.31	5339.26	5348.92	0.59	ppb
Strontium	86-1	47.32	47.16	48.75	47.74	1.83	ppb
Strontium	88-1	50.90	50.25	52.19	51.11	1.93	ppb
Sulfur	34-1	746.38	1108.01	957.26	937.21	19.38	ppb
Terbium	159-1				101		%
Terbium	159-2				102		%
Thallium	203-1	46.75	47.36	47.97	47.36	1.28	ppb
Thallium	205-1	50.15	50.68	50.49	50.44	0.53	ppb
Tin	118-1	48.80	49.21	49.14	49.05	0.45	ppb
Titanium	47-1	496.37	512.38	512.91	507.22	1.85	ppb
Uranium	238-1	49.25	48.50	49.49	49.08	1.05	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P8
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:22:35	DataFile Name :	006CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	49.09	48.62	49.13	48.95	0.58	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				106		%
Zinc	66-2	521.77	517.96	520.62	520.12	0.38	ppb
Zirconium	90-1	50.86	49.61	48.11	49.52	2.78	ppb
Zirconium	91-1	47.48	46.93	48.32	47.58	1.47	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P8
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:25:39	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2467.81	2532.37	2479.86	2493.34	1.38	ppb
Antimony	121-1	124.93	129.27	130.76	128.32	2.36	ppb
Arsenic	75-2	126.90	128.85	121.96	125.91	2.82	ppb
Barium	135-1	632.06	650.18	639.67	640.63	1.42	ppb
Barium	137-1	624.96	635.12	637.47	632.52	1.05	ppb
Beryllium	9-1	123.37	123.49	124.28	123.72	0.40	ppb
Bismuth	209-1				99		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	127.32	130.51	130.15	129.33	1.35	ppb
Cadmium	106-1	128.98	130.70	130.05	129.91	0.67	ppb
Cadmium	111-1	121.44	125.44	124.47	123.79	1.68	ppb
Calcium	43-1	12344.23	12493.78	12595.51	12477.84	1.01	ppb
Calcium	44-1	12750.05	13007.06	13160.06	12972.39	1.60	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	120.59	121.39	120.75	120.91	0.35	ppb
Cobalt	59-2	125.41	125.79	123.25	124.82	1.10	ppb
Copper	63-2	1312.69	1328.34	1296.86	1312.63	1.20	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				100		%
Indium	115-1				102		%
Indium	115-2				101		%
Iron	54-2	6579.60	6687.77	6570.09	6612.49	0.99	ppb
Iron	56-2	6877.67	6765.38	6605.14	6749.40	2.03	ppb
Iron	57-2	6410.85	6478.26	6368.46	6419.19	0.86	ppb
Krypton	83-1						cps
Lead	206-1	617.54	627.78	639.57	628.29	1.75	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P8
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:25:39	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	615.03	627.52	634.29	625.61	1.56	ppb
Lead	208-1	615.58	623.16	628.92	622.55	1.08	ppb
Lithium	6-1				100		%
Magnesium	24-2	13760.17	13646.71	13291.80	13566.23	1.80	ppb
Manganese	55-2	1307.00	1323.60	1289.40	1306.66	1.31	ppb
Molybdenum	94-1	1241.96	1286.99	1240.81	1256.59	2.10	ppb
Molybdenum	95-1	1259.60	1265.79	1236.48	1253.96	1.23	ppb
Molybdenum	96-1	1252.21	1251.18	1243.34	1248.91	0.39	ppb
Molybdenum	97-1	1254.57	1265.91	1251.51	1257.33	0.60	ppb
Molybdenum	98-1	1251.34	1273.35	1235.21	1253.30	1.53	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	125.64	127.26	124.32	125.74	1.17	ppb
Phosphorus	31-2	2571.94	2626.40	2542.51	2580.29	1.65	ppb
Potassium	39-2	6042.37	6157.93	6033.45	6077.92	1.14	ppb
Rhodium	103-1				100		%
Rhodium	103-2				101		%
Scandium	45-1				102		%
Scandium	45-2				103		%
Selenium	82-1	130.58	129.81	131.89	130.76	0.80	ppb
Selenium	77-2	136.86	146.54	139.82	141.07	3.51	ppb
Selenium	78-2	131.92	134.49	123.89	130.10	4.25	ppb
Silicon	28-1	128.63	129.22	131.74	129.86	1.27	ppb
Silver	107-1	132.08	135.28	135.90	134.42	1.53	ppb
Silver	109-1	133.32	134.44	133.22	133.66	0.51	ppb
Sodium	23-2	13221.09	13221.07	13065.61	13169.25	0.68	ppb
Strontium	86-1	120.51	120.42	119.78	120.24	0.33	ppb
Strontium	88-1	125.41	127.76	124.71	125.96	1.27	ppb
Sulfur	34-1	3000.92	3117.00	2933.27	3017.06	3.08	ppb
Terbium	159-1				101		%
Terbium	159-2				102		%
Thallium	203-1	125.02	124.33	127.65	125.67	1.40	ppb
Thallium	205-1	125.26	125.32	127.20	125.93	0.87	ppb
Tin	118-1	123.78	131.77	128.81	128.12	3.15	ppb
Titanium	47-1	1256.47	1283.71	1293.53	1277.90	1.50	ppb
Uranium	238-1	120.88	121.30	123.42	121.87	1.12	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P8
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:25:39	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	119.83	122.10	120.35	120.76	0.98	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				108		%
Zinc	66-2	1260.51	1285.13	1259.70	1268.44	1.14	ppb
Zirconium	90-1	125.35	127.91	125.28	126.18	1.19	ppb
Zirconium	91-1	118.10	121.48	118.66	119.41	1.51	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P8
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:28:39	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4939.57	5046.17	4956.17	4980.64	1.15	ppb
Antimony	121-1	252.30	254.11	251.68	252.70	0.50	ppb
Arsenic	75-2	257.35	260.60	254.13	257.36	1.26	ppb
Barium	135-1	1257.88	1266.21	1279.44	1267.84	0.86	ppb
Barium	137-1	1248.32	1249.49	1269.95	1255.92	0.97	ppb
Beryllium	9-1	257.87	263.77	261.07	260.90	1.13	ppb
Bismuth	209-1				98		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Cadmium	108-1	257.86	259.56	261.56	259.66	0.71	ppb
Cadmium	106-1	255.02	257.32	260.10	257.48	0.99	ppb
Cadmium	111-1	244.96	248.73	246.83	246.84	0.76	ppb
Calcium	43-1	26659.32	25923.63	26887.25	26490.07	1.90	ppb
Calcium	44-1	26188.93	25948.11	26103.29	26080.11	0.47	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	238.21	245.82	242.36	242.13	1.57	ppb
Cobalt	59-2	261.86	263.99	259.05	261.63	0.95	ppb
Copper	63-2	2590.62	2668.91	2615.51	2625.01	1.52	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				101		%
Holmium	165-2				101		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	54-2	13920.91	13766.73	13566.97	13751.54	1.29	ppb
Iron	56-2	13445.82	13628.05	13330.81	13468.23	1.11	ppb
Iron	57-2	12698.07	12956.70	12814.01	12822.93	1.01	ppb
Krypton	83-1						cps
Lead	206-1	1245.81	1243.89	1252.92	1247.54	0.38	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P8
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:28:39	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1244.66	1241.75	1235.12	1240.51	0.39	ppb
Lead	208-1	1244.27	1241.72	1242.73	1242.91	0.10	ppb
Lithium	6-1				100		%
Magnesium	24-2	26900.54	27417.41	27015.96	27111.30	1.00	ppb
Manganese	55-2	2603.61	2596.09	2595.29	2598.33	0.18	ppb
Molybdenum	94-1	2491.83	2522.62	2475.97	2496.80	0.95	ppb
Molybdenum	95-1	2532.09	2504.73	2509.25	2515.36	0.58	ppb
Molybdenum	96-1	2509.18	2507.89	2457.08	2491.38	1.19	ppb
Molybdenum	97-1	2525.75	2536.88	2444.85	2502.49	2.01	ppb
Molybdenum	98-1	2520.24	2547.68	2479.99	2515.97	1.35	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	247.51	254.40	247.59	249.84	1.58	ppb
Phosphorus	31-2	5195.55	5124.69	5167.36	5162.54	0.69	ppb
Potassium	39-2	13005.20	12889.02	12793.72	12895.98	0.82	ppb
Rhodium	103-1				98		%
Rhodium	103-2				98		%
Scandium	45-1				101		%
Scandium	45-2				102		%
Selenium	82-1	262.18	264.06	259.38	261.88	0.90	ppb
Selenium	77-2	249.63	276.94	253.15	259.91	5.72	ppb
Selenium	78-2	268.65	248.94	240.05	252.55	5.80	ppb
Silicon	28-1	262.32	257.80	262.01	260.71	0.97	ppb
Silver	107-1	260.83	261.56	266.13	262.84	1.09	ppb
Silver	109-1	259.37	262.04	262.74	261.38	0.68	ppb
Sodium	23-2	26651.00	26564.29	26262.57	26492.62	0.77	ppb
Strontium	86-1	239.85	241.70	235.91	239.15	1.24	ppb
Strontium	88-1	254.55	255.31	248.03	252.63	1.58	ppb
Sulfur	34-1	5973.03	5563.88	5875.56	5804.16	3.68	ppb
Terbium	159-1				101		%
Terbium	159-2				102		%
Thallium	203-1	255.50	252.76	253.80	254.02	0.55	ppb
Thallium	205-1	249.98	246.59	250.83	249.13	0.90	ppb
Tin	118-1	255.20	254.52	260.88	256.87	1.36	ppb
Titanium	47-1	2508.41	2532.47	2553.62	2531.50	0.89	ppb
Uranium	238-1	246.81	242.61	243.98	244.46	0.88	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P8
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:28:39	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	241.25	246.95	243.34	243.85	1.18	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				106		%
Zinc	66-2	2501.55	2573.72	2512.54	2529.27	1.54	ppb
Zirconium	90-1	252.77	254.23	251.29	252.76	0.58	ppb
Zirconium	91-1	253.44	254.04	250.74	252.74	0.70	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P8
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:31:29	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9704.87	9755.62	9778.21	9746.23	0.39	ppb
Antimony	121-1	487.43	498.24	503.06	496.24	1.61	ppb
Arsenic	75-2	495.19	500.23	515.14	503.52	2.06	ppb
Barium	135-1	2451.62	2487.16	2543.38	2494.05	1.86	ppb
Barium	137-1	2429.28	2483.65	2561.48	2491.47	2.67	ppb
Beryllium	9-1	494.64	517.17	511.65	507.82	2.31	ppb
Bismuth	209-1				96		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	492.65	506.06	514.25	504.32	2.16	ppb
Cadmium	106-1	496.25	507.45	513.40	505.70	1.72	ppb
Cadmium	111-1	498.84	515.54	509.90	508.09	1.67	ppb
Calcium	43-1	50743.80	53358.31	51864.66	51988.92	2.52	ppb
Calcium	44-1	50054.99	51527.37	51673.70	51085.35	1.75	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	501.50	508.85	510.35	506.90	0.93	ppb
Cobalt	59-2	505.83	507.44	511.88	508.38	0.62	ppb
Copper	63-2	5051.51	5123.13	5165.59	5113.41	1.13	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				101		%
Indium	115-1				99		%
Indium	115-2				99		%
Iron	54-2	26659.00	27237.25	27353.01	27083.08	1.37	ppb
Iron	56-2	25979.88	26394.01	26285.95	26219.95	0.82	ppb
Iron	57-2	26312.16	26591.36	26766.10	26556.54	0.86	ppb
Krypton	83-1						cps
Lead	206-1	2498.09	2507.54	2512.10	2505.91	0.29	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P8
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:31:29	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2486.14	2494.84	2518.17	2499.71	0.66	ppb
Lead	208-1	2477.62	2488.72	2530.98	2499.11	1.13	ppb
Lithium	6-1				100		%
Magnesium	24-2	52165.74	52365.79	51772.73	52101.42	0.58	ppb
Manganese	55-2	5005.32	5063.53	5091.01	5053.29	0.87	ppb
Molybdenum	94-1	4932.63	4974.42	5034.77	4980.61	1.03	ppb
Molybdenum	95-1	4871.89	5020.52	5063.08	4985.16	2.01	ppb
Molybdenum	96-1	4891.64	4936.74	5039.74	4956.04	1.53	ppb
Molybdenum	97-1	4947.07	4905.93	4962.22	4938.41	0.59	ppb
Molybdenum	98-1	4910.24	4968.58	4969.46	4949.43	0.69	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	478.45	484.04	483.85	482.11	0.66	ppb
Phosphorus	31-2	9983.32	10222.45	10067.76	10091.18	1.20	ppb
Potassium	39-2	25034.02	25559.81	25105.84	25233.23	1.13	ppb
Rhodium	103-1				97		%
Rhodium	103-2				97		%
Scandium	45-1				102		%
Scandium	45-2				104		%
Selenium	82-1	491.20	512.98	514.85	506.34	2.60	ppb
Selenium	77-2	531.11	490.21	500.52	507.28	4.19	ppb
Selenium	78-2	474.56	500.33	526.41	500.43	5.18	ppb
Silicon	28-1	503.68	519.13	524.53	515.78	2.10	ppb
Silver	107-1	494.02	503.32	513.23	503.52	1.91	ppb
Silver	109-1	488.46	509.21	508.42	502.03	2.34	ppb
Sodium	23-2	51787.04	51796.52	52210.36	51931.31	0.47	ppb
Strontium	86-1	494.96	507.79	515.11	505.96	2.02	ppb
Strontium	88-1	496.42	497.35	506.69	500.15	1.14	ppb
Sulfur	34-1	9941.82	10336.16	10584.55	10287.51	3.15	ppb
Terbium	159-1				101		%
Terbium	159-2				103		%
Thallium	203-1	489.78	499.89	513.26	500.98	2.35	ppb
Thallium	205-1	495.67	503.63	507.04	502.12	1.16	ppb
Tin	118-1	487.34	508.03	500.06	498.48	2.09	ppb
Titanium	47-1	4922.00	4972.88	5034.15	4976.34	1.13	ppb
Uranium	238-1	484.94	494.75	507.19	495.63	2.25	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P8
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:31:29	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	470.83	477.69	485.08	477.86	1.49	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				108		%
Zinc	66-2	5148.03	5287.60	5186.21	5207.28	1.39	ppb
Zirconium	90-1	486.32	499.64	507.61	497.85	2.16	ppb
Zirconium	91-1	486.88	508.27	507.33	500.82	2.41	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P8
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:34:16	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20081.97	20033.26	20575.99	20230.41	1.48	ppb
Antimony	121-1	998.87	1014.12	989.56	1000.85	1.24	ppb
Arsenic	75-2	987.65	996.49	1004.55	996.23	0.85	ppb
Barium	135-1	4987.43	5012.66	4990.68	4996.93	0.27	ppb
Barium	137-1	5027.50	5006.74	4970.76	5001.67	0.57	ppb
Beryllium	9-1	995.78	996.11	988.78	993.56	0.42	ppb
Bismuth	209-1				93		%
Bismuth	209-2				94		%
Bromine	81-1						cps
Cadmium	108-1	993.72	1000.41	990.14	994.76	0.52	ppb
Cadmium	106-1	990.82	999.87	992.88	994.52	0.48	ppb
Cadmium	111-1	988.43	1004.43	997.78	996.88	0.81	ppb
Calcium	43-1	101376.03	100516.25	102479.40	101457.23	0.97	ppb
Calcium	44-1	102332.40	101548.53	102111.49	101997.47	0.40	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	990.43	1006.11	1000.68	999.07	0.80	ppb
Cobalt	59-2	997.29	988.15	993.18	992.88	0.46	ppb
Copper	63-2	9888.86	9921.82	9895.49	9902.06	0.18	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				97		%
Indium	115-2				95		%
Iron	54-2	53166.18	52826.60	53167.86	53053.55	0.37	ppb
Iron	56-2	51313.66	51870.81	51939.91	51708.13	0.66	ppb
Iron	57-2	52894.03	52652.82	52034.19	52527.02	0.84	ppb
Krypton	83-1						cps
Lead	206-1	5075.72	4948.51	4966.89	4997.04	1.38	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P8
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:34:16	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	5086.47	4973.30	4947.15	5002.31	1.48	ppb
Lead	208-1	5075.05	4977.92	4954.44	5002.47	1.28	ppb
Lithium	6-1				98		%
Magnesium	24-2	102160.99	102711.10	105432.21	103434.77	1.69	ppb
Manganese	55-2	9946.52	9838.31	10039.94	9941.59	1.01	ppb
Molybdenum	94-1	10010.17	10009.73	10009.10	10009.66	0.01	ppb
Molybdenum	95-1	9997.14	10010.00	10001.52	10002.89	0.07	ppb
Molybdenum	96-1	10072.10	10065.88	9934.97	10024.32	0.77	ppb
Molybdenum	97-1	10028.14	10098.64	9959.98	10028.92	0.69	ppb
Molybdenum	98-1	10035.07	9999.84	10027.82	10020.91	0.19	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1011.93	1007.68	1006.85	1008.82	0.27	ppb
Phosphorus	31-2	19856.27	19859.35	19995.55	19903.72	0.40	ppb
Potassium	39-2	49151.41	49159.75	49650.77	49320.64	0.58	ppb
Rhodium	103-1				94		%
Rhodium	103-2				94		%
Scandium	45-1				102		%
Scandium	45-2				104		%
Selenium	82-1	989.40	1008.02	981.88	993.10	1.35	ppb
Selenium	77-2	998.61	974.76	1002.77	992.04	1.52	ppb
Selenium	78-2	981.11	1009.95	1003.63	998.23	1.52	ppb
Silicon	28-1	1008.94	976.16	981.24	988.78	1.78	ppb
Silver	107-1	992.16	1002.03	987.32	993.84	0.75	ppb
Silver	109-1	990.83	991.71	1002.56	995.03	0.66	ppb
Sodium	23-2	102478.41	102723.10	103385.26	102862.26	0.46	ppb
Strontium	86-1	993.74	1011.61	995.97	1000.44	0.97	ppb
Strontium	88-1	997.28	1005.98	994.01	999.09	0.62	ppb
Sulfur	34-1	20042.22	19376.99	19361.93	19593.71	1.98	ppb
Terbium	159-1				100		%
Terbium	159-2				101		%
Thallium	203-1	1013.71	987.62	994.34	998.55	1.36	ppb
Thallium	205-1	1008.05	994.24	994.78	999.02	0.78	ppb
Tin	118-1	997.42	1006.27	992.41	998.70	0.70	ppb
Titanium	47-1	10051.53	9955.25	9993.54	10000.11	0.48	ppb
Uranium	238-1	1024.37	989.41	998.24	1004.01	1.81	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P8
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:34:16	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	1021.11	1006.02	1012.43	1013.19	0.75	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				107		%
Zinc	66-2	9834.16	9866.59	9956.44	9885.73	0.64	ppb
Zirconium	90-1	1004.11	1000.17	996.50	1000.26	0.38	ppb
Zirconium	91-1	1000.24	1001.64	997.28	999.72	0.22	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P8
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:37:01	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	100007.06	100254.44	99679.30	99980.27	0.29	ppb
Antimony	121-1	0.49	0.53	0.47	0.49	6.54	ppb
Arsenic	75-2	0.53	0.45	0.52	0.50	7.94	ppb
Barium	135-1	2.02	2.07	1.92	2.00	3.76	ppb
Barium	137-1	2.14	2.11	2.01	2.09	3.19	ppb
Beryllium	9-1	0.37	0.37	0.30	0.35	10.71	ppb
Bismuth	209-1				82		%
Bismuth	209-2				83		%
Bromine	81-1						cps
Cadmium	108-1	0.77	0.72	0.84	0.78	8.00	ppb
Cadmium	106-1	0.71	0.89	1.32	0.97	31.94	ppb
Cadmium	111-1	0.28	0.31	0.31	0.30	6.41	ppb
Calcium	43-1	500434.80	500419.45	497453.25	499435.84	0.34	ppb
Calcium	44-1	496457.31	505970.88	495846.16	499424.78	1.14	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.87	2.96	2.80	2.87	2.86	ppb
Cobalt	59-2	1.95	2.08	2.01	2.01	3.10	ppb
Copper	63-2	1.91	1.89	1.78	1.86	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				93		%
Holmium	165-2				96		%
Indium	115-1				90		%
Indium	115-2				92		%
Iron	54-2	248855.40	249522.50	248944.48	249107.46	0.15	ppb
Iron	56-2	249507.81	250727.83	248183.80	249473.15	0.51	ppb
Iron	57-2	250384.10	247915.59	249652.97	249317.55	0.51	ppb
Krypton	83-1						cps
Lead	206-1	0.98	0.93	0.95	0.95	2.41	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P8
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:37:01	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.04	0.96	0.90	0.97	7.02	ppb
Lead	208-1	1.01	0.96	0.92	0.97	4.82	ppb
Lithium	6-1				90		%
Magnesium	24-2	494917.28	503187.78	498790.98	498965.34	0.83	ppb
Manganese	55-2	4.40	4.43	4.62	4.48	2.72	ppb
Molybdenum	94-1	7.13	7.28	7.33	7.25	1.47	ppb
Molybdenum	95-1	5.30	5.22	5.29	5.27	0.80	ppb
Molybdenum	96-1	5.41	5.40	5.52	5.45	1.18	ppb
Molybdenum	97-1	5.08	5.18	5.11	5.12	1.03	ppb
Molybdenum	98-1	5.11	5.07	5.07	5.09	0.44	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	3.09	3.08	3.21	3.13	2.24	ppb
Phosphorus	31-2	-18.83	-8.85	-15.40	-14.36		ppb
Potassium	39-2	249536.71	251467.22	249288.67	250097.53	0.48	ppb
Rhodium	103-1				84		%
Rhodium	103-2				86		%
Scandium	45-1				95		%
Scandium	45-2				99		%
Selenium	82-1	0.18	-0.10	0.48	0.19	155.02	ppb
Selenium	77-2	0.69	-0.36	0.66	0.33	182.70	ppb
Selenium	78-2	0.99	0.43	1.26	0.90	47.11	ppb
Silicon	28-1	9.16	9.37	8.85	9.13	2.88	ppb
Silver	107-1	0.18	0.17	0.15	0.17	8.01	ppb
Silver	109-1	0.18	0.16	0.16	0.17	6.24	ppb
Sodium	23-2	498542.59	501009.31	497866.70	499139.53	0.33	ppb
Strontium	86-1	3.04	3.06	3.06	3.05	0.39	ppb
Strontium	88-1	3.04	3.04	3.05	3.04	0.22	ppb
Sulfur	34-1	-541.39	-396.37	-462.53	-466.76		ppb
Terbium	159-1				93		%
Terbium	159-2				97		%
Thallium	203-1	0.11	0.08	0.08	0.09	23.01	ppb
Thallium	205-1	0.10	0.08	0.08	0.09	15.98	ppb
Tin	118-1	0.19	0.20	0.17	0.19	10.21	ppb
Titanium	47-1	2.32	2.33	2.35	2.33	0.73	ppb
Uranium	238-1	0.05	0.04	0.04	0.04	10.89	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P8
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:37:01	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.25	0.25	0.22	0.24	7.11	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				93		%
Yttrium	89-2				103		%
Zinc	66-2	5.22	5.40	5.08	5.23	3.09	ppb
Zirconium	90-1	1.56	1.55	1.61	1.57	2.06	ppb
Zirconium	91-1	1.63	1.67	1.66	1.65	1.24	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P8
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:48:22	DataFile Name :	012ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	487.64	480.62	489.03	485.77	0.93	ppb
Antimony	121-1	214.68	206.92	213.22	211.61	1.95	ppb
Arsenic	75-2	211.27	213.35	205.64	210.09	1.90	ppb
Barium	135-1	100.42	100.17	101.67	100.76	0.79	ppb
Barium	137-1	101.09	100.37	102.52	101.33	1.08	ppb
Beryllium	9-1	102.28	101.45	102.81	102.18	0.67	ppb
Bismuth	209-1				102		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Cadmium	108-1	85.89	84.86	86.74	85.83	1.10	ppb
Cadmium	106-1	84.74	84.13	83.55	84.14	0.71	ppb
Cadmium	111-1	102.31	102.89	103.76	102.99	0.71	ppb
Calcium	43-1	1953.59	1975.87	1987.04	1972.17	0.86	ppb
Calcium	44-1	2083.92	2069.28	2099.35	2084.18	0.72	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	99.59	101.45	100.78	100.60	0.94	ppb
Cobalt	59-2	102.92	104.27	103.49	103.56	0.66	ppb
Copper	63-2	105.02	105.88	105.28	105.39	0.42	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				107		%
Iron	54-2	2167.06	2182.69	2192.38	2180.71	0.59	ppb
Iron	56-2	2181.84	2207.26	2160.91	2183.34	1.06	ppb
Iron	57-2	2061.00	2098.43	2094.04	2084.49	0.98	ppb
Krypton	83-1						cps
Lead	206-1	207.23	211.65	209.56	209.48	1.06	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P8
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:48:22	DataFile Name :	012ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	200.93	201.26	203.08	201.76	0.57	ppb
Lead	208-1	202.25	204.45	204.85	203.85	0.69	ppb
Lithium	6-1				106		%
Magnesium	24-2	1171.70	1145.51	1169.27	1162.16	1.24	ppb
Manganese	55-2	99.45	100.59	99.06	99.70	0.79	ppb
Molybdenum	94-1	0.14	0.14	0.14	0.14	1.70	ppb
Molybdenum	95-1	0.06	0.05	0.07	0.06	13.21	ppb
Molybdenum	96-1	0.16	0.16	0.18	0.17	6.20	ppb
Molybdenum	97-1	0.05	0.06	0.06	0.06	3.94	ppb
Molybdenum	98-1	0.09	0.07	0.08	0.08	14.48	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	105.23	105.45	104.59	105.09	0.42	ppb
Phosphorus	31-2	-25.65	-20.94	-12.81	-19.80		ppb
Potassium	39-2	1956.40	1966.24	1933.38	1952.00	0.86	ppb
Rhodium	103-1				104		%
Rhodium	103-2				104		%
Scandium	45-1				107		%
Scandium	45-2				109		%
Selenium	82-1	210.37	220.22	224.65	218.42	3.35	ppb
Selenium	77-2	207.70	208.07	216.42	210.73	2.34	ppb
Selenium	78-2	223.05	218.13	195.28	212.15	6.98	ppb
Silicon	28-1	0.01	0.34	0.63	0.33	95.02	ppb
Silver	107-1	48.07	48.53	49.06	48.55	1.02	ppb
Silver	109-1	48.48	48.64	49.19	48.77	0.77	ppb
Sodium	23-2	2012.62	1995.86	2003.31	2003.93	0.42	ppb
Strontium	86-1	0.21	0.21	0.20	0.21	4.12	ppb
Strontium	88-1	0.20	0.21	0.22	0.21	4.27	ppb
Sulfur	34-1	-1013.74	-897.77	-750.23	-887.25		ppb
Terbium	159-1				103		%
Terbium	159-2				106		%
Thallium	203-1	200.89	207.32	206.12	204.78	1.67	ppb
Thallium	205-1	201.20	202.66	202.67	202.18	0.42	ppb
Tin	118-1	0.03	0.01	0.02	0.02	62.16	ppb
Titanium	47-1	0.07	0.05	0.06	0.06	20.75	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	23.57	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P8
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:48:22	DataFile Name :	012ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	98.19	98.57	97.88	98.21	0.35	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				105		%
Yttrium	89-2				114		%
Zinc	66-2	200.11	201.34	201.01	200.82	0.32	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	21.06	ppb
Zirconium	91-1	0.13	0.14	0.12	0.13	7.51	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P8
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:52:02	DataFile Name :	013LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20.50	19.51	20.63	20.21	3.03	ppb
Antimony	121-1	2.01	2.00	2.03	2.02	0.79	ppb
Arsenic	75-2	1.04	1.16	1.04	1.08	6.63	ppb
Barium	135-1	9.77	9.78	9.71	9.75	0.43	ppb
Barium	137-1	9.77	9.70	9.94	9.80	1.29	ppb
Beryllium	9-1	1.10	1.10	1.09	1.09	0.65	ppb
Bismuth	209-1				102		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Cadmium	108-1	1.00	1.06	0.80	0.95	13.97	ppb
Cadmium	106-1	1.76	1.09	1.44	1.43	23.48	ppb
Cadmium	111-1	1.02	1.10	1.16	1.09	6.02	ppb
Calcium	43-1	503.12	489.52	495.96	496.20	1.37	ppb
Calcium	44-1	501.90	500.57	499.38	500.62	0.25	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.97	2.02	1.99	1.99	1.15	ppb
Cobalt	59-2	1.08	1.07	1.05	1.07	1.48	ppb
Copper	63-2	2.10	2.03	2.11	2.08	2.24	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				103		%
Indium	115-1				105		%
Indium	115-2				105		%
Iron	54-2	55.56	54.15	57.33	55.68	2.87	ppb
Iron	56-2	53.52	54.56	54.45	54.18	1.06	ppb
Iron	57-2	56.38	53.36	53.30	54.35	3.25	ppb
Krypton	83-1						cps
Lead	206-1	0.98	0.99	1.01	0.99	1.17	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P8
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:52:02	DataFile Name :	013LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.97	1.00	1.03	1.00	3.04	ppb
Lead	208-1	0.99	1.00	1.00	1.00	0.78	ppb
Lithium	6-1				105		%
Magnesium	24-2	502.39	513.77	512.69	509.62	1.23	ppb
Manganese	55-2	1.06	1.13	1.07	1.08	3.81	ppb
Molybdenum	94-1	5.58	5.80	5.80	5.73	2.20	ppb
Molybdenum	95-1	4.69	4.80	4.87	4.79	1.98	ppb
Molybdenum	96-1	4.74	4.77	4.88	4.80	1.52	ppb
Molybdenum	97-1	4.75	4.88	4.94	4.86	1.92	ppb
Molybdenum	98-1	4.73	4.78	4.81	4.77	0.86	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.95	1.01	1.04	1.00	4.68	ppb
Phosphorus	31-2	1.29	-3.83	28.81	8.76	200.39	ppb
Potassium	39-2	488.15	498.50	497.02	494.56	1.13	ppb
Rhodium	103-1				104		%
Rhodium	103-2				104		%
Scandium	45-1				106		%
Scandium	45-2				107		%
Selenium	82-1	5.22	5.12	5.19	5.18	1.00	ppb
Selenium	77-2	8.46	4.54	9.50	7.50	34.83	ppb
Selenium	78-2	5.95	4.84	3.74	4.84	22.89	ppb
Silicon	28-1	3.10	2.62	2.52	2.75	11.31	ppb
Silver	107-1	0.98	1.00	1.01	1.00	1.52	ppb
Silver	109-1	0.99	0.98	1.00	0.99	1.05	ppb
Sodium	23-2	502.31	510.27	512.42	508.33	1.05	ppb
Strontium	86-1	0.94	0.92	0.94	0.93	1.28	ppb
Strontium	88-1	0.95	0.96	0.96	0.95	0.50	ppb
Sulfur	34-1	-566.19	-616.62	-634.00	-605.60		ppb
Terbium	159-1				103		%
Terbium	159-2				105		%
Thallium	203-1	0.94	0.96	0.97	0.96	1.48	ppb
Thallium	205-1	0.97	0.96	0.97	0.96	0.46	ppb
Tin	118-1	4.89	4.87	4.99	4.92	1.31	ppb
Titanium	47-1	4.91	4.91	4.64	4.82	3.24	ppb
Uranium	238-1	0.88	0.88	0.88	0.88	0.23	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P8
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:52:02	DataFile Name :	013LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	4.91	4.94	4.89	4.92	0.51	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				111		%
Zinc	66-2	5.28	5.70	5.47	5.48	3.85	ppb
Zirconium	90-1	0.93	0.94	0.96	0.94	1.89	ppb
Zirconium	91-1	0.97	0.92	0.94	0.95	2.82	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P8
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:55:26	DataFile Name :	014CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.03	-0.16	0.52	0.13	265.32	ppb
Antimony	121-1	0.02	0.02	0.02	0.02	3.49	ppb
Arsenic	75-2	0.00	0.05	0.01	0.02	132.06	ppb
Barium	135-1	0.04	0.04	0.03	0.03	13.51	ppb
Barium	137-1	0.03	0.04	0.03	0.03	15.09	ppb
Beryllium	9-1	0.06	0.06	0.06	0.06	4.94	ppb
Bismuth	209-1				101		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Cadmium	108-1	-0.01	0.01	0.01	0.00	255.92	ppb
Cadmium	106-1	0.25	0.51	-0.22	0.18	204.80	ppb
Cadmium	111-1	0.03	0.04	-0.01	0.02	156.12	ppb
Calcium	43-1	-1.55	-1.87	-2.14	-1.86		ppb
Calcium	44-1	-2.55	-2.80	-3.07	-2.80		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.05	-0.03	-0.05	-0.04		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00		ppb
Copper	63-2	-0.08	-0.06	-0.10	-0.08		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				102		%
Indium	115-1				103		%
Indium	115-2				104		%
Iron	54-2	0.12	0.69	0.61	0.47	65.43	ppb
Iron	56-2	0.33	0.14	0.31	0.26	39.79	ppb
Iron	57-2	-0.06	0.66	0.99	0.53	101.25	ppb
Krypton	83-1						cps
Lead	206-1	0.07	0.05	0.04	0.05	23.30	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P8
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:55:26	DataFile Name :	014CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.04	0.06	0.05	0.05	14.17	ppb
Lead	208-1	0.05	0.05	0.05	0.05	6.51	ppb
Lithium	6-1				104		%
Magnesium	24-2	-6.59	-7.02	-6.40	-6.67		ppb
Manganese	55-2	0.08	0.05	0.05	0.06	30.06	ppb
Molybdenum	94-1	0.01	-0.01	-0.01	0.00		ppb
Molybdenum	95-1	0.00	-0.01	0.00	0.00		ppb
Molybdenum	96-1	0.01	0.00	0.00	0.01	89.67	ppb
Molybdenum	97-1	0.01	-0.01	0.01	0.00	482.54	ppb
Molybdenum	98-1	0.00	-0.01	0.00	0.00		ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.03	-0.02	-0.04	-0.03		ppb
Phosphorus	31-2	-26.68	-22.18	-24.43	-24.43		ppb
Potassium	39-2	4.55	0.66	2.25	2.49	78.62	ppb
Rhodium	103-1				102		%
Rhodium	103-2				103		%
Scandium	45-1				105		%
Scandium	45-2				104		%
Selenium	82-1	0.09	0.01	-0.01	0.03	169.90	ppb
Selenium	77-2	0.62	-0.36	-0.36	-0.04		ppb
Selenium	78-2	0.64	0.35	0.65	0.55	30.71	ppb
Silicon	28-1	0.07	0.05	-0.06	0.02	338.15	ppb
Silver	107-1	0.01	0.01	0.00	0.01	52.10	ppb
Silver	109-1	0.01	0.01	0.01	0.01	24.55	ppb
Sodium	23-2	7.57	7.41	7.50	7.49	1.05	ppb
Strontium	86-1	-0.03	-0.01	-0.01	-0.02		ppb
Strontium	88-1	-0.02	-0.02	-0.02	-0.02		ppb
Sulfur	34-1	-651.90	-690.42	-558.79	-633.70		ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	0.01	0.01	0.01	0.01	1.42	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	20.75	ppb
Tin	118-1	0.01	0.00	0.01	0.01	34.34	ppb
Titanium	47-1	0.01	0.00	-0.01	0.00		ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P8
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:55:26	DataFile Name :	014CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	-0.01	-0.01	0.00	-0.01		ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				110		%
Zinc	66-2	-0.03	0.09	0.20	0.08	135.30	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00		ppb
Zirconium	91-1	0.01	0.00	0.01	0.01	54.68	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P8
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:58:49	DataFile Name :	015ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	99354.97	104083.67	96322.30	99920.31	3.91	ppb
Antimony	121-1	1.13	1.17	1.08	1.13	4.24	ppb
Arsenic	75-2	0.43	0.40	0.29	0.37	19.48	ppb
Barium	135-1	1.40	1.38	1.42	1.40	1.45	ppb
Barium	137-1	1.46	1.45	1.32	1.41	5.47	ppb
Beryllium	9-1	0.30	0.32	0.32	0.31	2.74	ppb
Bismuth	209-1				92		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Cadmium	108-1	19.82	19.33	19.24	19.46	1.59	ppb
Cadmium	106-1	-0.16	-0.11	-1.80	-0.69		ppb
Cadmium	111-1	0.70	0.73	0.50	0.64	19.52	ppb
Calcium	43-1	107400.98	105085.54	105406.37	105964.30	1.18	ppb
Calcium	44-1	106516.17	105156.26	104309.42	105327.28	1.06	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	19.84	20.52	19.71	20.03	2.18	ppb
Cobalt	59-2	1.21	1.25	1.12	1.19	5.32	ppb
Copper	63-2	8.09	8.52	8.05	8.22	3.16	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				99		%
Indium	115-1				99		%
Indium	115-2				98		%
Iron	54-2	109191.24	114548.88	108255.05	110665.06	3.07	ppb
Iron	56-2	110428.59	113873.68	108746.01	111016.09	2.35	ppb
Iron	57-2	111210.33	113717.82	107581.38	110836.51	2.78	ppb
Krypton	83-1						cps
Lead	206-1	4.69	4.67	4.64	4.67	0.49	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P8
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:58:49	DataFile Name :	015ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	4.33	4.31	4.23	4.29	1.17	ppb
Lead	208-1	4.43	4.42	4.34	4.40	1.08	ppb
Lithium	6-1				101		%
Magnesium	24-2	103693.75	105430.24	100982.84	103368.94	2.17	ppb
Manganese	55-2	7.34	7.67	7.65	7.56	2.44	ppb
Molybdenum	94-1	1623.13	1642.03	1618.40	1627.85	0.77	ppb
Molybdenum	95-1	2006.61	2026.02	2012.43	2015.02	0.49	ppb
Molybdenum	96-1	1974.53	1990.85	1944.05	1969.81	1.21	ppb
Molybdenum	97-1	1998.10	2024.50	1987.97	2003.52	0.94	ppb
Molybdenum	98-1	2008.67	2017.59	1994.68	2006.98	0.58	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	5.46	5.67	5.20	5.44	4.41	ppb
Phosphorus	31-2	108960.12	111508.00	107035.01	109167.71	2.06	ppb
Potassium	39-2	105257.50	106820.04	103810.90	105296.15	1.43	ppb
Rhodium	103-1				94		%
Rhodium	103-2				94		%
Scandium	45-1				103		%
Scandium	45-2				103		%
Selenium	82-1	0.11	0.33	0.18	0.21	51.76	ppb
Selenium	77-2	-0.36	-0.36	-0.36	-0.36		ppb
Selenium	78-2	0.07	0.37	0.93	0.46	95.19	ppb
Silicon	28-1	14.75	14.44	14.57	14.59	1.07	ppb
Silver	107-1	0.11	0.13	0.12	0.12	9.27	ppb
Silver	109-1	0.12	0.13	0.12	0.13	1.53	ppb
Sodium	23-2	109727.20	111671.07	106593.41	109330.56	2.34	ppb
Strontium	86-1	33.18	32.76	33.38	33.10	0.97	ppb
Strontium	88-1	35.46	35.48	35.43	35.46	0.07	ppb
Sulfur	34-1	100900.58	98326.87	98213.54	99147.00	1.53	ppb
Terbium	159-1				101		%
Terbium	159-2				100		%
Thallium	203-1	0.15	0.18	0.18	0.17	9.94	ppb
Thallium	205-1	0.15	0.17	0.18	0.17	10.45	ppb
Tin	118-1	0.16	0.16	0.15	0.16	3.96	ppb
Titanium	47-1	2135.32	2137.00	2130.66	2134.32	0.15	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	13.19	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P8
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:58:49	DataFile Name :	015ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.17	0.14	0.12	0.14	14.61	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				102		%
Yttrium	89-2				109		%
Zinc	66-2	10.91	11.23	10.67	10.94	2.54	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	4.14	ppb
Zirconium	91-1	0.02	0.02	0.02	0.02	5.22	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P8
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:02:06	DataFile Name :	016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	99868.33	98943.02	97951.02	98920.79	0.97	ppb
Antimony	121-1	21.22	21.36	21.33	21.30	0.35	ppb
Arsenic	75-2	21.46	20.97	21.96	21.46	2.31	ppb
Barium	135-1	21.46	21.50	21.19	21.38	0.79	ppb
Barium	137-1	21.59	21.53	21.69	21.60	0.37	ppb
Beryllium	9-1	20.70	20.76	20.78	20.75	0.22	ppb
Bismuth	209-1				93		%
Bismuth	209-2				93		%
Bromine	81-1						cps
Cadmium	108-1	35.71	35.12	35.22	35.35	0.89	ppb
Cadmium	106-1	14.79	15.04	14.22	14.68	2.86	ppb
Cadmium	111-1	19.97	20.22	19.82	20.00	1.01	ppb
Calcium	43-1	106847.78	107010.41	107586.69	107148.29	0.36	ppb
Calcium	44-1	106189.49	108092.83	105233.99	106505.43	1.37	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	39.07	39.31	39.57	39.32	0.64	ppb
Cobalt	59-2	21.09	20.82	20.94	20.95	0.63	ppb
Copper	63-2	28.13	27.43	28.06	27.87	1.38	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				102		%
Indium	115-1				100		%
Indium	115-2				101		%
Iron	54-2	109764.65	109369.76	111044.12	110059.51	0.80	ppb
Iron	56-2	109133.47	107914.90	110630.58	109226.32	1.25	ppb
Iron	57-2	108024.99	107629.87	107309.71	107654.86	0.33	ppb
Krypton	83-1						cps
Lead	206-1	24.54	24.57	25.01	24.71	1.07	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P8
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:02:06	DataFile Name :	016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	23.54	23.87	23.97	23.79	0.95	ppb
Lead	208-1	23.91	24.00	24.25	24.05	0.75	ppb
Lithium	6-1				103		%
Magnesium	24-2	103732.04	101117.60	102393.66	102414.43	1.28	ppb
Manganese	55-2	26.21	27.36	26.78	26.78	2.14	ppb
Molybdenum	94-1	1645.05	1655.49	1669.96	1656.83	0.75	ppb
Molybdenum	95-1	2007.74	2032.27	2022.70	2020.90	0.61	ppb
Molybdenum	96-1	1980.00	1959.07	1976.34	1971.80	0.57	ppb
Molybdenum	97-1	2044.07	2017.91	2025.79	2029.25	0.66	ppb
Molybdenum	98-1	2045.29	2045.35	2036.03	2042.22	0.26	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	25.11	24.78	24.94	24.95	0.66	ppb
Phosphorus	31-2	108988.99	107483.22	109054.31	108508.84	0.82	ppb
Potassium	39-2	104944.01	103993.99	103709.50	104215.83	0.62	ppb
Rhodium	103-1				96		%
Rhodium	103-2				95		%
Scandium	45-1				106		%
Scandium	45-2				108		%
Selenium	82-1	21.33	21.57	22.54	21.81	2.94	ppb
Selenium	77-2	27.00	18.42	19.51	21.64	21.58	ppb
Selenium	78-2	21.01	23.80	22.79	22.53	6.27	ppb
Silicon	28-1	15.73	15.07	15.29	15.36	2.19	ppb
Silver	107-1	18.78	18.90	18.88	18.85	0.34	ppb
Silver	109-1	18.92	19.03	19.01	18.99	0.29	ppb
Sodium	23-2	109259.03	107601.85	108312.29	108391.06	0.77	ppb
Strontium	86-1	33.72	33.69	33.51	33.64	0.34	ppb
Strontium	88-1	35.22	36.05	36.34	35.87	1.62	ppb
Sulfur	34-1	100377.81	99044.18	98625.88	99349.29	0.92	ppb
Terbium	159-1				102		%
Terbium	159-2				104		%
Thallium	203-1	20.29	20.49	20.71	20.49	1.04	ppb
Thallium	205-1	20.41	20.73	20.78	20.64	0.98	ppb
Tin	118-1	0.14	0.12	0.12	0.13	8.46	ppb
Titanium	47-1	2153.59	2135.27	2128.81	2139.22	0.60	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	6.27	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P8
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:02:06	DataFile Name :	016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	20.00	19.76	19.94	19.90	0.62	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				111		%
Zinc	66-2	31.20	30.21	30.89	30.77	1.65	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	22.27	ppb
Zirconium	91-1	0.02	0.02	0.02	0.02	16.03	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P8
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:13:13	DataFile Name :	019CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	50884.48	49948.57	50910.74	50581.26	1.08	ppb
Antimony	121-1	482.44	500.69	504.77	495.96	2.40	ppb
Arsenic	75-2	495.92	485.75	484.17	488.61	1.30	ppb
Barium	135-1	2453.09	2521.09	2568.63	2514.27	2.31	ppb
Barium	137-1	2455.10	2489.02	2560.70	2501.61	2.16	ppb
Beryllium	9-1	507.71	514.05	514.31	512.02	0.73	ppb
Bismuth	209-1				87		%
Bismuth	209-2				89		%
Bromine	81-1						cps
Cadmium	108-1	481.02	495.18	505.05	493.75	2.45	ppb
Cadmium	106-1	480.21	484.88	502.92	489.34	2.45	ppb
Cadmium	111-1	475.93	492.10	497.43	488.49	2.29	ppb
Calcium	43-1	253419.43	251895.35	255221.03	253511.94	0.66	ppb
Calcium	44-1	250114.00	249901.65	259420.30	253145.32	2.15	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	485.36	492.22	493.91	490.49	0.92	ppb
Cobalt	59-2	484.18	484.61	487.16	485.31	0.33	ppb
Copper	63-2	4615.70	4713.71	4615.43	4648.28	1.22	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				97		%
Holmium	165-2				99		%
Indium	115-1				94		%
Indium	115-2				97		%
Iron	54-2	128390.18	125218.74	126139.90	126582.94	1.29	ppb
Iron	56-2	125895.95	125905.26	125562.02	125787.74	0.16	ppb
Iron	57-2	126589.68	125458.79	126267.71	126105.39	0.46	ppb
Krypton	83-1						cps
Lead	206-1	2482.01	2495.31	2536.67	2504.66	1.14	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P8
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:13:13	DataFile Name :	019CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2468.14	2483.67	2522.10	2491.30	1.12	ppb
Lead	208-1	2467.35	2487.83	2528.88	2494.69	1.26	ppb
Lithium	6-1				98		%
Magnesium	24-2	253921.79	250136.81	248913.59	250990.73	1.04	ppb
Manganese	55-2	4961.60	4907.42	4928.91	4932.64	0.55	ppb
Molybdenum	94-1	4867.92	5053.08	5018.21	4979.74	1.98	ppb
Molybdenum	95-1	4827.38	5052.89	5035.39	4971.89	2.52	ppb
Molybdenum	96-1	4808.61	4947.25	4956.80	4904.22	1.69	ppb
Molybdenum	97-1	4843.36	4924.55	4957.12	4908.34	1.19	ppb
Molybdenum	98-1	4908.64	4948.98	5025.22	4960.95	1.19	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	493.97	501.67	497.96	497.87	0.77	ppb
Phosphorus	31-2	10115.84	10268.44	10048.53	10144.27	1.11	ppb
Potassium	39-2	125703.92	123646.94	124298.67	124549.84	0.84	ppb
Rhodium	103-1				90		%
Rhodium	103-2				92		%
Scandium	45-1				101		%
Scandium	45-2				107		%
Selenium	82-1	473.31	484.25	491.58	483.05	1.90	ppb
Selenium	77-2	465.88	493.05	539.26	499.40	7.43	ppb
Selenium	78-2	488.43	478.08	453.33	473.28	3.81	ppb
Silicon	28-1	342.13	352.36	356.76	350.42	2.14	ppb
Silver	107-1	482.96	485.88	495.30	488.04	1.32	ppb
Silver	109-1	476.26	483.38	483.58	481.07	0.87	ppb
Sodium	23-2	251242.23	254541.35	250695.73	252159.77	0.83	ppb
Strontium	86-1	490.77	501.74	514.84	502.45	2.40	ppb
Strontium	88-1	483.01	494.48	501.43	492.97	1.89	ppb
Sulfur	34-1	10034.21	10093.72	10587.64	10238.52	2.97	ppb
Terbium	159-1				97		%
Terbium	159-2				102		%
Thallium	203-1	501.89	508.10	515.07	508.35	1.30	ppb
Thallium	205-1	499.97	504.75	513.17	505.96	1.32	ppb
Tin	118-1	484.84	502.82	510.79	499.48	2.66	ppb
Titanium	47-1	4944.35	4959.82	5091.41	4998.53	1.62	ppb
Uranium	238-1	504.75	508.60	517.22	510.19	1.25	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P8
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:13:13	DataFile Name :	019CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	473.43	474.46	468.92	472.27	0.62	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				99		%
Yttrium	89-2				110		%
Zinc	66-2	4757.28	4801.40	4721.83	4760.17	0.84	ppb
Zirconium	90-1	493.57	502.26	508.45	501.43	1.49	ppb
Zirconium	91-1	504.78	506.55	514.81	508.71	1.05	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P8
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:16:11	DataFile Name :	020CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1.06	1.32	0.48	0.95	45.44	ppb
Antimony	121-1	0.14	0.13	0.12	0.13	8.38	ppb
Arsenic	75-2	0.00	0.07	0.01	0.03	145.29	ppb
Barium	135-1	0.45	0.35	0.36	0.39	14.39	ppb
Barium	137-1	0.44	0.36	0.35	0.39	13.06	ppb
Beryllium	9-1	0.32	0.24	0.24	0.27	17.83	ppb
Bismuth	209-1				96		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Cadmium	108-1	0.04	0.03	-0.02	0.02	171.47	ppb
Cadmium	106-1	0.47	-0.18	0.22	0.17	191.65	ppb
Cadmium	111-1	0.06	0.01	0.04	0.04	65.89	ppb
Calcium	43-1	6.92	3.63	4.32	4.96	34.94	ppb
Calcium	44-1	8.37	1.23	2.12	3.91	99.65	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.02	-0.01	-0.01	-0.01		ppb
Cobalt	59-2	0.02	0.00	0.01	0.01	63.50	ppb
Copper	63-2	0.10	0.10	0.07	0.09	19.76	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				97		%
Holmium	165-2				102		%
Indium	115-1				101		%
Indium	115-2				104		%
Iron	54-2	3.09	2.48	1.83	2.47	25.69	ppb
Iron	56-2	3.13	2.72	2.75	2.87	7.99	ppb
Iron	57-2	3.30	3.36	2.91	3.19	7.64	ppb
Krypton	83-1						cps
Lead	206-1	0.24	0.18	0.19	0.21	15.40	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P8
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:16:11	DataFile Name :	020CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.26	0.19	0.18	0.21	21.43	ppb
Lead	208-1	0.25	0.18	0.18	0.20	17.52	ppb
Lithium	6-1				101		%
Magnesium	24-2	-4.93	-4.96	-5.77	-5.22		ppb
Manganese	55-2	0.24	0.21	0.19	0.21	11.10	ppb
Molybdenum	94-1	0.21	0.15	0.12	0.16	29.01	ppb
Molybdenum	95-1	0.16	0.13	0.11	0.13	20.68	ppb
Molybdenum	96-1	0.19	0.12	0.12	0.14	28.83	ppb
Molybdenum	97-1	0.18	0.11	0.12	0.14	25.41	ppb
Molybdenum	98-1	0.18	0.12	0.13	0.14	23.21	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.03	-0.02	0.03	0.01	218.55	ppb
Phosphorus	31-2	-20.89	-12.76	-18.51	-17.39		ppb
Potassium	39-2	22.45	18.92	16.65	19.34	15.11	ppb
Rhodium	103-1				100		%
Rhodium	103-2				103		%
Scandium	45-1				103		%
Scandium	45-2				107		%
Selenium	82-1	0.10	0.32	0.14	0.19	60.36	ppb
Selenium	77-2	-0.36	0.62	-0.36	-0.03		ppb
Selenium	78-2	-0.21	0.36	0.62	0.26	165.00	ppb
Silicon	28-1	4.60	0.91	1.96	2.49	76.41	ppb
Silver	107-1	0.07	0.04	0.04	0.05	29.11	ppb
Silver	109-1	0.05	0.04	0.04	0.04	13.34	ppb
Sodium	23-2	43.93	37.09	36.28	39.10	10.75	ppb
Strontium	86-1	-0.01	-0.04	-0.02	-0.02		ppb
Strontium	88-1	-0.03	-0.03	-0.03	-0.03		ppb
Sulfur	34-1	599.55	-922.19	-524.71	-282.45		ppb
Terbium	159-1				98		%
Terbium	159-2				103		%
Thallium	203-1	0.08	0.06	0.07	0.07	12.86	ppb
Thallium	205-1	0.08	0.06	0.07	0.07	16.29	ppb
Tin	118-1	0.08	0.05	0.06	0.06	27.32	ppb
Titanium	47-1	0.12	0.06	0.08	0.09	32.84	ppb
Uranium	238-1	0.01	0.00	0.00	0.00	53.67	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P8
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:16:11	DataFile Name :	020CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	-0.01	0.00		ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				111		%
Zinc	66-2	0.19	0.30	0.38	0.29	31.36	ppb
Zirconium	90-1	0.03	0.02	0.01	0.02	51.55	ppb
Zirconium	91-1	0.02	0.02	0.03	0.02	20.95	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P8
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:19:38	DataFile Name :	021LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19.18	19.99	20.34	19.84	2.99	ppb
Antimony	121-1	2.05	2.06	2.00	2.04	1.56	ppb
Arsenic	75-2	0.94	1.15	1.02	1.03	10.18	ppb
Barium	135-1	9.98	9.87	9.95	9.93	0.57	ppb
Barium	137-1	10.23	10.01	9.97	10.07	1.37	ppb
Beryllium	9-1	1.14	1.13	1.13	1.13	0.32	ppb
Bismuth	209-1				99		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	0.87	0.99	0.96	0.94	6.92	ppb
Cadmium	106-1	0.99	0.53	1.15	0.89	35.96	ppb
Cadmium	111-1	1.14	1.04	1.05	1.08	5.16	ppb
Calcium	43-1	507.06	512.97	503.75	507.92	0.92	ppb
Calcium	44-1	499.99	499.60	499.74	499.78	0.04	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.93	1.95	2.02	1.96	2.32	ppb
Cobalt	59-2	1.02	1.10	1.07	1.07	3.77	ppb
Copper	63-2	2.13	2.05	2.01	2.06	2.99	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				100		%
Holmium	165-2				101		%
Indium	115-1				104		%
Indium	115-2				104		%
Iron	54-2	56.35	54.58	56.67	55.87	2.01	ppb
Iron	56-2	53.41	54.44	55.01	54.28	1.50	ppb
Iron	57-2	51.88	55.95	51.27	53.03	4.80	ppb
Krypton	83-1						cps
Lead	206-1	1.05	1.02	1.03	1.04	1.41	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P8
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:19:38	DataFile Name :	021LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.00	1.05	1.00	1.02	2.99	ppb
Lead	208-1	1.03	1.03	1.04	1.03	0.19	ppb
Lithium	6-1				106		%
Magnesium	24-2	507.82	512.03	517.08	512.31	0.90	ppb
Manganese	55-2	1.28	1.34	1.26	1.29	3.38	ppb
Molybdenum	94-1	5.49	5.53	5.44	5.49	0.84	ppb
Molybdenum	95-1	4.74	4.68	4.68	4.70	0.76	ppb
Molybdenum	96-1	4.80	4.73	4.80	4.77	0.84	ppb
Molybdenum	97-1	4.87	4.69	4.83	4.80	1.95	ppb
Molybdenum	98-1	4.78	4.59	4.78	4.72	2.31	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.05	1.03	1.15	1.08	6.43	ppb
Phosphorus	31-2	6.47	23.12	18.38	15.99	53.65	ppb
Potassium	39-2	498.39	494.96	508.28	500.54	1.38	ppb
Rhodium	103-1				102		%
Rhodium	103-2				103		%
Scandium	45-1				105		%
Scandium	45-2				106		%
Selenium	82-1	5.23	4.92	5.97	5.37	10.05	ppb
Selenium	77-2	6.43	4.62	6.49	5.84	18.16	ppb
Selenium	78-2	6.17	2.92	4.27	4.45	36.61	ppb
Silicon	28-1	4.28	3.69	3.90	3.96	7.48	ppb
Silver	107-1	0.97	0.99	0.98	0.98	0.83	ppb
Silver	109-1	0.99	0.99	0.99	0.99	0.27	ppb
Sodium	23-2	519.72	524.11	533.52	525.78	1.34	ppb
Strontium	86-1	0.92	0.93	0.93	0.93	0.59	ppb
Strontium	88-1	0.93	0.92	0.92	0.93	0.78	ppb
Sulfur	34-1	-627.07	-828.08	-741.27	-732.14		ppb
Terbium	159-1				100		%
Terbium	159-2				103		%
Thallium	203-1	0.97	0.99	0.96	0.97	1.42	ppb
Thallium	205-1	0.98	0.98	0.99	0.98	0.52	ppb
Tin	118-1	5.06	5.00	5.01	5.03	0.63	ppb
Titanium	47-1	4.96	4.86	4.88	4.90	1.04	ppb
Uranium	238-1	0.86	0.89	0.87	0.87	1.46	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P8
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:19:38	DataFile Name :	021LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	4.80	4.83	5.09	4.91	3.24	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				103		%
Yttrium	89-2				111		%
Zinc	66-2	5.51	5.17	5.99	5.56	7.38	ppb
Zirconium	90-1	0.95	0.93	0.93	0.94	1.16	ppb
Zirconium	91-1	0.94	0.94	0.91	0.93	1.76	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	PB166734BL	Instrumnet Name :	P8
Client Sample ID :	PB166734BL	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:23:10	DataFile Name :	022CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.36	0.74	0.60	0.57	33.35	ppb
Antimony	121-1	0.02	0.03	0.02	0.02	13.29	ppb
Arsenic	75-2	0.00	0.00	-0.01	-0.01		ppb
Barium	135-1	0.16	0.18	0.17	0.17	5.62	ppb
Barium	137-1	0.16	0.18	0.16	0.17	5.01	ppb
Beryllium	9-1	0.11	0.09	0.10	0.10	10.46	ppb
Bismuth	209-1				97		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	0.07	0.07	0.10	0.08	23.09	ppb
Cadmium	106-1	-0.72	-0.37	-0.43	-0.51		ppb
Cadmium	111-1	-0.05	-0.02	-0.03	-0.04		ppb
Calcium	43-1	-2.09	-1.37	-2.10	-1.85		ppb
Calcium	44-1	-3.22	-3.82	-2.94	-3.32		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.00	0.02	0.03	0.01	111.14	ppb
Cobalt	59-2	-0.01	-0.01	0.01	0.00		ppb
Copper	63-2	-0.08	-0.06	-0.05	-0.06		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				99		%
Holmium	165-2				100		%
Indium	115-1				101		%
Indium	115-2				103		%
Iron	54-2	0.34	1.70	1.63	1.22	62.53	ppb
Iron	56-2	0.99	1.15	1.09	1.08	7.64	ppb
Iron	57-2	0.84	0.39	-0.28	0.32	178.52	ppb
Krypton	83-1						cps
Lead	206-1	0.10	0.07	0.10	0.09	15.81	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	PB166734BL	Instrumnet Name :	P8
Client Sample ID :	PB166734BL	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:23:10	DataFile Name :	022CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.10	0.09	0.09	0.09	5.18	ppb
Lead	208-1	0.09	0.08	0.08	0.08	3.91	ppb
Lithium	6-1				104		%
Magnesium	24-2	-5.29	-6.07	-6.12	-5.83		ppb
Manganese	55-2	0.17	0.16	0.12	0.15	18.17	ppb
Molybdenum	94-1	0.03	0.03	0.02	0.02	20.05	ppb
Molybdenum	95-1	0.02	0.02	0.00	0.01	77.74	ppb
Molybdenum	96-1	0.03	0.02	0.02	0.02	19.02	ppb
Molybdenum	97-1	0.03	0.01	0.01	0.02	59.25	ppb
Molybdenum	98-1	0.01	0.01	0.02	0.01	42.73	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.01	0.04	-0.02	0.01	347.05	ppb
Phosphorus	31-2	-23.05	-19.59	-31.44	-24.69		ppb
Potassium	39-2	13.83	11.56	10.05	11.81	16.07	ppb
Rhodium	103-1				101		%
Rhodium	103-2				102		%
Scandium	45-1				104		%
Scandium	45-2				104		%
Selenium	82-1	0.00	0.37	0.37	0.25	85.38	ppb
Selenium	77-2	-0.36	-0.36	-0.36	-0.36		ppb
Selenium	78-2	0.35	0.91	0.65	0.64	43.35	ppb
Silicon	28-1	0.49	0.66	0.83	0.66	25.53	ppb
Silver	107-1	0.01	0.01	0.01	0.01	6.64	ppb
Silver	109-1	0.01	0.01	0.01	0.01	15.58	ppb
Sodium	23-2	21.47	19.67	20.79	20.64	4.38	ppb
Strontium	86-1	-0.02	-0.03	0.00	-0.02		ppb
Strontium	88-1	-0.03	-0.03	-0.03	-0.03		ppb
Sulfur	34-1	-915.77	-922.77	-770.81	-869.79		ppb
Terbium	159-1				99		%
Terbium	159-2				100		%
Thallium	203-1	0.03	0.03	0.03	0.03	2.96	ppb
Thallium	205-1	0.03	0.03	0.03	0.03	11.72	ppb
Tin	118-1	0.01	0.01	0.01	0.01	9.80	ppb
Titanium	47-1	0.03	0.01	0.00	0.01	101.16	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	PB166734BL	Instrumnet Name :	P8
Client Sample ID :	PB166734BL	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:23:10	DataFile Name :	022CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	-0.01	0.00	0.00		ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				102		%
Yttrium	89-2				111		%
Zinc	66-2	0.32	0.21	0.12	0.22	46.73	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	872.72	ppb
Zirconium	91-1	0.01	0.01	0.00	0.01	95.30	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	PB166734BS	Instrumnet Name :	P8
Client Sample ID :	PB166734BS	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:26:31	DataFile Name :	023LCSS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10183.62	10238.91	10004.36	10142.30	1.21	ppb
Antimony	121-1	524.22	519.27	525.04	522.84	0.60	ppb
Arsenic	75-2	516.77	520.49	525.17	520.81	0.81	ppb
Barium	135-1	2654.29	2598.83	2624.15	2625.76	1.06	ppb
Barium	137-1	2635.21	2659.75	2661.74	2652.23	0.56	ppb
Beryllium	9-1	527.17	519.70	507.56	518.14	1.91	ppb
Bismuth	209-1				93		%
Bismuth	209-2				93		%
Bromine	81-1						cps
Cadmium	108-1	520.82	535.61	529.39	528.61	1.41	ppb
Cadmium	106-1	525.06	532.15	537.72	531.65	1.19	ppb
Cadmium	111-1	532.96	533.51	539.29	535.26	0.66	ppb
Calcium	43-1	54121.49	53619.28	53575.24	53772.00	0.56	ppb
Calcium	44-1	53650.09	52703.34	53816.53	53389.98	1.12	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	527.35	527.58	511.33	522.09	1.78	ppb
Cobalt	59-2	519.77	515.92	519.35	518.35	0.41	ppb
Copper	63-2	5274.80	5291.42	5164.55	5243.59	1.32	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				98		%
Holmium	165-2				99		%
Indium	115-1				97		%
Indium	115-2				99		%
Iron	54-2	28343.65	27990.62	28129.17	28154.48	0.63	ppb
Iron	56-2	27311.96	26971.14	27102.61	27128.57	0.63	ppb
Iron	57-2	27692.96	27453.86	27620.68	27589.17	0.44	ppb
Krypton	83-1						cps
Lead	206-1	2586.40	2540.57	2589.99	2572.32	1.07	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	PB166734BS	Instrumnet Name :	P8
Client Sample ID :	PB166734BS	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:26:31	DataFile Name :	023LCSS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2571.80	2567.49	2549.65	2562.98	0.46	ppb
Lead	208-1	2556.37	2559.27	2561.54	2559.06	0.10	ppb
Lithium	6-1				101		%
Magnesium	24-2	55039.90	55908.63	54139.61	55029.38	1.61	ppb
Manganese	55-2	5230.52	5232.81	5255.94	5239.76	0.27	ppb
Molybdenum	94-1	5115.97	5258.18	5230.94	5201.70	1.45	ppb
Molybdenum	95-1	5153.41	5233.96	5301.02	5229.46	1.41	ppb
Molybdenum	96-1	5123.41	5174.39	5148.76	5148.85	0.50	ppb
Molybdenum	97-1	5170.39	5205.22	5203.82	5193.14	0.38	ppb
Molybdenum	98-1	5199.56	5224.50	5257.74	5227.27	0.56	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	493.21	493.32	490.92	492.48	0.27	ppb
Phosphorus	31-2	10779.93	10771.91	10754.01	10768.62	0.12	ppb
Potassium	39-2	26762.83	26477.92	26950.61	26730.45	0.89	ppb
Rhodium	103-1				97		%
Rhodium	103-2				98		%
Scandium	45-1				103		%
Scandium	45-2				106		%
Selenium	82-1	530.26	523.02	521.71	524.99	0.88	ppb
Selenium	77-2	547.95	543.94	546.65	546.18	0.37	ppb
Selenium	78-2	484.98	499.41	516.94	500.45	3.20	ppb
Silicon	28-1	357.29	346.34	351.67	351.77	1.56	ppb
Silver	107-1	532.43	540.00	546.22	539.55	1.28	ppb
Silver	109-1	527.72	530.70	532.08	530.16	0.42	ppb
Sodium	23-2	54571.49	54444.65	53304.51	54106.88	1.29	ppb
Strontium	86-1	528.29	521.55	534.90	528.25	1.26	ppb
Strontium	88-1	520.28	517.97	522.66	520.30	0.45	ppb
Sulfur	34-1	10247.13	9914.56	9907.91	10023.20	1.94	ppb
Terbium	159-1				98		%
Terbium	159-2				101		%
Thallium	203-1	514.85	509.48	520.43	514.92	1.06	ppb
Thallium	205-1	510.96	517.21	520.15	516.11	0.91	ppb
Tin	118-1	536.10	525.92	528.83	530.28	0.99	ppb
Titanium	47-1	5209.19	5111.34	5234.33	5184.95	1.25	ppb
Uranium	238-1	497.82	506.84	506.65	503.77	1.02	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	PB166734BS	Instrumnet Name :	P8
Client Sample ID :	PB166734BS	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:26:31	DataFile Name :	023LCSS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	495.05	497.02	493.46	495.18	0.36	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				110		%
Zinc	66-2	5380.22	5278.01	5272.85	5310.36	1.14	ppb
Zirconium	90-1	514.46	526.22	520.98	520.55	1.13	ppb
Zirconium	91-1	515.88	534.13	528.52	526.17	1.78	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:29:40	DataFile Name :	024AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	14861.07	14860.20	14986.76	14902.67	0.49	ppb
Antimony	121-1	0.15	0.15	0.14	0.14	2.84	ppb
Arsenic	75-2	2.97	3.23	3.26	3.16	5.00	ppb
Barium	135-1	59.11	59.81	60.35	59.76	1.03	ppb
Barium	137-1	58.87	59.91	60.89	59.89	1.69	ppb
Beryllium	9-1	0.70	0.72	0.69	0.71	1.98	ppb
Bismuth	209-1				97		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	1.13	1.05	1.19	1.12	6.35	ppb
Cadmium	106-1	1.31	1.72	1.71	1.58	14.72	ppb
Cadmium	111-1	0.17	0.20	0.17	0.18	7.86	ppb
Calcium	43-1	2509.37	2488.67	2523.00	2507.01	0.69	ppb
Calcium	44-1	2659.58	2668.55	2708.52	2678.88	0.97	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	23.14	23.44	23.65	23.41	1.09	ppb
Cobalt	59-2	4.61	4.78	4.78	4.72	2.03	ppb
Copper	63-2	9.54	9.87	9.80	9.74	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				98		%
Holmium	165-2				101		%
Indium	115-1				102		%
Indium	115-2				103		%
Iron	54-2	19915.58	20616.71	20316.97	20283.09	1.73	ppb
Iron	56-2	19623.52	19944.23	20056.20	19874.65	1.13	ppb
Iron	57-2	18737.63	19013.75	19054.20	18935.19	0.91	ppb
Krypton	83-1						cps
Lead	206-1	15.08	15.38	15.35	15.27	1.06	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:29:40	DataFile Name :	024AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	14.21	14.82	14.87	14.63	2.51	ppb
Lead	208-1	14.60	14.96	15.01	14.86	1.51	ppb
Lithium	6-1				104		%
Magnesium	24-2	1408.96	1418.77	1420.20	1415.97	0.43	ppb
Manganese	55-2	53.41	54.63	54.68	54.24	1.33	ppb
Molybdenum	94-1	14.03	13.82	13.81	13.89	0.90	ppb
Molybdenum	95-1	0.81	0.80	0.78	0.80	2.01	ppb
Molybdenum	96-1	2.20	2.18	2.18	2.19	0.45	ppb
Molybdenum	97-1	0.82	0.86	0.80	0.83	3.56	ppb
Molybdenum	98-1	0.80	0.80	0.79	0.80	0.70	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	8.92	8.87	8.82	8.87	0.54	ppb
Phosphorus	31-2	208.27	182.32	177.04	189.21	8.83	ppb
Potassium	39-2	725.56	730.43	718.03	724.67	0.86	ppb
Rhodium	103-1				101		%
Rhodium	103-2				102		%
Scandium	45-1				107		%
Scandium	45-2				108		%
Selenium	82-1	0.61	0.10	0.13	0.28	102.67	ppb
Selenium	77-2	14.33	20.72	18.46	17.84	18.17	ppb
Selenium	78-2	3.15	3.63	3.19	3.32	7.94	ppb
Silicon	28-1	744.78	732.20	731.00	735.99	1.04	ppb
Silver	107-1	0.06	0.06	0.06	0.06	2.67	ppb
Silver	109-1	0.06	0.05	0.05	0.05	12.42	ppb
Sodium	23-2	40.38	40.52	41.69	40.86	1.76	ppb
Strontium	86-1	6.81	6.82	6.92	6.85	0.95	ppb
Strontium	88-1	6.81	6.89	6.88	6.86	0.62	ppb
Sulfur	34-1	-1214.23	-1278.01	-1289.58	-1260.61		ppb
Terbium	159-1				99		%
Terbium	159-2				103		%
Thallium	203-1	0.22	0.23	0.22	0.22	3.19	ppb
Thallium	205-1	0.22	0.22	0.22	0.22	0.77	ppb
Tin	118-1	0.15	0.13	0.12	0.13	8.69	ppb
Titanium	47-1	257.52	258.29	258.92	258.24	0.27	ppb
Uranium	238-1	1.04	1.05	1.07	1.06	1.29	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:29:40	DataFile Name :	024AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	33.55	33.69	33.06	33.44	0.99	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				103		%
Yttrium	89-2				112		%
Zinc	66-2	25.99	26.12	26.31	26.14	0.62	ppb
Zirconium	90-1	7.18	7.32	7.29	7.26	0.98	ppb
Zirconium	91-1	7.17	7.28	7.36	7.27	1.33	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:32:58	DataFile Name :	025AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	14739.70	14969.02	14789.61	14832.78	0.81	ppb
Antimony	121-1	0.07	0.08	0.08	0.08	4.21	ppb
Arsenic	75-2	3.23	3.13	2.85	3.07	6.35	ppb
Barium	135-1	59.05	60.39	61.01	60.15	1.66	ppb
Barium	137-1	59.59	60.49	62.37	60.82	2.33	ppb
Beryllium	9-1	0.63	0.66	0.66	0.65	2.66	ppb
Bismuth	209-1				95		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	1.02	1.04	1.21	1.09	9.26	ppb
Cadmium	106-1	1.89	2.15	1.33	1.79	23.60	ppb
Cadmium	111-1	0.17	0.21	0.14	0.17	20.61	ppb
Calcium	43-1	2485.88	2500.81	2605.78	2530.83	2.58	ppb
Calcium	44-1	2632.57	2640.44	2774.17	2682.39	2.97	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	23.40	23.62	23.44	23.49	0.49	ppb
Cobalt	59-2	4.69	4.67	4.71	4.69	0.40	ppb
Copper	63-2	9.80	9.92	9.59	9.77	1.67	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				98		%
Holmium	165-2				101		%
Indium	115-1				101		%
Indium	115-2				103		%
Iron	54-2	20150.17	20557.18	19923.40	20210.25	1.59	ppb
Iron	56-2	19832.60	20109.02	19817.85	19919.82	0.82	ppb
Iron	57-2	18872.32	18983.12	18830.52	18895.32	0.42	ppb
Krypton	83-1						cps
Lead	206-1	15.10	15.36	16.02	15.49	3.04	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:32:58	DataFile Name :	025AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	14.44	14.51	15.10	14.68	2.47	ppb
Lead	208-1	14.74	14.77	15.42	14.98	2.57	ppb
Lithium	6-1				102		%
Magnesium	24-2	1404.91	1413.19	1388.25	1402.12	0.91	ppb
Manganese	55-2	53.78	54.85	53.78	54.14	1.14	ppb
Molybdenum	94-1	13.29	13.87	14.17	13.78	3.25	ppb
Molybdenum	95-1	0.72	0.74	0.76	0.74	2.26	ppb
Molybdenum	96-1	2.08	2.07	2.15	2.10	2.18	ppb
Molybdenum	97-1	0.76	0.79	0.76	0.77	2.16	ppb
Molybdenum	98-1	0.74	0.72	0.75	0.73	2.29	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	8.90	9.14	9.15	9.06	1.53	ppb
Phosphorus	31-2	252.12	220.89	181.76	218.26	16.15	ppb
Potassium	39-2	722.25	724.97	712.46	719.89	0.91	ppb
Rhodium	103-1				100		%
Rhodium	103-2				102		%
Scandium	45-1				105		%
Scandium	45-2				108		%
Selenium	82-1	0.39	-0.11	0.27	0.18	141.97	ppb
Selenium	77-2	10.22	17.11	13.96	13.76	25.05	ppb
Selenium	78-2	4.19	4.51	3.88	4.19	7.44	ppb
Silicon	28-1	744.02	741.44	754.39	746.62	0.92	ppb
Silver	107-1	0.04	0.04	0.04	0.04	3.91	ppb
Silver	109-1	0.03	0.03	0.03	0.03	1.57	ppb
Sodium	23-2	37.88	36.59	35.77	36.75	2.89	ppb
Strontium	86-1	6.71	6.86	7.06	6.88	2.54	ppb
Strontium	88-1	6.73	6.84	7.01	6.86	2.08	ppb
Sulfur	34-1	-1186.37	-1195.03	-889.80	-1090.40		ppb
Terbium	159-1				98		%
Terbium	159-2				103		%
Thallium	203-1	0.19	0.21	0.21	0.20	6.05	ppb
Thallium	205-1	0.20	0.22	0.22	0.21	5.30	ppb
Tin	118-1	0.11	0.19	0.12	0.14	33.82	ppb
Titanium	47-1	258.37	260.24	267.58	262.06	1.86	ppb
Uranium	238-1	1.04	1.05	1.10	1.06	3.16	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:32:58	DataFile Name :	025AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	33.32	33.44	33.66	33.47	0.51	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				103		%
Yttrium	89-2				113		%
Zinc	66-2	25.63	26.42	26.42	26.16	1.76	ppb
Zirconium	90-1	7.16	7.28	7.36	7.26	1.38	ppb
Zirconium	91-1	6.98	7.36	7.32	7.22	2.85	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	25
Date & Time Acquired :	2025-02-17 13:36:19	DataFile Name :	026AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3055.00	3055.94	3085.49	3065.48	0.57	ppb
Antimony	121-1	0.03	0.03	0.03	0.03	9.35	ppb
Arsenic	75-2	0.73	0.71	0.77	0.74	4.22	ppb
Barium	135-1	12.23	12.41	12.27	12.30	0.76	ppb
Barium	137-1	12.41	12.33	12.36	12.36	0.34	ppb
Beryllium	9-1	0.20	0.20	0.19	0.20	2.77	ppb
Bismuth	209-1				98		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	0.20	0.22	0.35	0.25	31.91	ppb
Cadmium	106-1	-0.57	0.13	0.26	-0.06		ppb
Cadmium	111-1	-0.02	0.03	0.03	0.01	196.36	ppb
Calcium	43-1	524.56	518.67	526.04	523.09	0.75	ppb
Calcium	44-1	519.12	519.09	525.08	521.09	0.66	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4.67	4.92	4.83	4.80	2.67	ppb
Cobalt	59-2	0.97	0.97	1.01	0.99	2.62	ppb
Copper	63-2	1.93	1.98	2.01	1.97	2.08	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				99		%
Holmium	165-2				100		%
Indium	115-1				102		%
Indium	115-2				103		%
Iron	54-2	3989.38	4033.39	4006.36	4009.71	0.55	ppb
Iron	56-2	4176.22	4246.20	4215.52	4212.65	0.83	ppb
Iron	57-2	3970.46	3998.95	3939.59	3969.67	0.75	ppb
Krypton	83-1						cps
Lead	206-1	3.09	3.18	3.11	3.13	1.46	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	25
Date & Time Acquired :	2025-02-17 13:36:19	DataFile Name :	026AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2.93	3.02	3.08	3.01	2.47	ppb
Lead	208-1	3.00	3.08	3.08	3.05	1.48	ppb
Lithium	6-1				103		%
Magnesium	24-2	289.69	293.54	294.82	292.68	0.91	ppb
Manganese	55-2	11.37	11.03	11.55	11.31	2.33	ppb
Molybdenum	94-1	2.83	2.86	2.96	2.88	2.42	ppb
Molybdenum	95-1	0.16	0.14	0.14	0.15	8.61	ppb
Molybdenum	96-1	0.43	0.44	0.44	0.43	1.47	ppb
Molybdenum	97-1	0.15	0.17	0.15	0.16	9.36	ppb
Molybdenum	98-1	0.16	0.15	0.16	0.16	3.83	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.83	1.88	1.93	1.88	2.76	ppb
Phosphorus	31-2	18.47	30.28	48.75	32.50	46.97	ppb
Potassium	39-2	156.85	161.16	157.31	158.44	1.49	ppb
Rhodium	103-1				101		%
Rhodium	103-2				102		%
Scandium	45-1				105		%
Scandium	45-2				106		%
Selenium	82-1	-0.01	0.14	0.07	0.07	113.50	ppb
Selenium	77-2	4.53	5.47	3.65	4.55	20.02	ppb
Selenium	78-2	0.63	1.46	0.94	1.01	41.49	ppb
Silicon	28-1	154.92	149.78	155.40	153.37	2.03	ppb
Silver	107-1	0.01	0.01	0.01	0.01	34.17	ppb
Silver	109-1	0.01	0.01	0.01	0.01	16.64	ppb
Sodium	23-2	19.64	17.05	17.16	17.95	8.14	ppb
Strontium	86-1	1.43	1.42	1.43	1.43	0.44	ppb
Strontium	88-1	1.35	1.42	1.42	1.40	3.08	ppb
Sulfur	34-1	-1170.48	-1289.84	-1166.09	-1208.81		ppb
Terbium	159-1				99		%
Terbium	159-2				102		%
Thallium	203-1	0.05	0.05	0.05	0.05	0.62	ppb
Thallium	205-1	0.05	0.05	0.06	0.05	4.46	ppb
Tin	118-1	0.03	0.03	0.02	0.03	15.53	ppb
Titanium	47-1	54.09	53.83	54.38	54.10	0.51	ppb
Uranium	238-1	0.21	0.21	0.21	0.21	1.22	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	25
Date & Time Acquired :	2025-02-17 13:36:19	DataFile Name :	026AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	6.84	6.91	7.08	6.94	1.76	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				102		%
Yttrium	89-2				111		%
Zinc	66-2	5.56	6.04	5.94	5.85	4.33	ppb
Zirconium	90-1	1.49	1.50	1.52	1.50	1.07	ppb
Zirconium	91-1	1.50	1.48	1.50	1.49	0.79	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:39:39	DataFile Name :	027AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	15561.73	15458.73	15494.33	15504.93	0.34	ppb
Antimony	121-1	97.40	93.50	99.18	96.69	3.00	ppb
Arsenic	75-2	3.01	2.70	3.24	2.98	8.98	ppb
Barium	135-1	514.61	500.09	499.06	504.59	1.72	ppb
Barium	137-1	522.87	500.98	492.37	505.41	3.11	ppb
Beryllium	9-1	94.48	94.05	93.42	93.98	0.57	ppb
Bismuth	209-1				91		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	93.72	91.15	92.22	92.36	1.39	ppb
Cadmium	106-1	103.03	98.48	99.22	100.24	2.43	ppb
Cadmium	111-1	97.35	93.22	92.65	94.40	2.72	ppb
Calcium	43-1	11739.31	11125.45	11300.60	11388.45	2.78	ppb
Calcium	44-1	12470.50	11643.93	11812.21	11975.54	3.65	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	108.80	108.35	108.71	108.62	0.22	ppb
Cobalt	59-2	95.93	94.59	94.98	95.17	0.73	ppb
Copper	63-2	992.57	991.03	982.90	988.83	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				96		%
Holmium	165-2				99		%
Indium	115-1				98		%
Indium	115-2				102		%
Iron	54-2	23257.34	23236.36	23331.32	23275.00	0.21	ppb
Iron	56-2	22967.80	22743.86	22861.38	22857.68	0.49	ppb
Iron	57-2	21691.94	21832.45	21933.82	21819.40	0.56	ppb
Krypton	83-1						cps
Lead	206-1	507.24	488.51	491.09	495.61	2.05	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:39:39	DataFile Name :	027AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	512.42	496.44	496.99	501.95	1.81	ppb
Lead	208-1	504.10	491.00	489.82	494.97	1.60	ppb
Lithium	6-1				100		%
Magnesium	24-2	10940.75	11044.63	10780.35	10921.91	1.22	ppb
Manganese	55-2	952.95	948.52	944.55	948.67	0.44	ppb
Molybdenum	94-1	472.58	452.22	456.09	460.29	2.35	ppb
Molybdenum	95-1	351.55	336.63	337.06	341.75	2.49	ppb
Molybdenum	96-1	363.67	341.74	343.19	349.53	3.51	ppb
Molybdenum	97-1	350.39	333.56	330.37	338.10	3.18	ppb
Molybdenum	98-1	352.35	331.40	333.21	338.99	3.42	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	100.81	99.56	99.09	99.82	0.89	ppb
Phosphorus	31-2	162.15	190.66	210.07	187.62	12.85	ppb
Potassium	39-2	4804.68	4756.94	4797.48	4786.36	0.54	ppb
Rhodium	103-1				96		%
Rhodium	103-2				98		%
Scandium	45-1				103		%
Scandium	45-2				107		%
Selenium	82-1	98.86	94.44	98.07	97.13	2.43	ppb
Selenium	77-2	109.80	111.99	97.75	106.51	7.20	ppb
Selenium	78-2	97.27	90.45	100.75	96.16	5.45	ppb
Silicon	28-1	873.13	881.40	961.86	905.47	5.41	ppb
Silver	107-1	16.48	15.90	15.96	16.12	1.97	ppb
Silver	109-1	16.53	16.17	15.92	16.21	1.90	ppb
Sodium	23-2	9392.59	9265.86	9351.96	9336.80	0.69	ppb
Strontium	86-1	116.64	111.12	111.29	113.02	2.78	ppb
Strontium	88-1	123.36	117.61	116.78	119.25	3.01	ppb
Sulfur	34-1	-720.53	-1291.06	-1123.61	-1045.07		ppb
Terbium	159-1				97		%
Terbium	159-2				101		%
Thallium	203-1	92.48	90.49	89.71	90.89	1.57	ppb
Thallium	205-1	101.22	95.10	95.11	97.14	3.64	ppb
Tin	118-1	88.24	84.05	83.89	85.39	2.89	ppb
Titanium	47-1	266.34	258.92	268.00	264.42	1.83	ppb
Uranium	238-1	98.29	93.30	93.25	94.95	3.05	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:39:39	DataFile Name :	027AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	123.20	120.72	121.38	121.77	1.06	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				111		%
Zinc	66-2	946.35	934.41	949.33	943.36	0.84	ppb
Zirconium	90-1	104.34	98.11	101.01	101.15	3.08	ppb
Zirconium	91-1	96.57	92.89	93.77	94.41	2.04	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:42:44	DataFile Name :	028AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	15824.43	15877.52	16179.97	15960.64	1.20	ppb
Antimony	121-1	100.66	98.72	99.00	99.46	1.05	ppb
Arsenic	75-2	3.13	2.87	3.07	3.02	4.61	ppb
Barium	135-1	505.49	498.00	513.49	505.66	1.53	ppb
Barium	137-1	520.14	499.23	503.36	507.58	2.18	ppb
Beryllium	9-1	92.05	93.01	93.27	92.77	0.69	ppb
Bismuth	209-1				93		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	93.00	92.68	93.65	93.11	0.53	ppb
Cadmium	106-1	98.32	97.18	97.78	97.76	0.58	ppb
Cadmium	111-1	93.39	93.30	93.44	93.38	0.07	ppb
Calcium	43-1	11337.87	11372.57	11187.67	11299.37	0.87	ppb
Calcium	44-1	11906.93	11902.96	11804.68	11871.52	0.49	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	111.32	111.45	110.59	111.12	0.42	ppb
Cobalt	59-2	97.72	97.45	96.79	97.32	0.49	ppb
Copper	63-2	1003.27	1001.06	975.19	993.17	1.57	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				98		%
Holmium	165-2				99		%
Indium	115-1				99		%
Indium	115-2				101		%
Iron	54-2	23729.34	23896.40	23488.01	23704.58	0.87	ppb
Iron	56-2	23237.80	23313.59	23326.91	23292.77	0.21	ppb
Iron	57-2	22208.27	22390.34	22125.69	22241.43	0.61	ppb
Krypton	83-1						cps
Lead	206-1	490.92	498.04	481.64	490.20	1.68	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:42:44	DataFile Name :	028AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	496.05	498.12	488.40	494.19	1.04	ppb
Lead	208-1	488.68	495.56	486.41	490.22	0.97	ppb
Lithium	6-1				101		%
Magnesium	24-2	11274.22	11290.81	11309.82	11291.62	0.16	ppb
Manganese	55-2	962.30	971.60	969.50	967.80	0.50	ppb
Molybdenum	94-1	463.55	207.04	453.52	374.70	38.77	ppb
Molybdenum	95-1	341.39	153.28	337.63	277.43	38.76	ppb
Molybdenum	96-1	355.97	158.42	348.00	287.46	38.90	ppb
Molybdenum	97-1	348.94	154.18	331.56	278.22	38.74	ppb
Molybdenum	98-1	344.01	152.56	336.49	277.69	39.05	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	101.89	102.22	102.25	102.12	0.20	ppb
Phosphorus	31-2	195.73	142.37	183.25	173.78	16.06	ppb
Potassium	39-2	4821.03	4860.79	4860.88	4847.57	0.47	ppb
Rhodium	103-1				98		%
Rhodium	103-2				99		%
Scandium	45-1				104		%
Scandium	45-2				105		%
Selenium	82-1	96.51	43.03	95.60	78.38	39.07	ppb
Selenium	77-2	124.04	122.66	115.94	120.88	3.59	ppb
Selenium	78-2	92.25	97.23	96.65	95.38	2.85	ppb
Silicon	28-1	886.25	850.75	963.37	900.12	6.40	ppb
Silver	107-1	16.27	16.24	16.33	16.28	0.28	ppb
Silver	109-1	16.03	16.02	16.27	16.10	0.87	ppb
Sodium	23-2	9595.01	9645.79	9537.47	9592.76	0.56	ppb
Strontium	86-1	113.88	50.62	111.13	91.88	38.92	ppb
Strontium	88-1	120.02	52.82	118.24	97.03	39.46	ppb
Sulfur	34-1	-1329.60	-1375.53	-1592.35	-1432.50		ppb
Terbium	159-1				97		%
Terbium	159-2				101		%
Thallium	203-1	87.35	90.51	87.23	88.37	2.10	ppb
Thallium	205-1	95.74	97.17	94.02	95.64	1.65	ppb
Tin	118-1	85.20	84.43	85.75	85.13	0.78	ppb
Titanium	47-1	257.08	251.75	244.54	251.12	2.51	ppb
Uranium	238-1	91.78	93.27	91.62	92.22	0.99	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:42:44	DataFile Name :	028AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	123.97	124.24	124.35	124.19	0.16	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				143		%
Yttrium	89-2				109		%
Zinc	66-2	962.32	954.70	960.05	959.02	0.41	ppb
Zirconium	90-1	101.96	45.19	99.22	82.12	38.99	ppb
Zirconium	91-1	94.52	42.50	92.38	76.46	38.50	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:45:46	DataFile Name :	029AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	15775.90	15765.82	15801.56	15781.10	0.12	ppb
Antimony	121-1	99.25	94.88	93.55	95.89	3.11	ppb
Arsenic	75-2	3.04	2.85	3.21	3.03	5.94	ppb
Barium	135-1	495.12	505.35	503.43	501.30	1.08	ppb
Barium	137-1	496.81	510.13	497.72	501.56	1.48	ppb
Beryllium	9-1	91.29	92.95	92.60	92.28	0.94	ppb
Bismuth	209-1				95		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	91.64	93.15	93.96	92.92	1.27	ppb
Cadmium	106-1	97.09	99.41	97.42	97.97	1.28	ppb
Cadmium	111-1	92.62	94.80	92.46	93.29	1.40	ppb
Calcium	43-1	11313.05	11387.37	11541.49	11413.97	1.02	ppb
Calcium	44-1	11731.10	11869.56	12160.15	11920.27	1.84	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	109.43	110.39	110.88	110.23	0.67	ppb
Cobalt	59-2	95.54	95.90	96.55	96.00	0.53	ppb
Copper	63-2	982.44	988.67	993.35	988.15	0.55	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				98		%
Holmium	165-2				101		%
Indium	115-1				100		%
Indium	115-2				102		%
Iron	54-2	23307.70	23801.95	23499.59	23536.41	1.06	ppb
Iron	56-2	23314.54	23232.91	23105.37	23217.61	0.45	ppb
Iron	57-2	22095.99	22087.76	22007.45	22063.73	0.22	ppb
Krypton	83-1						cps
Lead	206-1	486.45	478.91	490.63	485.33	1.22	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:45:46	DataFile Name :	029AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	477.02	480.28	487.68	481.66	1.13	ppb
Lead	208-1	478.70	478.69	484.19	480.52	0.66	ppb
Lithium	6-1				102		%
Magnesium	24-2	11139.47	11174.51	11090.92	11134.97	0.38	ppb
Manganese	55-2	962.92	963.48	970.45	965.62	0.43	ppb
Molybdenum	94-1	452.60	452.99	457.05	454.21	0.54	ppb
Molybdenum	95-1	336.15	337.27	334.96	336.13	0.34	ppb
Molybdenum	96-1	351.06	355.28	348.04	351.46	1.03	ppb
Molybdenum	97-1	337.69	341.71	336.95	338.78	0.76	ppb
Molybdenum	98-1	332.92	344.86	335.25	337.68	1.87	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	100.02	101.05	101.58	100.89	0.78	ppb
Phosphorus	31-2	193.31	187.90	192.54	191.25	1.53	ppb
Potassium	39-2	4829.67	4786.12	4840.76	4818.85	0.60	ppb
Rhodium	103-1				99		%
Rhodium	103-2				99		%
Scandium	45-1				103		%
Scandium	45-2				106		%
Selenium	82-1	95.47	95.25	94.83	95.18	0.34	ppb
Selenium	77-2	119.47	117.80	115.76	117.67	1.58	ppb
Selenium	78-2	95.65	97.71	91.44	94.93	3.37	ppb
Silicon	28-1	851.75	832.05	986.74	890.18	9.46	ppb
Silver	107-1	15.74	16.34	16.09	16.06	1.88	ppb
Silver	109-1	15.90	16.20	16.07	16.06	0.93	ppb
Sodium	23-2	9586.86	9316.32	9413.84	9439.01	1.45	ppb
Strontium	86-1	109.97	112.40	113.24	111.87	1.52	ppb
Strontium	88-1	115.71	117.42	118.97	117.37	1.39	ppb
Sulfur	34-1	-1512.92	-1428.73	-1279.29	-1406.98		ppb
Terbium	159-1				98		%
Terbium	159-2				102		%
Thallium	203-1	87.04	87.80	89.36	88.07	1.35	ppb
Thallium	205-1	93.68	93.90	94.71	94.10	0.58	ppb
Tin	118-1	83.65	85.69	83.96	84.43	1.30	ppb
Titanium	47-1	252.33	256.82	266.84	258.67	2.87	ppb
Uranium	238-1	89.60	89.38	91.59	90.19	1.35	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:45:46	DataFile Name :	029AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	121.51	122.76	124.16	122.81	1.08	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				102		%
Yttrium	89-2				112		%
Zinc	66-2	948.64	951.35	955.25	951.74	0.35	ppb
Zirconium	90-1	99.41	100.03	101.78	100.41	1.22	ppb
Zirconium	91-1	91.33	94.04	93.87	93.08	1.63	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P8
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:57:50	DataFile Name :	030CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	50325.53	50160.15	50878.65	50454.78	0.75	ppb
Antimony	121-1	497.49	483.30	487.39	489.39	1.49	ppb
Arsenic	75-2	518.87	527.35	517.27	521.16	1.04	ppb
Barium	135-1	2510.52	2437.29	2471.30	2473.04	1.48	ppb
Barium	137-1	2513.55	2456.57	2471.84	2480.65	1.19	ppb
Beryllium	9-1	517.87	521.48	519.12	519.49	0.35	ppb
Bismuth	209-1				82		%
Bismuth	209-2				86		%
Bromine	81-1						cps
Cadmium	108-1	484.18	477.96	477.32	479.82	0.79	ppb
Cadmium	106-1	490.79	476.79	485.60	484.39	1.46	ppb
Cadmium	111-1	494.54	485.51	487.04	489.03	0.99	ppb
Calcium	43-1	255851.65	247227.61	247638.41	250239.22	1.94	ppb
Calcium	44-1	258842.02	249159.88	247735.39	251912.43	2.40	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	483.43	500.39	493.33	492.38	1.73	ppb
Cobalt	59-2	474.31	481.46	489.09	481.62	1.53	ppb
Copper	63-2	4690.43	4640.35	4682.94	4671.24	0.58	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				93		%
Holmium	165-2				95		%
Indium	115-1				90		%
Indium	115-2				92		%
Iron	54-2	126871.07	128601.47	126287.34	127253.29	0.95	ppb
Iron	56-2	124701.49	125916.77	124807.39	125141.88	0.54	ppb
Iron	57-2	124446.53	126165.95	125182.28	125264.92	0.69	ppb
Krypton	83-1						cps
Lead	206-1	2566.87	2522.41	2492.22	2527.17	1.49	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P8
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:57:50	DataFile Name :	030CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2553.81	2475.22	2481.13	2503.39	1.75	ppb
Lead	208-1	2556.81	2487.91	2496.04	2513.59	1.50	ppb
Lithium	6-1				92		%
Magnesium	24-2	250114.10	250424.70	250319.86	250286.22	0.06	ppb
Manganese	55-2	4920.96	4967.87	4871.58	4920.14	0.98	ppb
Molybdenum	94-1	5039.20	4967.27	4940.66	4982.38	1.02	ppb
Molybdenum	95-1	5069.88	4983.19	4916.46	4989.84	1.54	ppb
Molybdenum	96-1	5005.27	4886.68	4862.87	4918.28	1.55	ppb
Molybdenum	97-1	5047.20	4963.98	4914.61	4975.26	1.35	ppb
Molybdenum	98-1	5083.29	4934.29	4969.41	4995.67	1.56	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	495.33	497.12	499.70	497.38	0.44	ppb
Phosphorus	31-2	9940.22	10092.94	10103.17	10045.44	0.91	ppb
Potassium	39-2	124405.60	124463.42	124010.81	124293.28	0.20	ppb
Rhodium	103-1				86		%
Rhodium	103-2				88		%
Scandium	45-1				96		%
Scandium	45-2				101		%
Selenium	82-1	496.87	481.19	475.39	484.48	2.29	ppb
Selenium	77-2	523.35	516.56	545.74	528.55	2.89	ppb
Selenium	78-2	506.54	512.24	510.42	509.74	0.57	ppb
Silicon	28-1	361.60	344.24	346.85	350.90	2.67	ppb
Silver	107-1	493.63	474.70	480.17	482.83	2.02	ppb
Silver	109-1	483.02	473.46	468.25	474.91	1.58	ppb
Sodium	23-2	250032.64	246491.28	250411.90	248978.61	0.87	ppb
Strontium	86-1	506.22	495.62	502.07	501.31	1.07	ppb
Strontium	88-1	501.16	492.88	488.12	494.05	1.33	ppb
Sulfur	34-1	10820.80	10101.10	9996.61	10306.17	4.35	ppb
Terbium	159-1				93		%
Terbium	159-2				96		%
Thallium	203-1	520.89	504.44	504.48	509.94	1.86	ppb
Thallium	205-1	525.28	499.82	502.81	509.30	2.73	ppb
Tin	118-1	494.49	485.16	488.26	489.30	0.97	ppb
Titanium	47-1	5122.12	4881.06	4868.82	4957.33	2.88	ppb
Uranium	238-1	521.03	505.63	510.60	512.42	1.53	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P8
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:57:50	DataFile Name :	030CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	469.15	470.13	475.95	471.74	0.78	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				94		%
Yttrium	89-2				98		%
Zinc	66-2	4744.78	4808.17	4822.24	4791.73	0.86	ppb
Zirconium	90-1	508.33	500.39	503.63	504.12	0.79	ppb
Zirconium	91-1	507.13	513.26	498.70	506.36	1.44	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P8
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:04:00	DataFile Name :	031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.08	0.60	0.59	0.42	69.85	ppb
Antimony	121-1	0.04	0.04	0.04	0.04	7.63	ppb
Arsenic	75-2	-0.01	0.02	0.00	0.00	618.53	ppb
Barium	135-1	0.15	0.20	0.17	0.18	12.53	ppb
Barium	137-1	0.19	0.17	0.16	0.17	8.52	ppb
Beryllium	9-1	0.11	0.09	0.10	0.10	7.89	ppb
Bismuth	209-1				95		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	0.04	0.14	0.06	0.08	66.34	ppb
Cadmium	106-1	-1.48	-1.58	-0.77	-1.28		ppb
Cadmium	111-1	-0.10	-0.12	-0.05	-0.09		ppb
Calcium	43-1	0.84	0.79	3.16	1.60	84.56	ppb
Calcium	44-1	-2.73	-2.68	-2.66	-2.69		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.01	-0.01	0.04	0.01	173.22	ppb
Cobalt	59-2	0.01	0.02	0.00	0.01	85.92	ppb
Copper	63-2	-0.12	-0.07	-0.09	-0.09		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				98		%
Holmium	165-2				98		%
Indium	115-1				100		%
Indium	115-2				102		%
Iron	54-2	0.69	0.40	1.82	0.97	77.64	ppb
Iron	56-2	0.92	0.97	1.00	0.96	4.24	ppb
Iron	57-2	1.19	-0.04	0.78	0.64	97.04	ppb
Krypton	83-1						cps
Lead	206-1	0.12	0.10	0.10	0.11	11.94	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P8
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:04:00	DataFile Name :	031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.09	0.09	0.10	0.09	0.37	ppb
Lead	208-1	0.10	0.09	0.10	0.10	4.08	ppb
Lithium	6-1				101		%
Magnesium	24-2	-4.07	-3.18	-3.85	-3.70		ppb
Manganese	55-2	0.20	0.17	0.23	0.20	15.55	ppb
Molybdenum	94-1	0.07	0.08	0.07	0.07	3.65	ppb
Molybdenum	95-1	0.06	0.06	0.07	0.06	17.49	ppb
Molybdenum	96-1	0.09	0.08	0.07	0.08	11.37	ppb
Molybdenum	97-1	0.07	0.06	0.06	0.06	9.51	ppb
Molybdenum	98-1	0.09	0.08	0.07	0.08	13.76	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.04	0.00	0.02	0.02	92.20	ppb
Phosphorus	31-2	-27.96	-27.78	-16.98	-24.24		ppb
Potassium	39-2	3.61	11.81	3.17	6.20	78.52	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				102		%
Scandium	45-2				104		%
Selenium	82-1	-0.08	-0.24	0.13	-0.07		ppb
Selenium	77-2	-0.36	-0.36	-0.36	-0.36		ppb
Selenium	78-2	2.08	1.81	0.08	1.32	82.25	ppb
Silicon	28-1	0.40	0.42	0.45	0.42	5.19	ppb
Silver	107-1	0.01	0.01	0.01	0.01	23.45	ppb
Silver	109-1	0.01	0.00	0.01	0.01	23.16	ppb
Sodium	23-2	10.75	10.64	9.99	10.46	3.96	ppb
Strontium	86-1	-0.02	-0.01	-0.04	-0.02		ppb
Strontium	88-1	-0.03	-0.03	-0.03	-0.03		ppb
Sulfur	34-1	-1012.21	-1016.86	-854.06	-961.04		ppb
Terbium	159-1				98		%
Terbium	159-2				100		%
Thallium	203-1	0.03	0.03	0.03	0.03	0.76	ppb
Thallium	205-1	0.03	0.03	0.03	0.03	13.16	ppb
Tin	118-1	0.04	0.03	0.03	0.03	24.86	ppb
Titanium	47-1	0.03	0.01	0.01	0.02	77.17	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P8
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:04:00	DataFile Name :	031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.01	-0.01	0.00	0.00		ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				109		%
Zinc	66-2	0.20	0.15	0.23	0.19	21.67	ppb
Zirconium	90-1	0.01	0.00	0.00	0.00	22.75	ppb
Zirconium	91-1	0.02	0.02	0.00	0.01	105.05	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:10:44	DataFile Name :	033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8490.30	8533.84	8431.43	8485.19	0.61	ppb
Antimony	121-1	0.04	0.03	0.03	0.04	3.81	ppb
Arsenic	75-2	1.63	1.81	1.80	1.74	5.71	ppb
Barium	135-1	32.59	33.33	33.14	33.02	1.17	ppb
Barium	137-1	33.09	34.07	34.01	33.72	1.62	ppb
Beryllium	9-1	0.34	0.34	0.34	0.34	0.72	ppb
Bismuth	209-1				99		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Cadmium	108-1	0.55	0.54	0.69	0.59	14.09	ppb
Cadmium	106-1	-0.17	0.31	0.56	0.23	159.93	ppb
Cadmium	111-1	0.01	0.05	0.06	0.04	68.52	ppb
Calcium	43-1	1389.19	1393.73	1411.42	1398.11	0.84	ppb
Calcium	44-1	1476.13	1507.73	1510.29	1498.05	1.27	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	13.24	13.33	13.35	13.31	0.45	ppb
Cobalt	59-2	2.65	2.58	2.60	2.61	1.47	ppb
Copper	63-2	5.36	5.43	5.45	5.41	0.88	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				103		%
Indium	115-1				104		%
Indium	115-2				106		%
Iron	54-2	11581.99	11417.95	11420.84	11473.60	0.82	ppb
Iron	56-2	11483.32	11293.44	11278.99	11351.92	1.00	ppb
Iron	57-2	10756.17	10686.70	10636.44	10693.10	0.56	ppb
Krypton	83-1						cps
Lead	206-1	8.33	8.49	8.52	8.45	1.20	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:10:44	DataFile Name :	033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	8.14	8.07	8.19	8.14	0.72	ppb
Lead	208-1	8.20	8.22	8.35	8.26	1.00	ppb
Lithium	6-1				105		%
Magnesium	24-2	804.03	800.81	786.86	797.24	1.14	ppb
Manganese	55-2	31.06	30.62	30.60	30.76	0.84	ppb
Molybdenum	94-1	7.49	7.60	7.74	7.61	1.64	ppb
Molybdenum	95-1	0.39	0.40	0.39	0.39	1.54	ppb
Molybdenum	96-1	1.13	1.15	1.17	1.15	2.00	ppb
Molybdenum	97-1	0.41	0.41	0.39	0.40	2.89	ppb
Molybdenum	98-1	0.37	0.37	0.39	0.38	2.51	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	4.90	5.07	5.02	4.99	1.83	ppb
Phosphorus	31-2	99.37	131.46	88.04	106.29	21.19	ppb
Potassium	39-2	412.15	420.02	407.95	413.37	1.48	ppb
Rhodium	103-1				104		%
Rhodium	103-2				104		%
Scandium	45-1				108		%
Scandium	45-2				110		%
Selenium	82-1	0.30	0.36	0.17	0.28	35.36	ppb
Selenium	77-2	1.54	4.31	12.74	6.20	94.13	ppb
Selenium	78-2	1.42	2.73	0.86	1.67	57.36	ppb
Silicon	28-1	534.53	493.93	475.18	501.21	6.05	ppb
Silver	107-1	0.02	0.02	0.02	0.02	4.30	ppb
Silver	109-1	0.01	0.01	0.01	0.01	9.85	ppb
Sodium	23-2	16.59	17.33	14.23	16.05	10.09	ppb
Strontium	86-1	3.86	3.81	4.06	3.91	3.36	ppb
Strontium	88-1	3.72	3.77	3.83	3.77	1.49	ppb
Sulfur	34-1	-1577.42	-1583.79	-1479.95	-1547.05		ppb
Terbium	159-1				101		%
Terbium	159-2				105		%
Thallium	203-1	0.12	0.12	0.12	0.12	0.44	ppb
Thallium	205-1	0.11	0.12	0.12	0.12	2.43	ppb
Tin	118-1	0.05	0.07	0.06	0.06	14.22	ppb
Titanium	47-1	145.26	148.31	149.61	147.73	1.51	ppb
Uranium	238-1	0.57	0.59	0.59	0.59	1.98	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:10:44	DataFile Name :	033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	18.71	18.76	18.87	18.78	0.43	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				105		%
Yttrium	89-2				116		%
Zinc	66-2	14.80	15.01	14.62	14.81	1.32	ppb
Zirconium	90-1	4.01	4.08	4.09	4.06	1.09	ppb
Zirconium	91-1	4.05	3.98	4.11	4.05	1.60	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DUPDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:14:02	DataFile Name :	034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	7371.37	7429.11	7334.96	7378.48	0.64	ppb
Antimony	121-1	0.03	0.03	0.03	0.03	14.19	ppb
Arsenic	75-2	1.53	1.67	1.25	1.48	14.54	ppb
Barium	135-1	29.30	29.61	29.26	29.39	0.65	ppb
Barium	137-1	29.67	29.76	29.25	29.56	0.92	ppb
Beryllium	9-1	0.30	0.31	0.30	0.30	1.10	ppb
Bismuth	209-1				98		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Cadmium	108-1	0.61	0.73	0.48	0.61	20.73	ppb
Cadmium	106-1	-0.26	0.33	0.44	0.17	224.99	ppb
Cadmium	111-1	-0.01	0.03	0.05	0.02	137.48	ppb
Calcium	43-1	1224.71	1270.75	1278.44	1257.97	2.31	ppb
Calcium	44-1	1226.93	1257.90	1280.84	1255.22	2.16	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	11.70	11.68	11.57	11.65	0.59	ppb
Cobalt	59-2	2.34	2.36	2.38	2.36	0.86	ppb
Copper	63-2	4.77	4.82	4.77	4.79	0.64	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				108		%
Iron	54-2	9453.90	9529.72	9502.82	9495.48	0.40	ppb
Iron	56-2	9947.22	9952.34	9786.64	9895.40	0.95	ppb
Iron	57-2	9442.90	9461.51	9422.83	9442.41	0.20	ppb
Krypton	83-1						cps
Lead	206-1	7.41	7.78	7.60	7.59	2.45	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DUPDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:14:02	DataFile Name :	034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	7.09	7.33	7.19	7.20	1.63	ppb
Lead	208-1	7.25	7.55	7.38	7.39	2.07	ppb
Lithium	6-1				107		%
Magnesium	24-2	697.65	699.41	694.99	697.35	0.32	ppb
Manganese	55-2	27.22	26.91	27.08	27.07	0.58	ppb
Molybdenum	94-1	6.72	6.72	6.72	6.72	0.06	ppb
Molybdenum	95-1	0.34	0.33	0.34	0.34	1.70	ppb
Molybdenum	96-1	1.03	1.02	1.06	1.03	1.89	ppb
Molybdenum	97-1	0.35	0.35	0.35	0.35	0.90	ppb
Molybdenum	98-1	0.36	0.34	0.36	0.35	2.33	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	4.54	4.30	4.49	4.44	2.87	ppb
Phosphorus	31-2	105.40	83.82	79.95	89.72	15.28	ppb
Potassium	39-2	354.75	357.01	357.87	356.54	0.45	ppb
Rhodium	103-1				105		%
Rhodium	103-2				106		%
Scandium	45-1				108		%
Scandium	45-2				111		%
Selenium	82-1	0.29	0.18	0.41	0.29	39.67	ppb
Selenium	77-2	2.45	7.13	10.77	6.78	61.52	ppb
Selenium	78-2	1.93	2.74	1.38	2.02	33.71	ppb
Silicon	28-1	360.75	362.92	369.74	364.47	1.29	ppb
Silver	107-1	0.01	0.01	0.01	0.01	2.84	ppb
Silver	109-1	0.01	0.01	0.01	0.01	13.51	ppb
Sodium	23-2	13.33	14.02	14.30	13.88	3.58	ppb
Strontium	86-1	3.31	3.38	3.47	3.39	2.44	ppb
Strontium	88-1	3.37	3.35	3.38	3.37	0.56	ppb
Sulfur	34-1	-1589.24	-1492.68	-1359.17	-1480.36		ppb
Terbium	159-1				102		%
Terbium	159-2				106		%
Thallium	203-1	0.10	0.10	0.10	0.10	3.05	ppb
Thallium	205-1	0.10	0.11	0.09	0.10	6.47	ppb
Tin	118-1	0.05	0.04	0.05	0.05	12.80	ppb
Titanium	47-1	128.11	128.92	131.33	129.45	1.29	ppb
Uranium	238-1	0.51	0.52	0.52	0.52	1.71	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DUPDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:14:02	DataFile Name :	034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	16.60	17.03	16.42	16.69	1.87	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				106		%
Yttrium	89-2				117		%
Zinc	66-2	13.56	12.80	13.10	13.15	2.91	ppb
Zirconium	90-1	3.52	3.56	3.60	3.56	1.13	ppb
Zirconium	91-1	3.41	3.60	3.57	3.53	2.83	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01LDL2X50	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	50
Date & Time Acquired :	2025-02-17 14:17:23	DataFile Name :	035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1550.91	1551.40	1512.58	1538.30	1.45	ppb
Antimony	121-1	0.01	0.01	0.01	0.01	3.22	ppb
Arsenic	75-2	0.37	0.37	0.40	0.38	4.14	ppb
Barium	135-1	6.04	5.81	5.83	5.89	2.22	ppb
Barium	137-1	6.18	5.86	6.02	6.02	2.62	ppb
Beryllium	9-1	0.09	0.09	0.09	0.09	3.34	ppb
Bismuth	209-1				98		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Cadmium	108-1	0.17	0.14	0.11	0.14	24.77	ppb
Cadmium	106-1	-0.50	-0.98	-0.41	-0.63		ppb
Cadmium	111-1	-0.04	-0.07	-0.03	-0.04		ppb
Calcium	43-1	259.77	252.58	251.96	254.77	1.70	ppb
Calcium	44-1	257.78	253.07	252.38	254.41	1.16	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.59	2.40	2.58	2.52	4.27	ppb
Cobalt	59-2	0.50	0.48	0.47	0.48	3.26	ppb
Copper	63-2	0.91	0.88	0.88	0.89	1.82	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				102		%
Indium	115-1				105		%
Indium	115-2				106		%
Iron	54-2	2000.77	1969.95	1966.07	1978.93	0.96	ppb
Iron	56-2	2053.84	2080.93	2083.94	2072.90	0.80	ppb
Iron	57-2	1995.92	1924.36	1949.65	1956.64	1.85	ppb
Krypton	83-1						cps
Lead	206-1	1.57	1.54	1.52	1.55	1.87	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01LDL2X50	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	50
Date & Time Acquired :	2025-02-17 14:17:23	DataFile Name :	035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.51	1.45	1.48	1.48	1.95	ppb
Lead	208-1	1.52	1.48	1.50	1.50	1.61	ppb
Lithium	6-1				105		%
Magnesium	24-2	141.89	142.17	140.74	141.60	0.53	ppb
Manganese	55-2	5.51	5.80	5.62	5.64	2.62	ppb
Molybdenum	94-1	1.44	1.38	1.35	1.39	3.01	ppb
Molybdenum	95-1	0.07	0.06	0.07	0.07	11.58	ppb
Molybdenum	96-1	0.20	0.21	0.20	0.20	1.36	ppb
Molybdenum	97-1	0.06	0.06	0.07	0.07	9.56	ppb
Molybdenum	98-1	0.07	0.06	0.06	0.06	12.07	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.91	0.90	1.01	0.94	6.66	ppb
Phosphorus	31-2	-7.44	5.23	-10.34	-4.18		ppb
Potassium	39-2	74.51	78.34	76.57	76.48	2.51	ppb
Rhodium	103-1				104		%
Rhodium	103-2				102		%
Scandium	45-1				106		%
Scandium	45-2				107		%
Selenium	82-1	0.04	0.18	-0.24	-0.01		ppb
Selenium	77-2	0.60	0.62	2.53	1.25	89.08	ppb
Selenium	78-2	-0.21	0.63	-0.21	0.07	666.52	ppb
Silicon	28-1	77.44	75.55	74.54	75.84	1.94	ppb
Silver	107-1	0.00	0.00	0.00	0.00	66.37	ppb
Silver	109-1	0.00	0.00	0.00	0.00	179.43	ppb
Sodium	23-2	6.68	5.38	4.46	5.51	20.27	ppb
Strontium	86-1	0.73	0.70	0.65	0.69	5.93	ppb
Strontium	88-1	0.69	0.65	0.66	0.67	3.46	ppb
Sulfur	34-1	-1174.51	-1369.15	-1310.91	-1284.86		ppb
Terbium	159-1				102		%
Terbium	159-2				104		%
Thallium	203-1	0.02	0.02	0.03	0.02	14.26	ppb
Thallium	205-1	0.03	0.03	0.02	0.03	14.96	ppb
Tin	118-1	0.03	0.03	0.02	0.03	19.63	ppb
Titanium	47-1	27.11	26.59	26.43	26.71	1.33	ppb
Uranium	238-1	0.10	0.10	0.10	0.10	0.90	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01LDL2X50	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	50
Date & Time Acquired :	2025-02-17 14:17:23	DataFile Name :	035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	3.35	3.55	3.46	3.45	2.94	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				113		%
Zinc	66-2	2.79	3.02	3.05	2.95	4.93	ppb
Zirconium	90-1	0.75	0.73	0.73	0.74	1.95	ppb
Zirconium	91-1	0.75	0.73	0.71	0.73	2.75	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:20:43	DataFile Name :	036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	7894.99	7832.06	7845.72	7857.59	0.42	ppb
Antimony	121-1	45.59	46.83	46.23	46.22	1.34	ppb
Arsenic	75-2	1.73	1.29	1.31	1.44	17.10	ppb
Barium	135-1	227.75	233.48	232.99	231.41	1.37	ppb
Barium	137-1	248.20	246.13	243.91	246.08	0.87	ppb
Beryllium	9-1	45.86	46.27	45.65	45.92	0.69	ppb
Bismuth	209-1				97		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	45.85	47.59	46.28	46.57	1.94	ppb
Cadmium	106-1	46.11	49.09	48.55	47.92	3.32	ppb
Cadmium	111-1	45.16	46.35	46.34	45.95	1.49	ppb
Calcium	43-1	5501.89	5608.60	5620.16	5576.88	1.17	ppb
Calcium	44-1	5812.31	5849.97	5863.25	5841.84	0.45	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	54.90	53.79	54.93	54.54	1.19	ppb
Cobalt	59-2	48.21	47.64	48.24	48.03	0.70	ppb
Copper	63-2	485.63	483.61	494.66	487.97	1.21	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				101		%
Indium	115-1				101		%
Indium	115-2				104		%
Iron	54-2	11873.85	11592.96	11579.00	11681.94	1.42	ppb
Iron	56-2	11595.41	11375.61	11665.32	11545.45	1.31	ppb
Iron	57-2	11012.46	10840.99	11022.10	10958.52	0.93	ppb
Krypton	83-1						cps
Lead	206-1	243.47	243.73	238.75	241.99	1.16	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:20:43	DataFile Name :	036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	240.87	249.36	243.29	244.51	1.79	ppb
Lead	208-1	241.19	244.95	239.27	241.80	1.19	ppb
Lithium	6-1				103		%
Magnesium	24-2	5553.07	5561.94	5465.88	5526.96	0.96	ppb
Manganese	55-2	479.11	473.67	480.14	477.64	0.73	ppb
Molybdenum	94-1	208.41	211.65	213.07	211.04	1.13	ppb
Molybdenum	95-1	153.37	157.28	158.27	156.31	1.66	ppb
Molybdenum	96-1	169.09	173.42	173.35	171.95	1.44	ppb
Molybdenum	97-1	152.18	157.26	158.48	155.97	2.14	ppb
Molybdenum	98-1	164.95	166.66	165.21	165.60	0.56	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	49.87	49.16	50.72	49.92	1.56	ppb
Phosphorus	31-2	94.86	46.70	89.53	77.03	34.28	ppb
Potassium	39-2	2379.17	2362.40	2379.11	2373.56	0.41	ppb
Rhodium	103-1				101		%
Rhodium	103-2				101		%
Scandium	45-1				106		%
Scandium	45-2				109		%
Selenium	82-1	47.77	47.63	48.77	48.06	1.30	ppb
Selenium	77-2	43.38	59.65	54.50	52.51	15.83	ppb
Selenium	78-2	44.23	50.40	47.95	47.52	6.54	ppb
Silicon	28-1	423.05	397.66	562.89	461.20	19.29	ppb
Silver	107-1	7.75	8.02	7.97	7.91	1.86	ppb
Silver	109-1	7.72	7.97	7.89	7.86	1.58	ppb
Sodium	23-2	4790.12	4830.94	4696.19	4772.42	1.45	ppb
Strontium	86-1	53.82	55.33	55.52	54.89	1.69	ppb
Strontium	88-1	59.12	59.21	58.93	59.09	0.24	ppb
Sulfur	34-1	-1480.92	-1417.14	-1399.15	-1432.41		ppb
Terbium	159-1				100		%
Terbium	159-2				103		%
Thallium	203-1	43.07	43.73	43.11	43.30	0.85	ppb
Thallium	205-1	45.80	46.34	46.29	46.14	0.64	ppb
Tin	118-1	40.84	41.71	41.52	41.35	1.11	ppb
Titanium	47-1	128.76	125.01	131.38	128.38	2.49	ppb
Uranium	238-1	45.35	45.37	43.74	44.82	2.09	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:20:43	DataFile Name :	036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	61.08	60.60	61.17	60.95	0.51	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				112		%
Zinc	66-2	476.44	467.55	474.49	472.83	0.99	ppb
Zirconium	90-1	48.93	48.59	49.80	49.11	1.27	ppb
Zirconium	91-1	45.10	46.39	46.54	46.01	1.72	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:23:51	DataFile Name :	037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8074.56	8064.89	8020.63	8053.36	0.36	ppb
Antimony	121-1	46.62	47.14	47.50	47.09	0.94	ppb
Arsenic	75-2	1.55	1.60	1.33	1.49	9.77	ppb
Barium	135-1	234.58	238.41	235.40	236.13	0.85	ppb
Barium	137-1	251.59	251.26	249.89	250.91	0.36	ppb
Beryllium	9-1	45.43	46.65	46.44	46.17	1.41	ppb
Bismuth	209-1				97		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	45.89	46.84	46.26	46.33	1.03	ppb
Cadmium	106-1	48.17	49.09	47.98	48.41	1.22	ppb
Cadmium	111-1	46.43	47.70	47.13	47.09	1.36	ppb
Calcium	43-1	5681.79	5666.95	5846.62	5731.78	1.74	ppb
Calcium	44-1	5916.83	5981.83	5966.52	5955.06	0.57	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	55.58	56.19	54.96	55.58	1.10	ppb
Cobalt	59-2	49.80	49.09	49.06	49.32	0.85	ppb
Copper	63-2	505.24	513.50	508.57	509.10	0.82	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				102		%
Indium	115-2				105		%
Iron	54-2	11892.01	12201.69	11899.67	11997.79	1.47	ppb
Iron	56-2	11856.23	11646.43	11751.47	11751.38	0.89	ppb
Iron	57-2	11260.04	11248.69	11258.59	11255.77	0.05	ppb
Krypton	83-1						cps
Lead	206-1	248.17	246.03	244.82	246.34	0.69	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:23:51	DataFile Name :	037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	245.89	249.76	244.96	246.87	1.03	ppb
Lead	208-1	243.56	243.83	241.86	243.08	0.44	ppb
Lithium	6-1				104		%
Magnesium	24-2	5712.54	5665.25	5550.00	5642.60	1.48	ppb
Manganese	55-2	493.02	490.24	488.59	490.62	0.46	ppb
Molybdenum	94-1	212.07	217.15	221.56	216.93	2.19	ppb
Molybdenum	95-1	156.19	170.68	161.59	162.82	4.50	ppb
Molybdenum	96-1	171.54	177.83	176.91	175.43	1.94	ppb
Molybdenum	97-1	157.08	161.79	161.67	160.18	1.68	ppb
Molybdenum	98-1	165.92	174.68	170.92	170.51	2.58	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	51.29	51.12	51.91	51.44	0.81	ppb
Phosphorus	31-2	92.43	67.39	92.12	83.98	17.11	ppb
Potassium	39-2	2455.91	2434.20	2472.01	2454.04	0.77	ppb
Rhodium	103-1				101		%
Rhodium	103-2				102		%
Scandium	45-1				105		%
Scandium	45-2				108		%
Selenium	82-1	50.02	47.79	48.13	48.65	2.47	ppb
Selenium	77-2	62.85	56.36	52.46	57.22	9.18	ppb
Selenium	78-2	61.20	45.33	48.90	51.81	16.07	ppb
Silicon	28-1	409.59	409.99	439.38	419.65	4.07	ppb
Silver	107-1	7.98	8.21	8.19	8.13	1.60	ppb
Silver	109-1	7.97	8.04	8.15	8.05	1.12	ppb
Sodium	23-2	4788.06	4871.36	4802.36	4820.60	0.92	ppb
Strontium	86-1	55.31	56.73	57.43	56.49	1.91	ppb
Strontium	88-1	59.26	60.81	59.60	59.89	1.36	ppb
Sulfur	34-1	-1612.12	-1611.16	-1539.03	-1587.44		ppb
Terbium	159-1				100		%
Terbium	159-2				104		%
Thallium	203-1	43.94	43.78	44.35	44.02	0.66	ppb
Thallium	205-1	47.00	47.51	46.85	47.12	0.74	ppb
Tin	118-1	41.85	42.78	42.20	42.28	1.12	ppb
Titanium	47-1	130.09	129.79	128.33	129.40	0.73	ppb
Uranium	238-1	46.05	46.48	45.78	46.10	0.77	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:23:51	DataFile Name :	037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	62.69	62.78	62.59	62.69	0.15	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				113		%
Zinc	66-2	487.43	483.10	478.30	482.95	0.95	ppb
Zirconium	90-1	49.94	49.84	51.07	50.28	1.35	ppb
Zirconium	91-1	45.76	47.12	47.28	46.72	1.79	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01ADL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:26:56	DataFile Name :	038AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	7777.12	7664.82	7811.86	7751.27	0.99	ppb
Antimony	121-1	45.56	45.32	46.41	45.77	1.25	ppb
Arsenic	75-2	1.18	1.86	1.42	1.49	23.04	ppb
Barium	135-1	226.55	227.02	231.67	228.42	1.24	ppb
Barium	137-1	246.43	239.24	241.77	242.48	1.50	ppb
Beryllium	9-1	45.33	45.40	45.27	45.34	0.14	ppb
Bismuth	209-1				98		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	45.26	45.34	45.67	45.42	0.47	ppb
Cadmium	106-1	45.45	46.72	47.62	46.60	2.33	ppb
Cadmium	111-1	44.84	45.72	46.30	45.62	1.62	ppb
Calcium	43-1	5607.38	5567.64	5528.36	5567.79	0.71	ppb
Calcium	44-1	5857.47	5921.79	5824.00	5867.75	0.85	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	53.94	54.40	53.95	54.10	0.49	ppb
Cobalt	59-2	46.97	46.73	47.51	47.07	0.85	ppb
Copper	63-2	493.12	482.95	484.99	487.02	1.10	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				103		%
Indium	115-1				103		%
Indium	115-2				106		%
Iron	54-2	11645.39	11550.23	11501.07	11565.57	0.63	ppb
Iron	56-2	11400.92	11303.86	11367.98	11357.59	0.43	ppb
Iron	57-2	10821.94	10796.19	10812.69	10810.27	0.12	ppb
Krypton	83-1						cps
Lead	206-1	243.55	235.25	236.66	238.49	1.86	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01ADL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:26:56	DataFile Name :	038AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	244.60	233.63	240.70	239.64	2.32	ppb
Lead	208-1	240.60	236.06	239.31	238.66	0.98	ppb
Lithium	6-1				103		%
Magnesium	24-2	5484.20	5446.73	5367.89	5432.94	1.09	ppb
Manganese	55-2	477.81	471.11	470.06	472.99	0.89	ppb
Molybdenum	94-1	214.14	215.15	217.45	215.58	0.79	ppb
Molybdenum	95-1	157.34	158.95	159.33	158.54	0.66	ppb
Molybdenum	96-1	171.99	174.19	170.73	172.30	1.02	ppb
Molybdenum	97-1	157.15	159.13	159.35	158.54	0.76	ppb
Molybdenum	98-1	167.17	170.60	171.15	169.64	1.27	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	49.50	48.87	49.38	49.25	0.67	ppb
Phosphorus	31-2	95.21	89.12	76.66	87.00	10.87	ppb
Potassium	39-2	2355.98	2372.77	2354.82	2361.19	0.43	ppb
Rhodium	103-1				102		%
Rhodium	103-2				103		%
Scandium	45-1				106		%
Scandium	45-2				109		%
Selenium	82-1	46.60	47.47	48.34	47.47	1.83	ppb
Selenium	77-2	57.53	59.97	54.61	57.37	4.68	ppb
Selenium	78-2	48.05	49.00	49.11	48.72	1.19	ppb
Silicon	28-1	473.04	469.31	407.83	450.06	8.14	ppb
Silver	107-1	7.83	7.92	7.96	7.90	0.85	ppb
Silver	109-1	7.79	7.88	8.02	7.89	1.47	ppb
Sodium	23-2	4627.28	4663.64	4654.45	4648.46	0.41	ppb
Strontium	86-1	55.53	56.43	56.25	56.07	0.85	ppb
Strontium	88-1	59.40	59.56	58.10	59.02	1.36	ppb
Sulfur	34-1	-1646.30	-1670.04	-1775.97	-1697.44		ppb
Terbium	159-1				101		%
Terbium	159-2				105		%
Thallium	203-1	43.17	42.25	43.35	42.92	1.37	ppb
Thallium	205-1	45.95	44.84	45.31	45.37	1.23	ppb
Tin	118-1	41.14	41.19	41.59	41.31	0.60	ppb
Titanium	47-1	123.59	125.22	124.55	124.45	0.66	ppb
Uranium	238-1	44.78	44.69	44.35	44.61	0.51	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01ADL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:26:56	DataFile Name :	038AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	60.59	60.46	60.11	60.39	0.41	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				102		%
Yttrium	89-2				114		%
Zinc	66-2	469.73	469.00	464.02	467.59	0.66	ppb
Zirconium	90-1	46.61	49.28	46.67	47.52	3.21	ppb
Zirconium	91-1	46.03	47.07	46.85	46.65	1.17	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P8
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:30:14	DataFile Name :	039CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	49867.71	49576.83	50494.08	49979.54	0.94	ppb
Antimony	121-1	484.47	478.01	483.44	481.97	0.72	ppb
Arsenic	75-2	483.99	490.39	486.52	486.96	0.66	ppb
Barium	135-1	2537.56	2449.50	2444.50	2477.18	2.11	ppb
Barium	137-1	2502.37	2438.82	2439.53	2460.24	1.48	ppb
Beryllium	9-1	505.71	511.48	518.06	511.75	1.21	ppb
Bismuth	209-1				86		%
Bismuth	209-2				89		%
Bromine	81-1						cps
Cadmium	108-1	477.99	474.89	479.24	477.38	0.47	ppb
Cadmium	106-1	479.21	475.80	482.55	479.19	0.70	ppb
Cadmium	111-1	486.81	477.20	472.47	478.83	1.53	ppb
Calcium	43-1	251266.50	253306.26	251478.07	252016.94	0.45	ppb
Calcium	44-1	252352.93	252608.38	253033.73	252665.01	0.14	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	482.29	478.67	491.50	484.16	1.37	ppb
Cobalt	59-2	472.57	473.64	477.06	474.42	0.49	ppb
Copper	63-2	4510.12	4568.04	4691.13	4589.76	2.01	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				96		%
Holmium	165-2				99		%
Indium	115-1				92		%
Indium	115-2				97		%
Iron	54-2	123383.85	123111.33	126460.71	124318.63	1.50	ppb
Iron	56-2	122347.99	120586.38	125862.77	122932.38	2.19	ppb
Iron	57-2	122537.51	120548.72	126067.80	123051.34	2.27	ppb
Krypton	83-1						cps
Lead	206-1	2499.27	2482.33	2505.59	2495.73	0.48	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P8
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:30:14	DataFile Name :	039CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2510.60	2445.24	2511.56	2489.13	1.53	ppb
Lead	208-1	2507.48	2474.73	2507.18	2496.46	0.75	ppb
Lithium	6-1				95		%
Magnesium	24-2	246448.02	244587.37	248648.08	246561.15	0.82	ppb
Manganese	55-2	4911.36	4783.94	4926.26	4873.85	1.60	ppb
Molybdenum	94-1	5029.79	5001.84	4948.97	4993.54	0.82	ppb
Molybdenum	95-1	5005.58	4953.61	4908.77	4955.98	0.98	ppb
Molybdenum	96-1	4969.70	4897.47	4952.48	4939.88	0.76	ppb
Molybdenum	97-1	5017.13	4893.44	4950.23	4953.60	1.25	ppb
Molybdenum	98-1	5045.73	4925.45	4982.60	4984.59	1.21	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	453.77	456.48	465.05	458.43	1.28	ppb
Phosphorus	31-2	9889.53	10126.43	10153.12	10056.36	1.44	ppb
Potassium	39-2	123606.68	121647.82	125628.06	123627.52	1.61	ppb
Rhodium	103-1				88		%
Rhodium	103-2				92		%
Scandium	45-1				99		%
Scandium	45-2				107		%
Selenium	82-1	487.86	482.21	478.57	482.88	0.97	ppb
Selenium	77-2	520.18	503.29	478.53	500.66	4.18	ppb
Selenium	78-2	468.59	453.94	449.14	457.23	2.22	ppb
Silicon	28-1	349.90	348.18	346.53	348.20	0.48	ppb
Silver	107-1	471.06	477.30	479.58	475.98	0.93	ppb
Silver	109-1	472.74	467.58	472.12	470.81	0.60	ppb
Sodium	23-2	245211.97	244788.72	247961.68	245987.45	0.70	ppb
Strontium	86-1	501.63	507.75	502.68	504.02	0.65	ppb
Strontium	88-1	494.57	491.38	491.74	492.56	0.36	ppb
Sulfur	34-1	9952.68	9635.38	9496.80	9694.95	2.41	ppb
Terbium	159-1				96		%
Terbium	159-2				101		%
Thallium	203-1	508.89	502.56	505.98	505.81	0.63	ppb
Thallium	205-1	509.18	504.82	502.97	505.66	0.63	ppb
Tin	118-1	484.49	482.48	490.35	485.78	0.84	ppb
Titanium	47-1	4942.30	4950.98	4939.68	4944.32	0.12	ppb
Uranium	238-1	511.11	505.06	507.12	507.77	0.61	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P8
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:30:14	DataFile Name :	039CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	461.35	460.52	476.61	466.16	1.94	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				97		%
Yttrium	89-2				110		%
Zinc	66-2	4628.94	4699.73	4735.85	4688.17	1.16	ppb
Zirconium	90-1	506.78	502.40	502.34	503.84	0.51	ppb
Zirconium	91-1	501.76	508.03	505.21	505.00	0.62	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P8
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:34:11	DataFile Name :	040CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.00	0.42	0.10	0.17	129.03	ppb
Antimony	121-1	0.08	0.07	0.08	0.08	2.92	ppb
Arsenic	75-2	0.02	0.02	0.02	0.02	1.42	ppb
Barium	135-1	0.23	0.21	0.25	0.23	10.26	ppb
Barium	137-1	0.25	0.22	0.18	0.22	14.94	ppb
Beryllium	9-1	0.12	0.12	0.12	0.12	3.78	ppb
Bismuth	209-1				99		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Cadmium	108-1	0.11	0.11	0.14	0.12	16.00	ppb
Cadmium	106-1	-1.03	-1.27	-0.50	-0.93		ppb
Cadmium	111-1	-0.06	-0.08	-0.03	-0.06		ppb
Calcium	43-1	1.84	0.74	0.22	0.93	88.90	ppb
Calcium	44-1	-2.97	-3.53	-4.39	-3.63		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.02	-0.02	-0.03	-0.02		ppb
Cobalt	59-2	0.01	0.01	0.02	0.01	71.66	ppb
Copper	63-2	-0.08	-0.10	-0.13	-0.11		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				102		%
Indium	115-1				104		%
Indium	115-2				106		%
Iron	54-2	0.81	1.06	0.91	0.93	13.88	ppb
Iron	56-2	1.37	1.40	1.24	1.34	6.38	ppb
Iron	57-2	0.77	0.53	1.27	0.86	43.76	ppb
Krypton	83-1						cps
Lead	206-1	0.09	0.07	0.08	0.08	9.59	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P8
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:34:11	DataFile Name :	040CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.09	0.09	0.07	0.09	14.23	ppb
Lead	208-1	0.09	0.07	0.07	0.08	10.09	ppb
Lithium	6-1				104		%
Magnesium	24-2	-3.85	-4.05	-4.34	-4.08		ppb
Manganese	55-2	0.20	0.20	0.17	0.19	8.68	ppb
Molybdenum	94-1	0.11	0.10	0.09	0.10	9.71	ppb
Molybdenum	95-1	0.09	0.10	0.07	0.08	15.51	ppb
Molybdenum	96-1	0.12	0.10	0.08	0.10	17.22	ppb
Molybdenum	97-1	0.11	0.08	0.08	0.09	13.84	ppb
Molybdenum	98-1	0.11	0.10	0.09	0.10	13.92	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.01	-0.06	-0.01	-0.02		ppb
Phosphorus	31-2	-23.16	-30.19	-15.16	-22.84		ppb
Potassium	39-2	6.87	7.59	4.71	6.39	23.47	ppb
Rhodium	103-1				104		%
Rhodium	103-2				106		%
Scandium	45-1				106		%
Scandium	45-2				108		%
Selenium	82-1	-0.26	0.09	0.09	-0.03		ppb
Selenium	77-2	-0.36	-0.36	-0.36	-0.36		ppb
Selenium	78-2	1.14	0.06	0.61	0.61	88.78	ppb
Silicon	28-1	-0.04	0.22	-0.23	-0.02		ppb
Silver	107-1	0.03	0.02	0.02	0.02	15.06	ppb
Silver	109-1	0.03	0.02	0.02	0.02	7.16	ppb
Sodium	23-2	11.87	11.99	11.61	11.82	1.64	ppb
Strontium	86-1	-0.04	-0.03	-0.04	-0.03		ppb
Strontium	88-1	-0.03	-0.03	-0.03	-0.03		ppb
Sulfur	34-1	-1197.56	-967.31	-1056.61	-1073.83		ppb
Terbium	159-1				101		%
Terbium	159-2				104		%
Thallium	203-1	0.04	0.03	0.03	0.03	10.56	ppb
Thallium	205-1	0.03	0.03	0.03	0.03	12.11	ppb
Tin	118-1	0.03	0.00	0.02	0.02	85.51	ppb
Titanium	47-1	0.08	0.07	0.04	0.06	32.36	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	365.87	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P8
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:34:11	DataFile Name :	040CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	-0.01	0.00	0.00		ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				115		%
Zinc	66-2	0.12	0.13	0.14	0.13	7.19	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	36.32	ppb
Zirconium	91-1	0.02	0.01	0.01	0.01	25.21	ppb

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:15:49	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	147	150	83	127	29.66	cps
Antimony	121-1	93	123	67	94	30.02	cps
Arsenic	75-2	3	0	7	3	100.05	cps
Barium	135-1	630	660	633	641	2.56	cps
Barium	137-1	1047	1023	1057	1042	1.64	cps
Beryllium	9-1	409	436	439	428	3.89	cps
Bismuth	209-1	12077104	11823454	11688909	11863155	1.66	cps
Bismuth	209-2	4331380	4373247	4341256	4348628	0.50	cps
Bromine	81-1	3861	3884	3897	3881	0.48	cps
Cadmium	108-1	37	30	30	32	11.95	cps
Cadmium	106-1	7485	7702	7879	7689	2.56	cps
Cadmium	111-1	5237	5401	5541	5393	2.82	cps
Calcium	43-1	700	607	730	679	9.47	cps
Calcium	44-1	25964	25549	25947	25820	0.91	cps
Carbon	12-1	4271170	4088347	3948045	4102520	3.95	cps
Carbon	12-2	24056	23639	22985	23560	2.29	cps
Chlorine	35-1	101163	100254	99499	100305	0.83	cps
Chlorine	35-2	327	327	377	343	8.41	cps
Chromium	52-2	1733	1760	1767	1753	1.01	cps
Cobalt	59-2	257	233	273	254	7.90	cps
Copper	63-2	3087	3060	2867	3005	4.00	cps
Dysprosium	156-1	247	280	273	267	6.62	cps
Dysprosium	156-2	13	10	3	9	57.30	cps
Erbium	164-1	110	93	107	103	8.54	cps
Erbium	164-2	10	33	20	21	55.45	cps
Gadolinium	160-1	87	117	127	110	18.92	cps
Gadolinium	160-2	10	23	7	13	66.12	cps
Holmium	165-1	18633623	18341805	18080254	18351894	1.51	cps
Holmium	165-2	5687390	5794802	5756714	5746302	0.95	cps
Indium	115-1	14029277	14153889	13928200	14037122	0.81	cps
Indium	115-2	1132091	1133636	1146182	1137303	0.68	cps
Iron	54-2	710	700	763	724	4.70	cps
Iron	56-2	10808	11001	10804	10871	1.04	cps
Iron	57-2	260	280	317	286	10.06	cps
Krypton	83-1	270	313	213	266	18.88	cps
Lead	206-1	2144	2130	2110	2128	0.79	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:15:49	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1833	1840	1787	1820	1.60	cps
Lead	208-1	8538	8381	8261	8393	1.65	cps
Lithium	6-1	8138199	8107400	7902810	8049470	1.59	cps
Magnesium	24-2	3430	3327	3390	3383	1.54	cps
Manganese	55-2	313	290	360	321	11.10	cps
Molybdenum	94-1	520	710	630	620	15.39	cps
Molybdenum	95-1	600	673	603	626	6.62	cps
Molybdenum	96-1	613	737	723	691	9.79	cps
Molybdenum	97-1	353	417	337	369	11.44	cps
Molybdenum	98-1	937	893	953	928	3.34	cps
Neodymium	150-1	30	30	20	27	21.65	cps
Neodymium	150-2	0	0	0	0	0.00	cps
Nickel	60-2	837	867	840	848	1.94	cps
Phosphorus	31-2	90	137	117	114	20.46	cps
Potassium	39-2	7792	7645	7572	7670	1.46	cps
Rhodium	103-1	13244441	13397724	13136656	13259607	0.99	cps
Rhodium	103-2	4638471	4743523	4748791	4710262	1.32	cps
Scandium	45-1	9723304	9745479	9691487	9720090	0.28	cps
Scandium	45-2	157162	157687	156221	157023	0.47	cps
Selenium	82-1	20	-90	20	-17	-381.05	cps
Selenium	77-2	0	3	0	1	173.21	cps
Selenium	78-2	3	3	0	2	86.60	cps
Silicon	28-1	519748	510421	514065	514745	0.91	cps
Silver	107-1	273	253	220	249	10.83	cps
Silver	109-1	150	133	120	134	11.18	cps
Sodium	23-2	35500	34591	33836	34642	2.41	cps
Strontium	86-1	847	730	713	763	9.52	cps
Strontium	88-1	3404	3330	3234	3323	2.57	cps
Sulfur	34-1	744965	740872	740673	742170	0.33	cps
Terbium	159-1	18953994	18598906	18639976	18730959	1.04	cps
Terbium	159-2	5416995	5379366	5439550	5411970	0.56	cps
Thallium	203-1	463	460	437	453	3.21	cps
Thallium	205-1	1160	1187	1017	1121	8.16	cps
Tin	118-1	2447	2417	2440	2435	0.65	cps
Titanium	47-1	287	187	213	229	22.62	cps
Uranium	238-1	290	370	327	329	12.18	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:15:49	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	20	27	27	24	15.75	cps
Ytterbium	172-1	80	110	80	90	19.25	cps
Ytterbium	172-2	23	50	33	36	37.90	cps
Ytterbium	176-1	2050	2277	2070	2132	5.89	cps
Ytterbium	176-2	347	347	333	342	2.25	cps
Yttrium	89-1	24466335	24309956	24314890	24363727	0.36	cps
Yttrium	89-2	1394295	1391306	1393374	1392992	0.11	cps
Zinc	66-2	237	170	243	217	18.72	cps
Zirconium	90-1	860	847	907	871	3.62	cps
Zirconium	91-1	160	180	170	170	5.88	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P8
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:19:11	DataFile Name :	005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1273	1310	1240	1275	2.75	cps
Antimony	121-1	34042	33718	34637	34133	1.37	cps
Arsenic	75-2	277	367	283	309	16.23	cps
Barium	135-1	40530	41212	40467	40737	1.01	cps
Barium	137-1	70033	70455	70928	70472	0.64	cps
Beryllium	9-1	6662	6724	6592	6659	1.00	cps
Bismuth	209-1	11869188	11981159	11973927	11941425	0.52	cps
Bismuth	209-2	4332622	4328069	4233572	4298088	1.30	cps
Bromine	81-1	3994	3847	3847	3896	2.17	cps
Cadmium	108-1	347	390	343	360	7.23	cps
Cadmium	106-1	8239	8286	7972	8166	2.07	cps
Cadmium	111-1	9809	9981	9808	9866	1.01	cps
Calcium	43-1	27844	28682	28294	28273	1.48	cps
Calcium	44-1	465935	466620	469588	467381	0.42	cps
Carbon	12-1	4401999	4277637	4044853	4241496	4.27	cps
Carbon	12-2	24911	24955	24444	24770	1.14	cps
Chlorine	35-1	103009	102211	103060	102760	0.46	cps
Chlorine	35-2	320	363	347	343	6.37	cps
Chromium	52-2	8099	8072	7839	8003	1.79	cps
Cobalt	59-2	6885	6668	6748	6767	1.62	cps
Copper	63-2	12996	12819	13076	12964	1.01	cps
Dysprosium	156-1	267	277	243	262	6.52	cps
Dysprosium	156-2	3	13	3	7	86.65	cps
Erbium	164-1	130	100	103	111	14.80	cps
Erbium	164-2	40	33	40	38	10.19	cps
Gadolinium	160-1	123	123	103	117	9.90	cps
Gadolinium	160-2	23	37	23	28	27.73	cps
Holmium	165-1	18111035	18646407	18621704	18459715	1.64	cps
Holmium	165-2	5734474	5741179	5653143	5709599	0.86	cps
Indium	115-1	14379726	14133318	14156163	14223069	0.96	cps
Indium	115-2	1142700	1148409	1137454	1142854	0.48	cps
Iron	54-2	7592	7549	7712	7618	1.11	cps
Iron	56-2	131896	131994	130840	131577	0.49	cps
Iron	57-2	3210	3224	3490	3308	4.78	cps
Krypton	83-1	270	330	237	279	16.96	cps
Lead	206-1	15970	15600	15596	15722	1.37	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P8
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:19:11	DataFile Name :	005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	13631	13220	13884	13578	2.47	cps
Lead	208-1	62452	61047	62325	61941	1.26	cps
Lithium	6-1	8165743	8005705	8033896	8068448	1.06	cps
Magnesium	24-2	122274	120217	122398	121630	1.01	cps
Manganese	55-2	1593	1563	1653	1603	2.86	cps
Molybdenum	94-1	34065	33377	33627	33690	1.03	cps
Molybdenum	95-1	41572	40365	40887	40941	1.48	cps
Molybdenum	96-1	45270	45290	45240	45267	0.06	cps
Molybdenum	97-1	25584	24943	25313	25280	1.27	cps
Molybdenum	98-1	66127	66274	66478	66293	0.27	cps
Neodymium	150-1	13	37	37	29	46.64	cps
Neodymium	150-2	3	0	3	2	86.60	cps
Nickel	60-2	2527	2537	2614	2559	1.85	cps
Phosphorus	31-2	193	170	183	182	6.43	cps
Potassium	39-2	65672	65953	65166	65597	0.61	cps
Rhodium	103-1	13356866	13118929	13237368	13237721	0.90	cps
Rhodium	103-2	4758908	4685291	4631225	4691808	1.37	cps
Scandium	45-1	9936659	9776453	9822852	9845322	0.84	cps
Scandium	45-2	160542	156670	157259	158157	1.32	cps
Selenium	82-1	1293	1240	1387	1307	5.68	cps
Selenium	77-2	17	17	13	16	12.40	cps
Selenium	78-2	70	63	43	59	23.57	cps
Silicon	28-1	595113	591201	592500	592938	0.34	cps
Silver	107-1	19077	19037	19400	19171	1.04	cps
Silver	109-1	18099	18549	18616	18421	1.53	cps
Sodium	23-2	264703	260848	262795	262782	0.73	cps
Strontium	86-1	6065	6362	6145	6190	2.48	cps
Strontium	88-1	50153	50628	49895	50225	0.74	cps
Sulfur	34-1	729927	729203	732680	730604	0.25	cps
Terbium	159-1	18741246	18778708	18710348	18743434	0.18	cps
Terbium	159-2	5397012	5508584	5370315	5425304	1.35	cps
Thallium	203-1	17185	16744	17442	17124	2.06	cps
Thallium	205-1	41259	41449	41332	41347	0.23	cps
Tin	118-1	70071	69998	70145	70071	0.11	cps
Titanium	47-1	12886	12866	12682	12811	0.88	cps
Uranium	238-1	51842	52940	52043	52275	1.12	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P8
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:19:11	DataFile Name :	005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	12329	12559	12499	12462	0.96	cps
Ytterbium	172-1	93	103	70	89	19.25	cps
Ytterbium	172-2	40	27	40	36	21.64	cps
Ytterbium	176-1	2150	2164	2190	2168	0.94	cps
Ytterbium	176-2	293	353	347	331	9.93	cps
Yttrium	89-1	24384939	24369379	24021722	24258680	0.85	cps
Yttrium	89-2	1487313	1477581	1400754	1455216	3.26	cps
Zinc	66-2	2690	2934	2754	2793	4.52	cps
Zirconium	90-1	28489	28272	28800	28520	0.93	cps
Zirconium	91-1	6188	6155	6275	6206	1.00	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P8
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:22:35	DataFile Name :	006CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	59863	59900	60060	59941	0.18	cps
Antimony	121-1	786767	793181	794612	791520	0.53	cps
Arsenic	75-2	13677	13400	13466	13514	1.07	cps
Barium	135-1	958319	965772	970623	964905	0.64	cps
Barium	137-1	1724840	1719765	1728324	1724310	0.25	cps
Beryllium	9-1	289211	289710	289394	289438	0.09	cps
Bismuth	209-1	11938571	11803323	11729932	11823942	0.90	cps
Bismuth	209-2	4305420	4269368	4329291	4301360	0.70	cps
Bromine	81-1	3764	3981	3881	3875	2.80	cps
Cadmium	108-1	16553	16570	16687	16603	0.44	cps
Cadmium	106-1	30287	31275	31389	30984	1.96	cps
Cadmium	111-1	205860	205399	206307	205855	0.22	cps
Calcium	43-1	258835	260347	264135	261106	1.05	cps
Calcium	44-1	4336095	4322329	4333951	4330791	0.17	cps
Carbon	12-1	4363849	4247209	4217120	4276059	1.81	cps
Carbon	12-2	25729	25419	25496	25548	0.63	cps
Chlorine	35-1	105208	106145	106088	105814	0.50	cps
Chlorine	35-2	427	387	323	379	13.75	cps
Chromium	52-2	150983	152065	150189	151079	0.62	cps
Cobalt	59-2	296867	292030	292775	293891	0.89	cps
Copper	63-2	2415656	2436333	2436194	2429395	0.49	cps
Dysprosium	156-1	280	243	290	271	9.06	cps
Dysprosium	156-2	17	10	0	9	94.38	cps
Erbium	164-1	107	120	113	113	5.88	cps
Erbium	164-2	30	47	27	34	31.11	cps
Gadolinium	160-1	123	120	120	121	1.59	cps
Gadolinium	160-2	27	27	20	24	15.75	cps
Holmium	165-1	18763270	18607893	18634248	18668471	0.45	cps
Holmium	165-2	5802006	5808287	5724296	5778196	0.81	cps
Indium	115-1	14423838	14381083	14227737	14344219	0.72	cps
Indium	115-2	1159393	1153106	1146232	1152910	0.57	cps
Iron	54-2	315137	313497	314460	314365	0.26	cps
Iron	56-2	5926026	5880045	5828807	5878293	0.83	cps
Iron	57-2	141372	141232	140942	141182	0.16	cps
Krypton	83-1	277	313	287	292	6.49	cps
Lead	206-1	3500254	3547075	3528327	3525219	0.67	cps

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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P8
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:22:35	DataFile Name :	006CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2995068	2995885	3020414	3003789	0.48	cps
Lead	208-1	13804992	13758083	13766471	13776515	0.18	cps
Lithium	6-1	8202563	8078645	8146504	8142571	0.76	cps
Magnesium	24-2	1191586	1196153	1183304	1190347	0.55	cps
Manganese	55-2	610359	611608	606320	609429	0.45	cps
Molybdenum	94-1	2846325	2824892	2803379	2824866	0.76	cps
Molybdenum	95-1	4067940	4094146	4099626	4087237	0.41	cps
Molybdenum	96-1	4463929	4419565	4440275	4441256	0.50	cps
Molybdenum	97-1	2548669	2530109	2563946	2547575	0.67	cps
Molybdenum	98-1	6519488	6482607	6561069	6521055	0.60	cps
Neodymium	150-1	110	107	107	108	1.78	cps
Neodymium	150-2	3	3	7	4	43.40	cps
Nickel	60-2	81823	82547	82219	82196	0.44	cps
Phosphorus	31-2	2827	2817	2880	2841	1.20	cps
Potassium	39-2	289345	289492	288456	289098	0.19	cps
Rhodium	103-1	13403025	13218476	13147205	13256235	1.00	cps
Rhodium	103-2	4683628	4729153	4696265	4703015	0.50	cps
Scandium	45-1	10071758	9723893	9866093	9887248	1.77	cps
Scandium	45-2	159690	159793	159355	159613	0.14	cps
Selenium	82-1	11632	12146	12102	11960	2.38	cps
Selenium	77-2	153	147	157	152	3.35	cps
Selenium	78-2	663	603	630	632	4.76	cps
Silicon	28-1	1879159	1913218	1889734	1894037	0.92	cps
Silver	107-1	990567	1003475	1011478	1001840	1.05	cps
Silver	109-1	951583	960938	957011	956511	0.49	cps
Sodium	23-2	2351796	2327112	2327583	2335497	0.60	cps
Strontium	86-1	253079	253509	255616	254068	0.53	cps
Strontium	88-1	2338515	2320116	2350671	2336434	0.66	cps
Sulfur	34-1	813692	811531	812426	812550	0.13	cps
Terbium	159-1	18874338	18913196	18966669	18918068	0.25	cps
Terbium	159-2	5451941	5549041	5503164	5501382	0.88	cps
Thallium	203-1	796160	797266	802505	798643	0.42	cps
Thallium	205-1	2036336	2034322	2014126	2028262	0.61	cps
Tin	118-1	632502	639165	639989	637219	0.64	cps
Titanium	47-1	1241136	1236908	1256286	1244777	0.82	cps
Uranium	238-1	2720827	2649045	2686427	2685433	1.34	cps

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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P8
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:22:35	DataFile Name :	006CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	117067	116025	116919	116670	0.48	cps
Ytterbium	172-1	117	123	113	118	4.32	cps
Ytterbium	172-2	27	50	47	41	30.69	cps
Ytterbium	176-1	5698	5441	5505	5548	2.41	cps
Ytterbium	176-2	1437	1500	1553	1497	3.90	cps
Yttrium	89-1	24787380	24910782	24303032	24667065	1.30	cps
Yttrium	89-2	1487654	1482690	1463437	1477927	0.87	cps
Zinc	66-2	242413	240799	241369	241527	0.34	cps
Zirconium	90-1	1443270	1415031	1338576	1398959	3.87	cps
Zirconium	91-1	298730	296710	298035	297825	0.34	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P8
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:25:39	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	147209	149438	149603	148750	0.90	cps
Antimony	121-1	2057719	2080278	2118924	2085640	1.48	cps
Arsenic	75-2	33974	34135	33620	33910	0.78	cps
Barium	135-1	2550834	2563688	2539881	2551468	0.47	cps
Barium	137-1	4313556	4282951	4328850	4308452	0.54	cps
Beryllium	9-1	712705	715951	721554	716737	0.62	cps
Bismuth	209-1	11880094	11709215	11619818	11736375	1.13	cps
Bismuth	209-2	4282200	4373681	4262509	4306130	1.38	cps
Bromine	81-1	3814	3867	4041	3907	3.03	cps
Cadmium	108-1	40807	40870	41041	40906	0.30	cps
Cadmium	106-1	65411	64657	64825	64964	0.61	cps
Cadmium	111-1	497116	501503	501142	499920	0.49	cps
Calcium	43-1	649306	651673	653941	651640	0.36	cps
Calcium	44-1	10775894	10900743	10977737	10884791	0.94	cps
Carbon	12-1	4502937	4487616	4483395	4491316	0.23	cps
Carbon	12-2	27102	27125	26781	27003	0.71	cps
Chlorine	35-1	109560	111750	111132	110814	1.02	cps
Chlorine	35-2	310	417	387	371	14.82	cps
Chromium	52-2	373094	371529	377821	374148	0.88	cps
Cobalt	59-2	732605	726955	728164	729241	0.41	cps
Copper	63-2	5941889	5948232	5936781	5942301	0.10	cps
Dysprosium	156-1	267	270	203	247	15.23	cps
Dysprosium	156-2	30	13	13	19	50.96	cps
Erbium	164-1	123	57	130	103	39.24	cps
Erbium	164-2	40	47	43	43	7.70	cps
Gadolinium	160-1	147	123	83	118	27.20	cps
Gadolinium	160-2	13	27	23	21	32.88	cps
Holmium	165-1	18578011	18581758	18757007	18638925	0.55	cps
Holmium	165-2	5774576	5728231	5749196	5750667	0.40	cps
Indium	115-1	14334082	14290385	14275046	14299838	0.21	cps
Indium	115-2	1149896	1152347	1158942	1153728	0.41	cps
Iron	54-2	778087	782391	785764	782081	0.49	cps
Iron	56-2	14959283	14557519	14529718	14682174	1.64	cps
Iron	57-2	351880	351767	353515	352388	0.28	cps
Krypton	83-1	283	280	253	272	6.04	cps
Lead	206-1	8602500	8619241	8714044	8645262	0.70	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P8
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:25:39	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	7345468	7386803	7409465	7380579	0.44	cps
Lead	208-1	33916613	33840289	33892591	33883164	0.12	cps
Lithium	6-1	8036233	8065082	8076600	8059305	0.26	cps
Magnesium	24-2	2994863	2938367	2925814	2953015	1.25	cps
Manganese	55-2	1606019	1608978	1602340	1605779	0.21	cps
Molybdenum	94-1	6964620	7129626	6998378	7030875	1.24	cps
Molybdenum	95-1	10144339	10070529	10015663	10076844	0.64	cps
Molybdenum	96-1	11066653	10923394	11051684	11013910	0.71	cps
Molybdenum	97-1	6263841	6243835	6284644	6264106	0.33	cps
Molybdenum	98-1	16225074	16310298	16108395	16214589	0.63	cps
Neodymium	150-1	173	173	170	172	1.12	cps
Neodymium	150-2	10	3	7	7	50.03	cps
Nickel	60-2	202019	202418	202178	202205	0.10	cps
Phosphorus	31-2	7159	7229	7159	7182	0.56	cps
Potassium	39-2	710396	716074	717395	714622	0.52	cps
Rhodium	103-1	13389243	13105686	13247395	13247441	1.07	cps
Rhodium	103-2	4726615	4744660	4737554	4736276	0.19	cps
Scandium	45-1	9941487	9858430	9812915	9870944	0.66	cps
Scandium	45-2	161620	159888	163451	161653	1.10	cps
Selenium	82-1	30571	30023	31055	30549	1.69	cps
Selenium	77-2	450	477	473	467	3.11	cps
Selenium	78-2	1517	1530	1467	1505	2.22	cps
Silicon	28-1	3914002	3896774	3944319	3918365	0.61	cps
Silver	107-1	2673883	2675839	2706801	2685508	0.69	cps
Silver	109-1	2562316	2524605	2519034	2535318	0.93	cps
Sodium	23-2	5792850	5730760	5790001	5771204	0.61	cps
Strontium	86-1	635681	627531	635478	632897	0.73	cps
Strontium	88-1	5688131	5724160	5689016	5700436	0.36	cps
Sulfur	34-1	968524	968875	951100	962833	1.06	cps
Terbium	159-1	19207577	18766505	18897530	18957204	1.19	cps
Terbium	159-2	5492671	5502343	5547034	5514016	0.53	cps
Thallium	203-1	2117775	2075755	2114951	2102827	1.12	cps
Thallium	205-1	5059488	4989103	5025113	5024568	0.70	cps
Tin	118-1	1628783	1693928	1667539	1663417	1.97	cps
Titanium	47-1	3100692	3141441	3150864	3130999	0.85	cps
Uranium	238-1	6645341	6572382	6636394	6618039	0.60	cps

Reviewed By:
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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P8
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:25:39	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	289190	291504	293736	291476	0.78	cps
Ytterbium	172-1	153	133	150	146	7.36	cps
Ytterbium	172-2	30	40	53	41	28.47	cps
Ytterbium	176-1	11582	11518	11492	11531	0.40	cps
Ytterbium	176-2	3250	3184	3107	3180	2.26	cps
Yttrium	89-1	24492370	24195370	24633781	24440507	0.92	cps
Yttrium	89-2	1496732	1481007	1541076	1506272	2.07	cps
Zinc	66-2	592389	597483	598715	596196	0.56	cps
Zirconium	90-1	3513778	3541968	3531966	3529237	0.40	cps
Zirconium	91-1	733894	745694	741643	740410	0.81	cps

Reviewed By:
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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P8
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:28:39	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	295377	295062	295058	295166	0.06	cps
Antimony	121-1	4125478	4140707	4074797	4113660	0.84	cps
Arsenic	75-2	67792	68794	67922	68169	0.80	cps
Barium	135-1	5039265	5055131	5075047	5056481	0.35	cps
Barium	137-1	8552882	8531318	8615211	8566470	0.51	cps
Beryllium	9-1	1502494	1513236	1513129	1509620	0.41	cps
Bismuth	209-1	11541581	11753014	11606899	11633831	0.93	cps
Bismuth	209-2	4211141	4228940	4208854	4216312	0.26	cps
Bromine	81-1	4277	4127	3917	4107	4.40	cps
Cadmium	108-1	82019	82274	82374	82222	0.22	cps
Cadmium	106-1	120746	121344	121785	121292	0.43	cps
Cadmium	111-1	989903	1001558	987558	993006	0.76	cps
Calcium	43-1	1379637	1358643	1378083	1372121	0.85	cps
Calcium	44-1	21761683	21835998	21482606	21693429	0.86	cps
Carbon	12-1	4777993	4704781	4615018	4699264	1.74	cps
Carbon	12-2	28604	28715	28895	28738	0.51	cps
Chlorine	35-1	116400	117838	118137	117458	0.79	cps
Chlorine	35-2	373	423	447	414	9.04	cps
Chromium	52-2	737369	743999	746853	742740	0.66	cps
Cobalt	59-2	1533806	1512051	1510669	1518842	0.85	cps
Copper	63-2	11757372	11844180	11817769	11806440	0.38	cps
Dysprosium	156-1	337	267	297	300	11.71	cps
Dysprosium	156-2	30	23	20	24	20.83	cps
Erbium	164-1	137	133	133	134	1.43	cps
Erbium	164-2	30	23	47	33	36.07	cps
Gadolinium	160-1	113	153	123	130	16.02	cps
Gadolinium	160-2	37	13	57	36	61.01	cps
Holmium	165-1	18581097	18812289	18378776	18590721	1.17	cps
Holmium	165-2	5775721	5856701	5834405	5822276	0.72	cps
Indium	115-1	14039732	13975678	14061173	14025528	0.32	cps
Indium	115-2	1137889	1135223	1133913	1135675	0.18	cps
Iron	54-2	1650185	1595756	1601131	1615691	1.86	cps
Iron	56-2	29319338	29058064	28939990	29105797	0.67	cps
Iron	57-2	698705	697132	701961	699266	0.35	cps
Krypton	83-1	313	243	307	288	13.42	cps
Lead	206-1	16857795	17140158	17049959	17015970	0.85	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P8
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:28:39	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	14440050	14670124	14410444	14506873	0.98	cps
Lead	208-1	66594239	67675020	66888317	67052525	0.83	cps
Lithium	6-1	8108078	7983241	8065394	8052238	0.79	cps
Magnesium	24-2	5868451	5848608	5867533	5861531	0.19	cps
Manganese	55-2	3208207	3128060	3183798	3173355	1.29	cps
Molybdenum	94-1	13903215	14094683	13962902	13986933	0.70	cps
Molybdenum	95-1	20289986	20098804	20322604	20237131	0.60	cps
Molybdenum	96-1	22063922	22083348	21837445	21994905	0.62	cps
Molybdenum	97-1	12547249	12620140	12275614	12481001	1.45	cps
Molybdenum	98-1	32513731	32913595	32337544	32588290	0.91	cps
Neodymium	150-1	317	433	337	362	17.23	cps
Neodymium	150-2	13	23	10	16	44.60	cps
Nickel	60-2	398280	400280	396655	398405	0.46	cps
Phosphorus	31-2	14347	13840	14207	14131	1.85	cps
Potassium	39-2	1524315	1477292	1493020	1498209	1.60	cps
Rhodium	103-1	13014759	13043609	12769036	12942468	1.17	cps
Rhodium	103-2	4548051	4629072	4663605	4613576	1.29	cps
Scandium	45-1	9786586	9911032	9692736	9796785	1.12	cps
Scandium	45-2	162089	158497	161371	160652	1.18	cps
Selenium	82-1	61090	61616	61087	61264	0.50	cps
Selenium	77-2	807	897	830	844	5.53	cps
Selenium	78-2	3037	2820	2754	2870	5.16	cps
Silicon	28-1	7319023	7293492	7240796	7284437	0.55	cps
Silver	107-1	5242101	5238500	5295801	5258801	0.61	cps
Silver	109-1	4948953	4982548	4963757	4965086	0.34	cps
Sodium	23-2	11674693	11378972	11454146	11502604	1.34	cps
Strontium	86-1	1258148	1269596	1250721	1259489	0.75	cps
Strontium	88-1	11484249	11534745	11310280	11443091	1.03	cps
Sulfur	34-1	1168021	1152957	1149851	1156943	0.84	cps
Terbium	159-1	19069117	19003224	18880957	18984433	0.50	cps
Terbium	159-2	5588403	5486631	5502562	5525866	0.99	cps
Thallium	203-1	4204173	4235193	4199853	4213073	0.46	cps
Thallium	205-1	9807985	9852321	9897201	9852502	0.45	cps
Tin	118-1	3331330	3310938	3371722	3337997	0.93	cps
Titanium	47-1	6093529	6230211	6143868	6155869	1.12	cps
Uranium	238-1	13181005	13194036	13103753	13159598	0.37	cps

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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P8
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:28:39	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	583851	584422	586316	584863	0.22	cps
Ytterbium	172-1	160	117	160	146	17.19	cps
Ytterbium	172-2	80	53	70	68	19.88	cps
Ytterbium	176-1	20653	20636	20773	20687	0.36	cps
Ytterbium	176-2	6111	6061	6078	6084	0.42	cps
Yttrium	89-1	24370054	24404099	24631397	24468517	0.58	cps
Yttrium	89-2	1472775	1475875	1494290	1480980	0.79	cps
Zinc	66-2	1178816	1185942	1178755	1181171	0.35	cps
Zirconium	90-1	7049282	7099825	7083165	7077424	0.36	cps
Zirconium	91-1	1566845	1572746	1566774	1568788	0.22	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P8
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:31:29	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	589631	582392	582005	584676	0.73	cps
Antimony	121-1	8064741	8063657	8041053	8056483	0.17	cps
Arsenic	75-2	136154	134578	134616	135116	0.67	cps
Barium	135-1	9937482	9861615	9959855	9919651	0.52	cps
Barium	137-1	16840639	16841935	17155002	16945858	1.07	cps
Beryllium	9-1	2883496	2973328	2934921	2930582	1.54	cps
Bismuth	209-1	11618978	11345881	11149380	11371413	2.07	cps
Bismuth	209-2	4236431	4198052	4128136	4187540	1.31	cps
Bromine	81-1	4194	4197	4144	4178	0.72	cps
Cadmium	108-1	158531	159292	159868	159230	0.42	cps
Cadmium	106-1	230261	230144	229877	230094	0.09	cps
Cadmium	111-1	2033998	2056049	2008457	2032835	1.17	cps
Calcium	43-1	2711577	2793738	2688766	2731360	2.02	cps
Calcium	44-1	42933873	43304529	42999047	43079149	0.46	cps
Carbon	12-1	5144124	5187949	5078850	5136974	1.07	cps
Carbon	12-2	32369	31176	32279	31941	2.08	cps
Chlorine	35-1	129570	133055	133761	132129	1.70	cps
Chlorine	35-2	437	480	443	453	5.15	cps
Chromium	52-2	1575515	1570757	1570693	1572322	0.18	cps
Cobalt	59-2	3010720	2967706	2984786	2987737	0.72	cps
Copper	63-2	23295342	23214164	23336940	23282149	0.27	cps
Dysprosium	156-1	383	333	373	363	7.28	cps
Dysprosium	156-2	33	40	60	44	31.23	cps
Erbium	164-1	243	173	190	202	18.08	cps
Erbium	164-2	40	50	60	50	20.00	cps
Gadolinium	160-1	217	160	183	187	15.26	cps
Gadolinium	160-2	50	57	57	54	7.07	cps
Holmium	165-1	18511986	18676251	18399860	18529366	0.75	cps
Holmium	165-2	5807031	5728101	5817171	5784101	0.84	cps
Indium	115-1	13870496	14024930	13602490	13832639	1.55	cps
Indium	115-2	1124527	1124085	1124375	1124329	0.02	cps
Iron	54-2	3210791	3223295	3227368	3220484	0.27	cps
Iron	56-2	57560029	57459067	57053754	57357617	0.47	cps
Iron	57-2	1471008	1460726	1465952	1465896	0.35	cps
Krypton	83-1	320	273	270	288	9.71	cps
Lead	206-1	34027699	33353613	32835530	33405614	1.79	cps

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LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P8
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:31:29	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	29034680	28451483	28220183	28568782	1.47	cps
Lead	208-1	133485033	130931376	130848316	131754909	1.14	cps
Lithium	6-1	8113201	8001531	7983335	8032689	0.88	cps
Magnesium	24-2	11561653	11403877	11241245	11402258	1.41	cps
Manganese	55-2	6267494	6229972	6245155	6247540	0.30	cps
Molybdenum	94-1	27852075	27980801	28147650	27993509	0.53	cps
Molybdenum	95-1	39507966	40557758	40652278	40239334	1.58	cps
Molybdenum	96-1	43530087	43763607	44404374	43899356	1.03	cps
Molybdenum	97-1	24870888	24569916	24700340	24713715	0.61	cps
Molybdenum	98-1	64108057	64622062	64239592	64323237	0.42	cps
Neodymium	150-1	720	733	720	724	1.06	cps
Neodymium	150-2	40	50	30	40	25.00	cps
Nickel	60-2	781578	776936	774309	777608	0.47	cps
Phosphorus	31-2	27873	28040	27536	27817	0.92	cps
Potassium	39-2	2974407	2983830	2922261	2960166	1.12	cps
Rhodium	103-1	13042409	12849936	12666187	12852844	1.46	cps
Rhodium	103-2	4645770	4564136	4510403	4573436	1.49	cps
Scandium	45-1	10107799	9903917	9806221	9939312	1.55	cps
Scandium	45-2	164721	161853	161372	162649	1.11	cps
Selenium	82-1	115846	120521	120222	118863	2.20	cps
Selenium	77-2	1790	1617	1603	1670	6.24	cps
Selenium	78-2	5598	5775	5901	5758	2.65	cps
Silicon	28-1	14022064	14144591	14145271	14103975	0.50	cps
Silver	107-1	10046243	10011991	10082946	10047060	0.35	cps
Silver	109-1	9430702	9616688	9483107	9510166	1.01	cps
Sodium	23-2	23019940	22623216	22735892	22793016	0.90	cps
Strontium	86-1	2626725	2684503	2706591	2672607	1.54	cps
Strontium	88-1	22662713	22618374	22902580	22727889	0.67	cps
Sulfur	34-1	1502312	1500822	1503987	1502374	0.11	cps
Terbium	159-1	19295374	18874429	18641155	18936986	1.75	cps
Terbium	159-2	5600320	5527070	5519588	5548993	0.80	cps
Thallium	203-1	8112734	8085467	8158061	8118754	0.45	cps
Thallium	205-1	19577219	19424176	19217031	19406142	0.93	cps
Tin	118-1	6434768	6561447	6378758	6458325	1.45	cps
Titanium	47-1	12348937	12224931	12253465	12275778	0.53	cps
Uranium	238-1	26072015	25974306	26166363	26070895	0.37	cps

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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P8
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:31:29	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1157951	1154372	1168736	1160353	0.64	cps
Ytterbium	172-1	187	227	197	203	10.24	cps
Ytterbium	172-2	67	127	73	89	37.00	cps
Ytterbium	176-1	39205	38797	39248	39083	0.64	cps
Ytterbium	176-2	11835	11609	11892	11779	1.27	cps
Yttrium	89-1	24663106	24568931	24419165	24550401	0.50	cps
Yttrium	89-2	1537278	1504173	1461058	1500836	2.55	cps
Zinc	66-2	2465085	2487823	2432869	2461926	1.12	cps
Zirconium	90-1	13724725	14046895	14183939	13985186	1.69	cps
Zirconium	91-1	3046039	3167688	3142579	3118769	2.06	cps

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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P8
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:34:16	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1211754	1200598	1231431	1214594	1.29	cps
Antimony	121-1	15996809	16260057	15915491	16057452	1.12	cps
Arsenic	75-2	263670	266419	265980	265356	0.56	cps
Barium	135-1	19567590	19689743	19664197	19640510	0.33	cps
Barium	137-1	33734210	33634542	33496331	33621695	0.36	cps
Beryllium	9-1	5619664	5620267	5619490	5619807	0.01	cps
Bismuth	209-1	10886133	11126630	11035669	11016144	1.10	cps
Bismuth	209-2	4108661	4065769	4046787	4073739	0.78	cps
Bromine	81-1	4587	4524	4297	4470	3.41	cps
Cadmium	108-1	309487	311936	309690	310371	0.44	cps
Cadmium	106-1	437361	441804	440129	439764	0.51	cps
Cadmium	111-1	3895813	3963449	3949444	3936235	0.91	cps
Calcium	43-1	5273343	5294686	5378999	5315676	1.05	cps
Calcium	44-1	85427052	85843959	86014555	85761855	0.35	cps
Carbon	12-1	5682680	5732806	5823767	5746418	1.24	cps
Carbon	12-2	37160	37474	37598	37411	0.60	cps
Chlorine	35-1	151122	153959	157071	154051	1.93	cps
Chlorine	35-2	510	583	570	554	7.05	cps
Chromium	52-2	3088858	3116396	3095338	3100197	0.46	cps
Cobalt	59-2	5895751	5802009	5823549	5840436	0.84	cps
Copper	63-2	45293183	45135271	44953833	45127429	0.38	cps
Dysprosium	156-1	600	533	520	551	7.78	cps
Dysprosium	156-2	57	57	60	58	3.33	cps
Erbium	164-1	230	290	263	261	11.51	cps
Erbium	164-2	63	73	110	82	29.89	cps
Gadolinium	160-1	207	303	237	249	19.88	cps
Gadolinium	160-2	60	57	57	58	3.33	cps
Holmium	165-1	18486438	18755612	18337966	18526672	1.14	cps
Holmium	165-2	5743137	5744837	5741346	5743106	0.03	cps
Indium	115-1	13562148	13607490	13695810	13621816	0.50	cps
Indium	115-2	1077645	1078197	1086769	1080870	0.47	cps
Iron	54-2	6359460	6275896	6307781	6314379	0.67	cps
Iron	56-2	112912525	113362568	113358072	113211055	0.23	cps
Iron	57-2	2936896	2903633	2865590	2902040	1.23	cps
Krypton	83-1	357	310	387	351	11.00	cps
Lead	206-1	64776124	64547959	64257962	64527348	0.40	cps

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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P8
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:34:16	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	55654618	55618454	54873811	55382294	0.80	cps
Lead	208-1	256170636	256819388	253518118	255502714	0.68	cps
Lithium	6-1	7854847	7853105	7910176	7872709	0.41	cps
Magnesium	24-2	22486518	22453918	23017120	22652519	1.40	cps
Manganese	55-2	12370555	12152816	12384884	12302752	1.06	cps
Molybdenum	94-1	55549776	55294899	56020344	55621673	0.66	cps
Molybdenum	95-1	79675777	79415714	80394517	79828669	0.64	cps
Molybdenum	96-1	88088267	87633759	87634357	87785461	0.30	cps
Molybdenum	97-1	49548134	49669714	49633551	49617133	0.13	cps
Molybdenum	98-1	128763938	127728745	129774701	128755795	0.79	cps
Neodymium	150-1	1333	1390	1350	1358	2.14	cps
Neodymium	150-2	43	30	60	44	33.82	cps
Nickel	60-2	1640940	1622937	1619394	1627757	0.71	cps
Phosphorus	31-2	54914	54549	54847	54770	0.35	cps
Potassium	39-2	5792910	5754510	5803947	5783789	0.45	cps
Rhodium	103-1	12355415	12626841	12549939	12510732	1.12	cps
Rhodium	103-2	4449441	4449896	4382685	4427340	0.87	cps
Scandium	45-1	9840676	9965010	9929782	9911823	0.65	cps
Scandium	45-2	163613	162501	162278	162797	0.44	cps
Selenium	82-1	229346	232600	229555	230501	0.79	cps
Selenium	77-2	3267	3194	3254	3238	1.21	cps
Selenium	78-2	11235	11581	11398	11405	1.52	cps
Silicon	28-1	26822851	26296473	26337168	26485497	1.11	cps
Silver	107-1	19529343	19746833	19517261	19597812	0.66	cps
Silver	109-1	18516529	18554658	18815828	18629005	0.87	cps
Sodium	23-2	45210991	45010818	45238679	45153496	0.28	cps
Strontium	86-1	5182220	5251440	5238403	5224021	0.70	cps
Strontium	88-1	44741943	44927193	44977888	44882341	0.28	cps
Sulfur	34-1	2195896	2174735	2165943	2178858	0.71	cps
Terbium	159-1	18676876	18698888	18756858	18710874	0.22	cps
Terbium	159-2	5464149	5468109	5475153	5469137	0.10	cps
Thallium	203-1	15731503	15665281	15642940	15679908	0.29	cps
Thallium	205-1	37302199	37603813	37316723	37407578	0.45	cps
Tin	118-1	12745112	12873281	12735422	12784605	0.60	cps
Titanium	47-1	24551854	24623928	24631259	24602347	0.18	cps
Uranium	238-1	51599978	50939566	50974364	51171303	0.73	cps

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LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P8
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:34:16	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	2494397	2440818	2453000	2462738	1.14	cps
Ytterbium	172-1	233	287	273	264	10.50	cps
Ytterbium	172-2	110	100	100	103	5.59	cps
Ytterbium	176-1	75269	74019	74991	74760	0.88	cps
Ytterbium	176-2	22887	22286	23044	22739	1.76	cps
Yttrium	89-1	24238987	24128825	24446927	24271580	0.67	cps
Yttrium	89-2	1492647	1494822	1480398	1489289	0.52	cps
Zinc	66-2	4677106	4660634	4696632	4678124	0.39	cps
Zirconium	90-1	27849584	27614173	27875730	27779829	0.52	cps
Zirconium	91-1	6149954	6130614	6184385	6154984	0.44	cps

Reviewed By:
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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P8
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:37:01	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5723692	5764649	5759955	5749432	0.39	cps
Antimony	121-1	7479	7926	7012	7472	6.12	cps
Arsenic	75-2	140	113	140	131	11.74	cps
Barium	135-1	8089	8086	7582	7919	3.68	cps
Barium	137-1	14581	14057	13520	14053	3.78	cps
Beryllium	9-1	2349	2272	1987	2203	8.64	cps
Bismuth	209-1	9751607	9565250	9726434	9681097	1.04	cps
Bismuth	209-2	3588202	3566756	3622992	3592650	0.79	cps
Bromine	81-1	4554	4594	4587	4579	0.47	cps
Cadmium	108-1	257	237	273	256	7.18	cps
Cadmium	106-1	7545	7449	7652	7549	1.35	cps
Cadmium	111-1	6122	6115	6125	6121	0.08	cps
Calcium	43-1	24656037	24143160	24156628	24318609	1.20	cps
Calcium	44-1	392490261	391702328	386368901	390187163	0.85	cps
Carbon	12-1	4933129	4764323	4688824	4795425	2.61	cps
Carbon	12-2	38149	36913	37541	37535	1.65	cps
Chlorine	35-1	103509	102415	100167	102031	1.67	cps
Chlorine	35-2	383	353	387	374	4.90	cps
Chromium	52-2	10210	10531	10094	10278	2.20	cps
Cobalt	59-2	11195	11948	11621	11588	3.26	cps
Copper	63-2	11268	11221	10808	11099	2.28	cps
Dysprosium	156-1	723	660	593	659	9.87	cps
Dysprosium	156-2	173	157	153	161	6.65	cps
Erbium	164-1	733	640	683	686	6.81	cps
Erbium	164-2	240	250	197	229	12.39	cps
Gadolinium	160-1	620	517	703	613	15.25	cps
Gadolinium	160-2	273	220	210	234	14.52	cps
Holmium	165-1	17290696	17105455	16840837	17078996	1.32	cps
Holmium	165-2	5571056	5561561	5458859	5530492	1.12	cps
Indium	115-1	12887231	12531744	12492095	12637024	1.72	cps
Indium	115-2	1047429	1048689	1056194	1050771	0.45	cps
Iron	54-2	28233630	28441533	28516129	28397097	0.52	cps
Iron	56-2	520755779	525746192	522988179	523163383	0.48	cps
Iron	57-2	13186494	13117473	13274794	13192920	0.60	cps
Krypton	83-1	360	407	273	347	19.52	cps
Lead	206-1	12910	12149	12593	12551	3.04	cps

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LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P8
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:37:01	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	11649	10721	10294	10888	6.36	cps
Lead	208-1	52649	49551	48315	50172	4.45	cps
Lithium	6-1	7334103	7186908	7305568	7275526	1.07	cps
Magnesium	24-2	103321612	105538782	105134552	104664982	1.13	cps
Manganese	55-2	5508	5568	5828	5635	3.02	cps
Molybdenum	94-1	38018	38102	38129	38083	0.15	cps
Molybdenum	95-1	40542	39238	39489	39757	1.74	cps
Molybdenum	96-1	45458	44554	45190	45067	1.03	cps
Molybdenum	97-1	24101	24131	23637	23956	1.16	cps
Molybdenum	98-1	62949	61335	60933	61739	1.73	cps
Neodymium	150-1	350	393	373	372	5.83	cps
Neodymium	150-2	67	73	67	69	5.58	cps
Nickel	60-2	5594	5598	5825	5672	2.33	cps
Phosphorus	31-2	97	123	107	109	12.37	cps
Potassium	39-2	27866942	28213632	28107742	28062772	0.63	cps
Rhodium	103-1	11284379	10997919	10946391	11076230	1.64	cps
Rhodium	103-2	4029601	3993913	4068370	4030628	0.92	cps
Scandium	45-1	9321701	9128078	9187627	9212468	1.08	cps
Scandium	45-2	155200	155925	156697	155941	0.48	cps
Selenium	82-1	23	-37	87	24	252.33	cps
Selenium	77-2	3	0	3	2	86.60	cps
Selenium	78-2	13	7	17	12	41.65	cps
Silicon	28-1	719776	710083	701992	710617	1.25	cps
Silver	107-1	3504	3407	3007	3306	7.97	cps
Silver	109-1	3300	2880	2977	3053	7.21	cps
Sodium	23-2	208503730	210513850	210229264	209748948	0.52	cps
Strontium	86-1	15719	15532	15432	15561	0.94	cps
Strontium	88-1	132232	129867	129460	130520	1.15	cps
Sulfur	34-1	664535	660498	660322	661785	0.36	cps
Terbium	159-1	17665538	17275236	17346569	17429114	1.19	cps
Terbium	159-2	5236589	5257046	5220896	5238177	0.35	cps
Thallium	203-1	1964	1440	1453	1619	18.43	cps
Thallium	205-1	4311	3624	3400	3778	12.56	cps
Tin	118-1	4644	4638	4224	4502	5.35	cps
Titanium	47-1	5588	5488	5581	5552	1.01	cps
Uranium	238-1	2380	2157	1960	2166	9.70	cps

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LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P8
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:37:01	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	610	607	543	587	6.40	cps
Ytterbium	172-1	653	880	837	790	15.23	cps
Ytterbium	172-2	333	303	310	316	4.99	cps
Ytterbium	176-1	2474	2510	2324	2436	4.06	cps
Ytterbium	176-2	403	460	523	462	12.99	cps
Yttrium	89-1	22941762	22524781	22373715	22613419	1.30	cps
Yttrium	89-2	1446228	1356380	1480881	1427830	4.50	cps
Zinc	66-2	2567	2664	2530	2587	2.66	cps
Zirconium	90-1	41822	40626	41956	41468	1.77	cps
Zirconium	91-1	9633	9677	9573	9628	0.54	cps

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LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P8
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:48:22	DataFile Name :	012ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	30819	30312	30843	30658	0.98	cps
Antimony	121-1	3545438	3457422	3513256	3505372	1.27	cps
Arsenic	75-2	58856	60168	59371	59465	1.11	cps
Barium	135-1	406934	410700	411028	409554	0.56	cps
Barium	137-1	700534	703724	708778	704345	0.59	cps
Beryllium	9-1	625721	625325	625633	625560	0.03	cps
Bismuth	209-1	12179224	12019310	12007564	12068699	0.79	cps
Bismuth	209-2	4442001	4419451	4449254	4436902	0.35	cps
Bromine	81-1	4014	4334	4304	4217	4.19	cps
Cadmium	108-1	27614	27604	27825	27681	0.45	cps
Cadmium	106-1	45802	46066	45167	45679	1.01	cps
Cadmium	111-1	420804	428127	425699	424877	0.88	cps
Calcium	43-1	108871	108750	108253	108625	0.30	cps
Calcium	44-1	1878739	1842794	1850226	1857253	1.02	cps
Carbon	12-1	4928421	4813045	4692681	4811383	2.45	cps
Carbon	12-2	28544	28367	28534	28482	0.35	cps
Chlorine	35-1	103053	104500	103939	103831	0.70	cps
Chlorine	35-2	313	280	337	310	9.19	cps
Chromium	52-2	325602	330922	328800	328441	0.82	cps
Cobalt	59-2	634743	641708	636933	637795	0.56	cps
Copper	63-2	504864	507852	505061	505926	0.33	cps
Dysprosium	156-1	103	143	103	117	19.80	cps
Dysprosium	156-2	10	7	0	6	91.64	cps
Erbium	164-1	110	113	120	114	4.45	cps
Erbium	164-2	30	27	37	31	16.37	cps
Gadolinium	160-1	120	107	137	121	12.41	cps
Gadolinium	160-2	17	40	20	26	49.38	cps
Holmium	165-1	18738623	19335925	18965554	19013367	1.59	cps
Holmium	165-2	5997473	5924196	5902695	5941454	0.84	cps
Indium	115-1	15018328	14769296	14640841	14809488	1.30	cps
Indium	115-2	1214618	1210150	1226468	1217079	0.69	cps
Iron	54-2	271074	272430	273662	272389	0.48	cps
Iron	56-2	5018032	5065319	4959656	5014336	1.06	cps
Iron	57-2	119637	121539	121297	120824	0.86	cps
Krypton	83-1	290	237	287	271	11.02	cps
Lead	206-1	2960867	2984258	2951916	2965680	0.56	cps

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LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P8
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:48:22	DataFile Name :	012ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2461502	2433110	2452698	2449103	0.59	cps
Lead	208-1	11429860	11402492	11413576	11415309	0.12	cps
Lithium	6-1	8509515	8573180	8463984	8515560	0.64	cps
Magnesium	24-2	272585	265996	271461	270014	1.31	cps
Manganese	55-2	129336	130520	128559	129472	0.76	cps
Molybdenum	94-1	1490	1487	1430	1469	2.30	cps
Molybdenum	95-1	1190	1080	1180	1150	5.29	cps
Molybdenum	96-1	2264	2230	2357	2284	2.88	cps
Molybdenum	97-1	677	680	680	679	0.28	cps
Molybdenum	98-1	2160	1863	2077	2034	7.53	cps
Neodymium	150-1	47	80	50	59	31.17	cps
Neodymium	150-2	3	0	3	2	86.60	cps
Nickel	60-2	178777	178764	177334	178291	0.47	cps
Phosphorus	31-2	87	100	123	103	17.96	cps
Potassium	39-2	248460	249125	245124	247570	0.87	cps
Rhodium	103-1	13891619	13938595	13608167	13812794	1.29	cps
Rhodium	103-2	4886030	4896410	4939011	4907151	0.57	cps
Scandium	45-1	10473277	10344466	10239627	10352457	1.13	cps
Scandium	45-2	170623	170252	170268	170381	0.12	cps
Selenium	82-1	51893	53857	53844	53198	2.12	cps
Selenium	77-2	710	720	767	732	4.13	cps
Selenium	78-2	2667	2640	2420	2576	5.26	cps
Silicon	28-1	554935	557123	559463	557174	0.41	cps
Silver	107-1	975933	996806	993666	988802	1.14	cps
Silver	109-1	934391	948407	945910	942903	0.79	cps
Sodium	23-2	962867	953087	956593	957516	0.52	cps
Strontium	86-1	1994	1977	1857	1942	3.84	cps
Strontium	88-1	13246	13330	13670	13415	1.67	cps
Sulfur	34-1	710132	710249	714196	711526	0.33	cps
Terbium	159-1	19259309	19485910	19215356	19320192	0.75	cps
Terbium	159-2	5705450	5741436	5683862	5710249	0.51	cps
Thallium	203-1	3488206	3552688	3528548	3523147	0.92	cps
Thallium	205-1	8330580	8280953	8273327	8294953	0.37	cps
Tin	118-1	2904	2620	2774	2766	5.13	cps
Titanium	47-1	440	373	383	399	9.01	cps
Uranium	238-1	483	520	450	484	7.23	cps

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LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P8
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:48:22	DataFile Name :	012ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	250166	250573	248861	249866	0.36	cps
Ytterbium	172-1	117	110	140	122	12.89	cps
Ytterbium	172-2	33	47	43	41	16.89	cps
Ytterbium	176-1	2057	2000	1950	2002	2.67	cps
Ytterbium	176-2	313	340	400	351	12.64	cps
Yttrium	89-1	25801059	25579355	25068312	25482909	1.47	cps
Yttrium	89-2	1557503	1576663	1614165	1582777	1.82	cps
Zinc	66-2	99482	99875	99721	99693	0.20	cps
Zirconium	90-1	1227	1353	1210	1263	6.20	cps
Zirconium	91-1	1027	1057	917	1000	7.37	cps

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LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P8
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:52:02	DataFile Name :	013LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1420	1340	1397	1386	2.97	cps
Antimony	121-1	33625	33595	33625	33615	0.05	cps
Arsenic	75-2	293	327	290	303	6.69	cps
Barium	135-1	40540	40741	39842	40374	1.17	cps
Barium	137-1	69262	68994	69701	69319	0.51	cps
Beryllium	9-1	7245	7126	6897	7089	2.49	cps
Bismuth	209-1	12076302	12099677	11967947	12047976	0.58	cps
Bismuth	209-2	4414976	4405791	4428301	4416356	0.26	cps
Bromine	81-1	4101	4131	4254	4162	1.95	cps
Cadmium	108-1	357	377	290	341	13.30	cps
Cadmium	106-1	8773	8499	8533	8602	1.73	cps
Cadmium	111-1	9792	10137	10217	10049	2.25	cps
Calcium	43-1	27924	27423	27887	27745	1.01	cps
Calcium	44-1	462704	465537	466382	464874	0.41	cps
Carbon	12-1	4642769	4438439	4372810	4484673	3.14	cps
Carbon	12-2	25048	25252	25309	25203	0.54	cps
Chlorine	35-1	107364	107945	108163	107824	0.38	cps
Chlorine	35-2	383	327	347	352	8.16	cps
Chromium	52-2	8276	8309	8146	8244	1.05	cps
Cobalt	59-2	6898	6758	6562	6739	2.51	cps
Copper	63-2	13220	12709	13003	12977	1.97	cps
Dysprosium	156-1	113	113	113	113	0.01	cps
Dysprosium	156-2	3	3	7	4	43.40	cps
Erbium	164-1	100	77	127	101	24.74	cps
Erbium	164-2	13	33	43	30	50.92	cps
Gadolinium	160-1	137	120	103	120	13.89	cps
Gadolinium	160-2	17	7	30	18	65.83	cps
Holmium	165-1	18992644	19022048	18637352	18884015	1.13	cps
Holmium	165-2	5930217	5996364	5818705	5915096	1.52	cps
Indium	115-1	14744454	15043613	14601858	14796642	1.52	cps
Indium	115-2	1190534	1204222	1188807	1194521	0.71	cps
Iron	54-2	7679	7402	7722	7601	2.29	cps
Iron	56-2	133942	134480	133033	133818	0.55	cps
Iron	57-2	3557	3337	3304	3399	4.05	cps
Krypton	83-1	287	273	227	262	12.01	cps
Lead	206-1	16077	16220	16254	16184	0.58	cps

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LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P8
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:52:02	DataFile Name :	013LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	13661	14001	14268	13977	2.18	cps
Lead	208-1	63943	64503	64235	64227	0.44	cps
Lithium	6-1	8602655	8458287	8274940	8445294	1.94	cps
Magnesium	24-2	118389	119350	118043	118594	0.57	cps
Manganese	55-2	1710	1783	1683	1726	3.00	cps
Molybdenum	94-1	33089	34302	33918	33770	1.84	cps
Molybdenum	95-1	39773	40629	40816	40406	1.38	cps
Molybdenum	96-1	44190	44347	44866	44468	0.80	cps
Molybdenum	97-1	24986	25577	25600	25388	1.37	cps
Molybdenum	98-1	64486	65038	64744	64756	0.43	cps
Neodymium	150-1	30	47	43	40	22.05	cps
Neodymium	150-2	3	3	0	2	86.60	cps
Nickel	60-2	2510	2584	2604	2566	1.92	cps
Phosphorus	31-2	163	147	237	182	26.28	cps
Potassium	39-2	67912	68240	67453	67868	0.58	cps
Rhodium	103-1	13872225	13888926	13746035	13835729	0.56	cps
Rhodium	103-2	4881917	4952121	4886503	4906847	0.80	cps
Scandium	45-1	10232273	10320635	10362444	10305117	0.64	cps
Scandium	45-2	169781	167484	165985	167750	1.14	cps
Selenium	82-1	1250	1223	1227	1233	1.18	cps
Selenium	77-2	30	17	33	27	33.06	cps
Selenium	78-2	73	60	47	60	22.22	cps
Silicon	28-1	625892	618190	617879	620654	0.73	cps
Silver	107-1	20318	20759	20706	20594	1.17	cps
Silver	109-1	19360	19334	19440	19378	0.29	cps
Sodium	23-2	267233	267211	265780	266742	0.31	cps
Strontium	86-1	5915	5795	5845	5851	1.03	cps
Strontium	88-1	48025	48280	47825	48043	0.47	cps
Sulfur	34-1	727577	730020	731648	729748	0.28	cps
Terbium	159-1	19429536	19497443	19218475	19381818	0.75	cps
Terbium	159-2	5702238	5653441	5634153	5663277	0.62	cps
Thallium	203-1	16697	17011	17028	16912	1.10	cps
Thallium	205-1	40821	40613	40506	40647	0.39	cps
Tin	118-1	67565	67495	68122	67727	0.51	cps
Titanium	47-1	12699	12829	12175	12568	2.75	cps
Uranium	238-1	49724	49633	49081	49479	0.70	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P8
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:52:02	DataFile Name :	013LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	12482	12389	12155	12342	1.36	cps
Ytterbium	172-1	93	127	120	113	15.57	cps
Ytterbium	172-2	37	70	23	43	55.47	cps
Ytterbium	176-1	1997	2220	2040	2086	5.68	cps
Ytterbium	176-2	307	347	323	326	6.17	cps
Yttrium	89-1	25390755	25346677	25066190	25267874	0.70	cps
Yttrium	89-2	1551872	1550464	1542788	1548374	0.32	cps
Zinc	66-2	2840	3007	2867	2905	3.08	cps
Zirconium	90-1	27784	28312	28449	28182	1.25	cps
Zirconium	91-1	6438	6085	6178	6234	2.94	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P8
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:55:26	DataFile Name :	014CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	133	123	163	140	14.87	cps
Antimony	121-1	427	430	447	434	2.47	cps
Arsenic	75-2	3	17	7	9	78.08	cps
Barium	135-1	800	800	767	789	2.44	cps
Barium	137-1	1270	1323	1270	1288	2.39	cps
Beryllium	9-1	809	779	776	788	2.29	cps
Bismuth	209-1	12006841	11863891	12036411	11969048	0.77	cps
Bismuth	209-2	4373898	4429622	4403189	4402236	0.63	cps
Bromine	81-1	4071	4321	4087	4160	3.36	cps
Cadmium	108-1	30	37	37	34	11.18	cps
Cadmium	106-1	8006	8066	7746	7939	2.14	cps
Cadmium	111-1	5643	5677	5446	5589	2.23	cps
Calcium	43-1	630	610	593	611	3.00	cps
Calcium	44-1	24938	24614	24291	24614	1.32	cps
Carbon	12-1	4520513	4335362	4216624	4357500	3.51	cps
Carbon	12-2	25973	25292	25332	25532	1.50	cps
Chlorine	35-1	105967	106045	106065	106026	0.05	cps
Chlorine	35-2	413	347	337	366	11.40	cps
Chromium	52-2	1677	1737	1690	1701	1.85	cps
Cobalt	59-2	260	280	250	263	5.80	cps
Copper	63-2	2747	2894	2677	2773	3.99	cps
Dysprosium	156-1	83	103	117	101	16.60	cps
Dysprosium	156-2	0	3	10	4	114.60	cps
Erbium	164-1	120	83	57	87	36.69	cps
Erbium	164-2	23	40	30	31	26.97	cps
Gadolinium	160-1	113	93	67	91	25.70	cps
Gadolinium	160-2	23	23	17	21	18.21	cps
Holmium	165-1	18739394	18451157	18551326	18580625	0.79	cps
Holmium	165-2	5801064	5856848	5874230	5844048	0.65	cps
Indium	115-1	14461526	14723473	14309706	14498235	1.44	cps
Indium	115-2	1171782	1184303	1176549	1177545	0.54	cps
Iron	54-2	767	843	830	813	5.04	cps
Iron	56-2	12022	11722	12035	11926	1.49	cps
Iron	57-2	293	337	353	328	9.45	cps
Krypton	83-1	253	250	300	268	10.44	cps
Lead	206-1	3097	2824	2764	2895	6.14	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P8
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:55:26	DataFile Name :	014CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2370	2504	2420	2431	2.77	cps
Lead	208-1	11152	11289	11119	11186	0.81	cps
Lithium	6-1	8352127	8365075	8298321	8338507	0.42	cps
Magnesium	24-2	2067	1993	2120	2060	3.09	cps
Manganese	55-2	437	400	400	412	5.14	cps
Molybdenum	94-1	697	550	597	614	12.19	cps
Molybdenum	95-1	593	570	667	610	8.27	cps
Molybdenum	96-1	813	710	753	759	6.84	cps
Molybdenum	97-1	403	330	417	383	12.17	cps
Molybdenum	98-1	967	813	977	919	9.96	cps
Neodymium	150-1	30	33	23	29	17.63	cps
Neodymium	150-2	3	3	0	2	86.60	cps
Nickel	60-2	837	853	817	836	2.20	cps
Phosphorus	31-2	80	93	87	87	7.69	cps
Potassium	39-2	8499	8126	8276	8300	2.26	cps
Rhodium	103-1	13512461	13561626	13376887	13483658	0.71	cps
Rhodium	103-2	4824701	4855821	4896602	4859041	0.74	cps
Scandium	45-1	10218645	10175362	10137272	10177093	0.40	cps
Scandium	45-2	163083	164759	163984	163942	0.51	cps
Selenium	82-1	3	-13	-20	-10	-120.16	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	10	7	10	9	21.63	cps
Silicon	28-1	542982	540138	535336	539485	0.72	cps
Silver	107-1	430	487	323	413	20.06	cps
Silver	109-1	350	273	283	302	13.79	cps
Sodium	23-2	39303	39637	39490	39477	0.42	cps
Strontium	86-1	607	733	730	690	10.46	cps
Strontium	88-1	2544	2507	2387	2479	3.31	cps
Sulfur	34-1	720146	714204	721375	718575	0.53	cps
Terbium	159-1	19224331	19097821	19101719	19141291	0.38	cps
Terbium	159-2	5575246	5620485	5597455	5597728	0.40	cps
Thallium	203-1	673	660	670	668	1.04	cps
Thallium	205-1	1497	1650	1670	1606	5.91	cps
Tin	118-1	2614	2540	2560	2571	1.47	cps
Titanium	47-1	267	247	203	239	13.55	cps
Uranium	238-1	113	77	70	87	26.93	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P8
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:55:26	DataFile Name :	014CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	10	7	13	10	33.30	cps
Ytterbium	172-1	140	107	83	110	25.89	cps
Ytterbium	172-2	27	33	47	36	28.64	cps
Ytterbium	176-1	2114	2107	2030	2084	2.22	cps
Ytterbium	176-2	337	250	297	294	14.73	cps
Yttrium	89-1	24598305	24504640	24998757	24700567	1.06	cps
Yttrium	89-2	1539613	1549416	1519824	1536284	0.98	cps
Zinc	66-2	210	270	320	267	20.65	cps
Zirconium	90-1	873	870	787	843	5.82	cps
Zirconium	91-1	217	187	233	212	11.14	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P8
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:58:49	DataFile Name :	015ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5965439	6042941	5854956	5954446	1.59	cps
Antimony	121-1	18219	18846	17795	18287	2.89	cps
Arsenic	75-2	123	110	83	106	19.30	cps
Barium	135-1	6121	6031	6358	6170	2.74	cps
Barium	137-1	10854	10738	10161	10584	3.51	cps
Beryllium	9-1	2206	2279	2244	2243	1.62	cps
Bismuth	209-1	10930597	10877182	10957959	10921913	0.38	cps
Bismuth	209-2	4022128	3937113	4006379	3988540	1.13	cps
Bromine	81-1	5861	6355	6425	6214	4.94	cps
Cadmium	108-1	6208	6041	6178	6143	1.45	cps
Cadmium	106-1	7606	7609	7065	7427	4.21	cps
Cadmium	111-1	8147	8239	7533	7973	4.82	cps
Calcium	43-1	5668884	5571273	5631673	5623943	0.88	cps
Calcium	44-1	90226565	89469835	89438662	89711688	0.50	cps
Carbon	12-1	49364264	49555851	50310808	49743641	1.01	cps
Carbon	12-2	308592	308627	308052	308424	0.10	cps
Chlorine	35-1	86248752	91410472	93831732	90496985	4.28	cps
Chlorine	35-2	337989	337801	343491	339760	0.95	cps
Chromium	52-2	63353	63316	63741	63470	0.37	cps
Cobalt	59-2	7365	7342	6948	7219	3.24	cps
Copper	63-2	39996	40558	40290	40281	0.70	cps
Dysprosium	156-1	157	173	150	160	7.51	cps
Dysprosium	156-2	17	23	10	17	39.99	cps
Erbium	164-1	133	200	160	164	20.40	cps
Erbium	164-2	50	70	37	52	32.12	cps
Gadolinium	160-1	160	163	163	162	1.19	cps
Gadolinium	160-2	67	30	43	47	39.77	cps
Holmium	165-1	18376554	18500084	18508937	18461858	0.40	cps
Holmium	165-2	5755901	5649782	5722966	5709550	0.95	cps
Indium	115-1	13999275	13831904	13754541	13861907	0.90	cps
Indium	115-2	1127731	1094650	1131571	1117984	1.82	cps
Iron	54-2	12996568	13183902	13044666	13075046	0.74	cps
Iron	56-2	241796456	241104076	241060330	241320288	0.17	cps
Iron	57-2	6144500	6075511	6017594	6079202	1.05	cps
Krypton	83-1	303	267	290	287	6.47	cps
Lead	206-1	62054	61545	61632	61744	0.44	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P8
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:58:49	DataFile Name :	015ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	49250	48758	48313	48774	0.96	cps
Lead	208-1	232061	230744	228371	230392	0.81	cps
Lithium	6-1	8165837	8104009	8003034	8090960	1.02	cps
Magnesium	24-2	22712833	22330386	22392976	22478732	0.91	cps
Manganese	55-2	9423	9507	9927	9619	2.81	cps
Molybdenum	94-1	9164398	9297861	9204658	9222305	0.74	cps
Molybdenum	95-1	16270958	16475749	16437667	16394791	0.66	cps
Molybdenum	96-1	17569578	17765886	17425085	17586850	0.97	cps
Molybdenum	97-1	10044395	10206443	10066660	10105832	0.87	cps
Molybdenum	98-1	26222900	26415286	26231032	26289740	0.41	cps
Neodymium	150-1	90	97	120	102	15.41	cps
Neodymium	150-2	10	17	17	14	26.66	cps
Nickel	60-2	9683	9700	9373	9586	1.92	cps
Phosphorus	31-2	299182	296062	297538	297594	0.52	cps
Potassium	39-2	12336075	12105591	12317271	12252979	1.04	cps
Rhodium	103-1	12366242	12553953	12292155	12404117	1.09	cps
Rhodium	103-2	4484166	4365917	4466926	4439003	1.44	cps
Scandium	45-1	9985430	10029696	10107574	10040900	0.62	cps
Scandium	45-2	162817	157439	164833	161696	2.36	cps
Selenium	82-1	10	60	27	32	79.02	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	3	7	13	8	65.47	cps
Silicon	28-1	918984	914776	925405	919722	0.58	cps
Silver	107-1	2407	2840	2684	2644	8.30	cps
Silver	109-1	2450	2514	2530	2498	1.69	cps
Sodium	23-2	48170999	47404526	47375624	47650383	0.95	cps
Strontium	86-1	176769	175034	179162	176988	1.17	cps
Strontium	88-1	1621950	1627211	1632087	1627083	0.31	cps
Sulfur	34-1	8184840	8030684	8084589	8100038	0.97	cps
Terbium	159-1	18692506	18647066	19154594	18831389	1.49	cps
Terbium	159-2	5463419	5331153	5484861	5426478	1.53	cps
Thallium	203-1	2754	3157	3244	3052	8.57	cps
Thallium	205-1	6528	7335	7822	7229	9.04	cps
Tin	118-1	4504	4431	4454	4463	0.84	cps
Titanium	47-1	5292631	5320272	5345693	5319532	0.50	cps
Uranium	238-1	957	803	923	894	9.02	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P8
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 12:58:49	DataFile Name :	015ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	427	353	330	370	13.63	cps
Ytterbium	172-1	117	133	133	128	7.53	cps
Ytterbium	172-2	30	33	33	32	5.97	cps
Ytterbium	176-1	1947	1974	1920	1947	1.37	cps
Ytterbium	176-2	290	253	303	282	9.17	cps
Yttrium	89-1	24660408	24731575	24841063	24744349	0.37	cps
Yttrium	89-2	1542733	1504962	1521828	1523174	1.24	cps
Zinc	66-2	5388	5354	5341	5361	0.45	cps
Zirconium	90-1	1217	1207	1240	1221	1.40	cps
Zirconium	91-1	303	313	320	312	2.69	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P8
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:02:06	DataFile Name :	016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	6209231	6212836	6079298	6167122	1.23	cps
Antimony	121-1	345954	349423	350139	348506	0.64	cps
Arsenic	75-2	5978	5775	6018	5924	2.20	cps
Barium	135-1	86336	86769	85847	86317	0.53	cps
Barium	137-1	148501	148552	150196	149083	0.65	cps
Beryllium	9-1	124455	124161	124922	124513	0.31	cps
Bismuth	209-1	10997147	11040027	10951803	10996326	0.40	cps
Bismuth	209-2	4089620	4000406	4040618	4043548	1.10	cps
Bromine	81-1	5578	5718	5835	5710	2.25	cps
Cadmium	108-1	11351	11201	11275	11276	0.67	cps
Cadmium	106-1	14331	14488	14177	14332	1.08	cps
Cadmium	111-1	85469	86747	85463	85893	0.86	cps
Calcium	43-1	5768046	5820566	5865405	5818006	0.84	cps
Calcium	44-1	91997152	94354709	92071802	92807888	1.44	cps
Carbon	12-1	51659863	52824703	52226354	52236973	1.12	cps
Carbon	12-2	325326	325649	320828	323934	0.83	cps
Chlorine	35-1	95432249	99999689	102031288	99154409	3.41	cps
Chlorine	35-2	368918	366887	369237	368348	0.35	cps
Chromium	52-2	127377	129412	128760	128516	0.81	cps
Cobalt	59-2	128722	128365	127635	128241	0.43	cps
Copper	63-2	135973	133988	135408	135123	0.76	cps
Dysprosium	156-1	153	137	150	147	6.01	cps
Dysprosium	156-2	33	20	23	26	27.15	cps
Erbium	164-1	133	140	180	151	16.70	cps
Erbium	164-2	50	50	50	50	0.00	cps
Gadolinium	160-1	140	150	173	154	11.08	cps
Gadolinium	160-2	20	43	33	32	36.33	cps
Holmium	165-1	18748448	18633753	18488587	18623596	0.70	cps
Holmium	165-2	5902030	5849386	5837379	5862932	0.59	cps
Indium	115-1	14103099	14028539	13868207	13999948	0.86	cps
Indium	115-2	1152471	1139026	1146838	1146112	0.59	cps
Iron	54-2	13528840	13614131	13662419	13601797	0.50	cps
Iron	56-2	247447970	247116716	250400443	248321710	0.73	cps
Iron	57-2	6180499	6219088	6128761	6176116	0.73	cps
Krypton	83-1	217	340	227	261	26.24	cps
Lead	206-1	318366	319991	323092	320483	0.75	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P8
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:02:06	DataFile Name :	016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	261847	266556	265507	264637	0.93	cps
Lead	208-1	1226955	1236184	1239404	1234181	0.52	cps
Lithium	6-1	8340869	8295974	8336529	8324457	0.30	cps
Magnesium	24-2	23528210	23163224	23183778	23291737	0.88	cps
Manganese	55-2	33937	35755	34605	34766	2.64	cps
Molybdenum	94-1	9541673	9614236	9633194	9596368	0.50	cps
Molybdenum	95-1	16724381	16949916	16756935	16810411	0.73	cps
Molybdenum	96-1	18099037	17930167	17966931	17998712	0.49	cps
Molybdenum	97-1	10555844	10433792	10404311	10464649	0.77	cps
Molybdenum	98-1	27429668	27464752	27156211	27350210	0.62	cps
Neodymium	150-1	67	103	93	88	21.59	cps
Neodymium	150-2	7	13	30	17	72.11	cps
Nickel	60-2	42851	42721	42490	42687	0.43	cps
Phosphorus	31-2	309890	308648	309530	309356	0.21	cps
Potassium	39-2	12736195	12746396	12564297	12682296	0.81	cps
Rhodium	103-1	12803082	12819679	12617214	12746658	0.88	cps
Rhodium	103-2	4437714	4483413	4512923	4478017	0.85	cps
Scandium	45-1	10212694	10290025	10313758	10272159	0.51	cps
Scandium	45-2	168600	170275	168303	169059	0.63	cps
Selenium	82-1	5151	5214	5415	5260	2.61	cps
Selenium	77-2	93	63	67	74	22.09	cps
Selenium	78-2	253	283	270	269	5.59	cps
Silicon	28-1	966363	955651	964033	962016	0.59	cps
Silver	107-1	376421	380011	381046	379159	0.64	cps
Silver	109-1	360064	363178	364271	362504	0.60	cps
Sodium	23-2	49669224	49402543	49152418	49408061	0.52	cps
Strontium	86-1	184533	184604	182383	183840	0.69	cps
Strontium	88-1	1654799	1695793	1697809	1682800	1.44	cps
Sulfur	34-1	8331736	8293582	8280881	8302066	0.32	cps
Terbium	159-1	19009243	19070151	19141230	19073542	0.35	cps
Terbium	159-2	5637766	5632492	5572746	5614335	0.64	cps
Thallium	203-1	318421	322871	323743	321678	0.89	cps
Thallium	205-1	763882	778894	774655	772477	1.00	cps
Tin	118-1	4264	4001	4124	4130	3.19	cps
Titanium	47-1	5459411	5453966	5450002	5454460	0.09	cps
Uranium	238-1	917	940	860	906	4.54	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P8
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:02:06	DataFile Name :	016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	50368	50268	50144	50260	0.22	cps
Ytterbium	172-1	87	163	107	119	33.45	cps
Ytterbium	172-2	40	53	67	53	25.00	cps
Ytterbium	176-1	1897	1994	2074	1988	4.45	cps
Ytterbium	176-2	307	290	323	307	5.43	cps
Yttrium	89-1	25333389	25365081	25195003	25297824	0.36	cps
Yttrium	89-2	1556666	1538662	1531074	1542134	0.85	cps
Zinc	66-2	15525	15188	15345	15353	1.10	cps
Zirconium	90-1	1253	1157	1133	1181	5.39	cps
Zirconium	91-1	333	293	300	309	6.94	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P8
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:13:13	DataFile Name :	019CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3141746	3073013	3145889	3120216	1.31	cps
Antimony	121-1	7613251	7787968	7692116	7697778	1.14	cps
Arsenic	75-2	135168	133680	134043	134297	0.58	cps
Barium	135-1	9484003	9607107	9589718	9560276	0.70	cps
Barium	137-1	16233279	16221503	16350104	16268296	0.44	cps
Beryllium	9-1	2900239	2909243	2891792	2900425	0.30	cps
Bismuth	209-1	10408365	10275598	10146115	10276693	1.28	cps
Bismuth	209-2	3861283	3892841	3833707	3862611	0.77	cps
Bromine	81-1	4838	5088	5324	5083	4.79	cps
Cadmium	108-1	147637	149800	149689	149042	0.82	cps
Cadmium	106-1	212765	211681	214833	213093	0.75	cps
Cadmium	111-1	1851175	1886415	1868117	1868569	0.94	cps
Calcium	43-1	13422781	13139168	12989204	13183717	1.67	cps
Calcium	44-1	212582550	209172104	211863057	211205904	0.85	cps
Carbon	12-1	5653359	5644323	5611013	5636232	0.40	cps
Carbon	12-2	39653	39429	40081	39721	0.83	cps
Chlorine	35-1	836741	824734	807722	823066	1.77	cps
Chlorine	35-2	2914	2777	2694	2795	3.98	cps
Chromium	52-2	1549917	1566220	1578445	1564861	0.91	cps
Cobalt	59-2	2929185	2921405	2949569	2933386	0.50	cps
Copper	63-2	21635401	22016309	21651474	21767728	0.99	cps
Dysprosium	156-1	407	507	543	486	14.57	cps
Dysprosium	156-2	83	83	80	82	2.34	cps
Erbium	164-1	437	433	447	439	1.58	cps
Erbium	164-2	127	137	117	127	7.89	cps
Gadolinium	160-1	327	333	417	359	13.97	cps
Gadolinium	160-2	120	150	150	140	12.37	cps
Holmium	165-1	17851119	17920248	17754146	17841838	0.47	cps
Holmium	165-2	5689662	5679244	5628355	5665753	0.58	cps
Indium	115-1	13210576	13249145	13124933	13194885	0.48	cps
Indium	115-2	1109223	1100140	1103143	1104169	0.42	cps
Iron	54-2	15714216	15271657	15451194	15479022	1.44	cps
Iron	56-2	283466289	282480789	282941269	282962782	0.17	cps
Iron	57-2	7192186	7102631	7179649	7158155	0.68	cps
Krypton	83-1	313	300	340	318	6.41	cps
Lead	206-1	30286138	30059979	30173176	30173098	0.37	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P8
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:13:13	DataFile Name :	019CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	25821230	25652235	25720899	25731455	0.33	cps
Lead	208-1	119081244	118537796	118975302	118864781	0.24	cps
Lithium	6-1	7950167	7876497	7825310	7883991	0.80	cps
Magnesium	24-2	57187717	56135321	56104831	56475956	1.09	cps
Manganese	55-2	6314780	6223653	6278206	6272213	0.73	cps
Molybdenum	94-1	27241970	27748100	27280535	27423535	1.03	cps
Molybdenum	95-1	38798472	39849676	39313809	39320652	1.34	cps
Molybdenum	96-1	42410188	42815059	42467894	42564380	0.51	cps
Molybdenum	97-1	24132690	24077319	23993702	24067904	0.29	cps
Molybdenum	98-1	63516527	62838279	63167002	63173936	0.54	cps
Neodymium	150-1	690	877	897	821	13.88	cps
Neodymium	150-2	63	20	47	43	50.44	cps
Nickel	60-2	820150	829965	827438	825851	0.62	cps
Phosphorus	31-2	28705	29032	28538	28759	0.87	cps
Potassium	39-2	15147849	14847208	14990619	14995225	1.00	cps
Rhodium	103-1	11993966	11857175	11858252	11903131	0.66	cps
Rhodium	103-2	4259745	4354033	4340661	4318146	1.18	cps
Scandium	45-1	10020994	9868605	9628850	9839483	2.01	cps
Scandium	45-2	167426	166832	167561	167273	0.23	cps
Selenium	82-1	110632	111068	111619	111106	0.45	cps
Selenium	77-2	1557	1663	1830	1683	8.18	cps
Selenium	78-2	5711	5645	5384	5580	3.09	cps
Silicon	28-1	9612985	9734204	9610014	9652401	0.73	cps
Silver	107-1	9367437	9289079	9276943	9311153	0.53	cps
Silver	109-1	8770175	8773672	8599213	8714353	1.14	cps
Sodium	23-2	113371868	114452308	113216105	113680094	0.59	cps
Strontium	86-1	2581270	2589490	2630478	2600413	1.01	cps
Strontium	88-1	21854113	21953771	22039112	21948999	0.42	cps
Sulfur	34-1	1496241	1477821	1477003	1483688	0.73	cps
Terbium	159-1	18403838	18139901	17771957	18105232	1.75	cps
Terbium	159-2	5499989	5538056	5479496	5505847	0.54	cps
Thallium	203-1	7447058	7443090	7450146	7446765	0.05	cps
Thallium	205-1	17689570	17630897	17699199	17673222	0.21	cps
Tin	118-1	6106003	6241520	6211758	6186427	1.15	cps
Titanium	47-1	12298486	12149352	12168700	12205513	0.66	cps
Uranium	238-1	24309860	24182765	24282527	24258384	0.28	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P8
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:13:13	DataFile Name :	019CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1183481	1181842	1173150	1179491	0.47	cps
Ytterbium	172-1	497	477	423	466	8.14	cps
Ytterbium	172-2	160	173	163	166	4.19	cps
Ytterbium	176-1	36701	37132	37232	37022	0.76	cps
Ytterbium	176-2	11522	11655	11722	11633	0.88	cps
Yttrium	89-1	24443490	23985340	23745018	24057949	1.47	cps
Yttrium	89-2	1523905	1538686	1547891	1536827	0.79	cps
Zinc	66-2	2315405	2328583	2300000	2314663	0.62	cps
Zirconium	90-1	13805308	13785239	13815327	13801958	0.11	cps
Zirconium	91-1	3129912	3082021	3100877	3104270	0.78	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P8
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:16:11	DataFile Name :	020CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	197	220	167	194	13.75	cps
Antimony	121-1	2184	2184	2060	2142	3.32	cps
Arsenic	75-2	3	23	7	11	96.43	cps
Barium	135-1	2194	2077	2034	2101	3.94	cps
Barium	137-1	3661	3561	3394	3538	3.81	cps
Beryllium	9-1	2111	1916	1874	1967	6.44	cps
Bismuth	209-1	10642998	12034320	11511150	11396156	6.17	cps
Bismuth	209-2	4292549	4407407	4415371	4371776	1.57	cps
Bromine	81-1	4427	4597	4561	4529	1.98	cps
Cadmium	108-1	40	43	27	37	24.04	cps
Cadmium	106-1	7172	7809	7736	7572	4.60	cps
Cadmium	111-1	5132	5586	5516	5412	4.51	cps
Calcium	43-1	977	950	940	956	1.98	cps
Calcium	44-1	30900	29447	28765	29704	3.67	cps
Carbon	12-1	4852575	4629381	4593791	4691916	2.99	cps
Carbon	12-2	26905	26871	26497	26758	0.85	cps
Chlorine	35-1	616633	596812	578458	597301	3.20	cps
Chlorine	35-2	1913	1883	1917	1905	0.96	cps
Chromium	52-2	1783	1860	1877	1840	2.71	cps
Cobalt	59-2	373	297	367	346	12.29	cps
Copper	63-2	3597	3717	3570	3628	2.15	cps
Dysprosium	156-1	37	73	67	59	33.16	cps
Dysprosium	156-2	7	10	10	9	21.63	cps
Erbium	164-1	90	97	90	92	4.18	cps
Erbium	164-2	27	50	20	32	48.88	cps
Gadolinium	160-1	103	120	90	104	14.39	cps
Gadolinium	160-2	7	13	17	12	41.65	cps
Holmium	165-1	16584685	18806981	18105121	17832263	6.37	cps
Holmium	165-2	5677563	5977302	5967918	5874261	2.90	cps
Indium	115-1	13369687	14949248	14321758	14213565	5.60	cps
Indium	115-2	1156305	1202391	1206461	1188386	2.34	cps
Iron	54-2	1130	1093	1010	1078	5.71	cps
Iron	56-2	18305	17995	18045	18115	0.92	cps
Iron	57-2	483	503	477	488	2.85	cps
Krypton	83-1	267	237	320	274	15.38	cps
Lead	206-1	4931	4754	4648	4778	3.00	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P8
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:16:11	DataFile Name :	020CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	4454	4161	3851	4155	7.26	cps
Lead	208-1	19629	18699	17972	18767	4.43	cps
Lithium	6-1	7430936	8554473	8291602	8092337	7.26	cps
Magnesium	24-2	2450	2530	2340	2440	3.91	cps
Manganese	55-2	630	623	590	614	3.49	cps
Molybdenum	94-1	1653	1513	1297	1488	12.08	cps
Molybdenum	95-1	1793	1727	1517	1679	8.60	cps
Molybdenum	96-1	2197	1887	1717	1933	12.59	cps
Molybdenum	97-1	1157	993	967	1039	9.90	cps
Molybdenum	98-1	3010	2604	2594	2736	8.69	cps
Neodymium	150-1	87	57	63	69	22.87	cps
Neodymium	150-2	3	0	10	4	114.60	cps
Nickel	60-2	933	887	963	928	4.16	cps
Phosphorus	31-2	97	123	107	109	12.37	cps
Potassium	39-2	10684	10624	10327	10545	1.81	cps
Rhodium	103-1	12362384	14157745	13226957	13249029	6.78	cps
Rhodium	103-2	4785249	4878854	4956847	4873650	1.76	cps
Scandium	45-1	9178813	10667882	10141482	9996059	7.55	cps
Scandium	45-2	164388	170102	169796	168095	1.91	cps
Selenium	82-1	7	60	17	28	102.04	cps
Selenium	77-2	0	3	0	1	173.21	cps
Selenium	78-2	0	7	10	6	91.64	cps
Silicon	28-1	597978	590548	589836	592788	0.76	cps
Silver	107-1	1417	1083	1067	1189	16.61	cps
Silver	109-1	960	953	837	917	7.57	cps
Sodium	23-2	55722	54525	54056	54768	1.57	cps
Strontium	86-1	653	600	667	640	5.51	cps
Strontium	88-1	1970	1913	1893	1926	2.07	cps
Sulfur	34-1	731610	730533	724224	728789	0.55	cps
Terbium	159-1	17016069	19215138	18604401	18278536	6.21	cps
Terbium	159-2	5395680	5678880	5681270	5585277	2.94	cps
Thallium	203-1	1673	1567	1643	1628	3.38	cps
Thallium	205-1	4031	3694	3641	3788	5.58	cps
Tin	118-1	3170	3130	3184	3162	0.88	cps
Titanium	47-1	490	417	450	452	8.12	cps
Uranium	238-1	623	470	497	530	15.46	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P8
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:16:11	DataFile Name :	020CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	30	33	7	23	62.26	cps
Ytterbium	172-1	107	103	87	99	10.84	cps
Ytterbium	172-2	30	37	17	28	36.66	cps
Ytterbium	176-1	1857	2144	1974	1991	7.24	cps
Ytterbium	176-2	267	300	257	274	8.27	cps
Yttrium	89-1	22556277	25767556	24502501	24275445	6.66	cps
Yttrium	89-2	1518360	1538423	1579126	1545303	2.00	cps
Zinc	66-2	320	383	420	374	13.51	cps
Zirconium	90-1	1463	1420	1103	1329	14.79	cps
Zirconium	91-1	267	307	340	304	12.06	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P8
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:19:38	DataFile Name :	021LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1327	1373	1373	1358	1.98	cps
Antimony	121-1	32983	33294	32589	32955	1.07	cps
Arsenic	75-2	267	317	287	290	8.68	cps
Barium	135-1	39852	39534	40153	39846	0.78	cps
Barium	137-1	69745	68502	68790	69012	0.94	cps
Beryllium	9-1	7466	7365	7341	7391	0.90	cps
Bismuth	209-1	11760656	11666256	11642802	11689905	0.53	cps
Bismuth	209-2	4331144	4397650	4343523	4357439	0.81	cps
Bromine	81-1	4411	4111	4211	4244	3.60	cps
Cadmium	108-1	303	343	337	328	6.54	cps
Cadmium	106-1	8109	7932	8269	8104	2.08	cps
Cadmium	111-1	9885	9506	9647	9679	1.98	cps
Calcium	43-1	27773	28592	27827	28064	1.63	cps
Calcium	44-1	455096	462906	458669	458890	0.85	cps
Carbon	12-1	4788895	4504713	4421433	4571680	4.21	cps
Carbon	12-2	25749	26120	25672	25847	0.93	cps
Chlorine	35-1	419406	410611	400170	410062	2.35	cps
Chlorine	35-2	1240	1353	1370	1321	5.35	cps
Chromium	52-2	8066	8112	8196	8125	0.81	cps
Cobalt	59-2	6492	6955	6682	6709	3.47	cps
Copper	63-2	13266	12846	12469	12860	3.10	cps
Dysprosium	156-1	93	60	57	70	28.96	cps
Dysprosium	156-2	3	3	7	4	43.40	cps
Erbium	164-1	107	123	80	103	21.16	cps
Erbium	164-2	27	17	40	28	42.13	cps
Gadolinium	160-1	107	83	120	103	17.96	cps
Gadolinium	160-2	17	33	13	21	50.75	cps
Holmium	165-1	18240113	18351098	18449504	18346905	0.57	cps
Holmium	165-2	5830637	5818945	5791219	5813600	0.35	cps
Indium	115-1	14679919	14388422	14570404	14546248	1.01	cps
Indium	115-2	1182534	1191550	1184326	1186136	0.40	cps
Iron	54-2	7712	7475	7612	7600	1.56	cps
Iron	56-2	132576	134554	133756	133629	0.74	cps
Iron	57-2	3270	3494	3177	3314	4.91	cps
Krypton	83-1	273	303	227	268	14.43	cps
Lead	206-1	16604	16083	16160	16283	1.73	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P8
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:19:38	DataFile Name :	021LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	13611	14121	13480	13737	2.46	cps
Lead	208-1	64664	64109	64183	64319	0.47	cps
Lithium	6-1	8578282	8503276	8479905	8520488	0.60	cps
Magnesium	24-2	118634	119273	118557	118821	0.33	cps
Manganese	55-2	1977	2060	1927	1988	3.39	cps
Molybdenum	94-1	32107	32902	31923	32311	1.61	cps
Molybdenum	95-1	39673	39814	39275	39587	0.71	cps
Molybdenum	96-1	44086	44167	44173	44142	0.11	cps
Molybdenum	97-1	25243	24742	25126	25037	1.05	cps
Molybdenum	98-1	64399	62905	64542	63949	1.42	cps
Neodymium	150-1	53	47	67	56	18.33	cps
Neodymium	150-2	0	0	7	2	173.21	cps
Nickel	60-2	2654	2614	2784	2684	3.31	cps
Phosphorus	31-2	177	223	207	202	11.69	cps
Potassium	39-2	68588	67993	68528	68370	0.48	cps
Rhodium	103-1	13646749	13444439	13562981	13551390	0.75	cps
Rhodium	103-2	4896147	4878574	4827291	4867338	0.74	cps
Scandium	45-1	10100178	10280973	10184316	10188489	0.89	cps
Scandium	45-2	168369	167925	165337	167210	0.98	cps
Selenium	82-1	1237	1180	1417	1278	9.67	cps
Selenium	77-2	23	17	23	21	18.21	cps
Selenium	78-2	77	37	53	56	36.17	cps
Silicon	28-1	649264	644971	644564	646266	0.40	cps
Silver	107-1	19394	19761	19844	19666	1.22	cps
Silver	109-1	18666	18656	18776	18699	0.36	cps
Sodium	23-2	272909	274175	274141	273742	0.26	cps
Strontium	86-1	5748	5901	5805	5818	1.33	cps
Strontium	88-1	46708	46812	46420	46647	0.43	cps
Sulfur	34-1	713647	711176	711012	711945	0.21	cps
Terbium	159-1	18698780	18754338	18909806	18787641	0.58	cps
Terbium	159-2	5586688	5524333	5570410	5560477	0.58	cps
Thallium	203-1	16764	16861	16367	16664	1.57	cps
Thallium	205-1	40286	40142	40289	40239	0.21	cps
Tin	118-1	67167	66601	67311	67026	0.56	cps
Titanium	47-1	12666	12642	12586	12631	0.33	cps
Uranium	238-1	47217	48191	47218	47542	1.18	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P8
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:19:38	DataFile Name :	021LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	12089	12145	12589	12274	2.23	cps
Ytterbium	172-1	113	117	70	100	26.03	cps
Ytterbium	172-2	57	30	30	39	39.59	cps
Ytterbium	176-1	1870	1964	2030	1955	4.11	cps
Ytterbium	176-2	233	320	297	283	15.83	cps
Yttrium	89-1	25051963	25467760	25119330	25213018	0.89	cps
Yttrium	89-2	1567774	1526691	1554176	1549547	1.35	cps
Zinc	66-2	2930	2757	3107	2931	5.97	cps
Zirconium	90-1	28085	27931	27754	27924	0.59	cps
Zirconium	91-1	6155	6245	5985	6128	2.16	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	PB166734BL	Instrumnet Name :	P8
Client Sample ID :	PB166734BL	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:23:10	DataFile Name :	022CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	153	177	167	166	7.07	cps
Antimony	121-1	420	510	457	462	9.79	cps
Arsenic	75-2	3	3	0	2	86.60	cps
Barium	135-1	1263	1317	1300	1293	2.11	cps
Barium	137-1	2150	2214	2137	2167	1.89	cps
Beryllium	9-1	1086	961	1040	1029	6.14	cps
Bismuth	209-1	11430978	11430372	11485899	11449083	0.28	cps
Bismuth	209-2	4305775	4371394	4277450	4318206	1.12	cps
Bromine	81-1	4237	4141	4244	4207	1.38	cps
Cadmium	108-1	53	53	63	57	10.19	cps
Cadmium	106-1	7372	7409	7459	7413	0.59	cps
Cadmium	111-1	5183	5215	5247	5215	0.61	cps
Calcium	43-1	600	633	590	608	3.73	cps
Calcium	44-1	24314	23599	24164	24026	1.57	cps
Carbon	12-1	4423457	4145560	4055698	4208238	4.56	cps
Carbon	12-2	23729	23746	23930	23802	0.47	cps
Chlorine	35-1	312112	306808	299682	306201	2.04	cps
Chlorine	35-2	1067	973	1043	1028	4.73	cps
Chromium	52-2	1813	1880	1897	1863	2.37	cps
Cobalt	59-2	217	227	317	253	21.74	cps
Copper	63-2	2747	2860	2897	2835	2.76	cps
Dysprosium	156-1	100	70	67	79	23.27	cps
Dysprosium	156-2	0	7	7	4	86.60	cps
Erbium	164-1	93	87	67	82	16.87	cps
Erbium	164-2	20	20	37	26	37.66	cps
Gadolinium	160-1	110	97	80	96	15.73	cps
Gadolinium	160-2	17	13	13	14	13.35	cps
Holmium	165-1	18229680	18172341	18328508	18243510	0.43	cps
Holmium	165-2	5766855	5724259	5726291	5739135	0.42	cps
Indium	115-1	14234074	14238994	14097101	14190056	0.57	cps
Indium	115-2	1166317	1173197	1158356	1165956	0.64	cps
Iron	54-2	793	960	943	899	10.21	cps
Iron	56-2	13466	13893	13623	13661	1.58	cps
Iron	57-2	343	320	280	314	10.19	cps
Krypton	83-1	290	260	223	258	12.95	cps
Lead	206-1	3354	3040	3404	3266	6.03	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	PB166734BL	Instrumnet Name :	P8
Client Sample ID :	PB166734BL	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:23:10	DataFile Name :	022CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2860	2780	2770	2804	1.76	cps
Lead	208-1	12733	12382	12616	12577	1.42	cps
Lithium	6-1	8423106	8363666	8280950	8355907	0.85	cps
Magnesium	24-2	2354	2194	2164	2237	4.57	cps
Manganese	55-2	547	533	480	520	6.78	cps
Molybdenum	94-1	810	783	723	772	5.75	cps
Molybdenum	95-1	833	813	637	761	14.22	cps
Molybdenum	96-1	990	907	867	921	6.83	cps
Molybdenum	97-1	523	440	410	458	12.83	cps
Molybdenum	98-1	1170	1050	1187	1136	6.57	cps
Neodymium	150-1	40	33	43	39	13.09	cps
Neodymium	150-2	0	7	0	2	173.21	cps
Nickel	60-2	897	943	843	894	5.59	cps
Phosphorus	31-2	90	100	67	86	19.99	cps
Potassium	39-2	9590	9370	9113	9358	2.55	cps
Rhodium	103-1	13564024	13350661	13246057	13386914	1.21	cps
Rhodium	103-2	4850272	4799164	4773838	4807758	0.81	cps
Scandium	45-1	10201101	10116472	10036938	10118170	0.81	cps
Scandium	45-2	163120	163920	162507	163182	0.43	cps
Selenium	82-1	-17	70	70	41	121.72	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	7	13	10	10	33.30	cps
Silicon	28-1	553503	553349	553539	553464	0.02	cps
Silver	107-1	420	433	440	431	2.36	cps
Silver	109-1	347	297	360	334	9.98	cps
Sodium	23-2	45420	44852	44952	45075	0.67	cps
Strontium	86-1	690	613	747	683	9.79	cps
Strontium	88-1	1937	1987	2140	2021	5.24	cps
Sulfur	34-1	699051	692729	698535	696772	0.50	cps
Terbium	159-1	18720811	18431543	18620284	18590879	0.79	cps
Terbium	159-2	5418363	5446576	5425243	5430061	0.27	cps
Thallium	203-1	923	910	943	926	1.81	cps
Thallium	205-1	2260	2067	2334	2220	6.21	cps
Tin	118-1	2567	2550	2580	2566	0.59	cps
Titanium	47-1	320	263	243	276	14.43	cps
Uranium	238-1	160	140	130	143	10.66	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	PB166734BL	Instrumnet Name :	P8
Client Sample ID :	PB166734BL	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:23:10	DataFile Name :	022CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	20	10	23	18	39.03	cps
Ytterbium	172-1	140	93	80	104	30.17	cps
Ytterbium	172-2	37	43	23	34	29.57	cps
Ytterbium	176-1	1860	1904	1730	1831	4.93	cps
Ytterbium	176-2	357	233	257	282	23.22	cps
Yttrium	89-1	25503516	24810669	24322209	24878798	2.39	cps
Yttrium	89-2	1549193	1561456	1515171	1541940	1.56	cps
Zinc	66-2	377	327	280	328	14.75	cps
Zirconium	90-1	860	980	853	898	7.94	cps
Zirconium	91-1	227	223	167	206	16.40	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	PB166734BS	Instrumnet Name :	P8
Client Sample ID :	PB166734BS	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:26:31	DataFile Name :	023LCSS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	622956	627492	619820	623423	0.62	cps
Antimony	121-1	8256091	8143285	8246566	8215314	0.76	cps
Arsenic	75-2	142597	143121	142909	142876	0.18	cps
Barium	135-1	10241414	9984737	10097641	10107931	1.27	cps
Barium	137-1	17389380	17476559	17516809	17460916	0.37	cps
Beryllium	9-1	3057766	3013998	3004530	3025431	0.94	cps
Bismuth	209-1	11097097	11047415	11122525	11089012	0.34	cps
Bismuth	209-2	4042431	4068608	4032713	4047917	0.46	cps
Bromine	81-1	4304	4284	4167	4252	1.74	cps
Cadmium	108-1	159531	163362	161716	161536	1.19	cps
Cadmium	106-1	231471	233495	236228	233731	1.02	cps
Cadmium	111-1	2068221	2061543	2087048	2072271	0.64	cps
Calcium	43-1	2841943	2863859	2851833	2852545	0.38	cps
Calcium	44-1	45218774	45183004	45980788	45460855	0.99	cps
Carbon	12-1	4981703	4891741	4908491	4927312	0.97	cps
Carbon	12-2	31069	31310	31400	31260	0.55	cps
Chlorine	35-1	306552	308639	312057	309083	0.90	cps
Chlorine	35-2	1227	1140	1077	1148	6.56	cps
Chromium	52-2	1668007	1671802	1638085	1659298	1.11	cps
Cobalt	59-2	3114934	3097540	3152232	3121569	0.90	cps
Copper	63-2	24491806	24614235	24286636	24464226	0.68	cps
Dysprosium	156-1	350	270	317	312	12.87	cps
Dysprosium	156-2	43	53	37	44	18.87	cps
Erbium	164-1	190	160	193	181	10.14	cps
Erbium	164-2	77	60	73	70	12.60	cps
Gadolinium	160-1	193	130	193	172	21.23	cps
Gadolinium	160-2	53	33	50	46	23.52	cps
Holmium	165-1	18116527	18056323	17642700	17938517	1.44	cps
Holmium	165-2	5654048	5711957	5770605	5712203	1.02	cps
Indium	115-1	13558510	13639630	13634764	13610968	0.33	cps
Indium	115-2	1123650	1129141	1126696	1126496	0.24	cps
Iron	54-2	3437062	3400518	3454685	3430755	0.81	cps
Iron	56-2	60925911	60276659	61232237	60811602	0.80	cps
Iron	57-2	1558810	1548201	1574626	1560546	0.85	cps
Krypton	83-1	273	250	373	299	21.92	cps
Lead	206-1	33648228	32903952	33772067	33441416	1.40	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	PB166734BS	Instrumnet Name :	P8
Client Sample ID :	PB166734BS	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:26:31	DataFile Name :	023LCSS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	28685953	28509740	28504158	28566617	0.36	cps
Lead	208-1	131541385	131101060	132109029	131583824	0.38	cps
Lithium	6-1	8072604	8071508	8238465	8127526	1.18	cps
Magnesium	24-2	12282159	12498954	12235833	12338982	1.14	cps
Manganese	55-2	6594402	6609442	6711202	6638349	0.96	cps
Molybdenum	94-1	28306865	29406420	29093928	28935737	1.96	cps
Molybdenum	95-1	40951242	42038324	42343808	41777791	1.75	cps
Molybdenum	96-1	44676413	45605959	45131559	45137977	1.03	cps
Molybdenum	97-1	25471302	25918539	25769687	25719843	0.89	cps
Molybdenum	98-1	66521412	67558919	67616477	67232270	0.92	cps
Neodymium	150-1	697	757	773	742	5.43	cps
Neodymium	150-2	20	33	23	26	27.15	cps
Nickel	60-2	811180	812863	817750	813931	0.42	cps
Phosphorus	31-2	30292	30325	30606	30407	0.57	cps
Potassium	39-2	3201073	3172918	3264702	3212898	1.46	cps
Rhodium	103-1	12792412	12810729	12924215	12842452	0.56	cps
Rhodium	103-2	4583880	4570875	4625519	4593424	0.62	cps
Scandium	45-1	9932772	10103097	10068937	10034935	0.90	cps
Scandium	45-2	165851	166157	167973	166660	0.69	cps
Selenium	82-1	122545	122172	121198	121972	0.57	cps
Selenium	77-2	1853	1833	1823	1837	0.83	cps
Selenium	78-2	5741	5891	6035	5889	2.49	cps
Silicon	28-1	9927252	9804330	9913533	9881705	0.68	cps
Silver	107-1	10306394	10408385	10544665	10419815	1.15	cps
Silver	109-1	9698428	9711684	9752053	9720721	0.29	cps
Sodium	23-2	24422124	24410352	24161079	24331185	0.61	cps
Strontium	86-1	2747197	2741318	2796090	2761535	1.09	cps
Strontium	88-1	23274582	23420381	23503201	23399388	0.49	cps
Sulfur	34-1	1498671	1499581	1494017	1497423	0.20	cps
Terbium	159-1	18367210	18288968	18317363	18324514	0.22	cps
Terbium	159-2	5501777	5445134	5493931	5480281	0.56	cps
Thallium	203-1	8144945	8023819	8251979	8140248	1.40	cps
Thallium	205-1	19274575	19423028	19666298	19454634	1.02	cps
Tin	118-1	6737889	6581768	6628425	6649361	1.21	cps
Titanium	47-1	12843149	12818021	13082046	12914405	1.13	cps
Uranium	238-1	25562269	25908983	26075415	25848889	1.01	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	PB166734BS	Instrumnet Name :	P8
Client Sample ID :	PB166734BS	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:26:31	DataFile Name :	023LCSS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1225889	1233013	1237576	1232159	0.48	cps
Ytterbium	172-1	173	183	140	166	13.71	cps
Ytterbium	172-2	43	87	53	61	37.14	cps
Ytterbium	176-1	38225	38208	39028	38487	1.22	cps
Ytterbium	176-2	11959	11792	12363	12038	2.44	cps
Yttrium	89-1	24167558	24427339	24293575	24296157	0.53	cps
Yttrium	89-2	1542786	1537384	1521426	1533865	0.72	cps
Zinc	66-2	2593937	2549349	2574687	2572657	0.87	cps
Zirconium	90-1	14227116	14708939	14482549	14472868	1.67	cps
Zirconium	91-1	3162598	3309694	3256973	3243088	2.30	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:29:40	DataFile Name :	024AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	931831	924106	929595	928510	0.43	cps
Antimony	121-1	2477	2397	2300	2391	3.70	cps
Arsenic	75-2	830	920	900	883	5.35	cps
Barium	135-1	232778	233363	233026	233056	0.13	cps
Barium	137-1	396383	399705	402087	399392	0.72	cps
Beryllium	9-1	4713	4774	4533	4673	2.68	cps
Bismuth	209-1	11660100	11448568	11384833	11497834	1.25	cps
Bismuth	209-2	4249223	4256674	4270472	4258790	0.25	cps
Bromine	81-1	9413	10294	10764	10157	6.75	cps
Cadmium	108-1	383	357	397	379	5.38	cps
Cadmium	106-1	8246	8346	8256	8283	0.67	cps
Cadmium	111-1	6067	6096	5931	6031	1.46	cps
Calcium	43-1	137910	137076	138724	137904	0.60	cps
Calcium	44-1	2360497	2373515	2404629	2379547	0.95	cps
Carbon	12-1	5628944	5465887	5385382	5493404	2.26	cps
Carbon	12-2	33044	33101	32897	33014	0.32	cps
Chlorine	35-1	315013	318818	319103	317645	0.72	cps
Chlorine	35-2	1237	1030	1090	1119	9.50	cps
Chromium	52-2	76848	77180	77649	77226	0.52	cps
Cobalt	59-2	28599	29374	29304	29092	1.47	cps
Copper	63-2	48646	49800	49352	49266	1.18	cps
Dysprosium	156-1	41484	41411	42454	41783	1.39	cps
Dysprosium	156-2	10834	10554	10818	10735	1.46	cps
Erbium	164-1	27238	28671	28213	28041	2.61	cps
Erbium	164-2	8803	8499	8723	8675	1.81	cps
Gadolinium	160-1	32653	32924	32640	32739	0.49	cps
Gadolinium	160-2	12182	12262	12426	12290	1.01	cps
Holmium	165-1	18044642	18004898	18013199	18020913	0.12	cps
Holmium	165-2	5775610	5811316	5903212	5830046	1.13	cps
Indium	115-1	14358266	14209066	14235091	14267474	0.56	cps
Indium	115-2	1176849	1174524	1177168	1176180	0.12	cps
Iron	54-2	2475861	2541898	2498555	2505438	1.34	cps
Iron	56-2	44876493	45234253	45371971	45160905	0.57	cps
Iron	57-2	1081282	1088179	1087709	1085723	0.35	cps
Krypton	83-1	273	323	363	320	14.09	cps
Lead	206-1	208254	208426	206841	207840	0.42	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:29:40	DataFile Name :	024AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	168326	172264	171940	170843	1.28	cps
Lead	208-1	797697	802417	800521	800211	0.30	cps
Lithium	6-1	8448928	8358919	8220060	8342636	1.38	cps
Magnesium	24-2	325866	325408	324901	325391	0.15	cps
Manganese	55-2	69374	70365	70252	69997	0.78	cps
Molybdenum	94-1	81856	79760	79250	80289	1.72	cps
Molybdenum	95-1	7395	7252	7022	7223	2.61	cps
Molybdenum	96-1	20776	20418	20265	20486	1.28	cps
Molybdenum	97-1	4631	4738	4414	4594	3.59	cps
Molybdenum	98-1	11728	11548	11391	11556	1.46	cps
Neodymium	150-1	64256	64755	63522	64178	0.97	cps
Neodymium	150-2	14108	13717	13777	13867	1.52	cps
Nickel	60-2	15932	15729	15602	15754	1.06	cps
Phosphorus	31-2	757	677	660	698	7.41	cps
Potassium	39-2	97040	96832	95084	96318	1.12	cps
Rhodium	103-1	13317103	13564893	13450921	13444306	0.92	cps
Rhodium	103-2	4848837	4775483	4809683	4811334	0.76	cps
Scandium	45-1	10343834	10366318	10348971	10353041	0.11	cps
Scandium	45-2	170012	168613	168182	168935	0.57	cps
Selenium	82-1	130	7	13	50	138.72	cps
Selenium	77-2	50	73	63	62	18.81	cps
Selenium	78-2	40	47	40	42	9.12	cps
Silicon	28-1	20955995	20656123	20588493	20733537	0.94	cps
Silver	107-1	1507	1430	1433	1457	2.97	cps
Silver	109-1	1237	1117	973	1109	11.89	cps
Sodium	23-2	56003	55605	55993	55867	0.41	cps
Strontium	86-1	37831	37447	37828	37702	0.59	cps
Strontium	88-1	322369	322409	320202	321660	0.39	cps
Sulfur	34-1	686056	682670	680644	683123	0.40	cps
Terbium	159-1	18694555	18522823	18333121	18516833	0.98	cps
Terbium	159-2	5573458	5550337	5560501	5561432	0.21	cps
Thallium	203-1	4137	4187	3934	4086	3.28	cps
Thallium	205-1	9630	9570	9514	9571	0.61	cps
Tin	118-1	4297	4051	3934	4094	4.53	cps
Titanium	47-1	661409	664842	665333	663861	0.32	cps
Uranium	238-1	56696	56177	56780	56551	0.58	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:29:40	DataFile Name :	024AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	85195	84846	83049	84363	1.37	cps
Ytterbium	172-1	7979	7969	8079	8009	0.76	cps
Ytterbium	172-2	2907	3214	3044	3055	5.03	cps
Ytterbium	176-1	7529	7586	7285	7467	2.14	cps
Ytterbium	176-2	2484	2344	2230	2352	5.40	cps
Yttrium	89-1	25285855	25006373	24871425	25054551	0.84	cps
Yttrium	89-2	1553099	1587394	1535154	1558549	1.70	cps
Zinc	66-2	13076	13036	13093	13068	0.22	cps
Zirconium	90-1	208719	210321	208237	209093	0.52	cps
Zirconium	91-1	46153	46380	46611	46381	0.49	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:32:58	DataFile Name :	025AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	918307	931308	930957	926857	0.80	cps
Antimony	121-1	1250	1330	1310	1297	3.21	cps
Arsenic	75-2	917	880	817	871	5.81	cps
Barium	135-1	230032	235001	231535	232189	1.10	cps
Barium	137-1	396943	402551	404703	401399	1.00	cps
Beryllium	9-1	4161	4371	4265	4266	2.46	cps
Bismuth	209-1	11551197	11432112	10998202	11327170	2.57	cps
Bismuth	209-2	4173926	4269191	4336781	4259966	1.92	cps
Bromine	81-1	10140	11131	11408	10893	6.12	cps
Cadmium	108-1	347	353	393	364	6.93	cps
Cadmium	106-1	8403	8509	7952	8288	3.57	cps
Cadmium	111-1	5983	6123	5705	5937	3.58	cps
Calcium	43-1	136049	136850	138283	137061	0.83	cps
Calcium	44-1	2326944	2333615	2376830	2345796	1.15	cps
Carbon	12-1	5554386	5455480	5400836	5470234	1.42	cps
Carbon	12-2	32015	32416	32005	32145	0.73	cps
Chlorine	35-1	294702	298638	301400	298247	1.13	cps
Chlorine	35-2	980	1057	1013	1017	3.78	cps
Chromium	52-2	77203	77783	78122	77703	0.60	cps
Cobalt	59-2	28893	28736	29307	28978	1.02	cps
Copper	63-2	49563	50048	49098	49569	0.96	cps
Dysprosium	156-1	41768	41534	41548	41617	0.32	cps
Dysprosium	156-2	10961	10741	11181	10961	2.01	cps
Erbium	164-1	27722	28394	28364	28160	1.35	cps
Erbium	164-2	8356	8406	8463	8408	0.64	cps
Gadolinium	160-1	32700	33111	33285	33032	0.91	cps
Gadolinium	160-2	12356	11965	12369	12230	1.88	cps
Holmium	165-1	17824433	18191626	17683510	17899856	1.47	cps
Holmium	165-2	5759245	5777476	5812627	5783116	0.47	cps
Indium	115-1	14430383	14437050	13772153	14213195	2.69	cps
Indium	115-2	1168108	1171341	1178523	1172657	0.45	cps
Iron	54-2	2488983	2535749	2486463	2503732	1.11	cps
Iron	56-2	45064239	45629294	45496994	45396843	0.65	cps
Iron	57-2	1082083	1086936	1090866	1086629	0.40	cps
Krypton	83-1	297	340	327	321	6.91	cps
Lead	206-1	206583	207912	208464	207653	0.47	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:32:58	DataFile Name :	025AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	169446	168437	168609	168831	0.32	cps
Lead	208-1	797721	791239	794278	794413	0.41	cps
Lithium	6-1	8231172	8304884	8081399	8205818	1.39	cps
Magnesium	24-2	322861	324295	322378	323178	0.31	cps
Manganese	55-2	69408	70684	70124	70072	0.91	cps
Molybdenum	94-1	78024	80065	80179	79423	1.53	cps
Molybdenum	95-1	6692	6702	6722	6705	0.23	cps
Molybdenum	96-1	19764	19410	19747	19641	1.02	cps
Molybdenum	97-1	4351	4397	4151	4300	3.05	cps
Molybdenum	98-1	10978	10427	10617	10674	2.62	cps
Neodymium	150-1	63834	65559	64618	64670	1.34	cps
Neodymium	150-2	13690	14161	13804	13885	1.77	cps
Nickel	60-2	15812	16183	16390	16128	1.81	cps
Phosphorus	31-2	877	787	683	782	12.37	cps
Potassium	39-2	96016	96215	95808	96013	0.21	cps
Rhodium	103-1	13326418	13404971	12990237	13240542	1.66	cps
Rhodium	103-2	4783289	4749824	4866165	4799759	1.25	cps
Scandium	45-1	10300159	10299274	9989977	10196470	1.75	cps
Scandium	45-2	168924	168692	170673	169430	0.64	cps
Selenium	82-1	77	-43	47	27	234.21	cps
Selenium	77-2	37	60	50	49	23.94	cps
Selenium	78-2	53	57	50	53	6.25	cps
Silicon	28-1	20846882	20774454	20493415	20704917	0.90	cps
Silver	107-1	990	1043	970	1001	3.79	cps
Silver	109-1	730	723	723	726	0.53	cps
Sodium	23-2	54508	53846	54103	54152	0.62	cps
Strontium	86-1	37507	37681	38008	37732	0.67	cps
Strontium	88-1	320262	320020	321718	320666	0.29	cps
Sulfur	34-1	685276	684559	686498	685444	0.14	cps
Terbium	159-1	18493556	18476512	18017870	18329313	1.47	cps
Terbium	159-2	5533147	5566797	5592582	5564175	0.54	cps
Thallium	203-1	3551	3904	3637	3697	4.98	cps
Thallium	205-1	8886	9587	9143	9206	3.85	cps
Tin	118-1	3767	4844	3777	4130	14.99	cps
Titanium	47-1	660789	665530	663726	663348	0.36	cps
Uranium	238-1	56057	55742	56455	56085	0.64	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:32:58	DataFile Name :	025AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	84062	84256	85795	84704	1.12	cps
Ytterbium	172-1	7952	7906	7992	7950	0.55	cps
Ytterbium	172-2	3100	2957	3084	3047	2.57	cps
Ytterbium	176-1	7219	7439	7419	7359	1.65	cps
Ytterbium	176-2	2274	2290	2374	2312	2.32	cps
Yttrium	89-1	25433764	25013265	24527189	24991406	1.82	cps
Yttrium	89-2	1580979	1567136	1593660	1580592	0.84	cps
Zinc	66-2	12816	13190	13343	13116	2.07	cps
Zirconium	90-1	209256	209171	207383	208603	0.51	cps
Zirconium	91-1	45240	46862	45718	45940	1.81	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	25
Date & Time Acquired :	2025-02-17 13:36:19	DataFile Name :	026AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	189169	186584	189562	188438	0.86	cps
Antimony	121-1	543	633	597	591	7.66	cps
Arsenic	75-2	207	203	213	208	2.45	cps
Barium	135-1	48597	49095	48677	48790	0.55	cps
Barium	137-1	84260	83361	83757	83793	0.54	cps
Beryllium	9-1	1637	1640	1576	1618	2.23	cps
Bismuth	209-1	11706831	11472022	11533372	11570742	1.05	cps
Bismuth	209-2	4320204	4225629	4277568	4274467	1.11	cps
Bromine	81-1	6505	6545	6301	6450	2.02	cps
Cadmium	108-1	93	100	140	111	22.71	cps
Cadmium	106-1	7415	7689	7766	7623	2.41	cps
Cadmium	111-1	5302	5476	5491	5423	1.94	cps
Calcium	43-1	28932	29039	28933	28968	0.21	cps
Calcium	44-1	475165	482183	478996	478782	0.73	cps
Carbon	12-1	4840533	4655208	4437936	4644559	4.34	cps
Carbon	12-2	26741	26263	26167	26390	1.17	cps
Chlorine	35-1	235252	235752	233812	234939	0.43	cps
Chlorine	35-2	770	833	783	796	4.20	cps
Chromium	52-2	16787	17351	17164	17100	1.68	cps
Cobalt	59-2	6138	6088	6375	6200	2.47	cps
Copper	63-2	12269	12325	12552	12382	1.21	cps
Dysprosium	156-1	8730	8896	8920	8849	1.17	cps
Dysprosium	156-2	2434	2150	2130	2238	7.58	cps
Erbium	164-1	5965	5635	5751	5784	2.89	cps
Erbium	164-2	1773	1830	1693	1766	3.89	cps
Gadolinium	160-1	6725	6615	7129	6823	3.96	cps
Gadolinium	160-2	2387	2537	2454	2459	3.06	cps
Holmium	165-1	18339656	18075993	18209661	18208437	0.72	cps
Holmium	165-2	5841000	5735083	5738778	5771620	1.04	cps
Indium	115-1	14395690	14421623	14183360	14333558	0.91	cps
Indium	115-2	1170593	1174661	1167462	1170906	0.31	cps
Iron	54-2	490108	488587	488343	489013	0.20	cps
Iron	56-2	9435195	9459158	9449423	9447925	0.13	cps
Iron	57-2	226377	224815	222863	224685	0.78	cps
Krypton	83-1	290	297	250	279	9.05	cps
Lead	206-1	44513	44794	44135	44480	0.74	cps

Reviewed By:
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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	25
Date & Time Acquired :	2025-02-17 13:36:19	DataFile Name :	026AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	36281	36558	37461	36767	1.68	cps
Lead	208-1	171166	171788	172908	171954	0.51	cps
Lithium	6-1	8345564	8278373	8271580	8298506	0.49	cps
Magnesium	24-2	68999	68891	69608	69166	0.56	cps
Manganese	55-2	14841	14207	14951	14667	2.74	cps
Molybdenum	94-1	16934	16987	17324	17082	1.24	cps
Molybdenum	95-1	2000	1797	1780	1859	6.59	cps
Molybdenum	96-1	4601	4637	4611	4616	0.41	cps
Molybdenum	97-1	1130	1257	1123	1170	6.42	cps
Molybdenum	98-1	3117	2934	3000	3017	3.08	cps
Neodymium	150-1	12860	13016	13070	12982	0.84	cps
Neodymium	150-2	2914	2824	2827	2855	1.79	cps
Nickel	60-2	3941	3977	4081	3999	1.82	cps
Phosphorus	31-2	210	240	293	248	17.04	cps
Potassium	39-2	27129	27262	26972	27121	0.54	cps
Rhodium	103-1	13533680	13385576	13439434	13452897	0.56	cps
Rhodium	103-2	4891474	4802297	4759975	4817916	1.39	cps
Scandium	45-1	10179151	10329982	10151222	10220119	0.94	cps
Scandium	45-2	167797	165454	166485	166579	0.70	cps
Selenium	82-1	-20	17	0	-1	-1649.09	cps
Selenium	77-2	17	20	13	17	20.01	cps
Selenium	78-2	10	20	13	14	35.26	cps
Silicon	28-1	4716574	4645809	4716615	4692999	0.87	cps
Silver	107-1	450	367	360	392	12.79	cps
Silver	109-1	320	280	270	290	9.12	cps
Sodium	23-2	45895	44103	44427	44809	2.13	cps
Strontium	86-1	8519	8393	8346	8419	1.07	cps
Strontium	88-1	66236	69093	68175	67835	2.15	cps
Sulfur	34-1	678419	679375	676886	678227	0.19	cps
Terbium	159-1	18666649	18588444	18634464	18629852	0.21	cps
Terbium	159-2	5565520	5488566	5488036	5514040	0.81	cps
Thallium	203-1	1323	1293	1293	1303	1.33	cps
Thallium	205-1	3144	3164	3284	3197	2.37	cps
Tin	118-1	2830	2780	2717	2776	2.05	cps
Titanium	47-1	136892	138268	137265	137475	0.52	cps
Uranium	238-1	11595	11619	11472	11562	0.68	cps

Reviewed By:
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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	25
Date & Time Acquired :	2025-02-17 13:36:19	DataFile Name :	026AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	17164	17094	17621	17293	1.66	cps
Ytterbium	172-1	1700	1733	1723	1719	1.00	cps
Ytterbium	172-2	590	743	677	670	11.48	cps
Ytterbium	176-1	2974	3224	3154	3117	4.14	cps
Ytterbium	176-2	613	700	760	691	10.67	cps
Yttrium	89-1	25172915	24946060	24621529	24913501	1.11	cps
Yttrium	89-2	1555427	1564464	1515726	1545206	1.68	cps
Zinc	66-2	2944	3134	3104	3060	3.34	cps
Zirconium	90-1	43879	43608	43755	43747	0.31	cps
Zirconium	91-1	9727	9523	9537	9596	1.19	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:39:39	DataFile Name :	027AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	958325	956213	956485	957007	0.12	cps
Antimony	121-1	1465509	1473454	1568122	1502362	3.80	cps
Arsenic	75-2	843	750	883	826	8.29	cps
Barium	135-1	1897264	1931083	1933568	1920638	1.06	cps
Barium	137-1	3296803	3308456	3262522	3289260	0.73	cps
Beryllium	9-1	541090	545595	544614	543767	0.44	cps
Bismuth	209-1	10611023	10903743	10998730	10837832	1.86	cps
Bismuth	209-2	4210707	4144871	4210254	4188611	0.90	cps
Bromine	81-1	8833	9904	10374	9703	8.14	cps
Cadmium	108-1	27447	27962	28383	27931	1.68	cps
Cadmium	106-1	49177	49565	50050	49598	0.88	cps
Cadmium	111-1	365005	366288	365324	365539	0.18	cps
Calcium	43-1	599419	602169	600880	600823	0.23	cps
Calcium	44-1	10231223	10127600	10092890	10150571	0.71	cps
Carbon	12-1	5335941	5221656	5227239	5261612	1.22	cps
Carbon	12-2	32125	30959	31310	31465	1.90	cps
Chlorine	35-1	10789637	12100885	12813888	11901470	8.63	cps
Chlorine	35-2	47672	47976	48748	48132	1.15	cps
Chromium	52-2	347938	348049	348487	348158	0.08	cps
Cobalt	59-2	579020	573448	574695	575721	0.51	cps
Copper	63-2	4642492	4655889	4608401	4635594	0.53	cps
Dysprosium	156-1	38602	38138	39475	38738	1.75	cps
Dysprosium	156-2	10281	9857	9877	10005	2.39	cps
Erbium	164-1	26296	25922	26015	26078	0.75	cps
Erbium	164-2	7946	8032	7802	7927	1.47	cps
Gadolinium	160-1	30475	31180	30488	30714	1.31	cps
Gadolinium	160-2	11749	11382	11131	11421	2.72	cps
Holmium	165-1	17216753	17647144	17977936	17613945	2.17	cps
Holmium	165-2	5721729	5718496	5702980	5714402	0.18	cps
Indium	115-1	13213749	13949964	14054845	13739519	3.34	cps
Indium	115-2	1154081	1150686	1160631	1155133	0.44	cps
Iron	54-2	2839515	2849562	2855442	2848173	0.28	cps
Iron	56-2	51584058	51308231	51469409	51453899	0.27	cps
Iron	57-2	1229353	1242813	1246068	1239411	0.71	cps
Krypton	83-1	290	340	283	304	10.17	cps
Lead	206-1	6311549	6246176	6333897	6297208	0.72	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:39:39	DataFile Name :	027AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	5466497	5442164	5495714	5468125	0.49	cps
Lead	208-1	24808822	24831129	24987358	24875770	0.39	cps
Lithium	6-1	7965171	8068692	8108662	8047508	0.92	cps
Magnesium	24-2	2460846	2495218	2430693	2462253	1.31	cps
Manganese	55-2	1209853	1209579	1202096	1207176	0.36	cps
Molybdenum	94-1	2583054	2581792	2592193	2585679	0.22	cps
Molybdenum	95-1	2759672	2760114	2751297	2757027	0.18	cps
Molybdenum	96-1	3132722	3074770	3073997	3093830	1.09	cps
Molybdenum	97-1	1705183	1695497	1671771	1690817	1.02	cps
Molybdenum	98-1	4453086	4374673	4378879	4402213	1.00	cps
Neodymium	150-1	58296	60154	58309	58920	1.81	cps
Neodymium	150-2	13076	12856	12953	12962	0.85	cps
Nickel	60-2	167638	166319	165204	166387	0.73	cps
Phosphorus	31-2	613	697	750	687	10.03	cps
Potassium	39-2	585266	582108	585816	584397	0.34	cps
Rhodium	103-1	12203175	13038429	12789214	12676939	3.38	cps
Rhodium	103-2	4672094	4560286	4631312	4621231	1.22	cps
Scandium	45-1	9650057	10228595	10048698	9975783	2.97	cps
Scandium	45-2	166975	167717	167379	167357	0.22	cps
Selenium	82-1	22552	22502	23263	22772	1.87	cps
Selenium	77-2	377	380	327	361	8.27	cps
Selenium	78-2	1167	1073	1177	1139	5.00	cps
Silicon	28-1	22831643	24424447	26136800	24464297	6.76	cps
Silver	107-1	304982	308247	310464	307898	0.90	cps
Silver	109-1	290353	297371	293863	293863	1.19	cps
Sodium	23-2	4262387	4224064	4254385	4246946	0.48	cps
Strontium	86-1	599667	596736	594940	597114	0.40	cps
Strontium	88-1	5452669	5429907	5367462	5416679	0.81	cps
Sulfur	34-1	675189	672615	673199	673668	0.20	cps
Terbium	159-1	17545664	18376675	18438470	18120270	2.75	cps
Terbium	159-2	5470682	5519478	5417798	5469319	0.93	cps
Thallium	203-1	1399322	1406972	1406967	1404420	0.31	cps
Thallium	205-1	3651960	3525627	3556831	3578139	1.84	cps
Tin	118-1	1061317	1058906	1060424	1060215	0.11	cps
Titanium	47-1	638186	657602	668696	654828	2.36	cps
Uranium	238-1	4826391	4707464	4746119	4759991	1.27	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:39:39	DataFile Name :	027AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	307170	302313	303351	304278	0.84	cps
Ytterbium	172-1	7552	7329	7662	7514	2.26	cps
Ytterbium	172-2	2770	2667	2814	2750	2.74	cps
Ytterbium	176-1	13230	13674	13784	13563	2.16	cps
Ytterbium	176-2	4374	4357	4224	4319	1.90	cps
Yttrium	89-1	23869175	24931160	24819451	24539929	2.38	cps
Yttrium	89-2	1560601	1543665	1519614	1541293	1.34	cps
Zinc	66-2	459539	455759	462099	459132	0.69	cps
Zirconium	90-1	2850560	2799615	2869439	2839871	1.27	cps
Zirconium	91-1	584850	587599	590507	587652	0.48	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:42:44	DataFile Name :	028AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	959093	958484	987435	968337	1.71	cps
Antimony	121-1	1561589	1552620	1538124	1550778	0.76	cps
Arsenic	75-2	847	783	850	827	4.54	cps
Barium	135-1	1921571	1919226	1954960	1931919	1.03	cps
Barium	137-1	3381585	3290409	3277460	3316484	1.71	cps
Beryllium	9-1	543145	546801	543776	544574	0.36	cps
Bismuth	209-1	11082634	10939275	11200919	11074276	1.18	cps
Bismuth	209-2	4080277	4187014	4219538	4162276	1.75	cps
Bromine	81-1	9600	10311	10891	10267	6.30	cps
Cadmium	108-1	28085	28373	28322	28260	0.54	cps
Cadmium	106-1	48729	48917	48578	48741	0.35	cps
Cadmium	111-1	361277	365905	362000	363061	0.69	cps
Calcium	43-1	604087	607412	608371	606623	0.37	cps
Calcium	44-1	10194313	10215793	10315171	10241759	0.63	cps
Carbon	12-1	5355268	5266108	5184909	5268762	1.62	cps
Carbon	12-2	31908	31150	30862	31307	1.73	cps
Chlorine	35-1	12416229	13458239	13763178	13212549	5.35	cps
Chlorine	35-2	49297	51009	51940	50749	2.64	cps
Chromium	52-2	350337	349332	350464	350044	0.18	cps
Cobalt	59-2	580486	576551	578975	578671	0.34	cps
Copper	63-2	4618305	4589827	4520238	4576123	1.10	cps
Dysprosium	156-1	38820	39167	39214	39067	0.55	cps
Dysprosium	156-2	10127	9974	10101	10067	0.81	cps
Erbium	164-1	26219	27432	27041	26897	2.30	cps
Erbium	164-2	8076	7922	7679	7892	2.54	cps
Gadolinium	160-1	30518	31230	31193	30980	1.29	cps
Gadolinium	160-2	11171	11328	11318	11273	0.78	cps
Holmium	165-1	17905170	18033328	17964548	17967682	0.36	cps
Holmium	165-2	5736524	5660052	5687390	5694655	0.68	cps
Indium	115-1	14042789	13952142	13876444	13957125	0.60	cps
Indium	115-2	1140354	1146495	1160337	1149062	0.89	cps
Iron	54-2	2851321	2859974	2841892	2851062	0.32	cps
Iron	56-2	51365153	51327754	51919449	51537452	0.64	cps
Iron	57-2	1238709	1243896	1242657	1241754	0.22	cps
Krypton	83-1	327	353	267	316	14.07	cps
Lead	206-1	6379931	6388764	6326166	6364954	0.53	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:42:44	DataFile Name :	028AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	5527128	5478421	5499954	5501835	0.44	cps
Lead	208-1	25119167	25143455	25269195	25177272	0.32	cps
Lithium	6-1	8206945	8176949	8108850	8164248	0.62	cps
Magnesium	24-2	2495652	2489381	2520873	2501969	0.67	cps
Manganese	55-2	1202407	1209190	1219798	1210465	0.72	cps
Molybdenum	94-1	2588472	2620742	2583523	2597579	0.78	cps
Molybdenum	95-1	2737768	2786418	2762273	2762153	0.88	cps
Molybdenum	96-1	3132623	3160225	3124267	3139038	0.60	cps
Molybdenum	97-1	1734794	1737536	1681676	1718002	1.83	cps
Molybdenum	98-1	4441523	4465077	4432171	4446257	0.38	cps
Neodymium	150-1	59213	59936	59585	59578	0.61	cps
Neodymium	150-2	12830	13066	12886	12927	0.96	cps
Nickel	60-2	166748	166629	168501	167292	0.63	cps
Phosphorus	31-2	697	547	667	637	12.47	cps
Potassium	39-2	577946	580329	586695	581657	0.78	cps
Rhodium	103-1	12978819	13137594	12899727	13005380	0.93	cps
Rhodium	103-2	4674597	4658529	4687601	4673576	0.31	cps
Scandium	45-1	10069147	10093722	10276538	10146469	1.12	cps
Scandium	45-2	164335	163681	165474	164496	0.55	cps
Selenium	82-1	22492	22702	22729	22641	0.57	cps
Selenium	77-2	410	410	393	404	2.38	cps
Selenium	78-2	1067	1137	1147	1117	3.90	cps
Silicon	28-1	24173009	23282927	26770264	24742067	7.32	cps
Silver	107-1	310476	314112	312061	312216	0.58	cps
Silver	109-1	290277	294119	295014	293137	0.86	cps
Sodium	23-2	4284621	4289980	4288664	4287755	0.07	cps
Strontium	86-1	598115	603455	595462	599011	0.68	cps
Strontium	88-1	5419761	5410215	5447028	5425668	0.35	cps
Sulfur	34-1	659267	657456	652925	656549	0.50	cps
Terbium	159-1	18091143	18340482	18118686	18183437	0.75	cps
Terbium	159-2	5533439	5496777	5410480	5480232	1.15	cps
Thallium	203-1	1380473	1411900	1393321	1395231	1.13	cps
Thallium	205-1	3607625	3614220	3580681	3600842	0.49	cps
Tin	118-1	1056707	1061614	1065170	1061164	0.40	cps
Titanium	47-1	642752	630975	624009	632579	1.50	cps
Uranium	238-1	4707103	4721406	4748702	4725737	0.45	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:42:44	DataFile Name :	028AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	304190	303643	307249	305027	0.64	cps
Ytterbium	172-1	7325	7682	7626	7544	2.54	cps
Ytterbium	172-2	2707	2847	2614	2723	4.31	cps
Ytterbium	176-1	13917	13864	13440	13741	1.90	cps
Ytterbium	176-2	4251	4337	4161	4250	2.08	cps
Yttrium	89-1	24384790	55261089	24876638	34840839	50.76	cps
Yttrium	89-2	1504171	1521096	1543583	1522950	1.30	cps
Zinc	66-2	459903	454448	461995	458782	0.85	cps
Zirconium	90-1	2845687	2859211	2825151	2843350	0.60	cps
Zirconium	91-1	584804	596079	583073	587985	1.20	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:45:46	DataFile Name :	029AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	979314	972085	965369	972256	0.72	cps
Antimony	121-1	1561537	1476965	1479791	1506098	3.19	cps
Arsenic	75-2	867	797	890	851	5.71	cps
Barium	135-1	1908896	1927615	1951271	1929261	1.10	cps
Barium	137-1	3275808	3327835	3299308	3300984	0.79	cps
Beryllium	9-1	538399	548023	542784	543069	0.89	cps
Bismuth	209-1	11304701	11314082	11074660	11231148	1.21	cps
Bismuth	209-2	4235327	4140278	4184018	4186541	1.14	cps
Bromine	81-1	9677	10754	10998	10476	6.71	cps
Cadmium	108-1	28065	28226	28930	28407	1.62	cps
Cadmium	106-1	48896	49355	49301	49184	0.51	cps
Cadmium	111-1	363420	367893	364729	365347	0.63	cps
Calcium	43-1	605915	604647	605327	605296	0.10	cps
Calcium	44-1	10096642	10127671	10248077	10157463	0.79	cps
Carbon	12-1	5280595	5260400	5127143	5222713	1.60	cps
Carbon	12-2	31961	31577	30629	31389	2.19	cps
Chlorine	35-1	12893935	13798487	14137665	13610029	4.72	cps
Chlorine	35-2	51562	52070	51648	51760	0.53	cps
Chromium	52-2	352763	353445	351740	352649	0.24	cps
Cobalt	59-2	581287	579512	578133	579644	0.27	cps
Copper	63-2	4632049	4629912	4609253	4623738	0.27	cps
Dysprosium	156-1	37937	39361	38692	38663	1.84	cps
Dysprosium	156-2	9867	10531	9947	10115	3.58	cps
Erbium	164-1	25989	26456	26350	26265	0.93	cps
Erbium	164-2	7979	8023	7992	7998	0.28	cps
Gadolinium	160-1	30816	31140	31277	31077	0.76	cps
Gadolinium	160-2	11141	11999	11482	11541	3.74	cps
Holmium	165-1	18283254	17962858	17755725	18000612	1.48	cps
Holmium	165-2	5795966	5807437	5843106	5815503	0.42	cps
Indium	115-1	14181122	14152549	13977999	14103890	0.78	cps
Indium	115-2	1173011	1157958	1158493	1163154	0.73	cps
Iron	54-2	2868516	2909561	2846314	2874797	1.12	cps
Iron	56-2	52783168	52243481	51481111	52169253	1.25	cps
Iron	57-2	1262304	1253319	1237331	1250985	1.01	cps
Krypton	83-1	267	323	307	299	9.74	cps
Lead	206-1	6448530	6353924	6371669	6391374	0.79	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:45:46	DataFile Name :	029AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	5421662	5463230	5430045	5438312	0.40	cps
Lead	208-1	25099197	25119574	24870500	25029757	0.55	cps
Lithium	6-1	8202239	8200581	8152712	8185177	0.34	cps
Magnesium	24-2	2525601	2516438	2474776	2505605	1.08	cps
Manganese	55-2	1232325	1224720	1222283	1226443	0.43	cps
Molybdenum	94-1	2605732	2563401	2601478	2590203	0.90	cps
Molybdenum	95-1	2779449	2741072	2738161	2752894	0.84	cps
Molybdenum	96-1	3185261	3168450	3122030	3158580	1.04	cps
Molybdenum	97-1	1730989	1721667	1707565	1720074	0.69	cps
Molybdenum	98-1	4431841	4512249	4412098	4452063	1.19	cps
Neodymium	150-1	58742	59980	59923	59548	1.17	cps
Neodymium	150-2	13010	12733	13067	12937	1.38	cps
Nickel	60-2	167681	168255	167570	167835	0.22	cps
Phosphorus	31-2	707	687	693	696	1.46	cps
Potassium	39-2	592993	583754	584921	587222	0.86	cps
Rhodium	103-1	13115940	13176801	13109041	13133927	0.28	cps
Rhodium	103-2	4728120	4624154	4693045	4681773	1.13	cps
Scandium	45-1	10121749	10034734	9912015	10022833	1.05	cps
Scandium	45-2	168316	167180	165649	167048	0.80	cps
Selenium	82-1	22939	22495	22525	22653	1.10	cps
Selenium	77-2	417	403	393	404	2.90	cps
Selenium	78-2	1167	1170	1087	1141	4.13	cps
Silicon	28-1	23374145	22649556	26434369	24152690	8.32	cps
Silver	107-1	304617	312884	313124	310208	1.56	cps
Silver	109-1	292110	294406	296724	294413	0.78	cps
Sodium	23-2	4384720	4233274	4238042	4285345	2.01	cps
Strontium	86-1	595531	598278	606229	600013	0.93	cps
Strontium	88-1	5387704	5373836	5476449	5412663	1.03	cps
Sulfur	34-1	649022	649675	652658	650452	0.30	cps
Terbium	159-1	18348062	18152956	18445814	18315611	0.81	cps
Terbium	159-2	5573513	5429349	5566177	5523013	1.47	cps
Thallium	203-1	1403030	1416504	1411199	1410244	0.48	cps
Thallium	205-1	3600913	3612197	3566305	3593138	0.67	cps
Tin	118-1	1052251	1066334	1061709	1060098	0.68	cps
Titanium	47-1	634170	639920	656747	643612	1.82	cps
Uranium	238-1	4687234	4679485	4693693	4686804	0.15	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	5
Date & Time Acquired :	2025-02-17 13:45:46	DataFile Name :	029AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	305380	306432	307093	306302	0.28	cps
Ytterbium	172-1	7629	7022	7606	7419	4.64	cps
Ytterbium	172-2	2674	2737	2880	2764	3.83	cps
Ytterbium	176-1	13714	13794	13697	13735	0.38	cps
Ytterbium	176-2	4234	4347	4511	4364	3.19	cps
Yttrium	89-1	25141453	24711757	24855865	24903025	0.88	cps
Yttrium	89-2	1586999	1557904	1546019	1563641	1.35	cps
Zinc	66-2	464349	462531	460176	462352	0.45	cps
Zirconium	90-1	2860675	2829316	2895587	2861859	1.16	cps
Zirconium	91-1	582595	589667	592014	588092	0.83	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P8
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:57:50	DataFile Name :	030CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2958764	2947990	2977689	2961481	0.51	cps
Antimony	121-1	7284785	7305648	7298664	7296366	0.15	cps
Arsenic	75-2	126175	128813	127588	127525	1.04	cps
Barium	135-1	9006306	9026025	9066594	9032975	0.34	cps
Barium	137-1	15421579	15558796	15509433	15496603	0.45	cps
Beryllium	9-1	2743211	2751461	2776385	2757019	0.63	cps
Bismuth	209-1	9588508	9903332	9848119	9779986	1.72	cps
Bismuth	209-2	3736018	3694505	3749007	3726510	0.76	cps
Bromine	81-1	4804	4794	4768	4789	0.40	cps
Cadmium	108-1	137892	140517	139019	139143	0.95	cps
Cadmium	106-1	201621	202403	204087	202703	0.62	cps
Cadmium	111-1	1784666	1808758	1797515	1796980	0.67	cps
Calcium	43-1	12341016	12390758	12426042	12385939	0.34	cps
Calcium	44-1	200347024	200385210	199475637	200069290	0.26	cps
Carbon	12-1	5264439	5322487	5292051	5292992	0.55	cps
Carbon	12-2	37504	37354	37742	37533	0.52	cps
Chlorine	35-1	334774	331754	328065	331531	1.01	cps
Chlorine	35-2	1190	1087	1143	1140	4.54	cps
Chromium	52-2	1470009	1520981	1493250	1494747	1.71	cps
Cobalt	59-2	2732369	2772558	2804702	2769876	1.31	cps
Copper	63-2	20935097	20704227	20806708	20815344	0.56	cps
Dysprosium	156-1	610	647	677	644	5.18	cps
Dysprosium	156-2	103	93	100	99	5.15	cps
Erbium	164-1	333	413	353	367	11.36	cps
Erbium	164-2	120	117	143	127	11.47	cps
Gadolinium	160-1	360	390	387	379	4.34	cps
Gadolinium	160-2	100	100	130	110	15.75	cps
Holmium	165-1	17020549	17076860	17039025	17045478	0.17	cps
Holmium	165-2	5460411	5453502	5462720	5458878	0.09	cps
Indium	115-1	12371454	12549571	12779840	12566955	1.63	cps
Indium	115-2	1040146	1048707	1056720	1048524	0.79	cps
Iron	54-2	14786311	14982630	14651400	14806780	1.12	cps
Iron	56-2	267360696	269869943	266371783	267867474	0.67	cps
Iron	57-2	6732584	6823168	6741612	6765788	0.74	cps
Krypton	83-1	303	270	337	303	10.99	cps
Lead	206-1	28854375	29285582	28773775	28971244	0.95	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P8
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:57:50	DataFile Name :	030CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	24612952	24638842	24559927	24603907	0.16	cps
Lead	208-1	113678610	114247020	113981417	113969016	0.25	cps
Lithium	6-1	7372279	7343159	7443456	7386298	0.70	cps
Magnesium	24-2	53638606	53686071	53438786	53587821	0.24	cps
Manganese	55-2	5963794	6018490	5877123	5953136	1.20	cps
Molybdenum	94-1	25754543	26170351	26184975	26036623	0.94	cps
Molybdenum	95-1	37213237	37705710	37422054	37447000	0.66	cps
Molybdenum	96-1	40315807	40575228	40617720	40502918	0.40	cps
Molybdenum	97-1	22967145	23285506	23191065	23147906	0.71	cps
Molybdenum	98-1	60071442	60110122	60897941	60359835	0.77	cps
Neodymium	150-1	627	770	833	743	14.24	cps
Neodymium	150-2	50	57	73	60	20.03	cps
Nickel	60-2	783109	785658	786416	785061	0.22	cps
Phosphorus	31-2	26862	27262	27175	27100	0.78	cps
Potassium	39-2	14275147	14276689	14165208	14239015	0.45	cps
Rhodium	103-1	11143347	11413835	11534984	11364056	1.76	cps
Rhodium	103-2	4170166	4176414	4144297	4163626	0.41	cps
Scandium	45-1	9125804	9482187	9493415	9367136	2.23	cps
Scandium	45-2	159426	159369	158702	159166	0.25	cps
Selenium	82-1	106066	105888	105233	105729	0.41	cps
Selenium	77-2	1560	1547	1650	1586	3.55	cps
Selenium	78-2	5284	5368	5401	5351	1.12	cps
Silicon	28-1	9224859	9149258	9225610	9199909	0.48	cps
Silver	107-1	8884259	8819463	8837851	8847191	0.38	cps
Silver	109-1	8253408	8351426	8182466	8262433	1.03	cps
Sodium	23-2	107435088	105876172	107109052	106806771	0.77	cps
Strontium	86-1	2431584	2454171	2500888	2462215	1.44	cps
Strontium	88-1	20708457	20995017	20916101	20873192	0.71	cps
Sulfur	34-1	1415537	1420471	1414834	1416947	0.22	cps
Terbium	159-1	17077085	17628638	17464177	17389966	1.63	cps
Terbium	159-2	5213998	5158905	5194161	5189021	0.54	cps
Thallium	203-1	7120191	7121755	7082604	7108184	0.31	cps
Thallium	205-1	17120953	16826129	16832451	16926511	1.00	cps
Tin	118-1	5778533	5852627	5835005	5822055	0.66	cps
Titanium	47-1	11602526	11488263	11473019	11521269	0.61	cps
Uranium	238-1	23117134	23170300	23267725	23185053	0.33	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P8
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 13:57:50	DataFile Name :	030CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1116747	1118675	1127770	1121064	0.53	cps
Ytterbium	172-1	363	487	457	436	14.77	cps
Ytterbium	172-2	153	147	123	141	11.16	cps
Ytterbium	176-1	35568	35187	35528	35427	0.59	cps
Ytterbium	176-2	11118	10851	11282	11084	1.96	cps
Yttrium	89-1	22323420	23012303	23149175	22828299	1.94	cps
Yttrium	89-2	1359602	1365691	1379076	1368123	0.73	cps
Zinc	66-2	2198977	2227558	2224718	2217085	0.71	cps
Zirconium	90-1	12985073	13176616	13340933	13167541	1.35	cps
Zirconium	91-1	2871734	2996129	2928479	2932114	2.12	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P8
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:04:00	DataFile Name :	031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	137	167	167	157	11.06	cps
Antimony	121-1	720	733	640	698	7.23	cps
Arsenic	75-2	0	10	3	4	114.60	cps
Barium	135-1	1233	1380	1280	1298	5.77	cps
Barium	137-1	2304	2100	2080	2161	5.72	cps
Beryllium	9-1	1069	975	994	1012	4.90	cps
Bismuth	209-1	11205707	11293365	11214248	11237773	0.43	cps
Bismuth	209-2	4306485	4242324	4235898	4261569	0.92	cps
Bromine	81-1	4257	4177	4277	4237	1.25	cps
Cadmium	108-1	43	73	50	56	28.35	cps
Cadmium	106-1	6972	6808	7109	6963	2.16	cps
Cadmium	111-1	4950	4775	5018	4914	2.55	cps
Calcium	43-1	743	737	853	778	8.42	cps
Calcium	44-1	24257	24164	23967	24129	0.61	cps
Carbon	12-1	4622881	4371381	4270872	4421711	4.10	cps
Carbon	12-2	26060	25849	25309	25739	1.51	cps
Chlorine	35-1	221752	218581	215937	218757	1.33	cps
Chlorine	35-2	723	740	790	751	4.62	cps
Chromium	52-2	1860	1787	1947	1865	4.30	cps
Cobalt	59-2	313	380	280	324	15.69	cps
Copper	63-2	2587	2797	2690	2691	3.90	cps
Dysprosium	156-1	130	137	143	137	4.88	cps
Dysprosium	156-2	7	7	10	8	24.71	cps
Erbium	164-1	80	143	83	102	34.87	cps
Erbium	164-2	40	17	30	29	40.51	cps
Gadolinium	160-1	83	80	107	90	16.15	cps
Gadolinium	160-2	3	23	10	12	83.33	cps
Holmium	165-1	18052613	17955860	17811301	17939925	0.68	cps
Holmium	165-2	5646531	5690253	5585537	5640774	0.93	cps
Indium	115-1	14143184	14063452	13904458	14037031	0.87	cps
Indium	115-2	1156571	1163020	1162217	1160603	0.30	cps
Iron	54-2	837	797	970	868	10.46	cps
Iron	56-2	13330	13356	13476	13388	0.58	cps
Iron	57-2	363	293	340	332	10.73	cps
Krypton	83-1	300	283	277	287	4.19	cps
Lead	206-1	3584	3327	3297	3403	4.63	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P8
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:04:00	DataFile Name :	031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2784	2810	2794	2796	0.48	cps
Lead	208-1	13183	12873	12956	13004	1.23	cps
Lithium	6-1	8165618	8106126	8123394	8131713	0.38	cps
Magnesium	24-2	2627	2804	2670	2700	3.41	cps
Manganese	55-2	583	543	623	583	6.86	cps
Molybdenum	94-1	1037	1053	1030	1040	1.16	cps
Molybdenum	95-1	1077	1067	1220	1121	7.65	cps
Molybdenum	96-1	1483	1377	1317	1392	6.06	cps
Molybdenum	97-1	730	680	667	692	4.82	cps
Molybdenum	98-1	2104	2010	1813	1976	7.49	cps
Neodymium	150-1	27	63	40	43	42.82	cps
Neodymium	150-2	0	3	0	1	173.21	cps
Nickel	60-2	953	880	917	917	4.00	cps
Phosphorus	31-2	77	77	107	87	19.98	cps
Potassium	39-2	8409	9313	8339	8687	6.25	cps
Rhodium	103-1	13243728	13207059	13211629	13220805	0.15	cps
Rhodium	103-2	4672846	4747671	4691592	4704036	0.83	cps
Scandium	45-1	10004994	9947228	9860760	9937661	0.73	cps
Scandium	45-2	163471	162420	163110	163000	0.33	cps
Selenium	82-1	-37	-73	13	-32	-135.03	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	27	23	3	18	71.00	cps
Silicon	28-1	540545	537736	533862	537381	0.62	cps
Silver	107-1	433	440	363	412	10.30	cps
Silver	109-1	260	217	267	248	10.96	cps
Sodium	23-2	40800	40486	40372	40553	0.55	cps
Strontium	86-1	673	693	580	649	9.32	cps
Strontium	88-1	2027	1983	1880	1963	3.84	cps
Sulfur	34-1	678494	674235	680218	677649	0.45	cps
Terbium	159-1	18527066	18212993	18100934	18280331	1.21	cps
Terbium	159-2	5392341	5443692	5457579	5431204	0.63	cps
Thallium	203-1	890	900	887	892	0.78	cps
Thallium	205-1	2204	2067	2354	2208	6.50	cps
Tin	118-1	2957	2717	2720	2798	4.92	cps
Titanium	47-1	310	247	267	274	11.80	cps
Uranium	238-1	200	137	187	174	19.14	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P8
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:04:00	DataFile Name :	031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	40	10	20	23	65.47	cps
Ytterbium	172-1	63	100	93	86	22.83	cps
Ytterbium	172-2	37	37	20	31	30.93	cps
Ytterbium	176-1	1890	1693	1760	1781	5.62	cps
Ytterbium	176-2	317	330	290	312	6.52	cps
Yttrium	89-1	24523800	24301798	24382373	24402657	0.46	cps
Yttrium	89-2	1517433	1506902	1527730	1517355	0.69	cps
Zinc	66-2	320	293	333	316	6.45	cps
Zirconium	90-1	1033	993	970	999	3.21	cps
Zirconium	91-1	287	267	157	237	29.58	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:10:44	DataFile Name :	033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	538877	541922	538836	539878	0.33	cps
Antimony	121-1	693	647	660	667	3.61	cps
Arsenic	75-2	470	530	527	509	6.63	cps
Barium	135-1	130960	133100	132363	132141	0.82	cps
Barium	137-1	227380	232582	232221	230728	1.26	cps
Beryllium	9-1	2504	2521	2525	2517	0.45	cps
Bismuth	209-1	11749067	11688420	11623473	11686986	0.54	cps
Bismuth	209-2	4443440	4413498	4355330	4404089	1.02	cps
Bromine	81-1	6942	7472	7635	7350	4.93	cps
Cadmium	108-1	207	203	250	220	11.83	cps
Cadmium	106-1	7739	7906	8016	7887	1.77	cps
Cadmium	111-1	5519	5645	5696	5620	1.62	cps
Calcium	43-1	77900	77759	78208	77955	0.29	cps
Calcium	44-1	1343566	1364836	1357922	1355441	0.80	cps
Carbon	12-1	5113804	5004755	4928719	5015759	1.85	cps
Carbon	12-2	29743	29720	29576	29680	0.30	cps
Chlorine	35-1	235177	238931	237849	237319	0.81	cps
Chlorine	35-2	853	857	773	828	5.70	cps
Chromium	52-2	45322	45646	46010	45659	0.75	cps
Cobalt	59-2	16767	16306	16573	16549	1.40	cps
Copper	63-2	29103	29467	29738	29436	1.08	cps
Dysprosium	156-1	23621	23785	23915	23773	0.62	cps
Dysprosium	156-2	6138	6325	6045	6169	2.31	cps
Erbium	164-1	15886	16006	16090	15994	0.64	cps
Erbium	164-2	4811	5094	4921	4942	2.89	cps
Gadolinium	160-1	19111	18553	19237	18967	1.92	cps
Gadolinium	160-2	7142	7079	7215	7145	0.96	cps
Holmium	165-1	18456887	18461441	18223711	18380680	0.74	cps
Holmium	165-2	5972204	5886551	5975030	5944595	0.85	cps
Indium	115-1	14489567	14647707	14471273	14536182	0.67	cps
Indium	115-2	1208682	1205117	1213652	1209150	0.35	cps
Iron	54-2	1457628	1437746	1447284	1447553	0.69	cps
Iron	56-2	26584075	26158338	26291562	26344658	0.83	cps
Iron	57-2	628356	624626	625656	626212	0.31	cps
Krypton	83-1	267	287	327	293	10.41	cps
Lead	206-1	116850	118479	118146	117825	0.73	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:10:44	DataFile Name :	033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	97984	96637	97463	97361	0.70	cps
Lead	208-1	454916	453941	458339	455732	0.51	cps
Lithium	6-1	8492029	8473990	8470118	8478712	0.14	cps
Magnesium	24-2	189803	189156	187112	188690	0.74	cps
Manganese	55-2	40972	40417	40654	40681	0.68	cps
Molybdenum	94-1	44491	45173	45621	45095	1.26	cps
Molybdenum	95-1	3964	4034	3901	3966	1.68	cps
Molybdenum	96-1	11101	11368	11442	11304	1.58	cps
Molybdenum	97-1	2517	2547	2410	2491	2.88	cps
Molybdenum	98-1	6028	5948	6148	6041	1.67	cps
Neodymium	150-1	36359	36459	37044	36621	1.01	cps
Neodymium	150-2	7786	8423	8189	8133	3.96	cps
Nickel	60-2	9273	9583	9543	9467	1.78	cps
Phosphorus	31-2	450	543	420	471	13.65	cps
Potassium	39-2	59422	60427	59308	59719	1.03	cps
Rhodium	103-1	13660200	13611730	14015463	13762464	1.60	cps
Rhodium	103-2	4904706	4858744	4955937	4906462	0.99	cps
Scandium	45-1	10509739	10456856	10386668	10451088	0.59	cps
Scandium	45-2	172072	172162	173261	172498	0.38	cps
Selenium	82-1	57	70	23	50	48.06	cps
Selenium	77-2	7	17	47	23	89.20	cps
Selenium	78-2	20	37	13	23	51.52	cps
Silicon	28-1	15438480	14236163	13624752	14433132	6.39	cps
Silver	107-1	653	617	637	636	2.89	cps
Silver	109-1	367	407	410	394	6.11	cps
Sodium	23-2	45651	46019	44865	45512	1.29	cps
Strontium	86-1	22004	21764	22936	22235	2.78	cps
Strontium	88-1	179390	182060	183412	181621	1.13	cps
Sulfur	34-1	668899	665042	668536	667492	0.32	cps
Terbium	159-1	19035953	18918836	18919416	18958068	0.36	cps
Terbium	159-2	5654062	5716910	5718114	5696362	0.64	cps
Thallium	203-1	2454	2437	2440	2444	0.36	cps
Thallium	205-1	5651	5675	5805	5710	1.45	cps
Tin	118-1	3117	3310	3214	3214	3.01	cps
Titanium	47-1	379190	385190	385948	383443	0.97	cps
Uranium	238-1	31549	32478	32298	32108	1.53	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:10:44	DataFile Name :	033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	48100	48244	48843	48396	0.81	cps
Ytterbium	172-1	4821	4664	4471	4652	3.77	cps
Ytterbium	172-2	1743	1783	1780	1769	1.25	cps
Ytterbium	176-1	5061	4874	4908	4948	2.01	cps
Ytterbium	176-2	1443	1417	1600	1487	6.66	cps
Yttrium	89-1	25561508	25594682	25381464	25512551	0.45	cps
Yttrium	89-2	1598988	1627772	1625958	1617573	1.00	cps
Zinc	66-2	7639	7749	7602	7663	1.00	cps
Zirconium	90-1	118258	120525	119763	119515	0.97	cps
Zirconium	91-1	26438	26004	26619	26354	1.20	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DUPDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:14:02	DataFile Name :	034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	477072	477504	469111	474562	1.00	cps
Antimony	121-1	540	657	550	582	11.11	cps
Arsenic	75-2	447	490	370	436	13.95	cps
Barium	135-1	118530	118570	118859	118653	0.15	cps
Barium	137-1	205175	203724	203108	204002	0.52	cps
Beryllium	9-1	2292	2336	2325	2318	0.98	cps
Bismuth	209-1	11873409	11431564	11716740	11673904	1.92	cps
Bismuth	209-2	4487968	4501490	4425896	4471784	0.90	cps
Bromine	81-1	7112	7879	8239	7743	7.44	cps
Cadmium	108-1	227	263	187	226	17.00	cps
Cadmium	106-1	7746	7929	8089	7921	2.17	cps
Cadmium	111-1	5470	5576	5732	5593	2.35	cps
Calcium	43-1	69725	71068	70230	70341	0.96	cps
Calcium	44-1	1137137	1144989	1144765	1142297	0.39	cps
Carbon	12-1	4968719	4867558	4769493	4868590	2.05	cps
Carbon	12-2	29680	29253	29035	29323	1.12	cps
Chlorine	35-1	218666	218953	221028	219549	0.59	cps
Chlorine	35-2	803	837	807	816	2.25	cps
Chromium	52-2	41065	40718	40156	40646	1.13	cps
Cobalt	59-2	15145	15155	15222	15174	0.27	cps
Copper	63-2	26782	26859	26471	26704	0.77	cps
Dysprosium	156-1	21644	20950	21140	21245	1.69	cps
Dysprosium	156-2	5384	5518	5751	5551	3.34	cps
Erbium	164-1	14331	14528	14198	14352	1.16	cps
Erbium	164-2	4444	4237	4231	4304	2.82	cps
Gadolinium	160-1	17131	17351	16393	16959	2.96	cps
Gadolinium	160-2	6282	6558	6225	6355	2.81	cps
Holmium	165-1	18708337	18895873	18516613	18706941	1.01	cps
Holmium	165-2	5961527	5949243	5994369	5968380	0.39	cps
Indium	115-1	14815105	14834355	14714820	14788093	0.43	cps
Indium	115-2	1216415	1239413	1223025	1226284	0.97	cps
Iron	54-2	1213335	1214655	1205207	1211065	0.42	cps
Iron	56-2	23482182	23332802	22830475	23215153	1.47	cps
Iron	57-2	562518	559752	554695	558988	0.71	cps
Krypton	83-1	290	273	233	266	10.97	cps
Lead	206-1	105209	106275	106453	105979	0.63	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DUPDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:14:02	DataFile Name :	034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	86466	85942	86486	86298	0.36	cps
Lead	208-1	407382	408400	409397	408393	0.25	cps
Lithium	6-1	8524748	8557864	8649490	8577368	0.75	cps
Magnesium	24-2	168427	167682	165818	167309	0.80	cps
Manganese	55-2	36664	35999	36042	36235	1.03	cps
Molybdenum	94-1	40626	40586	40155	40455	0.65	cps
Molybdenum	95-1	3567	3474	3510	3517	1.34	cps
Molybdenum	96-1	10394	10261	10514	10390	1.22	cps
Molybdenum	97-1	2260	2240	2204	2235	1.29	cps
Molybdenum	98-1	5941	5725	5835	5834	1.86	cps
Neodymium	150-1	32132	32670	33101	32634	1.49	cps
Neodymium	150-2	7145	7172	7382	7233	1.79	cps
Nickel	60-2	8833	8359	8656	8616	2.78	cps
Phosphorus	31-2	477	410	397	428	10.02	cps
Potassium	39-2	53345	53261	53104	53236	0.23	cps
Rhodium	103-1	13918366	13952081	13711520	13860656	0.94	cps
Rhodium	103-2	5010966	5027348	4904951	4981088	1.33	cps
Scandium	45-1	10656682	10472477	10287401	10472187	1.76	cps
Scandium	45-2	175454	174248	173382	174362	0.60	cps
Selenium	82-1	53	27	83	54	52.07	cps
Selenium	77-2	10	27	40	26	58.81	cps
Selenium	78-2	27	37	20	28	30.20	cps
Silicon	28-1	10748584	10622750	10620997	10664110	0.69	cps
Silver	107-1	533	520	520	524	1.47	cps
Silver	109-1	300	337	350	329	7.87	cps
Sodium	23-2	45009	45023	44929	44987	0.11	cps
Strontium	86-1	19297	19701	20004	19667	1.81	cps
Strontium	88-1	165235	164277	164406	164640	0.32	cps
Sulfur	34-1	677323	673075	671313	673903	0.46	cps
Terbium	159-1	19150895	18955898	19227994	19111596	0.73	cps
Terbium	159-2	5747695	5735560	5668569	5717275	0.75	cps
Thallium	203-1	2090	2104	2077	2090	0.64	cps
Thallium	205-1	5091	5234	4861	5062	3.72	cps
Tin	118-1	3117	2984	3180	3094	3.25	cps
Titanium	47-1	339128	335351	335578	336686	0.63	cps
Uranium	238-1	28211	28084	28452	28249	0.66	cps

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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01DUPDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:14:02	DataFile Name :	034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	43519	44338	42543	43467	2.07	cps
Ytterbium	172-1	4081	4194	4151	4142	1.38	cps
Ytterbium	172-2	1477	1540	1513	1510	2.11	cps
Ytterbium	176-1	4621	4714	4634	4656	1.08	cps
Ytterbium	176-2	1413	1383	1427	1408	1.58	cps
Yttrium	89-1	25961598	25953539	25688626	25867921	0.60	cps
Yttrium	89-2	1622819	1624133	1639000	1628651	0.55	cps
Zinc	66-2	7159	6725	6842	6908	3.25	cps
Zirconium	90-1	105589	106536	106842	106322	0.61	cps
Zirconium	91-1	22655	23860	23450	23322	2.63	cps

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On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01LDL2X50	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	50
Date & Time Acquired :	2025-02-17 14:17:23	DataFile Name :	035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	96067	96558	94813	95813	0.94	cps
Antimony	121-1	270	270	280	273	2.11	cps
Arsenic	75-2	110	107	117	111	4.58	cps
Barium	135-1	24435	24135	24098	24223	0.76	cps
Barium	137-1	42617	41577	42436	42210	1.32	cps
Beryllium	9-1	976	997	975	983	1.29	cps
Bismuth	209-1	11531340	11866530	11630489	11676120	1.47	cps
Bismuth	209-2	4362189	4416041	4366565	4381598	0.68	cps
Bromine	81-1	5398	5498	5601	5499	1.85	cps
Cadmium	108-1	87	77	67	77	13.04	cps
Cadmium	106-1	7475	7462	7679	7539	1.61	cps
Cadmium	111-1	5249	5256	5409	5305	1.70	cps
Calcium	43-1	14724	14634	14534	14631	0.65	cps
Calcium	44-1	250216	251239	249496	250317	0.35	cps
Carbon	12-1	4637161	4495495	4404278	4512312	2.60	cps
Carbon	12-2	26708	26043	26410	26387	1.26	cps
Chlorine	35-1	186606	184604	181708	184306	1.34	cps
Chlorine	35-2	643	613	643	633	2.74	cps
Chromium	52-2	10134	9573	10234	9980	3.57	cps
Cobalt	59-2	3300	3167	3160	3209	2.46	cps
Copper	63-2	7485	7382	7449	7439	0.70	cps
Dysprosium	156-1	4444	4351	4214	4336	2.67	cps
Dysprosium	156-2	1193	1037	1113	1115	7.03	cps
Erbium	164-1	3124	2924	3077	3041	3.44	cps
Erbium	164-2	960	840	933	911	6.92	cps
Gadolinium	160-1	3337	3661	3561	3519	4.70	cps
Gadolinium	160-2	1317	1337	1200	1285	5.75	cps
Holmium	165-1	18046681	18899326	18485336	18477114	2.31	cps
Holmium	165-2	5858972	5930790	5874156	5887973	0.64	cps
Indium	115-1	14413602	15089455	14645131	14716063	2.33	cps
Indium	115-2	1204096	1199452	1199571	1201039	0.22	cps
Iron	54-2	246103	243483	244731	244772	0.54	cps
Iron	56-2	4644485	4728081	4768549	4713705	1.34	cps
Iron	57-2	113911	110363	112603	112292	1.60	cps
Krypton	83-1	283	297	287	289	2.40	cps
Lead	206-1	23351	23608	22763	23241	1.86	cps

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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01LDL2X50	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	50
Date & Time Acquired :	2025-02-17 14:17:23	DataFile Name :	035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	19231	19104	19108	19148	0.38	cps
Lead	208-1	89647	89597	89180	89475	0.29	cps
Lithium	6-1	8217535	8596123	8504841	8439500	2.34	cps
Magnesium	24-2	35627	35861	35791	35759	0.34	cps
Manganese	55-2	7365	7776	7599	7580	2.71	cps
Molybdenum	94-1	8923	8733	8506	8721	2.39	cps
Molybdenum	95-1	1223	1140	1253	1206	4.87	cps
Molybdenum	96-1	2567	2630	2564	2587	1.45	cps
Molybdenum	97-1	713	697	757	722	4.29	cps
Molybdenum	98-1	1937	1763	1793	1831	5.06	cps
Neodymium	150-1	6412	6475	6675	6521	2.11	cps
Neodymium	150-2	1463	1563	1383	1470	6.14	cps
Nickel	60-2	2410	2414	2617	2480	4.77	cps
Phosphorus	31-2	137	173	130	147	15.91	cps
Potassium	39-2	17184	17731	17641	17519	1.68	cps
Rhodium	103-1	13679561	14018191	13798589	13832114	1.24	cps
Rhodium	103-2	4875511	4751241	4854876	4827209	1.38	cps
Scandium	45-1	10205396	10417040	10369967	10330801	1.08	cps
Scandium	45-2	167739	168542	169739	168673	0.60	cps
Selenium	82-1	-7	27	-77	-19	-279.21	cps
Selenium	77-2	3	3	10	6	69.34	cps
Selenium	78-2	0	10	0	3	173.21	cps
Silicon	28-1	2634075	2636427	2596812	2622438	0.85	cps
Silver	107-1	253	283	280	272	6.04	cps
Silver	109-1	183	150	127	153	18.57	cps
Sodium	23-2	40025	39624	39487	39712	0.70	cps
Strontium	86-1	4764	4641	4351	4585	4.63	cps
Strontium	88-1	35716	34068	34486	34757	2.46	cps
Sulfur	34-1	679865	679006	680393	679754	0.10	cps
Terbium	159-1	18738762	19240378	19143188	19040776	1.40	cps
Terbium	159-2	5661690	5693570	5587071	5647444	0.97	cps
Thallium	203-1	843	810	910	854	5.96	cps
Thallium	205-1	2340	2137	2070	2182	6.45	cps
Tin	118-1	2834	2884	2764	2827	2.13	cps
Titanium	47-1	68914	69005	68281	68733	0.57	cps
Uranium	238-1	5628	5795	5595	5672	1.89	cps

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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01LDL2X50	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	50
Date & Time Acquired :	2025-02-17 14:17:23	DataFile Name :	035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	8409	8960	8786	8718	3.23	cps
Ytterbium	172-1	913	923	847	894	4.66	cps
Ytterbium	172-2	333	323	377	344	8.23	cps
Ytterbium	176-1	2454	2584	2530	2522	2.59	cps
Ytterbium	176-2	420	507	523	483	11.48	cps
Yttrium	89-1	25198095	25533993	25377005	25369698	0.66	cps
Yttrium	89-2	1584374	1547835	1575389	1569199	1.21	cps
Zinc	66-2	1590	1713	1740	1681	4.76	cps
Zirconium	90-1	22628	22214	22054	22299	1.33	cps
Zirconium	91-1	4984	4914	4761	4886	2.34	cps

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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:20:43	DataFile Name :	036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	493178	496184	492325	493895	0.41	cps
Antimony	121-1	741997	747851	742518	744122	0.44	cps
Arsenic	75-2	487	367	360	404	17.63	cps
Barium	135-1	908586	913905	917211	913234	0.48	cps
Barium	137-1	1693229	1647583	1642084	1660965	1.69	cps
Beryllium	9-1	275457	273125	274287	274290	0.43	cps
Bismuth	209-1	11510290	11422066	11615675	11516010	0.84	cps
Bismuth	209-2	4344370	4293160	4317405	4318312	0.59	cps
Bromine	81-1	6978	7215	7465	7220	3.37	cps
Cadmium	108-1	14541	14808	14484	14611	1.18	cps
Cadmium	106-1	28109	28870	28804	28594	1.47	cps
Cadmium	111-1	186072	187237	188268	187192	0.59	cps
Calcium	43-1	304248	304320	304428	304332	0.03	cps
Calcium	44-1	5172634	5108362	5111211	5130736	0.71	cps
Carbon	12-1	4978052	4783493	4705483	4822343	2.91	cps
Carbon	12-2	28434	29005	28167	28535	1.50	cps
Chlorine	35-1	5302613	5959832	6293867	5852104	8.62	cps
Chlorine	35-2	23189	24411	24791	24130	3.47	cps
Chromium	52-2	179005	177908	179926	178946	0.56	cps
Cobalt	59-2	295241	295914	296766	295974	0.26	cps
Copper	63-2	2305373	2328379	2358873	2330875	1.15	cps
Dysprosium	156-1	19534	19224	19237	19332	0.91	cps
Dysprosium	156-2	5348	5128	5208	5228	2.13	cps
Erbium	164-1	13280	13444	13727	13484	1.68	cps
Erbium	164-2	4007	3887	4034	3976	1.97	cps
Gadolinium	160-1	15269	15426	15359	15351	0.51	cps
Gadolinium	160-2	5648	5755	5911	5771	2.30	cps
Holmium	165-1	18654928	18481002	18106480	18414137	1.52	cps
Holmium	165-2	5947008	5846467	5688147	5827208	2.24	cps
Indium	115-1	14286261	14100558	14355799	14247539	0.93	cps
Indium	115-2	1180905	1185733	1181700	1182779	0.22	cps
Iron	54-2	1470708	1456292	1440716	1455905	1.03	cps
Iron	56-2	26418955	26285793	26698757	26467835	0.80	cps
Iron	57-2	633147	632129	636577	633951	0.37	cps
Krypton	83-1	247	287	250	261	8.50	cps
Lead	206-1	3287336	3265598	3253125	3268686	0.53	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:20:43	DataFile Name :	036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2788297	2864411	2842100	2831603	1.38	cps
Lead	208-1	12880338	12980586	12894794	12918573	0.42	cps
Lithium	6-1	8347974	8203742	8350708	8300808	1.01	cps
Magnesium	24-2	1268598	1288630	1254404	1270544	1.35	cps
Manganese	55-2	617098	618752	621228	619026	0.34	cps
Molybdenum	94-1	1223517	1224961	1226560	1225013	0.12	cps
Molybdenum	95-1	1293114	1307341	1308452	1302969	0.66	cps
Molybdenum	96-1	1564331	1581714	1572562	1572869	0.55	cps
Molybdenum	97-1	795394	810338	812210	805981	1.14	cps
Molybdenum	98-1	2238798	2230089	2198833	2222573	0.95	cps
Neodymium	150-1	30044	30301	29833	30059	0.78	cps
Neodymium	150-2	6458	6612	6882	6651	3.23	cps
Nickel	60-2	84572	84573	86387	85177	1.23	cps
Phosphorus	31-2	430	297	417	381	19.27	cps
Potassium	39-2	298112	300266	299457	299278	0.36	cps
Rhodium	103-1	13499861	13314026	13222317	13345401	1.06	cps
Rhodium	103-2	4771440	4715868	4797519	4761609	0.88	cps
Scandium	45-1	10437685	10241999	10224609	10301431	1.15	cps
Scandium	45-2	169351	171752	170120	170408	0.72	cps
Selenium	82-1	11692	11492	11705	11630	1.03	cps
Selenium	77-2	150	207	183	180	15.82	cps
Selenium	78-2	533	610	563	569	6.79	cps
Silicon	28-1	12250294	11331643	15787699	13123212	17.93	cps
Silver	107-1	155192	157686	157608	156829	0.90	cps
Silver	109-1	146814	148564	148051	147810	0.61	cps
Sodium	23-2	2223018	2273424	2190054	2228832	1.88	cps
Strontium	86-1	297533	301540	300922	299998	0.72	cps
Strontium	88-1	2807828	2772467	2744365	2774887	1.15	cps
Sulfur	34-1	671744	663970	664199	666638	0.66	cps
Terbium	159-1	18977838	18621427	18728118	18775794	0.97	cps
Terbium	159-2	5578221	5518876	5603969	5567022	0.78	cps
Thallium	203-1	707118	712396	714288	711268	0.52	cps
Thallium	205-1	1793172	1800331	1828665	1807390	1.04	cps
Tin	118-1	532586	533731	534269	533529	0.16	cps
Titanium	47-1	333842	318029	333656	328509	2.76	cps
Uranium	238-1	2415715	2398066	2351088	2388290	1.40	cps

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Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:20:43	DataFile Name :	036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	154476	155416	155389	155094	0.35	cps
Ytterbium	172-1	3867	3881	3891	3880	0.30	cps
Ytterbium	172-2	1447	1423	1473	1448	1.73	cps
Ytterbium	176-1	7729	8364	7522	7872	5.57	cps
Ytterbium	176-2	2267	2267	2347	2294	2.01	cps
Yttrium	89-1	25628875	25267321	25131272	25342490	1.01	cps
Yttrium	89-2	1564974	1571735	1525125	1553945	1.62	cps
Zinc	66-2	234762	233655	234864	234427	0.29	cps
Zirconium	90-1	1435916	1405801	1433064	1424927	1.17	cps
Zirconium	91-1	293385	297503	296833	295907	0.75	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:23:51	DataFile Name :	037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	500755	501519	502381	501552	0.16	cps
Antimony	121-1	751772	754259	765161	757064	0.94	cps
Arsenic	75-2	437	450	380	422	8.80	cps
Barium	135-1	927188	935060	929435	930561	0.44	cps
Barium	137-1	1700571	1685242	1687282	1691032	0.49	cps
Beryllium	9-1	278181	278256	278397	278278	0.04	cps
Bismuth	209-1	11441552	11545490	11496081	11494374	0.45	cps
Bismuth	209-2	4337156	4285216	4251096	4291156	1.01	cps
Bromine	81-1	6675	7359	7686	7240	7.12	cps
Cadmium	108-1	14421	14605	14521	14516	0.63	cps
Cadmium	106-1	28753	28927	28636	28772	0.51	cps
Cadmium	111-1	189382	192951	191958	191430	0.96	cps
Calcium	43-1	309861	308588	313861	310770	0.89	cps
Calcium	44-1	5192902	5241730	5154694	5196442	0.84	cps
Carbon	12-1	4947616	4845918	4738785	4844106	2.16	cps
Carbon	12-2	29276	28898	28478	28884	1.38	cps
Chlorine	35-1	6143749	6739090	6966091	6616310	6.42	cps
Chlorine	35-2	25386	26110	26838	26111	2.78	cps
Chromium	52-2	179887	182346	179700	180644	0.82	cps
Cobalt	59-2	302780	299286	301296	301120	0.58	cps
Copper	63-2	2381079	2426533	2420660	2409424	1.03	cps
Dysprosium	156-1	19828	20245	20486	20186	1.65	cps
Dysprosium	156-2	5034	5204	5068	5102	1.77	cps
Erbium	164-1	13714	13694	13253	13554	1.92	cps
Erbium	164-2	4091	4064	4027	4061	0.78	cps
Gadolinium	160-1	15990	15853	15886	15910	0.45	cps
Gadolinium	160-2	5825	5765	5848	5812	0.74	cps
Holmium	165-1	18306469	18561666	18357178	18408437	0.73	cps
Holmium	165-2	5877832	5807862	5857476	5847723	0.62	cps
Indium	115-1	14284959	14223046	14324052	14277352	0.36	cps
Indium	115-2	1192362	1190205	1191441	1191336	0.09	cps
Iron	54-2	1462336	1504488	1477896	1481573	1.44	cps
Iron	56-2	26818169	26415656	26846864	26693563	0.90	cps
Iron	57-2	642707	643810	649044	645187	0.52	cps
Krypton	83-1	233	303	293	277	13.68	cps
Lead	206-1	3330636	3331934	3301422	3321331	0.52	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:23:51	DataFile Name :	037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2829437	2899988	2832160	2853862	1.40	cps
Lead	208-1	12928845	13061073	12900100	12963339	0.66	cps
Lithium	6-1	8510089	8289734	8331698	8377174	1.40	cps
Magnesium	24-2	1295515	1288323	1271333	1285057	0.97	cps
Manganese	55-2	630431	628589	631015	630012	0.20	cps
Molybdenum	94-1	1243278	1247017	1272512	1254269	1.27	cps
Molybdenum	95-1	1315026	1407647	1332887	1351853	3.63	cps
Molybdenum	96-1	1584820	1609356	1601223	1598466	0.78	cps
Molybdenum	97-1	819901	827221	826679	824600	0.49	cps
Molybdenum	98-1	2249024	2319272	2269625	2279307	1.58	cps
Neodymium	150-1	30568	30308	30010	30295	0.92	cps
Neodymium	150-2	6588	6818	6592	6666	1.98	cps
Nickel	60-2	86326	86279	88228	86945	1.28	cps
Phosphorus	31-2	420	350	423	398	10.41	cps
Potassium	39-2	305244	303443	310259	306315	1.15	cps
Rhodium	103-1	13345291	13322264	13322942	13330166	0.10	cps
Rhodium	103-2	4773225	4742893	4915138	4810418	1.91	cps
Scandium	45-1	10294460	10278938	10134058	10235819	0.86	cps
Scandium	45-2	168130	168589	169810	168843	0.51	cps
Selenium	82-1	12226	11442	11525	11731	3.67	cps
Selenium	77-2	217	193	183	198	8.65	cps
Selenium	78-2	737	543	597	626	15.96	cps
Silicon	28-1	11715012	11708260	12332334	11918535	3.01	cps
Silver	107-1	158327	161736	162349	160804	1.35	cps
Silver	109-1	150098	150296	153320	151238	1.19	cps
Sodium	23-2	2206060	2249911	2234642	2230204	1.00	cps
Strontium	86-1	305334	306761	310531	307542	0.87	cps
Strontium	88-1	2810432	2824833	2769130	2801465	1.03	cps
Sulfur	34-1	652562	651651	647860	650691	0.38	cps
Terbium	159-1	18803350	18658326	18783513	18748396	0.42	cps
Terbium	159-2	5593732	5628897	5649956	5624195	0.51	cps
Thallium	203-1	717057	721057	727170	721761	0.71	cps
Thallium	205-1	1828817	1865749	1831921	1842162	1.11	cps
Tin	118-1	540665	548457	544709	544610	0.72	cps
Titanium	47-1	332650	331372	323050	329024	1.58	cps
Uranium	238-1	2438245	2483182	2435296	2452241	1.09	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01MSDDL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:23:51	DataFile Name :	037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	157389	158051	158709	158050	0.42	cps
Ytterbium	172-1	3791	3841	3784	3805	0.81	cps
Ytterbium	172-2	1413	1413	1507	1445	3.73	cps
Ytterbium	176-1	7762	7836	7932	7844	1.09	cps
Ytterbium	176-2	2430	2457	2407	2431	1.03	cps
Yttrium	89-1	25594221	25071224	25074347	25246597	1.19	cps
Yttrium	89-2	1564238	1555762	1584147	1568049	0.93	cps
Zinc	66-2	238443	236972	236319	237245	0.46	cps
Zirconium	90-1	1463518	1430612	1466001	1453377	1.36	cps
Zirconium	91-1	297254	299853	300894	299334	0.63	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01ADL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:26:56	DataFile Name :	038AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	492202	486205	494799	491069	0.90	cps
Antimony	121-1	740615	738481	746739	741945	0.58	cps
Arsenic	75-2	343	523	403	423	21.65	cps
Barium	135-1	902690	906759	913667	907705	0.61	cps
Barium	137-1	1679117	1634149	1630576	1647947	1.64	cps
Beryllium	9-1	269259	271109	271748	270705	0.48	cps
Bismuth	209-1	11430841	11741190	11539412	11570481	1.36	cps
Bismuth	209-2	4332484	4237061	4316084	4295210	1.19	cps
Bromine	81-1	7032	7445	7345	7274	2.97	cps
Cadmium	108-1	14338	14398	14318	14351	0.29	cps
Cadmium	106-1	27788	28413	28446	28216	1.31	cps
Cadmium	111-1	184568	188531	188479	187193	1.21	cps
Calcium	43-1	303693	303176	302767	303212	0.15	cps
Calcium	44-1	5105443	5189122	5133115	5142560	0.83	cps
Carbon	12-1	4877552	4793751	4777191	4816165	1.12	cps
Carbon	12-2	28701	28204	28190	28365	1.03	cps
Chlorine	35-1	6316998	6791565	7057938	6722167	5.58	cps
Chlorine	35-2	26468	26054	26698	26406	1.24	cps
Chromium	52-2	178215	180149	178391	178918	0.60	cps
Cobalt	59-2	291430	290636	295028	292365	0.80	cps
Copper	63-2	2371649	2328135	2334475	2344753	1.00	cps
Dysprosium	156-1	19020	19277	19394	19231	0.99	cps
Dysprosium	156-2	5201	4711	4948	4953	4.95	cps
Erbium	164-1	13280	13514	13373	13389	0.88	cps
Erbium	164-2	3984	3881	3967	3944	1.41	cps
Gadolinium	160-1	14898	15222	15302	15141	1.41	cps
Gadolinium	160-2	5788	5618	6048	5818	3.72	cps
Holmium	165-1	18515934	18435674	18528588	18493399	0.27	cps
Holmium	165-2	5921665	5945844	5826814	5898108	1.07	cps
Indium	115-1	14552669	14413521	14367157	14444449	0.67	cps
Indium	115-2	1206602	1194325	1198859	1199929	0.52	cps
Iron	54-2	1461383	1452761	1444449	1452864	0.58	cps
Iron	56-2	26317389	26153111	26262596	26244365	0.32	cps
Iron	57-2	630376	630314	630346	630345	0.00	cps
Krypton	83-1	267	290	300	286	5.99	cps
Lead	206-1	3265637	3240043	3203530	3236403	0.96	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01ADL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:26:56	DataFile Name :	038AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2811911	2758769	2793432	2788038	0.97	cps
Lead	208-1	12760085	12859446	12812135	12810555	0.39	cps
Lithium	6-1	8254105	8298123	8341579	8297935	0.53	cps
Magnesium	24-2	1269375	1263611	1243538	1258841	1.08	cps
Manganese	55-2	623514	616179	613906	617866	0.81	cps
Molybdenum	94-1	1226138	1226083	1238328	1230183	0.57	cps
Molybdenum	95-1	1293870	1300870	1303092	1299277	0.37	cps
Molybdenum	96-1	1551959	1564401	1532206	1549522	1.05	cps
Molybdenum	97-1	801139	807371	807929	805480	0.47	cps
Molybdenum	98-1	2213051	2247771	2253510	2238111	0.98	cps
Neodymium	150-1	30070	29746	29619	29812	0.78	cps
Neodymium	150-2	6535	6432	6595	6521	1.27	cps
Nickel	60-2	85055	84187	84928	84723	0.55	cps
Phosphorus	31-2	437	420	383	413	6.60	cps
Potassium	39-2	299167	301928	299265	300120	0.52	cps
Rhodium	103-1	13407596	13570159	13415034	13464263	0.68	cps
Rhodium	103-2	4842816	4825278	4870628	4846241	0.47	cps
Scandium	45-1	10223108	10278391	10337266	10279588	0.56	cps
Scandium	45-2	171577	171969	171716	171754	0.12	cps
Selenium	82-1	11125	11278	11478	11294	1.57	cps
Selenium	77-2	203	207	190	200	4.41	cps
Selenium	78-2	593	590	597	593	0.56	cps
Silicon	28-1	13352179	13322875	11715682	12796912	7.32	cps
Silver	107-1	156655	158751	157689	157699	0.66	cps
Silver	109-1	147796	149878	150600	149424	0.97	cps
Sodium	23-2	2176958	2198781	2191286	2189008	0.51	cps
Strontium	86-1	299390	302801	301612	301268	0.57	cps
Strontium	88-1	2751508	2746034	2676714	2724752	1.53	cps
Sulfur	34-1	645462	647152	642780	645131	0.34	cps
Terbium	159-1	18954828	19000649	18761264	18905581	0.67	cps
Terbium	159-2	5683625	5652657	5664007	5666763	0.28	cps
Thallium	203-1	703829	707637	713605	708357	0.70	cps
Thallium	205-1	1786556	1790633	1778490	1785226	0.35	cps
Tin	118-1	535930	537867	536237	536678	0.19	cps
Titanium	47-1	313839	319705	319826	317790	1.08	cps
Uranium	238-1	2369042	2428306	2368418	2388589	1.44	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	Q1295-01ADL2X10	Instrumnet Name :	P8
Client Sample ID :	TAPFTA-SB01D-020425-	Dilution Factor :	10
Date & Time Acquired :	2025-02-17 14:26:56	DataFile Name :	038AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	155237	155251	154136	154875	0.41	cps
Ytterbium	172-1	3757	3624	3771	3717	2.18	cps
Ytterbium	172-2	1443	1430	1440	1438	0.48	cps
Ytterbium	176-1	7589	7732	7529	7617	1.37	cps
Ytterbium	176-2	2257	2290	2117	2221	4.14	cps
Yttrium	89-1	24997441	24879303	24862132	24912959	0.30	cps
Yttrium	89-2	1603099	1563458	1577530	1581362	1.27	cps
Zinc	66-2	234505	234675	231843	233675	0.68	cps
Zirconium	90-1	1333925	1403685	1328656	1355422	3.09	cps
Zirconium	91-1	292062	297241	295615	294972	0.90	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P8
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:30:14	DataFile Name :	039CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3105443	3103358	3086370	3098390	0.34	cps
Antimony	121-1	7464069	7464354	7446246	7458223	0.14	cps
Arsenic	75-2	131315	134070	133253	132879	1.07	cps
Barium	135-1	9578012	9370939	9224261	9391070	1.89	cps
Barium	137-1	16153631	15956715	15743634	15951327	1.29	cps
Beryllium	9-1	2767718	2810720	2827846	2802094	1.11	cps
Bismuth	209-1	10077729	10232522	10143653	10151301	0.77	cps
Bismuth	209-2	3919550	3821190	3804929	3848556	1.61	cps
Bromine	81-1	5151	5008	4984	5048	1.79	cps
Cadmium	108-1	143228	144229	143565	143674	0.35	cps
Cadmium	106-1	207304	208674	208643	208207	0.38	cps
Cadmium	111-1	1848485	1836632	1793693	1826270	1.58	cps
Calcium	43-1	12800254	12963614	12831571	12865146	0.67	cps
Calcium	44-1	206290244	207450450	207178337	206973010	0.29	cps
Carbon	12-1	4960963	4984850	4960840	4968884	0.28	cps
Carbon	12-2	35787	35673	36392	35951	1.07	cps
Chlorine	35-1	685240	654116	631523	656960	4.11	cps
Chlorine	35-2	2234	2003	1997	2078	6.49	cps
Chromium	52-2	1553378	1549738	1553779	1552298	0.14	cps
Cobalt	59-2	2883561	2905085	2857181	2881942	0.83	cps
Copper	63-2	21322328	21708241	21768341	21599637	1.12	cps
Dysprosium	156-1	600	650	607	619	4.39	cps
Dysprosium	156-2	67	103	90	87	21.42	cps
Erbium	164-1	367	423	460	417	11.29	cps
Erbium	164-2	153	130	157	147	9.91	cps
Gadolinium	160-1	340	337	340	339	0.57	cps
Gadolinium	160-2	87	80	80	82	4.68	cps
Holmium	165-1	17677761	17473548	17600606	17583972	0.59	cps
Holmium	165-2	5690105	5721969	5683899	5698658	0.36	cps
Indium	115-1	12977164	12991108	12964606	12977626	0.10	cps
Indium	115-2	1098499	1106055	1111438	1105331	0.59	cps
Iron	54-2	15231341	15276601	15322813	15276918	0.30	cps
Iron	56-2	277846596	275267923	280548949	277887823	0.95	cps
Iron	57-2	7021830	6943733	7090690	7018751	1.05	cps
Krypton	83-1	313	337	357	336	6.46	cps
Lead	206-1	29527930	29778305	29796247	29700828	0.51	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P8
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:30:14	DataFile Name :	039CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	25431050	25149526	25607165	25395914	0.91	cps
Lead	208-1	117173482	117419252	117925765	117506167	0.33	cps
Lithium	6-1	7616975	7647942	7596859	7620592	0.34	cps
Magnesium	24-2	55981823	55847634	55438334	55755930	0.51	cps
Manganese	55-2	6304590	6172907	6206906	6228134	1.10	cps
Molybdenum	94-1	26901738	27231993	27014286	27049339	0.62	cps
Molybdenum	95-1	38449659	38732791	38482115	38554855	0.40	cps
Molybdenum	96-1	41890547	42021950	42604642	42172380	0.90	cps
Molybdenum	97-1	23891885	23720734	24058467	23890362	0.71	cps
Molybdenum	98-1	62400136	62004872	62887646	62430885	0.71	cps
Neodymium	150-1	913	867	750	843	9.98	cps
Neodymium	150-2	40	23	40	34	27.94	cps
Nickel	60-2	759964	768454	764442	764287	0.56	cps
Phosphorus	31-2	28308	29133	28521	28654	1.49	cps
Potassium	39-2	15023328	14862136	14986859	14957441	0.57	cps
Rhodium	103-1	11669394	11666666	11785781	11707280	0.58	cps
Rhodium	103-2	4307055	4356571	4278036	4313887	0.92	cps
Scandium	45-1	9638113	9682519	9653565	9658066	0.23	cps
Scandium	45-2	168866	169742	165747	168118	1.25	cps
Selenium	82-1	108985	109653	109109	109249	0.33	cps
Selenium	77-2	1730	1687	1607	1675	3.74	cps
Selenium	78-2	5454	5324	5278	5352	1.71	cps
Silicon	28-1	9444109	9443379	9373091	9420193	0.43	cps
Silver	107-1	8920120	9160768	9078955	9053281	1.35	cps
Silver	109-1	8499082	8520113	8485534	8501576	0.20	cps
Sodium	23-2	111603005	111988828	110769648	111453827	0.56	cps
Strontium	86-1	2521582	2598127	2578862	2566190	1.55	cps
Strontium	88-1	21386676	21629531	21702006	21572738	0.77	cps
Sulfur	34-1	1433275	1417213	1403106	1417865	1.06	cps
Terbium	159-1	17967606	18211071	17962674	18047117	0.79	cps
Terbium	159-2	5529533	5460645	5410133	5466771	1.10	cps
Thallium	203-1	7311155	7331033	7316784	7319657	0.14	cps
Thallium	205-1	17442972	17559248	17343272	17448498	0.62	cps
Tin	118-1	5956909	6012671	6027330	5998970	0.62	cps
Titanium	47-1	11823693	11899022	11836369	11853028	0.34	cps
Uranium	238-1	23833963	23913799	23802850	23850204	0.24	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P8
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:30:14	DataFile Name :	039CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1163187	1167134	1179467	1169929	0.73	cps
Ytterbium	172-1	497	473	453	474	4.57	cps
Ytterbium	172-2	170	173	193	179	7.06	cps
Ytterbium	176-1	36550	36781	36972	36768	0.57	cps
Ytterbium	176-2	11021	11448	11515	11328	2.36	cps
Yttrium	89-1	23361407	23780330	23842235	23661324	1.11	cps
Yttrium	89-2	1516956	1528564	1531339	1525620	0.50	cps
Zinc	66-2	2272318	2319045	2281857	2291073	1.08	cps
Zirconium	90-1	13547414	13671239	13705187	13641280	0.61	cps
Zirconium	91-1	2973444	3064588	3055540	3031191	1.66	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P8
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:34:11	DataFile Name :	040CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	137	163	143	148	9.39	cps
Antimony	121-1	1350	1283	1317	1317	2.53	cps
Arsenic	75-2	10	10	10	10	0.00	cps
Barium	135-1	1540	1467	1640	1549	5.62	cps
Barium	137-1	2737	2554	2287	2526	8.96	cps
Beryllium	9-1	1160	1164	1175	1166	0.67	cps
Bismuth	209-1	11895495	11836939	11619799	11784078	1.23	cps
Bismuth	209-2	4465201	4407190	4452270	4441554	0.69	cps
Bromine	81-1	4481	4591	4541	4537	1.21	cps
Cadmium	108-1	67	67	77	70	8.25	cps
Cadmium	106-1	7285	7205	7489	7326	1.99	cps
Cadmium	111-1	5170	5144	5275	5196	1.34	cps
Calcium	43-1	827	753	733	771	6.37	cps
Calcium	44-1	24985	24077	23589	24217	2.93	cps
Carbon	12-1	4387702	4157140	4079444	4208095	3.81	cps
Carbon	12-2	24420	24183	23392	23999	2.24	cps
Chlorine	35-1	360975	349656	339964	350198	3.00	cps
Chlorine	35-2	1200	1123	1053	1126	6.52	cps
Chromium	52-2	1843	1830	1810	1828	0.92	cps
Cobalt	59-2	317	313	400	343	14.30	cps
Copper	63-2	2847	2767	2634	2749	3.92	cps
Dysprosium	156-1	123	187	170	160	20.52	cps
Dysprosium	156-2	3	0	3	2	86.60	cps
Erbium	164-1	77	127	70	91	33.99	cps
Erbium	164-2	27	20	23	23	14.29	cps
Gadolinium	160-1	103	110	110	108	3.57	cps
Gadolinium	160-2	10	13	13	12	15.73	cps
Holmium	165-1	18666646	18689292	18486218	18614052	0.60	cps
Holmium	165-2	5886735	5852692	5890023	5876484	0.35	cps
Indium	115-1	14613233	14608037	14653927	14625065	0.17	cps
Indium	115-2	1212514	1207983	1209764	1210087	0.19	cps
Iron	54-2	883	917	900	900	1.85	cps
Iron	56-2	14875	14981	14641	14832	1.17	cps
Iron	57-2	353	340	383	359	6.18	cps
Krypton	83-1	287	310	257	284	9.40	cps
Lead	206-1	3334	3114	3124	3190	3.89	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P8
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:34:11	DataFile Name :	040CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2947	2907	2620	2825	6.31	cps
Lead	208-1	13133	12472	12019	12541	4.47	cps
Lithium	6-1	8477057	8476358	8236044	8396486	1.65	cps
Magnesium	24-2	2777	2737	2677	2730	1.84	cps
Manganese	55-2	607	603	570	593	3.42	cps
Molybdenum	94-1	1273	1220	1143	1212	5.39	cps
Molybdenum	95-1	1363	1457	1213	1345	9.13	cps
Molybdenum	96-1	1807	1630	1467	1635	10.40	cps
Molybdenum	97-1	927	820	800	849	8.02	cps
Molybdenum	98-1	2497	2360	2087	2315	9.02	cps
Neodymium	150-1	40	43	50	44	11.46	cps
Neodymium	150-2	0	3	3	2	86.60	cps
Nickel	60-2	927	810	903	880	7.02	cps
Phosphorus	31-2	93	73	117	94	22.97	cps
Potassium	39-2	9130	9233	8899	9087	1.88	cps
Rhodium	103-1	13902916	13822903	13760999	13828939	0.51	cps
Rhodium	103-2	5008235	4941322	5029834	4993130	0.92	cps
Scandium	45-1	10390823	10214589	10328467	10311293	0.87	cps
Scandium	45-2	169739	170022	170383	170048	0.19	cps
Selenium	82-1	-80	3	3	-24	-196.84	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	17	3	10	10	66.70	cps
Silicon	28-1	549034	546984	540773	545597	0.79	cps
Silver	107-1	780	647	690	706	9.64	cps
Silver	109-1	617	587	550	584	5.71	cps
Sodium	23-2	42873	43003	42920	42932	0.15	cps
Strontium	86-1	587	633	587	602	4.47	cps
Strontium	88-1	2137	2080	2027	2081	2.64	cps
Sulfur	34-1	690451	696091	697047	694530	0.51	cps
Terbium	159-1	18845036	18904710	18765489	18838412	0.37	cps
Terbium	159-2	5605320	5651781	5663131	5640077	0.54	cps
Thallium	203-1	1057	953	937	982	6.62	cps
Thallium	205-1	2454	2164	2340	2319	6.30	cps
Tin	118-1	2807	2467	2704	2659	6.56	cps
Titanium	47-1	463	410	353	409	13.45	cps
Uranium	238-1	467	343	257	356	29.68	cps

Reviewed By:
On:
Inst Id :P8
LB :LB134737

LB Number :	LB134737	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P8
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2025-02-17 14:34:11	DataFile Name :	040CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	23	10	23	19	40.75	cps
Ytterbium	172-1	83	97	93	91	7.62	cps
Ytterbium	172-2	33	17	27	26	32.81	cps
Ytterbium	176-1	2004	2040	1657	1900	11.13	cps
Ytterbium	176-2	260	313	290	288	9.29	cps
Yttrium	89-1	25318110	25459125	24903579	25226938	1.14	cps
Yttrium	89-2	1614058	1599624	1585954	1599879	0.88	cps
Zinc	66-2	293	297	303	298	1.71	cps
Zirconium	90-1	1323	1123	1147	1198	9.13	cps
Zirconium	91-1	280	240	253	258	7.90	cps

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB166584

SOP ID : M7471B-Mercury-18

SDG No : NA

Matrix : SOIL

Pippete ID: HG A

Balance ID : M SC-3

Filter paper ID : NA

pH Strip ID : NA

Hood ID : #1

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

Start Digest Date: 02/05/2025 **Time :** 16:30 **Temp :** 95 °C

End Digest Date: 02/05/2025 **Time :** 17:00 **Temp :** 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: MB

Supervisor Signature: 12

Temp : 1. 95°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP84352
CCV	30mL	MP84354
CRA	30mL	MP84356
Blank Spike	0.48mL	MP84345
Matrix Spike	0.48mL	MP84345

Chemical Used	ML/SAMPLE USED	Lot Number
AQUA REGIA	1.5mL	MP84358
KMnO4 (5%)	4.5mL	MP83692
Hydroxylamine HCL (12%)	2.0mL	MP83694
PTFE Boiling Stones	----------	M4583
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	MP84346
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP84347
2.5 ppb	S2.5	30mL	MP84348
5.0 ppb	S5.0	30mL	MP84349
7.5 ppb	S7.5	30mL	MP84350
10.0 ppb	S10.0	30mL	MP84351
ICV	ICV	30mL	MP84352
ICB	ICB	30mL	MP84353
CCV	CCV	30mL	MP84354
CCB	CCB	30mL	MP84355
CRI	CRI	30mL	MP84356
CHK STD	CHK STD	30mL	MP84357

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
2/5/25 @ 18:10	MB - DT 5 - LAB	MB - Metal Lab
	Preparation Group	Analysis Group

MB 2/5/25

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB166584

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Comment	Prep Pos
PB166584BL	PBS584	0.55	35	NA	N/A	1
PB166584BS	LCS584	0.53	35	NA	MP84345	2
Q1276-01	TR-05-020325	0.51	35	NA	N/A	3
Q1277-02	RT 3249	0.52	35	NA	N/A	4
Q1280-01	72-11984	0.55	35	NA	N/A	5
Q1281-01	OR-02--2-03-2025	0.53	35	NA	N/A	6
Q1284-01	SU-03-2-4-2025	0.54	35	NA	N/A	7
Q1285-01	72-11977	0.53	35	NA	N/A	8
Q1286-01	NB-07-020425	0.52	35	NA	N/A	9
Q1287-01	BAY-DRUMS-A	0.54	35	NA	N/A	10
Q1287-03	BAY-DRUMS-B	0.52	35	NA	N/A	11
Q1287-05	BAY-DRUMS-C	0.58	35	NA	N/A	12
Q1287-07	BAY-DRUMS-D	0.55	35	NA	N/A	13
Q1287-09	BAY-DRUMS-E	0.53	35	NA	N/A	14
Q1288-01	HR-01-020425	0.54	35	NA	N/A	15
Q1288-01DUP	HR-01-020425DUP	0.54	35	NA	N/A	16
Q1288-01MS	HR-01-020425MS	0.54	35	NA	MP84345	17
Q1288-01MSD	HR-01-020425MSD	0.53	35	NA	MP84345	18
Q1288-04	HR-04-020425	0.55	35	NA	N/A	19
Q1289-02	FL-DRUMS-A	0.52	35	NA	N/A	20
Q1289-04	FL-DRUMS-B	0.55	35	NA	N/A	21
Q1295-01	TAPFTA-SB01D-020425-00-T1	0.58	35	NA	N/A	22
Q1304-01	RB21140	0.58	35	NA	N/A	23

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 020525_7471 **WorkList ID :** 187501 **Department :** Digestion **Date :** 02-05-2025 13:39:40

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1276-01	TR-05-020325	Solid	Mercury	Cool 4 deg C	PSEG05	D11	02/03/2025	7471B
Q1277-02	RT 3249	Solid	Mercury	Cool 4 deg C	PSEG03	D11	02/03/2025	7471B
Q1280-01	72-11984	Solid	Mercury	Cool 4 deg C	PSEG03	D11	02/03/2025	7471B
Q1281-01	OR-02--2-03-2025	Solid	Mercury	Cool 4 deg C	PSEG05	D11	02/03/2025	7471B
Q1284-01	SU-03-2-4-2025	Solid	Mercury	Cool 4 deg C	PSEG05	D11	02/04/2025	7471B
Q1285-01	72-11977	Solid	Mercury	Cool 4 deg C	PSEG03	D11	02/04/2025	7471B
Q1286-01	NB-07-020425	Solid	Mercury	Cool 4 deg C	PSEG05	D11	02/04/2025	7471B
Q1287-01	BAY-DRUMS-A	Solid	Mercury	Cool 4 deg C	PSEG03	D11	02/04/2025	7471B
Q1287-03	BAY-DRUMS-B	Solid	Mercury	Cool 4 deg C	PSEG03	D11	02/04/2025	7471B
Q1287-05	BAY-DRUMS-C	Solid	Mercury	Cool 4 deg C	PSEG03	D11	02/04/2025	7471B
Q1287-07	BAY-DRUMS-D	Solid	Mercury	Cool 4 deg C	PSEG03	D11	02/04/2025	7471B
Q1287-09	BAY-DRUMS-E	Solid	Mercury	Cool 4 deg C	PSEG03	D11	02/04/2025	7471B
Q1288-01	HR-01-020425	Solid	Mercury	Cool 4 deg C	PSEG05	D11	02/04/2025	7471B
Q1288-04	HR-04-020425	Solid	Mercury	Cool 4 deg C	PSEG05	D11	02/04/2025	7471B
Q1289-02	FL-DRUMS-A	Solid	Mercury	Cool 4 deg C	PSEG03	D11	02/04/2025	7471B
Q1289-04	FL-DRUMS-B	Solid	Mercury	Cool 4 deg C	PSEG03	D11	02/04/2025	7471B
Q1295-01	TAPFTA-SB01D-020425-00-T1	Solid	Mercury	Cool 4 deg C	WEST04	N41	02/04/2025	7471B
Q1304-01	RB21140	Solid	Mercury	Cool 4 deg C	PSEG03	N31	02/05/2025	7471B

Date/Time 2/5/25 @ 16:05

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

Date/Time 2/5/25 @ 16:50

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB166734

SOP ID : M3050B-Digestion-20

SDG No : N/A

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-3

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

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

Start Digest Date: 02/14/2025 **Time :** 09:05 **Temp :** 96 °C

End Digest Date: 02/14/2025 **Time :** 11:10 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #3

Dig Technician Signature: SLD

Supervisor Signature: MH

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
Spike Sol 1	1.00	MP84472
Spike Sol 2	2.00	MP84468
Spike Sol 3	2.00	MP84469
Spike Sol 4	2.00	MP84470
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	10.00	MP84041
Conc. HNO3	5.00	M6126
30% H2O2	3.00	M6125
PTFE Boiling Stones	N/A	M5585
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 #3 CELL#35 : 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
02/14/25 12:10	SLD. met. dig.	MH. Metal Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB166734

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
PB166734BL	PBS734	N/A	2.30	100	Colorless	Colorless	Fine	N/A	N/A	1
PB166734BS	LCS734	N/A	2.30	100	Colorless	Colorless	Fine	N/A	MP84472,MP84468,MP84469,N	2
Q1295-01	TAPFTA-SB01D-020425-00-T1	N/A	2.41	100	Brown	Yellow	Medium	N/A	N/A	3
Q1295-01MS	TAPFTA-SB01D-020425-00-T1MS	N/A	2.39	100	Brown	Yellow	Medium	N/A	MP84472,MP84468,MP84469,N	5
Q1295-01MSD	TAPFTA-SB01D-020425-00-T1MSD	N/A	2.29	100	Brown	Yellow	Medium	N/A	MP84472,MP84468,MP84469,N	6
Q1295-01DUP	TAPFTA-SB01D-020425-00-T1DUP	N/A	2.44	100	Brown	Yellow	Medium	N/A	N/A	4

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB166734 **WorkList ID :** 187712 **Department :** Digestion **Date :** 02-14-2025 08:25:50

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1295-01	TAPFTA-SB01D-020425-00-T1	Solid	Metals ICP-TAL	Cool 4 deg C	WEST04	N41	02/04/2025	6020B

Date/Time 02/14/25 8:45
Raw Sample Received by: SWD. met. div
Raw Sample Relinquished by: SM

Date/Time 02/14/25 9:45
Raw Sample Received by: SM
Raw Sample Relinquished by: SWD. met. div

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 2/6/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:30
In Date: 02/05/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:27
Out Date: 02/06/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB134582

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q1295-01	TAPFTA-SB01D-020425-00-T1	1	1.15	8.75	9.9	9.1	90.9	
Q1299-01	WC-1	2	1.18	8.42	9.6	8.63	88.5	
Q1299-02	WC-1-EPH	3	1.14	8.40	9.54	8.72	90.2	
Q1299-03	WC-1-VOC	4	1.15	8.82	9.97	9.44	94.0	
Q1299-05	WC-2	5	1.14	8.76	9.9	8.93	88.9	
Q1299-06	WC-2-EPH	6	1.15	8.76	9.91	8.98	89.4	
Q1299-07	WC-2-VOC	7	1.19	8.77	9.96	9.00	89.1	
Q1304-01	RB21140	8	1.14	8.82	9.96	7.81	75.6	
Q1304-02	RB21140-E2	9	1.12	8.51	9.63	7.78	78.3	
Q1305-01	BC258874-1-1	10	1.00	1.00	2.00	2.00	100.0	pilc
Q1305-02	BC258874-1-2	11	1.00	1.00	2.00	2.00	100.0	pilc
Q1305-03	BC258874-2-1	12	1.00	1.00	2.00	2.00	100.0	pilc
Q1305-04	BC258874-2-2	13	1.00	1.00	2.00	2.00	100.0	pilc
Q1305-05	Y2308-0040-1-1	14	1.00	1.00	2.00	2.00	100.0	pilc
Q1305-06	Y2308-0040-1-2	15	1.00	1.00	2.00	2.00	100.0	pilc
Q1305-07	BC216351-1-1	16	1.00	1.00	2.00	2.00	100.0	pilc
Q1305-08	BC216351-1-2	17	1.00	1.00	2.00	2.00	100.0	pilc
Q1306-01	KMH840Y-1-1	18	1.00	1.00	2.00	2.00	100.0	pilc
Q1306-02	KMH840Y-1-2	19	1.00	1.00	2.00	2.00	100.0	pilc
Q1306-03	KMH840Y-2-1	20	1.00	1.00	2.00	2.00	100.0	pilc
Q1306-04	KMH840Y-2-2	21	1.00	1.00	2.00	2.00	100.0	pilc
Q1307-01	434	22	1.16	8.40	9.56	8.77	90.6	
Q1308-01	EX-8-TPH-1	23	1.15	8.81	9.96	8.96	88.6	
Q1308-02	EX-6-TPH-1	24	1.13	8.72	9.85	8.39	83.3	
Q1308-03	EX-6-TPH-2	25	1.15	8.81	9.96	8.54	83.9	
Q1308-04	EX-11-TPH-5	26	1.13	8.65	9.78	8.51	85.3	
Q1308-05	EX-11-TPH-6	27	1.13	8.86	9.99	8.5	83.2	
Q1308-06	EX-11-TPH-7	28	1.19	8.40	9.59	8.31	84.8	

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 2/6/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:30
In Date: 02/05/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:27
Out Date: 02/06/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB134582

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q1308-07	EX-11-TPH-8	29	1.13	8.85	9.98	9.4	93.4	
Q1308-08	EX-11-TPH-9	30	1.15	8.80	9.95	9.1	90.3	
Q1308-09	EX-11-TPH-10	31	1.16	8.41	9.57	7.66	77.3	
Q1308-10	EX-11-TPH-11	32	1.14	8.83	9.97	8.92	88.1	
Q1308-11	EX-11-TPH-12	33	1.17	8.76	9.93	8.95	88.8	
Q1308-12	EX-11-TPH-13	34	1.15	8.49	9.64	8.48	86.3	
Q1308-13	EX-11-TPH-14	35	1.13	8.85	9.98	8.4	82.1	
Q1308-14	EX-11-TPH-14	36	1.00	1.00	2.00	2.00	100.0	
Q1309-01	WC-2	37	1.18	8.38	9.56	8.19	83.7	
Q1309-02	WC-2-EPH	38	1.16	8.58	9.74	8.32	83.4	
Q1309-03	WC-2-VOC	39	1.13	8.79	9.92	8.51	84.0	
Q1309-05	WC-3	40	1.16	8.48	9.64	8.28	84.0	
Q1309-06	WC-3-EPH	41	1.13	8.86	9.99	8.84	87.0	
Q1309-07	WC-3-VOC	42	1.14	8.62	9.76	8.26	82.6	
Q1309-09	WC-4	43	1.13	8.79	9.92	8.76	86.8	
Q1309-10	WC-4-EPH	44	1.16	8.74	9.9	8.45	83.4	
Q1309-11	WC-4-VOC	45	1.15	8.80	9.95	8.3	81.3	
Q1309-13	WC-5	46	1.17	8.48	9.65	8.36	84.8	
Q1309-14	WC-5-EPH	47	1.13	8.81	9.94	8.47	83.3	
Q1309-15	WC-5-VOC	48	1.17	8.82	9.99	8.94	88.1	
Q1309-17	WC-6	49	1.12	8.55	9.67	8.55	86.9	
Q1309-18	WC-6-EPH	50	1.15	8.83	9.98	9.03	89.2	
Q1309-19	WC-6-VOC	51	1.13	8.84	9.97	8.56	84.0	
Q1309-21	WC-8	52	1.12	8.61	9.73	8.57	86.5	
Q1309-22	WC-8-EPH	53	1.13	8.62	9.75	8.45	84.9	
Q1309-23	WC-8-VOC	54	1.16	8.83	9.99	9.12	90.1	

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB134603

Review By	Mohan	Review On	2/6/2025 7:11:57 PM
Supervise By	jaswal	Supervise On	2/6/2025 10:39:08 PM

STD. NAME	STD REF.#
ICAL Standard	MP84346,MP84347,MP84348,MP84349,MP84350,MP84351
ICV Standard	MP84352
CCV Standard	MP84354
ICSA Standard	
CRI Standard	MP84356
LCS Standard	
Chk Standard	MP84353,MP84355,MP84357,MP84363

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	02/06/25 13:20		Mohan	OK
2	S0.2	S0.2	CAL2	02/06/25 13:25		Mohan	OK
3	S2.5	S2.5	CAL3	02/06/25 13:27		Mohan	OK
4	S5	S5	CAL4	02/06/25 13:30		Mohan	OK
5	S7.5	S7.5	CAL5	02/06/25 13:32		Mohan	OK
6	S10	S10	CAL6	02/06/25 13:37		Mohan	OK
7	ICV89	ICV89	ICV	02/06/25 13:40		Mohan	OK
8	ICB89	ICB89	ICB	02/06/25 13:42		Mohan	OK
9	CCV33	CCV33	CCV	02/06/25 13:45		Mohan	OK
10	CCB33	CCB33	CCB	02/06/25 13:47		Mohan	OK
11	CRA	CRA	CRDL	02/06/25 13:49		Mohan	OK
12	HighStd	HighStd	HIGH STD	02/06/25 13:52		Mohan	OK
13	ChkStd	ChkStd	SAM	02/06/25 13:54		Mohan	OK
14	PB166584BL	PB166584BL	MB	02/06/25 14:03		Mohan	OK
15	PB166584BS	PB166584BS	LCS	02/06/25 14:05		Mohan	OK
16	Q1276-01	TR-05-020325	SAM	02/06/25 14:08		Mohan	OK
17	Q1277-02	RT 3249	SAM	02/06/25 14:10		Mohan	OK
18	Q1280-01	72-11984	SAM	02/06/25 14:12		Mohan	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB134603

Review By	Mohan	Review On	2/6/2025 7:11:57 PM
Supervise By	jaswal	Supervise On	2/6/2025 10:39:08 PM

STD. NAME	STD REF.#
ICAL Standard	MP84346,MP84347,MP84348,MP84349,MP84350,MP84351
ICV Standard	MP84352
CCV Standard	MP84354
ICSA Standard	
CRI Standard	MP84356
LCS Standard	
Chk Standard	MP84353,MP84355,MP84357,MP84363

19	Q1281-01	OR-02--2-03-2025	SAM	02/06/25 14:15		Mohan	OK
20	Q1284-01	SU-03-2-4-2025	SAM	02/06/25 14:17		Mohan	OK
21	CCV34	CCV34	CCV	02/06/25 14:19		Mohan	OK
22	CCB34	CCB34	CCB	02/06/25 14:22		Mohan	OK
23	Q1285-01	72-11977	SAM	02/06/25 14:24		Mohan	OK
24	Q1286-01	NB-07-020425	SAM	02/06/25 14:26		Mohan	OK
25	Q1287-01	BAY-DRUMS-A	SAM	02/06/25 14:28		Mohan	OK
26	Q1287-03	BAY-DRUMS-B	SAM	02/06/25 14:31		Mohan	OK
27	Q1287-05	BAY-DRUMS-C	SAM	02/06/25 14:33		Mohan	OK
28	Q1287-07	BAY-DRUMS-D	SAM	02/06/25 14:35		Mohan	OK
29	Q1287-09	BAY-DRUMS-E	SAM	02/06/25 14:37		Mohan	OK
30	Q1288-01	HR-01-020425	SAM	02/06/25 14:45		Mohan	OK
31	Q1288-01DUP	HR-01-020425DUP	DUP	02/06/25 14:47		Mohan	OK
32	Q1288-01MS	HR-01-020425MS	MS	02/06/25 14:49		Mohan	OK
33	CCV35	CCV35	CCV	02/06/25 14:52		Mohan	OK
34	CCB35	CCB35	CCB	02/06/25 14:54		Mohan	OK
35	Q1288-01MSD	HR-01-020425MSD	MSD	02/06/25 14:56		Mohan	OK
36	Q1288-04	HR-04-020425	SAM	02/06/25 14:58		Mohan	OK
37	Q1289-02	FL-DRUMS-A	SAM	02/06/25 15:01		Mohan	OK
38	Q1289-04	FL-DRUMS-B	SAM	02/06/25 15:03		Mohan	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB134603

Review By	Mohan	Review On	2/6/2025 7:11:57 PM
Supervise By	jaswal	Supervise On	2/6/2025 10:39:08 PM

STD. NAME	STD REF.#
ICAL Standard	MP84346,MP84347,MP84348,MP84349,MP84350,MP84351
ICV Standard	MP84352
CCV Standard	MP84354
ICSA Standard	
CRI Standard	MP84356
LCS Standard	
Chk Standard	MP84353,MP84355,MP84357,MP84363

39	Q1295-01	TAPFTA-SB01D-0204	SAM	02/06/25 15:05		Mohan	OK
40	Q1304-01	RB21140	SAM	02/06/25 15:08		Mohan	OK
41	Q1288-01L	HR-01-020425L	SD	02/06/25 15:10		Mohan	OK
42	Q1288-01A	HR-01-020425A	PS	02/06/25 15:12		Mohan	OK
43	CCV36	CCV36	CCV	02/06/25 15:15		Mohan	OK
44	CCB36	CCB36	CCB	02/06/25 15:17		Mohan	OK

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Instrument ID: P8

Daily Analysis Runlog For Sequence/QCBatch ID # LB134737

Review By	Kareem	Review On	2/17/2025 04:46:02 PM
Supervise By	JANVI	Supervise On	2/17/2025 04:56:22 PM

STD. NAME	STD REF.#
ICAL Standard	MP84414,MP84423,MP84422,MP84420,MP84419,MP84418,MP84417,MP84416,MP84415
ICV Standard	MP84439
CCV Standard	MP84438
ICSA Standard	MP84440,MP84441
CRI Standard	MP84049
LCS Standard	
Chk Standard	MP84444,MP84443

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	TUNE	TUNE	TUNE	02/17/25 11:36		Jaswal	OK
2	S0	S0	CAL1	02/17/25 12:15		Jaswal	OK
3	S2	S2	CAL3	02/17/25 12:19		Jaswal	OK
4	S3	S3	CAL4	02/17/25 12:22		Jaswal	OK
5	S4	S4	CAL5	02/17/25 12:25		Jaswal	OK
6	S5	S5	CAL6	02/17/25 12:28		Jaswal	OK
7	S6	S6	CAL7	02/17/25 12:31		Jaswal	OK
8	S7	S7	CAL8	02/17/25 12:34		Jaswal	OK
9	S8	S8	CAL9	02/17/25 12:37		Jaswal	OK
10	ICV01	ICV01	ICV	02/17/25 12:48		Jaswal	OK
11	LLICV	LLICV	LLICV	02/17/25 12:52		Jaswal	OK
12	ICB01	ICB01	ICB	02/17/25 12:55		Jaswal	OK
13	ICSA01	ICSA01	ICSA	02/17/25 12:58		Jaswal	OK
14	ICSAB01	ICSAB01	ICSAB	02/17/25 13:02		Jaswal	OK
15	CCV01	CCV01	CCV	02/17/25 13:13		Jaswal	OK
16	CCB01	CCB01	CCB	02/17/25 13:16		Jaswal	OK
17	CRI	CRI	CRDL	02/17/25 13:19		Jaswal	OK
18	PB166734BL	PB166734BL	MB	02/17/25 13:23		Jaswal	OK

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Instrument ID: P8

Daily Analysis Runlog For Sequence/QCBatch ID # LB134737

Review By	Kareem	Review On	2/17/2025 04:46:02 PM
Supervise By	JANVI	Supervise On	2/17/2025 04:56:22 PM

STD. NAME	STD REF.#
ICAL Standard	MP84414,MP84423,MP84422,MP84420,MP84419,MP84418,MP84417,MP84416,MP84415
ICV Standard	MP84439
CCV Standard	MP84438
ICSA Standard	MP84440,MP84441
CRI Standard	MP84049
LCS Standard	
Chk Standard	MP84444,MP84443

19	PB166734BS	PB166734BS	LCS	02/17/25 13:26		Jaswal	OK
20	Q1295-01DL	TAPFTA-SB01D-0204	SAM	02/17/25 13:29	Int std 89Y(1) fail in MSD	Jaswal	Dilution
21	Q1295-01DUPDL	TAPFTA-SB01D-0204	DUP	02/17/25 13:32	Int std 89Y(1) fail in MSD	Jaswal	Dilution
22	Q1295-01LDL	TAPFTA-SB01D-0204	SD	02/17/25 13:36	Int std 89Y(1) fail in MSD	Jaswal	Dilution
23	Q1295-01MSDL	TAPFTA-SB01D-0204	MS	02/17/25 13:39	Int std 89Y(1) fail in MSD	Jaswal	Dilution
24	Q1295-01MSDDL	TAPFTA-SB01D-0204	MSD	02/17/25 13:42	Int std 89Y(1) fail	Jaswal	Dilution
25	Q1295-01ADL	TAPFTA-SB01D-0204	PS	02/17/25 13:45		Jaswal	OK
26	CCV02	CCV02	CCV	02/17/25 13:57		Jaswal	OK
27	CCB02	CCB02	CCB	02/17/25 14:04		Jaswal	OK
28	Q1295-01DL2	TAPFTA-SB01D-0204	SAM	02/17/25 14:10	10X for Int Std89Y(1)	Jaswal	Confirms
29	Q1295-01DUPDL2	TAPFTA-SB01D-0204	DUP	02/17/25 14:14	10X for Int Std89Y(1)	Jaswal	Confirms
30	Q1295-01LDL2	TAPFTA-SB01D-0204	SD	02/17/25 14:17	10X for Int Std89Y(1)	Jaswal	Confirms
31	Q1295-01MSDL2	TAPFTA-SB01D-0204	MS	02/17/25 14:20	10X for Int Std89Y(1)	Jaswal	Confirms
32	Q1295-01MSDDL2	TAPFTA-SB01D-0204	MSD	02/17/25 14:23	10X for Int Std89Y(1)	Jaswal	Confirms
33	Q1295-01ADL2	TAPFTA-SB01D-0204	PS	02/17/25 14:26	Not used	Jaswal	Not Ok
34	CCV03	CCV03	CCV	02/17/25 14:30		Jaswal	OK
35	CCB03	CCB03	CCB	02/17/25 14:34		Jaswal	OK

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Prep Standard - Chemical Standard Summary

Order ID : Q1295

Test : Mercury,Metals ICP-TAL

Prepbatch ID : PB166584,PB166734,

Sequence ID/Qc Batch ID: LB134603,LB134737,

Standard ID :
MP83692,MP83694,MP84041,MP84048,MP84049,MP84345,MP84346,MP84347,MP84348,MP84349,MP84350,MP84351,MP84352,MP84353,MP84354,MP84355,MP84356,MP84357,MP84358,MP84363,MP84414,MP84415,MP84416,MP84417,MP84418,MP84419,MP84420,MP84421,MP84422,MP84423,MP84438,MP84439,MP84440,MP84441,MP84442,MP84443,MP84444,MP84468,MP84469,MP84470,MP84472,

Chemical ID :
M4371,M4583,M4884,M4888,M4916,M5062,M5192,M5288,M5298,M5304,M5472,M5476,M5496,M5498,M5513,M5519,M5532,M5585,M5658,M5739,M5751,M5792,M5798,M5799,M5800,M5801,M5802,M5806,M5811,M5815,M5817,M5819,M5873,M5874,M5882,M5884,M5960,M5961,M5962,M5976,M5977,M5978,M5981,M5983,M6021,M6023,M6025,M6028,M6030,M6032,M6055,M6079,M6121,M6125,M6126,M6127,M6128,M6144,M6145,M6146,M6150,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP83692	12/18/2024	06/18/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 12/18/2024

FROM 100.00000gram of M4916 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
67	SODIUM CHLORIDE - HYDROXYL- CHLORIDE SOLUTION	MP83694	12/18/2024	06/18/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 12/18/2024

FROM 2000.00000ml of W3112 + 240.00000gram of M4371 + 240.00000gram of M5884 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP84041	01/14/2025	07/14/2025	Eman Mughal	None	None	Sarabjit Jaswal 01/16/2025

FROM 1250.00000ml of M6126 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3955	S2CONC(SFAM,6020,200.8)	MP84048	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.05000ml of M5476 + 0.05000ml of M5798 + 0.05000ml of M5800 + 0.05000ml of M5801 + 0.05000ml of M5961 + 0.05000ml of M5981 + 0.05000ml of M5983 + 0.05000ml of M6023 + 0.05000ml of M6025 + 0.05000ml of M6028 + 0.05000ml of M6030 + 0.05000ml of M6128 + 0.10000ml of M5496 + 0.10000ml of M5658 + 0.10000ml of M5751 + 0.10000ml of M5802 + 0.25000ml of M5298 + 0.25000ml of M5799 + 0.25000ml of M5819 + 0.25000ml of M5962 + 0.25000ml of M5976 + 0.25000ml of M5978 + 0.25000ml of M6021 + 0.50000ml of M6032 + 2.00000ml of M5815 + 2.00000ml of M5817 + 2.50000ml of M5498 + 2.50000ml of M5519 + 2.50000ml of M5806 + 2.50000ml of M6121 + 2.50000ml of M6127 + 225.25000ml of W3112 + 5.00000ml of M6126 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3956	S2(SFAM,6020,200.8)	MP84049	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 98.00000ml of W3112 + 0.50000ml of MP84048 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP84345	02/05/2025	02/06/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 02/06/2025

FROM 1.00000ml of M6126 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP84346	02/05/2025	02/06/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/06/2025

FROM 2.50000ml of M6126 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1341	Hg 0.2 PPB STD	MP84347	02/05/2025	02/06/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/06/2025

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP84345 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP84348	02/05/2025	02/06/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/06/2025

FROM 2.50000ml of M6126 + 245.00000ml of W3112 + 2.50000ml of MP84345 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP84349	02/05/2025	02/06/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/06/2025

FROM 2.50000ml of M6126 + 242.50000ml of W3112 + 5.00000ml of MP84345 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP84350	02/05/2025	02/06/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/06/2025

FROM 2.50000ml of M6126 + 240.00000ml of W3112 + 7.50000ml of MP84345 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP84351	02/05/2025	02/06/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/06/2025

FROM 2.50000ml of M6126 + 237.50000ml of W3112 + 10.00000ml of MP84345 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP84352	02/05/2025	02/06/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/06/2025

FROM 2.50000ml of M5532 + 2.50000ml of M6126 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP84353	02/05/2025	02/06/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/06/2025

FROM 2.50000ml of M6126 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP84354	02/05/2025	02/06/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/06/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6126 + 10.00000ml of MP84345 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP84355	02/05/2025	02/06/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/06/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6126 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP84356	02/05/2025	02/06/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/06/2025

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP84345 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP84357	02/05/2025	02/06/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/06/2025

FROM 2.50000ml of M6126 + 240.50000ml of W3112 + 7.00000ml of MP84345 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
887	AQUA REGIA FOR HG ON 7471A	MP84358	02/05/2025	02/06/2025	Mohan Bera	None	None	Sarabjit Jaswal 02/06/2025

FROM 150.00000ml of M6121 + 50.00000ml of M6126 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP84363	02/06/2025	02/07/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 02/10/2025

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M5792 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP84414	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 10.00000ml of M6126 + 175.00000ml of W3112 + 5.00000ml of M6121 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2902	S8 ICPMS	MP84415	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 1.00000ml of M5496 + 2.50000ml of M5288 + 2.50000ml of M5811 + 5.00000ml of M5498 + 5.00000ml of M6127 + 5.00000ml of M6144 + 79.00000ml of MP84414 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3947	S7(SFAM,6020,200.8)	MP84416	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.00000ml of M4884 + 0.00000ml of M4888 + 0.00000ml of M5192 + 0.00000ml of M5288 + 0.00000ml of M5513 + 1.00000ml of M5476 + 1.00000ml of M5799 + 1.00000ml of M5981 + 1.00000ml of M6079 + 1.90000ml of M5496 + 10.00000ml of M5977 + 10.00000ml of M5978 + 10.00000ml of M6126 + 2.00000ml of M5815 + 2.00000ml of M5817 + 4.00000ml of M6025 + 4.00000ml of M6032 + 4.90000ml of M5519 + 4.90000ml of M5811 + 5.00000ml of M6121 + 50.00000ml of M5304 + 830.60000ml of W3112 + 9.00000ml of M5751 + 9.00000ml of M6128 + 9.00000ml of M6145 + 9.90000ml of M5498 + 9.90000ml of M6127 + 9.90000ml of M6144 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3948	S6(SFAM,6020,200.8)	MP84417	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 48.50000ml of W3112 + 50.00000ml of MP84416 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3949	S5(SFAM,6020,200.8)	MP84418	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 73.50000ml of W3112 + 25.00000ml of MP84416 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3954	S4(SFAM,6020,200.8)	MP84419	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 86.00000ml of W3112 + 12.50000ml of MP84416 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3951	S3(SFAM, 6020,200.8)	MP84420	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 88.50000ml of W3112 + 10.00000ml of MP84417 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3955	S2CONC(SFAM,6020,200.8)	MP84421	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.05000ml of M5476 + 0.05000ml of M5798 + 0.05000ml of M5800 + 0.05000ml of M5801 + 0.05000ml of M5960 + 0.05000ml of M5981 + 0.05000ml of M6023 + 0.05000ml of M6025 + 0.05000ml of M6028 + 0.05000ml of M6030 + 0.05000ml of M6079 + 0.05000ml of M6128 + 0.10000ml of M5496 + 0.10000ml of M5658 + 0.10000ml of M5751 + 0.10000ml of M6146 + 0.25000ml of M5799 + 0.25000ml of M5811 + 0.25000ml of M5962 + 0.25000ml of M5977 + 0.25000ml of M5978 + 0.25000ml of M6021 + 0.25000ml of M6145 + 0.50000ml of M6032 + 2.00000ml of M5815 + 2.00000ml of M5817 + 2.50000ml of M5498 + 2.50000ml of M5519 + 2.50000ml of M6121 + 2.50000ml of M6127 + 2.50000ml of M6144 + 225.25000ml of W3112 + 5.00000ml of M6126 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3956	S2(SFAM,6020,200.8)	MP84422	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 98.00000ml of W3112 + 0.50000ml of MP84421 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3957	S1(SFAM,6020,200.8)	MP84423	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 88.50000ml of W3112 + 10.00000ml of MP84422 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3961	CCV	MP84438	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.00000ml of M4884 + 0.00000ml of M5978 + 0.20000ml of M5513 + 0.50000ml of M5476 + 0.50000ml of M5799 + 0.50000ml of M5981 + 0.50000ml of M6079 + 1.00000ml of M5815 + 1.00000ml of M5817 + 10.00000ml of M6126 + 12.45000ml of M5519 + 12.45000ml of M5811 + 2.00000ml of M6032 + 24.95000ml of M5498 + 24.95000ml of M6127 + 24.95000ml of M6144 + 25.00000ml of M5304 + 4.50000ml of M5751 + 4.50000ml of M6128 + 4.50000ml of M6145 + 4.95000ml of M5496 + 5.00000ml of M5977 + 5.00000ml of M6121 + 830.60000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3958	ICV(SFAM)	MP84439	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 2.00000ml of M6150 + 98.00000ml of MP84414 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1142	ICSA ICPMS	MP84440	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 10.00000ml of M5873 + 90.00000ml of MP84414 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1143	ICSAB ICPMS	MP84441	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 10.00000ml of M5873 + 10.00000ml of M5874 + 80.00000ml of MP84414 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3962	MG 10PPM FOR TUNE	MP84442	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 0.01000ml of M6127 + 9.99000ml of MP84414 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3894	TUNE 200PPB	MP84443	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 2.00000ml of M6055 + 2.00000ml of MP84442 + 96.00000ml of MP84414 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3903	ISS 3PPM	MP84444	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/11/2025

FROM 5.00000ml of M6126 + 75.00000ml of M5739 + 170.00000ml of MP84414 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3881	M&B SPIKE-2	MP84468	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/13/2025

FROM 0.00000ml of M4888 + 10.00000ml of M5977 + 12.50000ml of M5519 + 12.50000ml of M5811 + 12.50000ml of M6032 + 2.50000ml of M4884 + 2.50000ml of M5799 + 5.00000ml of M5496 + 42.50000ml of MP84414 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3882	M&B SPIKE-3	MP84469	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/13/2025

FROM 0.62500ml of M5513 + 12.50000ml of M5751 + 12.50000ml of M6128 + 12.50000ml of M6145 + 11.87500ml of MP84414 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3900	M&B SPIKE-4	MP84470	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/13/2025

FROM 6.25000ml of M5498 + 6.25000ml of M6127 + 6.25000ml of M6144 + 6.25000ml of MP84414 = Final Quantity: 25.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3880	M&B SPIKE-1	MP84472	02/07/2025	02/28/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sohil Jodhani 02/13/2025

FROM 5.00000ml of M5472 + 5.00000ml of M5658 + 5.00000ml of M5798 + 5.00000ml of M5800 + 5.00000ml of M5960 + 5.00000ml of M5962 + 5.00000ml of M5981 + 5.00000ml of M6021 + 5.00000ml of M6023 + 5.00000ml of M6028 + 5.00000ml of M6030 + 5.00000ml of M6079 + 5.00000ml of M6146 + 11.87500ml of MP84414 = Final Quantity: 50.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-2196-01 / Hydroxylamine Hydrochloride, Crystal (cs/4x500g)	0000215387	06/25/2025	07/01/2019 / RICHARD	06/07/2019 / RICHARD	M4371

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Labpure	0919120 / Boiling Stones	26275770	07/07/2025	07/03/2020 / mohan	05/07/2020 / mohan	M4583

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57014 / Si, 1000 PPM, 125 ml	030921	03/09/2025	08/06/2021 / jaswal	08/05/2021 / jaswal	M4884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57022 / Ti, 1000 PPM, 125 ml	070721	09/27/2025	08/06/2021 / jaswal	08/05/2021 / jaswal	M4888

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 HCl 125mL 10ug/mL	S2-HG709270	09/22/2026	05/28/2022 / mohan	01/27/2022 / mohan	M5062

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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	051722	05/17/2025	07/01/2022 / bin	06/17/2022 / jaswal	M5192

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	071122	07/11/2025	09/01/2022 / jaswal	07/21/2022 / jaswal	M5288

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	020422	02/04/2025	05/02/2023 / jaswal	06/15/2022 / jaswal	M5298

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	6020CAL-1 / Calibration Standard Method 6020	S2-MEB711244	10/20/2026	08/07/2024 / jaswal	04/01/2022 / jaswal	M5304

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	082922	08/29/2025	01/14/2025 / Jaswal	03/16/2023 / jaswal	M5472

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57138 / Sr, 10000 PPM, 125 ml	082922	08/29/2025	07/29/2024 / jaswal	03/16/2023 / jaswal	M5476

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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	011623	01/16/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5496

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5498

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	061522	06/15/2025	03/19/2023 / bin	03/17/2023 / bin	M5513

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57119 / Potassium (K) 10,000PPM	120822	12/08/2025	01/08/2024 / bin	03/17/2023 / bin	M5519

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV5-0415	02/28/2025	01/02/2025 / jaswal	03/30/2023 / mohan	M5532

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	26397-103 / PTFE BOILING STONES	W126678	02/28/2025	01/20/2024 / jaswal	06/12/2023 / jaswal	M5585

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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 #
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.	58029 / Cu, 1000 PPM, 500 ml	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

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)	22D1462006	08/05/2025	02/05/2024 / Al-Terek	02/24/2022 / Al-Terek	M5792

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

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CHEMICAL RECEIPT LOG BOOK

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.	57051 / Sb, 1000 PPM, 125 ml	120523	12/05/2026	08/07/2024 / jaswal	01/03/2024 / jaswal	M5802

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	122223	12/22/2026	08/01/2024 / Jaswal	01/03/2024 / jaswal	M5806

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	051523	05/15/2026	02/06/2025 / kareem	01/03/2024 / jaswal	M5811

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

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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 #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	111623	11/16/2026	03/20/2024 / jaswal	02/09/2024 / jaswal	M5819

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICPMS) STOCK SOLN	CP-MS ICSA-0803	04/30/2025	04/17/2024 / jaswal	07/14/2022 / jaswal	M5873

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	04/30/2025	04/17/2024 / jaswal	07/14/2022 / jaswal	M5874

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

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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	041124	04/11/2027	07/03/2024 / kareem	06/11/2024 / kareem	M5960

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	041124	04/11/2027	07/02/2024 / Jaswal	06/11/2024 / Jaswal	M5961

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	CGMO1-1 / MOLYBDENUM 125mL 1000ug/mL	T2-MO720876	07/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5976

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGMO1-1 / MOLYBDENUM 125mL 1000ug/mL	T2-MO720876	07/17/2027	01/16/2025 / JANVI	02/22/2024 / Jaswal	M5977

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5978

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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

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	07/29/2024 / Jaswal	06/11/2024 / Jaswal	M5983

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 / Tl, 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.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

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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 #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1403 / Hydrogen Peroxide, 30% 1 gal	820803	05/25/2025	11/26/2024 / Eman	11/22/2024 / Eman	M6125

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CHEMICAL RECEIPT LOG BOOK

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	06/03/2025	12/03/2024 / Janvi	11/12/2024 / Janvi	M6126

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

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 #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	072424	07/24/2027	01/23/2025 / kareem	01/13/2025 / Jaswal	M6144

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV1-1014	07/07/2025	02/07/2025 / JANVI	04/20/2021 / JANVI	M6150

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 / Iwona	07/03/2024 / Iwona	W3112

ThermoFisher SCIENTIFIC

M5882 M3

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.

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Certified Reference Material CRM

M6032

R 8/5/24

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CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**010924**	**Solvent:**	24002546	Nitric Acid	
Description:	**Barium (Ba)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	010927				
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):	2000.02	0.058	Flask Uncertainty		

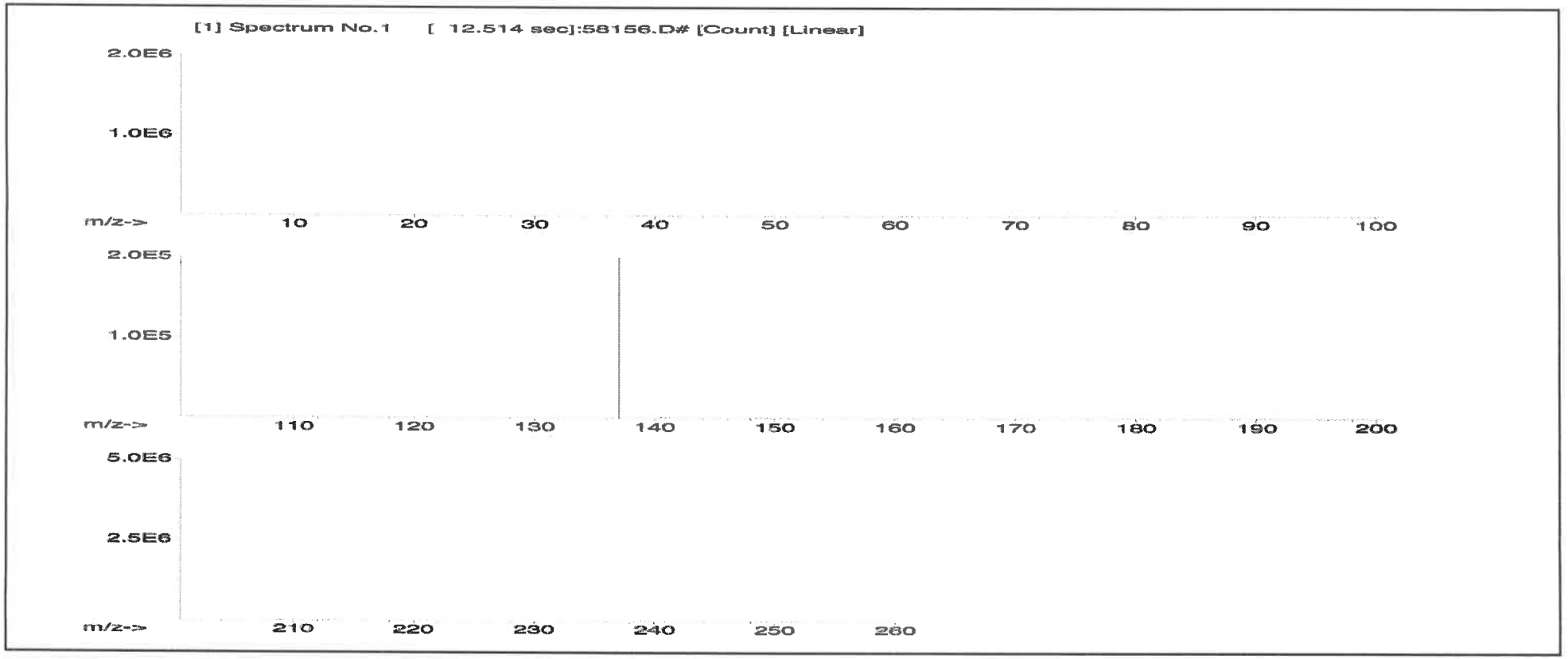
Giovanni Esposito

Formulated By:	Giovanni Esposito	010924

Pedro Rentas

Reviewed By:	Pedro L. Rentas	010924

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	**1000.1**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



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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	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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

Part Number: 57048
Lot Number: 070124
Description: Cadmium (Cd)

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 0.100 Flask Uncertainty

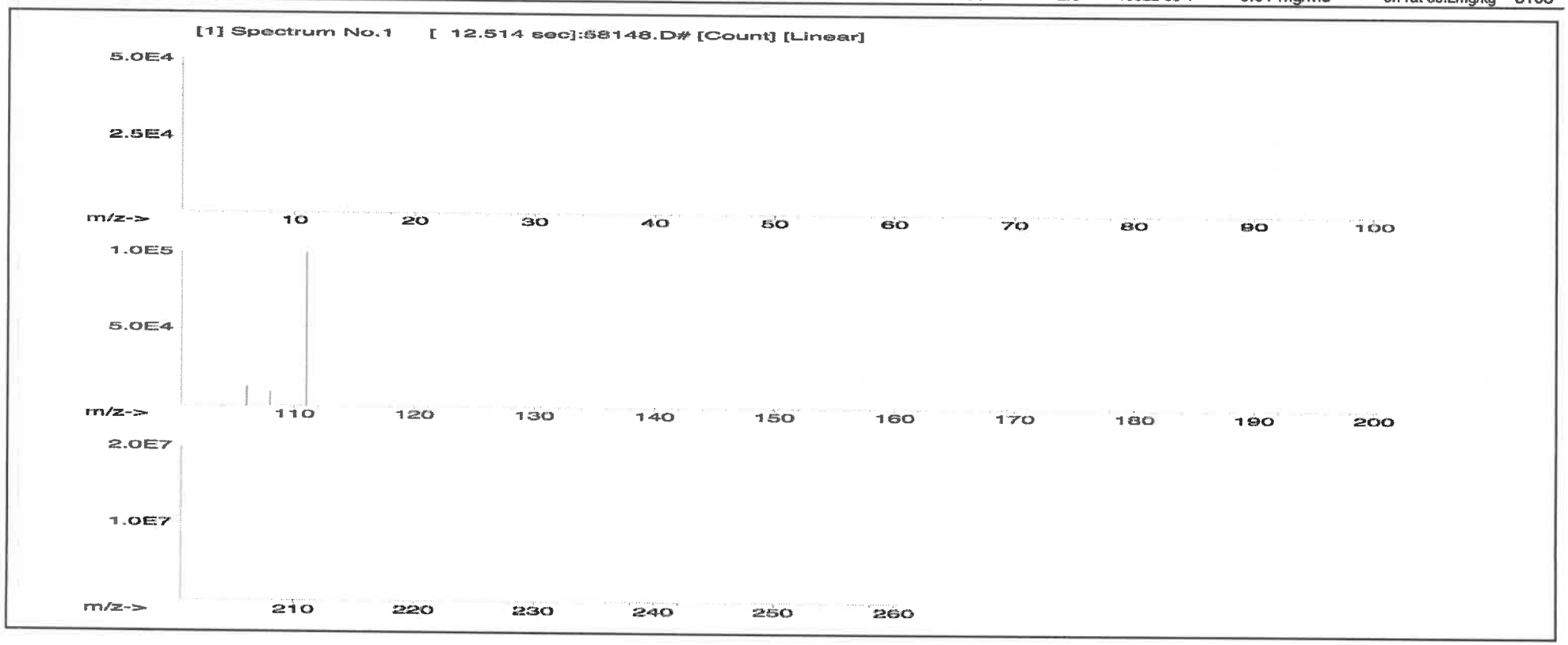
		Lot #	
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Aleah O'Brady
Formulated By: Aleah O'Brady 070124

Pedro Rentas
Reviewed By: Pedro L. Rentas 070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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ANAB ISO 17034 Accredited
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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	T	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	<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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R : 01/03/24. M5810, M5811

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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 051523
Description: Iron (Fe)

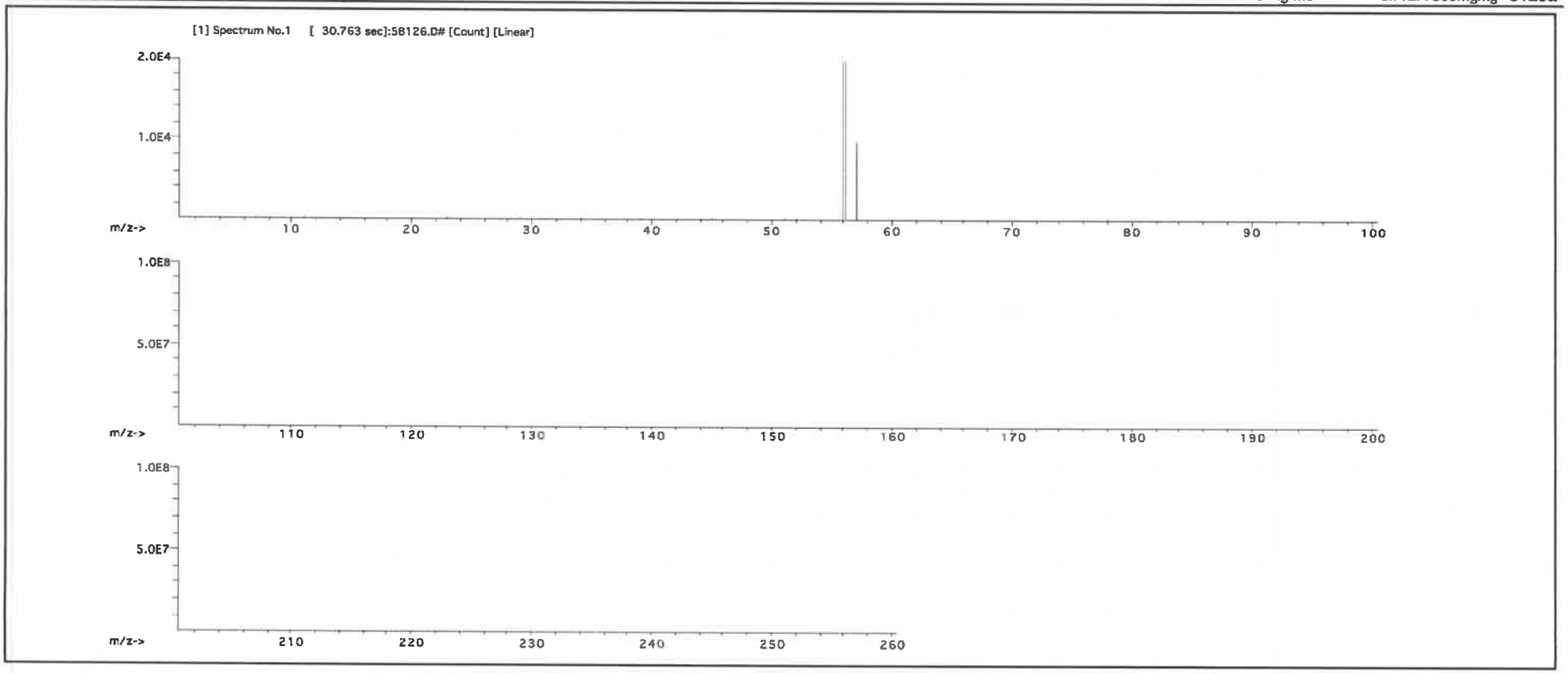
Expiration Date: 051526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 5000.1

	Lot #		
Solvent:	21110221	Nitric Acid	
5.0%	250.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.12	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	051523
Reviewed By:	Pedro L. Rentas	051523

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron (Fe)	IN346	2302010-500	10000	99.995	0.10	100.0	50.0034	50.0111	**10001.5**	**20.0**	7439-89-6	5 mg/m3	orl-rat 7500mg/kg	3126a



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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	<0.10	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	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.05	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	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.10
B	<0.02	Cu	<0.10	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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* 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).

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R: 8/5/24 M6025

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CERTIFIED WEIGHT REPORT:

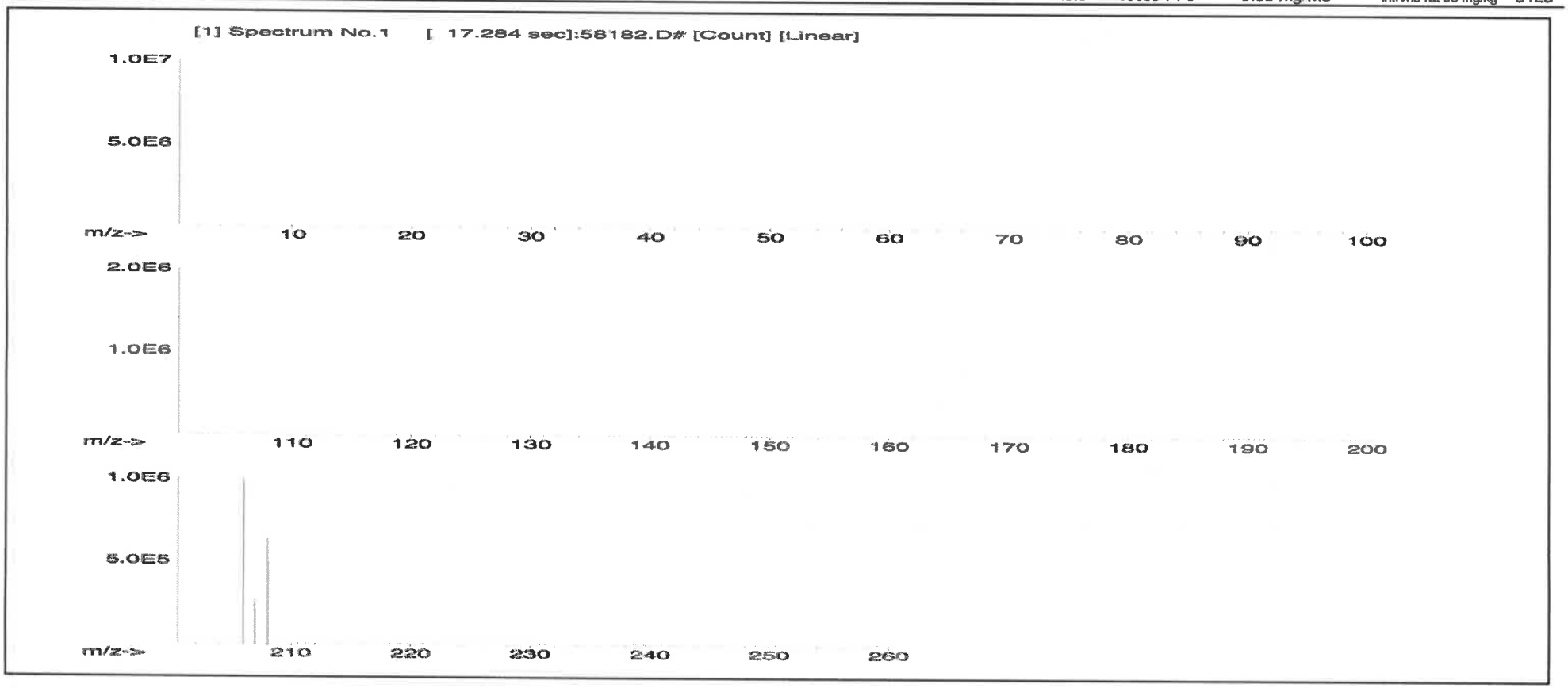
Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

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

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By:	Lawence Barry	110923
Reviewed By:	Pedro L. Rentas	110923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0040	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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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	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	T	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.

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* 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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M4371

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(hydroxylammonium chloride)

Rec – 06.07.19

J.T.Baker® | avantor™

Material No.: 2196-01
Batch No.: 0000215387
Manufactured Date: 2018/06/27
Retest Date: 2025/06/25
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($NH_2OH \cdot HCl$) (by $KMnO_4$ titrn)	>= 96.0 %	99.1
Clarity of Alcohol Solution	Passes Test	PT
Residue after Ignition	<= 0.050 %	0.017
Titrable Free Acid (meq/g)	<= 0.25	0.19
Ammonium (NH_4)	Passes Test	PT
Sulfur Compounds (as SO_4)	<= 0.005 %	< 0.003
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	4
Trace Impurities - Iron (Fe)	<= 5 ppm	< 3
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	< 0.005

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2015, FSSC22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Gliwice, Poland 9001:2015, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2015, 17025:2005
Panoli, India 9001:2015

James Ethier
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

M45 P3
Eqpt Dt. 5 7 20
MB

SAINT-GOBAIN

Manufacturer:
Saint-Gobain Performance Plastics
11 Sicho Drive
Poestenkill, NY 12140

Certificate of Conformance

Part Number/ Revision:	D1069103 0	**Customer Part Number/ Revision:**	1069103 N/A
Description:	*PTFE BOILING STONES-450 GRAMS		
Lot Number:	26275770	**Lot Quantity:**	10 EA
Date of Manufacture (MM/DD/YY)	03/23/20	**Expiration Date: (MM/DD/YY)**	N/A
Post Processing Run Number: (Refer to the attached Certificate for Additional Detail)		N/A	

We certify the material listed above confirms in full with the following specifications:

All items have been manufactured, inspected, tested, and accepted in accordance with our Quality Management system, ISO 9001-2015. Documentation substantiating this certification is kept on record per the Company's retention policy and is available for review.
All materials and processes used in manufacturing conform to the materials and/or manufacturing specifications and notes indicated on the purchase order, drawing, specifications, quality assurance requirements, or other applicable documents effective on the date of manufacture.
Saint-Gobain does not warrant the product for any particular application and it is the responsibility of the user to conduct tests that are deemed necessary to determine the suitability of the product for any particular use. Saint-Gobain's sole responsibility shall be for failure to manufacture the product in accordance with specifications and requirements of the buyer, and from defects in material and workmanship. This warranty is expressly made in lieu of any and all other warranties and Saint-Gobain's sole liability shall be to replace any product not in conformance with the specification and requirements of the buyer.

Quality Approval:	Jonathan Kimble	**Date:**	05/13/20

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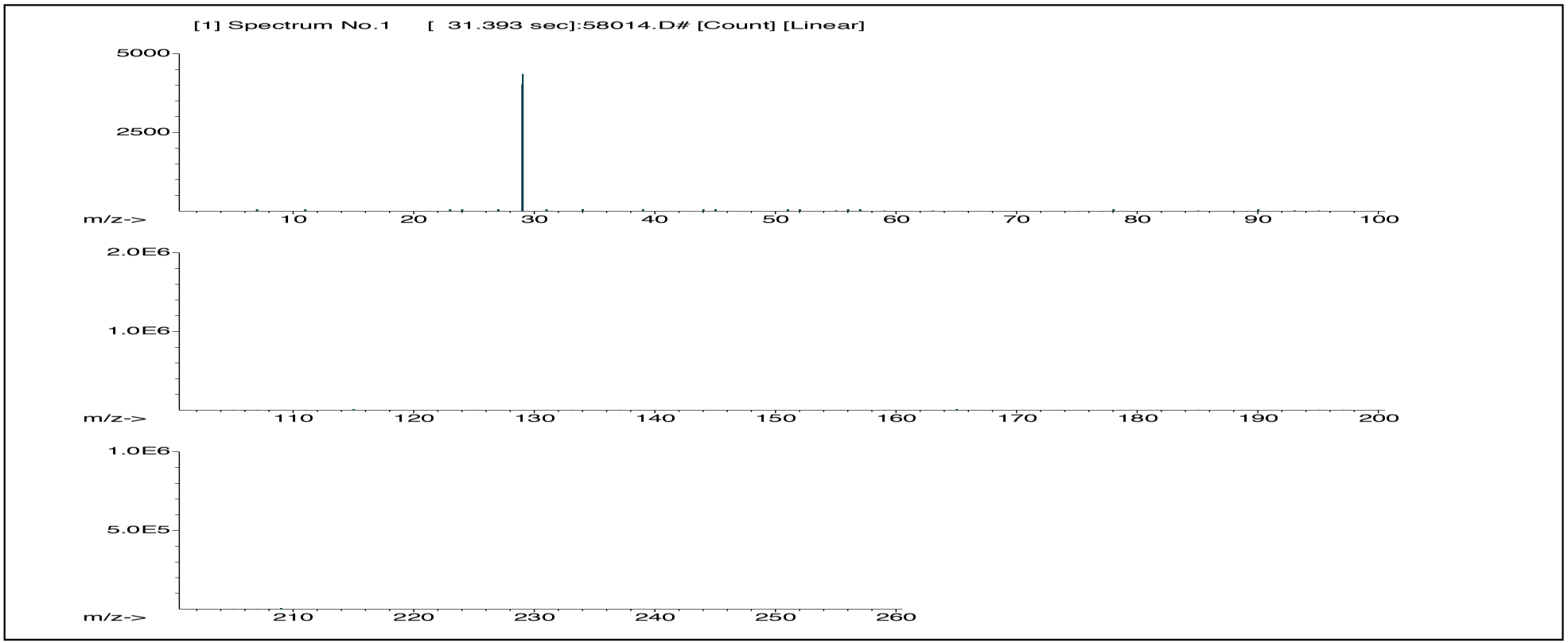
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57014**	19410105	Nitric Acid	
Lot Number:	**030921**			
Description:	**Silicon (Si)**			
		2.0%	60.0	Nitric Acid
Expiration Date:	030924		(mL)	
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry 030921
Reviewed By:	Pedro L. Rentas 030921

	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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1.	Ammonium hexafluorosilicate (Si)	58114	070120	0.1000	300.0	0.084	1000	10000.0	**1000.0**	**2.1**	16919-19-0	2.50 mg/m3	orl-rat 70 mg/kg	NA



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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	T	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:



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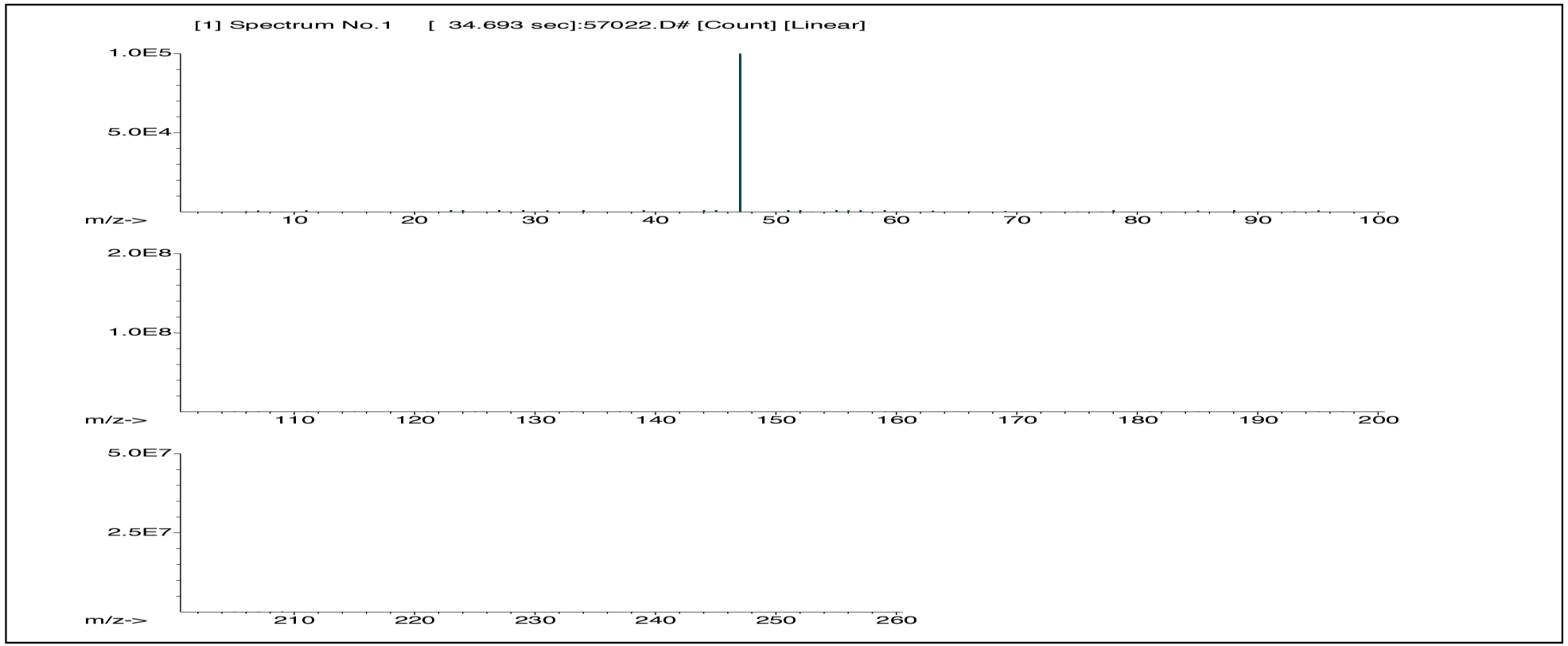
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57022**	20370011	Nitric Acid	
Lot Number:	**070721**			
Description:	**Titanium (Ti)**			
		2.0%	40.0	Nitric Acid
Expiration Date:	070724		(mL)	
Recommended Storage:	Ambient (20 ºC)			
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:	Lawrence Barry 070721
Reviewed By:	Pedro L. Rentas 070721

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorotitanate (Ti)	58122	070120	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	16962-40-6	2.5 (F) mg/m3	NA	3162a



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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	<0.01	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
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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	T	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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ThermoFisher SCIENTIFIC

M4913-16

MB

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.

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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

M5062
M5063
M3

1.0 ACCREDITATION / REGISTRATION

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

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	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:

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

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



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Certified Reference Material CRM

M5192 R: 06/17/22

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CERTIFIED WEIGHT REPORT:

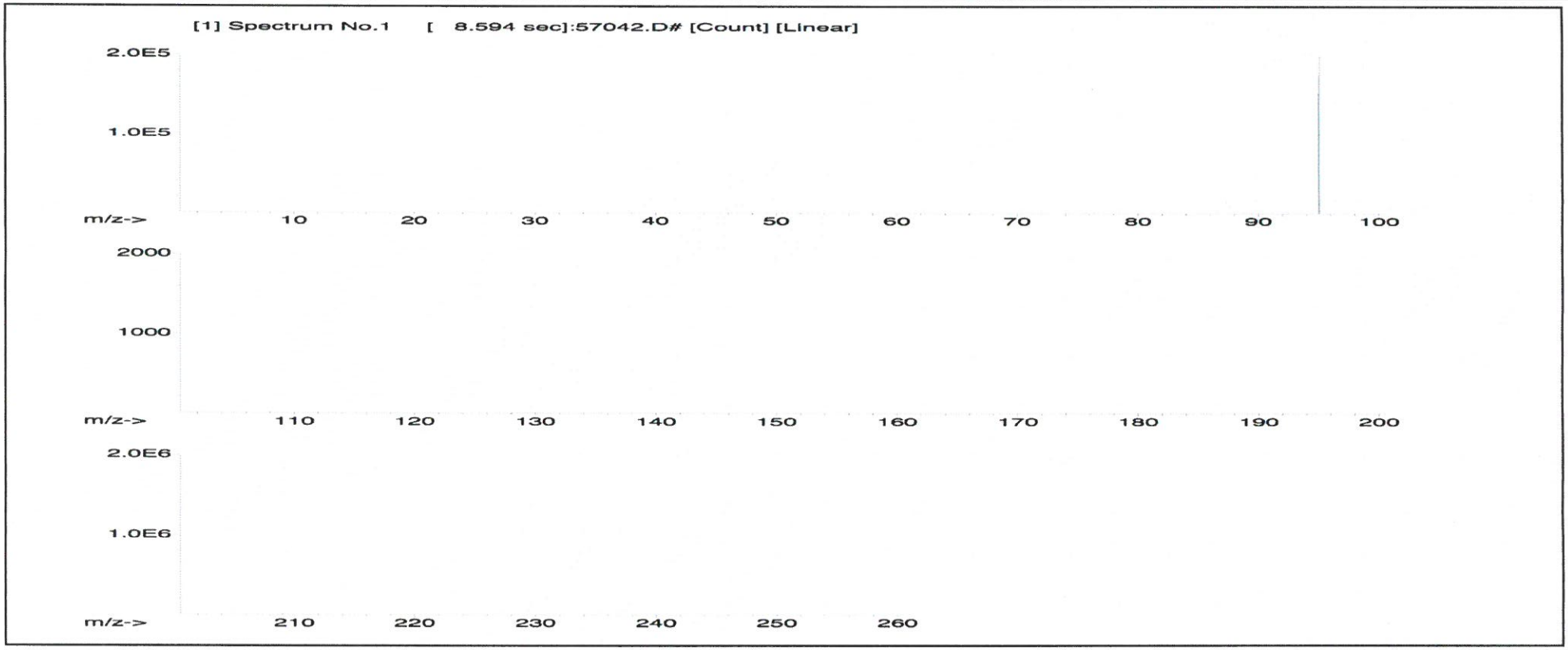
Part Number: 57042
Lot Number: 051722
Description: Molybdenum (Mo)
Expiration Date: 051725
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 3000.41

Lot #	Solvent:		
MKBQ8597V	Ammonium hydroxide		
0.5%	15.0 (mL)	Ammonium hydroxide	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By: Lawrence Barry 051722

Reviewed By: Pedro L. Rentas 051722

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium molybdate (Mo)	58142	022222	0.1000	300.0	0.084	1000	10001.0	**1000.0**	**2.1**	13106-76-8	5 mg(Mo)/m3	orl-rat 333 mg/kg	3134



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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	<0.01	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	T	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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5288 R: 07/21/2022

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CERTIFIED WEIGHT REPORT:

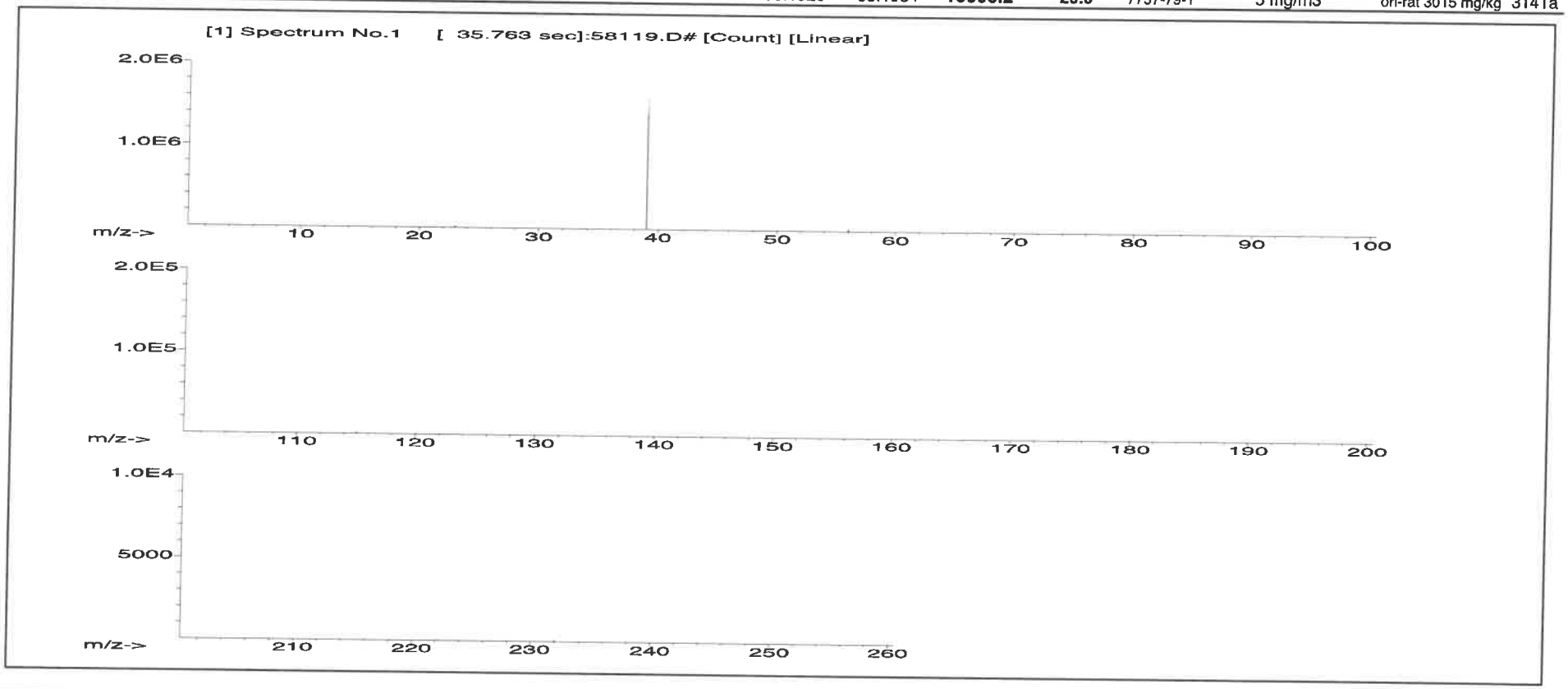
Part Number: 58119
Lot Number: 071122
Description: Potassium (K)

Expiration Date: 071125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	071122
Reviewed By:	Pedro L. Rentas	071122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD022021A1	10000	99.999	0.10	37.6	53.1925	53.1934	**10000.2**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 mg/kg	3141a



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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	<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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

SJ 6/15/22

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Certified Reference Material CRM

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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 020422
Description: Iron (Fe)

M5298

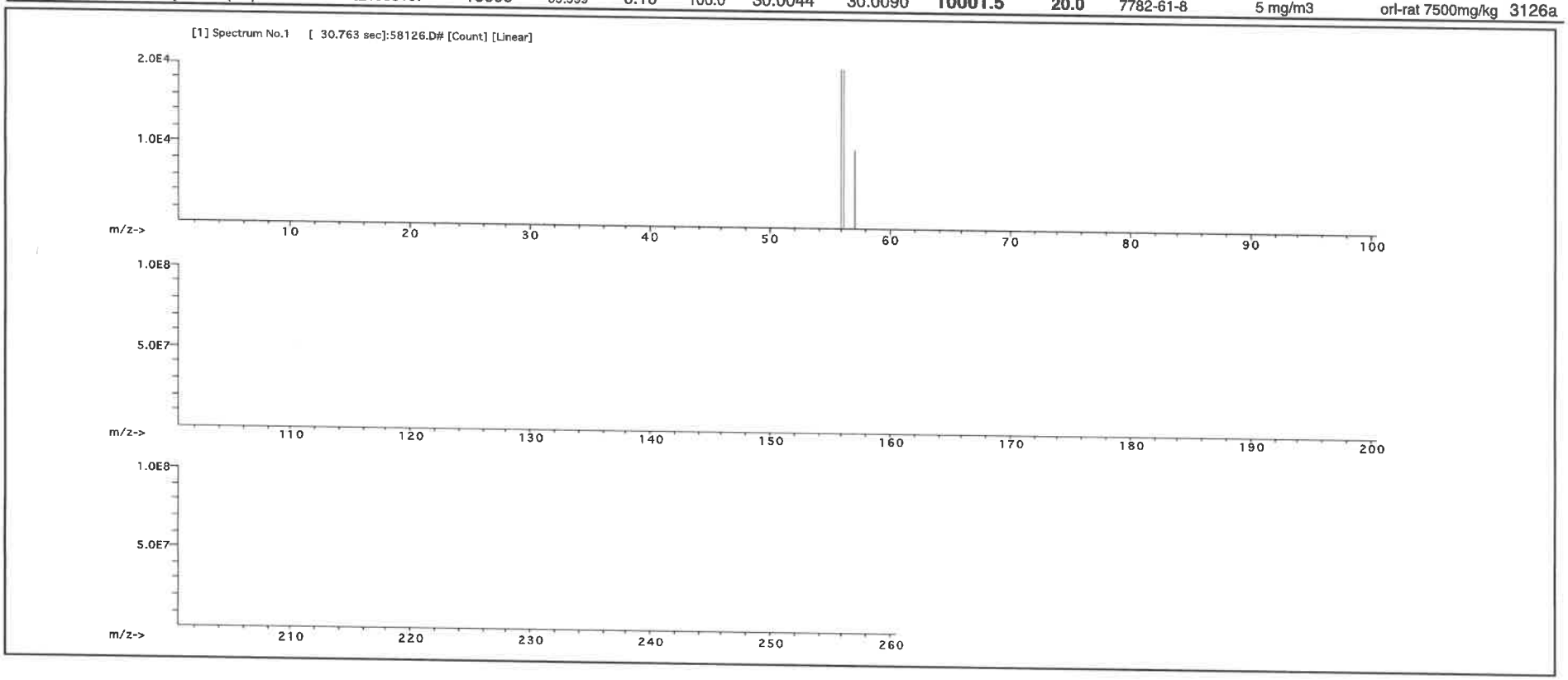
Expiration Date: 020425
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	20370011	Nitric Acid	
5.0%	150.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.058	Flask Uncertainty		

Giovanni Esposito
Formulated By: Giovanni Esposito 020422

Pedro Rentas
Reviewed By: Pedro L. Rentas 020422

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron(III) nitrate nonahydrate (Fe)	IN346	221035107	10000	99.999	0.10	100.0	30.0044	30.0090	**10001.5**	**20.0**	7782-61-8	5 mg/m3	orl-rat 7500mg/kg	3126a



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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	<0.10	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	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.5	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	<0.10	Ge	<0.10	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	<0.10	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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
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* 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).

Part # **58126** Lot # **020422**

Printed: 2/16/2022, 11:15:09 PM

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Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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

1.0 ACCREDITATION / REGISTRATION

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

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020CAL-1
Lot Number:	S2-MEB711244
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	**20.01 ± 0.08 µg/mL**	**Antimony, Sb**	**20.01 ± 0.12 µg/mL**
Arsenic, As	**20.01 ± 0.18 µg/mL**	**Barium, Ba**	**20.01 ± 0.11 µg/mL**
Beryllium, Be	**20.01 ± 0.14 µg/mL**	**Cadmium, Cd**	**20.01 ± 0.11 µg/mL**
Calcium, Ca	**20.01 ± 0.10 µg/mL**	**Chromium, Cr**	**20.01 ± 0.16 µg/mL**
Cobalt, Co	**20.01 ± 0.11 µg/mL**	**Copper, Cu**	**20.01 ± 0.10 µg/mL**
Iron, Fe	**20.01 ± 0.09 µg/mL**	**Lead, Pb**	**20.01 ± 0.11 µg/mL**
Magnesium, Mg	**19.99 ± 0.10 µg/mL**	**Manganese, Mn**	**20.01 ± 0.10 µg/mL**
Nickel, Ni	**20.01 ± 0.11 µg/mL**	**Potassium, K**	**20.01 ± 0.10 µg/mL**
Selenium, Se	**20.02 ± 0.14 µg/mL**	**Silver, Ag**	**20.02 ± 0.09 µg/mL**
Sodium, Na	**20.01 ± 0.10 µg/mL**	**Thallium, Tl**	**20.01 ± 0.13 µg/mL**
Vanadium, V	**20.01 ± 0.11 µg/mL**	**Zinc, Zn**	**20.01 ± 0.11 µg/mL**

Density: 1.026 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
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
Fe	Calculated		See Sec. 4.2
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
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

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

Characterization of CRM/RM by Two or More Methods

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

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

N/A

6.0 INTENDED USE

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

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

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

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

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

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

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

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

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

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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

October 20, 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

- **October 20, 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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5496 R 7/20/23

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

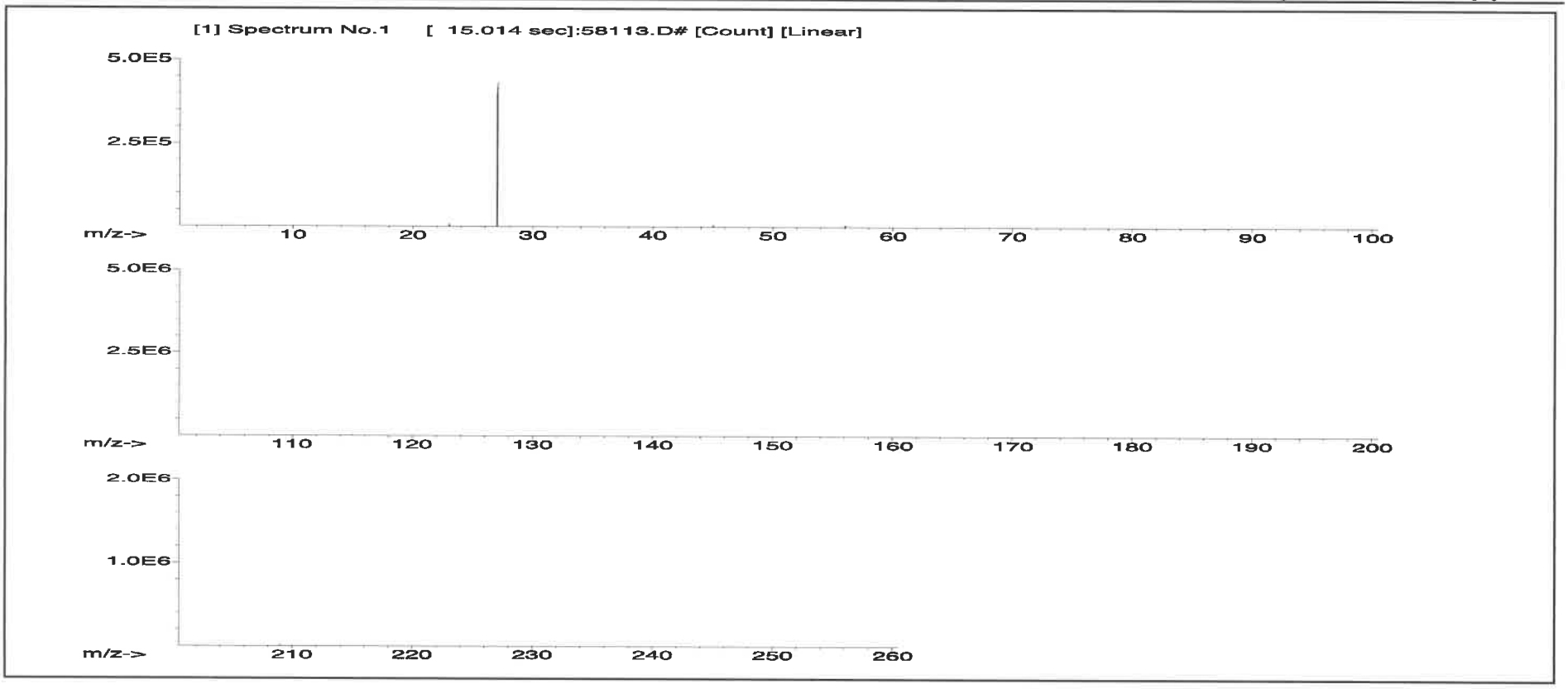
CERTIFIED WEIGHT REPORT:

Part Number:	**58113**		**Lot #**		
Lot Number:	**011623**	**Solvent:**	20510011	Nitric Acid	
Description:	**Aluminum (Al)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	011626				
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):	2000.02	0.058	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	011623
Reviewed By:	Pedro L. Rentas	011623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALM112021A1	10000	99.999	0.10	7.30	273.9779	274.0078	**10001.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



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www.absolutestandards.com

Certified Reference Material CRM

M5497 - M5498 R: 03/17/23 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

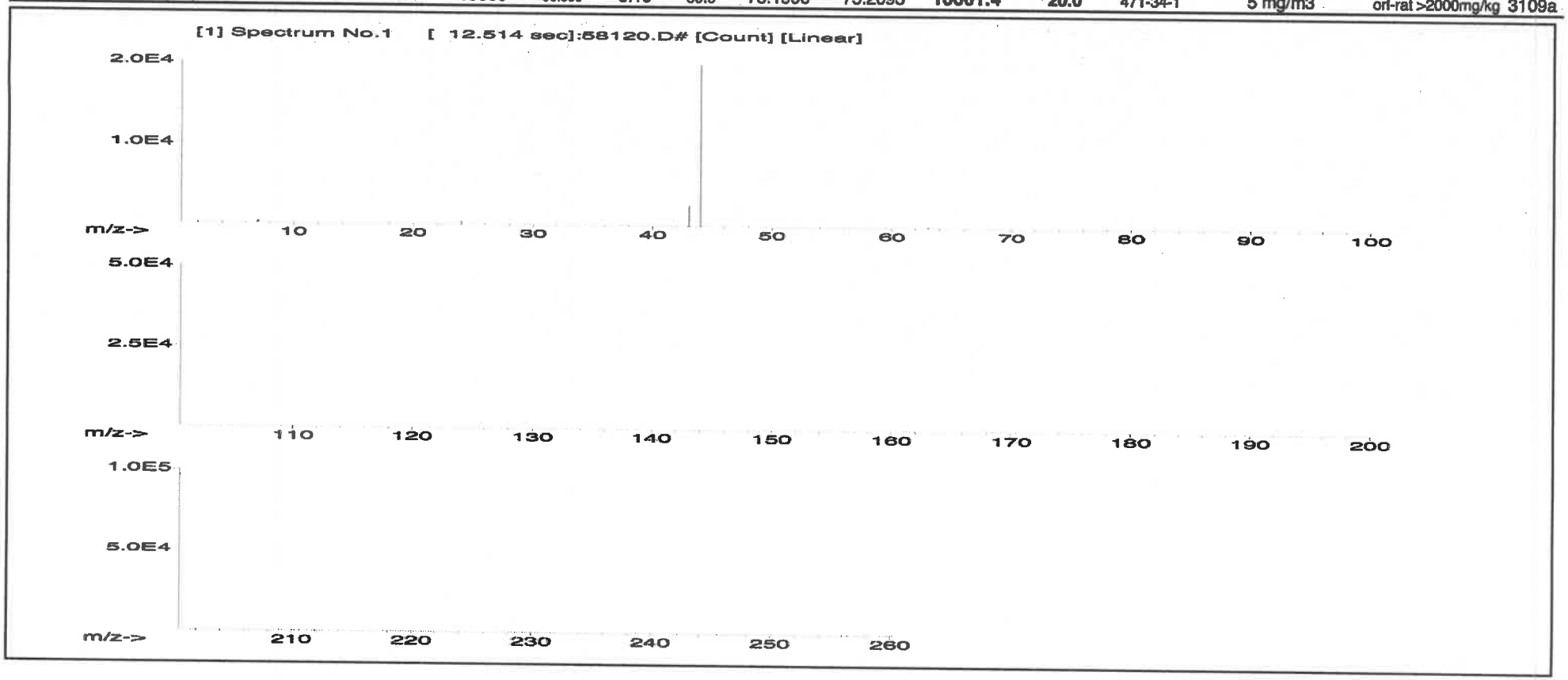
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	031523
Reviewed By:	Pedro L. Rentas	031523

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD072022A1	10000	99.999	0.10	39.9	75.1990	75.2093	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



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	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	<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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

MS513 R:03/17/23 BE

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 061522
Description: Lead (Pb)

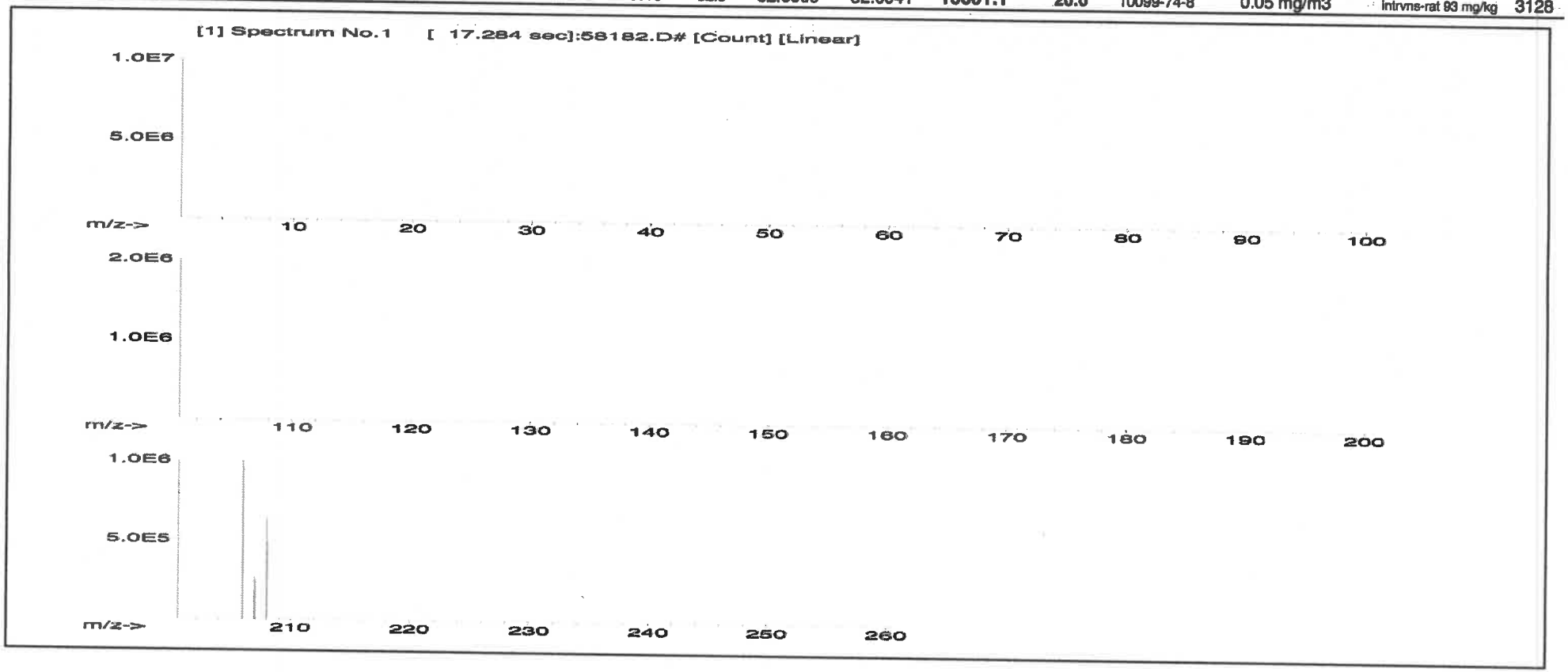
Expiration Date: 061525
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	061522
Reviewed By:	Pedro L. Rentas	061522

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0041	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	Intrvns-rat 93 mg/kg	3128



QC1995-METALS

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	<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	T	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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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www.absolutestandards.com

Certified Reference Material CRM

M5519. M5520 BH R:03/17/23

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58119
Lot Number: 120822
Description: Potassium (K)

Expiration Date: 120825
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.4 ± 0.06 Flask Uncertainty

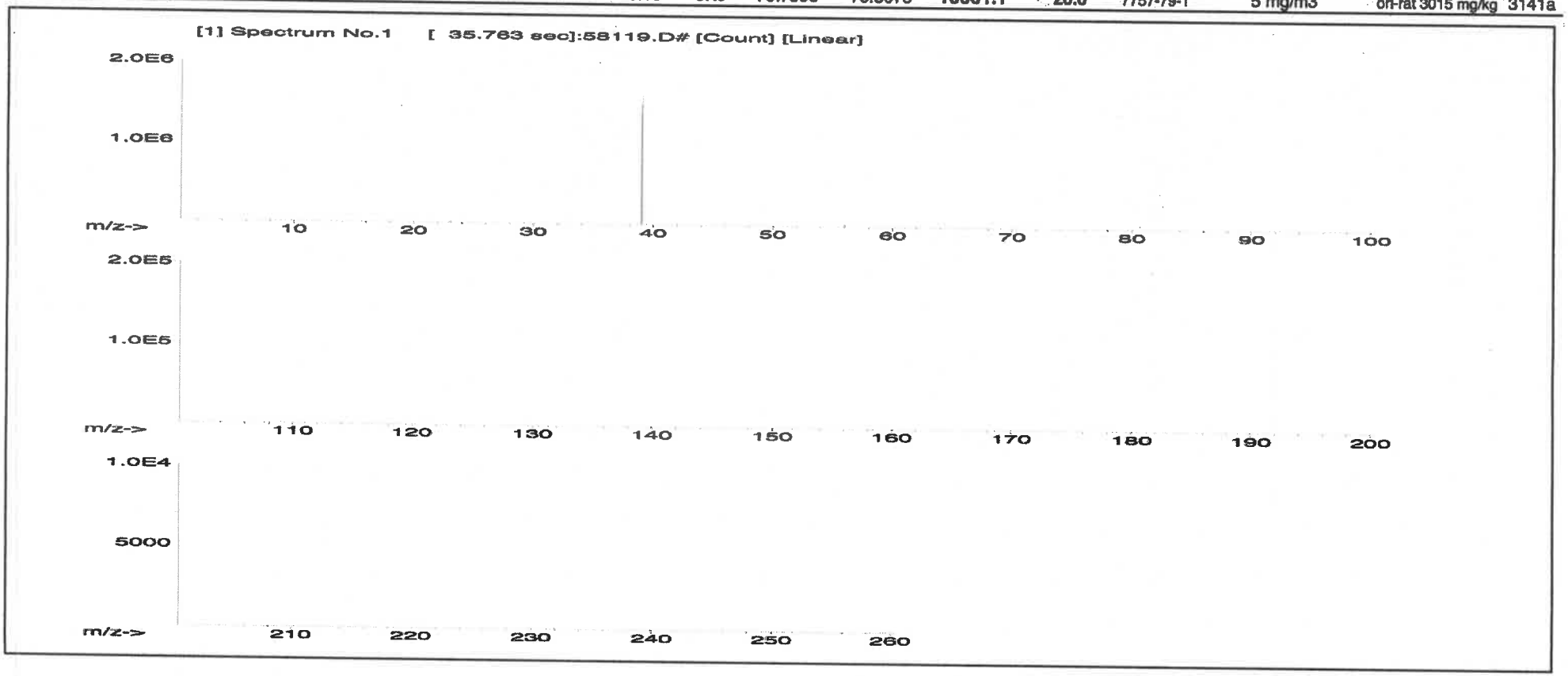
		Lot #	
Solvent:	20510011		Nitric Acid
	2%	60.0 (mL)	Nitric Acid

± 5E-05 Balance Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	120822
Reviewed By:	Pedro L. Rentas	120822

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD022021A1	10000	99.999	0.10	37.6	79.7990	79.8075	**10001.1**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 mg/kg	3141a



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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	<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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

QATS LABORATORY INORGANIC REFERENCE MATERIAL INITIAL CALIBRATION VERIFICATION SOLUTIONS (ICV1, ICV5, AND ICV6)

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.

MSS28-37
MB

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(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*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

JENSEN INERT PRODUCTS

MATERIAL CERTIFICATE OF COMPLIANCE

DATE: JUNE 12, 2023

CUSTOMER:	PCI SCIENTIFIC SUPPLY, INC
PURCHASE ORDER NO.	6054931
CATALOG NO.	BOI5021-450L
PRODUCT DESCRIPTION:	BOILING STONES, TFE, 454GMS
QUANTITY:	10 EACH
LOT NO.	W126678
SPECIFICATION (S):	Made from Virgin PTFE Resin

We certify that we have complied with the terms and conditions of the above Purchase Order and the Part Specifications in the manufacturing of the above product.

Laura Valencia

Laura Valencia
Quality Assurance Inspector

F:U:J:CF:PCISCI:COC-58118-BOI5021-061223

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M5658 R ! 8/25/23

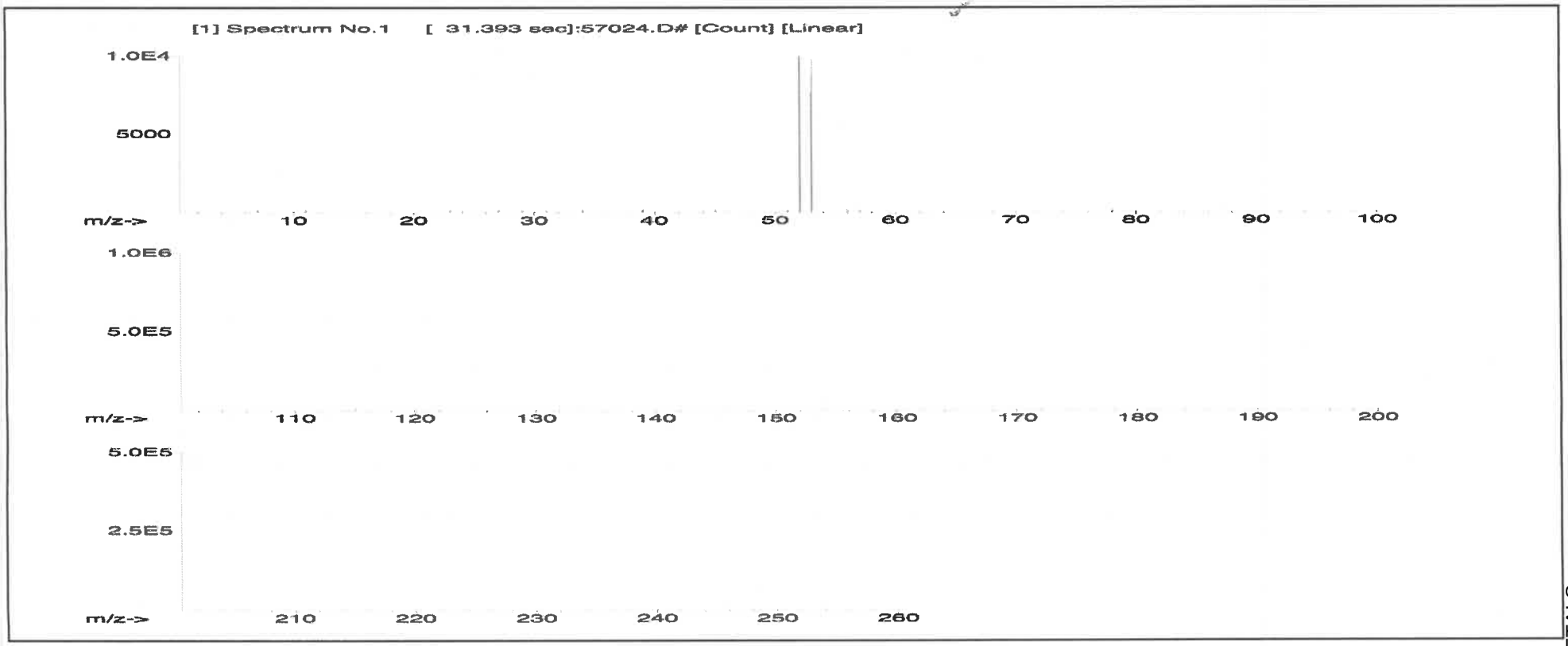
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
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:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

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)	SDS Information (Solvent Safety Info. On Attached pg.) 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	orl-rat 3250 mg/kg	3112a



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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	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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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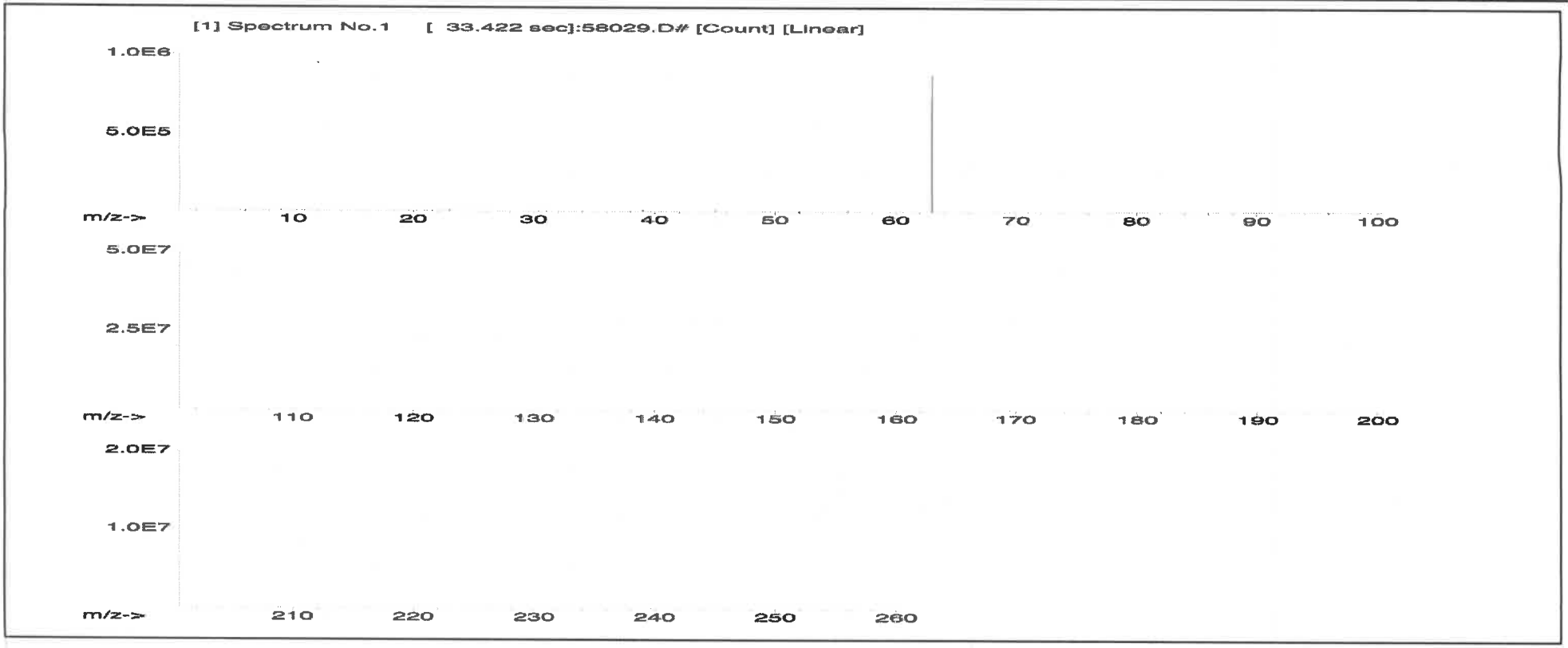
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	21110221	Nitric Acid	
Lot Number:	**071723**			
Description:	**Copper (Cu)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726			
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	071723
Reviewed By:	Pedro L. Rentas	071723

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	022723	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



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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	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	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:

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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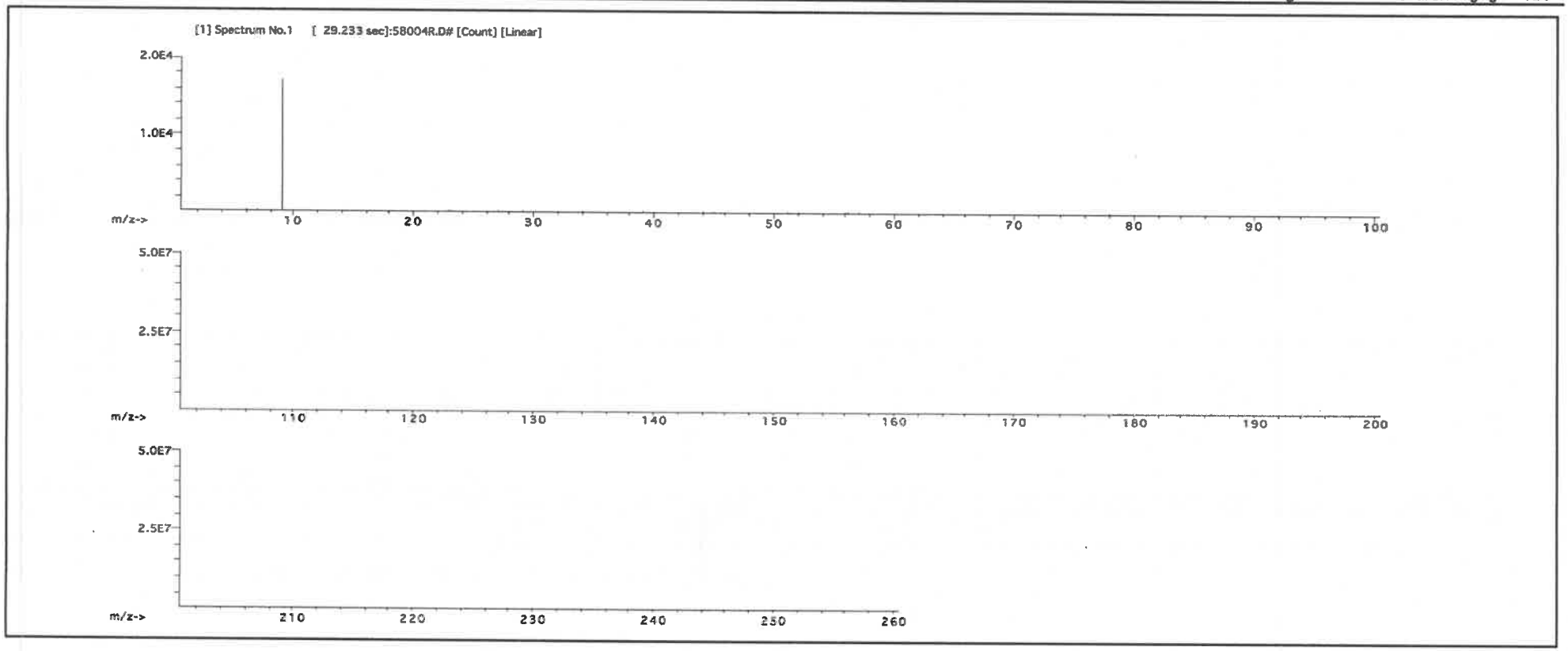
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**			
Lot Number:	**102523**	24002546	Nitric Acid	
Description:	**Beryllium (Be)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
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

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)	SDS Information (Solvent Safety Info. On Attached pg.) 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	0.2ug/m3	intrvns-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 (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	T	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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* 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).

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

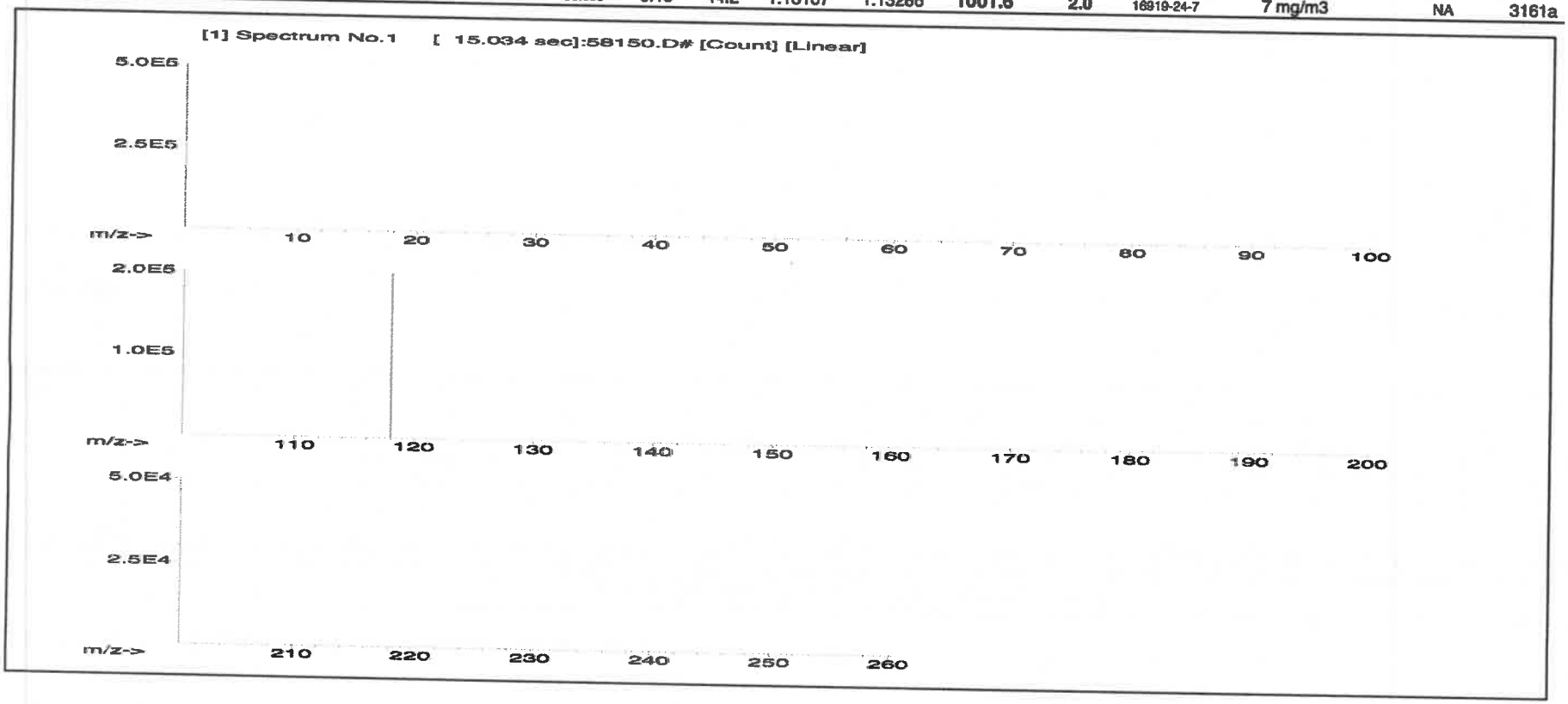
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

Solvents:	Lot #	
	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



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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	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	Sn	T	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:

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* 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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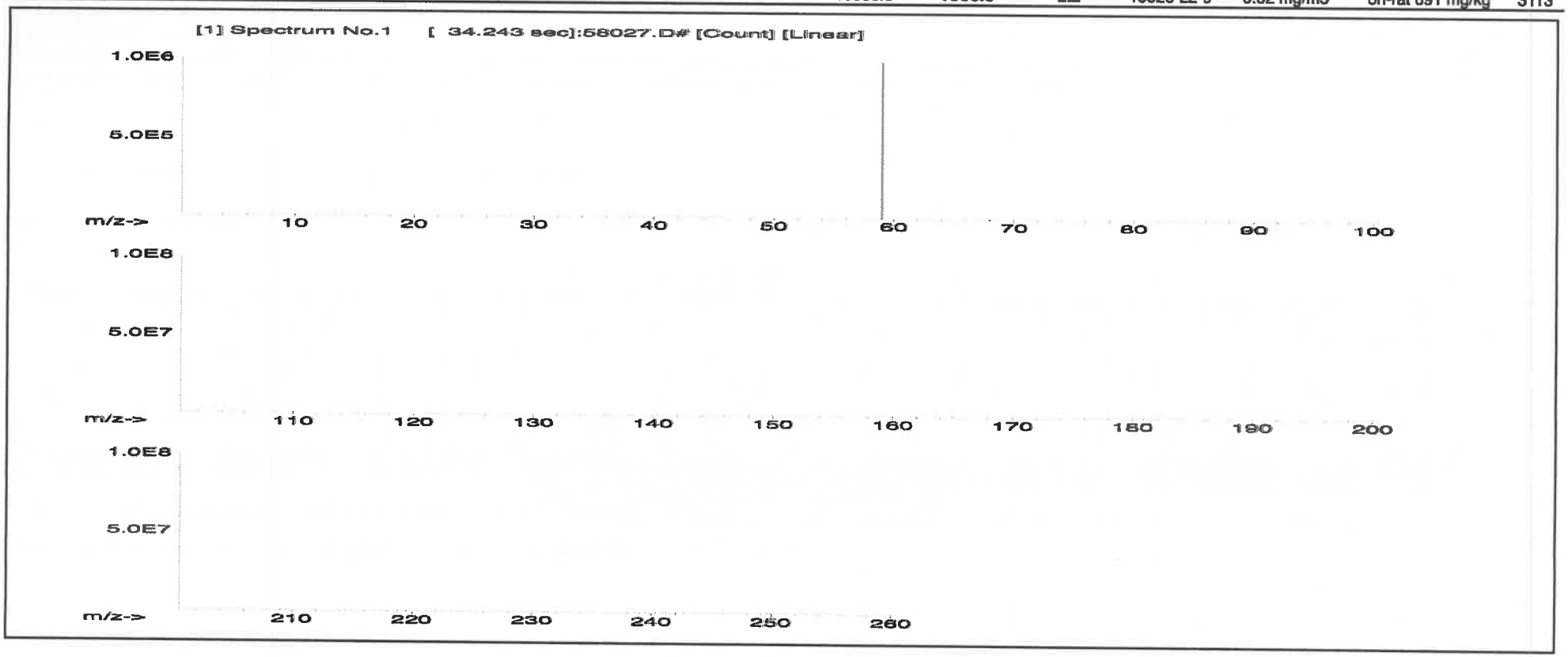
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
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: Lawrence Barry 091923

Reviewed By: Pedro L. Rentas 091923

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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



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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	<0.01	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	T	Gé	<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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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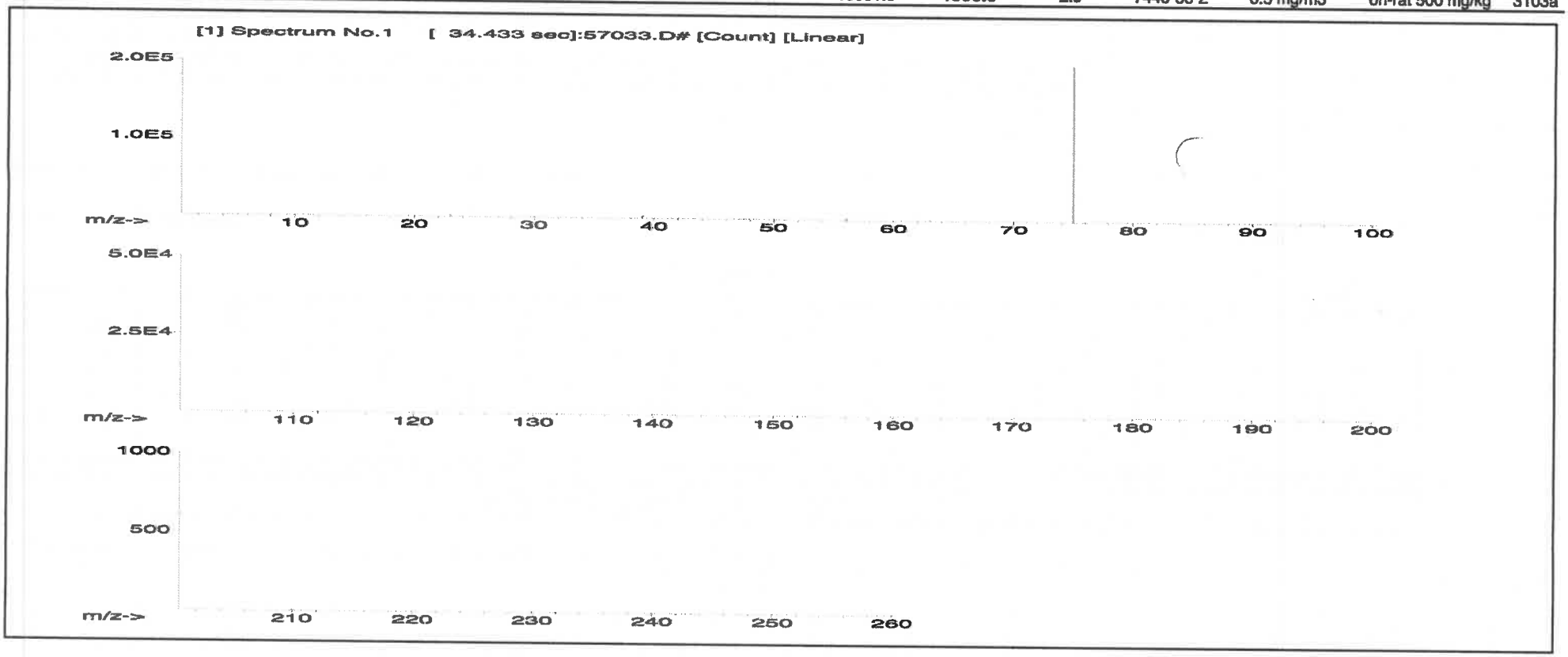
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CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	24002546	Nitric Acid		
Lot Number:	**111323**				
Description:	**Arsenic (As)**	2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
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):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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	orl-rat 500 mg/kg	3103a



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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	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	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	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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R1 02/09/24. M58165

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CERTIFIED WEIGHT REPORT:

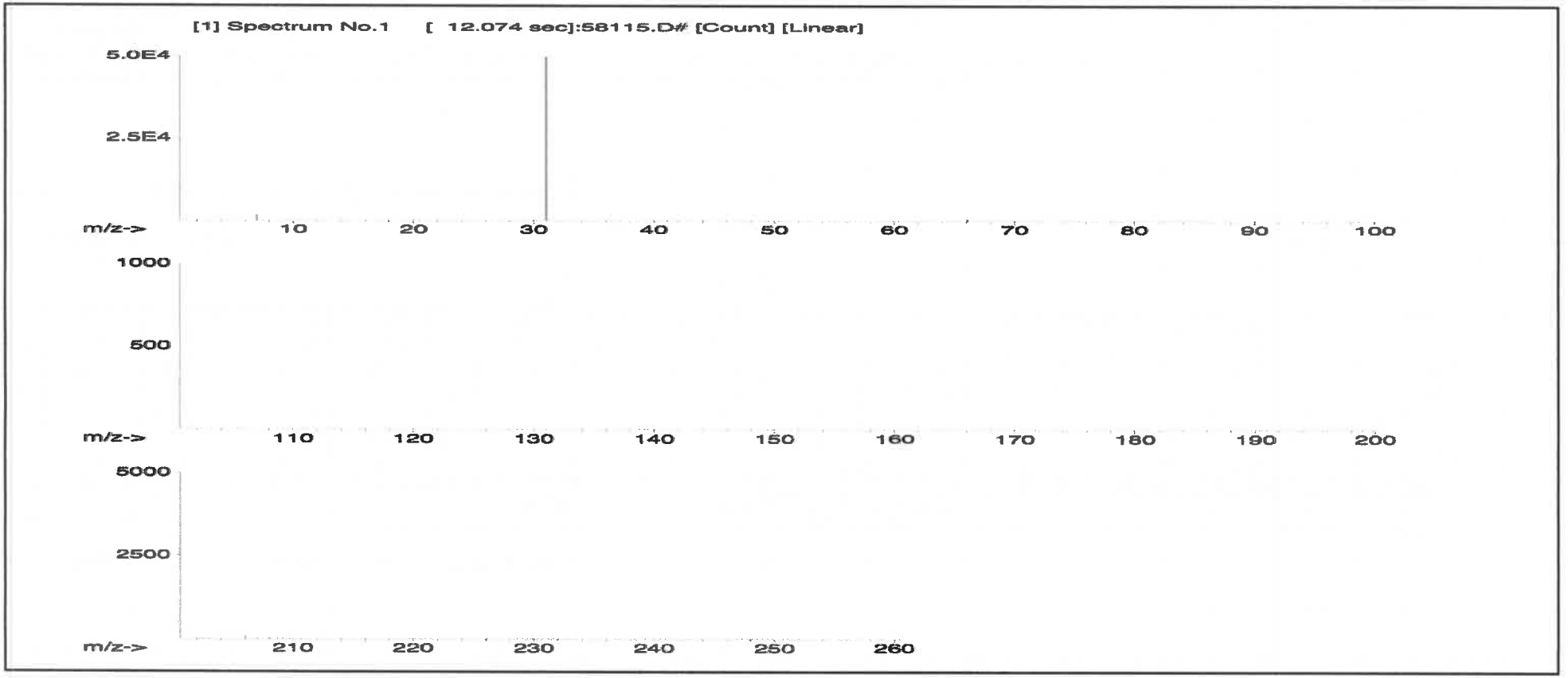
Part Number: 57115
Lot Number: 041723
Description: Phosphorous (P)

Expiration Date: 041726
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

		Lot #	
Solvent:	21110221		Nitric Acid
	2%	40.0 (mL)	Nitric Acid
		5E-05	Balance 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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	10000	99.999	0.10	27.5	72.7287	72.7289	**10000.0**	**20.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/kg	3186



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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	<0.01	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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* 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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* 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).

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Certified Reference Material CRM

R: 02/09/24 M5817

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CERTIFIED WEIGHT REPORT:

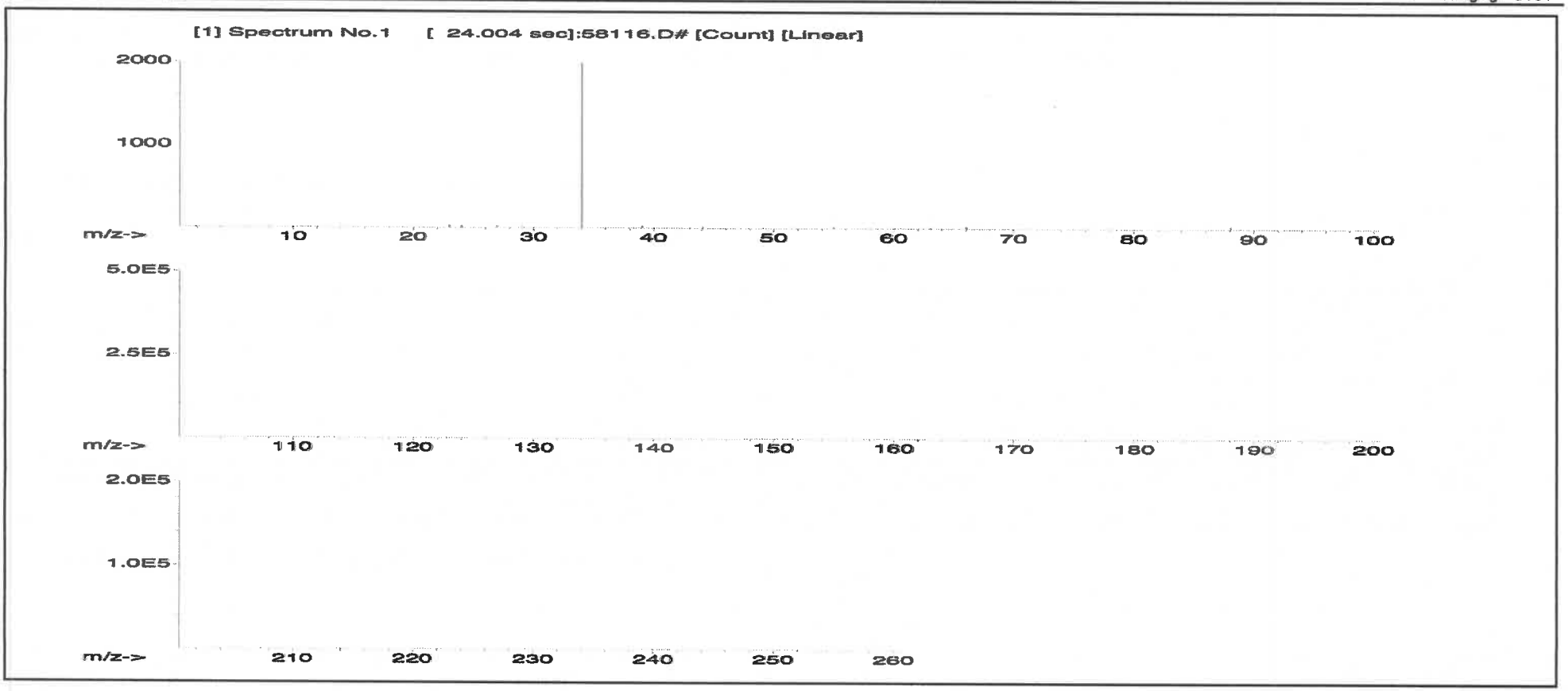
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

Lot #
Solvent: 071123 ASTM Type 1 Water

Expiration Date: 071126
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): 1999.48 0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	ori-rat 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	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	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

(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.
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* 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).

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R: 02/09/24 M5819

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CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

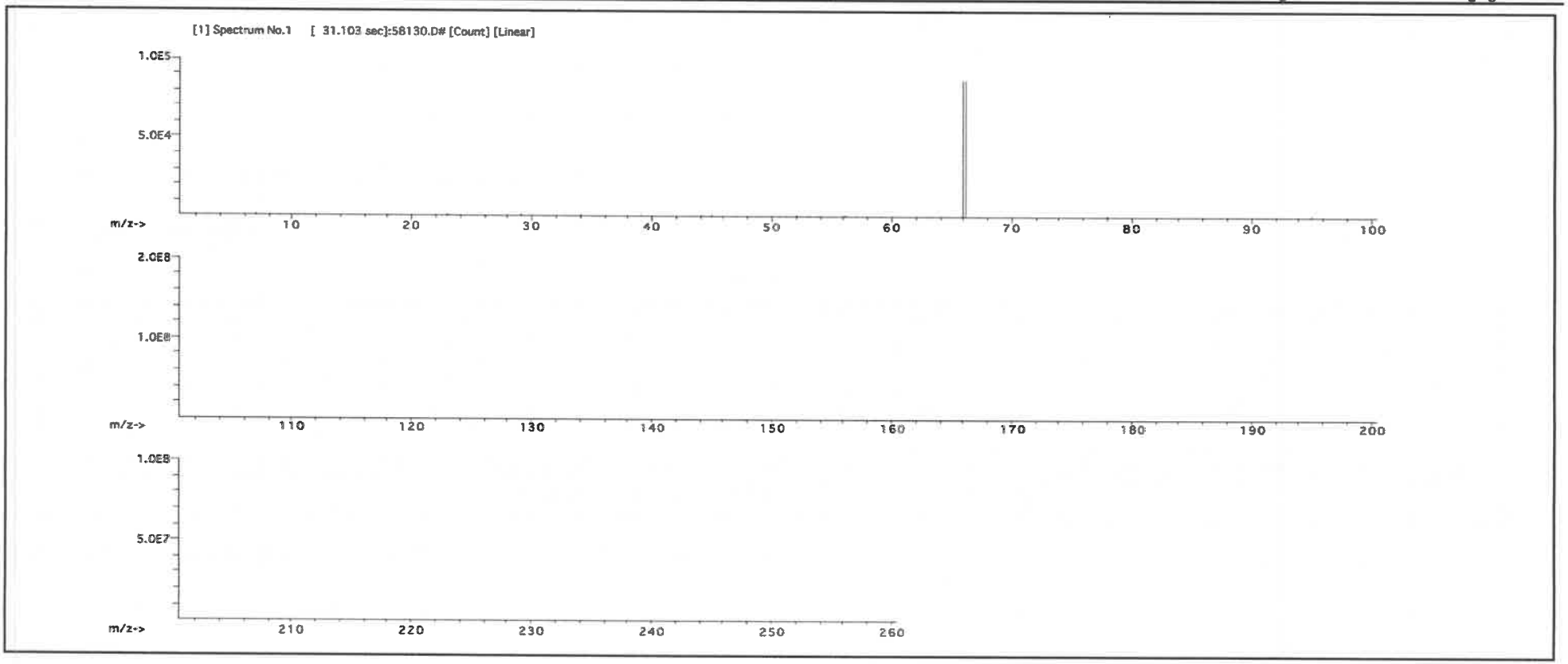
Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 | 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	

Formulated By:	Benson Chan	111623
Reviewed By:	Pedro L. Rentas	111623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	12.3475	12.3502	**1000.2**	**2.0**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



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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	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	T
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:

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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* 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).

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

MF884
MB

avantor™ | J.T.Baker®

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

James T Ethier
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

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M5960 KK R. 6/11/24

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CERTIFIED WEIGHT REPORT:

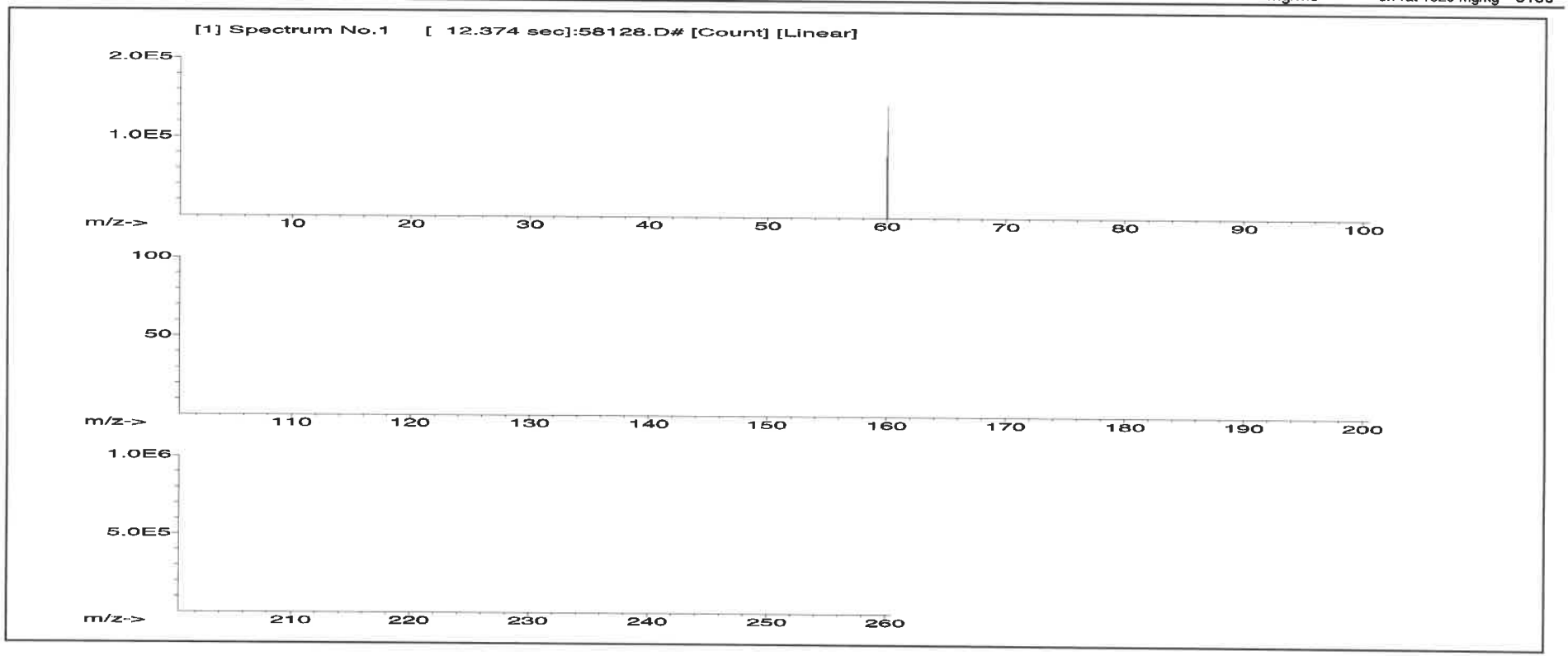
Part Number: 57028
Lot Number: 041124
Description: Nickel (Ni)

Expiration Date: 041127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 249.85

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	5.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.002	Flask Uncertainty	

Formulated By:	Brian Geddes	041124
Reviewed By:	Pedro L. Rentas	041124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	IN033	NIM052023A1	1000	99.999	0.10	20.2	1.2369	1.2369	**1000.0**	**2.0**	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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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	T	Pr	<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	<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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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M5961 R: 6/11/24

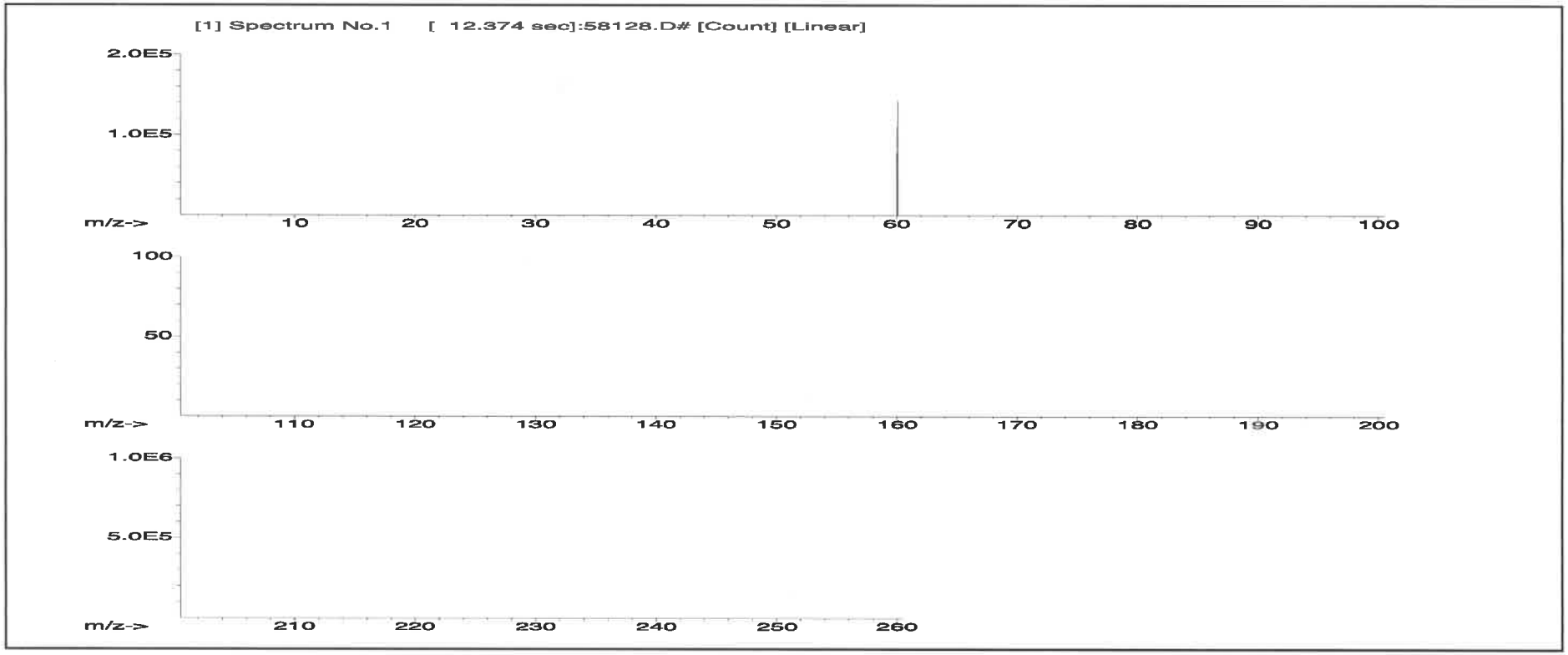
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CERTIFIED WEIGHT REPORT:

		Lot #		
Part Number:	**57028**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**041124**			
Description:	**Nickel (Ni)**		2% 5.0 (mL)	Nitric Acid
Expiration Date:	041127			
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):	249.85	0.002 Flask Uncertainty		

Formulated By:	Brian Geddes	041124
Reviewed By:	Pedro L. Rentas	041124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	IN033	NIM052023A1	1000	99.999	0.10	20.2	1.2369	1.2369	**1000.0**	**2.0**	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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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	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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

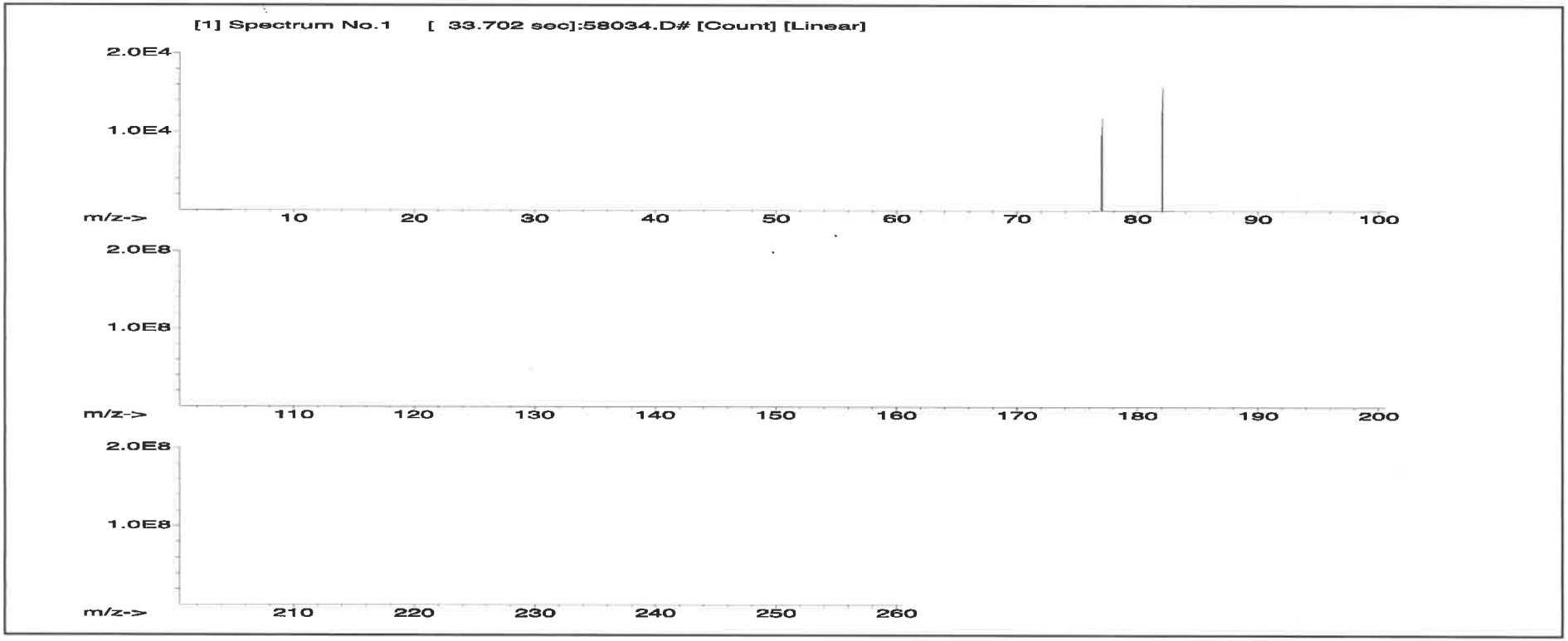
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
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):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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	orl-rat 6700 mg/kg	3149



Absolute Standards, Inc.
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www.absolutestandards.com

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	T	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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

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Christiansburg, VA 24073 USA
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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).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO1
Lot Number:	T2-MO720876
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	1 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 7 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

- 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:

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

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

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.000879	M	Se	<	0.008000	M	Zn		0.000598
M	Al		0.000563	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.000175				
M	Ba		0.001689	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.006334	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Tl	<	0.032000				
M	Ce	<	0.008300	M	K		0.130213	M	Rb		0.004575	M	Tl		0.001266				
M	Co		0.000598	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.000527	O	Li		0.000059	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.000527	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.002252	M	Mg		0.000563	i	S	<		M	W		0.087982				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.001513	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

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 - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or 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 95 amu	3 ppt	n/a	40Ar39K16O,79Br1 6O,190Os2+,190Pt 2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

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 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

- July 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

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Technical



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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Certificate of Analysis

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300 Technology Drive
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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).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO1
Lot Number:	T2-MO720876
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	1 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 7 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

- 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:

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

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

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.000879	M	Se	<	0.008000	M	Zn		0.000598
M	Al		0.000563	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.000175				
M	Ba		0.001689	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.006334	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Tl	<	0.032000				
M	Ce	<	0.008300	M	K		0.130213	M	Rb		0.004575	M	Tl		0.001266				
M	Co		0.000598	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.000527	O	Li		0.000059	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.000527	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.002252	M	Mg		0.000563	i	S	<		M	W		0.087982				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.001513	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

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 - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or 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 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

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 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

- July 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

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Technical



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



MS978, MS979

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Christiansburg, VA 24073 USA
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F: 540-585-3012
info@inorganicventures.com

R: 2/22/24

Certificate of Analysis

Refine your results. Redefine your industry.

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:	CGT11
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: 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 Information:

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

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

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

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

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

CRM/RM Expanded Uncertainty ($\pm$) = $U_{CRM/RM} = k\,(u^2_{Char} + u^2_{Bb} + u^2_{Its} + u^2_{Cg})^{½}$

k = coverage factor = 2

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

u_{Bb} = bottle to bottle homogeneity standard uncertainty

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

u_{Tg} = 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:

$$X_{CRM/RM} = (\Sigma x_a)\,(u_{Char\ a})$$

X_a = mean of Assay Method A with $u_{Char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty ($\pm$) = $U_{CRM/RM} = k\,(u^2_{Char\ a} + u^2_{Bb} + u^2_{Its} + u^2_{Cg})^{½}$

k = coverage factor = 2

$u_{Char\ a}$ = 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)

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	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	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		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
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	Tl	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

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 - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - 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 unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated 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 for months in 1% 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 - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2SO7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 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.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

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: 800.669.5798; 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 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

Certificate Approved By:

Thomas Kozlkowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

H5981 R:6/11/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57092**	24002546	Nitric Acid		
Lot Number:	**060724**				
Description:	**Uranium (U)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	060727				
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):	2000.07	0.100	Flask Uncertainty		

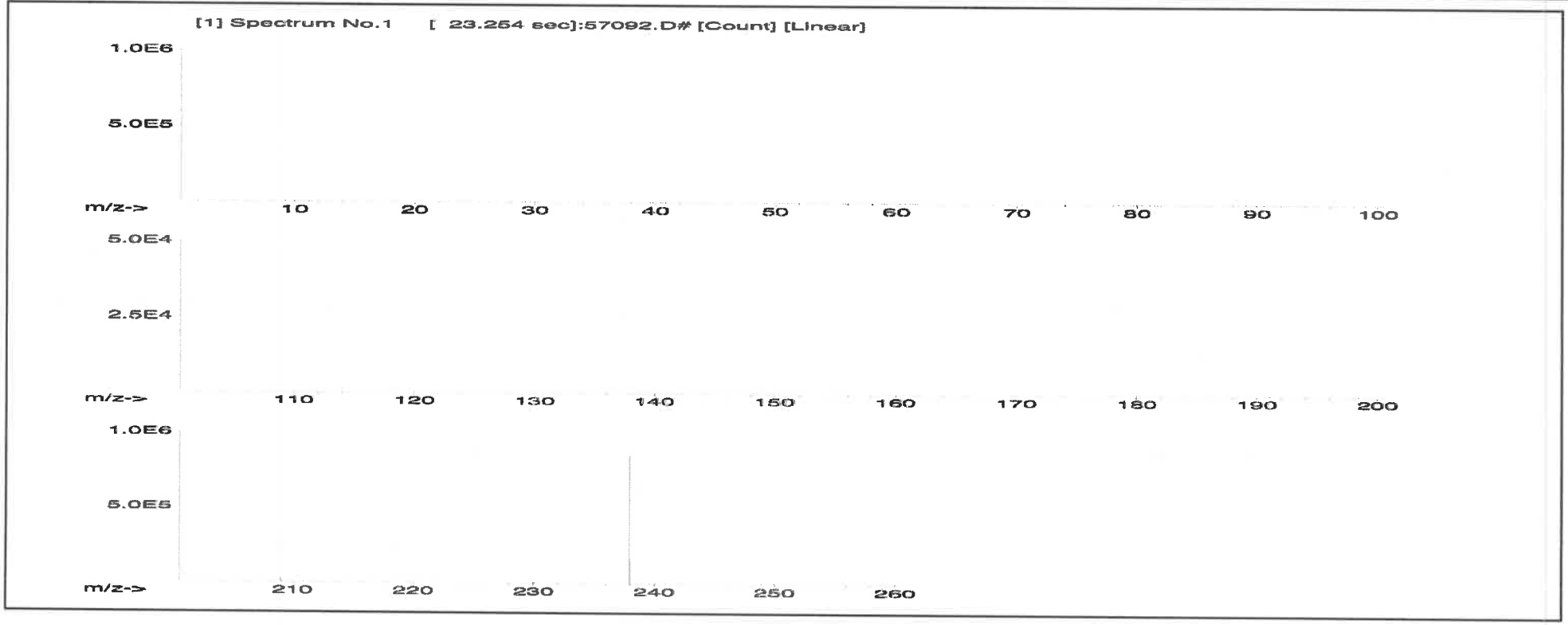
Giovanni Esposito

Formulated By:	Giovanni Esposito	060724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	060724

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Uranyl nitrate hexahydrate (U)	58192	041524	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13520-83-7	0.05 mg/m3	orl-rat 1040 mg/kg	3164



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800-368-1131
www.absolutestandards.com

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	T
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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Part # **57092** Lot # **060724**

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5983 R: 6/11/24

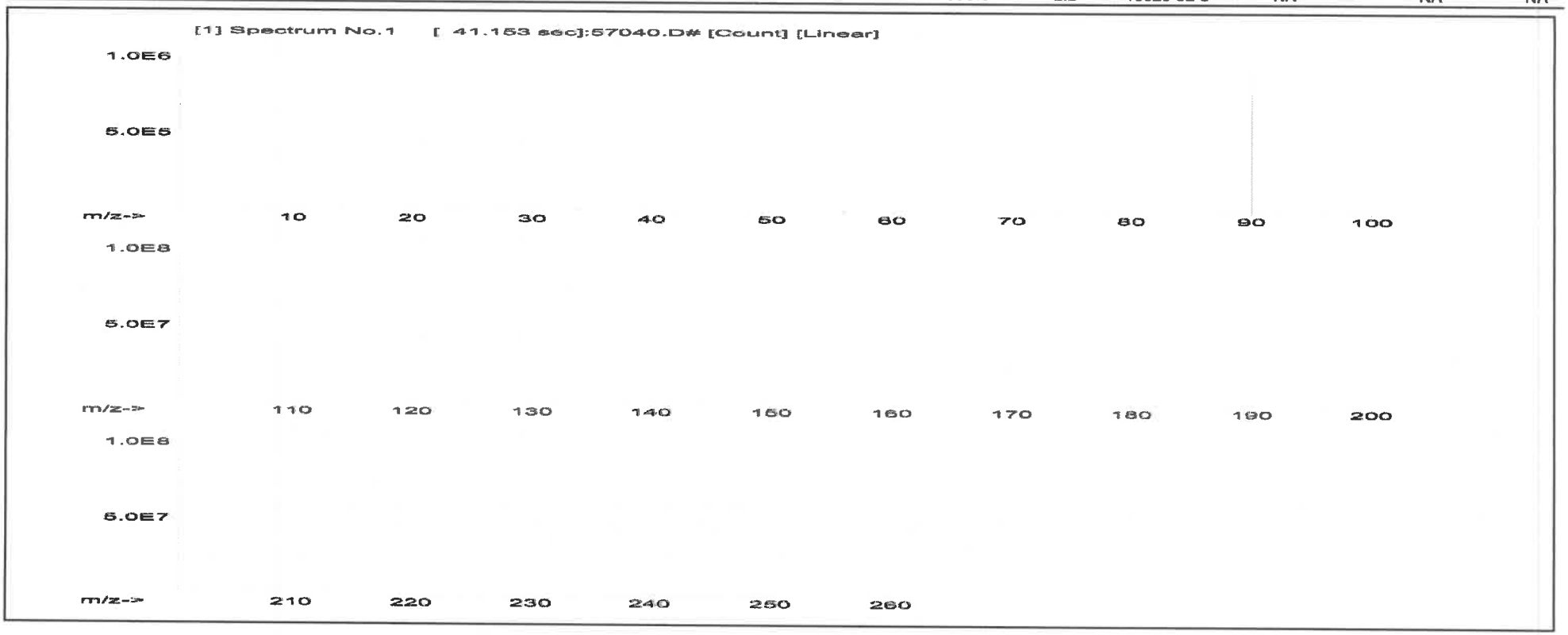
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57040**	21110221	Nitric Acid	
Lot Number:	**071423**			
Description:	**Zirconium (Zr)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071426			
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	071423
Reviewed By:	Pedro L. Rentas	071423

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zirconyl chloride octahydrate (Zr)	58140	070621	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	13520-92-8	NA	NA	NA



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	<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	T

(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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

R 18/19/24, M60055

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1.0 ACCREDITATION / REGISTRATION

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

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-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, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

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

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

N/A

6.0 INTENDED USE

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

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

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

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

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

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

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

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

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6079 R: 9/30/24

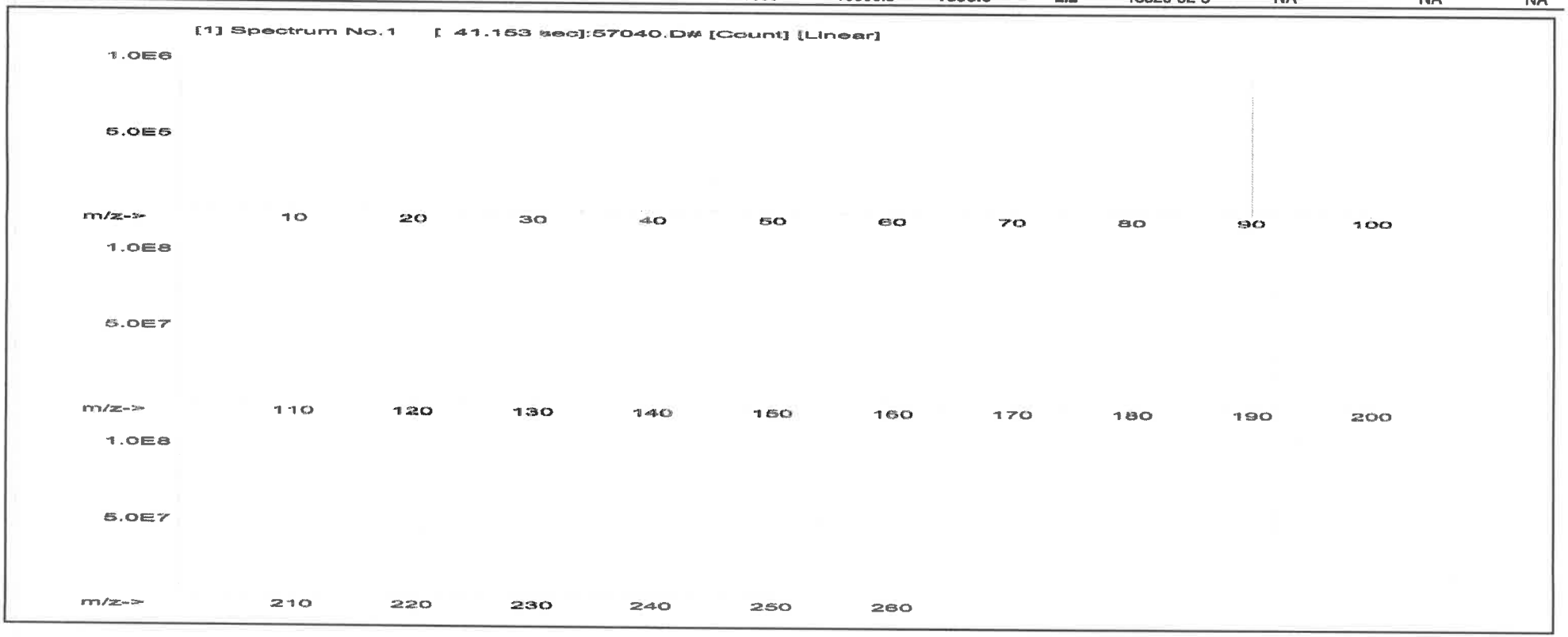
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57040**	21110221	Nitric Acid		
Lot Number:	**071423**				
Description:	**Zirconium (Zr)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	071426				
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	071423
Reviewed By:	Pedro L. Rentas	071423

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zirconyl chloride octahydrate (Zr)	58140	070621	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	13520-92-8	NA	NA	NA



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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	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	T

(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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

R → 10/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

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
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.190
ACS – Bromide (Br)	<= 0.005 %	< 0.005
ACS – Extractable Organic Substances	<= 5 ppm	1
ACS – Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.3
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities – Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities – Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities – Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities – Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities – Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities – Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities – Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities – Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities – Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities – Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities – Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities – Gallium (Ga)	<= 1.0 ppb	< 0.2

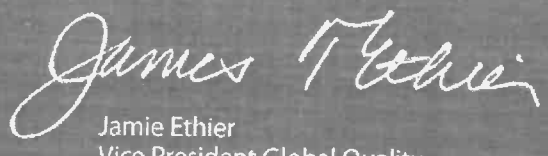
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Material No.: 9530-33
Batch No.: 0000275677

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	<1
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg 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 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

M6125 Receive -> 11/22/24

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

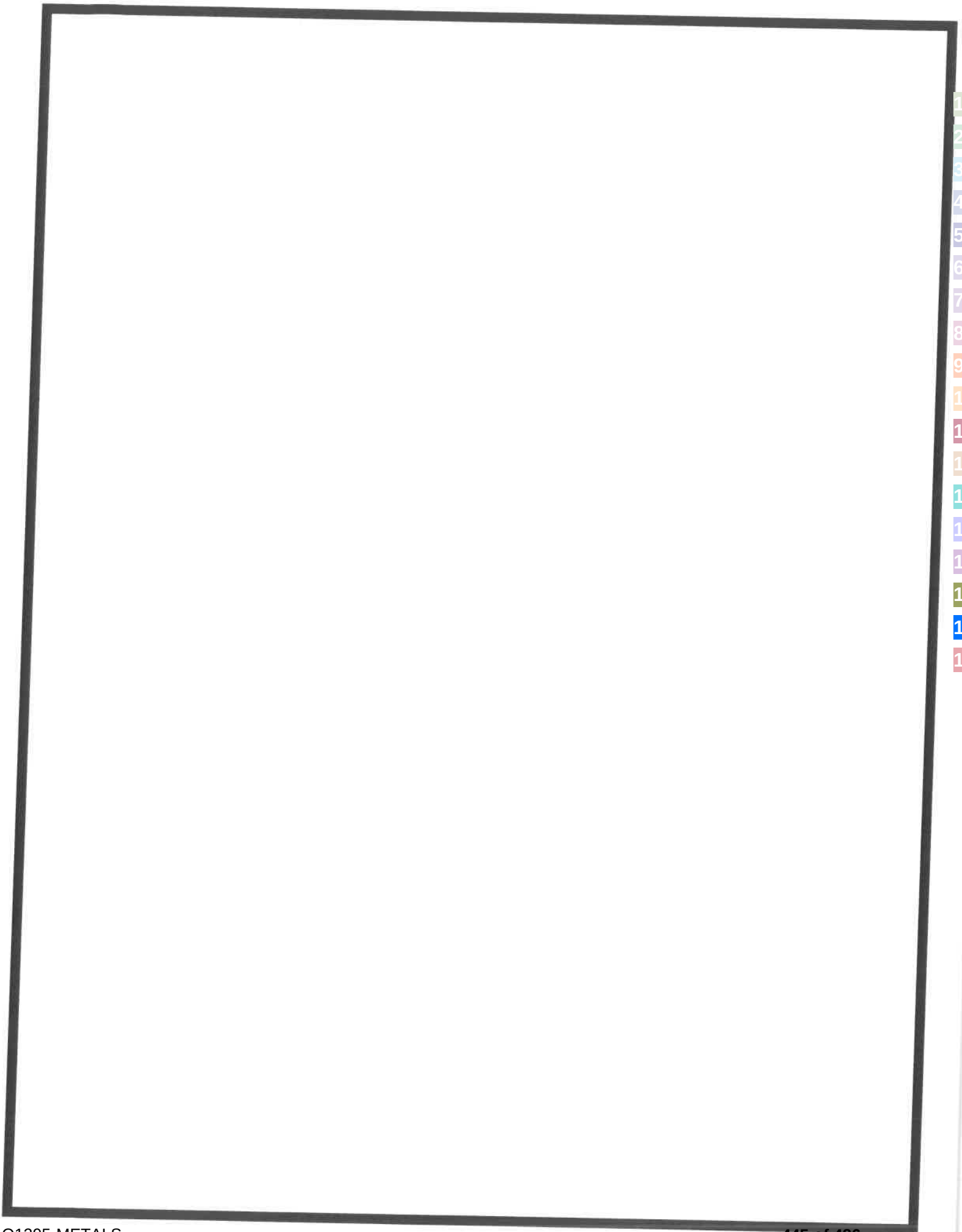
Office and Plant
299 Cedar Lane
Fairless Hills, PA 19030

Phone: 215-295-5006
Fax: 215-295-0781

Hydrogen Peroxide 30%, ACS

Reagent Grade

SPECIFICATION	MAXIMUM LIMITS
Appearance	Colorless and free from suspended matter or sediment
Assay	29-32%
Color (APHA)	10
Residue after Evaporation	0.002%
Titratable Acid	0.0006 meq/g
Chloride (Cl)	3 ppm
Nitrate (NO_3)	2 ppm
Phosphate	2 ppm
Sulfate (SO_4)	5 ppm
Ammonium (NH_4)	5 ppm
Heavy Metals (as Pb)	1 ppm
Iron (Fe)	0.5 ppm



Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R -> 11/12/24

M6126

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™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

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:

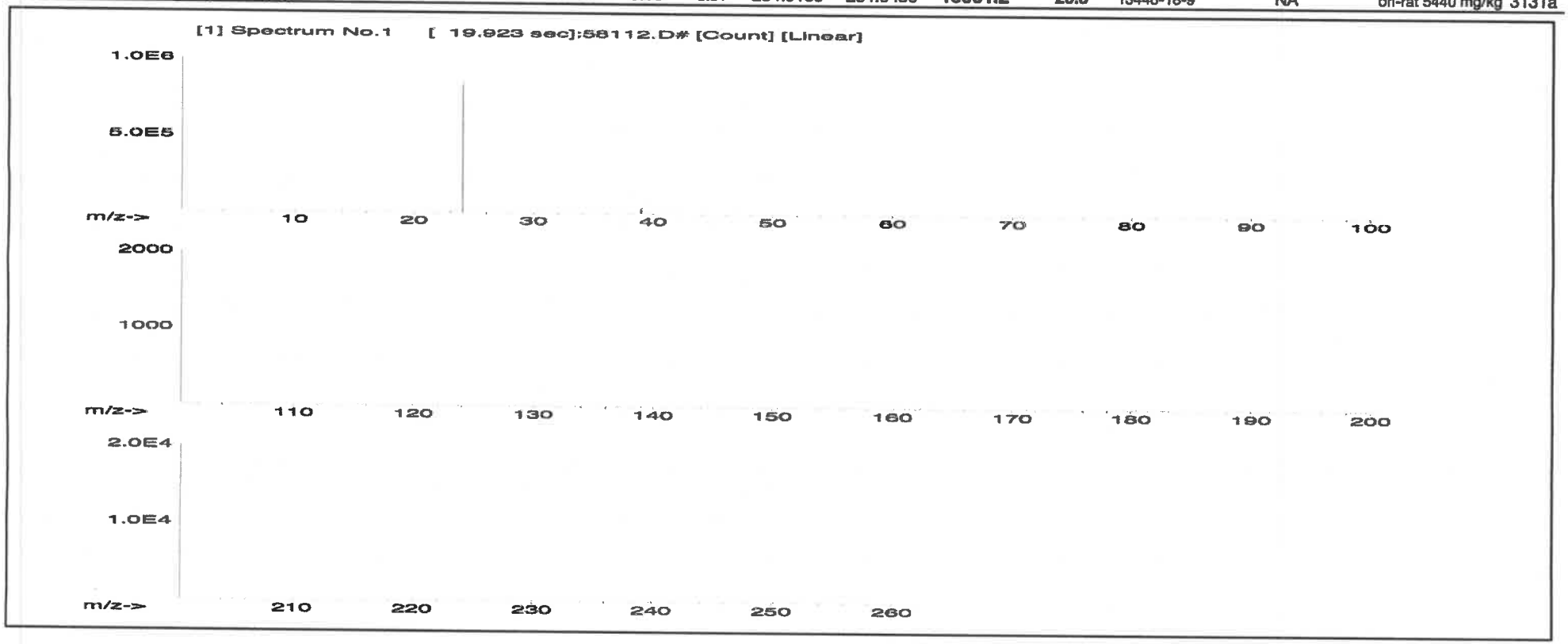
R -> 1/13/25
M 6127

Part Number:	**58112**		**Lot #**	
Lot Number:	**112124**	**Solvent:**	24012496	Nitric Acid
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	112127			
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):	2000.07	0.100	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	112124
Reviewed By:	Pedro L. Rentas	112124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9183	234.9459	**10001.2**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



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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	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	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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

R->1/13/25
M6128

Part Number:	**58025**		**Lot #**		
Lot Number:	**101124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid	
Expiration Date:	101127				
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):	4000.2	0.10	Flask Uncertainty		

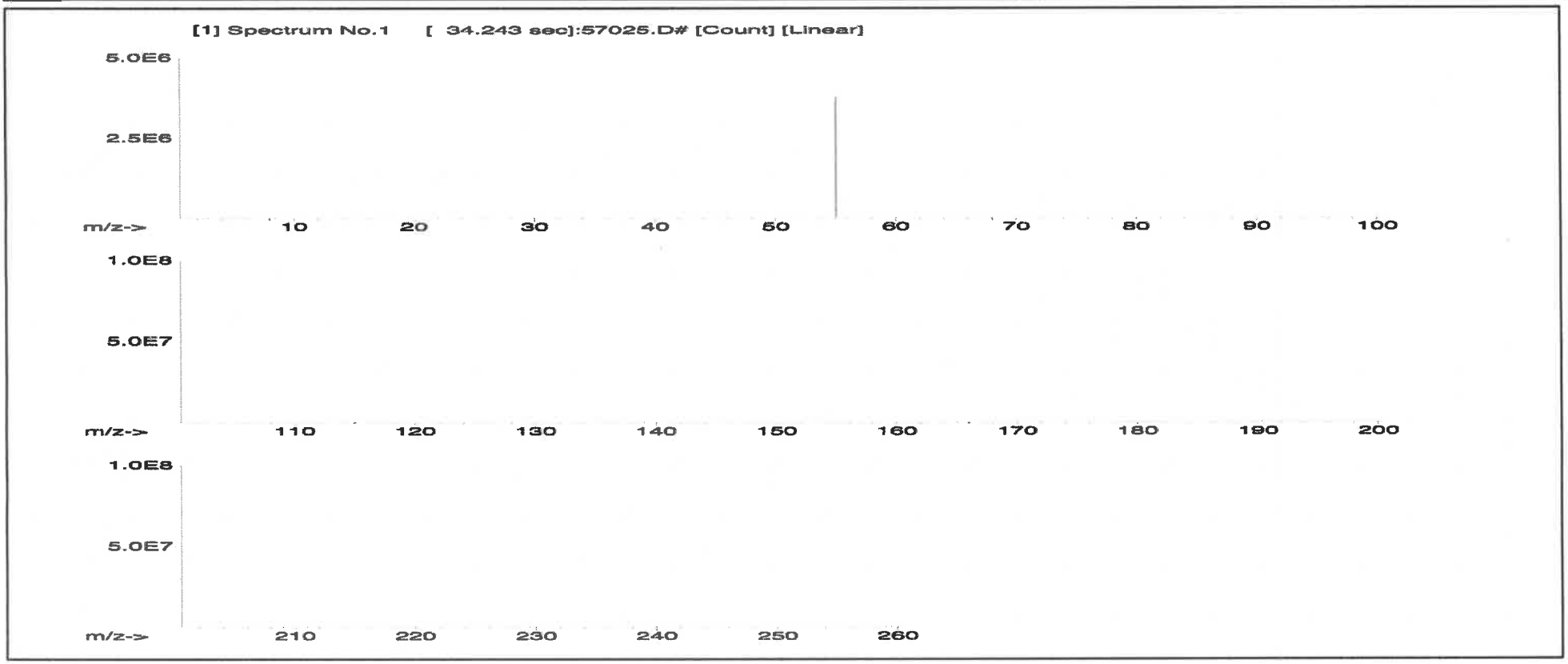
Giovanni Esposito

Formulated By:	Giovanni Esposito	101124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	101124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate hydrate (Mn)	IN031	MNM092020A1	1000	99.999	0.10	20.8	19.2322	19.2344	**1000.1**	**2.0**	15710-66-4	5 mg/m3	orl-rat >300mg/kg	3132



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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	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	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:

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.
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* 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).

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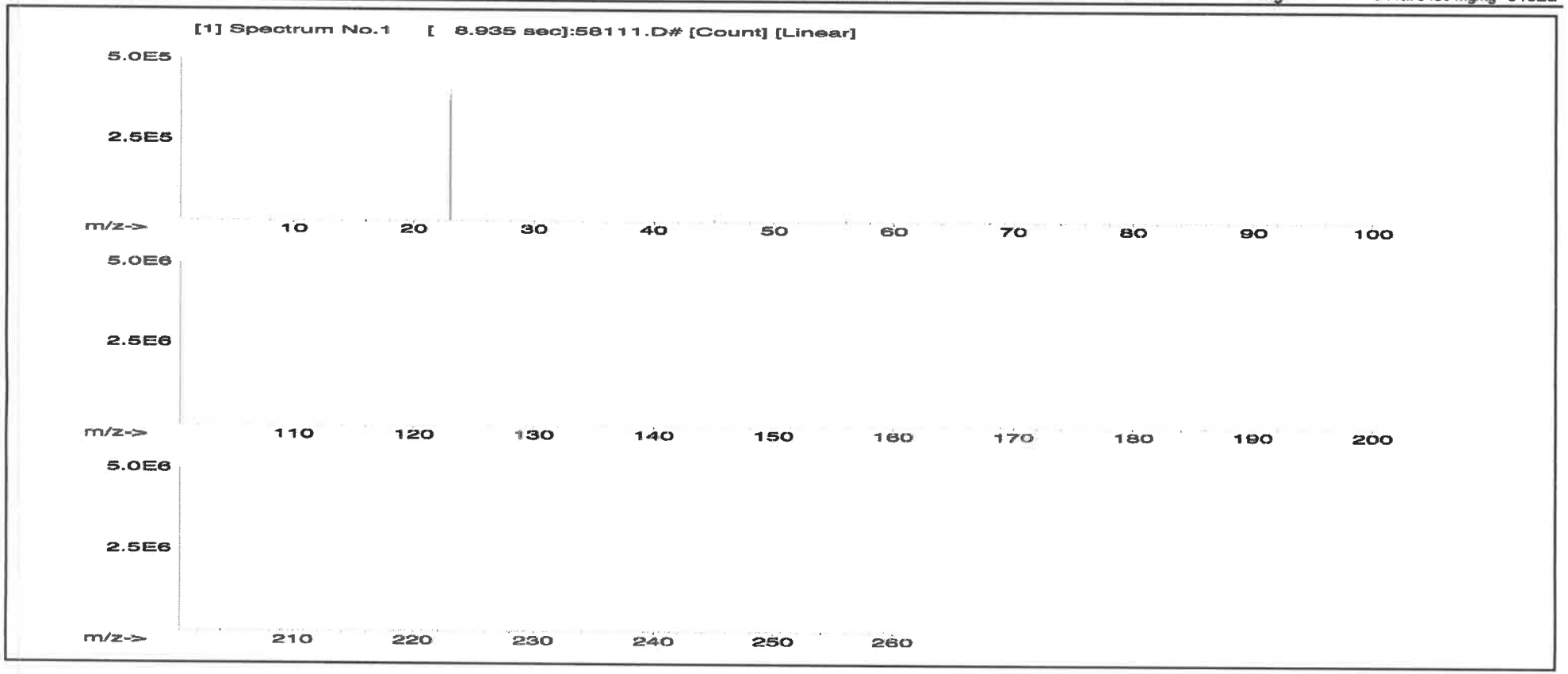
CERTIFIED WEIGHT REPORT:

R->1/13/25

Part Number:	**58111**		**Lot #**		
Lot Number:	**072424**	**Solvent:**	24002546	Nitric Acid	
Description:	**Sodium (Na)**				
		MG144 2%	80.0 (mL)	Nitric Acid	
Expiration Date:	072427				
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):	4000.2	0.10	Flask Uncertainty		

Formulated By:	Benson Chan	072424
Reviewed By:	Pedro L. Rentas	072424

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	148.7096	######	**10000.0**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



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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	Pr	<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	<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	T	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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 121724
Description: Zinc (Zn)

R → 1/13/25

M6145

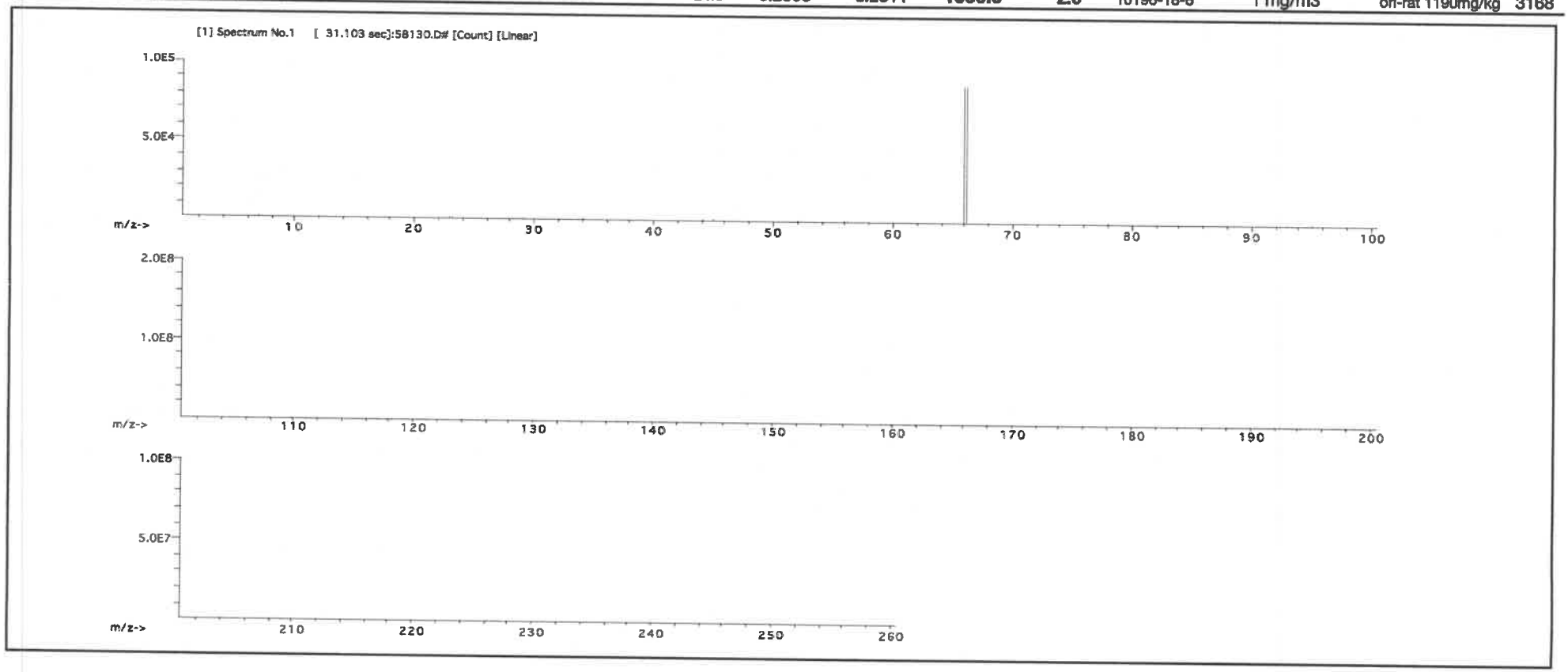
Expiration Date: 121727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

				Lot #	
Solvent:	24012496	Nitric Acid			
	2%	40.0 (mL)	Nitric Acid		
		5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	121724
Reviewed By:	Pedro L. Rentas	121724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	8.2308	8.2311	**1000.0**	**2.0**	10196-18-6	1 mg/m3	ori-rat 1190mg/kg	3168



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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	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	T
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

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Certified by:

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R : 4/20/21

QATS LABORATORY INORGANIC REFERENCE MATERIAL INITIAL CALIBRATION VERIFICATION SOLUTIONS (ICV1, ICV5, AND ICV6)

M6150

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 Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(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*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) ***CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS***

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	CN^-	99

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R: 01/03/24 M5806, M5807

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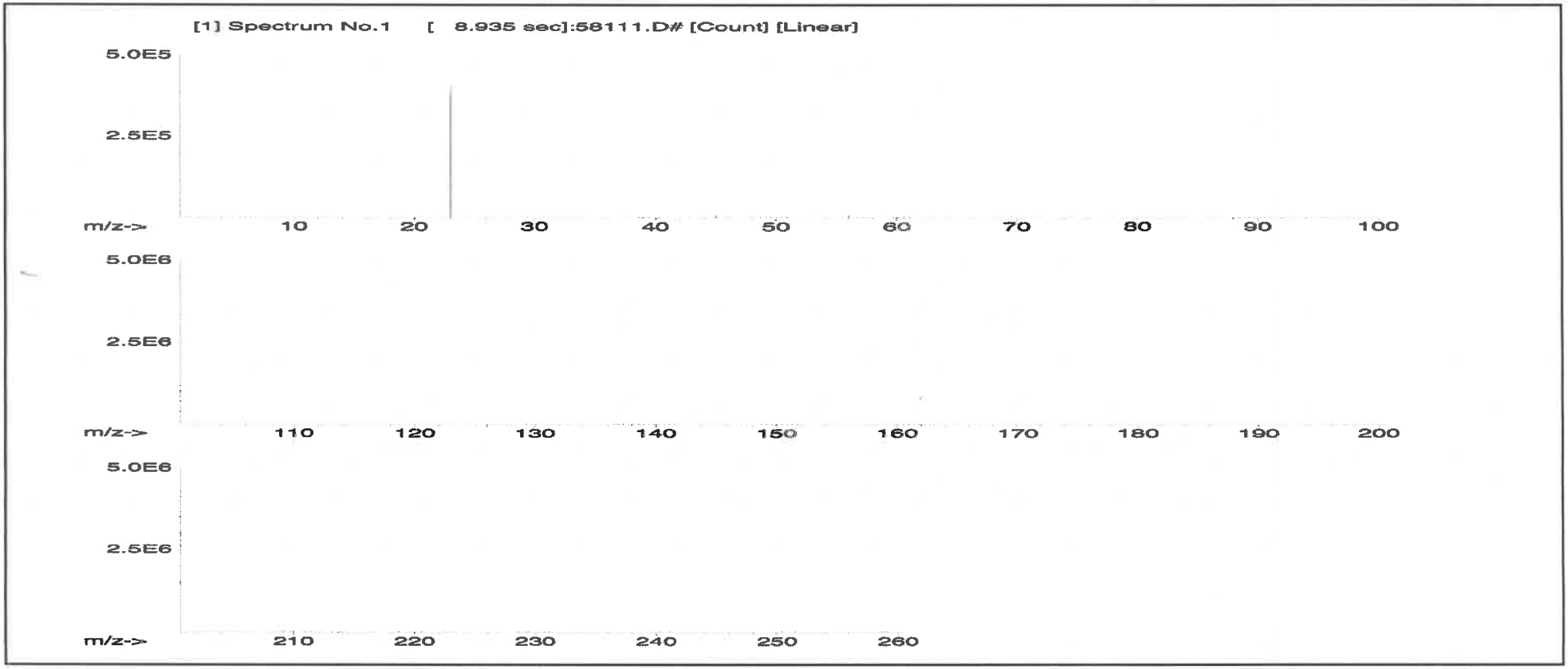
CERTIFIED WEIGHT REPORT:

		Lot #		
Part Number:	**58111**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**122223**			
Description:	**Sodium (Na)**	2%	60.0 (mL)	Nitric Acid
Expiration Date:	122226			
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):	3000.4	0.06	Flask Uncertainty	

Aleah O'Brady

Formulated By:	Aleah O'Brady	122223
Reviewed By:	Pedro L. Rentas	122223

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	111.5406	111.5479	**10000.7**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



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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	T	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

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A: 4/11/22

Certificate of Analysis

M5738, M5739, M5740, M5741, M5742, M5743

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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

1.0 ACCREDITATION / REGISTRATION

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

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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:

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
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



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 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, Inferferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO_3. 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 HNO_3. 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

ICSA: M5873

ICSB: M5874

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 ± 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.

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 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.

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2700 Chandler Avenue - Building C
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(C) *ANALYSIS OF SAMPLES*

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Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-0803, Inferferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO_3. 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 HNO_3. 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

ICSA: M5873

ICSB: M5874

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 ± 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.

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www.absolutestandards.com

Certified Reference Material CRM

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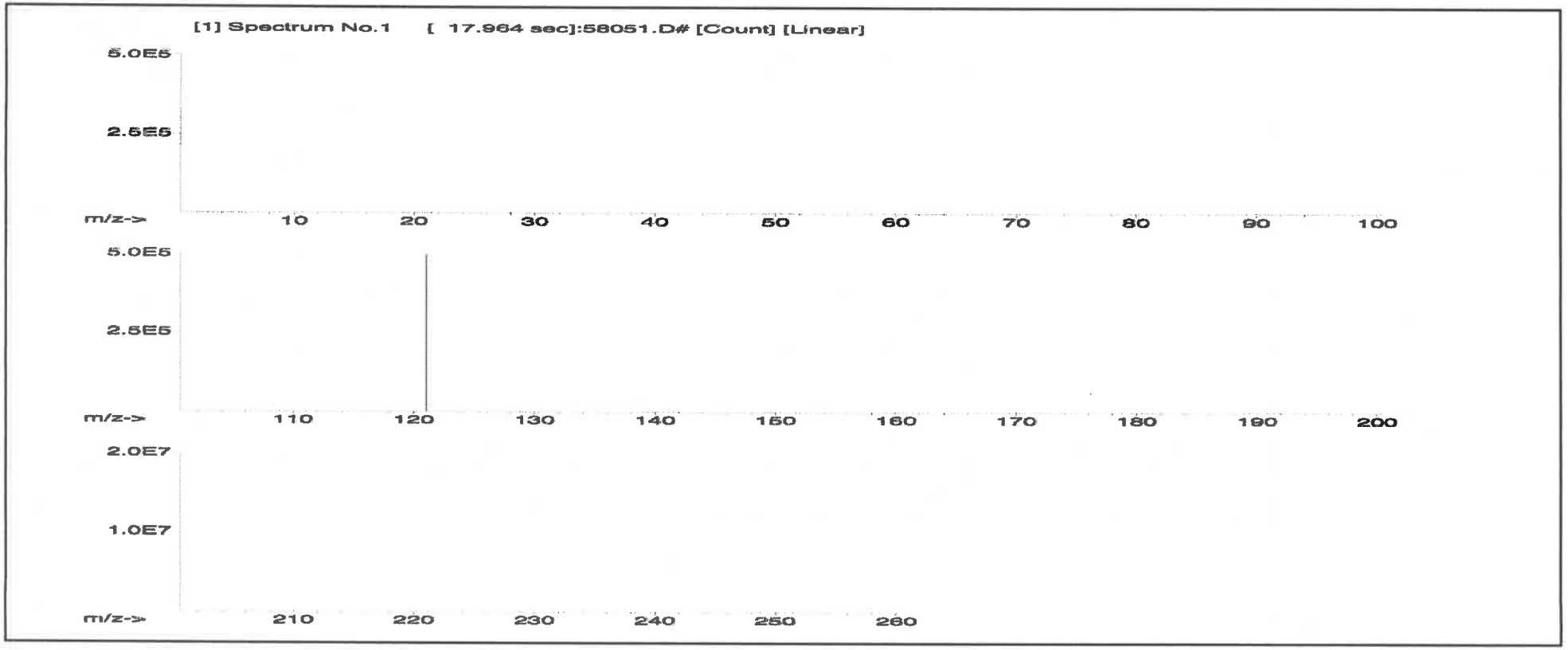
R: 01/03/24 M5802, M5803

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57051**	24002546	Nitric Acid	
Lot Number:	**120523**			
Description:	**Antimony (Sb)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	120526			
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):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Rentas	120523

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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	100923	0.1000	300.0	0.084	1000	10001.4	**1000.0**	2.1	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



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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	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	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:

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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M6030

R: 8/5/24

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CERTIFIED WEIGHT REPORT:

Part Number: 57047
Lot Number: 122823
Description: Silver (Ag)

Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

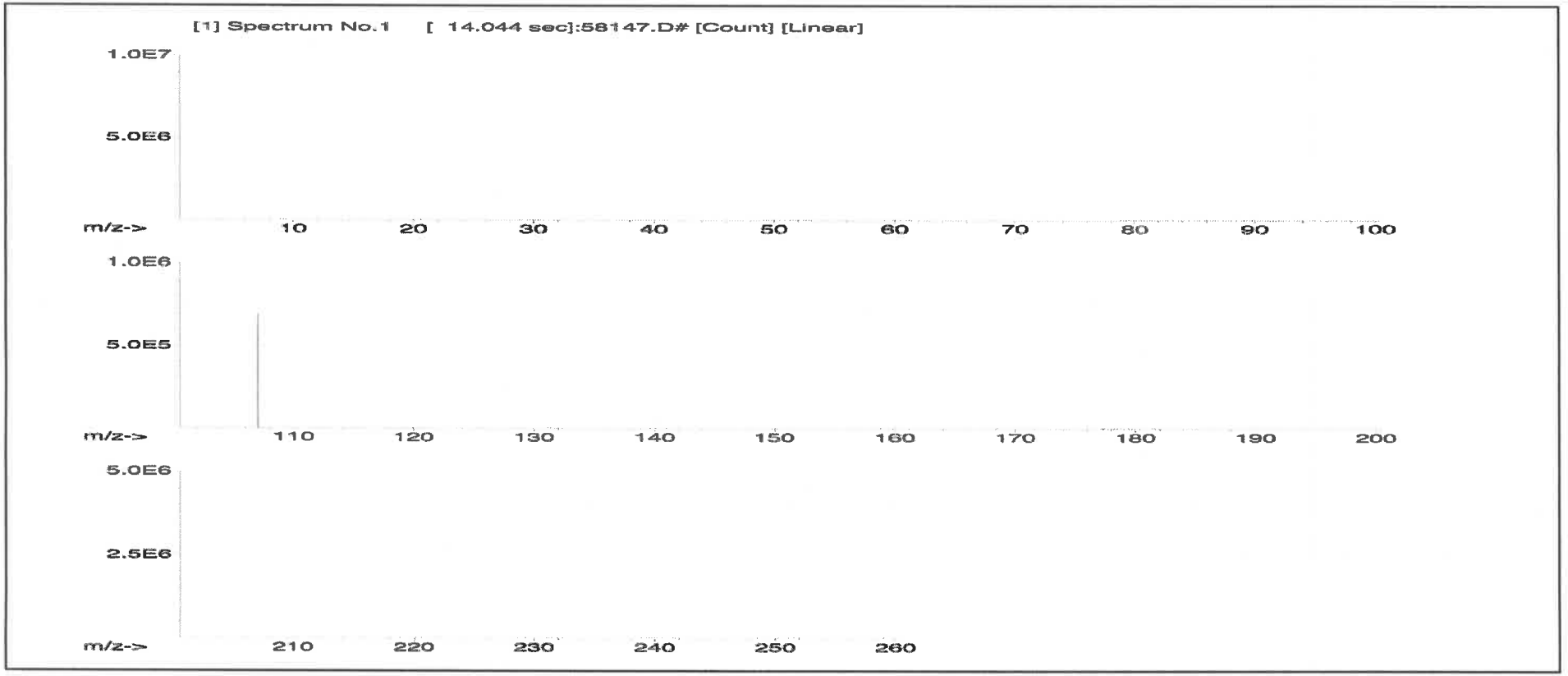
Weight shown below was diluted to (mL): 4000.30 0.058 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	122823
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)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



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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	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

(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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 10/18/24

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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

MG146

Part Number: 57051
Lot Number: 071724
Description: Antimony (Sb)
Expiration Date: 071727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.26

Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

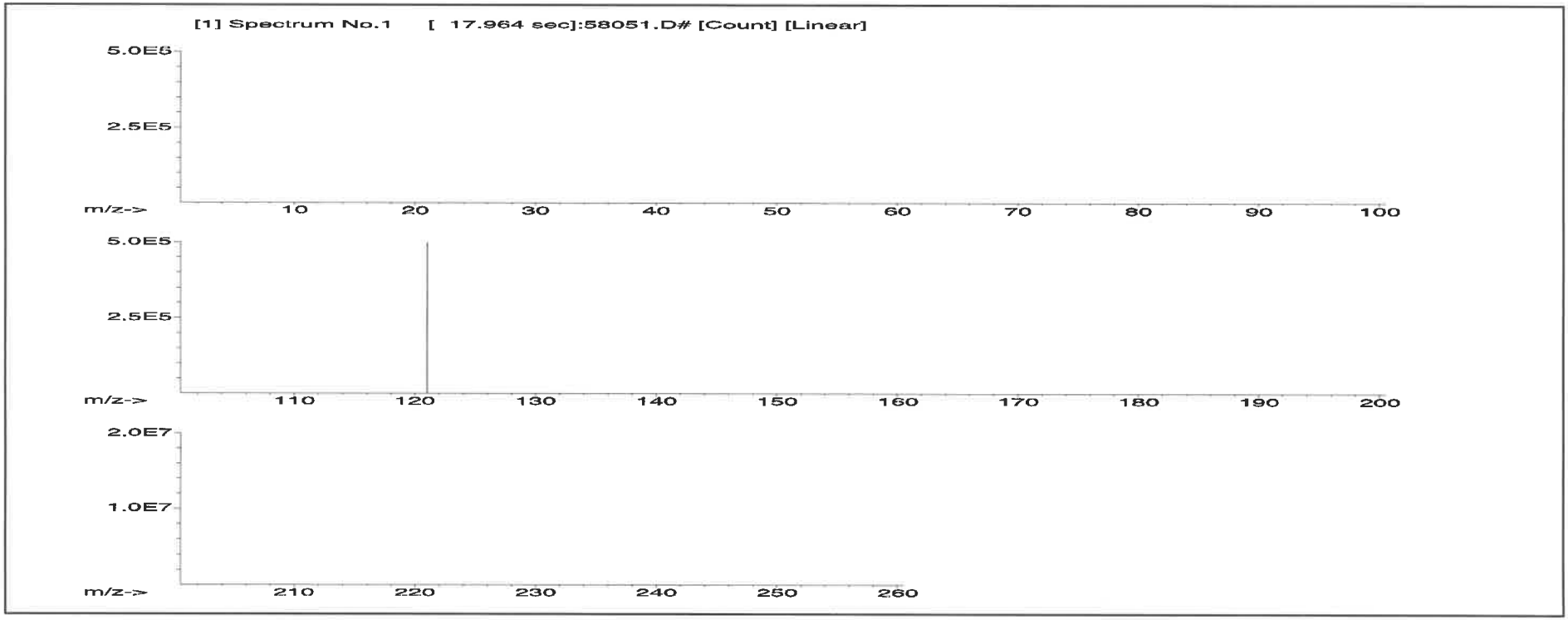
Giovanni Esposito

Formulated By:	Giovanni Esposito	071724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	071724

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)	SDS Information (Solvent Safety Info. On Attached pg.) 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



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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	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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1.0 ACCREDITATION / REGISTRATION

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

ACCREDITED Testing Laboratory Certificate 888.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	U2-SR730227
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	M2-2192
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985

Assay Method #2 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 2 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:

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

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

M	Ag	<	0.001980	M	Eu	<	0.000495	O	Na		0.000200	M	Se	<	0.013862	O	Zn		0.000143
O	Al		0.000370	O	Fe		0.000410	M	Nb	<	0.000495	i	Si	<		M	Zr	<	0.000495
M	As	<	0.000495	M	Ga	<	0.000495	M	Nd	<	0.000495	M	Sm	<	0.000495				
M	Au	<	0.000989	M	Gd	<	0.000495	O	Ni	<	0.007631	M	Sn	<	0.000990				
M	B	<	0.039606	M	Ge	<	0.000495	M	Os	<	0.000494	s	Sr	<					
M	Ba		0.006486	M	Hf	<	0.000495	i	P	<		M	Ta	<	0.000495				
M	Be	<	0.000990	M	Hg	<	0.000989	M	Pb	<	0.002970	M	Tb	<	0.000495				
M	Bi	<	0.000495	M	Ho	<	0.000495	M	Pd	<	0.003957	M	Te	<	0.027724				
O	Ca		0.004255	M	In	<	0.000495	M	Pr	<	0.000495	M	Th	<	0.000990				
M	Cd		0.001339	M	Ir	<	0.000494	M	Pt	<	0.002970	M	Ti	<	0.005940				
M	Ce	<	0.004950	O	K	<	0.008184	M	Rb	<	0.002970	M	Tl	<	0.000495				
M	Co	<	0.000495	M	La	<	0.000495	M	Re	<	0.000495	M	Tm	<	0.000495				
O	Cr	<	0.003207	O	Li	<	0.000884	O	Rh	<	0.012829	M	U	<	0.001485				
M	Cs	<	0.000990	M	Lu	<	0.002970	M	Ru	<	0.000989	M	V	<	0.001980				
M	Cu		0.000099	O	Mg		0.000064	i	S	<		M	W	<	0.003960				
M	Dy	<	0.000495	O	Mn		0.000066	M	Sb	<	0.014852	O	Y	<	0.000995				
M	Er	<	0.000495	M	Mo	<	0.001980	M	Sc	<	0.001980	M	Yb	<	0.000495				

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 - 87.62 +2 6 $Sr(H_2O)_{6}^{+2}$

Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, 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% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO_3 / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Ores (Carbonate fusion in Pt0 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

March 03, 2023

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

11.2 Lot Expiration Date

- **March 03, 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



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R: 03/16/23 M5473, M5474, M5475, M5476

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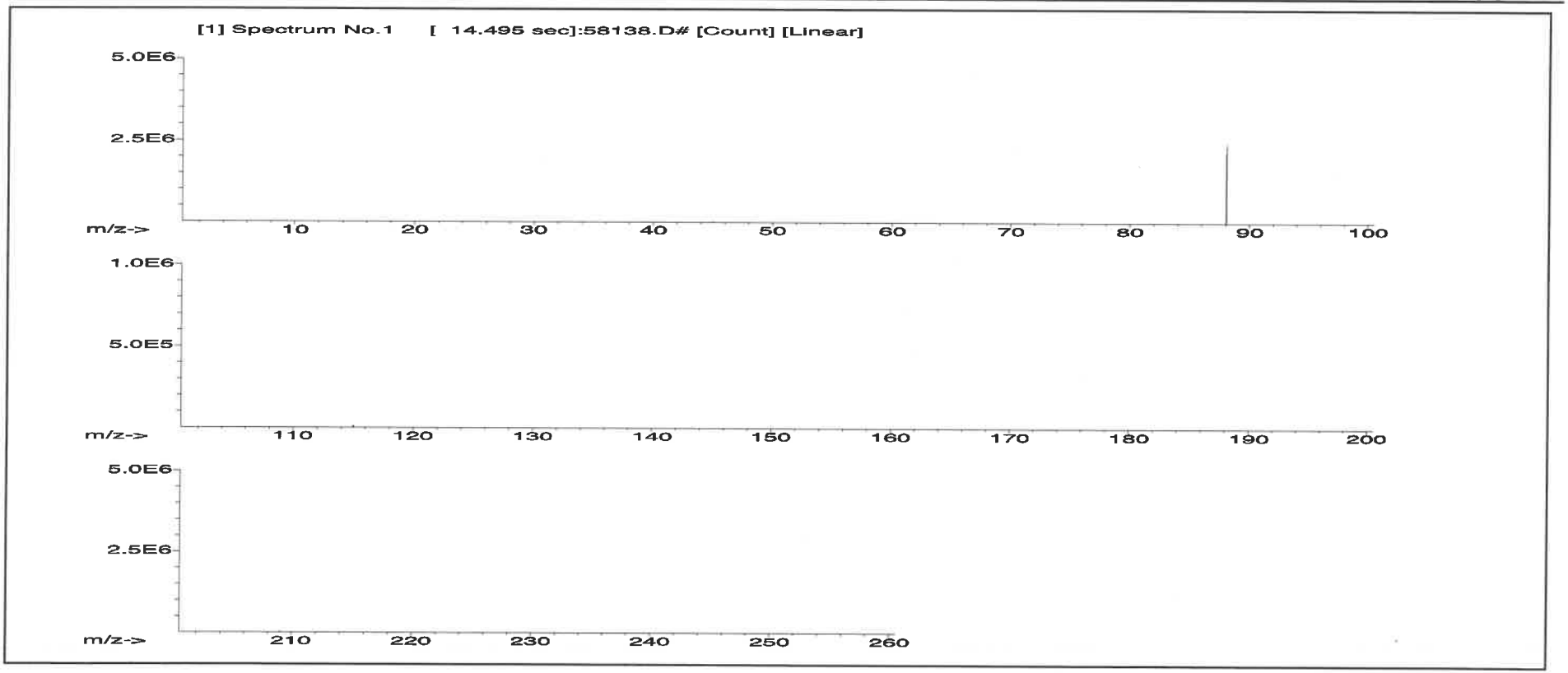
CERTIFIED WEIGHT REPORT:

Part Number: 56138
Lot Number: 082922
Description: Strontium (Sr)
Expiration Date: 082925
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By: Lawrence Barry 082922
Reviewed By: Pedro L. Rentas 082922

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	10000	99.997	0.10	41.2	24.2756	24.2758	**10000.1**	**20.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



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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	<0.01	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:

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.
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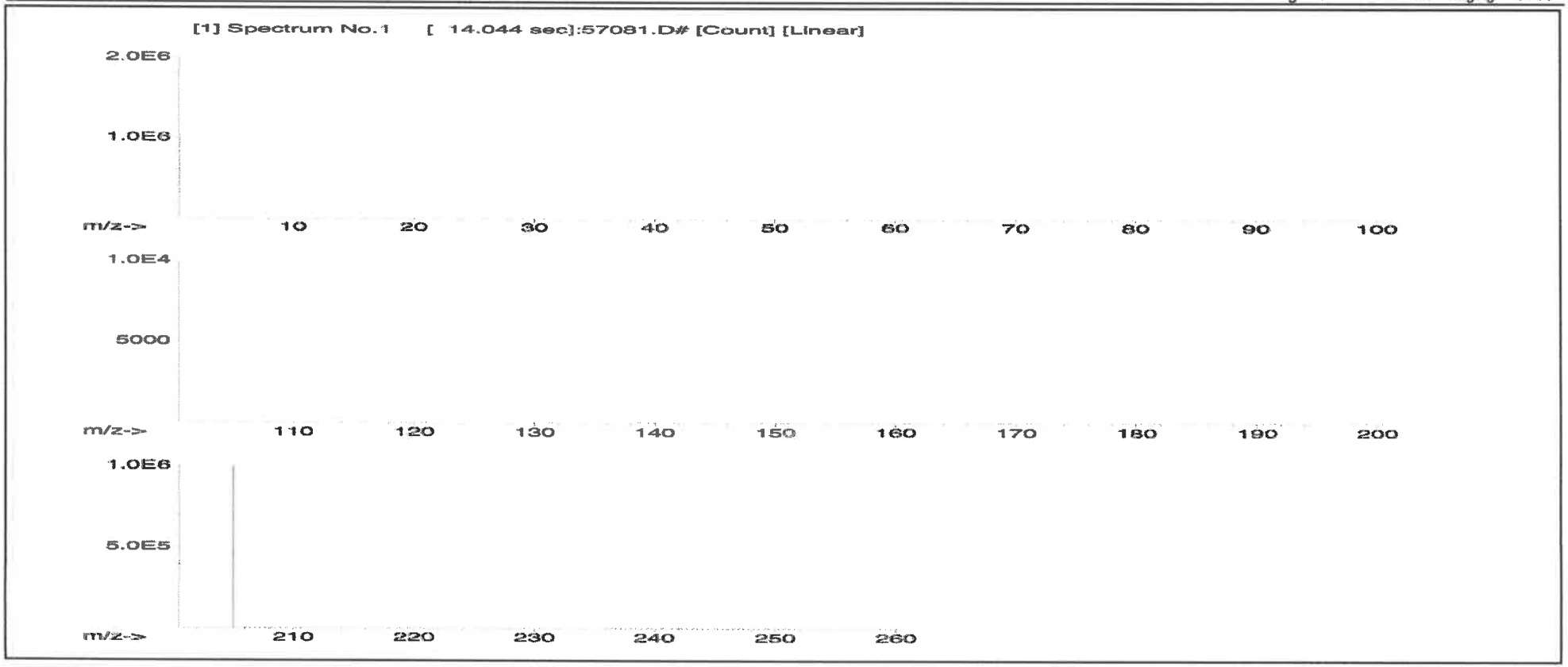
CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
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		

Aleah O'Brady

Formulated By:	Aleah O'Brady	062724
Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



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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	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	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	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.
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* 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).

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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**	24002546	Nitric Acid	
Description:	**Vanadium (V)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
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):	2000.3	0.06	Flask Uncertainty	

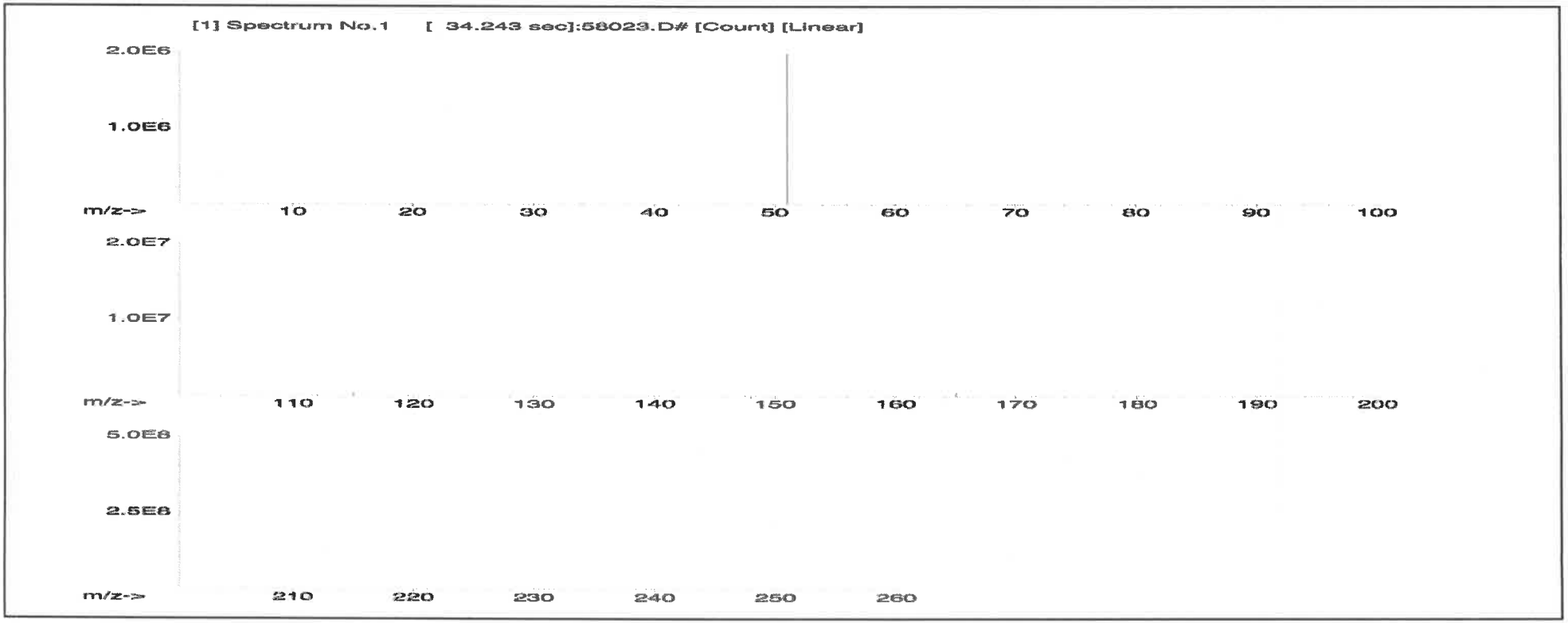
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

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)	SDS Information (Solvent Safety Info. On Attached pg.) 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	orl-rat 58.1mg/kg	3165



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

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	T
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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

SHIPPING DOCUMENTS

Q1295

Weston COC ID
Weston_20250204_1140

Chain of Custody Record/Lab Work Request

Page	1	of	1

Client:	Weston Solutions, Inc.		
Project Manager:	David Sembrot		
Street Address:	1400 Weston Way	City:	West Chester
Phone:	610-314-5456	ST, ZIP:	PA, 19038
e-mail:	david.sembrot@westonsolutions.com		
Sampled By:	Mike Giles		

Project Name:	Fort Meade RI	Project POC:	Nathan Fretz
PO Number	0111169	Phone:	484-524-5665
W.O. #:		POC e-mail:	nathan.fretz@westonsolutions.com
Lab:	CHEMTECH	Lab POC:	Yazmeen Gomez
TAT (days):	21	Lab Phone:	908-728-3144
Lab Address:	284 Sheffield Street Mountainside, NJ 07092		

Matrix Codes
SS - Soil
SE - Sediment
SO - Solid
SL - Sludge
GW - Groundwater
W - Water
SB - Soil Boring
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab Use Only		
Temperature of cooler when received (°C)		
COC Tape was present and unbroken on outer package?	Y	N
Samples received in good condition?	Y	N
Labels indicate properly preserved?	Y	N
Received within holding times?	Y	N
Discrepancies between sample labels and COC record?	Y	N

Analyses Requested:	Anions by EPA 9056A	Metals w Hg by EPA 6020B and 7470A	pH by EPA 9045D and TOC by 9060A									
Container Type:	Glass	Glass	Glass									
Container Size:	8 oz	8 oz	8 oz									
Preservative:	Ice to 0-6 deg	Ice to 0-6 deg	Ice to 0-6 deg									

#	Sample ID	G/C	Matrix	# Cont	MS/MSD	Date Collected	Time Collected												Special Instructions/Comments
1	TAPFTA-SB01D-020425-00-T1	g	SB	3	no	2/4/2025	9:25	X	X	X									
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

Shipping Airbill Number:	7714 6425 1549

Cooler Number:		of	

	Relinquished By	Date	Time	Received By	Date	Time	Additional Comments
1.)	[signature]	04 Feb 25	1800	[signature]	2-5-25	9:25	QSM 6.0 Compliant
2.)							Deliverable Requirements: DoD Level IV report, EnviroData EDD, and ERIS-compatible EDD
3.)							

IR Cont 1 1.8

284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488