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 : P5365

ATTENTION : Nathan Fretz

Laboratory Certification ID # 20012

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Cover Page

Order ID : P5365

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

Client : Weston Solutions

Lab Sample Number	Client Sample Number
P5365-01	TAPFTA-SB01I-4.5-121924-00-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 : N. N. Pandya

APPROVED

Date: 1/9/2025

By Nimisha Pandya, QA/QC Supervisor at 9:17 am, Jan 09, 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 # P5365
Test Name: Metals ICP-TAL,Mercury

A. Number of Samples and Date of Receipt:
1 Solid sample was received on 12/20/2024.

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-SB01I-4.5-121924-00-T1MS) analysis met criteria for all samples except for Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Nickel, Selenium, Silver, Thallium and Vanadium due to Chemical Interference during Digestion Process.
The Matrix Spike Duplicate (TAPFTA-SB01I-4.5-121924-00-T1MSD) analysis met criteria for all samples except for Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Nickel, Selenium, Silver, Thallium and Vanadium 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 criteria for all samples.

E. Additional Comments:

Calculation for ICP-MS Soil Sample:

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

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

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 :

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

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

P5365-01 sample diluted 5X dilution as straight analysis because of high concentration which can cause drastic damage to the instrument.
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.

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 N. N. Pandya

APPROVED
By Nimisha Pandya, QA/QC Supervisor at 9:18 am, Jan 09, 2025

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: P5365 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.			✓
	The Serial Dilution met criteria for all samples.			
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-SB01I-4.5-121924-00-T1MS) analysis met criteria for all samples except for Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Nickel, Selenium, Silver, Thallium and Vanadium due to Chemical Interference during Digestion Process. The Matrix Spike Duplicate (TAPFTA-SB01I-4.5-121924-00-T1MSD) analysis met criteria for all samples except for Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Nickel, Selenium, Silver, Thallium and Vanadium 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: P5365-01 sample diluted 5X dilution as straight analysis because of high concentration which can cause drastic damage to the instrument.

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.

N. N. Pandya
QA REVIEW

APPROVED
Date
By Nimisha Pandya, QA/QC Supervisor at 9:18 am, Jan 09, 2025

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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: P5365

	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:** 01/09/2025

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LAB CHRONICLE

OrderID:	P5365	**OrderDate:**	12/20/2024 10:24:00 AM
Client:	Weston Solutions	**Project:**	Ft Meade Tipton Airfield Parcel RI - PO 0111169
Contact:	Nathan Fretz	**Location:**	N21

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P5365-01	**TAPFTA-SB01I-4.5-12 1924-00-T1**	**SOIL**			**12/19/24**			**12/20/24**
			Mercury	7471B		12/20/24	12/20/24	
			Metals ICP-TAL	6020B		01/06/25	01/06/25	

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Hit Summary Sheet
SW-846

SDG No.: P5365 **Order ID:** P5365

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-SB01I-4.5-121924-00-T1									
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Aluminum	4070	D	2.39	4.27	8.54	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Antimony	0.077	JD	0.043	0.32	0.85	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Arsenic	1.61	D	0.038	0.11	0.43	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Barium	19.4	D	0.16	0.53	4.27	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Beryllium	0.31	JD	0.11	0.32	0.43	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Calcium	304	D	28.8	81.1	213	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Chromium	9.40	D	0.10	0.21	0.85	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Cobalt	3.51	D	0.034	0.11	0.43	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Copper	5.53	D	0.24	0.43	0.85	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Iron	9450	D	4.74	5.34	21.3	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Lead	3.12	D	0.064	0.32	0.43	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Magnesium	887	D	11.5	81.1	213	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Manganese	112	D	0.14	0.21	0.43	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Nickel	4.47	D	0.068	0.11	0.43	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Mercury	0.0080	J	0.0060	0.011	0.013	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Potassium	777	D	17.0	81.1	213	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Sodium	41.4	JD	26.1	107	213	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Thallium	0.10	JD	0.043	0.21	0.43	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Vanadium	14.3	D	0.034	0.11	2.13	mg/Kg
P5365-01	TAPFTA-SB01I-4.5-121924-00-T	SOIL	Zinc	11.7	D	0.56	0.64	2.13	mg/Kg

SAMPLE DATA

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

Report of Analysis

Client:	Weston Solutions	Date Collected:	12/19/24
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	12/20/24
Client Sample ID:	TAPFTA-SB01I-4.5-121924-00-T1	SDG No.:	P5365
Lab Sample ID:	P5365-01	Matrix:	SOIL
Level (low/med):	low	% Solid:	90.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	4070	D	5	2.39	4.27	8.54	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-36-0	Antimony	0.077	JD	5	0.043	0.32	0.85	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-38-2	Arsenic	1.61	DN	5	0.038	0.11	0.43	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-39-3	Barium	19.4	DN	5	0.16	0.53	4.27	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-41-7	Beryllium	0.31	JDN	5	0.11	0.32	0.43	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-43-9	Cadmium	0.32	UDN	5	0.12	0.32	0.43	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-70-2	Calcium	304	D	5	28.8	81.1	213	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-47-3	Chromium	9.40	DN	5	0.10	0.21	0.85	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-48-4	Cobalt	3.51	DN	5	0.034	0.11	0.43	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-50-8	Copper	5.53	D	5	0.24	0.43	0.85	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7439-89-6	Iron	9450	D	5	4.74	5.34	21.3	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7439-92-1	Lead	3.12	D	5	0.064	0.32	0.43	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7439-95-4	Magnesium	887	D	5	11.5	81.1	213	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7439-96-5	Manganese	112	D	5	0.14	0.21	0.43	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7439-97-6	Mercury	0.0080	J	1	0.0060	0.011	0.013	mg/Kg	12/20/24 10:15	12/20/24 14:47	SW7471B	
7440-02-0	Nickel	4.47	DN	5	0.068	0.11	0.43	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-09-7	Potassium	777	D	5	17.0	81.1	213	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7782-49-2	Selenium	1.92	UDN	5	0.51	1.92	2.13	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-22-4	Silver	0.21	UDN	5	0.11	0.21	0.43	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-23-5	Sodium	41.4	JD	5	26.1	107	213	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-28-0	Thallium	0.10	JDN	5	0.043	0.21	0.43	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-62-2	Vanadium	14.3	DN	5	0.034	0.11	2.13	mg/Kg	01/06/25 09:05	01/06/25 15:03	SW6020	SW3050
7440-66-6	Zinc	11.7	D	5	0.56	0.64	2.13	mg/Kg	01/06/25 09:05	01/06/25 15:03	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

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

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

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
ICV28	Mercury	4.01	4.0	100	90 - 110	CV	12/20/2024	14:13	LB134050

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

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
CCV57	Mercury	5.05	5.0	101	90 - 110	CV	12/20/2024	14:17	LB134050
CCV58	Mercury	4.92	5.0	98	90 - 110	CV	12/20/2024	14:43	LB134050
CCV59	Mercury	4.90	5.0	98	90 - 110	CV	12/20/2024	15:01	LB134050

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

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	478	500	96	90 - 110	P	01/06/2025	14:05	LB134187
	Antimony	205	200	103	90 - 110	P	01/06/2025	14:05	LB134187
	Arsenic	212	200	106	90 - 110	P	01/06/2025	14:05	LB134187
	Barium	98.9	100	99	90 - 110	P	01/06/2025	14:05	LB134187
	Beryllium	105	100	105	90 - 110	P	01/06/2025	14:05	LB134187
	Cadmium	104	100	104	90 - 110	P	01/06/2025	14:05	LB134187
	Calcium	2050	2000	102	90 - 110	P	01/06/2025	14:05	LB134187
	Chromium	104	100	104	90 - 110	P	01/06/2025	14:05	LB134187
	Cobalt	104	100	104	90 - 110	P	01/06/2025	14:05	LB134187
	Copper	99.4	100	99	90 - 110	P	01/06/2025	14:05	LB134187
	Iron	2160	2000	108	90 - 110	P	01/06/2025	14:05	LB134187
	Lead	190	200	95	90 - 110	P	01/06/2025	14:05	LB134187
	Magnesium	1180	1200	98	90 - 110	P	01/06/2025	14:05	LB134187
	Manganese	101	100	101	90 - 110	P	01/06/2025	14:05	LB134187
	Nickel	109	110	99	90 - 110	P	01/06/2025	14:05	LB134187
	Potassium	1990	2000	100	90 - 110	P	01/06/2025	14:05	LB134187
	Selenium	214	200	107	90 - 110	P	01/06/2025	14:05	LB134187
	Silver	49.9	50.0	100	90 - 110	P	01/06/2025	14:05	LB134187
	Sodium	1990	2000	100	90 - 110	P	01/06/2025	14:05	LB134187
	Thallium	195	210	93	90 - 110	P	01/06/2025	14:05	LB134187
	Vanadium	99.6	100	100	90 - 110	P	01/06/2025	14:05	LB134187
	Zinc	202	200	101	90 - 110	P	01/06/2025	14:05	LB134187

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Aluminum	19.3	20.0	96	80 - 120	P	01/06/2025	14:09	LB134187
	Antimony	2.21	2.0	110	80 - 120	P	01/06/2025	14:09	LB134187
	Arsenic	1.17	1.0	117	80 - 120	P	01/06/2025	14:09	LB134187
	Barium	10.3	10.0	103	80 - 120	P	01/06/2025	14:09	LB134187
	Beryllium	1.15	1.0	115	80 - 120	P	01/06/2025	14:09	LB134187
	Cadmium	1.07	1.0	107	80 - 120	P	01/06/2025	14:09	LB134187
	Calcium	556	500	111	80 - 120	P	01/06/2025	14:09	LB134187
	Chromium	2.15	2.0	108	80 - 120	P	01/06/2025	14:09	LB134187
	Cobalt	1.10	1.0	110	80 - 120	P	01/06/2025	14:09	LB134187
	Copper	2.05	2.0	102	80 - 120	P	01/06/2025	14:09	LB134187
	Iron	59.6	50.0	119	80 - 120	P	01/06/2025	14:09	LB134187
	Lead	1.00	1.0	100	80 - 120	P	01/06/2025	14:09	LB134187
	Magnesium	543	500	109	80 - 120	P	01/06/2025	14:09	LB134187
	Manganese	1.07	1.0	107	80 - 120	P	01/06/2025	14:09	LB134187
	Nickel	1.07	1.0	107	80 - 120	P	01/06/2025	14:09	LB134187
	Potassium	525	500	105	80 - 120	P	01/06/2025	14:09	LB134187
	Selenium	5.61	5.0	112	80 - 120	P	01/06/2025	14:09	LB134187
	Silver	1.10	1.0	110	80 - 120	P	01/06/2025	14:09	LB134187
	Sodium	518	500	104	80 - 120	P	01/06/2025	14:09	LB134187
	Thallium	0.99	1.0	99	80 - 120	P	01/06/2025	14:09	LB134187
	Vanadium	5.26	5.0	105	80 - 120	P	01/06/2025	14:09	LB134187
	Zinc	5.39	5.0	108	80 - 120	P	01/06/2025	14:09	LB134187

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

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	48800	50000	98	90 - 110	P	01/06/2025	14:34	LB134187
	Antimony	480	500	96	90 - 110	P	01/06/2025	14:34	LB134187
	Arsenic	478	500	96	90 - 110	P	01/06/2025	14:34	LB134187
	Barium	2420	2500	97	90 - 110	P	01/06/2025	14:34	LB134187
	Beryllium	470	500	94	90 - 110	P	01/06/2025	14:34	LB134187
	Cadmium	455	500	91	90 - 110	P	01/06/2025	14:34	LB134187
	Calcium	251000	250000	100	90 - 110	P	01/06/2025	14:34	LB134187
	Chromium	489	500	98	90 - 110	P	01/06/2025	14:34	LB134187
	Cobalt	476	500	95	90 - 110	P	01/06/2025	14:34	LB134187
	Copper	4650	5000	93	90 - 110	P	01/06/2025	14:34	LB134187
	Iron	126000	125000	101	90 - 110	P	01/06/2025	14:34	LB134187
	Lead	2490	2500	100	90 - 110	P	01/06/2025	14:34	LB134187
	Magnesium	246000	250000	98	90 - 110	P	01/06/2025	14:34	LB134187
	Manganese	4810	5000	96	90 - 110	P	01/06/2025	14:34	LB134187
	Nickel	469	500	94	90 - 110	P	01/06/2025	14:34	LB134187
	Potassium	121000	125000	97	90 - 110	P	01/06/2025	14:34	LB134187
	Selenium	469	500	94	90 - 110	P	01/06/2025	14:34	LB134187
	Silver	471	500	94	90 - 110	P	01/06/2025	14:34	LB134187
	Sodium	245000	250000	98	90 - 110	P	01/06/2025	14:34	LB134187
	Thallium	498	500	100	90 - 110	P	01/06/2025	14:34	LB134187
	Vanadium	485	500	97	90 - 110	P	01/06/2025	14:34	LB134187
	Zinc	4590	5000	92	90 - 110	P	01/06/2025	14:34	LB134187
CCV02	Aluminum	49700	50000	99	90 - 110	P	01/06/2025	15:35	LB134187
	Antimony	482	500	96	90 - 110	P	01/06/2025	15:35	LB134187
	Arsenic	483	500	96	90 - 110	P	01/06/2025	15:35	LB134187
	Barium	2440	2500	98	90 - 110	P	01/06/2025	15:35	LB134187
	Beryllium	491	500	98	90 - 110	P	01/06/2025	15:35	LB134187
	Cadmium	459	500	92	90 - 110	P	01/06/2025	15:35	LB134187
	Calcium	251000	250000	100	90 - 110	P	01/06/2025	15:35	LB134187
	Chromium	486	500	97	90 - 110	P	01/06/2025	15:35	LB134187
	Cobalt	481	500	96	90 - 110	P	01/06/2025	15:35	LB134187
	Copper	4680	5000	94	90 - 110	P	01/06/2025	15:35	LB134187
	Iron	128000	125000	102	90 - 110	P	01/06/2025	15:35	LB134187
	Lead	2510	2500	100	90 - 110	P	01/06/2025	15:35	LB134187

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

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	01/06/2025	15:35	LB134187
	Manganese	4850	5000	97	90 - 110	P	01/06/2025	15:35	LB134187
	Nickel	471	500	94	90 - 110	P	01/06/2025	15:35	LB134187
	Potassium	121000	125000	96	90 - 110	P	01/06/2025	15:35	LB134187
	Selenium	476	500	95	90 - 110	P	01/06/2025	15:35	LB134187
	Silver	474	500	95	90 - 110	P	01/06/2025	15:35	LB134187
	Sodium	247000	250000	99	90 - 110	P	01/06/2025	15:35	LB134187
	Thallium	502	500	100	90 - 110	P	01/06/2025	15:35	LB134187
	Vanadium	489	500	98	90 - 110	P	01/06/2025	15:35	LB134187
	Zinc	4630	5000	93	90 - 110	P	01/06/2025	15:35	LB134187

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CRDL STANDARD FOR AA & ICP

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

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	0.19	0.2	97	40 - 160	CV	12/20/2024	14:22	LB134050
CRI	Aluminum	20.1	20.0	100	70 - 130	P	01/06/2025	14:54	LB134187
	Antimony	2.10	2.0	105	70 - 130	P	01/06/2025	14:54	LB134187
	Arsenic	1.18	1.0	118	70 - 130	P	01/06/2025	14:54	LB134187
	Barium	10.3	10.0	103	70 - 130	P	01/06/2025	14:54	LB134187
	Beryllium	1.06	1.0	106	70 - 130	P	01/06/2025	14:54	LB134187
	Cadmium	1.07	1.0	107	70 - 130	P	01/06/2025	14:54	LB134187
	Calcium	554	500	111	70 - 130	P	01/06/2025	14:54	LB134187
	Chromium	2.21	2.0	110	70 - 130	P	01/06/2025	14:54	LB134187
	Cobalt	1.11	1.0	111	50 - 150	P	01/06/2025	14:54	LB134187
	Copper	2.11	2.0	106	70 - 130	P	01/06/2025	14:54	LB134187
	Iron	59.2	50.0	118	70 - 130	P	01/06/2025	14:54	LB134187
	Lead	0.98	1.0	98	70 - 130	P	01/06/2025	14:54	LB134187
	Magnesium	551	500	110	70 - 130	P	01/06/2025	14:54	LB134187
	Manganese	1.13	1.0	113	50 - 150	P	01/06/2025	14:54	LB134187
	Nickel	1.12	1.0	112	70 - 130	P	01/06/2025	14:54	LB134187
	Potassium	528	500	106	70 - 130	P	01/06/2025	14:54	LB134187
	Selenium	5.32	5.0	106	70 - 130	P	01/06/2025	14:54	LB134187
	Silver	1.06	1.0	106	70 - 130	P	01/06/2025	14:54	LB134187
	Sodium	523	500	104	70 - 130	P	01/06/2025	14:54	LB134187
	Thallium	0.98	1.0	98	70 - 130	P	01/06/2025	14:54	LB134187
	Vanadium	5.21	5.0	104	70 - 130	P	01/06/2025	14:54	LB134187
	Zinc	5.47	5.0	109	50 - 150	P	01/06/2025	14:54	LB134187

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB28	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	12/20/2024	14:15	LB134050

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB57	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	12/20/2024	14:20	LB134050
CCB58	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	12/20/2024	14:45	LB134050
CCB59	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	12/20/2024	15:03	LB134050

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

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	01/06/2025	14:24	LB134187
	Antimony	2.00	+/-2.00	U	0.25	2.00	P	01/06/2025	14:24	LB134187
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	01/06/2025	14:24	LB134187
	Barium	10.0	+/-10.0	U	1.25	10.0	P	01/06/2025	14:24	LB134187
	Beryllium	1.00	+/-1.00	U	0.25	1.00	P	01/06/2025	14:24	LB134187
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	01/06/2025	14:24	LB134187
	Calcium	500	+/-500	U	190	500	P	01/06/2025	14:24	LB134187
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	01/06/2025	14:24	LB134187
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	01/06/2025	14:24	LB134187
	Copper	2.00	+/-2.00	U	1.50	2.00	P	01/06/2025	14:24	LB134187
	Iron	50.0	+/-50.0	U	25.0	50.0	P	01/06/2025	14:24	LB134187
	Lead	1.00	+/-1.00	U	0.75	1.00	P	01/06/2025	14:24	LB134187
	Magnesium	500	+/-500	U	190	500	P	01/06/2025	14:24	LB134187
	Manganese	1.00	+/-1.00	U	0.75	1.00	P	01/06/2025	14:24	LB134187
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	01/06/2025	14:24	LB134187
	Potassium	500	+/-500	U	190	500	P	01/06/2025	14:24	LB134187
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	01/06/2025	14:24	LB134187
	Silver	1.00	+/-1.00	U	0.50	1.00	P	01/06/2025	14:24	LB134187
	Sodium	500	+/-500	U	190	500	P	01/06/2025	14:24	LB134187
	Thallium	1.00	+/-1.00	U	0.50	1.00	P	01/06/2025	14:24	LB134187
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	01/06/2025	14:24	LB134187
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	01/06/2025	14:24	LB134187

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

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	01/06/2025	14:41	LB134187
	Antimony	2.00	+/-2.00	U	0.25	2.00	P	01/06/2025	14:41	LB134187
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	01/06/2025	14:41	LB134187
	Barium	10.0	+/-10.0	U	1.25	10.0	P	01/06/2025	14:41	LB134187
	Beryllium	1.00	+/-1.00	U	0.25	1.00	P	01/06/2025	14:41	LB134187
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	01/06/2025	14:41	LB134187
	Calcium	500	+/-500	U	190	500	P	01/06/2025	14:41	LB134187
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	01/06/2025	14:41	LB134187
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	01/06/2025	14:41	LB134187
	Copper	2.00	+/-2.00	U	1.50	2.00	P	01/06/2025	14:41	LB134187
	Iron	50.0	+/-50.0	U	25.0	50.0	P	01/06/2025	14:41	LB134187
	Lead	1.00	+/-1.00	U	0.75	1.00	P	01/06/2025	14:41	LB134187
	Magnesium	500	+/-500	U	190	500	P	01/06/2025	14:41	LB134187
	Manganese	1.00	+/-1.00	U	0.75	1.00	P	01/06/2025	14:41	LB134187
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	01/06/2025	14:41	LB134187
	Potassium	500	+/-500	U	190	500	P	01/06/2025	14:41	LB134187
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	01/06/2025	14:41	LB134187
	Silver	1.00	+/-1.00	U	0.50	1.00	P	01/06/2025	14:41	LB134187
	Sodium	500	+/-500	U	190	500	P	01/06/2025	14:41	LB134187
	Thallium	1.00	+/-1.00	U	0.50	1.00	P	01/06/2025	14:41	LB134187
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	01/06/2025	14:41	LB134187
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	01/06/2025	14:41	LB134187
CCB02	Aluminum	3.09	+/-20.0	J	10.0	20.0	P	01/06/2025	15:38	LB134187
	Antimony	0.13	+/-2.00	J	0.25	2.00	P	01/06/2025	15:38	LB134187
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	01/06/2025	15:38	LB134187
	Barium	10.0	+/-10.0	U	1.25	10.0	P	01/06/2025	15:38	LB134187
	Beryllium	1.00	+/-1.00	U	0.25	1.00	P	01/06/2025	15:38	LB134187
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	01/06/2025	15:38	LB134187
	Calcium	500	+/-500	U	190	500	P	01/06/2025	15:38	LB134187
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	01/06/2025	15:38	LB134187
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	01/06/2025	15:38	LB134187
	Copper	2.00	+/-2.00	U	1.50	2.00	P	01/06/2025	15:38	LB134187
	Iron	50.0	+/-50.0	U	25.0	50.0	P	01/06/2025	15:38	LB134187
	Lead	0.17	+/-1.00	J	0.75	1.00	P	01/06/2025	15:38	LB134187
	Magnesium	500	+/-500	U	190	500	P	01/06/2025	15:38	LB134187
	Manganese	0.32	+/-1.00	J	0.75	1.00	P	01/06/2025	15:38	LB134187
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	01/06/2025	15:38	LB134187
	Potassium	500	+/-500	U	190	500	P	01/06/2025	15:38	LB134187
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	01/06/2025	15:38	LB134187

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

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	01/06/2025	15:38	LB134187
	Sodium	500	+/-500	U	190	500	P	01/06/2025	15:38	LB134187
	Thallium	1.00	+/-1.00	U	0.50	1.00	P	01/06/2025	15:38	LB134187
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	01/06/2025	15:38	LB134187
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	01/06/2025	15:38	LB134187

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Metals
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PREPARATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5365

Instrument: CV1

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB165798BL		**SOLID**		**Batch Number:**		**PB165798**		**Prep Date:**	**12/20/2024**	
	Mercury	0.013	<0.013	U	0.010	0.013	CV	12/20/2024	14:29	LB134050

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Metals
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PREPARATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5365

Instrument: P7

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB165957BL		**SOLID**		**Batch Number:**		**PB165957**		**Prep Date:**	**01/06/2025**	
	Aluminum	1.55	<1.55	U	0.78	1.55	P	01/06/2025	14:58	LB134187
	Antimony	0.16	<0.16	U	0.058	0.16	P	01/06/2025	14:58	LB134187
	Arsenic	0.078	<0.078	U	0.019	0.078	P	01/06/2025	14:58	LB134187
	Barium	0.78	<0.78	U	0.097	0.78	P	01/06/2025	14:58	LB134187
	Beryllium	0.078	<0.078	U	0.058	0.078	P	01/06/2025	14:58	LB134187
	Cadmium	0.078	<0.078	U	0.058	0.078	P	01/06/2025	14:58	LB134187
	Calcium	38.8	<38.8	U	14.7	38.8	P	01/06/2025	14:58	LB134187
	Chromium	0.16	<0.16	U	0.039	0.16	P	01/06/2025	14:58	LB134187
	Cobalt	0.078	<0.078	U	0.019	0.078	P	01/06/2025	14:58	LB134187
	Copper	0.16	<0.16	U	0.078	0.16	P	01/06/2025	14:58	LB134187
	Iron	3.88	<3.88	U	0.97	3.88	P	01/06/2025	14:58	LB134187
	Lead	0.078	<0.078	U	0.058	0.078	P	01/06/2025	14:58	LB134187
	Magnesium	38.8	<38.8	U	14.7	38.8	P	01/06/2025	14:58	LB134187
	Manganese	0.078	<0.078	U	0.039	0.078	P	01/06/2025	14:58	LB134187
	Nickel	0.078	<0.078	U	0.019	0.078	P	01/06/2025	14:58	LB134187
	Potassium	38.8	<38.8	U	14.7	38.8	P	01/06/2025	14:58	LB134187
	Selenium	0.39	<0.39	U	0.35	0.39	P	01/06/2025	14:58	LB134187
	Silver	0.078	<0.078	U	0.039	0.078	P	01/06/2025	14:58	LB134187
	Sodium	38.8	<38.8	U	19.4	38.8	P	01/06/2025	14:58	LB134187
	Thallium	0.078	<0.078	U	0.039	0.078	P	01/06/2025	14:58	LB134187
	Vanadium	0.39	<0.39	U	0.019	0.39	P	01/06/2025	14:58	LB134187
	Zinc	0.39	<0.39	U	0.12	0.39	P	01/06/2025	14:58	LB134187

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

ICS Source: EPA **Instrument ID:** P7

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Aluminum	90800	100000	91	0	0	01/06/2025	14:27	LB134187
	Antimony	1.12	1.5	75	-2.5	5.5	01/06/2025	14:27	LB134187
	Arsenic	0.29	0.1	290	-1.9	2.1	01/06/2025	14:27	LB134187
	Barium	1.34	1.2	112	-18.8	21.2	01/06/2025	14:27	LB134187
	Beryllium	0.32			-2	2	01/06/2025	14:27	LB134187
	Cadmium	0.31	0.7	44	-1.3	2.7	01/06/2025	14:27	LB134187
	Calcium	101000	100000	101	0	0	01/06/2025	14:27	LB134187
	Chromium	20.5	21.0	98	17	25	01/06/2025	14:27	LB134187
	Cobalt	1.32	1.0	132	-1	3	01/06/2025	14:27	LB134187
	Copper	7.48	8.0	94	4	12	01/06/2025	14:27	LB134187
	Iron	106000	100000	106	0	0	01/06/2025	14:27	LB134187
	Lead	4.73	4.0	118	2	6	01/06/2025	14:27	LB134187
	Magnesium	99700	100000	100	0	0	01/06/2025	14:27	LB134187
	Manganese	8.14	7.0	116	5	9	01/06/2025	14:27	LB134187
	Nickel	5.57	6.0	93	4	8	01/06/2025	14:27	LB134187
	Potassium	97900	100000	98	0	0	01/06/2025	14:27	LB134187
	Selenium	0.22	0.3	73	-9.7	10	01/06/2025	14:27	LB134187
	Silver	0.040			-2	2	01/06/2025	14:27	LB134187
	Sodium	101000	100000	101	0	0	01/06/2025	14:27	LB134187
	Thallium	0.16			-2	2	01/06/2025	14:27	LB134187
	Vanadium	0.22	0.5	44	-9.5	10.5	01/06/2025	14:27	LB134187
	Zinc	11.3	11.0	103	7	15	01/06/2025	14:27	LB134187
ICSAB01	Aluminum	89700	100000	90	0	0	01/06/2025	14:31	LB134187
	Antimony	20.9	22.0	95	18	26	01/06/2025	14:31	LB134187
	Arsenic	20.9	19.0	110	16.2	21.9	01/06/2025	14:31	LB134187
	Barium	20.8	22.0	94	2	42	01/06/2025	14:31	LB134187
	Beryllium	20.4	19.0	107	16.2	21.9	01/06/2025	14:31	LB134187
	Cadmium	19.7	20.0	98	17	23	01/06/2025	14:31	LB134187
	Calcium	102000	100000	102	0	0	01/06/2025	14:31	LB134187
	Chromium	40.3	40.0	101	34	46	01/06/2025	14:31	LB134187
	Cobalt	21.6	20.0	108	17	23	01/06/2025	14:31	LB134187
	Copper	26.2	25.0	105	21	29	01/06/2025	14:31	LB134187
	Iron	105000	100000	105	0	0	01/06/2025	14:31	LB134187
	Lead	23.8	25.0	95	21.3	28.8	01/06/2025	14:31	LB134187
	Magnesium	97900	100000	98	0	0	01/06/2025	14:31	LB134187
	Manganese	28.1	27.0	104	23	31.1	01/06/2025	14:31	LB134187
	Nickel	25.9	24.0	108	20.4	27.6	01/06/2025	14:31	LB134187
	Potassium	96500	100000	96	0	0	01/06/2025	14:31	LB134187
	Selenium	20.5	19.0	108	9	29	01/06/2025	14:31	LB134187
	Silver	18.9	18.0	105	15.3	20.7	01/06/2025	14:31	LB134187
	Sodium	99000	100000	99	0	0	01/06/2025	14:31	LB134187
	Thallium	19.8	21.0	94	17.9	24.2	01/06/2025	14:31	LB134187

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

ICS Source: EPA **Instrument ID:** P7

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSAB01	Vanadium	20.1	19.0	106	9	29	01/06/2025	14:31	LB134187
	Zinc	31.6	29.0	109	25	33	01/06/2025	14:31	LB134187

METAL QC DATA

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metals
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MATRIX SPIKE SUMMARY

client: Weston Solutions **level:** low **sdg no.:** P5365

contract: WEST04 **lab code:** CHEM **case no.:** P5365 **sas no.:** P5365

matrix: Solid **sample id:** P5365-01 **client id:** TAPFTA-SB01I-4.5-121924-00-T1MS

Percent Solids for Sample: 90.1 **Spiked ID:** P5365-01MS **Percent Solids for Spike Sample:** 90.1

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	78 - 124	4110	D	4070	D	760	6		P
Antimony	mg/Kg	72 - 124	47.1	D	0.077	JD	37.8	124		P
Arsenic	mg/Kg	82 - 118	51.0	D	1.61	D	37.8	131	N	P
Barium	mg/Kg	86 - 116	249	D	19.4	D	190	122	N	P
Beryllium	mg/Kg	80 - 120	49.1	D	0.31	JD	37.8	129	N	P
Cadmium	mg/Kg	84 - 116	50.5	D	0.43	UD	37.8	134	N	P
Calcium	mg/Kg	86 - 118	4070	D	304	D	3800	100		P
Chromium	mg/Kg	83 - 119	54.6	D	9.40	D	37.8	120	N	P
Cobalt	mg/Kg	84 - 115	51.7	D	3.51	D	37.8	128	N	P
Copper	mg/Kg	84 - 119	391	D	5.53	D	380	102		P
Iron	mg/Kg	81 - 124	10200	D	9450	D	1900	41		P
Lead	mg/Kg	84 - 118	183	D	3.12	D	190	95		P
Magnesium	mg/Kg	80 - 123	4400	D	887	D	3800	93		P
Manganese	mg/Kg	85 - 116	443	D	112	D	380	88		P
Nickel	mg/Kg	84 - 119	52.5	D	4.47	D	37.8	127	N	P
Mercury	mg/Kg	80 - 124	0.29		0.0080	J	0.29	99		CV
Potassium	mg/Kg	85 - 119	2910	D	777	D	1900	113		P
Selenium	mg/Kg	80 - 119	48.9	D	2.13	UD	37.8	129	N	P
Silver	mg/Kg	83 - 118	0.12	JD	0.43	UD	37.8	0	N	P
Sodium	mg/Kg	79 - 125	3710	D	41.4	JD	3800	97		P
Thallium	mg/Kg	83 - 118	47.1	D	0.10	JD	37.8	124	N	P
Vanadium	mg/Kg	82 - 116	59.5	D	14.3	D	37.8	120	N	P
Zinc	mg/Kg	82 - 119	380	D	11.7	D	380	98		P

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: Weston Solutions **level:** low **sdg no.:** P5365

contract: WEST04 **lab code:** CHEM **case no.:** P5365 **sas no.:** P5365

matrix: Solid **sample id:** P5365-01 **client id:** TAPFTA-SB01I-4.5-121924-00-T1MSD

Percent Solids for Sample: 90.1 **Spiked ID:** P5365-01MSD **Percent Solids for Spike Sample:** 90.1

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	78 - 124	4770	D	4070	D	880	80		P
Antimony	mg/Kg	72 - 124	54.6	D	0.077	JD	44.0	124		P
Arsenic	mg/Kg	82 - 118	58.7	D	1.61	D	44.0	130	N	P
Barium	mg/Kg	86 - 116	290	D	19.4	D	220	123	N	P
Beryllium	mg/Kg	80 - 120	56.5	D	0.31	JD	44.0	127	N	P
Cadmium	mg/Kg	84 - 116	58.5	D	0.43	UD	44.0	133	N	P
Calcium	mg/Kg	86 - 118	4660	D	304	D	4400	99		P
Chromium	mg/Kg	83 - 119	63.2	D	9.40	D	44.0	122	N	P
Cobalt	mg/Kg	84 - 115	59.6	D	3.51	D	44.0	127	N	P
Copper	mg/Kg	84 - 119	452	D	5.53	D	440	101		P
Iron	mg/Kg	81 - 124	11800	D	9450	D	2200	105		P
Lead	mg/Kg	84 - 118	212	D	3.12	D	220	95		P
Magnesium	mg/Kg	80 - 123	5080	D	887	D	4400	95		P
Manganese	mg/Kg	85 - 116	515	D	112	D	440	91		P
Nickel	mg/Kg	84 - 119	61.0	D	4.47	D	44.0	128	N	P
Mercury	mg/Kg	80 - 124	0.30		0.0080	J	0.28	106		CV
Potassium	mg/Kg	85 - 119	3360	D	777	D	2200	117		P
Selenium	mg/Kg	80 - 119	56.8	D	2.13	UD	44.0	129	N	P
Silver	mg/Kg	83 - 118	0.14	JD	0.43	UD	44.0	0	N	P
Sodium	mg/Kg	79 - 125	4310	D	41.4	JD	4400	97		P
Thallium	mg/Kg	83 - 118	54.9	D	0.10	JD	44.0	124	N	P
Vanadium	mg/Kg	82 - 116	69.2	D	14.3	D	44.0	125	N	P
Zinc	mg/Kg	82 - 119	441	D	11.7	D	440	97		P

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Metals
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POST DIGEST SPIKE SUMMARY

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

Matrix: Solid **Level:** LOW **Client ID:** TAPFTA-SB01I-4.5-121924-00-T1A

Sample ID: P5365-01 **Spiked ID:** P5365-01A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/Kg	82 - 118	57.3	D	1.61	D	42.7	130		P
Barium	mg/Kg	86 - 116	282	D	19.4	D	210	125		P
Beryllium	mg/Kg	80 - 120	55.6	D	0.31	JD	42.7	130		P
Cadmium	mg/Kg	84 - 116	56.6	D	0.43	UD	42.7	133		P
Chromium	mg/Kg	83 - 119	61.4	D	9.40	D	42.7	122		P
Cobalt	mg/Kg	84 - 115	57.9	D	3.51	D	42.7	127		P
Nickel	mg/Kg	84 - 119	59.1	D	4.47	D	42.7	128		P
Selenium	mg/Kg	80 - 119	55.6	D	2.13	UD	42.7	130		P
Silver	mg/Kg	83 - 118	0.13	JD	0.43	UD	42.7	0		P
Thallium	mg/Kg	83 - 118	51.9	D	0.10	JD	42.7	121		P
Vanadium	mg/Kg	82 - 116	66.8	D	14.3	D	42.7	123		P

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Weston Solutions **Level:** LOW **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

Matrix: Solid **Sample ID:** P5365-01 **Client ID:** TAPFTA-SB01I-4.5-121924-00-T1DUP

Percent Solids for Sample: 90.1 **Duplicate ID** P5365-01DUP **Percent Solids for Spike Sample:** 90.1

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	4070	D	3750	D	8		P
Antimony	mg/Kg	20	0.077	JD	0.79	UD	200		P
Arsenic	mg/Kg	20	1.61	D	1.54	D	4		P
Barium	mg/Kg	20	19.4	D	18.3	D	6		P
Beryllium	mg/Kg	20	0.31	JD	0.27	JD	13		P
Cadmium	mg/Kg	20	0.43	UD	0.40	UD			P
Calcium	mg/Kg	20	304	D	284	D	7		P
Chromium	mg/Kg	20	9.40	D	8.74	D	7		P
Cobalt	mg/Kg	20	3.51	D	3.25	D	8		P
Copper	mg/Kg	20	5.53	D	5.03	D	9		P
Iron	mg/Kg	20	9450	D	8810	D	7		P
Lead	mg/Kg	20	3.12	D	2.87	D	8		P
Magnesium	mg/Kg	20	887	D	817	D	8		P
Manganese	mg/Kg	20	112	D	104	D	7		P
Nickel	mg/Kg	20	4.47	D	4.07	D	9		P
Mercury	mg/Kg	20	0.0080	J	0.0080	J	0		CV
Potassium	mg/Kg	20	777	D	724	D	7		P
Selenium	mg/Kg	20	2.13	UD	1.98	UD			P
Silver	mg/Kg	20	0.43	UD	0.40	UD			P
Sodium	mg/Kg	20	41.4	JD	36.2	JD	13		P
Thallium	mg/Kg	20	0.10	JD	0.075	JD	31		P
Vanadium	mg/Kg	20	14.3	D	13.1	D	9		P
Zinc	mg/Kg	20	11.7	D	10.6	D	10		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.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

Matrix: Solid **Sample ID:** P5365-01MS **Client ID:** TAPFTA-SB01I-4.5-121924-00-T1MSD

Percent Solids for Sample: 90.1 **Duplicate ID** P5365-01MSD **Percent Solids for Spike Sample:** 90.1

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	4110	D	4770	D	15		P
Antimony	mg/Kg	20	47.1	D	54.6	D	15		P
Arsenic	mg/Kg	20	51.0	D	58.7	D	14		P
Barium	mg/Kg	20	249	D	290	D	15		P
Beryllium	mg/Kg	20	49.1	D	56.5	D	14		P
Cadmium	mg/Kg	20	50.5	D	58.5	D	15		P
Calcium	mg/Kg	20	4070	D	4660	D	14		P
Chromium	mg/Kg	20	54.6	D	63.2	D	15		P
Cobalt	mg/Kg	20	51.7	D	59.6	D	14		P
Copper	mg/Kg	20	391	D	452	D	14		P
Iron	mg/Kg	20	10200	D	11800	D	15		P
Lead	mg/Kg	20	183	D	212	D	15		P
Magnesium	mg/Kg	20	4400	D	5080	D	14		P
Manganese	mg/Kg	20	443	D	515	D	15		P
Nickel	mg/Kg	20	52.5	D	61.0	D	15		P
Mercury	mg/Kg	20	0.29		0.30		3		CV
Potassium	mg/Kg	20	2910	D	3360	D	14		P
Selenium	mg/Kg	20	48.9	D	56.8	D	15		P
Silver	mg/Kg	20	0.12	JD	0.14	JD	12		P
Sodium	mg/Kg	20	3710	D	4310	D	15		P
Thallium	mg/Kg	20	47.1	D	54.9	D	15		P
Vanadium	mg/Kg	20	59.5	D	69.2	D	15		P
Zinc	mg/Kg	20	380	D	441	D	15		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.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB165798BS							
Mercury	mg/Kg	0.25	0.26		106	80 - 124	CV

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Weston Solutions **SDG No.:** P5365

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5365 **SAS No.:** P5365

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB165957BS							
Aluminum	mg/Kg	780	772		99	78 - 124	P
Antimony	mg/Kg	38.8	41.2		106	72 - 124	P
Arsenic	mg/Kg	38.8	39.1		101	82 - 118	P
Barium	mg/Kg	190	207		109	86 - 116	P
Beryllium	mg/Kg	38.8	41.9		108	80 - 120	P
Cadmium	mg/Kg	38.8	40.6		105	84 - 116	P
Calcium	mg/Kg	3900	4230		108	86 - 118	P
Chromium	mg/Kg	38.8	39.1		101	83 - 119	P
Cobalt	mg/Kg	38.8	39.9		103	84 - 115	P
Copper	mg/Kg	390	398		102	84 - 119	P
Iron	mg/Kg	1900	2070		109	81 - 124	P
Lead	mg/Kg	190	207		109	84 - 118	P
Magnesium	mg/Kg	3900	3900		100	80 - 123	P
Manganese	mg/Kg	390	390		100	85 - 116	P
Nickel	mg/Kg	38.8	39.6		102	84 - 119	P
Potassium	mg/Kg	1900	1910		100	85 - 119	P
Selenium	mg/Kg	38.8	41.8		108	80 - 119	P
Silver	mg/Kg	38.8	42.4		109	83 - 118	P
Sodium	mg/Kg	3900	4000		103	79 - 125	P
Thallium	mg/Kg	38.8	41.3		106	83 - 118	P
Vanadium	mg/Kg	38.8	39.2		101	82 - 116	P
Zinc	mg/Kg	390	398		102	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.: P5365 | Sas No.: P5365 | SDG No.: P5365

Instrument ID: P7 | Start Date : 01/06/2025

Run Number: LB134187 | End Date : 01/06/2025

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	1315	100		100		100		100		100	
S2	S2	1319	102		100		100		99		100	
S3	S3	1325	106		100		99		98		101	
S4	S4	1328	109		96		97		96		101	
S5	S5	1331	111		92		95		92		101	
S6	S6	1334	111		88		91		88		100	
S7	S7	1336	110		87		91		86		98	
S8	S8	1339	114		91		89		79		91	
ICV01	ICV01	1405	116		98		100		99		104	
LLICV01	LLICV01	1409	112		97		98		97		101	
ICB01	ICB01	1424	112		99		99		98		102	
ICSA01	ICSA01	1427	113		92		96		89		103	
ICSAB01	ICSAB01	1431	111		93		97		91		106	
CCV01	CCV01	1434	109		90		94		86		101	
CCB01	CCB01	1441	113		95		98		97		104	
CRI	CRI	1454	112		100		100		100		106	
PB165957BL	PB165957BL	1458	110		99		100		99		105	
PB165957BS	PB165957BS	1501	105		88		91		87		98	
P5365-01	TAPFTA-SB01	1503	117		95		99		96		106	
P5365-01DUP	TAPFTA-SB01	1507	116		96		100		96		105	
P5365-01L	TAPFTA-SB01	1510	114		98		101		100		108	
P5365-01MS	TAPFTA-SB01	1513	115		98		103		98		107	
P5365-01MSD	TAPFTA-SB01	1516	115		99		103		99		107	
P5365-01A	TAPFTA-SB01	1519	113		99		102		98		106	
CCV02	CCV02	1535	109		90		92		84		100	
CCB02	CCB02	1538	118		93		97		96		105	

Internal Standard %RI Limit: 30 - 120

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Fax : 908 789 8922

FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Weston Solutions | Contract: WEST04

Lab Code: CHEM | Case no.: P5365 | Sas No.: P5365 | SDG No.: P5365

Instrument ID: P7 | Start Date : 01/06/2025

Run Number: LB134187 | End Date : 01/06/2025

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	1315	100		100		100		100		100	
S2	S2	1319	100		99		100		101		100	
S3	S3	1325	95		97		97		100		100	
S4	S4	1328	90		93		92		99		99	
S5	S5	1331	85		89		89		98		99	
S6	S6	1334	81		86		86		97		98	
S7	S7	1336	81		85		84		98		98	
S8	S8	1339	86		86		79		93		94	
ICV01	ICV01	1405	92		95		96		101		100	
LLICV01	LLICV01	1409	93		96		97		100		101	
ICB01	ICB01	1424	96		98		99		101		101	
ICSA01	ICSA01	1427	85		90		88		102		102	
ICSAB01	ICSAB01	1431	85		90		89		101		102	
CCV01	CCV01	1434	85		88		84		99		99	
CCB01	CCB01	1441	89		92		96		101		102	
CRI	CRI	1454	94		97		99		102		102	
PB165957BL	PB165957BL	1458	94		97		99		102		103	
PB165957BS	PB165957BS	1501	83		87		88		99		101	
P5365-01	TAPFTA-SB01	1503	90		95		96		102		104	
P5365-01DUP	TAPFTA-SB01	1507	91		96		97		103		104	
P5365-01L	TAPFTA-SB01	1510	91		96		98		103		104	
P5365-01MS	TAPFTA-SB01	1513	93		97		96		104		104	
P5365-01MSD	TAPFTA-SB01	1516	92		96		96		103		104	
P5365-01A	TAPFTA-SB01	1519	91		96		96		104		104	
CCV02	CCV02	1535	83		87		83		98		99	
CCB02	CCB02	1538	87		92		95		102		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.: P5365 Sas No.: P5365 SDG No.: P5365

Instrument ID: P7 Start Date : 01/06/2025

Run Number: LB134187 End Date : 01/06/2025

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	1315	100		100							
S2	S2	1319	99		100							
S3	S3	1325	101		102							
S4	S4	1328	101		103							
S5	S5	1331	100		103							
S6	S6	1334	100		102							
S7	S7	1336	100		102							
S8	S8	1339	92		84							
ICV01	ICV01	1405	104		108							
LLICV01	LLICV01	1409	101		105							
ICB01	ICB01	1424	103		104							
ICSA01	ICSA01	1427	105		103							
ICSAB01	ICSAB01	1431	107		105							
CCV01	CCV01	1434	103		100							
CCB01	CCB01	1441	105		109							
CRI	CRI	1454	104		109							
PB165957BL	PB165957BL	1458	105		108							
PB165957BS	PB165957BS	1501	97		99							
P5365-01	TAPFTA-SB01I	1503	106		111							
P5365-01DUP	TAPFTA-SB01I	1507	106		108							
P5365-01L	TAPFTA-SB01I	1510	107		111							
P5365-01MS	TAPFTA-SB01I	1513	107		109							
P5365-01MSD	TAPFTA-SB01I	1516	108		109							
P5365-01A	TAPFTA-SB01I	1519	107		111							
CCV02	CCV02	1535	101		99							
CCB02	CCB02	1538	106		110							

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.: P5365 Sas No.: P5365 SDG No.: P5365

Instrument ID: P7 Start Date : 01/06/2025

Run Number: LB134187 End Date : 01/06/2025

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Collision Cell									
			Element 209Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	S0	1315	100									
S2	S2	1319	101									
S3	S3	1325	101									
S4	S4	1328	100									
S5	S5	1331	100									
S6	S6	1334	98									
S7	S7	1336	96									
S8	S8	1339	85									
ICV01	ICV01	1405	103									
LLICV01	LLICV01	1409	103									
ICB01	ICB01	1424	103									
ICSA01	ICSA01	1427	99									
ICSAB01	ICSAB01	1431	98									
CCV01	CCV01	1434	94									
CCB01	CCB01	1441	105									
CRI	CRI	1454	105									
PB165957BL	PB165957BL	1458	104									
PB165957BS	PB165957BS	1501	100									
P5365-01	TAPFTA-SB01I	1503	106									
P5365-01DUP	TAPFTA-SB01I	1507	106									
P5365-01L	TAPFTA-SB01I	1510	107									
P5365-01MS	TAPFTA-SB01I	1513	104									
P5365-01MSD	TAPFTA-SB01I	1516	105									
P5365-01A	TAPFTA-SB01I	1519	104									
CCV02	CCV02	1535	94									
CCB02	CCB02	1538	105									

Internal Standard %RI Limit: 30 -120

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

TAPFTA-SB01I-4.5-121924-00-T1L

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

Lab Code: CHEM **Lb No.:** lb134187 **Lab Sample ID :** P5365-01L **SDG No.:** P5365

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	4070	D	3950	D	3		P
Antimony	0.077	JD	4.27	UD	44		P
Arsenic	1.61	D	1.54	JD	5		P
Barium	19.4	D	19.0	JD	2		P
Beryllium	0.31	JD	2.13	UD	4		P
Cadmium	0.43	UD	2.13	UD			P
Calcium	304	D	297	JD	2		P
Chromium	9.40	D	9.69	D	3		P
Cobalt	3.51	D	3.50	D	0		P
Copper	5.53	D	5.44	D	2		P
Iron	9450	D	9660	D	2		P
Lead	3.12	D	3.05	D	2		P
Magnesium	887	D	889	JD	0		P
Manganese	112	D	115	D	2		P
Nickel	4.47	D	4.29	D	4		P
Mercury	0.0080	J	0.066	U	100.0		CV
Potassium	777	D	774	JD	0		P
Selenium	2.13	UD	10.7	UD	100		P
Silver	0.43	UD	2.13	UD	55		P
Sodium	41.4	JD	1070	UD	31		P
Thallium	0.10	JD	2.13	UD	17		P
Vanadium	14.3	D	14.5	D	2		P
Zinc	11.7	D	11.5	D	1		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.:** P5365

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

Case No.: P5365 **SAS No.:** P5365

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB165798**						
P5365-01	TAPFTA-SB01I-4.5-121924-00-T1	SAM	SOLID	12/20/2024	0.59	35.0	90.10
P5365-01DUP	TAPFTA-SB01I-4.5-121924-00-T1DUP	DUP	SOLID	12/20/2024	0.58	35.0	90.10
P5365-01MS	TAPFTA-SB01I-4.5-121924-00-T1MS	MS	SOLID	12/20/2024	0.54	35.0	90.10
P5365-01MSD	TAPFTA-SB01I-4.5-121924-00-T1MSD	MSD	SOLID	12/20/2024	0.56	35.0	90.10
PB165798BL	PB165798BL	MB	SOLID	12/20/2024	0.54	35.0	100.00
PB165798BS	PB165798BS	LCS	SOLID	12/20/2024	0.57	35.0	100.00

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Metals
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SAMPLE PREPARATION SUMMARY

Client: Weston Solutions **SDG No.:** P5365

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

Case No.: P5365 **SAS No.:** P5365

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB165957**						
P5365-01	TAPFTA-SB01I-4.5-121924-00-T1	SAM	SOLID	01/06/2025	1.30	100.0	90.10
P5365-01DUP	TAPFTA-SB01I-4.5-121924-00-T1DUP	DUP	SOLID	01/06/2025	1.40	100.0	90.10
P5365-01MS	TAPFTA-SB01I-4.5-121924-00-T1MS	MS	SOLID	01/06/2025	1.47	100.0	90.10
P5365-01MSD	TAPFTA-SB01I-4.5-121924-00-T1MSD	MSD	SOLID	01/06/2025	1.26	100.0	90.10
PB165957BL	PB165957BL	MB	SOLID	01/06/2025	1.29	100.0	100.00
PB165957BS	PB165957BS	LCS	SOLID	01/06/2025	1.29	100.0	100.00

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metals
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ANALYSIS RUN LOG

Client: Weston Solutions **Contract:** WEST04

Lab code: CHEM **Case no.:** P5365 **Sas no.:** P5365 **Sdg no.:** P5365

Instrument id number: **Method:** **Run number:** LB134050

Start date: 12/20/2024 **End date:** 12/20/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1358	HG
S0.2	S0.2	1	1400	HG
S2.5	S2.5	1	1403	HG
S5	S5	1	1405	HG
S7.5	S7.5	1	1407	HG
S10	S10	1	1410	HG
ICV28	ICV28	1	1413	HG
ICB28	ICB28	1	1415	HG
CCV57	CCV57	1	1417	HG
CCB57	CCB57	1	1420	HG
CRA	CRA	1	1422	HG
PB165798BL	PB165798BL	1	1429	HG
PB165798BS	PB165798BS	1	1431	HG
CCV58	CCV58	1	1443	HG
CCB58	CCB58	1	1445	HG
P5365-01	TAPFTA-SB01I-4.5-121924-00-´	1	1447	HG
P5365-01DUP	TAPFTA-SB01I-4.5-121924-00-´	1	1450	HG
P5365-01MS	TAPFTA-SB01I-4.5-121924-00-´	1	1452	HG
P5365-01MSD	TAPFTA-SB01I-4.5-121924-00-´	1	1454	HG
P5365-01L	TAPFTA-SB01I-4.5-121924-00-´	5	1456	HG
CCV59	CCV59	1	1501	HG
CCB59	CCB59	1	1503	HG

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metals
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ANALYSIS RUN LOG

Client: Weston Solutions **Contract:** WEST04

Lab code: CHEM **Case no.:** P5365 **Sas no.:** P5365 **Sdg no.:** P5365

Instrument id number: **Method:** **Run number:** LB134187

Start date: 01/06/2025 **End date:** 01/06/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1315	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	1319	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	1325	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	1328	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	1331	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	1334	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	1336	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	1339	Al,Ca,Fe,K,Mg,Na
ICV01	ICV01	1	1405	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
LLICV01	LLICV01	1	1409	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	1424	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	1427	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	1431	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	1434	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	1441	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	1454	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB165957BL	PB165957BL	1	1458	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB165957BS	PB165957BS	1	1501	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5365-01	TAPFTA-SB01I-4.5-121924-00-´	5	1503	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5365-01DUP	TAPFTA-SB01I-4.5-121924-00-´	5	1507	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5365-01L	TAPFTA-SB01I-4.5-121924-00-´	25	1510	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5365-01MS	TAPFTA-SB01I-4.5-121924-00-´	5	1513	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5365-01MSD	TAPFTA-SB01I-4.5-121924-00-´	5	1516	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5365-01A	TAPFTA-SB01I-4.5-121924-00-´	5	1519	Ag,As,Ba,Be,Cd,Co,Cr,Ni,Se,Tl,V
CCV02	CCV02	1	1535	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	1538	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

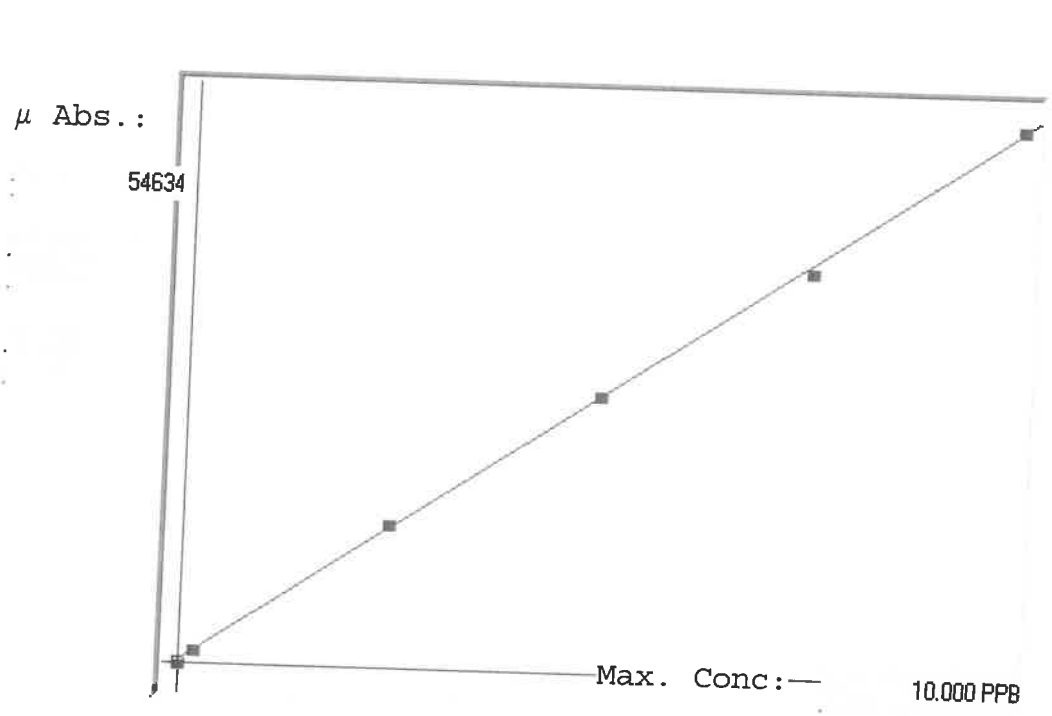
METAL
RAW DATA

Reviewed By:mohan
On:12/20/2024 9:49:50 PM
Inst Id :CV1
LB :LB134050

LB134050

7471B

INSTRUMENT ID: CV1



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	0/0
0.0	0.000	-0.035	-0.035	95	0.000	95					1
0.2	0.200	0.198	-0.002	1356	0.0 %	1356					1
2.5	2.500	2.570	0.070	14180	0.0 %	14180					3
5.0	5.000	5.034	0.034	27500	0.0 %	27500					1
7.5	7.500	7.379	-0.121	40177	0.0 %	40177					2
10.0	10.000	10.053	0.053	54634	0.0 %	54634					1

Reviewed By:mohan
On:12/20/2024 9:49:50 PM
Inst Id :CV1
LB :LB134050

LB134050 INSTRUMENT ID : CV1

Method: 7471B Operator: Admin Date of Analysis: 20 Dec 2024 13:55:55

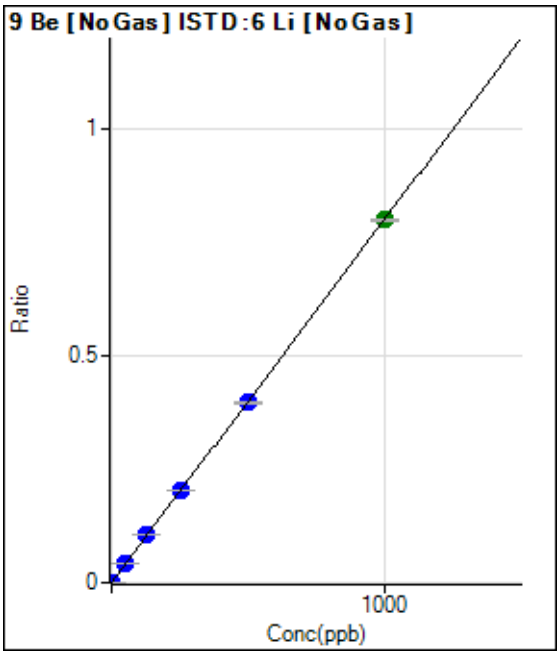
Sample ID	Extended ID	µAbs	Conc	Stnd Conc	Method	Units	Date	Type	Type
0.0 - 1	S0	95	-	0.00000	7471B	PPB	20 Dec 2024 13:58:41	S	Std
0.2 - 1	S0.2	1356	-	0.20000	7471B	PPB	20 Dec 2024 14:00:58	S	Std
2.5 - 1	S2.5	14180	-	2.50000	7471B	PPB	20 Dec 2024 14:03:15	S	Std
5.0 - 1	S5	27500	-	5.00000	7471B	PPB	20 Dec 2024 14:05:31	S	Std
7.5 - 1	S7.5	40177	-	7.50000	7471B	PPB	20 Dec 2024 14:07:50	S	Std
10.0 - 1	S10	54634	-	10.0000	7471B	PPB	20 Dec 2024 14:10:09	S	Std
ICV28 - 1	ICV28	21957	4.0089		-7471B	PPB	20 Dec 2024 14:13:22	U	SMPL
ICB28 - 1	ICB28	-52	-0.0624		-7471B	PPB	20 Dec 2024 14:15:37	U	SMPL
CCV57 - 1	CCV57	27568	5.0468		-7471B	PPB	20 Dec 2024 14:17:54	U	SMPL
CCB57 - 1	CCB57	-85	-0.0685		-7471B	PPB	20 Dec 2024 14:20:10	U	SMPL
CRA - 1	CRA	1337	0.1945		-7471B	PPB	20 Dec 2024 14:22:29	U	SMPL
HighStd - 1	HighStd	55443	10.2031		-7471B	PPB	20 Dec 2024 14:24:44	U	SMPL
ChkStd - 1	ChkStd	36455	6.6907		-7471B	PPB	20 Dec 2024 14:26:59	U	SMPL
PB165798BL - 1	PBS	-237	-0.0966		-7471B	PPB	20 Dec 2024 14:29:23	U	SMPL
PB165798BS - 1	LCSS	23496	4.2935		-7471B	PPB	20 Dec 2024 14:31:46	U	SMPL
P5316-01 - 1	TT-304-IDWSO-20241217-1	13	-0.0504		-7471B	PPB	20 Dec 2024 14:34:02	U	SMPL
P5339-01 - 1	TR-06-12182024	1565	0.2367		-7471B	PPB	20 Dec 2024 14:36:21	U	SMPL
P5355-01 - 1	RBR251688	5629	0.9885		-7471B	PPB	20 Dec 2024 14:38:38	U	SMPL
P5362-01 - 1	WC-SOIL-20241219	2794	0.4641		-7471B	PPB	20 Dec 2024 14:40:56	U	SMPL
CCV58 - 1	CCV58	26905	4.9241		-7471B	PPB	20 Dec 2024 14:43:13	U	SMPL
CCB58 - 1	CCB58	-113	-0.0737		-7471B	PPB	20 Dec 2024 14:45:28	U	SMPL
P5365-01 - 1	TAPFTA-SB01I-4.5-121924-00-T1	912	0.1159		-7471B	PPB	20 Dec 2024 14:47:47	U	SMPL
P5365-01DUP - 1	TAPFTA-SB01I-4.5-121924-00-T1DUP	922	0.1178		-7471B	PPB	20 Dec 2024 14:50:02	U	SMPL
P5365-01MS - 1	TAPFTA-SB01I-4.5-121924-00-T1MS	22381	4.0873		-7471B	PPB	20 Dec 2024 14:52:18	U	SMPL
P5365-01MSD - 1	TAPFTA-SB01I-4.5-121924-00-T1MSD	23970	4.3812		-7471B	PPB	20 Dec 2024 14:54:34	U	SMPL
P5365-01LX5 - 1		-200	-0.0898		-7471B	PPB	20 Dec 2024 14:56:53	U	SMPL
P5365-01A - 1		23305	4.2582		-7471B	PPB	20 Dec 2024 14:59:12	U	SMPL
CCV59 - 1	CCV59	26801	4.9049		-7471B	PPB	20 Dec 2024 15:01:28	U	SMPL
CCB59 - 1	CCB59	-76	-0.0668		-7471B	PPB	20 Dec 2024 15:03:48	U	SMPL

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Batch Folder: D:\Agilent\ICPMH\1\DATA\P7010625MS-2.b\
Analysis File: P7010625MS-2.batch.bin
DA Date-Time: 2025-01-07 09:32:28
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	S00	2025-01-06 13:15:48
2	005CALS.d	S02	2025-01-06 13:19:03
3	007CALS.d	S03	2025-01-06 13:25:33
4	008CALS.d	S04	2025-01-06 13:28:35
5	009CALS.d	S05	2025-01-06 13:31:26
6	010CALS.d	S06	2025-01-06 13:34:14
7	011CALS.d	S07	2025-01-06 13:36:58
8	012CALS.d	S08	2025-01-06 13:39:44

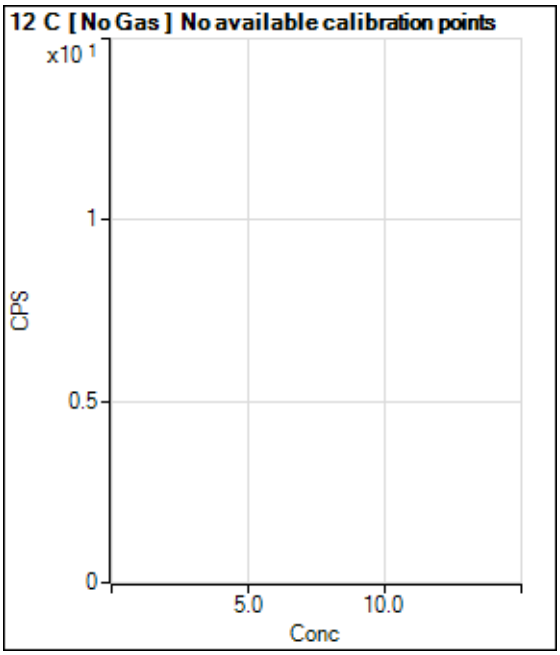
Reviewed By:mohan
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	16.4
2	☐	1.000	1.228	1512.31	0.0010	P	8.2
3	☐	50.000	53.242	66067.36	0.0427	P	0.9
4	☐	125.000	131.178	167791.63	0.1051	P	1.7
5	☐	250.000	255.886	332799.06	0.2049	P	0.6
6	☐	500.000	497.001	643673.71	0.3980	P	1.0
7	☐	1000.000	999.093	1286716.94	0.8001	A	0.5
8	☐			288.89	0.0002	P	7.4

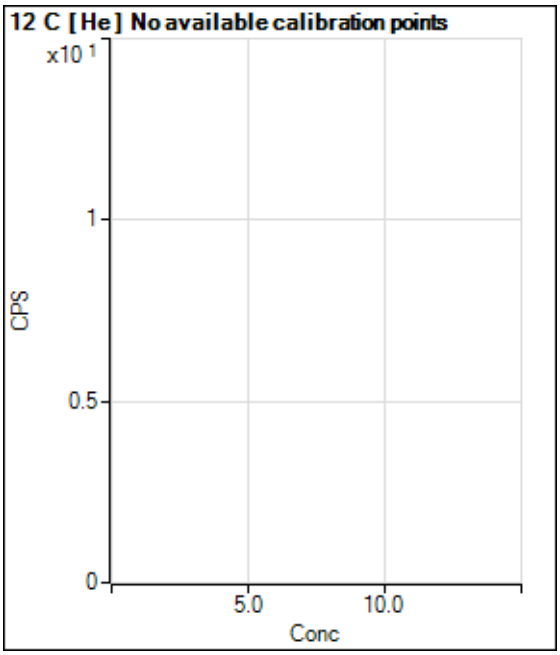
y = 8.0078E-004 * x + 3.1968E-005
R = 1.0000
DL = 0.01967
BEC = 0.03992

Weight: <None>
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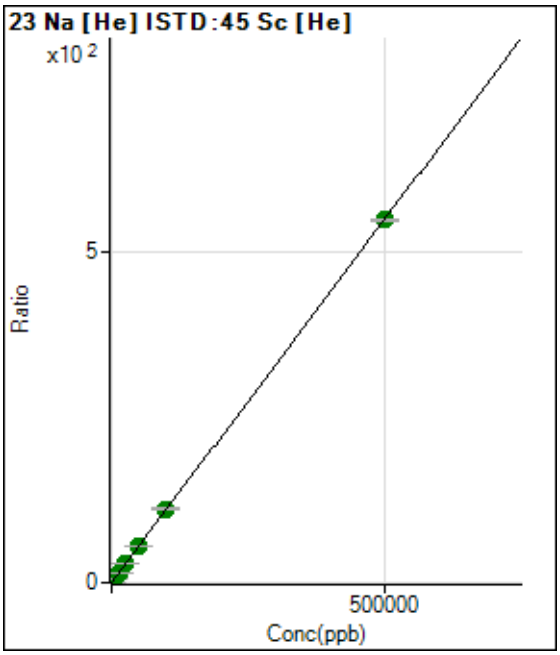


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐						
2	☐						
3	☐						
4	☐						
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6	☐						
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8	☐						

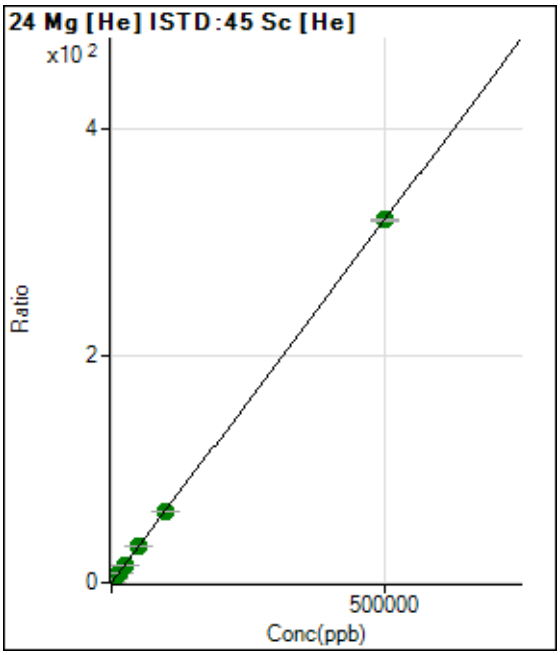


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22790.26	0.0376	P	1.1
2	☐	500.000	501.269	355487.29	0.5864	P	0.7
3	☐	5000.000	5081.432	3241270.65	5.6008	A	0.3
4	☐	12500.000	12650.755	7551599.96	13.8879	A	0.4
5	☐	25000.000	25377.763	14329896.04	27.8217	A	0.7
6	☐	50000.000	50467.395	27071141.54	55.2905	A	0.5
7	☐	100000.00	101600.68	54519125.30	111.2724	A	0.8
8	☐	500000.00	499609.65	285106755.7	547.0222	A	0.8

y = 0.0011 * x + 0.0376
R = 1.0000
DL = 1.172
BEC = 34.31

Weight: <None>
Min Conc: 0

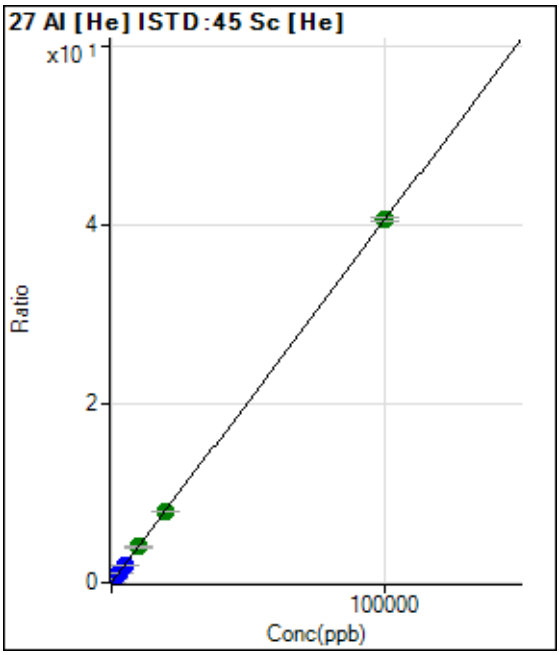
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	474.46	0.0008	P	3.9
2	☐	500.000	541.170	210554.44	0.3473	P	0.8
3	☐	5000.000	5041.380	1868606.03	3.2289	A	0.8
4	☐	12500.000	12434.797	4329863.16	7.9630	A	0.4
5	☐	25000.000	24944.912	8227330.30	15.9735	A	0.5
6	☐	50000.000	49645.282	15564722.96	31.7896	A	0.5
7	☐	100000.00	99202.587	31124098.42	63.5220	A	0.1
8	☐	500000.00	500198.88	166933818.6	320.2874	A	0.6

y = 6.4032E-004 * x + 7.8213E-004
R = 1.0000
DL = 0.1435
BEC = 1.221

Weight: <None>
Min Conc: 0

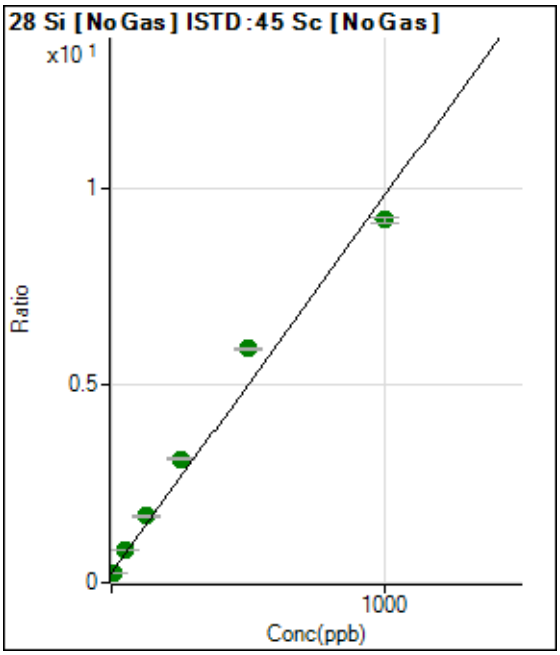


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	128.89	0.0002	P	31.1
2	☐	20.000	19.835	5005.31	0.0083	P	2.1
3	☐	1000.000	978.350	229718.03	0.3969	P	0.5
4	☐	2500.000	2426.221	535092.60	0.9841	P	0.4
5	☐	5000.000	4856.611	1014488.86	1.9696	P	0.3
6	☐	10000.000	9839.536	1953710.89	3.9903	A	0.5
7	☐	20000.000	19511.125	3876704.11	7.9123	A	0.6
8	☐	100000.00	100123.05	21161341.07	40.6016	A	1.0

y = 4.0551E-004 * x + 2.1258E-004
R = 1.0000
DL = 0.4889
BEC = 0.5242

Weight: <None>
Min Conc: 0

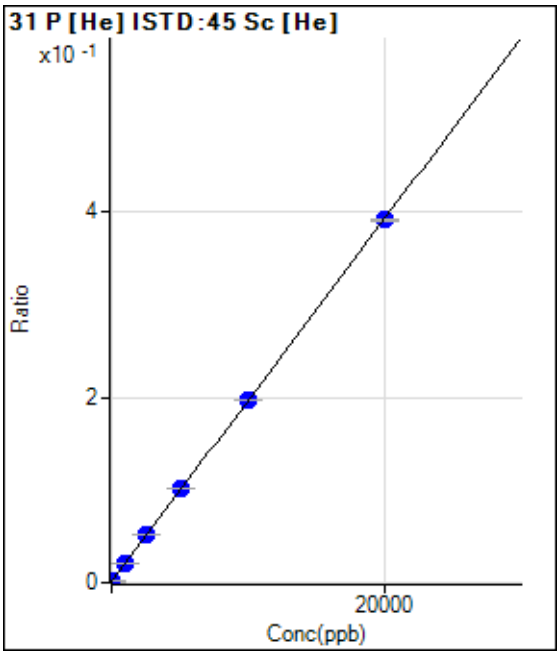
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1664055.79	0.2483	A	1.2
2	☐	10.000	0.116	1671154.77	0.2495	A	0.3
3	☐	50.000	59.534	5483464.85	0.8168	A	0.2
4	☐	125.000	150.369	10860420.19	1.6840	A	0.9
5	☐	250.000	301.513	19353166.52	3.1271	A	1.0
6	☐	500.000	594.264	34979055.59	5.9221	A	1.4
7	☐	1000.000	936.441	53423231.98	9.1891	A	1.4
8	☐			1309128.99	0.2150	A	4.1

y = 0.0095 * x + 0.2483
R = 0.9909
DL = 0.9541
BEC = 26.01

Weight: <None>
Min Conc: 0

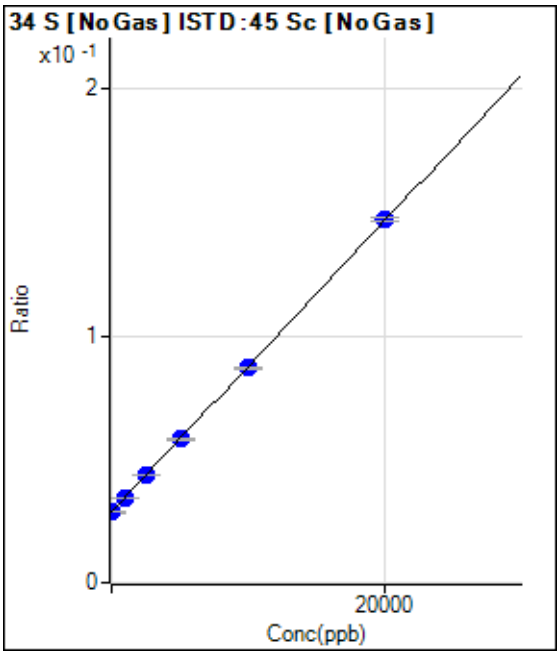


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-15.640	431.12	0.0007	P	8.1
2	☐	0.000	15.640	802.25	0.0013	P	1.8
3	☐	1000.000	1042.760	12407.34	0.0214	P	2.2
4	☐	2500.000	2589.681	28129.24	0.0517	P	1.1
5	☐	5000.000	5159.722	52570.91	0.1021	P	1.0
6	☐	10000.000	9993.956	96328.06	0.1967	P	0.5
7	☐	20000.000	19949.743	191928.77	0.3917	P	0.4
8	☐			490.01	0.0009	P	2.9

y = 1.9584E-005 * x + 0.0010
R = 1.0000
DL = 6.263
BEC = 51.93

Weight: <None>
Min Conc: 0

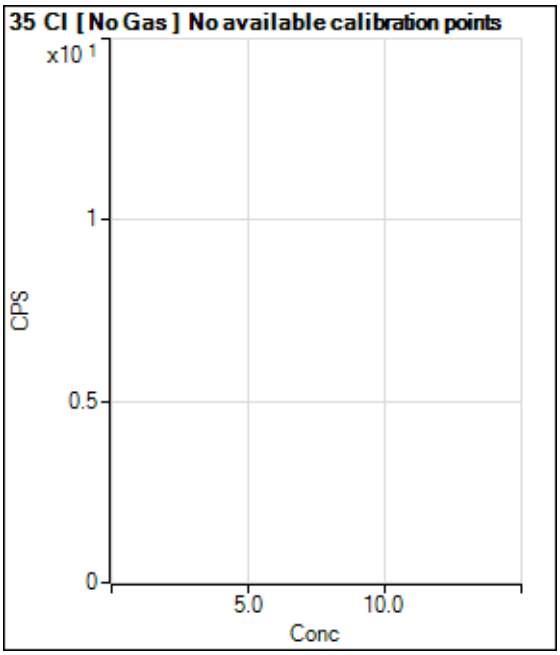
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-43.649	190865.53	0.0285	P	1.7
2	☐	0.000	43.649	194272.34	0.0290	P	1.0
3	☐	1000.000	952.017	230646.25	0.0344	P	0.1
4	☐	2500.000	2490.545	280044.64	0.0434	P	0.5
5	☐	5000.000	5014.146	360781.75	0.0583	P	0.9
6	☐	10000.000	9887.647	514001.97	0.0870	P	1.1
7	☐	20000.000	20056.221	854365.25	0.1470	P	1.0
8	☐			157222.27	0.0258	P	2.5

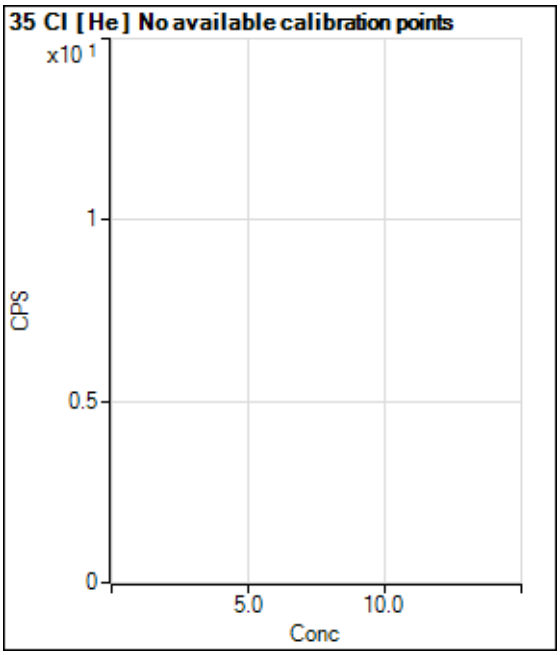
y = 5.8938E-006 * x + 0.0287
R = 1.0000
DL = 194.9
BEC = 4877

Weight: <None>
Min Conc: 0

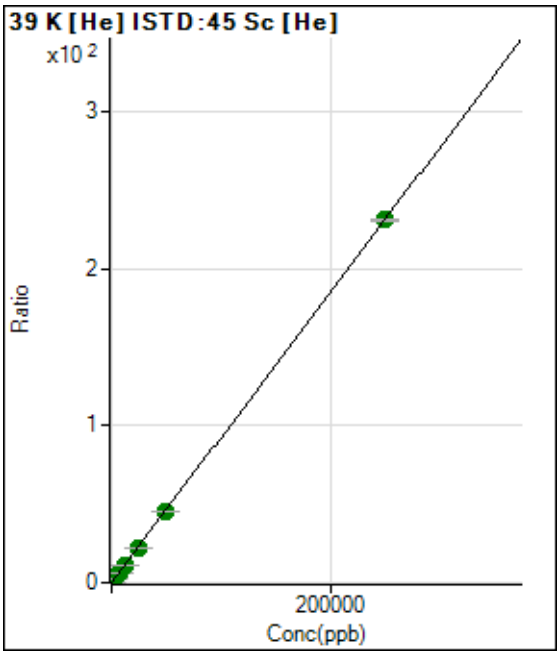


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
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8	☐						

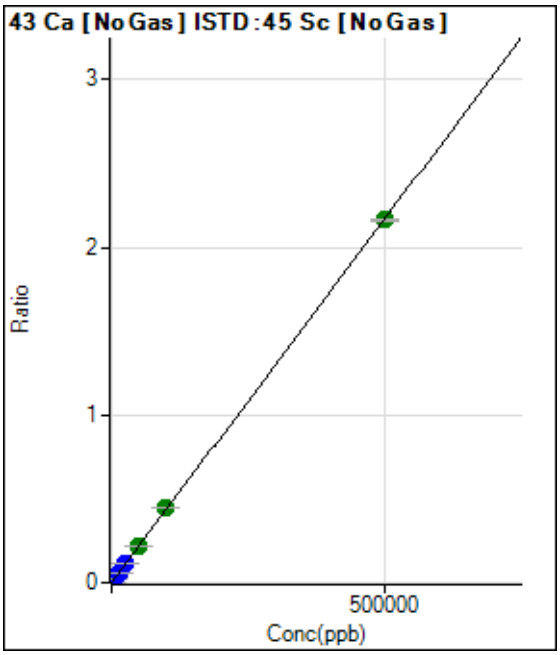


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60023.18	0.0989	P	0.6
2	☐	500.000	536.411	360445.59	0.5945	P	0.5
3	☐	2500.000	2516.030	1402553.99	2.4236	A	0.4
4	☐	6250.000	6152.774	3144827.94	5.7837	A	0.7
5	☐	12500.000	12263.866	5887125.89	11.4299	A	0.2
6	☐	25000.000	24340.945	11059554.28	22.5883	A	0.3
7	☐	50000.000	48677.835	22084902.17	45.0739	A	0.4
8	☐	250000.00	250344.34	120607013.7	231.3999	A	0.4

y = 9.2393E-004 * x + 0.0989
R = 1.0000
DL = 1.992
BEC = 107.1

Weight: <None>
Min Conc: 0

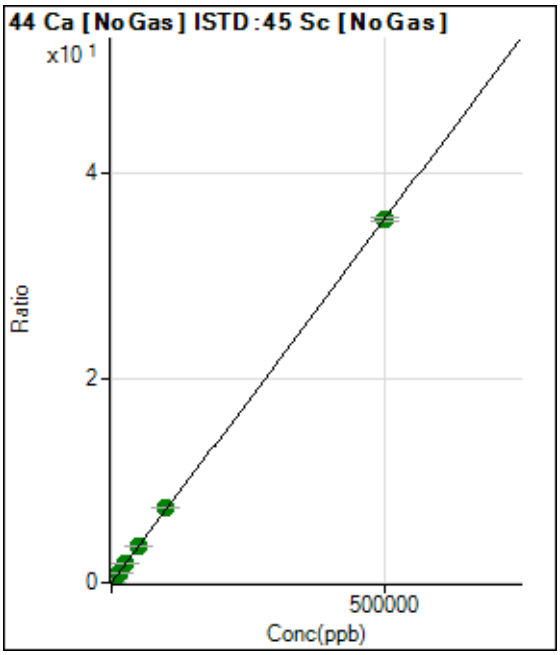
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On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	524.46	0.0001	P	10.4
2	☐	500.000	562.648	16868.38	0.0025	P	1.6
3	☐	5000.000	5338.127	155913.86	0.0232	P	1.3
4	☐	12500.000	13402.413	375272.54	0.0582	P	1.5
5	☐	25000.000	26829.819	720423.31	0.1164	P	1.6
6	☐	50000.000	51314.866	1314774.28	0.2226	A	0.4
7	☐	100000.00	103310.49	2604986.26	0.4480	A	0.5
8	☐	500000.00	499088.91	13175815.50	2.1642	A	0.9

y = 4.3361E-006 * x + 7.8200E-005
R = 1.0000
DL = 5.625
BEC = 18.03

Weight: <None>
Min Conc: 0

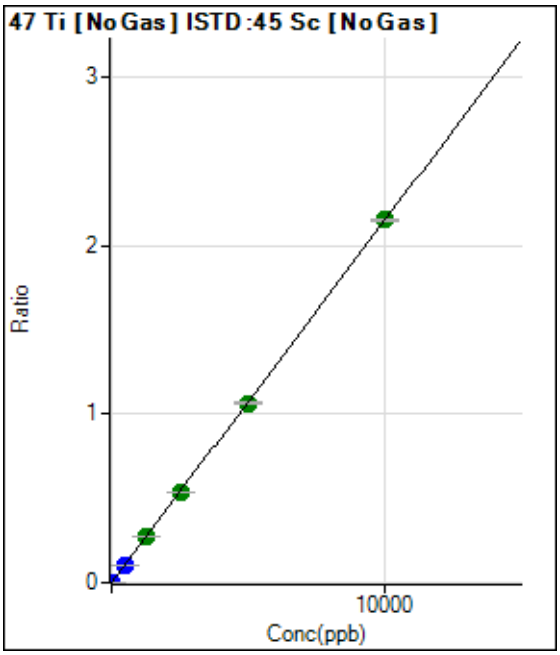


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11287.61	0.0017	P	3.3
2	☐	500.000	556.439	275953.91	0.0412	P	0.6
3	☐	5000.000	5067.629	2426878.78	0.3615	A	0.9
4	☐	12500.000	12723.714	5837126.44	0.9051	A	1.0
5	☐	25000.000	25531.539	11229573.72	1.8145	A	0.2
6	☐	50000.000	51137.512	21456454.12	3.6325	A	0.8
7	☐	100000.00	102907.25	42490912.42	7.3083	A	0.6
8	☐	500000.00	499271.89	215833263.4	35.4508	A	1.0

y = 7.1002E-005 * x + 0.0017
R = 1.0000
DL = 2.362
BEC = 23.73

Weight: <None>
Min Conc: 0

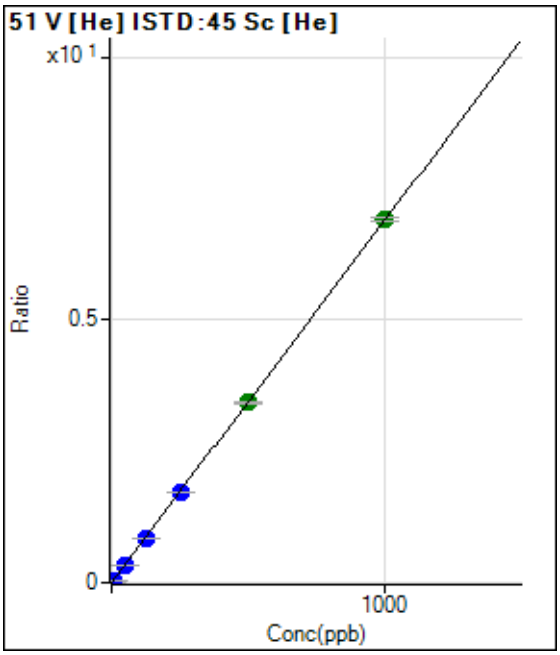
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	94.44	0.0000	P	32.5
2	☐	5.000	5.265	7679.79	0.0011	P	2.6
3	☐	500.000	495.316	715331.40	0.1066	P	1.1
4	☐	1250.000	1261.198	1749709.17	0.2713	A	0.1
5	☐	2500.000	2484.560	3307472.31	0.5344	A	0.5
6	☐	5000.000	4958.130	6299569.77	1.0665	A	1.2
7	☐	10000.000	10023.629	12535350.23	2.1560	A	0.7
8	☐			1685.67	0.0003	P	4.7

y = 2.1509E-004 * x + 1.4074E-005
R = 1.0000
DL = 0.06381
BEC = 0.06543

Weight: <None>
Min Conc: 0

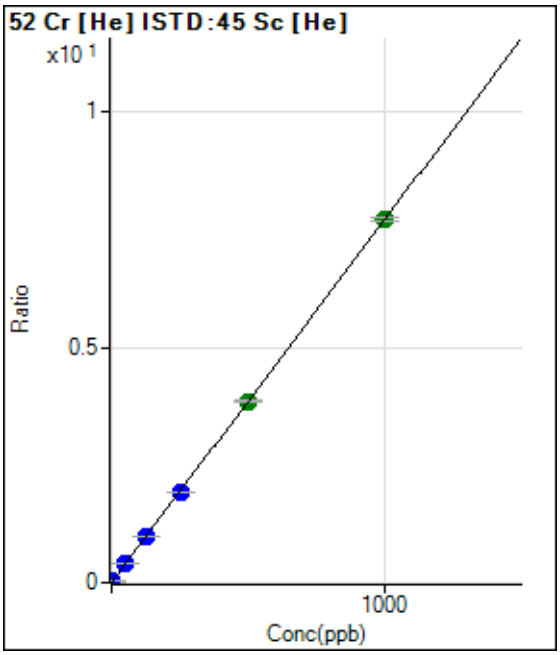


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	25.4
2	☐	5.000	5.243	21893.76	0.0361	P	1.2
3	☐	50.000	50.004	199196.94	0.3442	P	0.3
4	☐	125.000	124.165	464725.39	0.8547	P	0.3
5	☐	250.000	247.797	878515.65	1.7056	P	0.5
6	☐	500.000	496.799	1674265.06	3.4196	A	0.8
7	☐	1000.000	1002.254	3380045.43	6.8987	A	1.2
8	☐			793.37	0.0015	P	7.2

y = 0.0069 * x + 2.1991E-005
R = 1.0000
DL = 0.00243
BEC = 0.003195

Weight: <None>
Min Conc: 0

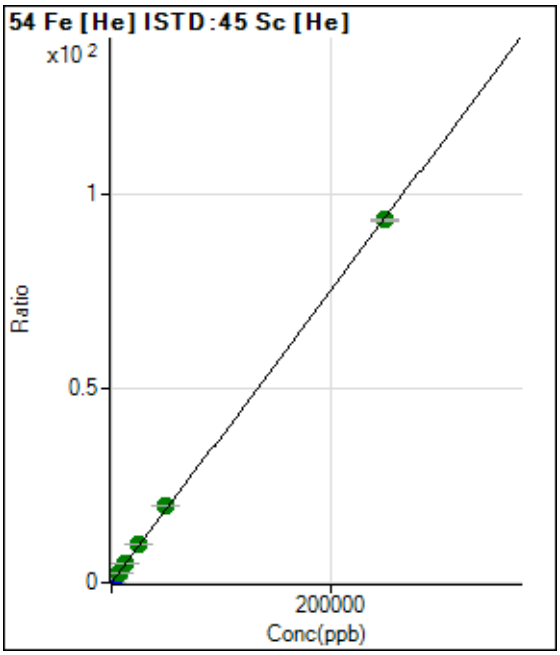
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3271.50	0.0054	P	3.4
2	☐	2.000	2.094	13037.95	0.0215	P	1.8
3	☐	50.000	50.412	227634.85	0.3933	P	0.5
4	☐	125.000	125.642	528669.29	0.9723	P	0.8
5	☐	250.000	250.137	994258.28	1.9304	P	0.6
6	☐	500.000	499.701	1885472.40	3.8509	A	0.4
7	☐	1000.000	1000.014	3773288.73	7.7012	A	0.9
8	☐			8773.85	0.0168	P	9.7

y = 0.0077 * x + 0.0054
R = 1.0000
DL = 0.07129
BEC = 0.7008

Weight: <None>
Min Conc: 0

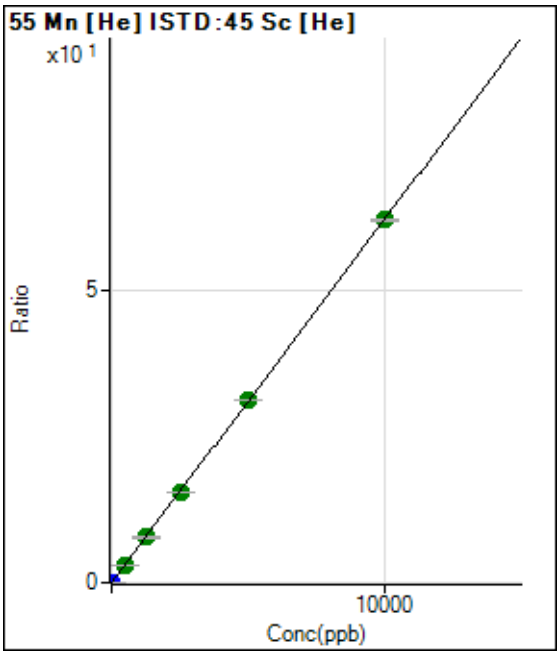


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3093.69	0.0051	P	1.4
2	☐	50.000	58.671	16430.18	0.0271	P	2.1
3	☐	2500.000	2743.953	598430.77	1.0341	P	0.2
4	☐	6250.000	6652.082	1359206.37	2.4996	A	0.4
5	☐	12500.000	13418.686	2594445.26	5.0371	A	0.2
6	☐	25000.000	26856.598	4933535.28	10.0763	A	0.3
7	☐	50000.000	52868.618	9716532.77	19.8309	A	0.4
8	☐	250000.00	249182.18	48706115.94	93.4486	A	0.4

y = 3.7500E-004 * x + 0.0051
R = 0.9999
DL = 0.5715
BEC = 13.6

Weight: <None>
Min Conc: 0

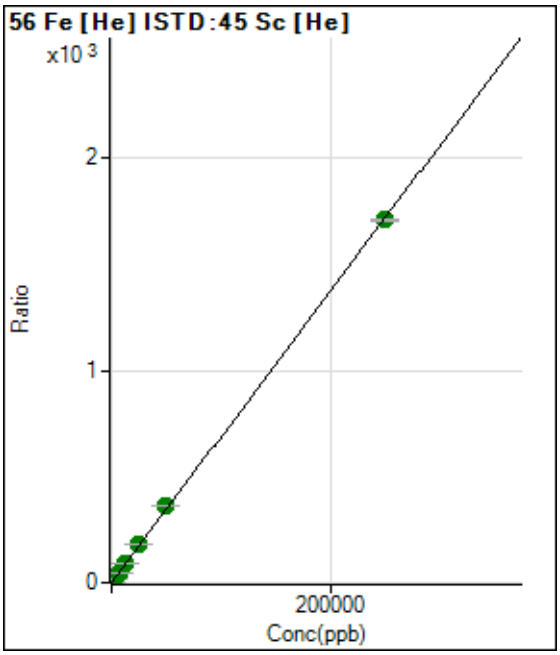
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	394.45	0.0007	P	5.1
2	☐	1.000	1.032	4268.43	0.0070	P	3.1
3	☐	500.000	500.361	1793225.56	3.0987	A	0.6
4	☐	1250.000	1245.605	4193864.52	7.7130	A	1.0
5	☐	2500.000	2500.832	7975638.35	15.4849	A	0.4
6	☐	5000.000	5019.120	15215918.24	31.0773	A	0.2
7	☐	10000.000	9990.763	30310094.83	61.8599	A	0.8
8	☐			15551.45	0.0298	P	0.8

y = 0.0062 * x + 6.5027E-004
R = 1.0000
DL = 0.0161
BEC = 0.105

Weight: <None>
Min Conc: 0

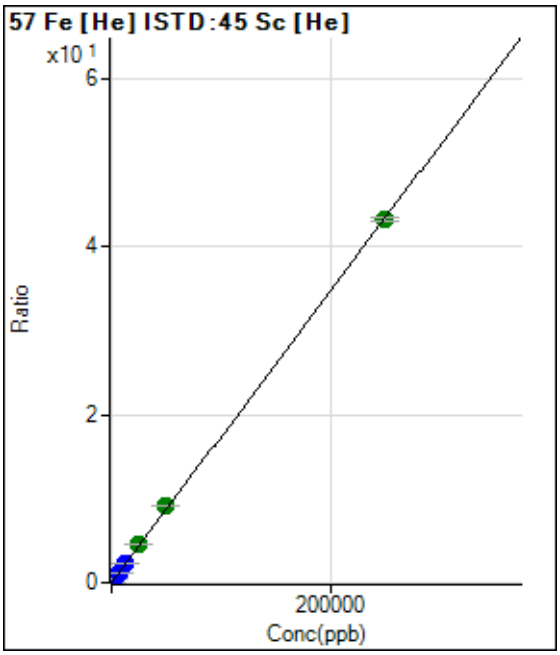


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25084.29	0.0413	P	1.0
2	☐	50.000	56.782	261096.98	0.4307	P	0.3
3	☐	2500.000	2642.208	10507797.07	18.1573	A	0.4
4	☐	6250.000	6551.634	24448049.92	44.9619	A	0.5
5	☐	12500.000	13225.935	46727907.08	90.7235	A	0.4
6	☐	25000.000	26391.027	88614538.68	180.9884	A	0.2
7	☐	50000.000	52589.354	176689935.1	360.6142	A	0.2
8	☐	250000.00	249297.76	890918484.5	1,709.322	A	0.3

y = 0.0069 * x + 0.0413
R = 0.9999
DL = 0.1804
BEC = 6.031

Weight: <None>
Min Conc: 0

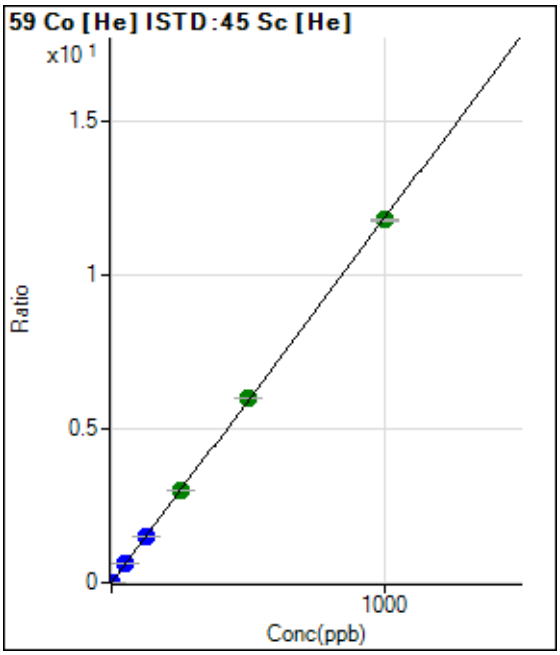
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1830.13	0.0030	P	2.5
2	☐	50.000	59.769	8098.92	0.0134	P	1.3
3	☐	2500.000	2721.561	274276.29	0.4739	P	1.0
4	☐	6250.000	6778.252	639380.04	1.1759	P	0.6
5	☐	12500.000	13537.689	1208061.13	2.3455	P	0.3
6	☐	25000.000	26443.872	2241789.86	4.5787	A	0.7
7	☐	50000.000	52462.960	4449344.03	9.0808	A	0.3
8	☐	250000.00	249295.71	22483804.39	43.1392	A	0.9

y = 1.7303E-004 * x + 0.0030
R = 0.9999
DL = 1.291
BEC = 17.43

Weight: <None>
Min Conc: 0

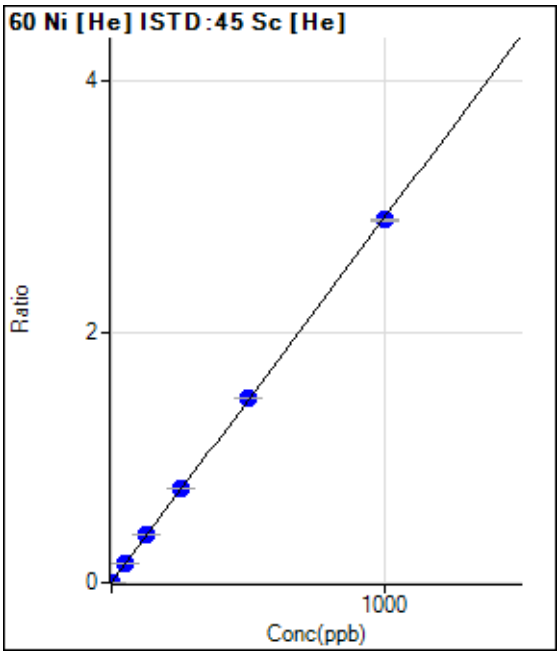


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	235.56	0.0004	P	10.7
2	☐	1.000	1.105	8178.97	0.0135	P	2.0
3	☐	50.000	50.895	349565.08	0.6041	P	0.7
4	☐	125.000	126.226	814280.83	1.4975	P	0.6
5	☐	250.000	253.154	1546733.00	3.0030	A	1.5
6	☐	500.000	507.054	2944806.66	6.0145	A	0.8
7	☐	1000.000	995.487	5785605.96	11.8078	A	0.8
8	☐			17460.26	0.0335	P	1.6

y = 0.0119 * x + 3.8820E-004
R = 1.0000
DL = 0.01052
BEC = 0.03273

Weight: <None>
Min Conc: 0

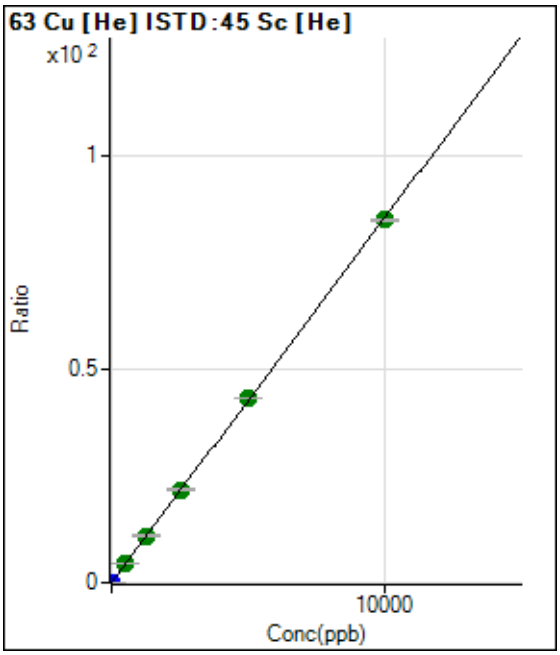
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1013.38	0.0017	P	2.3
2	☐	1.000	1.081	2918.09	0.0048	P	1.8
3	☐	50.000	52.326	89020.80	0.1538	P	0.2
4	☐	125.000	130.712	207584.50	0.3818	P	0.1
5	☐	250.000	257.225	386108.76	0.7496	P	0.8
6	☐	500.000	506.698	722211.80	1.4751	P	0.2
7	☐	1000.000	994.015	1417021.70	2.8921	P	0.5
8	☐			8106.71	0.0156	P	2.3

y = 0.0029 * x + 0.0017
R = 0.9999
DL = 0.04041
BEC = 0.5744

Weight: <None>
Min Conc: 0

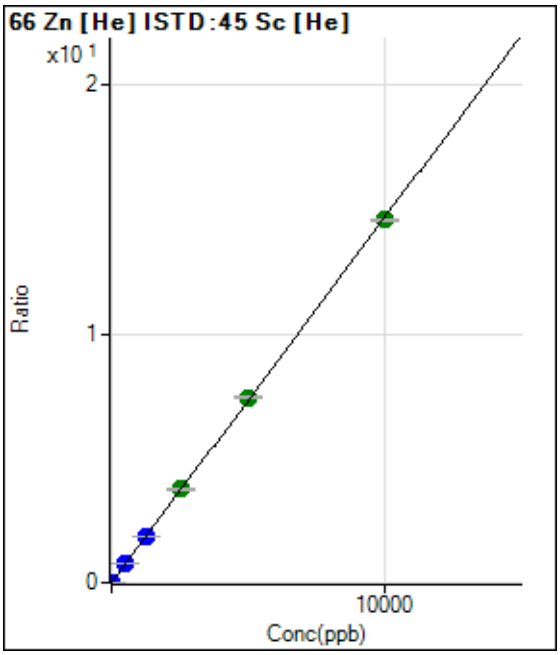


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2912.54	0.0048	P	3.6
2	☐	2.000	2.046	13520.63	0.0223	P	0.7
3	☐	500.000	521.554	2584002.38	4.4651	A	0.7
4	☐	1250.000	1286.747	5986102.20	11.0090	A	1.2
5	☐	2500.000	2557.103	11265864.42	21.8731	A	1.1
6	☐	5000.000	5052.872	21159676.21	43.2168	A	0.4
7	☐	10000.000	9953.617	41709553.83	85.1279	A	0.5
8	☐			11630.14	0.0223	P	1.1

y = 0.0086 * x + 0.0048
R = 1.0000
DL = 0.05984
BEC = 0.5614

Weight: <None>
Min Conc: 0

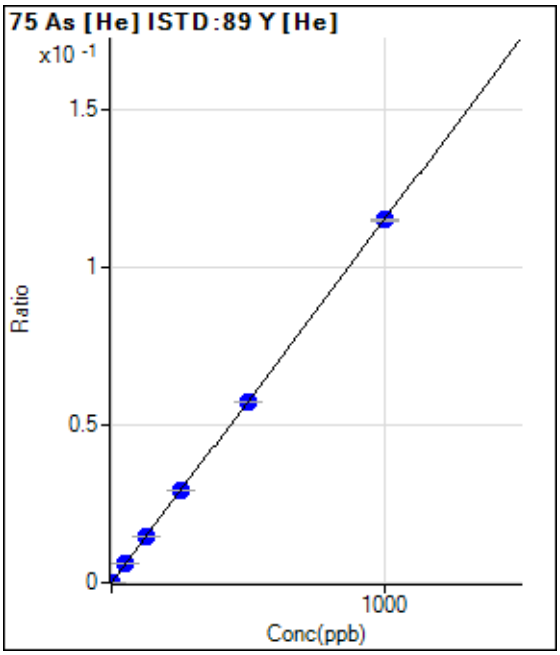
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	205.56	0.0003	P	2.7
2	☐	5.000	5.301	4916.41	0.0081	P	3.7
3	☐	500.000	506.720	430074.28	0.7432	P	0.4
4	☐	1250.000	1269.031	1011693.96	1.8606	P	0.9
5	☐	2500.000	2560.438	1933410.86	3.7538	A	1.1
6	☐	5000.000	5078.512	3645217.83	7.4451	A	0.5
7	☐	10000.000	9942.919	7141643.99	14.5759	A	0.7
8	☐			10574.95	0.0203	P	3.5

y = 0.0015 * x + 3.3884E-004
R = 0.9999
DL = 0.01869
BEC = 0.2311

Weight: <None>
Min Conc: 0

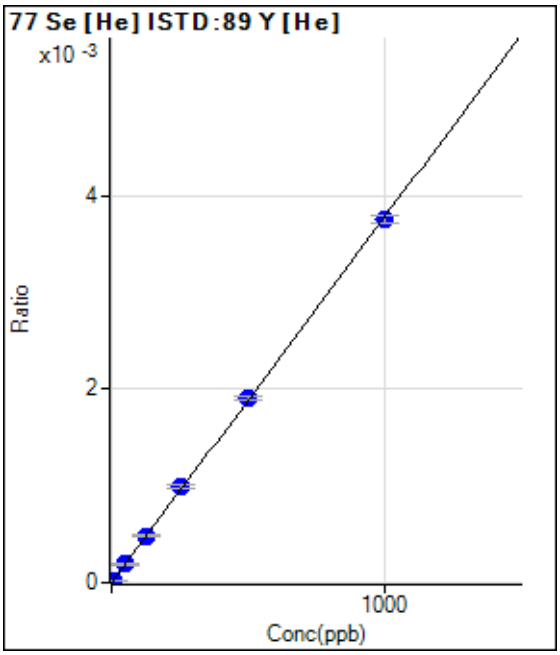


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11.11	0.0000	P	76.2
2	☐	1.000	1.256	762.25	0.0001	P	8.3
3	☐	50.000	52.115	30328.76	0.0060	P	1.7
4	☐	125.000	128.182	71480.85	0.0147	P	0.3
5	☐	250.000	255.440	136185.10	0.0294	P	0.8
6	☐	500.000	498.023	256835.95	0.0572	P	0.7
7	☐	1000.000	999.125	512569.51	0.1148	P	0.8
8	☐			350.01	0.0001	P	4.5

y = 1.1494E-004 * x + 2.1320E-006
R = 1.0000
DL = 0.04238
BEC = 0.01855

Weight: <None>
Min Conc: 0

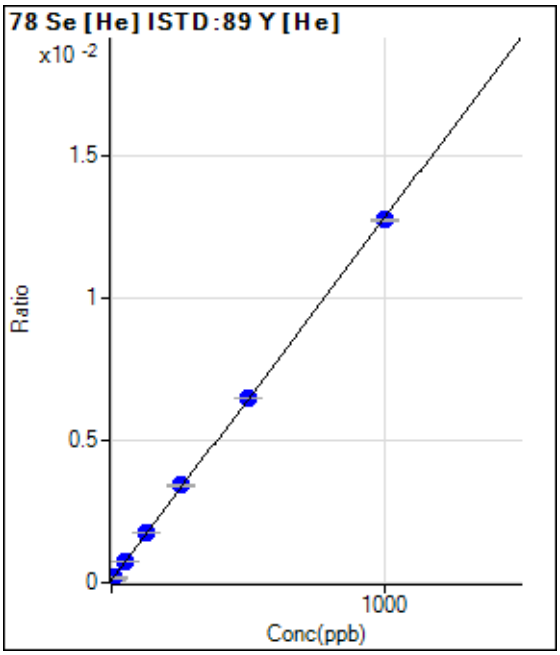
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	5.000	5.592	110.00	0.0000	P	7.1
3	☐	50.000	51.675	987.82	0.0002	P	10.6
4	☐	125.000	128.592	2355.77	0.0005	P	5.4
5	☐	250.000	263.016	4607.43	0.0010	P	4.3
6	☐	500.000	506.457	8582.55	0.0019	P	2.2
7	☐	1000.000	992.982	16737.33	0.0038	P	2.2
8	☐			2.22	0.0000	P	86.6

y = 3.7768E-006 * x + 0.0000E+000
R = 0.9999
DL = 0
BEC = 0

Weight: <None>
Min Conc: 0

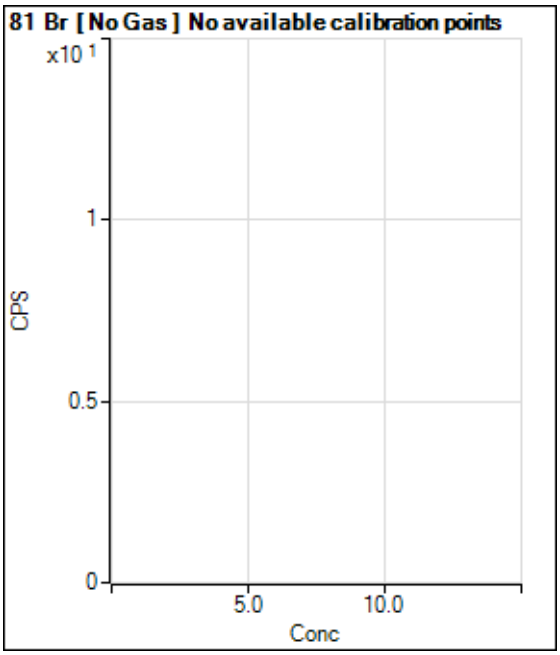


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	455.57	0.0001	P	6.1
2	☐	5.000	6.784	902.26	0.0002	P	7.0
3	☐	50.000	53.226	3867.21	0.0008	P	3.2
4	☐	125.000	130.904	8498.04	0.0018	P	1.0
5	☐	250.000	261.806	15847.48	0.0034	P	1.9
6	☐	500.000	502.643	29071.87	0.0065	P	0.6
7	☐	1000.000	994.819	56859.72	0.0127	P	0.4
8	☐			373.34	0.0001	P	5.8

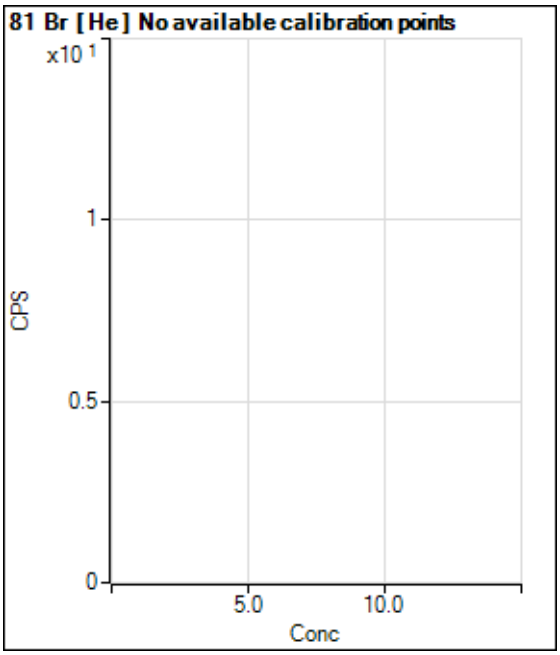
y = 1.2718E-005 * x + 8.7035E-005
R = 0.9999
DL = 1.26
BEC = 6.843

Weight: <None>
Min Conc: 0

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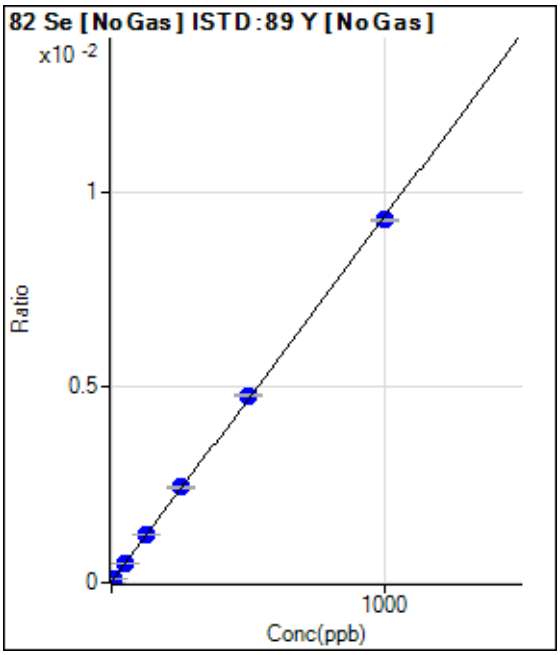


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			15766.33		P	1.2
2	☐			16095.52		P	0.8
3	☐			15285.79		P	0.5
4	☐			14028.99		P	2.2
5	☐			13809.91		P	1.5
6	☐			12866.83		P	3.5
7	☐			12543.20		P	1.6
8	☐			12308.56		P	1.4



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			167.78		P	17.4
2	☐			153.34		P	13.2
3	☐			140.00		P	9.5
4	☐			94.45		P	4.1
5	☐			140.00		P	12.6
6	☐			117.78		P	17.1
7	☐			88.89		P	19.2
8	☐			126.67		P	37.3

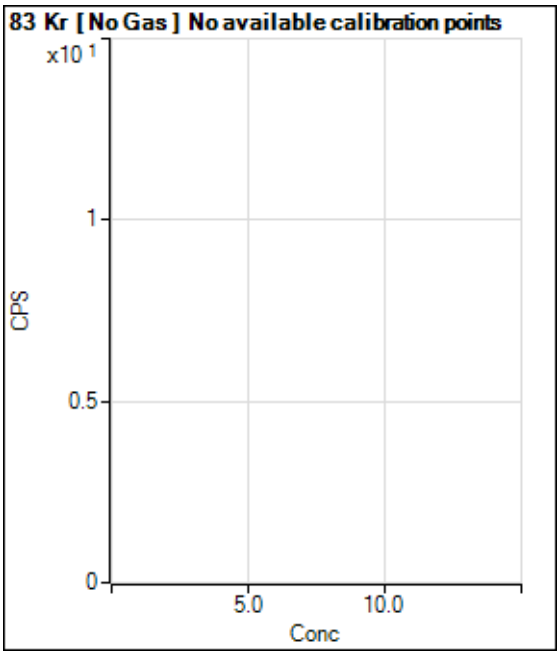
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	388.16	0.0000	P	8.6
2	☐	5.000	5.739	1343.42	0.0001	P	2.1
3	☐	50.000	52.244	9069.62	0.0005	P	0.9
4	☐	125.000	130.543	21569.62	0.0012	P	0.6
5	☐	250.000	259.153	41398.59	0.0024	P	1.1
6	☐	500.000	511.169	78394.72	0.0048	P	0.9
7	☐	1000.000	991.319	150521.67	0.0093	P	0.3
8	☐			485.37	0.0000	P	7.3

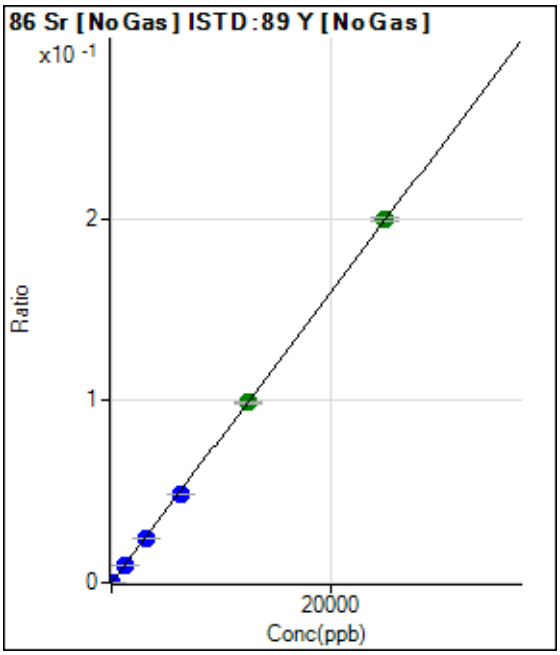
y = 9.3503E-006 * x + 2.1739E-005
R = 0.9999
DL = 0.6015
BEC = 2.325

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			215.56		P	20.2
2	☐			223.34		P	10.3
3	☐			196.67		P	3.4
4	☐			172.23		P	9.5
5	☐			165.56		P	5.1
6	☐			213.34		P	16.3
7	☐			175.56		P	12.6
8	☐			475.57		P	28.9

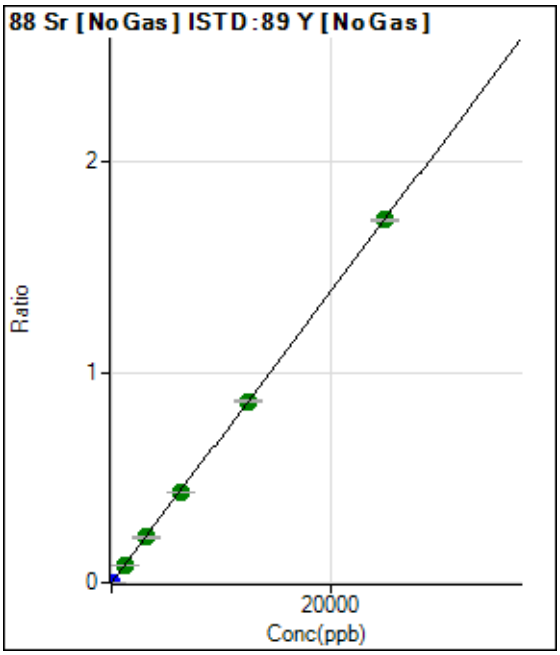
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	326.68	0.0000	P	10.3
2	☐	1.000	26.194	4033.92	0.0002	P	1.7
3	☐	1250.000	1225.236	173382.64	0.0098	P	0.5
4	☐	3125.000	3057.580	422112.11	0.0243	P	0.9
5	☐	6250.000	6091.769	819933.00	0.0484	P	0.9
6	☐	12500.000	12440.001	1614286.68	0.0989	A	1.0
7	☐	25000.000	25079.222	3228879.88	0.1993	A	1.0
8	☐			9823.37	0.0006	P	2.0

y = 7.9461E-006 * x + 1.8267E-005
R = 1.0000
DL = 0.7084
BEC = 2.299

Weight: <None>
Min Conc: 0

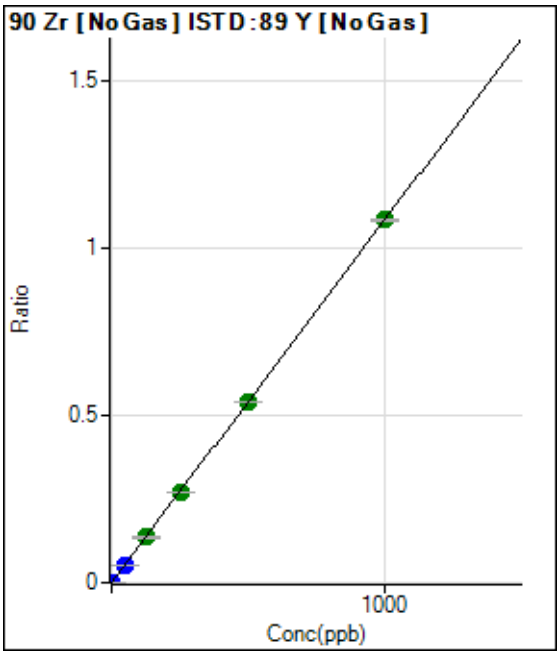


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.01	0.0000	P	3.5
2	☐	1.000	26.265	32488.12	0.0018	P	1.8
3	☐	1250.000	1235.748	1517610.67	0.0854	A	0.3
4	☐	3125.000	3118.309	3740014.15	0.2154	A	0.8
5	☐	6250.000	6244.828	7304891.70	0.4314	A	0.9
6	☐	12500.000	12513.604	14114909.79	0.8645	A	0.5
7	☐	25000.000	24996.039	27975041.25	1.7268	A	0.5
8	☐			80425.97	0.0051	P	1.1

y = 6.9081E-005 * x + 8.9550E-006
R = 1.0000
DL = 0.01356
BEC = 0.1296

Weight: <None>
Min Conc: 0

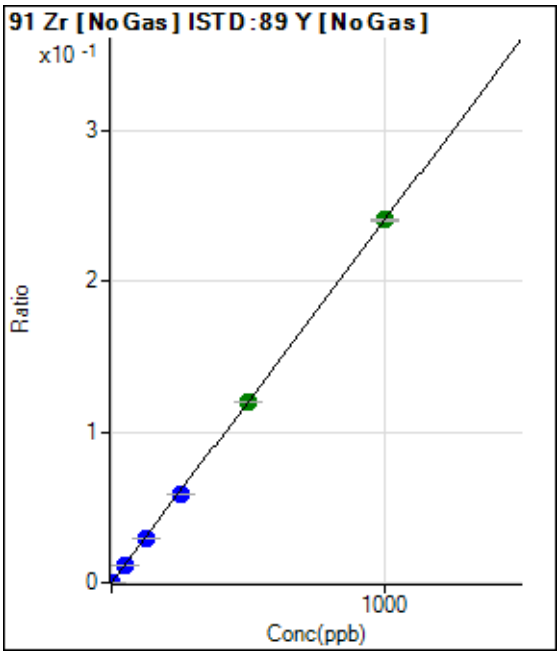
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	926.70	0.0001	P	1.2
2	☐	1.000	1.006	20329.69	0.0011	P	0.6
3	☐	50.000	49.296	949990.58	0.0534	P	0.7
4	☐	125.000	125.126	2353742.57	0.1356	A	1.0
5	☐	250.000	248.242	4553616.01	0.2689	A	0.7
6	☐	500.000	498.747	8820964.73	0.5402	A	1.0
7	☐	1000.000	1001.085	17566641.82	1.0843	A	0.6
8	☐			10603.93	0.0007	P	1.5

y = 0.0011 * x + 5.1858E-005
R = 1.0000
DL = 0.001739
BEC = 0.04788

Weight: <None>
Min Conc: 0

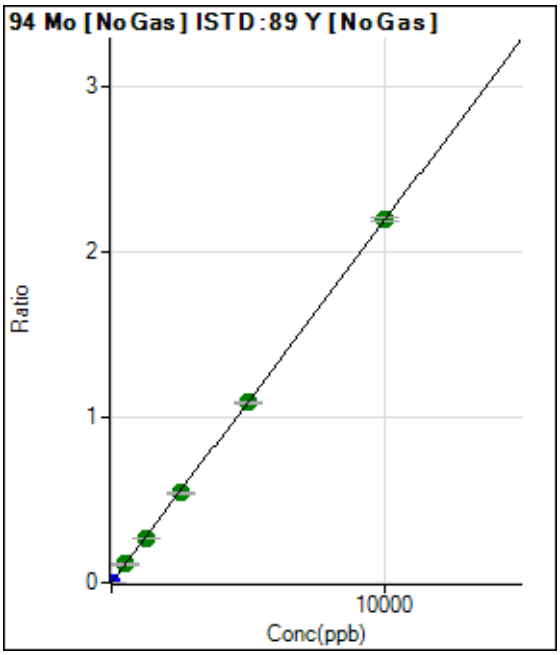


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	112.22	0.0000	P	32.1
2	☐	1.000	1.030	4524.07	0.0003	P	2.6
3	☐	50.000	49.278	210705.22	0.0119	P	0.4
4	☐	125.000	123.034	513654.13	0.0296	P	0.3
5	☐	250.000	245.922	1001241.26	0.0591	P	0.6
6	☐	500.000	499.686	1961653.01	0.1201	A	0.3
7	☐	1000.000	1001.458	3900790.57	0.2408	A	0.8
8	☐			2346.88	0.0001	P	2.3

y = 2.4042E-004 * x + 6.2654E-006
R = 1.0000
DL = 0.0251
BEC = 0.02606

Weight: <None>
Min Conc: 0

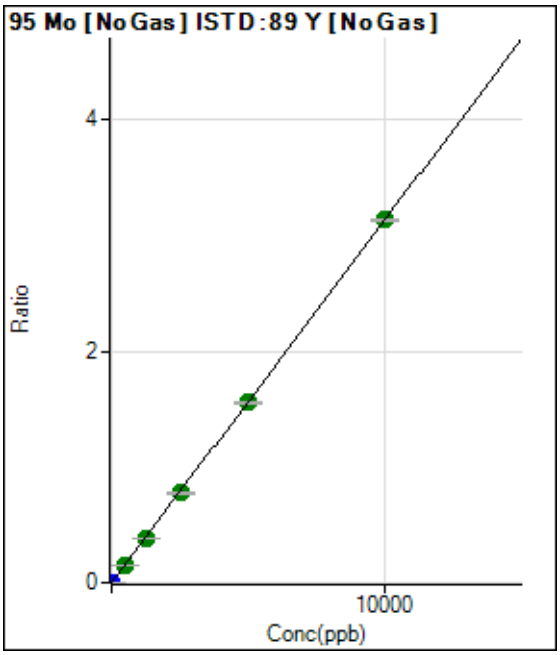
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	451.12	0.0000	P	13.4
2	☐	5.000	6.074	24152.21	0.0014	P	3.6
3	☐	500.000	504.639	1965182.99	0.1106	A	1.0
4	☐	1250.000	1239.811	4714975.07	0.2716	A	0.6
5	☐	2500.000	2484.068	9213075.07	0.5441	A	1.2
6	☐	5000.000	4976.597	17798051.40	1.0901	A	1.5
7	☐	10000.000	10016.725	35544529.20	2.1940	A	0.9
8	☐			8389.14	0.0005	P	2.0

y = 2.1903E-004 * x + 2.5276E-005
R = 1.0000
DL = 0.0465
BEC = 0.1154

Weight: <None>
Min Conc: 0

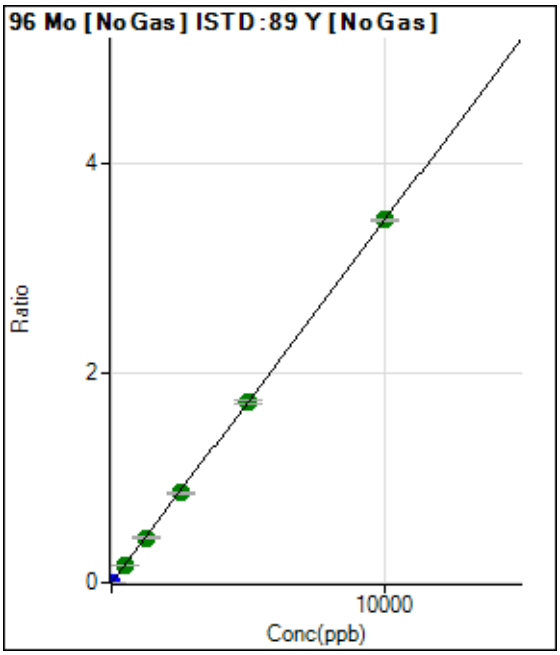


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	452.23	0.0000	P	11.1
2	☐	5.000	5.188	29383.96	0.0016	P	1.4
3	☐	500.000	498.347	2772652.56	0.1560	A	1.3
4	☐	1250.000	1243.085	6754450.04	0.3891	A	0.5
5	☐	2500.000	2475.395	13117714.39	0.7747	A	1.1
6	☐	5000.000	4982.584	25460624.90	1.5594	A	1.2
7	☐	10000.000	10015.807	50781957.02	3.1345	A	0.3
8	☐			7776.58	0.0005	P	1.6

y = 3.1296E-004 * x + 2.5298E-005
R = 1.0000
DL = 0.02685
BEC = 0.08083

Weight: <None>
Min Conc: 0

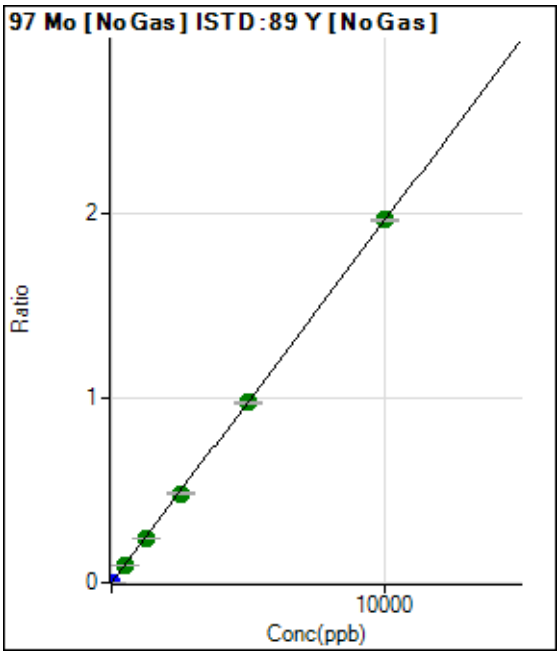
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	467.79	0.0000	P	5.6
2	☐	5.000	5.246	32747.70	0.0018	P	1.3
3	☐	500.000	500.470	3072506.90	0.1729	A	1.1
4	☐	1250.000	1245.544	7467695.09	0.4301	A	0.8
5	☐	2500.000	2477.719	14487829.37	0.8556	A	1.6
6	☐	5000.000	4981.646	28088622.36	1.7203	A	1.5
7	☐	10000.000	10015.280	56031054.16	3.4586	A	0.6
8	☐			17187.97	0.0011	P	1.9

y = 3.4533E-004 * x + 2.6192E-005
R = 1.0000
DL = 0.01267
BEC = 0.07585

Weight: <None>
Min Conc: 0

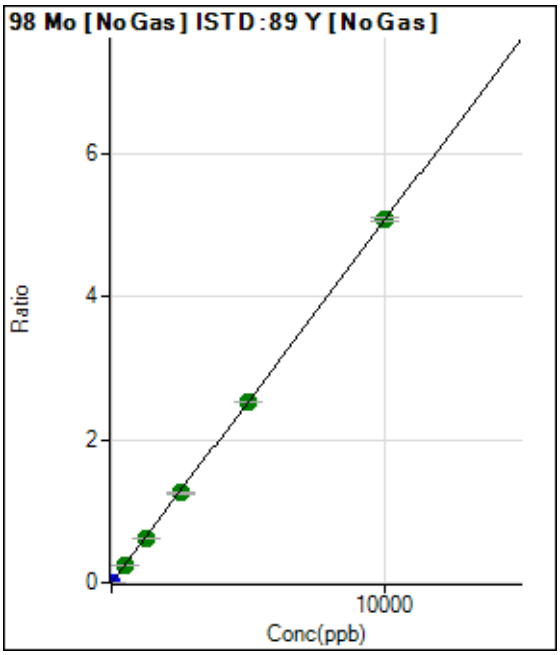


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	302.23	0.0000	P	2.1
2	☐	5.000	5.133	18230.36	0.0010	P	2.0
3	☐	500.000	498.227	1736417.08	0.0977	A	0.6
4	☐	1250.000	1237.865	4213294.00	0.2427	A	1.1
5	☐	2500.000	2469.156	8196234.74	0.4841	A	0.6
6	☐	5000.000	4973.559	15919524.90	0.9750	A	1.2
7	☐	10000.000	10022.537	31830718.41	1.9648	A	0.5
8	☐			4720.81	0.0003	P	5.4

y = 1.9603E-004 * x + 1.6917E-005
R = 1.0000
DL = 0.005412
BEC = 0.0863

Weight: <None>
Min Conc: 0

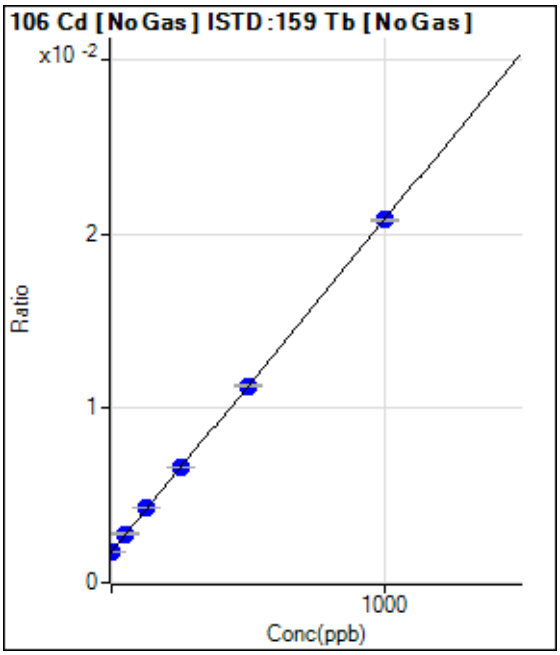
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	685.58	0.0000	P	1.2
2	☐	5.000	5.169	47311.87	0.0027	P	1.3
3	☐	500.000	495.624	4461184.52	0.2510	A	1.0
4	☐	1250.000	1238.662	10888664.42	0.6272	A	0.4
5	☐	2500.000	2477.139	21236879.82	1.2542	A	0.9
6	☐	5000.000	4983.145	41195568.27	2.5230	A	0.6
7	☐	10000.000	10015.779	82153321.00	5.0711	A	1.0
8	☐			11370.08	0.0007	P	5.3

y = 5.0630E-004 * x + 3.8366E-005
R = 1.0000
DL = 0.002773
BEC = 0.07578

Weight: <None>
Min Conc: 0

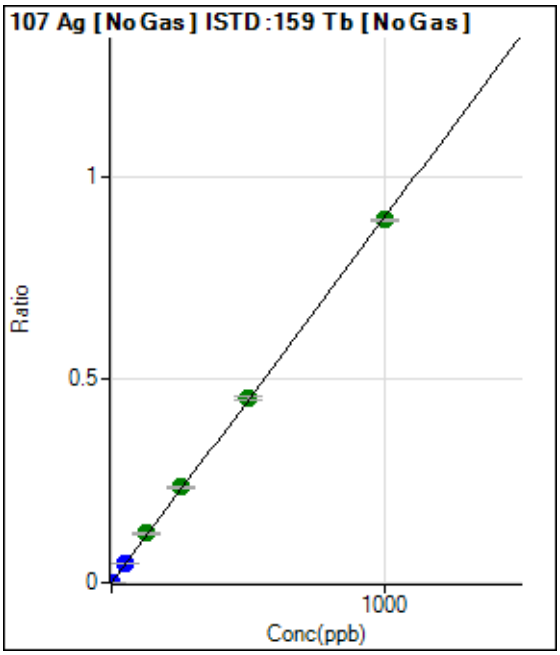


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25469.04	0.0018	P	0.6
2	☐	1.000	1.518	25858.66	0.0018	P	0.4
3	☐	50.000	54.304	40841.71	0.0028	P	1.2
4	☐	125.000	131.001	62056.18	0.0043	P	0.4
5	☐	250.000	253.776	96021.24	0.0066	P	0.6
6	☐	500.000	498.844	161881.46	0.0113	P	1.3
7	☐	1000.000	998.668	294276.52	0.0208	P	0.9
8	☐			22282.72	0.0017	P	1.2

y = 1.9069E-005 * x + 0.0018
R = 1.0000
DL = 1.577
BEC = 92.92

Weight: <None>
Min Conc: 0

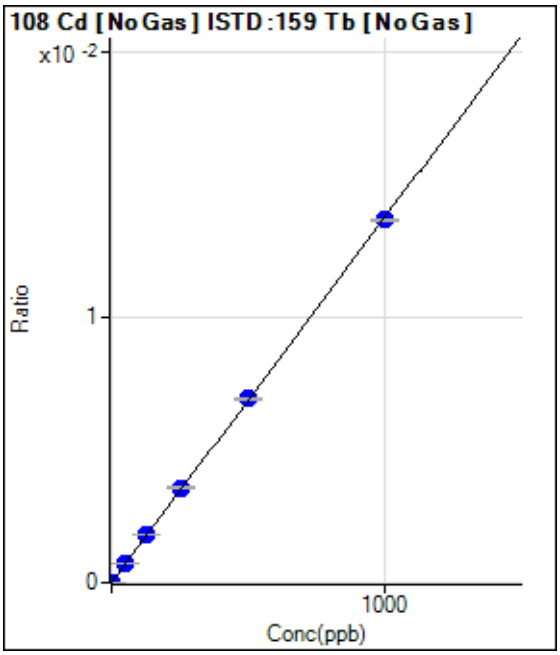
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	115.56	0.0000	P	20.4
2	☐	1.000	1.101	14323.83	0.0010	P	0.4
3	☐	50.000	54.855	717557.13	0.0493	P	0.2
4	☐	125.000	134.448	1756615.48	0.1209	A	1.1
5	☐	250.000	260.990	3407826.51	0.2346	A	1.3
6	☐	500.000	504.173	6502114.77	0.4532	A	1.7
7	☐	1000.000	993.742	12630183.70	0.8934	A	0.4
8	☐			2500.24	0.0002	P	7.4

y = 8.9897E-004 * x + 8.0341E-006
R = 0.9999
DL = 0.005465
BEC = 0.008937

Weight: <None>
Min Conc: 0

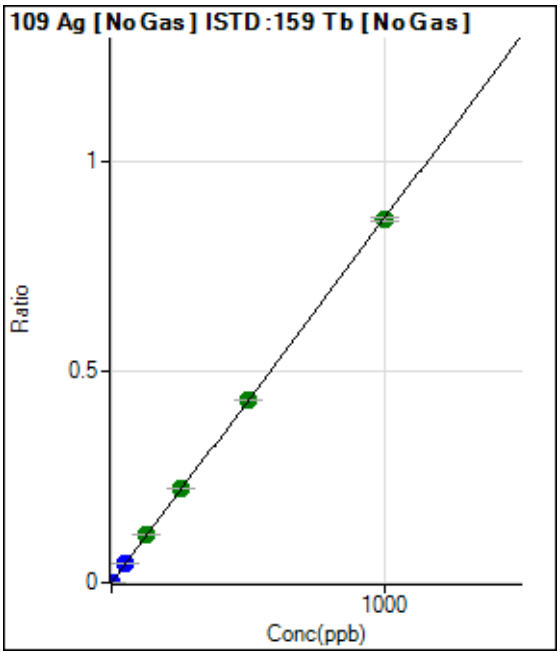


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47.78	0.0000	P	5.3
2	☐	1.000	1.239	292.23	0.0000	P	13.5
3	☐	50.000	54.143	10864.15	0.0007	P	2.6
4	☐	125.000	133.505	26691.26	0.0018	P	0.3
5	☐	250.000	260.037	51909.07	0.0036	P	1.0
6	☐	500.000	503.434	99222.77	0.0069	P	0.6
7	☐	1000.000	994.503	193119.38	0.0137	P	0.6
8	☐			146.67	0.0000	P	12.8

y = 1.3731E-005 * x + 3.3252E-006
R = 0.9999
DL = 0.0382
BEC = 0.2422

Weight: <None>
Min Conc: 0

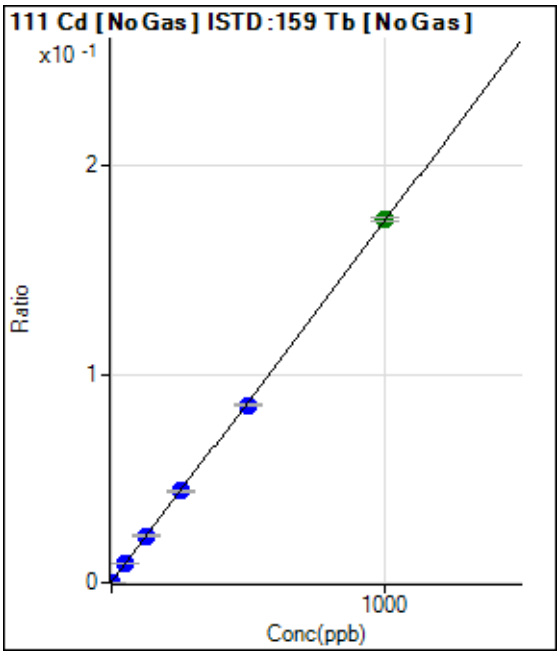
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55.55	0.0000	P	13.8
2	☐	1.000	1.099	13699.90	0.0010	P	0.9
3	☐	50.000	54.446	684712.04	0.0471	P	0.9
4	☐	125.000	133.554	1677650.03	0.1154	A	1.5
5	☐	250.000	260.378	3268994.88	0.2251	A	0.4
6	☐	500.000	500.983	6212421.58	0.4330	A	0.8
7	☐	1000.000	995.622	12166437.46	0.8606	A	0.9
8	☐			2251.31	0.0002	P	9.8

y = 8.6436E-004 * x + 3.8688E-006
R = 0.9999
DL = 0.001848
BEC = 0.004476

Weight: <None>
Min Conc: 0

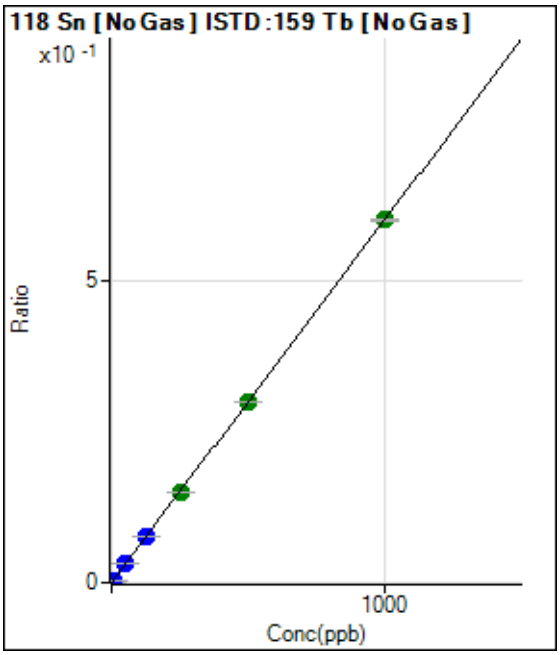


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2543.46	0.0002	P	0.3
2	☐	1.000	1.202	5531.68	0.0004	P	0.9
3	☐	50.000	52.661	135323.08	0.0093	P	0.1
4	☐	125.000	129.137	327742.63	0.0226	P	1.1
5	☐	250.000	252.071	636942.88	0.0439	P	0.2
6	☐	500.000	490.534	1221893.83	0.0852	P	0.8
7	☐	1000.000	1003.565	2460847.08	0.1741	A	1.2
8	☐			2584.51	0.0002	P	3.4

y = 1.7327E-004 * x + 1.7694E-004
R = 0.9999
DL = 0.009162
BEC = 1.021

Weight: <None>
Min Conc: 0

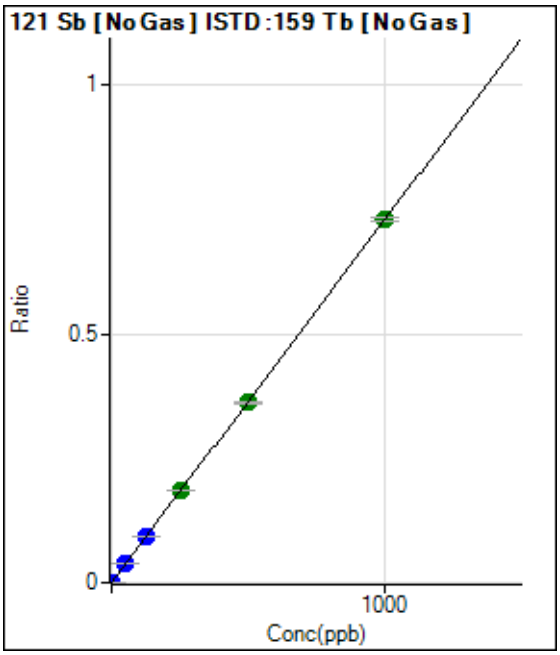
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	888.93	0.0001	P	7.3
2	☐	5.000	5.575	48857.03	0.0034	P	1.5
3	☐	50.000	51.668	451352.27	0.0310	P	0.3
4	☐	125.000	126.555	1103010.66	0.0759	P	1.0
5	☐	250.000	250.886	2184586.93	0.1504	A	0.5
6	☐	500.000	497.287	4276132.82	0.2981	A	0.5
7	☐	1000.000	1000.854	8480284.74	0.5998	A	0.6
8	☐			2649.16	0.0002	P	2.4

y = 5.9925E-004 * x + 6.1800E-005
R = 1.0000
DL = 0.0227
BEC = 0.1031

Weight: <None>
Min Conc: 0

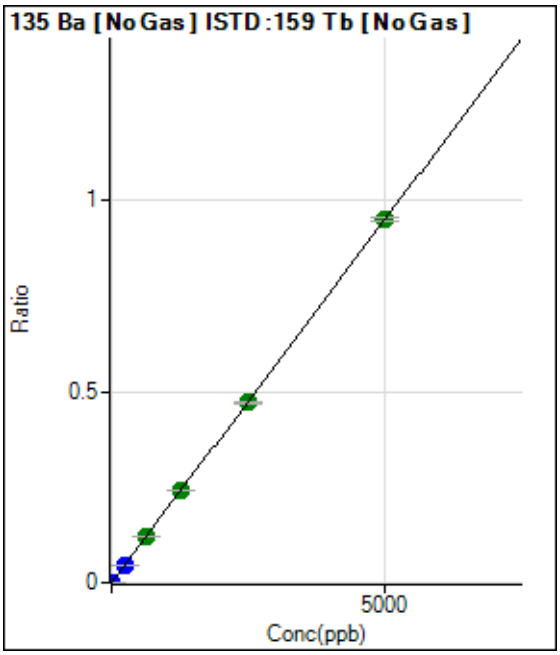


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	35.8
2	☐	2.000	2.182	22856.01	0.0016	P	2.1
3	☐	50.000	51.272	543342.10	0.0373	P	0.5
4	☐	125.000	125.526	1328715.23	0.0914	P	1.2
5	☐	250.000	253.776	2684783.40	0.1848	A	0.6
6	☐	500.000	496.809	5191353.46	0.3619	A	1.0
7	☐	1000.000	1000.522	10302957.21	0.7287	A	1.0
8	☐			7758.84	0.0006	P	1.9

y = 7.2837E-004 * x + 2.3186E-006
R = 1.0000
DL = 0.00342
BEC = 0.003183

Weight: <None>
Min Conc: 0

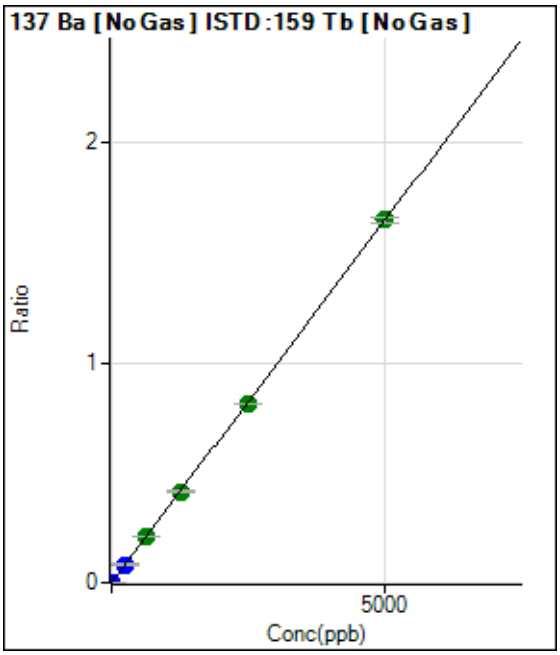
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35.56	0.0000	P	15.4
2	☐	10.000	10.559	28816.98	0.0020	P	2.6
3	☐	250.000	251.305	694127.61	0.0477	P	0.3
4	☐	625.000	636.736	1756795.80	0.1209	A	1.4
5	☐	1250.000	1265.378	3489123.80	0.2402	A	0.8
6	☐	2500.000	2483.223	6763307.68	0.4714	A	0.7
7	☐	5000.000	5003.010	13427808.27	0.9498	A	1.1
8	☐			5198.78	0.0004	P	4.0

y = 1.8984E-004 * x + 2.4762E-006
R = 1.0000
DL = 0.006015
BEC = 0.01304

Weight: <None>
Min Conc: 0

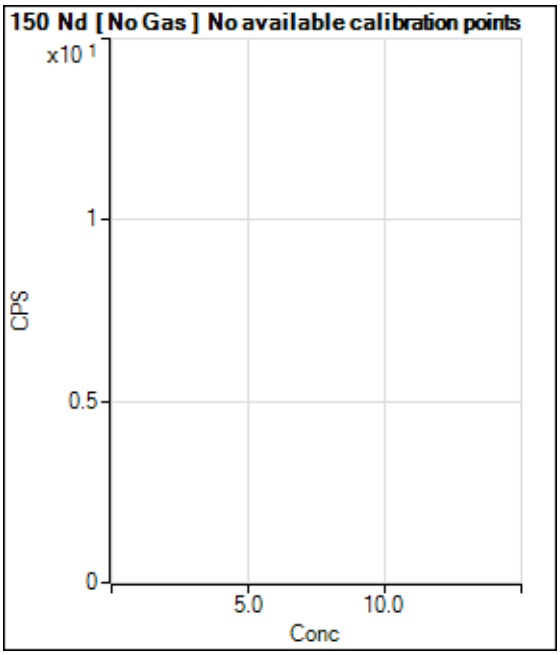


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0000	P	27.7
2	☐	10.000	10.640	50398.84	0.0035	P	0.9
3	☐	250.000	251.388	1204896.06	0.0828	P	1.1
4	☐	625.000	639.709	3062750.86	0.2107	A	0.8
5	☐	1250.000	1257.553	6017224.15	0.4143	A	0.9
6	☐	2500.000	2470.310	11675480.10	0.8138	A	0.5
7	☐	5000.000	5011.047	23338363.54	1.6508	A	1.3
8	☐			9289.78	0.0007	P	2.4

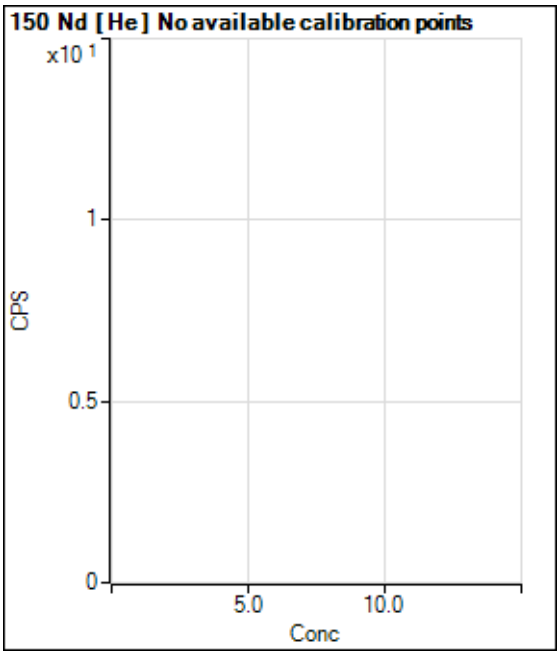
y = 3.2944E-004 * x + 4.4092E-006
R = 1.0000
DL = 0.01113
BEC = 0.01338

Weight: <None>
Min Conc: 0

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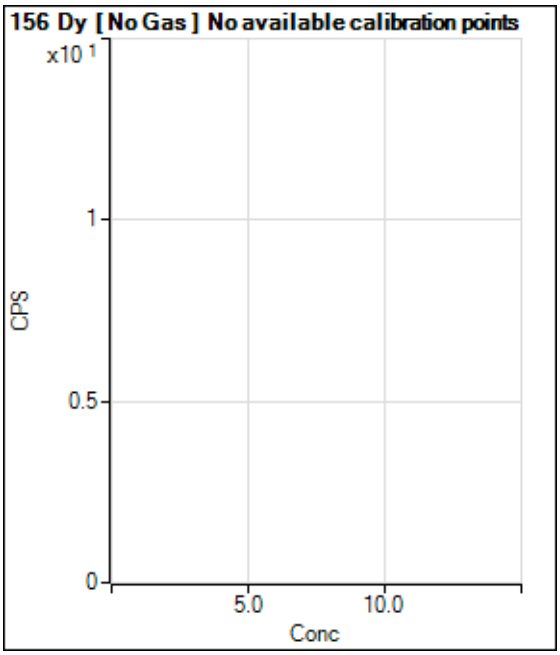


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			7.78		P	24.7
2	☐			7.78		P	49.5
3	☐			60.00		P	19.2
4	☐			137.78		P	9.8
5	☐			264.45		P	7.3
6	☐			498.90		P	5.1
7	☐			914.48		P	1.5
8	☐			202.23		P	23.6

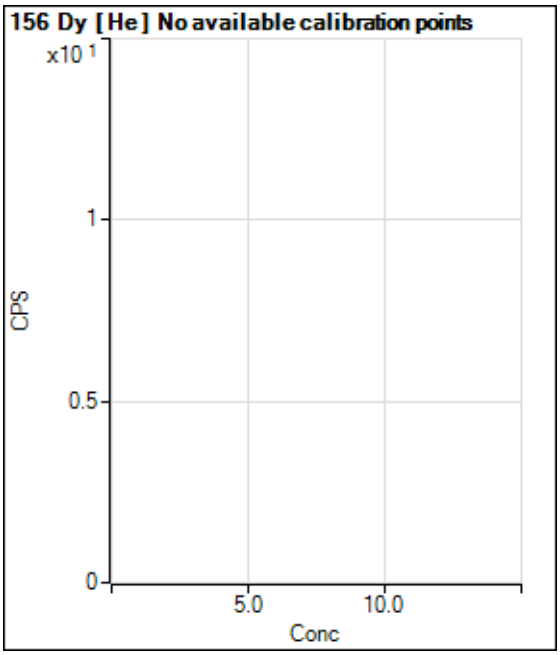


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			4.44		P	43.4
2	☐			4.44		P	114.
3	☐			14.44		P	58.1
4	☐			44.45		P	24.1
5	☐			78.89		P	27.2
6	☐			143.34		P	10.1
7	☐			285.56		P	4.1
8	☐			127.78		P	8.4

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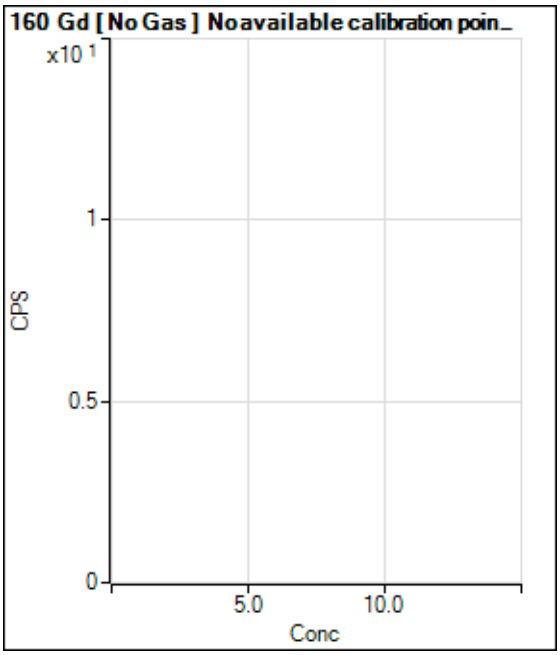


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			5.56		P	91.6
2	☐			10.00		P	66.7
3	☐			61.11		P	3.1
4	☐			86.67		P	19.2
5	☐			138.89		P	9.1
6	☐			293.34		P	8.2
7	☐			578.91		P	2.8
8	☐			367.79		P	16.8

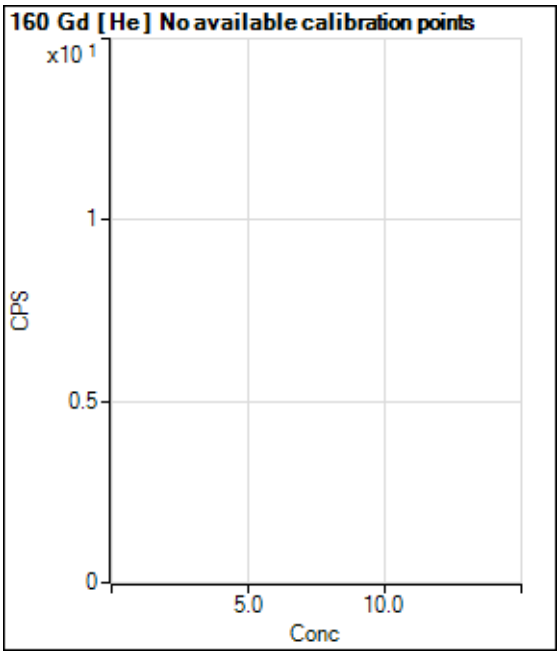


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1	☐			7.78		P	89.2
2	☐			5.56		P	34.7
3	☐			66.66		P	31.2
4	☐			136.67		P	4.2
5	☐			242.23		P	15.9
6	☐			471.12		P	3.2
7	☐			927.82		P	7.4
8	☐			337.79		P	6.3

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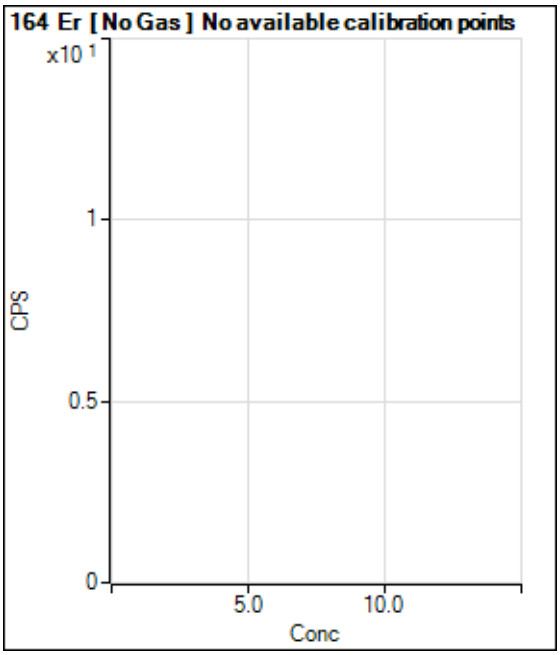


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1	☐			117.78		P	5.9
2	☐			108.89		P	6.4
3	☐			117.78		P	26.9
4	☐			126.67		P	25.1
5	☐			142.23		P	8.2
6	☐			181.11		P	7.7
7	☐			263.34		P	7.7
8	☐			406.68		P	11.1

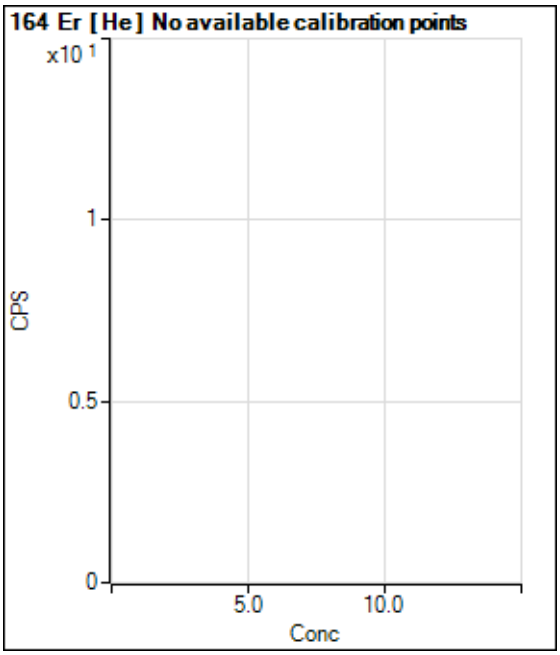


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1	☐			725.58		P	1.3
2	☐			645.58		P	8.5
3	☐			651.13		P	8.3
4	☐			692.25		P	9.4
5	☐			723.36		P	0.8
6	☐			728.92		P	1.2
7	☐			782.26		P	12.4
8	☐			934.48		P	3.6

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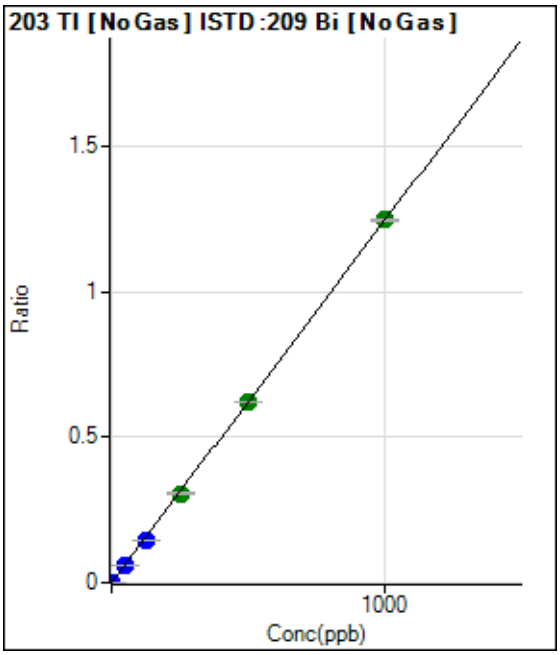


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1	☐			60.00		P	11.1
2	☐			81.11		P	39.5
3	☐			80.00		P	19.1
4	☐			88.89		P	12.1
5	☐			126.67		P	16.4
6	☐			176.67		P	23.2
7	☐			243.34		P	9.0
8	☐			487.79		P	12.3



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			52.22		P	35.2
2	☐			41.11		P	32.8
3	☐			51.11		P	16.4
4	☐			74.44		P	29.1
5	☐			84.44		P	16.4
6	☐			128.89		P	7.9
7	☐			185.56		P	20.7
8	☐			345.56		P	7.2

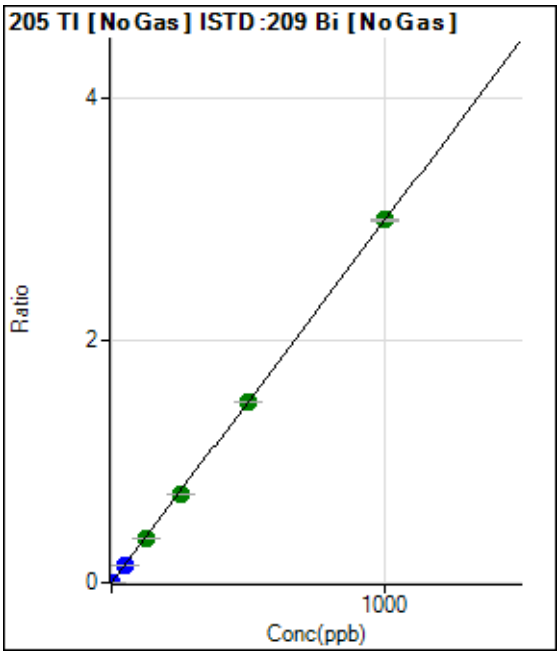
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	214.45	0.0000	P	18.0
2	☐	1.000	0.962	10374.03	0.0012	P	3.1
3	☐	50.000	46.932	507550.81	0.0584	P	0.9
4	☐	125.000	117.236	1274752.64	0.1458	P	1.7
5	☐	250.000	246.284	2680272.36	0.3063	A	1.3
6	☐	500.000	498.592	5382065.20	0.6201	A	0.1
7	☐	1000.000	1002.757	10737733.66	1.2471	A	0.3
8	☐			1685.68	0.0002	P	6.8

y = 0.0012 * x + 2.5277E-005
R = 1.0000
DL = 0.01096
BEC = 0.02033

Weight: <None>
Min Conc: 0

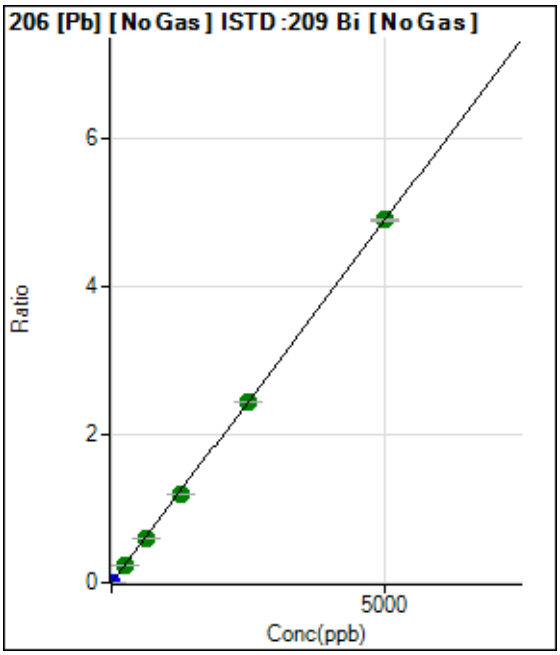


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	515.57	0.0001	P	6.3
2	☐	1.000	0.955	24762.61	0.0029	P	1.4
3	☐	50.000	46.008	1197007.73	0.1377	P	1.2
4	☐	125.000	122.657	3208573.74	0.3670	A	1.9
5	☐	250.000	244.559	6402953.80	0.7318	A	1.3
6	☐	500.000	498.941	12957412.31	1.4929	A	0.4
7	☐	1000.000	1002.382	25823767.95	2.9992	A	0.4
8	☐			3910.60	0.0005	P	9.7

y = 0.0030 * x + 6.0789E-005
R = 1.0000
DL = 0.003867
BEC = 0.02032

Weight: <None>
Min Conc: 0

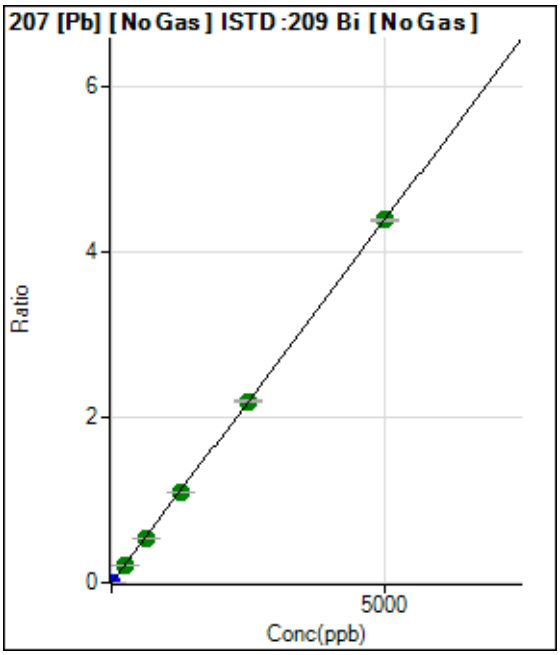
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	410.01	0.0000	P	7.0
2	☐	1.000	0.970	8474.94	0.0010	P	0.6
3	☐	250.000	240.437	2048395.77	0.2357	A	1.1
4	☐	625.000	611.940	5242895.27	0.5997	A	0.7
5	☐	1250.000	1228.862	10538674.57	1.2043	A	0.3
6	☐	2500.000	2494.923	21220445.66	2.4450	A	0.5
7	☐	5000.000	5009.934	42271888.82	4.9096	A	0.5
8	☐			10928.91	0.0015	P	2.5

y = 9.7996E-004 * x + 4.8341E-005
R = 1.0000
DL = 0.01033
BEC = 0.04933

Weight: <None>
Min Conc: 0

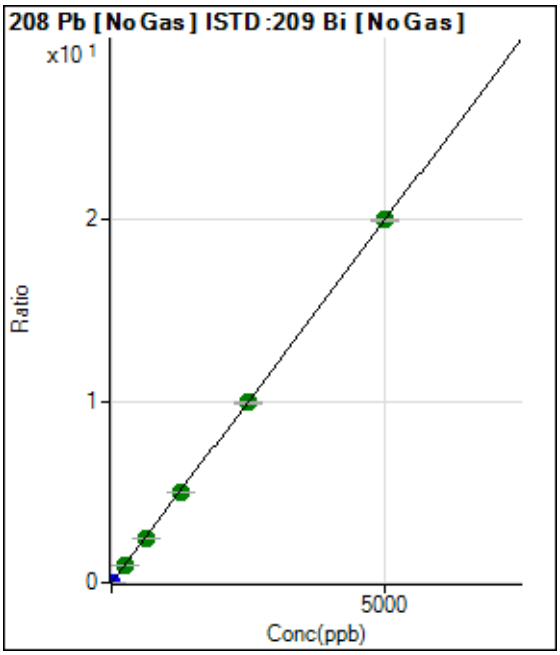


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	376.68	0.0000	P	10.8
2	☐	1.000	0.957	7501.02	0.0009	P	1.9
3	☐	250.000	245.644	1872826.41	0.2155	A	0.1
4	☐	625.000	613.845	4706146.18	0.5384	A	1.7
5	☐	1250.000	1238.324	9502785.62	1.0860	A	0.4
6	☐	2500.000	2498.536	19016904.86	2.1911	A	0.7
7	☐	5000.000	5005.263	37793531.38	4.3894	A	0.7
8	☐			9473.38	0.0013	P	4.4

y = 8.7694E-004 * x + 4.4401E-005
R = 1.0000
DL = 0.01647
BEC = 0.05063

Weight: <None>
Min Conc: 0

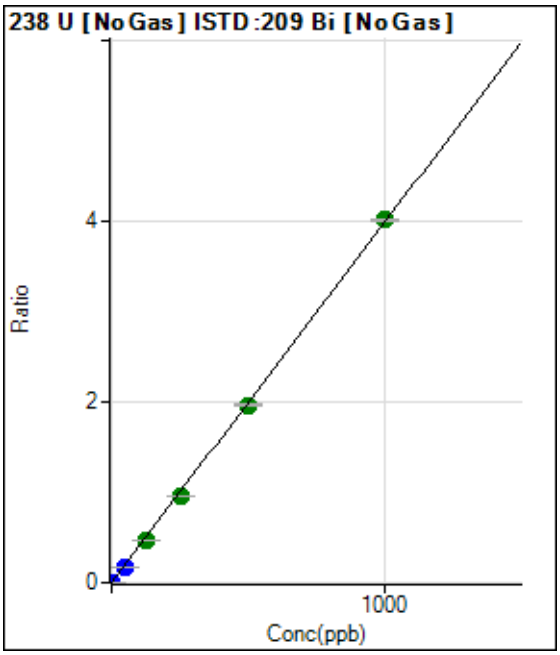
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1657.84	0.0002	P	2.6
2	☐	1.000	0.966	34354.03	0.0040	P	1.3
3	☐	250.000	245.369	8504672.57	0.9784	A	0.3
4	☐	625.000	612.747	21356907.25	2.4430	A	1.1
5	☐	1250.000	1240.487	43277575.68	4.9457	A	0.2
6	☐	2500.000	2492.005	86224983.72	9.9351	A	1.0
7	☐	5000.000	5008.139	171913591.0	19.9662	A	0.2
8	☐			43957.21	0.0061	P	3.3

y = 0.0040 * x + 1.9547E-004
R = 1.0000
DL = 0.003819
BEC = 0.04903

Weight: <None>
Min Conc: 0

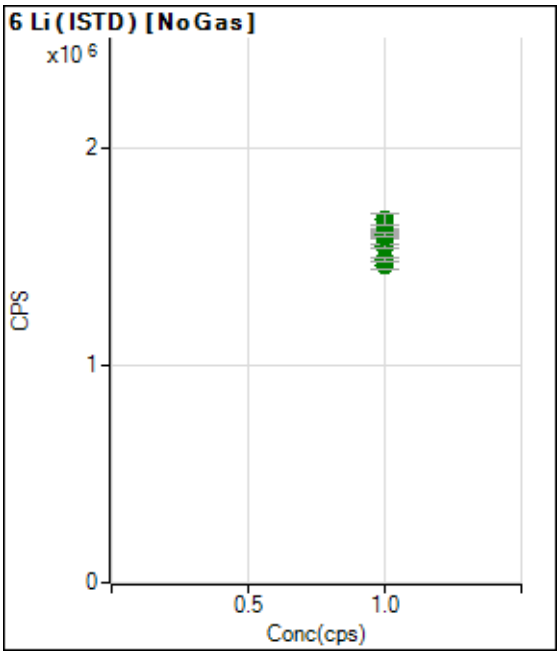


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	28.1
2	☐	1.000	0.891	30235.44	0.0036	P	0.6
3	☐	50.000	43.126	1496423.92	0.1722	P	1.5
4	☐	125.000	116.910	4079721.02	0.4667	A	1.6
5	☐	250.000	240.687	8407246.54	0.9608	A	1.3
6	☐	500.000	493.279	17089175.16	1.9691	A	1.2
7	☐	1000.000	1007.044	34612385.60	4.0200	A	0.4
8	☐			2431.36	0.0003	P	9.0

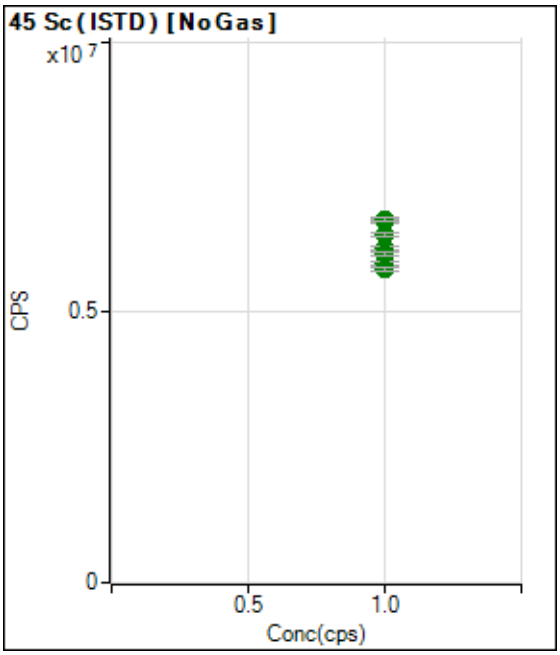
y = 0.0040 * x + 5.4975E-006
R = 0.9999
DL = 0.00116
BEC = 0.001377

Weight: <None>
Min Conc: 0

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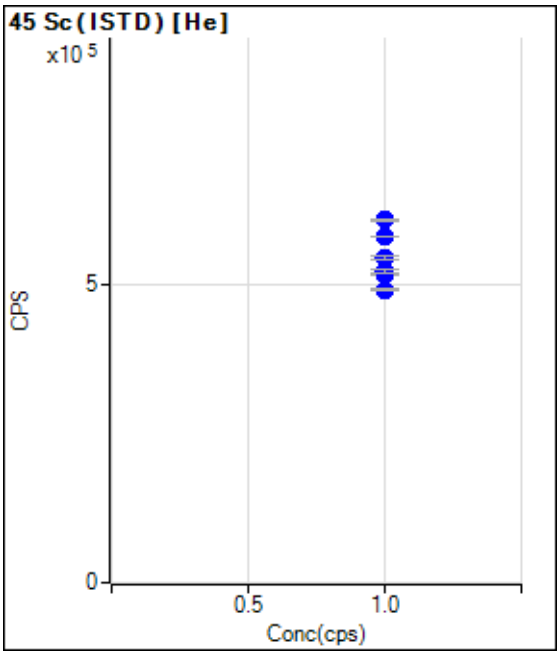


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1	☐	1.000		1463389.49		A	2.3
2	☐	1.000		1490745.95		A	1.1
3	☐	1.000		1548562.25		A	1.2
4	☐	1.000		1596971.69		A	1.2
5	☐	1.000		1623928.12		A	0.7
6	☐	1.000		1617285.41		A	0.9
7	☐	1.000		1608185.65		A	1.0
8	☐	1.000		1672808.93		A	3.2

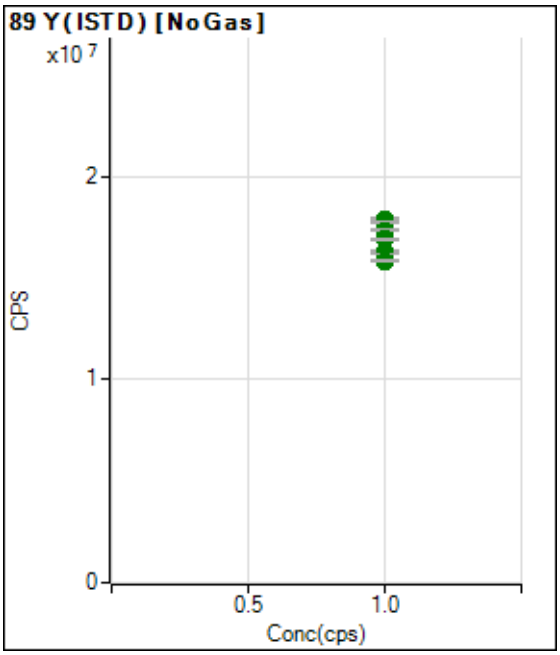


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1	☐	1.000		6701219.00		A	1.4
2	☐	1.000		6699224.34		A	0.6
3	☐	1.000		6713817.68		A	1.1
4	☐	1.000		6449639.69		A	1.3
5	☐	1.000		6189002.69		A	1.1
6	☐	1.000		5907059.77		A	1.1
7	☐	1.000		5814361.72		A	1.1
8	☐	1.000		6088578.31		A	1.1

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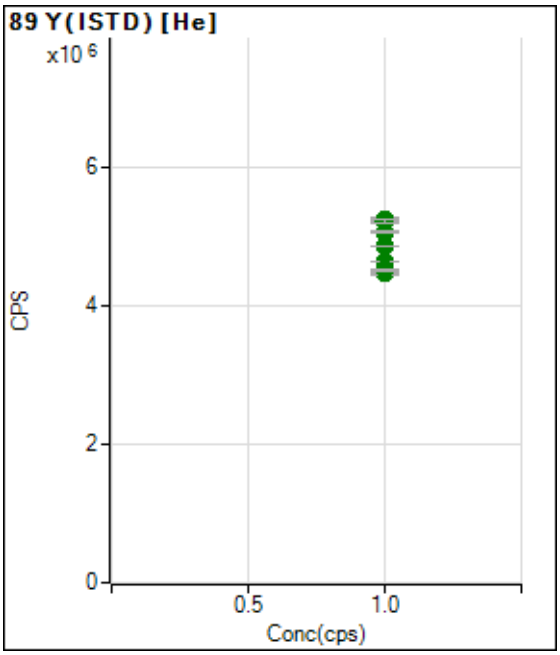


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1	☐	1.000		606667.33		P	0.4
2	☐	1.000		606258.35		P	0.3
3	☐	1.000		578707.75		P	0.4
4	☐	1.000		543759.81		P	0.8
5	☐	1.000		515063.44		P	0.3
6	☐	1.000		489615.40		P	0.1
7	☐	1.000		489972.48		P	0.6
8	☐	1.000		521218.40		P	0.8

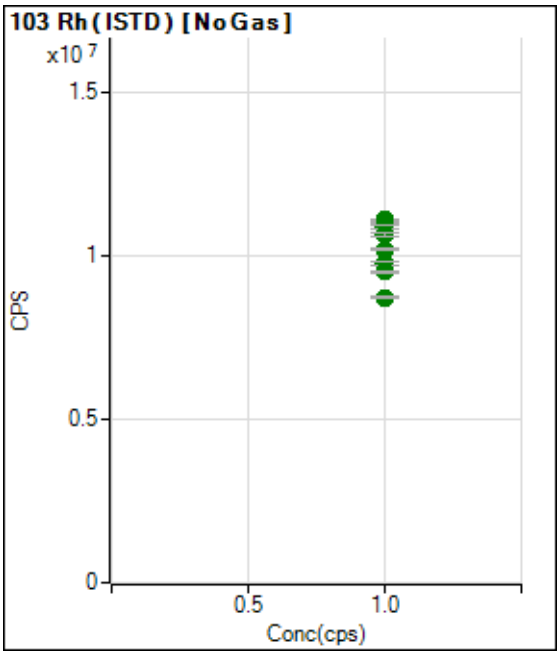


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1	☐	1.000		17868366.40		A	1.3
2	☐	1.000		17819303.07		A	1.1
3	☐	1.000		17775673.35		A	0.5
4	☐	1.000		17361504.88		A	0.7
5	☐	1.000		16932897.94		A	0.6
6	☐	1.000		16328104.62		A	0.4
7	☐	1.000		16200862.26		A	0.5
8	☐	1.000		15847831.71		A	0.7

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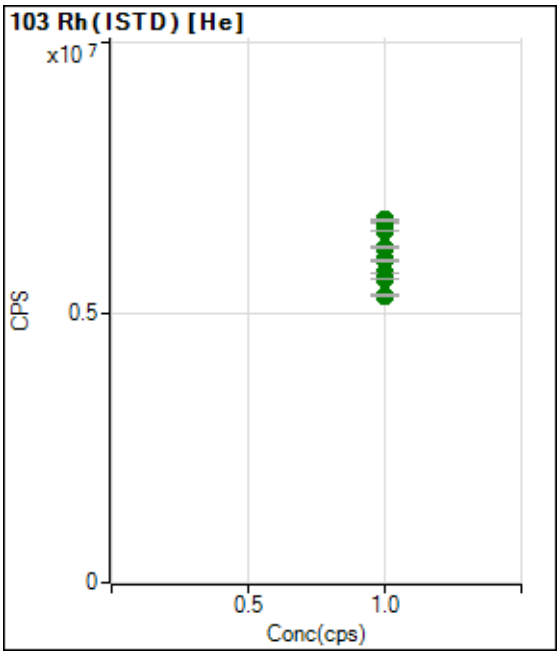


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2	☐	1.000		5205820.79		A	1.0
3	☐	1.000		5061053.57		A	0.9
4	☐	1.000		4850866.49		A	0.3
5	☐	1.000		4638016.70		A	0.4
6	☐	1.000		4486603.79		A	0.6
7	☐	1.000		4463302.82		A	0.6
8	☐	1.000		4512388.13		A	0.7

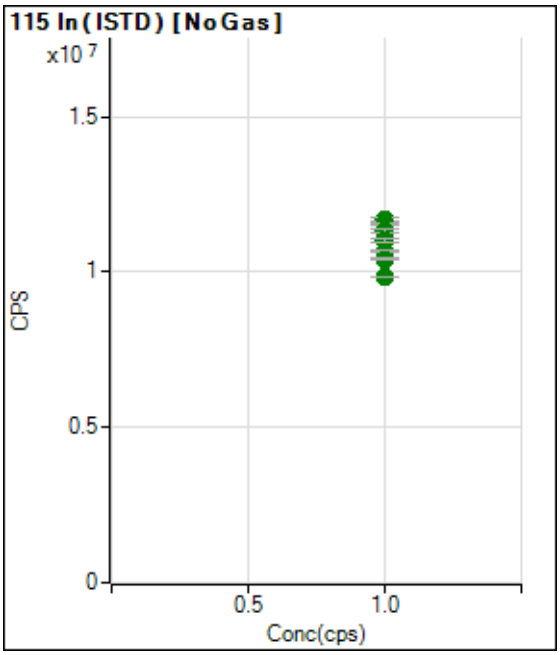


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1	☐	1.000		11096493.17		A	0.5
2	☐	1.000		10983029.56		A	0.6
3	☐	1.000		10888567.20		A	0.8
4	☐	1.000		10646978.52		A	1.3
5	☐	1.000		10200101.31		A	0.5
6	☐	1.000		9785559.85		A	1.1
7	☐	1.000		9501535.48		A	0.9
8	☐	1.000		8723853.55		A	0.5

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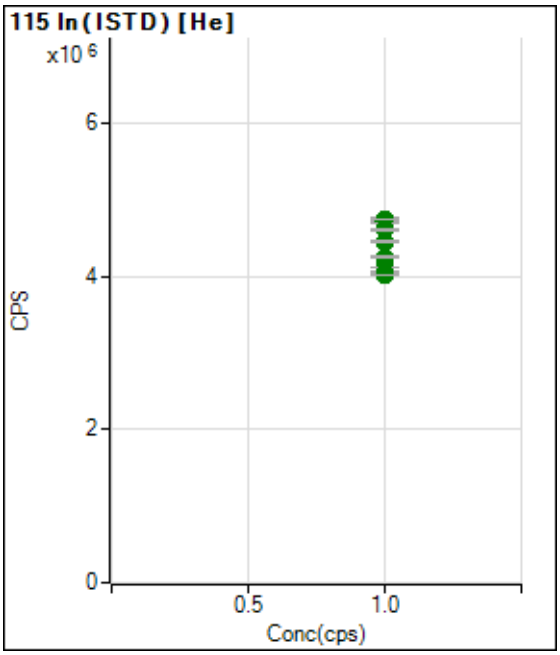


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1	☐	1.000		6706090.80		A	0.8
2	☐	1.000		6723846.36		A	0.5
3	☐	1.000		6532693.51		A	0.2
4	☐	1.000		6202116.57		A	0.6
5	☐	1.000		5971154.01		A	0.5
6	☐	1.000		5741121.65		A	0.4
7	☐	1.000		5630576.30		A	0.4
8	☐	1.000		5323106.10		A	0.8

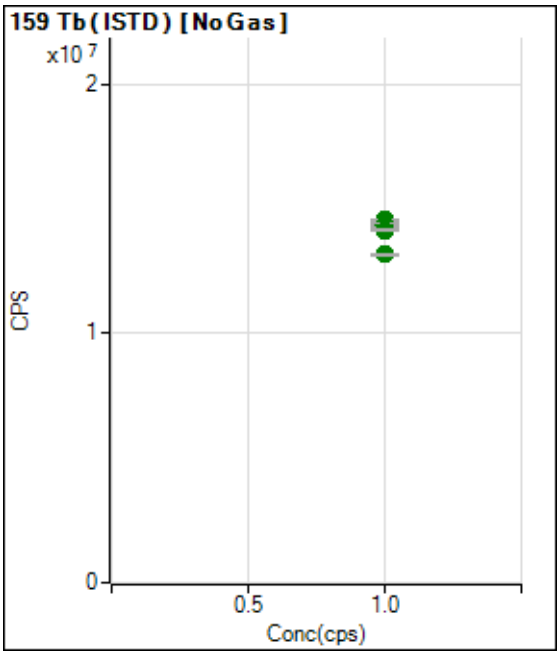


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1	☐	1.000		11675402.66		A	1.2
2	☐	1.000		11550415.49		A	0.6
3	☐	1.000		11526358.24		A	0.4
4	☐	1.000		11342225.54		A	1.0
5	☐	1.000		10998395.67		A	0.9
6	☐	1.000		10663060.31		A	0.7
7	☐	1.000		10414510.28		A	0.6
8	☐	1.000		9843067.60		A	0.4

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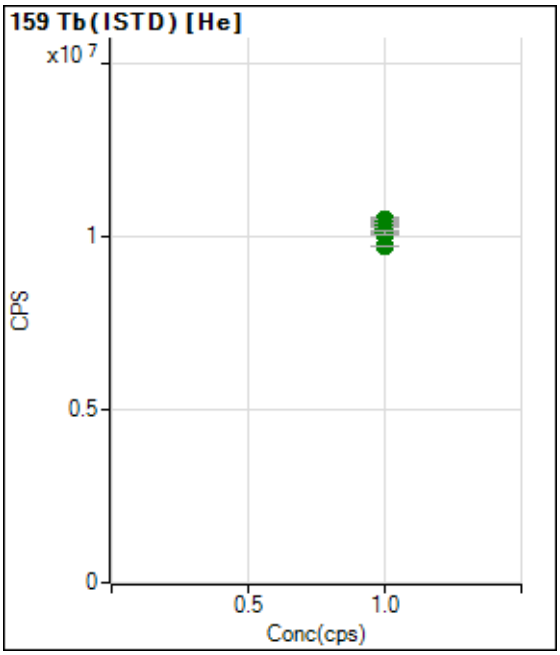


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4746320.53		A	1.0
2	☐	1.000		4726866.71		A	1.0
3	☐	1.000		4619929.07		A	0.3
4	☐	1.000		4461263.59		A	0.4
5	☐	1.000		4262567.34		A	0.4
6	☐	1.000		4128944.75		A	0.1
7	☐	1.000		4061317.86		A	0.8
8	☐	1.000		4025329.56		A	0.4

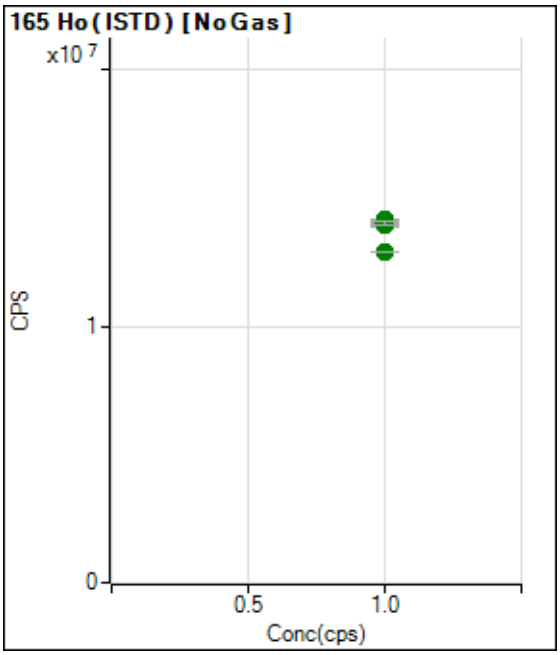


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		14375264.23		A	1.2
2	☐	1.000		14360236.17		A	0.7
3	☐	1.000		14548644.64		A	0.4
4	☐	1.000		14533379.09		A	0.9
5	☐	1.000		14524641.45		A	0.5
6	☐	1.000		14346942.29		A	0.8
7	☐	1.000		14138104.37		A	0.6
8	☐	1.000		13149426.61		A	0.1

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

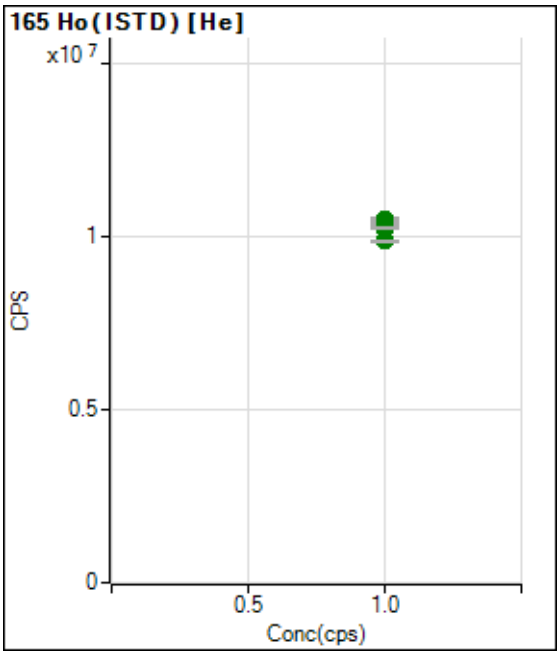


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10406782.76		A	1.5
2	☐	1.000		10496731.02		A	1.3
3	☐	1.000		10433771.65		A	1.3
4	☐	1.000		10344105.12		A	0.9
5	☐	1.000		10247735.40		A	0.8
6	☐	1.000		10094634.02		A	0.4
7	☐	1.000		10147097.00		A	1.0
8	☐	1.000		9726085.34		A	0.1

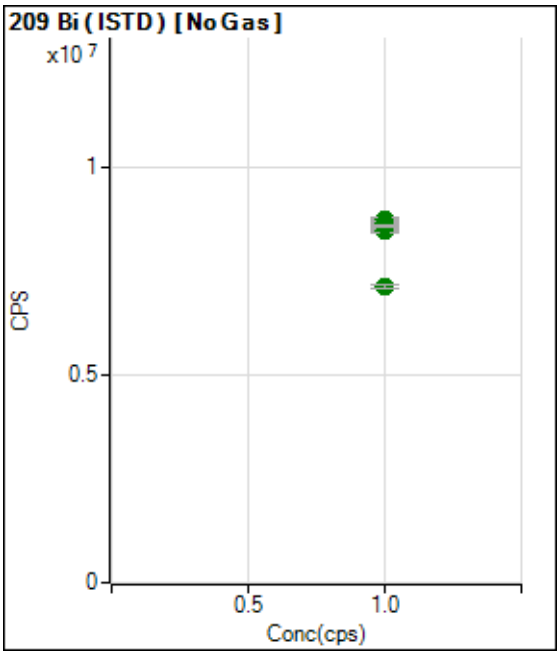


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		14029135.07		A	0.5
2	☐	1.000		13950036.18		A	0.7
3	☐	1.000		14145965.90		A	0.2
4	☐	1.000		14154830.20		A	0.3
5	☐	1.000		14022183.40		A	0.2
6	☐	1.000		14066873.40		A	1.1
7	☐	1.000		14061618.40		A	1.0
8	☐	1.000		12908853.28		A	0.4

Reviewed By:mohan
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Inst Id :P7
LB :LB134187

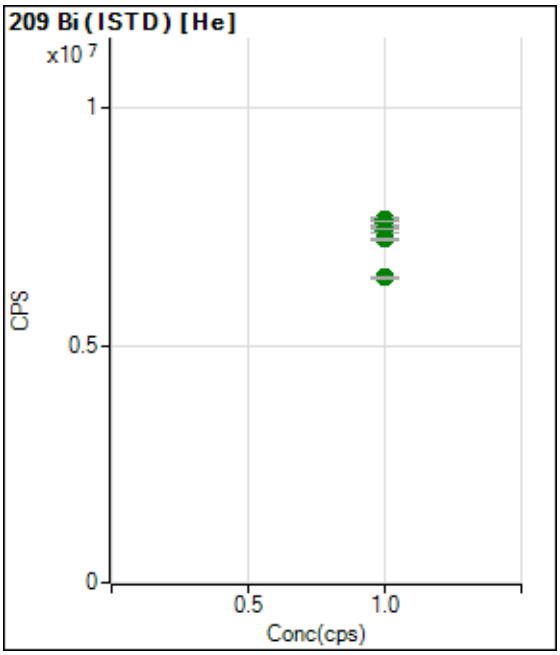


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10475486.99		A	1.6
2	☐	1.000		10455241.86		A	0.6
3	☐	1.000		10475639.36		A	0.8
4	☐	1.000		10393935.33		A	0.4
5	☐	1.000		10359926.93		A	0.7
6	☐	1.000		10275052.28		A	0.4
7	☐	1.000		10222616.17		A	0.5
8	☐	1.000		9873960.34		A	0.7



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8480716.47		A	0.5
2	☐	1.000		8487958.97		A	1.0
3	☐	1.000		8692284.25		A	0.7
4	☐	1.000		8742566.05		A	1.0
5	☐	1.000		8750752.16		A	1.4
6	☐	1.000		8679276.88		A	1.0
7	☐	1.000		8610208.69		A	0.7
8	☐	1.000		7163413.92		A	1.3

Reviewed By:mohan
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7555914.40		A	1.6
2	☐	1.000		7644698.36		A	0.4
3	☐	1.000		7647313.84		A	1.0
4	☐	1.000		7528511.97		A	0.4
5	☐	1.000		7584766.83		A	1.1
6	☐	1.000		7410396.90		A	1.0
7	☐	1.000		7237948.78		A	0.6
8	☐	1.000		6436353.72		A	0.4

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

US EPA Tune Check Report

Operator Name Jaswal

Acq/Data Batch D:\Agilent\ICPMH\1\DATA\P7010625MS-2.b

Acq. Date-Time 2025-01-06 12:39:40

Report Comment ---

Instrument Name G8403A JP14410463

[No Gas]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9		7162	71616.68			0.321	5.000
24		215525	2155254.96			0.603	5.000
25		27375	273752.32			0.283	5.000
26		31417	314167.90			0.555	5.000
59		84076	840759.37			0.399	5.000
113		11278	112779.02			0.647	5.000
115		142289	1422886.58			0.839	5.000
206		29738	297377.91			0.411	5.000
207		25747	257471.66			0.524	5.000
208		62494	624942.51			0.780	5.000
220		0	2.60			31.600	

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

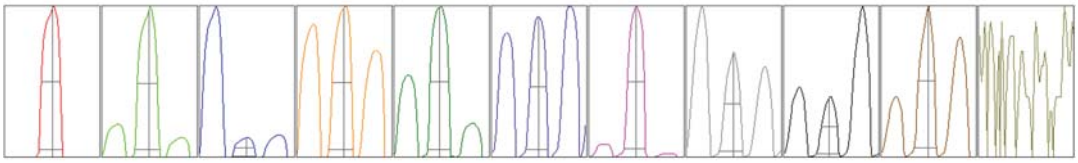
Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	7176	7137	7159	7193	7144
24	217678	214584	215827	214813	214724
25	27418	27448	27427	27305	27278
26	31657	31523	31348	31347	31209
59	83960	84333	83749	83819	84520
113	11356	11290	11298	11290	11157
115	143714	142782	142841	141236	140870
206	29934	29749	29663	29730	29613
207	25879	25603	25748	25884	25622
208	62471	63320	62322	62321	62038

US EPA Tune Check Report

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

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	12731.30	9.05	8.90 - 9.10	
24	366564.30	24.00	23.90 - 24.10	
25	47010.85	25.00	24.90 - 25.10	
26	53494.04	26.00	25.90 - 26.10	
59	147737.60	58.95	58.90 - 59.10	
113	22276.38	113.00	112.90 - 113.10	
115	279226.95	115.00	114.90 - 115.10	
206	60698.49	206.00	205.90 - 206.10	
207	51657.47	206.95	206.90 - 207.10	
208	130042.93	208.00	207.90 - 208.10	
220			-	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.59	0.738	0.900	
24	0.62	0.784	0.900	
25	0.62	0.741	0.900	
26	0.61	0.777	0.900	
59	0.59	0.733	0.900	
113	0.51	0.708	0.900	
115	0.52	0.690	0.900	
206	0.50	0.747	0.900	
207	0.50	0.715	0.900	
208	0.51	0.706	0.900	
220				

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

Tune Parameters

Plasma Parameters

Plasma Mode --- Nebulizer Gas 0.82 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	0.0 V	Omega Lens	8.5 V	Deflect	14.4 V
Extract 2	-130.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-60 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	160 V		

QP Parameters

Mass Gain	139	Axis Gain	0.9973	QP Bias	-3.0 V
Mass Offset	130	Axis Offset	0.15		

Hardware Settings

Torch

Torch H	0.3 mm	Torch V	0.4 mm		

EM

Discriminator	4.8 mV	Analog HV	2265 V	Pulse HV	1056 V

[He]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
59		27410	274096.40			0.595	
89		51907	519066.40			0.579	
205		32538	325375.23			0.704	

Mass	RSD% (Flag)
59	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	27653	27490	27318	27345	27242
89	52425	51809	51644	51801	51856
205	32883	32662	32411	32370	32361

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.82 L/min	Dilution Gas	0.40 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	9.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.4 V	Deflect	2.6 V

US EPA Tune Check Report

Reviewed By:mohan
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Inst Id :P7
LB :LB134187

Extract 2	-160.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	3.9 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	139	Axis Gain	0.9973	QP Bias	-13.0 V
Mass Offset	130	Axis Offset	0.15		

Hardware Settings

Torch

Torch H	0.3 mm	Torch V	0.4 mm		

EM

Discriminator	4.8 mV	Analog HV	2265 V	Pulse HV	1056 V

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:15:48	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.19	0.07	0.12	0.00	N/A	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	N/A	ppb
Arsenic	75-2	-0.01	0.00	0.01	0.00	N/A	ppb
Barium	135-1	0.00	0.00	0.00	0.00	N/A	ppb
Barium	137-1	0.00	0.00	0.00	0.00	N/A	ppb
Beryllium	9-1	-0.01	0.00	0.01	0.00	N/A	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.01	-0.01	0.01	0.00	N/A	ppb
Cadmium	106-1	-0.59	0.17	0.42	0.00	N/A	ppb
Cadmium	111-1	0.00	0.00	0.00	0.00	N/A	ppb
Calcium	43-1	-0.45	2.06	-1.61	0.00	N/A	ppb
Calcium	44-1	0.71	-0.85	0.14	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	-0.02	0.03	0.00	N/A	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	N/A	ppb
Copper	63-2	-0.01	-0.01	0.02	0.00	N/A	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				100		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	56-2	-0.05	0.06	-0.01	0.00	N/A	ppb
Iron	57-2	-0.40	0.46	-0.06	0.00	N/A	ppb
Iron	54-2	0.03	-0.21	0.17	0.00	N/A	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:15:48	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.00	0.00	0.00	0.00	N/A	ppb
Lead	207-1	0.00	0.00	-0.01	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	-0.01	-0.04	0.05	0.00	N/A	ppb
Manganese	55-2	-0.01	0.00	0.00	0.00	N/A	ppb
Molybdenum	94-1	0.00	-0.02	0.02	0.00	N/A	ppb
Molybdenum	95-1	-0.01	0.01	0.00	0.00	N/A	ppb
Molybdenum	96-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	97-1	0.00	0.00	0.00	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	0.00	-0.01	0.00	N/A	ppb
Phosphorus	31-2	-16.12	-18.30	-12.50	-15.64		ppb
Potassium	39-2	-0.51	-0.25	0.75	0.00	N/A	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	0.13	-0.23	0.10	0.00	N/A	ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.34	0.47	-0.12	0.00	N/A	ppb
Silicon	28-1	0.03	-0.33	0.30	0.00	N/A	ppb
Silver	107-1	0.00	0.00	0.00	0.00	N/A	ppb
Silver	109-1	0.00	0.00	0.00	0.00	N/A	ppb
Sodium	23-2	-0.01	-0.38	0.40	0.00	N/A	ppb
Strontium	86-1	-0.18	0.27	-0.09	0.00	N/A	ppb
Strontium	88-1	0.00	0.00	0.00	0.00	N/A	ppb
Sulfur	34-1	-113.96	-61.06	44.07	-43.65		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	0.01	0.00	-0.01	0.00	N/A	ppb
Titanium	47-1	-0.02	0.02	-0.01	0.00	N/A	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:15:48	DataFile Name :	004CALB.d

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

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P7
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:19:03	DataFile Name :	005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19.63	19.55	20.33	19.84	2.18	ppb
Antimony	121-1	2.23	2.18	2.14	2.18	2.07	ppb
Arsenic	75-2	1.21	1.18	1.38	1.26	8.38	ppb
Barium	135-1	10.86	10.48	10.33	10.56	2.58	ppb
Barium	137-1	10.64	10.74	10.54	10.64	0.92	ppb
Beryllium	9-1	1.19	1.34	1.15	1.23	8.42	ppb
Bismuth	209-1				100		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.02	1.30	1.40	1.24	16.09	ppb
Cadmium	106-1	1.96	1.30	1.29	1.52	25.04	ppb
Cadmium	111-1	1.20	1.18	1.22	1.20	1.59	ppb
Calcium	43-1	573.54	558.62	555.78	562.65	1.70	ppb
Calcium	44-1	553.42	556.10	559.79	556.44	0.57	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.15	2.08	2.05	2.09	2.47	ppb
Cobalt	59-2	1.11	1.13	1.08	1.10	2.02	ppb
Copper	63-2	2.06	2.02	2.05	2.05	0.95	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				99		%
Indium	115-2				100		%
Iron	56-2	56.60	57.01	56.73	56.78	0.37	ppb
Iron	57-2	60.11	60.56	58.64	59.77	1.68	ppb
Iron	54-2	58.05	57.55	60.41	58.67	2.61	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P7
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:19:03	DataFile Name :	005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.97	0.96	0.97	0.97	0.65	ppb
Lead	207-1	0.94	0.95	0.98	0.96	2.04	ppb
Lead	208-1	0.95	0.97	0.98	0.97	1.34	ppb
Lithium	6-1				102		%
Magnesium	24-2	545.50	541.12	536.90	541.17	0.79	ppb
Manganese	55-2	1.04	1.06	1.00	1.03	3.37	ppb
Molybdenum	94-1	6.33	5.98	5.91	6.07	3.67	ppb
Molybdenum	95-1	5.15	5.15	5.27	5.19	1.38	ppb
Molybdenum	96-1	5.25	5.31	5.17	5.25	1.34	ppb
Molybdenum	97-1	5.23	5.02	5.15	5.13	2.08	ppb
Molybdenum	98-1	5.25	5.13	5.12	5.17	1.35	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.05	1.10	1.09	1.08	2.77	ppb
Phosphorus	31-2	17.04	14.67	15.21	15.64	7.96	ppb
Potassium	39-2	538.95	532.69	537.59	536.41	0.61	ppb
Rhodium	103-1				99		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	5.83	5.85	5.54	5.74	2.93	ppb
Selenium	77-2	5.77	5.87	5.14	5.59	7.12	ppb
Selenium	78-2	7.87	6.36	6.12	6.78	13.97	ppb
Silicon	28-1	0.17	0.04	0.14	0.12	59.20	ppb
Silver	107-1	1.10	1.10	1.10	1.10	0.40	ppb
Silver	109-1	1.09	1.11	1.10	1.10	0.85	ppb
Sodium	23-2	505.66	499.87	498.27	501.27	0.78	ppb
Strontium	86-1	26.62	26.27	25.69	26.19	1.80	ppb
Strontium	88-1	26.74	25.79	26.27	26.26	1.82	ppb
Sulfur	34-1	17.48	12.71	100.76	43.65	113.44	ppb
Terbium	159-1				100		%
Terbium	159-2				101		%
Thallium	203-1	0.98	0.93	0.97	0.96	3.13	ppb
Thallium	205-1	0.96	0.94	0.96	0.95	1.43	ppb
Tin	118-1	5.66	5.57	5.49	5.57	1.55	ppb
Titanium	47-1	5.17	5.21	5.42	5.26	2.60	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P7
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:19:03	DataFile Name :	005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.89	0.89	0.90	0.89	0.57	ppb
Vanadium	51-2	5.17	5.29	5.27	5.24	1.22	ppb
Yttrium	89-1				100		%
Yttrium	89-2				99		%
Zinc	66-2	5.42	5.42	5.06	5.30	3.91	ppb
Zirconium	90-1	1.01	1.00	1.00	1.01	0.65	ppb
Zirconium	91-1	1.06	1.00	1.03	1.03	2.62	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P7
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:25:33	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	983.35	973.94	977.76	978.35	0.48	ppb
Antimony	121-1	51.59	51.16	51.07	51.27	0.54	ppb
Arsenic	75-2	52.66	52.58	51.11	52.11	1.67	ppb
Barium	135-1	252.06	250.61	251.24	251.30	0.29	ppb
Barium	137-1	254.46	250.03	249.67	251.39	1.06	ppb
Beryllium	9-1	52.66	53.48	53.58	53.24	0.94	ppb
Bismuth	209-1				102		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	54.64	52.52	55.27	54.14	2.66	ppb
Cadmium	106-1	54.41	52.46	56.04	54.30	3.29	ppb
Cadmium	111-1	52.68	52.62	52.68	52.66	0.07	ppb
Calcium	43-1	5261.26	5393.65	5359.47	5338.13	1.29	ppb
Calcium	44-1	5016.97	5103.62	5082.30	5067.63	0.89	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	50.68	50.33	50.23	50.41	0.47	ppb
Cobalt	59-2	50.88	50.57	51.23	50.90	0.65	ppb
Copper	63-2	519.20	525.61	519.85	521.55	0.68	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				99		%
Indium	115-2				97		%
Iron	56-2	2634.97	2652.96	2638.70	2642.21	0.36	ppb
Iron	57-2	2748.47	2719.83	2696.39	2721.56	0.96	ppb
Iron	54-2	2746.36	2736.75	2748.75	2743.95	0.23	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P7
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:25:33	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	238.04	243.32	239.95	240.44	1.11	ppb
Lead	207-1	245.29	246.02	245.62	245.64	0.15	ppb
Lead	208-1	244.61	245.32	246.19	245.37	0.32	ppb
Lithium	6-1				106		%
Magnesium	24-2	5087.59	5021.58	5014.97	5041.38	0.80	ppb
Manganese	55-2	500.29	497.51	503.28	500.36	0.58	ppb
Molybdenum	94-1	499.29	508.98	505.65	504.64	0.98	ppb
Molybdenum	95-1	491.19	503.59	500.26	498.35	1.29	ppb
Molybdenum	96-1	496.02	506.79	498.60	500.47	1.12	ppb
Molybdenum	97-1	495.83	501.26	497.59	498.23	0.56	ppb
Molybdenum	98-1	492.43	501.61	492.82	495.62	1.05	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	52.38	52.42	52.18	52.33	0.25	ppb
Phosphorus	31-2	1070.33	1027.95	1030.00	1042.76	2.29	ppb
Potassium	39-2	2528.33	2508.30	2511.46	2516.03	0.43	ppb
Rhodium	103-1				98		%
Rhodium	103-2				97		%
Scandium	45-1				100		%
Scandium	45-2				95		%
Selenium	82-1	51.84	52.75	52.14	52.24	0.89	ppb
Selenium	77-2	51.43	46.34	57.25	51.68	10.56	ppb
Selenium	78-2	55.13	51.34	53.21	53.23	3.57	ppb
Silicon	28-1	59.36	59.69	59.56	59.53	0.27	ppb
Silver	107-1	54.96	54.73	54.87	54.86	0.21	ppb
Silver	109-1	54.58	53.91	54.84	54.45	0.88	ppb
Sodium	23-2	5086.17	5091.92	5066.20	5081.43	0.27	ppb
Strontium	86-1	1218.43	1230.58	1226.70	1225.24	0.51	ppb
Strontium	88-1	1234.88	1232.70	1239.66	1235.75	0.29	ppb
Sulfur	34-1	945.20	961.36	949.49	952.02	0.88	ppb
Terbium	159-1				101		%
Terbium	159-2				100		%
Thallium	203-1	46.61	47.38	46.80	46.93	0.85	ppb
Thallium	205-1	45.53	46.59	45.91	46.01	1.17	ppb
Tin	118-1	51.51	51.67	51.83	51.67	0.31	ppb
Titanium	47-1	489.36	499.79	496.80	495.32	1.09	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P7
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:25:33	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	42.37	43.56	43.45	43.13	1.52	ppb
Vanadium	51-2	50.06	50.13	49.83	50.00	0.32	ppb
Yttrium	89-1				99		%
Yttrium	89-2				97		%
Zinc	66-2	508.20	507.59	504.37	506.72	0.41	ppb
Zirconium	90-1	49.01	49.20	49.68	49.30	0.70	ppb
Zirconium	91-1	49.17	49.19	49.48	49.28	0.36	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P7
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:28:35	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2417.84	2436.02	2424.80	2426.22	0.38	ppb
Antimony	121-1	123.98	125.71	126.89	125.53	1.17	ppb
Arsenic	75-2	127.72	128.21	128.61	128.18	0.35	ppb
Barium	135-1	628.97	646.86	634.38	636.74	1.44	ppb
Barium	137-1	636.06	637.89	645.17	639.71	0.75	ppb
Beryllium	9-1	130.43	133.64	129.46	131.18	1.67	ppb
Bismuth	209-1				103		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	133.89	133.52	133.11	133.50	0.29	ppb
Cadmium	106-1	131.66	131.22	130.12	131.00	0.60	ppb
Cadmium	111-1	127.54	129.90	129.97	129.14	1.07	ppb
Calcium	43-1	13176.15	13530.36	13500.73	13402.41	1.47	ppb
Calcium	44-1	12589.32	12849.43	12732.39	12723.71	1.02	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	124.66	126.69	125.58	125.64	0.81	ppb
Cobalt	59-2	125.74	127.16	125.78	126.23	0.64	ppb
Copper	63-2	1284.86	1303.55	1271.82	1286.75	1.24	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				101		%
Holmium	165-2				99		%
Indium	115-1				97		%
Indium	115-2				94		%
Iron	56-2	6540.22	6590.99	6523.69	6551.63	0.54	ppb
Iron	57-2	6766.57	6824.48	6743.71	6778.25	0.61	ppb
Iron	54-2	6666.91	6669.32	6620.01	6652.08	0.42	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P7
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:28:35	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	607.27	612.81	615.74	611.94	0.70	ppb
Lead	207-1	601.63	621.71	618.20	613.85	1.75	ppb
Lead	208-1	604.97	615.09	618.18	612.75	1.13	ppb
Lithium	6-1				109		%
Magnesium	24-2	12382.68	12492.83	12428.88	12434.80	0.44	ppb
Manganese	55-2	1240.46	1260.36	1235.99	1245.60	1.04	ppb
Molybdenum	94-1	1233.92	1237.09	1248.43	1239.81	0.62	ppb
Molybdenum	95-1	1237.55	1242.00	1249.70	1243.08	0.49	ppb
Molybdenum	96-1	1237.16	1242.82	1256.65	1245.54	0.81	ppb
Molybdenum	97-1	1248.23	1223.12	1242.23	1237.86	1.06	ppb
Molybdenum	98-1	1234.01	1243.19	1238.79	1238.66	0.37	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	130.71	130.78	130.64	130.71	0.05	ppb
Phosphorus	31-2	2558.56	2616.19	2594.30	2589.68	1.12	ppb
Potassium	39-2	6104.21	6165.98	6188.14	6152.77	0.71	ppb
Rhodium	103-1				96		%
Rhodium	103-2				92		%
Scandium	45-1				96		%
Scandium	45-2				90		%
Selenium	82-1	131.49	129.90	130.24	130.54	0.64	ppb
Selenium	77-2	121.53	128.95	135.29	128.59	5.36	ppb
Selenium	78-2	129.47	132.23	131.02	130.90	1.06	ppb
Silicon	28-1	148.49	151.54	151.08	150.37	1.10	ppb
Silver	107-1	132.79	135.81	134.75	134.45	1.14	ppb
Silver	109-1	132.83	132.02	135.81	133.55	1.50	ppb
Sodium	23-2	12635.47	12706.64	12610.16	12650.75	0.40	ppb
Strontium	86-1	3027.44	3067.81	3077.49	3057.58	0.87	ppb
Strontium	88-1	3090.95	3132.38	3131.60	3118.31	0.76	ppb
Sulfur	34-1	2447.01	2518.03	2506.60	2490.55	1.53	ppb
Terbium	159-1				101		%
Terbium	159-2				99		%
Thallium	203-1	115.32	117.15	119.23	117.24	1.67	ppb
Thallium	205-1	121.29	121.35	125.33	122.66	1.89	ppb
Tin	118-1	125.29	126.54	127.84	126.56	1.01	ppb
Titanium	47-1	1260.46	1262.31	1260.82	1261.20	0.08	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P7
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:28:35	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	115.79	115.93	119.01	116.91	1.55	ppb
Vanadium	51-2	123.72	124.52	124.26	124.16	0.33	ppb
Yttrium	89-1				97		%
Yttrium	89-2				93		%
Zinc	66-2	1257.39	1280.86	1268.84	1269.03	0.92	ppb
Zirconium	90-1	125.59	123.68	126.11	125.13	1.02	ppb
Zirconium	91-1	123.00	122.65	123.45	123.03	0.33	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P7
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:31:26	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4868.76	4861.60	4839.48	4856.61	0.31	ppb
Antimony	121-1	255.42	253.21	252.69	253.78	0.57	ppb
Arsenic	75-2	255.81	253.25	257.27	255.44	0.80	ppb
Barium	135-1	1273.14	1254.11	1268.88	1265.38	0.79	ppb
Barium	137-1	1260.34	1245.74	1266.57	1257.55	0.85	ppb
Beryllium	9-1	257.26	254.39	256.01	255.89	0.56	ppb
Bismuth	209-1				103		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	262.15	257.30	260.66	260.04	0.96	ppb
Cadmium	106-1	256.27	252.51	252.55	253.78	0.85	ppb
Cadmium	111-1	252.61	251.75	251.85	252.07	0.19	ppb
Calcium	43-1	27103.60	26348.87	27036.99	26829.82	1.56	ppb
Calcium	44-1	25481.98	25513.50	25599.14	25531.54	0.24	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	251.25	250.89	248.27	250.14	0.65	ppb
Cobalt	59-2	255.11	255.58	248.77	253.15	1.50	ppb
Copper	63-2	2561.01	2582.61	2527.69	2557.10	1.08	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				100		%
Holmium	165-2				99		%
Indium	115-1				94		%
Indium	115-2				90		%
Iron	56-2	13176.12	13283.99	13217.70	13225.94	0.41	ppb
Iron	57-2	13536.58	13572.18	13504.31	13537.69	0.25	ppb
Iron	54-2	13443.99	13390.39	13421.69	13418.69	0.20	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P7
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:31:26	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1224.51	1230.32	1231.75	1228.86	0.31	ppb
Lead	207-1	1243.91	1233.63	1237.43	1238.32	0.42	ppb
Lead	208-1	1242.29	1237.65	1241.53	1240.49	0.20	ppb
Lithium	6-1				111		%
Magnesium	24-2	25018.41	25018.66	24797.67	24944.91	0.51	ppb
Manganese	55-2	2495.94	2513.46	2493.10	2500.83	0.44	ppb
Molybdenum	94-1	2497.96	2505.65	2448.59	2484.07	1.25	ppb
Molybdenum	95-1	2491.76	2490.62	2443.81	2475.39	1.11	ppb
Molybdenum	96-1	2497.63	2503.12	2432.42	2477.72	1.59	ppb
Molybdenum	97-1	2467.47	2485.41	2454.59	2469.16	0.63	ppb
Molybdenum	98-1	2469.24	2502.29	2459.89	2477.14	0.90	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	258.84	258.03	254.80	257.22	0.83	ppb
Phosphorus	31-2	5202.46	5174.26	5102.45	5159.72	1.00	ppb
Potassium	39-2	12279.96	12272.91	12238.73	12263.87	0.18	ppb
Rhodium	103-1				92		%
Rhodium	103-2				89		%
Scandium	45-1				92		%
Scandium	45-2				85		%
Selenium	82-1	262.14	258.64	256.69	259.15	1.07	ppb
Selenium	77-2	274.11	251.46	263.48	263.02	4.31	ppb
Selenium	78-2	264.56	265.08	255.78	261.81	1.99	ppb
Silicon	28-1	305.05	298.83	300.66	301.51	1.06	ppb
Silver	107-1	264.82	258.13	260.02	260.99	1.32	ppb
Silver	109-1	259.29	261.51	260.33	260.38	0.43	ppb
Sodium	23-2	25459.89	25494.39	25179.01	25377.76	0.68	ppb
Strontium	86-1	6131.02	6117.44	6026.85	6091.77	0.93	ppb
Strontium	88-1	6189.31	6299.51	6245.67	6244.83	0.88	ppb
Sulfur	34-1	5106.41	4921.15	5014.88	5014.15	1.85	ppb
Terbium	159-1				101		%
Terbium	159-2				98		%
Thallium	203-1	248.31	242.51	248.03	246.28	1.33	ppb
Thallium	205-1	246.85	240.95	245.88	244.56	1.29	ppb
Tin	118-1	251.59	251.65	249.41	250.89	0.51	ppb
Titanium	47-1	2495.29	2469.27	2489.12	2484.56	0.55	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P7
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:31:26	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	241.58	237.32	243.16	240.69	1.26	ppb
Vanadium	51-2	248.88	248.03	246.47	247.80	0.49	ppb
Yttrium	89-1				95		%
Yttrium	89-2				89		%
Zinc	66-2	2575.76	2577.85	2527.71	2560.44	1.11	ppb
Zirconium	90-1	250.29	247.43	247.00	248.24	0.72	ppb
Zirconium	91-1	247.26	246.06	244.45	245.92	0.57	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P7
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:34:14	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9788.53	9838.38	9891.71	9839.54	0.52	ppb
Antimony	121-1	501.95	491.68	496.80	496.81	1.03	ppb
Arsenic	75-2	497.49	501.59	494.99	498.02	0.67	ppb
Barium	135-1	2502.53	2477.76	2469.38	2483.22	0.69	ppb
Barium	137-1	2482.14	2456.73	2472.06	2470.31	0.52	ppb
Beryllium	9-1	498.47	501.19	491.35	497.00	1.02	ppb
Bismuth	209-1				102		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	506.22	500.38	503.70	503.43	0.58	ppb
Cadmium	106-1	507.85	494.84	493.84	498.84	1.57	ppb
Cadmium	111-1	494.67	489.52	487.40	490.53	0.76	ppb
Calcium	43-1	51308.61	51112.71	51523.28	51314.87	0.40	ppb
Calcium	44-1	51511.13	50717.23	51184.18	51137.51	0.78	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	502.02	498.02	499.06	499.70	0.41	ppb
Cobalt	59-2	502.66	507.54	510.96	507.05	0.82	ppb
Copper	63-2	5062.89	5030.81	5064.92	5052.87	0.38	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				100		%
Holmium	165-2				98		%
Indium	115-1				91		%
Indium	115-2				87		%
Iron	56-2	26409.26	26443.95	26319.87	26391.03	0.24	ppb
Iron	57-2	26354.71	26328.31	26648.60	26443.87	0.67	ppb
Iron	54-2	26929.84	26779.26	26860.69	26856.60	0.28	ppb
Krypton	83-1						cps

Reviewed By:mohan
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Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P7
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:34:14	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2499.10	2481.47	2504.20	2494.92	0.48	ppb
Lead	207-1	2508.15	2478.79	2508.68	2498.54	0.68	ppb
Lead	208-1	2515.39	2466.75	2493.88	2492.00	0.98	ppb
Lithium	6-1				111		%
Magnesium	24-2	49464.94	49521.84	49949.06	49645.28	0.53	ppb
Manganese	55-2	5023.24	5008.72	5025.40	5019.12	0.18	ppb
Molybdenum	94-1	5051.16	4972.91	4905.73	4976.60	1.46	ppb
Molybdenum	95-1	5046.19	4975.31	4926.25	4982.58	1.21	ppb
Molybdenum	96-1	5067.22	4945.67	4932.05	4981.65	1.49	ppb
Molybdenum	97-1	5038.70	4918.24	4963.73	4973.56	1.22	ppb
Molybdenum	98-1	5017.05	4964.80	4967.58	4983.14	0.59	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	507.39	505.69	507.01	506.70	0.18	ppb
Phosphorus	31-2	9935.37	10012.36	10034.14	9993.96	0.52	ppb
Potassium	39-2	24296.98	24437.02	24288.84	24340.94	0.34	ppb
Rhodium	103-1				88		%
Rhodium	103-2				86		%
Scandium	45-1				88		%
Scandium	45-2				81		%
Selenium	82-1	516.20	510.61	506.70	511.17	0.93	ppb
Selenium	77-2	494.77	508.17	516.43	506.46	2.16	ppb
Selenium	78-2	499.29	505.88	502.76	502.64	0.66	ppb
Silicon	28-1	602.13	585.19	595.47	594.26	1.44	ppb
Silver	107-1	513.73	496.52	502.27	504.17	1.74	ppb
Silver	109-1	505.42	499.26	498.27	500.98	0.77	ppb
Sodium	23-2	50194.69	50467.29	50740.20	50467.40	0.54	ppb
Strontium	86-1	12522.44	12506.53	12291.04	12440.00	1.04	ppb
Strontium	88-1	12583.28	12498.03	12459.51	12513.60	0.51	ppb
Sulfur	34-1	10077.29	9776.59	9809.05	9887.65	1.67	ppb
Terbium	159-1				100		%
Terbium	159-2				97		%
Thallium	203-1	498.15	498.63	499.00	498.59	0.09	ppb
Thallium	205-1	496.91	499.52	500.40	498.94	0.36	ppb
Tin	118-1	499.87	496.70	495.30	497.29	0.47	ppb
Titanium	47-1	5024.15	4941.31	4908.93	4958.13	1.20	ppb

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Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P7
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:34:14	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	499.95	488.85	491.04	493.28	1.19	ppb
Vanadium	51-2	493.83	501.32	495.24	496.80	0.80	ppb
Yttrium	89-1				91		%
Yttrium	89-2				86		%
Zinc	66-2	5110.10	5066.96	5058.48	5078.51	0.55	ppb
Zirconium	90-1	502.19	501.10	492.95	498.75	1.01	ppb
Zirconium	91-1	501.16	499.83	498.07	499.69	0.31	ppb

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Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P7
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:36:58	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19524.86	19629.72	19378.79	19511.13	0.65	ppb
Antimony	121-1	998.73	991.25	1011.58	1000.52	1.03	ppb
Arsenic	75-2	1007.47	997.27	992.64	999.12	0.76	ppb
Barium	135-1	5024.57	4942.52	5041.94	5003.01	1.06	ppb
Barium	137-1	5054.25	4937.95	5040.94	5011.05	1.27	ppb
Beryllium	9-1	1005.18	994.85	997.25	999.09	0.54	ppb
Bismuth	209-1				102		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	988.91	1000.33	994.27	994.50	0.57	ppb
Cadmium	106-1	1005.86	987.77	1002.37	998.67	0.96	ppb
Cadmium	111-1	1003.54	991.43	1015.72	1003.56	1.21	ppb
Calcium	43-1	103315.26	102815.47	103800.77	103310.50	0.48	ppb
Calcium	44-1	103384.87	102151.81	103185.08	102907.25	0.64	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	995.29	1010.92	993.83	1000.01	0.95	ppb
Cobalt	59-2	986.81	997.88	1001.78	995.49	0.78	ppb
Copper	63-2	9988.78	9974.66	9897.41	9953.62	0.49	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				98		%
Indium	115-1				89		%
Indium	115-2				86		%
Iron	56-2	52605.30	52676.90	52485.87	52589.35	0.18	ppb
Iron	57-2	52272.63	52632.08	52484.17	52462.96	0.34	ppb
Iron	54-2	53098.60	52704.70	52802.55	52868.62	0.39	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P7
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:36:58	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	5033.03	5009.63	4987.14	5009.93	0.46	ppb
Lead	207-1	5009.34	5038.18	4968.27	5005.26	0.70	ppb
Lead	208-1	5008.03	5020.23	4996.15	5008.14	0.24	ppb
Lithium	6-1				110		%
Magnesium	24-2	99292.61	99059.53	99255.62	99202.59	0.13	ppb
Manganese	55-2	10035.25	9897.09	10039.96	9990.76	0.81	ppb
Molybdenum	94-1	10022.72	9925.13	10102.32	10016.73	0.89	ppb
Molybdenum	95-1	10022.61	9982.11	10042.71	10015.81	0.31	ppb
Molybdenum	96-1	10046.26	9941.55	10058.03	10015.28	0.64	ppb
Molybdenum	97-1	10029.17	9971.32	10067.13	10022.54	0.48	ppb
Molybdenum	98-1	10078.05	9896.02	10073.26	10015.78	1.04	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	994.49	998.55	989.00	994.01	0.48	ppb
Phosphorus	31-2	19982.55	20013.95	19852.74	19949.74	0.43	ppb
Potassium	39-2	48910.76	48482.93	48639.82	48677.84	0.44	ppb
Rhodium	103-1				86		%
Rhodium	103-2				84		%
Scandium	45-1				87		%
Scandium	45-2				81		%
Selenium	82-1	987.85	993.96	992.14	991.32	0.32	ppb
Selenium	77-2	1013.39	995.69	969.87	992.98	2.20	ppb
Selenium	78-2	995.41	990.57	998.48	994.82	0.40	ppb
Silicon	28-1	948.78	921.76	938.78	936.44	1.46	ppb
Silver	107-1	995.58	989.49	996.15	993.74	0.37	ppb
Silver	109-1	1003.17	985.57	998.13	995.62	0.91	ppb
Sodium	23-2	102396.10	101535.26	100870.68	101600.68	0.75	ppb
Strontium	86-1	24843.66	25049.24	25344.76	25079.22	1.00	ppb
Strontium	88-1	24972.52	24877.71	25137.88	24996.04	0.53	ppb
Sulfur	34-1	20246.63	19787.13	20134.90	20056.22	1.19	ppb
Terbium	159-1				98		%
Terbium	159-2				98		%
Thallium	203-1	1005.18	999.33	1003.77	1002.76	0.30	ppb
Thallium	205-1	999.71	1006.80	1000.64	1002.38	0.38	ppb
Tin	118-1	997.53	997.03	1008.00	1000.85	0.62	ppb
Titanium	47-1	10029.35	9945.84	10095.70	10023.63	0.75	ppb

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Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P7
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:36:58	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1011.24	1002.29	1007.61	1007.04	0.45	ppb
Vanadium	51-2	1014.89	1000.60	991.27	1002.25	1.19	ppb
Yttrium	89-1				91		%
Yttrium	89-2				85		%
Zinc	66-2	9946.73	10013.31	9868.71	9942.92	0.73	ppb
Zirconium	90-1	1006.02	994.20	1003.03	1001.09	0.61	ppb
Zirconium	91-1	997.29	996.01	1011.07	1001.46	0.83	ppb

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On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P7
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:39:44	DataFile Name :	012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	100052.87	99155.29	101161.00	100123.05	1.00	ppb
Antimony	121-1	0.82	0.81	0.79	0.81	1.88	ppb
Arsenic	75-2	0.63	0.69	0.66	0.66	4.67	ppb
Barium	135-1	2.10	2.13	1.98	2.07	4.00	ppb
Barium	137-1	2.18	2.08	2.13	2.13	2.37	ppb
Beryllium	9-1	0.19	0.18	0.16	0.18	9.06	ppb
Bismuth	209-1				84		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.48	0.55	0.68	0.57	18.18	ppb
Cadmium	106-1	-2.91	-5.10	-4.13	-4.05		ppb
Cadmium	111-1	0.16	0.08	0.10	0.11	34.47	ppb
Calcium	43-1	495045.79	498661.85	503559.11	499088.92	0.86	ppb
Calcium	44-1	500286.56	493760.29	503768.84	499271.90	1.02	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.73	1.40	1.33	1.49	14.23	ppb
Cobalt	59-2	2.84	2.75	2.79	2.79	1.57	ppb
Copper	63-2	2.07	2.02	2.06	2.05	1.40	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				92		%
Holmium	165-2				94		%
Indium	115-1				84		%
Indium	115-2				85		%
Iron	56-2	248513.28	249491.59	249888.43	249297.77	0.28	ppb
Iron	57-2	247007.58	249252.23	251627.32	249295.71	0.93	ppb
Iron	54-2	248220.73	249183.10	250142.74	249182.19	0.39	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P7
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:39:44	DataFile Name :	012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.55	1.48	1.49	1.51	2.62	ppb
Lead	207-1	1.53	1.40	1.45	1.46	4.55	ppb
Lead	208-1	1.54	1.45	1.48	1.49	3.37	ppb
Lithium	6-1				114		%
Magnesium	24-2	497556.79	499359.10	503680.76	500198.88	0.63	ppb
Manganese	55-2	4.67	4.74	4.74	4.71	0.80	ppb
Molybdenum	94-1	2.36	2.27	2.28	2.30	2.11	ppb
Molybdenum	95-1	1.52	1.47	1.47	1.49	1.70	ppb
Molybdenum	96-1	3.11	3.09	3.00	3.06	1.97	ppb
Molybdenum	97-1	1.53	1.37	1.40	1.43	5.76	ppb
Molybdenum	98-1	1.42	1.27	1.32	1.34	5.63	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	4.88	4.64	4.80	4.77	2.59	ppb
Phosphorus	31-2	-5.53	-3.10	-3.14	-3.92		ppb
Potassium	39-2	249607.10	249870.39	251555.53	250344.34	0.42	ppb
Rhodium	103-1				79		%
Rhodium	103-2				79		%
Scandium	45-1				91		%
Scandium	45-2				86		%
Selenium	82-1	1.22	0.78	0.85	0.95	25.10	ppb
Selenium	77-2	0.00	0.20	0.20	0.13	86.60	ppb
Selenium	78-2	-0.38	0.06	-0.69	-0.34		ppb
Silicon	28-1	-2.60	-3.47	-4.42	-3.50		ppb
Silver	107-1	0.22	0.21	0.19	0.20	7.74	ppb
Silver	109-1	0.21	0.19	0.18	0.19	10.01	ppb
Sodium	23-2	498674.28	496088.75	504065.92	499609.65	0.81	ppb
Strontium	86-1	76.49	76.74	73.88	75.70	2.09	ppb
Strontium	88-1	73.36	74.13	72.51	73.33	1.10	ppb
Sulfur	34-1	-590.38	-521.62	-372.11	-494.71		ppb
Terbium	159-1				91		%
Terbium	159-2				93		%
Thallium	203-1	0.18	0.17	0.16	0.17	7.62	ppb
Thallium	205-1	0.18	0.16	0.15	0.16	10.96	ppb
Tin	118-1	0.24	0.23	0.23	0.23	3.47	ppb
Titanium	47-1	1.24	1.15	1.27	1.22	4.92	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P7
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:39:44	DataFile Name :	012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.09	0.08	0.08	0.08	9.12	ppb
Vanadium	51-2	0.22	0.23	0.20	0.22	7.28	ppb
Yttrium	89-1				89		%
Yttrium	89-2				86		%
Zinc	66-2	13.05	13.95	13.83	13.61	3.56	ppb
Zirconium	90-1	0.58	0.57	0.56	0.57	1.66	ppb
Zirconium	91-1	0.60	0.57	0.60	0.59	2.45	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P7
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:05:23	DataFile Name :	016ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	478.93	476.79	476.96	477.56	0.25	ppb
Antimony	121-1	199.43	205.42	211.06	205.30	2.83	ppb
Arsenic	75-2	211.65	215.54	210.00	212.40	1.34	ppb
Barium	135-1	95.88	100.27	100.27	98.80	2.56	ppb
Barium	137-1	96.14	100.23	100.31	98.89	2.41	ppb
Beryllium	9-1	100.69	106.21	108.85	105.25	3.96	ppb
Bismuth	209-1				108		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	90.26	94.98	93.59	92.94	2.61	ppb
Cadmium	106-1	80.07	86.76	87.95	84.93	5.00	ppb
Cadmium	111-1	100.00	106.01	106.22	104.08	3.39	ppb
Calcium	43-1	1953.03	2091.95	2119.95	2054.98	4.35	ppb
Calcium	44-1	1954.01	2077.59	2106.83	2046.14	3.96	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	104.33	104.27	102.50	103.70	1.01	ppb
Cobalt	59-2	105.02	104.15	103.51	104.23	0.73	ppb
Copper	63-2	100.09	99.28	98.80	99.39	0.65	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				100		%
Indium	115-1				100		%
Indium	115-2				96		%
Iron	56-2	2142.33	2133.69	2101.18	2125.73	1.02	ppb
Iron	57-2	2168.98	2158.12	2139.45	2155.52	0.69	ppb
Iron	54-2	2241.92	2234.41	2217.46	2231.26	0.56	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P7
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:05:23	DataFile Name :	016ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	185.48	194.69	194.40	191.52	2.73	ppb
Lead	207-1	173.53	183.55	181.88	179.65	2.99	ppb
Lead	208-1	184.21	192.72	193.51	190.15	2.71	ppb
Lithium	6-1				116		%
Magnesium	24-2	1189.75	1174.02	1178.57	1180.78	0.69	ppb
Manganese	55-2	101.93	101.07	100.53	101.18	0.69	ppb
Molybdenum	94-1	0.05	0.02	0.04	0.04	44.47	ppb
Molybdenum	95-1	0.00	0.02	0.03	0.02	99.15	ppb
Molybdenum	96-1	0.03	0.05	0.06	0.05	24.10	ppb
Molybdenum	97-1	0.01	0.02	0.01	0.01	25.11	ppb
Molybdenum	98-1	0.02	0.02	0.03	0.02	22.19	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	108.96	108.30	109.20	108.82	0.43	ppb
Phosphorus	31-2	-25.35	-16.39	-25.82	-22.52		ppb
Potassium	39-2	2002.61	1992.20	1987.63	1994.15	0.38	ppb
Rhodium	103-1				99		%
Rhodium	103-2				96		%
Scandium	45-1				98		%
Scandium	45-2				92		%
Selenium	82-1	204.72	216.33	220.38	213.81	3.80	ppb
Selenium	77-2	214.80	224.14	226.64	221.86	2.81	ppb
Selenium	78-2	222.88	228.32	215.81	222.34	2.82	ppb
Silicon	28-1	-5.59	-5.10	-4.73	-5.14		ppb
Silver	107-1	48.13	50.80	50.85	49.93	3.12	ppb
Silver	109-1	47.63	50.24	50.50	49.46	3.21	ppb
Sodium	23-2	2009.43	1996.06	1974.85	1993.45	0.87	ppb
Strontium	86-1	5.17	5.73	5.85	5.59	6.52	ppb
Strontium	88-1	5.87	5.95	6.38	6.07	4.55	ppb
Sulfur	34-1	-346.37	-167.99	-70.34	-194.90		ppb
Terbium	159-1				104		%
Terbium	159-2				101		%
Thallium	203-1	192.21	201.12	196.48	196.60	2.27	ppb
Thallium	205-1	188.25	199.35	196.75	194.78	2.98	ppb
Tin	118-1	0.04	0.03	0.05	0.04	31.05	ppb
Titanium	47-1	0.02	0.03	0.85	0.30	158.72	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P7
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:05:23	DataFile Name :	016ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00		ppb
Vanadium	51-2	100.05	99.76	98.88	99.56	0.61	ppb
Yttrium	89-1				100		%
Yttrium	89-2				95		%
Zinc	66-2	205.34	200.42	201.25	202.34	1.30	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	38.09	ppb
Zirconium	91-1	0.05	0.09	0.06	0.07	26.33	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	LLICV01	Instrumnet Name :	P7
Client Sample ID :	LLICV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:09:29	DataFile Name :	017LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20.19	19.03	18.68	19.30	4.11	ppb
Antimony	121-1	2.21	2.22	2.21	2.21	0.33	ppb
Arsenic	75-2	1.09	1.18	1.24	1.17	6.46	ppb
Barium	135-1	10.37	10.10	10.42	10.29	1.65	ppb
Barium	137-1	10.12	10.33	10.48	10.31	1.77	ppb
Beryllium	9-1	1.15	1.15	1.16	1.15	0.67	ppb
Bismuth	209-1				105		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.34	1.29	1.24	1.29	3.80	ppb
Cadmium	106-1	-4.22	-5.06	-4.27	-4.51		ppb
Cadmium	111-1	1.09	1.10	1.03	1.07	3.71	ppb
Calcium	43-1	561.86	553.42	559.39	558.22	0.78	ppb
Calcium	44-1	556.01	559.31	553.64	556.32	0.51	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.14	2.19	2.11	2.15	1.98	ppb
Cobalt	59-2	1.12	1.13	1.05	1.10	4.10	ppb
Copper	63-2	2.09	2.12	1.95	2.05	4.57	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				101		%
Holmium	165-2				101		%
Indium	115-1				98		%
Indium	115-2				97		%
Iron	56-2	57.04	57.14	56.02	56.73	1.09	ppb
Iron	57-2	60.37	57.62	60.75	59.58	2.87	ppb
Iron	54-2	57.62	56.91	54.51	56.35	2.90	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	LLICV01	Instrumnet Name :	P7
Client Sample ID :	LLICV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:09:29	DataFile Name :	017LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.02	0.98	1.02	1.01	1.93	ppb
Lead	207-1	0.99	1.01	0.97	0.99	1.82	ppb
Lead	208-1	0.99	1.01	1.00	1.00	1.12	ppb
Lithium	6-1				112		%
Magnesium	24-2	541.31	545.88	542.98	543.39	0.43	ppb
Manganese	55-2	1.06	1.12	1.04	1.07	3.54	ppb
Molybdenum	94-1	6.07	6.03	6.08	6.06	0.43	ppb
Molybdenum	95-1	5.04	5.15	5.13	5.11	1.12	ppb
Molybdenum	96-1	5.10	5.32	5.28	5.23	2.18	ppb
Molybdenum	97-1	5.06	5.15	5.10	5.11	0.93	ppb
Molybdenum	98-1	5.00	5.09	5.09	5.06	1.07	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.07	1.04	1.11	1.07	2.93	ppb
Phosphorus	31-2	16.55	11.67	9.02	12.42	30.77	ppb
Potassium	39-2	527.22	526.63	519.72	524.52	0.79	ppb
Rhodium	103-1				97		%
Rhodium	103-2				97		%
Scandium	45-1				97		%
Scandium	45-2				93		%
Selenium	82-1	5.80	5.40	5.62	5.61	3.54	ppb
Selenium	77-2	4.90	4.95	5.30	5.05	4.34	ppb
Selenium	78-2	3.97	6.17	6.17	5.44	23.42	ppb
Silicon	28-1	-4.00	-4.28	-4.04	-4.10		ppb
Silver	107-1	1.10	1.07	1.11	1.10	1.78	ppb
Silver	109-1	1.08	1.09	1.06	1.08	0.99	ppb
Sodium	23-2	521.76	521.87	510.92	518.18	1.21	ppb
Strontium	86-1	25.53	26.23	25.80	25.85	1.36	ppb
Strontium	88-1	25.77	26.42	25.67	25.95	1.57	ppb
Sulfur	34-1	-28.83	-83.39	-106.88	-73.03		ppb
Terbium	159-1				101		%
Terbium	159-2				100		%
Thallium	203-1	1.00	1.01	1.01	1.00	0.69	ppb
Thallium	205-1	0.98	1.01	0.99	0.99	1.65	ppb
Tin	118-1	5.37	5.42	5.48	5.42	0.97	ppb
Titanium	47-1	5.17	5.48	5.14	5.27	3.51	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	LLICV01	Instrumnet Name :	P7
Client Sample ID :	LLICV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:09:29	DataFile Name :	017LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.89	0.89	0.90	0.90	0.28	ppb
Vanadium	51-2	5.33	5.29	5.17	5.26	1.55	ppb
Yttrium	89-1				98		%
Yttrium	89-2				96		%
Zinc	66-2	5.47	5.34	5.37	5.39	1.29	ppb
Zirconium	90-1	0.99	1.01	1.01	1.01	1.16	ppb
Zirconium	91-1	1.01	0.99	1.01	1.00	0.95	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P7
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:24:39	DataFile Name :	021CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.06	-0.12	-0.16	-0.07		ppb
Antimony	121-1	0.01	0.01	0.01	0.01	23.49	ppb
Arsenic	75-2	0.00	0.00	-0.01	0.00		ppb
Barium	135-1	0.01	0.01	-0.01	0.00	310.46	ppb
Barium	137-1	0.01	0.00	0.00	0.00	296.76	ppb
Beryllium	9-1	0.03	0.01	0.01	0.02	60.14	ppb
Bismuth	209-1				104		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.09	0.12	0.01	0.07	82.89	ppb
Cadmium	106-1	-3.98	-4.58	-4.05	-4.20		ppb
Cadmium	111-1	-0.05	-0.06	-0.04	-0.05		ppb
Calcium	43-1	-2.33	-1.02	0.19	-1.05		ppb
Calcium	44-1	0.88	0.27	0.02	0.39	113.58	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.01	0.04	0.03	0.03	53.86	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00		ppb
Copper	63-2	-0.03	-0.02	0.02	-0.01		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				103		%
Holmium	165-2				101		%
Indium	115-1				99		%
Indium	115-2				99		%
Iron	56-2	0.08	0.08	0.14	0.10	31.74	ppb
Iron	57-2	-1.48	-1.44	-1.23	-1.38		ppb
Iron	54-2	-0.13	0.07	-0.78	-0.28		ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P7
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:24:39	DataFile Name :	021CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.00	0.01	0.00	0.01	23.51	ppb
Lead	207-1	0.01	0.00	0.00	0.01	85.45	ppb
Lead	208-1	0.01	0.01	0.01	0.01	8.71	ppb
Lithium	6-1				112		%
Magnesium	24-2	0.19	0.09	-0.16	0.04	482.80	ppb
Manganese	55-2	0.02	-0.01	0.02	0.01	140.16	ppb
Molybdenum	94-1	-0.01	0.00	0.00	0.00		ppb
Molybdenum	95-1	-0.02	0.00	-0.01	-0.01		ppb
Molybdenum	96-1	0.01	0.01	0.01	0.01	19.77	ppb
Molybdenum	97-1	-0.01	-0.02	-0.02	-0.02		ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00		ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.00	-0.02	0.02	0.00		ppb
Phosphorus	31-2	-19.69	-16.60	-24.70	-20.33		ppb
Potassium	39-2	-1.18	-0.03	-1.03	-0.75		ppb
Rhodium	103-1				98		%
Rhodium	103-2				99		%
Scandium	45-1				99		%
Scandium	45-2				96		%
Selenium	82-1	-0.65	0.13	0.16	-0.12		ppb
Selenium	77-2	0.00	0.00	0.00	0.00	N/A	ppb
Selenium	78-2	-0.25	0.59	-0.15	0.06	721.76	ppb
Silicon	28-1	-3.83	-3.63	-3.62	-3.69		ppb
Silver	107-1	0.01	0.01	0.01	0.01	10.98	ppb
Silver	109-1	0.01	0.01	0.01	0.01	16.70	ppb
Sodium	23-2	6.42	7.18	7.47	7.02	7.73	ppb
Strontium	86-1	-0.31	-0.29	-0.50	-0.37		ppb
Strontium	88-1	0.06	0.06	0.07	0.06	9.83	ppb
Sulfur	34-1	37.07	58.17	0.52	31.92	91.37	ppb
Terbium	159-1				102		%
Terbium	159-2				101		%
Thallium	203-1	0.01	0.00	0.00	0.00	97.80	ppb
Thallium	205-1	0.01	0.00	0.00	0.00	80.07	ppb
Tin	118-1	0.03	0.03	0.02	0.03	4.48	ppb
Titanium	47-1	0.02	0.01	0.00	0.01	94.93	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P7
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:24:39	DataFile Name :	021CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00		ppb
Vanadium	51-2	0.01	0.00	0.00	0.00	108.80	ppb
Yttrium	89-1				99		%
Yttrium	89-2				98		%
Zinc	66-2	0.15	0.24	0.13	0.18	33.84	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	193.51	ppb
Zirconium	91-1	0.01	0.01	0.00	0.01	72.85	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P7
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:27:54	DataFile Name :	022ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	91010.56	90936.87	90597.77	90848.40	0.24	ppb
Antimony	121-1	1.10	1.14	1.12	1.12	1.58	ppb
Arsenic	75-2	0.26	0.29	0.32	0.29	10.47	ppb
Barium	135-1	1.41	1.41	1.45	1.42	1.59	ppb
Barium	137-1	1.33	1.36	1.34	1.34	1.00	ppb
Beryllium	9-1	0.33	0.34	0.28	0.32	10.71	ppb
Bismuth	209-1				103		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	10.11	9.40	8.49	9.33	8.71	ppb
Cadmium	106-1	-8.63	-9.54	-10.61	-9.59		ppb
Cadmium	111-1	0.36	0.30	0.27	0.31	15.37	ppb
Calcium	43-1	101684.75	102774.28	102860.70	102439.91	0.64	ppb
Calcium	44-1	100373.75	101773.38	102084.54	101410.56	0.90	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	20.44	20.50	20.63	20.53	0.48	ppb
Cobalt	59-2	1.33	1.29	1.35	1.32	2.03	ppb
Copper	63-2	7.49	7.53	7.43	7.48	0.69	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				102		%
Indium	115-1				95		%
Indium	115-2				91		%
Iron	56-2	106781.82	106602.11	106378.60	106587.51	0.19	ppb
Iron	57-2	106723.34	106016.80	106054.95	106265.03	0.37	ppb
Iron	54-2	107331.91	106902.54	106237.87	106824.11	0.52	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P7
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:27:54	DataFile Name :	022ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	5.26	4.95	4.93	5.05	3.70	ppb
Lead	207-1	4.80	4.40	4.33	4.51	5.66	ppb
Lead	208-1	4.98	4.65	4.55	4.73	4.73	ppb
Lithium	6-1				113		%
Magnesium	24-2	100068.05	99724.55	99220.75	99671.12	0.43	ppb
Manganese	55-2	8.12	8.16	8.13	8.14	0.26	ppb
Molybdenum	94-1	1587.28	1613.67	1622.45	1607.80	1.14	ppb
Molybdenum	95-1	1929.25	1983.16	1983.91	1965.44	1.59	ppb
Molybdenum	96-1	1885.77	1935.16	1959.21	1926.71	1.94	ppb
Molybdenum	97-1	1920.65	1978.00	1971.31	1956.65	1.60	ppb
Molybdenum	98-1	1929.16	1990.58	1982.00	1967.25	1.69	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	5.38	5.73	5.60	5.57	3.23	ppb
Phosphorus	31-2	103220.41	103381.98	102641.63	103081.34	0.38	ppb
Potassium	39-2	97821.28	98090.29	97765.66	97892.41	0.18	ppb
Rhodium	103-1				89		%
Rhodium	103-2				88		%
Scandium	45-1				92		%
Scandium	45-2				85		%
Selenium	82-1	0.27	0.23	0.17	0.22	22.06	ppb
Selenium	77-2	0.38	0.00	0.19	0.19	100.21	ppb
Selenium	78-2	-0.94	-0.01	-1.24	-0.73		ppb
Silicon	28-1	-5.18	-5.40	-5.71	-5.43		ppb
Silver	107-1	0.04	0.03	0.03	0.04	19.62	ppb
Silver	109-1	0.05	0.03	0.03	0.04	29.17	ppb
Sodium	23-2	101550.79	101018.74	100123.89	100897.81	0.71	ppb
Strontium	86-1	830.27	837.52	848.26	838.68	1.08	ppb
Strontium	88-1	834.68	853.82	860.31	849.61	1.57	ppb
Sulfur	34-1	107742.10	106795.64	106612.07	107049.94	0.57	ppb
Terbium	159-1				103		%
Terbium	159-2				102		%
Thallium	203-1	0.17	0.16	0.17	0.17	2.50	ppb
Thallium	205-1	0.17	0.16	0.16	0.16	4.84	ppb
Tin	118-1	0.27	0.26	0.19	0.24	16.35	ppb
Titanium	47-1	2039.60	2038.13	2052.02	2043.25	0.37	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P7
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:27:54	DataFile Name :	022ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.02	0.02	0.01	0.02	5.72	ppb
Vanadium	51-2	0.22	0.23	0.22	0.22	2.08	ppb
Yttrium	89-1				96		%
Yttrium	89-2				90		%
Zinc	66-2	11.15	11.11	11.51	11.25	1.94	ppb
Zirconium	90-1	0.01	0.01	0.02	0.01	38.38	ppb
Zirconium	91-1	0.01	0.01	0.02	0.01	32.17	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P7
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:31:33	DataFile Name :	023ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	90473.51	89134.10	89345.07	89650.90	0.80	ppb
Antimony	121-1	20.72	21.05	21.06	20.94	0.93	ppb
Arsenic	75-2	20.79	21.20	20.81	20.93	1.10	ppb
Barium	135-1	20.78	21.01	21.21	21.00	1.01	ppb
Barium	137-1	20.56	20.96	20.99	20.84	1.16	ppb
Beryllium	9-1	20.52	20.54	20.13	20.39	1.14	ppb
Bismuth	209-1				105		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	25.51	26.02	25.38	25.64	1.32	ppb
Cadmium	106-1	7.02	7.14	6.48	6.88	5.12	ppb
Cadmium	111-1	19.63	19.48	19.97	19.69	1.26	ppb
Calcium	43-1	100636.30	103249.11	103416.95	102434.12	1.52	ppb
Calcium	44-1	101424.93	102361.47	101838.10	101874.83	0.46	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	40.42	40.36	40.20	40.33	0.28	ppb
Cobalt	59-2	21.61	21.60	21.58	21.60	0.09	ppb
Copper	63-2	26.12	26.23	26.29	26.21	0.32	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				107		%
Holmium	165-2				102		%
Indium	115-1				96		%
Indium	115-2				91		%
Iron	56-2	105868.52	105264.95	105604.85	105579.44	0.29	ppb
Iron	57-2	104458.03	104106.30	105775.02	104779.78	0.84	ppb
Iron	54-2	105203.07	104642.35	104727.19	104857.54	0.29	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P7
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:31:33	DataFile Name :	023ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	24.92	25.13	24.50	24.85	1.29	ppb
Lead	207-1	23.27	23.51	22.88	23.22	1.38	ppb
Lead	208-1	23.79	24.16	23.54	23.83	1.31	ppb
Lithium	6-1				111		%
Magnesium	24-2	97763.56	97582.32	98214.21	97853.36	0.33	ppb
Manganese	55-2	28.06	28.25	27.89	28.07	0.64	ppb
Molybdenum	94-1	1594.60	1612.52	1610.70	1605.94	0.61	ppb
Molybdenum	95-1	1953.28	1982.00	1974.74	1970.01	0.76	ppb
Molybdenum	96-1	1899.45	1941.80	1945.88	1929.04	1.33	ppb
Molybdenum	97-1	1950.62	1956.31	1980.57	1962.50	0.81	ppb
Molybdenum	98-1	1944.87	1987.68	1973.44	1968.66	1.11	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	25.82	26.09	25.70	25.87	0.79	ppb
Phosphorus	31-2	102291.78	101898.65	102059.91	102083.45	0.19	ppb
Potassium	39-2	95942.91	97011.69	96645.18	96533.26	0.56	ppb
Rhodium	103-1				91		%
Rhodium	103-2				89		%
Scandium	45-1				93		%
Scandium	45-2				85		%
Selenium	82-1	20.17	20.67	20.51	20.45	1.25	ppb
Selenium	77-2	23.00	20.02	18.91	20.64	10.26	ppb
Selenium	78-2	20.15	20.49	20.90	20.51	1.82	ppb
Silicon	28-1	-5.35	-4.93	-5.32	-5.20		ppb
Silver	107-1	18.65	18.88	19.05	18.86	1.07	ppb
Silver	109-1	18.31	18.84	18.84	18.66	1.62	ppb
Sodium	23-2	99020.35	98932.02	98944.25	98965.54	0.05	ppb
Strontium	86-1	842.54	851.76	847.74	847.35	0.55	ppb
Strontium	88-1	853.51	861.86	863.89	859.75	0.64	ppb
Sulfur	34-1	103896.73	107426.14	106650.24	105991.04	1.75	ppb
Terbium	159-1				106		%
Terbium	159-2				101		%
Thallium	203-1	19.74	20.22	19.59	19.85	1.66	ppb
Thallium	205-1	19.62	20.06	19.60	19.76	1.30	ppb
Tin	118-1	0.16	0.16	0.17	0.16	5.20	ppb
Titanium	47-1	2022.35	2025.52	2039.66	2029.18	0.45	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P7
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:31:33	DataFile Name :	023ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.02	0.01	0.01	0.01	12.87	ppb
Vanadium	51-2	19.98	19.93	20.24	20.05	0.82	ppb
Yttrium	89-1				97		%
Yttrium	89-2				90		%
Zinc	66-2	31.53	31.74	31.56	31.61	0.36	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	19.11	ppb
Zirconium	91-1	0.03	0.02	0.03	0.02	21.69	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P7
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:34:34	DataFile Name :	024CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	48553.25	48572.46	49359.57	48828.42	0.94	ppb
Antimony	121-1	472.42	485.35	482.96	480.24	1.43	ppb
Arsenic	75-2	476.15	474.69	482.19	477.68	0.83	ppb
Barium	135-1	2390.21	2479.46	2443.11	2437.59	1.84	ppb
Barium	137-1	2363.43	2464.87	2437.02	2421.77	2.16	ppb
Beryllium	9-1	453.90	475.99	480.42	470.10	3.02	ppb
Bismuth	209-1				100		%
Bismuth	209-2				94		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	460.30	469.58	476.24	468.70	1.71	ppb
Cadmium	106-1	451.97	472.87	471.68	465.51	2.52	ppb
Cadmium	111-1	447.56	458.15	458.53	454.75	1.37	ppb
Calcium	43-1	244892.29	256175.45	252400.99	251156.24	2.29	ppb
Calcium	44-1	244440.20	255301.69	252870.04	250870.64	2.27	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	485.56	489.34	490.75	488.55	0.55	ppb
Cobalt	59-2	473.02	473.76	480.04	475.61	0.81	ppb
Copper	63-2	4660.17	4652.23	4635.98	4649.46	0.27	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				99		%
Indium	115-1				91		%
Indium	115-2				87		%
Iron	56-2	126989.32	126684.13	127611.63	127095.03	0.37	ppb
Iron	57-2	126513.69	126067.54	126705.68	126428.97	0.26	ppb
Iron	54-2	126436.53	126914.64	127380.28	126910.48	0.37	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P7
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:34:34	DataFile Name :	024CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2436.53	2523.21	2527.45	2495.73	2.06	ppb
Lead	207-1	2404.96	2536.60	2533.48	2491.68	3.01	ppb
Lead	208-1	2419.54	2522.24	2522.25	2488.01	2.38	ppb
Lithium	6-1				109		%
Magnesium	24-2	244577.08	245218.14	247182.58	245659.27	0.55	ppb
Manganese	55-2	4812.73	4804.14	4812.83	4809.90	0.10	ppb
Molybdenum	94-1	4774.97	4974.73	4914.97	4888.22	2.10	ppb
Molybdenum	95-1	4773.26	4961.82	4912.01	4882.36	2.00	ppb
Molybdenum	96-1	4781.78	4954.30	4890.08	4875.38	1.79	ppb
Molybdenum	97-1	4778.59	4966.75	4868.73	4871.36	1.93	ppb
Molybdenum	98-1	4717.55	5008.85	4865.44	4863.94	2.99	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	470.65	465.59	470.28	468.84	0.60	ppb
Phosphorus	31-2	9810.64	9845.79	9809.39	9821.94	0.21	ppb
Potassium	39-2	120823.12	120219.79	121801.65	120948.18	0.66	ppb
Rhodium	103-1				86		%
Rhodium	103-2				84		%
Scandium	45-1				90		%
Scandium	45-2				85		%
Selenium	82-1	461.73	476.98	466.84	468.52	1.66	ppb
Selenium	77-2	476.70	474.83	494.95	482.16	2.31	ppb
Selenium	78-2	461.07	474.77	474.79	470.21	1.68	ppb
Silicon	28-1	554.80	574.81	574.48	568.03	2.02	ppb
Silver	107-1	466.24	472.78	475.23	471.42	0.99	ppb
Silver	109-1	461.73	474.91	472.03	469.56	1.48	ppb
Sodium	23-2	243930.63	245152.00	245723.06	244935.23	0.37	ppb
Strontium	86-1	11852.76	12379.94	12121.41	12118.04	2.18	ppb
Strontium	88-1	12030.48	12471.21	12348.71	12283.46	1.85	ppb
Sulfur	34-1	9092.85	9373.37	9358.25	9274.82	1.70	ppb
Terbium	159-1				101		%
Terbium	159-2				99		%
Thallium	203-1	483.81	514.20	497.65	498.55	3.05	ppb
Thallium	205-1	489.92	506.56	497.98	498.16	1.67	ppb
Tin	118-1	471.42	485.16	483.28	479.95	1.55	ppb
Titanium	47-1	4817.32	4901.55	4959.13	4892.67	1.46	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P7
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:34:34	DataFile Name :	024CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	488.35	507.30	505.25	500.30	2.08	ppb
Vanadium	51-2	481.50	484.23	488.64	484.79	0.74	ppb
Yttrium	89-1				94		%
Yttrium	89-2				88		%
Zinc	66-2	4562.51	4595.48	4623.10	4593.70	0.66	ppb
Zirconium	90-1	477.94	492.49	489.58	486.67	1.58	ppb
Zirconium	91-1	477.50	495.31	490.18	487.66	1.88	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P7
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:41:15	DataFile Name :	026CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1.83	1.76	1.62	1.74	6.07	ppb
Antimony	121-1	0.04	0.04	0.04	0.04	6.19	ppb
Arsenic	75-2	-0.01	0.02	0.01	0.01	328.30	ppb
Barium	135-1	0.06	0.02	0.03	0.04	58.12	ppb
Barium	137-1	0.05	0.03	0.03	0.04	31.18	ppb
Beryllium	9-1	0.02	0.05	0.01	0.03	74.38	ppb
Bismuth	209-1				109		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.01	0.06	0.04	0.03	139.98	ppb
Cadmium	106-1	-8.30	-9.48	-7.73	-8.50		ppb
Cadmium	111-1	-0.08	-0.11	-0.08	-0.09		ppb
Calcium	43-1	3.53	2.77	2.20	2.83	23.69	ppb
Calcium	44-1	6.68	4.68	3.29	4.88	34.84	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.06	0.10	0.06	0.08	32.28	ppb
Cobalt	59-2	0.00	0.00	-0.01	0.00		ppb
Copper	63-2	0.23	0.25	0.26	0.25	5.82	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				105		%
Holmium	165-2				102		%
Indium	115-1				99		%
Indium	115-2				96		%
Iron	56-2	3.47	3.37	3.31	3.38	2.39	ppb
Iron	57-2	-0.99	1.37	1.37	0.59	232.12	ppb
Iron	54-2	3.59	3.05	3.25	3.29	8.26	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P7
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:41:15	DataFile Name :	026CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.08	0.08	0.08	0.08	2.48	ppb
Lead	207-1	0.09	0.08	0.07	0.08	8.85	ppb
Lead	208-1	0.09	0.08	0.07	0.08	7.42	ppb
Lithium	6-1				113		%
Magnesium	24-2	3.43	3.32	3.40	3.38	1.62	ppb
Manganese	55-2	0.12	0.12	0.11	0.11	5.01	ppb
Molybdenum	94-1	0.31	0.12	0.12	0.18	59.44	ppb
Molybdenum	95-1	0.39	0.09	0.10	0.19	88.20	ppb
Molybdenum	96-1	0.30	0.11	0.12	0.18	59.99	ppb
Molybdenum	97-1	0.21	0.08	0.09	0.12	57.83	ppb
Molybdenum	98-1	0.21	0.10	0.10	0.13	47.80	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.01	0.05	0.01	0.02	115.87	ppb
Phosphorus	31-2	-22.36	-23.87	-20.40	-22.21		ppb
Potassium	39-2	-2.80	-3.01	-0.63	-2.15		ppb
Rhodium	103-1				97		%
Rhodium	103-2				96		%
Scandium	45-1				95		%
Scandium	45-2				89		%
Selenium	82-1	0.06	-0.33	0.18	-0.03		ppb
Selenium	77-2	0.18	0.00	0.00	0.06	173.21	ppb
Selenium	78-2	-1.55	-0.24	0.23	-0.52		ppb
Silicon	28-1	-5.88	-6.10	-5.70	-5.89		ppb
Silver	107-1	0.02	0.01	0.02	0.02	16.78	ppb
Silver	109-1	0.02	0.02	0.01	0.02	23.54	ppb
Sodium	23-2	35.52	34.38	34.17	34.69	2.09	ppb
Strontium	86-1	0.26	0.07	0.50	0.28	78.88	ppb
Strontium	88-1	0.67	0.21	0.20	0.36	74.07	ppb
Sulfur	34-1	-455.63	-510.76	-411.82	-459.41		ppb
Terbium	159-1				104		%
Terbium	159-2				101		%
Thallium	203-1	0.06	0.05	0.06	0.06	7.33	ppb
Thallium	205-1	0.06	0.05	0.06	0.06	6.96	ppb
Tin	118-1	0.05	0.05	0.06	0.05	15.26	ppb
Titanium	47-1	0.28	0.09	0.10	0.16	68.90	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P7
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:41:15	DataFile Name :	026CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	11.34	ppb
Vanadium	51-2	0.01	0.01	0.01	0.01	8.34	ppb
Yttrium	89-1				98		%
Yttrium	89-2				92		%
Zinc	66-2	0.25	0.12	0.17	0.18	37.08	ppb
Zirconium	90-1	0.03	0.00	0.01	0.01	127.01	ppb
Zirconium	91-1	0.04	0.02	0.02	0.03	45.36	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P7
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:54:39	DataFile Name :	029LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20.64	19.64	19.89	20.06	2.59	ppb
Antimony	121-1	2.09	2.08	2.13	2.10	1.28	ppb
Arsenic	75-2	1.18	1.20	1.14	1.18	2.75	ppb
Barium	135-1	10.27	10.38	10.31	10.32	0.54	ppb
Barium	137-1	10.18	10.36	10.30	10.28	0.93	ppb
Beryllium	9-1	1.07	1.10	1.01	1.06	4.51	ppb
Bismuth	209-1				109		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.99	1.25	1.09	1.11	12.20	ppb
Cadmium	106-1	-8.20	-6.38	-7.02	-7.20		ppb
Cadmium	111-1	1.05	1.06	1.10	1.07	2.55	ppb
Calcium	43-1	532.69	560.76	550.48	547.98	2.59	ppb
Calcium	44-1	552.39	554.03	555.96	554.13	0.32	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.28	2.17	2.17	2.21	2.87	ppb
Cobalt	59-2	1.08	1.10	1.14	1.11	2.47	ppb
Copper	63-2	2.14	2.06	2.12	2.11	2.03	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				102		%
Indium	115-1				101		%
Indium	115-2				99		%
Iron	56-2	58.30	58.31	57.95	58.18	0.35	ppb
Iron	57-2	59.67	59.54	58.50	59.24	1.09	ppb
Iron	54-2	58.64	59.87	59.79	59.43	1.16	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P7
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:54:39	DataFile Name :	029LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.95	0.97	0.98	0.97	1.47	ppb
Lead	207-1	0.95	1.00	1.01	0.99	3.36	ppb
Lead	208-1	0.96	0.99	0.99	0.98	1.67	ppb
Lithium	6-1				112		%
Magnesium	24-2	556.28	548.77	547.56	550.87	0.86	ppb
Manganese	55-2	1.15	1.13	1.11	1.13	1.56	ppb
Molybdenum	94-1	6.02	6.15	6.14	6.10	1.25	ppb
Molybdenum	95-1	5.11	5.15	5.14	5.13	0.43	ppb
Molybdenum	96-1	5.12	5.10	5.33	5.18	2.49	ppb
Molybdenum	97-1	5.11	5.25	5.20	5.19	1.43	ppb
Molybdenum	98-1	5.12	5.05	5.21	5.13	1.52	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.17	1.08	1.13	1.12	4.09	ppb
Phosphorus	31-2	14.09	11.34	17.71	14.38	22.21	ppb
Potassium	39-2	534.33	527.14	523.88	528.45	1.01	ppb
Rhodium	103-1				100		%
Rhodium	103-2				99		%
Scandium	45-1				100		%
Scandium	45-2				94		%
Selenium	82-1	5.52	5.53	4.91	5.32	6.64	ppb
Selenium	77-2	4.88	5.26	5.06	5.07	3.72	ppb
Selenium	78-2	5.68	4.03	4.29	4.67	18.98	ppb
Silicon	28-1	-4.53	-4.32	-5.32	-4.72		ppb
Silver	107-1	1.04	1.07	1.06	1.06	1.54	ppb
Silver	109-1	1.03	1.07	1.08	1.06	2.28	ppb
Sodium	23-2	522.93	524.09	521.03	522.68	0.30	ppb
Strontium	86-1	26.23	24.61	27.18	26.01	5.01	ppb
Strontium	88-1	26.95	26.65	26.43	26.68	0.98	ppb
Sulfur	34-1	-194.56	-248.75	-217.60	-220.30		ppb
Terbium	159-1				106		%
Terbium	159-2				102		%
Thallium	203-1	0.99	1.00	0.99	0.99	0.28	ppb
Thallium	205-1	0.96	0.99	0.98	0.98	1.56	ppb
Tin	118-1	5.33	5.40	5.33	5.36	0.79	ppb
Titanium	47-1	5.26	5.19	5.41	5.29	2.09	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P7
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:54:39	DataFile Name :	029LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.88	0.89	0.88	0.89	0.89	ppb
Vanadium	51-2	5.23	5.26	5.14	5.21	1.21	ppb
Yttrium	89-1				100		%
Yttrium	89-2				97		%
Zinc	66-2	5.21	5.66	5.55	5.47	4.35	ppb
Zirconium	90-1	1.01	1.04	1.05	1.03	2.08	ppb
Zirconium	91-1	1.01	1.11	1.02	1.05	4.86	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	PB165957BL	Instrumnet Name :	P7
Client Sample ID :	PB165957BL	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:58:02	DataFile Name :	030CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.24	0.21	0.30	0.25	17.54	ppb
Antimony	121-1	0.01	0.01	0.00	0.01	19.72	ppb
Arsenic	75-2	-0.01	-0.02	-0.02	-0.02		ppb
Barium	135-1	0.00	0.00	-0.01	0.00		ppb
Barium	137-1	0.00	0.00	0.01	0.00	173.79	ppb
Beryllium	9-1	0.01	0.01	0.01	0.01	11.77	ppb
Bismuth	209-1				108		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.03	-0.02	0.05	0.02	173.59	ppb
Cadmium	106-1	-6.74	-6.61	-7.30	-6.88		ppb
Cadmium	111-1	-0.08	-0.08	-0.09	-0.08		ppb
Calcium	43-1	-3.33	-2.77	-1.95	-2.69		ppb
Calcium	44-1	-2.25	-2.79	-3.07	-2.71		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.04	0.00	-0.01	-0.02		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00		ppb
Copper	63-2	-0.03	-0.02	-0.03	-0.03		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				103		%
Indium	115-1				101		%
Indium	115-2				98		%
Iron	56-2	0.06	-0.03	0.05	0.03	168.78	ppb
Iron	57-2	-0.75	-1.41	-1.88	-1.34		ppb
Iron	54-2	-0.49	0.69	0.00	0.07	881.00	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	PB165957BL	Instrumnet Name :	P7
Client Sample ID :	PB165957BL	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:58:02	DataFile Name :	030CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.01	0.01	0.01	0.01	41.12	ppb
Lead	207-1	0.01	0.01	0.01	0.01	31.51	ppb
Lead	208-1	0.01	0.01	0.01	0.01	11.64	ppb
Lithium	6-1				110		%
Magnesium	24-2	0.33	0.24	0.52	0.36	38.92	ppb
Manganese	55-2	-0.02	0.00	-0.02	-0.01		ppb
Molybdenum	94-1	0.02	-0.01	-0.01	0.00	1460.50	ppb
Molybdenum	95-1	-0.02	-0.01	0.01	0.00		ppb
Molybdenum	96-1	0.01	0.00	0.01	0.01	80.49	ppb
Molybdenum	97-1	0.01	-0.02	-0.01	-0.01		ppb
Molybdenum	98-1	0.00	0.00	0.01	0.00	35.73	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.00	-0.01	-0.01	-0.01		ppb
Phosphorus	31-2	-20.47	-26.54	-21.75	-22.92		ppb
Potassium	39-2	-2.06	-0.57	-2.17	-1.60		ppb
Rhodium	103-1				99		%
Rhodium	103-2				99		%
Scandium	45-1				99		%
Scandium	45-2				94		%
Selenium	82-1	0.48	-0.26	-0.02	0.07	543.91	ppb
Selenium	77-2	0.00	0.35	0.00	0.12	173.21	ppb
Selenium	78-2	0.25	-0.39	-0.82	-0.32		ppb
Silicon	28-1	-4.97	-5.14	-4.88	-5.00		ppb
Silver	107-1	0.01	0.01	0.01	0.01	7.58	ppb
Silver	109-1	0.01	0.00	0.00	0.00	54.75	ppb
Sodium	23-2	10.47	11.92	11.56	11.32	6.65	ppb
Strontium	86-1	-0.09	-0.19	0.46	0.06	613.99	ppb
Strontium	88-1	-0.04	0.02	0.00	-0.01		ppb
Sulfur	34-1	-147.77	-196.21	-135.40	-159.79		ppb
Terbium	159-1				105		%
Terbium	159-2				102		%
Thallium	203-1	0.02	0.03	0.03	0.03	7.81	ppb
Thallium	205-1	0.03	0.02	0.02	0.02	11.02	ppb
Tin	118-1	0.00	-0.01	0.00	0.00		ppb
Titanium	47-1	0.00	0.01	-0.04	-0.01		ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	PB165957BL	Instrumnet Name :	P7
Client Sample ID :	PB165957BL	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:58:02	DataFile Name :	030CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00		ppb
Vanadium	51-2	0.01	0.00	0.00	0.00	97.06	ppb
Yttrium	89-1				100		%
Yttrium	89-2				97		%
Zinc	66-2	0.06	0.08	0.09	0.08	21.56	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00		ppb
Zirconium	91-1	0.00	0.00	0.01	0.00	122.99	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	PB165957BS	Instrumnet Name :	P7
Client Sample ID :	PB165957BS	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:01:16	DataFile Name :	031LCS6.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9973.61	9938.46	9969.30	9960.46	0.19	ppb
Antimony	121-1	514.85	490.58	587.60	531.01	9.51	ppb
Arsenic	75-2	505.89	500.25	505.27	503.80	0.61	ppb
Barium	135-1	2614.61	2467.24	2912.17	2664.68	8.51	ppb
Barium	137-1	2592.11	2484.30	2940.87	2672.42	8.93	ppb
Beryllium	9-1	505.19	496.79	620.75	540.91	12.81	ppb
Bismuth	209-1				99		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	526.28	497.11	593.78	539.06	9.20	ppb
Cadmium	106-1	529.14	493.96	591.06	538.05	9.14	ppb
Cadmium	111-1	511.41	487.25	572.68	523.78	8.41	ppb
Calcium	43-1	55085.15	51246.29	60937.22	55756.22	8.75	ppb
Calcium	44-1	52967.32	50819.68	60068.39	54618.46	8.86	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	510.50	501.19	502.32	504.67	1.01	ppb
Cobalt	59-2	515.14	512.82	514.76	514.24	0.24	ppb
Copper	63-2	5158.77	5127.68	5121.28	5135.91	0.39	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				101		%
Indium	115-1				89		%
Indium	115-2				89		%
Iron	56-2	26758.70	26396.07	26669.92	26608.23	0.71	ppb
Iron	57-2	26660.13	26374.76	26897.40	26644.10	0.98	ppb
Iron	54-2	26727.26	26671.35	26990.40	26796.34	0.64	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	PB165957BS	Instrumnet Name :	P7
Client Sample ID :	PB165957BS	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:01:16	DataFile Name :	031LCS6.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2586.94	2503.26	2974.10	2688.10	9.34	ppb
Lead	207-1	2584.86	2495.12	2960.89	2680.29	9.22	ppb
Lead	208-1	2571.58	2489.37	2959.27	2673.40	9.39	ppb
Lithium	6-1				105		%
Magnesium	24-2	50956.74	49761.58	50164.74	50294.35	1.21	ppb
Manganese	55-2	5078.68	4998.89	5026.42	5034.66	0.81	ppb
Molybdenum	94-1	5166.79	4990.97	5829.83	5329.20	8.30	ppb
Molybdenum	95-1	5154.29	5025.99	5813.55	5331.28	7.93	ppb
Molybdenum	96-1	5152.70	5014.28	5832.51	5333.16	8.21	ppb
Molybdenum	97-1	5124.86	4944.56	5825.73	5298.38	8.79	ppb
Molybdenum	98-1	5212.04	4957.35	5816.34	5328.58	8.28	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	514.52	509.01	507.28	510.27	0.74	ppb
Phosphorus	31-2	10217.57	10053.25	10027.69	10099.50	1.02	ppb
Potassium	39-2	24972.57	24430.32	24608.59	24670.49	1.12	ppb
Rhodium	103-1				87		%
Rhodium	103-2				88		%
Scandium	45-1				88		%
Scandium	45-2				83		%
Selenium	82-1	522.65	501.37	592.91	538.98	8.89	ppb
Selenium	77-2	486.37	493.95	503.98	494.77	1.79	ppb
Selenium	78-2	516.71	505.07	514.36	512.05	1.20	ppb
Silicon	28-1	635.20	598.24	710.78	648.07	8.85	ppb
Silver	107-1	535.60	508.48	596.26	546.78	8.22	ppb
Silver	109-1	532.77	498.19	593.49	541.48	8.91	ppb
Sodium	23-2	51991.76	51311.17	51460.15	51587.69	0.69	ppb
Strontium	86-1	12908.90	12439.35	14592.44	13313.57	8.50	ppb
Strontium	88-1	12908.25	12384.66	14684.70	13325.87	9.05	ppb
Sulfur	34-1	10755.48	10086.17	12624.91	11155.52	11.80	ppb
Terbium	159-1				98		%
Terbium	159-2				99		%
Thallium	203-1	518.17	487.94	594.31	533.47	10.27	ppb
Thallium	205-1	523.09	486.33	589.39	532.93	9.80	ppb
Tin	118-1	527.61	494.16	583.21	535.00	8.41	ppb
Titanium	47-1	5126.59	4949.25	5789.40	5288.41	8.37	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	PB165957BS	Instrumnet Name :	P7
Client Sample ID :	PB165957BS	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:01:16	DataFile Name :	031LCS6.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	492.29	472.75	575.04	513.36	10.58	ppb
Vanadium	51-2	508.12	505.62	503.23	505.65	0.48	ppb
Yttrium	89-1				91		%
Yttrium	89-2				87		%
Zinc	66-2	5204.06	5090.38	5112.77	5135.74	1.17	ppb
Zirconium	90-1	514.42	492.67	586.79	531.29	9.27	ppb
Zirconium	91-1	514.13	492.05	589.97	532.05	9.65	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:03:56	DataFile Name :	032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9475.98	9625.32	9499.67	9533.66	0.84	ppb
Antimony	121-1	0.19	0.17	0.17	0.18	7.36	ppb
Arsenic	75-2	3.68	3.82	3.83	3.77	2.24	ppb
Barium	135-1	44.51	44.87	45.19	44.85	0.76	ppb
Barium	137-1	45.29	44.71	46.12	45.37	1.56	ppb
Beryllium	9-1	0.79	0.68	0.71	0.73	7.90	ppb
Bismuth	209-1				111		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.66	0.48	0.78	0.64	23.12	ppb
Cadmium	106-1	-9.99	-9.34	-6.22	-8.52		ppb
Cadmium	111-1	-0.06	-0.05	-0.05	-0.05		ppb
Calcium	43-1	709.01	722.21	728.14	719.79	1.36	ppb
Calcium	44-1	710.91	709.79	716.84	712.51	0.53	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	22.09	21.89	22.09	22.02	0.53	ppb
Cobalt	59-2	8.23	8.21	8.24	8.23	0.14	ppb
Copper	63-2	13.00	13.02	12.82	12.95	0.86	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				104		%
Indium	115-1				99		%
Indium	115-2				96		%
Iron	56-2	22423.27	22334.45	22141.18	22299.63	0.65	ppb
Iron	57-2	22172.53	22217.58	21998.19	22129.43	0.52	ppb
Iron	54-2	22288.62	22485.07	22146.37	22306.69	0.76	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:03:56	DataFile Name :	032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	7.72	7.48	7.72	7.64	1.83	ppb
Lead	207-1	7.12	6.86	7.10	7.03	2.10	ppb
Lead	208-1	7.37	7.17	7.38	7.31	1.64	ppb
Lithium	6-1				117		%
Magnesium	24-2	2080.42	2081.82	2073.64	2078.63	0.21	ppb
Manganese	55-2	263.67	263.28	262.08	263.01	0.32	ppb
Molybdenum	94-1	11.05	10.99	10.78	10.94	1.30	ppb
Molybdenum	95-1	1.15	1.06	1.04	1.08	5.32	ppb
Molybdenum	96-1	2.42	2.26	2.29	2.32	3.61	ppb
Molybdenum	97-1	1.17	1.13	1.05	1.12	5.85	ppb
Molybdenum	98-1	1.21	1.07	1.03	1.10	8.64	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	10.38	10.45	10.54	10.46	0.77	ppb
Phosphorus	31-2	247.59	233.60	249.62	243.61	3.58	ppb
Potassium	39-2	1811.83	1831.94	1818.84	1820.87	0.56	ppb
Rhodium	103-1				96		%
Rhodium	103-2				96		%
Scandium	45-1				95		%
Scandium	45-2				90		%
Selenium	82-1	0.03	0.01	-0.01	0.01	157.53	ppb
Selenium	77-2	5.09	4.12	2.99	4.07	25.81	ppb
Selenium	78-2	0.50	1.25	0.68	0.81	47.88	ppb
Silicon	28-1	25.51	17.69	18.53	20.57	20.87	ppb
Silver	107-1	0.13	0.10	0.09	0.11	15.53	ppb
Silver	109-1	0.13	0.09	0.08	0.10	25.05	ppb
Sodium	23-2	98.59	96.24	95.88	96.90	1.52	ppb
Strontium	86-1	76.95	75.91	78.57	77.15	1.74	ppb
Strontium	88-1	78.34	77.56	78.26	78.05	0.55	ppb
Sulfur	34-1	-634.13	-686.64	-658.17	-659.65		ppb
Terbium	159-1				106		%
Terbium	159-2				102		%
Thallium	203-1	0.25	0.24	0.23	0.24	4.33	ppb
Thallium	205-1	0.25	0.23	0.23	0.24	6.19	ppb
Tin	118-1	0.24	0.24	0.22	0.23	5.60	ppb
Titanium	47-1	414.11	414.26	411.45	413.27	0.38	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:03:56	DataFile Name :	032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.19	1.17	1.23	1.20	2.68	ppb
Vanadium	51-2	33.44	33.35	33.54	33.44	0.28	ppb
Yttrium	89-1				99		%
Yttrium	89-2				95		%
Zinc	66-2	27.58	27.03	27.47	27.36	1.08	ppb
Zirconium	90-1	5.42	5.43	5.54	5.47	1.26	ppb
Zirconium	91-1	5.46	5.43	5.54	5.48	1.02	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01DUPDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:07:07	DataFile Name :	033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9520.29	9368.95	9502.94	9464.06	0.88	ppb
Antimony	121-1	0.06	0.05	0.04	0.05	18.46	ppb
Arsenic	75-2	4.01	3.93	3.71	3.89	3.96	ppb
Barium	135-1	47.81	45.64	45.24	46.23	2.99	ppb
Barium	137-1	47.90	45.56	45.14	46.20	3.21	ppb
Beryllium	9-1	0.75	0.61	0.72	0.69	10.60	ppb
Bismuth	209-1				108		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.61	0.31	0.61	0.51	33.52	ppb
Cadmium	106-1	-8.17	-7.74	-8.13	-8.01		ppb
Cadmium	111-1	-0.10	-0.08	-0.11	-0.10		ppb
Calcium	43-1	733.26	706.82	730.67	723.58	2.01	ppb
Calcium	44-1	731.35	701.48	716.50	716.44	2.08	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	22.00	22.23	21.96	22.06	0.68	ppb
Cobalt	59-2	8.14	8.25	8.24	8.21	0.80	ppb
Copper	63-2	12.69	12.71	12.65	12.68	0.23	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				104		%
Indium	115-1				99		%
Indium	115-2				96		%
Iron	56-2	22414.88	22453.20	22294.55	22387.54	0.37	ppb
Iron	57-2	22158.16	22375.79	22109.06	22214.34	0.64	ppb
Iron	54-2	22229.21	22390.02	21860.31	22159.85	1.23	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01DUPDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:07:07	DataFile Name :	033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	7.72	7.68	7.48	7.63	1.68	ppb
Lead	207-1	6.97	6.87	6.91	6.92	0.74	ppb
Lead	208-1	7.37	7.17	7.17	7.24	1.58	ppb
Lithium	6-1				116		%
Magnesium	24-2	2072.81	2060.83	2049.80	2061.15	0.56	ppb
Manganese	55-2	262.74	262.82	260.99	262.18	0.39	ppb
Molybdenum	94-1	10.86	10.54	10.49	10.63	1.87	ppb
Molybdenum	95-1	0.67	0.61	0.61	0.63	6.05	ppb
Molybdenum	96-1	1.94	1.84	1.84	1.87	3.26	ppb
Molybdenum	97-1	0.65	0.59	0.63	0.62	4.36	ppb
Molybdenum	98-1	0.70	0.60	0.62	0.64	8.50	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	10.50	10.01	10.29	10.26	2.39	ppb
Phosphorus	31-2	242.77	237.12	252.43	244.11	3.17	ppb
Potassium	39-2	1827.93	1829.85	1821.62	1826.47	0.24	ppb
Rhodium	103-1				96		%
Rhodium	103-2				97		%
Scandium	45-1				96		%
Scandium	45-2				91		%
Selenium	82-1	0.27	0.42	0.57	0.42	36.52	ppb
Selenium	77-2	3.65	2.82	3.18	3.22	13.01	ppb
Selenium	78-2	0.60	0.48	0.70	0.59	18.23	ppb
Silicon	28-1	23.68	22.22	22.17	22.69	3.78	ppb
Silver	107-1	0.03	0.03	0.02	0.03	20.11	ppb
Silver	109-1	0.03	0.02	0.02	0.02	25.16	ppb
Sodium	23-2	91.68	91.26	91.03	91.32	0.36	ppb
Strontium	86-1	81.84	77.61	75.22	78.22	4.28	ppb
Strontium	88-1	81.44	77.63	77.12	78.73	3.00	ppb
Sulfur	34-1	-546.60	-755.92	-705.72	-669.41		ppb
Terbium	159-1				105		%
Terbium	159-2				103		%
Thallium	203-1	0.21	0.18	0.18	0.19	8.60	ppb
Thallium	205-1	0.20	0.18	0.18	0.19	6.22	ppb
Tin	118-1	0.19	0.19	0.24	0.20	13.62	ppb
Titanium	47-1	425.50	419.00	418.28	420.93	0.94	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01DUPDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:07:07	DataFile Name :	033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.21	1.17	1.16	1.18	2.23	ppb
Vanadium	51-2	33.20	33.17	33.10	33.16	0.15	ppb
Yttrium	89-1				100		%
Yttrium	89-2				96		%
Zinc	66-2	26.73	26.87	26.40	26.67	0.92	ppb
Zirconium	90-1	5.66	5.43	5.42	5.50	2.43	ppb
Zirconium	91-1	5.77	5.41	5.45	5.55	3.58	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01LDLX25	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	25
Date & Time Acquired :	2025-01-06 15:10:21	DataFile Name :	034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1852.45	1843.85	1849.06	1848.45	0.23	ppb
Antimony	121-1	0.02	0.02	0.02	0.02	9.88	ppb
Arsenic	75-2	0.73	0.69	0.74	0.72	3.76	ppb
Barium	135-1	8.87	9.20	8.86	8.98	2.16	ppb
Barium	137-1	8.85	9.05	8.87	8.92	1.21	ppb
Beryllium	9-1	0.11	0.17	0.15	0.14	19.99	ppb
Bismuth	209-1				111		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.29	0.15	0.18	0.21	34.77	ppb
Cadmium	106-1	-10.42	-8.23	-7.23	-8.63		ppb
Cadmium	111-1	-0.13	-0.09	-0.09	-0.10		ppb
Calcium	43-1	135.81	132.97	139.34	136.04	2.35	ppb
Calcium	44-1	139.44	139.41	138.25	139.04	0.49	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4.59	4.55	4.47	4.54	1.36	ppb
Cobalt	59-2	1.64	1.64	1.62	1.64	0.60	ppb
Copper	63-2	2.58	2.53	2.54	2.55	1.00	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				104		%
Indium	115-1				101		%
Indium	115-2				98		%
Iron	56-2	4495.34	4471.12	4532.28	4499.58	0.68	ppb
Iron	57-2	4527.62	4516.07	4528.05	4523.91	0.15	ppb
Iron	54-2	4574.48	4559.13	4590.61	4574.74	0.34	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01LDLX25	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	25
Date & Time Acquired :	2025-01-06 15:10:21	DataFile Name :	034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.50	1.52	1.51	1.51	0.54	ppb
Lead	207-1	1.37	1.33	1.34	1.35	1.61	ppb
Lead	208-1	1.43	1.45	1.41	1.43	1.44	ppb
Lithium	6-1				114		%
Magnesium	24-2	418.53	413.09	417.84	416.49	0.71	ppb
Manganese	55-2	53.49	53.43	54.05	53.66	0.64	ppb
Molybdenum	94-1	1.94	2.12	2.09	2.05	4.66	ppb
Molybdenum	95-1	0.12	0.12	0.15	0.13	12.40	ppb
Molybdenum	96-1	0.37	0.41	0.41	0.40	5.89	ppb
Molybdenum	97-1	0.16	0.12	0.14	0.14	11.25	ppb
Molybdenum	98-1	0.13	0.13	0.14	0.13	4.38	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.92	1.99	2.12	2.01	5.24	ppb
Phosphorus	31-2	18.59	26.50	26.09	23.72	18.77	ppb
Potassium	39-2	357.94	366.87	362.91	362.58	1.23	ppb
Rhodium	103-1				100		%
Rhodium	103-2				98		%
Scandium	45-1				98		%
Scandium	45-2				91		%
Selenium	82-1	-0.35	-0.01	0.09	-0.09		ppb
Selenium	77-2	0.71	1.57	1.42	1.23	37.26	ppb
Selenium	78-2	-0.25	-0.52	-0.79	-0.52		ppb
Silicon	28-1	-1.11	-2.02	-2.47	-1.87		ppb
Silver	107-1	0.01	0.01	0.01	0.01	19.15	ppb
Silver	109-1	0.01	0.01	0.01	0.01	16.78	ppb
Sodium	23-2	25.21	25.94	24.99	25.38	1.97	ppb
Strontium	86-1	14.66	15.81	16.44	15.63	5.76	ppb
Strontium	88-1	15.22	15.58	15.71	15.50	1.64	ppb
Sulfur	34-1	-928.76	-954.36	-1023.90	-969.01		ppb
Terbium	159-1				108		%
Terbium	159-2				103		%
Thallium	203-1	0.05	0.04	0.04	0.04	6.27	ppb
Thallium	205-1	0.04	0.05	0.04	0.04	9.72	ppb
Tin	118-1	0.03	0.03	0.02	0.03	20.96	ppb
Titanium	47-1	83.83	84.47	82.50	83.60	1.20	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01LDLX25	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219	Dilution Factor :	25
Date & Time Acquired :	2025-01-06 15:10:21	DataFile Name :	034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.24	0.23	0.22	0.23	3.34	ppb
Vanadium	51-2	6.82	6.77	6.85	6.81	0.55	ppb
Yttrium	89-1				101		%
Yttrium	89-2				96		%
Zinc	66-2	5.39	5.23	5.60	5.41	3.52	ppb
Zirconium	90-1	1.08	1.09	1.09	1.09	0.51	ppb
Zirconium	91-1	1.09	1.05	1.09	1.07	2.32	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01MSDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:13:34	DataFile Name :	035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10951.27	10925.45	10822.07	10899.60	0.63	ppb
Antimony	121-1	123.63	124.26	126.04	124.64	1.00	ppb
Arsenic	75-2	133.60	134.74	136.96	135.10	1.26	ppb
Barium	135-1	661.90	661.49	664.92	662.77	0.28	ppb
Barium	137-1	653.12	656.97	667.67	659.25	1.14	ppb
Beryllium	9-1	129.05	133.22	128.25	130.18	2.05	ppb
Bismuth	209-1				109		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	132.23	131.18	132.28	131.89	0.47	ppb
Cadmium	106-1	127.19	133.41	131.91	130.84	2.48	ppb
Cadmium	111-1	130.78	134.12	136.13	133.67	2.02	ppb
Calcium	43-1	11263.01	11206.06	11373.03	11280.70	0.75	ppb
Calcium	44-1	10712.98	10801.93	10806.64	10773.85	0.49	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	144.19	144.55	144.92	144.55	0.25	ppb
Cobalt	59-2	136.10	137.21	137.33	136.88	0.50	ppb
Copper	63-2	1029.37	1044.89	1034.23	1036.16	0.77	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				104		%
Indium	115-1				101		%
Indium	115-2				97		%
Iron	56-2	27232.29	27214.80	27104.67	27183.92	0.25	ppb
Iron	57-2	27206.71	27136.29	26853.26	27065.42	0.69	ppb
Iron	54-2	27211.20	27114.77	27386.55	27237.51	0.51	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01MSDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:13:34	DataFile Name :	035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	484.74	480.02	494.63	486.46	1.53	ppb
Lead	207-1	489.18	488.05	487.37	488.20	0.19	ppb
Lead	208-1	485.12	484.88	486.65	485.55	0.20	ppb
Lithium	6-1				115		%
Magnesium	24-2	11637.19	11724.91	11592.41	11651.50	0.58	ppb
Manganese	55-2	1173.22	1171.94	1175.54	1173.57	0.16	ppb
Molybdenum	94-1	818.33	817.72	835.86	823.97	1.25	ppb
Molybdenum	95-1	719.10	737.54	732.93	729.86	1.31	ppb
Molybdenum	96-1	729.27	744.79	746.05	740.04	1.26	ppb
Molybdenum	97-1	717.57	730.31	727.36	725.08	0.92	ppb
Molybdenum	98-1	717.74	719.19	723.46	720.13	0.41	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	138.51	139.25	139.41	139.06	0.34	ppb
Phosphorus	31-2	225.57	211.09	223.70	220.12	3.58	ppb
Potassium	39-2	7622.26	7751.67	7723.00	7698.98	0.88	ppb
Rhodium	103-1				98		%
Rhodium	103-2				96		%
Scandium	45-1				98		%
Scandium	45-2				93		%
Selenium	82-1	129.35	128.32	130.80	129.49	0.96	ppb
Selenium	77-2	136.97	136.88	137.76	137.20	0.35	ppb
Selenium	78-2	129.28	132.73	135.32	132.45	2.29	ppb
Silicon	28-1	28.46	29.18	38.79	32.14	17.95	ppb
Silver	107-1	0.31	0.32	0.33	0.32	3.22	ppb
Silver	109-1	0.15	0.17	0.16	0.16	7.54	ppb
Sodium	23-2	9797.42	9785.29	9901.67	9828.13	0.65	ppb
Strontium	86-1	3103.58	3107.07	3114.58	3108.41	0.18	ppb
Strontium	88-1	3181.08	3188.02	3187.31	3185.47	0.12	ppb
Sulfur	34-1	-702.12	-730.93	-697.69	-710.25		ppb
Terbium	159-1				107		%
Terbium	159-2				104		%
Thallium	203-1	117.15	119.02	119.90	118.69	1.18	ppb
Thallium	205-1	125.00	124.22	125.06	124.76	0.38	ppb
Tin	118-1	121.77	123.04	122.86	122.56	0.56	ppb
Titanium	47-1	871.31	852.99	881.16	868.49	1.65	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01MSDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:13:34	DataFile Name :	035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	121.82	122.44	122.76	122.34	0.39	ppb
Vanadium	51-2	157.50	157.25	158.01	157.59	0.25	ppb
Yttrium	89-1				103		%
Yttrium	89-2				97		%
Zinc	66-2	1001.02	1015.47	1006.50	1007.66	0.72	ppb
Zirconium	90-1	128.68	128.74	130.22	129.21	0.67	ppb
Zirconium	91-1	124.97	126.10	126.71	125.93	0.70	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01MSDDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:16:27	DataFile Name :	036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10811.91	10901.32	10797.04	10836.76	0.52	ppb
Antimony	121-1	124.76	122.93	124.15	123.95	0.75	ppb
Arsenic	75-2	133.46	132.72	133.46	133.21	0.32	ppb
Barium	135-1	657.49	660.51	656.61	658.21	0.31	ppb
Barium	137-1	657.48	661.65	655.78	658.30	0.46	ppb
Beryllium	9-1	126.66	128.02	129.91	128.20	1.28	ppb
Bismuth	209-1				109		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	132.42	131.14	132.54	132.03	0.59	ppb
Cadmium	106-1	128.53	124.25	128.49	127.09	1.94	ppb
Cadmium	111-1	133.05	132.24	133.12	132.80	0.37	ppb
Calcium	43-1	11033.02	11168.66	11093.84	11098.51	0.61	ppb
Calcium	44-1	10592.89	10616.49	10506.80	10572.06	0.55	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	144.02	143.52	142.92	143.48	0.38	ppb
Cobalt	59-2	135.56	136.09	134.49	135.38	0.60	ppb
Copper	63-2	1026.04	1021.36	1032.05	1026.48	0.52	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				104		%
Indium	115-1				101		%
Indium	115-2				97		%
Iron	56-2	26990.88	27241.31	26992.52	27074.90	0.53	ppb
Iron	57-2	26827.19	26768.69	26574.20	26723.36	0.50	ppb
Iron	54-2	26976.80	27350.66	26845.66	27057.71	0.97	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01MSDDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:16:27	DataFile Name :	036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	488.71	484.04	475.17	482.64	1.42	ppb
Lead	207-1	478.08	479.06	480.13	479.09	0.21	ppb
Lead	208-1	484.91	482.05	479.02	481.99	0.61	ppb
Lithium	6-1				115		%
Magnesium	24-2	11466.78	11591.54	11511.88	11523.40	0.55	ppb
Manganese	55-2	1168.55	1166.06	1171.50	1168.71	0.23	ppb
Molybdenum	94-1	819.08	829.34	824.65	824.36	0.62	ppb
Molybdenum	95-1	717.28	720.27	722.35	719.96	0.35	ppb
Molybdenum	96-1	721.30	726.48	736.10	727.96	1.03	ppb
Molybdenum	97-1	727.21	725.34	725.66	726.07	0.14	ppb
Molybdenum	98-1	713.84	713.55	713.02	713.47	0.06	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	137.86	139.00	138.68	138.51	0.42	ppb
Phosphorus	31-2	233.14	238.42	207.54	226.37	7.30	ppb
Potassium	39-2	7608.38	7643.88	7642.11	7631.45	0.26	ppb
Rhodium	103-1				99		%
Rhodium	103-2				96		%
Scandium	45-1				99		%
Scandium	45-2				92		%
Selenium	82-1	127.57	128.66	130.40	128.88	1.11	ppb
Selenium	77-2	132.78	134.25	146.69	137.91	5.54	ppb
Selenium	78-2	130.21	131.37	133.75	131.78	1.37	ppb
Silicon	28-1	31.02	26.77	29.45	29.08	7.38	ppb
Silver	107-1	0.31	0.30	0.31	0.31	2.54	ppb
Silver	109-1	0.17	0.15	0.15	0.16	7.69	ppb
Sodium	23-2	9790.41	9802.14	9757.47	9783.34	0.24	ppb
Strontium	86-1	3067.84	3112.25	3082.75	3087.61	0.73	ppb
Strontium	88-1	3176.84	3159.41	3157.55	3164.60	0.34	ppb
Sulfur	34-1	-875.88	-812.06	-837.21	-841.72		ppb
Terbium	159-1				107		%
Terbium	159-2				103		%
Thallium	203-1	118.84	118.51	119.36	118.90	0.36	ppb
Thallium	205-1	126.15	123.76	123.72	124.55	1.12	ppb
Tin	118-1	122.34	121.23	121.70	121.76	0.45	ppb
Titanium	47-1	855.64	857.04	857.90	856.86	0.13	ppb

Reviewed By:mohan
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Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01MSDDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:16:27	DataFile Name :	036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	121.74	121.38	120.92	121.35	0.34	ppb
Vanadium	51-2	157.31	157.75	156.58	157.21	0.38	ppb
Yttrium	89-1				103		%
Yttrium	89-2				96		%
Zinc	66-2	998.83	1007.99	995.76	1000.86	0.64	ppb
Zirconium	90-1	128.83	128.95	128.89	128.89	0.05	ppb
Zirconium	91-1	124.90	126.67	126.61	126.06	0.80	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01ADLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:19:18	DataFile Name :	037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10967.50	10927.00	10746.44	10880.31	1.08	ppb
Antimony	121-1	124.21	124.56	124.59	124.46	0.17	ppb
Arsenic	75-2	135.95	132.26	134.66	134.29	1.39	ppb
Barium	135-1	662.33	659.76	651.77	657.95	0.84	ppb
Barium	137-1	664.44	656.06	658.20	659.57	0.66	ppb
Beryllium	9-1	130.17	130.46	130.40	130.34	0.12	ppb
Bismuth	209-1				111		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	131.42	129.20	131.66	130.76	1.04	ppb
Cadmium	106-1	128.58	126.92	129.68	128.39	1.08	ppb
Cadmium	111-1	132.82	132.84	132.46	132.70	0.16	ppb
Calcium	43-1	11219.74	11172.41	11166.16	11186.10	0.26	ppb
Calcium	44-1	10644.39	10688.05	10581.11	10637.85	0.51	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	145.11	143.49	143.25	143.95	0.70	ppb
Cobalt	59-2	136.41	135.87	134.40	135.56	0.77	ppb
Copper	63-2	1038.99	1044.11	1014.98	1032.69	1.51	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				104		%
Indium	115-1				101		%
Indium	115-2				96		%
Iron	56-2	27019.63	27146.27	26815.19	26993.70	0.62	ppb
Iron	57-2	26876.13	26889.46	26891.32	26885.63	0.03	ppb
Iron	54-2	27159.57	26991.66	26726.72	26959.32	0.81	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01ADLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:19:18	DataFile Name :	037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	486.08	472.85	468.16	475.70	1.95	ppb
Lead	207-1	490.55	474.99	481.18	482.24	1.62	ppb
Lead	208-1	484.86	473.61	472.83	477.10	1.41	ppb
Lithium	6-1				113		%
Magnesium	24-2	11634.68	11587.44	11574.03	11598.72	0.27	ppb
Manganese	55-2	1164.32	1168.19	1157.64	1163.38	0.46	ppb
Molybdenum	94-1	806.93	833.56	829.48	823.32	1.74	ppb
Molybdenum	95-1	712.71	730.29	720.83	721.28	1.22	ppb
Molybdenum	96-1	727.00	740.32	732.51	733.28	0.91	ppb
Molybdenum	97-1	722.33	726.16	726.52	725.00	0.32	ppb
Molybdenum	98-1	709.92	722.26	718.99	717.06	0.89	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	139.39	138.93	136.96	138.43	0.94	ppb
Phosphorus	31-2	220.69	218.08	231.15	223.31	3.10	ppb
Potassium	39-2	7656.27	7682.56	7652.83	7663.89	0.21	ppb
Rhodium	103-1				98		%
Rhodium	103-2				96		%
Scandium	45-1				99		%
Scandium	45-2				91		%
Selenium	82-1	128.68	131.60	130.57	130.28	1.14	ppb
Selenium	77-2	132.55	139.49	141.54	137.86	3.42	ppb
Selenium	78-2	132.39	128.74	132.11	131.08	1.55	ppb
Silicon	28-1	27.54	27.70	30.25	28.50	5.34	ppb
Silver	107-1	0.30	0.30	0.32	0.31	3.63	ppb
Silver	109-1	0.16	0.15	0.17	0.16	6.75	ppb
Sodium	23-2	9758.37	9865.39	9680.07	9767.94	0.95	ppb
Strontium	86-1	3070.06	3137.90	3104.86	3104.27	1.09	ppb
Strontium	88-1	3175.27	3206.81	3182.56	3188.21	0.52	ppb
Sulfur	34-1	-883.13	-862.02	-828.09	-857.74		ppb
Terbium	159-1				106		%
Terbium	159-2				104		%
Thallium	203-1	116.68	115.60	116.85	116.38	0.58	ppb
Thallium	205-1	121.10	120.75	122.65	121.50	0.83	ppb
Tin	118-1	121.29	122.52	122.52	122.11	0.58	ppb
Titanium	47-1	843.22	850.68	846.77	846.89	0.44	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01ADLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:19:18	DataFile Name :	037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	120.78	120.75	121.09	120.88	0.16	ppb
Vanadium	51-2	157.51	156.97	155.24	156.57	0.76	ppb
Yttrium	89-1				102		%
Yttrium	89-2				96		%
Zinc	66-2	1006.47	1005.06	995.58	1002.37	0.59	ppb
Zirconium	90-1	128.08	129.81	126.73	128.21	1.20	ppb
Zirconium	91-1	124.38	126.90	126.08	125.79	1.02	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P7
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:35:10	DataFile Name :	042CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	49302.75	49416.08	50237.51	49652.11	1.03	ppb
Antimony	121-1	491.16	481.04	474.12	482.11	1.78	ppb
Arsenic	75-2	480.23	482.23	485.55	482.67	0.56	ppb
Barium	135-1	2495.14	2449.62	2383.89	2442.88	2.29	ppb
Barium	137-1	2499.56	2420.30	2398.28	2439.38	2.18	ppb
Beryllium	9-1	489.79	496.96	485.29	490.68	1.20	ppb
Bismuth	209-1				99		%
Bismuth	209-2				94		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	484.99	466.11	472.18	474.43	2.03	ppb
Cadmium	106-1	478.60	465.55	463.97	469.37	1.71	ppb
Cadmium	111-1	467.86	455.04	455.24	459.38	1.60	ppb
Calcium	43-1	255083.16	250124.41	251519.46	252242.34	1.01	ppb
Calcium	44-1	253105.34	249006.24	250777.99	250963.19	0.82	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	487.95	484.20	486.16	486.10	0.39	ppb
Cobalt	59-2	479.21	483.37	480.92	481.17	0.43	ppb
Copper	63-2	4655.27	4681.39	4695.17	4677.27	0.43	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				90		%
Indium	115-2				86		%
Iron	56-2	126272.11	127543.81	129081.60	127632.51	1.10	ppb
Iron	57-2	126967.77	128151.94	128662.21	127927.31	0.68	ppb
Iron	54-2	127310.03	127092.64	127554.24	127318.97	0.18	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P7
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:35:10	DataFile Name :	042CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2557.66	2499.36	2474.64	2510.55	1.70	ppb
Lead	207-1	2551.67	2485.64	2476.59	2504.63	1.64	ppb
Lead	208-1	2552.57	2497.91	2480.30	2510.26	1.50	ppb
Lithium	6-1				109		%
Magnesium	24-2	250374.27	247320.06	250975.05	249556.46	0.79	ppb
Manganese	55-2	4813.51	4876.68	4858.30	4849.50	0.67	ppb
Molybdenum	94-1	5057.44	5005.75	4901.65	4988.28	1.59	ppb
Molybdenum	95-1	4984.20	4977.78	4852.97	4938.32	1.50	ppb
Molybdenum	96-1	4979.45	4980.54	4879.00	4946.33	1.18	ppb
Molybdenum	97-1	5006.92	4963.33	4840.19	4936.81	1.75	ppb
Molybdenum	98-1	4990.34	4914.08	4818.22	4907.55	1.76	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	467.39	473.56	471.02	470.66	0.66	ppb
Phosphorus	31-2	9888.99	9806.81	9868.33	9854.71	0.43	ppb
Potassium	39-2	120706.28	119558.55	121705.32	120656.72	0.89	ppb
Rhodium	103-1				84		%
Rhodium	103-2				83		%
Scandium	45-1				90		%
Scandium	45-2				83		%
Selenium	82-1	479.42	477.91	471.44	476.26	0.89	ppb
Selenium	77-2	468.97	470.98	481.56	473.84	1.43	ppb
Selenium	78-2	477.26	472.00	472.34	473.87	0.62	ppb
Silicon	28-1	475.49	466.46	469.10	470.35	0.99	ppb
Silver	107-1	487.27	468.26	466.59	474.04	2.42	ppb
Silver	109-1	484.09	463.39	463.65	470.38	2.52	ppb
Sodium	23-2	245525.24	247046.67	248640.93	247070.95	0.63	ppb
Strontium	86-1	12347.05	12426.45	12130.86	12301.45	1.24	ppb
Strontium	88-1	12566.84	12281.10	12243.51	12363.82	1.43	ppb
Sulfur	34-1	9834.29	9588.91	9714.10	9712.43	1.26	ppb
Terbium	159-1				100		%
Terbium	159-2				98		%
Thallium	203-1	512.00	506.25	493.91	504.05	1.83	ppb
Thallium	205-1	509.81	500.88	496.39	502.36	1.36	ppb
Tin	118-1	493.11	477.88	482.86	484.62	1.60	ppb
Titanium	47-1	4952.61	4851.05	4924.27	4909.31	1.07	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P7
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:35:10	DataFile Name :	042CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	510.02	502.06	497.63	503.24	1.25	ppb
Vanadium	51-2	486.87	490.09	489.63	488.86	0.36	ppb
Yttrium	89-1				92		%
Yttrium	89-2				87		%
Zinc	66-2	4622.32	4599.86	4682.46	4634.88	0.92	ppb
Zirconium	90-1	504.28	492.38	486.64	494.44	1.82	ppb
Zirconium	91-1	510.30	500.02	496.10	502.14	1.46	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P7
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:38:14	DataFile Name :	043CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3.15	3.17	2.96	3.09	3.65	ppb
Antimony	121-1	0.14	0.11	0.13	0.13	8.52	ppb
Arsenic	75-2	0.04	0.04	0.06	0.05	27.80	ppb
Barium	135-1	0.17	0.16	0.14	0.15	7.98	ppb
Barium	137-1	0.15	0.15	0.15	0.15	1.45	ppb
Beryllium	9-1	0.08	0.08	0.09	0.08	7.67	ppb
Bismuth	209-1				110		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.11	0.08	0.15	0.11	29.85	ppb
Cadmium	106-1	-10.94	-11.55	-13.61	-12.03		ppb
Cadmium	111-1	-0.09	-0.10	-0.11	-0.10		ppb
Calcium	43-1	14.22	7.97	13.18	11.79	28.38	ppb
Calcium	44-1	12.60	11.83	12.48	12.30	3.34	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.02	0.01	0.05	0.01	248.21	ppb
Cobalt	59-2	0.03	0.02	0.03	0.02	17.48	ppb
Copper	63-2	0.33	0.32	0.32	0.32	1.72	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				102		%
Indium	115-1				99		%
Indium	115-2				95		%
Iron	56-2	8.41	8.69	9.24	8.78	4.83	ppb
Iron	57-2	5.84	5.38	5.04	5.42	7.42	ppb
Iron	54-2	8.09	8.31	7.99	8.13	2.02	ppb
Krypton	83-1						cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P7
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:38:14	DataFile Name :	043CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.16	0.18	0.16	0.17	6.85	ppb
Lead	207-1	0.19	0.18	0.16	0.18	6.51	ppb
Lead	208-1	0.17	0.18	0.17	0.17	3.41	ppb
Lithium	6-1				118		%
Magnesium	24-2	17.15	16.99	17.17	17.10	0.59	ppb
Manganese	55-2	0.31	0.33	0.32	0.32	3.44	ppb
Molybdenum	94-1	0.34	0.37	0.36	0.36	4.57	ppb
Molybdenum	95-1	0.35	0.35	0.35	0.35	1.25	ppb
Molybdenum	96-1	0.37	0.32	0.33	0.34	7.49	ppb
Molybdenum	97-1	0.35	0.30	0.37	0.34	10.03	ppb
Molybdenum	98-1	0.35	0.33	0.35	0.35	3.82	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.03	0.01	-0.01	0.01	173.66	ppb
Phosphorus	31-2	-17.87	-25.17	-20.19	-21.08		ppb
Potassium	39-2	5.96	3.89	4.44	4.76	22.50	ppb
Rhodium	103-1				96		%
Rhodium	103-2				95		%
Scandium	45-1				93		%
Scandium	45-2				87		%
Selenium	82-1	-0.50	0.43	-0.33	-0.13		ppb
Selenium	77-2	0.55	0.00	0.00	0.18	173.21	ppb
Selenium	78-2	-0.75	-0.16	-0.12	-0.34		ppb
Silicon	28-1	-12.37	-12.35	-12.30	-12.34		ppb
Silver	107-1	0.08	0.07	0.06	0.07	9.01	ppb
Silver	109-1	0.07	0.06	0.07	0.07	5.99	ppb
Sodium	23-2	51.14	48.89	48.80	49.61	2.67	ppb
Strontium	86-1	0.75	1.03	0.99	0.92	16.43	ppb
Strontium	88-1	0.76	0.76	0.78	0.76	1.41	ppb
Sulfur	34-1	-607.69	-554.00	-570.60	-577.43		ppb
Terbium	159-1				105		%
Terbium	159-2				102		%
Thallium	203-1	0.06	0.07	0.06	0.06	7.21	ppb
Thallium	205-1	0.06	0.06	0.06	0.06	0.68	ppb
Tin	118-1	0.04	0.04	0.04	0.04	5.12	ppb
Titanium	47-1	0.29	0.29	0.32	0.30	6.31	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P7
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:38:14	DataFile Name :	043CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.03	0.02	0.02	0.02	9.38	ppb
Vanadium	51-2	0.02	0.04	0.04	0.03	27.54	ppb
Yttrium	89-1				97		%
Yttrium	89-2				92		%
Zinc	66-2	0.52	0.43	0.49	0.48	9.49	ppb
Zirconium	90-1	0.03	0.05	0.05	0.04	20.25	ppb
Zirconium	91-1	0.04	0.05	0.05	0.05	14.37	ppb

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:15:48	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	83	147	157	129	30.86	cps
Antimony	121-1	23	47	30	33	36.07	cps
Arsenic	75-2	3	10	20	11	75.52	cps
Barium	135-1	30	37	40	36	14.32	cps
Barium	137-1	73	43	73	63	27.35	cps
Beryllium	9-1	40	47	53	47	14.28	cps
Bismuth	209-1	8529486	8468611	8444053	8480716	0.52	cps
Bismuth	209-2	7660856	7588367	7418521	7555914	1.65	cps
Bromine	81-1	15608	15725	15965	15766	1.15	cps
Bromine	81-2	143	200	160	168	17.36	cps
Cadmium	108-1	47	47	50	48	4.02	cps
Cadmium	106-1	25539	25636	25232	25469	0.83	cps
Cadmium	111-1	2558	2561	2512	2543	1.09	cps
Calcium	43-1	513	590	470	524	11.59	cps
Calcium	44-1	11681	11001	11181	11288	3.12	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3254	3180	3380	3271	3.09	cps
Cobalt	59-2	243	257	207	236	10.99	cps
Copper	63-2	2864	2854	3020	2913	3.21	cps
Dysprosium	156-1	10	7	0	6	91.64	cps
Dysprosium	156-2	0	10	13	8	89.21	cps
Erbium	164-1	60	67	53	60	11.12	cps
Erbium	164-2	53	70	33	52	35.16	cps
Gadolinium	160-1	123	110	120	118	5.89	cps
Gadolinium	160-2	720	737	720	726	1.33	cps
Holmium	165-1	14041424	13951904	14094076	14029135	0.51	cps
Holmium	165-2	10643521	10474909	10308031	10475487	1.60	cps
Indium	115-1	11536638	11823881	11665690	11675403	1.23	cps
Indium	115-2	4774858	4773512	4690592	4746321	1.02	cps
Iron	56-2	24931	25381	24941	25084	1.03	cps
Iron	57-2	1793	1880	1817	1830	2.45	cps
Iron	54-2	3110	3050	3120	3094	1.22	cps
Krypton	83-1	167	230	250	216	20.18	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:15:48	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	420	433	377	410	7.23	cps
Lead	207-1	413	387	330	377	11.30	cps
Lead	208-1	1717	1637	1620	1658	3.12	cps
Lithium	6-1	1500174	1454961	1435033	1463389	2.28	cps
Magnesium	24-2	470	460	493	474	3.61	cps
Manganese	55-2	373	400	410	394	4.81	cps
Molybdenum	94-1	450	397	507	451	12.19	cps
Molybdenum	95-1	393	497	467	452	11.76	cps
Molybdenum	96-1	463	450	490	468	4.35	cps
Molybdenum	97-1	307	300	300	302	1.27	cps
Molybdenum	98-1	673	703	680	686	2.30	cps
Neodymium	150-1	7	10	7	8	24.71	cps
Neodymium	150-2	3	3	7	4	43.40	cps
Nickel	60-2	1037	1020	983	1013	2.69	cps
Phosphorus	31-2	427	400	467	431	7.78	cps
Potassium	39-2	59911	59951	60208	60023	0.27	cps
Rhodium	103-1	11053561	11076527	11159392	11096493	0.50	cps
Rhodium	103-2	6699804	6762439	6656029	6706091	0.80	cps
Scandium	45-1	6732662	6771929	6599066	6701219	1.35	cps
Scandium	45-2	608393	607324	604285	606667	0.35	cps
Selenium	82-1	409	355	401	388	7.43	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	437	487	443	456	5.96	cps
Silicon	28-1	1674046	1660287	1657834	1664056	0.53	cps
Silver	107-1	103	143	100	116	20.87	cps
Silver	109-1	50	53	63	56	12.49	cps
Sodium	23-2	22847	22560	22964	22790	0.91	cps
Strontium	86-1	300	370	310	327	11.59	cps
Strontium	88-1	153	163	163	160	3.61	cps
Sulfur	34-1	188996	192209	191392	190866	0.88	cps
Terbium	159-1	14506340	14442705	14176748	14375264	1.22	cps
Terbium	159-2	10589064	10322036	10309249	10406783	1.52	cps
Thallium	203-1	230	243	170	214	18.22	cps
Thallium	205-1	520	547	480	516	6.51	cps
Tin	118-1	947	917	803	889	8.51	cps
Titanium	47-1	70	130	83	94	33.36	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:15:48	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	60	47	33	47	28.58	cps
Vanadium	51-2	10	13	17	13	25.01	cps
Yttrium	89-1	17787128	18138681	17679290	17868366	1.34	cps
Yttrium	89-2	5282745	5233675	5188095	5234838	0.90	cps
Zinc	66-2	207	200	210	206	2.48	cps
Zirconium	90-1	913	953	913	927	2.49	cps
Zirconium	91-1	80	153	103	112	33.39	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P7
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:19:03	DataFile Name :	005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4941	4951	5124	5005	2.06	cps
Antimony	121-1	23205	22781	22581	22856	1.39	cps
Arsenic	75-2	733	727	827	762	7.34	cps
Barium	135-1	29454	28589	28408	28817	1.94	cps
Barium	137-1	50064	50817	50315	50399	0.76	cps
Beryllium	9-1	1467	1637	1433	1512	7.21	cps
Bismuth	209-1	8561474	8506468	8395935	8487959	0.99	cps
Bismuth	209-2	7679461	7637213	7617421	7644698	0.41	cps
Bromine	81-1	15995	16232	16059	16096	0.76	cps
Bromine	81-2	163	167	130	153	13.22	cps
Cadmium	108-1	247	303	327	292	14.08	cps
Cadmium	106-1	25813	25773	25990	25859	0.45	cps
Cadmium	111-1	5489	5482	5624	5532	1.45	cps
Calcium	43-1	17233	16816	16556	16868	2.03	cps
Calcium	44-1	275308	276871	275683	275954	0.30	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	13266	13026	12822	13038	1.70	cps
Cobalt	59-2	8159	8366	8012	8179	2.17	cps
Copper	63-2	13566	13453	13543	13521	0.44	cps
Dysprosium	156-1	10	3	17	10	66.70	cps
Dysprosium	156-2	3	7	7	6	34.70	cps
Erbium	164-1	110	87	47	81	39.49	cps
Erbium	164-2	43	27	53	41	32.76	cps
Gadolinium	160-1	117	103	107	109	6.37	cps
Gadolinium	160-2	647	700	590	646	8.52	cps
Holmium	165-1	14028347	13973102	13848659	13950036	0.66	cps
Holmium	165-2	10515341	10389220	10461164	10455242	0.61	cps
Indium	115-1	11579226	11477482	11594538	11550415	0.55	cps
Indium	115-2	4736631	4767122	4676847	4726867	0.97	cps
Iron	56-2	259639	262926	260726	261097	0.64	cps
Iron	57-2	8112	8209	7976	8099	1.45	cps
Iron	54-2	16246	16229	16816	16430	2.04	cps
Krypton	83-1	237	197	237	223	10.34	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P7
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:19:03	DataFile Name :	005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	8576	8433	8416	8475	1.04	cps
Lead	207-1	7435	7492	7576	7501	0.94	cps
Lead	208-1	34150	34614	34297	34354	0.69	cps
Lithium	6-1	1485550	1477118	1509570	1490746	1.13	cps
Magnesium	24-2	211658	211235	208770	210554	0.74	cps
Manganese	55-2	4274	4404	4127	4268	3.24	cps
Molybdenum	94-1	24838	23893	23726	24152	2.48	cps
Molybdenum	95-1	28792	29256	30104	29384	2.27	cps
Molybdenum	96-1	32372	33288	32583	32748	1.46	cps
Molybdenum	97-1	18345	17901	18445	18230	1.59	cps
Molybdenum	98-1	47447	47176	47313	47312	0.29	cps
Neodymium	150-1	10	3	10	8	49.52	cps
Neodymium	150-2	10	0	3	4	114.60	cps
Nickel	60-2	2850	2967	2937	2918	2.08	cps
Phosphorus	31-2	817	793	797	802	1.57	cps
Potassium	39-2	360889	359558	360890	360446	0.21	cps
Rhodium	103-1	10965555	11053350	10930184	10983030	0.58	cps
Rhodium	103-2	6699207	6764159	6708173	6723846	0.52	cps
Scandium	45-1	6718339	6725276	6654057	6699224	0.59	cps
Scandium	45-2	604611	608277	605887	606258	0.31	cps
Selenium	82-1	1341	1366	1323	1343	1.63	cps
Selenium	77-2	113	117	100	110	8.02	cps
Selenium	78-2	973	883	850	902	7.07	cps
Silicon	28-1	1679472	1672713	1661280	1671155	0.55	cps
Silver	107-1	14284	14317	14371	14324	0.31	cps
Silver	109-1	13513	13813	13773	13700	1.19	cps
Sodium	23-2	357435	355745	353282	355487	0.59	cps
Strontium	86-1	4044	4061	3997	4034	0.81	cps
Strontium	88-1	32666	32022	32777	32488	1.26	cps
Sulfur	34-1	193798	193809	195210	194272	0.42	cps
Terbium	159-1	14268341	14344877	14467490	14360236	0.70	cps
Terbium	159-2	10576202	10570831	10343160	10496731	1.27	cps
Thallium	203-1	10698	10034	10391	10374	3.20	cps
Thallium	205-1	25133	24419	24736	24763	1.45	cps
Tin	118-1	49291	48799	48481	48857	0.83	cps
Titanium	47-1	7559	7629	7852	7680	2.00	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P7
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:19:03	DataFile Name :	005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	30532	30114	30061	30235	0.85	cps
Vanadium	51-2	21529	22150	22003	21894	1.48	cps
Yttrium	89-1	17597846	17885658	17974406	17819303	1.10	cps
Yttrium	89-2	5201854	5260639	5154969	5205821	1.02	cps
Zinc	66-2	5008	5041	4701	4916	3.81	cps
Zirconium	90-1	20217	20304	20468	20330	0.63	cps
Zirconium	91-1	4584	4427	4561	4524	1.87	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P7
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:25:33	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	231729	228917	228507	229718	0.76	cps
Antimony	121-1	544268	544346	541412	543342	0.31	cps
Arsenic	75-2	30962	30398	29626	30329	2.21	cps
Barium	135-1	693107	695048	694228	694128	0.14	cps
Barium	137-1	1214233	1203295	1197160	1204896	0.72	cps
Beryllium	9-1	66237	66049	65916	66067	0.24	cps
Bismuth	209-1	8713089	8622786	8740978	8692284	0.71	cps
Bismuth	209-2	7591781	7620563	7729598	7647314	0.95	cps
Bromine	81-1	15281	15368	15208	15286	0.52	cps
Bromine	81-2	127	153	140	140	9.52	cps
Cadmium	108-1	10914	10584	11094	10864	2.38	cps
Cadmium	106-1	40690	40496	41339	40842	1.08	cps
Cadmium	111-1	134776	135768	135424	135323	0.37	cps
Calcium	43-1	155470	157117	155154	155914	0.68	cps
Calcium	44-1	2430724	2437573	2412340	2426879	0.54	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	229655	227486	225764	227635	0.86	cps
Cobalt	59-2	350764	347681	350249	349565	0.47	cps
Copper	63-2	2581679	2606787	2563541	2584002	0.84	cps
Dysprosium	156-1	63	60	60	61	3.15	cps
Dysprosium	156-2	83	73	43	67	31.23	cps
Erbium	164-1	83	93	63	80	19.09	cps
Erbium	164-2	60	43	50	51	16.42	cps
Gadolinium	160-1	117	87	150	118	26.90	cps
Gadolinium	160-2	623	617	713	651	8.29	cps
Holmium	165-1	14174560	14126331	14137006	14145966	0.18	cps
Holmium	165-2	10490578	10385484	10550856	10475639	0.80	cps
Indium	115-1	11547979	11474639	11556456	11526358	0.39	cps
Indium	115-2	4633632	4612450	4613705	4619929	0.26	cps
Iron	56-2	10517130	10561354	10444907	10507797	0.56	cps
Iron	57-2	277970	274379	270480	274276	1.37	cps
Iron	54-2	601131	597487	596674	598431	0.40	cps
Krypton	83-1	203	197	190	197	3.39	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P7
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:25:33	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2032916	2056495	2055776	2048396	0.65	cps
Lead	207-1	1874618	1860715	1883146	1872826	0.60	cps
Lead	208-1	8498456	8434770	8580792	8504673	0.86	cps
Lithium	6-1	1569419	1541166	1535102	1548562	1.18	cps
Magnesium	24-2	1892546	1863162	1850110	1868606	1.16	cps
Manganese	55-2	1799520	1784885	1795271	1793226	0.42	cps
Molybdenum	94-1	1955685	1978886	1960978	1965183	0.62	cps
Molybdenum	95-1	2748800	2797363	2771795	2772653	0.88	cps
Molybdenum	96-1	3062939	3106283	3048299	3072507	0.98	cps
Molybdenum	97-1	1738109	1744167	1726976	1736417	0.50	cps
Molybdenum	98-1	4458248	4507780	4417525	4461185	1.01	cps
Neodymium	150-1	47	67	67	60	19.24	cps
Neodymium	150-2	7	23	13	14	58.06	cps
Nickel	60-2	89434	89270	88358	89021	0.65	cps
Phosphorus	31-2	12765	12252	12205	12407	2.51	cps
Potassium	39-2	1414239	1399856	1393567	1402554	0.76	cps
Rhodium	103-1	10891778	10976380	10797544	10888567	0.82	cps
Rhodium	103-2	6521336	6534758	6541987	6532694	0.16	cps
Scandium	45-1	6791675	6695707	6654071	6713818	1.05	cps
Scandium	45-2	580810	579306	576007	578708	0.42	cps
Selenium	82-1	9055	9140	9014	9070	0.71	cps
Selenium	77-2	993	880	1090	988	10.64	cps
Selenium	78-2	4031	3721	3851	3867	4.03	cps
Silicon	28-1	5535900	5478399	5436096	5483465	0.91	cps
Silver	107-1	715715	718898	718058	717557	0.23	cps
Silver	109-1	683390	680767	689979	684712	0.69	cps
Sodium	23-2	3256041	3251254	3216517	3241271	0.67	cps
Strontium	86-1	173425	173855	172868	173383	0.29	cps
Strontium	88-1	1525345	1511410	1516077	1517611	0.47	cps
Sulfur	34-1	233049	230394	228496	230646	0.99	cps
Terbium	159-1	14483751	14607999	14554184	14548645	0.43	cps
Terbium	159-2	10317304	10578042	10405969	10433772	1.27	cps
Thallium	203-1	505343	508347	508963	507551	0.38	cps
Thallium	205-1	1187393	1202460	1201171	1197008	0.70	cps
Tin	118-1	447930	453216	452911	451352	0.66	cps
Titanium	47-1	714966	719897	711131	715331	0.61	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P7
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:25:33	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1473840	1499289	1516143	1496424	1.42	cps
Vanadium	51-2	200131	199899	197561	199197	0.71	cps
Yttrium	89-1	17878794	17746667	17701559	17775673	0.52	cps
Yttrium	89-2	5113709	5028205	5041247	5061054	0.91	cps
Zinc	66-2	432894	431251	426078	430074	0.83	cps
Zirconium	90-1	949927	946625	953419	949991	0.36	cps
Zirconium	91-1	211445	209977	210694	210705	0.35	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P7
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:28:35	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	538234	533409	533635	535093	0.51	cps
Antimony	121-1	1323767	1330743	1331636	1328715	0.32	cps
Arsenic	75-2	71447	71327	71668	71481	0.24	cps
Barium	135-1	1750411	1784823	1735154	1756796	1.45	cps
Barium	137-1	3071724	3054275	3062253	3062751	0.29	cps
Beryllium	9-1	165312	170150	167913	167792	1.44	cps
Bismuth	209-1	8830032	8745639	8652027	8742566	1.02	cps
Bismuth	209-2	7529136	7499333	7557066	7528512	0.38	cps
Bromine	81-1	14310	14077	13700	14029	2.20	cps
Bromine	81-2	97	97	90	94	4.08	cps
Cadmium	108-1	26999	26695	26381	26691	1.16	cps
Cadmium	106-1	62775	62119	61275	62056	1.21	cps
Cadmium	111-1	326539	329688	327000	327743	0.52	cps
Calcium	43-1	374187	377537	374094	375273	0.52	cps
Calcium	44-1	5857326	5873954	5780100	5837126	0.86	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	529478	529243	527287	528669	0.23	cps
Cobalt	59-2	818757	814433	809653	814281	0.56	cps
Copper	63-2	6033304	6020915	5904087	5986102	1.19	cps
Dysprosium	156-1	70	87	103	87	19.23	cps
Dysprosium	156-2	140	140	130	137	4.22	cps
Erbium	164-1	77	93	97	89	12.05	cps
Erbium	164-2	97	53	73	74	29.14	cps
Gadolinium	160-1	93	130	157	127	25.11	cps
Gadolinium	160-2	620	747	710	692	9.42	cps
Holmium	165-1	14136111	14205766	14122614	14154830	0.32	cps
Holmium	165-2	10407159	10424087	10350561	10393935	0.37	cps
Indium	115-1	11271787	11281184	11473705	11342226	1.00	cps
Indium	115-2	4479628	4459196	4444967	4461264	0.39	cps
Iron	56-2	24633703	24418752	24291695	24448050	0.71	cps
Iron	57-2	644251	639123	634767	639380	0.74	cps
Iron	54-2	1374940	1352939	1349740	1359206	1.01	cps
Krypton	83-1	153	180	183	172	9.55	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P7
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:28:35	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	5255150	5252476	5221059	5242895	0.36	cps
Lead	207-1	4659063	4768536	4690839	4706146	1.20	cps
Lead	208-1	21298342	21447588	21324792	21356907	0.37	cps
Lithium	6-1	1582222	1589497	1619196	1596972	1.23	cps
Magnesium	24-2	4352068	4318963	4318559	4329863	0.44	cps
Manganese	55-2	4215687	4213257	4152649	4193865	0.85	cps
Molybdenum	94-1	4722876	4712445	4709604	4714975	0.15	cps
Molybdenum	95-1	6767775	6759744	6735831	6754450	0.25	cps
Molybdenum	96-1	7465376	7463866	7473844	7467695	0.07	cps
Molybdenum	97-1	4275884	4169928	4194070	4213294	1.32	cps
Molybdenum	98-1	10917534	10946424	10802035	10888664	0.70	cps
Neodymium	150-1	140	150	123	138	9.77	cps
Neodymium	150-2	57	40	37	44	24.11	cps
Nickel	60-2	209519	206207	207028	207585	0.83	cps
Phosphorus	31-2	28059	28209	28119	28129	0.27	cps
Potassium	39-2	3149660	3128955	3155868	3144828	0.45	cps
Rhodium	103-1	10810738	10565072	10565125	10646979	1.33	cps
Rhodium	103-2	6226159	6160313	6219878	6202117	0.59	cps
Scandium	45-1	6540502	6426540	6381877	6449640	1.27	cps
Scandium	45-2	548835	539859	542585	543760	0.85	cps
Selenium	82-1	21862	21500	21347	21570	1.23	cps
Selenium	77-2	2234	2357	2477	2356	5.17	cps
Selenium	78-2	8436	8559	8499	8498	0.73	cps
Silicon	28-1	10896630	10894044	10790587	10860420	0.56	cps
Silver	107-1	1749991	1774549	1745307	1756615	0.89	cps
Silver	109-1	1683079	1658535	1691336	1677650	1.02	cps
Sodium	23-2	7612996	7530542	7511262	7551600	0.72	cps
Strontium	86-1	420656	424231	421449	422112	0.44	cps
Strontium	88-1	3731129	3763136	3725778	3740014	0.54	cps
Sulfur	34-1	282323	280094	277717	280045	0.82	cps
Terbium	159-1	14658997	14533811	14407329	14533379	0.87	cps
Terbium	159-2	10412973	10379588	10239755	10344105	0.89	cps
Thallium	203-1	1266623	1274441	1283194	1274753	0.65	cps
Thallium	205-1	3204921	3175898	3244903	3208574	1.08	cps
Tin	118-1	1101460	1102967	1104606	1103011	0.14	cps
Titanium	47-1	1773331	1744991	1730805	1749709	1.24	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P7
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:28:35	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	4081517	4047347	4110299	4079721	0.77	cps
Vanadium	51-2	467379	462728	464069	464725	0.52	cps
Yttrium	89-1	17473087	17389898	17221530	17361505	0.74	cps
Yttrium	89-2	4865951	4839232	4847416	4850866	0.28	cps
Zinc	66-2	1011824	1013849	1009409	1011694	0.22	cps
Zirconium	90-1	2377624	2330456	2353148	2353743	1.00	cps
Zirconium	91-1	516815	512906	511242	513654	0.56	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P7
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:31:26	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1019902	1011781	1011784	1014489	0.46	cps
Antimony	121-1	2694893	2694146	2665310	2684783	0.63	cps
Arsenic	75-2	136833	135094	136628	136185	0.70	cps
Barium	135-1	3501100	3477921	3488350	3489124	0.33	cps
Barium	137-1	6014381	5994961	6042331	6017224	0.40	cps
Beryllium	9-1	331797	332555	334045	332799	0.34	cps
Bismuth	209-1	8614461	8848784	8789012	8750752	1.39	cps
Bismuth	209-2	7610615	7655798	7487887	7584767	1.15	cps
Bromine	81-1	13613	14030	13787	13810	1.52	cps
Bromine	81-2	160	127	133	140	12.60	cps
Cadmium	108-1	52190	51658	51879	51909	0.51	cps
Cadmium	106-1	96451	96219	95394	96021	0.58	cps
Cadmium	111-1	636563	639782	634484	636943	0.42	cps
Calcium	43-1	729114	714808	717348	720423	1.06	cps
Calcium	44-1	11227701	11336454	11124567	11229574	0.94	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1001480	993573	987722	994258	0.69	cps
Cobalt	59-2	1563122	1555811	1521265	1546733	1.45	cps
Copper	63-2	11315128	11336368	11146098	11265864	0.93	cps
Dysprosium	156-1	133	153	130	139	9.09	cps
Dysprosium	156-2	217	223	287	242	15.95	cps
Erbium	164-1	150	110	120	127	16.43	cps
Erbium	164-2	73	80	100	84	16.44	cps
Gadolinium	160-1	130	143	153	142	8.23	cps
Gadolinium	160-2	720	720	730	723	0.80	cps
Holmium	165-1	14061536	14008636	13996378	14022183	0.25	cps
Holmium	165-2	10377764	10278979	10423038	10359927	0.71	cps
Indium	115-1	11073040	11033396	10888752	10998396	0.88	cps
Indium	115-2	4268906	4275049	4243747	4262567	0.39	cps
Iron	56-2	46684059	46760084	46739578	46727907	0.08	cps
Iron	57-2	1211383	1206668	1206132	1208061	0.24	cps
Iron	54-2	2606671	2579410	2597255	2594445	0.53	cps
Krypton	83-1	157	167	173	166	5.07	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P7
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:31:26	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	10337548	10669140	10609335	10538675	1.68	cps
Lead	207-1	9397314	9573214	9537829	9502786	0.98	cps
Lead	208-1	42665992	43662892	43503844	43277576	1.24	cps
Lithium	6-1	1610325	1632256	1629203	1623928	0.73	cps
Magnesium	24-2	8274928	8221210	8185853	8227330	0.55	cps
Manganese	55-2	7982618	7986379	7957917	7975638	0.19	cps
Molybdenum	94-1	9266939	9237507	9134780	9213075	0.75	cps
Molybdenum	95-1	13207668	13119277	13026198	13117714	0.69	cps
Molybdenum	96-1	14608074	14548893	14306521	14487829	1.10	cps
Molybdenum	97-1	8192558	8200633	8195513	8196235	0.05	cps
Molybdenum	98-1	21174304	21323887	21212448	21236880	0.37	cps
Neodymium	150-1	253	287	253	264	7.28	cps
Neodymium	150-2	103	63	70	79	27.17	cps
Nickel	60-2	389624	385891	382811	386109	0.88	cps
Phosphorus	31-2	53152	52523	52038	52571	1.06	cps
Potassium	39-2	5911457	5869683	5880238	5887126	0.37	cps
Rhodium	103-1	10168503	10261175	10170626	10200101	0.52	cps
Rhodium	103-2	5997390	5937631	5978441	5971154	0.51	cps
Scandium	45-1	6199906	6252234	6114869	6189003	1.12	cps
Scandium	45-2	516520	513162	515508	515063	0.33	cps
Selenium	82-1	41880	41068	41247	41399	1.03	cps
Selenium	77-2	4817	4407	4597	4607	4.45	cps
Selenium	78-2	16062	16049	15432	15847	2.27	cps
Silicon	28-1	19597133	19390821	19071546	19353167	1.37	cps
Silver	107-1	3448552	3389924	3385004	3407827	1.04	cps
Silver	109-1	3246437	3302006	3258541	3268995	0.89	cps
Sodium	23-2	14416933	14342586	14230169	14329896	0.66	cps
Strontium	86-1	825409	818446	815944	819933	0.60	cps
Strontium	88-1	7241583	7324552	7348540	7304892	0.77	cps
Sulfur	34-1	364798	361051	356496	360782	1.15	cps
Terbium	159-1	14485235	14607717	14480973	14524641	0.50	cps
Terbium	159-2	10313849	10267695	10161662	10247735	0.76	cps
Thallium	203-1	2660492	2668996	2711329	2680272	1.02	cps
Thallium	205-1	6362944	6379687	6466231	6402954	0.87	cps
Tin	118-1	2184754	2203791	2165216	2184587	0.88	cps
Titanium	47-1	3327695	3320781	3273941	3307472	0.88	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P7
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:31:26	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	8307481	8382912	8531348	8407247	1.35	cps
Vanadium	51-2	884855	876111	874581	878516	0.63	cps
Yttrium	89-1	16936425	16830804	17031465	16932898	0.59	cps
Yttrium	89-2	4653373	4640658	4620019	4638017	0.36	cps
Zinc	66-2	1950489	1939385	1910359	1933411	1.07	cps
Zirconium	90-1	4592192	4511355	4557302	4553616	0.89	cps
Zirconium	91-1	1006894	995791	1001039	1001241	0.55	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P7
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:34:14	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1943112	1951514	1966507	1953711	0.61	cps
Antimony	121-1	5196952	5163744	5213364	5191353	0.49	cps
Arsenic	75-2	255804	257724	256980	256836	0.38	cps
Barium	135-1	6753278	6782519	6754126	6763308	0.25	cps
Barium	137-1	11623466	11669824	11733150	11675480	0.47	cps
Beryllium	9-1	643450	645017	642555	643674	0.19	cps
Bismuth	209-1	8579435	8723953	8734443	8679277	1.00	cps
Bismuth	209-2	7356168	7384118	7490905	7410397	0.96	cps
Bromine	81-1	13359	12492	12749	12867	3.46	cps
Bromine	81-2	137	97	120	118	17.06	cps
Cadmium	108-1	98853	99119	99696	99223	0.43	cps
Cadmium	106-1	162841	161604	161199	161881	0.53	cps
Cadmium	111-1	1220865	1225550	1219267	1221894	0.27	cps
Calcium	43-1	1306097	1326260	1311966	1314774	0.79	cps
Calcium	44-1	21473708	21551555	21344100	21456454	0.49	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1893746	1877255	1885416	1885472	0.44	cps
Cobalt	59-2	2918570	2944670	2971180	2944807	0.89	cps
Copper	63-2	21196470	21046083	21236476	21159676	0.47	cps
Dysprosium	156-1	300	313	267	293	8.20	cps
Dysprosium	156-2	470	457	487	471	3.19	cps
Erbium	164-1	193	130	207	177	23.19	cps
Erbium	164-2	127	120	140	129	7.90	cps
Gadolinium	160-1	170	177	197	181	7.66	cps
Gadolinium	160-2	737	730	720	729	1.15	cps
Holmium	165-1	13907602	14079646	14213373	14066873	1.09	cps
Holmium	165-2	10222381	10308622	10294153	10275052	0.45	cps
Indium	115-1	10585195	10736056	10667930	10663060	0.71	cps
Indium	115-2	4125919	4135062	4125854	4128945	0.13	cps
Iron	56-2	88654632	88703205	88485779	88614539	0.13	cps
Iron	57-2	2233688	2229748	2261934	2241790	0.78	cps
Iron	54-2	4945792	4914392	4940422	4933535	0.34	cps
Krypton	83-1	237	230	173	213	16.31	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P7
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:34:14	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	21011618	21214826	21434892	21220446	1.00	cps
Lead	207-1	18870815	18964085	19215815	19016905	0.94	cps
Lead	208-1	86037284	85794844	86842823	86224984	0.64	cps
Lithium	6-1	1611878	1607025	1632953	1617285	0.85	cps
Magnesium	24-2	15504404	15510376	15679389	15564723	0.64	cps
Manganese	55-2	15224725	15169131	15253899	15215918	0.28	cps
Molybdenum	94-1	17991333	17806986	17595835	17798051	1.11	cps
Molybdenum	95-1	25680770	25454965	25246140	25460625	0.85	cps
Molybdenum	96-1	28455091	27920521	27890255	28088622	1.13	cps
Molybdenum	97-1	16062359	15761904	15934312	15919525	0.95	cps
Molybdenum	98-1	41306544	41094139	41186021	41195568	0.26	cps
Neodymium	150-1	493	527	477	499	5.10	cps
Neodymium	150-2	160	137	133	143	10.13	cps
Nickel	60-2	723029	720058	723548	722212	0.26	cps
Phosphorus	31-2	95743	96407	96834	96328	0.57	cps
Potassium	39-2	11037037	11091889	11049737	11059554	0.26	cps
Rhodium	103-1	9668558	9812304	9875817	9785560	1.09	cps
Rhodium	103-2	5718670	5737619	5767077	5741122	0.42	cps
Scandium	45-1	5868643	5982072	5870465	5907060	1.10	cps
Scandium	45-2	489498	489124	490225	489615	0.11	cps
Selenium	82-1	78841	78405	77938	78395	0.58	cps
Selenium	77-2	8359	8579	8809	8583	2.62	cps
Selenium	78-2	28795	29149	29272	29072	0.85	cps
Silicon	28-1	35195638	34908348	34833181	34979056	0.55	cps
Silver	107-1	6564846	6436073	6505425	6502115	0.99	cps
Silver	109-1	6209908	6222364	6204993	6212422	0.14	cps
Sodium	23-2	26918422	27043834	27251169	27071142	0.62	cps
Strontium	86-1	1618356	1624911	1599593	1614287	0.81	cps
Strontium	88-1	14135538	14114569	14094623	14114910	0.14	cps
Sulfur	34-1	517244	516639	508123	514002	0.99	cps
Terbium	159-1	14214621	14418934	14407273	14346942	0.80	cps
Terbium	159-2	10051929	10105087	10126887	10094634	0.38	cps
Thallium	203-1	5315383	5410190	5420622	5382065	1.08	cps
Thallium	205-1	12755832	13038892	13077512	12957412	1.36	cps
Tin	118-1	4258780	4292597	4277022	4276133	0.40	cps
Titanium	47-1	6342078	6358074	6198557	6299570	1.39	cps

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On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P7
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:34:14	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	17122316	17024311	17120898	17089175	0.33	cps
Vanadium	51-2	1663870	1687820	1671105	1674265	0.73	cps
Yttrium	89-1	16261229	16347857	16375228	16328105	0.36	cps
Yttrium	89-2	4473236	4470041	4516534	4486604	0.58	cps
Zinc	66-2	3667015	3633278	3635360	3645218	0.52	cps
Zirconium	90-1	8845591	8873554	8743749	8820965	0.77	cps
Zirconium	91-1	1959407	1964606	1960946	1961653	0.14	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P7
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:36:58	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3866109	3888661	3875342	3876704	0.29	cps
Antimony	121-1	10219850	10274716	10414306	10302957	0.97	cps
Arsenic	75-2	513850	511176	512683	512570	0.26	cps
Barium	135-1	13401148	13353021	13529256	13427808	0.68	cps
Barium	137-1	23392343	23150090	23472657	23338364	0.72	cps
Beryllium	9-1	1307316	1281170	1271665	1286717	1.43	cps
Bismuth	209-1	8540766	8659915	8629946	8610209	0.72	cps
Bismuth	209-2	7186009	7256458	7271380	7237949	0.63	cps
Bromine	81-1	12315	12702	12612	12543	1.61	cps
Bromine	81-2	70	93	103	89	19.24	cps
Cadmium	108-1	190817	195521	193020	193119	1.22	cps
Cadmium	106-1	294358	293263	295208	294277	0.33	cps
Cadmium	111-1	2445348	2447148	2490045	2460847	1.03	cps
Calcium	43-1	2583905	2624915	2606139	2604986	0.79	cps
Calcium	44-1	42341516	42707200	42424021	42490912	0.45	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3742573	3803056	3774237	3773289	0.80	cps
Cobalt	59-2	5715235	5781980	5859603	5785606	1.25	cps
Copper	63-2	41713004	41673209	41742449	41709554	0.08	cps
Dysprosium	156-1	587	590	560	579	2.84	cps
Dysprosium	156-2	1000	863	920	928	7.40	cps
Erbium	164-1	220	263	247	243	8.98	cps
Erbium	164-2	147	223	187	186	20.67	cps
Gadolinium	160-1	240	273	277	263	7.70	cps
Gadolinium	160-2	860	673	813	782	12.42	cps
Holmium	165-1	13931030	14209064	14044761	14061618	0.99	cps
Holmium	165-2	10228290	10167518	10272040	10222616	0.51	cps
Indium	115-1	10386666	10368229	10488636	10414510	0.62	cps
Indium	115-2	4027064	4061666	4095224	4061318	0.84	cps
Iron	56-2	176133784	176454624	177481397	176689935	0.40	cps
Iron	57-2	4417879	4450295	4479859	4449344	0.70	cps
Iron	54-2	9725108	9657425	9767065	9716533	0.57	cps
Krypton	83-1	190	187	150	176	12.64	cps

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On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P7
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:36:58	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	42124920	42514062	42176684	42271889	0.50	cps
Lead	207-1	37519068	38261543	37599984	37793531	1.08	cps
Lead	208-1	170523003	173322980	171894790	171913591	0.81	cps
Lithium	6-1	1624082	1608129	1592347	1608186	0.99	cps
Magnesium	24-2	31044635	30986009	31341652	31124098	0.61	cps
Manganese	55-2	30339378	29935459	30655448	30310095	1.19	cps
Molybdenum	94-1	35379590	35374708	35879289	35544529	0.82	cps
Molybdenum	95-1	50550041	50833766	50962064	50781957	0.42	cps
Molybdenum	96-1	55910283	55863821	56319059	56031054	0.45	cps
Molybdenum	97-1	31684859	31807440	31999857	31830718	0.50	cps
Molybdenum	98-1	82232530	81529890	82697542	82153321	0.72	cps
Neodymium	150-1	907	930	907	914	1.47	cps
Neodymium	150-2	287	273	297	286	4.10	cps
Nickel	60-2	1412824	1419245	1418997	1417022	0.26	cps
Phosphorus	31-2	191582	191971	192233	191929	0.17	cps
Potassium	39-2	22113728	21930803	22210176	22084902	0.64	cps
Rhodium	103-1	9400751	9541409	9562446	9501535	0.93	cps
Rhodium	103-2	5606610	5637401	5647718	5630576	0.38	cps
Scandium	45-1	5766887	5886889	5789309	5814362	1.10	cps
Scandium	45-2	488279	488504	493134	489972	0.56	cps
Selenium	82-1	149208	151584	150773	150522	0.80	cps
Selenium	77-2	16983	16770	16459	16737	1.57	cps
Selenium	78-2	56561	56568	57451	56860	0.90	cps
Silicon	28-1	53671964	53269783	53327949	53423232	0.41	cps
Silver	107-1	12573994	12658914	12657643	12630184	0.39	cps
Silver	109-1	12181850	12123120	12194342	12166437	0.31	cps
Sodium	23-2	54757221	54322014	54478141	54519125	0.40	cps
Strontium	86-1	3181714	3239135	3265790	3228880	1.33	cps
Strontium	88-1	27802164	27965065	28157895	27975041	0.64	cps
Sulfur	34-1	853921	855747	853428	854365	0.14	cps
Terbium	159-1	14048970	14230919	14134424	14138104	0.64	cps
Terbium	159-2	10099848	10077841	10263602	10147097	1.00	cps
Thallium	203-1	10676951	10762929	10773320	10737734	0.49	cps
Thallium	205-1	25546721	26086984	25837599	25823768	1.05	cps
Tin	118-1	8398869	8503372	8538613	8480285	0.86	cps
Titanium	47-1	12440637	12593779	12571634	12535350	0.66	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P7
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:36:58	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	34476951	34648390	34711815	34612386	0.35	cps
Vanadium	51-2	3410956	3364465	3364715	3380045	0.79	cps
Yttrium	89-1	16115847	16272053	16214686	16200862	0.49	cps
Yttrium	89-2	4437258	4459314	4493337	4463303	0.63	cps
Zinc	66-2	7119858	7170816	7134258	7141644	0.37	cps
Zirconium	90-1	17560910	17522886	17616130	17566642	0.27	cps
Zirconium	91-1	3864159	3896623	3941589	3900791	1.00	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P7
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:39:44	DataFile Name :	012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	21283940	21021766	21178318	21161341	0.62	cps
Antimony	121-1	7886	7802	7589	7759	1.97	cps
Arsenic	75-2	337	363	350	350	3.81	cps
Barium	135-1	5284	5354	4958	5199	4.07	cps
Barium	137-1	9513	9073	9283	9290	2.37	cps
Beryllium	9-1	317	293	257	289	10.47	cps
Bismuth	209-1	7059576	7219225	7211441	7163414	1.26	cps
Bismuth	209-2	6464603	6411157	6433301	6436354	0.42	cps
Bromine	81-1	12115	12419	12392	12309	1.37	cps
Bromine	81-2	73	163	143	127	37.31	cps
Cadmium	108-1	130	143	167	147	12.65	cps
Cadmium	106-1	22584	22030	22234	22283	1.26	cps
Cadmium	111-1	2687	2519	2547	2585	3.49	cps
Calcium	43-1	13170786	13237110	13119550	13175815	0.45	cps
Calcium	44-1	217953310	214625790	214920690	215833263	0.85	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	9797	8463	8062	8774	10.35	cps
Cobalt	59-2	17847	17243	17290	17460	1.92	cps
Copper	63-2	11805	11521	11565	11630	1.31	cps
Dysprosium	156-1	373	427	303	368	16.82	cps
Dysprosium	156-2	350	350	313	338	6.27	cps
Erbium	164-1	460	447	557	488	12.31	cps
Erbium	164-2	320	347	370	346	7.24	cps
Gadolinium	160-1	450	360	410	407	11.09	cps
Gadolinium	160-2	897	947	960	934	3.57	cps
Holmium	165-1	12957254	12845106	12924199	12908853	0.45	cps
Holmium	165-2	9829493	9841998	9950390	9873960	0.67	cps
Indium	115-1	9885449	9812347	9831407	9843068	0.39	cps
Indium	115-2	4018604	4013186	4044198	4025330	0.41	cps
Iron	56-2	893859453	894347533	884548467	890918485	0.62	cps
Iron	57-2	22422356	22549689	22479368	22483804	0.28	cps
Iron	54-2	48832359	48856119	48429869	48706116	0.49	cps
Krypton	83-1	630	430	367	476	28.90	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P7
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:39:44	DataFile Name :	012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	11085	10811	10891	10929	1.29	cps
Lead	207-1	9774	9160	9487	9473	3.24	cps
Lead	208-1	44853	43010	44008	43957	2.10	cps
Lithium	6-1	1718226	1685794	1614407	1672809	3.18	cps
Magnesium	24-2	167129724	167168641	166503091	166933819	0.22	cps
Manganese	55-2	15511	15668	15475	15551	0.66	cps
Molybdenum	94-1	8643	8279	8246	8389	2.62	cps
Molybdenum	95-1	7976	7709	7645	7777	2.25	cps
Molybdenum	96-1	17564	17304	16696	17188	2.59	cps
Molybdenum	97-1	5048	4534	4581	4721	6.01	cps
Molybdenum	98-1	12112	10837	11161	11370	5.83	cps
Neodymium	150-1	243	213	150	202	23.56	cps
Neodymium	150-2	120	140	123	128	8.39	cps
Nickel	60-2	8322	7925	8072	8107	2.48	cps
Phosphorus	31-2	477	500	493	490	2.45	cps
Potassium	39-2	121031015	120749448	120040578	120607014	0.42	cps
Rhodium	103-1	8696811	8700758	8773991	8723854	0.50	cps
Rhodium	103-2	5326013	5278150	5365156	5323106	0.82	cps
Scandium	45-1	6135581	6121763	6008390	6088578	1.15	cps
Scandium	45-2	524583	522811	516262	521218	0.84	cps
Selenium	82-1	529	460	467	485	7.87	cps
Selenium	77-2	0	3	3	2	86.60	cps
Selenium	78-2	373	393	353	373	5.36	cps
Silicon	28-1	1371425	1317553	1238409	1309129	5.11	cps
Silver	107-1	2660	2547	2294	2500	7.51	cps
Silver	109-1	2494	2204	2057	2251	9.87	cps
Sodium	23-2	286421109	283973882	284925276	285106756	0.43	cps
Strontium	86-1	9990	9953	9526	9823	2.62	cps
Strontium	88-1	81011	81296	78970	80426	1.58	cps
Sulfur	34-1	155006	157138	159522	157222	1.44	cps
Terbium	159-1	13159072	13156030	13133178	13149427	0.11	cps
Terbium	159-2	9734504	9714788	9728964	9726085	0.10	cps
Thallium	203-1	1787	1670	1600	1686	5.59	cps
Thallium	205-1	4284	3794	3654	3911	8.46	cps
Tin	118-1	2724	2604	2620	2649	2.45	cps
Titanium	47-1	1723	1607	1727	1686	4.05	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P7
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 13:39:44	DataFile Name :	012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	2644	2294	2357	2431	7.67	cps
Vanadium	51-2	797	853	730	793	7.78	cps
Yttrium	89-1	15958109	15848022	15737364	15847832	0.70	cps
Yttrium	89-2	4544802	4479023	4513339	4512388	0.73	cps
Zinc	66-2	10217	10867	10641	10575	3.12	cps
Zirconium	90-1	10861	10547	10404	10604	2.20	cps
Zirconium	91-1	2390	2284	2367	2347	2.39	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P7
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:05:23	DataFile Name :	016ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	108308	108463	108533	108435	0.11	cps
Antimony	121-1	2208689	2213754	2259829	2227424	1.27	cps
Arsenic	75-2	120776	121287	120628	120897	0.29	cps
Barium	135-1	276803	281678	279847	279443	0.88	cps
Barium	137-1	481656	488602	485804	485354	0.72	cps
Beryllium	9-1	140838	143781	143421	142680	1.13	cps
Bismuth	209-1	9311434	9043979	9034760	9130058	1.72	cps
Bismuth	209-2	7746497	7782647	7741481	7756875	0.29	cps
Bromine	81-1	14130	14414	13920	14155	1.75	cps
Bromine	81-2	140	140	143	141	1.37	cps
Cadmium	108-1	18896	19346	18939	19060	1.30	cps
Cadmium	106-1	50156	50695	50698	50516	0.62	cps
Cadmium	111-1	266152	274389	273136	271225	1.64	cps
Calcium	43-1	58248	59934	59546	59243	1.49	cps
Calcium	44-1	957018	977375	971669	968687	1.08	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	450285	452689	445150	449375	0.86	cps
Cobalt	59-2	694126	692436	688387	691650	0.43	cps
Copper	63-2	479501	478472	476307	478093	0.34	cps
Dysprosium	156-1	13	20	27	20	33.35	cps
Dysprosium	156-2	43	27	30	33	26.45	cps
Erbium	164-1	87	73	77	79	8.80	cps
Erbium	164-2	77	27	53	52	47.91	cps
Gadolinium	160-1	103	107	117	109	6.37	cps
Gadolinium	160-2	720	767	700	729	4.69	cps
Holmium	165-1	14897143	14528923	14295591	14573886	2.08	cps
Holmium	165-2	10468580	10516562	10574704	10519948	0.51	cps
Indium	115-1	11997330	11568934	11551198	11705821	2.16	cps
Indium	115-2	4643853	4538275	4520023	4567384	1.46	cps
Iron	56-2	8205561	8221033	8098391	8174995	0.82	cps
Iron	57-2	210749	210946	209194	210296	0.46	cps
Iron	54-2	471177	472392	468964	470845	0.37	cps
Krypton	83-1	170	207	163	180	12.96	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P7
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:05:23	DataFile Name :	016ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1692908	1725893	1721578	1713460	1.05	cps
Lead	207-1	1417399	1456105	1441463	1438322	1.36	cps
Lead	208-1	6840205	6950374	6971941	6920840	1.02	cps
Lithium	6-1	1746028	1689866	1644803	1693566	2.99	cps
Magnesium	24-2	424820	421692	423447	423320	0.37	cps
Manganese	55-2	351917	351043	349277	350746	0.38	cps
Molybdenum	94-1	677	523	600	600	12.78	cps
Molybdenum	95-1	453	577	590	540	13.95	cps
Molybdenum	96-1	703	760	810	758	7.04	cps
Molybdenum	97-1	347	353	337	346	2.43	cps
Molybdenum	98-1	873	880	927	893	3.25	cps
Neodymium	150-1	17	17	13	16	12.40	cps
Neodymium	150-2	7	7	10	8	24.71	cps
Nickel	60-2	177432	177409	178930	177924	0.49	cps
Phosphorus	31-2	290	390	287	322	18.22	cps
Potassium	39-2	1085840	1086887	1084830	1085852	0.09	cps
Rhodium	103-1	11180902	10878532	10891304	10983579	1.56	cps
Rhodium	103-2	6473210	6379643	6384029	6412294	0.82	cps
Scandium	45-1	6815288	6550900	6423275	6596488	3.03	cps
Scandium	45-2	557066	560368	560526	559320	0.35	cps
Selenium	82-1	35663	36207	36753	36208	1.50	cps
Selenium	77-2	4027	4144	4277	4150	3.02	cps
Selenium	78-2	14504	14641	14150	14432	1.75	cps
Silicon	28-1	1328941	1307708	1305177	1313942	0.99	cps
Silver	107-1	658033	675836	672136	668668	1.40	cps
Silver	109-1	626075	642578	641689	636781	1.46	cps
Sodium	23-2	1246457	1245643	1232975	1241692	0.61	cps
Strontium	86-1	1093	1130	1143	1122	2.31	cps
Strontium	88-1	7632	7439	7939	7670	3.29	cps
Sulfur	34-1	181980	181807	181962	181916	0.05	cps
Terbium	159-1	15205070	14795825	14699724	14900206	1.80	cps
Terbium	159-2	10528639	10505957	10541708	10525435	0.17	cps
Thallium	203-1	2226071	2262367	2207889	2232109	1.24	cps
Thallium	205-1	5245246	5394760	5319091	5319699	1.41	cps
Tin	118-1	1267	1143	1337	1249	7.84	cps
Titanium	47-1	127	133	1264	508	128.88	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P7
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:05:23	DataFile Name :	016ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	53	60	37	50	24.03	cps
Vanadium	51-2	383625	384811	381491	383309	0.44	cps
Yttrium	89-1	18421472	17709824	17649425	17926907	2.40	cps
Yttrium	89-2	4964220	4895083	4996905	4952069	1.05	cps
Zinc	66-2	167875	164828	165553	166085	0.96	cps
Zirconium	90-1	1073	1173	1150	1132	4.62	cps
Zirconium	91-1	353	473	353	393	17.62	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	LLICV01	Instrumnet Name :	P7
Client Sample ID :	LLICV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:09:29	DataFile Name :	017LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4761	4457	4414	4544	4.16	cps
Antimony	121-1	23723	23666	23195	23528	1.23	cps
Arsenic	75-2	643	690	723	686	5.86	cps
Barium	135-1	29026	28044	28499	28523	1.72	cps
Barium	137-1	49161	49757	49763	49560	0.70	cps
Beryllium	9-1	1537	1597	1583	1572	2.00	cps
Bismuth	209-1	8972677	8837462	8777024	8862388	1.13	cps
Bismuth	209-2	7876593	7708661	7721918	7769057	1.20	cps
Bromine	81-1	13520	13840	13726	13695	1.19	cps
Bromine	81-2	123	130	110	121	8.41	cps
Cadmium	108-1	320	307	293	307	4.35	cps
Cadmium	106-1	24915	24474	24334	24574	1.23	cps
Cadmium	111-1	5388	5376	5112	5292	2.95	cps
Calcium	43-1	16192	16082	16336	16203	0.78	cps
Calcium	44-1	265069	268671	267462	267067	0.69	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	12388	12502	12242	12377	1.05	cps
Cobalt	59-2	7779	7775	7288	7614	3.70	cps
Copper	63-2	12869	12892	12158	12640	3.30	cps
Dysprosium	156-1	13	20	10	14	35.26	cps
Dysprosium	156-2	0	7	10	6	91.64	cps
Erbium	164-1	73	67	73	71	5.41	cps
Erbium	164-2	83	73	53	70	21.82	cps
Gadolinium	160-1	133	77	140	117	29.83	cps
Gadolinium	160-2	650	723	697	690	5.38	cps
Holmium	165-1	14368584	14138550	14078406	14195180	1.08	cps
Holmium	165-2	10691331	10584769	10599790	10625297	0.54	cps
Indium	115-1	11413549	11435362	11440277	11429730	0.12	cps
Indium	115-2	4612682	4577910	4622009	4604200	0.50	cps
Iron	56-2	245041	243415	241162	243206	0.80	cps
Iron	57-2	7629	7299	7669	7532	2.70	cps
Iron	54-2	15134	14861	14477	14824	2.23	cps
Krypton	83-1	157	200	173	177	12.37	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	LLICV01	Instrumnet Name :	P7
Client Sample ID :	LLICV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:09:29	DataFile Name :	017LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	9377	8946	9177	9167	2.35	cps
Lead	207-1	8223	8226	7892	8114	2.36	cps
Lead	208-1	37130	37334	36533	36999	1.13	cps
Lithium	6-1	1616764	1671866	1644610	1644413	1.68	cps
Magnesium	24-2	196852	196885	197527	197088	0.19	cps
Manganese	55-2	4097	4254	4034	4128	2.74	cps
Molybdenum	94-1	23870	23559	23666	23698	0.67	cps
Molybdenum	95-1	28267	28665	28428	28453	0.70	cps
Molybdenum	96-1	31514	32586	32239	32113	1.70	cps
Molybdenum	97-1	17781	17981	17741	17834	0.72	cps
Molybdenum	98-1	45280	45815	45601	45565	0.59	cps
Neodymium	150-1	7	13	3	8	65.47	cps
Neodymium	150-2	7	3	7	6	34.70	cps
Nickel	60-2	2717	2644	2770	2710	2.35	cps
Phosphorus	31-2	760	700	677	712	6.04	cps
Potassium	39-2	332093	329066	328283	329814	0.61	cps
Rhodium	103-1	10804422	10691063	10715644	10737043	0.56	cps
Rhodium	103-2	6492211	6414943	6566725	6491293	1.17	cps
Scandium	45-1	6439587	6490220	6524456	6484754	0.66	cps
Scandium	45-2	566659	562017	566858	565178	0.48	cps
Selenium	82-1	1338	1264	1296	1300	2.86	cps
Selenium	77-2	93	93	100	96	4.03	cps
Selenium	78-2	693	827	827	782	9.84	cps
Silicon	28-1	1353324	1346677	1368930	1356310	0.84	cps
Silver	107-1	14671	14224	14514	14470	1.57	cps
Silver	109-1	13800	13763	13303	13622	2.03	cps
Sodium	23-2	344984	342223	338377	341861	0.97	cps
Strontium	86-1	3897	3967	3894	3919	1.06	cps
Strontium	88-1	31534	32098	31076	31569	1.62	cps
Sulfur	34-1	183999	183359	183423	183594	0.19	cps
Terbium	159-1	14731120	14608093	14394692	14577968	1.17	cps
Terbium	159-2	10509524	10480063	10345282	10444956	0.84	cps
Thallium	203-1	11338	11305	11215	11286	0.57	cps
Thallium	205-1	26733	27194	26573	26833	1.20	cps
Tin	118-1	48327	48388	48127	48281	0.28	cps
Titanium	47-1	7255	7739	7312	7435	3.56	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	LLICV01	Instrumnet Name :	P7
Client Sample ID :	LLICV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:09:29	DataFile Name :	017LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	32049	31621	31524	31731	0.88	cps
Vanadium	51-2	20801	20474	20197	20491	1.48	cps
Yttrium	89-1	17626195	17503473	17438754	17522808	0.54	cps
Yttrium	89-2	5043871	4994672	4995291	5011278	0.56	cps
Zinc	66-2	4737	4591	4651	4660	1.58	cps
Zirconium	90-1	19860	20144	19970	19991	0.72	cps
Zirconium	91-1	4374	4284	4344	4334	1.06	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P7
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:24:39	DataFile Name :	021CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	137	97	87	107	24.80	cps
Antimony	121-1	107	150	137	131	16.93	cps
Arsenic	75-2	10	13	3	9	57.30	cps
Barium	135-1	67	50	17	44	57.28	cps
Barium	137-1	90	87	43	73	35.50	cps
Beryllium	9-1	87	67	63	72	17.48	cps
Bismuth	209-1	8847889	8837691	8812550	8832710	0.21	cps
Bismuth	209-2	7667911	7848226	7762813	7759650	1.16	cps
Bromine	81-1	14220	14477	14240	14313	1.00	cps
Bromine	81-2	110	90	97	99	10.30	cps
Cadmium	108-1	67	73	50	63	18.98	cps
Cadmium	106-1	24962	24531	24821	24771	0.89	cps
Cadmium	111-1	2479	2428	2484	2464	1.25	cps
Calcium	43-1	450	490	527	489	7.84	cps
Calcium	44-1	11544	11318	11238	11367	1.40	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3190	3334	3250	3258	2.21	cps
Cobalt	59-2	207	207	217	210	2.75	cps
Copper	63-2	2660	2710	2877	2749	4.13	cps
Dysprosium	156-1	10	13	3	9	57.30	cps
Dysprosium	156-2	0	0	13	4	173.21	cps
Erbium	164-1	60	60	60	60	0.00	cps
Erbium	164-2	53	73	57	61	17.53	cps
Gadolinium	160-1	120	80	90	97	21.53	cps
Gadolinium	160-2	777	633	823	744	13.30	cps
Holmium	165-1	14395367	14327961	14427850	14383726	0.35	cps
Holmium	165-2	10546604	10620588	10606386	10591193	0.37	cps
Indium	115-1	11630439	11424456	11568424	11541106	0.92	cps
Indium	115-2	4674826	4728708	4626236	4676590	1.10	cps
Iron	56-2	24336	24433	24583	24451	0.51	cps
Iron	57-2	1603	1613	1630	1616	0.83	cps
Iron	54-2	2934	2987	2794	2905	3.44	cps
Krypton	83-1	247	180	187	204	17.96	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P7
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:24:39	DataFile Name :	021CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	467	483	463	471	2.27	cps
Lead	207-1	477	410	417	434	8.45	cps
Lead	208-1	1910	1940	1930	1927	0.79	cps
Lithium	6-1	1647985	1647985	1607046	1634339	1.45	cps
Magnesium	24-2	523	490	393	469	14.40	cps
Manganese	55-2	433	360	433	409	10.35	cps
Molybdenum	94-1	413	457	460	443	5.87	cps
Molybdenum	95-1	353	463	393	403	13.81	cps
Molybdenum	96-1	520	517	503	513	1.72	cps
Molybdenum	97-1	263	240	233	246	6.42	cps
Molybdenum	98-1	653	680	700	678	3.45	cps
Neodymium	150-1	0	7	3	3	100.05	cps
Neodymium	150-2	0	0	0	0	0.00	cps
Nickel	60-2	967	940	1003	970	3.28	cps
Phosphorus	31-2	367	403	310	360	13.06	cps
Potassium	39-2	56819	57662	56956	57146	0.79	cps
Rhodium	103-1	11016628	10826932	10782332	10875297	1.14	cps
Rhodium	103-2	6647221	6652292	6576164	6625226	0.64	cps
Scandium	45-1	6606746	6642313	6665395	6638151	0.45	cps
Scandium	45-2	580650	582945	581260	581618	0.20	cps
Selenium	82-1	281	403	412	365	20.11	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	427	483	437	449	6.74	cps
Silicon	28-1	1399238	1419567	1424819	1414541	0.96	cps
Silver	107-1	247	263	237	249	5.41	cps
Silver	109-1	157	127	143	142	10.57	cps
Sodium	23-2	25895	26479	26593	26323	1.42	cps
Strontium	86-1	283	280	253	272	6.04	cps
Strontium	88-1	233	233	247	238	3.24	cps
Sulfur	34-1	191342	193198	191605	192048	0.52	cps
Terbium	159-1	14718614	14563309	14647318	14643080	0.53	cps
Terbium	159-2	10486617	10640682	10518387	10548562	0.77	cps
Thallium	203-1	300	273	220	264	15.41	cps
Thallium	205-1	700	560	613	624	11.32	cps
Tin	118-1	1143	1137	1123	1135	0.90	cps
Titanium	47-1	127	107	97	110	13.89	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P7
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:24:39	DataFile Name :	021CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	23	20	27	23	14.29	cps
Vanadium	51-2	37	30	10	26	54.31	cps
Yttrium	89-1	17892260	17570931	17759594	17740928	0.91	cps
Yttrium	89-2	5087919	5115290	5127615	5110275	0.40	cps
Zinc	66-2	327	407	310	348	14.86	cps
Zirconium	90-1	1007	913	913	944	5.71	cps
Zirconium	91-1	173	133	127	144	17.47	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P7
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:27:54	DataFile Name :	022ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	18985003	18854189	18846372	18895188	0.41	cps
Antimony	121-1	11962	12285	12099	12115	1.34	cps
Arsenic	75-2	153	163	187	168	10.19	cps
Barium	135-1	4017	3991	4124	4044	1.75	cps
Barium	137-1	6595	6688	6618	6634	0.73	cps
Beryllium	9-1	503	490	413	469	10.36	cps
Bismuth	209-1	8634046	8698792	8749739	8694192	0.67	cps
Bismuth	209-2	7533403	7409780	7508220	7483801	0.87	cps
Bromine	81-1	15208	14497	14941	14882	2.41	cps
Bromine	81-2	347	400	300	349	14.34	cps
Cadmium	108-1	2110	1957	1780	1949	8.47	cps
Cadmium	106-1	23863	23499	23309	23557	1.20	cps
Cadmium	111-1	3556	3377	3318	3417	3.63	cps
Calcium	43-1	2752809	2731898	2742016	2742241	0.38	cps
Calcium	44-1	44497903	44300933	44563449	44454095	0.31	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	83697	83432	84223	83784	0.48	cps
Cobalt	59-2	8322	8046	8389	8252	2.21	cps
Copper	63-2	35402	35398	35064	35288	0.55	cps
Dysprosium	156-1	67	57	47	57	17.65	cps
Dysprosium	156-2	13	40	47	33	52.92	cps
Erbium	164-1	83	150	97	110	32.07	cps
Erbium	164-2	80	100	107	96	14.52	cps
Gadolinium	160-1	160	147	153	153	4.35	cps
Gadolinium	160-2	750	740	790	760	3.48	cps
Holmium	165-1	14638687	14612094	14818756	14689846	0.77	cps
Holmium	165-2	10820769	10595844	10642758	10686457	1.11	cps
Indium	115-1	11122240	10949347	11030405	11033997	0.78	cps
Indium	115-2	4316991	4308660	4332007	4319219	0.27	cps
Iron	56-2	376640621	373718528	374175674	374844941	0.42	cps
Iron	57-2	9500946	9380620	9415214	9432260	0.66	cps
Iron	54-2	20707418	20499076	20439411	20548635	0.68	cps
Krypton	83-1	140	167	157	154	8.72	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P7
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:27:54	DataFile Name :	022ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	44931	42617	42660	43402	3.05	cps
Lead	207-1	36743	33949	33605	34766	4.95	cps
Lead	208-1	173092	163042	160483	165539	4.03	cps
Lithium	6-1	1683769	1628249	1632685	1648235	1.87	cps
Magnesium	24-2	32961498	32648446	32591579	32733841	0.61	cps
Manganese	55-2	26193	26166	26160	26173	0.07	cps
Molybdenum	94-1	6014382	5999266	6020209	6011286	0.18	cps
Molybdenum	95-1	10444478	10534247	10517774	10498833	0.46	cps
Molybdenum	96-1	11265049	11342481	11461172	11356234	0.87	cps
Molybdenum	97-1	6513184	6581392	6546418	6546998	0.52	cps
Molybdenum	98-1	16896337	17106019	16999329	17000562	0.62	cps
Neodymium	150-1	70	63	53	62	13.48	cps
Neodymium	150-2	27	23	30	27	12.51	cps
Nickel	60-2	8903	9376	9216	9165	2.63	cps
Phosphorus	31-2	1040406	1035692	1031700	1035933	0.42	cps
Potassium	39-2	46543408	46387234	46387693	46439445	0.19	cps
Rhodium	103-1	9945839	9916223	9856992	9906351	0.46	cps
Rhodium	103-2	5895120	5894558	5950808	5913495	0.55	cps
Scandium	45-1	6242354	6129275	6146807	6172812	0.99	cps
Scandium	45-2	514411	511280	512981	512891	0.31	cps
Selenium	82-1	419	406	395	407	2.96	cps
Selenium	77-2	7	0	3	3	100.05	cps
Selenium	78-2	353	407	337	366	10.00	cps
Silicon	28-1	1241786	1206331	1191212	1213110	2.14	cps
Silver	107-1	713	567	533	604	15.84	cps
Silver	109-1	743	490	477	570	26.36	cps
Sodium	23-2	57211639	56565647	56251261	56676182	0.86	cps
Strontium	86-1	114437	113261	114488	114062	0.61	cps
Strontium	88-1	997578	1001235	1006894	1001902	0.47	cps
Sulfur	34-1	4143396	4034149	4039037	4072194	1.52	cps
Terbium	159-1	14846636	14781292	14851443	14826457	0.26	cps
Terbium	159-2	10573779	10486767	10645789	10568778	0.75	cps
Thallium	203-1	2064	1990	2064	2039	2.08	cps
Thallium	205-1	4938	4764	4591	4764	3.64	cps
Tin	118-1	3280	3197	2647	3041	11.32	cps
Titanium	47-1	2738632	2687075	2713129	2712945	0.95	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P7
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:27:54	DataFile Name :	022ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	567	607	550	574	5.07	cps
Vanadium	51-2	780	807	787	791	1.75	cps
Yttrium	89-1	17298020	16972387	16939506	17069971	1.16	cps
Yttrium	89-2	4706094	4680320	4728085	4704833	0.51	cps
Zinc	66-2	8579	8502	8826	8636	1.96	cps
Zirconium	90-1	1027	1117	1170	1104	6.56	cps
Zirconium	91-1	163	150	187	167	11.14	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P7
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:31:33	DataFile Name :	023ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	19001549	18692298	18679728	18791192	0.97	cps
Antimony	121-1	230086	233119	232473	231893	0.69	cps
Arsenic	75-2	11378	11505	11288	11390	0.96	cps
Barium	135-1	60183	60678	61047	60636	0.71	cps
Barium	137-1	103312	105020	104873	104402	0.91	cps
Beryllium	9-1	26977	26569	26092	26546	1.67	cps
Bismuth	209-1	8887307	8799563	8995237	8894036	1.10	cps
Bismuth	209-2	7374732	7417563	7366990	7386428	0.37	cps
Bromine	81-1	15115	15625	15582	15440	1.83	cps
Bromine	81-2	293	343	380	339	12.84	cps
Cadmium	108-1	5391	5481	5331	5401	1.40	cps
Cadmium	106-1	29049	29002	28722	28924	0.61	cps
Cadmium	111-1	54547	54004	55111	54554	1.02	cps
Calcium	43-1	2735005	2770842	2774327	2760058	0.79	cps
Calcium	44-1	45138331	44984228	44737861	44953473	0.45	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	163909	163417	162299	163208	0.51	cps
Cobalt	59-2	132973	132707	132152	132611	0.32	cps
Copper	63-2	118192	118484	118380	118352	0.13	cps
Dysprosium	156-1	73	60	53	62	16.37	cps
Dysprosium	156-2	27	40	33	33	20.00	cps
Erbium	164-1	137	97	120	118	17.06	cps
Erbium	164-2	103	80	60	81	26.74	cps
Gadolinium	160-1	140	160	173	158	10.64	cps
Gadolinium	160-2	643	650	637	643	1.04	cps
Holmium	165-1	14984548	15089832	15015791	15030057	0.36	cps
Holmium	165-2	10711881	10791088	10626269	10709746	0.77	cps
Indium	115-1	11263756	11075376	11262275	11200469	0.97	cps
Indium	115-2	4310905	4328201	4350410	4329839	0.46	cps
Iron	56-2	375963368	373262021	373331794	374185728	0.41	cps
Iron	57-2	9362664	9317214	9437832	9372570	0.65	cps
Iron	54-2	20435029	20295785	20250648	20327154	0.47	cps
Krypton	83-1	187	170	157	171	8.78	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P7
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:31:33	DataFile Name :	023ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	217478	217120	216422	217007	0.25	cps
Lead	207-1	181768	181788	180846	181467	0.30	cps
Lead	208-1	844691	849344	845974	846670	0.28	cps
Lithium	6-1	1638846	1612221	1615746	1622271	0.89	cps
Magnesium	24-2	32421808	32313397	32424023	32386409	0.20	cps
Manganese	55-2	90312	90802	89380	90164	0.80	cps
Molybdenum	94-1	6048189	6101699	6101552	6083813	0.51	cps
Molybdenum	95-1	10585203	10715503	10688066	10662924	0.64	cps
Molybdenum	96-1	11358204	11583984	11621189	11521125	1.24	cps
Molybdenum	97-1	6621471	6625098	6714674	6653747	0.79	cps
Molybdenum	98-1	17051096	17385200	17279743	17238680	0.99	cps
Neodymium	150-1	57	60	50	56	9.17	cps
Neodymium	150-2	57	50	40	49	17.16	cps
Nickel	60-2	39753	40103	39385	39747	0.90	cps
Phosphorus	31-2	1038075	1032544	1031041	1033887	0.36	cps
Potassium	39-2	45961653	46403711	46088419	46151261	0.49	cps
Rhodium	103-1	10020581	10065689	10042477	10042916	0.22	cps
Rhodium	103-2	6015549	5894436	5896050	5935345	1.17	cps
Scandium	45-1	6266584	6188064	6185794	6213480	0.74	cps
Scandium	45-2	517915	517142	515574	516877	0.23	cps
Selenium	82-1	3642	3714	3693	3683	1.01	cps
Selenium	77-2	413	357	337	369	10.78	cps
Selenium	78-2	1633	1640	1663	1646	0.96	cps
Silicon	28-1	1236289	1245393	1221892	1234525	0.96	cps
Silver	107-1	255675	258133	259669	257826	0.78	cps
Silver	109-1	241353	247564	246770	245229	1.38	cps
Sodium	23-2	56166576	56032719	55869724	56023006	0.27	cps
Strontium	86-1	116241	117232	116809	116761	0.43	cps
Strontium	88-1	1021099	1028653	1032211	1027321	0.55	cps
Sulfur	34-1	4017454	4095837	4066047	4059779	0.97	cps
Terbium	159-1	15243600	15200507	15153753	15199287	0.30	cps
Terbium	159-2	10620083	10522875	10511759	10551572	0.56	cps
Thallium	203-1	218362	221522	219403	219762	0.73	cps
Thallium	205-1	522357	528596	528058	526337	0.66	cps
Tin	118-1	2414	2360	2504	2426	2.99	cps
Titanium	47-1	2726008	2696071	2713895	2711991	0.56	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P7
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:31:33	DataFile Name :	023ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	653	530	543	576	11.76	cps
Vanadium	51-2	71240	70969	71833	71347	0.62	cps
Yttrium	89-1	17315430	17274528	17293634	17294531	0.12	cps
Yttrium	89-2	4757559	4717587	4714701	4729949	0.51	cps
Zinc	66-2	24116	24240	24029	24128	0.44	cps
Zirconium	90-1	1133	1057	1087	1092	3.54	cps
Zirconium	91-1	220	187	230	212	10.69	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P7
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:34:34	DataFile Name :	024CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	10151252	10107307	10252978	10170512	0.73	cps
Antimony	121-1	5013061	5160119	5122321	5098500	1.50	cps
Arsenic	75-2	254723	252611	254473	253935	0.45	cps
Barium	135-1	6610816	6870848	6753684	6745116	1.93	cps
Barium	137-1	11343204	11852821	11690459	11628828	2.24	cps
Beryllium	9-1	581224	607359	607764	598783	2.54	cps
Bismuth	209-1	8474938	8449547	8475708	8466731	0.18	cps
Bismuth	209-2	7117100	7106944	7035268	7086437	0.63	cps
Bromine	81-1	14214	14080	13763	14019	1.65	cps
Bromine	81-2	107	167	137	137	21.95	cps
Cadmium	108-1	92130	94166	95270	93855	1.70	cps
Cadmium	106-1	151373	157483	156769	155208	2.15	cps
Cadmium	111-1	1132341	1161311	1159454	1151035	1.41	cps
Calcium	43-1	6438440	6696875	6619730	6585015	2.01	cps
Calcium	44-1	105235402	109287802	108600012	107707738	2.01	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1929325	1935152	1937287	1933922	0.21	cps
Cobalt	59-2	2892800	2883634	2916694	2897710	0.59	cps
Copper	63-2	20549953	20418070	20310878	20426300	0.59	cps
Dysprosium	156-1	443	450	423	439	3.16	cps
Dysprosium	156-2	653	570	573	599	7.88	cps
Erbium	164-1	333	350	383	356	7.16	cps
Erbium	164-2	237	263	280	260	8.41	cps
Gadolinium	160-1	337	313	317	322	3.92	cps
Gadolinium	160-2	850	793	767	803	5.30	cps
Holmium	165-1	14424572	14434579	14464318	14441156	0.14	cps
Holmium	165-2	10505734	10378602	10382663	10422333	0.69	cps
Indium	115-1	10649840	10642003	10593170	10628338	0.29	cps
Indium	115-2	4117525	4135015	4089715	4114085	0.56	cps
Iron	56-2	448924527	445730620	448201993	447619047	0.37	cps
Iron	57-2	11287924	11195001	11231817	11238247	0.42	cps
Iron	54-2	24447900	24424440	24470810	24447716	0.09	cps
Krypton	83-1	163	247	200	203	20.54	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P7
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:34:34	DataFile Name :	024CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	20236073	20893115	20993069	20707419	1.99	cps
Lead	207-1	17874094	18795950	18831000	18500348	2.93	cps
Lead	208-1	81751003	84965570	85228818	83981797	2.31	cps
Lithium	6-1	1598957	1593322	1579672	1590650	0.62	cps
Magnesium	24-2	80742892	80572197	81074425	80796505	0.32	cps
Manganese	55-2	15363755	15263912	15264547	15297405	0.38	cps
Molybdenum	94-1	17584996	18165641	18121941	17957526	1.80	cps
Molybdenum	95-1	25116495	25887758	25877074	25627109	1.73	cps
Molybdenum	96-1	27763851	28522102	28426126	28237360	1.46	cps
Molybdenum	97-1	15750334	16231993	16066396	16016241	1.53	cps
Molybdenum	98-1	40159305	42278254	41467109	41301556	2.59	cps
Neodymium	150-1	487	570	520	526	7.98	cps
Neodymium	150-2	167	217	203	196	13.24	cps
Nickel	60-2	706464	695565	701334	701121	0.78	cps
Phosphorus	31-2	99584	99467	98926	99326	0.35	cps
Potassium	39-2	57605592	57047496	57695531	57449540	0.61	cps
Rhodium	103-1	9503618	9629959	9561691	9565089	0.66	cps
Rhodium	103-2	5677509	5625331	5659420	5654087	0.47	cps
Scandium	45-1	6062877	6028501	6048162	6046513	0.29	cps
Scandium	45-2	515573	513138	512233	513648	0.34	cps
Selenium	82-1	72954	74713	73844	73837	1.19	cps
Selenium	77-2	8379	8302	8583	8421	1.72	cps
Selenium	78-2	27696	28357	28123	28059	1.20	cps
Silicon	28-1	33620920	34581687	34675771	34292793	1.70	cps
Silver	107-1	6106340	6203992	6220980	6177104	1.00	cps
Silver	109-1	5814418	5991918	5941061	5915799	1.55	cps
Sodium	23-2	137708901	137744688	137822025	137758538	0.04	cps
Strontium	86-1	1583829	1640263	1621632	1615241	1.78	cps
Strontium	88-1	13973357	14362687	14359903	14231982	1.57	cps
Sulfur	34-1	499185	506322	507434	504314	0.89	cps
Terbium	159-1	14568661	14596695	14561263	14575540	0.13	cps
Terbium	159-2	10393145	10354839	10270718	10339567	0.61	cps
Thallium	203-1	5099573	5403548	5245918	5249680	2.90	cps
Thallium	205-1	12423339	12806858	12628866	12619687	1.52	cps
Tin	118-1	4116498	4244555	4217877	4192977	1.61	cps
Titanium	47-1	6282261	6355864	6451498	6363207	1.33	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P7
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:34:34	DataFile Name :	024CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	16521541	17111173	17094788	16909167	1.99	cps
Vanadium	51-2	1708758	1710316	1722839	1713971	0.45	cps
Yttrium	89-1	16813279	16671012	16833119	16772470	0.53	cps
Yttrium	89-2	4654009	4629589	4591181	4624926	0.68	cps
Zinc	66-2	3448490	3457006	3471647	3459048	0.34	cps
Zirconium	90-1	8704311	8893434	8926782	8841509	1.36	cps
Zirconium	91-1	1930267	1985319	1983852	1966480	1.60	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P7
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:41:15	DataFile Name :	026CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	517	500	470	496	4.77	cps
Antimony	121-1	507	490	450	482	6.04	cps
Arsenic	75-2	3	23	13	13	75.02	cps
Barium	135-1	217	93	130	147	43.18	cps
Barium	137-1	320	217	223	253	22.83	cps
Beryllium	9-1	73	117	70	87	30.04	cps
Bismuth	209-1	9165084	9209976	9323589	9232883	0.88	cps
Bismuth	209-2	8030622	7852034	7989685	7957447	1.18	cps
Bromine	81-1	14007	14110	13733	13950	1.40	cps
Bromine	81-2	70	100	83	84	17.80	cps
Cadmium	108-1	47	63	57	56	15.09	cps
Cadmium	106-1	24080	23990	24147	24072	0.33	cps
Cadmium	111-1	2422	2385	2415	2407	0.82	cps
Calcium	43-1	590	577	553	573	3.24	cps
Calcium	44-1	13620	12896	12102	12872	5.90	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3167	3347	3180	3231	3.10	cps
Cobalt	59-2	193	197	173	188	6.72	cps
Copper	63-2	3677	3754	3801	3744	1.66	cps
Dysprosium	156-1	10	3	13	9	57.30	cps
Dysprosium	156-2	0	7	0	2	173.21	cps
Erbium	164-1	87	97	57	80	26.02	cps
Erbium	164-2	47	63	33	48	31.46	cps
Gadolinium	160-1	107	107	107	107	0.00	cps
Gadolinium	160-2	600	700	750	683	11.18	cps
Holmium	165-1	14679329	14727559	14629136	14678675	0.34	cps
Holmium	165-2	10721850	10594071	10582024	10632649	0.73	cps
Indium	115-1	11516997	11761376	11533264	11603879	1.18	cps
Indium	115-2	4623080	4560186	4500707	4561324	1.34	cps
Iron	56-2	35241	34797	34566	34868	0.98	cps
Iron	57-2	1540	1757	1757	1685	7.43	cps
Iron	54-2	3487	3370	3410	3423	1.73	cps
Krypton	83-1	153	157	147	152	3.35	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P7
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:41:15	DataFile Name :	026CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1160	1153	1203	1172	2.32	cps
Lead	207-1	1120	1043	1027	1063	4.68	cps
Lead	208-1	4907	4654	4564	4708	3.78	cps
Lithium	6-1	1640817	1670334	1644438	1651863	0.97	cps
Magnesium	24-2	1610	1570	1597	1592	1.28	cps
Manganese	55-2	743	737	707	729	2.68	cps
Molybdenum	94-1	1607	933	883	1141	35.42	cps
Molybdenum	95-1	2547	963	970	1493	61.09	cps
Molybdenum	96-1	2231	1127	1193	1517	40.82	cps
Molybdenum	97-1	1000	587	583	723	33.14	cps
Molybdenum	98-1	2494	1580	1507	1860	29.58	cps
Neodymium	150-1	10	13	0	8	89.21	cps
Neodymium	150-2	0	7	7	4	86.60	cps
Nickel	60-2	913	977	913	934	3.91	cps
Phosphorus	31-2	313	297	333	314	5.84	cps
Potassium	39-2	52136	51918	53096	52383	1.20	cps
Rhodium	103-1	10690835	10682326	10779665	10717609	0.50	cps
Rhodium	103-2	6492264	6399205	6388012	6426494	0.89	cps
Scandium	45-1	6309327	6393986	6308094	6337135	0.78	cps
Scandium	45-2	541096	539896	539829	540274	0.13	cps
Selenium	82-1	387	333	406	376	10.07	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	330	403	433	389	13.67	cps
Silicon	28-1	1212788	1215493	1223478	1217253	0.46	cps
Silver	107-1	373	303	340	339	10.33	cps
Silver	109-1	337	343	237	306	19.56	cps
Sodium	23-2	41369	40607	40476	40817	1.18	cps
Strontium	86-1	353	337	387	359	7.10	cps
Strontium	88-1	954	423	393	590	53.41	cps
Sulfur	34-1	164406	164535	166003	164982	0.54	cps
Terbium	159-1	14923434	15078156	14864943	14955511	0.74	cps
Terbium	159-2	10531963	10646859	10483405	10554076	0.80	cps
Thallium	203-1	947	853	910	903	5.21	cps
Thallium	205-1	2274	2064	2174	2170	4.84	cps
Tin	118-1	1383	1347	1470	1400	4.52	cps
Titanium	47-1	470	210	227	302	48.16	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P7
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:41:15	DataFile Name :	026CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	183	210	220	204	9.27	cps
Vanadium	51-2	37	33	33	34	5.60	cps
Yttrium	89-1	17367613	17911920	17370841	17550124	1.79	cps
Yttrium	89-2	4900055	4803890	4815105	4839683	1.09	cps
Zinc	66-2	383	277	320	327	16.42	cps
Zirconium	90-1	1500	913	1063	1159	26.31	cps
Zirconium	91-1	290	197	203	230	22.64	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P7
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:54:39	DataFile Name :	029LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4891	4664	4714	4756	2.50	cps
Antimony	121-1	23269	23079	23426	23258	0.75	cps
Arsenic	75-2	700	707	673	693	2.54	cps
Barium	135-1	29731	30078	29557	29789	0.89	cps
Barium	137-1	51111	52108	51265	51495	1.04	cps
Beryllium	9-1	1457	1493	1390	1447	3.62	cps
Bismuth	209-1	9269352	9217052	9193160	9226521	0.42	cps
Bismuth	209-2	7972952	7895303	7890495	7919583	0.58	cps
Bromine	81-1	15115	15228	14894	15079	1.13	cps
Bromine	81-2	153	107	150	137	19.05	cps
Cadmium	108-1	257	313	277	282	10.18	cps
Cadmium	106-1	24598	25155	24714	24822	1.18	cps
Cadmium	111-1	5454	5510	5545	5503	0.83	cps
Calcium	43-1	15968	16693	16466	16376	2.26	cps
Calcium	44-1	273537	272842	274919	273766	0.39	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	13066	12612	12562	12747	2.18	cps
Cobalt	59-2	7529	7685	7892	7702	2.37	cps
Copper	63-2	13159	12772	13062	12998	1.55	cps
Dysprosium	156-1	13	13	10	12	15.73	cps
Dysprosium	156-2	10	23	7	13	66.12	cps
Erbium	164-1	97	50	87	78	31.59	cps
Erbium	164-2	50	57	57	54	7.07	cps
Gadolinium	160-1	110	117	90	106	13.15	cps
Gadolinium	160-2	743	640	650	678	8.41	cps
Holmium	165-1	14709144	14658227	14585444	14650938	0.42	cps
Holmium	165-2	10880169	10670133	10637154	10729152	1.23	cps
Indium	115-1	11819198	11813938	11884530	11839222	0.33	cps
Indium	115-2	4702381	4703153	4715625	4707053	0.16	cps
Iron	56-2	251315	251557	249799	250891	0.38	cps
Iron	57-2	7602	7595	7482	7560	0.89	cps
Iron	54-2	15435	15712	15672	15606	0.96	cps
Krypton	83-1	150	150	227	176	25.21	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P7
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:54:39	DataFile Name :	029LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	9090	9203	9267	9187	0.97	cps
Lead	207-1	8119	8493	8549	8387	2.79	cps
Lead	208-1	37321	38105	38091	37839	1.19	cps
Lithium	6-1	1637538	1632728	1655827	1642031	0.74	cps
Magnesium	24-2	203402	200833	200107	201447	0.86	cps
Manganese	55-2	4417	4361	4291	4356	1.46	cps
Molybdenum	94-1	24260	24768	24294	24440	1.16	cps
Molybdenum	95-1	29326	29523	28965	29271	0.97	cps
Molybdenum	96-1	32383	32252	33081	32572	1.37	cps
Molybdenum	97-1	18382	18872	18375	18543	1.54	cps
Molybdenum	98-1	47477	46865	47413	47252	0.71	cps
Neodymium	150-1	23	13	7	14	58.06	cps
Neodymium	150-2	7	7	0	4	86.60	cps
Nickel	60-2	2890	2740	2817	2816	2.66	cps
Phosphorus	31-2	737	707	777	740	4.75	cps
Potassium	39-2	337667	334168	331981	334605	0.86	cps
Rhodium	103-1	11212571	11062701	11025822	11100365	0.89	cps
Rhodium	103-2	6697856	6624220	6638852	6653643	0.59	cps
Scandium	45-1	6687088	6651241	6679493	6672607	0.28	cps
Scandium	45-2	569784	570273	569464	569840	0.07	cps
Selenium	82-1	1325	1325	1199	1283	5.67	cps
Selenium	77-2	93	100	97	97	3.45	cps
Selenium	78-2	807	697	717	740	7.92	cps
Silicon	28-1	1371681	1377701	1319615	1356333	2.35	cps
Silver	107-1	14320	14761	14517	14533	1.52	cps
Silver	109-1	13680	14204	14137	14007	2.04	cps
Sodium	23-2	347614	348640	346237	347497	0.35	cps
Strontium	86-1	4094	3857	4151	4034	3.86	cps
Strontium	88-1	33792	33381	32509	33228	1.97	cps
Sulfur	34-1	184540	181426	183423	183130	0.86	cps
Terbium	159-1	15226870	15243619	15088051	15186180	0.56	cps
Terbium	159-2	10811477	10592819	10453456	10619251	1.70	cps
Thallium	203-1	11655	11652	11605	11637	0.24	cps
Thallium	205-1	27167	27805	27581	27518	1.18	cps
Tin	118-1	49572	50314	49164	49683	1.17	cps
Titanium	47-1	7665	7522	7865	7684	2.25	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P7
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:54:39	DataFile Name :	029LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	32680	32978	32373	32677	0.93	cps
Vanadium	51-2	20521	20654	20150	20442	1.28	cps
Yttrium	89-1	18061817	18041553	17716834	17940068	1.08	cps
Yttrium	89-2	5063825	5036454	5059407	5053229	0.29	cps
Zinc	66-2	4541	4928	4824	4764	4.20	cps
Zirconium	90-1	20705	21189	21129	21007	1.26	cps
Zirconium	91-1	4517	4908	4457	4627	5.28	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	PB165957BL	Instrumnet Name :	P7
Client Sample ID :	PB165957BL	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:58:02	DataFile Name :	030CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	177	170	190	179	5.69	cps
Antimony	121-1	113	93	90	99	12.77	cps
Arsenic	75-2	3	0	0	1	173.21	cps
Barium	135-1	30	47	17	31	48.31	cps
Barium	137-1	57	83	93	78	24.37	cps
Beryllium	9-1	67	63	63	64	2.99	cps
Bismuth	209-1	9155615	9222629	9007600	9128615	1.21	cps
Bismuth	209-2	7846311	7857633	7872576	7858840	0.17	cps
Bromine	81-1	14697	14727	14521	14648	0.76	cps
Bromine	81-2	133	137	70	113	33.15	cps
Cadmium	108-1	57	47	60	54	12.74	cps
Cadmium	106-1	24921	24988	24701	24870	0.60	cps
Cadmium	111-1	2476	2479	2448	2468	0.70	cps
Calcium	43-1	420	443	463	442	4.90	cps
Calcium	44-1	10043	9957	9743	9914	1.56	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2884	3060	3027	2990	3.14	cps
Cobalt	59-2	210	200	207	206	2.48	cps
Copper	63-2	2587	2637	2584	2602	1.15	cps
Dysprosium	156-1	10	30	10	17	69.28	cps
Dysprosium	156-2	3	3	0	2	86.60	cps
Erbium	164-1	97	110	63	90	26.71	cps
Erbium	164-2	67	53	73	64	15.80	cps
Gadolinium	160-1	117	120	97	111	11.36	cps
Gadolinium	160-2	693	590	680	654	8.59	cps
Holmium	165-1	14599094	14699498	14813629	14704073	0.73	cps
Holmium	165-2	10755668	10788304	10724863	10756278	0.29	cps
Indium	115-1	11723267	11801029	11826524	11783607	0.46	cps
Indium	115-2	4700804	4636016	4564661	4633827	1.47	cps
Iron	56-2	23712	23455	23762	23643	0.70	cps
Iron	57-2	1640	1580	1533	1585	3.38	cps
Iron	54-2	2794	3054	2904	2917	4.48	cps
Krypton	83-1	193	187	200	193	3.45	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	PB165957BL	Instrumnet Name :	P7
Client Sample ID :	PB165957BL	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:58:02	DataFile Name :	030CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	553	517	483	518	6.76	cps
Lead	207-1	493	460	453	469	4.57	cps
Lead	208-1	2180	2143	2067	2130	2.71	cps
Lithium	6-1	1625089	1612018	1601647	1612918	0.73	cps
Magnesium	24-2	563	533	633	577	8.90	cps
Manganese	55-2	283	377	317	326	14.53	cps
Molybdenum	94-1	520	417	430	456	12.34	cps
Molybdenum	95-1	357	397	520	424	20.06	cps
Molybdenum	96-1	503	480	540	508	5.96	cps
Molybdenum	97-1	323	250	250	274	15.43	cps
Molybdenum	98-1	713	730	740	728	1.85	cps
Neodymium	150-1	7	10	7	8	24.71	cps
Neodymium	150-2	17	3	7	9	78.08	cps
Nickel	60-2	957	940	930	942	1.43	cps
Phosphorus	31-2	350	283	337	323	10.91	cps
Potassium	39-2	55129	56076	55213	55473	0.94	cps
Rhodium	103-1	11016716	11038559	11051349	11035542	0.16	cps
Rhodium	103-2	6688786	6716454	6547074	6650771	1.37	cps
Scandium	45-1	6587505	6699196	6644570	6643757	0.84	cps
Scandium	45-2	568138	569777	569577	569164	0.16	cps
Selenium	82-1	470	347	384	400	15.76	cps
Selenium	77-2	0	7	0	2	173.21	cps
Selenium	78-2	460	417	390	422	8.37	cps
Silicon	28-1	1323562	1335235	1340327	1333041	0.64	cps
Silver	107-1	207	217	203	209	3.32	cps
Silver	109-1	153	97	100	117	27.26	cps
Sodium	23-2	27859	28840	28607	28435	1.80	cps
Strontium	86-1	313	300	390	334	14.52	cps
Strontium	88-1	113	187	157	152	24.22	cps
Sulfur	34-1	183608	184809	185683	184700	0.56	cps
Terbium	159-1	15165769	15183589	15129831	15159730	0.18	cps
Terbium	159-2	10597870	10631444	10703190	10644168	0.51	cps
Thallium	203-1	503	553	517	524	4.94	cps
Thallium	205-1	1273	1150	1147	1190	6.07	cps
Tin	118-1	973	827	947	916	8.53	cps
Titanium	47-1	87	113	43	81	43.56	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	PB165957BL	Instrumnet Name :	P7
Client Sample ID :	PB165957BL	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 14:58:02	DataFile Name :	030CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	27	27	60	38	50.93	cps
Vanadium	51-2	40	20	17	26	49.38	cps
Yttrium	89-1	17887679	17923087	17803512	17871426	0.34	cps
Yttrium	89-2	5098287	5078953	5095043	5090761	0.20	cps
Zinc	66-2	240	260	267	256	5.43	cps
Zirconium	90-1	930	960	883	924	4.18	cps
Zirconium	91-1	110	123	140	124	12.08	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	PB165957BS	Instrumnet Name :	P7
Client Sample ID :	PB165957BS	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:01:16	DataFile Name :	031LCS6.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2019835	2024261	2021810	2021969	0.11	cps
Antimony	121-1	5332497	5392756	5467332	5397528	1.25	cps
Arsenic	75-2	264827	264432	263706	264322	0.21	cps
Barium	135-1	7058323	7069083	7062505	7063304	0.08	cps
Barium	137-1	12142886	12351751	12376330	12290322	1.04	cps
Beryllium	9-1	652394	659533	665988	659305	1.03	cps
Bismuth	209-1	8504741	9061253	7649888	8405294	8.46	cps
Bismuth	209-2	7486368	7584621	7594757	7555248	0.79	cps
Bromine	81-1	14030	13420	13606	13685	2.29	cps
Bromine	81-2	113	93	147	118	22.88	cps
Cadmium	108-1	102807	103069	104197	103358	0.71	cps
Cadmium	106-1	168674	168895	166613	168061	0.75	cps
Cadmium	111-1	1262553	1276824	1269830	1269736	0.56	cps
Calcium	43-1	1448934	1396649	1405548	1417044	1.97	cps
Calcium	44-1	22816445	22681945	22689524	22729304	0.33	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1964607	1939875	1935879	1946787	0.80	cps
Cobalt	59-2	3051452	3055155	3053509	3053372	0.06	cps
Copper	63-2	22034041	22026881	21904773	21988565	0.33	cps
Dysprosium	156-1	347	320	300	322	7.26	cps
Dysprosium	156-2	493	507	463	488	4.55	cps
Erbium	164-1	113	183	130	142	25.71	cps
Erbium	164-2	113	107	97	106	7.95	cps
Gadolinium	160-1	200	190	150	180	14.70	cps
Gadolinium	160-2	690	710	697	699	1.46	cps
Holmium	165-1	14007969	14540951	12410566	13653162	8.12	cps
Holmium	165-2	10532803	10532346	10617977	10561042	0.47	cps
Indium	115-1	10702265	11176479	9433930	10437558	8.63	cps
Indium	115-2	4204160	4217356	4205658	4209058	0.17	cps
Iron	56-2	91641555	90918462	91466405	91342141	0.41	cps
Iron	57-2	2305191	2293614	2328974	2309259	0.78	cps
Iron	54-2	5007739	5025934	5064149	5032607	0.57	cps
Krypton	83-1	163	167	173	168	3.03	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	PB165957BS	Instrumnet Name :	P7
Client Sample ID :	PB165957BS	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:01:16	DataFile Name :	031LCS6.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	21560811	22228570	22295957	22028446	1.84	cps
Lead	207-1	19278632	19827048	19863484	19656388	1.67	cps
Lead	208-1	87193337	89929087	90253060	89125162	1.89	cps
Lithium	6-1	1612532	1657745	1339700	1536659	11.20	cps
Magnesium	24-2	16294553	16003661	16063924	16120712	0.95	cps
Manganese	55-2	15703629	15545578	15563965	15604391	0.55	cps
Molybdenum	94-1	18876714	18909101	18768192	18851336	0.39	cps
Molybdenum	95-1	26905840	27206890	26741153	26951295	0.88	cps
Molybdenum	96-1	29679625	29951079	29603311	29744672	0.61	cps
Molybdenum	97-1	16757374	16766089	16785537	16769666	0.09	cps
Molybdenum	98-1	44016088	43414341	43282689	43571039	0.90	cps
Neodymium	150-1	487	633	420	513	21.26	cps
Neodymium	150-2	120	120	137	126	7.67	cps
Nickel	60-2	747978	744225	738511	743571	0.64	cps
Phosphorus	31-2	100437	99397	98719	99517	0.87	cps
Potassium	39-2	11571653	11386407	11419798	11459286	0.86	cps
Rhodium	103-1	9944330	10232051	8709268	9628550	8.40	cps
Rhodium	103-2	5922139	5847591	5885786	5885172	0.63	cps
Scandium	45-1	6064250	6283149	5317893	5888431	8.59	cps
Scandium	45-2	499384	502248	500088	500573	0.30	cps
Selenium	82-1	81874	81464	81802	81713	0.27	cps
Selenium	77-2	8366	8579	8643	8529	1.70	cps
Selenium	78-2	30324	29940	30097	30121	0.64	cps
Silicon	28-1	38283544	37447857	37408846	37713416	1.31	cps
Silver	107-1	6846822	6898873	6847504	6864400	0.43	cps
Silver	109-1	6548314	6498898	6553137	6533450	0.46	cps
Sodium	23-2	28444584	28233512	28193646	28290581	0.48	cps
Strontium	86-1	1711218	1710003	1704501	1708574	0.21	cps
Strontium	88-1	14873705	14798435	14910022	14860721	0.38	cps
Sulfur	34-1	558723	554105	548551	553793	0.92	cps
Terbium	159-1	14219860	15092164	12774462	14028829	8.34	cps
Terbium	159-2	10357018	10258513	10353544	10323025	0.54	cps
Thallium	203-1	5480843	5498813	5654319	5544658	1.72	cps
Thallium	205-1	13310993	13185368	13490514	13328958	1.15	cps
Tin	118-1	4496781	4470066	4465319	4477389	0.38	cps
Titanium	47-1	6687083	6688798	6622222	6666034	0.57	cps

Reviewed By:mohan
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Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	PB165957BS	Instrumnet Name :	P7
Client Sample ID :	PB165957BS	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:01:16	DataFile Name :	031LCS6.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	16713316	17100030	17560243	17124530	2.48	cps
Vanadium	51-2	1746573	1747968	1732203	1742248	0.50	cps
Yttrium	89-1	16679636	17296829	14697671	16224712	8.37	cps
Yttrium	89-2	4554192	4598664	4540449	4564435	0.67	cps
Zinc	66-2	3809860	3748012	3748304	3768725	0.95	cps
Zirconium	90-1	9294245	9230620	9341895	9288920	0.60	cps
Zirconium	91-1	2061829	2046308	2084826	2064321	0.94	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:03:56	DataFile Name :	032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2092242	2126914	2113772	2110976	0.83	cps
Antimony	121-1	2160	1927	1893	1993	7.29	cps
Arsenic	75-2	2137	2174	2217	2176	1.84	cps
Barium	135-1	129354	131006	130609	130323	0.66	cps
Barium	137-1	228399	226566	231311	228759	1.05	cps
Beryllium	9-1	1133	1007	1027	1056	6.45	cps
Bismuth	209-1	9381321	9547380	9273099	9400600	1.47	cps
Bismuth	209-2	8034514	8018093	8019821	8024143	0.11	cps
Bromine	81-1	14834	14754	15118	14902	1.28	cps
Bromine	81-2	463	467	497	476	3.86	cps
Cadmium	108-1	190	153	213	186	16.30	cps
Cadmium	106-1	24200	24504	25162	24622	2.00	cps
Cadmium	111-1	2554	2600	2554	2569	1.04	cps
Calcium	43-1	19733	20454	20844	20344	2.77	cps
Calcium	44-1	326494	331879	338754	332376	1.85	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	95483	94721	96244	95483	0.80	cps
Cobalt	59-2	53338	53294	53819	53484	0.55	cps
Copper	63-2	63149	63273	62777	63066	0.41	cps
Dysprosium	156-1	30977	31272	31034	31094	0.50	cps
Dysprosium	156-2	28108	28319	28486	28304	0.67	cps
Erbium	164-1	26378	25877	26398	26218	1.13	cps
Erbium	164-2	19130	18950	19434	19171	1.28	cps
Gadolinium	160-1	28906	28770	28780	28819	0.26	cps
Gadolinium	160-2	23233	22405	22498	22712	2.00	cps
Holmium	165-1	14922402	14816812	14861133	14866782	0.36	cps
Holmium	165-2	10956764	10841414	10782357	10860178	0.82	cps
Indium	115-1	11606768	11575778	11506821	11563123	0.44	cps
Indium	115-2	4540923	4533845	4575724	4550164	0.49	cps
Iron	56-2	83727559	83462695	83317000	83502418	0.25	cps
Iron	57-2	2090454	2096372	2090147	2092324	0.17	cps
Iron	54-2	4553418	4597201	4559534	4570051	0.52	cps
Krypton	83-1	233	237	230	233	1.43	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:03:56	DataFile Name :	032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	71436	70418	70589	70814	0.77	cps
Lead	207-1	59031	57846	58160	58346	1.05	cps
Lead	208-1	277577	274730	274670	275659	0.60	cps
Lithium	6-1	1696819	1735582	1711829	1714744	1.14	cps
Magnesium	24-2	725705	726774	728961	727147	0.23	cps
Manganese	55-2	889187	888592	890694	889491	0.12	cps
Molybdenum	94-1	43123	43518	42475	43039	1.22	cps
Molybdenum	95-1	6772	6408	6221	6467	4.33	cps
Molybdenum	96-1	15178	14444	14521	14714	2.74	cps
Molybdenum	97-1	4357	4267	3951	4192	5.10	cps
Molybdenum	98-1	11448	10347	9927	10574	7.43	cps
Neodymium	150-1	54341	55288	56221	55283	1.70	cps
Neodymium	150-2	35107	35000	34562	34890	0.83	cps
Nickel	60-2	17347	17464	17737	17516	1.14	cps
Phosphorus	31-2	3194	3047	3240	3160	3.19	cps
Potassium	39-2	965278	976176	976332	972595	0.65	cps
Rhodium	103-1	10560844	10754980	10631744	10649189	0.92	cps
Rhodium	103-2	6471842	6363027	6446647	6427172	0.89	cps
Scandium	45-1	6259451	6372404	6442488	6358114	1.45	cps
Scandium	45-2	544449	544885	548680	546005	0.43	cps
Selenium	82-1	388	391	386	388	0.58	cps
Selenium	77-2	97	77	57	77	26.09	cps
Selenium	78-2	470	507	480	486	3.90	cps
Silicon	28-1	3078919	2658787	2739526	2825744	7.89	cps
Silver	107-1	1867	1547	1413	1609	14.48	cps
Silver	109-1	1767	1277	1127	1390	24.08	cps
Sodium	23-2	79219	77882	78210	78437	0.89	cps
Strontium	86-1	11101	11121	11438	11220	1.68	cps
Strontium	88-1	95552	96038	96383	95991	0.43	cps
Sulfur	34-1	156522	157374	160186	158027	1.21	cps
Terbium	159-1	15303949	15376166	15220561	15300225	0.51	cps
Terbium	159-2	10779650	10607371	10600686	10662569	0.95	cps
Thallium	203-1	3187	3097	2910	3065	4.61	cps
Thallium	205-1	7669	7085	6875	7210	5.70	cps
Tin	118-1	3147	3160	2924	3077	4.32	cps
Titanium	47-1	557626	567895	570245	565255	1.19	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:03:56	DataFile Name :	032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	44464	44778	45742	44995	1.48	cps
Vanadium	51-2	125345	125082	126666	125698	0.68	cps
Yttrium	89-1	17628167	17894672	17798556	17773798	0.76	cps
Yttrium	89-2	5030063	4924622	5016158	4990281	1.15	cps
Zinc	66-2	22200	21773	22283	22085	1.24	cps
Zirconium	90-1	104377	106238	107815	106143	1.62	cps
Zirconium	91-1	23262	23476	23813	23517	1.18	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01DUPDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:07:07	DataFile Name :	033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2136405	2103273	2138108	2125929	0.92	cps
Antimony	121-1	697	583	533	604	13.85	cps
Arsenic	75-2	2350	2274	2147	2257	4.55	cps
Barium	135-1	131457	132506	132449	132137	0.45	cps
Barium	137-1	228521	229557	229303	229127	0.24	cps
Beryllium	9-1	1063	887	1040	997	9.63	cps
Bismuth	209-1	9067205	9254992	9259737	9193978	1.19	cps
Bismuth	209-2	7983962	8026002	8063672	8024545	0.50	cps
Bromine	81-1	15238	15648	15602	15496	1.45	cps
Bromine	81-2	567	567	537	557	3.11	cps
Cadmium	108-1	170	117	180	156	21.89	cps
Cadmium	106-1	23399	24835	24925	24386	3.51	cps
Cadmium	111-1	2314	2482	2423	2406	3.53	cps
Calcium	43-1	20534	20674	20991	20733	1.13	cps
Calcium	44-1	337930	338697	339831	338820	0.28	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	96667	97707	96734	97036	0.60	cps
Cobalt	59-2	53612	54405	54465	54161	0.88	cps
Copper	63-2	62721	62821	62694	62745	0.11	cps
Dysprosium	156-1	32150	31455	30911	31505	1.97	cps
Dysprosium	156-2	28409	28499	28172	28360	0.60	cps
Erbium	164-1	26776	26599	26168	26514	1.18	cps
Erbium	164-2	19227	19310	19968	19501	2.08	cps
Gadolinium	160-1	29344	28466	29678	29163	2.15	cps
Gadolinium	160-2	22455	23039	22748	22747	1.28	cps
Holmium	165-1	14325044	15020710	15068215	14804656	2.81	cps
Holmium	165-2	10910231	10842062	10888080	10880124	0.32	cps
Indium	115-1	11125366	11773060	11700795	11533074	3.08	cps
Indium	115-2	4543127	4517617	4607499	4556081	1.02	cps
Iron	56-2	85065137	85244095	84830614	85046615	0.24	cps
Iron	57-2	2123268	2144951	2124126	2130782	0.58	cps
Iron	54-2	4615563	4650766	4550923	4605751	1.10	cps
Krypton	83-1	243	187	203	211	13.80	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01DUPDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:07:07	DataFile Name :	033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	69047	70077	68334	69153	1.27	cps
Lead	207-1	55834	56159	56544	56179	0.63	cps
Lead	208-1	268232	266521	266598	267117	0.36	cps
Lithium	6-1	1690069	1706333	1700430	1698944	0.48	cps
Magnesium	24-2	734875	730922	728629	731475	0.43	cps
Manganese	55-2	900549	901184	896916	899550	0.26	cps
Molybdenum	94-1	41485	42144	42050	41893	0.85	cps
Molybdenum	95-1	4064	3877	3891	3944	2.64	cps
Molybdenum	96-1	12038	11938	11955	11977	0.45	cps
Molybdenum	97-1	2484	2407	2530	2474	2.52	cps
Molybdenum	98-1	6808	6185	6375	6456	4.95	cps
Neodymium	150-1	55244	56021	55642	55636	0.70	cps
Neodymium	150-2	35411	35434	34813	35220	1.00	cps
Nickel	60-2	17817	17036	17520	17458	2.26	cps
Phosphorus	31-2	3194	3134	3307	3211	2.74	cps
Potassium	39-2	989298	990672	988660	989543	0.10	cps
Rhodium	103-1	10316776	10970836	10770261	10685957	3.14	cps
Rhodium	103-2	6457332	6568953	6572497	6532927	1.00	cps
Scandium	45-1	6303301	6577849	6465933	6449028	2.14	cps
Scandium	45-2	553354	553572	554806	553911	0.14	cps
Selenium	82-1	418	463	491	457	7.95	cps
Selenium	77-2	70	53	60	61	13.73	cps
Selenium	78-2	480	467	480	476	1.62	cps
Silicon	28-1	2990528	3029204	2974596	2998109	0.94	cps
Silver	107-1	563	477	453	498	11.64	cps
Silver	109-1	417	330	300	349	17.36	cps
Sodium	23-2	76331	76103	76137	76190	0.16	cps
Strontium	86-1	11541	11465	11151	11386	1.82	cps
Strontium	88-1	97280	96994	96605	96960	0.35	cps
Sulfur	34-1	160870	159762	158957	159863	0.60	cps
Terbium	159-1	14478851	15289529	15415616	15061332	3.38	cps
Terbium	159-2	10768534	10761098	10780157	10769930	0.09	cps
Thallium	203-1	2564	2344	2260	2389	6.56	cps
Thallium	205-1	5985	5591	5521	5699	4.38	cps
Tin	118-1	2550	2650	3138	2779	11.31	cps
Titanium	47-1	576976	592914	581831	583907	1.40	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01DUPDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:07:07	DataFile Name :	033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	43695	43143	42789	43209	1.06	cps
Vanadium	51-2	126460	126401	126434	126432	0.02	cps
Yttrium	89-1	17263312	18056242	18102979	17807511	2.65	cps
Yttrium	89-2	5073019	5008137	5003491	5028216	0.77	cps
Zinc	66-2	21869	21996	21656	21841	0.79	cps
Zirconium	90-1	106657	107141	107191	106996	0.28	cps
Zirconium	91-1	24073	23606	23839	23840	0.98	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01LDLX25	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	25
Date & Time Acquired :	2025-01-06 15:10:21	DataFile Name :	034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	417142	415539	415621	416101	0.22	cps
Antimony	121-1	227	263	233	241	8.10	cps
Arsenic	75-2	430	413	437	427	2.82	cps
Barium	135-1	26218	26986	26014	26406	1.94	cps
Barium	137-1	45375	46027	45185	45529	0.97	cps
Beryllium	9-1	203	277	250	243	15.25	cps
Bismuth	209-1	9447274	9299405	9402216	9382965	0.81	cps
Bismuth	209-2	8110873	8108105	8057095	8092025	0.37	cps
Bromine	81-1	15115	15074	14938	15042	0.62	cps
Bromine	81-2	223	220	243	229	5.51	cps
Cadmium	108-1	113	83	90	96	16.49	cps
Cadmium	106-1	24447	24905	25225	24859	1.57	cps
Cadmium	111-1	2392	2492	2496	2460	2.40	cps
Calcium	43-1	4344	4267	4524	4378	3.01	cps
Calcium	44-1	75443	75493	76247	75728	0.59	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	22624	22443	22060	22376	1.29	cps
Cobalt	59-2	11011	11044	10894	10983	0.72	cps
Copper	63-2	14904	14691	14687	14761	0.84	cps
Dysprosium	156-1	6261	6221	6498	6327	2.36	cps
Dysprosium	156-2	5958	5701	5668	5776	2.75	cps
Erbium	164-1	5344	5188	5221	5251	1.57	cps
Erbium	164-2	3647	3847	3921	3805	3.72	cps
Gadolinium	160-1	5938	6168	5951	6019	2.15	cps
Gadolinium	160-2	5111	4931	5208	5083	2.76	cps
Holmium	165-1	14834216	15081425	15065584	14993742	0.92	cps
Holmium	165-2	10864747	11083781	10867587	10938705	1.15	cps
Indium	115-1	11818032	11747226	11833029	11799429	0.39	cps
Indium	115-2	4653100	4668297	4627857	4649751	0.44	cps
Iron	56-2	17133552	17055088	17242715	17143785	0.55	cps
Iron	57-2	436589	435830	435837	436085	0.10	cps
Iron	54-2	955148	952717	956762	954875	0.21	cps
Krypton	83-1	187	193	210	197	6.11	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01LDLX25	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219	Dilution Factor :	25
Date & Time Acquired :	2025-01-06 15:10:21	DataFile Name :	034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	14364	14281	14328	14324	0.29	cps
Lead	207-1	11789	11255	11505	11516	2.32	cps
Lead	208-1	55742	55729	54800	55424	0.97	cps
Lithium	6-1	1671073	1657938	1680941	1669984	0.69	cps
Magnesium	24-2	149208	147394	148693	148432	0.63	cps
Manganese	55-2	184215	184151	185814	184727	0.51	cps
Molybdenum	94-1	8236	8869	8656	8587	3.75	cps
Molybdenum	95-1	1133	1163	1287	1195	6.80	cps
Molybdenum	96-1	2804	3017	3014	2945	4.15	cps
Molybdenum	97-1	867	747	793	802	7.54	cps
Molybdenum	98-1	1887	1923	1960	1923	1.91	cps
Neodymium	150-1	10948	11425	11495	11289	2.64	cps
Neodymium	150-2	7115	7149	6718	6994	3.42	cps
Nickel	60-2	4021	4141	4347	4170	3.96	cps
Phosphorus	31-2	767	853	847	822	5.87	cps
Potassium	39-2	238520	243297	240632	240816	0.99	cps
Rhodium	103-1	11155304	11055350	11080773	11097142	0.47	cps
Rhodium	103-2	6555233	6555794	6579989	6563672	0.22	cps
Scandium	45-1	6511997	6517519	6629813	6553110	1.01	cps
Scandium	45-2	555146	555593	554136	554958	0.13	cps
Selenium	82-1	337	392	406	378	9.67	cps
Selenium	77-2	13	30	27	23	37.81	cps
Selenium	78-2	417	407	383	402	4.25	cps
Silicon	28-1	1548492	1493036	1489855	1510461	2.18	cps
Silver	107-1	207	243	223	224	8.18	cps
Silver	109-1	140	150	170	153	9.96	cps
Sodium	23-2	36176	36650	35975	36267	0.96	cps
Strontium	86-1	2464	2604	2674	2580	4.14	cps
Strontium	88-1	19383	19644	19647	19558	0.77	cps
Sulfur	34-1	151529	150674	150553	150918	0.35	cps
Terbium	159-1	15541216	15422695	15439144	15467685	0.42	cps
Terbium	159-2	10705763	10820340	10738022	10754708	0.55	cps
Thallium	203-1	777	740	710	742	4.50	cps
Thallium	205-1	1743	1910	1717	1790	5.85	cps
Tin	118-1	1257	1220	1147	1208	4.64	cps
Titanium	47-1	117505	118502	117733	117913	0.44	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01LDLX25	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219	Dilution Factor :	25
Date & Time Acquired :	2025-01-06 15:10:21	DataFile Name :	034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	8930	8513	8316	8586	3.65	cps
Vanadium	51-2	26066	25916	26129	26037	0.42	cps
Yttrium	89-1	18280818	18098023	17958332	18112391	0.89	cps
Yttrium	89-2	4969632	5054028	4979397	5001019	0.92	cps
Zinc	66-2	4574	4444	4741	4586	3.24	cps
Zirconium	90-1	22414	22220	22217	22284	0.51	cps
Zirconium	91-1	4904	4664	4811	4793	2.53	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01MSDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:13:34	DataFile Name :	035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2506284	2485993	2455598	2482625	1.03	cps
Antimony	121-1	1387901	1395135	1397503	1393513	0.36	cps
Arsenic	75-2	78090	78905	78888	78628	0.59	cps
Barium	135-1	1936673	1935754	1921585	1931337	0.44	cps
Barium	137-1	3316095	3336196	3348338	3333543	0.49	cps
Beryllium	9-1	173237	177367	175141	175248	1.18	cps
Bismuth	209-1	9309208	9308895	9206375	9274826	0.64	cps
Bismuth	209-2	7970018	7854324	7853574	7892639	0.85	cps
Bromine	81-1	15518	16192	16086	15932	2.27	cps
Bromine	81-2	417	563	570	517	16.77	cps
Cadmium	108-1	28034	27817	27700	27850	0.61	cps
Cadmium	106-1	64687	66525	65262	65491	1.44	cps
Cadmium	111-1	351947	360925	361741	358204	1.52	cps
Calcium	43-1	321091	323134	323163	322463	0.37	cps
Calcium	44-1	5004079	5103390	5031230	5046233	1.02	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	629233	627195	627034	627821	0.20	cps
Cobalt	59-2	911191	913343	911585	912040	0.13	cps
Copper	63-2	4970631	5016526	4951500	4979553	0.67	cps
Dysprosium	156-1	30036	29558	29615	29736	0.88	cps
Dysprosium	156-2	27146	26989	26923	27019	0.43	cps
Erbium	164-1	25350	24662	24929	24980	1.39	cps
Erbium	164-2	17945	18542	17998	18162	1.82	cps
Gadolinium	160-1	27350	27300	27844	27498	1.09	cps
Gadolinium	160-2	21116	21153	21430	21233	0.81	cps
Holmium	165-1	15085829	14880501	14905416	14957249	0.75	cps
Holmium	165-2	10954381	10867435	10804089	10875302	0.69	cps
Indium	115-1	11830093	11789580	11773626	11797766	0.25	cps
Indium	115-2	4580296	4607656	4614873	4600942	0.40	cps
Iron	56-2	105393598	104720135	104005282	104706338	0.66	cps
Iron	57-2	2658394	2636267	2601505	2632055	1.09	cps
Iron	54-2	5761498	5708070	5749160	5739576	0.49	cps
Krypton	83-1	200	240	250	230	11.50	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01MSDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:13:34	DataFile Name :	035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	4422535	4379316	4462956	4421602	0.95	cps
Lead	207-1	3993911	3984509	3935187	3971202	0.79	cps
Lead	208-1	18006127	17996599	17863470	17955399	0.44	cps
Lithium	6-1	1675809	1662063	1704844	1680905	1.30	cps
Magnesium	24-2	4205606	4212933	4153698	4190746	0.77	cps
Manganese	55-2	4099811	4071767	4072865	4081481	0.39	cps
Molybdenum	94-1	3297840	3300582	3340902	3313108	0.73	cps
Molybdenum	95-1	4140540	4253336	4185629	4193168	1.35	cps
Molybdenum	96-1	4633354	4739408	4701185	4691315	1.14	cps
Molybdenum	97-1	2588107	2638180	2601909	2609399	0.99	cps
Molybdenum	98-1	6685877	6709903	6683971	6693250	0.22	cps
Neodymium	150-1	52183	53380	52504	52689	1.18	cps
Neodymium	150-2	32795	32538	32788	32707	0.45	cps
Nickel	60-2	228244	228125	227749	228039	0.11	cps
Phosphorus	31-2	3067	2890	3020	2993	3.06	cps
Potassium	39-2	4030150	4074056	4047858	4050688	0.55	cps
Rhodium	103-1	10941465	10955677	10845599	10914247	0.55	cps
Rhodium	103-2	6453103	6479842	6441857	6458268	0.30	cps
Scandium	45-1	6564242	6639511	6542786	6582179	0.77	cps
Scandium	45-2	564337	561091	559525	561651	0.44	cps
Selenium	82-1	22650	22507	22712	22623	0.46	cps
Selenium	77-2	2630	2634	2607	2624	0.55	cps
Selenium	78-2	8803	9043	9060	8968	1.60	cps
Silicon	28-1	3414045	3498357	4048142	3653515	9.43	cps
Silver	107-1	4411	4597	4634	4547	2.63	cps
Silver	109-1	2037	2360	2184	2194	7.38	cps
Sodium	23-2	6074536	6032143	6086599	6064426	0.47	cps
Strontium	86-1	454015	455237	451893	453715	0.37	cps
Strontium	88-1	4042842	4058007	4017596	4039481	0.51	cps
Sulfur	34-1	161513	162237	161156	161635	0.34	cps
Terbium	159-1	15411898	15414283	15222514	15349565	0.72	cps
Terbium	159-2	10920403	10796869	10685240	10800837	1.09	cps
Thallium	203-1	1356479	1378160	1373012	1369217	0.83	cps
Thallium	205-1	3482302	3460341	3445379	3462674	0.54	cps
Tin	118-1	1125578	1137423	1121693	1128231	0.73	cps
Titanium	47-1	1230308	1218262	1240159	1229577	0.89	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01MSDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:13:34	DataFile Name :	035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	4527153	4549748	4511590	4529497	0.42	cps
Vanadium	51-2	611821	607340	608565	609242	0.38	cps
Yttrium	89-1	18396416	18425270	18245834	18355840	0.52	cps
Yttrium	89-2	5084577	5094179	5010518	5063091	0.90	cps
Zinc	66-2	828309	835434	825743	829829	0.61	cps
Zirconium	90-1	2564948	2570139	2574365	2569817	0.18	cps
Zirconium	91-1	552848	558707	555949	555834	0.53	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01MSDDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:16:27	DataFile Name :	036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2453242	2449211	2444431	2448961	0.18	cps
Antimony	121-1	1392999	1390945	1387853	1390599	0.19	cps
Arsenic	75-2	77715	76841	76529	77028	0.80	cps
Barium	135-1	1913425	1947970	1913190	1924862	1.04	cps
Barium	137-1	3320295	3386110	3315763	3340723	1.18	cps
Beryllium	9-1	172546	174181	173565	173431	0.48	cps
Bismuth	209-1	9233264	9343485	9262339	9279696	0.62	cps
Bismuth	209-2	7948477	7800629	7975366	7908157	1.19	cps
Bromine	81-1	15568	16529	15982	16027	3.01	cps
Bromine	81-2	413	507	427	449	11.25	cps
Cadmium	108-1	27924	28024	27984	27977	0.18	cps
Cadmium	106-1	64730	64328	64797	64618	0.39	cps
Cadmium	111-1	356098	358687	356724	357170	0.38	cps
Calcium	43-1	322033	321325	319819	321059	0.35	cps
Calcium	44-1	5065892	5004565	4962961	5011139	1.03	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	623139	614871	617029	618346	0.69	cps
Cobalt	59-2	899814	894504	890752	895023	0.51	cps
Copper	63-2	4912226	4841764	4930016	4894669	0.95	cps
Dysprosium	156-1	29481	29852	29264	29532	1.01	cps
Dysprosium	156-2	27103	26301	26579	26661	1.53	cps
Erbium	164-1	24839	25320	24939	25032	1.01	cps
Erbium	164-2	18018	18222	18122	18121	0.56	cps
Gadolinium	160-1	27737	27584	27684	27668	0.28	cps
Gadolinium	160-2	21266	20936	21123	21108	0.78	cps
Holmium	165-1	15200245	15230041	15068348	15166211	0.57	cps
Holmium	165-2	10884439	10860057	11008539	10917678	0.73	cps
Indium	115-1	11875248	11823447	11744895	11814530	0.56	cps
Indium	115-2	4615372	4551417	4597338	4588042	0.72	cps
Iron	56-2	103566628	103499732	103343018	103469793	0.11	cps
Iron	57-2	2598929	2567770	2568721	2578473	0.69	cps
Iron	54-2	5663070	5685068	5623044	5657061	0.56	cps
Krypton	83-1	203	207	277	229	18.09	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01MSDDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:16:27	DataFile Name :	036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	4422389	4432479	4313432	4389433	1.50	cps
Lead	207-1	3871467	3925680	3900284	3899144	0.70	cps
Lead	208-1	17851347	17958074	17690324	17833248	0.76	cps
Lithium	6-1	1700719	1698480	1667870	1689023	1.09	cps
Magnesium	24-2	4108607	4112472	4115608	4112229	0.09	cps
Manganese	55-2	4048597	4000247	4049789	4032878	0.70	cps
Molybdenum	94-1	3328170	3329818	3306622	3321537	0.39	cps
Molybdenum	95-1	4164158	4131853	4138344	4144785	0.41	cps
Molybdenum	96-1	4620602	4598495	4653294	4624130	0.60	cps
Molybdenum	97-1	2644515	2606390	2604108	2618338	0.87	cps
Molybdenum	98-1	6704464	6622129	6608539	6645044	0.78	cps
Neodymium	150-1	52223	53575	53187	52995	1.31	cps
Neodymium	150-2	32030	33379	33239	32883	2.26	cps
Nickel	60-2	225236	224846	226058	225380	0.27	cps
Phosphorus	31-2	3124	3150	2837	3037	5.72	cps
Potassium	39-2	3988525	3967484	3997069	3984359	0.38	cps
Rhodium	103-1	10999522	11006926	10833792	10946747	0.89	cps
Rhodium	103-2	6545566	6418347	6444998	6469637	1.04	cps
Scandium	45-1	6720498	6624418	6637773	6660896	0.78	cps
Scandium	45-2	559514	554013	558272	557266	0.52	cps
Selenium	82-1	22528	22448	22715	22563	0.61	cps
Selenium	77-2	2540	2554	2764	2619	4.78	cps
Selenium	78-2	8829	8853	8919	8867	0.53	cps
Silicon	28-1	3659327	3338559	3514795	3504227	4.58	cps
Silver	107-1	4454	4324	4461	4413	1.75	cps
Silver	109-1	2317	2030	2107	2151	6.90	cps
Sodium	23-2	6018321	5966270	5984829	5989807	0.44	cps
Strontium	86-1	452498	453593	448704	451598	0.57	cps
Strontium	88-1	4070806	4000401	3992769	4021325	1.07	cps
Sulfur	34-1	158475	158701	158037	158404	0.21	cps
Terbium	159-1	15329036	15534400	15347737	15403724	0.74	cps
Terbium	159-2	10750264	10588951	10733571	10690929	0.83	cps
Thallium	203-1	1364888	1377313	1375146	1372449	0.48	cps
Thallium	205-1	3485634	3460362	3429202	3458399	0.82	cps
Tin	118-1	1124702	1129522	1120193	1124806	0.41	cps
Titanium	47-1	1236945	1221261	1224944	1227717	0.67	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01MSDDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:16:27	DataFile Name :	036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	4487290	4527359	4471007	4495218	0.65	cps
Vanadium	51-2	605859	601582	601688	603043	0.40	cps
Yttrium	89-1	18548415	18328159	18303983	18393519	0.73	cps
Yttrium	89-2	5065357	5036161	4988216	5029911	0.77	cps
Zinc	66-2	819436	818822	815107	817788	0.29	cps
Zirconium	90-1	2589022	2560833	2556173	2568676	0.69	cps
Zirconium	91-1	557093	558282	557290	557555	0.11	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01ADLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:19:18	DataFile Name :	037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2457709	2449960	2431902	2446524	0.54	cps
Antimony	121-1	1384531	1386670	1380648	1383949	0.22	cps
Arsenic	75-2	78576	76294	77517	77463	1.47	cps
Barium	135-1	1924190	1914304	1882561	1907018	1.14	cps
Barium	137-1	3349702	3303271	3299051	3317341	0.85	cps
Beryllium	9-1	172401	173042	172873	172772	0.19	cps
Bismuth	209-1	9367460	9408918	9437264	9404547	0.37	cps
Bismuth	209-2	7926895	7930267	7744436	7867199	1.35	cps
Bromine	81-1	15598	15468	15495	15520	0.44	cps
Bromine	81-2	420	463	503	462	9.02	cps
Cadmium	108-1	27666	27166	27556	27463	0.96	cps
Cadmium	106-1	64633	64067	64579	64426	0.48	cps
Cadmium	111-1	354875	354471	351869	353738	0.46	cps
Calcium	43-1	321816	322338	320074	321409	0.37	cps
Calcium	44-1	5002512	5052411	4969620	5008181	0.83	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	620036	613521	618193	617250	0.54	cps
Cobalt	59-2	894285	891201	889739	891742	0.26	cps
Copper	63-2	4912557	4939425	4846398	4899460	0.98	cps
Dysprosium	156-1	29772	28906	29758	29479	1.68	cps
Dysprosium	156-2	26792	26949	26218	26653	1.44	cps
Erbium	164-1	24862	24769	25143	24925	0.78	cps
Erbium	164-2	18072	18349	17902	18107	1.25	cps
Gadolinium	160-1	26752	27357	27253	27121	1.19	cps
Gadolinium	160-2	21136	21219	21386	21247	0.60	cps
Holmium	165-1	15118484	15101365	15005211	15075020	0.41	cps
Holmium	165-2	10951293	10803098	10835847	10863413	0.72	cps
Indium	115-1	11784622	11786438	11717226	11762762	0.34	cps
Indium	115-2	4639346	4524160	4546680	4570062	1.34	cps
Iron	56-2	102392268	102927785	102618982	102646345	0.26	cps
Iron	57-2	2571404	2574073	2598208	2581228	0.57	cps
Iron	54-2	5630772	5599008	5595676	5608485	0.35	cps
Krypton	83-1	187	223	273	228	19.10	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01ADLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219:	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:19:18	DataFile Name :	037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	4462538	4360265	4330102	4384302	1.58	cps
Lead	207-1	4030137	3919593	3982662	3977464	1.39	cps
Lead	208-1	18109281	17767329	17791377	17889329	1.07	cps
Lithium	6-1	1653481	1655827	1654970	1654759	0.07	cps
Magnesium	24-2	4117105	4102608	4136000	4118571	0.41	cps
Manganese	55-2	3983935	3999334	4000108	3994459	0.23	cps
Molybdenum	94-1	3245685	3292453	3294901	3277680	0.85	cps
Molybdenum	95-1	4095877	4121331	4091042	4102750	0.40	cps
Molybdenum	96-1	4610131	4610032	4587302	4602488	0.29	cps
Molybdenum	97-1	2600284	2567001	2582822	2583369	0.64	cps
Molybdenum	98-1	6600371	6594208	6601538	6598706	0.06	cps
Neodymium	150-1	51396	52370	52340	52035	1.06	cps
Neodymium	150-2	32387	33079	32741	32736	1.06	cps
Nickel	60-2	224901	224281	223162	224115	0.39	cps
Phosphorus	31-2	2950	2924	3094	2989	3.06	cps
Potassium	39-2	3963556	3979132	4000835	3981174	0.47	cps
Rhodium	103-1	10923903	10926710	10849653	10900088	0.40	cps
Rhodium	103-2	6473017	6394714	6377730	6415154	0.79	cps
Scandium	45-1	6604378	6643070	6600103	6615850	0.36	cps
Scandium	45-2	552581	552880	558025	554495	0.55	cps
Selenium	82-1	22491	22579	22532	22534	0.20	cps
Selenium	77-2	2517	2644	2677	2612	3.23	cps
Selenium	78-2	8903	8653	8849	8802	1.50	cps
Silicon	28-1	3376929	3406419	3545365	3442904	2.61	cps
Silver	107-1	4241	4274	4497	4337	3.22	cps
Silver	109-1	2134	2010	2280	2141	6.31	cps
Sodium	23-2	5924365	5992350	5934902	5950539	0.61	cps
Strontium	86-1	448255	449905	447697	448619	0.26	cps
Strontium	88-1	4027728	3994513	3986780	4003007	0.54	cps
Sulfur	34-1	155455	157192	157495	156714	0.70	cps
Terbium	159-1	15302691	15283351	15214252	15266765	0.30	cps
Terbium	159-2	10771839	10780570	10817992	10790134	0.23	cps
Thallium	203-1	1359566	1352960	1371717	1361414	0.70	cps
Thallium	205-1	3394626	3399970	3463736	3419444	1.12	cps
Tin	118-1	1113201	1123073	1118005	1118093	0.44	cps
Titanium	47-1	1197937	1215604	1202204	1205248	0.76	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	P5365-01ADLX5	Instrumnet Name :	P7
Client Sample ID :	TAPFTA-SB01I-4.5-1219	Dilution Factor :	5
Date & Time Acquired :	2025-01-06 15:19:18	DataFile Name :	037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	4516607	4535356	4561878	4537947	0.50	cps
Vanadium	51-2	599093	597377	596280	597583	0.24	cps
Yttrium	89-1	18361203	18030664	18132926	18174931	0.93	cps
Yttrium	89-2	5027683	5017853	5007485	5017674	0.20	cps
Zinc	66-2	815470	814773	814600	814947	0.06	cps
Zirconium	90-1	2548009	2535939	2489896	2524615	1.21	cps
Zirconium	91-1	549174	550207	549766	549716	0.09	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P7
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:35:10	DataFile Name :	042CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	10147834	10167539	10247817	10187730	0.52	cps
Antimony	121-1	5050623	5115472	5030148	5065414	0.88	cps
Arsenic	75-2	251157	253000	252113	252090	0.37	cps
Barium	135-1	6687501	6789686	6592078	6689755	1.48	cps
Barium	137-1	11625346	11641117	11508273	11591579	0.63	cps
Beryllium	9-1	623721	630165	626289	626725	0.52	cps
Bismuth	209-1	8243467	8462804	8534939	8413737	1.80	cps
Bismuth	209-2	7142491	7138495	7108505	7129830	0.26	cps
Bromine	81-1	13293	13186	13293	13257	0.46	cps
Bromine	81-2	100	123	90	104	16.38	cps
Cadmium	108-1	94066	93492	94488	94015	0.53	cps
Cadmium	106-1	153858	155478	154677	154671	0.52	cps
Cadmium	111-1	1146971	1153705	1151524	1150733	0.30	cps
Calcium	43-1	6593606	6574695	6524040	6564114	0.55	cps
Calcium	44-1	107133685	107179898	106516755	106943446	0.35	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1908682	1893386	1884703	1895590	0.64	cps
Cobalt	59-2	2885132	2909108	2869564	2887935	0.69	cps
Copper	63-2	20209470	20315599	20200479	20241850	0.32	cps
Dysprosium	156-1	403	477	453	444	8.43	cps
Dysprosium	156-2	613	593	580	596	2.82	cps
Erbium	164-1	303	273	393	323	19.31	cps
Erbium	164-2	267	217	227	237	11.18	cps
Gadolinium	160-1	253	317	353	308	16.44	cps
Gadolinium	160-2	783	870	893	849	6.83	cps
Holmium	165-1	13826356	14352323	14265205	14147961	1.99	cps
Holmium	165-2	10409351	10381843	10325645	10372280	0.41	cps
Indium	115-1	10434399	10582465	10573002	10529955	0.79	cps
Indium	115-2	4126343	4112058	4048113	4095505	1.02	cps
Iron	56-2	439455260	443722860	445217540	442798553	0.68	cps
Iron	57-2	11152464	11252457	11200276	11201732	0.45	cps
Iron	54-2	24234400	24184410	24063877	24160896	0.36	cps
Krypton	83-1	180	173	247	200	20.28	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P7
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:35:10	DataFile Name :	042CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	20661895	20728154	20698053	20696034	0.16	cps
Lead	207-1	18446479	18447234	18536769	18476827	0.28	cps
Lead	208-1	83890143	84278054	84397316	84188504	0.31	cps
Lithium	6-1	1590140	1583379	1611493	1595004	0.92	cps
Magnesium	24-2	81372784	80351547	80839047	80854459	0.63	cps
Manganese	55-2	15127545	15320620	15131848	15193337	0.73	cps
Molybdenum	94-1	18039391	18062473	17914088	18005317	0.44	cps
Molybdenum	95-1	25401483	25663477	25341496	25468819	0.67	cps
Molybdenum	96-1	28002122	28333660	28112606	28149463	0.60	cps
Molybdenum	97-1	15983811	16028747	15831918	15948158	0.65	cps
Molybdenum	98-1	41145244	40987215	40703959	40945473	0.55	cps
Neodymium	150-1	560	600	577	579	3.47	cps
Neodymium	150-2	167	217	217	200	14.43	cps
Nickel	60-2	690671	699533	689805	693336	0.78	cps
Phosphorus	31-2	98816	97964	97729	98170	0.58	cps
Potassium	39-2	56655992	56097783	56613959	56455911	0.55	cps
Rhodium	103-1	9219038	9352730	9425314	9332361	1.12	cps
Rhodium	103-2	5572222	5585223	5583714	5580386	0.13	cps
Scandium	45-1	5960953	6061686	5981624	6001421	0.89	cps
Scandium	45-2	507565	507384	503028	505992	0.51	cps
Selenium	82-1	73353	73972	73913	73746	0.46	cps
Selenium	77-2	8059	8119	8216	8131	0.97	cps
Selenium	78-2	28013	27796	27529	27779	0.87	cps
Silicon	28-1	28541840	28501495	28275890	28439742	0.50	cps
Silver	107-1	6184277	6145972	6109822	6146690	0.61	cps
Silver	109-1	5907354	5847867	5837462	5864228	0.64	cps
Sodium	23-2	136455925	137252501	136952278	136886901	0.29	cps
Strontium	86-1	1597969	1626928	1608640	1611179	0.91	cps
Strontium	88-1	14137198	13976275	14112505	14075326	0.62	cps
Sulfur	34-1	516842	516810	514397	516016	0.27	cps
Terbium	159-1	14117863	14599944	14565882	14427896	1.86	cps
Terbium	159-2	10216134	10140425	10152611	10169723	0.40	cps
Thallium	203-1	5249228	5328397	5242877	5273501	0.90	cps
Thallium	205-1	12574529	12683076	12676371	12644659	0.48	cps
Tin	118-1	4172611	4181869	4215558	4190013	0.54	cps
Titanium	47-1	6350112	6325006	6335674	6336931	0.20	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P7
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:35:10	DataFile Name :	042CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	16783380	16960784	16954555	16899573	0.60	cps
Vanadium	51-2	1700958	1711612	1695304	1702625	0.49	cps
Yttrium	89-1	16284410	16473611	16685260	16481093	1.22	cps
Yttrium	89-2	4549872	4564234	4517105	4543737	0.53	cps
Zinc	66-2	3439424	3421497	3453032	3437984	0.46	cps
Zirconium	90-1	8895122	8786144	8795369	8825545	0.68	cps
Zirconium	91-1	1997980	1980465	1990188	1989544	0.44	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P7
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:38:14	DataFile Name :	043CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	790	790	743	774	3.48	cps
Antimony	121-1	1520	1297	1430	1416	7.94	cps
Arsenic	75-2	30	33	43	36	19.51	cps
Barium	135-1	510	487	440	479	7.44	cps
Barium	137-1	787	813	793	798	1.74	cps
Beryllium	9-1	170	163	180	171	4.90	cps
Bismuth	209-1	9460969	9269165	9378137	9369424	1.03	cps
Bismuth	209-2	7965481	7920215	7990413	7958703	0.45	cps
Bromine	81-1	13239	13113	13623	13325	1.99	cps
Bromine	81-2	127	133	153	138	10.07	cps
Cadmium	108-1	73	67	80	73	9.09	cps
Cadmium	106-1	23492	23486	22711	23230	1.93	cps
Cadmium	111-1	2425	2422	2358	2402	1.56	cps
Calcium	43-1	870	700	850	807	11.52	cps
Calcium	44-1	16045	15672	16142	15953	1.56	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2787	2884	3024	2898	4.11	cps
Cobalt	59-2	363	320	363	349	7.17	cps
Copper	63-2	4031	3967	3981	3993	0.84	cps
Dysprosium	156-1	10	3	10	8	49.52	cps
Dysprosium	156-2	3	7	3	4	43.40	cps
Erbium	164-1	50	70	107	76	38.04	cps
Erbium	164-2	50	43	30	41	24.77	cps
Gadolinium	160-1	100	93	120	104	13.29	cps
Gadolinium	160-2	680	640	663	661	3.04	cps
Holmium	165-1	14920057	15099993	14762635	14927562	1.13	cps
Holmium	165-2	10636239	10671277	10672325	10659947	0.19	cps
Indium	115-1	11567014	11443421	11543101	11517845	0.57	cps
Indium	115-2	4479807	4475667	4536331	4497269	0.75	cps
Iron	56-2	52431	53281	55010	53574	2.45	cps
Iron	57-2	2134	2084	2043	2087	2.16	cps
Iron	54-2	4307	4337	4254	4300	0.98	cps
Krypton	83-1	210	157	210	192	16.02	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P7
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:38:14	DataFile Name :	043CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1957	2087	1920	1988	4.41	cps
Lead	207-1	1960	1883	1763	1869	5.30	cps
Lead	208-1	8344	8428	8088	8287	2.14	cps
Lithium	6-1	1737832	1725415	1718665	1727304	0.56	cps
Magnesium	24-2	6231	6155	6188	6191	0.62	cps
Manganese	55-2	1350	1417	1380	1382	2.42	cps
Molybdenum	94-1	1743	1847	1807	1799	2.90	cps
Molybdenum	95-1	2337	2354	2340	2344	0.38	cps
Molybdenum	96-1	2684	2380	2427	2497	6.54	cps
Molybdenum	97-1	1490	1313	1553	1452	8.57	cps
Molybdenum	98-1	3814	3560	3791	3722	3.76	cps
Neodymium	150-1	7	3	17	9	78.08	cps
Neodymium	150-2	0	13	3	6	124.93	cps
Nickel	60-2	927	903	863	898	3.57	cps
Phosphorus	31-2	353	277	327	319	12.21	cps
Potassium	39-2	55327	54129	54139	54532	1.26	cps
Rhodium	103-1	10551159	10703029	10679483	10644557	0.77	cps
Rhodium	103-2	6318253	6355641	6432628	6368841	0.92	cps
Scandium	45-1	6221235	6207137	6279645	6236006	0.62	cps
Scandium	45-2	529703	527888	525424	527672	0.41	cps
Selenium	82-1	299	446	326	357	21.95	cps
Selenium	77-2	10	0	0	3	173.21	cps
Selenium	78-2	373	410	410	398	5.32	cps
Silicon	28-1	810312	809736	821951	814000	0.85	cps
Silver	107-1	1160	1043	997	1067	7.89	cps
Silver	109-1	963	890	983	946	5.20	cps
Sodium	23-2	49556	48085	47811	48484	1.94	cps
Strontium	86-1	423	457	457	446	4.32	cps
Strontium	88-1	1077	1057	1093	1076	1.71	cps
Sulfur	34-1	156536	158145	159378	158020	0.90	cps
Terbium	159-1	15028284	15136947	15018558	15061263	0.44	cps
Terbium	159-2	10604630	10622505	10510764	10579300	0.57	cps
Thallium	203-1	983	993	903	960	5.14	cps
Thallium	205-1	2370	2334	2337	2347	0.86	cps
Tin	118-1	1293	1270	1290	1285	0.98	cps
Titanium	47-1	470	480	523	491	5.77	cps

Reviewed By:mohan
On:1/9/2025 3:59:21 AM
Inst Id :P7
LB :LB134187

LB Number :	LB134187	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P7
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2025-01-06 15:38:14	DataFile Name :	043CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1030	850	910	930	9.86	cps
Vanadium	51-2	97	147	160	134	24.83	cps
Yttrium	89-1	17487123	17287129	17471211	17415154	0.64	cps
Yttrium	89-2	4813752	4824821	4796081	4811552	0.30	cps
Zinc	66-2	580	510	557	549	6.49	cps
Zirconium	90-1	1530	1810	1793	1711	9.18	cps
Zirconium	91-1	280	333	317	310	8.80	cps

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB165798

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: 12/20/2024 **Time :** 10:15 **Temp :** 94 °C

End Digest Date: 12/20/2024 **Time :** 10:45 **Temp :** 94 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: MB

Supervisor Signature: 12

Temp : 1. 94°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP83736
CCV	30mL	MP83738
CRA	30mL	MP83740
Blank Spike	0.48mL	MP83729
Matrix Spike	0.48mL	MP83729

Chemical Used	ML/SAMPLE USED	Lot Number
AQUA REGIA	1.5mL	MP83742
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	MP83730
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP83731
2.5 ppb	S2.5	30mL	MP83732
5.0 ppb	S5.0	30mL	MP83733
7.5 ppb	S7.5	30mL	MP83734
10.0 ppb	S10.0	30mL	MP83735
ICV	ICV	30mL	MP83736
ICB	ICB	30mL	MP83737
CCV	CCV	30mL	MP83738
CCB	CCB	30mL	MP83739
CRI	CRI	30mL	MP83740
CHK STD	CHK STD	30mL	MP83741

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/20/24 11:50	MB - Dig - Lab	MB - Hood Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB165798

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Comment	Prep Pos
P5316-01	TT-304-IDWSO-20241217-1	0.59	35	NA	N/A	3-1
P5339-01	TR-06-12182024	0.50	35	NA	N/A	2
P5355-01	RBR251688	0.54	35	NA	N/A	3
P5362-01	WC-SOIL-20241219	0.59	35	NA	N/A	4
P5365-01	TAPFTA-SB01I-4.5-121924-00-T1	0.59	35	NA	N/A	5
P5365-01DUP	TAPFTA-SB01I-4.5-121924-00-T1DUP	0.58	35	NA	N/A	6
P5365-01MS	TAPFTA-SB01I-4.5-121924-00-T1MS	0.54	35	NA	MP83729	7
P5365-01MSD	TAPFTA-SB01I-4.5-121924-00-T1MSD	0.56	35	NA	MP83729	8
PB165798BL	PBS798	0.54	35	NA	N/A	9
PB165798BS	LCS798	0.57	35	NA	MP83729	10

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 122024_7471 **WorkList ID :** 186532 **Department :** Digestion **Date :** 12-20-2024 09:25:44

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5362-01	WC-SOIL-20241219	Solid	Mercury	Cool 4 deg C	PARS02	N21	12/19/2024	7471B
P5316-01	TT-304-IDWSO-20241217-1	Solid	Mercury	Cool 4 deg C	TETR06		12/17/2024	7471B
P5365-01	TAPFTA-SB01I-4.5-121924-00-T1	Solid	Mercury	Cool 4 deg C	WEST04	N21	12/19/2024	7471B
P5355-01	RBR251688	Solid	Mercury	Cool 4 deg C	PSEG03	N13	12/19/2024	7471B
P5339-01	TR-06-12182024	Solid	Mercury	Cool 4 deg C	PSEG05	N12	12/18/2024	7471B

Date/Time 12/20/24 @ 9:50

Raw Sample Received by: MG - NIA - Lang

Raw Sample Relinquished by: MG - NIA Lang

Date/Time 12/20/24 @ 10:35

Raw Sample Received by: MG - NIA - Lang

Raw Sample Relinquished by: MG - NIA - Lang

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165957

SOP ID : M3050B-Digestion-20

SDG No : N/A

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

Block ID: 1. HOT BLOCK #5 2. N/A

Start Digest Date: 01/06/2025 **Time :** 09:05 **Temp :** 96 °C

End Digest Date: 01/06/2025 **Time :** 11:10 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #5

Dig Technician Signature: SJG.

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
Spike Sol 1	1.00	MP83717
Spike Sol 2	2.00	MP83718
Spike Sol 3	2.00	MP83719
Spike Sol 4	2.00	MP83720
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	10.00	MP83498
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#5 CELL #33 Temp: 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01/06/25 12:10	SJG. MET digestion	Natalie Lash
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165957

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P5365-01	TAPFTA-SB01I-4.5-121924-00-T1	N/A	1.30	100	Brown	Yellow	Medium	N/A	N/A	1
P5365-01MS	TAPFTA-SB01I-4.5-121924-00-T1MS	N/A	1.47	100	Brown	Yellow	Medium	N/A	MP83717,MP83718,MP83719,N	3
P5365-01MSD	TAPFTA-SB01I-4.5-121924-00-T1MSD	N/A	1.26	100	Brown	Yellow	Medium	N/A	MP83717,MP83718,MP83719,N	4
P5365-01DUP	TAPFTA-SB01I-4.5-121924-00-T1DUP	N/A	1.40	100	Brown	Yellow	Medium	N/A	N/A	2
PB165957BL	PBS957	N/A	1.29	100	Colorless	Colorless	Fine	N/A	N/A	5
PB165957BS	LCS957	N/A	1.29	100	Colorless	Colorless	Fine	N/A	MP83717,MP83718,MP83719,N	6

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB165957 **WorkList ID :** 186754 **Department :** Digestion **Date :** 01-06-2025 08:25:11

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5365-01	TAPFTA-SB01I-4.5-121924-00-	Solid	Metals ICP-TAL	Cool 4 deg C	WEST04	N21	12/19/2024	6020B

Date/Time 01/06/25 8:45
Raw Sample Received by: SRG. met digestion
Raw Sample Relinquished by: SM

Date/Time 01/06/25 9:45
Raw Sample Received by: SM
Raw Sample Relinquished by: SRG. met digestion

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 12/23/2024

OVENTEMP IN Celsius(°C): 106
Time IN: 16:30
In Date: 12/20/2024
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: 12/21/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB134046

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
P5318-01	AU-06-122024	15	1.15	8.84	9.99	8.77	86.2	
P5319-01	AUD-1617	16	1.00	1.00	2.00	2.00	100.0	wipe sample
P5361-01	SB-01-20241219-7.0-7.5	1	1.14	8.41	9.55	8.85	91.7	
P5361-02	SB-01-20241219-9.0-9.5	2	1.19	8.48	9.67	8.58	87.1	
P5362-01	WC-SOIL-20241219	3	1.13	8.70	9.83	9.13	92.0	
P5365-01	TAPFTA-SB01I-4.5-121924-00-T1	4	1.13	8.56	9.69	8.84	90.1	
P5369-05	SVOC-GPC-BLANK	5	1.00	1.00	2.00	2.00	100.0	
P5369-06	PEST-GPC-BLANK	6	1.00	1.00	2.00	2.00	100.0	
P5369-07	PEST-GPC-BLANK-SPIKE	7	1.00	1.00	2.00	2.00	100.0	
P5369-08	PCB-GPC-BLANK	8	1.00	1.00	2.00	2.00	100.0	
P5369-09	PCB-GPC-BLANK-SPIKE	9	1.00	1.00	2.00	2.00	100.0	
P5369-10	SVOC-GPC2-BLANK	10	1.00	1.00	2.00	2.00	100.0	
P5369-11	PEST-GPC2-BLANK	11	1.00	1.00	2.00	2.00	100.0	
P5369-12	PEST-GPC2-BLANK-SPIKE	12	1.00	1.00	2.00	2.00	100.0	
P5369-13	PCB-GPC2-BLANK	13	1.00	1.00	2.00	2.00	100.0	
P5369-14	PCB-GPC2-BLANK-SPIKE	14	1.00	1.00	2.00	2.00	100.0	
P5377-01	GAS-TRE-1119	17	1.00	1.00	2.00	2.00	100.0	wipe sample

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

VB34046

WorkList Name : %1-122024 **WorkList ID :** 186509 **Department :** Wet-Chemistry **Date :** 12-20-2024 08:05:45

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5318-01	AU-06-122024	Solid	Percent Solids	Cool 4 deg C	PSEG05	N31	12/20/2024	Chemtech -SO
P5319-01	AUD-1617	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	12/20/2024	Chemtech -SO
P5361-01	SB-01-20241219-7.0-7.5	Solid	Percent Solids	Cool 4 deg C	PARS02	N12	12/20/2024	Chemtech -SO
P5361-02	SB-01-20241219-9.0-9.5	Solid	Percent Solids	Cool 4 deg C	PARS02	N12	12/20/2024	Chemtech -SO
P5362-01	WC-SOIL-20241219	Solid	Percent Solids	Cool 4 deg C	PARS02	N21	12/19/2024	Chemtech -SO
P5365-01	TAPFTA-SB01I-4.5-121924-00-	Solid	Percent Solids	Cool 4 deg C	WEST04	N21	12/19/2024	Chemtech -SO
P5369-05	SVOC-GPC-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	N22	12/13/2024	Chemtech -SO
P5369-06	PEST-GPC-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	N22	12/13/2024	Chemtech -SO
P5369-07	PEST-GPC-BLANK-SPIKE	Solid	Percent Solids	Cool 4 deg C	CHEM02	N22	12/13/2024	Chemtech -SO
P5369-08	PCB-GPC-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	N22	12/13/2024	Chemtech -SO
P5369-09	PCB-GPC-BLANK-SPIKE	Solid	Percent Solids	Cool 4 deg C	CHEM02	N22	12/13/2024	Chemtech -SO
P5369-10	SVOC-GPC2-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	N22	12/13/2024	Chemtech -SO
P5369-11	PEST-GPC2-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	N22	12/13/2024	Chemtech -SO
P5369-12	PEST-GPC2-BLANK-SPIKE	Solid	Percent Solids	Cool 4 deg C	CHEM02	N22	12/13/2024	Chemtech -SO
P5369-13	PCB-GPC2-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	N22	12/13/2024	Chemtech -SO
P5369-14	PCB-GPC2-BLANK-SPIKE	Solid	Percent Solids	Cool 4 deg C	CHEM02	N22	12/13/2024	Chemtech -SO
P5377-01	GAS-TRE-1119	Solid	Percent Solids	Cool 4 deg C	PSEG03	N13	12/20/2024	Chemtech -SO

Date/Time 12/20/24 16:15

Raw Sample Received by: TB WOC

Raw Sample Relinquished by: CB SM

Date/Time 12/20/24 17:30

Raw Sample Received by: CB SM

Raw Sample Relinquished by: SM WOC

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB134050

Review By	jaswal	Review On	12/20/2024 9:49:17 PM
Supervise By	mohan	Supervise On	12/20/2024 9:49:50 PM

STD. NAME	STD REF.#
ICAL Standard	MP83730,MP83731,MP83732,MP83733,MP83734,MP83735
ICV Standard	MP83736
CCV Standard	MP83738
ICSA Standard	
CRI Standard	MP83740
LCS Standard	
Chk Standard	MP83737,MP83739,MP83741,MP83743

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	12/20/24 13:58		Mohan	OK
2	S0.2	S0.2	CAL2	12/20/24 14:00		Mohan	OK
3	S2.5	S2.5	CAL3	12/20/24 14:03		Mohan	OK
4	S5	S5	CAL4	12/20/24 14:05		Mohan	OK
5	S7.5	S7.5	CAL5	12/20/24 14:07		Mohan	OK
6	S10	S10	CAL6	12/20/24 14:10		Mohan	OK
7	ICV28	ICV28	ICV	12/20/24 14:13		Mohan	OK
8	ICB28	ICB28	ICB	12/20/24 14:15		Mohan	OK
9	CCV57	CCV57	CCV	12/20/24 14:17		Mohan	OK
10	CCB57	CCB57	CCB	12/20/24 14:20		Mohan	OK
11	CRA	CRA	CRDL	12/20/24 14:22		Mohan	OK
12	HighStd	HighStd	HIGH STD	12/20/24 14:24		Mohan	OK
13	ChkStd	ChkStd	SAM	12/20/24 14:26		Mohan	OK
14	PB165798BL	PB165798BL	MB	12/20/24 14:29		Mohan	OK
15	PB165798BS	PB165798BS	LCS	12/20/24 14:31		Mohan	OK
16	P5316-01	TT-304-IDWSO-2024	SAM	12/20/24 14:34		Mohan	OK
17	P5339-01	TR-06-12182024	SAM	12/20/24 14:36		Mohan	OK
18	P5355-01	RBR251688	SAM	12/20/24 14:38		Mohan	OK

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB134050

Review By	jaswal	Review On	12/20/2024 9:49:17 PM
Supervise By	mohan	Supervise On	12/20/2024 9:49:50 PM

STD. NAME	STD REF.#
ICAL Standard	MP83730,MP83731,MP83732,MP83733,MP83734,MP83735
ICV Standard	MP83736
CCV Standard	MP83738
ICSA Standard	
CRI Standard	MP83740
LCS Standard	
Chk Standard	MP83737,MP83739,MP83741,MP83743

19	P5362-01	WC-SOIL-20241219	SAM	12/20/24 14:40		Mohan	OK
20	CCV58	CCV58	CCV	12/20/24 14:43		Mohan	OK
21	CCB58	CCB58	CCB	12/20/24 14:45		Mohan	OK
22	P5365-01	TAPFTA-SB01I-4.5-12	SAM	12/20/24 14:47		Mohan	OK
23	P5365-01DUP	TAPFTA-SB01I-4.5-12	DUP	12/20/24 14:50		Mohan	OK
24	P5365-01MS	TAPFTA-SB01I-4.5-12	MS	12/20/24 14:52		Mohan	OK
25	P5365-01MSD	TAPFTA-SB01I-4.5-12	MSD	12/20/24 14:54		Mohan	OK
26	P5365-01L	TAPFTA-SB01I-4.5-12	SD	12/20/24 14:56		Mohan	OK
27	P5365-01A	TAPFTA-SB01I-4.5-12	PS	12/20/24 14:59		Mohan	OK
28	CCV59	CCV59	CCV	12/20/24 15:01		Mohan	OK
29	CCB59	CCB59	CCB	12/20/24 15:03		Mohan	OK

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

Instrument ID: P7

Daily Analysis Runlog For Sequence/QCBatch ID # LB134187

Review By	jaswal	Review On	1/9/2025 3:58:25 AM
Supervise By	mohan	Supervise On	1/9/2025 3:59:21 AM

STD. NAME	STD REF.#
ICAL Standard	MP83619,MP83628,MP83627,MP83625,MP83623,MP83622,MP83621,MP83620,MP83636
ICV Standard	MP83629
CCV Standard	MP83632
ICSA Standard	MP83630,MP83631
CRI Standard	
LCS Standard	
Chk Standard	MP83635,MP83634

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	TUNE	TUNE	TUNE	01/06/25 12:42		Jaswal	OK
2	S0	S0	CAL1	01/06/25 13:15		Jaswal	OK
3	S2	S2	CAL3	01/06/25 13:19		Jaswal	OK
4	S3	S3	CAL4	01/06/25 13:25		Jaswal	OK
5	S4	S4	CAL5	01/06/25 13:28		Jaswal	OK
6	S5	S5	CAL6	01/06/25 13:31		Jaswal	OK
7	S6	S6	CAL7	01/06/25 13:34		Jaswal	OK
8	S7	S7	CAL8	01/06/25 13:36		Jaswal	OK
9	S8	S8	CAL9	01/06/25 13:39		Jaswal	OK
10	ICV01	ICV01	ICV	01/06/25 14:05		Jaswal	OK
11	LLICV01	LLICV01	LLICV	01/06/25 14:09		Jaswal	OK
12	ICB01	ICB01	ICB	01/06/25 14:24		Jaswal	OK
13	ICSA01	ICSA01	ICSA	01/06/25 14:27		Jaswal	OK
14	ICSAB01	ICSAB01	ICSAB	01/06/25 14:31		Jaswal	OK
15	CCV01	CCV01	CCV	01/06/25 14:34		Jaswal	OK
16	CCB01	CCB01	CCB	01/06/25 14:41		Jaswal	OK
17	CRI	CRI	CRDL	01/06/25 14:54		Jaswal	OK
18	PB165957BL	PB165957BL	MB	01/06/25 14:58		Jaswal	OK

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Instrument ID: P7

Daily Analysis Runlog For Sequence/QCBatch ID # LB134187

Review By	jaswal	Review On	1/9/2025 3:58:25 AM
Supervise By	mohan	Supervise On	1/9/2025 3:59:21 AM

STD. NAME	STD REF.#
ICAL Standard	MP83619,MP83628,MP83627,MP83625,MP83623,MP83622,MP83621,MP83620,MP83636
ICV Standard	MP83629
CCV Standard	MP83632
ICSA Standard	MP83630,MP83631
CRI Standard	
LCS Standard	
Chk Standard	MP83635,MP83634

19	PB165957BS	PB165957BS	LCS	01/06/25 15:01		Jaswal	OK
20	P5365-01DL	TAPFTA-SB01I-4.5-12	SAM	01/06/25 15:03		Jaswal	OK
21	P5365-01DUPDL	TAPFTA-SB01I-4.5-12	DUP	01/06/25 15:07		Jaswal	OK
22	P5365-01LDL	TAPFTA-SB01I-4.5-12	SD	01/06/25 15:10		Jaswal	OK
23	P5365-01MSDL	TAPFTA-SB01I-4.5-12	MS	01/06/25 15:13		Jaswal	OK
24	P5365-01MSDDL	TAPFTA-SB01I-4.5-12	MSD	01/06/25 15:16		Jaswal	OK
25	P5365-01ADL	TAPFTA-SB01I-4.5-12	PS	01/06/25 15:19		Jaswal	OK
26	CCV02	CCV02	CCV	01/06/25 15:35		Jaswal	OK
27	CCB02	CCB02	CCB	01/06/25 15:38		Jaswal	OK

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Prep Standard - Chemical Standard Summary

Order ID : P5365

Test : Mercury,Metals ICP-TAL

Prepbatch ID : PB165798,PB165957,

Sequence ID/Qc Batch ID: LB134050,LB134187,

Standard ID :
MP83498,MP83619,MP83620,MP83621,MP83622,MP83623,MP83625,MP83626,MP83627,MP83628,MP83629,MP836
30,MP83631,MP83632,MP83633,MP83634,MP83635,MP83636,MP83692,MP83694,MP83717,MP83718,MP83719,MP
83720,MP83729,MP83730,MP83731,MP83732,MP83733,MP83734,MP83735,MP83736,MP83737,MP83738,MP83739,
MP83740,MP83741,MP83742,MP83743,

Chemical ID :
M4371,M4583,M4916,M5062,M5288,M5295,M5304,M5390,M5476,M5496,M5498,M5513,M5515,M5516,M5519,M5585
,M5658,M5697,M5698,M5739,M5751,M5769,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5817,M5818,M581
9,M5873,M5874,M5882,M5884,M5953,M5961,M5962,M5976,M5978,M5981,M5982,M5983,M6021,M6023,M6025,M60
28,M6030,M6033,M6055,M6121,M6125,M6126,W3112,

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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	MP83498	12/09/2024	01/31/2025	Janvi Patel	None	None	Sarabjit Jaswal 12/09/2024

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
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP83619	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 25.00000ml of M6121 + 4925.00000ml of W3112 + 50.00000ml of M6126 = Final Quantity: 5000.000 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)	MP83620	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.10000ml of M5476 + 1.00000ml of M5799 + 1.00000ml of M5818 + 1.00000ml of M5981 + 1.00000ml of M5983 + 1.90000ml of M6033 + 10.00000ml of M6126 + 2.00000ml of M5815 + 2.00000ml of M5817 + 4.00000ml of M5390 + 4.00000ml of M6025 + 4.90000ml of M5515 + 4.90000ml of M5519 + 5.00000ml of M6121 + 50.00000ml of M5304 + 832.50000ml of W3112 + 9.00000ml of M5698 + 9.00000ml of M5751 + 9.00000ml of M5819 + 9.00000ml of M5976 + 9.00000ml of M5978 + 9.90000ml of M5498 + 9.90000ml of M5769 + 9.90000ml of M5806 = 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)	MP83621	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 48.50000ml of W3112 + 50.00000ml of MP83620 = 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)	MP83622	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 73.50000ml of W3112 + 25.00000ml of MP83620 = 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)	MP83623	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 86.00000ml of W3112 + 12.50000ml of MP83620 = 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)	MP83625	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 88.50000ml of W3112 + 10.00000ml of MP83621 = 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)	MP83626	12/13/2024	01/10/2025	Sarabjit Jaswal	None	None	Mohan Bera 12/17/2024

FROM 0.05000ml of M5476 + 0.05000ml of M5698 + 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 + 0.10000ml of M5658 + 0.10000ml of M5751 + 0.10000ml of M5802 + 0.10000ml of M6033 + 0.25000ml of M5515 + 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 M5390 + 0.50000ml of M5818 + 1.25000ml of M5815 + 1.25000ml of M5817 + 2.50000ml of M5498 + 2.50000ml of M5519 + 2.50000ml of M5769 + 2.50000ml of M5806 + 2.50000ml of M6121 + 226.25000ml 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)	MP83627	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 98.00000ml of W3112 + 0.50000ml of MP83626 = 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)	MP83628	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 88.50000ml of W3112 + 10.00000ml of MP83627 = 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
3958	ICV(SFAM)	MP83629	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 2.00000ml of M5295 + 98.00000ml of MP83619 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1142	ICSA ICPMS	MP83630	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 10.00000ml of M5873 + 90.00000ml of MP83619 = 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
1143	ICSAB ICPMS	MP83631	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 10.00000ml of M5873 + 10.00000ml of M5874 + 80.00000ml of MP83619 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3961	CCV	MP83632	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.20000ml of M5513 + 0.50000ml of M5476 + 0.50000ml of M5799 + 0.50000ml of M5818 + 0.50000ml of M5981 + 0.50000ml of M5983 + 1.00000ml of M5815 + 1.00000ml of M5817 + 10.00000ml of M6126 + 12.45000ml of M5515 + 12.45000ml of M5519 + 2.00000ml of M5390 + 24.95000ml of M5498 + 24.95000ml of M5516 + 24.95000ml of M5769 + 25.00000ml of M5304 + 4.50000ml of M5698 + 4.50000ml of M5751 + 4.50000ml of M5819 + 4.50000ml of M5976 + 4.50000ml of M5978 + 4.95000ml of M6033 + 5.00000ml of M6121 + 826.10000ml of W3112 = Final Quantity: 1000.000 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	MP83633	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.01000ml of M5769 + 9.99000ml of MP83619 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3894	TUNE 200PPB	MP83634	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 2.00000ml of M6055 + 2.00000ml of MP83633 + 96.00000ml of MP83619 = 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	MP83635	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 5.00000ml of M6126 + 75.00000ml of M5739 + 170.00000ml of MP83619 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2902	S8 ICPMS	MP83636	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 1.00000ml of M6033 + 2.50000ml of M5288 + 2.50000ml of M5515 + 5.00000ml of M5498 + 5.00000ml of M5516 + 5.00000ml of M5769 + 79.00000ml of MP83619 = 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
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
3880	M&B SPIKE-1	MP83717	12/18/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/20/2024

FROM 5.00000ml of M5658 + 5.00000ml of M5798 + 5.00000ml of M5800 + 5.00000ml of M5802 + 5.00000ml of M5961 + 5.00000ml of M5962 + 5.00000ml of M5981 + 5.00000ml of M5982 + 5.00000ml of M5983 + 5.00000ml of M6021 + 5.00000ml of M6023 + 5.00000ml of M6028 + 5.00000ml of M6030 + 35.00000ml of MP83619 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3881	M&B SPIKE-2	MP83718	12/18/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/20/2024

FROM 10.00000ml of M5976 + 12.50000ml of M5390 + 12.50000ml of M5515 + 12.50000ml of M5519 + 2.50000ml of M5799 + 2.50000ml of M5818 + 5.00000ml of M5496 + 42.50000ml of MP83619 = 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	MP83719	12/18/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/20/2024

FROM 0.62500ml of M5513 + 12.50000ml of M5697 + 12.50000ml of M5698 + 12.50000ml of M5819 + 11.87500ml of MP83619 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3900	M&B SPIKE-4	MP83720	12/18/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/20/2024

FROM 6.25000ml of M5498 + 6.25000ml of M5769 + 6.25000ml of M5806 + 6.25000ml of MP83619 = 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
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP83729	12/20/2024	12/21/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/20/2024

FROM 1.00000ml of M6126 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP83730	12/20/2024	12/21/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/20/2024

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
1341	Hg 0.2 PPB STD	MP83731	12/20/2024	12/21/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/20/2024

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP83729 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP83732	12/20/2024	12/21/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/20/2024

FROM 2.50000ml of M6126 + 245.00000ml of W3112 + 2.50000ml of MP83729 = 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
1343	Hg 5.0 PPB STD	MP83733	12/20/2024	12/21/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/20/2024

FROM 2.50000ml of M6126 + 242.50000ml of W3112 + 5.00000ml of MP83729 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP83734	12/20/2024	12/21/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/20/2024

FROM 2.50000ml of M6126 + 240.00000ml of W3112 + 7.50000ml of MP83729 = 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
1345	Hg 10.0 PPB STD	MP83735	12/20/2024	12/21/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/20/2024

FROM 2.50000ml of M6126 + 237.50000ml of W3112 + 10.00000ml of MP83729 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP83736	12/20/2024	12/21/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/20/2024

FROM 2.50000ml of M5953 + 2.50000ml of M6126 + 245.00000ml 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
1351	ICB (Hg 0.00 PPB SOLUTION)	MP83737	12/20/2024	12/21/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/20/2024

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
1358	CCV (Hg 5.0 PPB SOLUTION)	MP83738	12/20/2024	12/21/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/20/2024

FROM 485.00000ml of W3112 + 5.00000ml of M6126 + 10.00000ml of MP83729 = 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
1352	CCB (Hg 0.00 PPB SOLUTION)	MP83739	12/20/2024	12/21/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/20/2024

FROM 495.00000ml of W3112 + 5.00000ml of M6126 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP83740	12/20/2024	12/21/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/20/2024

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP83729 = 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
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP83741	12/20/2024	12/21/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/20/2024

FROM 2.50000ml of M6126 + 240.50000ml of W3112 + 7.00000ml of MP83729 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
887	AQUA REGIA FOR HG ON 7471A	MP83742	12/20/2024	12/21/2024	Mohan Bera	None	None	Sarabjit Jaswal 12/20/2024

FROM 150.00000ml of M6121 + 50.00000ml of M6126 = Final Quantity: 200.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP83743	12/20/2024	12/21/2024	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 12/20/2024

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6121 = Final Quantity: 500.000 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 #
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

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 #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV-1014	02/05/2025	08/07/2024 / jaswal	04/20/2021 / bin	M5295

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CHEMICAL RECEIPT LOG BOOK

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.	57056 / Ba, 1000 PPM, 125 ml	072122	07/21/2025	08/07/2024 / jaswal	09/18/2022 / bin	M5390

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

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

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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.	58126 / Fe, 10000 PPM, 500 ml	092122	09/21/2025	08/01/2024 / Jaswal	03/17/2023 / bin	M5515

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	022123	11/06/2025	11/06/2024 / kareem	03/17/2023 / bin	M5516

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 #
PCI Scientific Supply, Inc.	26397-103 / PTFE BOILING STONES	W126678	02/28/2025	01/20/2024 / jaswal	06/12/2023 / jaswal	M5585

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

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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.	58025 / Mn, 1000 PPM, 500 ml	102623	10/26/2026	04/18/2024 / jaswal	10/27/2023 / jaswal	M5698

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 #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	091823	09/18/2026	05/24/2024 / Jaswal	01/03/2024 / bin	M5769

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.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

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

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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	122023	12/20/2026	03/06/2024 / jaswal	02/09/2024 / jaswal	M5818

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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CHEMICAL RECEIPT LOG BOOK

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	01/01/2025	07/01/2024 / mohan	03/30/2023 / mohan	M5953

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	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5978

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

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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.	57038 / Sr, 1000 PPM, 125 ml	031524	03/15/2027	07/01/2024 / Jaswal	06/11/2024 / Jaswal	M5982

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.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/07/2024 / Jaswal	01/03/2024 / Jaswal	M6033

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 #
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

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

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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	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

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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.

Absolute Standards, Inc.
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Certified Reference Material CRM

M6028

R 8/15/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

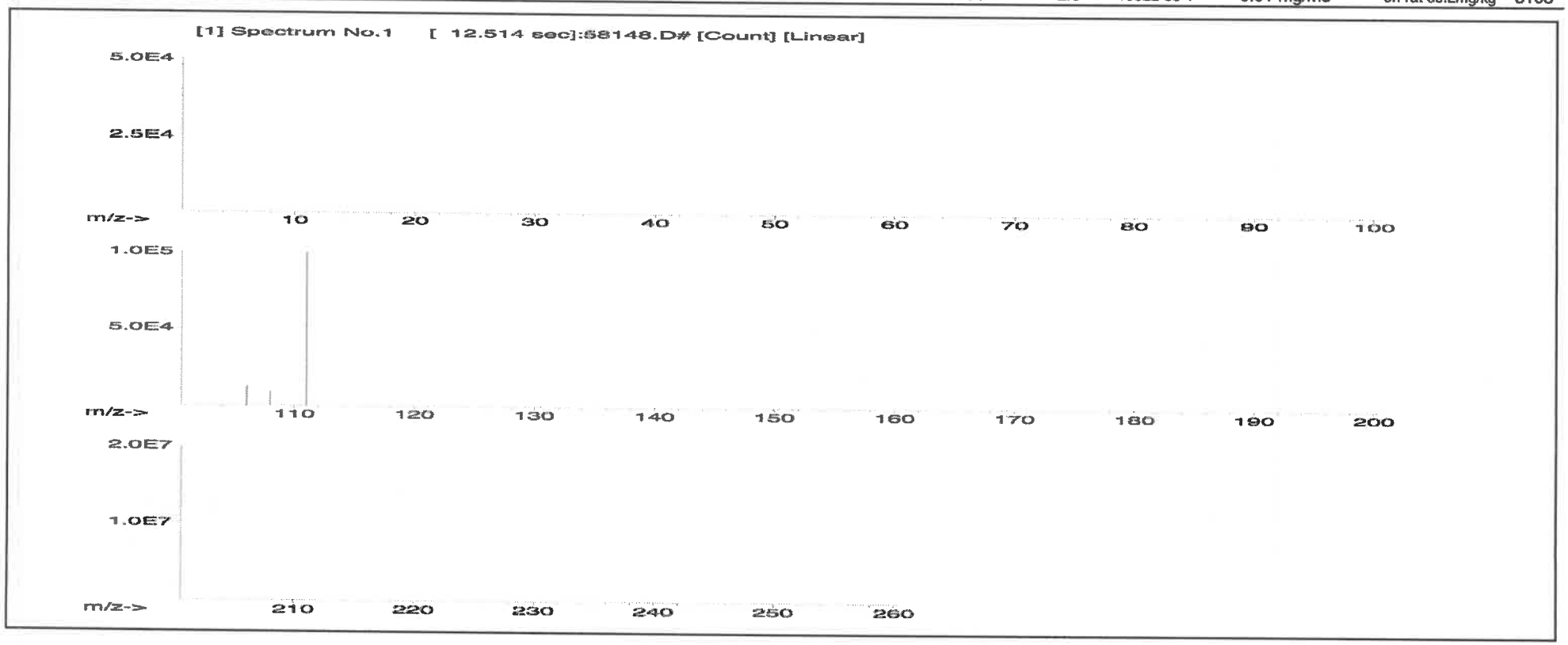
CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
Lot Number:	**070124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Cadmium (Cd)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070127				
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):	2000.07	0.100	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	070124
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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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:

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

R: 8/15/24 M6025

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

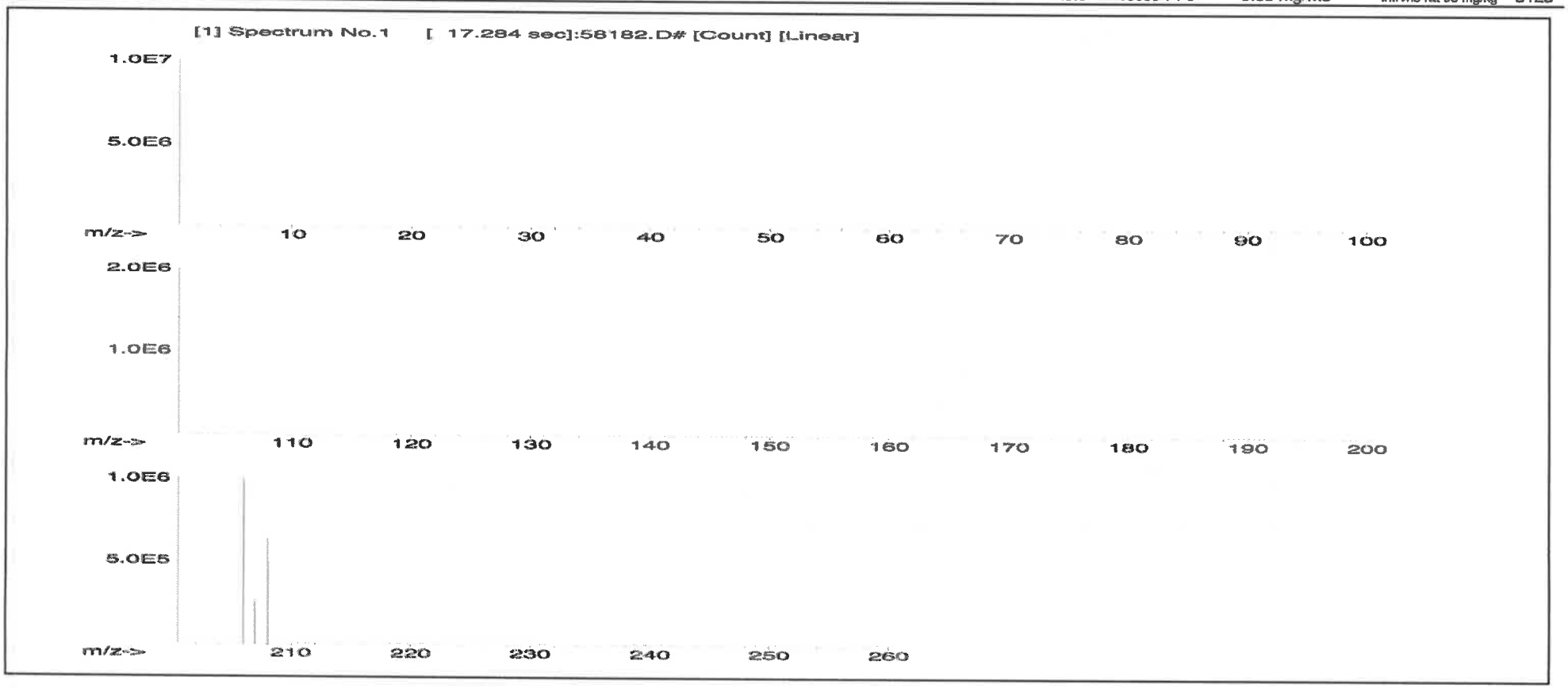
Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

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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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	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.
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* 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.
* 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).

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
Expd 12+. 5 7x4
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

Certificate of Analysis
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

300 Technology Drive
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



Absolute Standards, Inc.
800-368-1131
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Certified Reference Material CRM

M5288 R: 07/21/2022

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

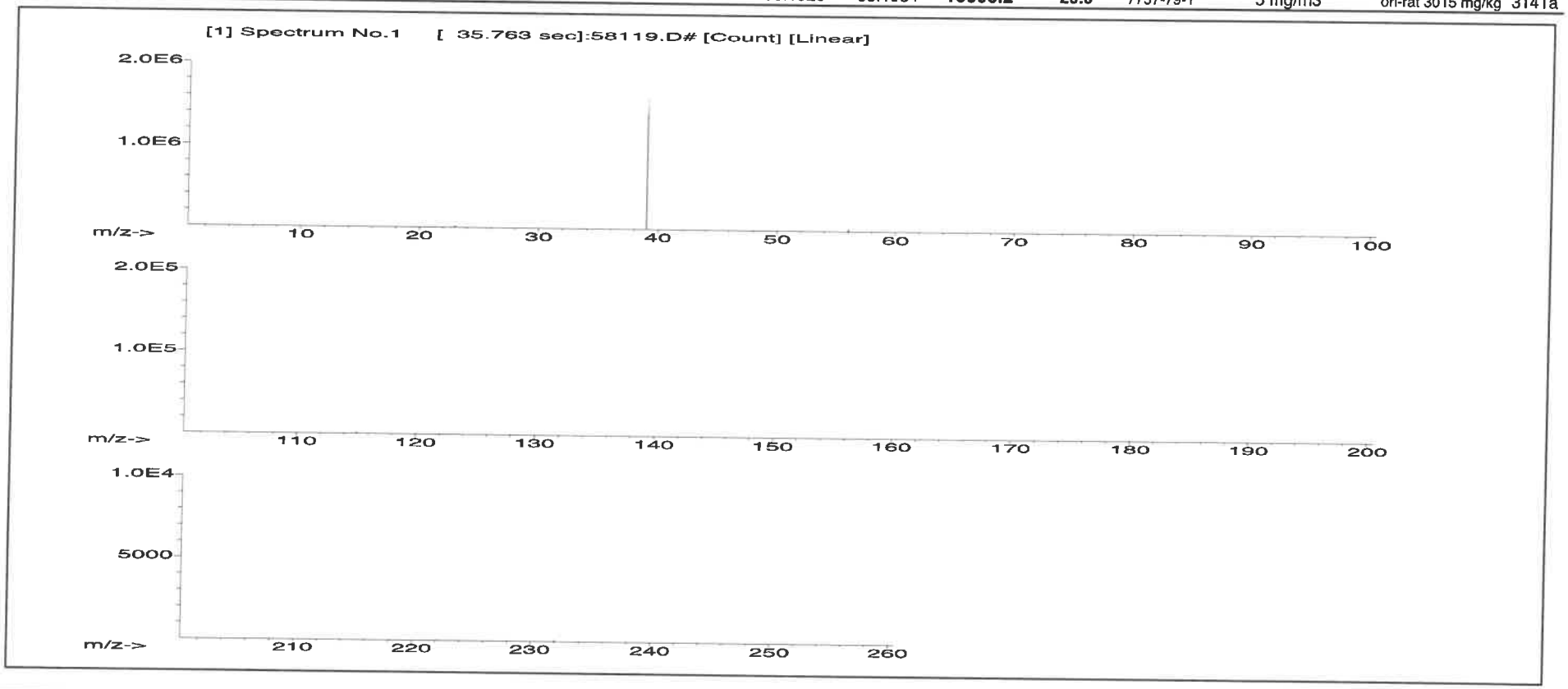
Part Number: 58119
Lot Number: 071122
Description: Potassium (K)

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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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).

R : 4/20/21

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.

Contains Metals in Dilute Acidic or
Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

M5291
M5292
M5293
M5294
M5295

(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.

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

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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

1.0 ACCREDITATION / REGISTRATION

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

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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

R: 09/08/22 (BA)

Certified Reference Material CRM

M5387 . M5389 . M5390 . M5391 . M5392

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

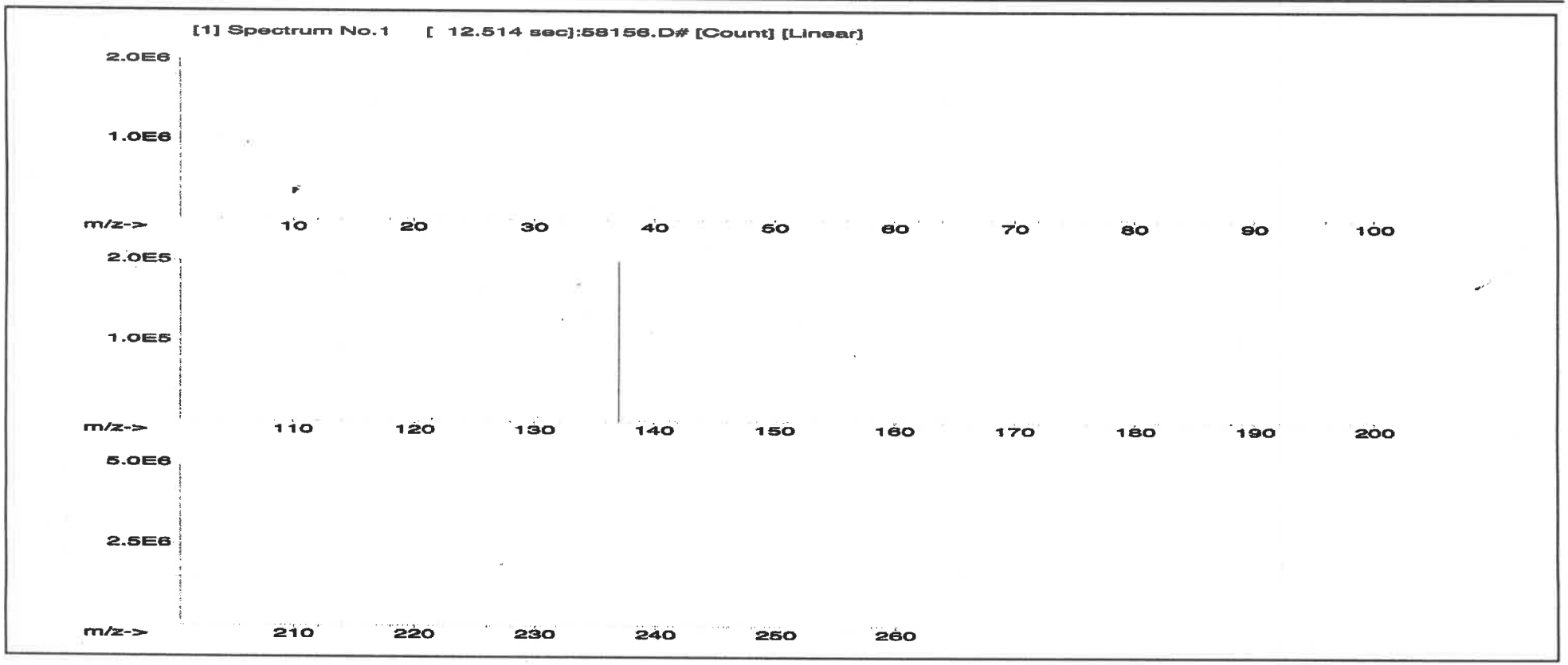
CERTIFIED WEIGHT REPORT:

		Lot #		
Part Number:	**57056**	**Solvent:**	20510011	Nitric Acid
Lot Number:	**072122**			
Description:	**Barium (Ba)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	072125			
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	072122
Reviewed By:	Pedro L. Rentas	072122

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	3.82426	**1000.0**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



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:

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

IN5497 - IN5498 R: 03/17/23 (BP)

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

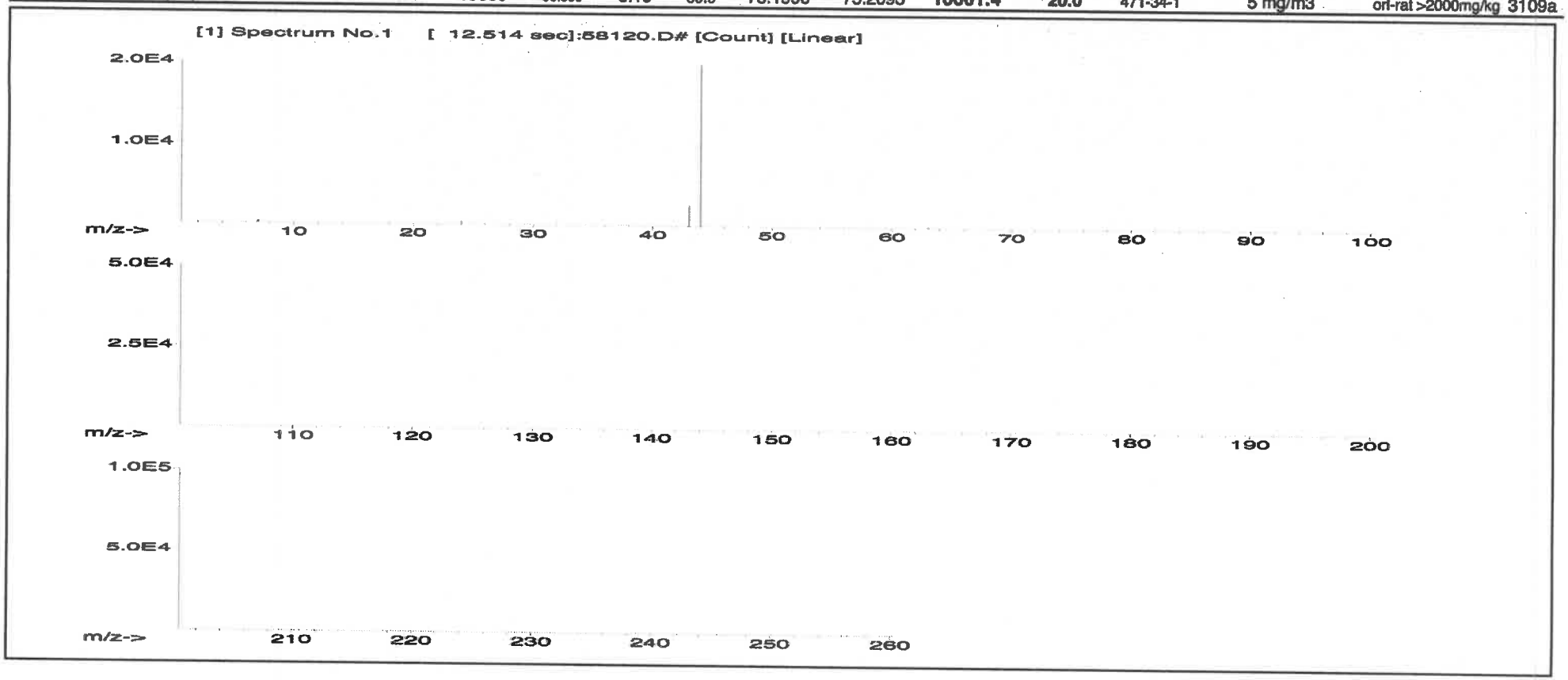
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	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

Pedro Rentas
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).

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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

M 5513 R: 03/17/23 BF

CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 061522
Description: Lead (Pb)

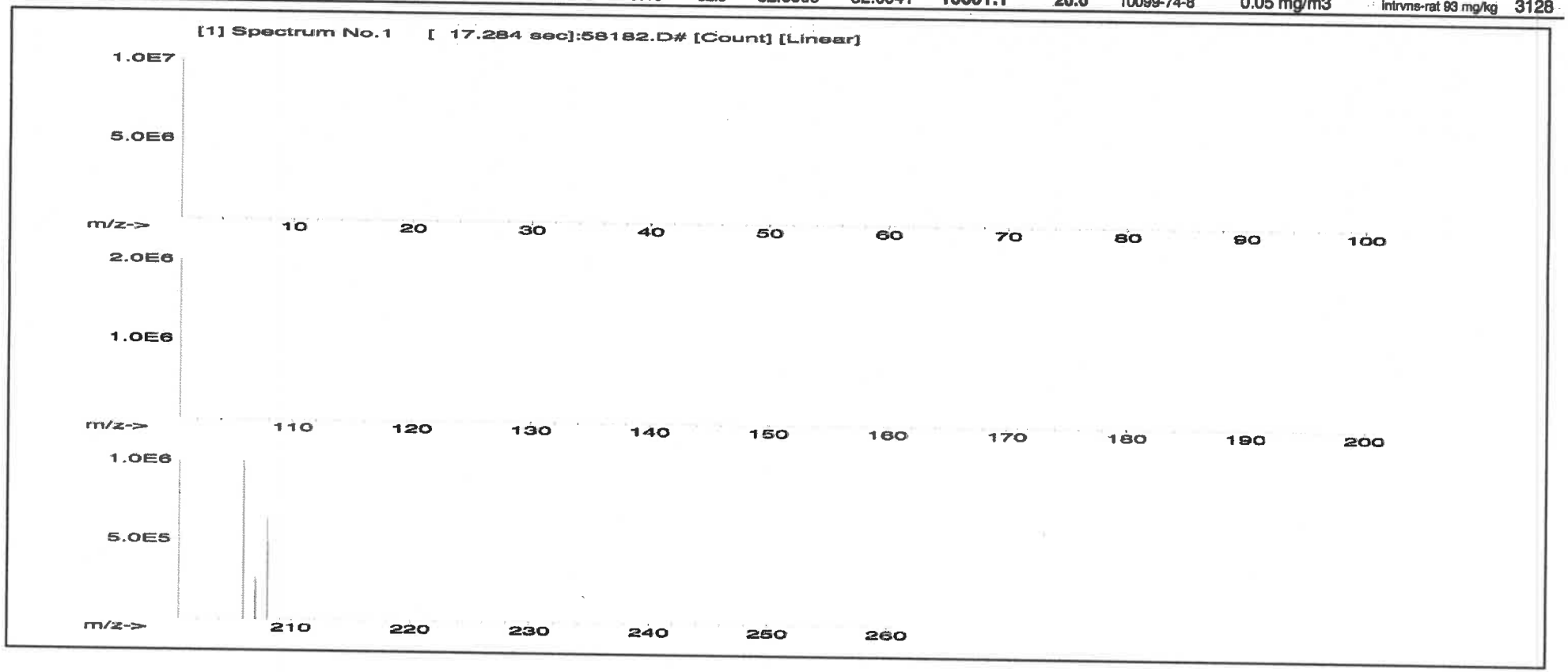
Expiration Date: 061525
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	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



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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M5514 , M5515 R: 03/17/23

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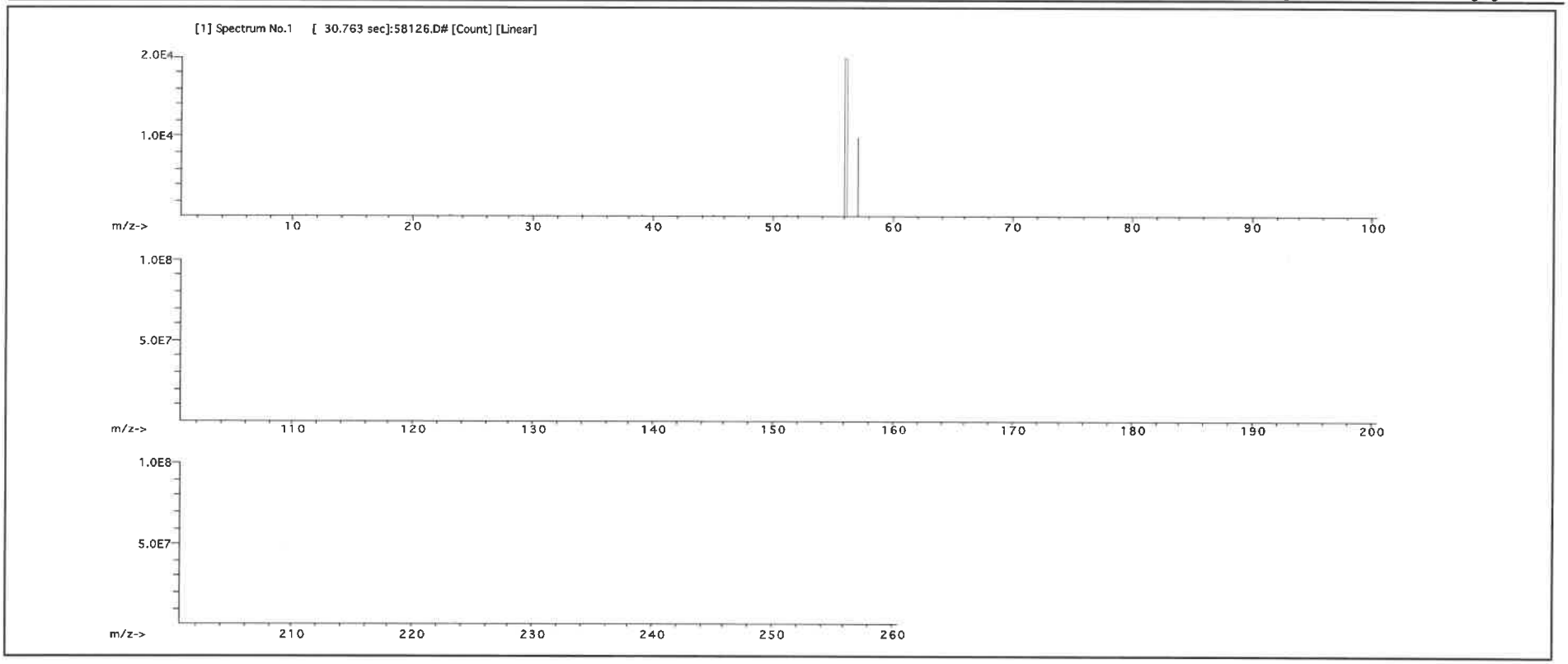
CERTIFIED WEIGHT REPORT:

Part Number:	**58126**		**Lot #**		
Lot Number:	**092122**		**Solvent:**	20510011	Nitric Acid
Description:	**Iron (Fe)**		7.0%	350.0 (mL)	Nitric Acid
Expiration Date:	092125				
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):	5000.1	0.12	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	092122
Reviewed By:	Pedro L. Rentas	092122

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	2224912-500	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



P-835 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	<0.10	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	<0.05
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:

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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M546 M517 R: 03/17/22 BH

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CERTIFIED WEIGHT REPORT:

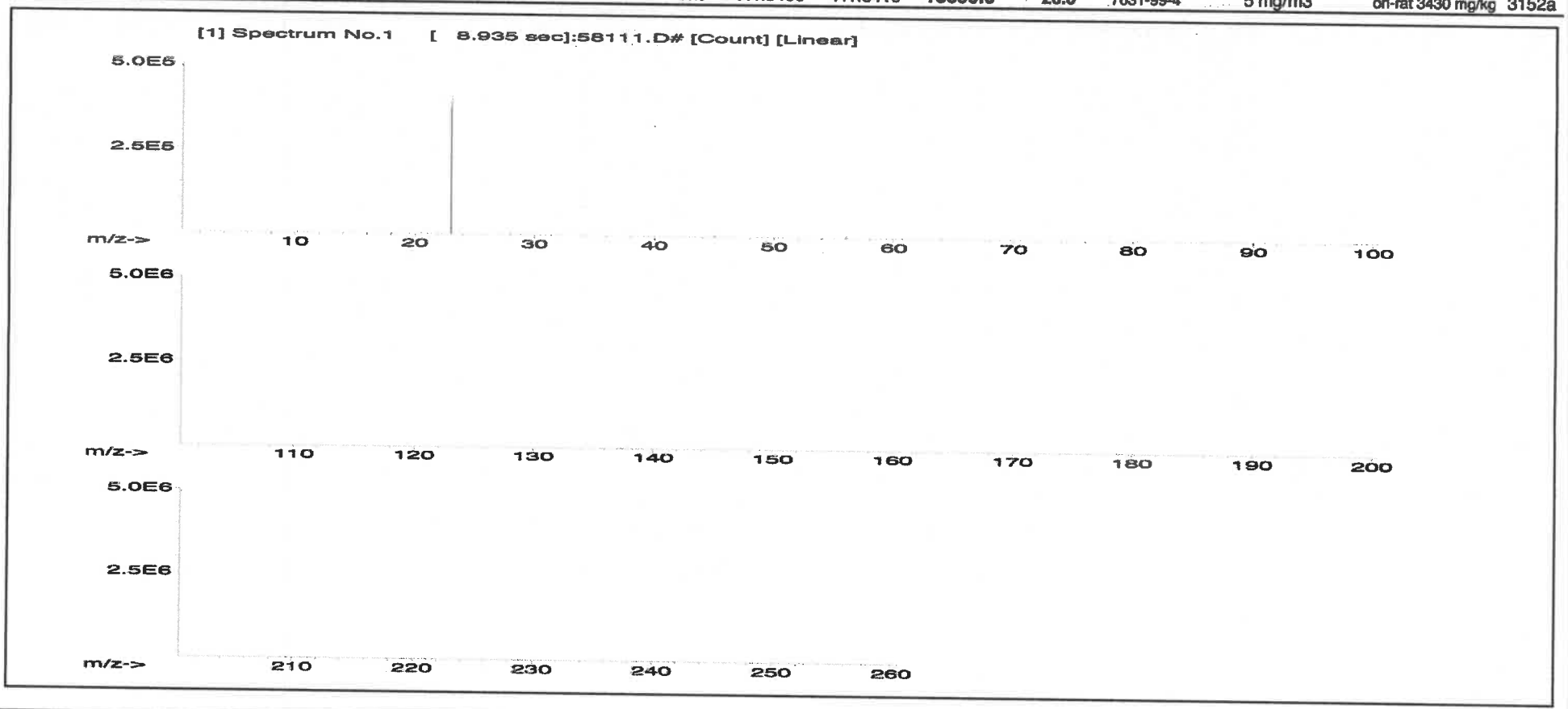
Part Number: 58111
Lot Number: 022123
Description: Sodium (Na)

Expiration Date: 022126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41 ± 0.06 Flask Uncertainty

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	± 5E-05 Balance Uncertainty

Formulated By: Lawrence Barry 022123
Reviewed By: Pedro L. Rentas 022123

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	111.5410	**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	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	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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* 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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M5519. M5520 BH R:03/17/23

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CERTIFIED WEIGHT REPORT:

Part Number: 58119
Lot Number: 120822
Description: Potassium (K)

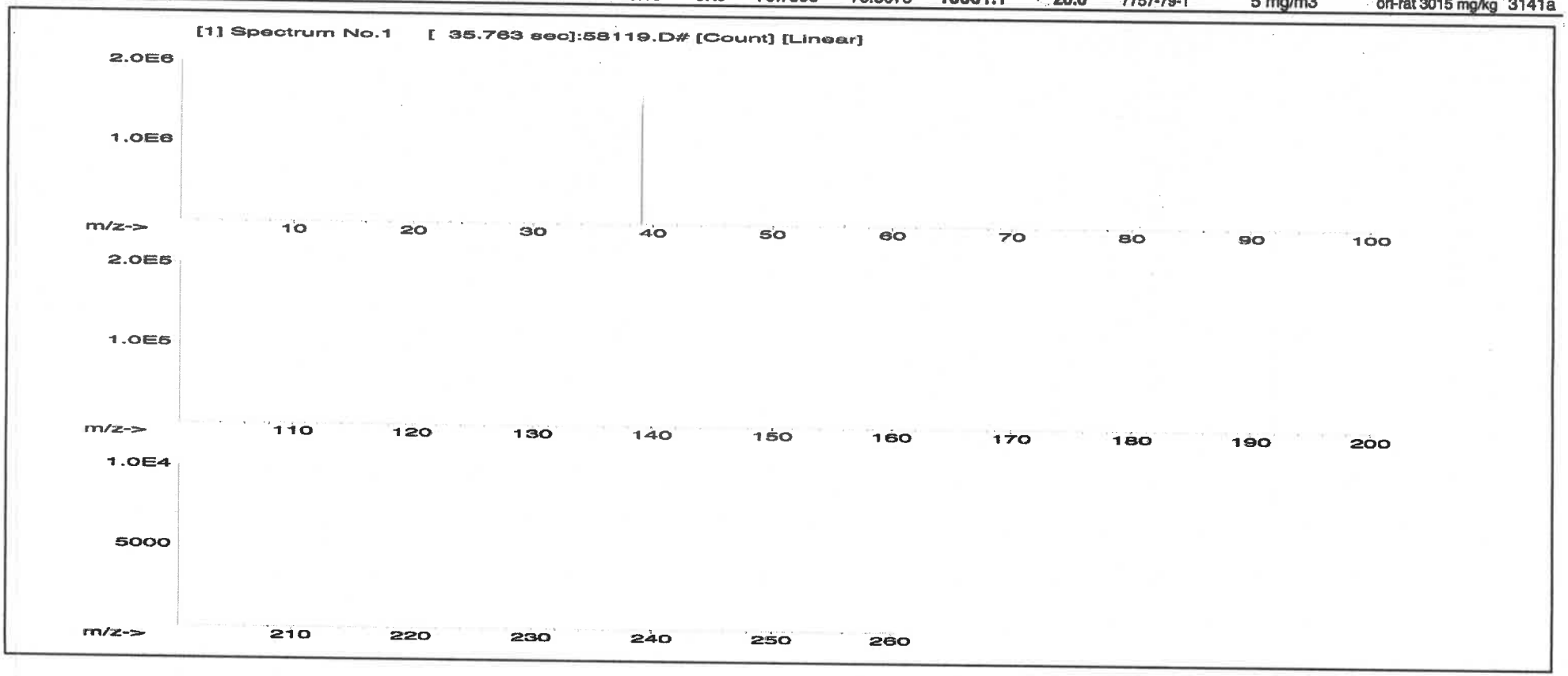
Expiration Date: 120825
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.4

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.06 Flask Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 120822
Pedro Rentas
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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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:

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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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* 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).

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-55114-BOI5021-061223

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M5658 R ! 8/25/23

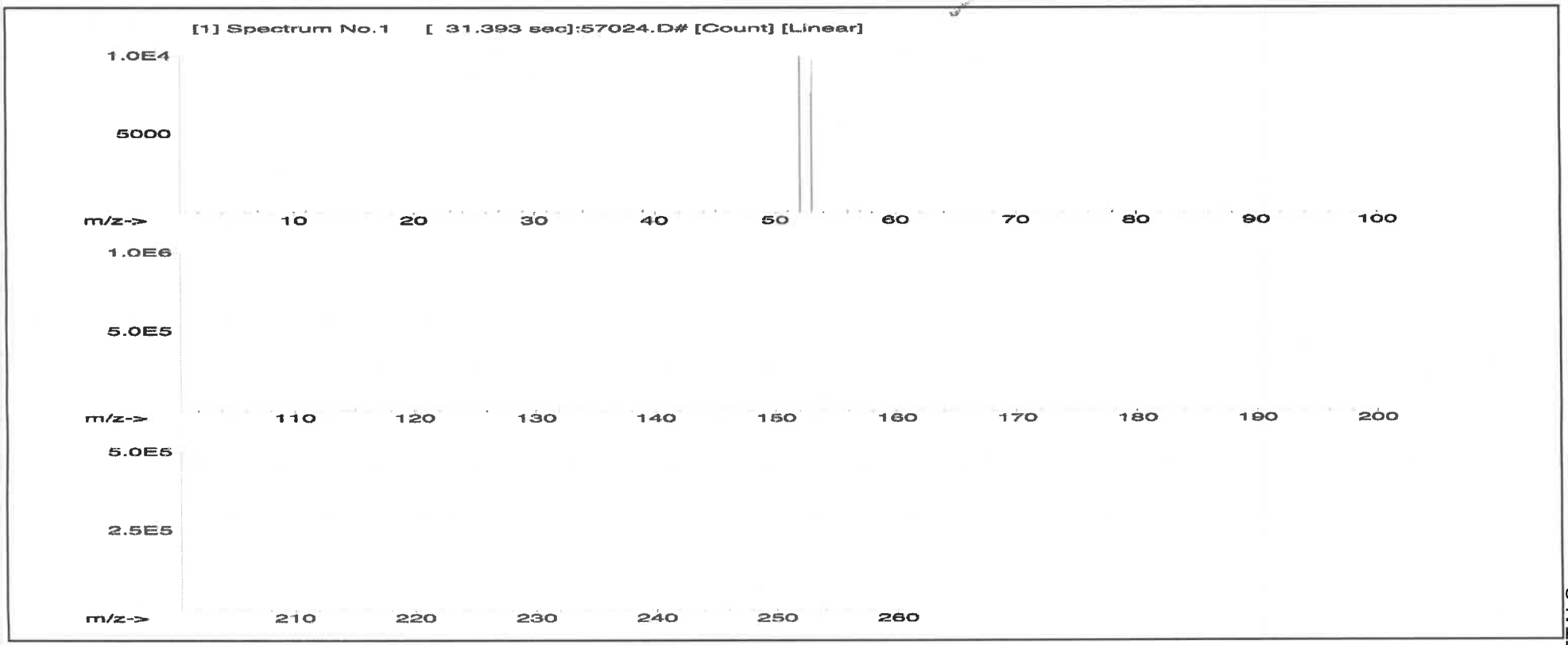
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CERTIFIED WEIGHT REPORT:

		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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M5697 R: 10/27/23

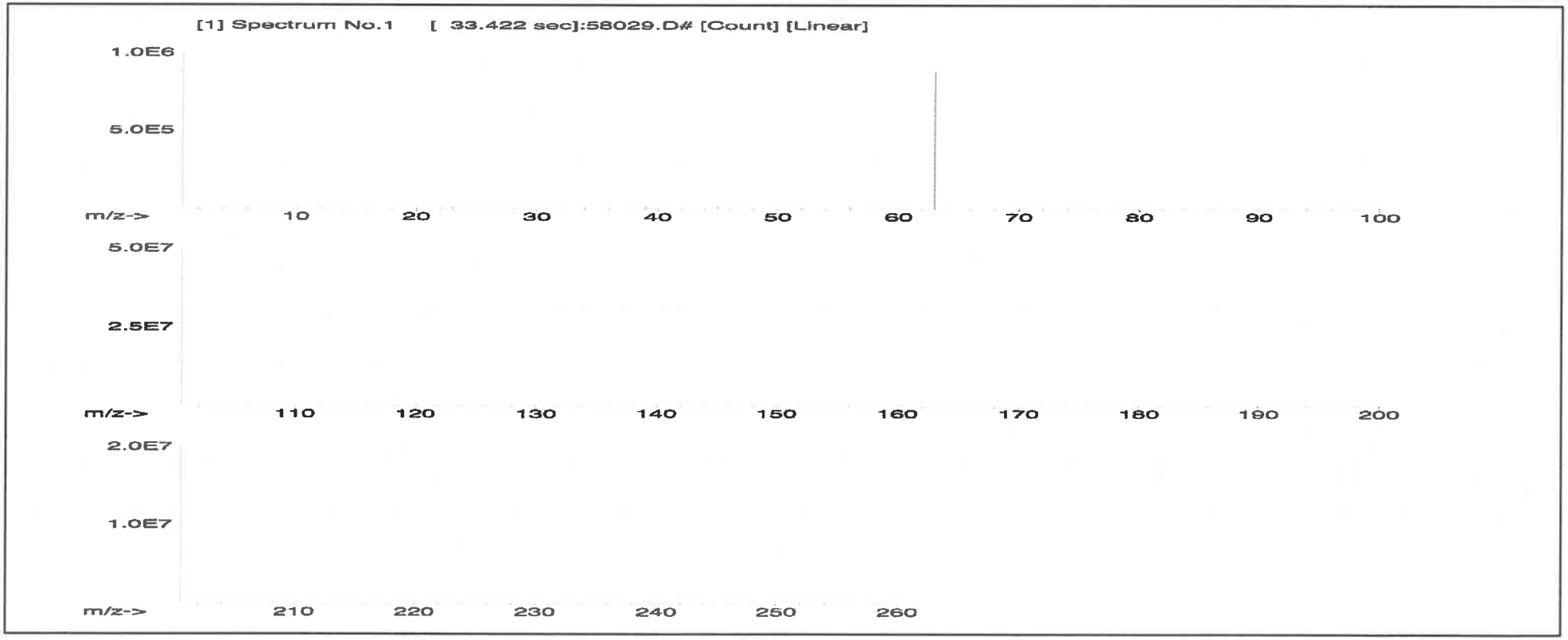
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Copper (Cu)**			
		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. Copper(II) nitrate trihydrate (Cu)	58129	100223	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	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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* 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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M5648 R: 10/27/23

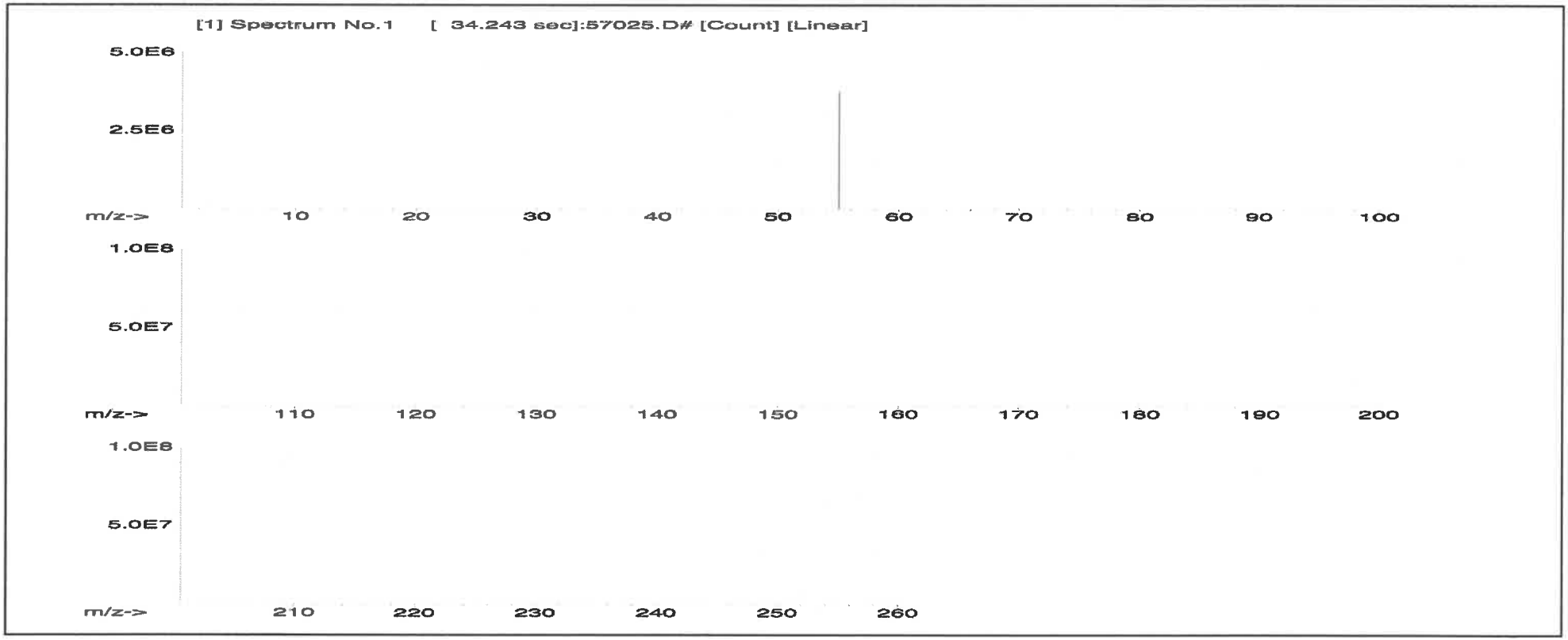
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58025**	24002546	Nitric Acid	
Lot Number:	**102623**			
Description:	**Manganese (Mn)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	102626			
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:	Benson Chan	102623
Reviewed By:	Pedro L. Rentas	102623

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. Manganese(II) nitrate tetrahydrate (Mn)	58125	071123	0.1000	300.0	0.084	1000	10000.1	**1000.0**	**2.1**	20694-39-7	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:

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 balances that are calibrated with weights traceable to NIST (see above).
* 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).

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R: 8/25/23 M5751

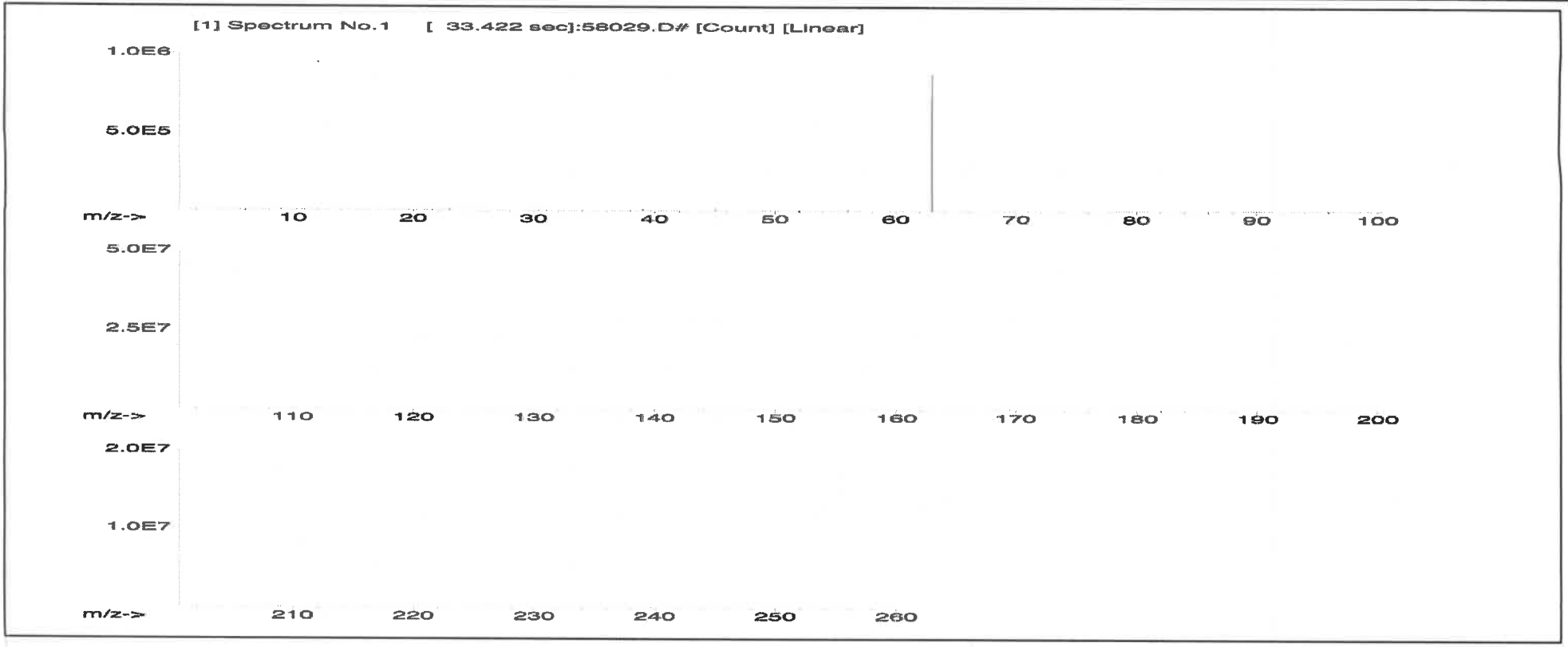
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CERTIFIED WEIGHT REPORT:

		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:

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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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M5768 M5769 (BP) R:1/3/24

Certified Reference Material CRM

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CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Expiration Date: 091826
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

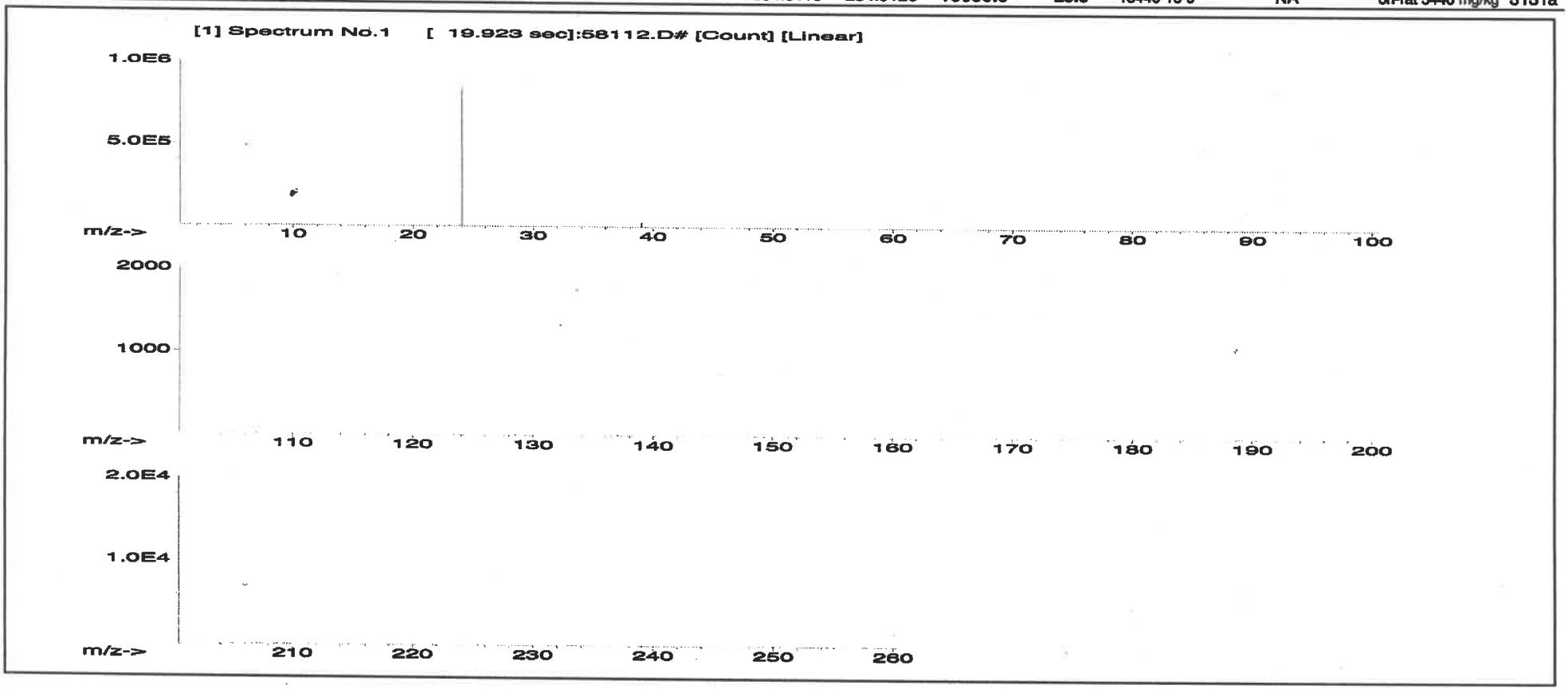
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

M5768, M5769 (BP) R: 1/3/24

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	091823
Reviewed By:	Pedro L. Rentas	091823

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	234.9118	234.9126	**10000.0**	**20.0**	13446-18-9	NA	ori-rat 5440 mg/kg	3131a



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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	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.

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R: 02/09/24 M5798

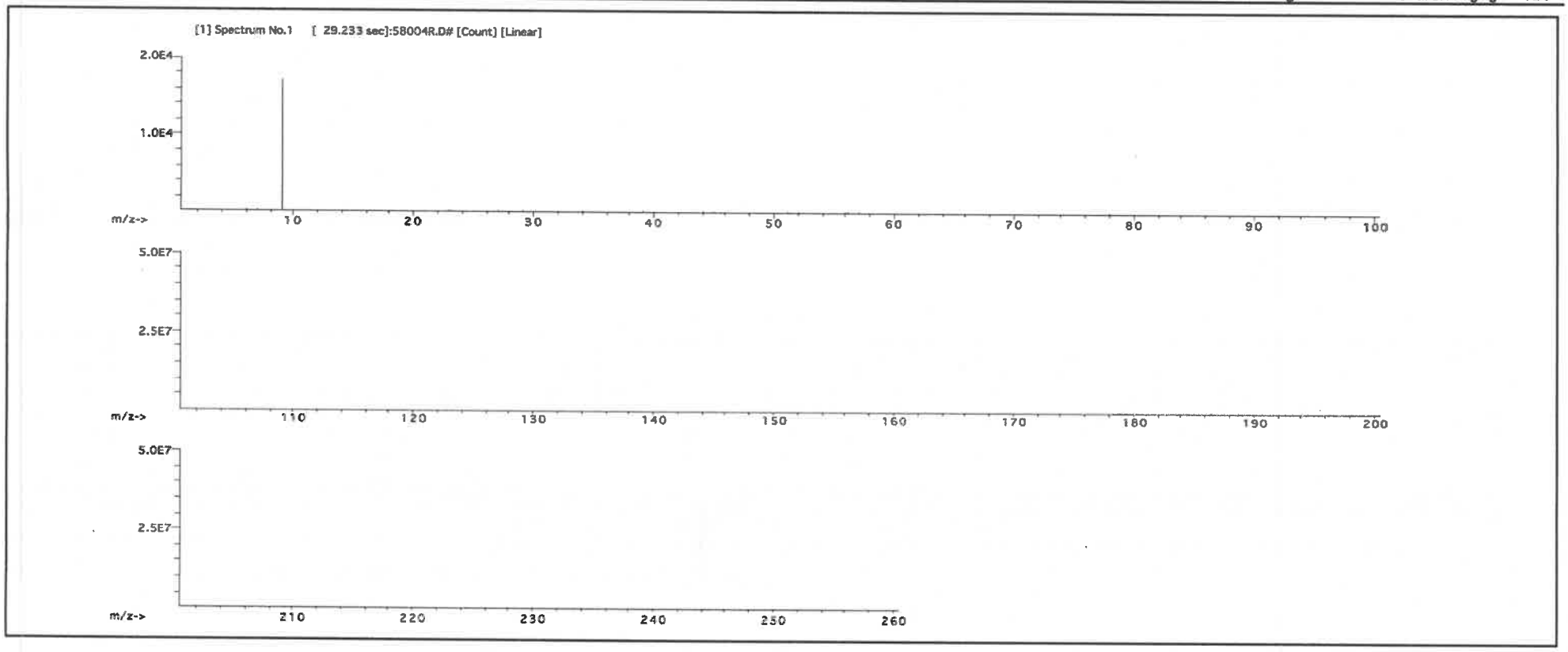
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
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



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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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

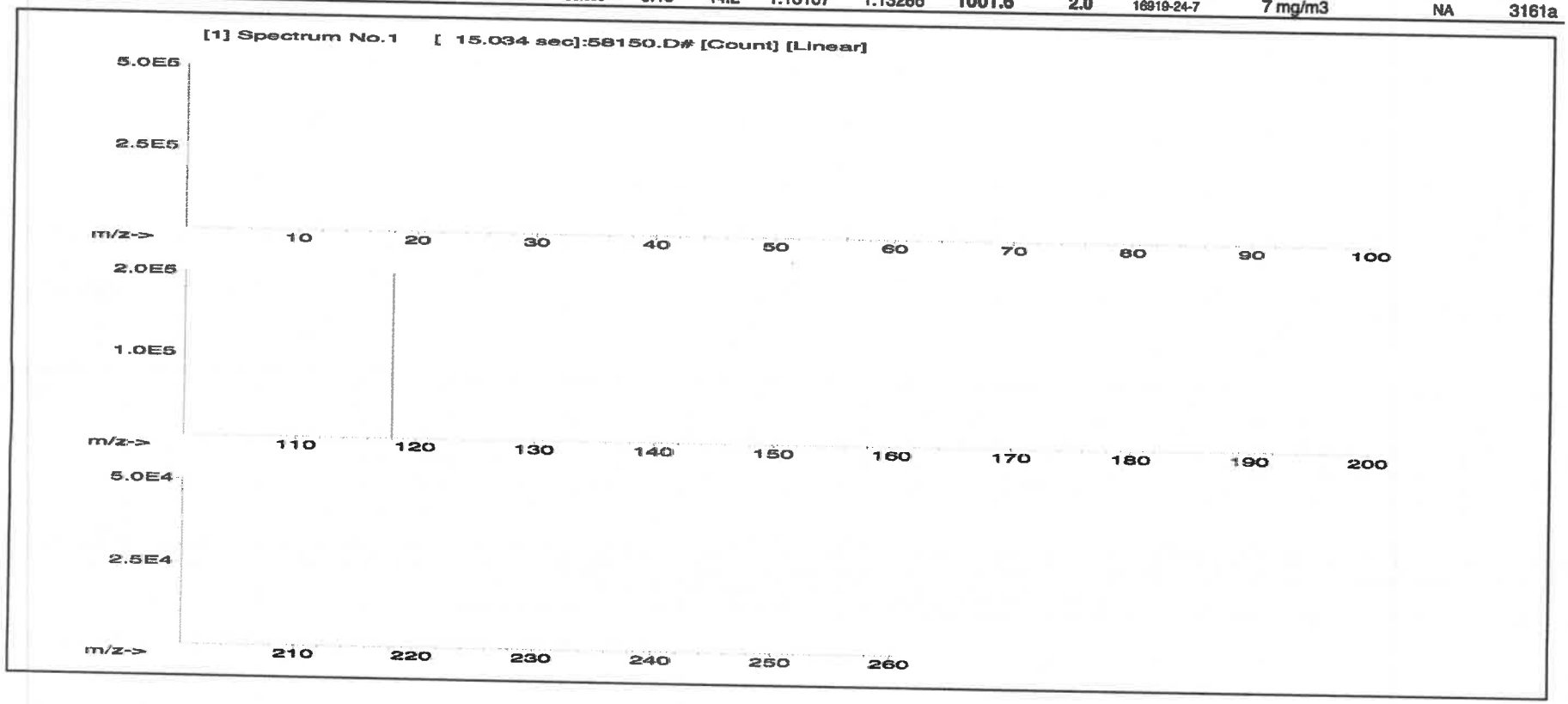
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	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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R: 02/09/24 IM5800 BH

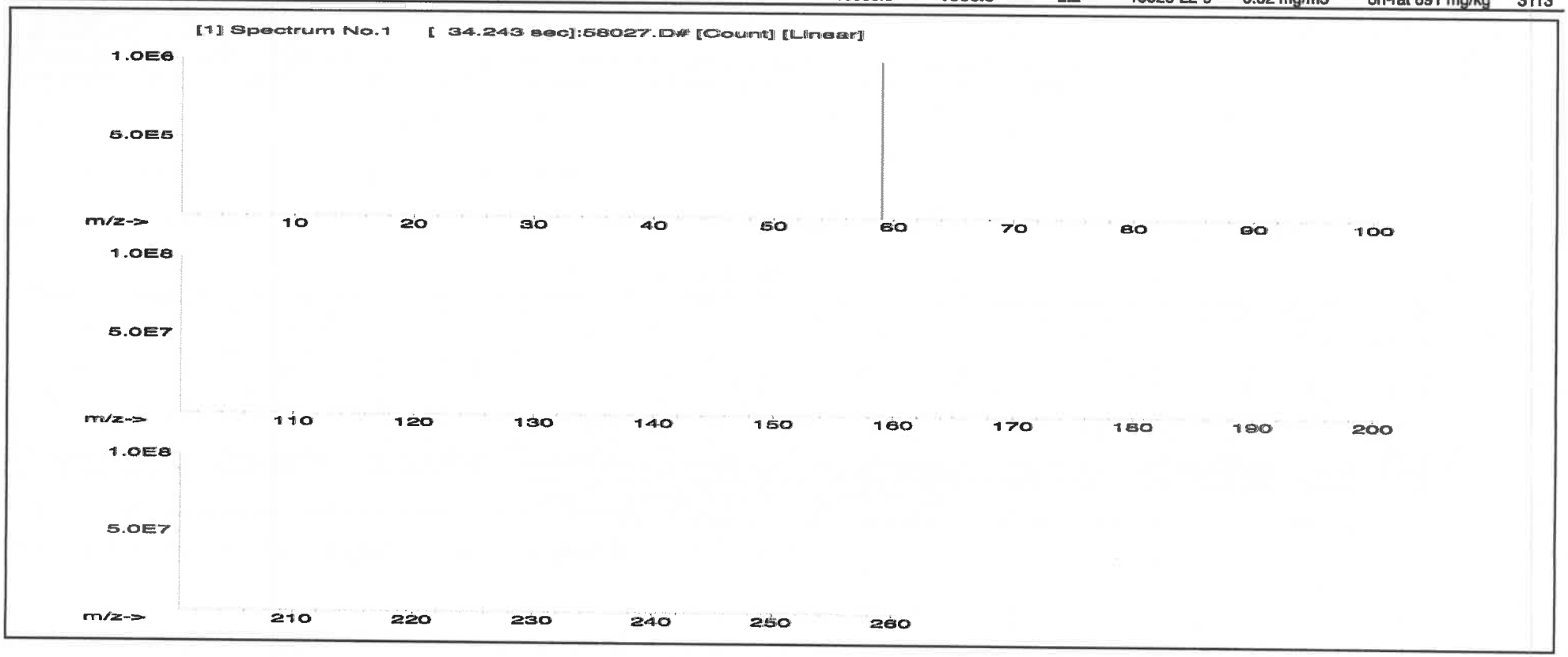
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CERTIFIED WEIGHT REPORT:

		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.

* 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 M5801 BH

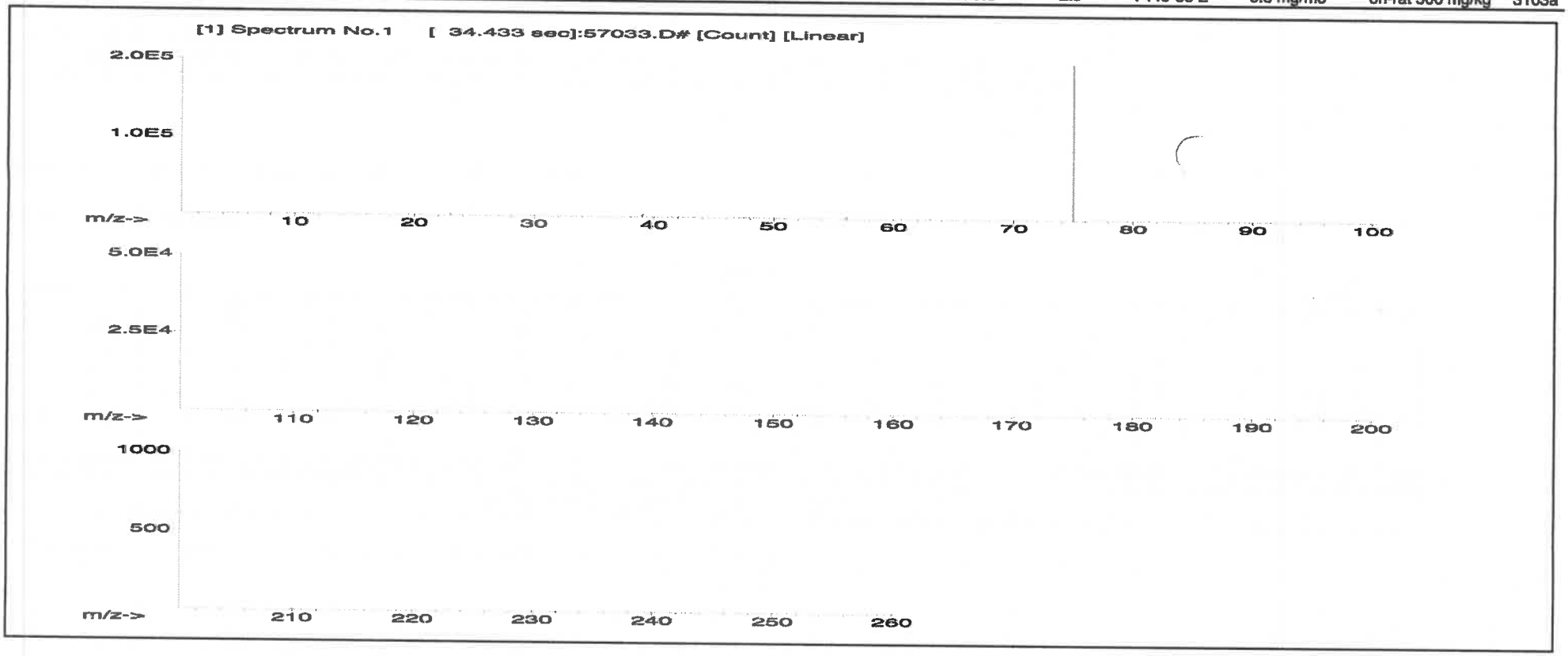
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:
Part Number:	**57033**		
Lot Number:	**111323**	24002546	Nitric Acid
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.

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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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R1 02/09/24. M58165

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CERTIFIED WEIGHT REPORT:

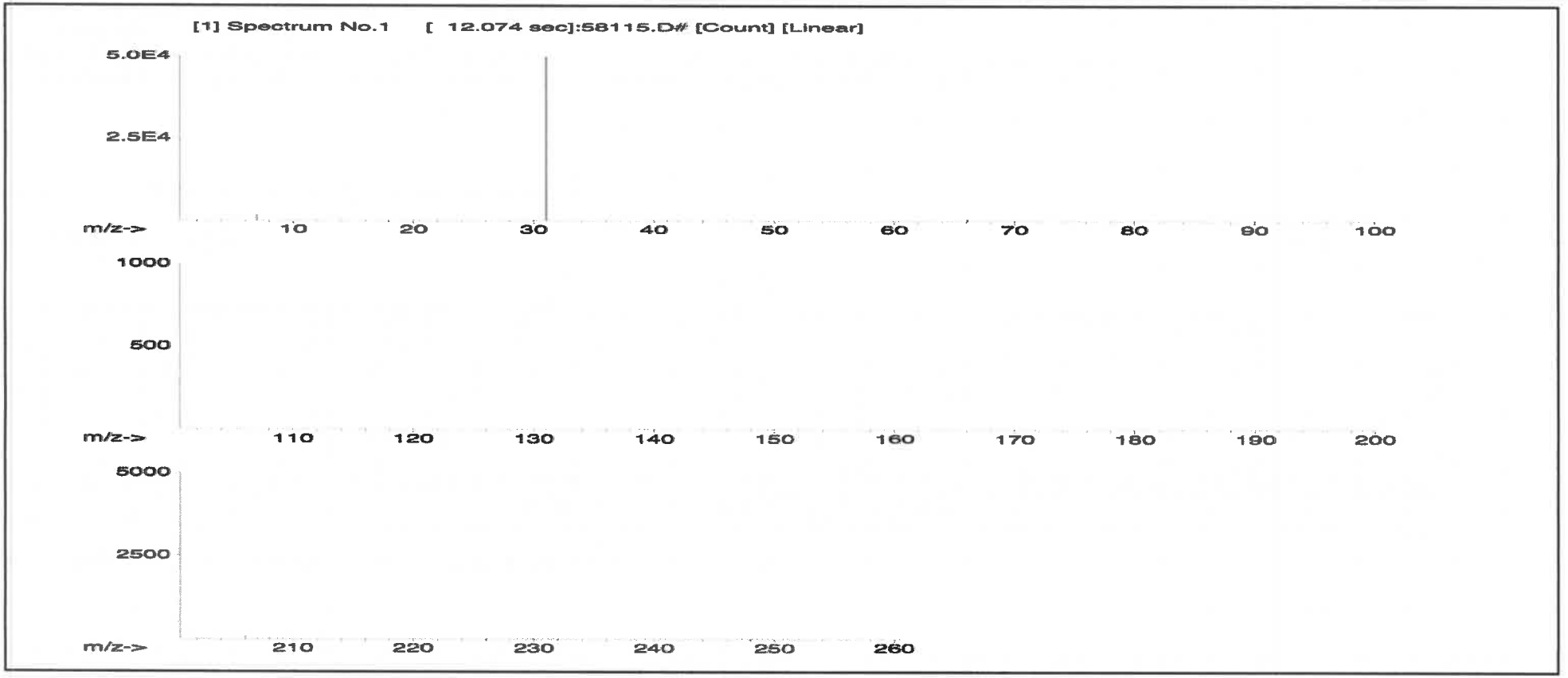
Part Number: 57115
Lot Number: 041723
Description: Phosphorous (P)

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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* 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 M5817

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CERTIFIED WEIGHT REPORT:

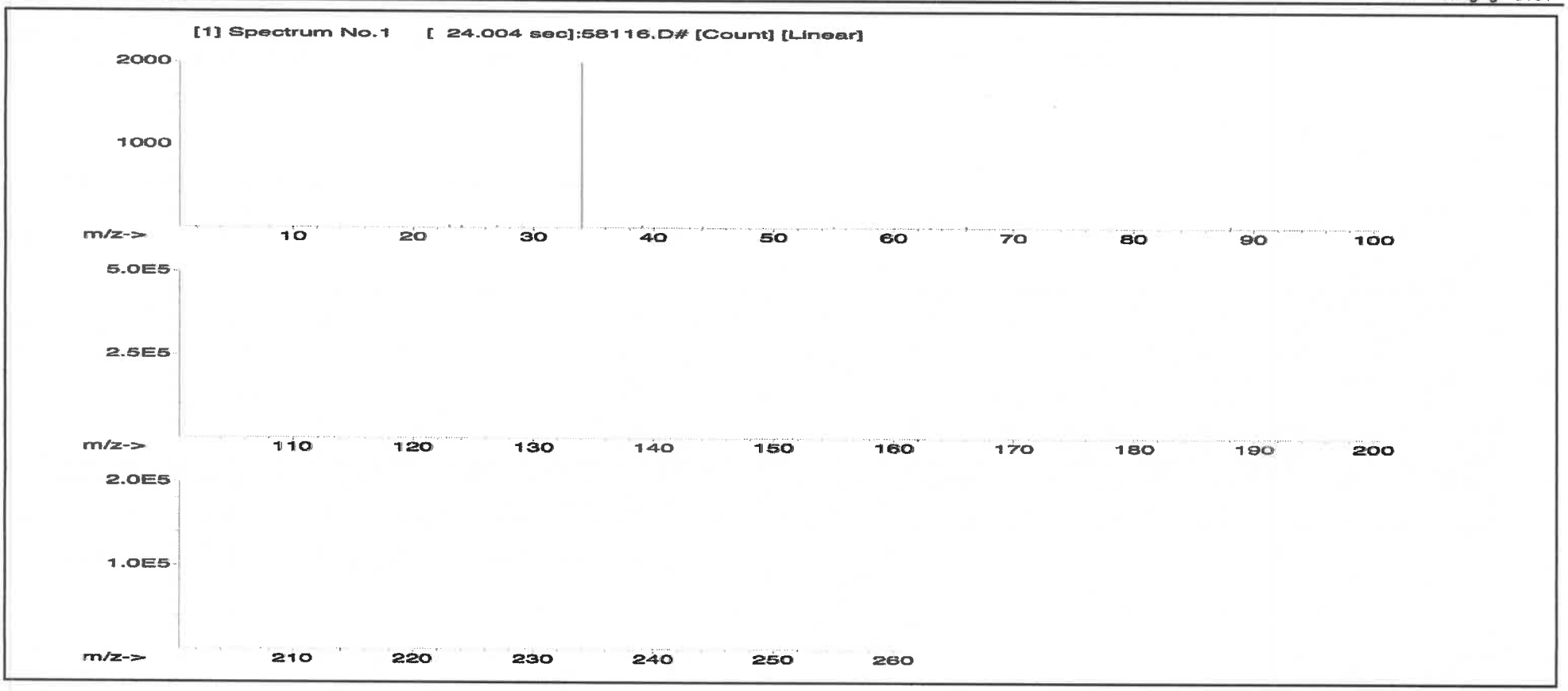
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

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	orl-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:

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R: 02/09/24 M.5818
Lot #

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CERTIFIED WEIGHT REPORT:

Part Number: 57014
Lot Number: 122023
Description: Silicon (Si)

Expiration Date: 122026
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1999.48 ± 0.058 Flask Uncertainty

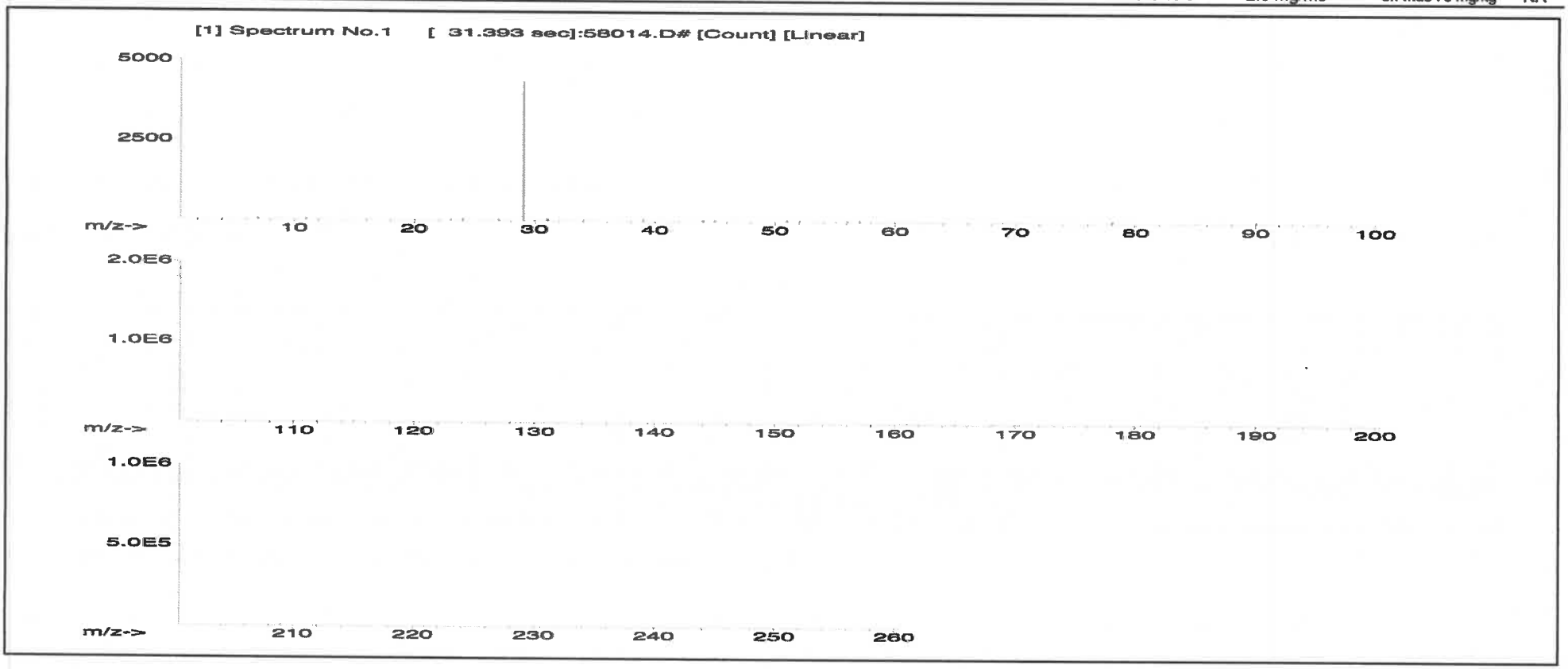
Solvent: 24002546 Nitric Acid
2% 40.0 (mL) Nitric Acid

5E-05 Balance Uncertainty

Aleah O'Brady
Formulated By: Aleah O'Brady 122023

Pedro Rentas
Reviewed By: Pedro L. Rentas 122023

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 hexafluorosilicate (Si)	IN009	SID082022A1	1000	99.999	0.10	14.4	13.8854	13.8855	**1000.0**	**2.0**	16919-19-0	2.5 mg/m3	orl-mus 70 mg/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	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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R: 02/09/24 M5819

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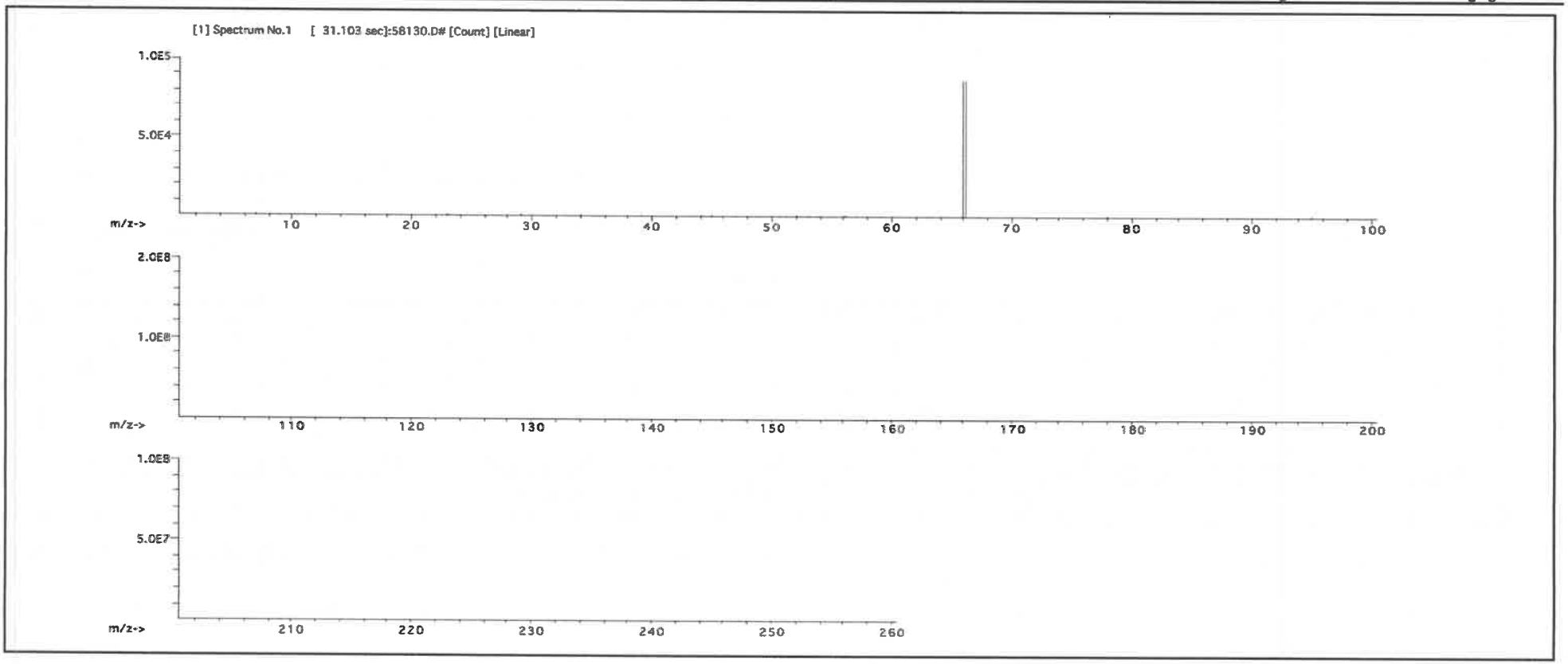
CERTIFIED WEIGHT REPORT:

Part Number:	**58030**			
Lot Number:	**111623**			
Description:	**Zinc (Zn)**			
		Solvent:	24002546	Nitric Acid
		2%	60.0 (mL)	Nitric Acid
Expiration Date:	111626			
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):	3000.4	0.06	Flask Uncertainty	

Lot #

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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* 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).

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

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 - 32
MSS53
3/30/23

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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5961 R: 6/11/24

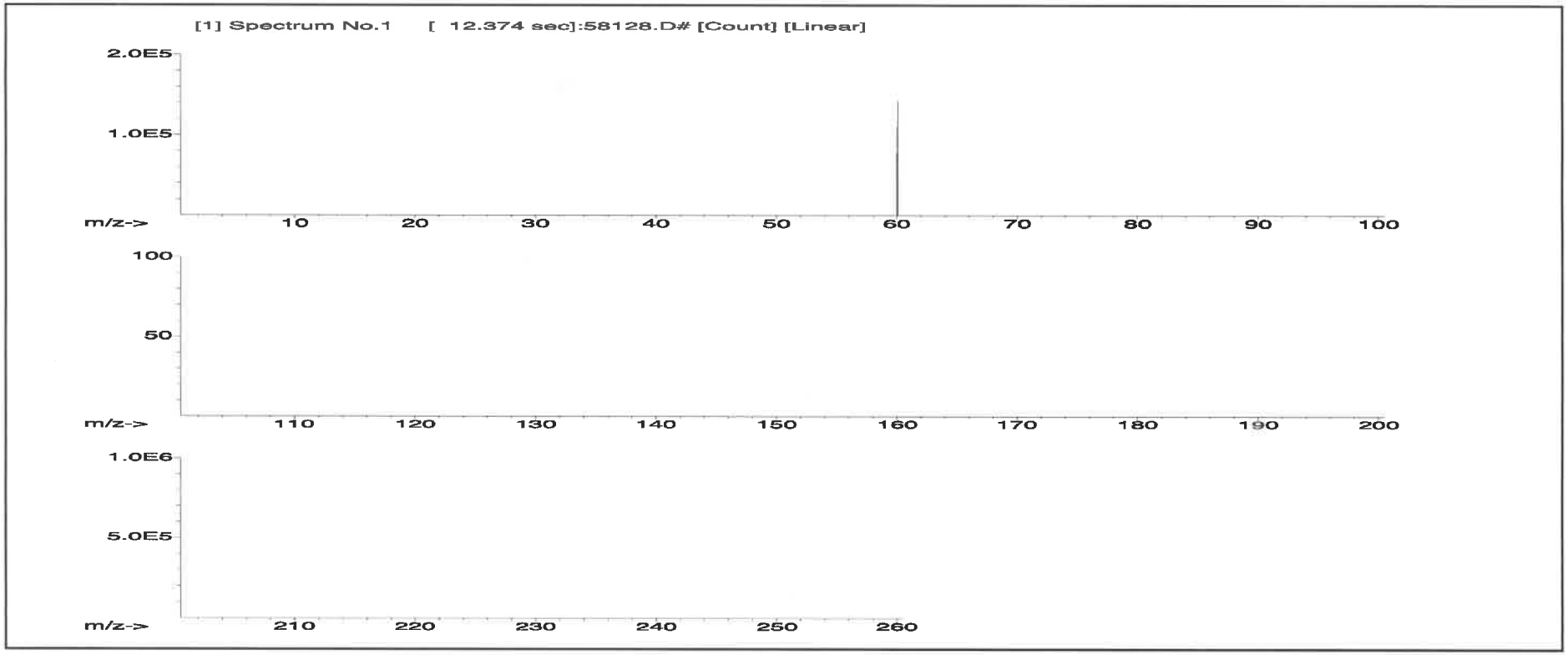
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57028**		**Lot #**		
Lot Number:	**041124**	**Solvent:**	24002546	Nitric Acid	
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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Certified Reference Material CRM

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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	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).

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www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

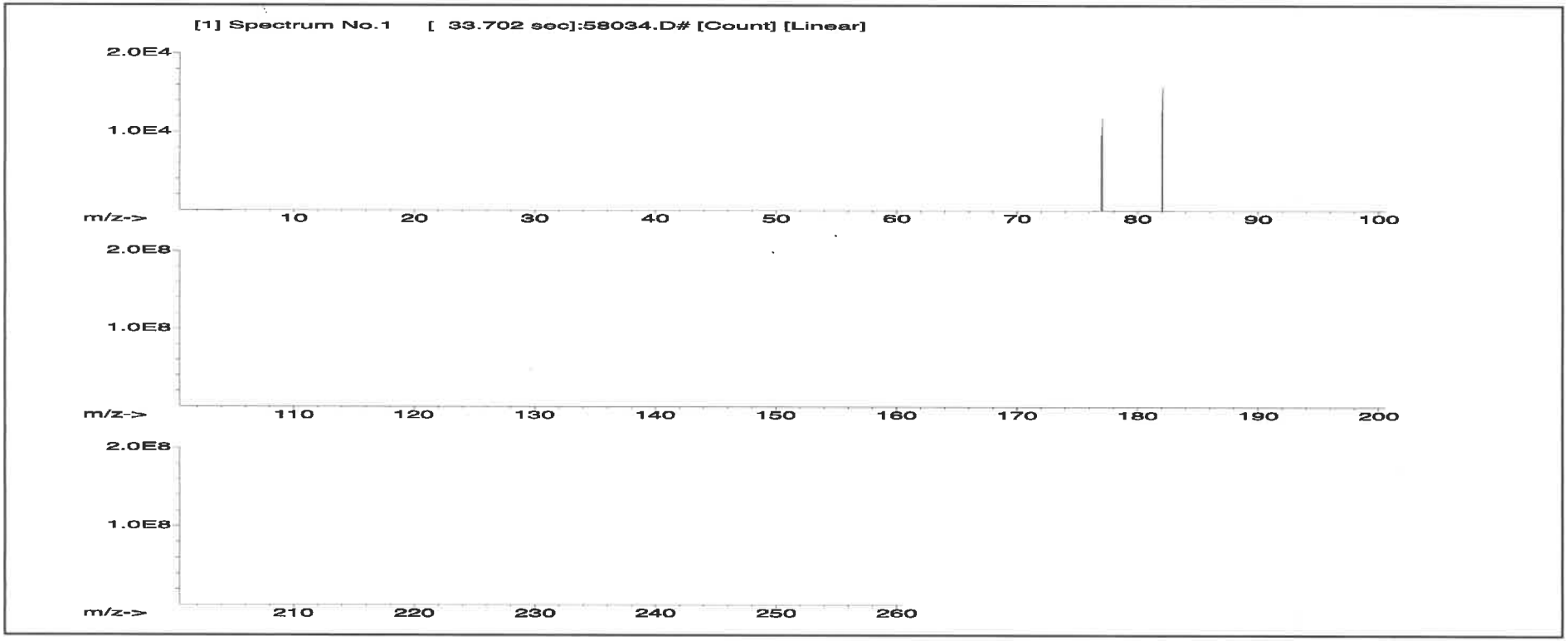
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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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	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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Refine your results. Redefine your industry.

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Christiansburg, VA 24073 USA
inorganicventures.com

Certificate of Analysis

M5976, M5977
R: 02/22/24

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:	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



MS978, MS979

INORGANIC VENTURES™

Refine your results. Redefine your industry.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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

R: 2/22/24

Certificate of Analysis

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 865.01 — ACCREDITED Reference Material Producer Certificate 865.02

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, $X_{CRM/RM}$, 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:

$$X_{CRM/RM} = (\Sigma x_a)\ (u_{Char\ a})$$

X_a = mean of Assay Method A with

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

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

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	<	0.000536	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	Ti	<					
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 + K2S2O7 - 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

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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 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

M5981 R:6/11/24

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AR-1539 Certificate Number
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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		

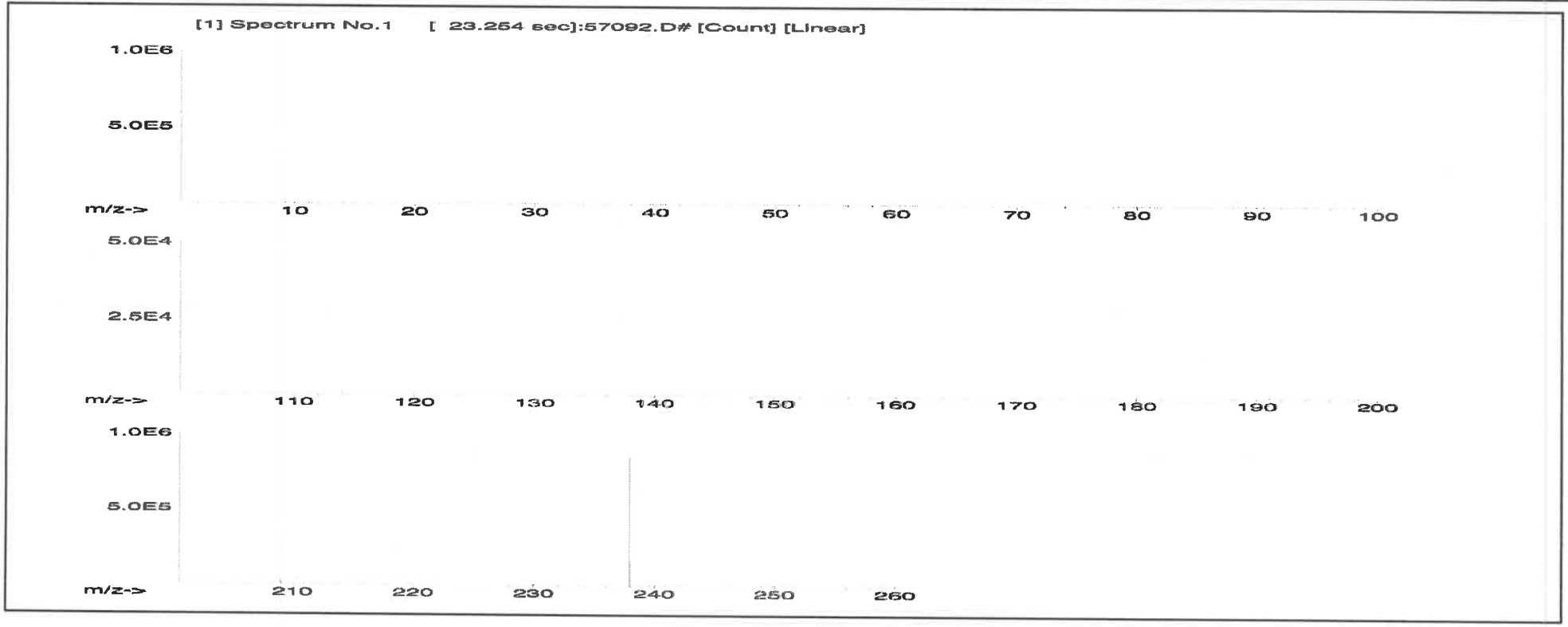
Giovanni Esposito

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



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).

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Certified Reference Material CRM

45982 R: 6/11/24

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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number: 57038
Lot Number: 031524
Description: Strontium (Sr)

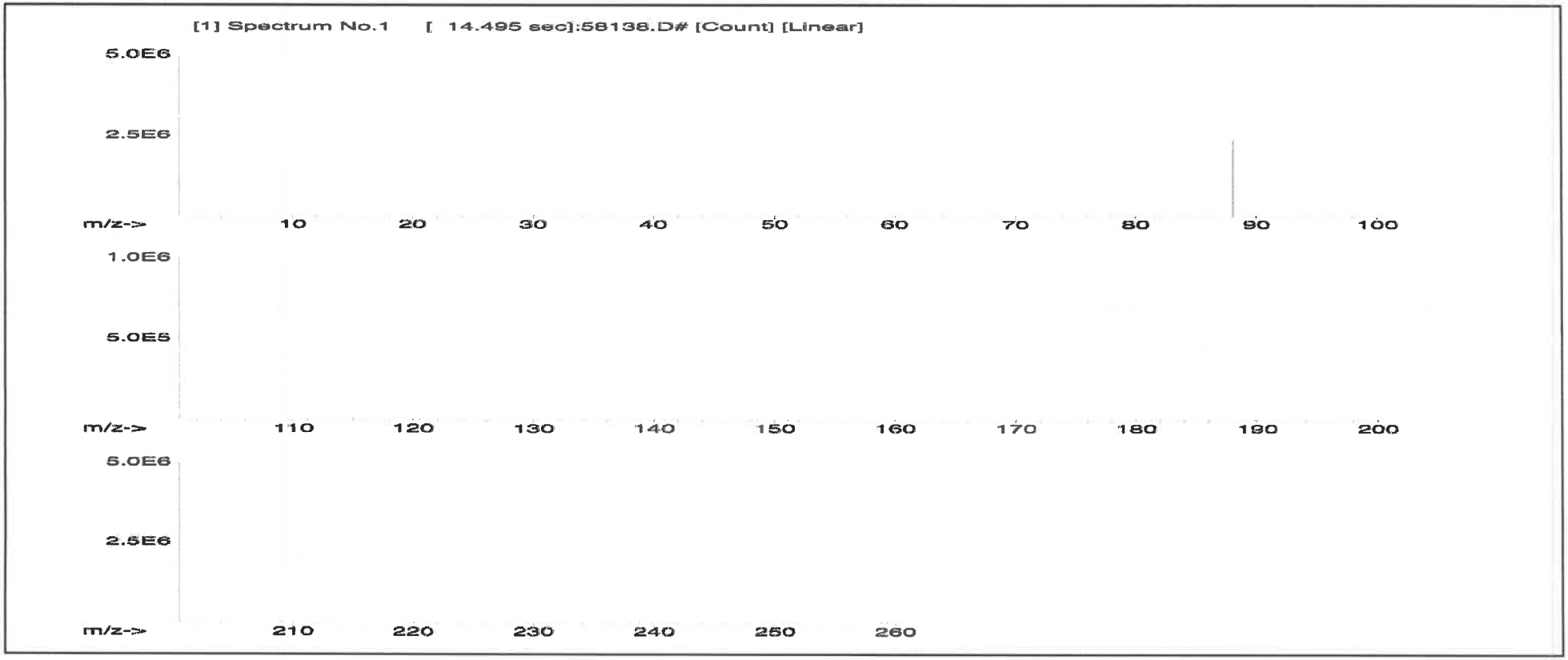
Expiration Date: 031527
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.100	Flask Uncertainty		

Formulated By: Benson Chan 031524

Reviewed By: Pedro L. Rentas 031524

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	1000	99.997	0.10	41.2	4.85470	4.85502	**1000.1**	**2.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



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	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.
* 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

M5983 R: 6/11/24

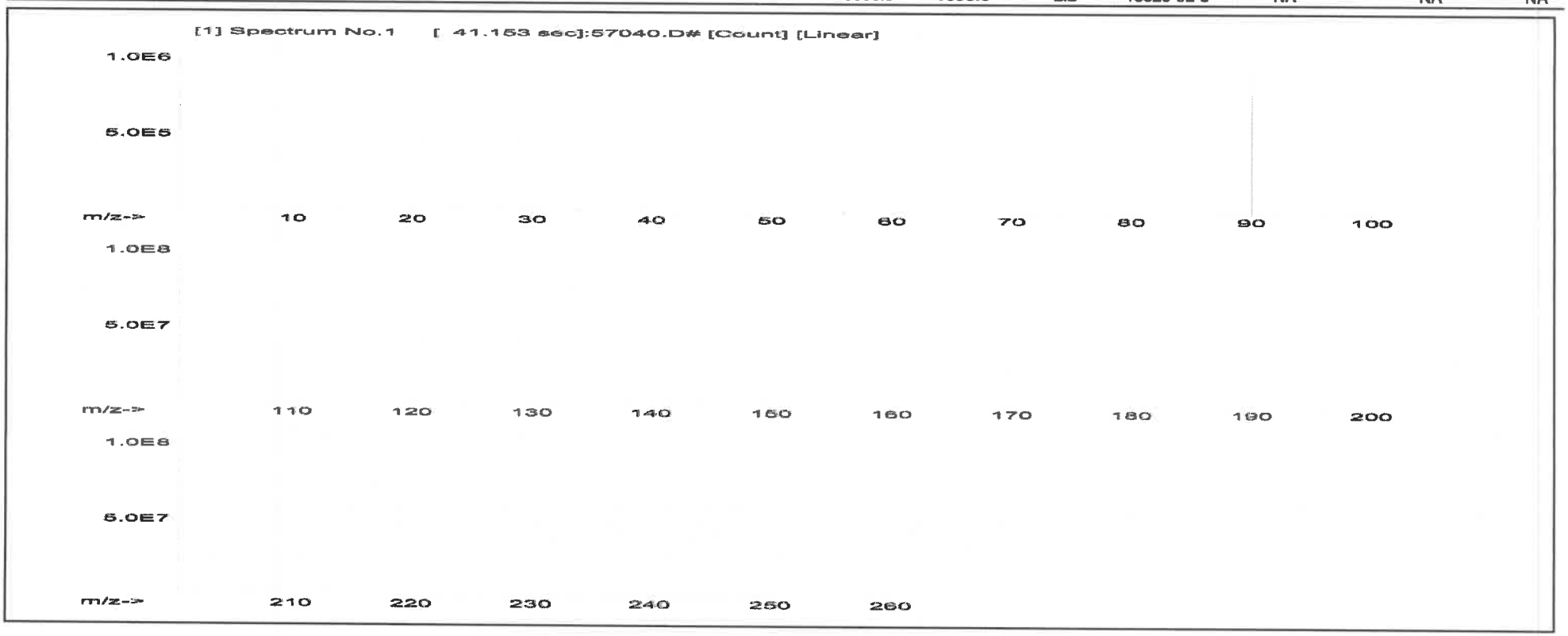
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

		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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AR-1539 Certificate Number
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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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M6033

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

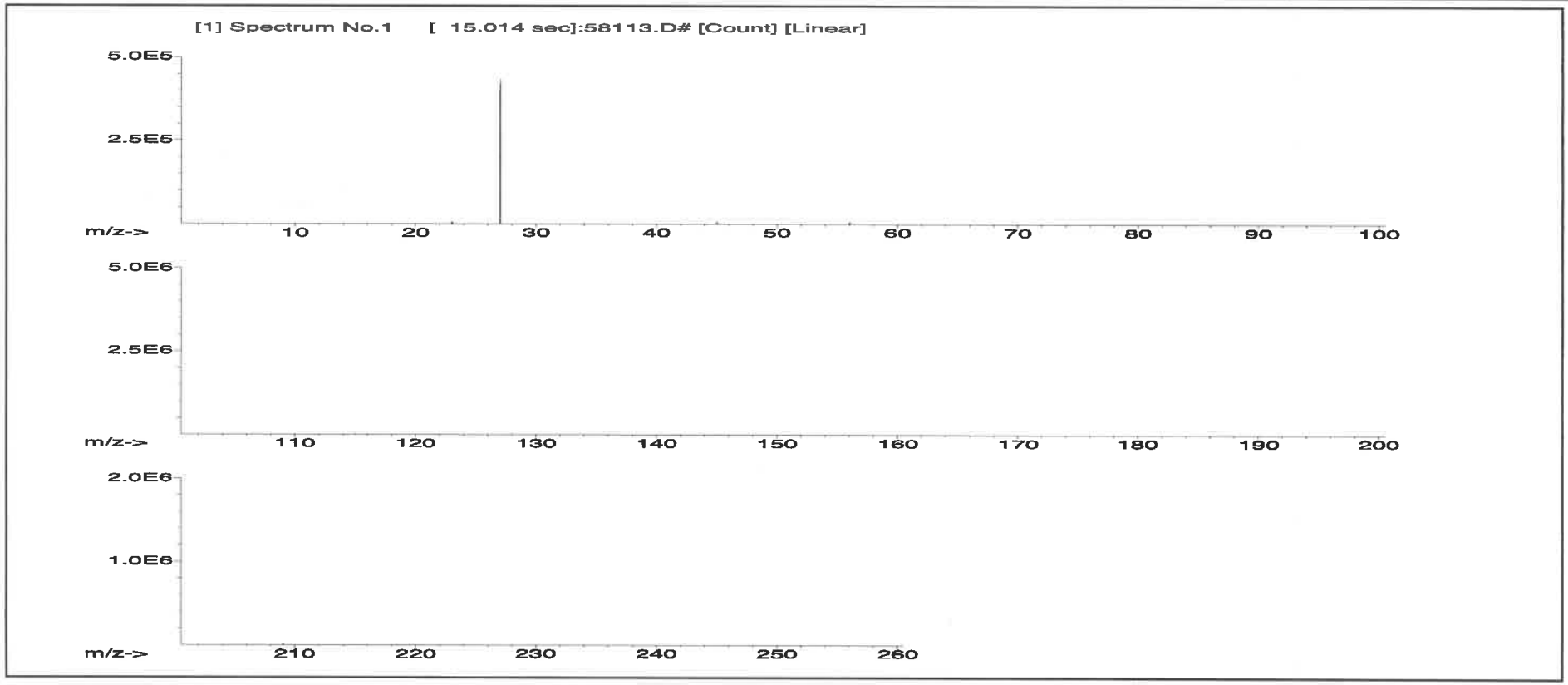
CERTIFIED WEIGHT REPORT:

Part Number:	**58113**		**Solvent:**	20510011	Nitric Acid
Lot Number:	**011623**				
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		

Lot #

Giovanni Esposito		
Formulated By:	Giovanni Esposito	011623
Pedro Rentas		
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



INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

R 18/19/24, M60055

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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

1.0 ACCREDITATION / REGISTRATION

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

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-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



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

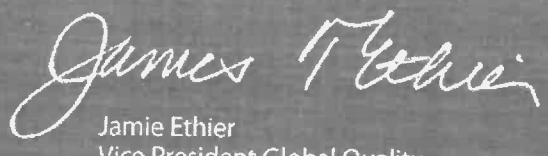
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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

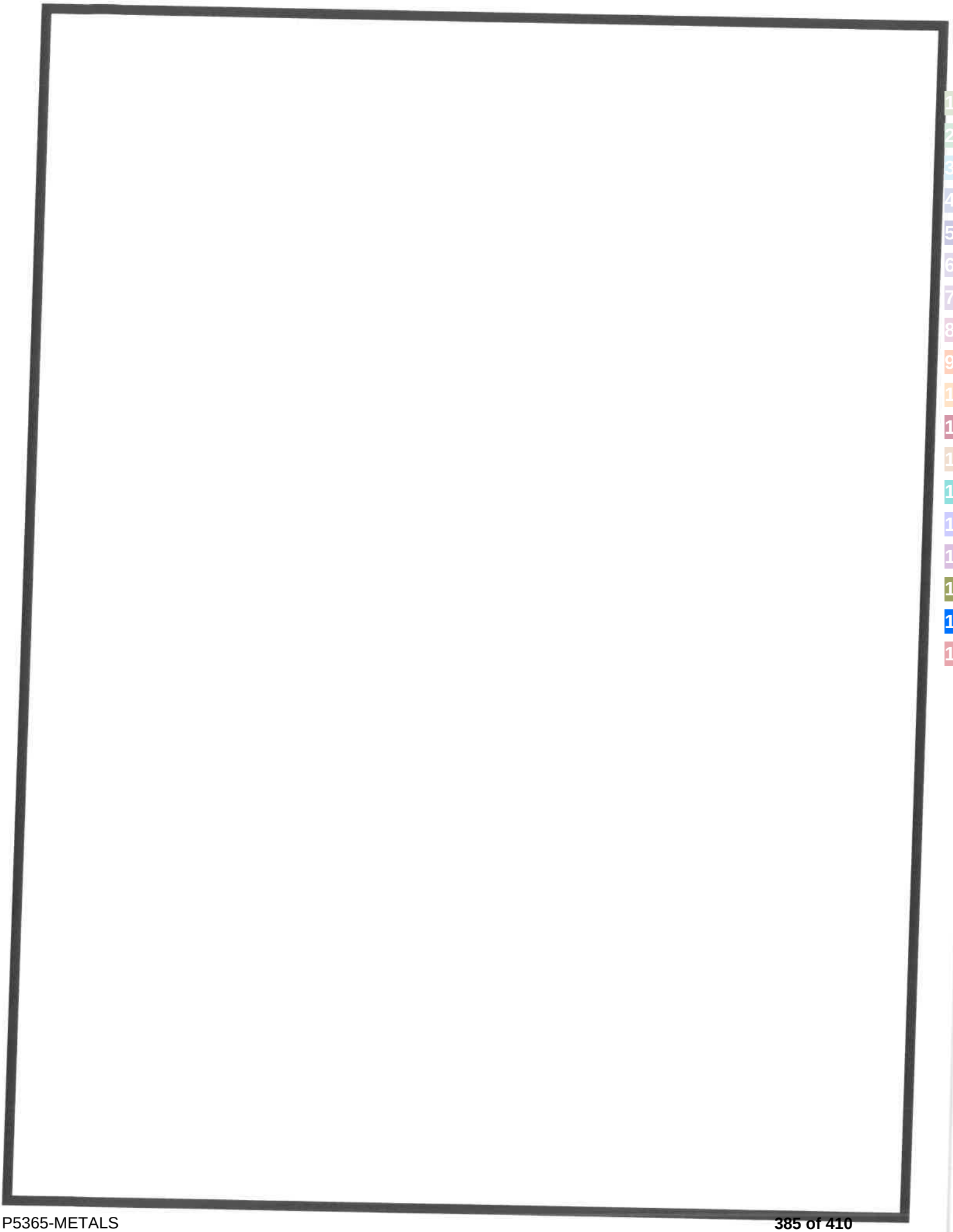
Office and Plant
299 Cedar Lane
Fairless Hills, PA 19030

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

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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

R: 01/03/24 M5806, M5807

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

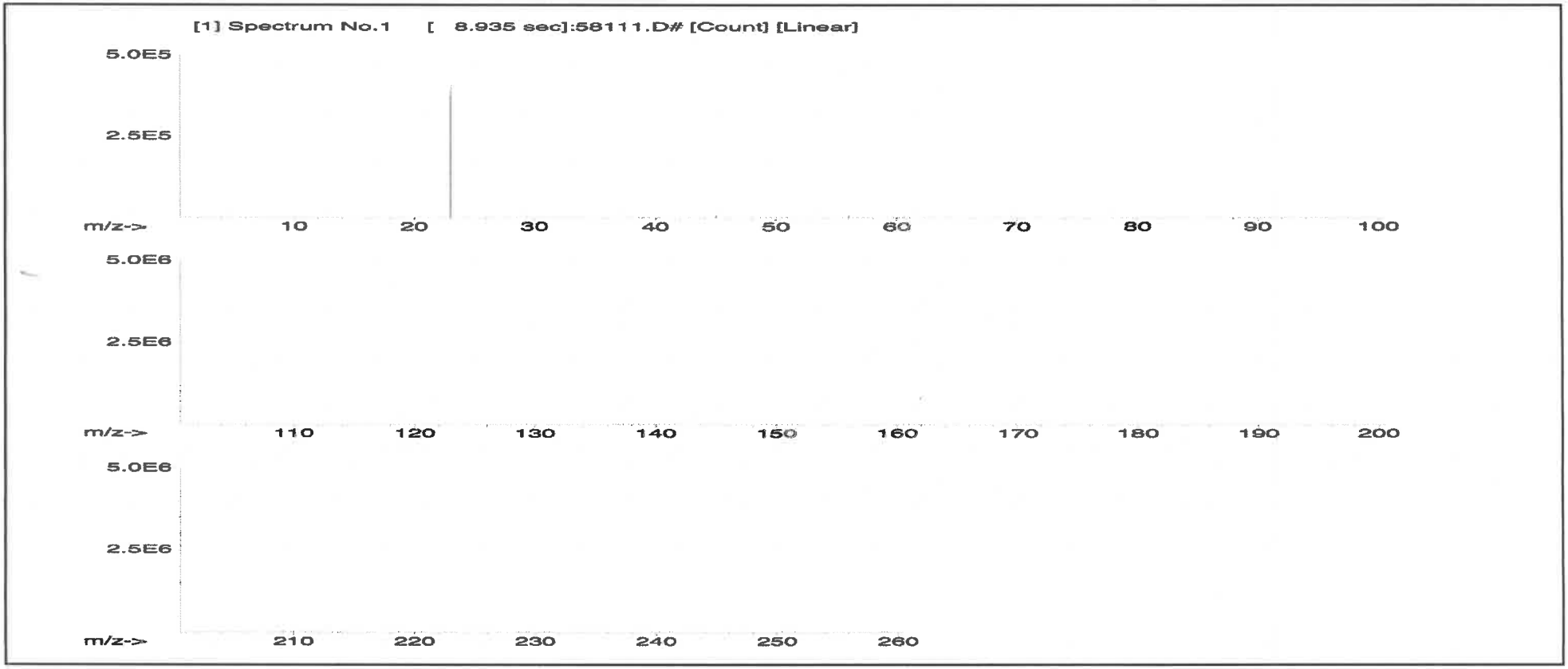
CERTIFIED WEIGHT REPORT:

Part Number:	58111		**Lot #**		
Lot Number:	122223	**Solvent:**	24002546	Nitric Acid	
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



Absolute Standards, Inc.
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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	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:

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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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:

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

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.

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:

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

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.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M5802, M5803

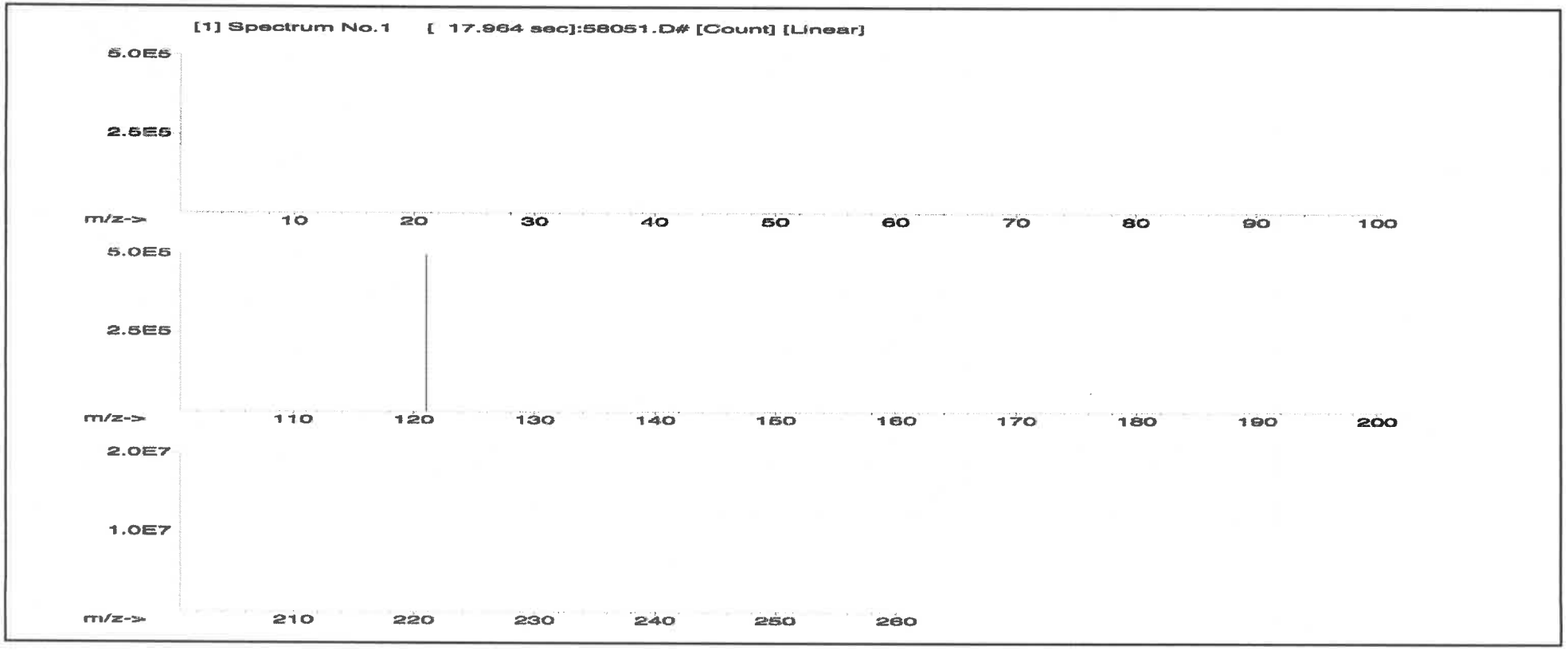
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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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Certified Reference Material CRM

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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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Certified Reference Material CRM

M6030

R: 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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

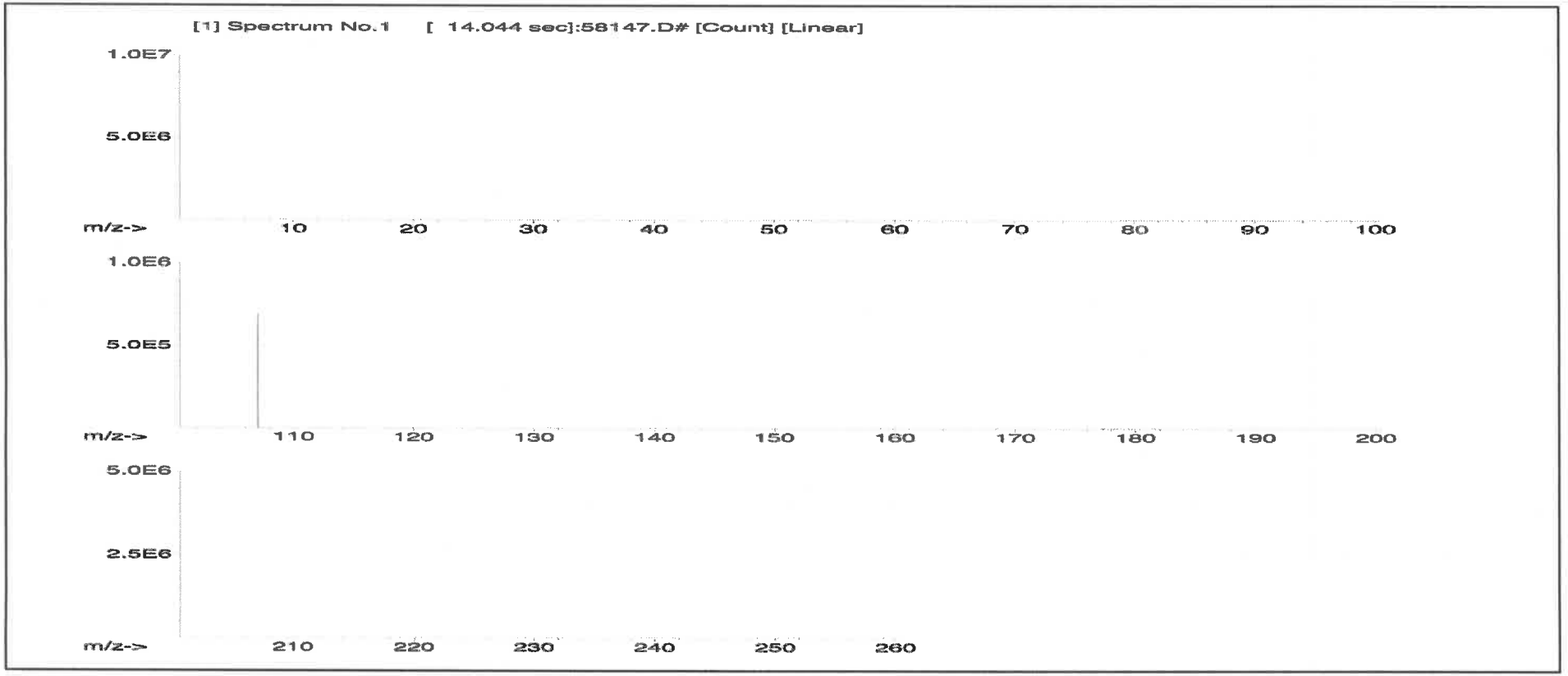
Weight shown below was diluted to (mL): 4000.30 0.058 Flask Uncertainty

	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



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	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.

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Certified Reference Material CRM

R: 03/16/23 M5473, M5474, M5475, M5476

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CERTIFIED WEIGHT REPORT:

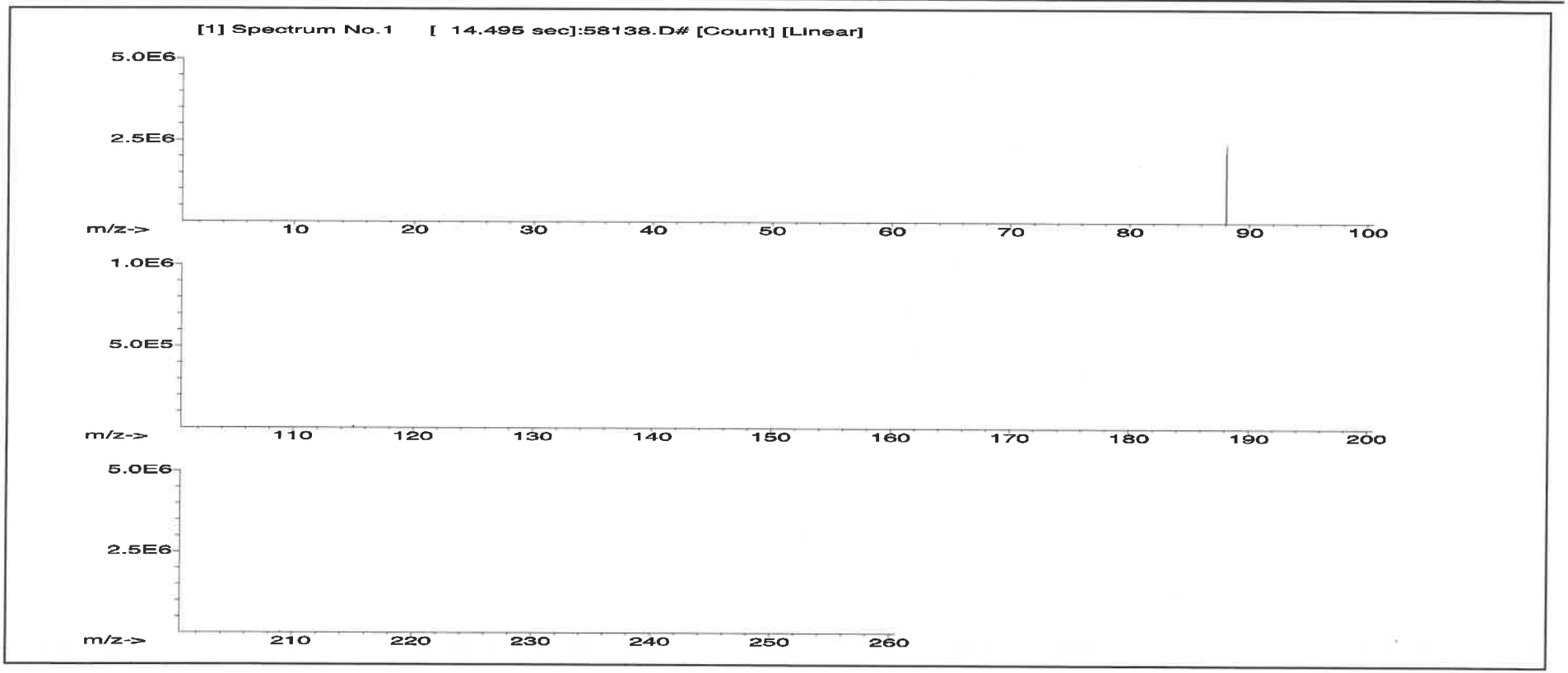
Part Number: 56138
Lot Number: 082922
Description: Strontium (Sr)
Expiration Date: 082925
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	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.

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Certified Reference Material CRM

M6023

R ! 8/5/24

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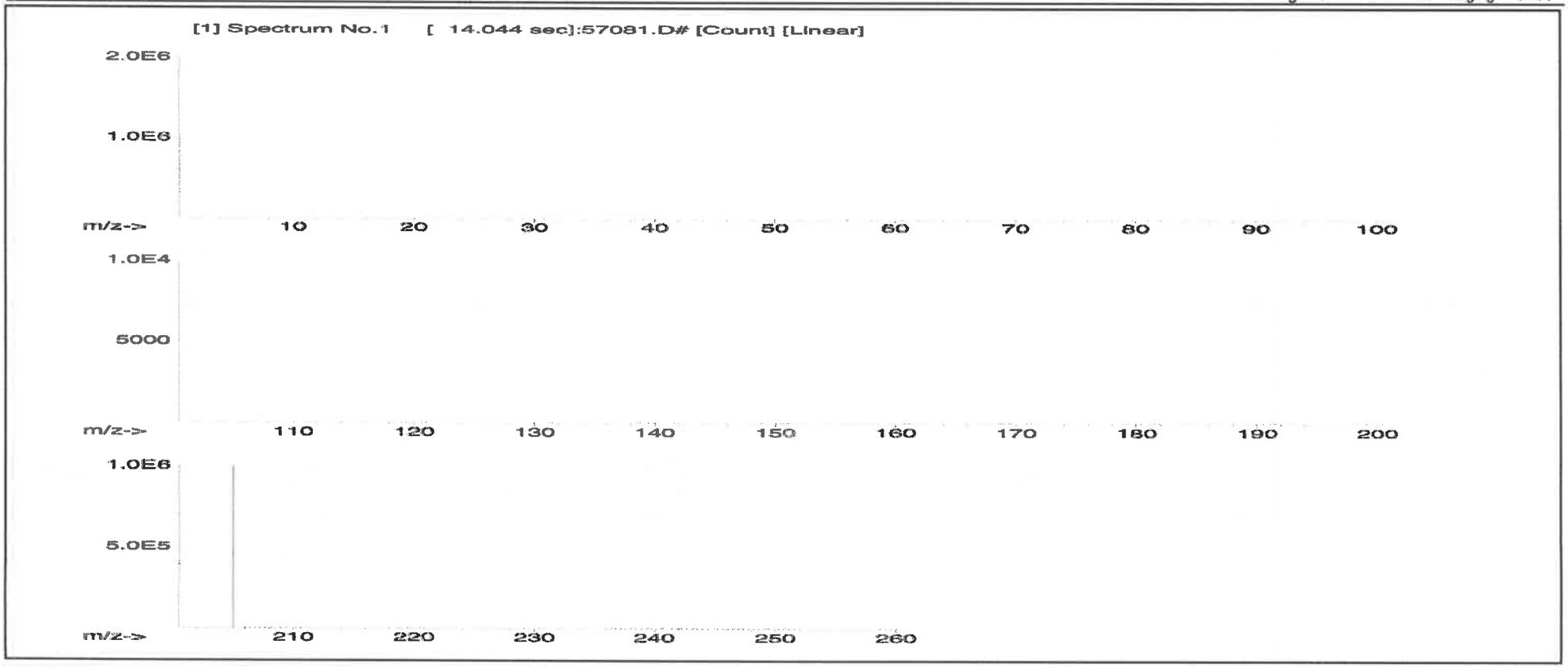
CERTIFIED WEIGHT REPORT:

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:



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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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M6021

Rc. 8/5/24

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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	

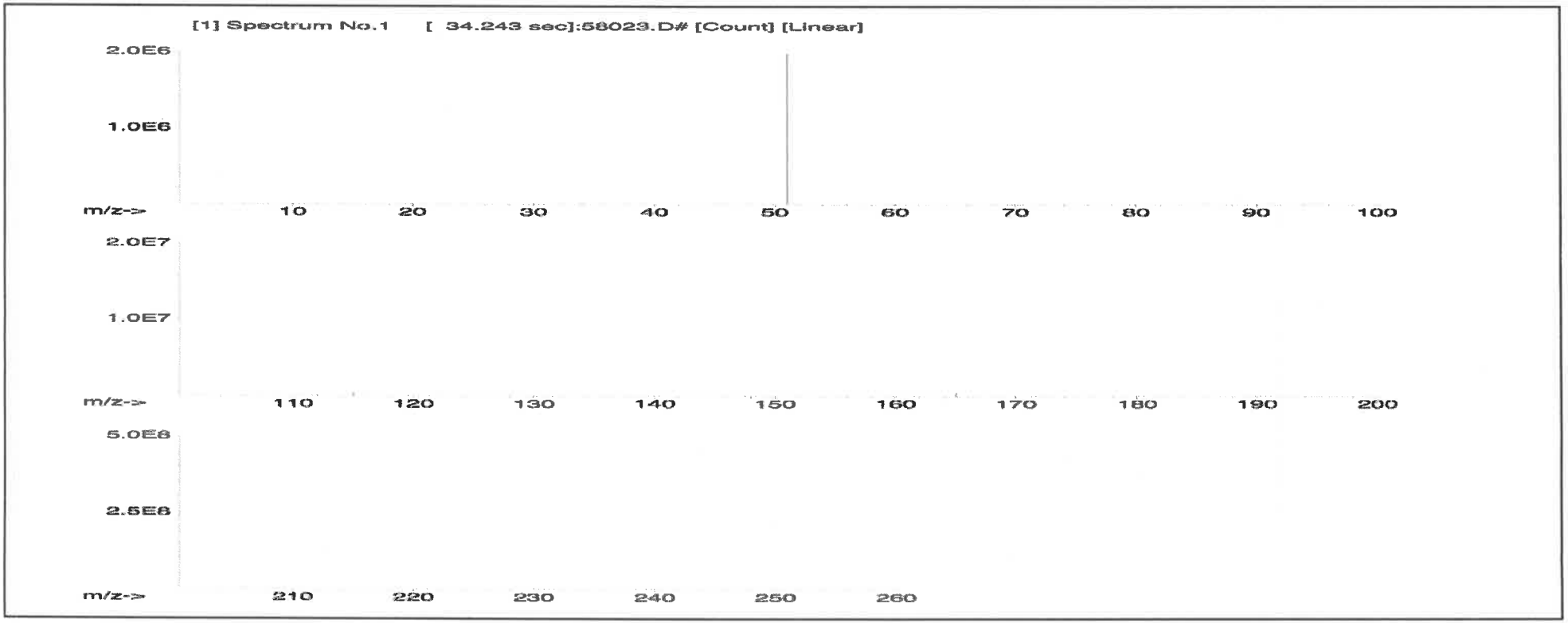
Aleah O'Brady

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



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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
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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	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

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SHIPPING DOCUMENTS

P5365

Weston COC ID
Weston_20241219_1530

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:	Cheyenne Harrington		

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:**	Jordan Hedvat
TAT (days):	21	**Lab Phone:**	908-728-3144
Lab Address:	284 Sheffield Street Mountainside, NJ 07092		

Matrix Codes	
SB-	Soil
SE -	Sediment
SO -	Solid
SL -	Sludge
GW -	Groundwater
W -	Water
O -	Oil
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	pH by EPA 9045D	TAL Metals by EPA 6020B/7471B	TOC by 9060A						
Container Type:	Glass	Glass	Glass	Glass						
Container Size:	8 oz	8 oz	8 oz	8 oz						
Preservative:	Ice to 0-6	Ice to 0-6	Ice to 0-6	Ice to 0-6						

#	Sample ID	G/C	Matrix	# Cont	MS/MSD	Date Collected	Time Collected											Special Instructions/Comments
1	TAPFTA-SB01I-4.5-121924-00-T1	g	SB	3	no	12/19/2024	13:00	X	X	X	X							
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

Shipping Airbill Number(s):

Cooler Number: 1 of 1

	Relinquished By	Date	Time	Received By	Date	Time	Additional Comments
1.)	Sol R Dk with	12/19/24	1820		12-20-24	9:49	QSM 6.0 Compliant
2.)							Deliverable Requirements: DoD Level IV report, EnviroData EDD, and ERIS-compatible EDD
3.)							

IR-Cooler 2.1.2

CHEMTECH 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