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 : P5236

ATTENTION : Nathan Fretz

Laboratory Certification ID # 20012

Table Of Contents for P5236

1) METALS DATA 2

2) Signature Page 4

3) Case Narrative 5

4) Qualifier Page 7

5) Conformance/Non Conformance 8

6) QA Checklist 9

7) Chronicle 10

8) Hit Summary 11

9) Sample Data 12

- 9.1) TAPIAL3-SB03D-3-120724-00-T01 13

10) METALS CALIBRATION DATA 14

- 10.1) Initial and Continuing Calibration Verification 15
- 10.2) CRDL Standard For AA & ICP 21
- 10.3) Initial and Continuing Calibration Blank Summary 22
- 10.4) Preparation Blank Summary 27
- 10.5) Interference Check Sample 29

11) METALS QC DATA 31

- 11.1) Matrix Spike Summary 32
- 11.2) Post Digest Spike Summary 36
- 11.3) Duplicate Sample Summary 37
- 11.4) Laboratory Control Sample Summary 41
- 11.5) Internal Standard Relative Intensity Summary8A 43
- 11.6) Internal Standard Relative Intensity Summary8B 45
- 11.7) ICP Serial Dilutions 47

12) METALS PREPARATION & INSTRUMENT DATA 49

13) PREPARATION & ANALYTICAL SUMMARY 50

- 13.1) Sample Preparation Summary 51
- 13.2) Analysis Run Log 53

14) METALS RAW DATA 55

- 14.1) METALS RAW DATA - ANALYTICAL 56
- 14.2) LB133887 56
- 14.3) LB134024 58
- 14.4) METALS RAW DATA - PREP 289
  - 14.4.1) PB165560 289
  - 14.4.2) PB165717 292

15) Percent Solid 295
16) Analytical Runlogs 297
17) Standard Prep Logs 302
18) Shipping Document 436
18.1) Chain Of Custody 437
18.2) Lab Certificate 438

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

Cover Page

Order ID : P5236

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

Client : Weston Solutions

Lab Sample Number	Client Sample Number
P5236-01	TAPIAL3-SB03D-3-120724-00-T01

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

Signature : _____

Date: 12/23/2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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

CASE NARRATIVE

Weston Solutions
Project Name: Ft Meade Tipton Airfield Parcel RI - PO 0111169
Project # N/A
Chemtech Project # P5236
Test Name: Metals ICP-TAL,Mercury

A. Number of Samples and Date of Receipt:
1 Solid sample was received on 12/10/2024.

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 (TAPIAL3-SB04I-10-120324-00-T1MS) analysis met criteria for all samples except for Antimony, Arsenic, Beryllium, Cadmium, Chromium, Cobalt, Nickel, Selenium, Silver, Thallium, Vanadium due to matrix interference.
The Matrix Spike Duplicate (TAPIAL3-SB04I-10-120324-00-T1MSD) analysis met criteria for all samples except for Antimony, Arsenic, Beryllium, Cadmium, Chromium, Cobalt, Nickel, Selenium, Silver, Thallium, Vanadium due to matrix interference.
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. Calculations:

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

F. Additional Comments:
Sample P5236-01 reported with straight 5X dilution due to high interferent samples.

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_____

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

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

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

QA Control # A3040961

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: P5236 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 (TAPIAL3-SB04I-10-120324-00-T1MS) analysis met criteria for all samples except for Antimony, Arsenic, Beryllium, Cadmium, Chromium, Cobalt, Nickel, Selenium, Silver, Thallium, Vanadium due to matrix interference. The Matrix Spike Duplicate (TAPIAL3-SB04I-10-120324-00-T1MSD) analysis met criteria for all samples except for Antimony, Arsenic, Beryllium, Cadmium, Chromium, Cobalt, Nickel, Selenium, Silver, Thallium, Vanadium due to matrix interference.			
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: Sample P5236-01 reported with straight 5X dilution due to high interferent samples.

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

_____ _____

QA REVIEW Date

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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: P5236

	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: SPHIL JODHANI **Date:** 12/23/2024

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

LAB CHRONICLE

OrderID:	P5236	**OrderDate:**	12/10/2024 12:04:00 PM
Client:	Weston Solutions	**Project:**	Ft Meade Tipton Airfield Parcel RI - PO 0111169
Contact:	Nathan Fretz	**Location:**	L51

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P5236-01	**TAPIAL3-SB03D-3-12 0724-00-T01**	**SOIL**			**12/07/24**			**12/10/24**
			Mercury	7471B		12/10/24	12/11/24	
			Metals ICP-TAL	6020B		12/18/24	12/19/24	

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

Hit Summary Sheet
SW-846

SDG No.: P5236 **Order ID:** P5236

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 : TAPIAL3-SB03D-3-120724-00-T01									
P5236-01	TAPIAL3-SB03D-3-120724-00-T	SOIL	Aluminum	899	D	2.67	4.77	9.54	mg/Kg
P5236-01	TAPIAL3-SB03D-3-120724-00-T	SOIL	Arsenic	5.07	D	0.043	0.12	0.48	mg/Kg
P5236-01	TAPIAL3-SB03D-3-120724-00-T	SOIL	Barium	6.09	D	0.18	0.60	4.77	mg/Kg
P5236-01	TAPIAL3-SB03D-3-120724-00-T	SOIL	Cadmium	0.14	JD	0.13	0.36	0.48	mg/Kg
P5236-01	TAPIAL3-SB03D-3-120724-00-T	SOIL	Chromium	19.2	D	0.12	0.24	0.95	mg/Kg
P5236-01	TAPIAL3-SB03D-3-120724-00-T	SOIL	Copper	4.06	D	0.27	0.48	0.95	mg/Kg
P5236-01	TAPIAL3-SB03D-3-120724-00-T	SOIL	Iron	4540	D	5.30	5.96	23.9	mg/Kg
P5236-01	TAPIAL3-SB03D-3-120724-00-T	SOIL	Lead	3.12	D	0.072	0.36	0.48	mg/Kg
P5236-01	TAPIAL3-SB03D-3-120724-00-T	SOIL	Manganese	0.53	D	0.16	0.24	0.48	mg/Kg
P5236-01	TAPIAL3-SB03D-3-120724-00-T	SOIL	Nickel	0.14	JD	0.076	0.12	0.48	mg/Kg
P5236-01	TAPIAL3-SB03D-3-120724-00-T	SOIL	Mercury	0.019		0.0070	0.013	0.016	mg/Kg
P5236-01	TAPIAL3-SB03D-3-120724-00-T	SOIL	Potassium	149	JD	19.0	90.7	239	mg/Kg
P5236-01	TAPIAL3-SB03D-3-120724-00-T	SOIL	Vanadium	28.2	D	0.038	0.12	2.39	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:	12/07/24
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	12/10/24
Client Sample ID:	TAPIAL3-SB03D-3-120724-00-T01	SDG No.:	P5236
Lab Sample ID:	P5236-01	Matrix:	SOIL
Level (low/med):	low	% Solid:	85.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	899	D	5	2.67	4.77	9.54	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-36-0	Antimony	0.36	UDN	5	0.048	0.36	0.95	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-38-2	Arsenic	5.07	DN	5	0.043	0.12	0.48	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-39-3	Barium	6.09	D	5	0.18	0.60	4.77	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-41-7	Beryllium	0.36	UDN	5	0.12	0.36	0.48	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-43-9	Cadmium	0.14	JDN	5	0.13	0.36	0.48	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-70-2	Calcium	90.7	UD	5	32.2	90.7	239	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-47-3	Chromium	19.2	DN	5	0.12	0.24	0.95	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-48-4	Cobalt	0.12	UDN	5	0.038	0.12	0.48	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-50-8	Copper	4.06	D	5	0.27	0.48	0.95	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7439-89-6	Iron	4540	D	5	5.30	5.96	23.9	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7439-92-1	Lead	3.12	D	5	0.072	0.36	0.48	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7439-95-4	Magnesium	90.7	UD	5	12.9	90.7	239	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7439-96-5	Manganese	0.53	D	5	0.16	0.24	0.48	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7439-97-6	Mercury	0.019		1	0.0070	0.013	0.016	mg/Kg	12/10/24 15:50	12/11/24 12:32	SW7471B	
7440-02-0	Nickel	0.14	JDN	5	0.076	0.12	0.48	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-09-7	Potassium	149	JD	5	19.0	90.7	239	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7782-49-2	Selenium	2.15	UDN	5	0.57	2.15	2.39	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-22-4	Silver	0.24	UDN	5	0.12	0.24	0.48	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-23-5	Sodium	119	UD	5	29.2	119	239	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-28-0	Thallium	0.24	UDN	5	0.048	0.24	0.48	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-62-2	Vanadium	28.2	DN	5	0.038	0.12	2.39	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050
7440-66-6	Zinc	0.72	UD	5	0.62	0.72	2.39	mg/Kg	12/18/24 10:40	12/19/24 17:11	SW6020	SW3050

Color Before:	light 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.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

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
ICV16	Mercury	3.88	4.0	97	90 - 110	CV	12/11/2024	11:13	LB133887

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.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

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
CCV16	Mercury	4.85	5.0	97	90 - 110	CV	12/11/2024	11:20	LB133887
CCV17	Mercury	4.77	5.0	96	90 - 110	CV	12/11/2024	11:48	LB133887
CCV18	Mercury	4.82	5.0	96	90 - 110	CV	12/11/2024	12:18	LB133887
CCV19	Mercury	4.75	5.0	95	90 - 110	CV	12/11/2024	12:51	LB133887

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.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

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	491	500	98	90 - 110	P	12/19/2024	15:49	LB134024
	Antimony	220	200	110	90 - 110	P	12/19/2024	15:49	LB134024
	Arsenic	219	200	109	90 - 110	P	12/19/2024	15:49	LB134024
	Barium	106	100	106	90 - 110	P	12/19/2024	15:49	LB134024
	Beryllium	105	100	105	90 - 110	P	12/19/2024	15:49	LB134024
	Cadmium	110	100	110	90 - 110	P	12/19/2024	15:49	LB134024
	Calcium	2020	2000	101	90 - 110	P	12/19/2024	15:49	LB134024
	Chromium	106	100	106	90 - 110	P	12/19/2024	15:49	LB134024
	Cobalt	106	100	106	90 - 110	P	12/19/2024	15:49	LB134024
	Copper	102	100	102	90 - 110	P	12/19/2024	15:49	LB134024
	Iron	2150	2000	108	90 - 110	P	12/19/2024	15:49	LB134024
	Lead	206	200	103	90 - 110	P	12/19/2024	15:49	LB134024
	Magnesium	1170	1200	98	90 - 110	P	12/19/2024	15:49	LB134024
	Manganese	103	100	103	90 - 110	P	12/19/2024	15:49	LB134024
	Nickel	108	110	98	90 - 110	P	12/19/2024	15:49	LB134024
	Potassium	2000	2000	100	90 - 110	P	12/19/2024	15:49	LB134024
	Selenium	214	200	107	90 - 110	P	12/19/2024	15:49	LB134024
	Silver	54.3	50.0	108	90 - 110	P	12/19/2024	15:49	LB134024
	Sodium	2020	2000	101	90 - 110	P	12/19/2024	15:49	LB134024
	Thallium	208	210	99	90 - 110	P	12/19/2024	15:49	LB134024
	Vanadium	102	100	102	90 - 110	P	12/19/2024	15:49	LB134024
	Zinc	204	200	102	90 - 110	P	12/19/2024	15:49	LB134024

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.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV	Aluminum	18.5	20.0	92	80 - 120	P	12/19/2024	16:04	LB134024
	Antimony	2.04	2.0	102	80 - 120	P	12/19/2024	16:04	LB134024
	Arsenic	1.06	1.0	106	80 - 120	P	12/19/2024	16:04	LB134024
	Barium	9.76	10.0	98	80 - 120	P	12/19/2024	16:04	LB134024
	Beryllium	1.03	1.0	103	80 - 120	P	12/19/2024	16:04	LB134024
	Cadmium	1.06	1.0	106	80 - 120	P	12/19/2024	16:04	LB134024
	Calcium	514	500	103	80 - 120	P	12/19/2024	16:04	LB134024
	Chromium	1.98	2.0	99	80 - 120	P	12/19/2024	16:04	LB134024
	Cobalt	1.04	1.0	104	80 - 120	P	12/19/2024	16:04	LB134024
	Copper	1.91	2.0	96	80 - 120	P	12/19/2024	16:04	LB134024
	Iron	53.4	50.0	107	80 - 120	P	12/19/2024	16:04	LB134024
	Lead	0.92	1.0	92	80 - 120	P	12/19/2024	16:04	LB134024
	Magnesium	498	500	100	80 - 120	P	12/19/2024	16:04	LB134024
	Manganese	0.96	1.0	96	80 - 120	P	12/19/2024	16:04	LB134024
	Nickel	1.03	1.0	103	80 - 120	P	12/19/2024	16:04	LB134024
	Potassium	498	500	100	80 - 120	P	12/19/2024	16:04	LB134024
	Selenium	5.30	5.0	106	80 - 120	P	12/19/2024	16:04	LB134024
	Silver	1.02	1.0	102	80 - 120	P	12/19/2024	16:04	LB134024
	Sodium	473	500	94	80 - 120	P	12/19/2024	16:04	LB134024
	Thallium	0.91	1.0	91	80 - 120	P	12/19/2024	16:04	LB134024
	Vanadium	4.88	5.0	98	80 - 120	P	12/19/2024	16:04	LB134024
	Zinc	4.96	5.0	99	80 - 120	P	12/19/2024	16:04	LB134024

Alliance TECHNICAL GROUP
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.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

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	51600	50000	103	90 - 110	P	12/19/2024	16:16	LB134024
	Antimony	511	500	102	90 - 110	P	12/19/2024	16:16	LB134024
	Arsenic	530	500	106	90 - 110	P	12/19/2024	16:16	LB134024
	Barium	2580	2500	103	90 - 110	P	12/19/2024	16:16	LB134024
	Beryllium	494	500	99	90 - 110	P	12/19/2024	16:16	LB134024
	Cadmium	520	500	104	90 - 110	P	12/19/2024	16:16	LB134024
	Calcium	257000	250000	103	90 - 110	P	12/19/2024	16:16	LB134024
	Chromium	510	500	102	90 - 110	P	12/19/2024	16:16	LB134024
	Cobalt	497	500	100	90 - 110	P	12/19/2024	16:16	LB134024
	Copper	4850	5000	97	90 - 110	P	12/19/2024	16:16	LB134024
	Iron	130000	125000	104	90 - 110	P	12/19/2024	16:16	LB134024
	Lead	2610	2500	104	90 - 110	P	12/19/2024	16:16	LB134024
	Magnesium	257000	250000	103	90 - 110	P	12/19/2024	16:16	LB134024
	Manganese	5000	5000	100	90 - 110	P	12/19/2024	16:16	LB134024
	Nickel	477	500	96	90 - 110	P	12/19/2024	16:16	LB134024
	Potassium	127000	125000	102	90 - 110	P	12/19/2024	16:16	LB134024
	Selenium	513	500	103	90 - 110	P	12/19/2024	16:16	LB134024
	Silver	526	500	105	90 - 110	P	12/19/2024	16:16	LB134024
	Sodium	254000	250000	101	90 - 110	P	12/19/2024	16:16	LB134024
	Thallium	529	500	106	90 - 110	P	12/19/2024	16:16	LB134024
	Vanadium	516	500	103	90 - 110	P	12/19/2024	16:16	LB134024
	Zinc	4790	5000	96	90 - 110	P	12/19/2024	16:16	LB134024
CCV02	Aluminum	51600	50000	103	90 - 110	P	12/19/2024	17:01	LB134024
	Antimony	512	500	102	90 - 110	P	12/19/2024	17:01	LB134024
	Arsenic	502	500	100	90 - 110	P	12/19/2024	17:01	LB134024
	Barium	2580	2500	103	90 - 110	P	12/19/2024	17:01	LB134024
	Beryllium	490	500	98	90 - 110	P	12/19/2024	17:01	LB134024
	Cadmium	493	500	99	90 - 110	P	12/19/2024	17:01	LB134024
	Calcium	258000	250000	103	90 - 110	P	12/19/2024	17:01	LB134024
	Chromium	511	500	102	90 - 110	P	12/19/2024	17:01	LB134024
	Cobalt	499	500	100	90 - 110	P	12/19/2024	17:01	LB134024
	Copper	4820	5000	96	90 - 110	P	12/19/2024	17:01	LB134024
	Iron	131000	125000	105	90 - 110	P	12/19/2024	17:01	LB134024
	Lead	2590	2500	103	90 - 110	P	12/19/2024	17:01	LB134024

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.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

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	258000	250000	103	90 - 110	P	12/19/2024	17:01	LB134024
	Manganese	5010	5000	100	90 - 110	P	12/19/2024	17:01	LB134024
	Nickel	476	500	95	90 - 110	P	12/19/2024	17:01	LB134024
	Potassium	127000	125000	102	90 - 110	P	12/19/2024	17:01	LB134024
	Selenium	491	500	98	90 - 110	P	12/19/2024	17:01	LB134024
	Silver	501	500	100	90 - 110	P	12/19/2024	17:01	LB134024
	Sodium	256000	250000	102	90 - 110	P	12/19/2024	17:01	LB134024
	Thallium	523	500	104	90 - 110	P	12/19/2024	17:01	LB134024
	Vanadium	514	500	103	90 - 110	P	12/19/2024	17:01	LB134024
	Zinc	4750	5000	95	90 - 110	P	12/19/2024	17:01	LB134024
CCV03	Aluminum	51700	50000	103	90 - 110	P	12/19/2024	17:20	LB134024
	Antimony	496	500	99	90 - 110	P	12/19/2024	17:20	LB134024
	Arsenic	498	500	100	90 - 110	P	12/19/2024	17:20	LB134024
	Barium	2510	2500	100	90 - 110	P	12/19/2024	17:20	LB134024
	Beryllium	486	500	97	90 - 110	P	12/19/2024	17:20	LB134024
	Cadmium	475	500	95	90 - 110	P	12/19/2024	17:20	LB134024
	Calcium	249000	250000	100	90 - 110	P	12/19/2024	17:20	LB134024
	Chromium	507	500	101	90 - 110	P	12/19/2024	17:20	LB134024
	Cobalt	498	500	100	90 - 110	P	12/19/2024	17:20	LB134024
	Copper	4820	5000	96	90 - 110	P	12/19/2024	17:20	LB134024
	Iron	130000	125000	104	90 - 110	P	12/19/2024	17:20	LB134024
	Lead	2560	2500	102	90 - 110	P	12/19/2024	17:20	LB134024
	Magnesium	259000	250000	103	90 - 110	P	12/19/2024	17:20	LB134024
	Manganese	5010	5000	100	90 - 110	P	12/19/2024	17:20	LB134024
	Nickel	474	500	95	90 - 110	P	12/19/2024	17:20	LB134024
	Potassium	126000	125000	101	90 - 110	P	12/19/2024	17:20	LB134024
	Selenium	479	500	96	90 - 110	P	12/19/2024	17:20	LB134024
	Silver	491	500	98	90 - 110	P	12/19/2024	17:20	LB134024
	Sodium	256000	250000	102	90 - 110	P	12/19/2024	17:20	LB134024
	Thallium	521	500	104	90 - 110	P	12/19/2024	17:20	LB134024
	Vanadium	512	500	102	90 - 110	P	12/19/2024	17:20	LB134024
	Zinc	4810	5000	96	90 - 110	P	12/19/2024	17:20	LB134024

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

Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Weston Solutions **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

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	0.21	0.2	103	40 - 160	CV	12/11/2024	11:25	LB133887
CRI	Aluminum	18.6	20.0	93	70 - 130	P	12/19/2024	16:23	LB134024
	Antimony	2.05	2.0	102	70 - 130	P	12/19/2024	16:23	LB134024
	Arsenic	1.07	1.0	107	70 - 130	P	12/19/2024	16:23	LB134024
	Barium	9.65	10.0	96	70 - 130	P	12/19/2024	16:23	LB134024
	Beryllium	1.01	1.0	101	70 - 130	P	12/19/2024	16:23	LB134024
	Cadmium	1.03	1.0	103	70 - 130	P	12/19/2024	16:23	LB134024
	Calcium	521	500	104	70 - 130	P	12/19/2024	16:23	LB134024
	Chromium	2.00	2.0	100	70 - 130	P	12/19/2024	16:23	LB134024
	Cobalt	1.04	1.0	104	50 - 150	P	12/19/2024	16:23	LB134024
	Copper	2.01	2.0	100	70 - 130	P	12/19/2024	16:23	LB134024
	Iron	53.8	50.0	108	70 - 130	P	12/19/2024	16:23	LB134024
	Lead	0.99	1.0	99	70 - 130	P	12/19/2024	16:23	LB134024
	Magnesium	498	500	100	70 - 130	P	12/19/2024	16:23	LB134024
	Manganese	1.00	1.0	100	50 - 150	P	12/19/2024	16:23	LB134024
	Nickel	1.05	1.0	105	70 - 130	P	12/19/2024	16:23	LB134024
	Potassium	497	500	99	70 - 130	P	12/19/2024	16:23	LB134024
	Selenium	5.06	5.0	101	70 - 130	P	12/19/2024	16:23	LB134024
	Silver	1.01	1.0	101	70 - 130	P	12/19/2024	16:23	LB134024
	Sodium	492	500	98	70 - 130	P	12/19/2024	16:23	LB134024
	Thallium	0.98	1.0	98	70 - 130	P	12/19/2024	16:23	LB134024
	Vanadium	4.82	5.0	96	70 - 130	P	12/19/2024	16:23	LB134024
	Zinc	5.08	5.0	102	50 - 150	P	12/19/2024	16:23	LB134024

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB16	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	12/11/2024	11:18	LB133887

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB16	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	12/11/2024	11:22	LB133887
CCB17	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	12/11/2024	11:53	LB133887
CCB18	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	12/11/2024	12:20	LB133887
CCB19	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	12/11/2024	12:53	LB133887

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

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	12/19/2024	16:07	LB134024
	Antimony	2.00	+/-2.00	U	0.25	2.00	P	12/19/2024	16:07	LB134024
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	16:07	LB134024
	Barium	10.0	+/-10.0	U	1.25	10.0	P	12/19/2024	16:07	LB134024
	Beryllium	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	16:07	LB134024
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	12/19/2024	16:07	LB134024
	Calcium	500	+/-500	U	190	500	P	12/19/2024	16:07	LB134024
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	12/19/2024	16:07	LB134024
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	16:07	LB134024
	Copper	2.00	+/-2.00	U	1.50	2.00	P	12/19/2024	16:07	LB134024
	Iron	50.0	+/-50.0	U	25.0	50.0	P	12/19/2024	16:07	LB134024
	Lead	1.00	+/-1.00	U	0.75	1.00	P	12/19/2024	16:07	LB134024
	Magnesium	500	+/-500	U	190	500	P	12/19/2024	16:07	LB134024
	Manganese	1.00	+/-1.00	U	0.75	1.00	P	12/19/2024	16:07	LB134024
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	16:07	LB134024
	Potassium	500	+/-500	U	190	500	P	12/19/2024	16:07	LB134024
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	12/19/2024	16:07	LB134024
	Silver	1.00	+/-1.00	U	0.50	1.00	P	12/19/2024	16:07	LB134024
	Sodium	500	+/-500	U	190	500	P	12/19/2024	16:07	LB134024
	Thallium	1.00	+/-1.00	U	0.50	1.00	P	12/19/2024	16:07	LB134024
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	12/19/2024	16:07	LB134024
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	12/19/2024	16:07	LB134024

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

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	12/19/2024	16:19	LB134024
	Antimony	0.19	+/-2.00	J	0.25	2.00	P	12/19/2024	16:19	LB134024
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	16:19	LB134024
	Barium	10.0	+/-10.0	U	1.25	10.0	P	12/19/2024	16:19	LB134024
	Beryllium	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	16:19	LB134024
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	12/19/2024	16:19	LB134024
	Calcium	500	+/-500	U	190	500	P	12/19/2024	16:19	LB134024
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	12/19/2024	16:19	LB134024
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	16:19	LB134024
	Copper	2.00	+/-2.00	U	1.50	2.00	P	12/19/2024	16:19	LB134024
	Iron	50.0	+/-50.0	U	25.0	50.0	P	12/19/2024	16:19	LB134024
	Lead	0.31	+/-1.00	J	0.75	1.00	P	12/19/2024	16:19	LB134024
	Magnesium	500	+/-500	U	190	500	P	12/19/2024	16:19	LB134024
	Manganese	1.00	+/-1.00	U	0.75	1.00	P	12/19/2024	16:19	LB134024
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	16:19	LB134024
	Potassium	500	+/-500	U	190	500	P	12/19/2024	16:19	LB134024
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	12/19/2024	16:19	LB134024
	Silver	0.080	+/-1.00	J	0.50	1.00	P	12/19/2024	16:19	LB134024
	Sodium	500	+/-500	U	190	500	P	12/19/2024	16:19	LB134024
	Thallium	0.14	+/-1.00	J	0.50	1.00	P	12/19/2024	16:19	LB134024
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	12/19/2024	16:19	LB134024
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	12/19/2024	16:19	LB134024
CCB02	Aluminum	3.07	+/-20.0	J	10.0	20.0	P	12/19/2024	17:03	LB134024
	Antimony	0.25	+/-2.00	J	0.25	2.00	P	12/19/2024	17:03	LB134024
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	17:03	LB134024
	Barium	0.35	+/-10.0	J	1.25	10.0	P	12/19/2024	17:03	LB134024
	Beryllium	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	17:03	LB134024
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	12/19/2024	17:03	LB134024
	Calcium	500	+/-500	U	190	500	P	12/19/2024	17:03	LB134024
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	12/19/2024	17:03	LB134024
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	17:03	LB134024
	Copper	0.43	+/-2.00	J	1.50	2.00	P	12/19/2024	17:03	LB134024
	Iron	50.0	+/-50.0	U	25.0	50.0	P	12/19/2024	17:03	LB134024
	Lead	0.39	+/-1.00	J	0.75	1.00	P	12/19/2024	17:03	LB134024
	Magnesium	500	+/-500	U	190	500	P	12/19/2024	17:03	LB134024
	Manganese	0.35	+/-1.00	J	0.75	1.00	P	12/19/2024	17:03	LB134024
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	17:03	LB134024
	Potassium	500	+/-500	U	190	500	P	12/19/2024	17:03	LB134024
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	12/19/2024	17:03	LB134024

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	0.11	+/-1.00	J	0.50	1.00	P	12/19/2024	17:03	LB134024
	Sodium	500	+/-500	U	190	500	P	12/19/2024	17:03	LB134024
	Thallium	0.11	+/-1.00	J	0.50	1.00	P	12/19/2024	17:03	LB134024
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	12/19/2024	17:03	LB134024
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	12/19/2024	17:03	LB134024
CCB03	Aluminum	2.64	+/-20.0	J	10.0	20.0	P	12/19/2024	17:23	LB134024
	Antimony	0.23	+/-2.00	J	0.25	2.00	P	12/19/2024	17:23	LB134024
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	17:23	LB134024
	Barium	0.35	+/-10.0	J	1.25	10.0	P	12/19/2024	17:23	LB134024
	Beryllium	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	17:23	LB134024
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	12/19/2024	17:23	LB134024
	Calcium	500	+/-500	U	190	500	P	12/19/2024	17:23	LB134024
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	12/19/2024	17:23	LB134024
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	17:23	LB134024
	Copper	2.00	+/-2.00	U	1.50	2.00	P	12/19/2024	17:23	LB134024
	Iron	50.0	+/-50.0	U	25.0	50.0	P	12/19/2024	17:23	LB134024
	Lead	0.38	+/-1.00	J	0.75	1.00	P	12/19/2024	17:23	LB134024
	Magnesium	500	+/-500	U	190	500	P	12/19/2024	17:23	LB134024
	Manganese	0.26	+/-1.00	J	0.75	1.00	P	12/19/2024	17:23	LB134024
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	12/19/2024	17:23	LB134024
	Potassium	500	+/-500	U	190	500	P	12/19/2024	17:23	LB134024
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	12/19/2024	17:23	LB134024
	Silver	0.11	+/-1.00	J	0.50	1.00	P	12/19/2024	17:23	LB134024
	Sodium	500	+/-500	U	190	500	P	12/19/2024	17:23	LB134024
	Thallium	1.00	+/-1.00	U	0.50	1.00	P	12/19/2024	17:23	LB134024
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	12/19/2024	17:23	LB134024
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	12/19/2024	17:23	LB134024

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

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5236

Instrument: CV1

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB165560BL		**SOLID**		**Batch Number:**		**PB165560**		**Prep Date:**	**12/10/2024**	
	Mercury	0.013	<0.013	U	0.010	0.013	CV	12/11/2024	11:32	LB133887

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

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5236

Instrument: P7

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB165717BL		**SOLID**		**Batch Number:**		**PB165717**		**Prep Date:**	**12/18/2024**	
	Aluminum	1.43	<1.43	U	0.71	1.43	P	12/19/2024	16:26	LB134024
	Antimony	0.14	<0.14	U	0.054	0.14	P	12/19/2024	16:26	LB134024
	Arsenic	0.071	<0.071	U	0.018	0.071	P	12/19/2024	16:26	LB134024
	Barium	0.71	<0.71	U	0.089	0.71	P	12/19/2024	16:26	LB134024
	Beryllium	0.071	<0.071	U	0.054	0.071	P	12/19/2024	16:26	LB134024
	Cadmium	0.071	<0.071	U	0.054	0.071	P	12/19/2024	16:26	LB134024
	Calcium	35.7	<35.7	U	13.6	35.7	P	12/19/2024	16:26	LB134024
	Chromium	0.14	<0.14	U	0.036	0.14	P	12/19/2024	16:26	LB134024
	Cobalt	0.071	<0.071	U	0.018	0.071	P	12/19/2024	16:26	LB134024
	Copper	0.14	<0.14	U	0.071	0.14	P	12/19/2024	16:26	LB134024
	Iron	3.57	<3.57	U	0.89	3.57	P	12/19/2024	16:26	LB134024
	Lead	0.071	<0.071	U	0.054	0.071	P	12/19/2024	16:26	LB134024
	Magnesium	35.7	<35.7	U	13.6	35.7	P	12/19/2024	16:26	LB134024
	Manganese	0.071	<0.071	U	0.036	0.071	P	12/19/2024	16:26	LB134024
	Nickel	0.071	<0.071	U	0.018	0.071	P	12/19/2024	16:26	LB134024
	Potassium	35.7	<35.7	U	13.6	35.7	P	12/19/2024	16:26	LB134024
	Selenium	0.36	<0.36	U	0.32	0.36	P	12/19/2024	16:26	LB134024
	Silver	0.071	<0.071	U	0.036	0.071	P	12/19/2024	16:26	LB134024
	Sodium	35.7	<35.7	U	17.9	35.7	P	12/19/2024	16:26	LB134024
	Thallium	0.071	<0.071	U	0.036	0.071	P	12/19/2024	16:26	LB134024
	Vanadium	0.36	<0.36	U	0.018	0.36	P	12/19/2024	16:26	LB134024
	Zinc	0.36	<0.36	U	0.11	0.36	P	12/19/2024	16:26	LB134024

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

Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Weston Solutions **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

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	94400	100000	94	0	0	12/19/2024	16:10	LB134024
	Antimony	1.17	1.5	78	-2.5	5.5	12/19/2024	16:10	LB134024
	Arsenic	0.34	0.1	340	-1.9	2.1	12/19/2024	16:10	LB134024
	Barium	1.36	1.2	113	-18.8	21.2	12/19/2024	16:10	LB134024
	Beryllium	0.25			-2	2	12/19/2024	16:10	LB134024
	Cadmium	0.32	0.7	46	-1.3	2.7	12/19/2024	16:10	LB134024
	Calcium	103000	100000	103	0	0	12/19/2024	16:10	LB134024
	Chromium	20.9	21.0	100	17	25	12/19/2024	16:10	LB134024
	Cobalt	1.26	1.0	126	-1	3	12/19/2024	16:10	LB134024
	Copper	7.18	8.0	90	4	12	12/19/2024	16:10	LB134024
	Iron	107000	100000	107	0	0	12/19/2024	16:10	LB134024
	Lead	5.11	4.0	128	2	6	12/19/2024	16:10	LB134024
	Magnesium	100000	100000	100	0	0	12/19/2024	16:10	LB134024
	Manganese	7.91	7.0	113	5	9	12/19/2024	16:10	LB134024
	Nickel	5.54	6.0	92	4	8	12/19/2024	16:10	LB134024
	Potassium	100000	100000	100	0	0	12/19/2024	16:10	LB134024
	Selenium	0.23	0.3	77	-9.7	10	12/19/2024	16:10	LB134024
	Silver	0.030			-2	2	12/19/2024	16:10	LB134024
	Sodium	102000	100000	102	0	0	12/19/2024	16:10	LB134024
	Thallium	0.18			-2	2	12/19/2024	16:10	LB134024
	Vanadium	0.17	0.5	34	-9.5	10.5	12/19/2024	16:10	LB134024
	Zinc	14.5	11.0	132	7	15	12/19/2024	16:10	LB134024
ICSAB01	Aluminum	102000	100000	102	0	0	12/19/2024	16:13	LB134024
	Antimony	21.8	22.0	99	18	26	12/19/2024	16:13	LB134024
	Arsenic	21.7	19.0	114	16.2	21.9	12/19/2024	16:13	LB134024
	Barium	21.7	22.0	99	2	42	12/19/2024	16:13	LB134024
	Beryllium	21.1	19.0	111	16.2	21.9	12/19/2024	16:13	LB134024
	Cadmium	20.1	20.0	100	17	23	12/19/2024	16:13	LB134024
	Calcium	111000	100000	111	0	0	12/19/2024	16:13	LB134024
	Chromium	42.9	40.0	107	34	46	12/19/2024	16:13	LB134024
	Cobalt	21.8	20.0	109	17	23	12/19/2024	16:13	LB134024
	Copper	27.0	25.0	108	21	29	12/19/2024	16:13	LB134024
	Iron	114000	100000	114	0	0	12/19/2024	16:13	LB134024
	Lead	24.5	25.0	98	21.3	28.8	12/19/2024	16:13	LB134024
	Magnesium	107000	100000	107	0	0	12/19/2024	16:13	LB134024
	Manganese	29.0	27.0	107	23	31.1	12/19/2024	16:13	LB134024
	Nickel	26.3	24.0	110	20.4	27.6	12/19/2024	16:13	LB134024
	Potassium	108000	100000	108	0	0	12/19/2024	16:13	LB134024
	Selenium	19.7	19.0	104	9	29	12/19/2024	16:13	LB134024
	Silver	19.2	18.0	107	15.3	20.7	12/19/2024	16:13	LB134024
	Sodium	109000	100000	109	0	0	12/19/2024	16:13	LB134024
	Thallium	20.4	21.0	97	17.9	24.2	12/19/2024	16:13	LB134024

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

Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Weston Solutions **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

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	20.5	19.0	108	9	29	12/19/2024	16:13	LB134024
	Zinc	33.0	29.0	114	25	33	12/19/2024	16:13	LB134024

METAL QC DATA

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

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Weston Solutions **level:** low **sdg no.:** P5236

contract: WEST04 **lab code:** CHEM **case no.:** P5236 **sas no.:** P5236

matrix: Solid **sample id:** P5117-01 **client id:** TAPIAL3-SB04I-10-120324-00-T1MS

Percent Solids for Sample: 95.7 **Spiked ID:** P5117-01MS **Percent Solids for Spike Sample:** 95.7

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	78 - 124	860	D	37.6	D	810	102		P
Antimony	mg/Kg	72 - 124	52.5	D	0.037	JD	40.5	130	N	P
Arsenic	mg/Kg	82 - 118	52.0	D	0.033	JD	40.5	128	N	P
Barium	mg/Kg	86 - 116	235	D	1.46	JD	200	115		P
Beryllium	mg/Kg	80 - 120	50.5	D	0.37	UD	40.5	125	N	P
Cadmium	mg/Kg	84 - 116	54.7	D	0.37	UD	40.5	135	N	P
Calcium	mg/Kg	86 - 118	4190	D	185	UD	4100	103		P
Chromium	mg/Kg	83 - 119	49.7	D	0.28	JD	40.5	122	N	P
Cobalt	mg/Kg	84 - 115	51.0	D	0.030	JD	40.5	126	N	P
Copper	mg/Kg	84 - 119	408	D	0.74	UD	410	101		P
Iron	mg/Kg	81 - 124	2460	D	71.1	D	2000	118		P
Lead	mg/Kg	84 - 118	191	D	0.19	JD	200	94		P
Magnesium	mg/Kg	80 - 123	3970	D	185	UD	4100	98		P
Manganese	mg/Kg	85 - 116	370	D	0.60	D	410	91		P
Nickel	mg/Kg	84 - 119	50.3	D	0.37	UD	40.5	124	N	P
Potassium	mg/Kg	85 - 119	2240	D	185	UD	2000	110		P
Selenium	mg/Kg	80 - 119	52.5	D	1.85	UD	40.5	129	N	P
Silver	mg/Kg	83 - 118	1.08	D	0.37	UD	40.5	3	N	P
Sodium	mg/Kg	79 - 125	3990	D	185	UD	4100	98		P
Thallium	mg/Kg	83 - 118	49.8	D	0.37	UD	40.5	123	N	P
Vanadium	mg/Kg	82 - 116	50.4	D	0.30	JD	40.5	124	N	P
Zinc	mg/Kg	82 - 119	391	D	1.85	UD	410	96		P

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

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Weston Solutions **level:** low **sdg no.:** P5236

contract: WEST04 **lab code:** CHEM **case no.:** P5236 **sas no.:** P5236

matrix: Solid **sample id:** P5117-01 **client id:** TAPIAL3-SB04I-10-120324-00-T1MSD

Percent Solids for Sample: 95.7 **Spiked ID:** P5117-01MSD **Percent Solids for Spike Sample:** 95.7

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	78 - 124	940	D	37.6	D	870	104		P
Antimony	mg/Kg	72 - 124	55.5	D	0.037	JD	43.5	127	N	P
Arsenic	mg/Kg	82 - 118	56.7	D	0.033	JD	43.5	130	N	P
Barium	mg/Kg	86 - 116	250	D	1.46	JD	220	114		P
Beryllium	mg/Kg	80 - 120	54.6	D	0.37	UD	43.5	125	N	P
Cadmium	mg/Kg	84 - 116	58.6	D	0.37	UD	43.5	135	N	P
Calcium	mg/Kg	86 - 118	4470	D	185	UD	4400	102		P
Chromium	mg/Kg	83 - 119	54.1	D	0.28	JD	43.5	124	N	P
Cobalt	mg/Kg	84 - 115	55.4	D	0.030	JD	43.5	127	N	P
Copper	mg/Kg	84 - 119	442	D	0.74	UD	440	102		P
Iron	mg/Kg	81 - 124	2670	D	71.1	D	2200	119		P
Lead	mg/Kg	84 - 118	207	D	0.19	JD	220	95		P
Magnesium	mg/Kg	80 - 123	4340	D	185	UD	4400	100		P
Manganese	mg/Kg	85 - 116	400	D	0.60	D	440	92		P
Nickel	mg/Kg	84 - 119	55.2	D	0.37	UD	43.5	127	N	P
Potassium	mg/Kg	85 - 119	2440	D	185	UD	2200	112		P
Selenium	mg/Kg	80 - 119	56.2	D	1.85	UD	43.5	129	N	P
Silver	mg/Kg	83 - 118	1.17	D	0.37	UD	43.5	3	N	P
Sodium	mg/Kg	79 - 125	4350	D	185	UD	4400	100		P
Thallium	mg/Kg	83 - 118	54.3	D	0.37	UD	43.5	125	N	P
Vanadium	mg/Kg	82 - 116	54.6	D	0.30	JD	43.5	125	N	P
Zinc	mg/Kg	82 - 119	425	D	1.85	UD	440	98		P

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

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Weston Solutions **level:** low **sdg no.:** P5236

contract: WEST04 **lab code:** CHEM **case no.:** P5236 **sas no.:** P5236

matrix: Solid **sample id:** P5223-01 **client id:** TR-05-120924MS

Percent Solids for Sample: 93.2 **Spiked ID:** P5223-01MS **Percent Solids for Spike Sample:** 93.2

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 124	0.25		0.021		0.26	89		CV

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

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Weston Solutions **level:** low **sdg no.:** P5236

contract: WEST04 **lab code:** CHEM **case no.:** P5236 **sas no.:** P5236

matrix: Solid **sample id:** P5223-01 **client id:** TR-05-120924MSD

Percent Solids for Sample: 93.2 **Spiked ID:** P5223-01MSD **Percent Solids for Spike Sample:** 93.2

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 124	0.23		0.021		0.25	83		CV

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

Metals
- 5b -
POST DIGEST SPIKE SUMMARY

Client: Weston Solutions **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

Matrix: Solid **Level:** LOW **Client ID:** TAPIAL3-SB04I-10-120324-00-T1A

Sample ID: P5117-01 **Spiked ID:** P5117-01A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	mg/Kg	72 - 124	47.5	D	0.037	JD	37.1	128		P
Arsenic	mg/Kg	82 - 118	48.9	D	0.033	JD	37.1	132		P
Beryllium	mg/Kg	80 - 120	46.7	D	0.37	UD	37.1	126		P
Cadmium	mg/Kg	84 - 116	49.9	D	0.37	UD	37.1	134		P
Chromium	mg/Kg	83 - 119	46.0	D	0.28	JD	37.1	123		P
Cobalt	mg/Kg	84 - 115	47.3	D	0.030	JD	37.1	127		P
Nickel	mg/Kg	84 - 119	46.7	D	0.37	UD	37.1	126		P
Selenium	mg/Kg	80 - 119	48.2	D	1.85	UD	37.1	130		P
Silver	mg/Kg	83 - 118	0.99	D	0.37	UD	37.1	3		P
Thallium	mg/Kg	83 - 118	46.2	D	0.37	UD	37.1	124		P
Vanadium	mg/Kg	82 - 116	46.7	D	0.30	JD	37.1	125		P

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

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Weston Solutions **Level:** LOW **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

Matrix: Solid **Sample ID:** P5117-01 **Client ID:** TAPIAL3-SB04I-10-120324-00-T1DUP

Percent Solids for Sample: 95.7 **Duplicate ID** P5117-01DUP **Percent Solids for Spike Sample:** 95.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	37.6	D	37.7	D	0		P
Antimony	mg/Kg	20	0.037	JD	0.72	UD			P
Arsenic	mg/Kg	20	0.033	JD	0.36	UD			P
Barium	mg/Kg	20	1.46	JD	1.45	JD	1		P
Beryllium	mg/Kg	20	0.37	UD	0.36	UD			P
Cadmium	mg/Kg	20	0.37	UD	0.36	UD			P
Calcium	mg/Kg	20	185	UD	179	UD			P
Chromium	mg/Kg	20	0.28	JD	0.27	JD	6		P
Cobalt	mg/Kg	20	0.030	JD	0.36	UD			P
Copper	mg/Kg	20	0.74	UD	0.72	UD			P
Iron	mg/Kg	20	71.1	D	68.5	D	4		P
Lead	mg/Kg	20	0.19	JD	0.14	JD	33		P
Magnesium	mg/Kg	20	185	UD	179	UD			P
Manganese	mg/Kg	20	0.60	D	0.49	D	20		P
Nickel	mg/Kg	20	0.37	UD	0.36	UD			P
Potassium	mg/Kg	20	185	UD	179	UD			P
Selenium	mg/Kg	20	1.85	UD	1.79	UD			P
Silver	mg/Kg	20	0.37	UD	0.36	UD			P
Sodium	mg/Kg	20	185	UD	179	UD			P
Thallium	mg/Kg	20	0.37	UD	0.36	UD			P
Vanadium	mg/Kg	20	0.30	JD	0.29	JD	4		P
Zinc	mg/Kg	20	1.85	UD	1.79	UD			P

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

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

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Weston Solutions **Level:** LOW **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

Matrix: Solid **Sample ID:** P5117-01MS **Client ID:** TAPIAL3-SB04I-10-120324-00-T1MSD

Percent Solids for Sample: 95.7 **Duplicate ID** P5117-01MSD **Percent Solids for Spike Sample:** 95.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	860	D	940	D	9		P
Antimony	mg/Kg	20	52.5	D	55.5	D	6		P
Arsenic	mg/Kg	20	52.0	D	56.7	D	9		P
Barium	mg/Kg	20	235	D	250	D	6		P
Beryllium	mg/Kg	20	50.5	D	54.6	D	8		P
Cadmium	mg/Kg	20	54.7	D	58.6	D	7		P
Calcium	mg/Kg	20	4190	D	4470	D	6		P
Chromium	mg/Kg	20	49.7	D	54.1	D	8		P
Cobalt	mg/Kg	20	51.0	D	55.4	D	8		P
Copper	mg/Kg	20	408	D	442	D	8		P
Iron	mg/Kg	20	2460	D	2670	D	8		P
Lead	mg/Kg	20	191	D	207	D	8		P
Magnesium	mg/Kg	20	3970	D	4340	D	9		P
Manganese	mg/Kg	20	370	D	400	D	8		P
Nickel	mg/Kg	20	50.3	D	55.2	D	9		P
Potassium	mg/Kg	20	2240	D	2440	D	9		P
Selenium	mg/Kg	20	52.5	D	56.2	D	7		P
Silver	mg/Kg	20	1.08	D	1.17	D	8		P
Sodium	mg/Kg	20	3990	D	4350	D	9		P
Thallium	mg/Kg	20	49.8	D	54.3	D	9		P
Vanadium	mg/Kg	20	50.4	D	54.6	D	8		P
Zinc	mg/Kg	20	391	D	425	D	8		P

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

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

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Weston Solutions **Level:** LOW **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

Matrix: Solid **Sample ID:** P5223-01 **Client ID:** TR-05-120924DUP

Percent Solids for Sample: 93.2 **Duplicate ID** P5223-01DUP **Percent Solids for Spike Sample:** 93.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.021		0.020		5		CV

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

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

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Weston Solutions **Level:** LOW **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

Matrix: Solid **Sample ID:** P5223-01MS **Client ID:** TR-05-120924MSD

Percent Solids for Sample: 93.2 **Duplicate ID** P5223-01MSD **Percent Solids for Spike Sample:** 93.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.25		0.23		10		CV

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

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

LABORATORY CONTROL SAMPLE SUMMARY

Client: Weston Solutions **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB165560BS							
Mercury	mg/Kg	0.26	0.23		89	80 - 124	CV

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

LABORATORY CONTROL SAMPLE SUMMARY

Client: Weston Solutions **SDG No.:** P5236

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5236 **SAS No.:** P5236

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB165717BS							
Aluminum	mg/Kg	710	707		100	78 - 124	P
Antimony	mg/Kg	35.7	37.4		105	72 - 124	P
Arsenic	mg/Kg	35.7	36.7		103	82 - 118	P
Barium	mg/Kg	180	185		103	86 - 116	P
Beryllium	mg/Kg	35.7	35.5		99	80 - 120	P
Cadmium	mg/Kg	35.7	37.5		105	84 - 116	P
Calcium	mg/Kg	3600	3700		103	86 - 118	P
Chromium	mg/Kg	35.7	36.7		103	83 - 119	P
Cobalt	mg/Kg	35.7	36.4		102	84 - 115	P
Copper	mg/Kg	360	367		102	84 - 119	P
Iron	mg/Kg	1800	1870		104	81 - 124	P
Lead	mg/Kg	180	182		101	84 - 118	P
Magnesium	mg/Kg	3600	3570		99	80 - 123	P
Manganese	mg/Kg	360	362		101	85 - 116	P
Nickel	mg/Kg	35.7	35.6		100	84 - 119	P
Potassium	mg/Kg	1800	1790		99	85 - 119	P
Selenium	mg/Kg	35.7	37.5		105	80 - 119	P
Silver	mg/Kg	35.7	38.4		108	83 - 118	P
Sodium	mg/Kg	3600	3620		101	79 - 125	P
Thallium	mg/Kg	35.7	36.6		102	83 - 118	P
Vanadium	mg/Kg	35.7	36.2		101	82 - 116	P
Zinc	mg/Kg	360	366		102	82 - 119	P

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

FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Weston Solutions | Contract: WEST04

Lab Code: CHEM | Case no.: P5236 | Sas No.: P5236 | SDG No.: P5236

Instrument ID: P7 | Start Date : 12/19/2024

Run Number: LB134024 | End Date : 12/19/2024

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	1504	100		100		100		100		100	
S2	S2	1510	102		103		103		103		102	
S3	S3	1514	104		102		102		101		103	
S4	S4	1517	101		96		96		96		101	
S5	S5	1519	99		87		89		88		97	
S6	S6	1522	97		82		85		83		96	
S7	S7	1525	95		82		86		82		97	
S8	S8	1528	94		84		86		78		96	
ICV01	ICV01	1549	104		95		95		96		100	
LLICV	LLICV	1604	101		96		96		97		100	
ICB01	ICB01	1607	105		97		98		99		102	
ICSA01	ICSA01	1610	98		91		94		89		102	
ICSAB01	ICSAB01	1613	97		92		96		90		104	
CCV01	CCV01	1616	95		89		92		86		101	
CCB01	CCB01	1619	99		90		93		93		101	
CRI	CRI	1623	99		91		94		95		102	
PB165717BL	PB165717BL	1626	100		93		96		96		102	
PB165717BS	PB165717BS	1635	100		89		91		89		100	
ZZZZZZ	ZZZZZZ	1639										
P5117-01DUP	TAPIAL3-SB0	1643	98		89		92		92		99	
P5117-01L	TAPIAL3-SB0	1646	99		91		93		95		101	
P5117-01MS	TAPIAL3-SB0	1649	101		93		95		95		102	
P5117-01MSD	TAPIAL3-SB0	1652	102		92		94		94		102	
P5117-01A	TAPIAL3-SB0	1655	102		91		94		94		102	
CCV02	CCV02	1701	98		85		88		82		97	
CCB02	CCB02	1703	100		86		89		90		98	
ZZZZZZ	ZZZZZZ	1707										
P5236-01	TAPIAL3-SB0	1711	103		97		101		94		101	
ZZZZZZ	ZZZZZZ	1714										
CCV03	CCV03	1720	99		88		89		83		98	
CCB03	CCB03	1723	101		87		90		91		98	

Internal Standard %RI Limit: 30 - 120

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

FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Weston Solutions | Contract: WEST04

Lab Code: CHEM | Case no.: P5236 | Sas No.: P5236 | SDG No.: P5236

Instrument ID: P7 | Start Date : 12/19/2024

Run Number: LB134024 | End Date : 12/19/2024

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	1504	100		100		100		100		100	
S2	S2	1510	103		103		103		103		103	
S3	S3	1514	99		100		100		102		103	
S4	S4	1517	90		92		93		98		101	
S5	S5	1519	81		86		87		97		98	
S6	S6	1522	80		85		85		97		99	
S7	S7	1525	81		86		85		98		100	
S8	S8	1528	87		89		82		96		98	
ICV01	ICV01	1549	95		97		98		104		104	
LLICV	LLICV	1604	97		98		100		102		104	
ICB01	ICB01	1607	98		100		100		103		104	
ICSA01	ICSA01	1610	88		94		91		103		104	
ICSAB01	ICSAB01	1613	88		93		90		102		103	
CCV01	CCV01	1616	87		91		86		100		101	
CCB01	CCB01	1619	89		94		96		102		103	
CRI	CRI	1623	91		95		97		102		104	
PB165717BL	PB165717BL	1626	92		96		99		103		105	
PB165717BS	PB165717BS	1635	87		91		91		101		103	
ZZZZZZ	ZZZZZZ	1639										
P5117-01DUP	TAPIAL3-SB0	1643	89		93		97		102		103	
P5117-01L	TAPIAL3-SB0	1646	91		95		98		103		105	
P5117-01MS	TAPIAL3-SB0	1649	91		96		97		103		105	
P5117-01MSD	TAPIAL3-SB0	1652	89		94		96		103		105	
P5117-01A	TAPIAL3-SB0	1655	89		92		95		102		103	
CCV02	CCV02	1701	84		88		84		98		100	
CCB02	CCB02	1703	87		92		95		102		103	
ZZZZZZ	ZZZZZZ	1707										
P5236-01	TAPIAL3-SB0	1711	96		102		99		105		106	
ZZZZZZ	ZZZZZZ	1714										
CCV03	CCV03	1720	83		87		83		98		98	
CCB03	CCB03	1723	87		92		95		101		102	

Internal Standard %RI Limit: 30 - 120

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

FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Weston Solutions Contract: WEST04

Lab Code: CHEM Case no.: P5236 Sas No.: P5236 SDG No.: P5236

Instrument ID: P7 Start Date : 12/19/2024

Run Number: LB134024 End Date : 12/19/2024

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	1504	100		100							
S2	S2	1510	102		105							
S3	S3	1514	103		106							
S4	S4	1517	101		104							
S5	S5	1519	97		102							
S6	S6	1522	97		101							
S7	S7	1525	98		100							
S8	S8	1528	97		91							
ICV01	ICV01	1549	101		106							
LLICV	LLICV	1604	99		104							
ICB01	ICB01	1607	102		106							
ICSA01	ICSA01	1610	103		102							
ICSAB01	ICSAB01	1613	104		103							
CCV01	CCV01	1616	102		98							
CCB01	CCB01	1619	101		107							
CRI	CRI	1623	102		107							
PB165717BL	PB165717BL	1626	103		108							
PB165717BS	PB165717BS	1635	102		104							
ZZZZZZ	ZZZZZZ	1639										
P5117-01DUP	TAPIAL3-SB04	1643	99		105							
P5117-01L	TAPIAL3-SB04	1646	101		107							
P5117-01MS	TAPIAL3-SB04	1649	102		107							
P5117-01MSD	TAPIAL3-SB04	1652	103		107							
P5117-01A	TAPIAL3-SB04	1655	102		106							
CCV02	CCV02	1701	99		98							
CCB02	CCB02	1703	98		105							
ZZZZZZ	ZZZZZZ	1707										
P5236-01	TAPIAL3-SB03	1711	101		107							
ZZZZZZ	ZZZZZZ	1714										
CCV03	CCV03	1720	99		97							
CCB03	CCB03	1723	99		107							

Internal Standard %RI Limit: 30 -120

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

FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Weston Solutions Contract: WEST04

Lab Code: CHEM Case no.: P5236 Sas No.: P5236 SDG No.: P5236

Instrument ID: P7 Start Date : 12/19/2024

Run Number: LB134024 End Date : 12/19/2024

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Collision Cell									
			Element 209Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	S0	1504	100									
S2	S2	1510	104									
S3	S3	1514	104									
S4	S4	1517	101									
S5	S5	1519	100									
S6	S6	1522	99									
S7	S7	1525	98									
S8	S8	1528	89									
ICV01	ICV01	1549	106									
LLICV	LLICV	1604	105									
ICB01	ICB01	1607	106									
ICSA01	ICSA01	1610	101									
ICSAB01	ICSAB01	1613	100									
CCV01	CCV01	1616	96									
CCB01	CCB01	1619	106									
CRI	CRI	1623	107									
PB165717BL	PB165717BL	1626	107									
PB165717BS	PB165717BS	1635	104									
ZZZZZZ	ZZZZZZ	1639										
P5117-01DUP	TAPIAL3-SB04	1643	106									
P5117-01L	TAPIAL3-SB04	1646	108									
P5117-01MS	TAPIAL3-SB04	1649	107									
P5117-01MSD	TAPIAL3-SB04	1652	106									
P5117-01A	TAPIAL3-SB04	1655	105									
CCV02	CCV02	1701	95									
CCB02	CCB02	1703	106									
ZZZZZZ	ZZZZZZ	1707										
P5236-01	TAPIAL3-SB03	1711	108									
ZZZZZZ	ZZZZZZ	1714										
CCV03	CCV03	1720	94									
CCB03	CCB03	1723	107									

Internal Standard %RI Limit: 30 -120

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

Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

TAPIAL3-SB04I-10-120324-00-T1L

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

Lab Code: CHEM **Lb No.:** lb134024 **Lab Sample ID :** P5117-01L **SDG No.:** P5236

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	37.6	D	30.3	JD	19		P
Antimony	0.037	JD	3.71	UD	100		P
Arsenic	0.033	JD	1.85	UD	100		P
Barium	1.46	JD	1.28	JD	12		P
Beryllium	0.37	UD	1.85	UD			P
Cadmium	0.37	UD	1.85	UD			P
Calcium	185	UD	926	UD	89		P
Chromium	0.28	JD	3.71	UD	100		P
Cobalt	0.030	JD	1.85	UD	100		P
Copper	0.74	UD	3.71	UD			P
Iron	71.1	D	61.8	JD	13		P
Lead	0.19	JD	1.85	UD	100		P
Magnesium	185	UD	926	UD			P
Manganese	0.60	D	1.85	UD	100		P
Nickel	0.37	UD	1.85	UD			P
Potassium	185	UD	926	UD	10		P
Selenium	1.85	UD	9.26	UD			P
Silver	0.37	UD	1.85	UD			P
Sodium	185	UD	926	UD			P
Thallium	0.37	UD	1.85	UD			P
Vanadium	0.30	JD	0.28	JD	9		P
Zinc	1.85	UD	9.26	UD			P

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

Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

TR-05-120924L

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

Lab Code: CHEM **Lb No.:** lb133887 **Lab Sample ID :** P5223-01L **SDG No.:** P5236

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

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Mercury	0.021		0.066	U	100.0		CV

METAL PREPARATION & INSTRUMENT DATA

METAL PREPARATION & ANALYICAL SUMMARY

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

Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: Weston Solutions **SDG No.:** P5236

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

Case No.: P5236 **SAS No.:** P5236

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB165560**						
P5223-01DUP	TR-05-120924DUP	DUP	SOLID	12/10/2024	0.56	35.0	93.20
P5223-01MS	TR-05-120924MS	MS	SOLID	12/10/2024	0.57	35.0	93.20
P5223-01MSD	TR-05-120924MSD	MSD	SOLID	12/10/2024	0.59	35.0	93.20
P5236-01	TAPIAL3-SB03D-3-120724-00-T01	SAM	SOLID	12/10/2024	0.50	35.0	85.20
PB165560BL	PB165560BL	MB	SOLID	12/10/2024	0.56	35.0	100.00
PB165560BS	PB165560BS	LCS	SOLID	12/10/2024	0.54	35.0	100.00

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

Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: Weston Solutions **SDG No.:** P5236

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

Case No.: P5236 **SAS No.:** P5236

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB165717**						
P5117-01DUP	TAPIAL3-SB04I-10-120324-00-T1DUP	DUP	SOLID	12/18/2024	1.46	100.0	95.70
P5117-01MS	TAPIAL3-SB04I-10-120324-00-T1MS	MS	SOLID	12/18/2024	1.29	100.0	95.70
P5117-01MSD	TAPIAL3-SB04I-10-120324-00-T1MSD	MSD	SOLID	12/18/2024	1.20	100.0	95.70
P5236-01	TAPIAL3-SB03D-3-120724-00-T01	SAM	SOLID	12/18/2024	1.23	100.0	85.20
PB165717BL	PB165717BL	MB	SOLID	12/18/2024	1.40	100.0	100.00
PB165717BS	PB165717BS	LCS	SOLID	12/18/2024	1.40	100.0	100.00

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

metals
- 14 -
ANALYSIS RUN LOG

Client: Weston Solutions **Contract:** WEST04

Lab code: CHEM **Case no.:** P5236 **Sas no.:** P5236 **Sdg no.:** P5236

Instrument id number: **Method:** **Run number:** LB133887

Start date: 12/11/2024 **End date:** 12/11/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1056	HG
S0.2	S0.2	1	1058	HG
S2.5	S2.5	1	1100	HG
S5	S5	1	1102	HG
S7.5	S7.5	1	1105	HG
S10	S10	1	1110	HG
ICV16	ICV16	1	1113	HG
ICB16	ICB16	1	1118	HG
CCV16	CCV16	1	1120	HG
CCB16	CCB16	1	1122	HG
CRA	CRA	1	1125	HG
PB165560BL	PB165560BL	1	1132	HG
PB165560BS	PB165560BS	1	1134	HG
CCV17	CCV17	1	1148	HG
CCB17	CCB17	1	1153	HG
CCV18	CCV18	1	1218	HG
CCB18	CCB18	1	1220	HG
P5223-01DUP	TR-05-120924DUP	1	1225	HG
P5223-01MS	TR-05-120924MS	1	1228	HG
P5223-01MSD	TR-05-120924MSD	1	1230	HG
P5236-01	TAPIAL3-SB03D-3-120724-00-'	1	1232	HG
P5223-01L	TR-05-120924L	5	1241	HG
CCV19	CCV19	1	1251	HG
CCB19	CCB19	1	1253	HG

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

metals
- 14 -
ANALYSIS RUN LOG

Client: Weston Solutions **Contract:** WEST04

Lab code: CHEM **Case no.:** P5236 **Sas no.:** P5236 **Sdg no.:** P5236

Instrument id number: **Method:** **Run number:** LB134024

Start date: 12/19/2024 **End date:** 12/19/2024

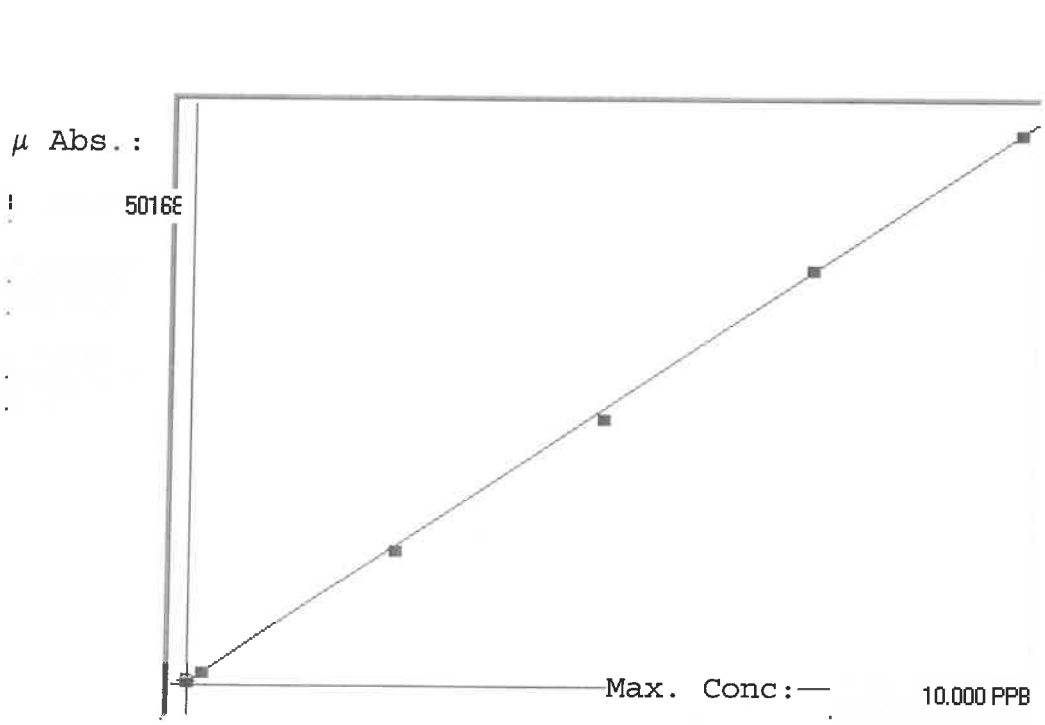
Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1504	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S2	S2	1	1510	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S3	S3	1	1514	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S4	S4	1	1517	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S5	S5	1	1519	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	1522	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	1525	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	1528	Al,Ca,Fe,K,Mg,Na
ICV01	ICV01	1	1549	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
LLICV	LLICV	1	1604	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	1607	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	1610	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	1613	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	1616	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	1619	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	1623	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB165717BL	PB165717BL	1	1626	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB165717BS	PB165717BS	1	1635	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5117-01DUP	TAPIAL3-SB04I-10-120324-00-	5	1643	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5117-01L	TAPIAL3-SB04I-10-120324-00-	25	1646	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5117-01MS	TAPIAL3-SB04I-10-120324-00-	5	1649	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5117-01MSD	TAPIAL3-SB04I-10-120324-00-	5	1652	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5117-01A	TAPIAL3-SB04I-10-120324-00-	5	1655	Ag,As,Be,Cd,Co,Cr,Ni,Sb,Se,Tl,V
CCV02	CCV02	1	1701	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	1703	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5236-01	TAPIAL3-SB03D-3-120724-00-	5	1711	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV03	CCV03	1	1720	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB03	CCB03	1	1723	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

METAL
RAW DATA

Reviewed By:jaswal
On:12/11/2024
11:05:59 PM
Inst Id :CV1
LB :LB133887

LB133887

7471B INSTRUMENT ID: CV1



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	%D
0.0	0.000	0.063	0.063	511	0.000	511					
0.2	0.200	0.219	0.019	1290	0.0 %	1290					
2.5	2.500	2.463	-0.037	12479	0.0 %	12479					
5.0	5.000	4.860	-0.140	24437	0.0 %	24437					
7.5	7.500	7.575	0.075	37976	0.0 %	37976					
10.0	10.000	10.019	0.019	50168	0.0 %	50168					

-9
-1
-3
1
0

Reviewed By:jaswal
On:12/11/2024
11:05:59 PM
Inst Id :CV1
LB :LB133887

LB133887 INSTRUMENT ID : CV1

Method: 7471B Operator: Admin Date of Analysis: 11 Dec 2024 10:53:39

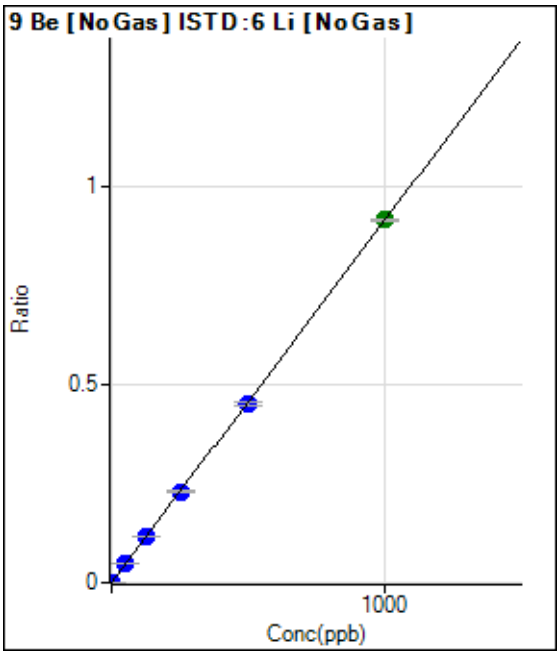
Sample ID	Extended ID	µ Abs	Conc	Stnd Conc	Method	Units	Date	Type	Type
0.0 - 1	50	511	-	0.0000	7471B	PPB	11 Dec 2024 10:56:02	S	Std
0.2 - 1	50.2	1290	-	0.2000	7471B	PPB	11 Dec 2024 10:58:19	S	Std
2.5 - 1	52.5	12479	-	2.5000	7471B	PPB	11 Dec 2024 11:00:36	S	Std
5.0 - 1	55	24437	-	5.0000	7471B	PPB	11 Dec 2024 11:02:53	S	Std
7.5 - 1	57.5	37976	-	7.5000	7471B	PPB	11 Dec 2024 11:05:11	S	Std
10.0 - 1	510	50168	-	10.0000	7471B	PPB	11 Dec 2024 11:10:31	S	Std
ICV16 - 1	ICV16	19571	3.8847		-7471B	PPB	11 Dec 2024 11:13:27	U	SMPL
ICB16 - 1	ICB16	367	0.0343		-7471B	PPB	11 Dec 2024 11:18:17	U	SMPL
CCV16 - 1	CCV16	24378	4.8485		-7471B	PPB	11 Dec 2024 11:20:31	U	SMPL
CCB16 - 1	CCB16	8	-0.0377		-7471B	PPB	11 Dec 2024 11:22:47	U	SMPL
CRA - 1	CRA	1227	0.2067		-7471B	PPB	11 Dec 2024 11:25:07	U	SMPL
HighStd - 1	HighStd	49178	9.8209		-7471B	PPB	11 Dec 2024 11:27:22	U	SMPL
ChkStd - 1	ChkStd	34166	6.8110		-7471B	PPB	11 Dec 2024 11:29:38	U	SMPL
PB165560BL - 1	PB165560BL	273	0.0155		-7471B	PPB	11 Dec 2024 11:32:00	U	SMPL
PB165560BS - 1	PB165560BS	17973	3.5643		-7471B	PPB	11 Dec 2024 11:34:19	U	SMPL
P5174-01 - 1	ROLL-OFF-COMP	184418	36.9366		-7471B	PPB	11 Dec 2024 11:36:35	U	SMPL
P5175-01 - 1	OK-01-12062024	-521	-0.1437		-7471B	PPB	11 Dec 2024 11:38:54	U	SMPL
P5176-01 - 1	EO-02-12062024	2141	0.3900		-7471B	PPB	11 Dec 2024 11:41:25	U	SMPL
P5176-03 - 1	EO-03-12062024	3467	0.6559		-7471B	PPB	11 Dec 2024 11:43:43	U	SMPL
P5196-01 - 1	MH-761	1470	0.2555		-7471B	PPB	11 Dec 2024 11:46:01	U	SMPL
CCV17 - 1	CCV17	24001	4.7729		-7471B	PPB	11 Dec 2024 11:48:19	U	SMPL
CCB17 - 1	CCB17	260	0.0128		-7471B	PPB	11 Dec 2024 11:53:15	U	SMPL
P5213-01 - 1	TAPIAL3-SB03I-15-120624-00-T1	769	0.1149		-7471B	PPB	11 Dec 2024 11:55:30	U	SMPL
P5216-01 - 1	BP-G-6	5546	1.0727		-7471B	PPB	11 Dec 2024 11:57:46	U	SMPL
P5216-05 - 1	MH-743	1078	0.1769		-7471B	PPB	11 Dec 2024 12:00:02	U	SMPL
P5216-09 - 1	MH-744	1172	0.1957		-7471B	PPB	11 Dec 2024 12:02:20	U	SMPL
P5216-13 - 1	TP-12	4937	0.9506		-7471B	PPB	11 Dec 2024 12:04:38	U	SMPL
P5219-01 - 1	MR-CAM-09-MR-CAM-010	1645	0.2905		-7471B	PPB	11 Dec 2024 12:06:54	U	SMPL
P5219-02 - 1	MR-CAM-011	1532	0.2679		-7471B	PPB	11 Dec 2024 12:09:13	U	SMPL
P5219-03 - 1	MR-CAM-012	2181	0.3980		-7471B	PPB	11 Dec 2024 12:11:32	U	SMPL
P5219-04 - 1	MR-CAM-013	240	0.0088		-7471B	PPB	11 Dec 2024 12:13:51	U	SMPL
P5223-01 - 1	TR-05-120924	1760	0.3136		-7471B	PPB	11 Dec 2024 12:16:08	U	SMPL
CCV18 - 1	CCV18	24220	4.8168		-7471B	PPB	11 Dec 2024 12:18:24	U	SMPL
CCB18 - 1	CCB18	190	-0.0012		-7471B	PPB	11 Dec 2024 12:20:40	U	SMPL
P5223-01DUP - 1	TR-05-120924DUP	1666	0.2948		-7471B	PPB	11 Dec 2024 12:25:47	U	SMPL
P5223-01MS - 1	TR-05-120924MS	19342	3.8388		-7471B	PPB	11 Dec 2024 12:28:02	U	SMPL
P5223-01MSD - 1	TR-05-120924MSD	18104	3.5906		-7471B	PPB	11 Dec 2024 12:30:18	U	SMPL
P5236-01 - 1	TAPIAL3-SB03D-3-120724-00-T01	1354	0.2322		-7471B	PPB	11 Dec 2024 12:32:37	U	SMPL
P5239-01 - 1	WC-1	1358	0.2330		-7471B	PPB	11 Dec 2024 12:34:57	U	SMPL
P5244-01 - 1	NB-08-121024	2678	0.4977		-7471B	PPB	11 Dec 2024 12:37:13	U	SMPL
P5245-01 - 1	72-12016	4186	0.8000		-7471B	PPB	11 Dec 2024 12:39:31	U	SMPL
P5223-01LX5 - 1		244	0.0096		-7471B	PPB	11 Dec 2024 12:41:47	U	SMPL
P5223-01A - 1		19255	3.8214		-7471B	PPB	11 Dec 2024 12:44:05	U	SMPL
P5174-01DLX10 - 1		16141	3.1970		-7471B	PPB	11 Dec 2024 12:46:21	U	SMPL
CCV19 - 1	CCV19	23901	4.7529		-7471B	PPB	11 Dec 2024 12:51:03	U	SMPL
CCB19 - 1	CCB19	168	-0.0056		-7471B	PPB	11 Dec 2024 12:53:18	U	SMPL

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

Batch Folder: D:\Agilent\ICPMH\1\DATA\P7121924MS1.b\
Analysis File: P7121924MS1.batch.bin
DA Date-Time: 2024-12-19 17:35:39
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	S00	2024-12-19 15:04:22
2	006CALS.d	S02	2024-12-19 15:10:54
3	007CALS.d	S03	2024-12-19 15:14:09
4	008CALS.d	S04	2024-12-19 15:17:09
5	009CALS.d	S05	2024-12-19 15:19:58
6	010CALS.d	S06	2024-12-19 15:22:45
7	011CALS.d	S07	2024-12-19 15:25:28
8	012CALS.d	S08	2024-12-19 15:28:14

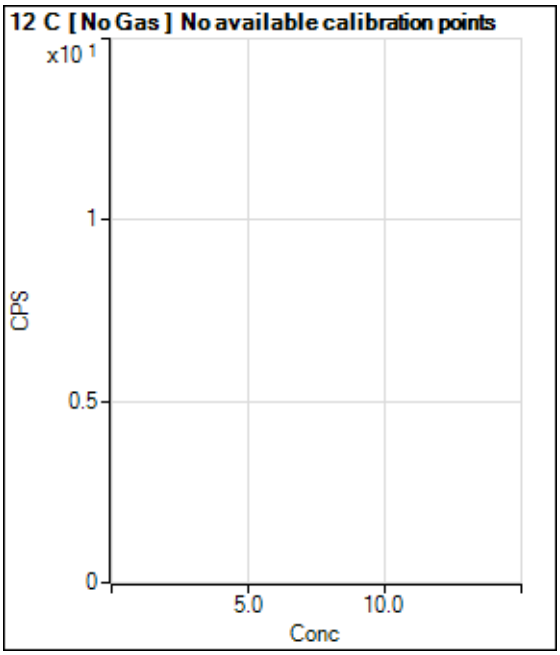
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	134.44	0.0001	P	18.4
2	☐	1.000	1.033	1687.88	0.0010	P	1.8
3	☐	50.000	51.125	77992.15	0.0468	P	2.0
4	☐	125.000	125.513	186612.53	0.1147	P	1.1
5	☐	250.000	252.175	364906.19	0.2303	P	2.6
6	☐	500.000	494.666	703394.53	0.4517	P	2.2
7	☐	1000.000	1002.003	1392732.51	0.9150	A	0.8
8	☐			503.35	0.0003	P	9.9

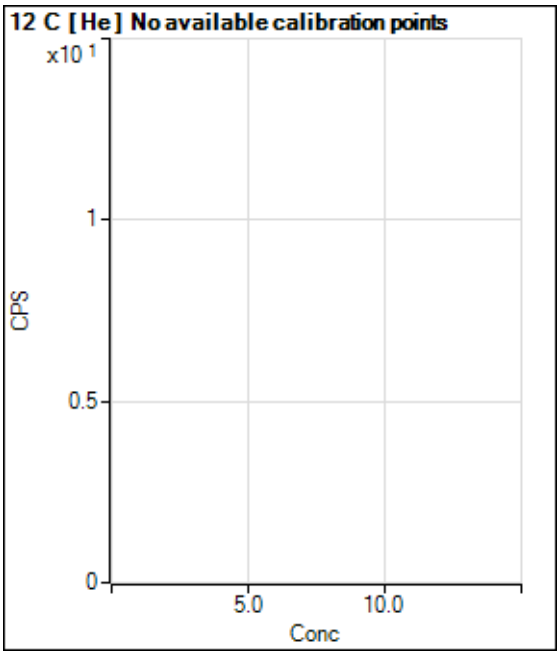
y = 9.1306E-004 * x + 8.3803E-005
R = 1.0000
DL = 0.05058
BEC = 0.09178

Weight: <None>
Min Conc: 0

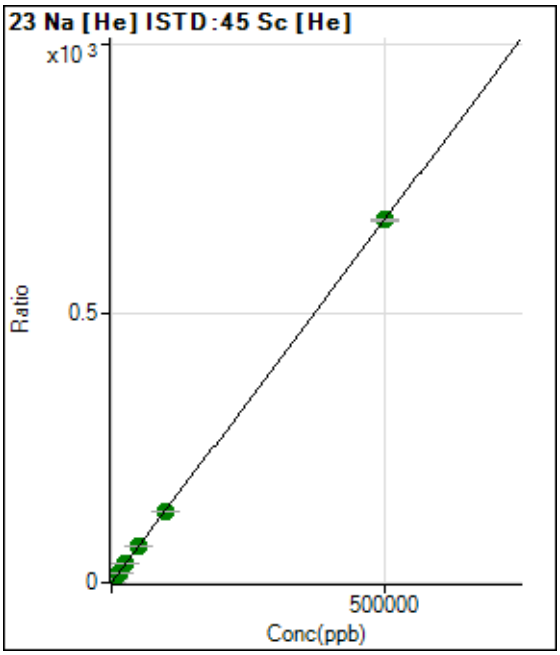


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



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

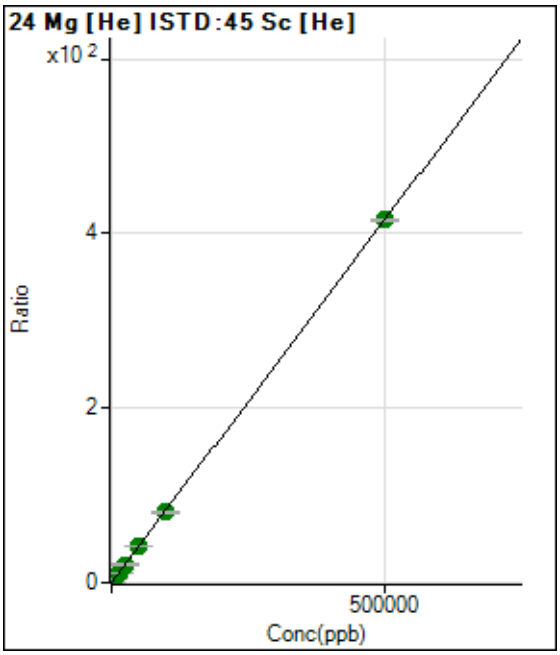


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30798.55	0.0484	P	0.9
2	☐	500.000	493.989	465331.49	0.7129	P	0.8
3	☐	5000.000	5046.769	4288005.42	6.8372	A	0.6
4	☐	12500.000	12670.938	9754841.52	17.0932	A	0.7
5	☐	25000.000	25555.836	17749876.26	34.4258	A	0.5
6	☐	50000.000	50809.079	34635132.82	68.3962	A	0.8
7	☐	100000.00	98693.904	68690802.87	132.8103	A	0.9
8	☐	500000.00	500147.78	372742678.89	672.8416	A	0.2

y = 0.0013 * x + 0.0484
R = 1.0000
DL = 0.9428
BEC = 35.97

Weight: <None>
Min Conc: 0

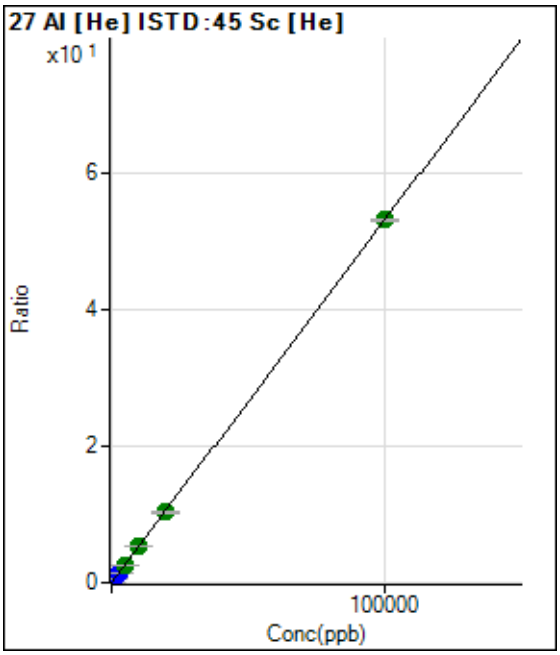
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6475.85	0.0102	P	2.7
2	☐	500.000	527.003	292202.67	0.4477	P	0.5
3	☐	5000.000	5034.791	2627485.20	4.1897	A	1.2
4	☐	12500.000	12527.357	5940729.36	10.4094	A	0.7
5	☐	25000.000	25158.505	10773423.31	20.8949	A	0.7
6	☐	50000.000	50224.778	21117795.80	41.7030	A	0.9
7	☐	100000.00	97341.658	41798309.65	80.8158	A	1.4
8	☐	500000.00	500500.20	230174138.79	415.4874	A	0.4

y = 8.3012E-004 * x + 0.0102
R = 1.0000
DL = 0.9969
BEC = 12.26

Weight: <None>
Min Conc: 0

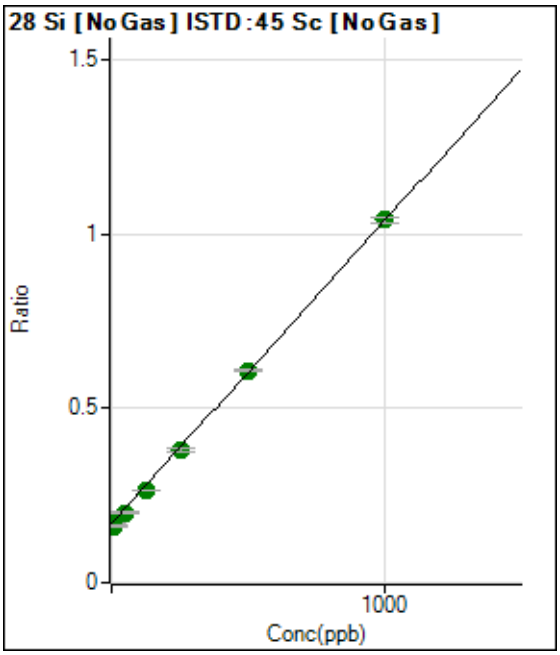


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	916.70	0.0014	P	7.8
2	☐	20.000	17.862	7142.82	0.0109	P	1.4
3	☐	1000.000	976.578	326719.69	0.5210	P	0.4
4	☐	2500.000	2449.377	744435.21	1.3044	P	0.3
5	☐	5000.000	5018.108	1377121.35	2.6709	A	0.4
6	☐	10000.000	9973.396	2687317.05	5.3070	A	1.6
7	☐	20000.000	19377.228	5332372.87	10.3096	A	0.5
8	☐	100000.00	100127.81	29508413.73	53.2665	A	0.6

y = 5.3197E-004 * x + 0.0014
R = 1.0000
DL = 0.6333
BEC = 2.707

Weight: <None>
Min Conc: 0

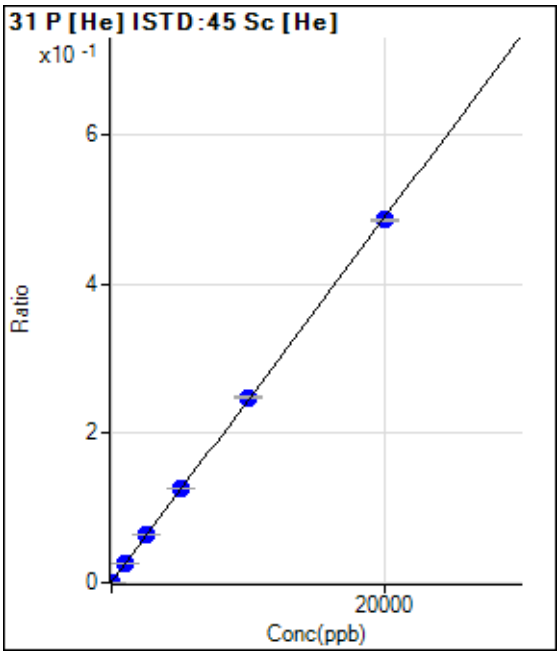
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1218649.96	0.1702	A	1.0
2	☐	10.000	-9.236	1192810.00	0.1622	A	1.7
3	☐	50.000	34.675	1459656.82	0.2003	A	1.2
4	☐	125.000	108.592	1814431.85	0.2644	A	0.6
5	☐	250.000	241.928	2368389.77	0.3802	A	2.7
6	☐	500.000	505.625	3574455.81	0.6090	A	1.6
7	☐	1000.000	1002.215	6087537.69	1.0401	A	1.4
8	☐			746886.94	0.1244	P	0.4

y = 8.6799E-004 * x + 0.1702
R = 0.9998
DL = 6.049
BEC = 196.1

Weight: <None>
Min Conc: 0

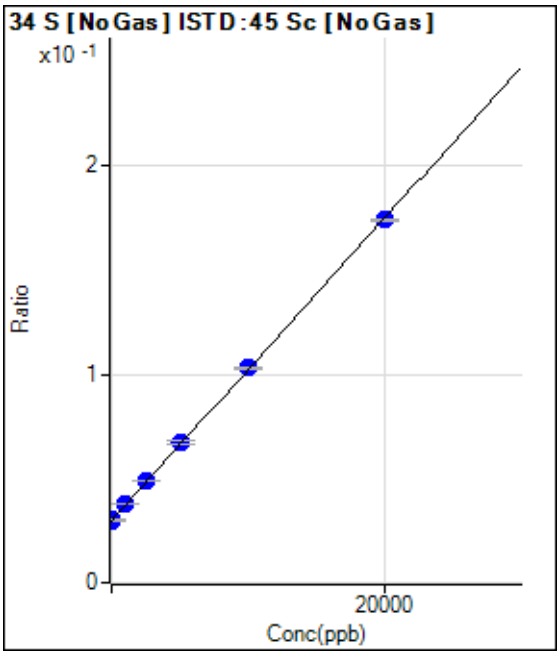


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-17.706	174.45	0.0003	P	5.7
2	☐	0.000	17.706	742.25	0.0011	P	10.1
3	☐	1000.000	1041.120	16364.40	0.0261	P	2.3
4	☐	2500.000	2586.722	36397.64	0.0638	P	1.4
5	☐	5000.000	5128.259	64834.32	0.1257	P	1.4
6	☐	10000.000	10149.154	125669.24	0.2482	P	0.5
7	☐	20000.000	19880.462	251075.83	0.4854	P	0.6
8	☐			328.90	0.0006	P	9.7

y = 2.4382E-005 * x + 7.0573E-004
R = 0.9999
DL = 8.01
BEC = 28.94

Weight: <None>
Min Conc: 0

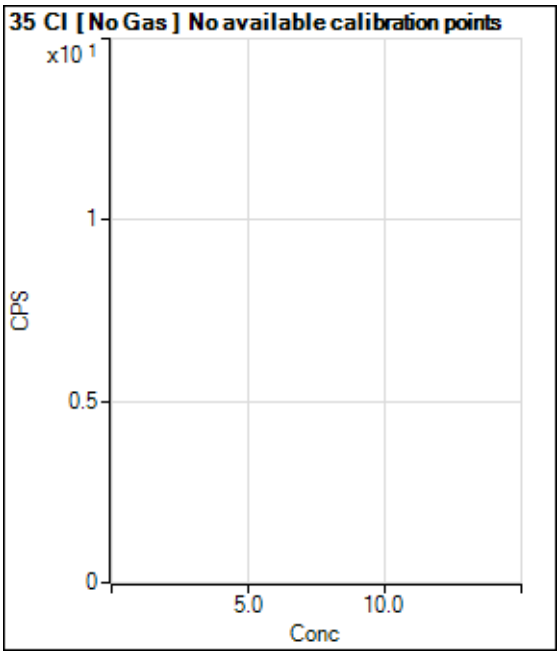
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-52.424	210661.18	0.0294	P	0.5
2	☐	0.000	52.424	221989.64	0.0302	P	1.2
3	☐	1000.000	1142.619	277656.23	0.0381	P	1.1
4	☐	2500.000	2644.127	336236.29	0.0490	P	0.2
5	☐	5000.000	5204.372	421156.83	0.0676	P	2.5
6	☐	10000.000	10090.477	604941.04	0.1031	P	0.7
7	☐	20000.000	19878.522	1019282.15	0.1742	P	0.3
8	☐			169181.23	0.0282	P	4.1

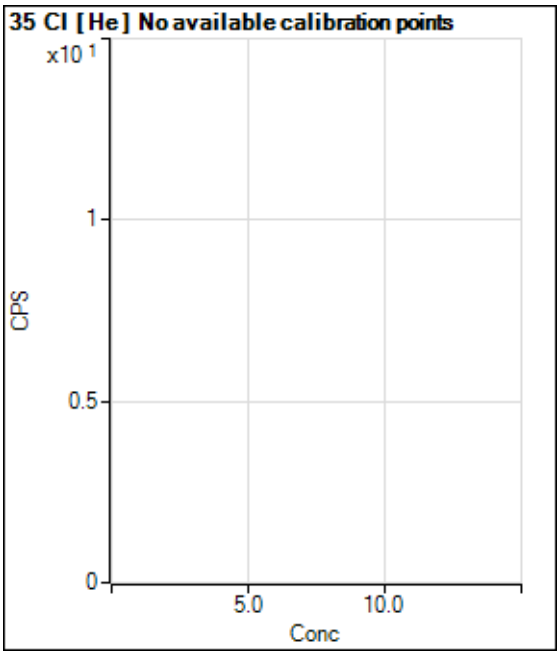
y = 7.2623E-006 * x + 0.0298
R = 0.9999
DL = 108.2
BEC = 4103

Weight: <None>
Min Conc: 0

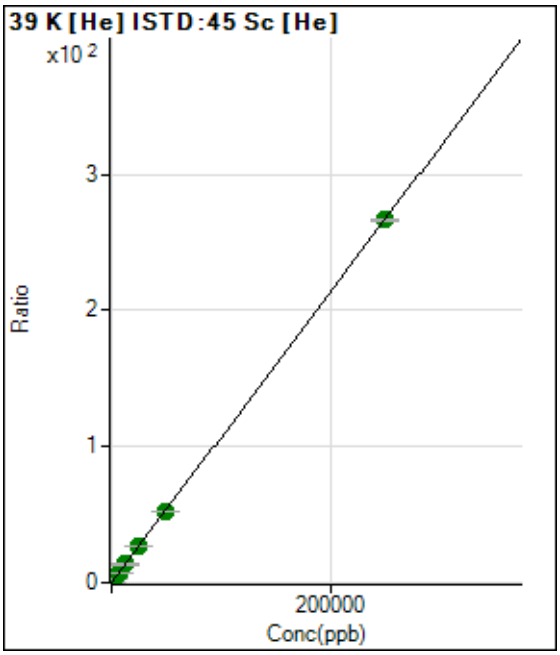


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



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

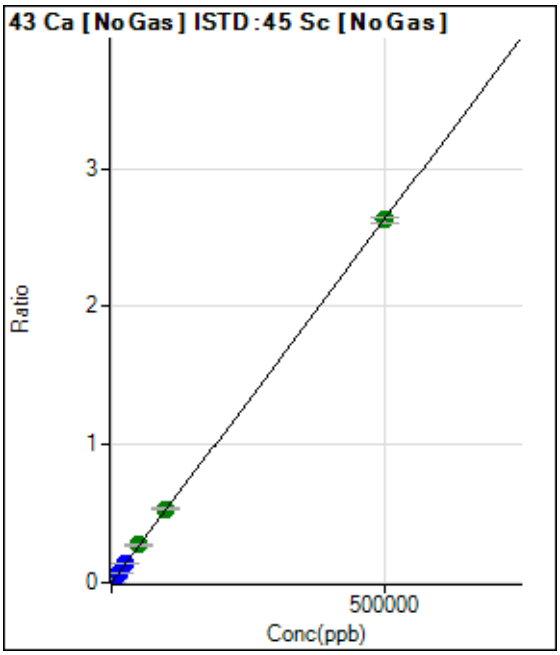


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64709.02	0.1017	P	1.5
2	☐	500.000	542.659	443537.34	0.6795	P	0.8
3	☐	2500.000	2572.382	1781594.99	2.8408	A	1.0
4	☐	6250.000	6339.452	3910517.20	6.8521	A	0.7
5	☐	12500.000	12540.993	6937448.93	13.4556	A	0.8
6	☐	25000.000	25111.921	13592545.21	26.8415	A	0.6
7	☐	50000.000	48986.780	27031540.43	52.2640	A	0.8
8	☐	250000.00	250186.35	147638706.69	266.5064	A	0.4

y = 0.0011 * x + 0.1017
R = 1.0000
DL = 4.276
BEC = 95.48

Weight: <None>
Min Conc: 0

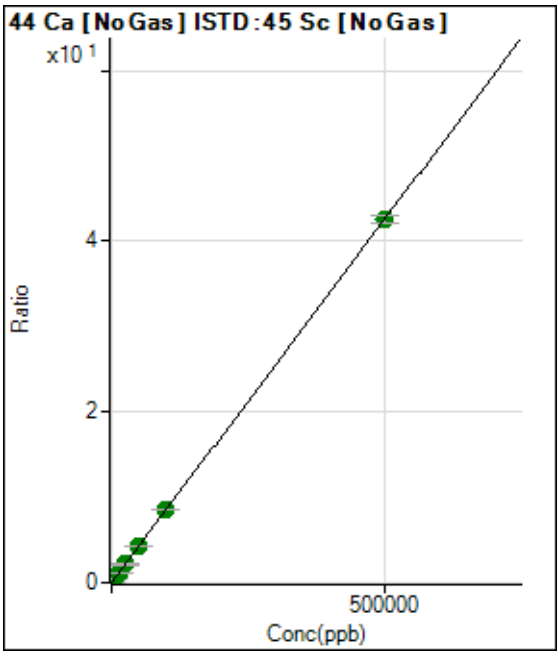
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	703.36	0.0001	P	16.6
2	☐	500.000	557.593	22303.12	0.0030	P	0.6
3	☐	5000.000	5397.780	207696.70	0.0285	P	1.0
4	☐	12500.000	13323.843	481668.67	0.0702	P	0.4
5	☐	25000.000	26465.131	868097.16	0.1393	P	2.6
6	☐	50000.000	51714.672	1597290.81	0.2722	A	0.9
7	☐	100000.00	101714.71	3132473.60	0.5352	A	1.4
8	☐	500000.00	499387.70	15771454.21	2.6274	A	1.3

y = 5.2610E-006 * x + 9.8250E-005
R = 1.0000
DL = 9.307
BEC = 18.67

Weight: <None>
Min Conc: 0

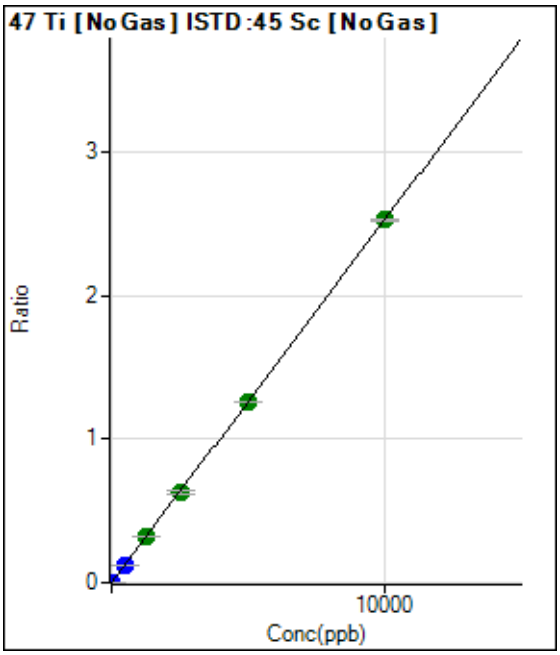


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18350.19	0.0026	P	7.8
2	☐	500.000	554.361	365651.54	0.0497	P	0.4
3	☐	5000.000	5165.865	3220779.92	0.4419	A	0.6
4	☐	12500.000	12729.382	7444979.26	1.0850	A	1.1
5	☐	25000.000	25415.212	13482451.47	2.1638	A	2.4
6	☐	50000.000	51184.338	25559499.34	4.3551	A	0.4
7	☐	100000.00	101518.67	50540000.91	8.6354	A	0.2
8	☐	500000.00	499549.62	255006729.53	42.4829	A	2.1

y = 8.5037E-005 * x + 0.0026
R = 1.0000
DL = 7.071
BEC = 30.14

Weight: <None>
Min Conc: 0

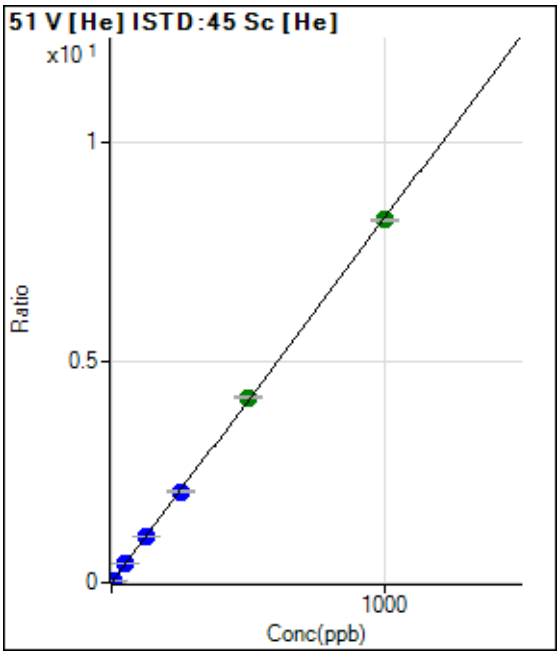
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	483.35	0.0001	P	8.9
2	☐	5.000	4.966	9718.75	0.0013	P	1.9
3	☐	500.000	499.904	920321.38	0.1263	P	0.9
4	☐	1250.000	1259.422	2182202.54	0.3180	A	0.6
5	☐	2500.000	2480.685	3901087.96	0.6263	A	3.5
6	☐	5000.000	4996.250	7402713.78	1.2614	A	0.4
7	☐	10000.000	10005.531	14783165.06	2.5260	A	0.4
8	☐			3209.28	0.0005	P	19.2

y = 2.5245E-004 * x + 6.7486E-005
R = 1.0000
DL = 0.07102
BEC = 0.2673

Weight: <None>
Min Conc: 0

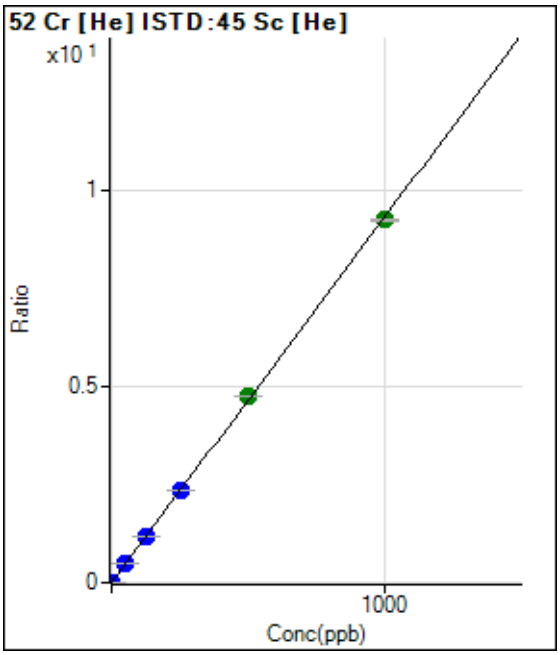


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	132.22	0.0002	P	21.6
2	☐	5.000	5.244	28405.60	0.0435	P	0.7
3	☐	50.000	50.362	260976.59	0.4161	P	0.5
4	☐	125.000	125.536	591774.50	1.0369	P	0.2
5	☐	250.000	250.373	1066192.35	2.0679	P	0.5
6	☐	500.000	508.661	2127421.53	4.2010	A	0.5
7	☐	1000.000	995.490	4252278.93	8.2215	A	0.8
8	☐			1018.94	0.0018	P	10.0

y = 0.0083 * x + 2.0790E-004
R = 0.9999
DL = 0.0163
BEC = 0.02517

Weight: <None>
Min Conc: 0

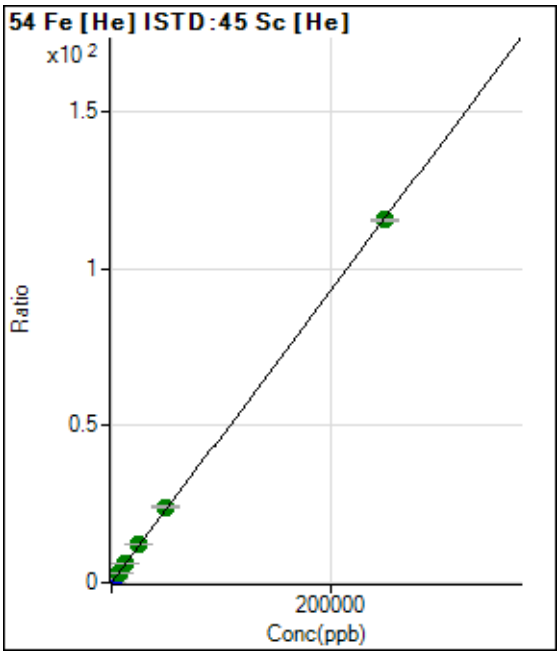
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1287.85	0.0020	P	3.7
2	☐	2.000	2.134	14313.55	0.0219	P	0.4
3	☐	50.000	51.135	300447.01	0.4791	P	0.5
4	☐	125.000	127.379	679339.76	1.1904	P	0.4
5	☐	250.000	253.847	1222045.41	2.3702	P	0.2
6	☐	500.000	511.201	2416078.94	4.7711	A	0.4
7	☐	1000.000	993.083	4792869.82	9.2666	A	0.8
8	☐			8346.56	0.0151	P	10.7

y = 0.0093 * x + 0.0020
R = 0.9999
DL = 0.02408
BEC = 0.2168

Weight: <None>
Min Conc: 0

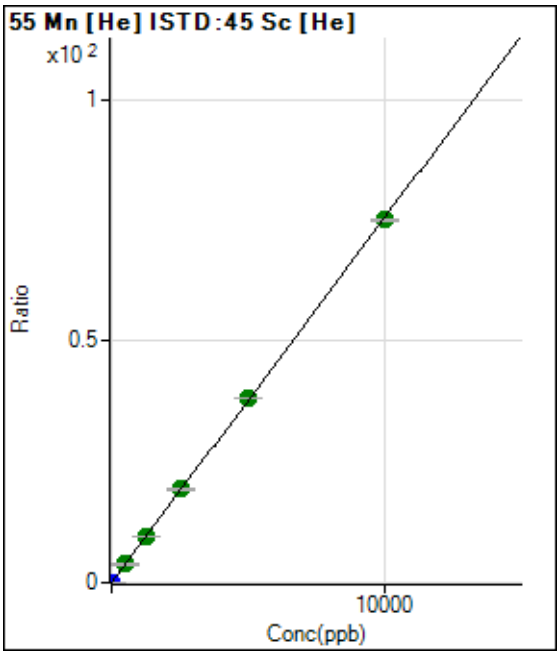


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4255.09	0.0067	P	2.5
2	☐	50.000	54.152	20754.38	0.0318	P	2.2
3	☐	2500.000	2743.901	802230.04	1.2791	P	0.0
4	☐	6250.000	6795.225	1802185.27	3.1579	A	0.4
5	☐	12500.000	13549.532	3243036.34	6.2900	A	0.9
6	☐	25000.000	26694.303	6272061.22	12.3857	A	0.6
7	☐	50000.000	52142.515	12509893.15	24.1869	A	0.2
8	☐	250000.00	249333.52	64058204.60	115.6308	A	0.4

y = 4.6373E-004 * x + 0.0067
R = 0.9999
DL = 1.064
BEC = 14.42

Weight: <None>
Min Conc: 0

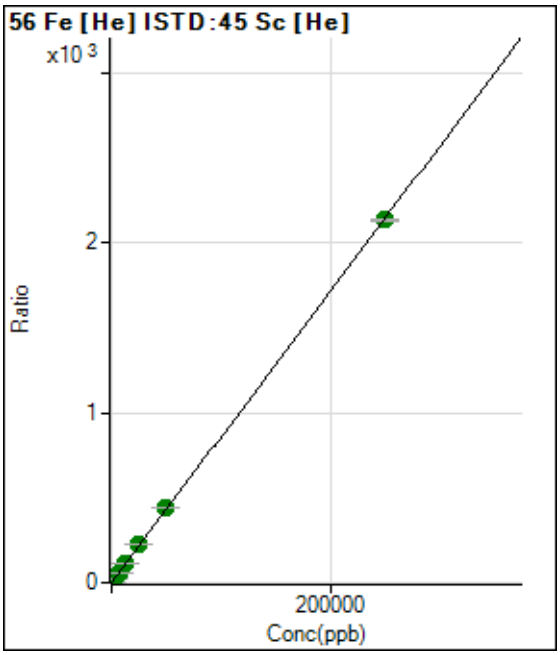
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1378.96	0.0022	P	2.9
2	☐	1.000	0.876	5735.59	0.0088	P	1.6
3	☐	500.000	502.567	2382617.03	3.7990	A	1.3
4	☐	1250.000	1278.332	5512546.10	9.6597	A	0.7
5	☐	2500.000	2563.423	9986007.84	19.3683	A	0.7
6	☐	5000.000	5066.947	19385808.88	38.2819	A	0.5
7	☐	10000.000	9947.001	38868374.42	75.1497	A	0.7
8	☐			19433.72	0.0351	P	2.7

y = 0.0076 * x + 0.0022
R = 0.9999
DL = 0.02493
BEC = 0.2867

Weight: <None>
Min Conc: 0

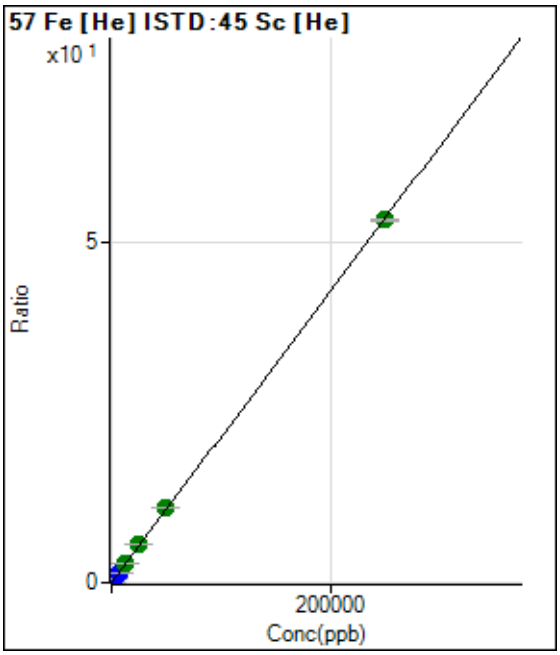


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	48096.61	0.0756	P	1.2
2	☐	50.000	51.256	335715.01	0.5143	P	0.6
3	☐	2500.000	2608.458	14050891.32	22.4037	A	0.3
4	☐	6250.000	6625.106	32407257.85	56.7858	A	0.4
5	☐	12500.000	13297.635	58726269.12	113.9020	A	0.3
6	☐	25000.000	26336.852	114201832.74	225.5164	A	0.4
7	☐	50000.000	51567.792	228344569.93	441.4907	A	0.7
8	☐	250000.00	249502.41	1183201760.1	2,135.791	A	0.6

y = 0.0086 * x + 0.0756
R = 1.0000
DL = 0.307
BEC = 8.828

Weight: <None>
Min Conc: 0

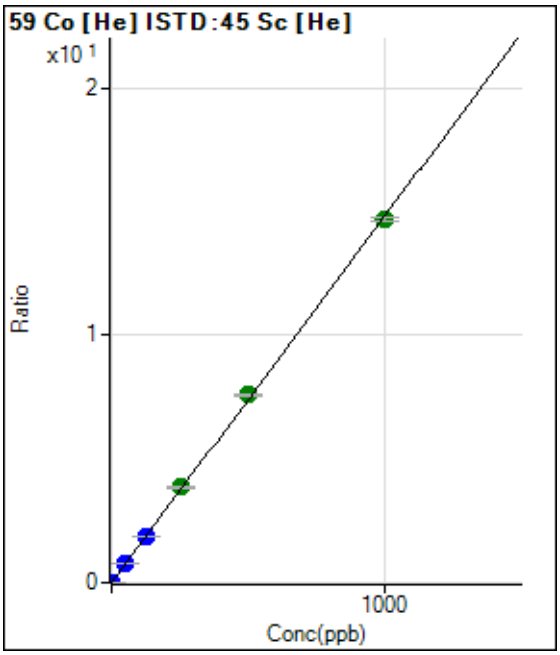
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1956.82	0.0031	P	8.7
2	☐	50.000	54.432	9599.80	0.0147	P	3.7
3	☐	2500.000	2680.339	361226.61	0.5760	P	0.4
4	☐	6250.000	6757.056	825969.88	1.4473	P	0.6
5	☐	12500.000	13392.294	1477405.15	2.8655	A	0.8
6	☐	25000.000	26434.490	2862745.34	5.6532	A	0.5
7	☐	50000.000	51378.345	5681466.72	10.9846	A	0.3
8	☐	250000.00	249521.78	29547610.67	53.3356	A	0.6

y = 2.1374E-004 * x + 0.0031
R = 1.0000
DL = 3.754
BEC = 14.38

Weight: <None>
Min Conc: 0

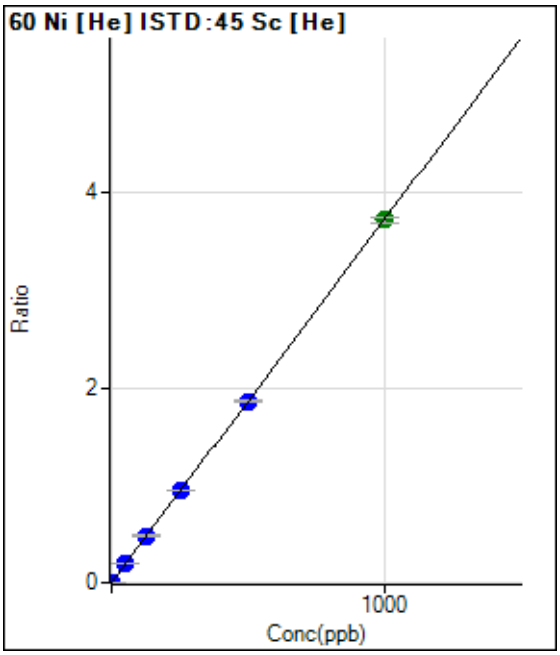


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	358.90	0.0006	P	6.8
2	☐	1.000	1.105	11053.04	0.0169	P	2.2
3	☐	50.000	51.394	477771.87	0.7618	P	0.5
4	☐	125.000	127.131	1074982.02	1.8836	P	0.2
5	☐	250.000	260.351	1988584.26	3.8569	A	0.8
6	☐	500.000	512.395	3843611.40	7.5901	A	0.5
7	☐	1000.000	990.878	7591306.28	14.6774	A	1.0
8	☐			21357.51	0.0386	P	1.9

y = 0.0148 * x + 5.6400E-004
R = 0.9998
DL = 0.007726
BEC = 0.03808

Weight: <None>
Min Conc: 0

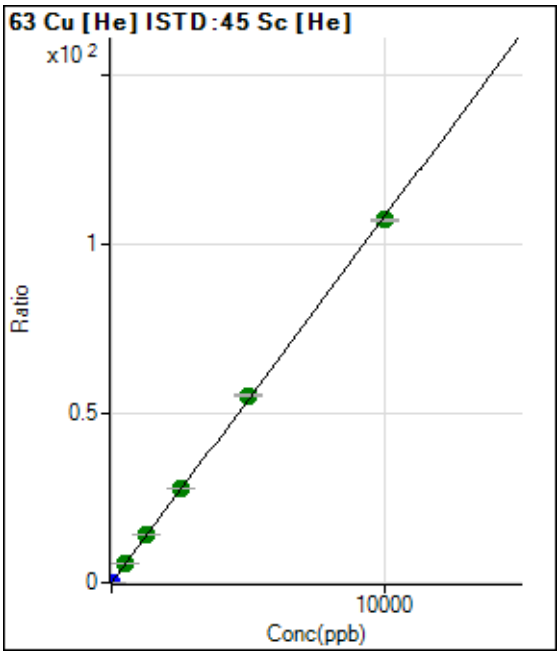
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	561.13	0.0009	P	6.9
2	☐	1.000	1.119	3298.17	0.0051	P	1.9
3	☐	50.000	52.187	122624.90	0.1955	P	0.3
4	☐	125.000	129.124	275332.64	0.4825	P	0.9
5	☐	250.000	253.864	488617.41	0.9477	P	0.5
6	☐	500.000	499.692	944222.90	1.8645	P	0.4
7	☐	1000.000	998.563	1926663.79	3.7251	A	1.6
8	☐			8185.64	0.0148	P	0.3

y = 0.0037 * x + 8.8135E-004
R = 1.0000
DL = 0.04859
BEC = 0.2363

Weight: <None>
Min Conc: 0

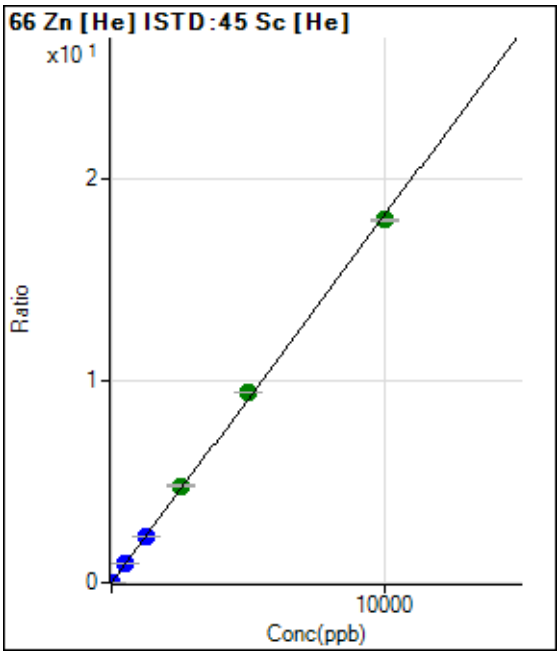


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2332.42	0.0037	P	5.6
2	☐	2.000	1.883	15679.41	0.0240	P	1.4
3	☐	500.000	524.995	3560954.39	5.6779	A	1.1
4	☐	1250.000	1305.838	8056834.32	14.1173	A	0.4
5	☐	2500.000	2588.777	14427960.48	27.9835	A	0.3
6	☐	5000.000	5118.577	28016617.92	55.3259	A	0.6
7	☐	10000.000	9910.288	55401842.51	107.1152	A	0.3
8	☐			11064.18	0.0200	P	2.9

y = 0.0108 * x + 0.0037
R = 0.9998
DL = 0.05714
BEC = 0.3391

Weight: <None>
Min Conc: 0

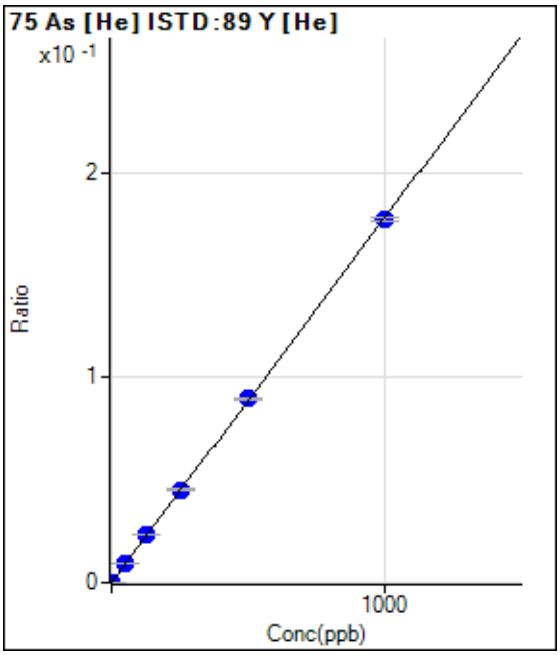
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	647.80	0.0010	P	3.0
2	☐	2.000	5.771	7525.29	0.0115	P	2.6
3	☐	500.000	510.454	583757.17	0.9308	P	0.6
4	☐	1250.000	1277.200	1328232.46	2.3274	P	0.5
5	☐	2500.000	2628.597	2469169.65	4.7889	A	1.3
6	☐	5000.000	5171.737	4770852.71	9.4212	A	0.5
7	☐	10000.000	9878.059	9306692.98	17.9936	A	0.7
8	☐			10560.47	0.0191	P	1.8

y = 0.0018 * x + 0.0010
R = 0.9997
DL = 0.05071
BEC = 0.5588

Weight: <None>
Min Conc: 0

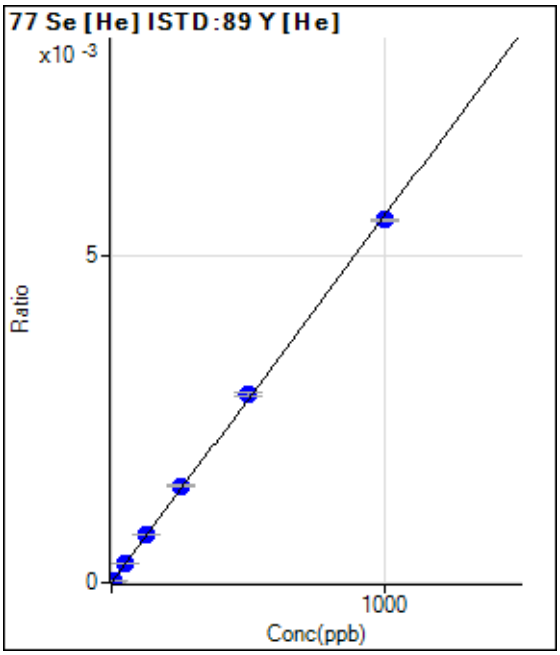


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	58.6
2	☐	1.000	1.188	936.71	0.0002	P	5.3
3	☐	50.000	53.997	39932.43	0.0096	P	0.6
4	☐	125.000	131.113	89552.37	0.0233	P	2.1
5	☐	250.000	255.479	163326.50	0.0455	P	0.5
6	☐	500.000	505.291	319707.74	0.0899	P	0.7
7	☐	1000.000	995.021	636969.31	0.1770	P	0.9
8	☐			367.79	0.0001	P	2.5

y = 1.7788E-004 * x + 7.1987E-006
R = 1.0000
DL = 0.07109
BEC = 0.04047

Weight: <None>
Min Conc: 0

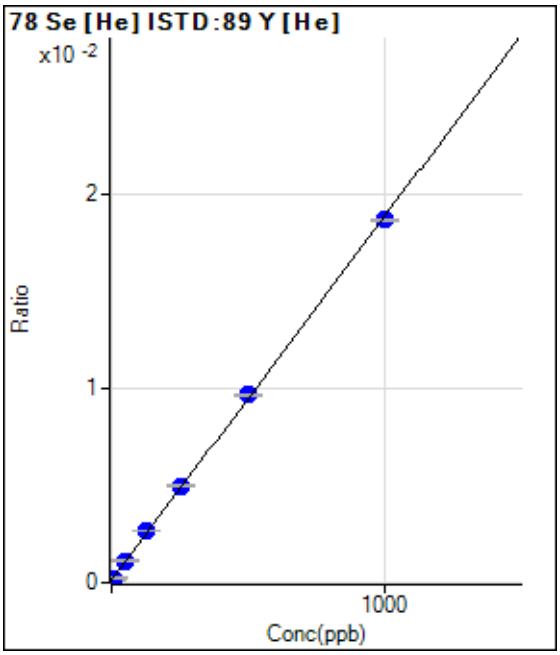
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.22	0.0000	P	173.
2	☐	5.000	5.312	130.00	0.0000	P	6.7
3	☐	50.000	52.425	1223.40	0.0003	P	2.0
4	☐	125.000	132.259	2849.19	0.0007	P	1.1
5	☐	250.000	263.733	5316.56	0.0015	P	1.0
6	☐	500.000	512.991	10232.51	0.0029	P	2.4
7	☐	1000.000	989.041	19961.30	0.0055	P	0.5
8	☐			6.67	0.0000	P	50.7

y = 5.6073E-006 * x + 5.3905E-007
R = 0.9998
DL = 0.4995
BEC = 0.09613

Weight: <None>
Min Conc: 0

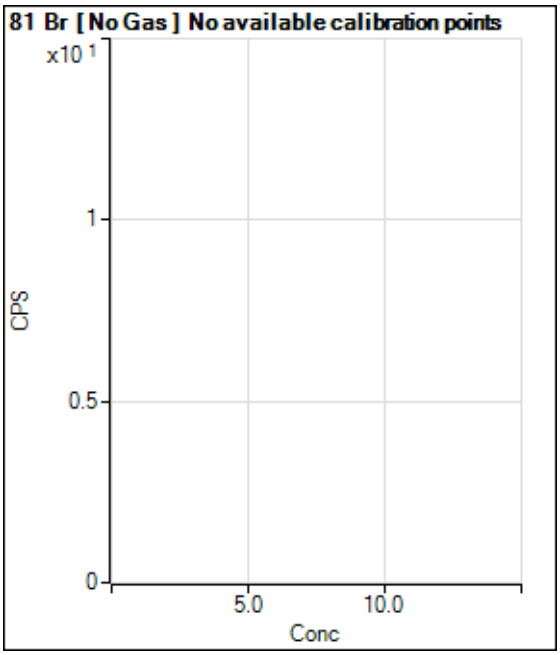


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	535.57	0.0001	P	4.2
2	☐	5.000	6.142	1043.38	0.0002	P	4.5
3	☐	50.000	52.767	4632.99	0.0011	P	4.8
4	☐	125.000	136.594	10302.56	0.0027	P	0.7
5	☐	250.000	259.732	17917.59	0.0050	P	1.8
6	☐	500.000	510.147	34394.40	0.0097	P	0.8
7	☐	1000.000	990.900	67163.63	0.0187	P	0.6
8	☐			413.34	0.0001	P	5.8

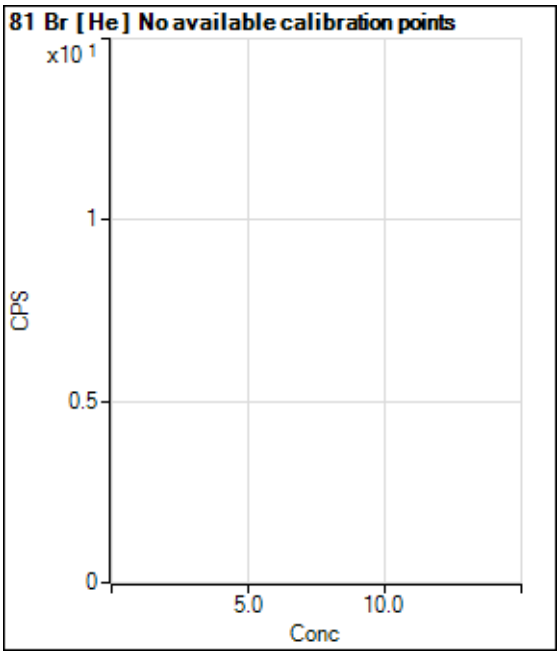
y = 1.8704E-005 * x + 1.2851E-004
R = 0.9998
DL = 0.856
BEC = 6.871

Weight: <None>
Min Conc: 0

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

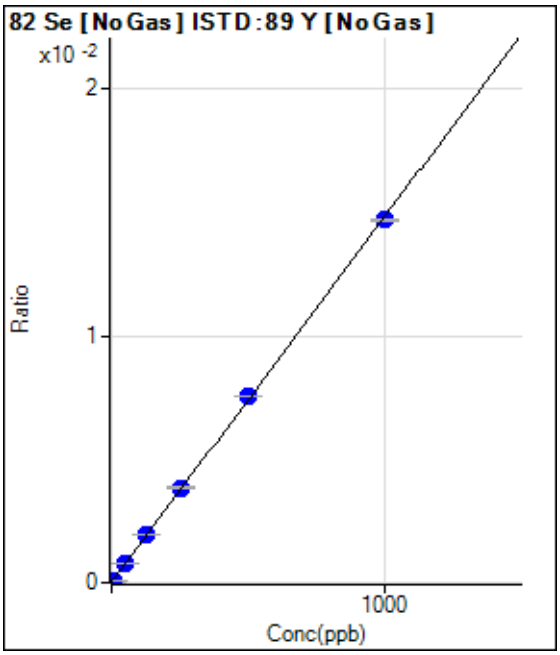


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			16186.78		P	2.3
2	☐			16982.10		P	0.8
3	☐			16618.33		P	1.6
4	☐			14627.34		P	3.5
5	☐			11857.07		P	1.9
6	☐			11297.74		P	1.4
7	☐			11400.03		P	1.3
8	☐			13244.91		P	2.4



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			187.78		P	2.7
2	☐			166.67		P	23.1
3	☐			264.45		P	1.9
4	☐			125.56		P	12.6
5	☐			124.45		P	20.3
6	☐			106.67		P	8.3
7	☐			121.11		P	8.4
8	☐			163.34		P	22.1

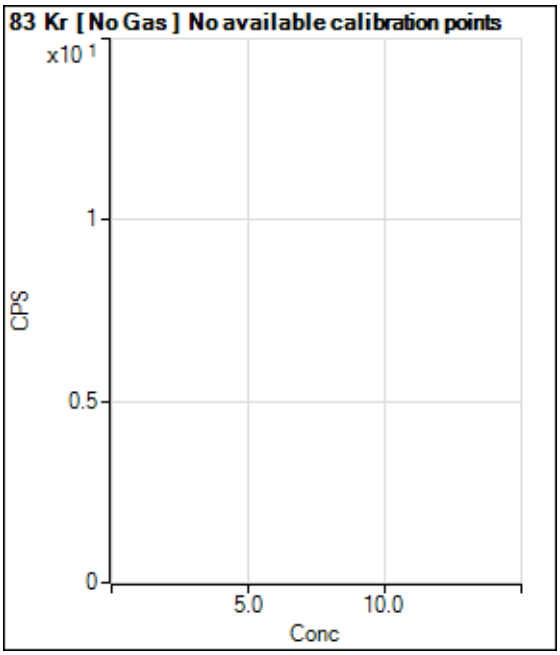
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	222.94	0.0000	P	13.0
2	☐	5.000	5.009	1398.93	0.0001	P	3.8
3	☐	50.000	52.983	12438.59	0.0008	P	1.5
4	☐	125.000	129.447	28428.61	0.0019	P	1.1
5	☐	250.000	258.629	52478.68	0.0038	P	2.6
6	☐	500.000	510.245	98505.26	0.0076	P	0.4
7	☐	1000.000	992.015	192471.78	0.0147	P	0.7
8	☐			349.33	0.0000	P	5.1

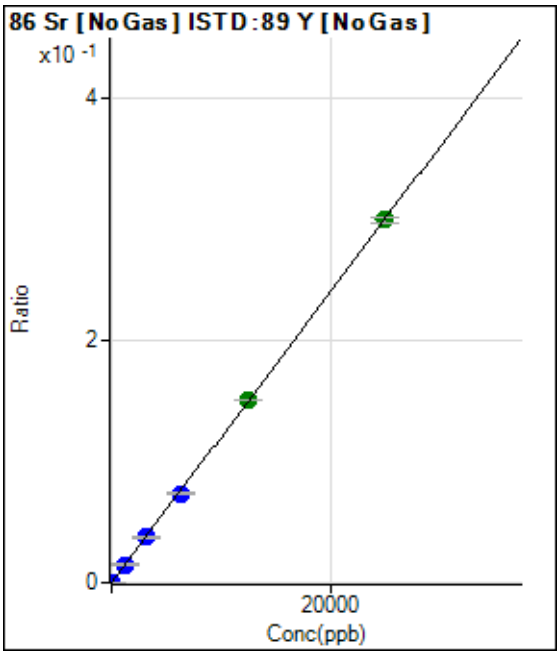
y = 1.4804E-005 * x + 1.4576E-005
R = 0.9999
DL = 0.384
BEC = 0.9846

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			253.34		P	7.9
2	☐			290.01		P	12.1
3	☐			241.11		P	14.8
4	☐			232.23		P	3.6
5	☐			175.56		P	9.7
6	☐			224.45		P	12.6
7	☐			222.23		P	7.7
8	☐			292.23		P	4.0

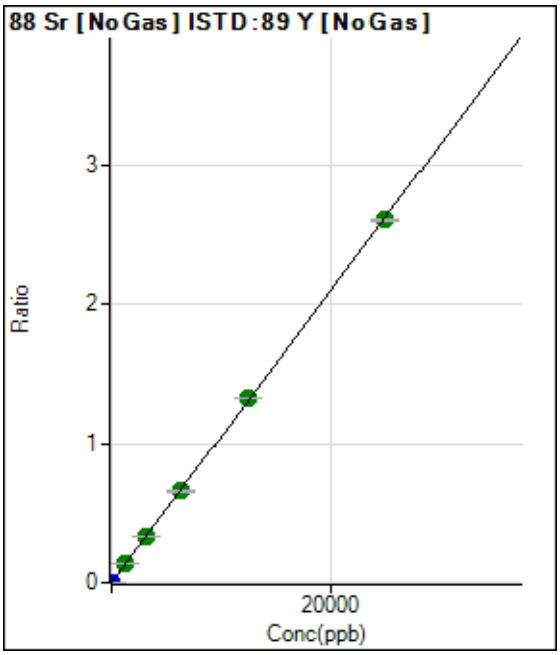
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	460.01	0.0000	P	5.1
2	☐	1.000	26.089	5406.60	0.0003	P	3.3
3	☐	1250.000	1253.925	234552.77	0.0151	P	0.9
4	☐	3125.000	3113.625	550060.55	0.0374	P	1.9
5	☐	6250.000	6141.369	1005962.91	0.0737	P	2.1
6	☐	12500.000	12570.681	1962213.54	0.1508	A	0.3
7	☐	25000.000	24993.042	3923940.84	0.2997	A	1.5
8	☐			12396.43	0.0009	P	2.1

y = 1.1990E-005 * x + 3.0083E-005
R = 1.0000
DL = 0.3836
BEC = 2.509

Weight: <None>
Min Conc: 0

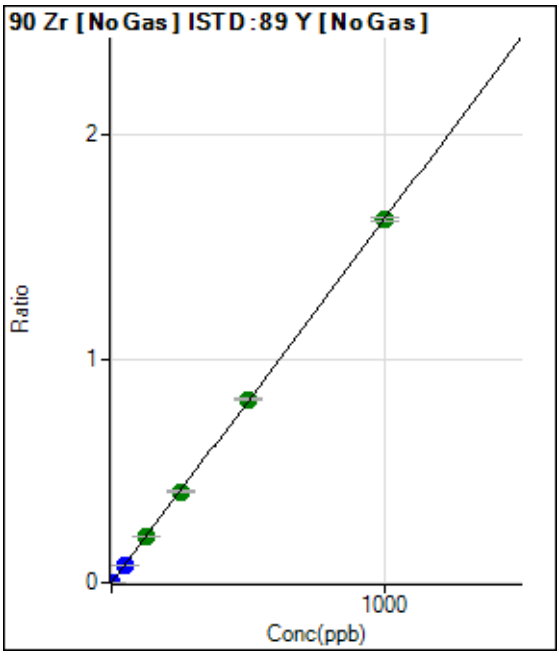


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1021.16	0.0001	P	5.8
2	☐	1.000	25.684	43510.76	0.0028	P	1.6
3	☐	1250.000	1277.826	2086809.64	0.1340	A	0.1
4	☐	3125.000	3175.951	4902734.16	0.3330	A	1.5
5	☐	6250.000	6297.331	9016171.05	0.6602	A	2.1
6	☐	12500.000	12650.297	17262212.80	1.3263	A	0.5
7	☐	25000.000	24905.258	34185927.82	2.6110	A	0.8
8	☐			103650.31	0.0079	P	0.8

y = 1.0484E-004 * x + 6.6775E-005
R = 1.0000
DL = 0.1103
BEC = 0.637

Weight: <None>
Min Conc: 0

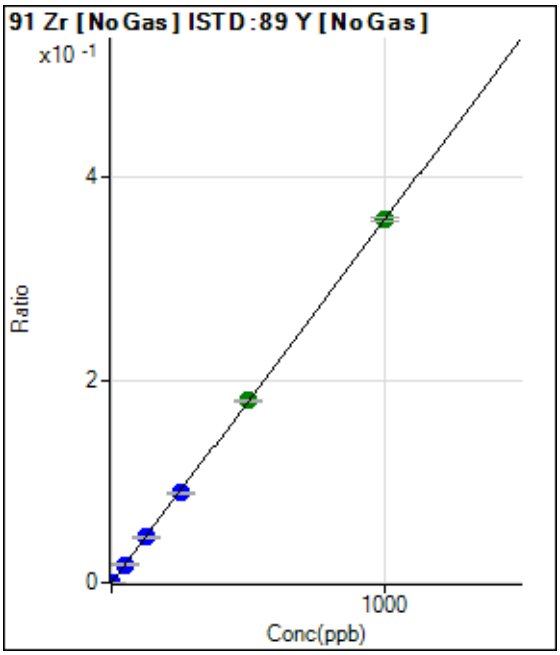
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1174.50	0.0001	P	7.5
2	☐	1.000	1.010	27079.49	0.0017	P	2.0
3	☐	50.000	49.466	1252694.19	0.0805	P	0.6
4	☐	125.000	125.904	3013274.95	0.2047	A	1.3
5	☐	250.000	250.049	5549010.82	0.4064	A	2.5
6	☐	500.000	503.888	10658297.83	0.8189	A	0.6
7	☐	1000.000	997.957	21233079.68	1.6217	A	1.0
8	☐			14670.77	0.0011	P	6.0

y = 0.0016 * x + 7.6798E-005
R = 1.0000
DL = 0.01061
BEC = 0.04726

Weight: <None>
Min Conc: 0

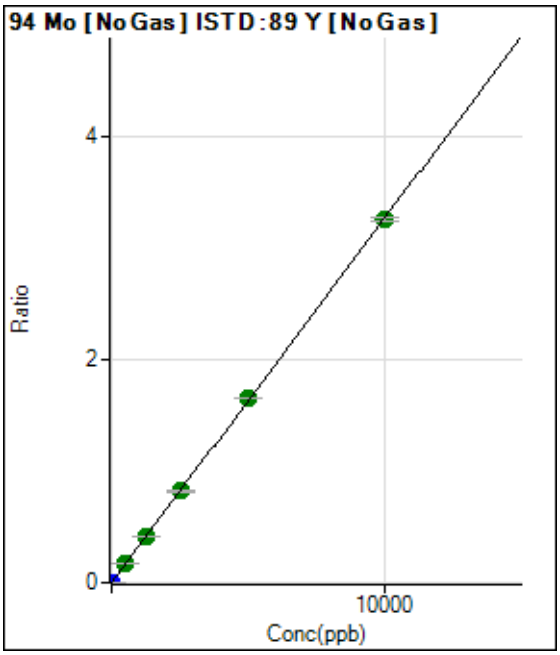


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	244.45	0.0000	P	13.1
2	☐	1.000	1.015	5972.38	0.0004	P	2.4
3	☐	50.000	50.153	279461.49	0.0179	P	0.8
4	☐	125.000	124.720	656795.08	0.0446	P	1.6
5	☐	250.000	246.868	1205614.05	0.0883	P	2.2
6	☐	500.000	501.057	2332137.81	0.1792	A	1.4
7	☐	1000.000	1000.282	4683271.49	0.3577	A	1.0
8	☐			3213.72	0.0002	P	7.6

y = 3.5758E-004 * x + 1.5980E-005
R = 1.0000
DL = 0.01762
BEC = 0.04469

Weight: <None>
Min Conc: 0

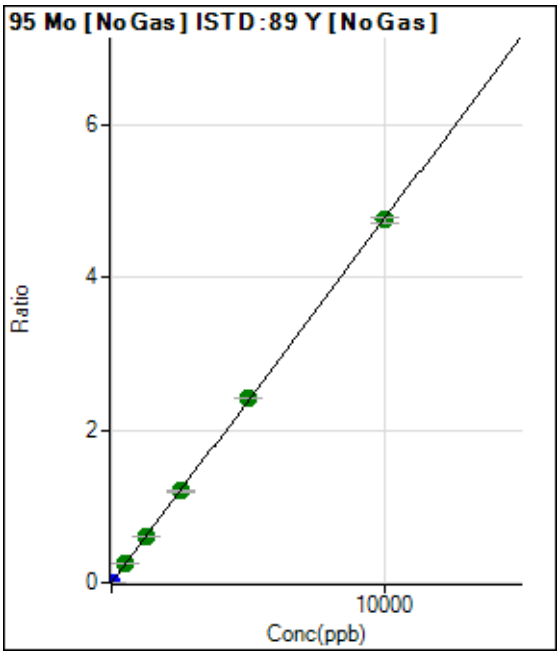
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1284.52	0.0001	P	3.9
2	☐	5.000	5.897	31745.52	0.0020	P	0.8
3	☐	500.000	507.991	2588665.34	0.1663	A	0.1
4	☐	1250.000	1273.050	6131795.05	0.4165	A	2.1
5	☐	2500.000	2525.276	11281793.86	0.8262	A	1.9
6	☐	5000.000	5059.389	21542684.40	1.6551	A	0.2
7	☐	10000.000	9960.705	42662517.70	3.2585	A	1.2
8	☐			13681.02	0.0010	P	15.1

y = 3.2712E-004 * x + 8.4019E-005
R = 1.0000
DL = 0.02967
BEC = 0.2568

Weight: <None>
Min Conc: 0

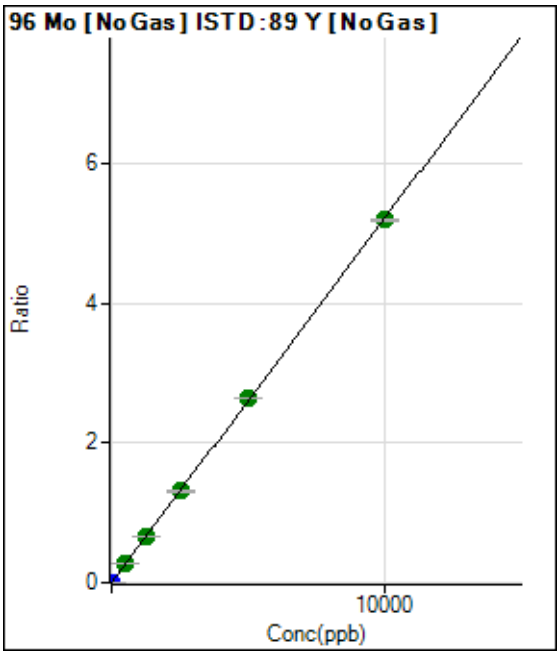


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1562.32	0.0001	P	4.4
2	☐	5.000	4.985	39086.48	0.0025	P	2.5
3	☐	500.000	507.605	3769410.43	0.2421	A	0.2
4	☐	1250.000	1264.001	8873114.17	0.6027	A	1.7
5	☐	2500.000	2511.410	16351581.42	1.1974	A	2.1
6	☐	5000.000	5056.905	31379752.31	2.4109	A	0.2
7	☐	10000.000	9966.564	62211305.19	4.7516	A	1.4
8	☐			14045.94	0.0011	P	21.2

y = 4.7674E-004 * x + 1.0220E-004
R = 1.0000
DL = 0.02813
BEC = 0.2144

Weight: <None>
Min Conc: 0

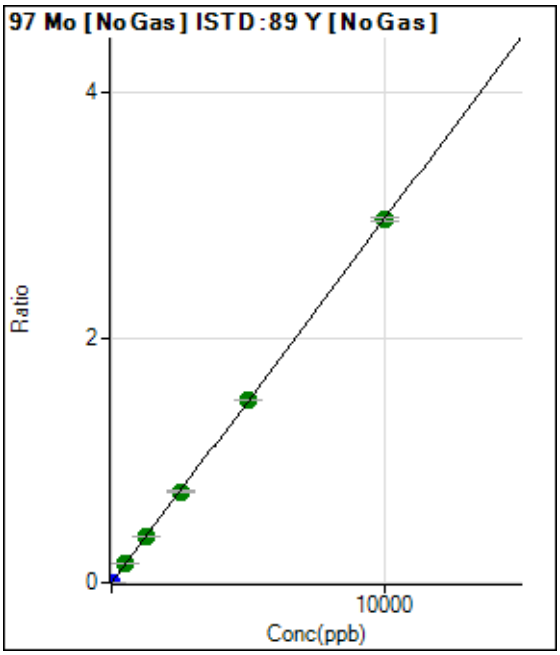
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1795.68	0.0001	P	5.8
2	☐	5.000	5.033	43264.91	0.0027	P	1.5
3	☐	500.000	508.753	4134647.72	0.2656	A	1.1
4	☐	1250.000	1269.892	9756342.98	0.6627	A	1.3
5	☐	2500.000	2508.915	17878285.85	1.3092	A	2.2
6	☐	5000.000	5062.497	34380682.27	2.6415	A	0.1
7	☐	10000.000	9963.599	68065989.54	5.1987	A	0.8
8	☐			25392.36	0.0019	P	11.9

y = 5.2175E-004 * x + 1.1747E-004
R = 1.0000
DL = 0.03895
BEC = 0.2251

Weight: <None>
Min Conc: 0

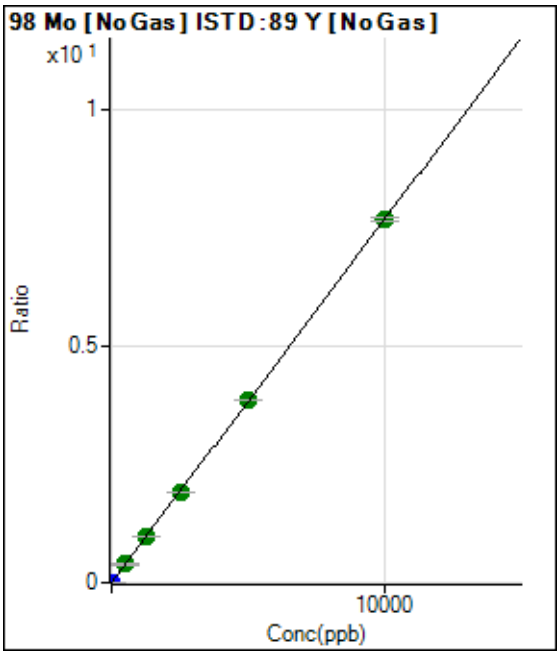


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1018.94	0.0001	P	1.8
2	☐	5.000	4.940	24194.47	0.0015	P	1.5
3	☐	500.000	506.003	2341724.31	0.1504	A	1.2
4	☐	1250.000	1269.545	5553957.42	0.3773	A	1.6
5	☐	2500.000	2504.340	10162764.22	0.7441	A	1.6
6	☐	5000.000	5040.177	19491404.99	1.4975	A	0.1
7	☐	10000.000	9976.083	38807618.03	2.9640	A	1.0
8	☐			8630.48	0.0007	P	18.8

y = 2.9711E-004 * x + 6.6639E-005
R = 1.0000
DL = 0.01187
BEC = 0.2243

Weight: <None>
Min Conc: 0

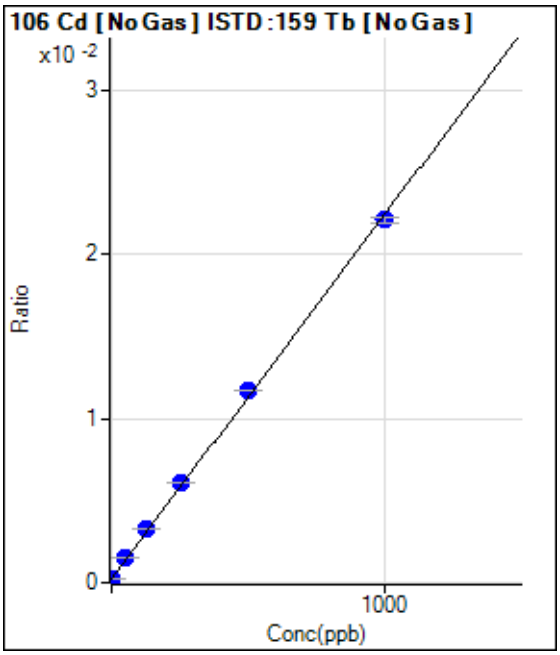
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2449.12	0.0002	P	4.5
2	☐	5.000	4.914	62115.60	0.0039	P	0.3
3	☐	500.000	504.513	6042496.78	0.3881	A	1.0
4	☐	1250.000	1256.016	14220843.95	0.9659	A	1.4
5	☐	2500.000	2487.600	26125283.50	1.9129	A	1.6
6	☐	5000.000	5023.650	50278410.36	3.8630	A	0.5
7	☐	10000.000	9990.297	100578458.50	7.6819	A	0.9
8	☐			21681.11	0.0017	P	19.1

y = 7.6892E-004 * x + 1.6021E-004
R = 1.0000
DL = 0.02784
BEC = 0.2084

Weight: <None>
Min Conc: 0

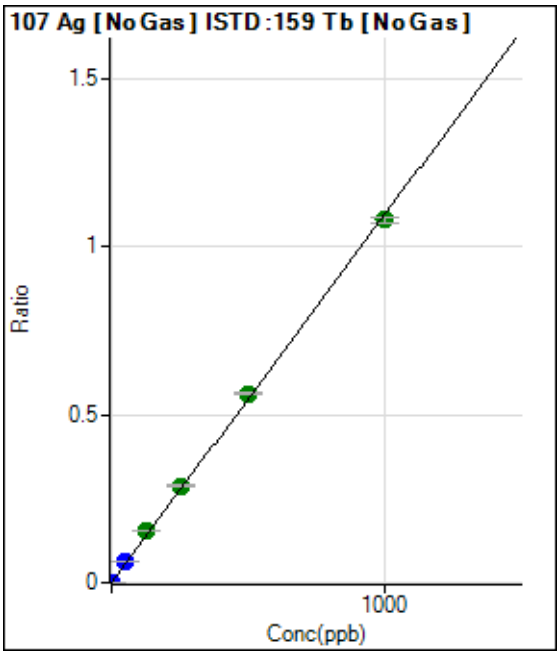


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3480.45	0.0002	P	2.9
2	☐	1.000	1.848	4213.99	0.0003	P	5.3
3	☐	50.000	58.290	24207.99	0.0015	P	1.5
4	☐	125.000	139.848	51601.20	0.0033	P	0.4
5	☐	250.000	264.863	91591.83	0.0061	P	1.0
6	☐	500.000	516.366	171953.10	0.0117	P	0.3
7	☐	1000.000	985.830	329833.74	0.0221	P	1.7
8	☐			3387.09	0.0002	P	3.3

y = 2.2209E-005 * x + 2.2624E-004
R = 0.9996
DL = 0.8834
BEC = 10.19

Weight: <None>
Min Conc: 0

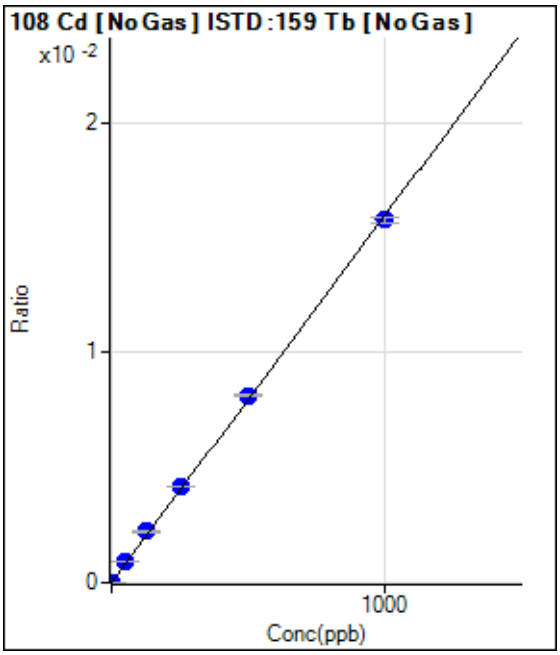
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	464.54	0.0000	P	5.9
2	☐	1.000	1.137	20078.34	0.0013	P	1.3
3	☐	50.000	56.802	989324.53	0.0622	P	1.1
4	☐	125.000	141.023	2388875.18	0.1543	A	1.4
5	☐	250.000	263.659	4324133.18	0.2884	A	1.1
6	☐	500.000	515.106	8283900.67	0.5634	A	1.3
7	☐	1000.000	986.689	16090830.01	1.0791	A	1.3
8	☐			3849.18	0.0003	P	17.8

y = 0.0011 * x + 3.0205E-005
R = 0.9997
DL = 0.004874
BEC = 0.02762

Weight: <None>
Min Conc: 0

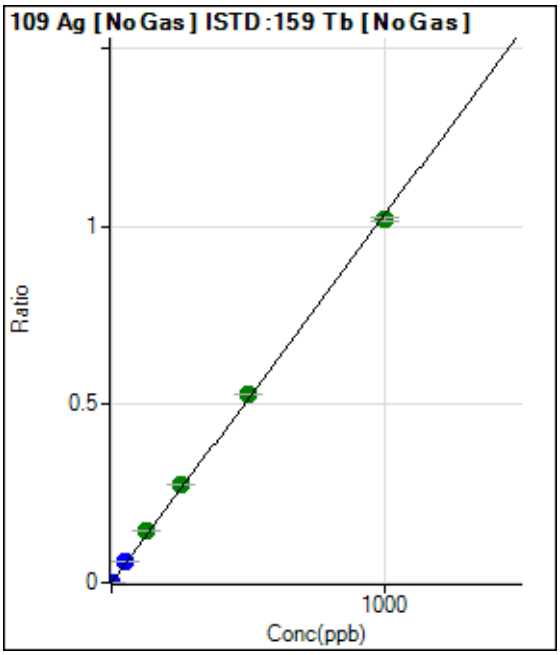


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	27.7
2	☐	1.000	1.121	305.56	0.0000	P	8.2
3	☐	50.000	57.983	14736.45	0.0009	P	1.6
4	☐	125.000	139.286	34406.37	0.0022	P	1.1
5	☐	250.000	262.934	62865.31	0.0042	P	1.3
6	☐	500.000	509.745	119500.43	0.0081	P	1.3
7	☐	1000.000	989.709	235257.88	0.0158	P	1.9
8	☐			128.89	0.0000	P	4.6

y = 1.5940E-005 * x + 1.5142E-006
R = 0.9998
DL = 0.07882
BEC = 0.09499

Weight: <None>
Min Conc: 0

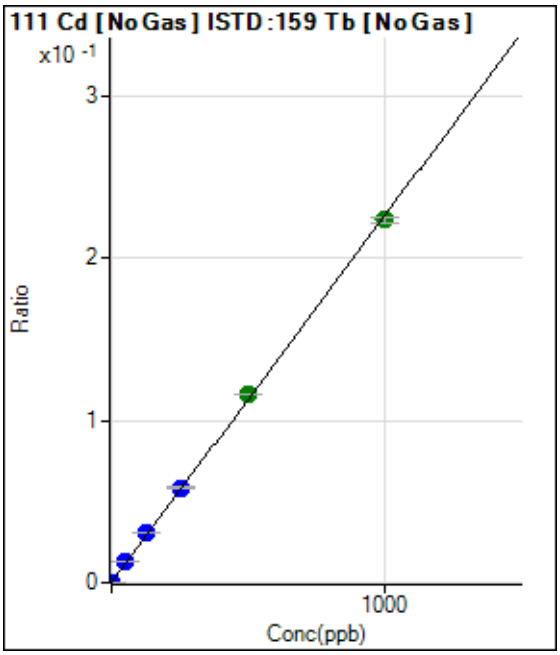
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	412.23	0.0000	P	4.3
2	☐	1.000	1.121	18648.75	0.0012	P	2.2
3	☐	50.000	56.919	934913.15	0.0587	P	1.0
4	☐	125.000	140.758	2248657.93	0.1452	A	0.7
5	☐	250.000	267.867	4142938.72	0.2763	A	0.7
6	☐	500.000	513.051	7781299.54	0.5292	A	0.6
7	☐	1000.000	986.692	15175307.27	1.0177	A	1.2
8	☐			3544.92	0.0002	P	17.4

y = 0.0010 * x + 2.6801E-005
R = 0.9996
DL = 0.00338
BEC = 0.02598

Weight: <None>
Min Conc: 0

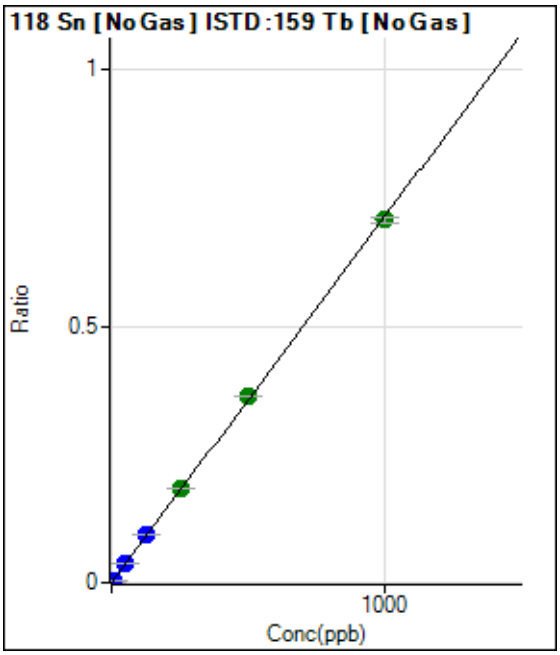


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2529.17	0.0002	P	3.1
2	☐	1.000	1.205	6877.43	0.0004	P	2.1
3	☐	50.000	55.853	203276.45	0.0128	P	1.0
4	☐	125.000	134.511	472672.82	0.0305	P	0.7
5	☐	250.000	258.520	877221.49	0.0585	P	1.9
6	☐	500.000	513.350	1706053.14	0.1160	A	0.5
7	☐	1000.000	989.713	3333255.68	0.2235	A	1.5
8	☐			3059.60	0.0002	P	4.4

y = 2.2570E-004 * x + 1.6441E-004
R = 0.9998
DL = 0.06777
BEC = 0.7285

Weight: <None>
Min Conc: 0

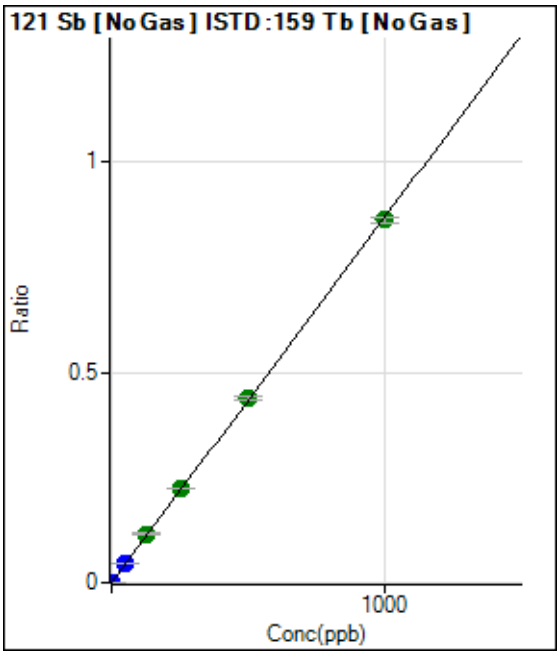
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2147.96	0.0001	P	3.2
2	☐	5.000	5.702	66251.18	0.0042	P	1.1
3	☐	50.000	53.530	609483.21	0.0383	P	0.7
4	☐	125.000	129.904	1435763.69	0.0927	P	0.9
5	☐	250.000	256.945	2747685.65	0.1833	A	1.2
6	☐	500.000	510.887	5355639.64	0.3642	A	0.5
7	☐	1000.000	992.027	10543804.71	0.7071	A	1.4
8	☐			5005.36	0.0003	P	11.1

y = 7.1265E-004 * x + 1.3963E-004
R = 0.9999
DL = 0.01885
BEC = 0.1959

Weight: <None>
Min Conc: 0

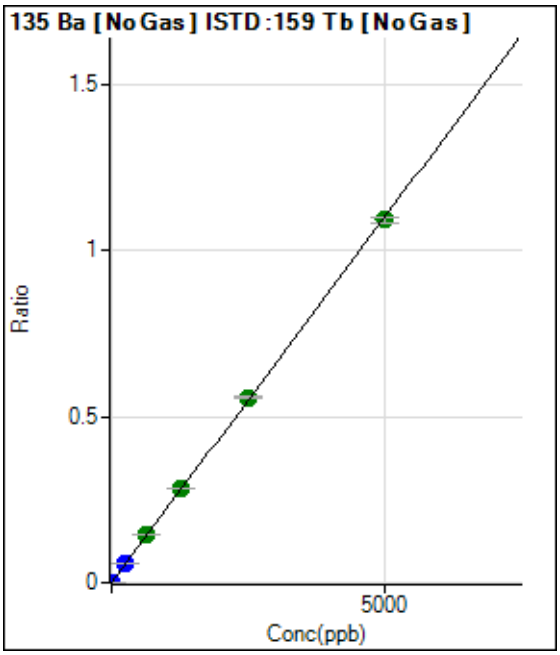


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	313.34	0.0000	P	6.0
2	☐	2.000	2.218	30647.11	0.0019	P	0.5
3	☐	50.000	52.938	731259.35	0.0459	P	1.0
4	☐	125.000	132.833	1784501.73	0.1152	A	2.6
5	☐	250.000	258.995	3368830.57	0.2247	A	0.7
6	☐	500.000	505.450	6447170.60	0.4385	A	1.3
7	☐	1000.000	993.900	12855522.73	0.8621	A	1.4
8	☐			7161.86	0.0005	P	12.0

y = 8.6742E-004 * x + 2.0357E-005
R = 0.9999
DL = 0.004189
BEC = 0.02347

Weight: <None>
Min Conc: 0

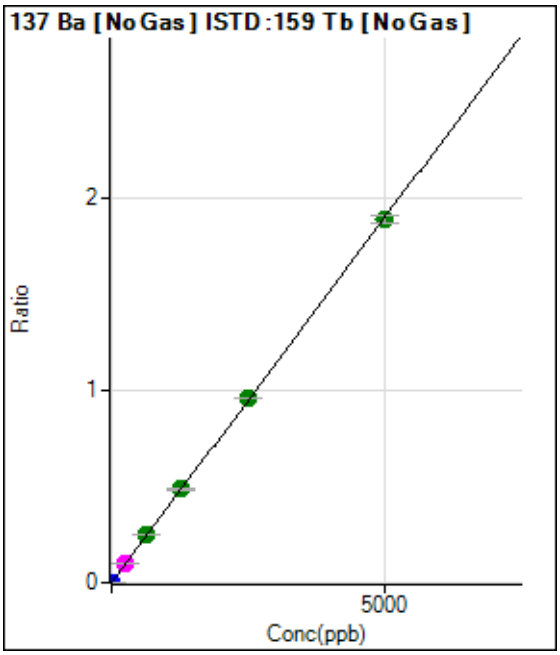
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	405.57	0.0000	P	24.9
2	☐	10.000	10.654	37317.70	0.0024	P	1.4
3	☐	250.000	257.947	902691.35	0.0567	P	0.8
4	☐	625.000	658.215	2240251.25	0.1447	A	0.7
5	☐	1250.000	1286.543	4239156.39	0.2827	A	1.1
6	☐	2500.000	2538.745	8203393.35	0.5579	A	0.5
7	☐	5000.000	4966.941	16275121.56	1.0915	A	1.3
8	☐			8063.47	0.0005	P	8.6

y = 2.1974E-004 * x + 2.6378E-005
R = 0.9999
DL = 0.08963
BEC = 0.12

Weight: <None>
Min Conc: 0

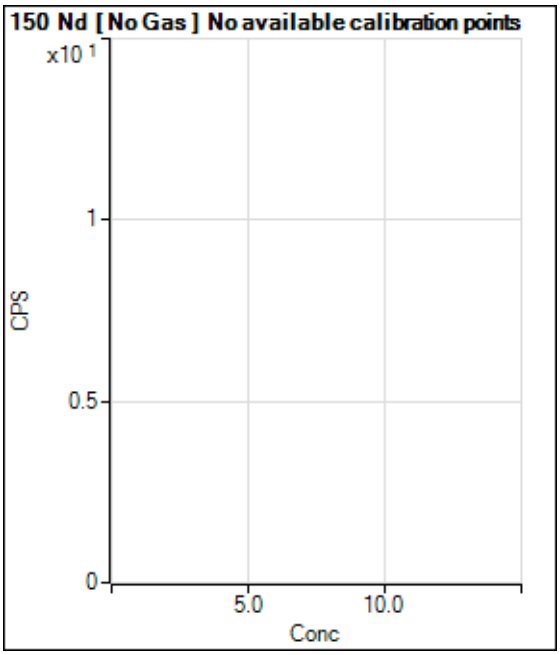


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	683.36	0.0000	P	7.6
2	☐	10.000	10.710	64626.84	0.0041	P	1.5
3	☐	250.000	264.459	1594859.06	0.1002	M	2.2
4	☐	625.000	651.627	3822069.66	0.2468	A	1.3
5	☐	1250.000	1279.844	7266955.03	0.4847	A	1.8
6	☐	2500.000	2532.108	14100363.40	0.9589	A	0.7
7	☐	5000.000	4972.432	28077519.58	1.8831	A	2.0
8	☐			13732.29	0.0009	P	7.4

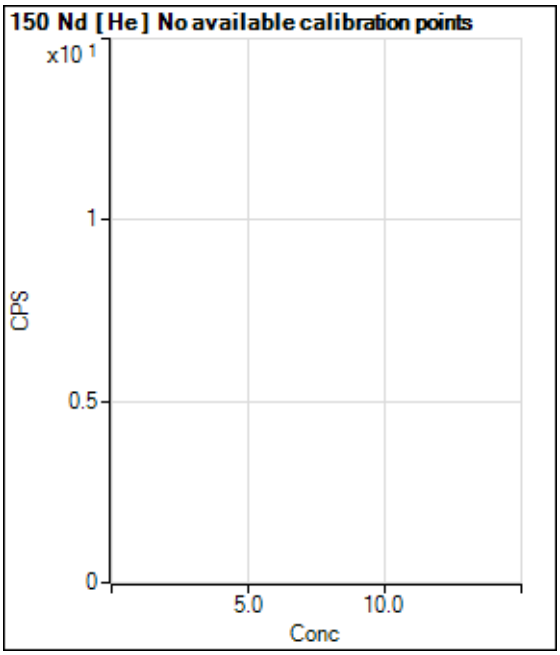
y = 3.7869E-004 * x + 4.4406E-005
R = 0.9999
DL = 0.02679
BEC = 0.1173

Weight: <None>
Min Conc: 0

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

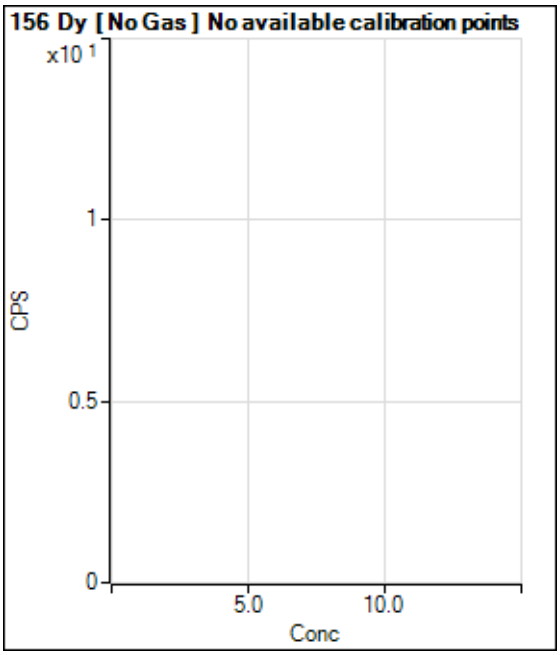


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			8.89		P	78.1
2	☐			8.89		P	21.6
3	☐			67.78		P	23.2
4	☐			124.45		P	6.2
5	☐			220.00		P	3.0
6	☐			386.68		P	10.5
7	☐			753.36		P	4.7
8	☐			260.01		P	11.0

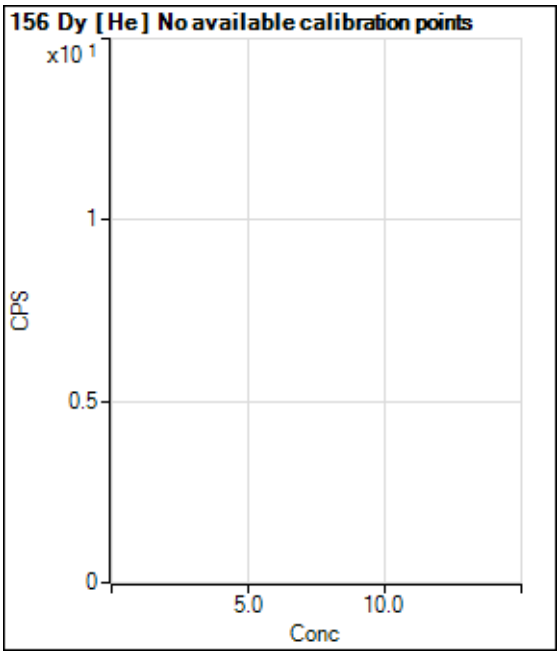


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			2.22		P	173.
2	☐			6.67		P	50.0
3	☐			8.89		P	43.3
4	☐			36.67		P	18.2
5	☐			45.56		P	25.7
6	☐			93.33		P	32.1
7	☐			185.56		P	2.7
8	☐			172.23		P	11.2

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

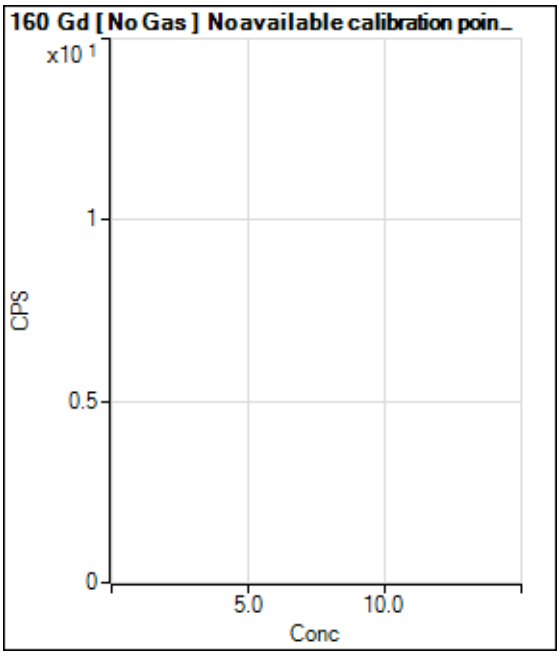


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			35.56		P	28.6
2	☐			24.45		P	28.4
3	☐			36.67		P	32.8
4	☐			40.00		P	25.0
5	☐			71.11		P	5.4
6	☐			127.78		P	6.0
7	☐			247.78		P	10.8
8	☐			491.13		P	7.0

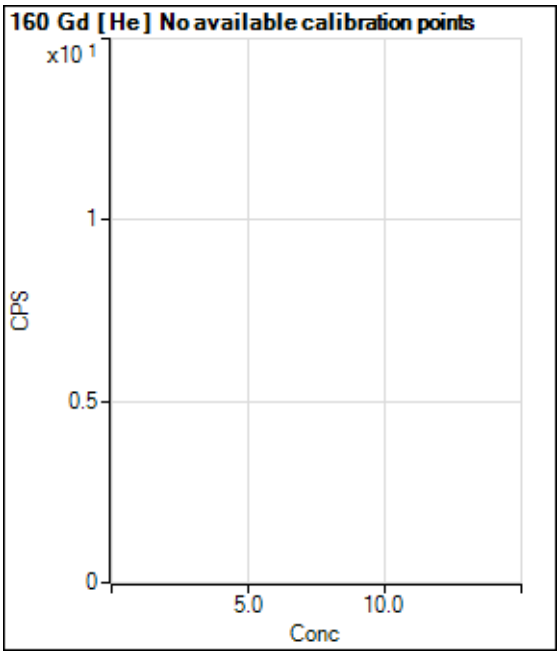


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			8.89		P	86.6
2	☐			10.00		P	33.3
3	☐			70.00		P	12.6
4	☐			101.11		P	12.5
5	☐			222.23		P	15.0
6	☐			338.89		P	6.0
7	☐			794.47		P	10.1
8	☐			400.01		P	5.5

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

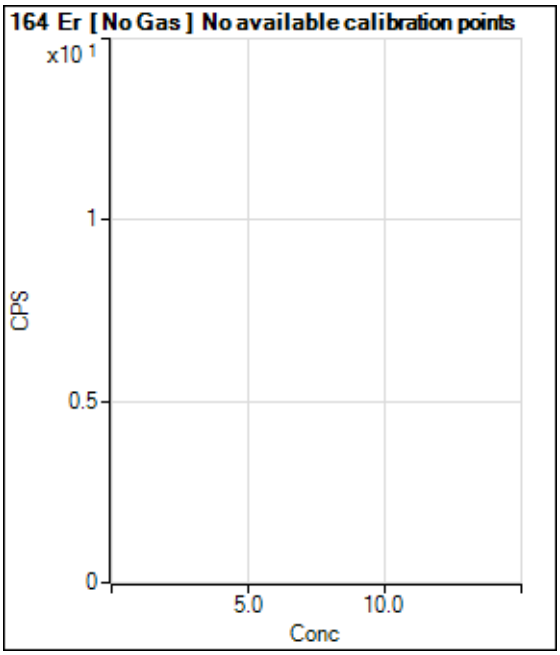


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			40.00		P	30.0
2	☐			57.78		P	8.8
3	☐			55.55		P	6.9
4	☐			67.78		P	7.5
5	☐			95.55		P	21.3
6	☐			113.34		P	5.1
7	☐			150.00		P	15.6
8	☐			476.68		P	5.6

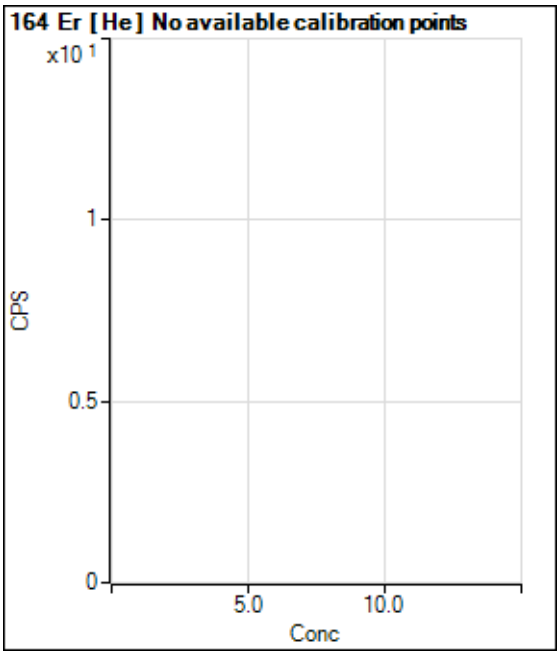


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			614.46		P	12.0
2	☐			731.14		P	2.1
3	☐			661.13		P	1.5
4	☐			651.14		P	11.9
5	☐			650.02		P	8.3
6	☐			596.69		P	4.9
7	☐			701.14		P	2.7
8	☐			920.04		P	3.8

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

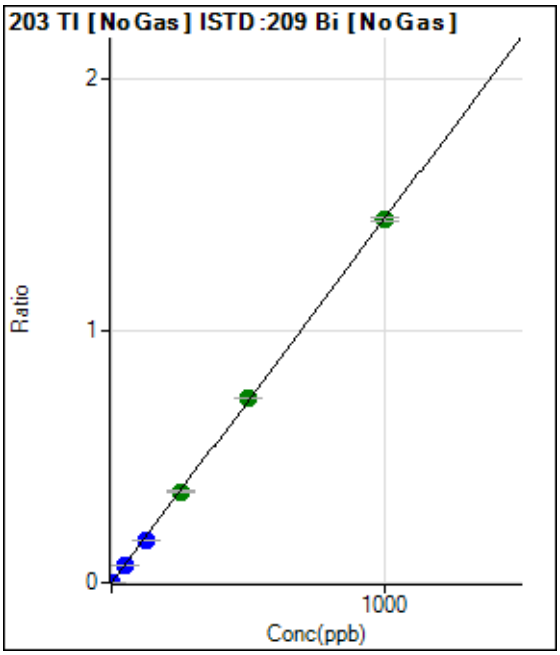


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			58.89		P	33.2
2	☐			72.22		P	23.7
3	☐			75.56		P	16.7
4	☐			86.67		P	25.2
5	☐			87.78		P	34.5
6	☐			134.45		P	6.2
7	☐			148.89		P	8.5
8	☐			556.68		P	10.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			45.56		P	11.2
2	☐			41.11		P	54.0
3	☐			51.11		P	44.4
4	☐			60.00		P	14.7
5	☐			45.55		P	23.5
6	☐			82.22		P	8.4
7	☐			120.00		P	14.4
8	☐			407.79		P	11.3

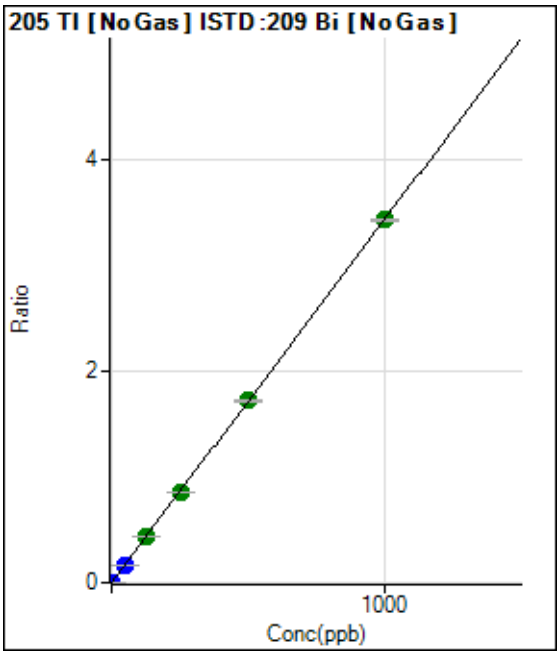
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	671.14	0.0001	P	4.4
2	☐	1.000	0.942	13497.88	0.0014	P	0.2
3	☐	50.000	48.046	657009.96	0.0694	P	2.1
4	☐	125.000	118.408	1596300.67	0.1709	P	0.4
5	☐	250.000	250.935	3310586.31	0.3621	A	1.2
6	☐	500.000	507.162	6612891.85	0.7318	A	0.9
7	☐	1000.000	997.107	12943659.81	1.4387	A	0.9
8	☐			2438.04	0.0003	P	20.5

y = 0.0014 * x + 7.4890E-005
R = 0.9999
DL = 0.006912
BEC = 0.05191

Weight: <None>
Min Conc: 0

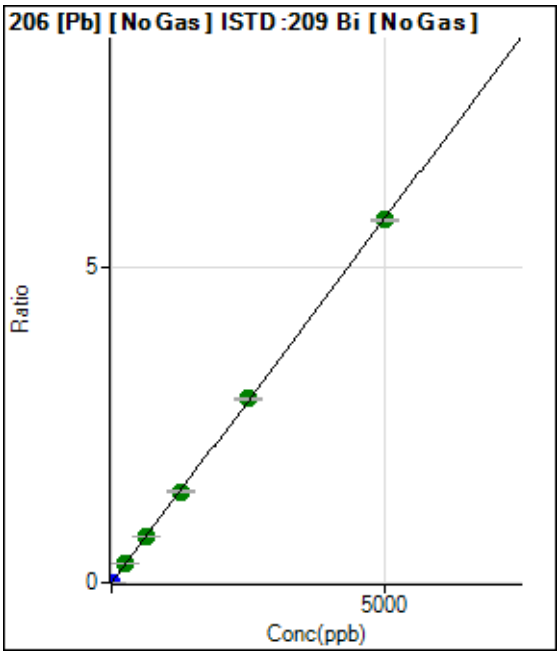


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1433.42	0.0002	P	7.0
2	☐	1.000	0.973	32905.32	0.0035	P	2.2
3	☐	50.000	47.674	1549851.61	0.1637	P	2.0
4	☐	125.000	126.167	4043546.57	0.4329	A	1.9
5	☐	250.000	248.897	7807141.34	0.8539	A	1.1
6	☐	500.000	501.762	15554644.91	1.7213	A	1.0
7	☐	1000.000	999.365	30843698.98	3.4283	A	0.6
8	☐			5926.95	0.0007	P	23.4

y = 0.0034 * x + 1.6003E-004
R = 1.0000
DL = 0.009758
BEC = 0.04665

Weight: <None>
Min Conc: 0

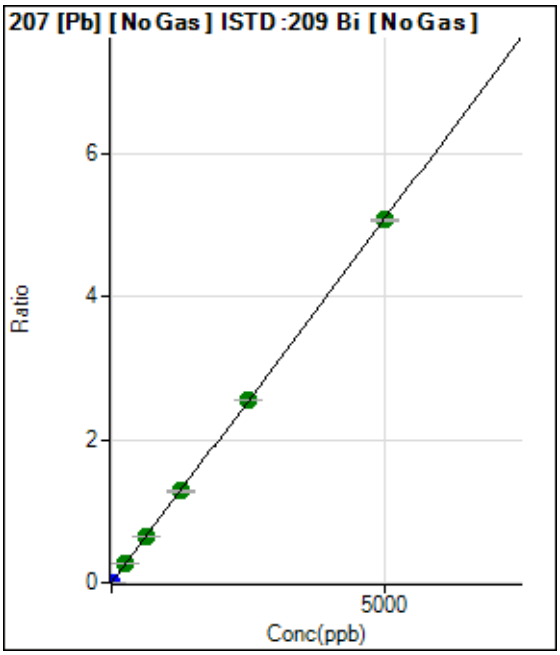
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1829.03	0.0002	P	1.8
2	☐	1.000	0.909	11761.83	0.0013	P	1.8
3	☐	250.000	254.265	2773258.43	0.2929	A	2.6
4	☐	625.000	624.670	6718626.50	0.7193	A	1.0
5	☐	1250.000	1249.669	13154603.83	1.4389	A	1.1
6	☐	2500.000	2528.008	26300747.94	2.9105	A	0.7
7	☐	5000.000	4985.907	51643684.23	5.7401	A	0.3
8	☐			15911.73	0.0019	P	10.9

y = 0.0012 * x + 2.0412E-004
R = 1.0000
DL = 0.009589
BEC = 0.1773

Weight: <None>
Min Conc: 0

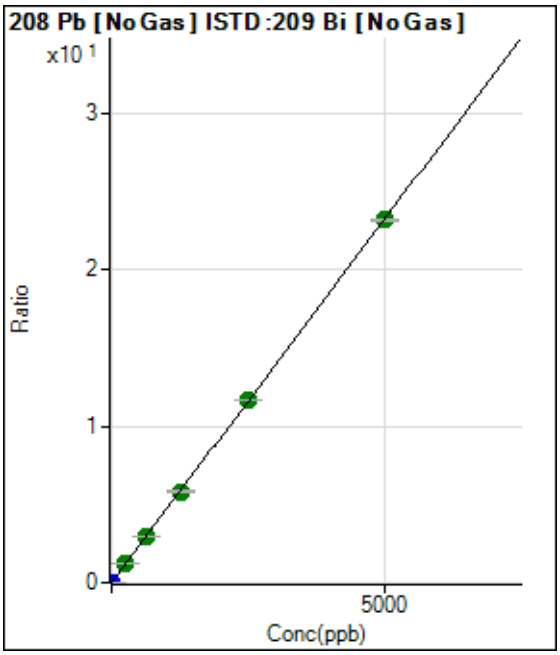


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1614.56	0.0002	P	8.4
2	☐	1.000	0.871	10032.68	0.0011	P	3.6
3	☐	250.000	254.715	2457122.57	0.2595	A	1.0
4	☐	625.000	630.822	5999762.55	0.6424	A	0.6
5	☐	1250.000	1261.103	11739301.77	1.2840	A	0.8
6	☐	2500.000	2513.148	23121331.32	2.5587	A	0.3
7	☐	5000.000	4989.687	45703068.76	5.0799	A	0.5
8	☐			14130.88	0.0017	P	12.6

y = 0.0010 * x + 1.8019E-004
R = 1.0000
DL = 0.04463
BEC = 0.177

Weight: <None>
Min Conc: 0

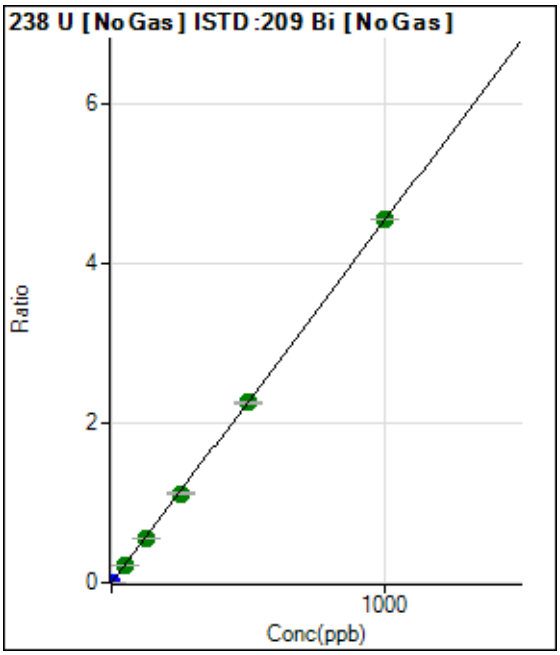
Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7428.65	0.0008	P	1.1
2	☐	1.000	0.880	46262.20	0.0049	P	1.9
3	☐	250.000	253.041	11138625.78	1.1764	A	1.3
4	☐	625.000	625.437	27145676.19	2.9064	A	0.6
5	☐	1250.000	1252.367	53198862.12	5.8189	A	1.0
6	☐	2500.000	2514.541	105568321.76	11.6825	A	0.4
7	☐	5000.000	4991.931	208652800.22	23.1915	A	0.2
8	☐			63770.43	0.0078	P	11.2

y = 0.0046 * x + 8.2895E-004
R = 1.0000
DL = 0.005695
BEC = 0.1784

Weight: <None>
Min Conc: 0

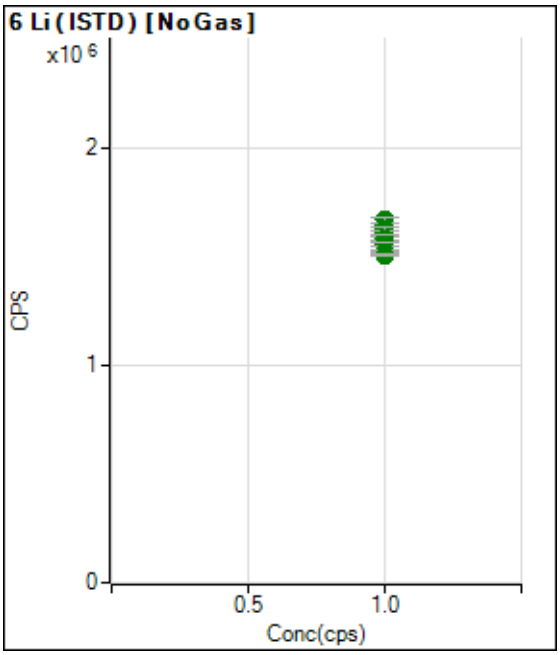


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	704.47	0.0001	P	9.6
2	☐	1.000	0.893	38796.37	0.0041	P	2.8
3	☐	50.000	47.877	2054162.42	0.2170	A	1.7
4	☐	125.000	121.005	5120301.11	0.5482	A	1.1
5	☐	250.000	245.580	10170687.90	1.1125	A	2.4
6	☐	500.000	497.561	20368362.75	2.2540	A	0.8
7	☐	1000.000	1002.930	40875272.72	4.5432	A	0.2
8	☐			6079.29	0.0007	P	24.9

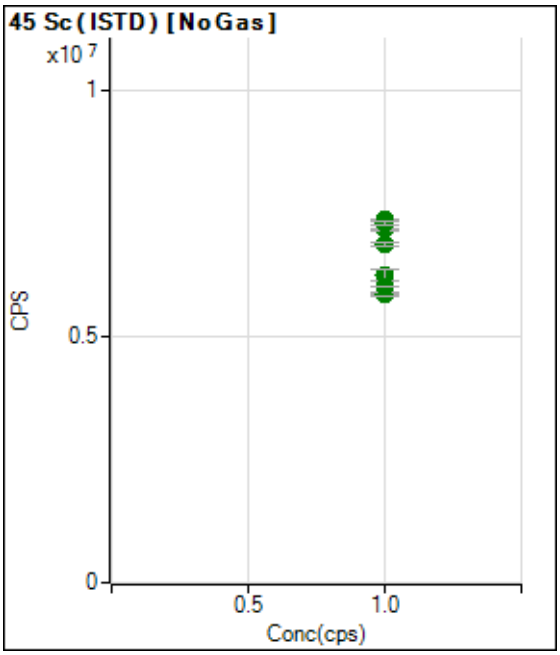
y = 0.0045 * x + 7.8639E-005
R = 1.0000
DL = 0.005017
BEC = 0.01736

Weight: <None>
Min Conc: 0

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

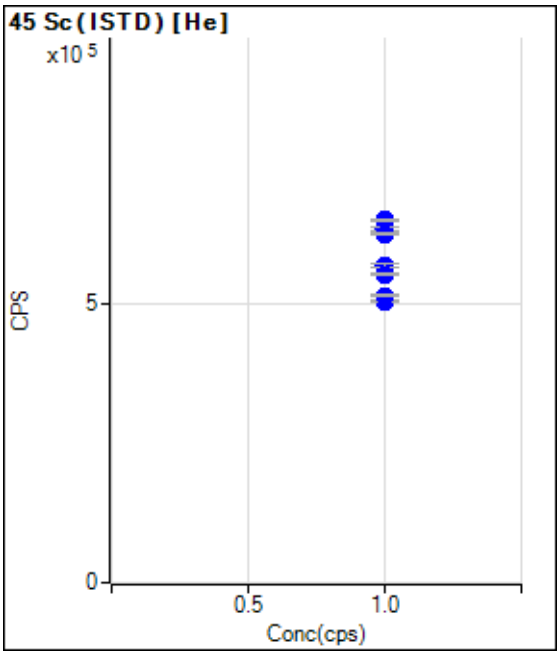


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1606285.70		A	2.0
2	☐	1.000		1643395.43		A	1.0
3	☐	1.000		1668012.63		A	1.3
4	☐	1.000		1627324.46		A	1.2
5	☐	1.000		1584786.28		A	1.9
6	☐	1.000		1557354.87		A	1.2
7	☐	1.000		1522105.81		A	0.8
8	☐	1.000		1506970.50		A	0.9

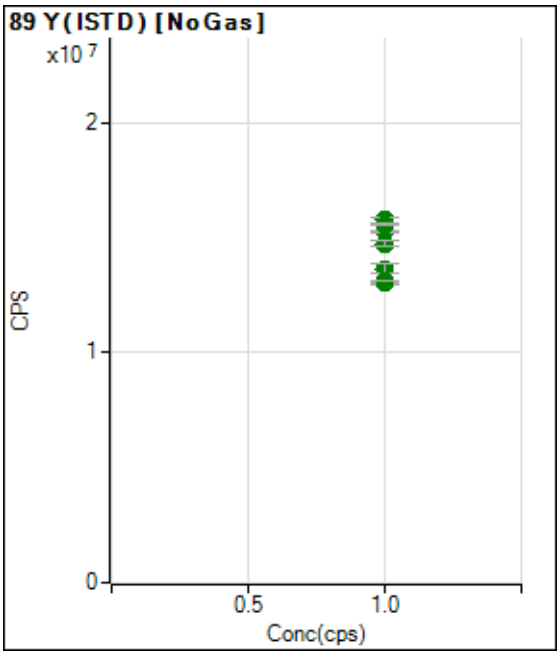


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7161476.28		A	0.4
2	☐	1.000		7356518.43		A	0.7
3	☐	1.000		7289171.84		A	1.2
4	☐	1.000		6861997.05		A	0.9
5	☐	1.000		6234300.67		A	3.9
6	☐	1.000		5868792.20		A	0.2
7	☐	1.000		5852638.73		A	0.9
8	☐	1.000		6002906.16		A	0.4

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

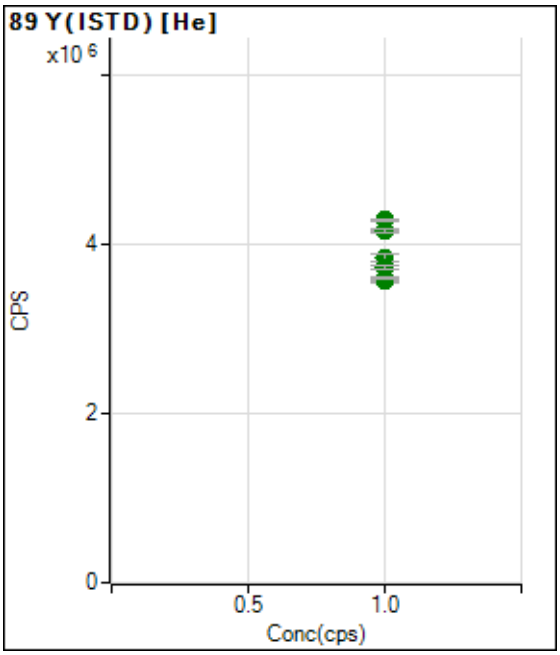


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		636500.49		P	0.7
2	☐	1.000		652756.60		P	0.7
3	☐	1.000		627171.91		P	0.8
4	☐	1.000		570692.49		P	0.8
5	☐	1.000		515590.77		P	0.5
6	☐	1.000		506405.71		P	0.6
7	☐	1.000		517221.23		P	0.4
8	☐	1.000		553979.44		P	0.7

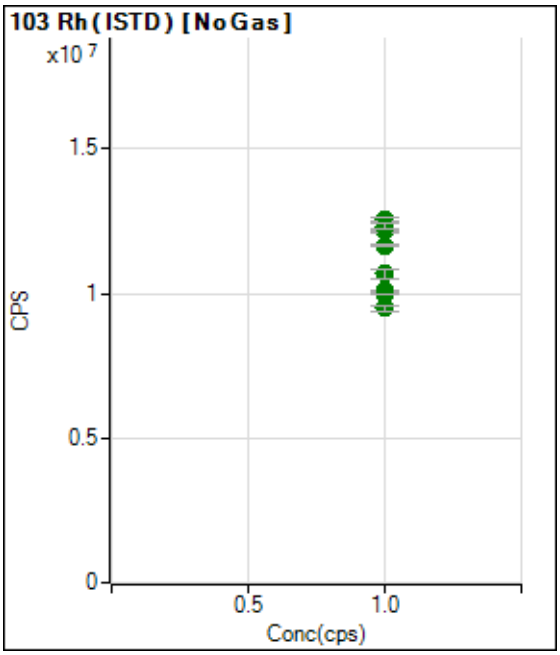


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		15289700.05		A	0.5
2	☐	1.000		15770679.76		A	1.4
3	☐	1.000		15569844.21		A	0.7
4	☐	1.000		14724547.42		A	1.7
5	☐	1.000		13660880.07		A	3.0
6	☐	1.000		13015609.11		A	0.3
7	☐	1.000		13093353.14		A	0.6
8	☐	1.000		13122735.08		A	0.6

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

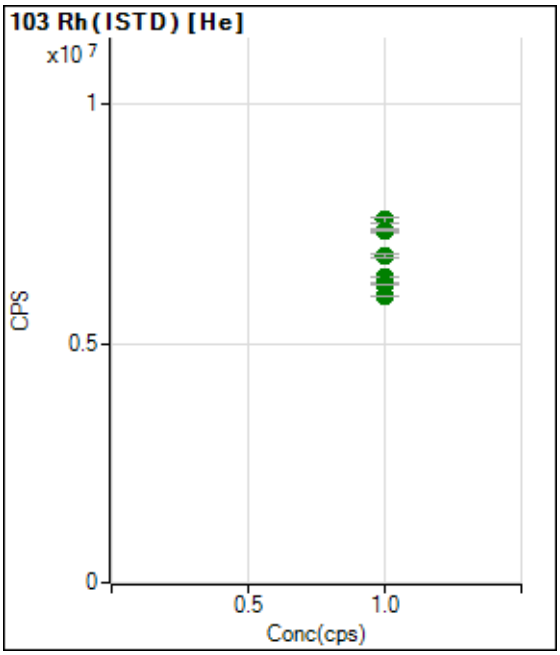


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4166465.11		A	0.9
2	☐	1.000		4286692.36		A	0.7
3	☐	1.000		4154162.54		A	0.7
4	☐	1.000		3839658.90		A	2.4
5	☐	1.000		3593520.47		A	1.5
6	☐	1.000		3556677.93		A	0.2
7	☐	1.000		3598818.63		A	1.1
8	☐	1.000		3726001.33		A	0.8

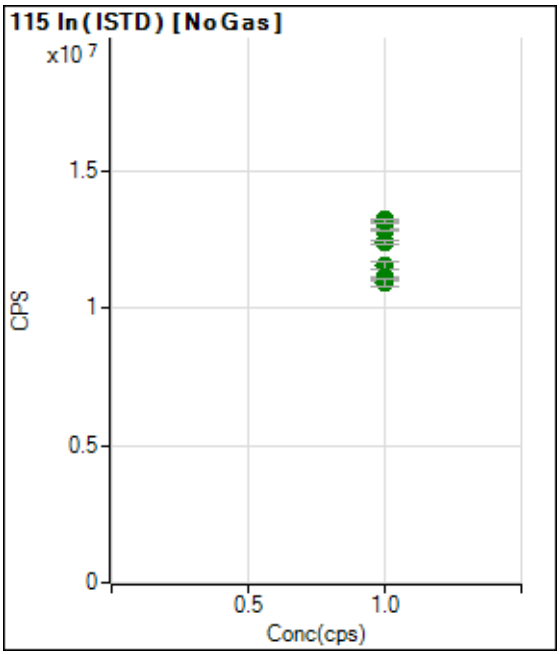


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12148912.46		A	0.6
2	☐	1.000		12542990.23		A	1.0
3	☐	1.000		12322262.73		A	1.3
4	☐	1.000		11646523.02		A	0.7
5	☐	1.000		10699642.76		A	3.1
6	☐	1.000		10073865.06		A	0.3
7	☐	1.000		9963723.46		A	0.4
8	☐	1.000		9493008.75		A	1.8

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

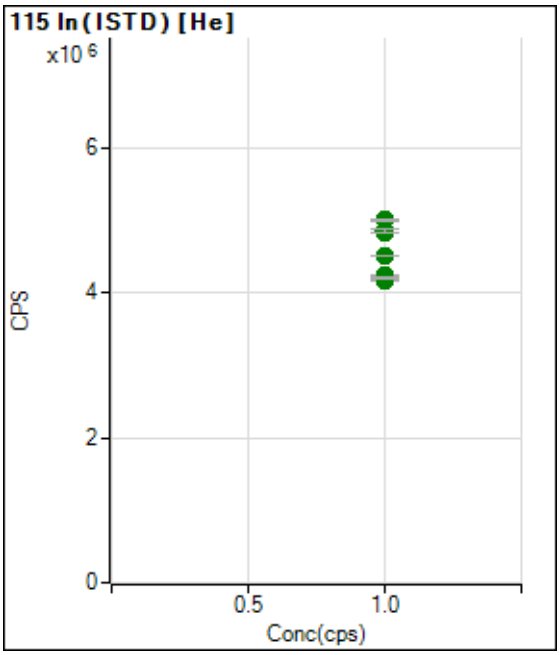


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7338868.71		A	0.7
2	☐	1.000		7586200.65		A	1.3
3	☐	1.000		7366197.95		A	0.7
4	☐	1.000		6836151.77		A	1.7
5	☐	1.000		6403164.56		A	0.2
6	☐	1.000		6248505.53		A	0.8
7	☐	1.000		6243066.43		A	0.2
8	☐	1.000		5992687.62		A	0.5

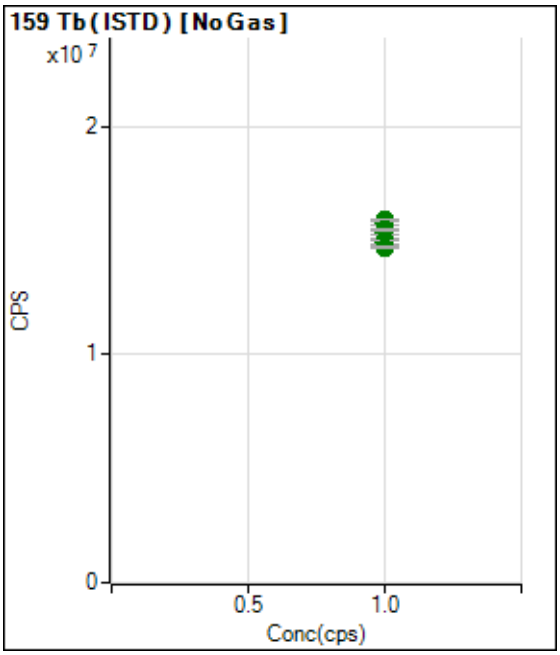


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12867074.78		A	0.4
2	☐	1.000		13231103.23		A	0.7
3	☐	1.000		13199038.58		A	1.0
4	☐	1.000		12439149.02		A	1.2
5	☐	1.000		11587599.40		A	2.4
6	☐	1.000		11161624.58		A	0.3
7	☐	1.000		11039326.48		A	0.4
8	☐	1.000		10949802.06		A	2.3

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

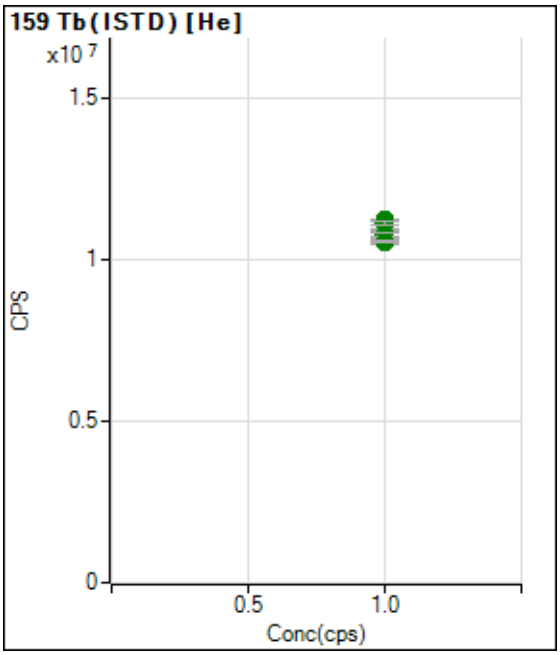


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4835980.14		A	0.3
2	☐	1.000		5006598.20		A	0.7
3	☐	1.000		4855632.33		A	0.6
4	☐	1.000		4521787.83		A	0.1
5	☐	1.000		4236602.23		A	0.8
6	☐	1.000		4187801.01		A	0.8
7	☐	1.000		4168501.56		A	0.5
8	☐	1.000		4207442.83		A	0.9

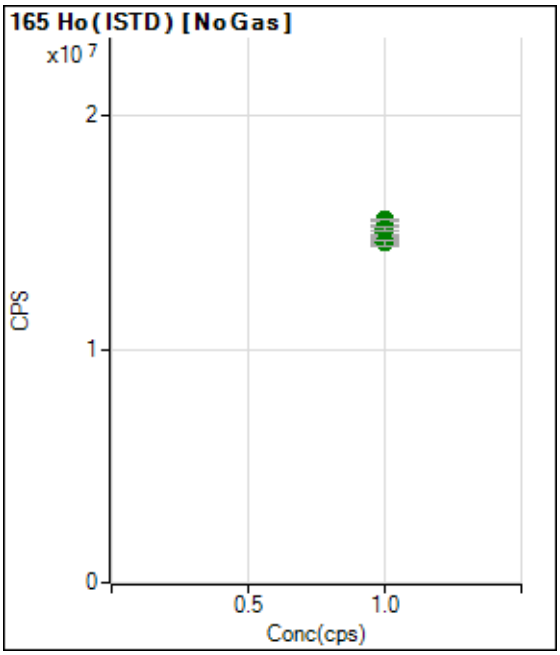


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		15386161.44		A	1.2
2	☐	1.000		15763597.96		A	0.9
3	☐	1.000		15918495.87		A	0.5
4	☐	1.000		15486080.05		A	0.5
5	☐	1.000		14995318.39		A	1.8
6	☐	1.000		14704143.25		A	0.2
7	☐	1.000		14912392.69		A	0.9
8	☐	1.000		14711047.00		A	0.8

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

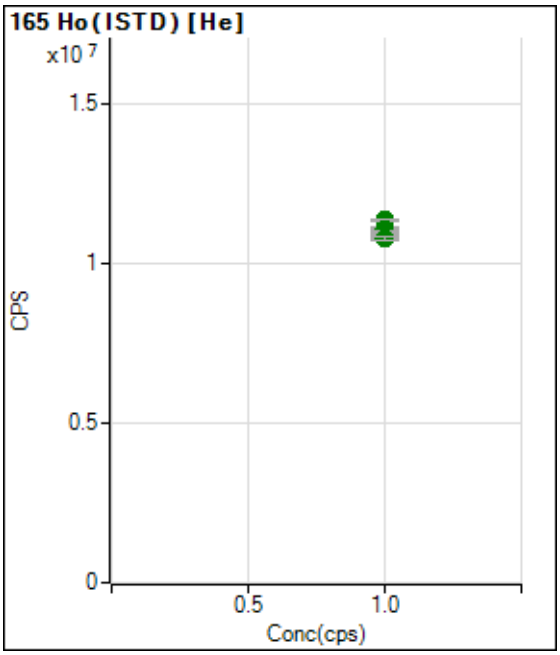


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10942515.67		A	0.5
2	☐	1.000		11225685.39		A	0.8
3	☐	1.000		11137834.14		A	1.2
4	☐	1.000		10762957.48		A	0.9
5	☐	1.000		10559915.54		A	1.7
6	☐	1.000		10613987.20		A	0.6
7	☐	1.000		10748937.34		A	1.2
8	☐	1.000		10542853.53		A	0.7

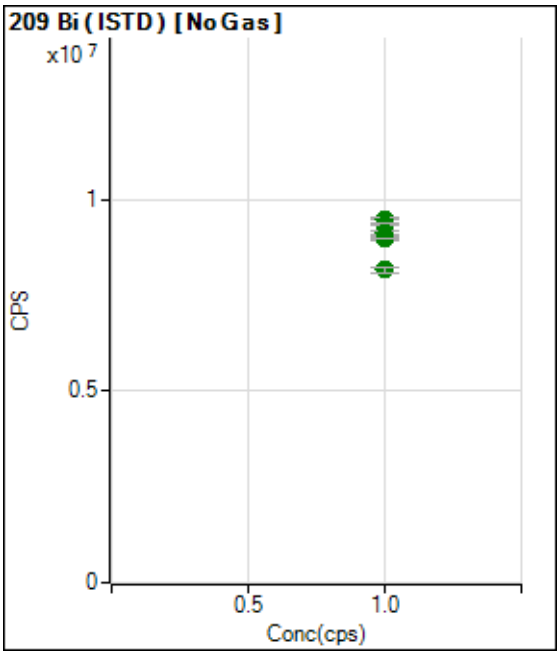


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		15024007.83		A	1.1
2	☐	1.000		15308192.41		A	0.4
3	☐	1.000		15534374.77		A	0.7
4	☐	1.000		15170246.30		A	1.3
5	☐	1.000		14598394.23		A	1.7
6	☐	1.000		14599086.87		A	0.2
7	☐	1.000		14689451.87		A	1.3
8	☐	1.000		14538396.73		A	1.4

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

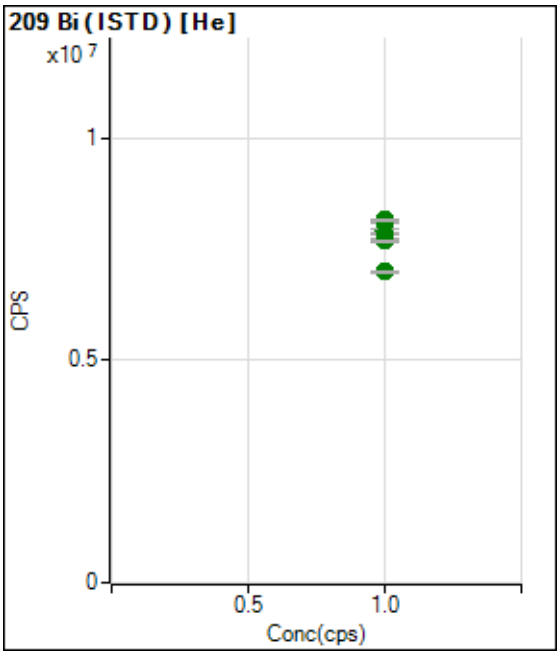


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		11017911.92		A	0.8
2	☐	1.000		11318910.11		A	0.1
3	☐	1.000		11365652.61		A	0.4
4	☐	1.000		11085559.97		A	1.0
5	☐	1.000		10822369.70		A	1.0
6	☐	1.000		10873172.89		A	1.0
7	☐	1.000		10996713.86		A	0.9
8	☐	1.000		10798484.01		A	1.0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8961882.99		A	1.1
2	☐	1.000		9410229.03		A	2.0
3	☐	1.000		9469931.66		A	1.7
4	☐	1.000		9340036.94		A	0.6
5	☐	1.000		9143134.66		A	1.2
6	☐	1.000		9036549.45		A	0.4
7	☐	1.000		8996958.20		A	0.2
8	☐	1.000		8158151.27		A	1.5

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7838638.43		A	0.5
2	☐	1.000		8117172.38		A	0.9
3	☐	1.000		8162667.52		A	0.9
4	☐	1.000		7927706.89		A	1.0
5	☐	1.000		7829807.18		A	0.3
6	☐	1.000		7739948.01		A	0.5
7	☐	1.000		7685219.40		A	0.3
8	☐	1.000		7005568.85		A	0.7

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

US EPA Tune Check Report

Operator Name	Jaswal
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\P7121924MS1.b
Acq. Date-Time	2024-12-19 14:30:21
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		8888	88881.11			0.402	5.000
24		71370	713697.87			0.698	5.000
25		8561	85605.76			0.572	5.000
26		9596	95962.10			0.503	5.000
59		120255	1202550.72			0.652	5.000
113		16207	162072.87			0.452	5.000
115		204389	2043885.09			0.505	5.000
206		38545	385454.13			0.581	5.000
207		33930	339295.63			0.776	5.000
208		81189	811890.90			0.617	5.000
220		0	1.90			68.117	

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

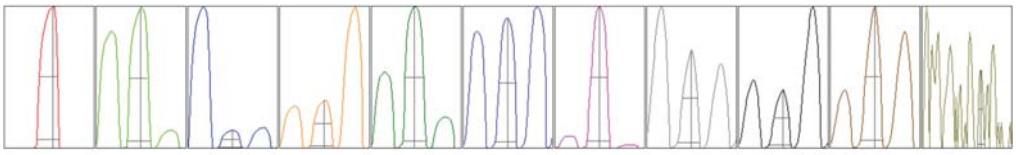
Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	8919	8895	8915	8830	8882
24	71960	71300	71183	70679	71726
25	8585	8511	8523	8552	8632
26	9546	9606	9674	9578	9578
59	121264	120754	119402	120283	119573
113	16271	16242	16253	16092	16178
115	205281	205055	204923	203862	202821
206	38674	38280	38779	38332	38662
207	34005	33523	34047	33851	34223
208	81750	80779	80956	80749	81711

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	15495.79	9.15	8.90 - 9.10	Fail
24	119680.77	24.00	23.90 - 24.10	
25	14940.48	25.00	24.90 - 25.10	
26	16985.51	26.00	25.90 - 26.10	
59	204679.25	58.95	58.90 - 59.10	
113	30889.23	113.00	112.90 - 113.10	
115	387401.00	115.00	114.90 - 115.10	
206	80306.17	206.00	205.90 - 206.10	
207	69206.81	207.00	206.90 - 207.10	
208	166378.18	208.00	207.90 - 208.10	
220	0.30	220.50	-	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.60	0.736	0.900	
24	0.63	0.782	0.900	
25	0.60	0.761	0.900	
26	0.59	0.758	0.900	
59	0.61	0.782	0.900	
113	0.53	0.727	0.900	
115	0.54	0.767	0.900	
206	0.51	0.758	0.900	
207	0.51	0.730	0.900	
208	0.51	0.734	0.900	
220	0.18	0.243		

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	7.3 V	Deflect	16.2 V
Extract 2	-115.0 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	200 V		

QP Parameters

Mass Gain	136	Axis Gain	0.9973	QP Bias	-3.0 V
Mass Offset	130	Axis Offset	0.17		

Hardware Settings

Torch

Torch H	0.3 mm	Torch V	0.6 mm		

EM

Discriminator	4.8 mV	Analog HV	2237 V	Pulse HV	1013 V

[He]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
59		40092	400922.16			0.197	
89		45801	458006.90			0.492	
205		45613	456130.28			0.425	

Mass	RSD% (Flag)
59	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	40224	40097	40074	40033	40032
89	45967	46106	45704	45651	45575
205	45659	45879	45450	45679	45398

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	9.7 V	Deflect	4.0 V

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

US EPA Tune Check Report

Extract 2	-165.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-85 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	136	Axis Gain	0.9973	QP Bias	-13.0 V
Mass Offset	130	Axis Offset	0.17		

Hardware Settings

Torch

Torch H	0.3 mm	Torch V	0.6 mm		

EM

Discriminator	4.8 mV	Analog HV	2237 V	Pulse HV	1013 V

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:04:22	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.23	-0.06	-0.18	0.00	N/A	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	N/A	ppb
Arsenic	75-2	0.03	-0.02	-0.01	0.00	N/A	ppb
Barium	135-1	-0.02	-0.01	0.03	0.00	N/A	ppb
Barium	137-1	0.00	-0.01	0.01	0.00	N/A	ppb
Beryllium	9-1	-0.02	0.00	0.02	0.00	N/A	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.03	0.00	-0.03	0.00	N/A	ppb
Cadmium	106-1	-0.30	0.00	0.29	0.00	N/A	ppb
Cadmium	111-1	-0.02	0.00	0.02	0.00	N/A	ppb
Calcium	43-1	3.32	-0.50	-2.82	0.00	N/A	ppb
Calcium	44-1	2.71	-1.12	-1.59	0.00	N/A	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.00	0.00	-0.01	0.00	N/A	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	N/A	ppb
Copper	63-2	0.01	-0.02	0.01	0.00	N/A	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				100		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	56-2	-0.10	-0.01	0.11	0.00	N/A	ppb
Iron	57-2	1.35	-1.12	-0.24	0.00	N/A	ppb
Iron	54-2	-0.02	-0.34	0.37	0.00	N/A	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:04:22	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	-0.01	0.02	-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	0.16	-0.38	0.22	0.00	N/A	ppb
Manganese	55-2	0.01	0.00	-0.01	0.00	N/A	ppb
Molybdenum	94-1	0.00	0.01	-0.01	0.00	N/A	ppb
Molybdenum	95-1	-0.01	0.01	0.00	0.00	N/A	ppb
Molybdenum	96-1	-0.01	0.01	0.00	0.00	N/A	ppb
Molybdenum	97-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	98-1	-0.01	0.01	0.00	0.00	N/A	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.01	0.01	-0.02	0.00	N/A	ppb
Phosphorus	31-2	-18.22	-16.99	-17.91	-17.71		ppb
Potassium	39-2	-1.48	0.11	1.37	0.00	N/A	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	0.14	-0.04	-0.10	0.00	N/A	ppb
Selenium	77-2	-0.10	-0.10	0.19	0.00	N/A	ppb
Selenium	78-2	-0.05	0.31	-0.26	0.00	N/A	ppb
Silicon	28-1	0.25	1.88	-2.13	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	-0.31	0.32	-0.02	0.00	N/A	ppb
Strontium	86-1	0.13	-0.01	-0.12	0.00	N/A	ppb
Strontium	88-1	0.03	-0.04	0.01	0.00	N/A	ppb
Sulfur	34-1	-54.50	-30.41	-72.36	-52.42		ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.00	0.00	0.00	0.00	N/A	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	N/A	ppb
Tin	118-1	0.00	0.01	0.00	0.00	N/A	ppb
Titanium	47-1	-0.03	0.02	0.01	0.00	N/A	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:04:22	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	-0.01	0.00	0.00	N/A	ppb
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	-0.02	0.00	0.02	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:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P7
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:10:54	DataFile Name :	006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	17.75	18.19	17.65	17.86	1.62	ppb
Antimony	121-1	2.23	2.22	2.20	2.22	0.54	ppb
Arsenic	75-2	1.12	1.20	1.25	1.19	5.44	ppb
Barium	135-1	10.65	10.50	10.81	10.65	1.45	ppb
Barium	137-1	10.77	10.53	10.83	10.71	1.50	ppb
Beryllium	9-1	1.05	1.04	1.01	1.03	2.01	ppb
Bismuth	209-1				105		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.24	1.05	1.08	1.12	8.91	ppb
Cadmium	106-1	2.41	1.99	1.14	1.85	34.84	ppb
Cadmium	111-1	1.25	1.18	1.18	1.20	3.39	ppb
Calcium	43-1	559.26	553.39	560.13	557.59	0.66	ppb
Calcium	44-1	553.67	552.68	556.73	554.36	0.38	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.14	2.14	2.12	2.13	0.46	ppb
Cobalt	59-2	1.12	1.08	1.12	1.11	2.24	ppb
Copper	63-2	1.88	1.85	1.92	1.88	1.66	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				103		%
Indium	115-1				103		%
Indium	115-2				104		%
Iron	56-2	51.43	50.86	51.48	51.26	0.67	ppb
Iron	57-2	53.43	52.56	57.30	54.43	4.63	ppb
Iron	54-2	54.25	52.61	55.59	54.15	2.76	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P7
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:10:54	DataFile Name :	006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.92	0.91	0.89	0.91	2.10	ppb
Lead	207-1	0.91	0.84	0.86	0.87	4.36	ppb
Lead	208-1	0.90	0.88	0.86	0.88	2.24	ppb
Lithium	6-1				102		%
Magnesium	24-2	525.51	525.51	529.99	527.00	0.49	ppb
Manganese	55-2	0.90	0.87	0.86	0.88	2.18	ppb
Molybdenum	94-1	5.90	5.94	5.84	5.90	0.84	ppb
Molybdenum	95-1	5.13	4.95	4.88	4.99	2.60	ppb
Molybdenum	96-1	5.10	5.06	4.94	5.03	1.62	ppb
Molybdenum	97-1	5.01	4.96	4.86	4.94	1.55	ppb
Molybdenum	98-1	4.92	4.92	4.90	4.91	0.30	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.13	1.09	1.14	1.12	2.34	ppb
Phosphorus	31-2	12.63	18.58	21.91	17.71	26.56	ppb
Potassium	39-2	538.31	541.38	548.28	542.66	0.94	ppb
Rhodium	103-1				103		%
Rhodium	103-2				103		%
Scandium	45-1				103		%
Scandium	45-2				103		%
Selenium	82-1	5.27	4.83	4.94	5.01	4.60	ppb
Selenium	77-2	5.55	4.89	5.49	5.31	6.84	ppb
Selenium	78-2	5.93	6.80	5.70	6.14	9.48	ppb
Silicon	28-1	-5.66	-11.77	-10.28	-9.24		ppb
Silver	107-1	1.12	1.14	1.15	1.14	1.37	ppb
Silver	109-1	1.14	1.09	1.13	1.12	2.27	ppb
Sodium	23-2	490.85	492.35	498.77	493.99	0.85	ppb
Strontium	86-1	26.94	26.25	25.08	26.09	3.60	ppb
Strontium	88-1	26.14	25.28	25.64	25.68	1.67	ppb
Sulfur	34-1	107.65	42.75	6.87	52.42	97.45	ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	0.94	0.94	0.94	0.94	0.24	ppb
Thallium	205-1	1.00	0.97	0.95	0.97	2.32	ppb
Tin	118-1	5.75	5.63	5.72	5.70	1.15	ppb
Titanium	47-1	5.07	4.95	4.88	4.97	1.99	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P7
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:10:54	DataFile Name :	006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.92	0.88	0.88	0.89	2.84	ppb
Vanadium	51-2	5.21	5.23	5.29	5.24	0.74	ppb
Yttrium	89-1				103		%
Yttrium	89-2				103		%
Zinc	66-2	5.82	5.59	5.90	5.77	2.82	ppb
Zirconium	90-1	1.03	1.01	0.99	1.01	2.10	ppb
Zirconium	91-1	1.03	1.03	0.99	1.01	2.49	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P7
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:14:09	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	972.64	979.14	977.95	976.58	0.35	ppb
Antimony	121-1	52.63	53.57	52.62	52.94	1.03	ppb
Arsenic	75-2	54.35	53.99	53.66	54.00	0.64	ppb
Barium	135-1	258.23	259.78	255.83	257.95	0.77	ppb
Barium	137-1	258.10	269.07	266.20	264.46	2.15	ppb
Beryllium	9-1	50.34	52.28	50.76	51.13	2.00	ppb
Bismuth	209-1				106		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	58.27	58.76	56.92	57.98	1.64	ppb
Cadmium	106-1	58.62	59.14	57.12	58.29	1.80	ppb
Cadmium	111-1	55.67	56.48	55.40	55.85	1.01	ppb
Calcium	43-1	5340.68	5405.80	5446.86	5397.78	0.99	ppb
Calcium	44-1	5164.85	5198.87	5133.88	5165.87	0.63	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	50.87	51.12	51.42	51.13	0.54	ppb
Cobalt	59-2	51.16	51.70	51.32	51.39	0.54	ppb
Copper	63-2	523.23	531.59	520.16	525.00	1.13	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				103		%
Indium	115-1				103		%
Indium	115-2				100		%
Iron	56-2	2604.85	2618.42	2602.11	2608.46	0.33	ppb
Iron	57-2	2673.35	2692.37	2675.30	2680.34	0.39	ppb
Iron	54-2	2744.21	2743.99	2743.51	2743.90	0.01	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P7
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:14:09	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	248.02	253.79	260.98	254.26	2.55	ppb
Lead	207-1	251.88	255.10	257.16	254.71	1.04	ppb
Lead	208-1	250.16	252.47	256.50	253.04	1.27	ppb
Lithium	6-1				104		%
Magnesium	24-2	4971.48	5037.55	5095.35	5034.79	1.23	ppb
Manganese	55-2	503.16	509.03	495.50	502.57	1.35	ppb
Molybdenum	94-1	508.64	507.49	507.85	507.99	0.12	ppb
Molybdenum	95-1	506.61	509.02	507.19	507.60	0.25	ppb
Molybdenum	96-1	506.97	514.92	504.36	508.75	1.08	ppb
Molybdenum	97-1	505.46	512.41	500.14	506.00	1.22	ppb
Molybdenum	98-1	505.25	509.31	498.98	504.51	1.03	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	52.20	52.34	52.02	52.19	0.31	ppb
Phosphorus	31-2	1058.45	1012.69	1052.21	1041.12	2.38	ppb
Potassium	39-2	2547.73	2602.53	2566.89	2572.38	1.08	ppb
Rhodium	103-1				101		%
Rhodium	103-2				100		%
Scandium	45-1				102		%
Scandium	45-2				99		%
Selenium	82-1	52.32	53.89	52.73	52.98	1.54	ppb
Selenium	77-2	51.23	53.31	52.73	52.42	2.05	ppb
Selenium	78-2	53.54	49.58	55.18	52.77	5.46	ppb
Silicon	28-1	31.53	36.19	36.30	34.67	7.86	ppb
Silver	107-1	56.53	57.50	56.37	56.80	1.08	ppb
Silver	109-1	56.46	57.57	56.73	56.92	1.01	ppb
Sodium	23-2	5017.38	5049.01	5073.92	5046.77	0.56	ppb
Strontium	86-1	1240.83	1263.40	1257.55	1253.93	0.93	ppb
Strontium	88-1	1279.95	1276.62	1276.91	1277.83	0.14	ppb
Sulfur	34-1	1076.27	1173.39	1178.20	1142.62	5.03	ppb
Terbium	159-1				103		%
Terbium	159-2				102		%
Thallium	203-1	47.40	47.51	49.23	48.05	2.14	ppb
Thallium	205-1	46.84	47.47	48.71	47.67	2.00	ppb
Tin	118-1	53.09	53.80	53.69	53.53	0.71	ppb
Titanium	47-1	494.47	503.23	502.01	499.90	0.95	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P7
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:14:09	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	47.56	47.29	48.78	47.88	1.65	ppb
Vanadium	51-2	50.23	50.63	50.23	50.36	0.46	ppb
Yttrium	89-1				102		%
Yttrium	89-2				100		%
Zinc	66-2	508.27	514.08	509.02	510.45	0.62	ppb
Zirconium	90-1	49.19	49.81	49.40	49.47	0.64	ppb
Zirconium	91-1	49.75	50.60	50.11	50.15	0.84	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P7
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:17:09	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2456.34	2440.94	2450.85	2449.38	0.32	ppb
Antimony	121-1	129.77	132.24	136.49	132.83	2.56	ppb
Arsenic	75-2	129.86	129.22	134.27	131.11	2.10	ppb
Barium	135-1	654.90	663.46	656.28	658.21	0.70	ppb
Barium	137-1	646.57	661.73	646.57	651.63	1.34	ppb
Beryllium	9-1	126.22	123.90	126.42	125.51	1.12	ppb
Bismuth	209-1				104		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	138.61	141.01	138.24	139.29	1.08	ppb
Cadmium	106-1	139.66	140.56	139.32	139.85	0.46	ppb
Cadmium	111-1	133.50	135.40	134.63	134.51	0.71	ppb
Calcium	43-1	13266.02	13337.37	13368.14	13323.84	0.39	ppb
Calcium	44-1	12577.60	12744.09	12866.45	12729.38	1.14	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	127.92	127.20	127.02	127.38	0.37	ppb
Cobalt	59-2	127.26	127.35	126.79	127.13	0.23	ppb
Copper	63-2	1309.50	1308.44	1299.58	1305.84	0.42	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				101		%
Indium	115-1				97		%
Indium	115-2				94		%
Iron	56-2	6646.61	6593.44	6635.26	6625.11	0.42	ppb
Iron	57-2	6781.61	6706.46	6783.09	6757.06	0.65	ppb
Iron	54-2	6792.60	6822.30	6770.77	6795.22	0.38	ppb
Krypton	83-1						cps

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P7
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:17:09	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	619.04	631.01	623.96	624.67	0.96	ppb
Lead	207-1	628.24	635.21	629.02	630.82	0.61	ppb
Lead	208-1	621.16	628.67	626.48	625.44	0.62	ppb
Lithium	6-1				101		%
Magnesium	24-2	12630.78	12452.83	12498.46	12527.36	0.74	ppb
Manganese	55-2	1275.76	1271.48	1287.75	1278.33	0.66	ppb
Molybdenum	94-1	1241.68	1288.01	1289.46	1273.05	2.13	ppb
Molybdenum	95-1	1240.19	1283.83	1267.98	1264.00	1.75	ppb
Molybdenum	96-1	1250.53	1277.65	1281.50	1269.89	1.33	ppb
Molybdenum	97-1	1246.63	1276.24	1285.76	1269.55	1.61	ppb
Molybdenum	98-1	1235.52	1266.96	1265.58	1256.02	1.41	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	129.47	127.82	130.08	129.12	0.91	ppb
Phosphorus	31-2	2626.31	2556.06	2577.79	2586.72	1.39	ppb
Potassium	39-2	6388.36	6305.27	6324.72	6339.45	0.69	ppb
Rhodium	103-1				96		%
Rhodium	103-2				93		%
Scandium	45-1				96		%
Scandium	45-2				90		%
Selenium	82-1	127.84	130.76	129.75	129.45	1.15	ppb
Selenium	77-2	131.49	131.38	133.91	132.26	1.08	ppb
Selenium	78-2	136.67	135.59	137.52	136.59	0.71	ppb
Silicon	28-1	106.45	109.01	110.32	108.59	1.81	ppb
Silver	107-1	140.87	143.01	139.18	141.02	1.36	ppb
Silver	109-1	140.51	141.86	139.90	140.76	0.71	ppb
Sodium	23-2	12710.92	12569.42	12732.47	12670.94	0.70	ppb
Strontium	86-1	3047.94	3157.09	3135.85	3113.62	1.86	ppb
Strontium	88-1	3122.83	3189.76	3215.27	3175.95	1.50	ppb
Sulfur	34-1	2660.10	2636.13	2636.15	2644.13	0.52	ppb
Terbium	159-1				101		%
Terbium	159-2				98		%
Thallium	203-1	118.15	119.01	118.06	118.41	0.44	ppb
Thallium	205-1	124.72	128.91	124.87	126.17	1.89	ppb
Tin	118-1	128.54	130.40	130.77	129.90	0.92	ppb
Titanium	47-1	1259.61	1267.51	1251.15	1259.42	0.65	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P7
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:17:09	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	119.74	122.30	120.98	121.00	1.06	ppb
Vanadium	51-2	125.67	125.21	125.73	125.54	0.23	ppb
Yttrium	89-1				96		%
Yttrium	89-2				92		%
Zinc	66-2	1282.52	1269.71	1279.37	1277.20	0.52	ppb
Zirconium	90-1	124.57	125.42	127.72	125.90	1.29	ppb
Zirconium	91-1	122.46	126.19	125.51	124.72	1.59	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P7
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:19:58	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5037.55	4999.23	5017.54	5018.11	0.38	ppb
Antimony	121-1	256.86	260.62	259.50	258.99	0.75	ppb
Arsenic	75-2	253.98	255.81	256.65	255.48	0.53	ppb
Barium	135-1	1272.06	1287.26	1300.30	1286.54	1.10	ppb
Barium	137-1	1253.83	1296.46	1289.24	1279.84	1.78	ppb
Beryllium	9-1	244.56	255.47	256.50	252.17	2.62	ppb
Bismuth	209-1				102		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	259.77	266.37	262.66	262.93	1.26	ppb
Cadmium	106-1	262.29	267.55	264.76	264.86	0.99	ppb
Cadmium	111-1	253.13	262.62	259.81	258.52	1.89	ppb
Calcium	43-1	25680.88	26917.02	26797.49	26465.13	2.58	ppb
Calcium	44-1	24722.83	25905.58	25617.22	25415.21	2.43	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	253.76	254.35	253.44	253.85	0.18	ppb
Cobalt	59-2	261.42	261.63	258.00	260.35	0.78	ppb
Copper	63-2	2585.68	2597.93	2582.72	2588.78	0.31	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				98		%
Indium	115-1				90		%
Indium	115-2				88		%
Iron	56-2	13255.88	13347.84	13289.18	13297.63	0.35	ppb
Iron	57-2	13268.80	13445.33	13462.74	13392.29	0.80	ppb
Iron	54-2	13483.42	13697.29	13467.89	13549.53	0.95	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P7
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:19:58	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1241.36	1241.67	1265.98	1249.67	1.13	ppb
Lead	207-1	1251.27	1260.14	1271.90	1261.10	0.82	ppb
Lead	208-1	1240.18	1252.75	1264.17	1252.37	0.96	ppb
Lithium	6-1				99		%
Magnesium	24-2	25348.34	25009.91	25117.26	25158.51	0.69	ppb
Manganese	55-2	2556.06	2583.23	2550.98	2563.42	0.68	ppb
Molybdenum	94-1	2469.06	2546.59	2560.19	2525.28	1.95	ppb
Molybdenum	95-1	2451.32	2553.27	2529.63	2511.41	2.12	ppb
Molybdenum	96-1	2450.48	2558.94	2517.33	2508.91	2.18	ppb
Molybdenum	97-1	2459.62	2540.59	2512.81	2504.34	1.64	ppb
Molybdenum	98-1	2443.81	2517.55	2501.44	2487.60	1.56	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	252.65	255.38	253.56	253.86	0.55	ppb
Phosphorus	31-2	5197.91	5132.10	5054.76	5128.26	1.40	ppb
Potassium	39-2	12446.59	12642.56	12533.83	12540.99	0.78	ppb
Rhodium	103-1				88		%
Rhodium	103-2				87		%
Scandium	45-1				87		%
Scandium	45-2				81		%
Selenium	82-1	250.95	263.33	261.60	258.63	2.59	ppb
Selenium	77-2	266.61	261.32	263.26	263.73	1.01	ppb
Selenium	78-2	255.14	264.57	259.49	259.73	1.82	ppb
Silicon	28-1	228.75	245.85	251.18	241.93	4.84	ppb
Silver	107-1	262.00	266.99	261.98	263.66	1.10	ppb
Silver	109-1	265.68	268.53	269.39	267.87	0.72	ppb
Sodium	23-2	25695.19	25550.49	25421.82	25555.84	0.54	ppb
Strontium	86-1	5990.74	6218.91	6214.46	6141.37	2.12	ppb
Strontium	88-1	6148.13	6383.44	6360.42	6297.33	2.06	ppb
Sulfur	34-1	4945.57	5387.12	5280.43	5204.37	4.43	ppb
Terbium	159-1				97		%
Terbium	159-2				97		%
Thallium	203-1	248.27	250.15	254.38	250.93	1.25	ppb
Thallium	205-1	245.94	249.52	251.23	248.90	1.09	ppb
Tin	118-1	254.27	260.48	256.08	256.95	1.24	ppb
Titanium	47-1	2386.17	2501.29	2554.60	2480.69	3.47	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P7
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:19:58	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	238.82	248.99	248.93	245.58	2.38	ppb
Vanadium	51-2	250.14	251.63	249.36	250.37	0.46	ppb
Yttrium	89-1				89		%
Yttrium	89-2				86		%
Zinc	66-2	2640.70	2590.24	2654.85	2628.60	1.29	ppb
Zirconium	90-1	243.57	250.55	256.02	250.05	2.50	ppb
Zirconium	91-1	240.53	250.23	249.85	246.87	2.22	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P7
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:22:45	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9812.65	10131.76	9975.77	9973.40	1.60	ppb
Antimony	121-1	497.93	509.65	508.77	505.45	1.29	ppb
Arsenic	75-2	508.95	504.41	502.51	505.29	0.66	ppb
Barium	135-1	2523.68	2549.37	2543.18	2538.74	0.53	ppb
Barium	137-1	2513.04	2544.23	2539.05	2532.11	0.66	ppb
Beryllium	9-1	489.94	507.19	486.87	494.67	2.21	ppb
Bismuth	209-1				101		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	504.30	516.86	508.08	509.74	1.26	ppb
Cadmium	106-1	516.43	514.55	518.12	516.37	0.35	ppb
Cadmium	111-1	511.24	516.17	512.64	513.35	0.50	ppb
Calcium	43-1	52227.42	51429.77	51486.82	51714.67	0.86	ppb
Calcium	44-1	51037.46	51386.04	51129.51	51184.34	0.35	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	509.77	510.37	513.46	511.20	0.39	ppb
Cobalt	59-2	509.24	513.42	514.53	512.40	0.54	ppb
Copper	63-2	5086.06	5148.08	5121.59	5118.58	0.61	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				97		%
Holmium	165-2				99		%
Indium	115-1				87		%
Indium	115-2				87		%
Iron	56-2	26303.84	26443.44	26263.28	26336.85	0.36	ppb
Iron	57-2	26350.64	26595.73	26357.11	26434.49	0.53	ppb
Iron	54-2	26574.59	26866.70	26641.62	26694.30	0.57	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P7
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:22:45	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2532.27	2544.18	2507.57	2528.01	0.74	ppb
Lead	207-1	2510.06	2521.56	2507.83	2513.15	0.29	ppb
Lead	208-1	2513.97	2525.08	2504.58	2514.54	0.41	ppb
Lithium	6-1				97		%
Magnesium	24-2	49730.06	50660.85	50283.42	50224.78	0.93	ppb
Manganese	55-2	5047.86	5098.38	5054.60	5066.95	0.54	ppb
Molybdenum	94-1	5051.74	5068.41	5058.03	5059.39	0.17	ppb
Molybdenum	95-1	5064.40	5043.48	5062.84	5056.91	0.23	ppb
Molybdenum	96-1	5058.84	5067.74	5060.91	5062.50	0.09	ppb
Molybdenum	97-1	5035.62	5045.38	5039.53	5040.18	0.10	ppb
Molybdenum	98-1	5009.81	5008.46	5052.68	5023.65	0.50	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	501.37	500.20	497.51	499.69	0.40	ppb
Phosphorus	31-2	10098.25	10161.39	10187.83	10149.15	0.45	ppb
Potassium	39-2	25008.05	25057.41	25270.31	25111.92	0.56	ppb
Rhodium	103-1				83		%
Rhodium	103-2				85		%
Scandium	45-1				82		%
Scandium	45-2				80		%
Selenium	82-1	508.20	510.30	512.23	510.24	0.40	ppb
Selenium	77-2	513.84	524.74	500.39	512.99	2.38	ppb
Selenium	78-2	509.83	506.15	514.46	510.15	0.82	ppb
Silicon	28-1	492.70	511.36	512.82	505.62	2.22	ppb
Silver	107-1	507.76	521.39	516.17	515.11	1.33	ppb
Silver	109-1	509.70	515.52	513.93	513.05	0.59	ppb
Sodium	23-2	50419.92	51195.42	50811.90	50809.08	0.76	ppb
Strontium	86-1	12595.63	12586.21	12530.21	12570.68	0.28	ppb
Strontium	88-1	12578.58	12680.47	12691.83	12650.30	0.49	ppb
Sulfur	34-1	9973.50	10144.21	10153.71	10090.48	1.01	ppb
Terbium	159-1				96		%
Terbium	159-2				97		%
Thallium	203-1	504.46	512.34	504.69	507.16	0.88	ppb
Thallium	205-1	502.70	506.35	496.23	501.76	1.02	ppb
Tin	118-1	508.18	511.71	512.77	510.89	0.47	ppb
Titanium	47-1	4985.26	5019.75	4983.74	4996.25	0.41	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P7
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:22:45	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	492.86	500.61	499.22	497.56	0.83	ppb
Vanadium	51-2	510.83	509.34	505.82	508.66	0.51	ppb
Yttrium	89-1				85		%
Yttrium	89-2				85		%
Zinc	66-2	5150.32	5200.89	5164.00	5171.74	0.51	ppb
Zirconium	90-1	500.58	504.52	506.57	503.89	0.60	ppb
Zirconium	91-1	495.91	498.39	508.87	501.06	1.37	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P7
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:25:28	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19402.20	19267.19	19462.30	19377.23	0.52	ppb
Antimony	121-1	977.58	1003.42	1000.71	993.90	1.43	ppb
Arsenic	75-2	986.38	1004.51	994.17	995.02	0.91	ppb
Barium	135-1	4891.31	5018.55	4990.96	4966.94	1.35	ppb
Barium	137-1	4858.67	5053.90	5004.73	4972.43	2.04	ppb
Beryllium	9-1	1001.85	1010.15	994.00	1002.00	0.81	ppb
Bismuth	209-1				100		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	969.73	1007.14	992.26	989.71	1.90	ppb
Cadmium	106-1	967.47	1000.53	989.48	985.83	1.71	ppb
Cadmium	111-1	973.81	992.79	1002.55	989.71	1.48	ppb
Calcium	43-1	101287.23	100520.32	103336.61	101714.72	1.43	ppb
Calcium	44-1	101472.81	101306.97	101776.24	101518.68	0.23	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	997.24	998.38	983.63	993.08	0.83	ppb
Cobalt	59-2	979.02	995.95	997.67	990.88	1.04	ppb
Copper	63-2	9882.82	9945.12	9902.93	9910.29	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				98		%
Holmium	165-2				100		%
Indium	115-1				86		%
Indium	115-2				86		%
Iron	56-2	51267.88	51951.32	51484.18	51567.79	0.68	ppb
Iron	57-2	51392.55	51544.94	51197.55	51378.34	0.34	ppb
Iron	54-2	52019.77	52247.21	52160.56	52142.52	0.22	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P7
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:25:28	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	4972.36	4980.11	5005.25	4985.91	0.34	ppb
Lead	207-1	4968.32	4986.97	5013.77	4989.69	0.46	ppb
Lead	208-1	4997.19	4980.60	4998.01	4991.93	0.20	ppb
Lithium	6-1				95		%
Magnesium	24-2	96351.89	98853.02	96820.06	97341.66	1.37	ppb
Manganese	55-2	9892.35	10020.15	9928.50	9947.00	0.66	ppb
Molybdenum	94-1	9835.50	10076.38	9970.24	9960.71	1.21	ppb
Molybdenum	95-1	9808.75	10083.74	10007.20	9966.56	1.42	ppb
Molybdenum	96-1	9879.47	10032.76	9978.57	9963.60	0.78	ppb
Molybdenum	97-1	9867.58	10073.59	9987.08	9976.08	1.04	ppb
Molybdenum	98-1	9908.68	10086.12	9976.10	9990.30	0.90	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	993.52	1016.44	985.73	998.56	1.60	ppb
Phosphorus	31-2	19934.89	19954.02	19752.47	19880.46	0.56	ppb
Potassium	39-2	48646.49	49403.38	48910.46	48986.78	0.78	ppb
Rhodium	103-1				82		%
Rhodium	103-2				85		%
Scandium	45-1				82		%
Scandium	45-2				81		%
Selenium	82-1	985.63	999.28	991.14	992.02	0.69	ppb
Selenium	77-2	991.36	983.33	992.43	989.04	0.50	ppb
Selenium	78-2	997.42	988.06	987.22	990.90	0.57	ppb
Silicon	28-1	987.13	999.52	1020.00	1002.22	1.66	ppb
Silver	107-1	972.24	998.07	989.75	986.69	1.34	ppb
Silver	109-1	973.16	994.81	992.11	986.69	1.20	ppb
Sodium	23-2	97973.01	99701.57	98407.14	98693.90	0.91	ppb
Strontium	86-1	24662.44	25404.19	24912.50	24993.04	1.51	ppb
Strontium	88-1	24685.61	25098.01	24932.15	24905.26	0.83	ppb
Sulfur	34-1	19920.27	19793.90	19921.39	19878.52	0.37	ppb
Terbium	159-1				97		%
Terbium	159-2				98		%
Thallium	203-1	989.02	995.51	1006.80	997.11	0.90	ppb
Thallium	205-1	994.92	997.39	1005.79	999.37	0.57	ppb
Tin	118-1	976.18	1002.07	997.83	992.03	1.40	ppb
Titanium	47-1	10051.51	9997.49	9967.59	10005.53	0.43	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P7
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:25:28	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1002.19	1001.84	1004.76	1002.93	0.16	ppb
Vanadium	51-2	996.85	1002.70	986.92	995.49	0.80	ppb
Yttrium	89-1				86		%
Yttrium	89-2				86		%
Zinc	66-2	9921.60	9909.73	9802.84	9878.06	0.66	ppb
Zirconium	90-1	990.46	1009.12	994.30	997.96	0.99	ppb
Zirconium	91-1	989.04	1006.65	1005.16	1000.28	0.98	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P7
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:28:14	DataFile Name :	012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	100691.36	99429.42	100262.65	100127.81	0.64	ppb
Antimony	121-1	0.61	0.53	0.47	0.54	12.51	ppb
Arsenic	75-2	0.50	0.53	0.51	0.51	2.66	ppb
Barium	135-1	2.61	2.33	2.18	2.37	9.08	ppb
Barium	137-1	2.54	2.31	2.18	2.35	7.76	ppb
Beryllium	9-1	0.32	0.25	0.25	0.27	13.27	ppb
Bismuth	209-1				91		%
Bismuth	209-2				89		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.43	0.47	0.46	0.45	5.53	ppb
Cadmium	106-1	0.42	-0.21	0.33	0.18	188.86	ppb
Cadmium	111-1	0.24	0.16	0.18	0.19	21.02	ppb
Calcium	43-1	492569.67	500551.57	505041.86	499387.70	1.26	ppb
Calcium	44-1	488062.03	502260.96	508325.87	499549.62	2.08	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.60	1.27	1.33	1.40	12.38	ppb
Cobalt	59-2	2.55	2.62	2.53	2.56	1.88	ppb
Copper	63-2	1.57	1.49	1.47	1.51	3.54	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				98		%
Indium	115-1				85		%
Indium	115-2				87		%
Iron	56-2	249637.27	247984.15	250885.82	249502.41	0.58	ppb
Iron	57-2	248707.61	248504.92	251352.83	249521.79	0.64	ppb
Iron	54-2	248692.59	248749.81	250558.15	249333.52	0.43	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P7
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:28:14	DataFile Name :	012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.70	1.51	1.33	1.52	12.19	ppb
Lead	207-1	1.76	1.45	1.35	1.52	14.09	ppb
Lead	208-1	1.70	1.48	1.32	1.50	12.51	ppb
Lithium	6-1				94		%
Magnesium	24-2	500298.41	498751.61	502450.60	500500.21	0.37	ppb
Manganese	55-2	4.45	4.41	4.21	4.36	2.86	ppb
Molybdenum	94-1	3.40	2.95	2.44	2.93	16.37	ppb
Molybdenum	95-1	2.54	1.96	1.59	2.03	23.42	ppb
Molybdenum	96-1	3.97	3.36	3.11	3.48	12.69	ppb
Molybdenum	97-1	2.46	1.85	1.66	1.99	20.96	ppb
Molybdenum	98-1	2.38	1.88	1.56	1.94	21.18	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	3.74	3.72	3.72	3.73	0.29	ppb
Phosphorus	31-2	-1.88	-5.72	-6.16	-4.59		ppb
Potassium	39-2	250991.46	249142.62	250424.99	250186.36	0.38	ppb
Rhodium	103-1				78		%
Rhodium	103-2				82		%
Scandium	45-1				84		%
Scandium	45-2				87		%
Selenium	82-1	0.92	0.76	0.76	0.81	11.19	ppb
Selenium	77-2	0.39	0.06	0.22	0.22	72.47	ppb
Selenium	78-2	-1.32	-0.83	-0.67	-0.94		ppb
Silicon	28-1	-52.38	-52.44	-53.31	-52.71		ppb
Silver	107-1	0.26	0.21	0.17	0.21	20.09	ppb
Silver	109-1	0.25	0.21	0.17	0.21	19.60	ppb
Sodium	23-2	500100.33	499122.14	501220.89	500147.78	0.21	ppb
Strontium	86-1	77.54	76.93	74.36	76.28	2.21	ppb
Strontium	88-1	74.09	74.80	75.22	74.71	0.77	ppb
Sulfur	34-1	-356.45	-264.88	-44.18	-221.84		ppb
Terbium	159-1				96		%
Terbium	159-2				96		%
Thallium	203-1	0.20	0.15	0.12	0.15	27.31	ppb
Thallium	205-1	0.21	0.17	0.11	0.16	30.09	ppb
Tin	118-1	0.33	0.29	0.22	0.28	18.85	ppb
Titanium	47-1	2.31	1.70	1.54	1.85	21.95	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P7
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:28:14	DataFile Name :	012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.19	0.14	0.11	0.15	27.86	ppb
Vanadium	51-2	0.22	0.18	0.18	0.20	11.26	ppb
Yttrium	89-1				86		%
Yttrium	89-2				89		%
Zinc	66-2	9.69	10.01	10.02	9.91	1.88	ppb
Zirconium	90-1	0.69	0.62	0.61	0.64	6.46	ppb
Zirconium	91-1	0.69	0.65	0.58	0.64	8.12	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P7
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:49:00	DataFile Name :	014ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	494.47	488.55	490.74	491.25	0.61	ppb
Antimony	121-1	215.67	223.83	220.21	219.90	1.86	ppb
Arsenic	75-2	218.27	218.41	219.34	218.67	0.26	ppb
Barium	135-1	103.81	106.58	104.80	105.06	1.34	ppb
Barium	137-1	104.20	106.64	106.70	105.85	1.35	ppb
Beryllium	9-1	104.33	108.32	103.51	105.39	2.44	ppb
Bismuth	209-1				106		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	101.77	102.35	100.89	101.67	0.73	ppb
Cadmium	106-1	97.49	101.52	99.54	99.51	2.02	ppb
Cadmium	111-1	108.37	110.74	110.17	109.76	1.13	ppb
Calcium	43-1	2144.50	2131.98	2116.67	2131.05	0.65	ppb
Calcium	44-1	2017.79	2053.87	1996.21	2022.62	1.44	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	105.60	105.33	105.65	105.52	0.16	ppb
Cobalt	59-2	106.13	105.23	106.18	105.85	0.51	ppb
Copper	63-2	102.41	101.80	101.83	102.02	0.34	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				104		%
Indium	115-1				97		%
Indium	115-2				99		%
Iron	56-2	2122.03	2105.29	2128.39	2118.57	0.56	ppb
Iron	57-2	2158.55	2154.76	2136.07	2149.79	0.56	ppb
Iron	54-2	2254.38	2244.04	2246.25	2248.22	0.24	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P7
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:49:00	DataFile Name :	014ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	212.75	215.39	210.55	212.90	1.14	ppb
Lead	207-1	201.53	198.39	200.13	200.02	0.79	ppb
Lead	208-1	207.06	205.58	206.83	206.49	0.39	ppb
Lithium	6-1				104		%
Magnesium	24-2	1175.53	1169.02	1168.49	1171.01	0.34	ppb
Manganese	55-2	103.22	102.29	102.78	102.76	0.45	ppb
Molybdenum	94-1	-0.12	-0.12	-0.14	-0.13		ppb
Molybdenum	95-1	-0.18	-0.16	-0.17	-0.17		ppb
Molybdenum	96-1	-0.16	-0.14	-0.15	-0.15		ppb
Molybdenum	97-1	-0.19	0.31	-0.19	-0.02		ppb
Molybdenum	98-1	-0.16	0.67	-0.16	0.11	418.80	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	108.35	107.39	108.93	108.22	0.71	ppb
Phosphorus	31-2	-17.01	-16.38	-14.28	-15.89		ppb
Potassium	39-2	2011.79	2000.89	1992.25	2001.65	0.49	ppb
Rhodium	103-1				96		%
Rhodium	103-2				98		%
Scandium	45-1				95		%
Scandium	45-2				95		%
Selenium	82-1	212.70	214.46	213.73	213.63	0.41	ppb
Selenium	77-2	212.39	235.81	231.02	226.41	5.46	ppb
Selenium	78-2	221.90	224.47	226.16	224.18	0.96	ppb
Silicon	28-1	-76.11	-76.74	-78.42	-77.09		ppb
Silver	107-1	53.20	55.01	54.55	54.26	1.73	ppb
Silver	109-1	54.18	56.04	55.09	55.10	1.69	ppb
Sodium	23-2	2035.11	2033.90	1987.57	2018.86	1.34	ppb
Strontium	86-1	5.96	6.42	6.18	6.19	3.69	ppb
Strontium	88-1	5.95	6.04	6.03	6.01	0.79	ppb
Sulfur	34-1	95.96	98.58	-17.06	59.16	111.60	ppb
Terbium	159-1				100		%
Terbium	159-2				104		%
Thallium	203-1	204.50	210.51	207.44	207.49	1.45	ppb
Thallium	205-1	207.09	209.40	207.17	207.89	0.63	ppb
Tin	118-1	0.11	0.13	0.11	0.11	8.31	ppb
Titanium	47-1	-0.19	-0.19	-0.20	-0.19		ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P7
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:49:00	DataFile Name :	014ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	-0.02	-0.01	-0.02	-0.01		ppb
Vanadium	51-2	102.03	101.72	101.62	101.79	0.21	ppb
Yttrium	89-1				95		%
Yttrium	89-2				97		%
Zinc	66-2	204.53	203.31	204.25	204.03	0.31	ppb
Zirconium	90-1	0.00	0.01	0.00	0.00	134.92	ppb
Zirconium	91-1	0.07	0.05	0.06	0.06	12.50	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P7
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:04:14	DataFile Name :	017LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	18.19	18.71	18.48	18.46	1.41	ppb
Antimony	121-1	2.04	2.03	2.06	2.04	0.83	ppb
Arsenic	75-2	1.10	1.10	1.00	1.06	5.30	ppb
Barium	135-1	9.63	9.72	9.89	9.75	1.36	ppb
Barium	137-1	9.69	9.63	9.95	9.76	1.78	ppb
Beryllium	9-1	1.07	1.04	0.97	1.03	4.92	ppb
Bismuth	209-1				104		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.10	1.17	0.98	1.09	9.01	ppb
Cadmium	106-1	1.28	0.26	0.89	0.81	63.49	ppb
Cadmium	111-1	1.04	1.01	1.11	1.06	4.91	ppb
Calcium	43-1	509.44	506.00	529.87	515.10	2.51	ppb
Calcium	44-1	513.00	510.12	517.97	513.70	0.77	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.00	1.93	2.01	1.98	2.10	ppb
Cobalt	59-2	1.06	1.05	1.02	1.04	1.64	ppb
Copper	63-2	1.90	1.90	1.93	1.91	0.83	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				104		%
Indium	115-1				98		%
Indium	115-2				99		%
Iron	56-2	52.07	51.58	51.87	51.84	0.47	ppb
Iron	57-2	55.35	51.39	53.36	53.37	3.71	ppb
Iron	54-2	52.62	53.06	55.05	53.58	2.42	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P7
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:04:14	DataFile Name :	017LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.94	0.90	0.96	0.93	3.56	ppb
Lead	207-1	0.91	0.91	0.94	0.92	1.80	ppb
Lead	208-1	0.92	0.91	0.92	0.92	1.01	ppb
Lithium	6-1				101		%
Magnesium	24-2	501.84	491.87	499.62	497.78	1.05	ppb
Manganese	55-2	0.96	0.94	0.98	0.96	2.13	ppb
Molybdenum	94-1	5.88	5.68	5.61	5.73	2.43	ppb
Molybdenum	95-1	4.77	4.73	4.83	4.77	1.00	ppb
Molybdenum	96-1	4.91	4.85	4.96	4.91	1.09	ppb
Molybdenum	97-1	4.78	4.79	4.77	4.78	0.20	ppb
Molybdenum	98-1	4.84	4.86	4.79	4.83	0.68	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.06	1.02	1.02	1.03	1.99	ppb
Phosphorus	31-2	13.71	15.08	13.69	14.16	5.62	ppb
Potassium	39-2	503.03	491.26	499.31	497.87	1.21	ppb
Rhodium	103-1				97		%
Rhodium	103-2				100		%
Scandium	45-1				96		%
Scandium	45-2				97		%
Selenium	82-1	5.70	5.04	5.16	5.30	6.66	ppb
Selenium	77-2	4.69	2.93	5.32	4.31	28.74	ppb
Selenium	78-2	3.99	4.97	4.11	4.36	12.24	ppb
Silicon	28-1	-69.26	-71.29	-68.96	-69.84		ppb
Silver	107-1	1.01	1.02	1.04	1.02	1.54	ppb
Silver	109-1	1.03	1.00	1.02	1.02	1.62	ppb
Sodium	23-2	473.79	467.92	475.94	472.55	0.88	ppb
Strontium	86-1	24.15	25.10	25.30	24.85	2.47	ppb
Strontium	88-1	24.14	24.37	24.23	24.25	0.47	ppb
Sulfur	34-1	56.03	46.35	38.29	46.89	18.95	ppb
Terbium	159-1				100		%
Terbium	159-2				102		%
Thallium	203-1	0.91	0.90	0.91	0.91	0.54	ppb
Thallium	205-1	0.91	0.92	0.91	0.91	0.60	ppb
Tin	118-1	5.18	5.12	5.21	5.17	0.88	ppb
Titanium	47-1	4.86	4.69	4.77	4.77	1.73	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P7
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:04:14	DataFile Name :	017LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.86	0.86	0.86	0.86	0.06	ppb
Vanadium	51-2	4.90	4.81	4.93	4.88	1.24	ppb
Yttrium	89-1				96		%
Yttrium	89-2				98		%
Zinc	66-2	4.89	4.98	5.01	4.96	1.29	ppb
Zirconium	90-1	0.95	0.95	0.96	0.95	0.10	ppb
Zirconium	91-1	0.94	1.00	1.00	0.98	3.38	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P7
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:07:29	DataFile Name :	018CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-1.42	-1.41	-1.36	-1.40		ppb
Antimony	121-1	-0.01	-0.01	-0.01	-0.01		ppb
Arsenic	75-2	-0.03	-0.02	-0.03	-0.03		ppb
Barium	135-1	-0.11	-0.10	-0.11	-0.11		ppb
Barium	137-1	-0.10	-0.11	-0.10	-0.11		ppb
Beryllium	9-1	-0.04	-0.04	-0.03	-0.04		ppb
Bismuth	209-1				106		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.03	-0.04	-0.04	-0.04		ppb
Cadmium	106-1	0.44	0.83	0.26	0.51	57.15	ppb
Cadmium	111-1	0.01	0.04	0.00	0.02	109.75	ppb
Calcium	43-1	-11.26	-9.27	-8.91	-9.81		ppb
Calcium	44-1	-11.48	-12.18	-12.02	-11.90		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.04	-0.03	-0.05	-0.04		ppb
Cobalt	59-2	-0.02	-0.02	-0.03	-0.02		ppb
Copper	63-2	-0.20	-0.20	-0.20	-0.20		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				104		%
Indium	115-1				100		%
Indium	115-2				101		%
Iron	56-2	-5.51	-5.47	-5.57	-5.52		ppb
Iron	57-2	-7.09	-6.47	-6.33	-6.63		ppb
Iron	54-2	-5.29	-5.38	-5.75	-5.47		ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P7
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:07:29	DataFile Name :	018CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	-0.08	-0.09	-0.09	-0.09		ppb
Lead	207-1	-0.09	-0.08	-0.08	-0.08		ppb
Lead	208-1	-0.09	-0.09	-0.09	-0.09		ppb
Lithium	6-1				105		%
Magnesium	24-2	-10.15	-10.16	-9.95	-10.09		ppb
Manganese	55-2	-0.22	-0.21	-0.21	-0.21		ppb
Molybdenum	94-1	-0.20	-0.20	-0.20	-0.20		ppb
Molybdenum	95-1	-0.19	-0.20	-0.20	-0.20		ppb
Molybdenum	96-1	-0.19	-0.20	-0.20	-0.20		ppb
Molybdenum	97-1	-0.21	-0.21	-0.21	-0.21		ppb
Molybdenum	98-1	-0.19	-0.19	-0.19	-0.19		ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.05	-0.01	-0.04	-0.03		ppb
Phosphorus	31-2	-17.78	-16.65	-15.97	-16.80		ppb
Potassium	39-2	-9.81	-8.74	-9.21	-9.25		ppb
Rhodium	103-1				99		%
Rhodium	103-2				100		%
Scandium	45-1				97		%
Scandium	45-2				98		%
Selenium	82-1	0.11	-0.03	-0.09	0.00		ppb
Selenium	77-2	0.05	-0.10	0.05	0.00		ppb
Selenium	78-2	0.38	0.17	-0.49	0.02	2208.72	ppb
Silicon	28-1	-77.24	-76.11	-75.37	-76.24		ppb
Silver	107-1	-0.01	-0.01	-0.01	-0.01		ppb
Silver	109-1	-0.01	-0.01	-0.02	-0.01		ppb
Sodium	23-2	-4.88	-5.60	-5.56	-5.35		ppb
Strontium	86-1	-0.24	-0.59	-0.26	-0.36		ppb
Strontium	88-1	-0.49	-0.51	-0.45	-0.48		ppb
Sulfur	34-1	78.89	99.84	131.76	103.49	25.72	ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	-0.02	-0.02	-0.03	-0.02		ppb
Thallium	205-1	-0.02	-0.02	-0.02	-0.02		ppb
Tin	118-1	-0.02	-0.02	-0.01	-0.02		ppb
Titanium	47-1	-0.21	-0.21	-0.22	-0.21		ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P7
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:07:29	DataFile Name :	018CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	-0.02	-0.02	-0.02	-0.02		ppb
Vanadium	51-2	-0.02	-0.02	-0.02	-0.02		ppb
Yttrium	89-1				98		%
Yttrium	89-2				100		%
Zinc	66-2	0.31	0.32	0.32	0.32	0.64	ppb
Zirconium	90-1	-0.02	-0.02	-0.01	-0.02		ppb
Zirconium	91-1	-0.02	-0.01	-0.01	-0.01		ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P7
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:10:47	DataFile Name :	019ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	94552.04	94183.12	94541.48	94425.55	0.22	ppb
Antimony	121-1	1.14	1.18	1.18	1.17	1.71	ppb
Arsenic	75-2	0.34	0.38	0.31	0.34	10.27	ppb
Barium	135-1	1.33	1.33	1.33	1.33	0.27	ppb
Barium	137-1	1.30	1.40	1.37	1.36	3.80	ppb
Beryllium	9-1	0.24	0.25	0.26	0.25	5.42	ppb
Bismuth	209-1				102		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	9.82	9.78	9.50	9.70	1.80	ppb
Cadmium	106-1	-0.35	-0.31	-1.11	-0.59		ppb
Cadmium	111-1	0.39	0.29	0.30	0.32	17.83	ppb
Calcium	43-1	101548.36	104813.63	102776.28	103046.09	1.60	ppb
Calcium	44-1	101280.90	104144.00	102278.78	102567.89	1.42	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	21.15	20.89	20.55	20.87	1.44	ppb
Cobalt	59-2	1.24	1.29	1.26	1.26	2.18	ppb
Copper	63-2	7.11	7.27	7.15	7.18	1.15	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				104		%
Indium	115-1				93		%
Indium	115-2				93		%
Iron	56-2	107327.98	107050.93	107226.24	107201.71	0.13	ppb
Iron	57-2	107017.11	106301.69	107170.63	106829.81	0.43	ppb
Iron	54-2	107373.65	107304.55	106912.06	107196.75	0.23	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P7
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:10:47	DataFile Name :	019ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	5.74	5.36	5.32	5.47	4.26	ppb
Lead	207-1	5.21	4.92	4.73	4.95	4.88	ppb
Lead	208-1	5.37	5.07	4.89	5.11	4.77	ppb
Lithium	6-1				98		%
Magnesium	24-2	100262.28	100957.91	99596.16	100272.11	0.68	ppb
Manganese	55-2	7.98	7.91	7.83	7.91	0.95	ppb
Molybdenum	94-1	1648.85	1677.31	1658.03	1661.40	0.87	ppb
Molybdenum	95-1	2000.37	2045.14	2023.26	2022.92	1.11	ppb
Molybdenum	96-1	1984.75	2003.13	1998.41	1995.43	0.48	ppb
Molybdenum	97-1	1988.99	2012.14	2020.85	2007.33	0.82	ppb
Molybdenum	98-1	1977.92	2040.29	2004.80	2007.67	1.56	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	5.61	5.52	5.48	5.54	1.20	ppb
Phosphorus	31-2	103718.56	106508.47	104355.13	104860.72	1.39	ppb
Potassium	39-2	100901.29	100095.10	100227.36	100407.92	0.43	ppb
Rhodium	103-1				89		%
Rhodium	103-2				91		%
Scandium	45-1				91		%
Scandium	45-2				88		%
Selenium	82-1	0.17	0.48	0.03	0.23	99.29	ppb
Selenium	77-2	-0.10	0.21	0.06	0.06	270.04	ppb
Selenium	78-2	-1.97	-1.12	-1.05	-1.38		ppb
Silicon	28-1	-70.56	-69.95	-72.15	-70.89		ppb
Silver	107-1	0.04	0.04	0.02	0.03	24.92	ppb
Silver	109-1	0.05	0.02	0.03	0.03	33.66	ppb
Sodium	23-2	101947.43	102084.94	101658.52	101896.96	0.21	ppb
Strontium	86-1	851.11	882.41	870.91	868.14	1.82	ppb
Strontium	88-1	853.01	875.13	872.80	866.98	1.40	ppb
Sulfur	34-1	105299.84	105070.99	104514.83	104961.89	0.38	ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	0.15	0.19	0.19	0.18	11.94	ppb
Thallium	205-1	0.16	0.19	0.19	0.18	10.53	ppb
Tin	118-1	0.50	0.51	0.41	0.47	11.63	ppb
Titanium	47-1	2028.04	2101.90	2060.02	2063.32	1.80	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P7
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:10:47	DataFile Name :	019ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	128.37	ppb
Vanadium	51-2	0.17	0.18	0.16	0.17	5.33	ppb
Yttrium	89-1				94		%
Yttrium	89-2				94		%
Zinc	66-2	13.95	14.75	14.90	14.53	3.50	ppb
Zirconium	90-1	0.06	0.08	0.07	0.07	8.00	ppb
Zirconium	91-1	0.07	0.08	0.08	0.07	9.33	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P7
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:13:49	DataFile Name :	020ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	102331.15	100782.21	101771.04	101628.13	0.77	ppb
Antimony	121-1	21.53	21.85	22.00	21.79	1.09	ppb
Arsenic	75-2	21.92	21.86	21.30	21.69	1.58	ppb
Barium	135-1	21.23	21.53	22.04	21.60	1.90	ppb
Barium	137-1	21.45	21.74	21.83	21.67	0.92	ppb
Beryllium	9-1	20.55	21.44	21.41	21.14	2.38	ppb
Bismuth	209-1				103		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	27.20	28.45	28.17	27.94	2.36	ppb
Cadmium	106-1	17.25	17.33	18.00	17.53	2.37	ppb
Cadmium	111-1	19.84	20.04	20.47	20.11	1.60	ppb
Calcium	43-1	109935.52	110750.48	111647.48	110777.83	0.77	ppb
Calcium	44-1	109190.12	111030.77	111335.67	110518.85	1.05	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	43.33	42.68	42.67	42.90	0.88	ppb
Cobalt	59-2	21.97	21.68	21.69	21.78	0.77	ppb
Copper	63-2	27.12	26.95	26.97	27.01	0.36	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				103		%
Indium	115-1				96		%
Indium	115-2				92		%
Iron	56-2	115772.80	114420.50	113665.28	114619.52	0.93	ppb
Iron	57-2	115162.20	112556.38	113858.91	113859.16	1.14	ppb
Iron	54-2	116224.37	113785.58	114610.79	114873.58	1.08	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P7
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:13:49	DataFile Name :	020ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	25.44	25.81	25.59	25.61	0.72	ppb
Lead	207-1	24.11	24.32	24.37	24.26	0.56	ppb
Lead	208-1	24.43	24.67	24.53	24.54	0.49	ppb
Lithium	6-1				97		%
Magnesium	24-2	107850.86	106723.57	107919.17	107497.87	0.62	ppb
Manganese	55-2	29.23	28.79	28.99	29.01	0.75	ppb
Molybdenum	94-1	1749.43	1804.17	1793.30	1782.30	1.63	ppb
Molybdenum	95-1	2111.25	2162.44	2201.78	2158.49	2.10	ppb
Molybdenum	96-1	2091.27	2146.68	2153.26	2130.40	1.60	ppb
Molybdenum	97-1	2120.69	2181.03	2164.95	2155.55	1.45	ppb
Molybdenum	98-1	2133.13	2178.47	2165.00	2158.86	1.08	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	26.31	26.32	26.27	26.30	0.10	ppb
Phosphorus	31-2	113174.88	112504.38	111563.25	112414.17	0.72	ppb
Potassium	39-2	109109.84	106933.90	106865.35	107636.36	1.19	ppb
Rhodium	103-1				90		%
Rhodium	103-2				90		%
Scandium	45-1				92		%
Scandium	45-2				88		%
Selenium	82-1	19.22	20.14	19.78	19.72	2.36	ppb
Selenium	77-2	21.64	21.14	22.90	21.89	4.15	ppb
Selenium	78-2	20.07	20.67	19.11	19.95	3.95	ppb
Silicon	28-1	-67.61	-65.74	-65.22	-66.19		ppb
Silver	107-1	18.99	19.24	19.46	19.23	1.23	ppb
Silver	109-1	19.48	19.47	19.92	19.62	1.32	ppb
Sodium	23-2	109606.90	107659.77	109861.29	109042.65	1.10	ppb
Strontium	86-1	920.57	946.83	937.03	934.81	1.42	ppb
Strontium	88-1	913.52	938.70	943.65	931.95	1.73	ppb
Sulfur	34-1	113371.04	111591.14	110940.26	111967.48	1.12	ppb
Terbium	159-1				104		%
Terbium	159-2				102		%
Thallium	203-1	20.39	20.58	20.77	20.58	0.93	ppb
Thallium	205-1	20.32	20.47	20.44	20.41	0.39	ppb
Tin	118-1	0.19	0.19	0.19	0.19	1.63	ppb
Titanium	47-1	2155.19	2224.40	2231.65	2203.75	1.92	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P7
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:13:49	DataFile Name :	020ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	22.13	ppb
Vanadium	51-2	20.67	20.39	20.54	20.53	0.68	ppb
Yttrium	89-1				96		%
Yttrium	89-2				93		%
Zinc	66-2	33.11	32.98	32.92	33.00	0.28	ppb
Zirconium	90-1	0.03	0.03	0.04	0.03	18.65	ppb
Zirconium	91-1	0.03	0.03	0.04	0.03	11.11	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P7
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:16:53	DataFile Name :	021CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	52044.92	51290.40	51345.05	51560.12	0.82	ppb
Antimony	121-1	502.36	519.66	510.27	510.76	1.70	ppb
Arsenic	75-2	528.71	529.01	533.62	530.44	0.52	ppb
Barium	135-1	2534.30	2629.47	2557.14	2573.64	1.93	ppb
Barium	137-1	2534.57	2618.60	2580.70	2577.96	1.63	ppb
Beryllium	9-1	490.07	486.53	505.29	493.96	2.02	ppb
Bismuth	209-1				98		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	509.48	521.49	514.52	515.17	1.17	ppb
Cadmium	106-1	506.22	524.28	517.09	515.86	1.76	ppb
Cadmium	111-1	507.39	534.55	518.41	520.12	2.63	ppb
Calcium	43-1	255142.37	257085.25	259146.41	257124.68	0.78	ppb
Calcium	44-1	256206.87	257514.80	258309.91	257343.86	0.41	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	508.01	511.99	508.80	509.60	0.41	ppb
Cobalt	59-2	492.66	500.81	499.00	497.49	0.86	ppb
Copper	63-2	4847.30	4836.89	4876.33	4853.50	0.42	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				101		%
Indium	115-1				91		%
Indium	115-2				89		%
Iron	56-2	129982.76	129360.55	129980.37	129774.56	0.28	ppb
Iron	57-2	131036.90	130503.28	129545.94	130362.04	0.58	ppb
Iron	54-2	131086.76	130556.20	131598.05	131080.34	0.40	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P7
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:16:53	DataFile Name :	021CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2582.84	2610.28	2683.16	2625.43	1.97	ppb
Lead	207-1	2580.29	2628.23	2644.42	2617.65	1.27	ppb
Lead	208-1	2569.37	2613.95	2640.03	2607.78	1.37	ppb
Lithium	6-1				95		%
Magnesium	24-2	258942.97	254249.02	258604.41	257265.47	1.02	ppb
Manganese	55-2	4989.86	5003.26	4994.40	4995.84	0.14	ppb
Molybdenum	94-1	5097.56	5267.30	5136.45	5167.10	1.72	ppb
Molybdenum	95-1	5054.27	5231.36	5102.67	5129.43	1.78	ppb
Molybdenum	96-1	5080.72	5288.37	5207.31	5192.13	2.02	ppb
Molybdenum	97-1	5103.99	5250.05	5110.84	5154.96	1.60	ppb
Molybdenum	98-1	5005.38	5240.87	5103.46	5116.57	2.31	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	478.87	477.30	475.82	477.33	0.32	ppb
Phosphorus	31-2	10268.99	10129.03	10139.06	10179.03	0.77	ppb
Potassium	39-2	126832.57	126974.03	127712.11	127172.90	0.37	ppb
Rhodium	103-1				86		%
Rhodium	103-2				86		%
Scandium	45-1				89		%
Scandium	45-2				87		%
Selenium	82-1	503.93	519.19	515.35	512.82	1.55	ppb
Selenium	77-2	515.40	515.60	521.76	517.59	0.70	ppb
Selenium	78-2	521.76	520.06	519.71	520.51	0.21	ppb
Silicon	28-1	456.60	472.57	488.43	472.53	3.37	ppb
Silver	107-1	518.18	533.71	525.73	525.88	1.48	ppb
Silver	109-1	515.19	534.73	526.74	525.55	1.87	ppb
Sodium	23-2	252777.79	253623.57	254194.87	253532.08	0.28	ppb
Strontium	86-1	12711.91	13003.27	12793.96	12836.38	1.17	ppb
Strontium	88-1	12539.57	12984.48	12886.06	12803.37	1.83	ppb
Sulfur	34-1	9482.04	9638.72	9813.00	9644.59	1.72	ppb
Terbium	159-1				101		%
Terbium	159-2				100		%
Thallium	203-1	523.86	528.84	538.61	530.44	1.41	ppb
Thallium	205-1	524.77	522.77	538.37	528.64	1.61	ppb
Tin	118-1	506.48	522.79	520.98	516.75	1.73	ppb
Titanium	47-1	4992.39	5064.12	5088.52	5048.35	0.99	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P7
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:16:53	DataFile Name :	021CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	530.77	539.75	538.20	536.24	0.90	ppb
Vanadium	51-2	512.86	515.18	519.66	515.90	0.67	ppb
Yttrium	89-1				92		%
Yttrium	89-2				91		%
Zinc	66-2	4785.80	4789.56	4783.87	4786.41	0.06	ppb
Zirconium	90-1	504.43	519.40	508.50	510.78	1.52	ppb
Zirconium	91-1	501.31	529.66	518.84	516.60	2.77	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P7
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:19:45	DataFile Name :	022CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1.40	1.85	0.92	1.39	33.47	ppb
Antimony	121-1	0.23	0.19	0.16	0.19	17.97	ppb
Arsenic	75-2	0.01	0.01	0.00	0.01	60.48	ppb
Barium	135-1	0.31	0.23	0.15	0.23	33.36	ppb
Barium	137-1	0.35	0.22	0.15	0.24	42.06	ppb
Beryllium	9-1	0.13	0.10	0.09	0.10	17.28	ppb
Bismuth	209-1				107		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.11	0.05	0.09	0.08	33.09	ppb
Cadmium	106-1	-0.21	-0.03	0.30	0.02	1093.13	ppb
Cadmium	111-1	0.06	0.05	0.06	0.05	10.24	ppb
Calcium	43-1	34.29	20.96	14.40	23.22	43.66	ppb
Calcium	44-1	34.67	22.09	15.29	24.02	40.95	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.03	0.04	0.04	0.04	15.47	ppb
Cobalt	59-2	0.01	0.01	0.01	0.01	37.40	ppb
Copper	63-2	0.27	0.20	0.15	0.21	28.17	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				103		%
Indium	115-1				96		%
Indium	115-2				96		%
Iron	56-2	5.57	4.36	2.99	4.30	29.98	ppb
Iron	57-2	3.70	2.74	1.55	2.66	40.45	ppb
Iron	54-2	5.02	3.90	3.39	4.10	20.28	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P7
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:19:45	DataFile Name :	022CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.40	0.31	0.23	0.31	27.72	ppb
Lead	207-1	0.43	0.30	0.21	0.31	34.95	ppb
Lead	208-1	0.41	0.30	0.22	0.31	31.08	ppb
Lithium	6-1				99		%
Magnesium	24-2	8.20	5.57	3.04	5.60	46.06	ppb
Manganese	55-2	0.15	0.10	0.07	0.11	39.01	ppb
Molybdenum	94-1	0.83	0.58	0.41	0.61	34.35	ppb
Molybdenum	95-1	0.77	0.53	0.38	0.56	35.40	ppb
Molybdenum	96-1	0.78	0.55	0.36	0.56	37.21	ppb
Molybdenum	97-1	0.74	0.55	0.37	0.55	33.00	ppb
Molybdenum	98-1	0.77	0.55	0.38	0.56	34.89	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.01	0.02	0.01	0.01	12.83	ppb
Phosphorus	31-2	-14.49	-17.32	-15.15	-15.65		ppb
Potassium	39-2	0.65	0.64	-0.40	0.30	202.57	ppb
Rhodium	103-1				93		%
Rhodium	103-2				96		%
Scandium	45-1				90		%
Scandium	45-2				89		%
Selenium	82-1	0.18	0.04	-0.04	0.06	185.67	ppb
Selenium	77-2	-0.10	-0.10	0.21	0.01	3201.97	ppb
Selenium	78-2	-0.92	-0.55	-1.34	-0.94		ppb
Silicon	28-1	-80.12	-80.83	-82.05	-81.00		ppb
Silver	107-1	0.11	0.08	0.05	0.08	34.88	ppb
Silver	109-1	0.11	0.08	0.05	0.08	32.31	ppb
Sodium	23-2	37.45	34.58	31.97	34.67	7.90	ppb
Strontium	86-1	2.29	1.55	1.50	1.78	24.90	ppb
Strontium	88-1	1.70	1.04	0.74	1.16	42.20	ppb
Sulfur	34-1	-262.57	-205.47	-280.94	-249.66		ppb
Terbium	159-1				101		%
Terbium	159-2				102		%
Thallium	203-1	0.16	0.11	0.10	0.13	24.43	ppb
Thallium	205-1	0.17	0.13	0.11	0.14	21.07	ppb
Tin	118-1	0.09	0.06	0.05	0.07	25.04	ppb
Titanium	47-1	0.70	0.47	0.23	0.47	50.01	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P7
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:19:45	DataFile Name :	022CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.06	0.04	0.03	0.04	36.53	ppb
Vanadium	51-2	0.01	0.00	0.00	0.01	43.27	ppb
Yttrium	89-1				93		%
Yttrium	89-2				94		%
Zinc	66-2	0.39	0.29	0.20	0.29	32.65	ppb
Zirconium	90-1	0.10	0.07	0.05	0.07	33.73	ppb
Zirconium	91-1	0.09	0.08	0.05	0.07	31.86	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P7
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:23:01	DataFile Name :	023LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19.00	18.28	18.44	18.57	2.03	ppb
Antimony	121-1	2.07	2.03	2.04	2.05	1.19	ppb
Arsenic	75-2	1.01	1.09	1.11	1.07	4.83	ppb
Barium	135-1	9.72	9.49	9.75	9.65	1.46	ppb
Barium	137-1	9.57	9.76	9.63	9.65	0.99	ppb
Beryllium	9-1	1.00	0.94	1.07	1.01	6.25	ppb
Bismuth	209-1				107		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.15	0.95	0.95	1.01	11.61	ppb
Cadmium	106-1	0.42	0.66	0.68	0.59	24.71	ppb
Cadmium	111-1	1.06	0.99	1.03	1.03	3.31	ppb
Calcium	43-1	511.74	511.88	517.65	513.76	0.66	ppb
Calcium	44-1	520.45	524.06	518.05	520.86	0.58	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.07	1.99	1.95	2.00	2.99	ppb
Cobalt	59-2	1.05	1.04	1.02	1.04	1.58	ppb
Copper	63-2	1.99	2.00	2.03	2.01	1.13	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				104		%
Indium	115-1				98		%
Indium	115-2				97		%
Iron	56-2	53.13	52.95	52.13	52.74	1.01	ppb
Iron	57-2	56.09	51.73	53.60	53.81	4.06	ppb
Iron	54-2	54.47	53.37	55.07	54.30	1.58	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P7
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:23:01	DataFile Name :	023LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.02	0.97	1.00	1.00	2.49	ppb
Lead	207-1	1.02	1.00	0.98	1.00	1.76	ppb
Lead	208-1	1.00	0.98	0.98	0.99	1.16	ppb
Lithium	6-1				99		%
Magnesium	24-2	498.14	498.01	497.60	497.92	0.06	ppb
Manganese	55-2	0.96	1.03	1.01	1.00	3.70	ppb
Molybdenum	94-1	5.85	5.77	5.78	5.80	0.80	ppb
Molybdenum	95-1	4.80	4.81	4.82	4.81	0.25	ppb
Molybdenum	96-1	4.82	4.92	4.85	4.87	1.06	ppb
Molybdenum	97-1	4.72	5.01	4.80	4.84	3.08	ppb
Molybdenum	98-1	4.74	4.91	4.77	4.81	1.84	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.06	1.02	1.06	1.05	2.11	ppb
Phosphorus	31-2	18.79	10.19	13.87	14.28	30.20	ppb
Potassium	39-2	499.35	498.71	492.43	496.83	0.77	ppb
Rhodium	103-1				95		%
Rhodium	103-2				97		%
Scandium	45-1				91		%
Scandium	45-2				91		%
Selenium	82-1	5.11	4.90	5.17	5.06	2.87	ppb
Selenium	77-2	5.19	4.35	5.85	5.13	14.71	ppb
Selenium	78-2	4.58	4.84	5.84	5.09	13.07	ppb
Silicon	28-1	-75.84	-76.06	-75.82	-75.91		ppb
Silver	107-1	1.00	1.04	0.99	1.01	2.28	ppb
Silver	109-1	0.99	1.01	1.00	1.00	1.03	ppb
Sodium	23-2	493.48	492.85	488.28	491.54	0.58	ppb
Strontium	86-1	25.46	24.19	26.04	25.23	3.77	ppb
Strontium	88-1	24.55	24.64	24.78	24.66	0.46	ppb
Sulfur	34-1	-181.98	-166.74	-159.11	-169.28		ppb
Terbium	159-1				102		%
Terbium	159-2				102		%
Thallium	203-1	1.02	0.98	0.99	1.00	2.38	ppb
Thallium	205-1	1.01	0.97	0.96	0.98	2.29	ppb
Tin	118-1	4.95	5.11	5.08	5.04	1.72	ppb
Titanium	47-1	4.89	4.76	4.82	4.82	1.37	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P7
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:23:01	DataFile Name :	023LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.89	0.86	0.86	0.87	1.97	ppb
Vanadium	51-2	4.86	4.81	4.79	4.82	0.68	ppb
Yttrium	89-1				94		%
Yttrium	89-2				95		%
Zinc	66-2	5.10	5.07	5.08	5.08	0.29	ppb
Zirconium	90-1	0.96	0.98	0.99	0.98	1.31	ppb
Zirconium	91-1	1.02	0.94	0.94	0.96	4.79	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	PB165717BL	Instrumnet Name :	P7
Client Sample ID :	PB165717BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:26:17	DataFile Name :	024CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.05	0.14	-0.15	0.02	998.81	ppb
Antimony	121-1	0.03	0.02	0.03	0.02	7.75	ppb
Arsenic	75-2	0.00	0.01	-0.02	0.00		ppb
Barium	135-1	0.00	0.01	-0.02	0.00		ppb
Barium	137-1	0.00	-0.01	0.00	0.00		ppb
Beryllium	9-1	-0.03	0.00	-0.03	-0.02		ppb
Bismuth	209-1				108		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.00	-0.04	-0.05	-0.03		ppb
Cadmium	106-1	0.30	0.68	0.22	0.40	62.03	ppb
Cadmium	111-1	0.02	0.05	0.01	0.03	67.14	ppb
Calcium	43-1	-0.42	0.11	-1.30	-0.54		ppb
Calcium	44-1	-1.95	-1.29	-2.17	-1.81		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	0.01	0.00	0.00	993.29	ppb
Cobalt	59-2	-0.01	0.00	0.00	0.00		ppb
Copper	63-2	0.07	0.08	0.09	0.08	10.29	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				105		%
Indium	115-1				99		%
Indium	115-2				99		%
Iron	56-2	0.42	0.42	0.35	0.40	10.32	ppb
Iron	57-2	-1.66	-0.96	-1.50	-1.37		ppb
Iron	54-2	0.28	-0.45	0.20	0.01	4165.97	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	PB165717BL	Instrumnet Name :	P7
Client Sample ID :	PB165717BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:26:17	DataFile Name :	024CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.05	0.06	0.05	0.05	10.80	ppb
Lead	207-1	0.05	0.05	0.06	0.05	9.77	ppb
Lead	208-1	0.04	0.05	0.05	0.05	8.43	ppb
Lithium	6-1				100		%
Magnesium	24-2	0.84	0.14	0.47	0.48	72.13	ppb
Manganese	55-2	-0.01	0.01	-0.03	-0.01		ppb
Molybdenum	94-1	0.05	0.03	0.04	0.04	28.78	ppb
Molybdenum	95-1	0.01	0.01	0.02	0.01	68.79	ppb
Molybdenum	96-1	0.03	0.02	0.03	0.03	24.81	ppb
Molybdenum	97-1	0.00	0.02	0.00	0.00	229.22	ppb
Molybdenum	98-1	0.02	0.01	0.02	0.02	15.25	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.01	0.00	0.01	0.00	204.17	ppb
Phosphorus	31-2	-14.77	-15.43	-13.21	-14.47		ppb
Potassium	39-2	-1.60	-1.61	-2.62	-1.94		ppb
Rhodium	103-1				96		%
Rhodium	103-2				99		%
Scandium	45-1				93		%
Scandium	45-2				92		%
Selenium	82-1	-0.11	0.17	-0.23	-0.06		ppb
Selenium	77-2	-0.10	-0.10	-0.10	-0.10		ppb
Selenium	78-2	-0.61	-1.30	-0.37	-0.76		ppb
Silicon	28-1	-83.57	-81.96	-83.76	-83.10		ppb
Silver	107-1	0.01	0.01	0.02	0.01	18.59	ppb
Silver	109-1	0.01	0.01	0.00	0.01	38.18	ppb
Sodium	23-2	16.17	15.71	15.29	15.72	2.78	ppb
Strontium	86-1	0.27	0.11	0.34	0.24	50.09	ppb
Strontium	88-1	-0.02	-0.01	0.08	0.02	300.53	ppb
Sulfur	34-1	-190.23	-73.42	-104.02	-122.56		ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	0.04	0.04	0.05	0.04	5.55	ppb
Thallium	205-1	0.05	0.05	0.05	0.05	3.36	ppb
Tin	118-1	0.01	0.00	0.00	0.00	201.82	ppb
Titanium	47-1	0.01	0.03	-0.01	0.01	273.20	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	PB165717BL	Instrumnet Name :	P7
Client Sample ID :	PB165717BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:26:17	DataFile Name :	024CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	53.73	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	190.55	ppb
Yttrium	89-1				96		%
Yttrium	89-2				96		%
Zinc	66-2	0.04	0.03	-0.01	0.02	139.09	ppb
Zirconium	90-1	0.00	0.01	0.00	0.00	93.82	ppb
Zirconium	91-1	0.00	0.01	0.00	0.01	106.91	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	PB165717BS	Instrumnet Name :	P7
Client Sample ID :	PB165717BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:35:30	DataFile Name :	027LCS6.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10034.55	9817.61	9851.18	9901.11	1.18	ppb
Antimony	121-1	517.06	526.09	526.02	523.06	0.99	ppb
Arsenic	75-2	516.67	513.48	511.56	513.90	0.50	ppb
Barium	135-1	2568.96	2625.95	2577.77	2590.89	1.18	ppb
Barium	137-1	2567.12	2623.12	2583.90	2591.38	1.11	ppb
Beryllium	9-1	487.27	500.35	504.37	497.33	1.80	ppb
Bismuth	209-1				104		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	522.80	532.03	529.94	528.26	0.92	ppb
Cadmium	106-1	525.39	535.67	527.08	529.38	1.04	ppb
Cadmium	111-1	521.06	529.21	525.88	525.38	0.78	ppb
Calcium	43-1	51849.67	52638.35	52925.03	52471.02	1.06	ppb
Calcium	44-1	51570.95	52436.84	51516.48	51841.42	1.00	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	518.00	512.98	509.87	513.62	0.80	ppb
Cobalt	59-2	505.26	512.05	512.97	510.09	0.83	ppb
Copper	63-2	5172.63	5138.56	5119.10	5143.43	0.53	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				103		%
Indium	115-1				93		%
Indium	115-2				91		%
Iron	56-2	26201.72	26251.07	26194.04	26215.61	0.12	ppb
Iron	57-2	26257.56	26191.59	26127.25	26192.13	0.25	ppb
Iron	54-2	26912.96	26306.79	26559.33	26593.03	1.14	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	PB165717BS	Instrumnet Name :	P7
Client Sample ID :	PB165717BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:35:30	DataFile Name :	027LCS6.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2581.62	2582.12	2542.06	2568.60	0.89	ppb
Lead	207-1	2559.50	2566.97	2560.82	2562.43	0.16	ppb
Lead	208-1	2550.50	2567.18	2540.04	2552.58	0.54	ppb
Lithium	6-1				100		%
Magnesium	24-2	50223.65	49836.65	49768.56	49942.95	0.49	ppb
Manganese	55-2	5101.92	5021.93	5060.55	5061.47	0.79	ppb
Molybdenum	94-1	5207.39	5248.26	5145.88	5200.51	0.99	ppb
Molybdenum	95-1	5110.90	5251.97	5133.33	5165.40	1.47	ppb
Molybdenum	96-1	5190.76	5246.34	5169.43	5202.18	0.76	ppb
Molybdenum	97-1	5127.61	5207.90	5112.46	5149.32	1.00	ppb
Molybdenum	98-1	5152.69	5174.04	5105.16	5143.96	0.69	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	500.29	498.18	496.98	498.48	0.34	ppb
Phosphorus	31-2	10182.24	10148.12	10081.38	10137.25	0.51	ppb
Potassium	39-2	25303.49	24830.86	24895.26	25009.87	1.02	ppb
Rhodium	103-1				89		%
Rhodium	103-2				91		%
Scandium	45-1				89		%
Scandium	45-2				87		%
Selenium	82-1	523.05	531.44	522.10	525.53	0.98	ppb
Selenium	77-2	529.65	516.37	533.01	526.35	1.67	ppb
Selenium	78-2	512.33	518.47	509.58	513.46	0.89	ppb
Silicon	28-1	480.26	496.01	514.61	496.96	3.46	ppb
Silver	107-1	530.40	545.28	535.00	536.90	1.42	ppb
Silver	109-1	529.62	544.91	539.06	537.86	1.43	ppb
Sodium	23-2	51029.67	50548.51	50397.37	50658.51	0.65	ppb
Strontium	86-1	12799.70	13029.99	12842.20	12890.63	0.95	ppb
Strontium	88-1	12807.88	13044.84	12872.34	12908.35	0.95	ppb
Sulfur	34-1	9992.78	10120.17	10067.27	10060.07	0.64	ppb
Terbium	159-1				100		%
Terbium	159-2				101		%
Thallium	203-1	520.58	523.19	514.33	519.37	0.88	ppb
Thallium	205-1	511.66	515.15	509.89	512.23	0.52	ppb
Tin	118-1	515.75	527.58	525.66	523.00	1.21	ppb
Titanium	47-1	5045.13	5025.63	5088.59	5053.12	0.64	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	PB165717BS	Instrumnet Name :	P7
Client Sample ID :	PB165717BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:35:30	DataFile Name :	027LCS6.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	500.88	501.37	502.27	501.51	0.14	ppb
Vanadium	51-2	508.78	505.03	506.88	506.90	0.37	ppb
Yttrium	89-1				91		%
Yttrium	89-2				91		%
Zinc	66-2	5109.57	5094.14	5187.27	5130.33	0.97	ppb
Zirconium	90-1	504.55	516.72	513.37	511.55	1.23	ppb
Zirconium	91-1	510.26	519.34	517.33	515.64	0.92	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:39:46	DataFile Name :	028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	102.00	98.67	103.89	101.52	2.61	ppb
Antimony	121-1	0.12	0.10	0.09	0.10	12.98	ppb
Arsenic	75-2	0.09	0.09	0.09	0.09	4.86	ppb
Barium	135-1	4.06	3.75	3.89	3.90	3.92	ppb
Barium	137-1	3.93	3.83	4.01	3.93	2.34	ppb
Beryllium	9-1	0.06	0.06	0.06	0.06	3.81	ppb
Bismuth	209-1				104		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.10	0.07	0.09	0.09	20.92	ppb
Cadmium	106-1	-0.68	-1.14	-0.58	-0.80		ppb
Cadmium	111-1	-0.03	-0.06	-0.04	-0.04		ppb
Calcium	43-1	59.73	59.18	61.83	60.25	2.32	ppb
Calcium	44-1	58.53	58.41	59.08	58.67	0.62	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.77	0.77	0.76	0.77	1.17	ppb
Cobalt	59-2	0.09	0.08	0.08	0.08	6.61	ppb
Copper	63-2	0.46	0.45	0.43	0.45	3.78	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				98		%
Holmium	165-2				103		%
Indium	115-1				93		%
Indium	115-2				95		%
Iron	56-2	195.19	201.66	196.57	197.81	1.72	ppb
Iron	57-2	198.75	192.87	183.83	191.82	3.92	ppb
Iron	54-2	205.40	197.17	195.70	199.43	2.62	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:39:46	DataFile Name :	028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.55	0.54	0.49	0.53	6.70	ppb
Lead	207-1	0.51	0.50	0.47	0.49	4.51	ppb
Lead	208-1	0.53	0.52	0.48	0.51	5.38	ppb
Lithium	6-1				98		%
Magnesium	24-2	6.21	5.62	6.28	6.04	6.05	ppb
Manganese	55-2	1.64	1.66	1.61	1.63	1.39	ppb
Molybdenum	94-1	1.26	1.21	1.15	1.20	4.42	ppb
Molybdenum	95-1	0.25	0.18	0.16	0.20	24.05	ppb
Molybdenum	96-1	0.35	0.33	0.27	0.31	12.89	ppb
Molybdenum	97-1	0.23	0.22	0.18	0.21	12.87	ppb
Molybdenum	98-1	0.28	0.18	0.19	0.21	24.78	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.16	0.13	0.11	0.13	17.88	ppb
Phosphorus	31-2	-10.66	-10.73	-8.48	-9.96		ppb
Potassium	39-2	27.50	26.62	27.24	27.12	1.66	ppb
Rhodium	103-1				91		%
Rhodium	103-2				95		%
Scandium	45-1				87		%
Scandium	45-2				87		%
Selenium	82-1	-0.04	0.44	0.05	0.15	171.79	ppb
Selenium	77-2	0.36	0.21	0.21	0.26	32.29	ppb
Selenium	78-2	-0.99	-0.53	-1.29	-0.94		ppb
Silicon	28-1	45.04	59.27	31.93	45.41	30.11	ppb
Silver	107-1	0.03	0.02	0.03	0.03	15.56	ppb
Silver	109-1	0.03	0.02	0.02	0.02	32.66	ppb
Sodium	23-2	22.45	22.14	21.25	21.94	2.82	ppb
Strontium	86-1	7.32	6.80	7.49	7.20	4.98	ppb
Strontium	88-1	6.98	6.70	7.26	6.98	3.97	ppb
Sulfur	34-1	-267.84	-257.56	-272.06	-265.82		ppb
Terbium	159-1				99		%
Terbium	159-2				101		%
Thallium	203-1	0.05	0.04	0.03	0.04	26.98	ppb
Thallium	205-1	0.06	0.05	0.04	0.05	21.30	ppb
Tin	118-1	0.49	0.48	0.47	0.48	2.24	ppb
Titanium	47-1	3.08	4.80	3.12	3.67	26.78	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:39:46	DataFile Name :	028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.06	0.06	0.05	0.06	10.13	ppb
Vanadium	51-2	0.81	0.80	0.83	0.82	2.02	ppb
Yttrium	89-1				91		%
Yttrium	89-2				93		%
Zinc	66-2	0.65	0.55	0.68	0.63	10.06	ppb
Zirconium	90-1	0.59	0.57	0.57	0.58	1.20	ppb
Zirconium	91-1	0.58	0.58	0.76	0.64	16.33	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01DUPDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:43:02	DataFile Name :	029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	100.61	110.39	105.40	105.47	4.64	ppb
Antimony	121-1	0.02	0.03	0.02	0.02	10.39	ppb
Arsenic	75-2	0.05	0.06	0.08	0.07	22.82	ppb
Barium	135-1	3.93	4.07	3.97	3.99	1.85	ppb
Barium	137-1	4.02	4.03	4.05	4.04	0.35	ppb
Beryllium	9-1	0.00	0.02	0.00	0.01	228.45	ppb
Bismuth	209-1				105		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.03	-0.01	-0.01	0.00	3068.60	ppb
Cadmium	106-1	-0.30	-0.34	-0.16	-0.27		ppb
Cadmium	111-1	-0.04	-0.04	-0.02	-0.03		ppb
Calcium	43-1	51.54	53.57	49.82	51.64	3.64	ppb
Calcium	44-1	49.19	50.58	49.30	49.69	1.55	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.74	0.74	0.77	0.75	2.51	ppb
Cobalt	59-2	0.05	0.05	0.05	0.05	5.77	ppb
Copper	63-2	0.20	0.27	0.25	0.24	15.16	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				99		%
Holmium	165-2				103		%
Indium	115-1				94		%
Indium	115-2				96		%
Iron	56-2	192.10	194.51	193.18	193.26	0.63	ppb
Iron	57-2	190.06	190.25	193.69	191.33	1.07	ppb
Iron	54-2	194.00	196.53	196.16	195.56	0.70	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01DUPDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:43:02	DataFile Name :	029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.40	0.40	0.40	0.40	0.41	ppb
Lead	207-1	0.36	0.41	0.35	0.37	8.10	ppb
Lead	208-1	0.38	0.39	0.37	0.38	2.21	ppb
Lithium	6-1				98		%
Magnesium	24-2	-2.45	-2.53	-2.57	-2.51		ppb
Manganese	55-2	1.39	1.38	1.38	1.38	0.41	ppb
Molybdenum	94-1	0.94	0.87	0.94	0.92	4.38	ppb
Molybdenum	95-1	-0.08	-0.08	-0.08	-0.08		ppb
Molybdenum	96-1	0.02	0.03	0.03	0.03	20.19	ppb
Molybdenum	97-1	-0.09	-0.10	-0.10	-0.10		ppb
Molybdenum	98-1	-0.08	-0.06	-0.08	-0.07		ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.06	0.07	0.10	0.08	23.60	ppb
Phosphorus	31-2	-9.43	-8.77	-9.07	-9.09		ppb
Potassium	39-2	18.75	19.66	20.99	19.80	5.70	ppb
Rhodium	103-1				92		%
Rhodium	103-2				97		%
Scandium	45-1				89		%
Scandium	45-2				89		%
Selenium	82-1	-0.04	-0.03	-0.06	-0.04		ppb
Selenium	77-2	-0.10	-0.10	0.06	-0.04		ppb
Selenium	78-2	-1.27	-1.01	-0.86	-1.05		ppb
Silicon	28-1	51.54	79.06	72.78	67.80	21.28	ppb
Silver	107-1	-0.01	-0.01	-0.01	-0.01		ppb
Silver	109-1	-0.01	-0.01	-0.01	-0.01		ppb
Sodium	23-2	10.35	10.59	11.19	10.71	3.99	ppb
Strontium	86-1	7.99	6.58	6.45	7.01	12.20	ppb
Strontium	88-1	6.46	6.51	6.39	6.45	0.93	ppb
Sulfur	34-1	-308.86	-334.76	-307.83	-317.15		ppb
Terbium	159-1				99		%
Terbium	159-2				102		%
Thallium	203-1	0.00	0.00	0.00	0.00		ppb
Thallium	205-1	0.01	0.00	0.00	0.00	76.65	ppb
Tin	118-1	0.48	0.47	0.49	0.48	2.31	ppb
Titanium	47-1	3.37	2.75	3.44	3.19	11.89	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01DUPDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:43:02	DataFile Name :	029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.03	0.05	0.03	0.04	29.69	ppb
Vanadium	51-2	0.83	0.79	0.85	0.82	3.79	ppb
Yttrium	89-1				92		%
Yttrium	89-2				93		%
Zinc	66-2	0.27	0.32	0.23	0.27	16.31	ppb
Zirconium	90-1	0.56	0.59	0.63	0.60	6.17	ppb
Zirconium	91-1	0.58	0.57	0.58	0.58	1.16	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01LDLX25	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	25
Date & Time Acquired :	2024-12-19 16:46:16	DataFile Name :	030SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	16.32	15.95	16.77	16.35	2.51	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	9493.26	ppb
Arsenic	75-2	0.01	-0.02	-0.02	-0.01		ppb
Barium	135-1	0.71	0.74	0.66	0.71	5.76	ppb
Barium	137-1	0.68	0.72	0.68	0.69	3.18	ppb
Beryllium	9-1	-0.03	-0.04	-0.03	-0.03		ppb
Bismuth	209-1				107		%
Bismuth	209-2				108		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.08	-0.04	-0.03	-0.05		ppb
Cadmium	106-1	0.05	-0.33	0.05	-0.08		ppb
Cadmium	111-1	-0.01	-0.04	-0.02	-0.02		ppb
Calcium	43-1	3.03	2.81	2.07	2.64	18.94	ppb
Calcium	44-1	1.18	1.10	1.64	1.31	22.04	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.11	0.15	0.11	0.13	17.42	ppb
Cobalt	59-2	-0.01	-0.01	-0.01	-0.01		ppb
Copper	63-2	-0.10	-0.11	-0.09	-0.10		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				105		%
Indium	115-1				97		%
Indium	115-2				98		%
Iron	56-2	33.89	34.17	33.88	33.98	0.48	ppb
Iron	57-2	34.61	31.89	33.52	33.34	4.12	ppb
Iron	54-2	33.94	33.55	33.96	33.82	0.68	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01LDLX25	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	25
Date & Time Acquired :	2024-12-19 16:46:16	DataFile Name :	030SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.01	0.02	0.02	0.01	36.22	ppb
Lead	207-1	0.01	-0.01	0.00	0.00	338.52	ppb
Lead	208-1	0.01	0.00	0.01	0.01	64.60	ppb
Lithium	6-1				99		%
Magnesium	24-2	-8.39	-8.42	-8.00	-8.27		ppb
Manganese	55-2	0.13	0.15	0.11	0.13	17.50	ppb
Molybdenum	94-1	0.06	0.03	0.05	0.05	36.44	ppb
Molybdenum	95-1	-0.17	-0.17	-0.17	-0.17		ppb
Molybdenum	96-1	-0.15	-0.16	-0.15	-0.15		ppb
Molybdenum	97-1	-0.17	-0.18	-0.18	-0.18		ppb
Molybdenum	98-1	-0.16	-0.17	-0.16	-0.17		ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.01	-0.01	0.00	-0.01		ppb
Phosphorus	31-2	-16.01	-18.37	-17.07	-17.15		ppb
Potassium	39-2	-1.54	-2.72	-0.46	-1.57		ppb
Rhodium	103-1				95		%
Rhodium	103-2				98		%
Scandium	45-1				91		%
Scandium	45-2				91		%
Selenium	82-1	0.17	-0.39	0.12	-0.04		ppb
Selenium	77-2	-0.10	-0.10	0.05	-0.05		ppb
Selenium	78-2	-0.16	-1.21	-0.89	-0.76		ppb
Silicon	28-1	-63.61	-22.80	-65.14	-50.52		ppb
Silver	107-1	-0.02	-0.02	-0.02	-0.02		ppb
Silver	109-1	-0.02	-0.02	-0.02	-0.02		ppb
Sodium	23-2	1.28	1.06	1.49	1.28	16.69	ppb
Strontium	86-1	1.01	1.13	1.28	1.14	11.78	ppb
Strontium	88-1	0.98	0.84	0.92	0.91	7.60	ppb
Sulfur	34-1	-227.90	-212.01	-194.18	-211.36		ppb
Terbium	159-1				101		%
Terbium	159-2				103		%
Thallium	203-1	-0.01	-0.01	-0.01	-0.01		ppb
Thallium	205-1	-0.01	0.00	-0.01	-0.01		ppb
Tin	118-1	0.08	0.06	0.06	0.07	14.78	ppb
Titanium	47-1	0.39	0.35	0.38	0.37	5.77	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01LDLX25	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	25
Date & Time Acquired :	2024-12-19 16:46:16	DataFile Name :	030SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	-0.01	-0.01	-0.01	-0.01		ppb
Vanadium	51-2	0.14	0.14	0.17	0.15	9.44	ppb
Yttrium	89-1				93		%
Yttrium	89-2				95		%
Zinc	66-2	0.02	0.08	0.03	0.04	76.62	ppb
Zirconium	90-1	0.09	0.10	0.10	0.09	3.26	ppb
Zirconium	91-1	0.09	0.10	0.11	0.10	8.19	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01MSDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:49:34	DataFile Name :	031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2098.33	2119.25	2151.23	2122.94	1.26	ppb
Antimony	121-1	129.63	130.40	129.01	129.68	0.54	ppb
Arsenic	75-2	127.62	128.86	128.86	128.44	0.56	ppb
Barium	135-1	583.53	575.33	572.22	577.03	1.01	ppb
Barium	137-1	583.19	576.54	578.01	579.25	0.60	ppb
Beryllium	9-1	125.25	124.43	124.46	124.71	0.38	ppb
Bismuth	209-1				107		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	135.43	135.71	134.87	135.34	0.32	ppb
Cadmium	106-1	138.87	135.65	137.10	137.21	1.18	ppb
Cadmium	111-1	135.93	134.85	134.44	135.07	0.57	ppb
Calcium	43-1	10647.53	10897.19	10904.13	10816.28	1.35	ppb
Calcium	44-1	10192.79	10448.10	10397.19	10346.03	1.31	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	122.17	122.72	122.96	122.62	0.33	ppb
Cobalt	59-2	125.42	125.76	126.76	125.98	0.55	ppb
Copper	63-2	1005.24	1006.76	1008.17	1006.72	0.15	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				105		%
Indium	115-1				97		%
Indium	115-2				96		%
Iron	56-2	5934.59	5967.11	6058.62	5986.77	1.07	ppb
Iron	57-2	6065.34	6068.85	6106.74	6080.31	0.38	ppb
Iron	54-2	6059.20	5963.68	6095.15	6039.34	1.13	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01MSDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:49:34	DataFile Name :	031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	476.21	469.33	480.39	475.31	1.17	ppb
Lead	207-1	479.27	474.68	479.72	477.89	0.58	ppb
Lead	208-1	474.09	468.74	474.83	472.55	0.70	ppb
Lithium	6-1				101		%
Magnesium	24-2	9828.42	9762.30	9848.46	9813.06	0.46	ppb
Manganese	55-2	916.22	909.48	914.73	913.48	0.39	ppb
Molybdenum	94-1	790.18	778.25	789.45	785.96	0.85	ppb
Molybdenum	95-1	687.21	673.39	676.73	679.11	1.06	ppb
Molybdenum	96-1	698.38	689.10	693.17	693.55	0.67	ppb
Molybdenum	97-1	683.35	671.26	673.98	676.20	0.94	ppb
Molybdenum	98-1	687.19	667.45	675.54	676.73	1.47	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	123.64	124.36	124.91	124.31	0.51	ppb
Phosphorus	31-2	-11.83	-9.88	-9.94	-10.55		ppb
Potassium	39-2	5574.57	5520.24	5499.47	5531.42	0.70	ppb
Rhodium	103-1				95		%
Rhodium	103-2				97		%
Scandium	45-1				93		%
Scandium	45-2				91		%
Selenium	82-1	129.29	130.03	129.39	129.57	0.31	ppb
Selenium	77-2	133.64	127.80	129.28	130.24	2.33	ppb
Selenium	78-2	127.56	129.82	126.64	128.01	1.28	ppb
Silicon	28-1	140.35	209.61	157.16	169.04	21.37	ppb
Silver	107-1	2.67	2.69	2.66	2.67	0.58	ppb
Silver	109-1	0.14	0.12	0.13	0.13	6.15	ppb
Sodium	23-2	9868.23	9775.85	9902.20	9848.76	0.66	ppb
Strontium	86-1	3132.13	3074.38	3096.08	3100.86	0.94	ppb
Strontium	88-1	3153.94	3122.80	3208.35	3161.70	1.37	ppb
Sulfur	34-1	-282.48	-295.94	-256.76	-278.39		ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	116.15	117.66	117.61	117.14	0.73	ppb
Thallium	205-1	122.48	122.55	124.04	123.02	0.72	ppb
Tin	118-1	114.50	113.84	113.74	114.03	0.36	ppb
Titanium	47-1	430.05	434.90	431.50	432.15	0.58	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01MSDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:49:34	DataFile Name :	031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	120.18	121.69	120.82	120.90	0.63	ppb
Vanadium	51-2	124.78	124.31	124.36	124.48	0.21	ppb
Yttrium	89-1				95		%
Yttrium	89-2				96		%
Zinc	66-2	959.04	964.78	971.18	965.00	0.63	ppb
Zirconium	90-1	125.73	126.09	125.84	125.89	0.14	ppb
Zirconium	91-1	125.46	123.31	124.47	124.41	0.86	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01MSDDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:52:27	DataFile Name :	032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2171.47	2162.07	2140.75	2158.10	0.73	ppb
Antimony	121-1	126.74	127.53	128.01	127.42	0.50	ppb
Arsenic	75-2	129.69	130.64	130.68	130.34	0.43	ppb
Barium	135-1	575.62	580.18	571.66	575.82	0.74	ppb
Barium	137-1	576.36	574.60	574.89	575.28	0.16	ppb
Beryllium	9-1	122.55	128.24	125.59	125.46	2.27	ppb
Bismuth	209-1				107		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	133.99	139.67	136.99	136.88	2.08	ppb
Cadmium	106-1	135.94	140.54	138.54	138.34	1.67	ppb
Cadmium	111-1	133.13	136.81	134.17	134.70	1.41	ppb
Calcium	43-1	10558.80	10821.88	10922.85	10767.84	1.75	ppb
Calcium	44-1	10031.98	10365.12	10387.54	10261.55	1.94	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	125.09	124.36	123.29	124.25	0.73	ppb
Cobalt	59-2	128.35	126.99	126.45	127.27	0.77	ppb
Copper	63-2	1022.92	1013.66	1011.09	1015.89	0.61	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				105		%
Indium	115-1				96		%
Indium	115-2				95		%
Iron	56-2	6062.89	6036.14	5983.95	6027.66	0.67	ppb
Iron	57-2	6163.88	6184.92	6063.58	6137.46	1.06	ppb
Iron	54-2	6121.73	6200.42	6164.91	6162.36	0.64	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01MSDDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:52:27	DataFile Name :	032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	474.28	482.22	478.22	478.24	0.83	ppb
Lead	207-1	470.64	475.73	486.35	477.57	1.68	ppb
Lead	208-1	472.12	476.15	477.23	475.17	0.57	ppb
Lithium	6-1				102		%
Magnesium	24-2	9918.66	10080.59	9875.00	9958.08	1.09	ppb
Manganese	55-2	924.64	911.50	919.12	918.42	0.72	ppb
Molybdenum	94-1	781.35	789.09	784.52	784.99	0.50	ppb
Molybdenum	95-1	678.29	680.42	676.73	678.48	0.27	ppb
Molybdenum	96-1	681.23	684.66	684.99	683.63	0.30	ppb
Molybdenum	97-1	672.91	680.53	683.22	678.89	0.79	ppb
Molybdenum	98-1	669.52	671.84	676.51	672.62	0.53	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	127.31	128.09	124.85	126.75	1.33	ppb
Phosphorus	31-2	-10.38	-13.49	-8.91	-10.93		ppb
Potassium	39-2	5648.07	5652.34	5501.58	5600.66	1.53	ppb
Rhodium	103-1				94		%
Rhodium	103-2				96		%
Scandium	45-1				92		%
Scandium	45-2				89		%
Selenium	82-1	127.74	128.13	131.14	129.01	1.44	ppb
Selenium	77-2	134.49	135.15	132.25	133.96	1.14	ppb
Selenium	78-2	134.43	132.46	131.68	132.86	1.06	ppb
Silicon	28-1	133.55	130.85	145.18	136.53	5.58	ppb
Silver	107-1	2.67	2.70	2.70	2.69	0.62	ppb
Silver	109-1	0.12	0.14	0.12	0.13	6.77	ppb
Sodium	23-2	10069.13	10021.77	9849.25	9980.05	1.16	ppb
Strontium	86-1	3072.29	3071.08	3110.46	3084.61	0.73	ppb
Strontium	88-1	3151.75	3126.19	3172.63	3150.19	0.74	ppb
Sulfur	34-1	-184.52	-151.39	-189.28	-175.06		ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	115.63	115.47	117.92	116.34	1.18	ppb
Thallium	205-1	123.16	126.47	124.63	124.75	1.33	ppb
Tin	118-1	112.82	114.54	113.08	113.48	0.82	ppb
Titanium	47-1	420.85	432.61	437.28	430.25	1.97	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01MSDDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:52:27	DataFile Name :	032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	120.47	121.05	123.12	121.55	1.15	ppb
Vanadium	51-2	125.65	126.64	124.15	125.48	1.00	ppb
Yttrium	89-1				94		%
Yttrium	89-2				94		%
Zinc	66-2	979.72	981.99	965.53	975.74	0.91	ppb
Zirconium	90-1	122.74	125.20	125.85	124.60	1.32	ppb
Zirconium	91-1	123.31	123.37	125.54	124.07	1.02	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01ADLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:55:21	DataFile Name :	033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2159.75	2142.08	2160.12	2153.98	0.48	ppb
Antimony	121-1	127.34	128.26	128.62	128.07	0.51	ppb
Arsenic	75-2	131.66	132.89	131.30	131.95	0.63	ppb
Barium	135-1	580.61	581.48	579.96	580.68	0.13	ppb
Barium	137-1	581.21	578.62	583.56	581.13	0.43	ppb
Beryllium	9-1	124.65	127.81	125.35	125.94	1.32	ppb
Bismuth	209-1				106		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	133.43	133.47	132.83	133.24	0.27	ppb
Cadmium	106-1	137.45	138.35	136.27	137.36	0.76	ppb
Cadmium	111-1	133.66	135.80	134.50	134.65	0.80	ppb
Calcium	43-1	10895.19	10905.76	10742.12	10847.69	0.84	ppb
Calcium	44-1	10348.52	10395.26	10307.81	10350.53	0.42	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	124.62	123.27	124.25	124.05	0.56	ppb
Cobalt	59-2	127.08	127.12	128.40	127.53	0.59	ppb
Copper	63-2	1018.34	1010.51	1032.80	1020.55	1.11	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				103		%
Indium	115-1				95		%
Indium	115-2				95		%
Iron	56-2	6043.82	6026.92	6101.57	6057.43	0.65	ppb
Iron	57-2	6134.50	6101.00	6154.30	6129.93	0.44	ppb
Iron	54-2	6062.01	6127.85	6116.10	6101.98	0.58	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01ADLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:55:21	DataFile Name :	033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	475.67	484.14	483.48	481.10	0.98	ppb
Lead	207-1	477.73	479.78	481.88	479.79	0.43	ppb
Lead	208-1	474.57	478.65	479.06	477.43	0.52	ppb
Lithium	6-1				102		%
Magnesium	24-2	9914.66	10060.21	9958.78	9977.88	0.75	ppb
Manganese	55-2	925.62	918.88	925.03	923.18	0.40	ppb
Molybdenum	94-1	770.68	794.86	793.47	786.34	1.73	ppb
Molybdenum	95-1	667.14	695.44	686.64	683.07	2.12	ppb
Molybdenum	96-1	682.74	695.67	696.18	691.53	1.10	ppb
Molybdenum	97-1	671.45	691.60	669.81	677.62	1.79	ppb
Molybdenum	98-1	661.56	681.76	672.52	671.95	1.51	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	125.73	126.05	126.27	126.02	0.21	ppb
Phosphorus	31-2	-15.25	-12.52	-6.28	-11.35		ppb
Potassium	39-2	5660.25	5583.67	5635.73	5626.55	0.69	ppb
Rhodium	103-1				94		%
Rhodium	103-2				95		%
Scandium	45-1				91		%
Scandium	45-2				89		%
Selenium	82-1	129.36	130.69	130.26	130.10	0.52	ppb
Selenium	77-2	140.89	128.34	130.77	133.34	4.99	ppb
Selenium	78-2	132.65	135.11	136.08	134.61	1.31	ppb
Silicon	28-1	145.04	158.08	136.77	146.63	7.33	ppb
Silver	107-1	2.66	2.66	2.65	2.66	0.12	ppb
Silver	109-1	0.12	0.13	0.12	0.12	4.48	ppb
Sodium	23-2	10092.41	10128.02	10056.38	10092.27	0.35	ppb
Strontium	86-1	3051.04	3170.23	3128.79	3116.69	1.94	ppb
Strontium	88-1	3069.88	3199.88	3193.44	3154.40	2.32	ppb
Sulfur	34-1	-126.32	-191.63	-227.83	-181.93		ppb
Terbium	159-1				102		%
Terbium	159-2				102		%
Thallium	203-1	116.17	118.43	119.31	117.97	1.37	ppb
Thallium	205-1	121.90	124.96	126.79	124.55	1.98	ppb
Tin	118-1	112.51	114.41	113.31	113.41	0.84	ppb
Titanium	47-1	434.10	437.22	429.34	433.55	0.92	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01ADLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:55:21	DataFile Name :	033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	120.12	121.52	121.63	121.09	0.70	ppb
Vanadium	51-2	126.42	126.24	125.84	126.16	0.24	ppb
Yttrium	89-1				94		%
Yttrium	89-2				92		%
Zinc	66-2	982.21	977.88	979.99	980.03	0.22	ppb
Zirconium	90-1	124.52	129.16	124.95	126.21	2.03	ppb
Zirconium	91-1	122.59	126.29	125.79	124.89	1.61	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P7
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:01:10	DataFile Name :	035CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	51923.74	51541.48	51419.36	51628.19	0.51	ppb
Antimony	121-1	513.17	511.73	510.86	511.92	0.23	ppb
Arsenic	75-2	502.09	504.16	499.66	501.97	0.45	ppb
Barium	135-1	2572.25	2588.48	2551.54	2570.76	0.72	ppb
Barium	137-1	2574.34	2605.99	2560.45	2580.26	0.90	ppb
Beryllium	9-1	493.18	490.70	487.47	490.45	0.58	ppb
Bismuth	209-1				98		%
Bismuth	209-2				95		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	499.10	505.24	502.30	502.21	0.61	ppb
Cadmium	106-1	501.63	504.97	500.09	502.23	0.50	ppb
Cadmium	111-1	485.87	498.35	495.30	493.17	1.32	ppb
Calcium	43-1	256939.44	256275.90	260765.19	257993.51	0.94	ppb
Calcium	44-1	258183.94	256969.66	259453.12	258202.24	0.48	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	510.50	510.38	513.25	511.38	0.32	ppb
Cobalt	59-2	501.12	500.04	494.81	498.66	0.68	ppb
Copper	63-2	4817.95	4833.89	4809.78	4820.54	0.25	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				87		%
Indium	115-2				86		%
Iron	56-2	129866.85	130308.54	130523.32	130232.90	0.26	ppb
Iron	57-2	130624.52	130166.48	131280.64	130690.55	0.43	ppb
Iron	54-2	130717.62	131453.79	131586.58	131252.66	0.36	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P7
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:01:10	DataFile Name :	035CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2601.75	2626.80	2573.68	2600.74	1.02	ppb
Lead	207-1	2590.29	2611.47	2534.68	2578.81	1.54	ppb
Lead	208-1	2596.98	2609.53	2550.14	2585.55	1.21	ppb
Lithium	6-1				98		%
Magnesium	24-2	260249.10	256506.15	257956.89	258237.38	0.73	ppb
Manganese	55-2	4999.98	5024.20	5001.97	5008.71	0.27	ppb
Molybdenum	94-1	5192.24	5204.52	5230.71	5209.16	0.38	ppb
Molybdenum	95-1	5189.97	5121.39	5215.69	5175.69	0.94	ppb
Molybdenum	96-1	5218.97	5171.53	5236.32	5208.94	0.64	ppb
Molybdenum	97-1	5204.15	5145.89	5199.58	5183.21	0.63	ppb
Molybdenum	98-1	5176.33	5130.59	5202.81	5169.91	0.71	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	476.54	477.30	475.48	476.44	0.19	ppb
Phosphorus	31-2	10230.82	10154.05	10084.43	10156.43	0.72	ppb
Potassium	39-2	127118.35	127350.40	126124.49	126864.41	0.51	ppb
Rhodium	103-1				82		%
Rhodium	103-2				84		%
Scandium	45-1				85		%
Scandium	45-2				84		%
Selenium	82-1	492.86	488.88	491.70	491.15	0.42	ppb
Selenium	77-2	502.69	494.12	492.50	496.44	1.10	ppb
Selenium	78-2	485.86	498.18	484.69	489.58	1.53	ppb
Silicon	28-1	482.30	480.41	501.18	487.96	2.35	ppb
Silver	107-1	499.18	502.93	500.61	500.91	0.38	ppb
Silver	109-1	496.87	499.84	497.37	498.03	0.32	ppb
Sodium	23-2	257509.62	257544.36	253300.28	256118.09	0.95	ppb
Strontium	86-1	12966.06	12880.41	12926.15	12924.21	0.33	ppb
Strontium	88-1	12958.11	12838.89	12780.48	12859.16	0.70	ppb
Sulfur	34-1	9923.98	9831.30	10150.07	9968.45	1.64	ppb
Terbium	159-1				97		%
Terbium	159-2				98		%
Thallium	203-1	513.65	526.67	521.89	520.74	1.27	ppb
Thallium	205-1	521.75	527.49	518.33	522.52	0.89	ppb
Tin	118-1	512.44	517.04	502.64	510.71	1.44	ppb
Titanium	47-1	4964.98	5007.46	5074.49	5015.64	1.10	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P7
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:01:10	DataFile Name :	035CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	532.17	534.16	518.19	528.17	1.65	ppb
Vanadium	51-2	514.44	517.97	509.30	513.90	0.85	ppb
Yttrium	89-1				88		%
Yttrium	89-2				88		%
Zinc	66-2	4735.96	4779.70	4729.26	4748.30	0.58	ppb
Zirconium	90-1	511.86	515.56	516.14	514.52	0.45	ppb
Zirconium	91-1	518.06	524.63	516.93	519.87	0.80	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P7
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:03:52	DataFile Name :	036CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3.73	3.00	2.46	3.07	20.76	ppb
Antimony	121-1	0.29	0.24	0.21	0.25	17.95	ppb
Arsenic	75-2	0.05	0.03	0.07	0.05	36.53	ppb
Barium	135-1	0.44	0.27	0.24	0.32	33.35	ppb
Barium	137-1	0.45	0.35	0.26	0.35	26.75	ppb
Beryllium	9-1	0.12	0.14	0.10	0.12	18.34	ppb
Bismuth	209-1				105		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.05	0.04	0.01	0.04	50.46	ppb
Cadmium	106-1	-0.39	-0.24	-1.28	-0.64		ppb
Cadmium	111-1	0.09	0.06	-0.01	0.04	120.19	ppb
Calcium	43-1	52.62	27.97	28.35	36.31	38.89	ppb
Calcium	44-1	46.82	33.64	25.36	35.28	30.68	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.04	0.01	0.03	0.03	54.43	ppb
Cobalt	59-2	0.03	0.04	0.04	0.03	16.54	ppb
Copper	63-2	0.48	0.45	0.37	0.43	13.10	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				98		%
Holmium	165-2				103		%
Indium	115-1				92		%
Indium	115-2				95		%
Iron	56-2	10.57	9.33	8.26	9.39	12.35	ppb
Iron	57-2	7.30	7.57	7.39	7.42	1.84	ppb
Iron	54-2	11.69	8.82	7.82	9.44	21.28	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P7
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:03:52	DataFile Name :	036CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.51	0.38	0.31	0.40	25.33	ppb
Lead	207-1	0.49	0.38	0.31	0.40	23.09	ppb
Lead	208-1	0.50	0.38	0.31	0.39	24.41	ppb
Lithium	6-1				100		%
Magnesium	24-2	19.66	18.07	16.01	17.91	10.22	ppb
Manganese	55-2	0.43	0.32	0.32	0.35	18.04	ppb
Molybdenum	94-1	1.11	0.80	0.67	0.86	25.82	ppb
Molybdenum	95-1	1.02	0.76	0.57	0.78	28.69	ppb
Molybdenum	96-1	1.02	0.73	0.60	0.78	27.78	ppb
Molybdenum	97-1	1.02	0.73	0.56	0.77	30.37	ppb
Molybdenum	98-1	0.99	0.76	0.60	0.79	25.06	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.04	0.03	0.06	0.04	33.27	ppb
Phosphorus	31-2	-17.10	-18.58	-14.42	-16.70		ppb
Potassium	39-2	9.64	8.00	6.34	7.99	20.65	ppb
Rhodium	103-1				90		%
Rhodium	103-2				95		%
Scandium	45-1				86		%
Scandium	45-2				87		%
Selenium	82-1	0.30	0.07	0.19	0.18	61.10	ppb
Selenium	77-2	-0.10	-0.10	0.06	-0.04		ppb
Selenium	78-2	-0.52	-1.19	-1.64	-1.12		ppb
Silicon	28-1	-74.94	-77.02	-77.95	-76.64		ppb
Silver	107-1	0.14	0.11	0.08	0.11	25.65	ppb
Silver	109-1	0.15	0.12	0.08	0.12	27.67	ppb
Sodium	23-2	61.40	55.37	50.71	55.83	9.61	ppb
Strontium	86-1	2.20	2.43	0.98	1.87	41.77	ppb
Strontium	88-1	2.25	1.72	1.32	1.77	26.60	ppb
Sulfur	34-1	-226.09	-202.32	-220.47	-216.29		ppb
Terbium	159-1				98		%
Terbium	159-2				102		%
Thallium	203-1	0.12	0.10	0.09	0.10	17.12	ppb
Thallium	205-1	0.13	0.10	0.08	0.11	24.95	ppb
Tin	118-1	0.09	0.09	0.07	0.08	18.44	ppb
Titanium	47-1	1.02	0.75	0.52	0.76	33.30	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P7
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:03:52	DataFile Name :	036CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.09	0.06	0.05	0.07	29.00	ppb
Vanadium	51-2	0.04	0.02	0.02	0.03	29.96	ppb
Yttrium	89-1				89		%
Yttrium	89-2				92		%
Zinc	66-2	0.38	0.50	0.29	0.39	27.88	ppb
Zirconium	90-1	0.12	0.10	0.08	0.10	21.78	ppb
Zirconium	91-1	0.13	0.09	0.08	0.10	23.44	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5213-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB03I-15-1206;	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:07:52	DataFile Name :	037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1997.62	1970.83	1981.46	1983.30	0.68	ppb
Antimony	121-1	0.05	0.03	0.04	0.04	14.43	ppb
Arsenic	75-2	1.46	1.45	1.51	1.47	2.33	ppb
Barium	135-1	7.78	7.69	7.69	7.72	0.72	ppb
Barium	137-1	7.75	7.75	7.71	7.74	0.32	ppb
Beryllium	9-1	0.06	0.03	0.05	0.05	24.43	ppb
Bismuth	209-1				107		%
Bismuth	209-2				110		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.33	0.44	0.37	0.38	14.78	ppb
Cadmium	106-1	0.55	0.58	0.74	0.62	16.41	ppb
Cadmium	111-1	0.02	0.01	0.03	0.02	41.77	ppb
Calcium	43-1	18.32	18.92	18.38	18.54	1.80	ppb
Calcium	44-1	19.32	17.74	17.80	18.29	4.89	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	6.75	6.66	6.65	6.69	0.80	ppb
Cobalt	59-2	0.38	0.36	0.37	0.37	3.04	ppb
Copper	63-2	2.59	2.57	2.50	2.55	1.99	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				105		%
Indium	115-1				96		%
Indium	115-2				98		%
Iron	56-2	3712.66	3773.53	3676.43	3720.87	1.32	ppb
Iron	57-2	3757.80	3748.07	3724.50	3743.46	0.46	ppb
Iron	54-2	3794.79	3802.04	3755.08	3783.97	0.67	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5213-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB03I-15-1206;	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:07:52	DataFile Name :	037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2.36	2.26	2.35	2.32	2.25	ppb
Lead	207-1	2.14	2.15	2.20	2.16	1.41	ppb
Lead	208-1	2.25	2.19	2.30	2.25	2.50	ppb
Lithium	6-1				102		%
Magnesium	24-2	53.22	54.17	53.75	53.71	0.89	ppb
Manganese	55-2	19.47	19.32	18.96	19.25	1.36	ppb
Molybdenum	94-1	9.28	9.19	9.30	9.25	0.61	ppb
Molybdenum	95-1	0.11	0.07	0.09	0.09	19.81	ppb
Molybdenum	96-1	1.07	1.02	1.08	1.06	2.74	ppb
Molybdenum	97-1	0.08	0.07	0.08	0.08	11.05	ppb
Molybdenum	98-1	0.10	0.09	0.10	0.10	8.36	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.67	0.76	0.64	0.69	9.06	ppb
Phosphorus	31-2	63.62	57.01	63.79	61.48	6.29	ppb
Potassium	39-2	130.64	128.04	128.41	129.03	1.09	ppb
Rhodium	103-1				94		%
Rhodium	103-2				98		%
Scandium	45-1				92		%
Scandium	45-2				92		%
Selenium	82-1	0.43	0.06	0.22	0.24	78.29	ppb
Selenium	77-2	1.08	1.92	1.67	1.56	27.76	ppb
Selenium	78-2	-0.75	-1.25	-1.02	-1.01		ppb
Silicon	28-1	278.66	260.09	312.78	283.85	9.42	ppb
Silver	107-1	0.02	0.01	0.02	0.02	12.16	ppb
Silver	109-1	0.00	0.00	0.00	0.00	41.72	ppb
Sodium	23-2	13.74	12.09	11.59	12.47	8.99	ppb
Strontium	86-1	11.34	11.85	11.08	11.43	3.43	ppb
Strontium	88-1	10.49	10.10	10.79	10.46	3.29	ppb
Sulfur	34-1	-34.93	-190.43	-170.25	-131.87		ppb
Terbium	159-1				101		%
Terbium	159-2				104		%
Thallium	203-1	0.02	0.02	0.02	0.02	26.24	ppb
Thallium	205-1	0.03	0.02	0.03	0.03	14.64	ppb
Tin	118-1	0.33	0.31	0.30	0.31	4.98	ppb
Titanium	47-1	19.49	18.90	19.20	19.20	1.54	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5213-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB03I-15-1206;	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:07:52	DataFile Name :	037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.42	0.42	0.43	0.42	1.08	ppb
Vanadium	51-2	11.06	10.97	10.98	11.00	0.44	ppb
Yttrium	89-1				95		%
Yttrium	89-2				98		%
Zinc	66-2	2.99	3.06	2.97	3.01	1.54	ppb
Zirconium	90-1	5.04	5.02	5.07	5.04	0.54	ppb
Zirconium	91-1	5.06	5.08	5.28	5.14	2.32	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5236-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB03D-3-12072	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:11:05	DataFile Name :	038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1883.98	1888.23	1883.08	1885.10	0.15	ppb
Antimony	121-1	0.05	0.06	0.05	0.05	12.14	ppb
Arsenic	75-2	10.49	10.61	10.75	10.62	1.20	ppb
Barium	135-1	12.67	12.93	12.56	12.72	1.50	ppb
Barium	137-1	12.72	13.05	12.53	12.77	2.06	ppb
Beryllium	9-1	0.05	0.09	0.08	0.07	31.42	ppb
Bismuth	209-1				107		%
Bismuth	209-2				108		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.76	1.69	1.52	1.66	7.47	ppb
Cadmium	106-1	5.44	4.94	3.94	4.77	16.08	ppb
Cadmium	111-1	0.34	0.31	0.23	0.29	19.22	ppb
Calcium	43-1	29.57	32.77	28.54	30.29	7.28	ppb
Calcium	44-1	26.73	31.24	28.03	28.67	8.10	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	40.43	40.47	39.97	40.29	0.69	ppb
Cobalt	59-2	0.04	0.03	0.03	0.03	22.57	ppb
Copper	63-2	8.59	8.52	8.41	8.51	1.06	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				106		%
Indium	115-1				97		%
Indium	115-2				99		%
Iron	56-2	9483.21	9444.10	9453.55	9460.29	0.22	ppb
Iron	57-2	9590.79	9507.83	9470.87	9523.16	0.64	ppb
Iron	54-2	9648.75	9754.73	9567.89	9657.12	0.97	ppb
Krypton	83-1						cps

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5236-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB03D-3-12072	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:11:05	DataFile Name :	038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	6.96	6.95	6.82	6.91	1.11	ppb
Lead	207-1	6.35	6.31	6.23	6.30	1.03	ppb
Lead	208-1	6.57	6.58	6.47	6.54	0.95	ppb
Lithium	6-1				103		%
Magnesium	24-2	5.00	5.64	5.65	5.43	6.86	ppb
Manganese	55-2	1.10	1.12	1.08	1.10	1.98	ppb
Molybdenum	94-1	41.84	41.59	42.02	41.81	0.52	ppb
Molybdenum	95-1	0.03	0.15	0.02	0.06	116.79	ppb
Molybdenum	96-1	4.45	4.63	4.54	4.54	1.97	ppb
Molybdenum	97-1	-0.01	0.16	-0.01	0.05	210.95	ppb
Molybdenum	98-1	0.02	0.14	0.00	0.05	143.79	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.28	0.31	0.27	0.29	7.03	ppb
Phosphorus	31-2	39.11	35.84	34.41	36.45	6.60	ppb
Potassium	39-2	311.80	313.24	311.47	312.17	0.30	ppb
Rhodium	103-1				94		%
Rhodium	103-2				99		%
Scandium	45-1				97		%
Scandium	45-2				96		%
Selenium	82-1	0.58	0.61	0.42	0.54	19.17	ppb
Selenium	77-2	7.13	6.61	6.59	6.78	4.54	ppb
Selenium	78-2	0.75	0.54	1.07	0.79	33.73	ppb
Silicon	28-1	204.56	229.30	221.89	218.58	5.81	ppb
Silver	107-1	0.05	0.06	0.05	0.06	6.89	ppb
Silver	109-1	-0.01	0.00	0.00	0.00		ppb
Sodium	23-2	10.99	11.42	10.46	10.96	4.42	ppb
Strontium	86-1	47.31	49.97	46.66	47.98	3.65	ppb
Strontium	88-1	45.70	47.76	46.19	46.55	2.31	ppb
Sulfur	34-1	-352.16	-329.66	-338.42	-340.08		ppb
Terbium	159-1				101		%
Terbium	159-2				105		%
Thallium	203-1	0.05	0.06	0.05	0.05	9.10	ppb
Thallium	205-1	0.05	0.06	0.06	0.06	8.20	ppb
Tin	118-1	0.50	0.52	0.49	0.50	2.82	ppb
Titanium	47-1	8.30	8.33	8.39	8.34	0.60	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5236-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB03D-3-12072	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:11:05	DataFile Name :	038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.77	1.81	1.78	1.79	1.21	ppb
Vanadium	51-2	59.55	59.09	58.90	59.18	0.57	ppb
Yttrium	89-1				101		%
Yttrium	89-2				102		%
Zinc	66-2	0.50	0.62	0.64	0.59	12.93	ppb
Zirconium	90-1	23.20	23.10	22.99	23.10	0.46	ppb
Zirconium	91-1	23.06	23.10	23.21	23.12	0.35	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5076-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL2-SB02I-7.5-1202	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:14:20	DataFile Name :	039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	6326.28	6419.43	6251.80	6332.50	1.33	ppb
Antimony	121-1	0.01	0.02	0.02	0.02	22.54	ppb
Arsenic	75-2	3.86	3.88	3.65	3.80	3.40	ppb
Barium	135-1	40.04	41.10	40.79	40.64	1.34	ppb
Barium	137-1	41.25	41.72	41.78	41.58	0.70	ppb
Beryllium	9-1	0.42	0.45	0.40	0.42	5.21	ppb
Bismuth	209-1				106		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.60	0.65	0.59	0.61	5.00	ppb
Cadmium	106-1	1.35	2.06	1.09	1.50	33.33	ppb
Cadmium	111-1	0.08	0.13	0.06	0.09	41.48	ppb
Calcium	43-1	324.31	325.90	329.56	326.59	0.82	ppb
Calcium	44-1	323.00	323.50	318.84	321.78	0.80	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	14.94	15.00	15.09	15.01	0.49	ppb
Cobalt	59-2	5.62	5.74	5.61	5.65	1.26	ppb
Copper	63-2	7.70	7.76	7.73	7.73	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				103		%
Holmium	165-2				104		%
Indium	115-1				98		%
Indium	115-2				97		%
Iron	56-2	14621.85	14706.29	14657.82	14661.99	0.29	ppb
Iron	57-2	14776.40	14601.54	14659.60	14679.18	0.61	ppb
Iron	54-2	14568.33	14708.48	14769.10	14681.97	0.70	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5076-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL2-SB02I-7.5-1202	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:14:20	DataFile Name :	039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	8.08	8.22	7.93	8.08	1.78	ppb
Lead	207-1	7.62	7.57	7.48	7.56	0.91	ppb
Lead	208-1	7.75	7.82	7.69	7.75	0.88	ppb
Lithium	6-1				103		%
Magnesium	24-2	751.96	754.90	763.04	756.63	0.76	ppb
Manganese	55-2	143.54	143.83	144.34	143.90	0.28	ppb
Molybdenum	94-1	14.63	14.96	14.91	14.83	1.22	ppb
Molybdenum	95-1	0.39	0.39	0.38	0.39	1.42	ppb
Molybdenum	96-1	2.04	2.01	2.01	2.02	0.79	ppb
Molybdenum	97-1	0.39	0.39	0.40	0.39	1.01	ppb
Molybdenum	98-1	0.38	0.38	0.39	0.38	1.85	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	6.11	6.11	6.03	6.08	0.79	ppb
Phosphorus	31-2	170.29	168.93	153.82	164.35	5.57	ppb
Potassium	39-2	574.75	575.12	576.11	575.33	0.12	ppb
Rhodium	103-1				97		%
Rhodium	103-2				99		%
Scandium	45-1				96		%
Scandium	45-2				93		%
Selenium	82-1	0.28	0.03	0.09	0.14	97.08	ppb
Selenium	77-2	4.40	3.58	3.57	3.85	12.35	ppb
Selenium	78-2	-0.48	-0.44	-1.06	-0.66		ppb
Silicon	28-1	648.38	635.83	690.80	658.34	4.38	ppb
Silver	107-1	0.02	0.03	0.02	0.03	12.61	ppb
Silver	109-1	0.00	0.01	0.00	0.01	52.34	ppb
Sodium	23-2	20.09	19.27	19.04	19.47	2.85	ppb
Strontium	86-1	73.87	73.51	74.85	74.08	0.94	ppb
Strontium	88-1	73.30	73.84	74.17	73.77	0.60	ppb
Sulfur	34-1	-98.58	-172.76	-218.61	-163.32		ppb
Terbium	159-1				103		%
Terbium	159-2				103		%
Thallium	203-1	0.09	0.08	0.08	0.08	5.55	ppb
Thallium	205-1	0.09	0.09	0.08	0.09	4.05	ppb
Tin	118-1	0.12	0.10	0.14	0.12	18.98	ppb
Titanium	47-1	177.03	179.55	178.77	178.45	0.72	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5076-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL2-SB02I-7.5-1202	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:14:20	DataFile Name :	039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.83	0.81	0.82	0.82	1.44	ppb
Vanadium	51-2	25.23	25.16	25.12	25.17	0.23	ppb
Yttrium	89-1				98		%
Yttrium	89-2				98		%
Zinc	66-2	18.11	18.16	18.01	18.09	0.41	ppb
Zirconium	90-1	7.87	8.06	8.03	7.99	1.27	ppb
Zirconium	91-1	8.07	8.07	8.22	8.12	1.09	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P7
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:20:37	DataFile Name :	040CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	51436.61	51817.31	51774.24	51676.05	0.40	ppb
Antimony	121-1	482.21	498.50	506.11	495.61	2.46	ppb
Arsenic	75-2	501.99	492.19	499.45	497.87	1.02	ppb
Barium	135-1	2453.43	2531.88	2568.17	2517.83	2.33	ppb
Barium	137-1	2431.89	2520.35	2571.49	2507.91	2.82	ppb
Beryllium	9-1	468.44	499.54	490.22	486.06	3.28	ppb
Bismuth	209-1				97		%
Bismuth	209-2				94		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	477.78	494.16	504.29	492.08	2.72	ppb
Cadmium	106-1	477.16	494.79	500.24	490.73	2.46	ppb
Cadmium	111-1	462.27	475.55	485.99	474.60	2.50	ppb
Calcium	43-1	243794.88	255463.40	253628.52	250962.27	2.50	ppb
Calcium	44-1	241440.47	253337.09	252019.50	248932.35	2.62	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	508.17	502.99	508.53	506.57	0.61	ppb
Cobalt	59-2	495.41	496.58	500.73	497.58	0.56	ppb
Copper	63-2	4792.83	4792.84	4877.67	4821.11	1.02	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				98		%
Indium	115-1				88		%
Indium	115-2				86		%
Iron	56-2	130801.43	130033.61	130774.04	130536.36	0.33	ppb
Iron	57-2	130656.36	130087.73	130341.86	130361.99	0.22	ppb
Iron	54-2	130549.78	130104.31	131356.38	130670.16	0.49	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P7
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:20:37	DataFile Name :	040CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2497.63	2613.66	2624.22	2578.50	2.72	ppb
Lead	207-1	2485.37	2584.49	2608.98	2559.61	2.56	ppb
Lead	208-1	2490.63	2586.25	2607.10	2561.33	2.42	ppb
Lithium	6-1				99		%
Magnesium	24-2	256660.41	258803.04	260072.12	258511.86	0.67	ppb
Manganese	55-2	5002.21	5002.60	5038.16	5014.32	0.41	ppb
Molybdenum	94-1	4965.96	5150.92	5170.88	5095.92	2.22	ppb
Molybdenum	95-1	4920.04	5141.08	5135.59	5065.57	2.49	ppb
Molybdenum	96-1	4911.50	5108.52	5123.26	5047.76	2.34	ppb
Molybdenum	97-1	4880.19	5081.57	5106.04	5022.60	2.47	ppb
Molybdenum	98-1	4850.96	5059.50	5067.30	4992.59	2.46	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	473.61	468.64	478.95	473.73	1.09	ppb
Phosphorus	31-2	10136.66	10049.96	10199.16	10128.59	0.74	ppb
Potassium	39-2	126153.63	125813.98	127512.66	126493.43	0.71	ppb
Rhodium	103-1				83		%
Rhodium	103-2				83		%
Scandium	45-1				88		%
Scandium	45-2				83		%
Selenium	82-1	461.84	486.42	489.66	479.31	3.17	ppb
Selenium	77-2	484.18	496.62	493.03	491.28	1.30	ppb
Selenium	78-2	493.46	482.94	489.16	488.52	1.08	ppb
Silicon	28-1	440.79	482.21	478.87	467.29	4.92	ppb
Silver	107-1	480.37	489.58	502.45	490.80	2.26	ppb
Silver	109-1	480.84	480.28	502.69	487.94	2.62	ppb
Sodium	23-2	255643.75	254962.40	257016.42	255874.19	0.41	ppb
Strontium	86-1	11985.85	12669.43	12951.38	12535.55	3.96	ppb
Strontium	88-1	12186.74	12634.07	12822.17	12547.66	2.60	ppb
Sulfur	34-1	9559.76	9965.99	9794.84	9773.53	2.09	ppb
Terbium	159-1				98		%
Terbium	159-2				98		%
Thallium	203-1	512.26	523.47	530.50	522.08	1.76	ppb
Thallium	205-1	509.25	521.87	531.64	520.92	2.15	ppb
Tin	118-1	488.70	500.50	503.69	497.63	1.59	ppb
Titanium	47-1	4776.49	5003.85	4934.51	4904.95	2.38	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P7
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:20:37	DataFile Name :	040CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	502.76	529.40	532.67	521.61	3.15	ppb
Vanadium	51-2	512.32	504.85	519.33	512.16	1.41	ppb
Yttrium	89-1				89		%
Yttrium	89-2				87		%
Zinc	66-2	4830.37	4780.47	4825.52	4812.12	0.57	ppb
Zirconium	90-1	487.73	512.18	513.70	504.54	2.89	ppb
Zirconium	91-1	491.64	514.74	517.82	508.07	2.82	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P7
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:23:19	DataFile Name :	041CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3.16	2.70	2.07	2.64	20.59	ppb
Antimony	121-1	0.27	0.22	0.19	0.23	18.23	ppb
Arsenic	75-2	0.00	0.01	0.01	0.01	54.27	ppb
Barium	135-1	0.46	0.32	0.22	0.34	36.06	ppb
Barium	137-1	0.48	0.35	0.23	0.35	36.07	ppb
Beryllium	9-1	0.13	0.11	0.07	0.10	29.49	ppb
Bismuth	209-1				107		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.14	0.05	0.02	0.07	96.97	ppb
Cadmium	106-1	-0.30	0.21	0.24	0.05	604.05	ppb
Cadmium	111-1	0.09	0.08	0.06	0.08	20.33	ppb
Calcium	43-1	60.43	36.18	21.80	39.47	49.47	ppb
Calcium	44-1	54.03	32.28	22.46	36.26	44.56	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.03	0.02	0.02	0.02	22.24	ppb
Cobalt	59-2	0.03	0.02	0.02	0.02	16.08	ppb
Copper	63-2	0.38	0.29	0.27	0.31	19.62	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				99		%
Holmium	165-2				102		%
Indium	115-1				94		%
Indium	115-2				95		%
Iron	56-2	8.64	7.23	6.01	7.30	18.04	ppb
Iron	57-2	6.75	5.10	4.26	5.37	23.56	ppb
Iron	54-2	8.35	7.62	6.89	7.62	9.59	ppb
Krypton	83-1						cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P7
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:23:19	DataFile Name :	041CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.51	0.35	0.26	0.37	33.11	ppb
Lead	207-1	0.53	0.36	0.26	0.38	36.11	ppb
Lead	208-1	0.53	0.34	0.27	0.38	35.02	ppb
Lithium	6-1				101		%
Magnesium	24-2	15.53	12.82	11.05	13.13	17.17	ppb
Manganese	55-2	0.28	0.27	0.24	0.26	8.09	ppb
Molybdenum	94-1	1.15	0.82	0.59	0.86	32.88	ppb
Molybdenum	95-1	1.10	0.71	0.53	0.78	37.04	ppb
Molybdenum	96-1	1.13	0.71	0.51	0.79	40.46	ppb
Molybdenum	97-1	1.07	0.75	0.53	0.79	34.60	ppb
Molybdenum	98-1	1.11	0.73	0.53	0.79	37.52	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.02	0.00	0.05	0.02	95.69	ppb
Phosphorus	31-2	-20.27	-16.64	-15.94	-17.62		ppb
Potassium	39-2	5.56	4.96	3.16	4.56	27.34	ppb
Rhodium	103-1				91		%
Rhodium	103-2				95		%
Scandium	45-1				87		%
Scandium	45-2				87		%
Selenium	82-1	0.31	-0.33	0.03	0.00	27297.01	ppb
Selenium	77-2	0.06	-0.10	-0.10	-0.04		ppb
Selenium	78-2	0.21	-1.21	-0.51	-0.50		ppb
Silicon	28-1	-81.89	-83.19	-83.37	-82.82		ppb
Silver	107-1	0.15	0.10	0.08	0.11	33.46	ppb
Silver	109-1	0.14	0.11	0.08	0.11	26.08	ppb
Sodium	23-2	44.70	40.57	36.38	40.55	10.25	ppb
Strontium	86-1	2.72	2.14	1.31	2.06	34.40	ppb
Strontium	88-1	2.61	1.66	1.08	1.78	43.17	ppb
Sulfur	34-1	-174.22	-167.76	-174.90	-172.29		ppb
Terbium	159-1				98		%
Terbium	159-2				101		%
Thallium	203-1	0.10	0.07	0.06	0.08	29.82	ppb
Thallium	205-1	0.11	0.08	0.06	0.08	29.62	ppb
Tin	118-1	0.11	0.10	0.07	0.09	21.76	ppb
Titanium	47-1	1.05	0.69	0.41	0.72	44.25	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P7
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:23:19	DataFile Name :	041CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.09	0.06	0.04	0.07	39.85	ppb
Vanadium	51-2	0.02	0.03	0.02	0.02	6.35	ppb
Yttrium	89-1				90		%
Yttrium	89-2				92		%
Zinc	66-2	0.47	0.45	0.35	0.43	15.37	ppb
Zirconium	90-1	0.14	0.09	0.08	0.10	31.59	ppb
Zirconium	91-1	0.13	0.11	0.07	0.11	28.61	ppb

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:04:22	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	997	903	850	917	8.10	cps
Antimony	121-1	333	290	317	313	6.98	cps
Arsenic	75-2	50	17	23	30	58.79	cps
Barium	135-1	343	353	520	406	24.47	cps
Barium	137-1	697	623	730	683	7.99	cps
Beryllium	9-1	113	130	160	134	17.59	cps
Bismuth	209-1	9065228	8951470	8868950	8961883	1.10	cps
Bismuth	209-2	7859693	7858569	7797653	7838638	0.45	cps
Bromine	81-1	16429	16379	15752	16187	2.33	cps
Bromine	81-2	193	187	183	188	2.71	cps
Cadmium	108-1	30	23	17	23	28.56	cps
Cadmium	106-1	3424	3450	3567	3480	2.19	cps
Cadmium	111-1	2477	2520	2590	2529	2.26	cps
Calcium	43-1	827	683	600	703	16.30	cps
Calcium	44-1	19950	17640	17460	18350	7.57	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1317	1323	1223	1288	4.34	cps
Cobalt	59-2	340	353	383	359	6.18	cps
Copper	63-2	2394	2197	2407	2332	5.04	cps
Dysprosium	156-1	27	33	47	36	28.64	cps
Dysprosium	156-2	0	13	13	9	86.60	cps
Erbium	164-1	37	73	67	59	33.16	cps
Erbium	164-2	40	50	47	46	11.18	cps
Gadolinium	160-1	27	50	43	40	30.04	cps
Gadolinium	160-2	543	610	690	614	11.95	cps
Holmium	165-1	15207699	14945602	14918723	15024008	1.06	cps
Holmium	165-2	11116303	10992641	10944792	11017912	0.80	cps
Indium	115-1	12926860	12819497	12854868	12867075	0.43	cps
Indium	115-2	4825271	4830984	4851686	4835980	0.29	cps
Iron	56-2	47615	48364	48311	48097	0.87	cps
Iron	57-2	2144	1817	1910	1957	8.60	cps
Iron	54-2	4254	4181	4331	4255	1.76	cps
Krypton	83-1	233	273	253	253	7.89	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:04:22	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1823	1817	1847	1829	0.86	cps
Lead	207-1	1530	1767	1547	1615	8.18	cps
Lead	208-1	7441	7504	7341	7429	1.11	cps
Lithium	6-1	1639746	1576169	1602943	1606286	1.99	cps
Magnesium	24-2	6568	6315	6545	6476	2.16	cps
Manganese	55-2	1410	1403	1323	1379	3.50	cps
Molybdenum	94-1	1277	1333	1243	1285	3.54	cps
Molybdenum	95-1	1513	1630	1543	1562	3.88	cps
Molybdenum	96-1	1710	1897	1780	1796	5.25	cps
Molybdenum	97-1	1037	993	1027	1019	2.23	cps
Molybdenum	98-1	2340	2524	2484	2449	3.94	cps
Neodymium	150-1	17	3	7	9	78.08	cps
Neodymium	150-2	0	7	0	2	173.21	cps
Nickel	60-2	590	580	513	561	7.43	cps
Phosphorus	31-2	167	187	170	174	6.14	cps
Potassium	39-2	63783	65196	65149	64709	1.24	cps
Rhodium	103-1	12201881	12173633	12071223	12148912	0.57	cps
Rhodium	103-2	7317125	7398393	7301088	7338869	0.71	cps
Scandium	45-1	7143020	7148401	7193008	7161476	0.38	cps
Scandium	45-2	637212	640553	631737	636500	0.70	cps
Selenium	82-1	257	212	200	223	13.48	cps
Selenium	77-2	0	0	7	2	173.21	cps
Selenium	78-2	533	563	510	536	4.99	cps
Silicon	28-1	1217071	1228125	1210753	1218650	0.72	cps
Silver	107-1	439	479	476	465	4.78	cps
Silver	109-1	400	427	410	412	3.27	cps
Sodium	23-2	30570	31272	30554	30799	1.33	cps
Strontium	86-1	487	457	437	460	5.47	cps
Strontium	88-1	1073	950	1040	1021	6.25	cps
Sulfur	34-1	210013	211422	210549	210661	0.34	cps
Terbium	159-1	15586299	15245741	15326444	15386161	1.16	cps
Terbium	159-2	11008654	10900743	10918149	10942516	0.53	cps
Thallium	203-1	690	637	687	671	4.45	cps
Thallium	205-1	1337	1467	1497	1433	5.93	cps
Tin	118-1	2127	2207	2110	2148	2.41	cps
Titanium	47-1	433	513	503	483	9.02	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:04:22	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	700	643	770	704	9.01	cps
Vanadium	51-2	150	100	147	132	21.14	cps
Yttrium	89-1	15377204	15215798	15276099	15289700	0.53	cps
Yttrium	89-2	4177811	4197064	4124520	4166465	0.90	cps
Zinc	66-2	630	650	663	648	2.59	cps
Zirconium	90-1	1250	1070	1203	1175	7.95	cps
Zirconium	91-1	277	210	247	244	13.66	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P7
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:10:54	DataFile Name :	006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	7122	7292	7015	7143	1.95	cps
Antimony	121-1	30679	31030	30232	30647	1.31	cps
Arsenic	75-2	890	947	973	937	4.54	cps
Barium	135-1	37225	37155	37573	37318	0.60	cps
Barium	137-1	64803	64191	64887	64627	0.59	cps
Beryllium	9-1	1687	1717	1660	1688	1.68	cps
Bismuth	209-1	9195179	9499762	9535746	9410229	1.99	cps
Bismuth	209-2	8197264	8091039	8063214	8117172	0.87	cps
Bromine	81-1	17023	16826	17097	16982	0.82	cps
Bromine	81-2	163	130	207	167	23.07	cps
Cadmium	108-1	333	290	293	306	7.89	cps
Cadmium	106-1	4397	4307	3937	4214	5.79	cps
Cadmium	111-1	7027	6857	6749	6877	2.04	cps
Calcium	43-1	22196	22183	22530	22303	0.88	cps
Calcium	44-1	362421	365297	369237	365652	0.94	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	14400	14400	14140	14314	1.05	cps
Cobalt	59-2	11211	10831	11118	11053	1.79	cps
Copper	63-2	15702	15545	15792	15679	0.80	cps
Dysprosium	156-1	17	30	27	24	28.38	cps
Dysprosium	156-2	13	7	10	10	33.30	cps
Erbium	164-1	87	77	53	72	23.69	cps
Erbium	164-2	30	67	27	41	53.99	cps
Gadolinium	160-1	53	63	57	58	8.81	cps
Gadolinium	160-2	717	747	730	731	2.06	cps
Holmium	165-1	15367199	15316472	15240906	15308192	0.42	cps
Holmium	165-2	11306761	11334669	11315301	11318910	0.13	cps
Indium	115-1	13338893	13161293	13193124	13231103	0.72	cps
Indium	115-2	5013240	4966764	5039790	5006598	0.74	cps
Iron	56-2	337540	335143	334462	335715	0.48	cps
Iron	57-2	9486	9386	9927	9600	2.99	cps
Iron	54-2	20841	20387	21035	20754	1.60	cps
Krypton	83-1	253	323	293	290	12.11	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P7
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:10:54	DataFile Name :	006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	11662	11935	11688	11762	1.28	cps
Lead	207-1	10207	9840	10050	10033	1.84	cps
Lead	208-1	46047	46732	46007	46262	0.88	cps
Lithium	6-1	1623996	1654734	1651456	1643395	1.03	cps
Magnesium	24-2	292153	292822	291633	292203	0.20	cps
Manganese	55-2	5851	5748	5608	5736	2.13	cps
Molybdenum	94-1	31263	32296	31678	31746	1.64	cps
Molybdenum	95-1	39533	39176	38551	39086	1.27	cps
Molybdenum	96-1	43093	43909	42792	43265	1.34	cps
Molybdenum	97-1	24107	24521	23956	24194	1.21	cps
Molybdenum	98-1	61181	62851	62315	62116	1.37	cps
Neodymium	150-1	10	10	7	9	21.63	cps
Neodymium	150-2	10	7	3	7	50.03	cps
Nickel	60-2	3324	3244	3327	3298	1.43	cps
Phosphorus	31-2	663	760	803	742	9.66	cps
Potassium	39-2	441671	444822	444120	443537	0.37	cps
Rhodium	103-1	12456248	12486951	12685771	12542990	0.99	cps
Rhodium	103-2	7666884	7612951	7478767	7586201	1.28	cps
Scandium	45-1	7300173	7370621	7398761	7356518	0.69	cps
Scandium	45-2	654447	655940	647883	652757	0.66	cps
Selenium	82-1	1436	1370	1391	1399	2.42	cps
Selenium	77-2	137	120	133	130	6.79	cps
Selenium	78-2	1033	1097	1000	1043	4.71	cps
Silicon	28-1	1206438	1178946	1193046	1192810	1.15	cps
Silver	107-1	19746	20309	20179	20078	1.47	cps
Silver	109-1	18879	18358	18709	18649	1.42	cps
Sodium	23-2	463786	466169	466039	465331	0.29	cps
Strontium	86-1	5478	5491	5251	5407	2.50	cps
Strontium	88-1	43544	43267	43721	43511	0.53	cps
Sulfur	34-1	223230	221910	220829	221990	0.54	cps
Terbium	159-1	15722827	15921694	15646273	15763598	0.90	cps
Terbium	159-2	11270519	11289014	11117524	11225685	0.84	cps
Thallium	203-1	13216	13594	13684	13498	1.84	cps
Thallium	205-1	32910	33147	32659	32905	0.74	cps
Tin	118-1	66673	66084	65997	66251	0.56	cps
Titanium	47-1	9843	9700	9613	9719	1.20	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P7
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:10:54	DataFile Name :	006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	39141	38613	38636	38796	0.77	cps
Vanadium	51-2	28320	28467	28430	28406	0.27	cps
Yttrium	89-1	15514516	15924902	15872621	15770680	1.42	cps
Yttrium	89-2	4317503	4288698	4253876	4286692	0.74	cps
Zinc	66-2	7605	7345	7625	7525	2.08	cps
Zirconium	90-1	27202	27299	26738	27079	1.11	cps
Zirconium	91-1	5978	6091	5848	5972	2.04	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P7
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:14:09	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	328563	326071	325525	326720	0.50	cps
Antimony	121-1	728383	736038	729357	731259	0.57	cps
Arsenic	75-2	40338	40114	39345	39932	1.30	cps
Barium	135-1	905410	904267	898398	902691	0.42	cps
Barium	137-1	1559522	1614062	1610993	1594859	1.92	cps
Beryllium	9-1	77984	79020	76973	77992	1.31	cps
Bismuth	209-1	9551605	9574623	9283567	9469932	1.71	cps
Bismuth	209-2	8120260	8244070	8123673	8162668	0.86	cps
Bromine	81-1	16376	16906	16573	16618	1.61	cps
Bromine	81-2	263	260	270	264	1.92	cps
Cadmium	108-1	14838	14854	14517	14736	1.29	cps
Cadmium	106-1	24370	24377	23876	24208	1.19	cps
Cadmium	111-1	203015	204450	202364	203276	0.53	cps
Calcium	43-1	208299	207218	207573	207697	0.27	cps
Calcium	44-1	3263614	3228696	3170030	3220780	1.47	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	301774	299002	300565	300447	0.46	cps
Cobalt	59-2	480187	478423	474706	477772	0.59	cps
Copper	63-2	3583437	3589083	3510343	3560954	1.23	cps
Dysprosium	156-1	27	33	50	37	32.78	cps
Dysprosium	156-2	67	63	80	70	12.60	cps
Erbium	164-1	67	70	90	76	16.70	cps
Erbium	164-2	77	43	33	51	44.40	cps
Gadolinium	160-1	60	53	53	56	6.93	cps
Gadolinium	160-2	650	667	667	661	1.46	cps
Holmium	165-1	15528166	15643364	15431594	15534375	0.68	cps
Holmium	165-2	11396452	11384023	11316483	11365653	0.38	cps
Indium	115-1	13351082	13087993	13158040	13199039	1.03	cps
Indium	115-2	4889563	4849518	4827816	4855632	0.65	cps
Iron	56-2	14167496	14039381	13945797	14050891	0.79	cps
Iron	57-2	363784	361169	358727	361227	0.70	cps
Iron	54-2	810090	798554	798046	802230	0.85	cps
Krypton	83-1	260	263	200	241	14.78	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P7
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:14:09	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2729210	2799418	2791146	2773258	1.38	cps
Lead	207-1	2450998	2488238	2432131	2457123	1.16	cps
Lead	208-1	11108194	11237804	11069879	11138626	0.79	cps
Lithium	6-1	1693594	1652559	1657884	1668013	1.34	cps
Magnesium	24-2	2619816	2616953	2645686	2627485	0.60	cps
Manganese	55-2	2408531	2402108	2337213	2382617	1.66	cps
Molybdenum	94-1	2612264	2572564	2581167	2588665	0.81	cps
Molybdenum	95-1	3791532	3760177	3756522	3769410	0.51	cps
Molybdenum	96-1	4152597	4162953	4088393	4134648	0.98	cps
Molybdenum	97-1	2357584	2358995	2308594	2341724	1.23	cps
Molybdenum	98-1	6098838	6067975	5960677	6042497	1.20	cps
Neodymium	150-1	80	73	50	68	23.24	cps
Neodymium	150-2	13	7	7	9	43.25	cps
Nickel	60-2	123849	122411	121615	122625	0.92	cps
Phosphorus	31-2	16789	15855	16449	16364	2.89	cps
Potassium	39-2	1782306	1793495	1768984	1781595	0.69	cps
Rhodium	103-1	12422017	12401736	12143035	12322263	1.26	cps
Rhodium	103-2	7422184	7349601	7326809	7366198	0.68	cps
Scandium	45-1	7387634	7261046	7218836	7289172	1.21	cps
Scandium	45-2	633246	624279	623991	627172	0.84	cps
Selenium	82-1	12384	12583	12349	12439	1.02	cps
Selenium	77-2	1200	1250	1220	1223	2.06	cps
Selenium	78-2	4711	4407	4781	4633	4.28	cps
Silicon	28-1	1459334	1463727	1455909	1459657	0.27	cps
Silver	107-1	986441	996243	985289	989325	0.61	cps
Silver	109-1	929149	940526	935064	934913	0.61	cps
Sodium	23-2	4304623	4270228	4289165	4288005	0.40	cps
Strontium	86-1	233939	235094	234626	234553	0.25	cps
Strontium	88-1	2106655	2073910	2079864	2086810	0.84	cps
Sulfur	34-1	277871	278231	276866	277656	0.25	cps
Terbium	159-1	15948358	15833536	15973594	15918496	0.47	cps
Terbium	159-2	10982123	11245564	11185815	11137834	1.24	cps
Thallium	203-1	653874	657033	660123	657010	0.48	cps
Thallium	205-1	1536252	1560491	1552812	1549852	0.80	cps
Tin	118-1	605671	609328	613451	609483	0.64	cps
Titanium	47-1	922693	922928	915344	920321	0.47	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P7
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:14:09	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	2058725	2051796	2051966	2054162	0.19	cps
Vanadium	51-2	262810	261168	258952	260977	0.74	cps
Yttrium	89-1	15691930	15488351	15529252	15569844	0.69	cps
Yttrium	89-2	4169448	4174078	4118961	4154163	0.74	cps
Zinc	66-2	586900	585195	579176	583757	0.70	cps
Zirconium	90-1	1255556	1254857	1247669	1252694	0.35	cps
Zirconium	91-1	279413	280459	278513	279461	0.35	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P7
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:17:09	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	752097	743168	738040	744435	0.96	cps
Antimony	121-1	1754084	1773296	1826125	1784502	2.09	cps
Arsenic	75-2	90514	88793	89350	89552	0.98	cps
Barium	135-1	2242613	2253764	2224377	2240251	0.66	cps
Barium	137-1	3815633	3873912	3776664	3822070	1.28	cps
Beryllium	9-1	187425	186610	185802	186613	0.43	cps
Bismuth	209-1	9322589	9294410	9403111	9340037	0.60	cps
Bismuth	209-2	7954971	7986584	7841566	7927707	0.96	cps
Bromine	81-1	14954	14888	14040	14627	3.48	cps
Bromine	81-2	143	120	113	126	12.55	cps
Cadmium	108-1	34448	34765	34006	34406	1.11	cps
Cadmium	106-1	51852	51745	51206	51601	0.67	cps
Cadmium	111-1	472007	474875	471137	472673	0.41	cps
Calcium	43-1	484146	481856	479004	481669	0.53	cps
Calcium	44-1	7426779	7449257	7458902	7444979	0.22	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	687270	679564	671186	679340	1.18	cps
Cobalt	59-2	1084030	1078665	1062251	1074982	1.06	cps
Copper	63-2	8139291	8086827	7944386	8056834	1.25	cps
Dysprosium	156-1	50	30	40	40	25.00	cps
Dysprosium	156-2	107	110	87	101	12.48	cps
Erbium	164-1	90	107	63	87	25.22	cps
Erbium	164-2	63	50	67	60	14.70	cps
Gadolinium	160-1	73	63	67	68	7.51	cps
Gadolinium	160-2	640	580	733	651	11.87	cps
Holmium	165-1	15393544	15020690	15096504	15170246	1.30	cps
Holmium	165-2	11134869	11162378	10959433	11085560	0.99	cps
Indium	115-1	12612722	12330150	12374574	12439149	1.22	cps
Indium	115-2	4522030	4517452	4525881	4521788	0.09	cps
Iron	56-2	32754084	32308905	32158785	32407258	0.96	cps
Iron	57-2	835136	821237	821537	825970	0.96	cps
Iron	54-2	1814866	1812489	1779201	1802185	1.11	cps
Krypton	83-1	233	223	240	232	3.61	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P7
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:17:09	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	6645710	6753727	6756443	6718626	0.94	cps
Lead	207-1	5964181	6012034	6023073	5999763	0.52	cps
Lead	208-1	26909560	27152683	27374785	27145676	0.86	cps
Lithium	6-1	1625110	1648381	1608482	1627324	1.23	cps
Magnesium	24-2	6034128	5915593	5872468	5940729	1.41	cps
Manganese	55-2	5542561	5492756	5502321	5512546	0.48	cps
Molybdenum	94-1	6094467	6166864	6134053	6131795	0.59	cps
Molybdenum	95-1	8870940	8957971	8790432	8873114	0.94	cps
Molybdenum	96-1	9789495	9756540	9722994	9756343	0.34	cps
Molybdenum	97-1	5557152	5549668	5555052	5553957	0.07	cps
Molybdenum	98-1	14253635	14258006	14150890	14220844	0.43	cps
Neodymium	150-1	120	133	120	124	6.19	cps
Neodymium	150-2	30	37	43	37	18.18	cps
Nickel	60-2	278132	273030	274836	275333	0.94	cps
Phosphorus	31-2	37222	36032	35939	36398	1.97	cps
Potassium	39-2	3969454	3896449	3865649	3910517	1.36	cps
Rhodium	103-1	11711007	11668197	11560365	11646523	0.67	cps
Rhodium	103-2	6955276	6825163	6728016	6836152	1.67	cps
Scandium	45-1	6927148	6857555	6801288	6861997	0.92	cps
Scandium	45-2	574937	571689	565451	570692	0.84	cps
Selenium	82-1	28608	28540	28138	28429	0.89	cps
Selenium	77-2	2890	2847	2810	2849	1.41	cps
Selenium	78-2	10517	10290	10100	10303	2.03	cps
Silicon	28-1	1818831	1815805	1808659	1814432	0.29	cps
Silver	107-1	2400881	2417912	2347832	2388875	1.53	cps
Silver	109-1	2258348	2261962	2225663	2248658	0.89	cps
Sodium	23-2	9858427	9693922	9712176	9754842	0.92	cps
Strontium	86-1	548682	554384	547116	550061	0.70	cps
Strontium	88-1	4912089	4894358	4901756	4902734	0.18	cps
Sulfur	34-1	340228	335616	332864	336236	1.11	cps
Terbium	159-1	15580591	15456175	15421475	15486080	0.54	cps
Terbium	159-2	10839324	10794522	10655027	10762957	0.89	cps
Thallium	203-1	1589899	1596632	1602371	1596301	0.39	cps
Thallium	205-1	3989895	4111602	4029143	4043547	1.54	cps
Tin	118-1	1429431	1438539	1439321	1435764	0.38	cps
Titanium	47-1	2203209	2194751	2148648	2182203	1.35	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P7
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:17:09	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	5057247	5149741	5153915	5120301	1.07	cps
Vanadium	51-2	596807	591252	587264	591775	0.81	cps
Yttrium	89-1	15001067	14633359	14539216	14724547	1.66	cps
Yttrium	89-2	3917191	3861846	3739940	3839659	2.36	cps
Zinc	66-2	1343681	1322753	1318263	1328232	1.02	cps
Zirconium	90-1	3037805	2983356	3018664	3013275	0.92	cps
Zirconium	91-1	657101	660533	652751	656795	0.59	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P7
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:19:58	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1389954	1367459	1373951	1377121	0.84	cps
Antimony	121-1	3409033	3366863	3330595	3368831	1.17	cps
Arsenic	75-2	164898	163341	161740	163327	0.97	cps
Barium	135-1	4276903	4212784	4227782	4239156	0.79	cps
Barium	137-1	7264959	7311924	7223982	7266955	0.61	cps
Beryllium	9-1	361807	367151	365761	364906	0.76	cps
Bismuth	209-1	9228457	9178487	9022460	9143135	1.18	cps
Bismuth	209-2	7852679	7806977	7829766	7829807	0.29	cps
Bromine	81-1	12112	11705	11755	11857	1.87	cps
Bromine	81-2	107	113	153	124	20.28	cps
Cadmium	108-1	63374	63254	61968	62865	1.24	cps
Cadmium	106-1	92579	91854	90342	91592	1.25	cps
Cadmium	111-1	876553	885137	869974	877221	0.87	cps
Calcium	43-1	879319	874641	850332	868097	1.79	cps
Calcium	44-1	13689466	13612511	13145377	13482451	2.18	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1228269	1220457	1217409	1222045	0.46	cps
Cobalt	59-2	2007574	1991835	1966344	1988584	1.05	cps
Copper	63-2	14489119	14431881	14362882	14427960	0.44	cps
Dysprosium	156-1	73	67	73	71	5.41	cps
Dysprosium	156-2	260	210	197	222	15.03	cps
Erbium	164-1	83	60	120	88	34.46	cps
Erbium	164-2	33	50	53	46	23.52	cps
Gadolinium	160-1	100	73	113	96	21.32	cps
Gadolinium	160-2	600	707	643	650	8.25	cps
Holmium	165-1	14889099	14470895	14435189	14598394	1.73	cps
Holmium	165-2	10936709	10733879	10796520	10822370	0.96	cps
Indium	115-1	11886170	11550407	11326222	11587599	2.43	cps
Indium	115-2	4224006	4274078	4211723	4236602	0.78	cps
Iron	56-2	58860799	58756377	58561631	58726269	0.26	cps
Iron	57-2	1471791	1478455	1481969	1477405	0.35	cps
Iron	54-2	3244826	3267737	3216545	3243036	0.79	cps
Krypton	83-1	190	180	157	176	9.74	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P7
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:19:58	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	13190254	13122052	13151506	13154604	0.26	cps
Lead	207-1	11757246	11776409	11684250	11739302	0.41	cps
Lead	208-1	53176707	53424583	52995297	53198862	0.41	cps
Lithium	6-1	1619678	1573469	1561212	1584786	1.95	cps
Magnesium	24-2	10913456	10674707	10732107	10773423	1.16	cps
Manganese	55-2	10011560	10030473	9915990	9986008	0.61	cps
Molybdenum	94-1	11398755	11307782	11138844	11281794	1.17	cps
Molybdenum	95-1	16492650	16522627	16039467	16351581	1.66	cps
Molybdenum	96-1	18043615	18122786	17468456	17878286	2.00	cps
Molybdenum	97-1	10313087	10245831	9929375	10162764	2.02	cps
Molybdenum	98-1	26518822	26275913	25581115	26125283	1.86	cps
Neodymium	150-1	213	220	227	220	3.03	cps
Neodymium	150-2	33	57	47	46	25.70	cps
Nickel	60-2	488936	489932	486984	488617	0.31	cps
Phosphorus	31-2	66065	64669	63769	64834	1.78	cps
Potassium	39-2	6923205	6970580	6918562	6937449	0.41	cps
Rhodium	103-1	11052508	10643464	10402957	10699643	3.07	cps
Rhodium	103-2	6417785	6399644	6392064	6403165	0.21	cps
Scandium	45-1	6503547	6172074	6027281	6234301	3.92	cps
Scandium	45-2	518394	513911	514467	515591	0.47	cps
Selenium	82-1	52631	53108	51697	52479	1.37	cps
Selenium	77-2	5458	5261	5231	5317	2.32	cps
Selenium	78-2	17884	18221	17647	17918	1.61	cps
Silicon	28-1	2398014	2367403	2339753	2368390	1.23	cps
Silver	107-1	4384212	4348803	4239385	4324133	1.75	cps
Silver	109-1	4192742	4124884	4111190	4142939	1.05	cps
Sodium	23-2	17943303	17688114	17618212	17749876	0.96	cps
Strontium	86-1	1014063	1012480	991346	1005963	1.26	cps
Strontium	88-1	9096260	9083797	8868456	9016171	1.42	cps
Sulfur	34-1	427367	425376	410727	421157	2.16	cps
Terbium	159-1	15299105	14891813	14795037	14995318	1.78	cps
Terbium	159-2	10769774	10480458	10429515	10559916	1.74	cps
Thallium	203-1	3306338	3313335	3312086	3310586	0.11	cps
Thallium	205-1	7786941	7857580	7776903	7807141	0.56	cps
Tin	118-1	2774461	2766500	2702097	2747686	1.44	cps
Titanium	47-1	3918075	3897758	3887430	3901088	0.40	cps

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P7
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:19:58	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	9984314	10353204	10174546	10170688	1.81	cps
Vanadium	51-2	1070983	1068045	1059550	1066192	0.56	cps
Yttrium	89-1	14111321	13572556	13298764	13660880	3.03	cps
Yttrium	89-2	3649349	3588967	3542245	3593520	1.49	cps
Zinc	66-2	2493978	2425179	2488352	2469170	1.55	cps
Zirconium	90-1	5586231	5527042	5533760	5549011	0.58	cps
Zirconium	91-1	1213915	1214615	1188312	1205614	1.24	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P7
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:22:45	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2662864	2715770	2683318	2687317	0.99	cps
Antimony	121-1	6342684	6491417	6507411	6447171	1.41	cps
Arsenic	75-2	321625	318845	318652	319708	0.52	cps
Barium	135-1	8143813	8225933	8240434	8203393	0.64	cps
Barium	137-1	13975436	14147544	14178111	14100363	0.77	cps
Beryllium	9-1	701293	711083	697807	703395	0.98	cps
Bismuth	209-1	9011804	9022689	9075156	9036549	0.37	cps
Bismuth	209-2	7754114	7700107	7765623	7739948	0.45	cps
Bromine	81-1	11218	11485	11191	11298	1.44	cps
Bromine	81-2	103	117	100	107	8.27	cps
Cadmium	108-1	118066	120996	119440	119500	1.23	cps
Cadmium	106-1	171742	171114	173003	171953	0.56	cps
Cadmium	111-1	1696773	1712973	1708414	1706053	0.49	cps
Calcium	43-1	1608919	1591346	1591607	1597291	0.63	cps
Calcium	44-1	25419341	25705776	25553380	25559499	0.56	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2426361	2399465	2422411	2416079	0.60	cps
Cobalt	59-2	3847018	3831055	3852761	3843611	0.29	cps
Copper	63-2	28035947	28030335	27983571	28016618	0.10	cps
Dysprosium	156-1	123	123	137	128	6.03	cps
Dysprosium	156-2	343	317	357	339	6.01	cps
Erbium	164-1	133	127	143	134	6.24	cps
Erbium	164-2	80	90	77	82	8.44	cps
Gadolinium	160-1	117	107	117	113	5.09	cps
Gadolinium	160-2	583	577	630	597	4.87	cps
Holmium	165-1	14629175	14565599	14602486	14599087	0.22	cps
Holmium	165-2	10981337	10775246	10862936	10873173	0.95	cps
Indium	115-1	11145189	11201295	11138391	11161625	0.31	cps
Indium	115-2	4221267	4191585	4150551	4187801	0.85	cps
Iron	56-2	114865128	114060538	113679832	114201833	0.53	cps
Iron	57-2	2873868	2865066	2849303	2862745	0.43	cps
Iron	54-2	6288172	6279409	6248603	6272061	0.33	cps
Krypton	83-1	223	253	197	224	12.63	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P7
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:22:45	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	26273411	26428825	26200007	26300748	0.44	cps
Lead	207-1	23029795	23163175	23171024	23121331	0.34	cps
Lead	208-1	105256108	105848858	105600000	105568322	0.28	cps
Lithium	6-1	1567383	1535241	1569440	1557355	1.23	cps
Magnesium	24-2	21058313	21189679	21105395	21117796	0.32	cps
Manganese	55-2	19449528	19403623	19304276	19385809	0.38	cps
Molybdenum	94-1	21468573	21663939	21495541	21542684	0.49	cps
Molybdenum	95-1	31365854	31416859	31356545	31379752	0.10	cps
Molybdenum	96-1	34289591	34548455	34304000	34380682	0.42	cps
Molybdenum	97-1	19436206	19586491	19451518	19491405	0.42	cps
Molybdenum	98-1	50043539	50319329	50472363	50278410	0.43	cps
Neodymium	150-1	360	433	367	387	10.49	cps
Neodymium	150-2	123	63	93	93	32.15	cps
Nickel	60-2	954068	940191	938409	944223	0.91	cps
Phosphorus	31-2	125926	125159	125923	125669	0.35	cps
Potassium	39-2	13632253	13491804	13653579	13592545	0.65	cps
Rhodium	103-1	10067567	10050425	10103604	10073865	0.27	cps
Rhodium	103-2	6301953	6243371	6200192	6248506	0.82	cps
Scandium	45-1	5853423	5879251	5873702	5868792	0.23	cps
Scandium	45-2	509982	503737	505498	506406	0.64	cps
Selenium	82-1	97922	98895	98699	98505	0.52	cps
Selenium	77-2	10237	10457	10003	10233	2.22	cps
Selenium	78-2	34330	34096	34757	34394	0.98	cps
Silicon	28-1	3499357	3609986	3614025	3574456	1.82	cps
Silver	107-1	8154888	8372859	8323955	8283901	1.38	cps
Silver	109-1	7720186	7807560	7816153	7781300	0.68	cps
Sodium	23-2	34613835	34715482	34576081	34635133	0.21	cps
Strontium	86-1	1962314	1972182	1952145	1962214	0.51	cps
Strontium	88-1	17131200	17369808	17285631	17262213	0.70	cps
Sulfur	34-1	598378	608307	608138	604941	0.94	cps
Terbium	159-1	14684496	14683107	14744827	14704143	0.24	cps
Terbium	159-2	10675325	10618769	10547867	10613987	0.60	cps
Thallium	203-1	6559724	6670169	6608783	6612892	0.84	cps
Thallium	205-1	15541360	15673271	15449304	15554645	0.72	cps
Tin	118-1	5320106	5356589	5390224	5355640	0.65	cps
Titanium	47-1	7367062	7450753	7390326	7402714	0.58	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P7
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:22:45	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	20120291	20461529	20523268	20368363	1.07	cps
Vanadium	51-2	2151544	2119002	2111719	2127422	1.00	cps
Yttrium	89-1	12990526	13065629	12990672	13015609	0.33	cps
Yttrium	89-2	3552238	3553282	3564514	3556678	0.19	cps
Zinc	66-2	4784742	4772545	4755272	4770853	0.31	cps
Zirconium	90-1	10567855	10712639	10694399	10658298	0.74	cps
Zirconium	91-1	2303778	2328656	2363980	2332138	1.30	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P7
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:25:28	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5359364	5282054	5355701	5332373	0.82	cps
Antimony	121-1	12774680	12880315	12911573	12855523	0.56	cps
Arsenic	75-2	636098	635229	639581	636969	0.36	cps
Barium	135-1	16192406	16319612	16313347	16275122	0.44	cps
Barium	137-1	27718957	28322468	28191134	28077520	1.13	cps
Beryllium	9-1	1394732	1413214	1370252	1392733	1.55	cps
Bismuth	209-1	9007350	9003500	8980024	8996958	0.16	cps
Bismuth	209-2	7709618	7658774	7687266	7685219	0.33	cps
Bromine	81-1	11371	11264	11565	11400	1.34	cps
Bromine	81-2	110	123	130	121	8.41	cps
Cadmium	108-1	232890	237595	235288	235258	1.00	cps
Cadmium	106-1	327096	332173	330231	329834	0.78	cps
Cadmium	111-1	3313476	3318234	3368056	3333256	0.91	cps
Calcium	43-1	3088361	3116647	3192413	3132474	1.72	cps
Calcium	44-1	50016179	50776188	50827636	50540001	0.90	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4831124	4800261	4747225	4792870	0.89	cps
Cobalt	59-2	7528949	7601536	7643433	7591306	0.76	cps
Copper	63-2	55457404	55387321	55360803	55401843	0.09	cps
Dysprosium	156-1	273	220	250	248	10.79	cps
Dysprosium	156-2	753	887	743	794	10.07	cps
Erbium	164-1	140	143	163	149	8.48	cps
Erbium	164-2	140	110	110	120	14.43	cps
Gadolinium	160-1	127	173	150	150	15.56	cps
Gadolinium	160-2	690	690	723	701	2.74	cps
Holmium	165-1	14778209	14470399	14819748	14689452	1.30	cps
Holmium	165-2	11105132	10938102	10946909	10996714	0.85	cps
Indium	115-1	11068389	10983496	11066094	11039326	0.44	cps
Indium	115-2	4194377	4155910	4155218	4168502	0.54	cps
Iron	56-2	227878030	229178877	227976803	228344570	0.32	cps
Iron	57-2	5704524	5678410	5661466	5681467	0.38	cps
Iron	54-2	12527662	12487804	12514214	12509893	0.16	cps
Krypton	83-1	203	237	227	222	7.70	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P7
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:25:28	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	51563051	51621313	51746689	51643684	0.18	cps
Lead	207-1	45560139	45711609	45837458	45703069	0.30	cps
Lead	208-1	209113922	208330757	208513722	208652800	0.20	cps
Lithium	6-1	1524581	1532091	1509645	1522106	0.75	cps
Magnesium	24-2	41530974	42288502	41575453	41798310	1.02	cps
Manganese	55-2	38801473	39007178	38796473	38868374	0.31	cps
Molybdenum	94-1	42311561	42855086	42820906	42662518	0.71	cps
Molybdenum	95-1	61495691	62501151	62637074	62211305	1.00	cps
Molybdenum	96-1	67786904	68056314	68354751	68065990	0.42	cps
Molybdenum	97-1	38554086	38911670	38957098	38807618	0.57	cps
Molybdenum	98-1	100194582	100829645	100711149	100578459	0.34	cps
Neodymium	150-1	750	720	790	753	4.66	cps
Neodymium	150-2	190	187	180	186	2.74	cps
Nickel	60-2	1924234	1953800	1901958	1926664	1.35	cps
Phosphorus	31-2	252713	251053	249461	251076	0.65	cps
Potassium	39-2	26946049	27158705	26989868	27031540	0.42	cps
Rhodium	103-1	9990035	9988403	9912732	9963723	0.44	cps
Rhodium	103-2	6242476	6254652	6232072	6243066	0.18	cps
Scandium	45-1	5794593	5892270	5871053	5852639	0.88	cps
Scandium	45-2	519175	515271	517218	517221	0.38	cps
Selenium	82-1	192073	192515	192827	192472	0.20	cps
Selenium	77-2	20154	19603	20127	19961	1.56	cps
Selenium	78-2	68096	66153	67242	67164	1.45	cps
Silicon	28-1	5950978	6114642	6196993	6087538	2.06	cps
Silver	107-1	16018568	16153131	16100791	16090830	0.42	cps
Silver	109-1	15121167	15184018	15220737	15175307	0.33	cps
Sodium	23-2	68448309	69131724	68492376	68690803	0.56	cps
Strontium	86-1	3889133	3960561	3922129	3923941	0.91	cps
Strontium	88-1	34032969	34208249	34316565	34185928	0.42	cps
Sulfur	34-1	1010942	1022575	1024329	1019282	0.71	cps
Terbium	159-1	15064768	14798154	14874257	14912393	0.92	cps
Terbium	159-2	10891204	10700918	10654689	10748937	1.17	cps
Thallium	203-1	12853579	12932394	13045006	12943660	0.74	cps
Thallium	205-1	30742032	30805358	30983707	30843699	0.41	cps
Tin	118-1	10482281	10569856	10579278	10543805	0.51	cps
Titanium	47-1	14704117	14871625	14773753	14783165	0.57	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P7
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:25:28	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	40892281	40860703	40872834	40875273	0.04	cps
Vanadium	51-2	4274208	4266970	4215659	4252279	0.75	cps
Yttrium	89-1	13150351	13000894	13128815	13093353	0.62	cps
Yttrium	89-2	3625141	3554879	3616436	3598819	1.06	cps
Zinc	66-2	9383010	9301308	9235761	9306693	0.79	cps
Zirconium	90-1	21166133	21319772	21213334	21233080	0.37	cps
Zirconium	91-1	4650931	4679923	4718960	4683271	0.73	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P7
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:28:14	DataFile Name :	012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	29496672	29268065	29760505	29508414	0.84	cps
Antimony	121-1	8099	7112	6275	7162	12.75	cps
Arsenic	75-2	357	380	367	368	3.18	cps
Barium	135-1	8893	7899	7399	8063	9.43	cps
Barium	137-1	14948	13513	12736	13732	8.17	cps
Beryllium	9-1	567	470	473	503	10.90	cps
Bismuth	209-1	8295851	8117429	8061174	8158151	1.50	cps
Bismuth	209-2	7051772	7006006	6958929	7005569	0.66	cps
Bromine	81-1	12892	13336	13506	13245	2.39	cps
Bromine	81-2	123	173	193	163	22.07	cps
Cadmium	108-1	123	133	130	129	3.95	cps
Cadmium	106-1	3494	3254	3414	3387	3.61	cps
Cadmium	111-1	3235	2939	3004	3060	5.07	cps
Calcium	43-1	15625338	15788407	15900618	15771454	0.88	cps
Calcium	44-1	250256670	256075063	258688456	255006730	1.69	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	9315	7695	8029	8347	10.25	cps
Cobalt	59-2	21072	21783	21218	21358	1.76	cps
Copper	63-2	11354	10954	10884	11064	2.29	cps
Dysprosium	156-1	500	453	520	491	6.97	cps
Dysprosium	156-2	380	423	397	400	5.46	cps
Erbium	164-1	490	573	607	557	10.80	cps
Erbium	164-2	390	460	373	408	11.28	cps
Gadolinium	160-1	447	487	497	477	5.55	cps
Gadolinium	160-2	953	923	883	920	3.82	cps
Holmium	165-1	14766524	14452689	14395977	14538397	1.37	cps
Holmium	165-2	10849973	10868102	10677377	10798484	0.97	cps
Indium	115-1	11245994	10821201	10782212	10949802	2.35	cps
Indium	115-2	4169160	4242824	4210344	4207443	0.88	cps
Iron	56-2	1176723902	1174592783	1198288595	1183201760	1.11	cps
Iron	57-2	29273816	29391613	29977403	29547611	1.28	cps
Iron	54-2	63509211	63831459	64833944	64058205	1.08	cps
Krypton	83-1	293	280	303	292	4.01	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P7
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:28:14	DataFile Name :	012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	17962	15746	14027	15912	12.40	cps
Lead	207-1	16383	13470	12539	14131	14.19	cps
Lead	208-1	72365	62654	56292	63770	12.69	cps
Lithium	6-1	1522834	1497078	1500999	1506970	0.92	cps
Magnesium	24-2	228698777	229095843	232727797	230174139	0.96	cps
Manganese	55-2	19693	19633	18975	19434	2.05	cps
Molybdenum	94-1	15755	13683	11605	13681	15.17	cps
Molybdenum	95-1	17277	13530	11331	14046	21.40	cps
Molybdenum	96-1	28855	24414	22908	25392	12.18	cps
Molybdenum	97-1	10494	8046	7352	8630	19.13	cps
Molybdenum	98-1	26190	20952	17901	21681	19.34	cps
Neodymium	150-1	290	233	257	260	10.95	cps
Neodymium	150-2	183	183	150	172	11.18	cps
Nickel	60-2	8162	8162	8232	8186	0.49	cps
Phosphorus	31-2	363	313	310	329	9.08	cps
Potassium	39-2	147225678	146849344	148841098	147638707	0.72	cps
Rhodium	103-1	9693981	9378329	9406717	9493009	1.84	cps
Rhodium	103-2	5963879	5987301	6026883	5992688	0.53	cps
Scandium	45-1	6029411	5995189	5984118	6002906	0.39	cps
Scandium	45-2	550657	553324	557958	553979	0.67	cps
Selenium	82-1	371	337	340	349	5.43	cps
Selenium	77-2	10	3	7	7	50.03	cps
Selenium	78-2	383	423	433	413	6.40	cps
Silicon	28-1	751892	747350	741419	746887	0.70	cps
Silver	107-1	4596	3778	3174	3849	18.55	cps
Silver	109-1	4177	3567	2890	3545	18.16	cps
Sodium	23-2	370469701	371535741	376222594	372742679	0.82	cps
Strontium	86-1	12646	12419	12125	12396	2.10	cps
Strontium	88-1	103222	103111	104618	103650	0.81	cps
Sulfur	34-1	164050	167106	176388	169181	3.80	cps
Terbium	159-1	14836309	14682224	14614608	14711047	0.77	cps
Terbium	159-2	10597401	10461605	10569554	10542854	0.68	cps
Thallium	203-1	3024	2320	1970	2438	22.01	cps
Thallium	205-1	7395	5938	4447	5927	24.87	cps
Tin	118-1	5534	5114	4367	5005	11.81	cps
Titanium	47-1	3921	2980	2727	3209	19.60	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P7
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:28:14	DataFile Name :	012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	7772	5888	4578	6079	26.42	cps
Vanadium	51-2	1130	960	967	1019	9.45	cps
Yttrium	89-1	13175619	13037949	13154638	13122735	0.57	cps
Yttrium	89-2	3694604	3749818	3733582	3726001	0.76	cps
Zinc	66-2	10280	10654	10747	10560	2.34	cps
Zirconium	90-1	15749	14124	14140	14671	6.36	cps
Zirconium	91-1	3450	3230	2960	3214	7.64	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P7
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:49:00	DataFile Name :	014ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	160546	159272	159071	159630	0.50	cps
Antimony	121-1	2886307	2960446	2963852	2936868	1.49	cps
Arsenic	75-2	158102	158663	156205	157657	0.82	cps
Barium	135-1	352298	357475	357700	355824	0.86	cps
Barium	137-1	609448	616400	627607	617818	1.48	cps
Beryllium	9-1	158708	162093	163116	161305	1.43	cps
Bismuth	209-1	9475849	9454413	9618973	9516412	0.94	cps
Bismuth	209-2	8366528	8325944	8334165	8342213	0.26	cps
Bromine	81-1	13716	13693	13086	13498	2.65	cps
Bromine	81-2	193	213	190	199	6.35	cps
Cadmium	108-1	25048	24898	24975	24974	0.30	cps
Cadmium	106-1	36890	37822	37809	37507	1.43	cps
Cadmium	111-1	379838	383567	388333	383913	1.11	cps
Calcium	43-1	76692	76562	77416	76890	0.60	cps
Calcium	44-1	1173586	1199164	1187450	1186733	1.08	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	599211	600113	598474	599266	0.14	cps
Cobalt	59-2	954551	950301	953444	952765	0.23	cps
Copper	63-2	674102	672814	669191	672036	0.38	cps
Dysprosium	156-1	20	13	17	17	20.01	cps
Dysprosium	156-2	23	23	17	21	18.21	cps
Erbium	164-1	43	93	93	77	37.65	cps
Erbium	164-2	43	60	37	47	25.75	cps
Gadolinium	160-1	47	67	40	51	27.15	cps
Gadolinium	160-2	620	690	613	641	6.63	cps
Holmium	165-1	15028011	15167933	15260713	15152219	0.77	cps
Holmium	165-2	11525394	11508219	11466147	11499920	0.27	cps
Indium	115-1	12305713	12363365	12738691	12469257	1.89	cps
Indium	115-2	4746680	4824510	4757072	4776087	0.88	cps
Iron	56-2	11071884	11029179	11086191	11062418	0.27	cps
Iron	57-2	281922	282564	278533	281007	0.77	cps
Iron	54-2	638647	638300	635284	637410	0.29	cps
Krypton	83-1	247	277	247	257	6.75	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P7
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:49:00	DataFile Name :	014ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2322825	2346247	2333523	2334198	0.50	cps
Lead	207-1	1945843	1911193	1961473	1939503	1.33	cps
Lead	208-1	9122728	9037114	9250222	9136688	1.17	cps
Lithium	6-1	1664527	1637549	1724408	1675495	2.65	cps
Magnesium	24-2	598524	597639	593969	596711	0.40	cps
Manganese	55-2	474664	472279	471872	472938	0.32	cps
Molybdenum	94-1	640	660	557	619	8.85	cps
Molybdenum	95-1	213	400	330	314	29.99	cps
Molybdenum	96-1	500	657	553	570	13.98	cps
Molybdenum	97-1	160	2295	160	872	141.42	cps
Molybdenum	98-1	537	9732	510	3593	147.98	cps
Neodymium	150-1	23	10	17	17	39.99	cps
Neodymium	150-2	20	7	20	16	49.47	cps
Nickel	60-2	245823	244650	246718	245730	0.42	cps
Phosphorus	31-2	177	187	217	193	10.77	cps
Potassium	39-2	1362061	1360478	1347153	1356564	0.60	cps
Rhodium	103-1	11604614	11686461	11732920	11674665	0.56	cps
Rhodium	103-2	7222434	7191029	7212714	7208726	0.22	cps
Scandium	45-1	6738940	6766604	6891160	6798901	1.19	cps
Scandium	45-2	607013	609459	605988	607487	0.29	cps
Selenium	82-1	46103	46191	46452	46249	0.39	cps
Selenium	77-2	4851	5401	5188	5147	5.39	cps
Selenium	78-2	17420	17667	17447	17512	0.77	cps
Silicon	28-1	701568	700757	703584	701970	0.21	cps
Silver	107-1	898055	917730	926077	913954	1.57	cps
Silver	109-1	862426	881575	881983	875328	1.28	cps
Sodium	23-2	1691134	1696958	1649522	1679205	1.54	cps
Strontium	86-1	1480	1550	1523	1518	2.33	cps
Strontium	88-1	10070	10140	10214	10141	0.71	cps
Sulfur	34-1	205496	206468	204481	205482	0.48	cps
Terbium	159-1	15426789	15246117	15515041	15395982	0.89	cps
Terbium	159-2	11300599	11272246	11450289	11341045	0.84	cps
Thallium	203-1	2796579	2872262	2879634	2849491	1.61	cps
Thallium	205-1	6733030	6792710	6837407	6787716	0.77	cps
Tin	118-1	3360	3494	3367	3407	2.21	cps
Titanium	47-1	140	127	123	130	6.78	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P7
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 15:49:00	DataFile Name :	014ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	53	307	33	131	116.22	cps
Vanadium	51-2	511579	512122	508701	510801	0.36	cps
Yttrium	89-1	14574102	14482419	14614124	14556882	0.46	cps
Yttrium	89-2	4071212	4083032	4002875	4052373	1.07	cps
Zinc	66-2	226763	226312	226061	226379	0.16	cps
Zirconium	90-1	1140	1253	1127	1173	5.93	cps
Zirconium	91-1	580	500	540	540	7.41	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P7
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:04:14	DataFile Name :	017LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	6842	7112	6942	6965	1.96	cps
Antimony	121-1	27466	27623	27807	27632	0.62	cps
Arsenic	75-2	830	833	750	804	5.86	cps
Barium	135-1	32935	33486	33793	33405	1.30	cps
Barium	137-1	57070	57154	58573	57599	1.47	cps
Beryllium	9-1	1723	1680	1583	1662	4.31	cps
Bismuth	209-1	9345795	9363007	9369063	9359288	0.13	cps
Bismuth	209-2	8257161	8260678	8250522	8256120	0.06	cps
Bromine	81-1	13853	13937	14220	14003	1.37	cps
Bromine	81-2	283	243	233	253	10.44	cps
Cadmium	108-1	293	313	263	290	8.68	cps
Cadmium	106-1	3914	3594	3777	3762	4.27	cps
Cadmium	111-1	6143	6081	6381	6202	2.56	cps
Calcium	43-1	19089	19139	19880	19369	2.29	cps
Calcium	44-1	317322	318540	321068	318977	0.60	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	12699	12505	12779	12661	1.11	cps
Cobalt	59-2	9970	10080	9690	9913	2.03	cps
Copper	63-2	14924	15114	15101	15047	0.71	cps
Dysprosium	156-1	23	27	10	20	44.10	cps
Dysprosium	156-2	10	17	13	13	25.01	cps
Erbium	164-1	50	43	57	50	13.34	cps
Erbium	164-2	60	37	43	47	25.75	cps
Gadolinium	160-1	43	77	43	54	35.36	cps
Gadolinium	160-2	560	673	613	616	9.21	cps
Holmium	165-1	14946383	14993183	14858636	14932734	0.46	cps
Holmium	165-2	11452250	11507437	11487726	11482471	0.24	cps
Indium	115-1	12626087	12440375	12630984	12565815	0.86	cps
Indium	115-2	4812347	4774562	4818564	4801824	0.50	cps
Iron	56-2	320818	322819	319915	321184	0.46	cps
Iron	57-2	9173	8776	8916	8955	2.25	cps
Iron	54-2	19132	19533	19836	19500	1.81	cps
Krypton	83-1	203	207	193	201	3.45	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P7
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:04:14	DataFile Name :	017LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	12032	11592	12306	11976	3.01	cps
Lead	207-1	10337	10327	10621	10429	1.60	cps
Lead	208-1	47576	47163	47986	47575	0.87	cps
Lithium	6-1	1620471	1629535	1628228	1626078	0.30	cps
Magnesium	24-2	262636	261248	261648	261844	0.27	cps
Manganese	55-2	5805	5774	5885	5821	0.98	cps
Molybdenum	94-1	29253	28658	28337	28749	1.62	cps
Molybdenum	95-1	34607	34781	35456	34948	1.28	cps
Molybdenum	96-1	39015	39092	39928	39345	1.29	cps
Molybdenum	97-1	21653	21990	21917	21853	0.81	cps
Molybdenum	98-1	56512	57449	56736	56899	0.86	cps
Neodymium	150-1	13	7	13	11	34.61	cps
Neodymium	150-2	3	0	3	2	86.60	cps
Nickel	60-2	2970	2934	2887	2930	1.43	cps
Phosphorus	31-2	640	670	640	650	2.66	cps
Potassium	39-2	392208	390019	389986	390737	0.33	cps
Rhodium	103-1	11601034	11733517	11898404	11744319	1.27	cps
Rhodium	103-2	7363934	7342565	7236260	7314253	0.93	cps
Scandium	45-1	6870391	6933538	6888498	6897476	0.47	cps
Scandium	45-2	615415	624260	615752	618476	0.81	cps
Selenium	82-1	1442	1316	1343	1367	4.89	cps
Selenium	77-2	110	70	123	101	27.45	cps
Selenium	78-2	833	913	833	860	5.37	cps
Silicon	28-1	756117	750854	759882	755618	0.60	cps
Silver	107-1	17408	17716	17916	17680	1.45	cps
Silver	109-1	16783	16393	16583	16586	1.18	cps
Sodium	23-2	422004	423137	424014	423052	0.24	cps
Strontium	86-1	4657	4884	4921	4821	2.96	cps
Strontium	88-1	37849	38674	38474	38332	1.12	cps
Sulfur	34-1	207512	208932	207171	207872	0.45	cps
Terbium	159-1	15366627	15487213	15357333	15403724	0.47	cps
Terbium	159-2	11154514	11236250	11115872	11168879	0.55	cps
Thallium	203-1	12996	12890	12980	12955	0.44	cps
Thallium	205-1	30568	30965	30748	30760	0.65	cps
Tin	118-1	58896	58709	59197	58934	0.42	cps
Titanium	47-1	8889	8683	8763	8778	1.19	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P7
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:04:14	DataFile Name :	017LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	37219	37302	37285	37269	0.12	cps
Vanadium	51-2	25014	24947	25204	25055	0.53	cps
Yttrium	89-1	14569162	14752495	14756684	14692780	0.73	cps
Yttrium	89-2	4102235	4125172	4058040	4095149	0.83	cps
Zinc	66-2	6105	6301	6245	6217	1.63	cps
Zirconium	90-1	23713	24006	24056	23925	0.78	cps
Zirconium	91-1	5128	5494	5494	5372	3.94	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P7
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:07:29	DataFile Name :	018CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	427	430	447	434	2.47	cps
Antimony	121-1	180	233	200	204	13.18	cps
Arsenic	75-2	10	13	10	11	17.30	cps
Barium	135-1	50	60	43	51	16.42	cps
Barium	137-1	73	63	80	72	11.62	cps
Beryllium	9-1	87	73	97	86	13.69	cps
Bismuth	209-1	9465381	9489523	9500158	9485020	0.19	cps
Bismuth	209-2	8200511	8376955	8307526	8294997	1.07	cps
Bromine	81-1	14604	15008	14511	14707	1.80	cps
Bromine	81-2	247	217	290	251	14.68	cps
Cadmium	108-1	17	13	13	14	13.35	cps
Cadmium	106-1	3694	3834	3627	3718	2.84	cps
Cadmium	111-1	2617	2704	2573	2632	2.54	cps
Calcium	43-1	273	343	353	323	13.48	cps
Calcium	44-1	11111	10594	10597	10767	2.76	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1053	1073	993	1040	4.00	cps
Cobalt	59-2	167	160	113	147	19.82	cps
Copper	63-2	907	953	907	922	2.92	cps
Dysprosium	156-1	10	30	23	21	48.24	cps
Dysprosium	156-2	10	7	0	6	91.64	cps
Erbium	164-1	63	53	90	69	27.52	cps
Erbium	164-2	33	40	37	37	9.10	cps
Gadolinium	160-1	23	40	63	42	47.59	cps
Gadolinium	160-2	637	690	643	657	4.43	cps
Holmium	165-1	15078756	15311020	15419508	15269761	1.14	cps
Holmium	165-2	11502500	11551434	11426229	11493388	0.55	cps
Indium	115-1	12758950	12849182	12842557	12816896	0.39	cps
Indium	115-2	4781938	4899293	4909270	4863500	1.46	cps
Iron	56-2	17741	17877	17337	17652	1.59	cps
Iron	57-2	973	1053	1070	1032	5.01	cps
Iron	54-2	2644	2610	2497	2584	2.98	cps
Krypton	83-1	237	253	270	253	6.58	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P7
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:07:29	DataFile Name :	018CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1030	927	957	971	5.47	cps
Lead	207-1	800	957	950	902	9.82	cps
Lead	208-1	4097	3964	4034	4031	1.65	cps
Lithium	6-1	1694998	1675530	1676345	1682291	0.65	cps
Magnesium	24-2	1090	1083	1190	1121	5.33	cps
Manganese	55-2	313	373	360	349	9.03	cps
Molybdenum	94-1	267	257	263	262	1.94	cps
Molybdenum	95-1	140	130	137	136	3.76	cps
Molybdenum	96-1	237	203	163	201	18.26	cps
Molybdenum	97-1	83	63	63	70	16.50	cps
Molybdenum	98-1	180	157	170	169	6.93	cps
Neodymium	150-1	3	3	3	3	0.00	cps
Neodymium	150-2	0	0	13	4	173.21	cps
Nickel	60-2	437	520	460	472	9.10	cps
Phosphorus	31-2	170	187	197	184	7.30	cps
Potassium	39-2	56959	57495	57093	57182	0.49	cps
Rhodium	103-1	11964251	12019781	11998937	11994323	0.23	cps
Rhodium	103-2	7402095	7322125	7372918	7365713	0.55	cps
Scandium	45-1	7004870	6939607	6878295	6940924	0.91	cps
Scandium	45-2	624374	622485	621518	622792	0.23	cps
Selenium	82-1	240	213	198	217	9.78	cps
Selenium	77-2	3	0	3	2	86.60	cps
Selenium	78-2	563	550	497	537	6.57	cps
Silicon	28-1	722410	722490	720521	721807	0.15	cps
Silver	107-1	244	300	230	258	14.42	cps
Silver	109-1	207	190	173	190	8.77	cps
Sodium	23-2	26116	25434	25421	25657	1.55	cps
Strontium	86-1	403	347	403	384	8.51	cps
Strontium	88-1	223	200	293	239	20.33	cps
Sulfur	34-1	212737	211810	211533	212027	0.30	cps
Terbium	159-1	15654854	15672054	15633016	15653308	0.12	cps
Terbium	159-2	11172503	11434367	11277259	11294710	1.17	cps
Thallium	203-1	440	407	337	394	13.37	cps
Thallium	205-1	970	843	843	886	8.26	cps
Tin	118-1	1933	1930	2074	1979	4.13	cps
Titanium	47-1	97	97	90	94	4.08	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P7
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:07:29	DataFile Name :	018CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	23	33	30	29	17.63	cps
Vanadium	51-2	3	13	20	12	68.66	cps
Yttrium	89-1	14829734	15033117	14988368	14950406	0.71	cps
Yttrium	89-2	4153554	4176931	4160482	4163656	0.29	cps
Zinc	66-2	993	993	993	993	0.00	cps
Zirconium	90-1	617	777	813	736	14.22	cps
Zirconium	91-1	153	167	170	163	5.40	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P7
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:10:47	DataFile Name :	019ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	28290140	28023037	28312244	28208473	0.57	cps
Antimony	121-1	15886	16316	16369	16190	1.64	cps
Arsenic	75-2	263	293	240	266	10.07	cps
Barium	135-1	4984	5001	4991	4992	0.17	cps
Barium	137-1	8433	9020	8839	8764	3.43	cps
Beryllium	9-1	483	487	507	492	2.56	cps
Bismuth	209-1	9127477	9116717	9210788	9151661	0.56	cps
Bismuth	209-2	7924127	7878445	7928956	7910509	0.35	cps
Bromine	81-1	14831	15215	15325	15123	1.71	cps
Bromine	81-2	400	497	413	437	12.00	cps
Cadmium	108-1	2480	2467	2400	2449	1.75	cps
Cadmium	106-1	3427	3437	3164	3343	4.64	cps
Cadmium	111-1	3965	3588	3630	3727	5.55	cps
Calcium	43-1	3494087	3555089	3582349	3543842	1.28	cps
Calcium	44-1	56334734	57102329	57629922	57022329	1.14	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	112112	110142	109077	110444	1.39	cps
Cobalt	59-2	10607	11004	10827	10813	1.84	cps
Copper	63-2	45285	45987	45549	45607	0.78	cps
Dysprosium	156-1	87	57	63	69	22.87	cps
Dysprosium	156-2	40	37	53	43	20.34	cps
Erbium	164-1	97	100	123	107	13.62	cps
Erbium	164-2	90	40	80	70	37.80	cps
Gadolinium	160-1	90	93	87	90	3.70	cps
Gadolinium	160-2	633	627	683	648	4.78	cps
Holmium	165-1	15486419	15451800	15538385	15492201	0.28	cps
Holmium	165-2	11525376	11420758	11453107	11466414	0.47	cps
Indium	115-1	12055420	12001246	11961319	12005995	0.39	cps
Indium	115-2	4516095	4476989	4489943	4494342	0.44	cps
Iron	56-2	516750712	512550366	516721952	515341010	0.47	cps
Iron	57-2	12866468	12709386	12896430	12824095	0.78	cps
Iron	54-2	28008336	27834645	27912855	27918612	0.31	cps
Krypton	83-1	223	203	257	228	11.83	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P7
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:10:47	DataFile Name :	019ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	62188	58067	58308	59521	3.89	cps
Lead	207-1	50075	47269	46041	47795	4.33	cps
Lead	208-1	235338	222156	216849	224781	4.24	cps
Lithium	6-1	1609918	1545012	1559273	1571401	2.17	cps
Magnesium	24-2	46816328	46878924	46546861	46747371	0.38	cps
Manganese	55-2	35124	34633	34516	34758	0.93	cps
Molybdenum	94-1	7714053	7785209	7820583	7773282	0.70	cps
Molybdenum	95-1	13638283	13833406	13907407	13793032	1.01	cps
Molybdenum	96-1	14809516	14828570	15033589	14890558	0.83	cps
Molybdenum	97-1	8451097	8481951	8656854	8529967	1.30	cps
Molybdenum	98-1	21749840	22258472	22226064	22078125	1.29	cps
Neodymium	150-1	70	70	77	72	5.33	cps
Neodymium	150-2	73	37	37	49	43.29	cps
Nickel	60-2	12272	12008	12012	12097	1.25	cps
Phosphorus	31-2	1422696	1452829	1432704	1436076	1.07	cps
Potassium	39-2	60485256	59668734	60135306	60096432	0.68	cps
Rhodium	103-1	10808264	10657535	10804983	10756927	0.80	cps
Rhodium	103-2	6680908	6741859	6593025	6671931	1.12	cps
Scandium	45-1	6538988	6445921	6624081	6536330	1.36	cps
Scandium	45-2	562424	559296	562926	561549	0.35	cps
Selenium	82-1	245	307	218	256	17.82	cps
Selenium	77-2	0	7	3	3	100.05	cps
Selenium	78-2	360	423	420	401	8.89	cps
Silicon	28-1	712290	705521	712382	710065	0.55	cps
Silver	107-1	1116	1086	866	1023	13.34	cps
Silver	109-1	1187	810	953	983	19.33	cps
Sodium	23-2	77157191	76831532	77007324	76998682	0.21	cps
Strontium	86-1	146359	150527	150981	149289	1.71	cps
Strontium	88-1	1279688	1302489	1320096	1300758	1.56	cps
Sulfur	34-1	5195299	5110643	5225142	5177028	1.15	cps
Terbium	159-1	15687770	15664862	15688897	15680510	0.09	cps
Terbium	159-2	11342960	11215070	11182811	11246947	0.75	cps
Thallium	203-1	2704	3174	3227	3035	9.49	cps
Thallium	205-1	6455	7475	7569	7166	8.62	cps
Tin	118-1	7819	7859	6778	7485	8.18	cps
Titanium	47-1	3348253	3420779	3445303	3404778	1.48	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P7
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:10:47	DataFile Name :	019ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	750	710	747	736	3.02	cps
Vanadium	51-2	913	937	860	903	4.35	cps
Yttrium	89-1	14299462	14186521	14416674	14300886	0.80	cps
Yttrium	89-2	3928994	3932531	3857542	3906356	1.08	cps
Zinc	66-2	14868	15595	15852	15438	3.31	cps
Zirconium	90-1	2604	2827	2684	2705	4.18	cps
Zirconium	91-1	563	623	623	603	5.74	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P7
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:13:49	DataFile Name :	020ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	30406242	30242474	30439959	30362891	0.35	cps
Antimony	121-1	300661	305875	303479	303338	0.86	cps
Arsenic	75-2	15068	15048	14817	14978	0.93	cps
Barium	135-1	75432	76685	77365	76494	1.28	cps
Barium	137-1	131330	133401	132076	132269	0.79	cps
Beryllium	9-1	29405	30450	30290	30048	1.87	cps
Bismuth	209-1	9168706	9231079	9280341	9226709	0.61	cps
Bismuth	209-2	7768037	7898508	7853429	7839991	0.85	cps
Bromine	81-1	15965	16613	16019	16199	2.22	cps
Bromine	81-2	450	530	513	498	8.48	cps
Cadmium	108-1	6995	7335	7159	7163	2.37	cps
Cadmium	106-1	9797	9850	9947	9865	0.77	cps
Cadmium	111-1	74634	75545	75998	75392	0.92	cps
Calcium	43-1	3830977	3840392	3868651	3846673	0.51	cps
Calcium	44-1	61509111	62238111	62363192	62036805	0.74	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	226925	225747	224973	225881	0.44	cps
Cobalt	59-2	182097	181422	180929	181483	0.32	cps
Copper	63-2	165790	166346	165928	166021	0.17	cps
Dysprosium	156-1	67	63	43	58	21.85	cps
Dysprosium	156-2	63	20	67	50	52.07	cps
Erbium	164-1	113	93	93	100	11.55	cps
Erbium	164-2	70	70	70	70	0.00	cps
Gadolinium	160-1	107	103	117	109	6.37	cps
Gadolinium	160-2	617	593	613	608	2.08	cps
Holmium	165-1	15763747	15746266	15569705	15693240	0.68	cps
Holmium	165-2	11390142	11444815	11249267	11361408	0.89	cps
Indium	115-1	12369390	12328202	12302339	12333311	0.27	cps
Indium	115-2	4463095	4496838	4432322	4464085	0.72	cps
Iron	56-2	553558698	552509525	547079605	551049276	0.63	cps
Iron	57-2	13750028	13571985	13684414	13668809	0.66	cps
Iron	54-2	30107451	29767582	29886015	29920349	0.58	cps
Krypton	83-1	203	243	237	228	9.41	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P7
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:13:49	DataFile Name :	020ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	270385	276122	275270	273926	1.13	cps
Lead	207-1	226678	230168	231875	229573	1.15	cps
Lead	208-1	1048330	1065635	1065046	1059671	0.93	cps
Lithium	6-1	1559787	1548966	1542662	1550472	0.56	cps
Magnesium	24-2	50011664	49978926	50374551	50121714	0.44	cps
Manganese	55-2	124550	123925	124365	124280	0.26	cps
Molybdenum	94-1	8449465	8588954	8539884	8526101	0.83	cps
Molybdenum	95-1	14860206	15002324	15280004	15047511	1.42	cps
Molybdenum	96-1	16109362	16299167	16354246	16254258	0.79	cps
Molybdenum	97-1	9302322	9429892	9363292	9365168	0.68	cps
Molybdenum	98-1	24215712	24375993	24232870	24274858	0.36	cps
Neodymium	150-1	80	30	53	54	45.95	cps
Neodymium	150-2	27	27	23	26	7.55	cps
Nickel	60-2	55291	55867	55579	55579	0.52	cps
Phosphorus	31-2	1541655	1547696	1529765	1539705	0.59	cps
Potassium	39-2	64949747	64285801	64035879	64423809	0.73	cps
Rhodium	103-1	11087667	10963186	10854635	10968496	1.06	cps
Rhodium	103-2	6642116	6702506	6573708	6639443	0.97	cps
Scandium	45-1	6622582	6590013	6585178	6599258	0.31	cps
Scandium	45-2	558541	564071	562238	561617	0.50	cps
Selenium	82-1	4416	4551	4475	4481	1.51	cps
Selenium	77-2	470	460	503	478	4.75	cps
Selenium	78-2	1943	1990	1897	1943	2.40	cps
Silicon	28-1	738340	745395	747814	743849	0.66	cps
Silver	107-1	334461	339606	338680	337582	0.81	cps
Silver	109-1	323559	324066	326929	324851	0.56	cps
Sodium	23-2	82379465	81717577	83117094	82404712	0.85	cps
Strontium	86-1	163391	165633	163974	164333	0.71	cps
Strontium	88-1	1414760	1432905	1440899	1429521	0.94	cps
Sulfur	34-1	5649898	5536930	5501740	5562856	1.39	cps
Terbium	159-1	16078970	16120130	15887989	16029030	0.77	cps
Terbium	159-2	11171714	11309068	11121560	11200781	0.87	cps
Thallium	203-1	270442	274785	278858	274695	1.53	cps
Thallium	205-1	640600	649724	652053	647459	0.93	cps
Tin	118-1	4397	4457	4414	4423	0.70	cps
Titanium	47-1	3603631	3701050	3710387	3671689	1.61	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P7
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:13:49	DataFile Name :	020ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	827	820	873	840	3.46	cps
Vanadium	51-2	95449	95087	95489	95342	0.23	cps
Yttrium	89-1	14762374	14550839	14555387	14622867	0.83	cps
Yttrium	89-2	3856352	3863476	3903612	3874480	0.66	cps
Zinc	66-2	34249	34456	34289	34332	0.32	cps
Zirconium	90-1	1733	1920	1973	1876	6.72	cps
Zirconium	91-1	417	393	433	414	4.85	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P7
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:16:53	DataFile Name :	021CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	15413301	15192717	15158686	15254901	0.91	cps
Antimony	121-1	6840217	6930696	6882351	6884421	0.66	cps
Arsenic	75-2	355997	356391	357092	356493	0.16	cps
Barium	135-1	8741741	8884056	8737319	8787705	0.95	cps
Barium	137-1	15066675	15247056	15196166	15169965	0.61	cps
Beryllium	9-1	683965	691655	696308	690642	0.90	cps
Bismuth	209-1	8865849	8843706	8732237	8813931	0.81	cps
Bismuth	209-2	7563726	7457273	7464473	7495157	0.79	cps
Bromine	81-1	13690	13563	13243	13498	1.71	cps
Bromine	81-2	83	97	100	93	9.45	cps
Cadmium	108-1	127501	127831	127548	127627	0.14	cps
Cadmium	106-1	180020	182497	182076	181531	0.73	cps
Cadmium	111-1	1800093	1857425	1821793	1826437	1.58	cps
Calcium	43-1	8641999	8677890	8662316	8660735	0.21	cps
Calcium	44-1	140274988	140506688	139568615	140116763	0.35	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2639416	2660545	2635283	2645082	0.51	cps
Cobalt	59-2	4062526	4130505	4102053	4098361	0.83	cps
Copper	63-2	29166676	29109525	29249950	29175384	0.24	cps
Dysprosium	156-1	340	323	343	336	3.19	cps
Dysprosium	156-2	603	607	660	623	5.10	cps
Erbium	164-1	357	280	373	337	14.78	cps
Erbium	164-2	280	217	200	232	18.18	cps
Gadolinium	160-1	367	303	373	348	11.11	cps
Gadolinium	160-2	773	850	803	809	4.78	cps
Holmium	165-1	15327166	15406411	15141321	15291633	0.89	cps
Holmium	165-2	11067959	11066605	11201190	11111918	0.70	cps
Indium	115-1	11721729	11747384	11744115	11737743	0.12	cps
Indium	115-2	4324187	4255788	4279023	4286333	0.81	cps
Iron	56-2	619427684	616578817	617487257	617831253	0.24	cps
Iron	57-2	15593083	15532514	15367673	15497757	0.75	cps
Iron	54-2	33843935	33713315	33870114	33809121	0.25	cps
Krypton	83-1	243	210	243	232	8.29	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P7
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:16:53	DataFile Name :	021CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	26363985	26577555	26975156	26638898	1.16	cps
Lead	207-1	23290656	23664054	23509770	23488160	0.80	cps
Lead	208-1	105833208	107400388	107104769	106779455	0.78	cps
Lithium	6-1	1528266	1556691	1508970	1531309	1.57	cps
Magnesium	24-2	119666978	117519952	119138335	118775088	0.94	cps
Manganese	55-2	20986596	21046924	20940288	20991269	0.25	cps
Molybdenum	94-1	23718625	23983776	23643094	23781832	0.75	cps
Molybdenum	95-1	34272998	34714511	34229875	34405795	0.78	cps
Molybdenum	96-1	37705189	38406116	38229867	38113724	0.96	cps
Molybdenum	97-1	21569142	21711484	21366322	21548983	0.80	cps
Molybdenum	98-1	54742986	56091576	55216621	55350394	1.24	cps
Neodymium	150-1	590	550	560	567	3.67	cps
Neodymium	150-2	133	147	170	150	12.37	cps
Nickel	60-2	994728	991654	985314	990565	0.48	cps
Phosphorus	31-2	139774	137901	137581	138419	0.86	cps
Potassium	39-2	75238927	75336959	75524351	75366746	0.19	cps
Rhodium	103-1	10544334	10400237	10356515	10433696	0.94	cps
Rhodium	103-2	6401977	6323271	6302971	6342740	0.82	cps
Scandium	45-1	6437681	6415567	6353121	6402123	0.68	cps
Scandium	45-2	556681	556786	554948	556138	0.19	cps
Selenium	82-1	106313	107182	107551	107015	0.59	cps
Selenium	77-2	10941	10951	11007	10966	0.33	cps
Selenium	78-2	37424	37324	37050	37266	0.52	cps
Silicon	28-1	3646902	3723294	3774556	3714917	1.73	cps
Silver	107-1	8895768	8974593	8940324	8936895	0.44	cps
Silver	109-1	8341188	8479918	8447651	8422919	0.86	cps
Sodium	23-2	189317424	189986537	189785704	189696555	0.18	cps
Strontium	86-1	2168320	2170534	2158892	2165915	0.29	cps
Strontium	88-1	18698354	18947346	19008792	18884831	0.87	cps
Sulfur	34-1	635128	640246	642055	639143	0.56	cps
Terbium	159-1	15696633	15374833	15548539	15540002	1.04	cps
Terbium	159-2	10892369	10950672	10855716	10899585	0.44	cps
Thallium	203-1	6701633	6748422	6786486	6745514	0.63	cps
Thallium	205-1	15961025	15860420	16127680	15983042	0.84	cps
Tin	118-1	5667849	5730335	5774981	5724388	0.94	cps
Titanium	47-1	8113985	8202294	8161590	8159290	0.54	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P7
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:16:53	DataFile Name :	021CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	21316968	21623668	21289831	21410156	0.87	cps
Vanadium	51-2	2357932	2369023	2381741	2369565	0.50	cps
Yttrium	89-1	14223006	13918582	14070370	14070653	1.08	cps
Yttrium	89-2	3784966	3786987	3761686	3777880	0.37	cps
Zinc	66-2	4853266	4857997	4836199	4849154	0.24	cps
Zirconium	90-1	11659398	11748528	11627545	11678490	0.54	cps
Zirconium	91-1	2549777	2636303	2610637	2598906	1.71	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P7
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:19:45	DataFile Name :	022CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1240	1370	1090	1233	11.36	cps
Antimony	121-1	3407	2887	2470	2921	16.07	cps
Arsenic	75-2	37	37	30	34	11.18	cps
Barium	135-1	1457	1207	930	1198	22.00	cps
Barium	137-1	2730	2010	1553	2098	28.28	cps
Beryllium	9-1	317	270	270	286	9.43	cps
Bismuth	209-1	9514310	9540408	9595289	9550002	0.43	cps
Bismuth	209-2	8387548	8217535	8305466	8303516	1.02	cps
Bromine	81-1	13073	12922	12689	12895	1.50	cps
Bromine	81-2	157	133	153	148	8.54	cps
Cadmium	108-1	50	37	47	44	15.61	cps
Cadmium	106-1	3440	3500	3614	3518	2.50	cps
Cadmium	111-1	2747	2716	2751	2738	0.69	cps
Calcium	43-1	1793	1343	1130	1422	23.81	cps
Calcium	44-1	35472	28610	25091	29724	17.76	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1300	1343	1343	1329	1.88	cps
Cobalt	59-2	443	417	373	411	8.59	cps
Copper	63-2	3730	3280	3007	3339	10.94	cps
Dysprosium	156-1	10	13	13	12	15.73	cps
Dysprosium	156-2	7	7	7	7	0.00	cps
Erbium	164-1	53	60	60	58	6.67	cps
Erbium	164-2	30	27	37	31	16.37	cps
Gadolinium	160-1	47	57	23	42	40.52	cps
Gadolinium	160-2	607	580	553	580	4.60	cps
Holmium	165-1	15196432	15212446	15269463	15226114	0.25	cps
Holmium	165-2	11274678	11285982	11406403	11322354	0.64	cps
Indium	115-1	12398836	12314632	12266919	12326796	0.54	cps
Indium	115-2	4611170	4705689	4644386	4653749	1.03	cps
Iron	56-2	69908	63744	57111	63588	10.06	cps
Iron	57-2	2194	2067	1923	2061	6.55	cps
Iron	54-2	5114	4797	4664	4859	4.76	cps
Krypton	83-1	240	237	197	224	10.74	cps

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P7
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:19:45	DataFile Name :	022CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	6318	5354	4461	5378	17.27	cps
Lead	207-1	5861	4674	3774	4770	21.95	cps
Lead	208-1	26170	21200	17808	21726	19.36	cps
Lithium	6-1	1594736	1567844	1606918	1589833	1.26	cps
Magnesium	24-2	9636	8356	7172	8388	14.70	cps
Manganese	55-2	1870	1637	1517	1675	10.73	cps
Molybdenum	94-1	5051	3881	3124	4018	24.16	cps
Molybdenum	95-1	6655	5001	4011	5222	25.58	cps
Molybdenum	96-1	7449	5735	4347	5843	26.59	cps
Molybdenum	97-1	4064	3230	2530	3275	23.45	cps
Molybdenum	98-1	10661	8212	6388	8420	25.46	cps
Neodymium	150-1	3	10	7	7	50.03	cps
Neodymium	150-2	13	0	0	4	173.21	cps
Nickel	60-2	527	530	523	527	0.63	cps
Phosphorus	31-2	200	160	190	183	11.35	cps
Potassium	39-2	58073	57799	57173	57682	0.80	cps
Rhodium	103-1	11264873	11239485	11317963	11274107	0.36	cps
Rhodium	103-2	7061880	6977155	7046984	7028673	0.64	cps
Scandium	45-1	6436238	6442642	6495013	6457964	0.50	cps
Scandium	45-2	567373	564737	564698	565603	0.27	cps
Selenium	82-1	245	214	199	219	10.62	cps
Selenium	77-2	0	0	7	2	173.21	cps
Selenium	78-2	433	463	403	433	6.92	cps
Silicon	28-1	647681	644366	642676	644908	0.39	cps
Silver	107-1	2328	1750	1390	1823	25.95	cps
Silver	109-1	2127	1757	1283	1722	24.55	cps
Sodium	23-2	56038	53596	51613	53749	4.12	cps
Strontium	86-1	817	687	683	729	10.43	cps
Strontium	88-1	3480	2487	2057	2675	27.30	cps
Sulfur	34-1	179507	182357	180280	180715	0.82	cps
Terbium	159-1	15520204	15514816	15508807	15514609	0.04	cps
Terbium	159-2	11164222	11163922	11077153	11135099	0.45	cps
Thallium	203-1	2947	2287	2170	2468	16.97	cps
Thallium	205-1	6922	5901	5101	5975	15.27	cps
Tin	118-1	3114	2827	2767	2903	6.38	cps
Titanium	47-1	1570	1193	820	1195	31.40	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P7
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:19:45	DataFile Name :	022CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	3414	2487	2074	2658	25.82	cps
Vanadium	51-2	163	140	140	148	9.12	cps
Yttrium	89-1	14203574	14115477	14233765	14184272	0.43	cps
Yttrium	89-2	3890423	3920142	3901411	3903992	0.38	cps
Zinc	66-2	977	873	777	876	11.42	cps
Zirconium	90-1	3380	2594	2290	2755	20.43	cps
Zirconium	91-1	677	633	460	590	19.43	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P7
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:23:01	DataFile Name :	023LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	6648	6475	6575	6566	1.33	cps
Antimony	121-1	28714	27810	28107	28210	1.63	cps
Arsenic	75-2	737	780	817	778	5.15	cps
Barium	135-1	34115	33035	34001	33717	1.76	cps
Barium	137-1	57901	58493	57857	58084	0.61	cps
Beryllium	9-1	1597	1503	1693	1598	5.95	cps
Bismuth	209-1	9411394	9616372	9672294	9566687	1.44	cps
Bismuth	209-2	8360118	8424718	8319576	8368137	0.63	cps
Bromine	81-1	13176	13213	13696	13362	2.17	cps
Bromine	81-2	253	153	197	201	24.93	cps
Cadmium	108-1	313	260	260	278	11.08	cps
Cadmium	106-1	3717	3767	3784	3756	0.92	cps
Cadmium	111-1	6374	6079	6231	6228	2.37	cps
Calcium	43-1	18101	18184	18515	18267	1.20	cps
Calcium	44-1	303707	307020	305883	305536	0.55	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	12272	11915	11821	12003	1.98	cps
Cobalt	59-2	9280	9296	9153	9243	0.85	cps
Copper	63-2	14507	14647	14991	14715	1.69	cps
Dysprosium	156-1	20	13	10	14	35.26	cps
Dysprosium	156-2	7	13	3	8	65.47	cps
Erbium	164-1	87	70	43	67	32.79	cps
Erbium	164-2	47	30	57	44	30.31	cps
Gadolinium	160-1	53	47	57	52	9.75	cps
Gadolinium	160-2	620	623	600	614	2.05	cps
Holmium	165-1	15162653	15434568	15488687	15361969	1.14	cps
Holmium	165-2	11394641	11457721	11504215	11452192	0.48	cps
Indium	115-1	12548386	12546554	12662729	12585890	0.53	cps
Indium	115-2	4681228	4688668	4655838	4675245	0.37	cps
Iron	56-2	305327	306688	304959	305658	0.30	cps
Iron	57-2	8673	8196	8492	8454	2.85	cps
Iron	54-2	18391	18231	18832	18485	1.68	cps
Krypton	83-1	183	257	193	211	18.84	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P7
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:23:01	DataFile Name :	023LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	13010	12743	13110	12954	1.46	cps
Lead	207-1	11462	11488	11438	11463	0.22	cps
Lead	208-1	51589	51929	52056	51858	0.47	cps
Lithium	6-1	1595679	1590943	1597950	1594857	0.22	cps
Magnesium	24-2	243934	245644	247357	245645	0.70	cps
Manganese	55-2	5431	5784	5744	5653	3.42	cps
Molybdenum	94-1	28668	28411	28548	28542	0.45	cps
Molybdenum	95-1	34284	34504	34728	34505	0.64	cps
Molybdenum	96-1	37785	38728	38310	38274	1.23	cps
Molybdenum	97-1	21072	22411	21576	21686	3.12	cps
Molybdenum	98-1	54625	56723	55375	55574	1.91	cps
Neodymium	150-1	3	10	23	12	83.33	cps
Neodymium	150-2	7	0	7	4	86.60	cps
Nickel	60-2	2784	2720	2824	2776	1.88	cps
Phosphorus	31-2	670	553	610	611	9.55	cps
Potassium	39-2	364664	366917	365861	365814	0.31	cps
Rhodium	103-1	11474693	11650933	11606561	11577396	0.79	cps
Rhodium	103-2	7078021	7135253	7118322	7110532	0.41	cps
Scandium	45-1	6486604	6514702	6561705	6521004	0.58	cps
Scandium	45-2	575732	579918	584427	580026	0.75	cps
Selenium	82-1	1294	1255	1318	1289	2.48	cps
Selenium	77-2	117	97	133	116	15.89	cps
Selenium	78-2	843	850	950	881	6.78	cps
Silicon	28-1	676825	678545	684794	680055	0.62	cps
Silver	107-1	17727	18188	17492	17802	1.99	cps
Silver	109-1	16590	16750	16520	16620	0.71	cps
Sodium	23-2	410043	412535	412144	411574	0.33	cps
Strontium	86-1	4811	4614	4951	4792	3.53	cps
Strontium	88-1	37875	38206	38534	38205	0.86	cps
Sulfur	34-1	184708	186229	187937	186291	0.87	cps
Terbium	159-1	15780810	15642480	15676936	15700075	0.46	cps
Terbium	159-2	11119927	11161217	11129484	11136876	0.19	cps
Thallium	203-1	14595	14258	14601	14484	1.36	cps
Thallium	205-1	34013	33675	33528	33738	0.74	cps
Tin	118-1	57819	59114	58960	58631	1.21	cps
Titanium	47-1	8442	8262	8419	8375	1.17	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P7
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:23:01	DataFile Name :	023LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	38753	38332	38492	38526	0.55	cps
Vanadium	51-2	23205	23134	23255	23198	0.26	cps
Yttrium	89-1	14343004	14415027	14461439	14406490	0.41	cps
Yttrium	89-2	3938547	3879240	3996223	3938003	1.49	cps
Zinc	66-2	5931	5945	5998	5958	0.59	cps
Zirconium	90-1	23552	24153	24297	24001	1.65	cps
Zirconium	91-1	5451	5064	5084	5200	4.19	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	PB165717BL	Instrumnet Name :	P7
Client Sample ID :	PB165717BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:26:17	DataFile Name :	024CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	863	890	803	852	5.21	cps
Antimony	121-1	670	623	667	653	3.99	cps
Arsenic	75-2	27	33	17	26	32.81	cps
Barium	135-1	420	433	350	401	11.16	cps
Barium	137-1	720	663	683	689	4.17	cps
Beryllium	9-1	97	127	93	106	17.39	cps
Bismuth	209-1	9754980	9616413	9694563	9688652	0.72	cps
Bismuth	209-2	8464698	8394271	8412418	8423796	0.43	cps
Bromine	81-1	13903	13917	14621	14147	2.90	cps
Bromine	81-2	213	190	290	231	22.64	cps
Cadmium	108-1	23	13	10	16	44.60	cps
Cadmium	106-1	3691	3791	3604	3695	2.53	cps
Cadmium	111-1	2672	2749	2614	2678	2.53	cps
Calcium	43-1	647	653	613	638	3.36	cps
Calcium	44-1	16142	16219	15955	16105	0.84	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1123	1260	1210	1198	5.77	cps
Cobalt	59-2	257	343	347	316	16.17	cps
Copper	63-2	2614	2684	2727	2675	2.14	cps
Dysprosium	156-1	13	10	20	14	35.26	cps
Dysprosium	156-2	3	3	7	4	43.40	cps
Erbium	164-1	57	60	57	58	3.33	cps
Erbium	164-2	50	43	37	43	15.38	cps
Gadolinium	160-1	60	73	43	59	25.53	cps
Gadolinium	160-2	587	587	580	584	0.66	cps
Holmium	165-1	15504548	15405268	15476869	15462228	0.33	cps
Holmium	165-2	11516225	11503148	11551720	11523698	0.22	cps
Indium	115-1	12750183	12775649	12816543	12780792	0.26	cps
Indium	115-2	4772196	4780618	4752680	4768498	0.30	cps
Iron	56-2	46575	46445	46411	46477	0.19	cps
Iron	57-2	1600	1683	1627	1637	2.60	cps
Iron	54-2	4011	3801	4004	3938	3.03	cps
Krypton	83-1	247	213	250	237	8.57	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	PB165717BL	Instrumnet Name :	P7
Client Sample ID :	PB165717BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:26:17	DataFile Name :	024CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2520	2597	2520	2546	1.74	cps
Lead	207-1	2280	2210	2330	2274	2.65	cps
Lead	208-1	9995	10158	10238	10130	1.22	cps
Lithium	6-1	1634356	1583765	1619785	1612636	1.61	cps
Magnesium	24-2	6395	6038	6245	6226	2.88	cps
Manganese	55-2	1243	1310	1140	1231	6.96	cps
Molybdenum	94-1	1470	1360	1410	1413	3.90	cps
Molybdenum	95-1	1557	1560	1663	1593	3.81	cps
Molybdenum	96-1	1970	1867	1933	1923	2.72	cps
Molybdenum	97-1	983	1047	960	997	4.50	cps
Molybdenum	98-1	2567	2504	2514	2528	1.35	cps
Neodymium	150-1	17	0	10	9	94.38	cps
Neodymium	150-2	7	0	0	2	173.21	cps
Nickel	60-2	530	507	547	528	3.81	cps
Phosphorus	31-2	203	193	227	208	8.23	cps
Potassium	39-2	58813	58649	58421	58628	0.34	cps
Rhodium	103-1	11778660	11486238	11764589	11676496	1.41	cps
Rhodium	103-2	7237418	7323283	7215171	7258624	0.79	cps
Scandium	45-1	6735283	6611567	6710015	6685622	0.98	cps
Scandium	45-2	588333	586739	590816	588630	0.35	cps
Selenium	82-1	191	250	163	201	22.17	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	467	423	487	459	7.06	cps
Silicon	28-1	657584	654756	654001	655447	0.29	cps
Silver	107-1	663	673	727	688	5.00	cps
Silver	109-1	597	597	497	563	10.25	cps
Sodium	23-2	41262	40791	40740	40931	0.70	cps
Strontium	86-1	490	460	500	483	4.31	cps
Strontium	88-1	953	970	1093	1006	7.61	cps
Sulfur	34-1	191386	193479	194869	193244	0.91	cps
Terbium	159-1	15851656	15701834	15591294	15714928	0.83	cps
Terbium	159-2	11331469	11304880	11303528	11313292	0.14	cps
Thallium	203-1	1313	1330	1373	1339	2.31	cps
Thallium	205-1	3360	3207	3247	3272	2.43	cps
Tin	118-1	2277	2184	2180	2214	2.48	cps
Titanium	47-1	470	490	430	463	6.59	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	PB165717BL	Instrumnet Name :	P7
Client Sample ID :	PB165717BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:26:17	DataFile Name :	024CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	827	803	887	839	5.12	cps
Vanadium	51-2	113	140	137	130	11.17	cps
Yttrium	89-1	14717544	14659475	14619731	14665583	0.34	cps
Yttrium	89-2	3986295	4064985	3999842	4017041	1.05	cps
Zinc	66-2	640	627	590	619	4.18	cps
Zirconium	90-1	1143	1360	1230	1245	8.76	cps
Zirconium	91-1	253	303	240	266	12.57	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	PB165717BS	Instrumnet Name :	P7
Client Sample ID :	PB165717BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:35:30	DataFile Name :	027LCS6.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2938097	2880956	2883938	2900997	1.11	cps
Antimony	121-1	6940642	6987949	7055494	6994695	0.83	cps
Arsenic	75-2	345761	346359	344552	345557	0.27	cps
Barium	135-1	8735790	8836077	8758950	8776939	0.60	cps
Barium	137-1	15044068	15211182	15130610	15128620	0.55	cps
Beryllium	9-1	714802	735348	733625	727925	1.57	cps
Bismuth	209-1	9190517	9306044	9373787	9290116	1.00	cps
Bismuth	209-2	8134203	8232145	8035013	8133787	1.21	cps
Bromine	81-1	13129	13103	12922	13051	0.86	cps
Bromine	81-2	137	180	147	154	14.69	cps
Cadmium	108-1	128980	129882	130642	129834	0.64	cps
Cadmium	106-1	184060	185630	184499	184730	0.44	cps
Cadmium	111-1	1822337	1831428	1837738	1830501	0.42	cps
Calcium	43-1	1738898	1754158	1758782	1750613	0.59	cps
Calcium	44-1	27962059	28251200	27678107	27963789	1.02	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2660213	2640278	2618029	2639507	0.80	cps
Cobalt	59-2	4118344	4182951	4180466	4160587	0.88	cps
Copper	63-2	30764719	30629754	30441295	30611923	0.53	cps
Dysprosium	156-1	127	117	110	118	7.12	cps
Dysprosium	156-2	437	490	403	443	9.86	cps
Erbium	164-1	107	140	137	128	14.37	cps
Erbium	164-2	90	90	127	102	20.71	cps
Gadolinium	160-1	100	123	143	122	17.75	cps
Gadolinium	160-2	637	637	690	654	4.70	cps
Holmium	165-1	15115301	15351872	15440439	15302537	1.10	cps
Holmium	165-2	11318771	11464564	11368907	11384081	0.65	cps
Indium	115-1	11852532	11916924	12011065	11926840	0.67	cps
Indium	115-2	4401316	4430654	4382751	4404907	0.55	cps
Iron	56-2	123454701	123960978	123397905	123604528	0.25	cps
Iron	57-2	3089862	3088927	3074022	3084270	0.29	cps
Iron	54-2	6871073	6731266	6779704	6794014	1.04	cps
Krypton	83-1	200	233	173	202	14.87	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	PB165717BS	Instrumnet Name :	P7
Client Sample ID :	PB165717BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:35:30	DataFile Name :	027LCS6.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	27316565	27665224	27434380	27472057	0.65	cps
Lead	207-1	23949029	24320852	24439224	24236368	1.06	cps
Lead	208-1	108903315	110993257	110619427	110171999	1.01	cps
Lithium	6-1	1606329	1609328	1592743	1602800	0.55	cps
Magnesium	24-2	22946694	22820325	22735014	22834011	0.47	cps
Manganese	55-2	21210130	20923836	21034651	21056206	0.69	cps
Molybdenum	94-1	23648986	23659189	23613041	23640405	0.10	cps
Molybdenum	95-1	33826485	34504343	34328773	34219867	1.03	cps
Molybdenum	96-1	37598644	37721551	37834143	37718112	0.31	cps
Molybdenum	97-1	21149701	21322766	21306813	21259760	0.45	cps
Molybdenum	98-1	55003531	54825009	55063774	54964105	0.23	cps
Neodymium	150-1	363	450	463	426	12.76	cps
Neodymium	150-2	100	113	63	92	28.08	cps
Nickel	60-2	1027202	1025127	1020228	1024185	0.35	cps
Phosphorus	31-2	136997	136841	135621	136486	0.55	cps
Potassium	39-2	14881859	14637267	14640222	14719783	0.95	cps
Rhodium	103-1	10886076	10663447	10754155	10767893	1.04	cps
Rhodium	103-2	6722489	6633291	6658082	6671287	0.69	cps
Scandium	45-1	6372376	6332016	6314330	6339574	0.47	cps
Scandium	45-2	550254	551472	550162	550629	0.13	cps
Selenium	82-1	107696	108614	108620	108310	0.49	cps
Selenium	77-2	11174	10981	11318	11158	1.52	cps
Selenium	78-2	36532	37257	36572	36787	1.11	cps
Silicon	28-1	3740799	3803633	3894997	3813143	2.03	cps
Silver	107-1	8976592	9131858	9047515	9051988	0.86	cps
Silver	109-1	8453251	8606284	8597339	8552291	1.00	cps
Sodium	23-2	37798523	37525262	37324259	37549348	0.63	cps
Strontium	86-1	2130970	2153340	2160312	2148207	0.71	cps
Strontium	88-1	18640748	18845907	18929681	18805446	0.79	cps
Sulfur	34-1	652321	654048	649795	652054	0.33	cps
Terbium	159-1	15474332	15312268	15462334	15416311	0.59	cps
Terbium	159-2	11096287	11165555	10998497	11086779	0.76	cps
Thallium	203-1	6903574	7025347	6956673	6961864	0.88	cps
Thallium	205-1	16132081	16446301	16396805	16325062	1.03	cps
Tin	118-1	5689706	5759295	5794555	5747852	0.93	cps
Titanium	47-1	8116521	8033936	8111860	8087439	0.57	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	PB165717BS	Instrumnet Name :	P7
Client Sample ID :	PB165717BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 16:35:30	DataFile Name :	027LCS6.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	20853179	21136358	21328379	21105972	1.13	cps
Vanadium	51-2	2312144	2300188	2303104	2305145	0.27	cps
Yttrium	89-1	13882164	13780016	14026746	13896308	0.89	cps
Yttrium	89-2	3761801	3791666	3786042	3779836	0.42	cps
Zinc	66-2	5121734	5117571	5198739	5146015	0.89	cps
Zirconium	90-1	11382720	11571570	11702452	11552247	1.39	cps
Zirconium	91-1	2533111	2559210	2594936	2562419	1.21	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:39:46	DataFile Name :	028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	30815	29956	31445	30739	2.43	cps
Antimony	121-1	1790	1693	1500	1661	8.89	cps
Arsenic	75-2	93	87	87	89	4.33	cps
Barium	135-1	13687	13200	13600	13495	1.93	cps
Barium	137-1	22858	23186	24161	23402	2.89	cps
Beryllium	9-1	217	213	213	214	0.90	cps
Bismuth	209-1	9326357	9254825	9503030	9361404	1.36	cps
Bismuth	209-2	8258493	8171790	8276433	8235572	0.68	cps
Bromine	81-1	13032	12966	13083	13027	0.45	cps
Bromine	81-2	207	270	233	237	13.44	cps
Cadmium	108-1	47	40	47	44	8.66	cps
Cadmium	106-1	3147	3117	3294	3186	2.97	cps
Cadmium	111-1	2347	2347	2402	2365	1.35	cps
Calcium	43-1	2550	2557	2644	2584	2.02	cps
Calcium	44-1	46615	46999	47354	46989	0.79	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	5091	5121	5028	5080	0.94	cps
Cobalt	59-2	1050	980	970	1000	4.36	cps
Copper	63-2	4787	4761	4604	4717	2.10	cps
Dysprosium	156-1	1210	1337	1277	1275	4.97	cps
Dysprosium	156-2	1020	1050	1163	1078	7.01	cps
Erbium	164-1	1323	1420	1347	1363	3.70	cps
Erbium	164-2	1027	1027	987	1013	2.28	cps
Gadolinium	160-1	1327	1257	1080	1221	10.41	cps
Gadolinium	160-2	1550	1500	1623	1558	3.98	cps
Holmium	165-1	14626696	14555611	14788236	14656848	0.81	cps
Holmium	165-2	11348738	11268863	11347765	11321789	0.40	cps
Indium	115-1	11747258	12029915	12056150	11944441	1.43	cps
Indium	115-2	4581194	4590225	4609242	4593553	0.31	cps
Iron	56-2	966094	1000826	974915	980612	1.84	cps
Iron	57-2	25201	24607	23492	24433	3.55	cps
Iron	54-2	56391	54505	54030	54975	2.27	cps
Krypton	83-1	243	133	203	193	28.80	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:39:46	DataFile Name :	028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	7852	7696	7285	7611	3.85	cps
Lead	207-1	6522	6402	6241	6388	2.20	cps
Lead	208-1	30497	29953	28852	29767	2.81	cps
Lithium	6-1	1579201	1589176	1545012	1571130	1.47	cps
Magnesium	24-2	8482	8242	8532	8419	1.84	cps
Manganese	55-2	8036	8149	7946	8043	1.27	cps
Molybdenum	94-1	6882	6692	6385	6653	3.77	cps
Molybdenum	95-1	3080	2597	2497	2725	11.45	cps
Molybdenum	96-1	4164	4014	3584	3921	7.68	cps
Molybdenum	97-1	1873	1840	1660	1791	6.41	cps
Molybdenum	98-1	5184	4201	4207	4531	12.49	cps
Neodymium	150-1	1477	1533	1673	1561	6.49	cps
Neodymium	150-2	993	1150	1070	1071	7.31	cps
Nickel	60-2	813	763	717	764	6.32	cps
Phosphorus	31-2	247	247	277	257	6.75	cps
Potassium	39-2	72441	72220	72455	72372	0.18	cps
Rhodium	103-1	10896743	11283997	11165322	11115354	1.78	cps
Rhodium	103-2	7002297	6986682	7005754	6998244	0.15	cps
Scandium	45-1	6182641	6242172	6241443	6222085	0.55	cps
Scandium	45-2	553195	555482	554493	554390	0.21	cps
Selenium	82-1	194	296	212	234	23.12	cps
Selenium	77-2	10	7	7	8	24.71	cps
Selenium	78-2	430	457	400	429	6.61	cps
Silicon	28-1	1293810	1383385	1235109	1304101	5.73	cps
Silver	107-1	957	862	891	903	5.41	cps
Silver	109-1	910	770	697	792	13.68	cps
Sodium	23-2	43471	43418	42682	43190	1.02	cps
Strontium	86-1	1640	1560	1663	1621	3.34	cps
Strontium	88-1	11101	10758	11488	11116	3.29	cps
Sulfur	34-1	172198	174322	173644	173388	0.63	cps
Terbium	159-1	14903117	15505220	15439895	15282744	2.16	cps
Terbium	159-2	11120997	10897063	10987982	11002014	1.02	cps
Thallium	203-1	1360	1257	1097	1238	10.72	cps
Thallium	205-1	3304	2930	2724	2986	9.85	cps
Tin	118-1	7249	7435	7275	7320	1.38	cps
Titanium	47-1	5228	7991	5341	6186	25.27	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:39:46	DataFile Name :	028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	3424	3187	2984	3198	6.89	cps
Vanadium	51-2	3811	3804	3937	3851	1.95	cps
Yttrium	89-1	13910594	13978525	13881137	13923419	0.36	cps
Yttrium	89-2	3907426	3853222	3830171	3863607	1.03	cps
Zinc	66-2	1213	1127	1247	1196	5.18	cps
Zirconium	90-1	14300	14127	13977	14135	1.15	cps
Zirconium	91-1	3094	3120	3989	3401	14.98	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01DUPDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:43:02	DataFile Name :	029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	31186	34245	32439	32623	4.71	cps
Antimony	121-1	583	650	620	618	5.40	cps
Arsenic	75-2	63	73	83	73	13.64	cps
Barium	135-1	13550	14097	13767	13805	2.00	cps
Barium	137-1	23890	24064	24197	24050	0.64	cps
Beryllium	9-1	133	157	127	139	11.34	cps
Bismuth	209-1	9300383	9340051	9506734	9382389	1.17	cps
Bismuth	209-2	8317224	8273582	8312500	8301102	0.29	cps
Bromine	81-1	12752	13193	13199	13048	1.96	cps
Bromine	81-2	167	197	170	178	9.25	cps
Cadmium	108-1	30	20	20	23	24.74	cps
Cadmium	106-1	3347	3347	3414	3369	1.14	cps
Cadmium	111-1	2366	2378	2440	2395	1.66	cps
Calcium	43-1	2330	2407	2314	2350	2.12	cps
Calcium	44-1	42550	43462	43372	43128	1.17	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	5058	5078	5201	5112	1.52	cps
Cobalt	59-2	727	713	753	731	2.79	cps
Copper	63-2	3287	3717	3597	3534	6.28	cps
Dysprosium	156-1	1333	1207	1200	1247	6.03	cps
Dysprosium	156-2	1050	1107	1080	1079	2.63	cps
Erbium	164-1	1290	1283	1250	1275	1.68	cps
Erbium	164-2	1017	993	1107	1039	5.76	cps
Gadolinium	160-1	1183	1263	1213	1220	3.31	cps
Gadolinium	160-2	1487	1520	1643	1550	5.32	cps
Holmium	165-1	14425677	14924442	15161337	14837152	2.53	cps
Holmium	165-2	11431490	11176599	11286707	11298265	1.13	cps
Indium	115-1	11850455	12114390	12217674	12060840	1.57	cps
Indium	115-2	4679408	4635033	4626140	4646860	0.61	cps
Iron	56-2	975869	990679	975303	980617	0.89	cps
Iron	57-2	24794	24894	25085	24924	0.59	cps
Iron	54-2	54839	55676	55080	55199	0.78	cps
Krypton	83-1	217	260	247	241	9.20	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01DUPDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:43:02	DataFile Name :	029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	6211	6221	6368	6267	1.40	cps
Lead	207-1	5128	5538	5068	5245	4.88	cps
Lead	208-1	23945	24653	24425	24341	1.48	cps
Lithium	6-1	1555844	1554741	1595904	1568830	1.49	cps
Magnesium	24-2	4621	4597	4537	4585	0.94	cps
Manganese	55-2	7188	7165	7108	7154	0.58	cps
Molybdenum	94-1	5411	5171	5521	5368	3.34	cps
Molybdenum	95-1	917	870	893	893	2.61	cps
Molybdenum	96-1	1780	1883	1893	1852	3.39	cps
Molybdenum	97-1	553	530	510	531	4.08	cps
Molybdenum	98-1	1410	1607	1440	1486	7.13	cps
Neodymium	150-1	1597	1720	1617	1645	4.03	cps
Neodymium	150-2	963	1050	1130	1048	7.96	cps
Nickel	60-2	633	653	703	663	5.44	cps
Phosphorus	31-2	270	280	273	274	1.86	cps
Potassium	39-2	69012	69779	69951	69581	0.72	cps
Rhodium	103-1	11161497	11153304	11317104	11210635	0.82	cps
Rhodium	103-2	7099707	7094128	7076021	7089952	0.17	cps
Scandium	45-1	6307729	6332240	6420388	6353452	0.93	cps
Scandium	45-2	567395	569164	564036	566865	0.46	cps
Selenium	82-1	194	197	195	195	1.01	cps
Selenium	77-2	0	0	3	1	173.21	cps
Selenium	78-2	403	430	430	421	3.66	cps
Silicon	28-1	1355561	1512130	1498173	1455288	5.95	cps
Silver	107-1	270	314	314	299	8.54	cps
Silver	109-1	257	213	223	231	9.82	cps
Sodium	23-2	35357	35651	35778	35596	0.61	cps
Strontium	86-1	1740	1530	1520	1597	7.78	cps
Strontium	88-1	10277	10514	10414	10402	1.14	cps
Sulfur	34-1	173802	173287	176955	174681	1.14	cps
Terbium	159-1	15235489	15311123	15327777	15291463	0.32	cps
Terbium	159-2	11151303	11237152	10998966	11129140	1.08	cps
Thallium	203-1	747	670	683	700	5.85	cps
Thallium	205-1	1783	1593	1600	1659	6.50	cps
Tin	118-1	7385	7275	7525	7395	1.70	cps
Titanium	47-1	5788	4827	6015	5544	11.37	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01DUPDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:43:02	DataFile Name :	029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	2064	2982	2217	2421	20.33	cps
Vanadium	51-2	3991	3827	4081	3966	3.24	cps
Yttrium	89-1	13817917	14041841	14144642	14001467	1.19	cps
Yttrium	89-2	3852994	3924918	3825232	3867715	1.33	cps
Zinc	66-2	860	910	810	860	5.81	cps
Zirconium	90-1	13660	14549	15660	14623	6.85	cps
Zirconium	91-1	3070	3090	3180	3114	1.88	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01LDLX25	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	25
Date & Time Acquired :	2024-12-19 16:46:16	DataFile Name :	030SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5885	5771	5965	5873	1.65	cps
Antimony	121-1	273	340	333	316	11.64	cps
Arsenic	75-2	37	13	17	22	56.80	cps
Barium	135-1	2834	2947	2664	2815	5.07	cps
Barium	137-1	4681	4914	4661	4752	2.97	cps
Beryllium	9-1	97	73	90	87	13.87	cps
Bismuth	209-1	9478555	9612584	9651482	9580873	0.95	cps
Bismuth	209-2	8429713	8478996	8399473	8436061	0.48	cps
Bromine	81-1	13433	13633	13496	13521	0.76	cps
Bromine	81-2	173	160	157	163	5.40	cps
Cadmium	108-1	3	13	17	11	62.48	cps
Cadmium	106-1	3510	3397	3517	3475	1.94	cps
Cadmium	111-1	2506	2403	2478	2462	2.16	cps
Calcium	43-1	740	730	713	728	1.85	cps
Calcium	44-1	17263	17157	17657	17359	1.52	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1783	1997	1780	1853	6.70	cps
Cobalt	59-2	247	240	200	229	11.03	cps
Copper	63-2	1527	1440	1557	1508	4.02	cps
Dysprosium	156-1	257	287	253	266	6.91	cps
Dysprosium	156-2	250	200	273	241	15.54	cps
Erbium	164-1	307	317	340	321	5.33	cps
Erbium	164-2	313	227	213	251	21.62	cps
Gadolinium	160-1	273	360	257	297	18.70	cps
Gadolinium	160-2	740	907	787	811	10.60	cps
Holmium	165-1	15132743	15284637	15060094	15159158	0.76	cps
Holmium	165-2	11683426	11542017	11410197	11545213	1.18	cps
Indium	115-1	12419379	12579584	12625752	12541571	0.86	cps
Indium	115-2	4746044	4747302	4744421	4745922	0.03	cps
Iron	56-2	212572	214034	210476	212360	0.84	cps
Iron	57-2	6088	5751	5895	5911	2.86	cps
Iron	54-2	13036	12936	12916	12962	0.50	cps
Krypton	83-1	243	297	197	246	20.38	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01LDLX25	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	25
Date & Time Acquired :	2024-12-19 16:46:16	DataFile Name :	030SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2024	2150	2157	2110	3.56	cps
Lead	207-1	1820	1667	1770	1752	4.46	cps
Lead	208-1	8181	8031	8348	8187	1.94	cps
Lithium	6-1	1614171	1589883	1590300	1598118	0.87	cps
Magnesium	24-2	1867	1850	2037	1918	5.39	cps
Manganese	55-2	1837	1927	1710	1825	5.97	cps
Molybdenum	94-1	1497	1337	1427	1420	5.65	cps
Molybdenum	95-1	323	320	317	320	1.04	cps
Molybdenum	96-1	570	460	553	528	11.23	cps
Molybdenum	97-1	213	187	183	194	8.46	cps
Molybdenum	98-1	540	377	500	472	18.03	cps
Neodymium	150-1	270	370	377	339	17.63	cps
Neodymium	150-2	207	220	183	203	9.13	cps
Nickel	60-2	483	497	510	497	2.68	cps
Phosphorus	31-2	183	150	167	167	10.00	cps
Potassium	39-2	58147	57438	58251	57945	0.76	cps
Rhodium	103-1	11401057	11695076	11494922	11530351	1.30	cps
Rhodium	103-2	7194082	7223891	7200801	7206258	0.22	cps
Scandium	45-1	6481951	6458506	6535134	6491864	0.60	cps
Scandium	45-2	581337	581525	575712	579525	0.57	cps
Selenium	82-1	243	126	233	201	32.46	cps
Selenium	77-2	0	0	3	1	173.21	cps
Selenium	78-2	497	423	443	454	8.34	cps
Silicon	28-1	745149	971263	742566	819660	16.02	cps
Silver	107-1	194	147	157	166	14.88	cps
Silver	109-1	120	143	140	134	9.39	cps
Sodium	23-2	29131	28967	29007	29035	0.29	cps
Strontium	86-1	603	623	650	626	3.74	cps
Strontium	88-1	2417	2210	2337	2321	4.49	cps
Sulfur	34-1	182414	182499	185511	183475	0.96	cps
Terbium	159-1	15443462	15525067	15472323	15480284	0.27	cps
Terbium	159-2	11408455	11333572	11179525	11307184	1.03	cps
Thallium	203-1	540	520	603	554	7.85	cps
Thallium	205-1	1267	1440	1233	1313	8.45	cps
Tin	118-1	2990	2867	2787	2881	3.56	cps
Titanium	47-1	1080	1007	1063	1050	3.66	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01LDLX25	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	25
Date & Time Acquired :	2024-12-19 16:46:16	DataFile Name :	030SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	480	477	410	456	8.67	cps
Vanadium	51-2	790	817	910	839	7.51	cps
Yttrium	89-1	14283193	14280356	14297864	14287138	0.07	cps
Yttrium	89-2	3957082	4000511	3966260	3974618	0.58	cps
Zinc	66-2	610	673	617	633	5.50	cps
Zirconium	90-1	3224	3304	3370	3299	2.23	cps
Zirconium	91-1	713	720	790	741	5.73	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01MSDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:49:34	DataFile Name :	031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	651735	655674	659430	655613	0.59	cps
Antimony	121-1	1738642	1777115	1767229	1760995	1.13	cps
Arsenic	75-2	91158	91449	90719	91109	0.40	cps
Barium	135-1	1982782	1986401	1985833	1985005	0.10	cps
Barium	137-1	3415018	3430477	3456898	3434131	0.62	cps
Beryllium	9-1	183699	184194	186814	184903	0.91	cps
Bismuth	209-1	9513082	9582198	9603219	9566166	0.49	cps
Bismuth	209-2	8403157	8341304	8340305	8361588	0.43	cps
Bromine	81-1	13790	14220	13833	13948	1.70	cps
Bromine	81-2	217	173	190	193	11.31	cps
Cadmium	108-1	33398	34007	33970	33792	1.01	cps
Cadmium	106-1	51180	50879	51648	51235	0.76	cps
Cadmium	111-1	476840	480676	481692	479736	0.53	cps
Calcium	43-1	373976	381678	380028	378560	1.07	cps
Calcium	44-1	5793581	5921961	5863985	5859842	1.10	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	665763	666194	661305	664421	0.41	cps
Cobalt	59-2	1083590	1082286	1080905	1082260	0.12	cps
Copper	63-2	6337492	6322455	6273041	6310996	0.53	cps
Dysprosium	156-1	1127	1177	1273	1192	6.25	cps
Dysprosium	156-2	1123	1210	1183	1172	3.79	cps
Erbium	164-1	1260	1327	1280	1289	2.65	cps
Erbium	164-2	1007	953	967	976	2.84	cps
Gadolinium	160-1	1237	1307	1263	1269	2.78	cps
Gadolinium	160-2	1433	1543	1533	1503	4.05	cps
Holmium	165-1	15242641	15215534	15338433	15265536	0.42	cps
Holmium	165-2	11638896	11580963	11476802	11565554	0.71	cps
Indium	115-1	12509265	12446335	12531258	12495619	0.35	cps
Indium	115-2	4678915	4658129	4638869	4658638	0.43	cps
Iron	56-2	29665692	29712414	29889754	29755953	0.40	cps
Iron	57-2	757735	755235	752944	755305	0.32	cps
Iron	54-2	1642348	1610249	1630520	1627706	1.00	cps
Krypton	83-1	243	273	260	259	5.81	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01MSDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:49:34	DataFile Name :	031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	5217258	5179323	5312929	5236503	1.31	cps
Lead	207-1	4643259	4632219	4691636	4655705	0.68	cps
Lead	208-1	20960137	20873939	21191377	21008484	0.78	cps
Lithium	6-1	1605107	1620118	1642735	1622653	1.17	cps
Magnesium	24-2	4763409	4713061	4710849	4729106	0.63	cps
Manganese	55-2	4037454	3992246	3978332	4002677	0.77	cps
Molybdenum	94-1	3701075	3708633	3754161	3721290	0.77	cps
Molybdenum	95-1	4690900	4676559	4689966	4685808	0.17	cps
Molybdenum	96-1	5217293	5237562	5257453	5237436	0.38	cps
Molybdenum	97-1	2907008	2905285	2910964	2907752	0.10	cps
Molybdenum	98-1	7565507	7476139	7550930	7530858	0.64	cps
Neodymium	150-1	1630	1673	1557	1620	3.64	cps
Neodymium	150-2	957	930	1020	969	4.77	cps
Nickel	60-2	269409	269918	268625	269317	0.24	cps
Phosphorus	31-2	243	270	267	260	5.59	cps
Potassium	39-2	3520584	3473331	3428643	3474186	1.32	cps
Rhodium	103-1	11424409	11458727	11607211	11496782	0.85	cps
Rhodium	103-2	7160237	7157132	7096742	7138037	0.50	cps
Scandium	45-1	6664428	6646125	6613192	6641249	0.39	cps
Scandium	45-2	583109	580849	575503	579820	0.67	cps
Selenium	82-1	27606	28244	28047	27966	1.17	cps
Selenium	77-2	3010	2860	2870	2914	2.88	cps
Selenium	78-2	10093	10197	9880	10057	1.61	cps
Silicon	28-1	1945992	2340166	2027517	2104558	9.89	cps
Silver	107-1	45693	46631	46338	46220	1.04	cps
Silver	109-1	2587	2390	2614	2530	4.82	cps
Sodium	23-2	7768771	7666476	7693741	7709662	0.69	cps
Strontium	86-1	537987	537262	539923	538391	0.26	cps
Strontium	88-1	4733670	4768478	4888856	4797001	1.70	cps
Sulfur	34-1	184907	183750	184721	184460	0.34	cps
Terbium	159-1	15460024	15708950	15789766	15652914	1.10	cps
Terbium	159-2	11269692	11273617	11256567	11266625	0.08	cps
Thallium	203-1	1594891	1627400	1630317	1617536	1.22	cps
Thallium	205-1	3998424	4029583	4087755	4038587	1.12	cps
Tin	118-1	1263685	1276626	1282043	1274118	0.74	cps
Titanium	47-1	723974	730123	720828	724975	0.65	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01MSDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:49:34	DataFile Name :	031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	5179881	5282902	5256690	5239824	1.02	cps
Vanadium	51-2	601004	596441	591154	596200	0.83	cps
Yttrium	89-1	14313612	14562625	14532206	14469481	0.94	cps
Yttrium	89-2	4014270	3988464	3956463	3986399	0.73	cps
Zinc	66-2	1019203	1021322	1018640	1019722	0.14	cps
Zirconium	90-1	2925597	2984851	2972781	2961076	1.06	cps
Zirconium	91-1	642372	642352	647004	643910	0.42	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01MSDDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:52:27	DataFile Name :	032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	655827	651842	653675	653781	0.31	cps
Antimony	121-1	1724164	1721647	1749824	1731878	0.90	cps
Arsenic	75-2	91134	91047	90356	90846	0.47	cps
Barium	135-1	1983874	1984256	1979658	1982596	0.13	cps
Barium	137-1	3423254	3386625	3430901	3413594	0.69	cps
Beryllium	9-1	186268	190583	188977	188610	1.16	cps
Bismuth	209-1	9618411	9624967	9570356	9604578	0.31	cps
Bismuth	209-2	8304820	8322677	8413459	8346985	0.70	cps
Bromine	81-1	14147	13957	14157	14087	0.80	cps
Bromine	81-2	180	163	160	168	6.39	cps
Cadmium	108-1	33515	34668	34431	34205	1.78	cps
Cadmium	106-1	50889	52090	52043	51674	1.32	cps
Cadmium	111-1	473745	483051	479699	478832	0.98	cps
Calcium	43-1	371040	376089	378113	375081	0.97	cps
Calcium	44-1	5705144	5829256	5819071	5784490	1.19	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	662862	657821	660548	660410	0.38	cps
Cobalt	59-2	1078343	1065024	1074045	1072471	0.63	cps
Copper	63-2	6271037	6203362	6266751	6247050	0.61	cps
Dysprosium	156-1	1317	1253	1403	1325	5.69	cps
Dysprosium	156-2	1013	1187	1193	1131	9.02	cps
Erbium	164-1	1233	1370	1273	1292	5.44	cps
Erbium	164-2	1013	1070	943	1009	6.29	cps
Gadolinium	160-1	1093	1287	1220	1200	8.18	cps
Gadolinium	160-2	1417	1527	1460	1468	3.78	cps
Holmium	165-1	15612406	15341692	15407021	15453706	0.91	cps
Holmium	165-2	11611692	11523488	11629230	11588137	0.49	cps
Indium	115-1	12496560	12269135	12308218	12357971	0.98	cps
Indium	115-2	4610542	4633589	4586113	4610081	0.51	cps
Iron	56-2	29470381	29288936	29407283	29388867	0.31	cps
Iron	57-2	748783	750011	744733	747842	0.37	cps
Iron	54-2	1613501	1631316	1642734	1629184	0.90	cps
Krypton	83-1	260	240	213	238	9.85	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01MSDDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:52:27	DataFile Name :	032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	5253730	5345202	5270859	5289930	0.92	cps
Lead	207-1	4610224	4663240	4740182	4671215	1.40	cps
Lead	208-1	21103823	21298592	21225780	21209398	0.46	cps
Lithium	6-1	1663359	1626460	1646849	1645556	1.12	cps
Magnesium	24-2	4674530	4742393	4705188	4707370	0.72	cps
Manganese	55-2	3962174	3899028	3981861	3947687	1.10	cps
Molybdenum	94-1	3684343	3748872	3679642	3704286	1.04	cps
Molybdenum	95-1	4661152	4711027	4625717	4665965	0.92	cps
Molybdenum	96-1	5123432	5188014	5124286	5145244	0.72	cps
Molybdenum	97-1	2881849	2936451	2910471	2909590	0.94	cps
Molybdenum	98-1	7420592	7502450	7458160	7460401	0.55	cps
Neodymium	150-1	1717	1740	1790	1749	2.14	cps
Neodymium	150-2	1037	943	1100	1027	7.68	cps
Nickel	60-2	269732	270898	267442	269358	0.65	cps
Phosphorus	31-2	257	213	280	250	13.53	cps
Potassium	39-2	3467879	3464356	3416617	3449617	0.83	cps
Rhodium	103-1	11476763	11420041	11380722	11425842	0.42	cps
Rhodium	103-2	7074863	7062512	7015438	7050938	0.44	cps
Scandium	45-1	6667581	6594302	6568614	6610165	0.78	cps
Scandium	45-2	567029	566032	573269	568777	0.69	cps
Selenium	82-1	27461	27751	28036	27749	1.04	cps
Selenium	77-2	2980	2970	2884	2945	1.81	cps
Selenium	78-2	10437	10207	10070	10238	1.81	cps
Silicon	28-1	1907543	1871106	1945525	1908058	1.95	cps
Silver	107-1	46258	46421	46948	46542	0.78	cps
Silver	109-1	2380	2624	2444	2482	5.09	cps
Sodium	23-2	7707782	7658161	7623033	7662992	0.56	cps
Strontium	86-1	531263	535055	535001	533773	0.41	cps
Strontium	88-1	4762171	4759151	4768243	4763189	0.10	cps
Sulfur	34-1	189739	189240	186695	188558	0.87	cps
Terbium	159-1	15680973	15560687	15756137	15665933	0.63	cps
Terbium	159-2	11177047	11310551	11187900	11225166	0.66	cps
Thallium	203-1	1605338	1604216	1629001	1612852	0.87	cps
Thallium	205-1	4065123	4177128	4093077	4111776	1.42	cps
Tin	118-1	1262914	1272312	1271934	1269053	0.42	cps
Titanium	47-1	708826	720620	725561	718336	1.20	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01MSDDLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:52:27	DataFile Name :	032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	5249638	5278359	5338432	5288810	0.86	cps
Vanadium	51-2	588508	592099	587884	589497	0.39	cps
Yttrium	89-1	14409794	14518382	14333240	14420472	0.65	cps
Yttrium	89-2	3949176	3916604	3885777	3917186	0.81	cps
Zinc	66-2	1012457	1013015	1008779	1011417	0.23	cps
Zirconium	90-1	2875230	2954943	2932299	2920824	1.41	cps
Zirconium	91-1	635604	640698	643663	639988	0.64	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01ADLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:55:21	DataFile Name :	033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	654624	645960	645350	648644	0.80	cps
Antimony	121-1	1722817	1736078	1754124	1737673	0.90	cps
Arsenic	75-2	90493	90738	89689	90307	0.61	cps
Barium	135-1	1989990	1993920	2003798	1995903	0.36	cps
Barium	137-1	3432983	3419330	3474697	3442337	0.84	cps
Beryllium	9-1	186859	191387	189750	189332	1.21	cps
Bismuth	209-1	9561511	9534310	9521490	9539104	0.21	cps
Bismuth	209-2	8303551	8187899	8178617	8223355	0.85	cps
Bromine	81-1	13963	13900	13923	13929	0.23	cps
Bromine	81-2	197	160	167	174	11.20	cps
Cadmium	108-1	33191	33218	33308	33239	0.18	cps
Cadmium	106-1	51133	51468	51133	51244	0.38	cps
Cadmium	111-1	473005	480735	479786	477842	0.88	cps
Calcium	43-1	370188	374725	374718	373211	0.70	cps
Calcium	44-1	5690150	5780235	5818801	5763062	1.15	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	662740	652233	651320	655431	0.97	cps
Cobalt	59-2	1071460	1066326	1067072	1068286	0.26	cps
Copper	63-2	6265304	6185433	6263196	6237978	0.73	cps
Dysprosium	156-1	1397	1283	1327	1336	4.28	cps
Dysprosium	156-2	1073	1047	1100	1073	2.49	cps
Erbium	164-1	1203	1237	1233	1225	1.50	cps
Erbium	164-2	837	980	953	923	8.26	cps
Gadolinium	160-1	1187	1233	1290	1237	4.18	cps
Gadolinium	160-2	1377	1473	1433	1428	3.40	cps
Holmium	165-1	15272589	15376368	15327739	15325565	0.34	cps
Holmium	165-2	11366714	11329960	11246331	11314335	0.55	cps
Indium	115-1	12251059	12260386	12307243	12272896	0.25	cps
Indium	115-2	4586148	4582833	4541023	4570002	0.55	cps
Iron	56-2	29482909	29250465	29337545	29356973	0.40	cps
Iron	57-2	747888	740015	739541	742482	0.63	cps
Iron	54-2	1603511	1612607	1594596	1603572	0.56	cps
Krypton	83-1	230	227	257	238	6.92	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01ADLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:55:21	DataFile Name :	033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	5237917	5316021	5301586	5285175	0.79	cps
Lead	207-1	4651906	4658559	4672642	4661036	0.23	cps
Lead	208-1	21087789	21208893	21198286	21164989	0.32	cps
Lithium	6-1	1640592	1638867	1656749	1645403	0.60	cps
Magnesium	24-2	4689365	4733817	4642687	4688623	0.97	cps
Manganese	55-2	3980576	3931437	3921005	3944339	0.81	cps
Molybdenum	94-1	3651760	3687167	3730018	3689648	1.06	cps
Molybdenum	95-1	4606901	4701373	4704110	4670795	1.19	cps
Molybdenum	96-1	5159818	5147049	5219820	5175562	0.75	cps
Molybdenum	97-1	2889595	2913770	2859807	2887724	0.94	cps
Molybdenum	98-1	7368085	7433526	7431109	7410907	0.50	cps
Neodymium	150-1	1623	1727	1593	1648	4.25	cps
Neodymium	150-2	1057	903	1007	989	7.91	cps
Nickel	60-2	267349	266659	264640	266216	0.53	cps
Phosphorus	31-2	190	227	310	242	25.39	cps
Potassium	39-2	3487665	3423689	3423028	3444794	1.08	cps
Rhodium	103-1	11443182	11393319	11315559	11384020	0.56	cps
Rhodium	103-2	6950487	6929538	6951715	6943913	0.18	cps
Scandium	45-1	6447239	6519943	6618966	6528716	1.32	cps
Scandium	45-2	569058	566152	560901	565370	0.73	cps
Selenium	82-1	27940	27634	27911	27828	0.61	cps
Selenium	77-2	3054	2764	2817	2878	5.36	cps
Selenium	78-2	10080	10190	10264	10178	0.91	cps
Silicon	28-1	1908782	2004133	1912115	1941677	2.79	cps
Silver	107-1	45777	45878	46116	45923	0.38	cps
Silver	109-1	2327	2507	2430	2421	3.73	cps
Sodium	23-2	7753179	7740700	7614852	7702910	0.99	cps
Strontium	86-1	530163	539283	539372	536273	0.99	cps
Strontium	88-1	4661085	4756367	4810399	4742617	1.59	cps
Sulfur	34-1	186193	185200	186273	185889	0.32	cps
Terbium	159-1	15594224	15601715	15720048	15638662	0.45	cps
Terbium	159-2	11143755	11255872	10978893	11126173	1.25	cps
Thallium	203-1	1603347	1629833	1639782	1624321	1.16	cps
Thallium	205-1	3999744	4088279	4142531	4076851	1.77	cps
Tin	118-1	1252475	1274299	1271648	1266141	0.94	cps
Titanium	47-1	706978	720079	717848	714968	0.98	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5117-01ADLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB04I-10-1203	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 16:55:21	DataFile Name :	033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	5203277	5249206	5246903	5233129	0.49	cps
Vanadium	51-2	594237	590355	583011	589201	0.97	cps
Yttrium	89-1	14480007	14175795	14365762	14340522	1.07	cps
Yttrium	89-2	3862612	3837230	3838730	3846191	0.37	cps
Zinc	66-2	1018664	1008993	1001795	1009817	0.84	cps
Zirconium	90-1	2930933	2976285	2917995	2941738	1.04	cps
Zirconium	91-1	634974	640396	646409	640593	0.89	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P7
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:01:10	DataFile Name :	035CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	14752801	14663250	14664339	14693463	0.35	cps
Antimony	121-1	6636981	6655999	6687512	6660164	0.38	cps
Arsenic	75-2	327185	325910	326213	326436	0.20	cps
Barium	135-1	8427706	8529024	8461626	8472785	0.61	cps
Barium	137-1	14535649	14797928	14633209	14655595	0.90	cps
Beryllium	9-1	695440	708444	705184	703023	0.96	cps
Bismuth	209-1	8717397	8736274	8887723	8780465	1.06	cps
Bismuth	209-2	7374628	7478168	7400227	7417674	0.73	cps
Bromine	81-1	12182	12275	12175	12211	0.46	cps
Bromine	81-2	140	173	137	150	13.52	cps
Cadmium	108-1	118640	120781	120855	120092	1.05	cps
Cadmium	106-1	169472	171549	171020	170680	0.63	cps
Cadmium	111-1	1637401	1688943	1689459	1671934	1.79	cps
Calcium	43-1	8265140	8340582	8288158	8297960	0.47	cps
Calcium	44-1	134247531	135184925	133298461	134243639	0.70	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2544589	2547298	2567898	2553261	0.50	cps
Cobalt	59-2	3964448	3961041	3929265	3951585	0.49	cps
Copper	63-2	27812572	27940865	27869634	27874357	0.23	cps
Dysprosium	156-1	337	350	340	342	2.03	cps
Dysprosium	156-2	657	587	617	620	5.66	cps
Erbium	164-1	353	373	317	348	8.26	cps
Erbium	164-2	220	270	237	242	10.51	cps
Gadolinium	160-1	257	310	233	267	14.74	cps
Gadolinium	160-2	727	700	723	717	2.03	cps
Holmium	165-1	14854309	14936204	14985176	14925230	0.44	cps
Holmium	165-2	11010503	11092779	10897516	11000266	0.89	cps
Indium	115-1	11122400	11092464	11352365	11189076	1.27	cps
Indium	115-2	4134370	4232553	4151806	4172910	1.26	cps
Iron	56-2	593737364	596531671	598978284	596415773	0.44	cps
Iron	57-2	14912637	14879684	15043789	14945370	0.58	cps
Iron	54-2	32377811	32602494	32715358	32565221	0.53	cps
Krypton	83-1	300	243	230	258	14.42	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P7
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:01:10	DataFile Name :	035CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	26112294	26420761	26335284	26289446	0.61	cps
Lead	207-1	22989394	23227587	22935455	23050812	0.67	cps
Lead	208-1	105179067	105916379	105300285	105465244	0.37	cps
Lithium	6-1	1544102	1580936	1584065	1569701	1.42	cps
Magnesium	24-2	115385315	113873852	114798345	114685837	0.66	cps
Manganese	55-2	20174981	20299091	20258758	20244277	0.31	cps
Molybdenum	94-1	22532605	22985253	22934175	22817344	1.09	cps
Molybdenum	95-1	32823762	32962745	33327375	33037961	0.79	cps
Molybdenum	96-1	36123486	36428062	36618209	36389919	0.69	cps
Molybdenum	97-1	20511750	20640732	20705560	20619347	0.48	cps
Molybdenum	98-1	52801091	53259864	53619703	53226886	0.77	cps
Neodymium	150-1	497	503	477	492	2.82	cps
Neodymium	150-2	180	163	160	168	6.39	cps
Nickel	60-2	949676	952420	951114	951070	0.14	cps
Phosphorus	31-2	133600	132773	132188	132854	0.53	cps
Potassium	39-2	72345334	72571591	72049551	72322158	0.36	cps
Rhodium	103-1	9927049	9997948	9988772	9971256	0.39	cps
Rhodium	103-2	6104432	6211141	6116222	6143931	0.95	cps
Scandium	45-1	6113888	6185667	6040973	6113509	1.18	cps
Scandium	45-2	534070	534764	536074	534969	0.19	cps
Selenium	82-1	96982	97901	97754	97545	0.51	cps
Selenium	77-2	10327	10070	10137	10178	1.31	cps
Selenium	78-2	33758	34326	33742	33942	0.98	cps
Silicon	28-1	3599880	3631957	3655954	3629264	0.78	cps
Silver	107-1	8139792	8247652	8262518	8216654	0.82	cps
Silver	109-1	7641166	7730406	7741919	7704497	0.72	cps
Sodium	23-2	185027044	185292744	182686077	184335288	0.78	cps
Strontium	86-1	2062760	2085367	2077668	2075265	0.55	cps
Strontium	88-1	18021533	18171451	17958224	18050403	0.61	cps
Sulfur	34-1	622806	625954	625297	624686	0.27	cps
Terbium	159-1	14909464	14994148	15090981	14998198	0.61	cps
Terbium	159-2	10774599	10749701	10697182	10740494	0.37	cps
Thallium	203-1	6460960	6639143	6692949	6597684	1.84	cps
Thallium	205-1	15603344	15809018	15803884	15738749	0.75	cps
Tin	118-1	5446921	5526992	5407845	5460586	1.11	cps
Titanium	47-1	7663570	7819886	7739185	7740880	1.01	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P7
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:01:10	DataFile Name :	035CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	21015492	21139894	20863068	21006151	0.66	cps
Vanadium	51-2	2269097	2287646	2254870	2270537	0.72	cps
Yttrium	89-1	13265426	13499979	13402542	13389316	0.88	cps
Yttrium	89-2	3663010	3633781	3669890	3655560	0.52	cps
Zinc	66-2	4607644	4656245	4618396	4627429	0.55	cps
Zirconium	90-1	11034766	11310962	11241986	11195905	1.28	cps
Zirconium	91-1	2457561	2532757	2477570	2489296	1.56	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P7
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:03:52	DataFile Name :	036CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1897	1683	1527	1702	10.91	cps
Antimony	121-1	4084	3420	3050	3518	14.89	cps
Arsenic	75-2	60	50	73	61	19.15	cps
Barium	135-1	1820	1293	1217	1443	22.76	cps
Barium	137-1	3157	2667	2167	2664	18.59	cps
Beryllium	9-1	307	343	280	310	10.26	cps
Bismuth	209-1	9311518	9424007	9423112	9386212	0.69	cps
Bismuth	209-2	8255163	8387943	8272395	8305167	0.87	cps
Bromine	81-1	11848	12572	12862	12428	4.20	cps
Bromine	81-2	237	273	273	261	8.11	cps
Cadmium	108-1	33	33	27	31	12.36	cps
Cadmium	106-1	3217	3314	3017	3183	4.76	cps
Cadmium	111-1	2724	2656	2459	2613	5.27	cps
Calcium	43-1	2290	1527	1547	1788	24.34	cps
Calcium	44-1	39959	33738	29509	34402	15.28	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1337	1183	1270	1263	6.09	cps
Cobalt	59-2	537	620	613	590	7.85	cps
Copper	63-2	4901	4704	4251	4619	7.22	cps
Dysprosium	156-1	10	10	20	13	43.30	cps
Dysprosium	156-2	0	3	0	1	173.21	cps
Erbium	164-1	73	83	43	67	31.23	cps
Erbium	164-2	50	37	43	43	15.38	cps
Gadolinium	160-1	67	53	53	58	13.33	cps
Gadolinium	160-2	583	593	620	599	3.17	cps
Holmium	165-1	14697611	14738177	14852917	14762902	0.55	cps
Holmium	165-2	11409148	11421634	11310039	11380274	0.54	cps
Indium	115-1	11681135	11928195	11998918	11869416	1.41	cps
Indium	115-2	4598579	4590866	4548587	4579344	0.59	cps
Iron	56-2	91979	86128	81194	86434	6.25	cps
Iron	57-2	2567	2600	2584	2584	0.65	cps
Iron	54-2	6705	5971	5724	6134	8.31	cps
Krypton	83-1	193	180	193	189	4.08	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P7
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:03:52	DataFile Name :	036CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	7412	6025	5338	6258	16.88	cps
Lead	207-1	6348	5348	4691	5462	15.28	cps
Lead	208-1	29212	24439	21210	24954	16.13	cps
Lithium	6-1	1598539	1617632	1623342	1613171	0.81	cps
Magnesium	24-2	14674	13950	13026	13883	5.95	cps
Manganese	55-2	2980	2520	2527	2676	9.86	cps
Molybdenum	94-1	5928	4751	4204	4961	17.76	cps
Molybdenum	95-1	7826	6351	5184	6454	20.51	cps
Molybdenum	96-1	8646	6828	5921	7132	19.45	cps
Molybdenum	97-1	4931	3874	3227	4011	21.45	cps
Molybdenum	98-1	12255	10274	8566	10365	17.81	cps
Neodymium	150-1	7	0	0	2	173.21	cps
Neodymium	150-2	3	0	7	3	100.05	cps
Nickel	60-2	573	550	610	578	5.24	cps
Phosphorus	31-2	160	140	197	166	17.36	cps
Potassium	39-2	61992	61062	60188	61081	1.48	cps
Rhodium	103-1	10735996	10932167	10974204	10880789	1.17	cps
Rhodium	103-2	6970453	7016140	7008648	6998414	0.35	cps
Scandium	45-1	6105773	6220871	6252598	6193081	1.25	cps
Scandium	45-2	553846	554179	555159	554395	0.12	cps
Selenium	82-1	252	214	239	235	8.11	cps
Selenium	77-2	0	0	3	1	173.21	cps
Selenium	78-2	453	413	373	413	9.68	cps
Silicon	28-1	641878	642711	640979	641856	0.13	cps
Silver	107-1	2743	2290	1864	2299	19.12	cps
Silver	109-1	2684	2227	1743	2218	21.20	cps
Sodium	23-2	72546	68089	64729	68455	5.73	cps
Strontium	86-1	750	813	577	713	17.18	cps
Strontium	88-1	4027	3397	2827	3417	17.57	cps
Sulfur	34-1	171908	176222	176297	174809	1.44	cps
Terbium	159-1	14791469	14995443	15251036	15012649	1.53	cps
Terbium	159-2	10996825	11229679	11115721	11114075	1.05	cps
Thallium	203-1	2330	2020	1900	2084	10.65	cps
Thallium	205-1	5781	4658	4211	4883	16.57	cps
Tin	118-1	3064	3057	2847	2989	4.12	cps
Titanium	47-1	1990	1597	1237	1608	23.44	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P7
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:03:52	DataFile Name :	036CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	4461	3260	2964	3562	22.26	cps
Vanadium	51-2	293	223	227	248	15.94	cps
Yttrium	89-1	13285967	13729414	13793416	13602932	2.03	cps
Yttrium	89-2	3816689	3889690	3814065	3840148	1.12	cps
Zinc	66-2	947	1070	853	957	11.36	cps
Zirconium	90-1	3697	3367	2840	3302	13.09	cps
Zirconium	91-1	830	680	637	716	14.18	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5213-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB03I-15-1206(	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:07:52	DataFile Name :	037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	619227	612836	622478	618180	0.79	cps
Antimony	121-1	917	780	873	857	8.15	cps
Arsenic	75-2	1077	1090	1117	1094	1.86	cps
Barium	135-1	26425	26672	26839	26645	0.78	cps
Barium	137-1	45325	46322	46328	45992	1.26	cps
Beryllium	9-1	217	187	223	209	9.35	cps
Bismuth	209-1	9435412	9747570	9496911	9559964	1.73	cps
Bismuth	209-2	8665222	8622911	8500099	8596077	1.00	cps
Bromine	81-1	14380	14764	14958	14701	2.00	cps
Bromine	81-2	443	460	377	427	10.33	cps
Cadmium	108-1	103	133	117	118	12.77	cps
Cadmium	106-1	3627	3717	3794	3713	2.25	cps
Cadmium	111-1	2574	2607	2689	2623	2.26	cps
Calcium	43-1	1247	1323	1290	1287	2.99	cps
Calcium	44-1	26941	27241	26977	27053	0.61	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	37807	37473	37764	37681	0.48	cps
Cobalt	59-2	3620	3437	3580	3546	2.72	cps
Copper	63-2	18438	18355	18068	18287	1.06	cps
Dysprosium	156-1	13663	13930	13854	13816	0.99	cps
Dysprosium	156-2	11702	11895	11558	11718	1.44	cps
Erbium	164-1	13266	13366	13113	13249	0.96	cps
Erbium	164-2	9987	9837	9894	9906	0.77	cps
Gadolinium	160-1	12726	12799	13557	13027	3.53	cps
Gadolinium	160-2	11195	11034	11114	11114	0.72	cps
Holmium	165-1	15015391	15324612	15367676	15235893	1.26	cps
Holmium	165-2	11650410	11705216	11495160	11616929	0.94	cps
Indium	115-1	12144285	12373543	12511059	12342962	1.50	cps
Indium	115-2	4787205	4742137	4733689	4754344	0.61	cps
Iron	56-2	18537242	18899201	18603469	18679970	1.03	cps
Iron	57-2	469177	469426	471285	469963	0.25	cps
Iron	54-2	1027926	1033095	1030880	1030634	0.25	cps
Krypton	83-1	210	220	237	222	6.06	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5213-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB03I-15-1206(	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:07:52	DataFile Name :	037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	27535	27388	27631	27518	0.45	cps
Lead	207-1	22292	23063	22963	22772	1.84	cps
Lead	208-1	106490	107202	109398	107697	1.41	cps
Lithium	6-1	1604861	1617021	1680169	1634017	2.47	cps
Magnesium	24-2	31629	32190	32314	32045	1.14	cps
Manganese	55-2	86842	86450	85736	86342	0.65	cps
Molybdenum	94-1	44892	45096	45377	45121	0.54	cps
Molybdenum	95-1	2210	2000	2074	2095	5.09	cps
Molybdenum	96-1	9713	9513	9880	9702	1.89	cps
Molybdenum	97-1	1293	1260	1323	1292	2.45	cps
Molybdenum	98-1	3420	3310	3447	3393	2.14	cps
Neodymium	150-1	17895	17521	18182	17866	1.85	cps
Neodymium	150-2	11618	11378	11445	11480	1.08	cps
Nickel	60-2	1963	2170	1930	2021	6.43	cps
Phosphorus	31-2	1313	1223	1333	1290	4.54	cps
Potassium	39-2	140109	138930	140594	139878	0.61	cps
Rhodium	103-1	11240099	11474781	11425672	11380184	1.09	cps
Rhodium	103-2	7304124	7240190	7112427	7218914	1.35	cps
Scandium	45-1	6405953	6690494	6618336	6571594	2.25	cps
Scandium	45-2	581915	583730	589736	585127	0.70	cps
Selenium	82-1	301	226	259	262	14.42	cps
Selenium	77-2	27	47	40	38	26.95	cps
Selenium	78-2	463	433	443	447	3.42	cps
Silicon	28-1	2639563	2648962	2923081	2737202	5.88	cps
Silver	107-1	759	711	736	736	3.24	cps
Silver	109-1	460	440	477	459	4.00	cps
Sodium	23-2	38909	37739	37733	38127	1.78	cps
Strontium	86-1	2390	2514	2367	2424	3.25	cps
Strontium	88-1	16786	16429	17394	16870	2.89	cps
Sulfur	34-1	189253	190103	189023	189460	0.30	cps
Terbium	159-1	15213125	15549891	15637185	15466734	1.45	cps
Terbium	159-2	11567928	11337271	11392644	11432614	1.05	cps
Thallium	203-1	1040	967	920	976	6.20	cps
Thallium	205-1	2424	2270	2400	2365	3.49	cps
Tin	118-1	5668	5651	5481	5600	1.85	cps
Titanium	47-1	31954	32375	32528	32286	0.92	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5213-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB03I-15-1206:	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:07:52	DataFile Name :	037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	18613	19334	19114	19020	1.94	cps
Vanadium	51-2	53263	52983	53621	53289	0.60	cps
Yttrium	89-1	14394894	14594887	14522115	14503965	0.70	cps
Yttrium	89-2	4044836	4123151	4050085	4072691	1.07	cps
Zinc	66-2	3764	3844	3787	3798	1.08	cps
Zirconium	90-1	119018	120143	120825	119995	0.76	cps
Zirconium	91-1	26270	26751	27626	26883	2.56	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5236-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB03D-3-12072	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:11:05	DataFile Name :	038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	615019	613482	621294	616599	0.67	cps
Antimony	121-1	983	1123	993	1033	7.56	cps
Arsenic	75-2	8016	8069	8189	8091	1.10	cps
Barium	135-1	43305	44085	43964	43785	0.96	cps
Barium	137-1	74922	76679	75603	75735	1.17	cps
Beryllium	9-1	203	270	267	247	15.23	cps
Bismuth	209-1	9496349	9574602	9752128	9607693	1.36	cps
Bismuth	209-2	8576563	8481493	8435270	8497775	0.85	cps
Bromine	81-1	14741	15612	15635	15329	3.32	cps
Bromine	81-2	800	613	647	687	14.50	cps
Cadmium	108-1	457	437	407	433	5.81	cps
Cadmium	106-1	5351	5164	4951	5155	3.88	cps
Cadmium	111-1	3700	3598	3407	3568	4.17	cps
Calcium	43-1	1777	1877	1733	1796	4.09	cps
Calcium	44-1	33851	36190	34516	34852	3.46	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	232386	231466	232172	232008	0.21	cps
Cobalt	59-2	713	620	590	641	10.03	cps
Copper	63-2	59133	58383	58571	58695	0.66	cps
Dysprosium	156-1	67672	67839	68422	67978	0.58	cps
Dysprosium	156-2	56563	56972	56858	56798	0.37	cps
Erbium	164-1	73716	76129	75586	75144	1.68	cps
Erbium	164-2	56323	55824	56818	56322	0.88	cps
Gadolinium	160-1	69672	71103	71274	70683	1.24	cps
Gadolinium	160-2	55432	55161	56574	55722	1.35	cps
Holmium	165-1	15253221	14997262	15230994	15160492	0.94	cps
Holmium	165-2	11573586	11755847	11719151	11682861	0.83	cps
Indium	115-1	12502633	12300108	12448894	12417212	0.84	cps
Indium	115-2	4812403	4778726	4814780	4801970	0.42	cps
Iron	56-2	49788438	49348363	50163163	49766654	0.82	cps
Iron	57-2	1258025	1241251	1255593	1251623	0.72	cps
Iron	54-2	2745916	2762879	2752032	2753609	0.31	cps
Krypton	83-1	330	323	333	329	1.55	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5236-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB03D-3-12072	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:11:05	DataFile Name :	038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	78069	78579	78612	78420	0.39	cps
Lead	207-1	63146	63213	63578	63312	0.37	cps
Lead	208-1	297815	300719	301182	299906	0.61	cps
Lithium	6-1	1620021	1670913	1659695	1650210	1.62	cps
Magnesium	24-2	8779	9063	9206	9016	2.41	cps
Manganese	55-2	6438	6495	6391	6441	0.80	cps
Molybdenum	94-1	209536	211508	214053	211699	1.07	cps
Molybdenum	95-1	1737	2665	1700	2034	26.87	cps
Molybdenum	96-1	37154	39169	38484	38269	2.68	cps
Molybdenum	97-1	967	1761	987	1238	36.56	cps
Molybdenum	98-1	2617	4106	2510	3078	28.98	cps
Neodymium	150-1	82141	84494	84323	83653	1.57	cps
Neodymium	150-2	53441	52865	53621	53309	0.74	cps
Nickel	60-2	1173	1240	1173	1196	3.22	cps
Phosphorus	31-2	1017	963	957	979	3.36	cps
Potassium	39-2	265749	265425	268366	266513	0.61	cps
Rhodium	103-1	11346123	11422865	11551031	11440007	0.90	cps
Rhodium	103-2	7280999	7254752	7269876	7268542	0.18	cps
Scandium	45-1	7000526	6934057	6978061	6970881	0.49	cps
Scandium	45-2	612774	609870	619321	613988	0.79	cps
Selenium	82-1	353	365	322	347	6.44	cps
Selenium	77-2	173	160	160	164	4.68	cps
Selenium	78-2	610	590	633	611	3.55	cps
Silicon	28-1	2434276	2560051	2531454	2508594	2.63	cps
Silver	107-1	1393	1466	1373	1410	3.45	cps
Silver	109-1	313	383	347	348	10.07	cps
Sodium	23-2	38705	38882	38678	38755	0.29	cps
Strontium	86-1	9090	9723	9126	9313	3.82	cps
Strontium	88-1	73918	78399	75985	76100	2.95	cps
Sulfur	34-1	190690	190013	190775	190493	0.22	cps
Terbium	159-1	15413701	15376128	15783815	15524548	1.45	cps
Terbium	159-2	11563289	11441502	11548738	11517843	0.58	cps
Thallium	203-1	1410	1503	1400	1438	3.96	cps
Thallium	205-1	3304	3651	3537	3497	5.06	cps
Tin	118-1	7602	7819	7725	7715	1.41	cps
Titanium	47-1	15135	15044	15259	15146	0.71	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5236-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL3-SB03D-3-12072	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:11:05	DataFile Name :	038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	76985	79442	79576	78668	1.85	cps
Vanadium	51-2	301503	297721	301368	300197	0.71	cps
Yttrium	89-1	15216515	15451753	15478554	15382274	0.94	cps
Yttrium	89-2	4277253	4257675	4266674	4267201	0.23	cps
Zinc	66-2	1180	1313	1347	1280	6.89	cps
Zirconium	90-1	574801	581249	579417	578489	0.57	cps
Zirconium	91-1	125693	127894	128725	127437	1.23	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5076-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL2-SB02I-7.5-1202	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:14:20	DataFile Name :	039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1998550	2020666	1963920	1994379	1.43	cps
Antimony	121-1	507	547	610	554	9.40	cps
Arsenic	75-2	2844	2820	2657	2774	3.67	cps
Barium	135-1	140316	142679	142592	141863	0.94	cps
Barium	137-1	249057	249567	251700	250108	0.56	cps
Beryllium	9-1	767	810	757	778	3.65	cps
Bismuth	209-1	9395411	9444527	9577557	9472498	0.99	cps
Bismuth	209-2	8407882	8416518	8396539	8406980	0.12	cps
Bromine	81-1	14624	14624	14978	14742	1.39	cps
Bromine	81-2	407	383	383	391	3.45	cps
Cadmium	108-1	177	187	173	179	3.88	cps
Cadmium	106-1	4074	4284	3974	4111	3.85	cps
Cadmium	111-1	2907	3062	2819	2929	4.19	cps
Calcium	43-1	12232	12455	12595	12427	1.48	cps
Calcium	44-1	203556	206617	204020	204731	0.81	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	83942	83982	84274	84066	0.22	cps
Cobalt	59-2	49715	50595	49391	49900	1.25	cps
Copper	63-2	51598	51792	51488	51626	0.30	cps
Dysprosium	156-1	25443	26141	26368	25984	1.86	cps
Dysprosium	156-2	22281	22281	21703	22089	1.51	cps
Erbium	164-1	20208	20178	20582	20323	1.11	cps
Erbium	164-2	15255	15085	15946	15429	2.96	cps
Gadolinium	160-1	22862	22799	22441	22701	1.00	cps
Gadolinium	160-2	18172	18265	18319	18252	0.41	cps
Holmium	165-1	15227868	15600129	15382602	15403533	1.21	cps
Holmium	165-2	11521601	11450057	11476250	11482636	0.32	cps
Indium	115-1	12530932	12751973	12448807	12577237	1.25	cps
Indium	115-2	4728599	4710579	4671965	4703714	0.62	cps
Iron	56-2	74340647	74500544	74104167	74315119	0.27	cps
Iron	57-2	1876586	1847725	1851293	1858535	0.85	cps
Iron	54-2	4014209	4038199	4046582	4032997	0.42	cps
Krypton	83-1	237	293	260	263	10.82	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5076-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL2-SB02I-7.5-1202	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:14:20	DataFile Name :	039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	89307	91324	89438	90023	1.25	cps
Lead	207-1	74563	74492	74680	74578	0.13	cps
Lead	208-1	346022	351154	350040	349072	0.77	cps
Lithium	6-1	1654788	1647513	1671105	1657802	0.73	cps
Magnesium	24-2	376574	376664	379887	377708	0.50	cps
Manganese	55-2	645011	643964	644937	644637	0.09	cps
Molybdenum	94-1	72374	74461	74227	73687	1.55	cps
Molybdenum	95-1	4314	4274	4271	4286	0.56	cps
Molybdenum	96-1	17561	17447	17460	17489	0.35	cps
Molybdenum	97-1	2724	2734	2767	2741	0.83	cps
Molybdenum	98-1	6708	6775	6902	6795	1.45	cps
Neodymium	150-1	38011	38736	38325	38358	0.95	cps
Neodymium	150-2	23800	24839	23997	24212	2.28	cps
Nickel	60-2	14053	14000	13790	13948	1.00	cps
Phosphorus	31-2	2884	2854	2630	2789	4.96	cps
Potassium	39-2	423638	422345	422107	422697	0.19	cps
Rhodium	103-1	11808364	11940811	11730096	11826423	0.90	cps
Rhodium	103-2	7291789	7198678	7225347	7238605	0.66	cps
Scandium	45-1	6778558	6870686	6874960	6841401	0.80	cps
Scandium	45-2	593599	591462	590259	591773	0.29	cps
Selenium	82-1	279	225	239	248	11.42	cps
Selenium	77-2	103	83	83	90	12.83	cps
Selenium	78-2	490	487	440	472	5.92	cps
Silicon	28-1	4968396	4961091	5292191	5073893	3.73	cps
Silver	107-1	885	978	896	920	5.56	cps
Silver	109-1	480	560	493	511	8.39	cps
Sodium	23-2	44765	43949	43675	44130	1.28	cps
Strontium	86-1	13613	13633	13873	13706	1.06	cps
Strontium	88-1	115217	116775	117300	116431	0.93	cps
Sulfur	34-1	197127	196105	193938	195723	0.83	cps
Terbium	159-1	15898391	15751574	15863110	15837692	0.48	cps
Terbium	159-2	11324164	11287924	11273879	11295323	0.23	cps
Thallium	203-1	1890	1797	1813	1833	2.72	cps
Thallium	205-1	4351	4311	4214	4292	1.64	cps
Tin	118-1	3587	3294	3834	3572	7.57	cps
Titanium	47-1	303399	311886	310732	308672	1.49	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	P5076-01DLX5	Instrumnet Name :	P7
Client Sample ID :	TAPIAL2-SB02I-7.5-1202	Dilution Factor :	5
Date & Time Acquired :	2024-12-19 17:14:20	DataFile Name :	039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	36012	35196	36122	35777	1.41	cps
Vanadium	51-2	123805	123016	122556	123126	0.51	cps
Yttrium	89-1	14865190	14956400	14956498	14926030	0.35	cps
Yttrium	89-2	4098698	4042994	4049612	4063768	0.75	cps
Zinc	66-2	20180	20167	19967	20105	0.60	cps
Zirconium	90-1	191241	196942	196381	194855	1.61	cps
Zirconium	91-1	43110	43400	44206	43572	1.30	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P7
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:20:37	DataFile Name :	040CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	14566071	14747722	14488544	14600779	0.91	cps
Antimony	121-1	6436423	6561476	6528596	6508832	1.00	cps
Arsenic	75-2	325688	320346	321758	322597	0.86	cps
Barium	135-1	8295930	8442409	8392366	8376902	0.89	cps
Barium	137-1	14171220	14482989	14481681	14378630	1.25	cps
Beryllium	9-1	693040	707142	710465	703549	1.32	cps
Bismuth	209-1	8776940	8694254	8589237	8686811	1.08	cps
Bismuth	209-2	7412006	7389467	7354149	7385207	0.39	cps
Bromine	81-1	12565	12319	12198	12361	1.51	cps
Bromine	81-2	187	203	197	196	4.29	cps
Cadmium	108-1	117212	119547	119561	118773	1.14	cps
Cadmium	106-1	166542	170170	168572	168428	1.08	cps
Cadmium	111-1	1607915	1631072	1633535	1624174	0.87	cps
Calcium	43-1	8203584	8340568	8283322	8275825	0.83	cps
Calcium	44-1	131325348	133697775	133045158	132689427	0.92	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2524624	2511456	2496562	2510881	0.56	cps
Cobalt	59-2	3906375	3935288	3901668	3914443	0.47	cps
Copper	63-2	27576075	27714892	27732754	27674574	0.31	cps
Dysprosium	156-1	377	263	337	326	17.65	cps
Dysprosium	156-2	603	583	617	601	2.79	cps
Erbium	164-1	317	340	360	339	6.40	cps
Erbium	164-2	263	253	307	274	10.33	cps
Gadolinium	160-1	267	310	290	289	7.51	cps
Gadolinium	160-2	730	717	793	747	5.49	cps
Holmium	165-1	15123612	14824742	14821425	14923260	1.16	cps
Holmium	165-2	10777782	10873707	10872449	10841312	0.51	cps
Indium	115-1	11517114	11215311	11137492	11289972	1.78	cps
Indium	115-2	4125258	4179394	4115801	4140151	0.83	cps
Iron	56-2	596032178	595515604	588870471	593472751	0.67	cps
Iron	57-2	14866941	14876740	14656022	14799901	0.84	cps
Iron	54-2	32229303	32280984	32045470	32185252	0.38	cps
Krypton	83-1	230	237	287	251	12.33	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P7
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:20:37	DataFile Name :	040CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	25238654	26162218	25950613	25783828	1.88	cps
Lead	207-1	22208935	22877066	22814900	22633634	1.63	cps
Lead	208-1	101561403	104466703	104036844	103354983	1.52	cps
Lithium	6-1	1620043	1550112	1586990	1585715	2.21	cps
Magnesium	24-2	113417955	114940285	113568388	113975543	0.74	cps
Manganese	55-2	20117237	20220066	20022533	20119945	0.49	cps
Molybdenum	94-1	22723628	22653794	22587861	22655094	0.30	cps
Molybdenum	95-1	32810305	32951682	32694019	32818669	0.39	cps
Molybdenum	96-1	35845712	35834418	35694901	35791677	0.23	cps
Molybdenum	97-1	20281851	20297885	20257758	20279165	0.10	cps
Molybdenum	98-1	52175516	52303224	52029831	52169524	0.26	cps
Neodymium	150-1	577	543	557	559	3.00	cps
Neodymium	150-2	183	173	180	179	2.85	cps
Nickel	60-2	940729	935540	940087	938785	0.30	cps
Phosphorus	31-2	131936	131469	131180	131528	0.29	cps
Potassium	39-2	71559266	71725907	71475457	71586877	0.18	cps
Rhodium	103-1	10325074	9908749	9855360	10029728	2.56	cps
Rhodium	103-2	6089536	6131784	6122714	6114678	0.36	cps
Scandium	45-1	6395513	6205329	6207319	6269387	1.74	cps
Scandium	45-2	532303	534982	526018	531101	0.87	cps
Selenium	82-1	95838	97003	96989	96610	0.69	cps
Selenium	77-2	9903	10190	10013	10036	1.44	cps
Selenium	78-2	34129	33518	33598	33748	0.98	cps
Silicon	28-1	3535273	3653248	3636410	3608310	1.77	cps
Silver	107-1	8084104	8124745	8171747	8126865	0.54	cps
Silver	109-1	7631482	7516851	7710373	7619569	1.28	cps
Sodium	23-2	183079077	183510104	181888437	182825873	0.46	cps
Strontium	86-1	2010635	2042675	2074011	2042440	1.55	cps
Strontium	88-1	17871297	17807115	17950071	17876161	0.40	cps
Sulfur	34-1	634578	634014	626502	631698	0.71	cps
Terbium	159-1	15387075	15173656	14870558	15143763	1.71	cps
Terbium	159-2	10693295	10817542	10540581	10683806	1.30	cps
Thallium	203-1	6487572	6566991	6574758	6543107	0.74	cps
Thallium	205-1	15333506	15565500	15665266	15521424	1.10	cps
Tin	118-1	5361008	5414272	5339936	5371739	0.71	cps
Titanium	47-1	7712252	7839083	7732937	7761424	0.88	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P7
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:20:37	DataFile Name :	040CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	19989556	20850424	20726000	20521994	2.27	cps
Vanadium	51-2	2252261	2230606	2256115	2246327	0.61	cps
Yttrium	89-1	13987441	13443770	13352903	13594705	2.52	cps
Yttrium	89-2	3647002	3658625	3621343	3642323	0.52	cps
Zinc	66-2	4683944	4658895	4623988	4655609	0.65	cps
Zirconium	90-1	11086788	11190060	11147328	11141392	0.47	cps
Zirconium	91-1	2459184	2474645	2472652	2468827	0.34	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P7
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:23:19	DataFile Name :	041CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1720	1597	1417	1578	9.67	cps
Antimony	121-1	3884	3194	2780	3286	16.97	cps
Arsenic	75-2	30	37	33	33	10.01	cps
Barium	135-1	1957	1450	1143	1517	27.08	cps
Barium	137-1	3457	2637	1980	2691	27.49	cps
Beryllium	9-1	323	300	243	289	14.24	cps
Bismuth	209-1	9540387	9646528	9481489	9556135	0.88	cps
Bismuth	209-2	8306506	8415124	8389213	8370281	0.68	cps
Bromine	81-1	11845	12399	12822	12355	3.97	cps
Bromine	81-2	207	240	240	229	8.41	cps
Cadmium	108-1	57	33	27	39	40.51	cps
Cadmium	106-1	3354	3444	3520	3439	2.43	cps
Cadmium	111-1	2814	2724	2701	2746	2.18	cps
Calcium	43-1	2574	1803	1337	1905	32.79	cps
Calcium	44-1	44258	33166	28079	35168	23.52	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1263	1220	1243	1242	1.75	cps
Cobalt	59-2	550	497	500	516	5.79	cps
Copper	63-2	4311	3757	3670	3913	8.88	cps
Dysprosium	156-1	20	27	20	22	17.33	cps
Dysprosium	156-2	10	3	3	6	69.34	cps
Erbium	164-1	53	40	40	44	17.32	cps
Erbium	164-2	30	63	30	41	46.81	cps
Gadolinium	160-1	47	57	47	50	11.55	cps
Gadolinium	160-2	570	660	597	609	7.59	cps
Holmium	165-1	14907895	14847427	14979114	14911479	0.44	cps
Holmium	165-2	11231939	11278052	11356973	11288988	0.56	cps
Indium	115-1	12060933	12070008	12085591	12072178	0.10	cps
Indium	115-2	4629405	4580065	4549975	4586481	0.87	cps
Iron	56-2	82458	76386	70775	76540	7.63	cps
Iron	57-2	2490	2314	2220	2341	5.86	cps
Iron	54-2	5821	5678	5504	5668	2.80	cps
Krypton	83-1	203	240	250	231	10.63	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P7
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:23:19	DataFile Name :	041CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	7525	5821	4828	6058	22.52	cps
Lead	207-1	6905	5228	4231	5455	24.78	cps
Lead	208-1	31351	23375	19766	24831	23.88	cps
Lithium	6-1	1603329	1633671	1651177	1629392	1.49	cps
Magnesium	24-2	12719	11564	10781	11688	8.34	cps
Manganese	55-2	2377	2330	2224	2310	3.40	cps
Molybdenum	94-1	6365	4841	3834	5013	25.42	cps
Molybdenum	95-1	8656	6048	4924	6543	29.26	cps
Molybdenum	96-1	9803	6665	5324	7264	31.65	cps
Molybdenum	97-1	5324	3977	3104	4135	27.05	cps
Molybdenum	98-1	14044	9893	7832	10590	29.88	cps
Neodymium	150-1	10	3	0	4	114.60	cps
Neodymium	150-2	0	0	0	0	0.00	cps
Nickel	60-2	523	500	597	540	9.34	cps
Phosphorus	31-2	117	167	177	153	20.96	cps
Potassium	39-2	59322	59422	58518	59087	0.84	cps
Rhodium	103-1	11013733	10910814	11090475	11005008	0.82	cps
Rhodium	103-2	7082232	6961417	6855551	6966400	1.63	cps
Scandium	45-1	6183720	6248731	6277824	6236758	0.77	cps
Scandium	45-2	551384	555599	557129	554704	0.54	cps
Selenium	82-1	264	132	207	201	32.90	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	507	410	450	456	10.66	cps
Silicon	28-1	612763	612143	614035	612980	0.16	cps
Silver	107-1	2909	2116	1708	2244	27.21	cps
Silver	109-1	2630	2107	1707	2148	21.56	cps
Sodium	23-2	59832	57206	54225	57088	4.91	cps
Strontium	86-1	867	763	633	754	15.50	cps
Strontium	88-1	4704	3297	2494	3498	31.99	cps
Sulfur	34-1	176432	178580	179086	178032	0.79	cps
Terbium	159-1	15266696	14918965	15205596	15130419	1.23	cps
Terbium	159-2	11053869	11085715	10916272	11018619	0.82	cps
Thallium	203-1	2144	1723	1510	1792	17.98	cps
Thallium	205-1	5114	4181	3490	4262	19.12	cps
Tin	118-1	3370	3104	2914	3129	7.33	cps
Titanium	47-1	2054	1513	1080	1549	31.48	cps

Reviewed By:Mohan
On:12/20/2024 3:41:58 AM
Inst Id :P7
LB :LB134024

LB Number :	LB134024	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P7
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2024-12-19 17:23:19	DataFile Name :	041CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	4831	3207	2677	3572	31.42	cps
Vanadium	51-2	223	233	220	226	3.08	cps
Yttrium	89-1	13823216	13687794	13825726	13778912	0.57	cps
Yttrium	89-2	3826405	3874056	3783058	3827840	1.19	cps
Zinc	66-2	1037	1023	923	994	6.23	cps
Zirconium	90-1	4131	2994	2800	3308	21.73	cps
Zirconium	91-1	873	760	580	738	20.05	cps

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB165560

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: 12/10/2024 **Time :** 15:50 **Temp :** 95 °C

End Digest Date: 12/10/2024 **Time :** 16:20 **Temp :** 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: MB

Supervisor Signature:

Temp : 1. 95°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP83541
CCV	30mL	MP83543
CRA	30mL	MP83545
Blank Spike	0.48mL	MP83533
Matrix Spike	0.48mL	MP83533

Chemical Used	ML/SAMPLE USED	Lot Number
AQUA REGIA	1.5mL	MP83547
KMnO4 (5%)	4.5mL	MP83208
Hydroxylamine HCL (12%)	2.0mL	MP83210
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	MP83534
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP83536
2.5 ppb	S2.5	30mL	MP83537
5.0 ppb	S5.0	30mL	MP83538
7.5 ppb	S7.5	30mL	MP83539
10.0 ppb	S10.0	30mL	MP83540
ICV	ICV	30mL	MP83541
ICB	ICB	30mL	MP83542
CCV	CCV	30mL	MP83543
CCB	CCB	30mL	MP83544
CRI	CRI	30mL	MP83545
CHK STD	CHK STD	30mL	MP83546

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/10/24 @ 16:50	MB - Dig. Lab	MB - metal Lab
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB165560

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Comment	Prep Pos
P5174-01	ROLL-OFF-COMP	0.59	35	NA	N/A	3-1
P5175-01	OK-01-12062024	0.50	35	NA	N/A	2
P5176-01	EO-02-12062024	0.56	35	NA	N/A	3
P5176-03	EO-03-12062024	0.53	35	NA	N/A	4
P5196-01	MH-761	0.56	35	NA	N/A	5
P5213-01	TAPIAL3-SB03I-15-120624-00-T1	0.59	35	NA	N/A	6
P5216-01	BP-G-6	0.57	35	NA	N/A	7
P5216-05	MH-743	0.50	35	NA	N/A	8
P5216-09	MH-744	0.60	35	NA	N/A	9
P5216-13	TP-12	0.56	35	NA	N/A	10
P5219-01	MR-CAM-09-MR-CAM-010	0.50	35	NA	N/A	11
P5219-02	MR-CAM-011	0.57	35	NA	N/A	12
P5219-03	MR-CAM-012	0.56	35	NA	N/A	13
P5219-04	MR-CAM-013	0.54	35	NA	N/A	14
P5223-01	TR-05-120924	0.57	35	NA	N/A	15
P5223-01DUP	TR-05-120924DUP	0.56	35	NA	N/A	16
P5223-01MS	TR-05-120924MS	0.57	35	NA	MP83533	17
P5223-01MSD	TR-05-120924MSD	0.59	35	NA	MP83533	18
P5236-01	TAPIAL3-SB03D-3-120724-00-T01	0.50	35	NA	N/A	19
P5239-01	WC-1	0.52	35	NA	N/A	20
P5244-01	NB-08-121024	0.57	35	NA	N/A	21
P5245-01	72-12016	0.56	35	NA	N/A	22
PB165560BL	PBS560	0.56	35	NA	N/A	23
PB165560BS	LCS560	0.54	35	NA	MP83533	24

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 121024_7471 **WorkList ID :** 186189 **Department :** Digestion **Date :** 12-10-2024 13:03:01

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5174-01	ROLL-OFF-COMP	Solid	Mercury	Cool 4 deg C	PSEG03	L51	12/06/2024	7471B
P5175-01	OK-01-12062024	Solid	Mercury	Cool 4 deg C	PSEG05	L51	12/06/2024	7471B
P5176-01	EO-02-12062024	Solid	Mercury	Cool 4 deg C	PSEG05	L51	12/06/2024	7471B
P5176-03	EO-03-12062024	Solid	Mercury	Cool 4 deg C	PSEG05	L51	12/06/2024	7471B
P5196-01	MH-761	Solid	Mercury	Cool 4 deg C	PSEG03	L51	12/06/2024	7471B
P5213-01	TAPIAL3-SB03I-15-120624-00-	Solid	Mercury	Cool 4 deg C	WEST04	L51	12/06/2024	7471B
P5216-01	BP-G-6	Solid	Mercury	Cool 4 deg C	PSEG03	L41	12/07/2024	7471B
P5216-05	MH-743	Solid	Mercury	Cool 4 deg C	PSEG03	L41	12/07/2024	7471B
P5216-09	MH-744	Solid	Mercury	Cool 4 deg C	PSEG03	L41	12/07/2024	7471B
P5216-13	TP-12	Solid	Mercury	Cool 4 deg C	PSEG03	L51	12/09/2024	7471B
P5219-01	MR-CAM-09-MR-CAM-010	Solid	Mercury	Cool 4 deg C	PSEG03	L51	12/09/2024	7471B
P5219-02	MR-CAM-011	Solid	Mercury	Cool 4 deg C	PSEG03	L51	12/09/2024	7471B
P5219-03	MR-CAM-012	Solid	Mercury	Cool 4 deg C	PSEG03	L51	12/09/2024	7471B
P5219-04	MR-CAM-013	Solid	Mercury	Cool 4 deg C	PSEG05	L51	12/09/2024	7471B
P5223-01	TR-05-120924	Solid	Mercury	Cool 4 deg C	WEST04	L51	12/07/2024	7471B
P5236-01	TAPIAL3-SB03D-3-120724-00-1	Solid	Mercury	Cool 4 deg C	PSEG03	L51	12/10/2024	7471B
P5239-01	WC-1	Solid	Mercury	Cool 4 deg C	PSEG05	L51	12/10/2024	7471B
P5244-01	NB-08-121024	Solid	Mercury	Cool 4 deg C	PSEG03	L41	12/10/2024	7471B
P5245-01	72-12016	Solid	Mercury	Cool 4 deg C	PSEG03	L41	12/10/2024	7471B

Date/Time 12/10/24 @ 15:10
Raw Sample Received by: AB-DIG Lab
Raw Sample Relinquished by: AB-DIG Lab

Date/Time 12/10/24 @ 16:00
Raw Sample Received by: AB-DIG Lab
Raw Sample Relinquished by: AB-DIG Lab

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165717

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 #3 2. N/A

Start Digest Date: 12/18/2024 **Time :** 10:40 **Temp :** 96 °C

End Digest Date: 12/18/2024 **Time :** 12:45 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #3

Dig Technician Signature: SLS.

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
Conc. HCL	10.00	M6121
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

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#3 CELL #33 Temp: 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/18/24 13:50	SLS. met digestion	[illegible] Metal Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165717

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P5076-01	TAPIAL2-SB02I-7.5-120224-00-T1	N/A	1.37	100	Brown	Yellow	Medium	N/A	N/A	1
P5117-01	TAPIAL3-SB04I-10-120324-00-T1	N/A	1.41	100	light Brown	Yellow	Medium	N/A	N/A	2
P5117-01MS	TAPIAL3-SB04I-10-120324-00-T1MS	N/A	1.29	100	light Brown	Yellow	Medium	N/A	MP83717,MP83718,MP83719,N	4
P5117-01MSD	TAPIAL3-SB04I-10-120324-00-T1MSD	N/A	1.20	100	light Brown	Yellow	Medium	N/A	MP83717,MP83718,MP83719,N	5
P5117-01DUP	TAPIAL3-SB04I-10-120324-00-T1DUP	N/A	1.46	100	light Brown	Yellow	Medium	N/A	N/A	3
P5213-01	TAPIAL3-SB03I-15-120624-00-T1	N/A	1.27	100	light Brown	Yellow	Medium	N/A	N/A	6
P5236-01	TAPIAL3-SB03D-3-120724-00-T01	N/A	1.23	100	light Brown	Yellow	Medium	N/A	N/A	7
PB165717BL	PBS717	N/A	1.40	100	Colorless	Colorless	Fine	N/A	N/A	8
PB165717BS	LCS717	N/A	1.40	100	Colorless	Colorless	Fine	N/A	MP83717,MP83718,MP83719,N	9

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB165717 **WorkList ID :** 186431 **Department :** Digestion **Date :** 12-18-2024 09:44:10

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5076-01	TAPIAL2-SB02I-7.5-120224-00-	Solid	Metals ICP-TAL	Cool 4 deg C	WEST04	L61	12/02/2024	6020B
P5117-01	TAPIAL3-SB04I-10-120324-00-	Solid	Metals ICP-TAL	Cool 4 deg C	WEST04	L41	12/03/2024	6020B
P5213-01	TAPIAL3-SB03I-15-120624-00-	Solid	Metals ICP-TAL	Cool 4 deg C	WEST04	L51	12/06/2024	6020B
P5236-01	TAPIAL3-SB03D-3-120724-00-1	Solid	Metals ICP-TAL	Cool 4 deg C	WEST04	L51	12/07/2024	6020B

Date/Time 12/18/24 10:15
Raw Sample Received by: sred. met digestion
Raw Sample Relinquished by: GPC(gm)

Date/Time 12/18/24 11:15
Raw Sample Received by: GPC(gm)
Raw Sample Relinquished by: sred. met digest

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 12/11/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 17:00
In Date: 12/10/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:11
Out Date: 12/11/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB133867

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
P5161-02	125	19	1.00	1.00	2.00	2.00	100.0	oil sample
P5225-01	1A-1B-1C-MAIN BUILDING	15	1.00	1.00	2.00	2.00	100.0	caluk
P5225-02	2A-2B-2C MAIN BUILDING	16	1.00	1.00	2.00	2.00	100.0	caluk
P5225-03	3A-3B-3C ADDITION BASIC	17	1.00	1.00	2.00	2.00	100.0	caluk
P5225-04	4A-4B-4C BASIC	18	1.00	1.00	2.00	2.00	100.0	caluk
P5236-01	TAPIAL3-SB03D-3-120724-00-T01	1	1.15	8.72	9.87	8.58	85.2	
P5239-01	WC-1	2	1.15	8.51	9.66	8.26	83.5	
P5239-02	WC-1-EPH	3	1.17	8.58	9.75	8.09	80.7	
P5239-03	WC-1-VOC	4	1.15	8.52	9.67	8.02	80.6	
P5239-05	SW-1	5	1.15	8.84	9.99	8.8	86.5	
P5239-06	SW-2	6	1.15	8.82	9.97	8.27	80.7	
P5239-07	SW-3	7	1.13	8.77	9.9	8.03	78.7	
P5239-08	SW-4	8	1.12	8.80	9.92	7.99	78.1	
P5239-09	B-5	9	1.15	8.72	9.87	8.39	83.0	
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	10	1.19	8.62	9.81	9.28	93.9	
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	11	1.17	8.70	9.87	9.24	92.8	
P5244-01	NB-08-121024	12	1.14	8.82	9.96	8.98	88.9	
P5244-02	NB-08-121024-E2	13	1.17	8.58	9.75	8.59	86.5	
P5245-01	72-12016	14	1.15	8.37	9.52	8.99	93.7	

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

WORKLIST(Hardcopy Internal Chain)

lb 133867

WorkList Name : %1-121024 **WorkList ID :** 186173 **Department :** Wet-Chemistry **Date :** 12-10-2024 09:35:09

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5161-02	125	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	12/06/2024	Chemtech -SO
P5225-01	1A-1B-1C-MAIN BUILDING	Solid	Percent Solids	Cool 4 deg C	ATCE02	M11	12/09/2024	Chemtech -SO
P5225-02	2A-2B-2C MAIN BUILDING	Solid	Percent Solids	Cool 4 deg C	ATCE02	M11	12/09/2024	Chemtech -SO
P5225-03	3A-3B-3C ADDITION BASIC	Solid	Percent Solids	Cool 4 deg C	ATCE02	M11	12/09/2024	Chemtech -SO
P5225-04	4A-4B-4C BASIC	Solid	Percent Solids	Cool 4 deg C	ATCE02	M11	12/09/2024	Chemtech -SO
P5236-01	TAPIAL3-SB03D-3-120724-00-T	Solid	Percent Solids	Cool 4 deg C	WEST04	L51	12/07/2024	Chemtech -SO
P5239-01	WC-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	12/10/2024	Chemtech -SO
P5239-02	WC-1-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	12/10/2024	Chemtech -SO
P5239-03	WC-1-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	12/10/2024	Chemtech -SO
P5239-05	SW-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	12/10/2024	Chemtech -SO
P5239-06	SW-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	12/10/2024	Chemtech -SO
P5239-07	SW-3	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	12/10/2024	Chemtech -SO
P5239-08	SW-4	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	12/10/2024	Chemtech -SO
P5239-09	B-5	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	12/10/2024	Chemtech -SO
P5242-01	TAPIAL1-SB04D-9-112224-00-T	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	12/10/2024	Chemtech -SO
P5242-02	TAPIAL1-SB04D-4-112224-00-	Solid	Percent Solids	Cool 4 deg C	WEST04	L61	11/22/2024	Chemtech -SO
P5244-01	NB-08-121024	Solid	Percent Solids	Cool 4 deg C	WEST04	L61	11/22/2024	Chemtech -SO
P5244-02	NB-08-121024-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	L51	12/10/2024	Chemtech -SO
P5245-01	72-12016	Solid	Percent Solids	Cool 4 deg C	PSEG05	L51	12/10/2024	Chemtech -SO
P5245-02	72-12016-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	12/10/2024	Chemtech -SO

Date/Time 12-10-24 15:35

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

Date/Time 12-10-24 17:10

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

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 # LB133887

Review By	Mohan	Review On	12/11/2024 4:47:45 PM
Supervise By	jaswal	Supervise On	12/11/2024 11:05:59 PM

STD. NAME	STD REF.#
ICAL Standard	MP83534,MP83536,MP835337,MP83538,MP83538,MP83540
ICV Standard	MP83541
CCV Standard	MP83543
ICSA Standard	
CRI Standard	MP83545
LCS Standard	
Chk Standard	MP83542,MP83544,MP83546,MP83550

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	12/11/24 10:56		Mohan	OK
2	S0.2	S0.2	CAL2	12/11/24 10:58		Mohan	OK
3	S2.5	S2.5	CAL3	12/11/24 11:00		Mohan	OK
4	S5	S5	CAL4	12/11/24 11:02		Mohan	OK
5	S7.5	S7.5	CAL5	12/11/24 11:05		Mohan	OK
6	S10	S10	CAL6	12/11/24 11:10		Mohan	OK
7	ICV16	ICV16	ICV	12/11/24 11:13		Mohan	OK
8	ICB16	ICB16	ICB	12/11/24 11:18		Mohan	OK
9	CCV16	CCV16	CCV	12/11/24 11:20		Mohan	OK
10	CCB16	CCB16	CCB	12/11/24 11:22		Mohan	OK
11	CRA	CRA	CRDL	12/11/24 11:25		Mohan	OK
12	HighStd	HighStd	HIGH STD	12/11/24 11:27		Mohan	OK
13	ChkStd	ChkStd	SAM	12/11/24 11:29		Mohan	OK
14	PB165560BL	PB165560BL	MB	12/11/24 11:32		Mohan	OK
15	PB165560BS	PB165560BS	LCS	12/11/24 11:34		Mohan	OK
16	P5174-01	ROLL-OFF-COMP	SAM	12/11/24 11:36	High	Mohan	Dilution
17	P5175-01	OK-01-12062024	SAM	12/11/24 11:38		Mohan	OK
18	P5176-01	EO-02-12062024	SAM	12/11/24 11:41		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 # LB133887

Review By	Mohan	Review On	12/11/2024 4:47:45 PM
Supervise By	jaswal	Supervise On	12/11/2024 11:05:59 PM

STD. NAME	STD REF.#
ICAL Standard	MP83534,MP83536,MP835337,MP83538,MP83538,MP83540
ICV Standard	MP83541
CCV Standard	MP83543
ICSA Standard	
CRI Standard	MP83545
LCS Standard	
Chk Standard	MP83542,MP83544,MP83546,MP83550

19	P5176-03	EO-03-12062024	SAM	12/11/24 11:43		Mohan	OK
20	P5196-01	MH-761	SAM	12/11/24 11:46		Mohan	OK
21	CCV17	CCV17	CCV	12/11/24 11:48		Mohan	OK
22	CCB17	CCB17	CCB	12/11/24 11:53		Mohan	OK
23	P5213-01	TAPIAL3-SB03I-15-12	SAM	12/11/24 11:55		Mohan	OK
24	P5216-01	BP-G-6	SAM	12/11/24 11:57		Mohan	OK
25	P5216-05	MH-743	SAM	12/11/24 12:00		Mohan	OK
26	P5216-09	MH-744	SAM	12/11/24 12:02		Mohan	OK
27	P5216-13	TP-12	SAM	12/11/24 12:04		Mohan	OK
28	P5219-01	MR-CAM-09-MR-CAM	SAM	12/11/24 12:06		Mohan	OK
29	P5219-02	MR-CAM-011	SAM	12/11/24 12:09		Mohan	OK
30	P5219-03	MR-CAM-012	SAM	12/11/24 12:11		Mohan	OK
31	P5219-04	MR-CAM-013	SAM	12/11/24 12:13		Mohan	OK
32	P5223-01	TR-05-120924	SAM	12/11/24 12:16		Mohan	OK
33	CCV18	CCV18	CCV	12/11/24 12:18		Mohan	OK
34	CCB18	CCB18	CCB	12/11/24 12:20		Mohan	OK
35	P5223-01DUP	TR-05-120924DUP	DUP	12/11/24 12:25		Mohan	OK
36	P5223-01MS	TR-05-120924MS	MS	12/11/24 12:28		Mohan	OK
37	P5223-01MSD	TR-05-120924MSD	MSD	12/11/24 12:30		Mohan	OK
38	P5236-01	TAPIAL3-SB03D-3-12	SAM	12/11/24 12:32		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 # LB133887

Review By	Mohan	Review On	12/11/2024 4:47:45 PM
Supervise By	jaswal	Supervise On	12/11/2024 11:05:59 PM

STD. NAME	STD REF.#
ICAL Standard	MP83534,MP83536,MP835337,MP83538,MP83538,MP83540
ICV Standard	MP83541
CCV Standard	MP83543
ICSA Standard	
CRI Standard	MP83545
LCS Standard	
Chk Standard	MP83542,MP83544,MP83546,MP83550

39	P5239-01	WC-1	SAM	12/11/24 12:34		Mohan	OK
40	P5244-01	NB-08-121024	SAM	12/11/24 12:37		Mohan	OK
41	P5245-01	72-12016	SAM	12/11/24 12:39		Mohan	OK
42	P5223-01L	TR-05-120924L	SD	12/11/24 12:41		Mohan	OK
43	P5223-01A	TR-05-120924A	PS	12/11/24 12:44		Mohan	OK
44	P5174-01DL	ROLL-OFF-COMPDL	SAM	12/11/24 12:46	Report 10X	Mohan	Confirms
45	CCV19	CCV19	CCV	12/11/24 12:51		Mohan	OK
46	CCB19	CCB19	CCB	12/11/24 12:53		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 # LB134024

Review By	Jaswal	Review On	12/20/2024 3:40:07 AM
Supervise By	Mohan	Supervise On	12/20/2024 3:41:58 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	12/19/24 14:30		Jaswal	OK
2	S0	S0	CAL1	12/19/24 15:04		Jaswal	OK
3	S2	S2	CAL3	12/19/24 15:10		Jaswal	OK
4	S3	S3	CAL4	12/19/24 15:14		Jaswal	OK
5	S4	S4	CAL5	12/19/24 15:17		Jaswal	OK
6	S5	S5	CAL6	12/19/24 15:19		Jaswal	OK
7	S6	S6	CAL7	12/19/24 15:22		Jaswal	OK
8	S7	S7	CAL8	12/19/24 15:25		Jaswal	OK
9	S8	S8	CAL9	12/19/24 15:28		Jaswal	OK
10	ICV01	ICV01	ICV	12/19/24 15:49		Jaswal	OK
11	LLICV	LLICV	LLICV	12/19/24 16:04		Jaswal	OK
12	ICB01	ICB01	ICB	12/19/24 16:07		Jaswal	OK
13	ICSA01	ICSA01	ICSA	12/19/24 16:10		Jaswal	OK
14	ICSAB01	ICSAB01	ICSAB	12/19/24 16:13		Jaswal	OK
15	CCV01	CCV01	CCV	12/19/24 16:16		Jaswal	OK
16	CCB01	CCB01	CCB	12/19/24 16:19		Jaswal	OK
17	CRI	CRI	CRDL	12/19/24 16:23		Jaswal	OK
18	PB165717BL	PB165717BL	MB	12/19/24 16:26		Jaswal	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 # LB134024

Review By	Jaswal	Review On	12/20/2024 3:40:07 AM
Supervise By	Mohan	Supervise On	12/20/2024 3:41:58 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	PB165717BS	PB165717BS	LCS	12/19/24 16:35		Jaswal	OK
20	P5117-01DL	TAPIAL3-SB04I-10-12	SAM	12/19/24 16:39		Jaswal	OK
21	P5117-01DUPDL	TAPIAL3-SB04I-10-12	DUP	12/19/24 16:43		Jaswal	OK
22	P5117-01LDL	TAPIAL3-SB04I-10-12	SD	12/19/24 16:46		Jaswal	OK
23	P5117-01MSDL	TAPIAL3-SB04I-10-12	MS	12/19/24 16:49		Jaswal	OK
24	P5117-01MSDDL	TAPIAL3-SB04I-10-12	MSD	12/19/24 16:52		Jaswal	OK
25	P5117-01ADL	TAPIAL3-SB04I-10-12	PS	12/19/24 16:55		Jaswal	OK
26	CCV02	CCV02	CCV	12/19/24 17:01		Jaswal	OK
27	CCB02	CCB02	CCB	12/19/24 17:03		Jaswal	OK
28	P5213-01DL	TAPIAL3-SB03I-15-12	SAM	12/19/24 17:07		Jaswal	OK
29	P5236-01DL	TAPIAL3-SB03D-3-12	SAM	12/19/24 17:11		Jaswal	OK
30	P5076-01DL	TAPIAL2-SB02I-7.5-1	SAM	12/19/24 17:14		Jaswal	OK
31	CCV03	CCV03	CCV	12/19/24 17:20		Jaswal	OK
32	CCB03	CCB03	CCB	12/19/24 17:23		Jaswal	OK

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

Prep Standard - Chemical Standard Summary

Order ID : P5236

Test : Mercury,Metals ICP-TAL

Prepbatch ID : PB165560,PB165717,

Sequence ID/Qc Batch ID: LB133887,LB134024,

Standard ID :
MP83208,MP83210,MP83498,MP83533,MP835337,MP83534,MP83536,MP83538,MP83540,MP83541,MP83542,MP83543,MP83544,MP83545,MP83546,MP83547,MP83550,MP83619,MP83620,MP83621,MP83622,MP83623,MP83625,MP83626,MP83627,MP83628,MP83629,MP83630,MP83631,MP83632,MP83633,MP83634,MP83635,MP83636,

Chemical ID :
M4371,M4583,M4916,M5062,M5288,M5295,M5304,M5390,M5476,M5498,M5513,M5515,M5516,M5519,M5585,M5658,M5698,M5739,M5751,M5769,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5817,M5818,M5819,M5873,M5874,M5882,M5884,M5953,M5961,M5962,M5976,M5978,M5981,M5983,M6021,M6023,M6025,M6028,M6030,M6033,M6055,M6121,M6125,M6126,W3112,

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP83208	11/11/2024	05/11/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 11/11/2024

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	MP83210	11/11/2024	05/11/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 11/11/2024

FROM 2000.00000ml of W3112 + 240.00000gram of M4371 + 240.00000gram of M5884 = Final Quantity: 2000.000 ml

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

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	12/28/2024	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
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP83533	12/10/2024	12/11/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/10/2024

FROM 1.00000ml of M6126 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP83534	12/10/2024	12/11/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/10/2024

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
1341	Hg 0.2 PPB STD	MP83536	12/10/2024	12/11/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/10/2024

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP83533 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP83538	12/10/2024	12/11/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/10/2024

FROM 2.50000ml of M6126 + 242.50000ml of W3112 + 5.00000ml of MP83533 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP83540	12/10/2024	12/11/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/10/2024

FROM 2.50000ml of M6126 + 237.50000ml of W3112 + 10.00000ml of MP83533 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP83541	12/10/2024	12/11/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/10/2024

FROM 2.50000ml of M5953 + 2.50000ml of M6126 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP83542	12/10/2024	12/11/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/10/2024

FROM 2.50000ml of M6126 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP83543	12/10/2024	12/11/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/10/2024

FROM 485.00000ml of W3112 + 5.00000ml of M6126 + 10.00000ml of MP83533 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP83544	12/10/2024	12/11/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/10/2024

FROM 495.00000ml of W3112 + 5.00000ml of M6126 = Final Quantity: 500.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP83545	12/10/2024	12/11/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/10/2024

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP83533 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP83546	12/10/2024	12/11/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/10/2024

FROM 2.50000ml of M6126 + 240.50000ml of W3112 + 7.00000ml of MP83533 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
887	AQUA REGIA FOR HG ON 7471A	MP83547	12/10/2024	12/11/2024	Mohan Bera	None	None	Sarabjit Jaswal 12/10/2024

FROM 150.00000ml of M6121 + 50.00000ml of M6126 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP83550	12/11/2024	12/12/2024	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 12/11/2024

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6121 = Final Quantity: 500.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP83619	12/13/2024	01/07/2025	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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3947	S7(SFAM,6020,200.8)	MP83620	12/13/2024	01/07/2025	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

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3948	S6(SFAM,6020,200.8)	MP83621	12/13/2024	01/07/2025	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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3949	S5(SFAM,6020,200.8)	MP83622	12/13/2024	01/07/2025	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

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3954	S4(SFAM,6020,200.8)	MP83623	12/13/2024	01/07/2025	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

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

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3955	S2CONC(SFAM,6020,200.8)	MP83626	12/13/2024	01/07/2025	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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3956	S2(SFAM,6020,200.8)	MP83627	12/13/2024	01/07/2025	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

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3957	S1(SFAM,6020,200.8)	MP83628	12/13/2024	01/07/2025	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 MP83627 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3958	ICV(SFAM)	MP83629	12/13/2024	01/07/2025	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

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1142	ICSA ICPMS	MP83630	12/13/2024	01/07/2025	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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1143	ICSAB ICPMS	MP83631	12/13/2024	01/07/2025	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

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3961	CCV	MP83632	12/13/2024	01/07/2025	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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3962	MG 10PPM FOR TUNE	MP83633	12/13/2024	01/07/2025	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

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3894	TUNE 200PPB	MP83634	12/13/2024	01/07/2025	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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3903	ISS 3PPM	MP83635	12/13/2024	01/07/2025	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

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2902	S8 ICPMS	MP83636	12/13/2024	01/07/2025	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

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

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

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

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.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5498

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57182 / Pb, 10000 PPM, 125 ml	061522	06/15/2025	03/19/2023 / bin	03/17/2023 / bin	M5513

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	092122	09/21/2025	08/01/2024 / Jaswal	03/17/2023 / bin	M5515

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

CHEMICAL RECEIPT LOG BOOK

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.	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

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

CHEMICAL RECEIPT LOG BOOK

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

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

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

CHEMICAL RECEIPT LOG BOOK

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

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

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

CHEMICAL RECEIPT LOG BOOK

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

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

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

CHEMICAL RECEIPT LOG BOOK

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

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

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

CHEMICAL RECEIPT LOG BOOK

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

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

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

ThermoFisher SCIENTIFIC

M5882 M3

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	T142	Quality Test / Release Date	08/17/2023
Lot Number	232820		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Aug/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	100.65
CALCIUM	%	<= 0.005	0.0017
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	0.0011
LEAD (Pb)	%	<= 0.01	0.0006
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	0.0001
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)

Harout Sahagian - Quality Control Supervisor - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6028

R 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

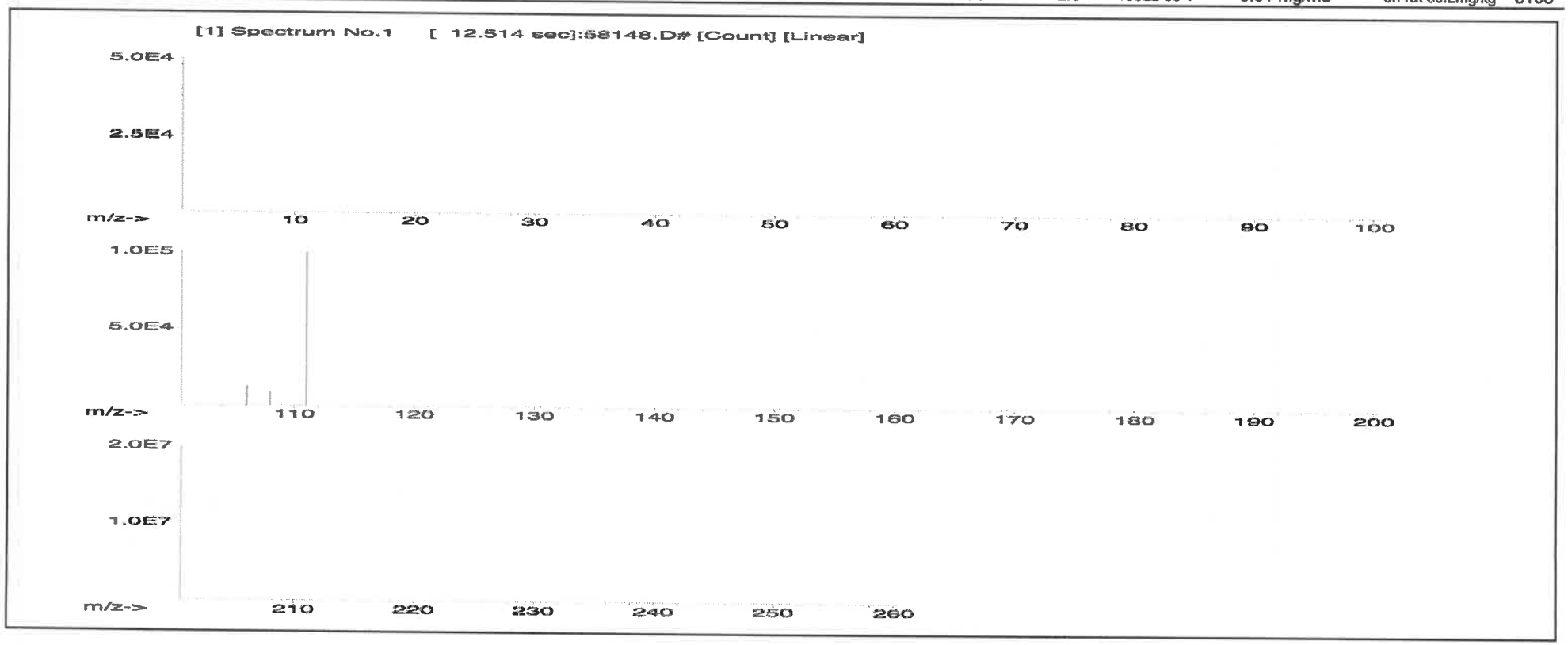
CERTIFIED WEIGHT REPORT:

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



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	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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:

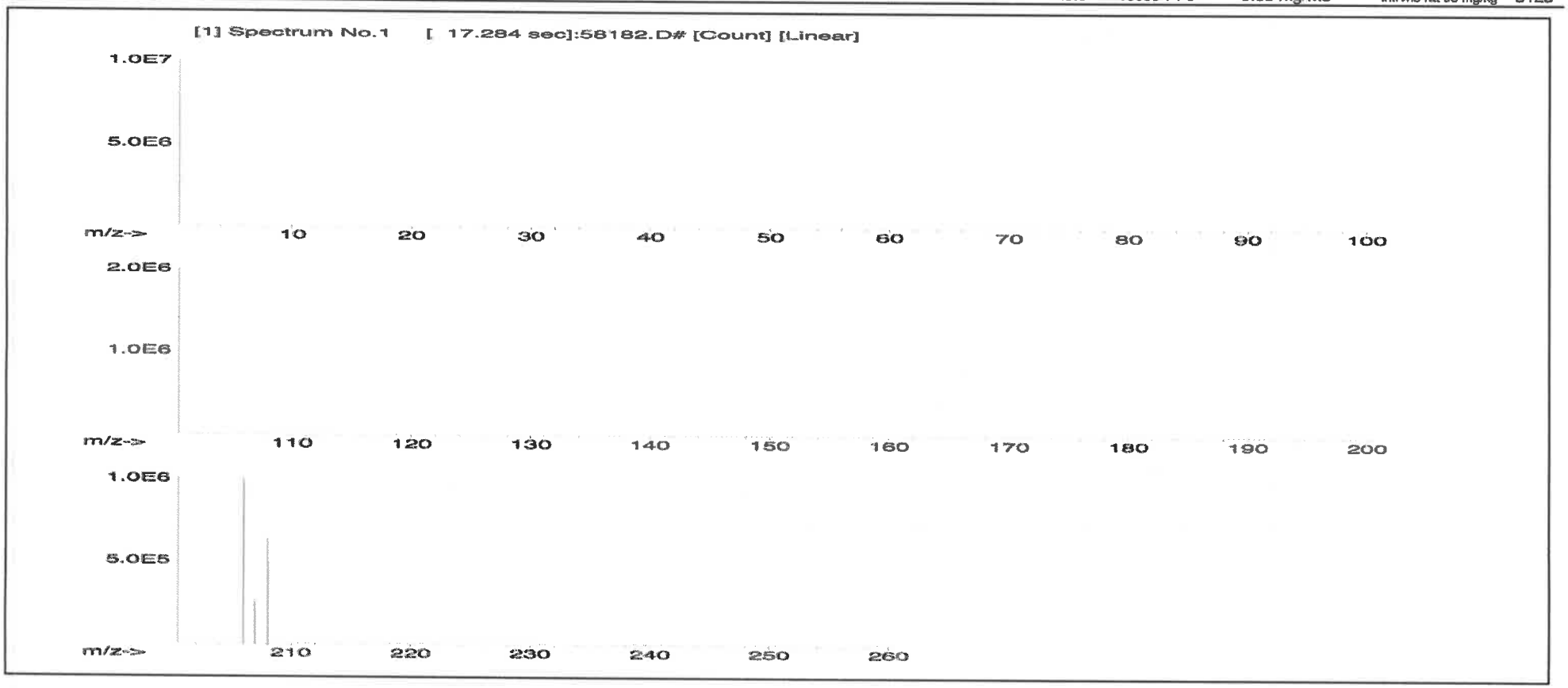
Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<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).

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 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 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

M45 P3
Expd Dt. 5 7 24
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
www.absolutestandards.com

Certified Reference Material CRM

M5288 R: 07/21/2022

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

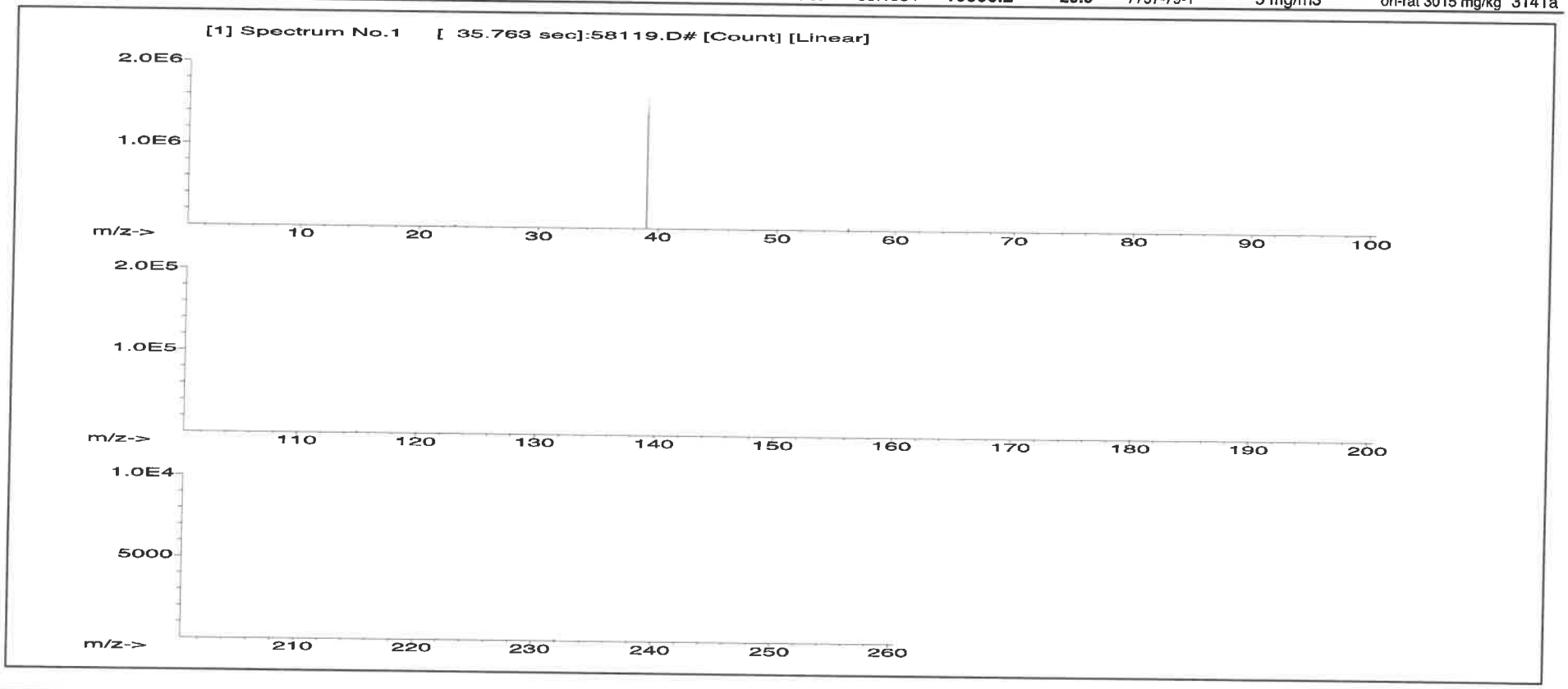
Part Number: 58119
Lot Number: 071122
Description: Potassium (K)

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<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:

Part Number: 57056
Lot Number: 072122
Description: Barium (Ba)

Expiration Date: 072125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

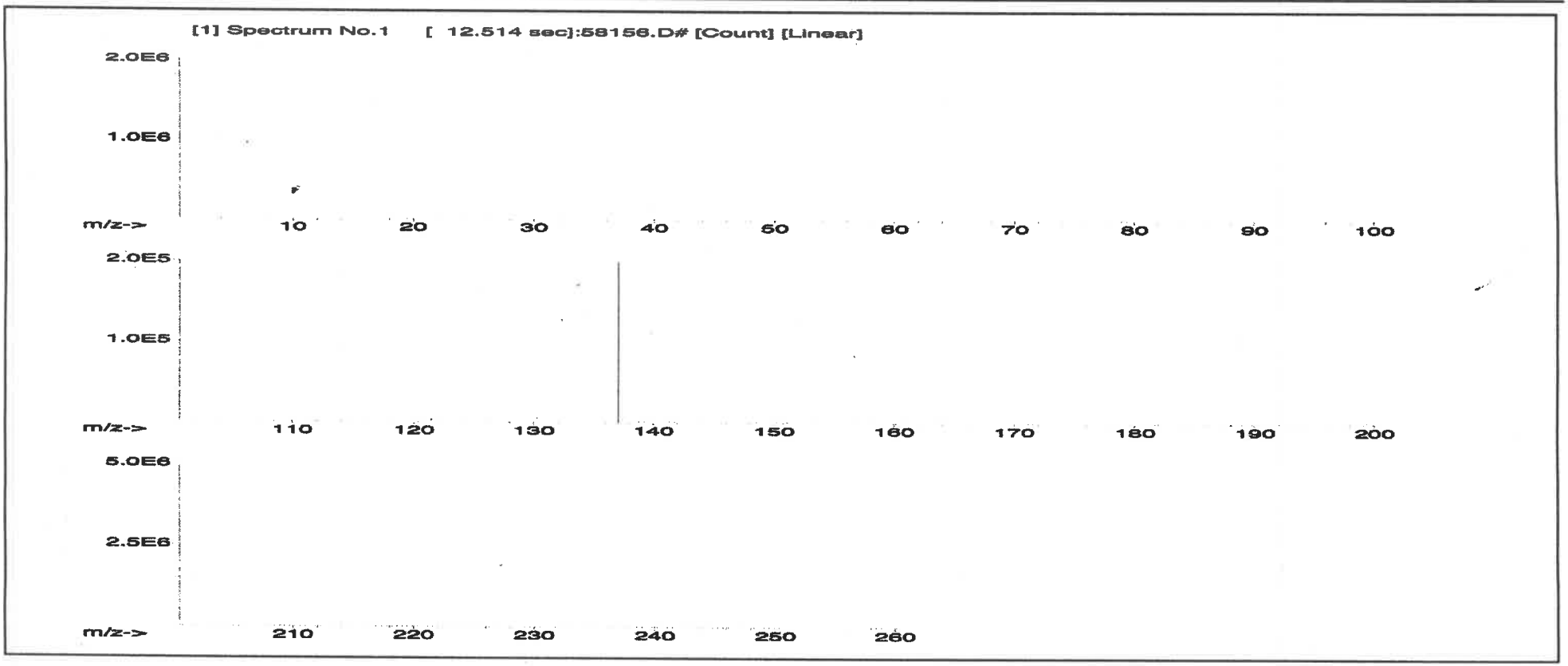
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance 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



52356-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5497 - M5498 R: 03/17/23 (BF)

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

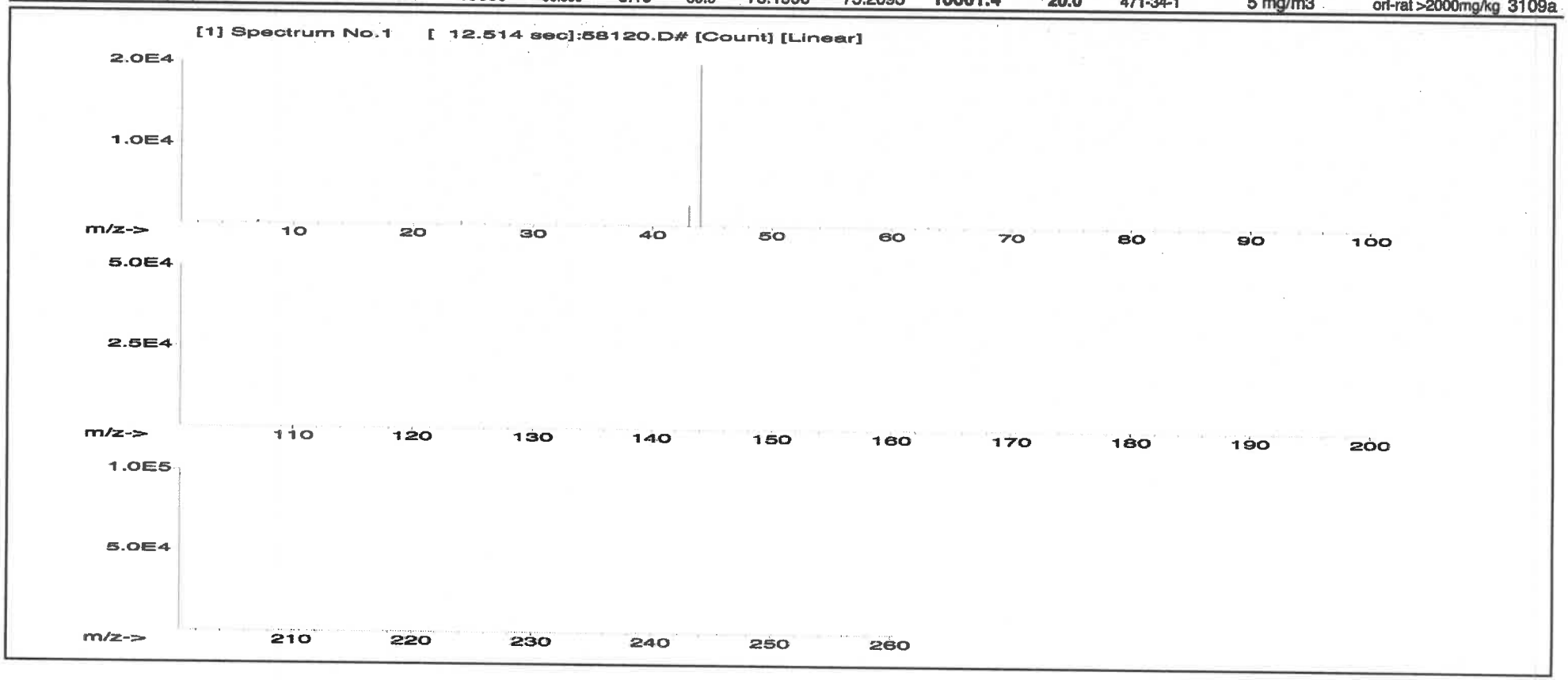
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	031523
Reviewed By:	Pedro L. Rentas	031523

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD072022A1	10000	99.999	0.10	39.9	75.1990	75.2093	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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)

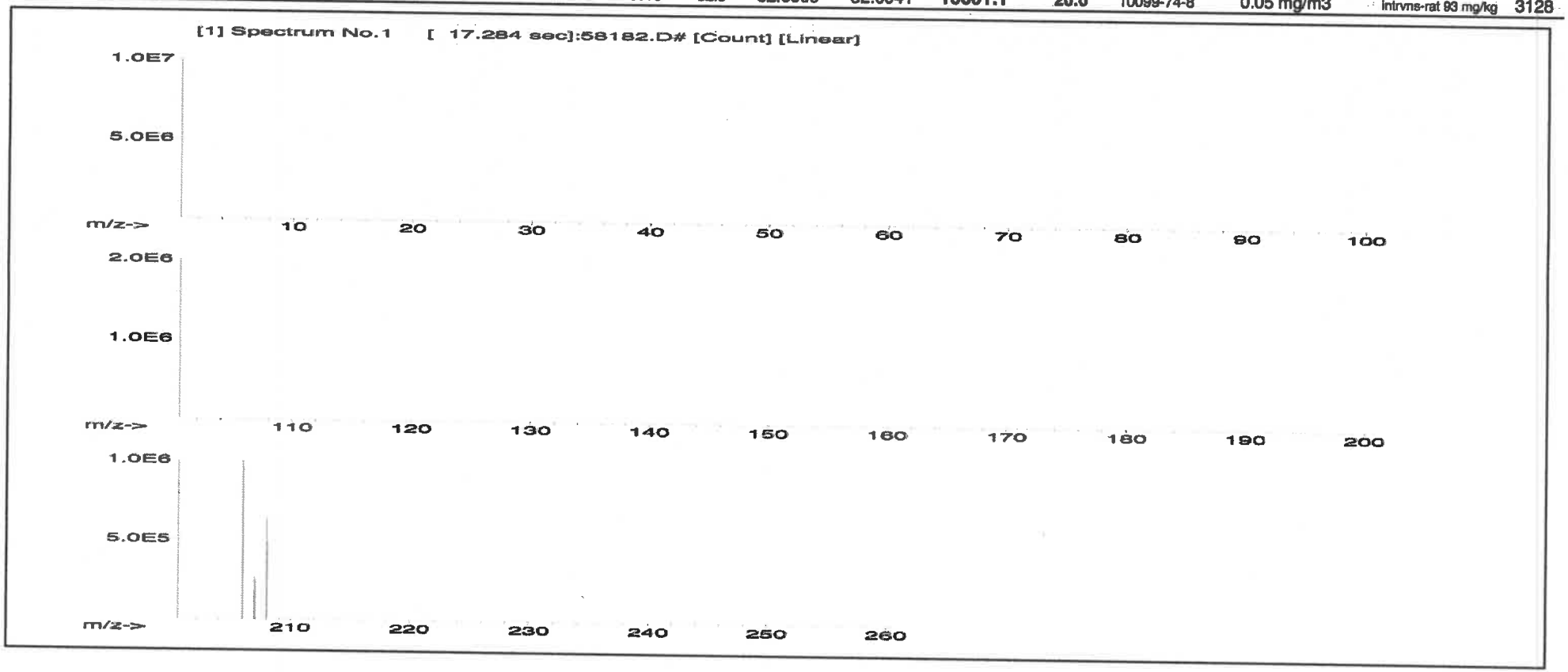
Expiration Date: 061525
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	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



6338-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5514 , M5515 R: 03/17/23

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

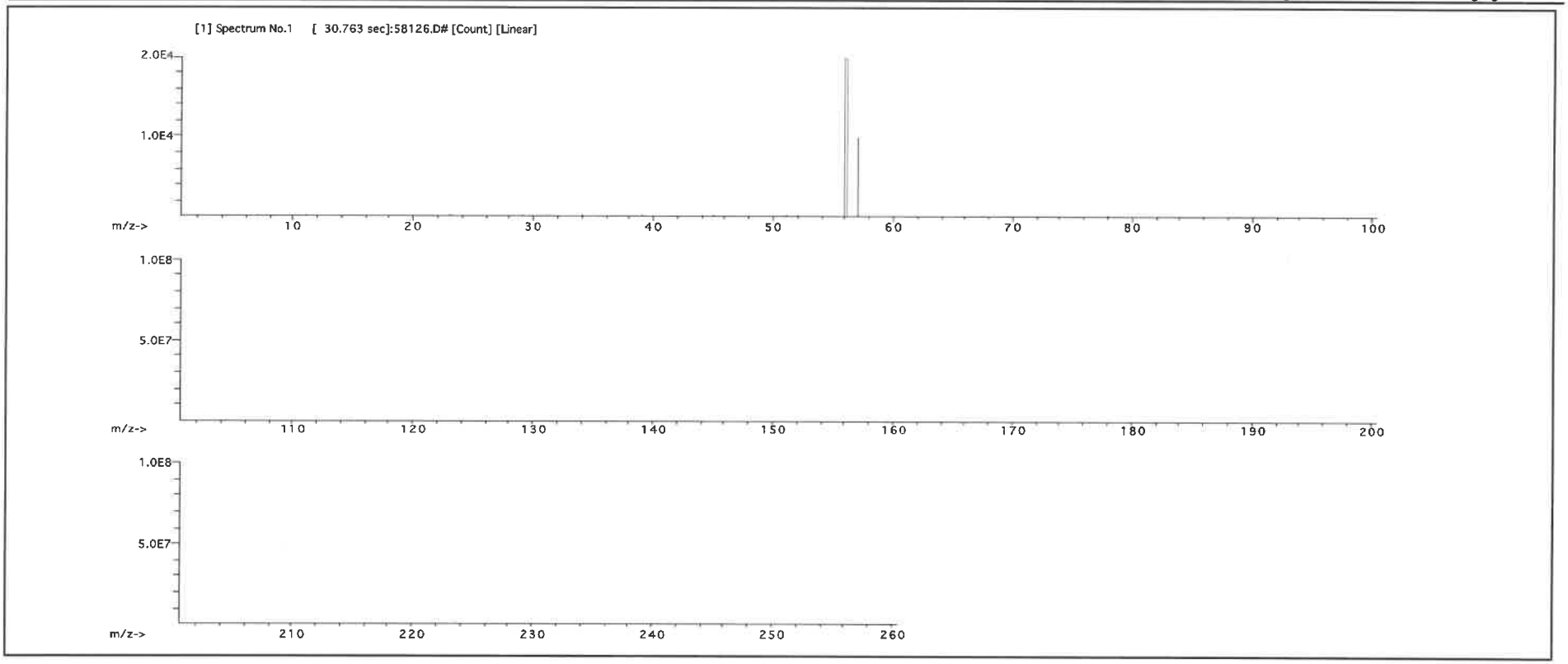
CERTIFIED WEIGHT REPORT:

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



P226 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.
* 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

M546 M517 R: 03/17/22 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

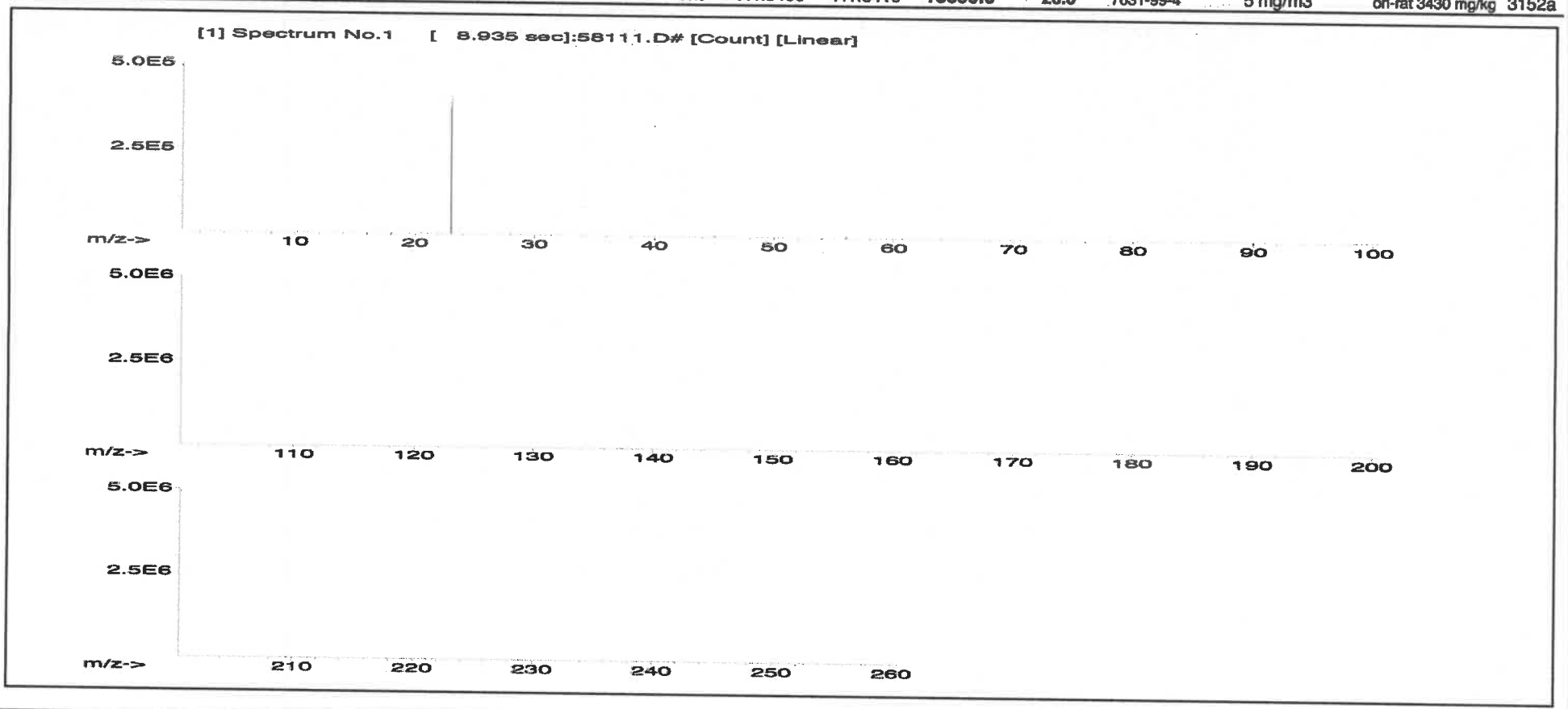
Part Number: 58111
Lot Number: 022123
Description: Sodium (Na)

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 | 5E-05 Balance Uncertainty

	Lot #	
Solvent:	21110221	Nitric Acid
2%	60.0 (mL)	Nitric Acid

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<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.

* 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

M519. M520 BH R:03/17/23

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58119
Lot Number: 120822
Description: Potassium (K)

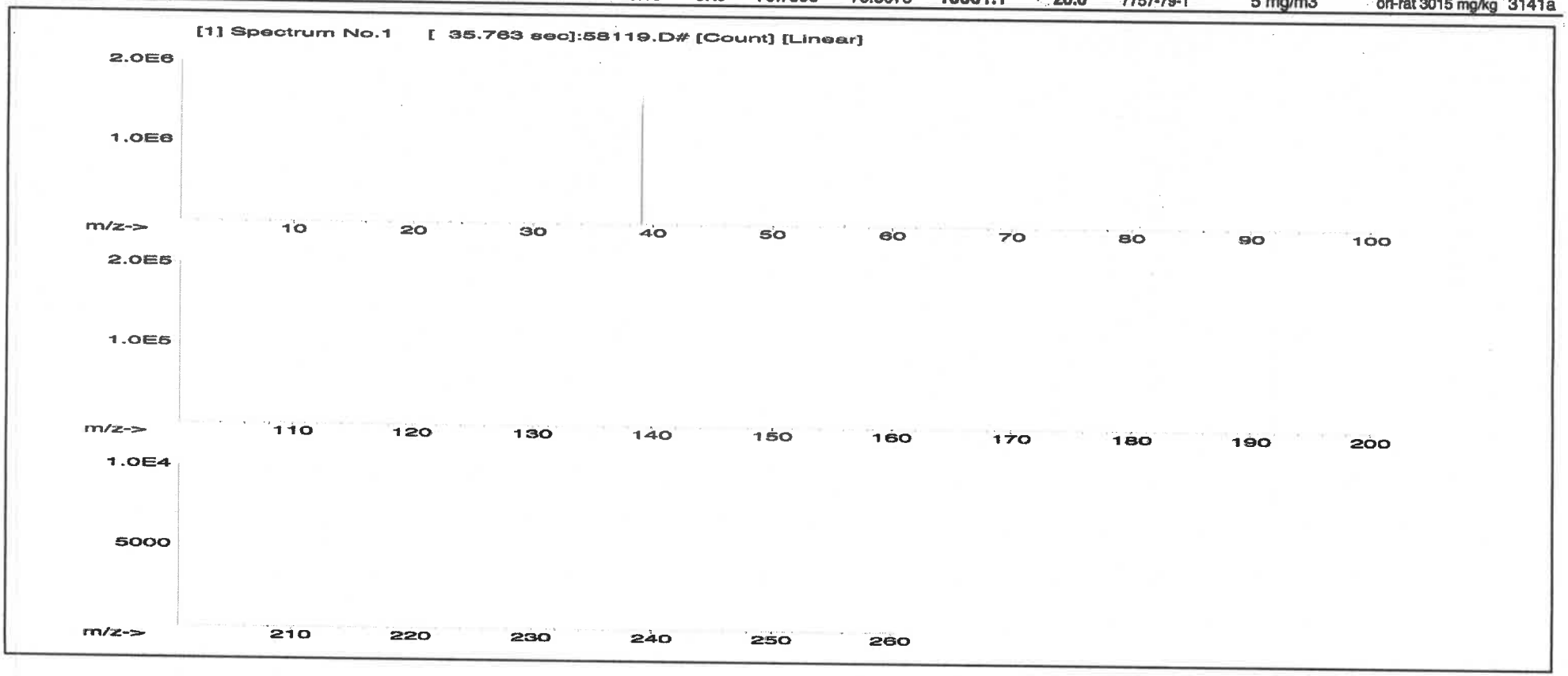
Expiration Date: 120825
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.4

	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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<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).

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

3773 NW 126th Avenue • Coral Springs, Florida 33065 • Fax (954) 344-2008 • 1-800 446-3781
Email: jensen@jenseninert.com Visit our Web Site at www.jenseninert.com

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5658 R ! 8/25/23

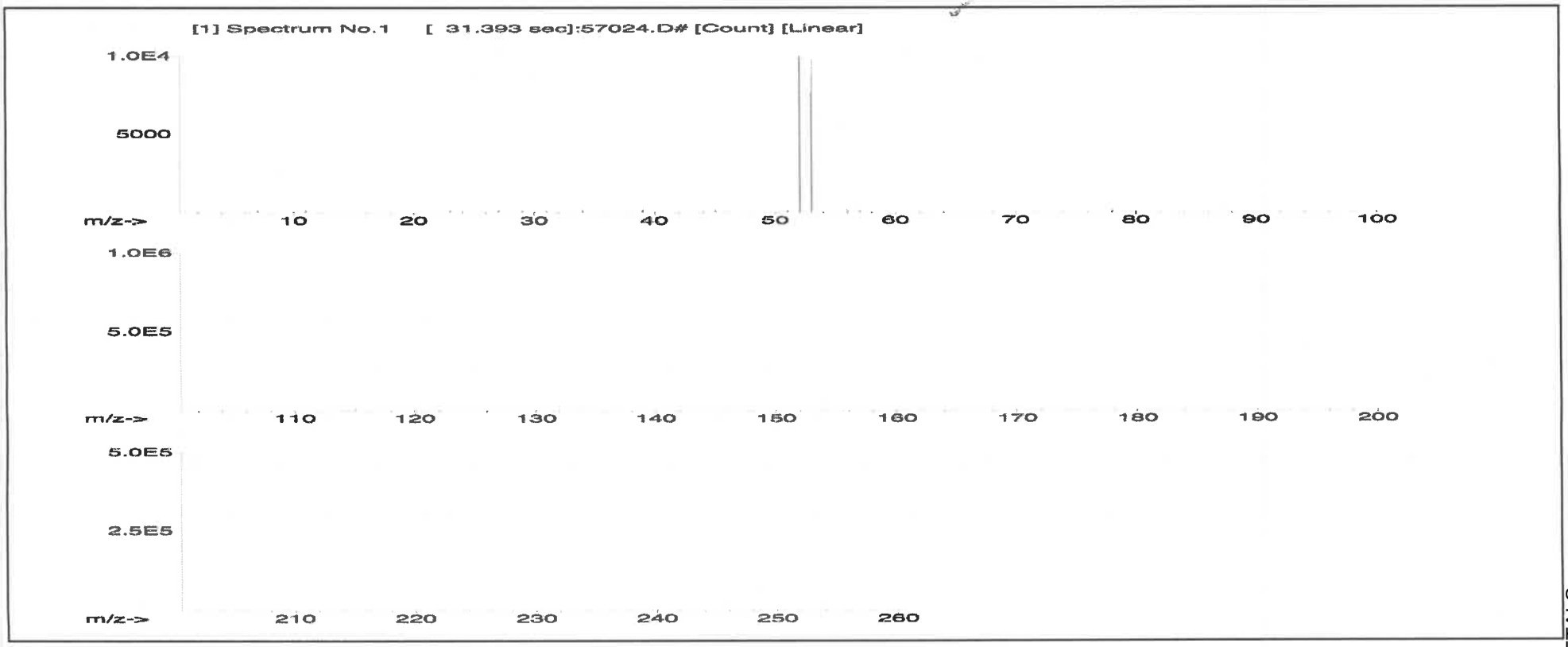
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<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.

* 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

M5648 R: 10/27/23

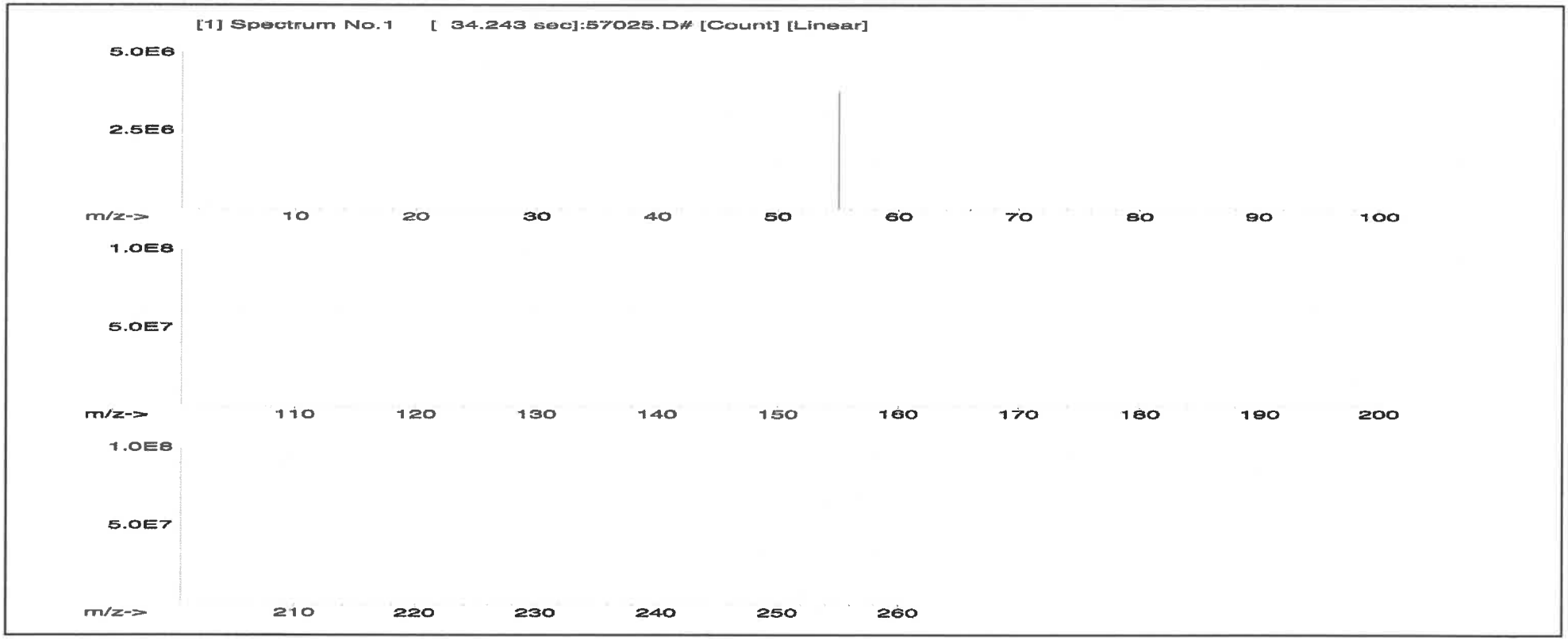
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



Absolute Standards, Inc.
300-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<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.
* 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: 8/25/23 M5751

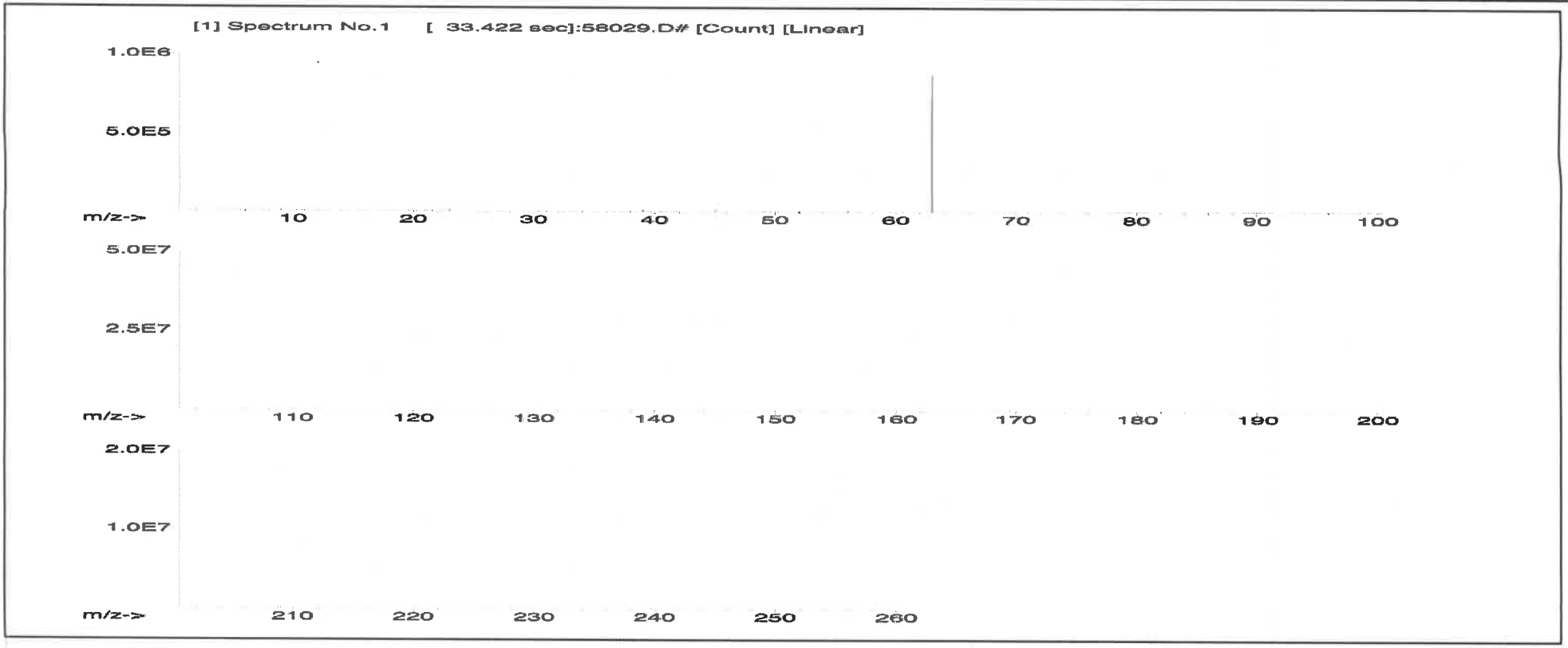
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**58029**			**Lot #**	**Solvent:**	
Lot Number:	**071723**			21110221	Nitric Acid	
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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<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.
* 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

M5768 M5769 (BP) R:1/3/24

Certified Reference Material CRM

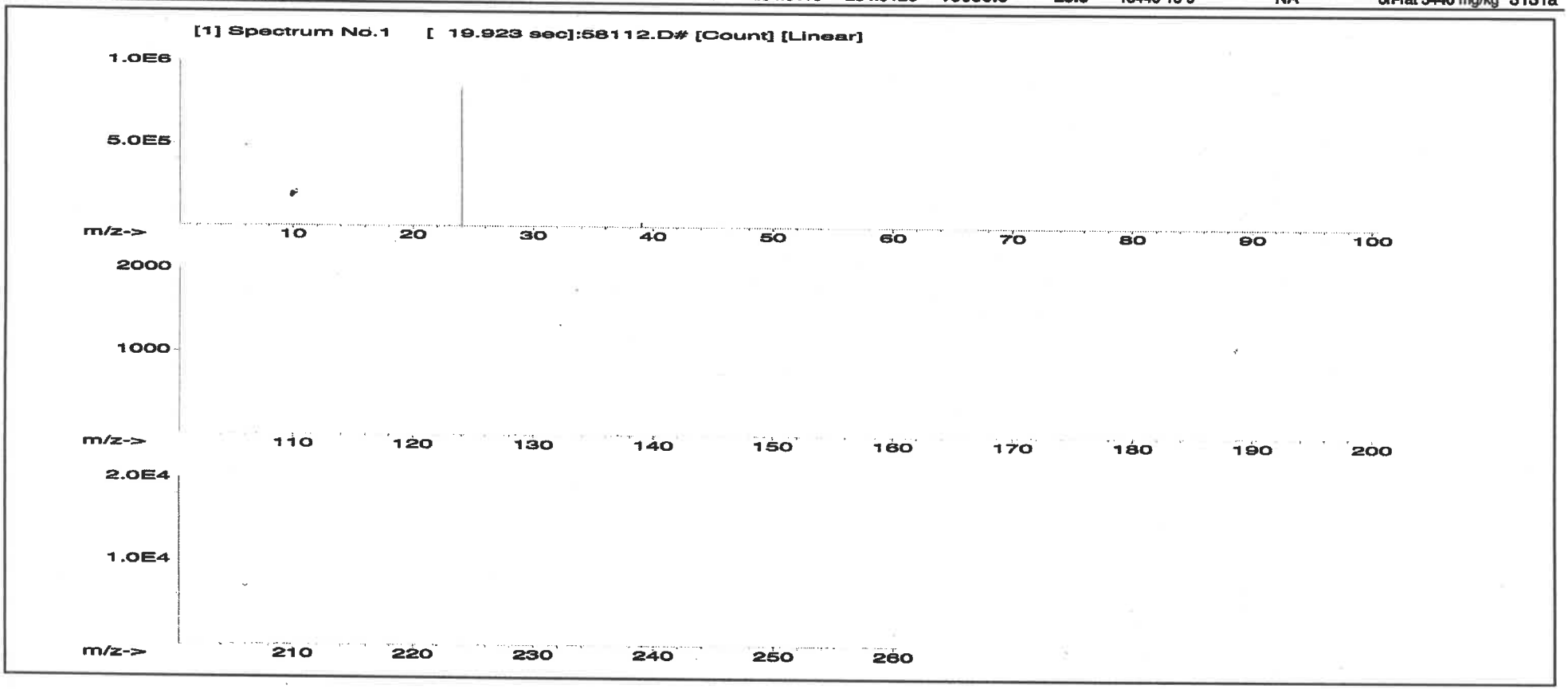
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**58112**		**Lot #**	
Lot Number:	**091823**	**Solvent:**	24002546	Nitric Acid
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	091826			
Recommended Storage:	Ambient (20 °C)	M5768, M5769 (BP) R: 1/3/24		
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		

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	orl-rat 5440 mg/kg	3131a



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	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5798

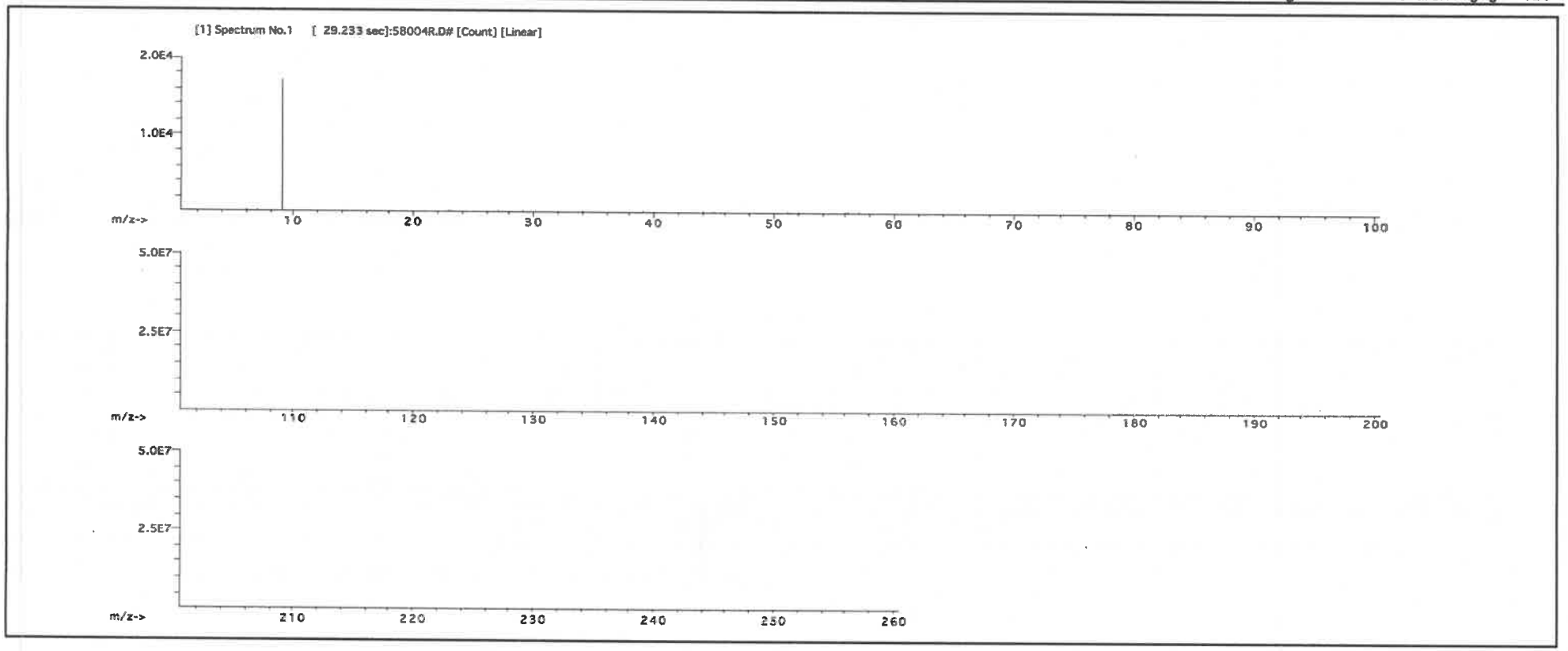
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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.

* 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? 02/09/24 IV15799

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

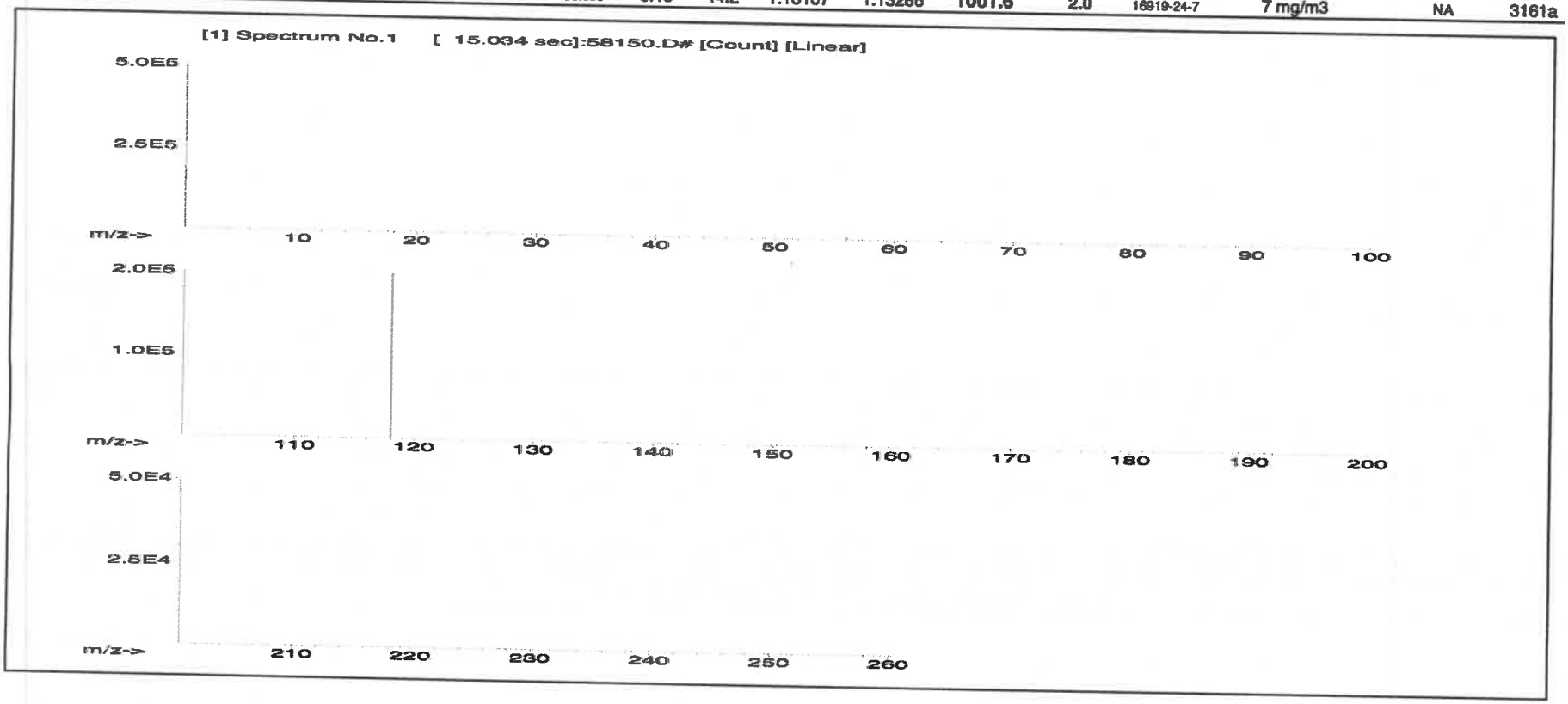
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<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:

* 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: 02/09/24 IM5800 BH

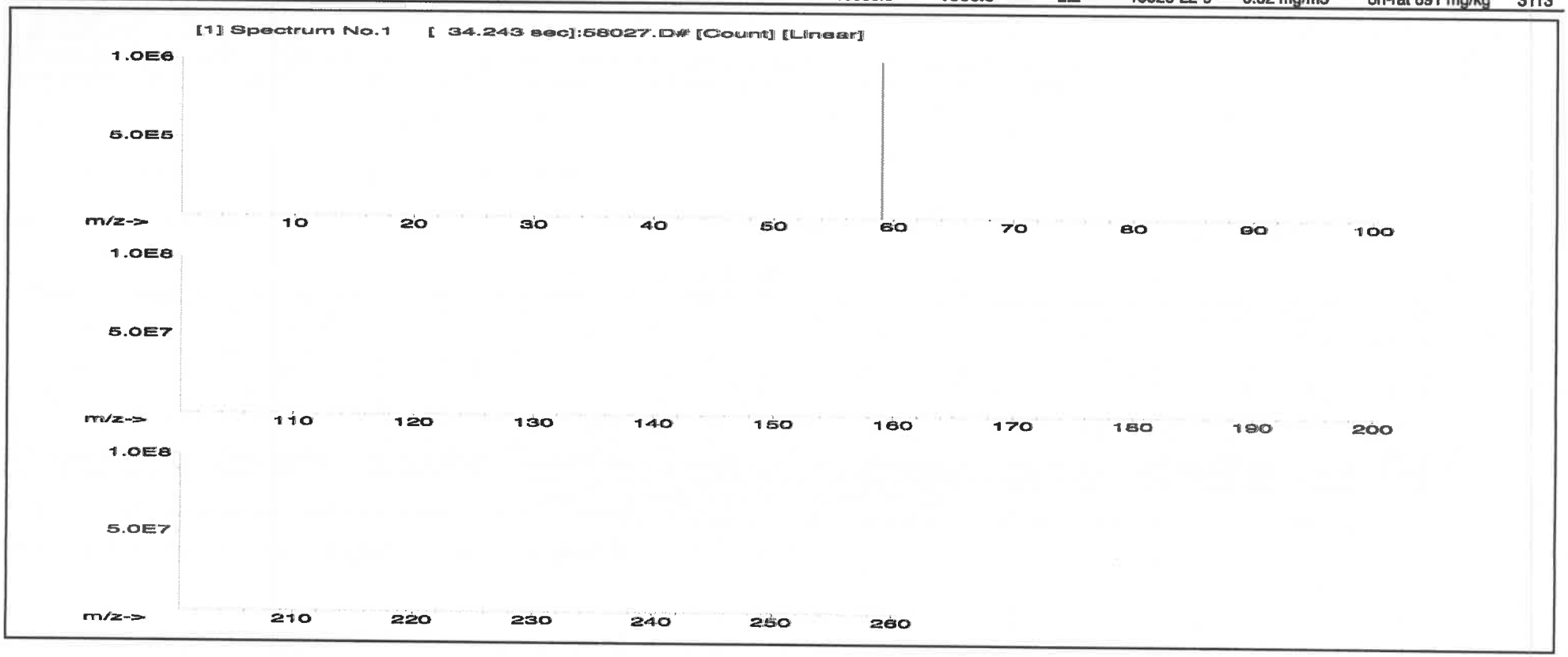
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



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 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.
* 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: 02/09/24 M5801 BH

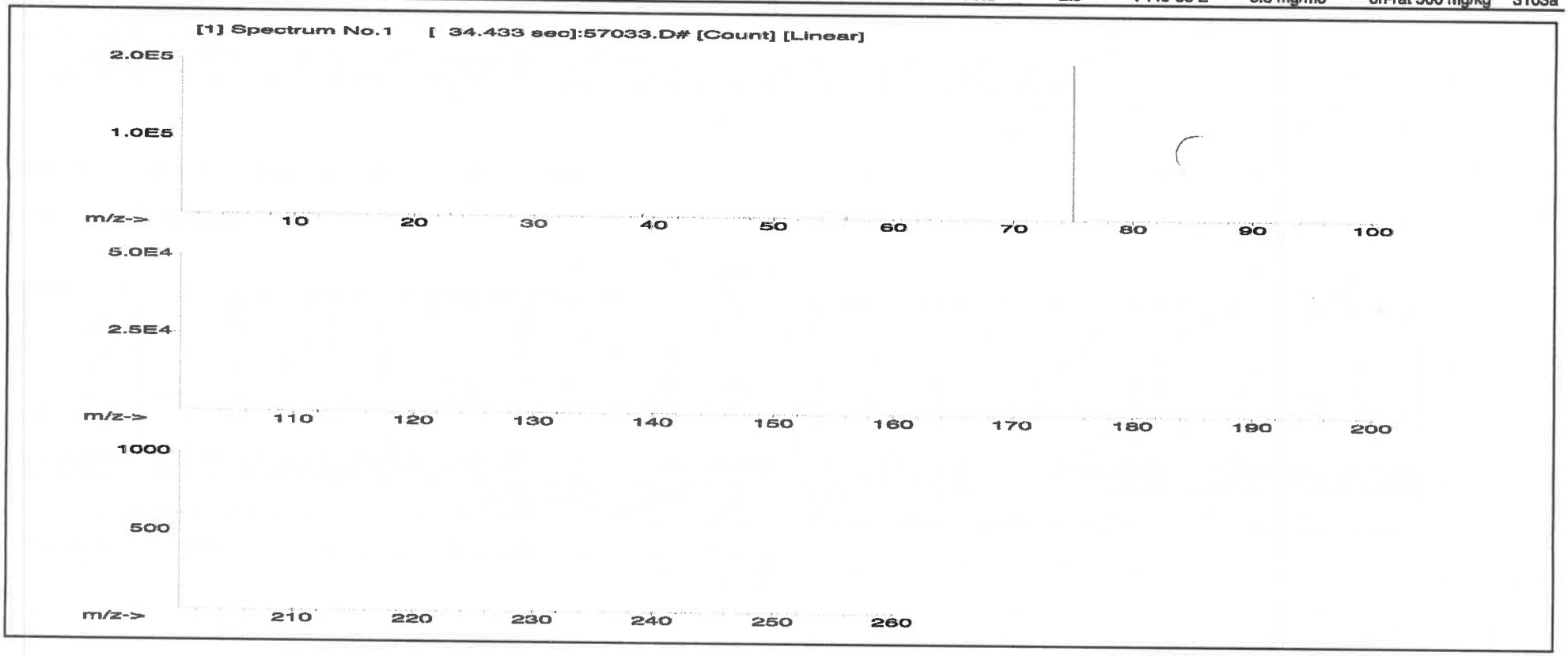
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



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	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R1 02/09/24. M58165

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

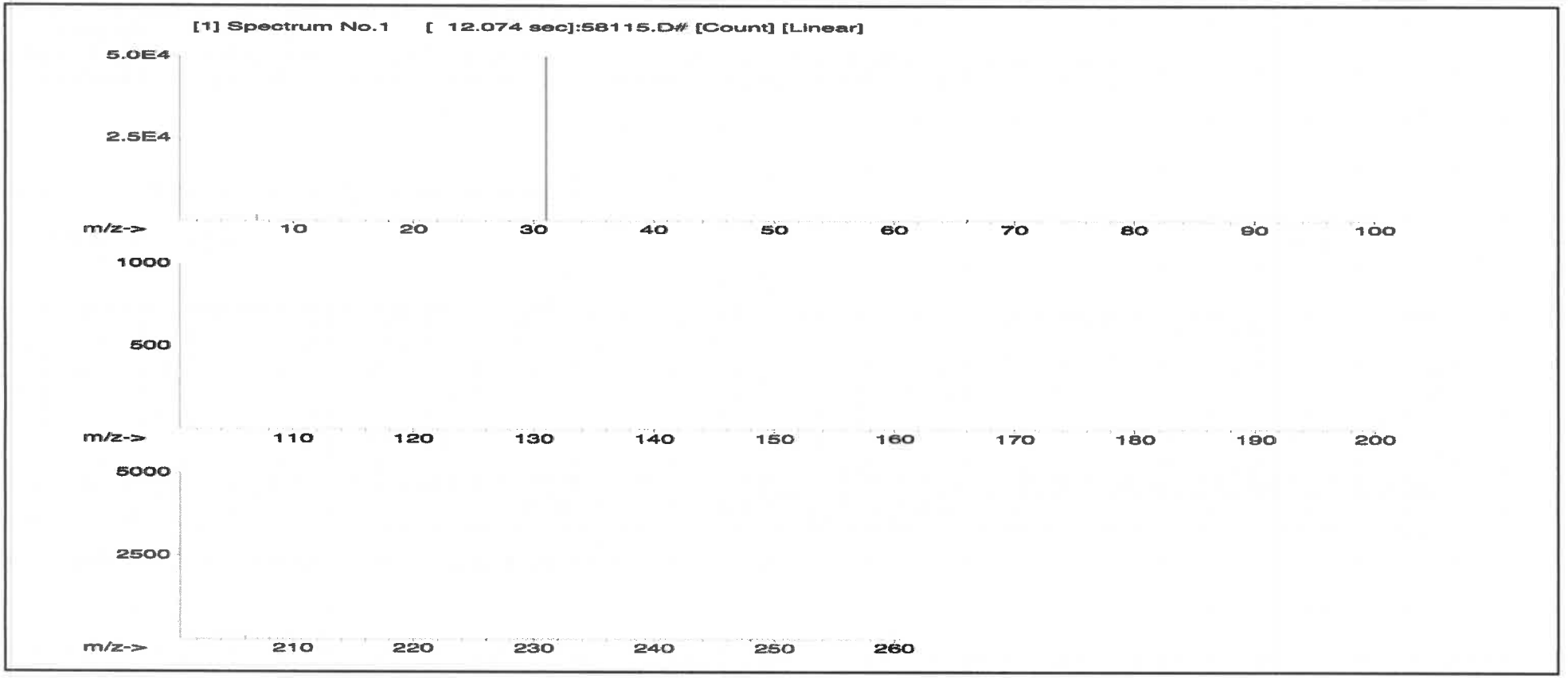
Part Number: 57115
Lot Number: 041723
Description: Phosphorous (P)

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



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 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.

* 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: 02/09/24 M5817

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

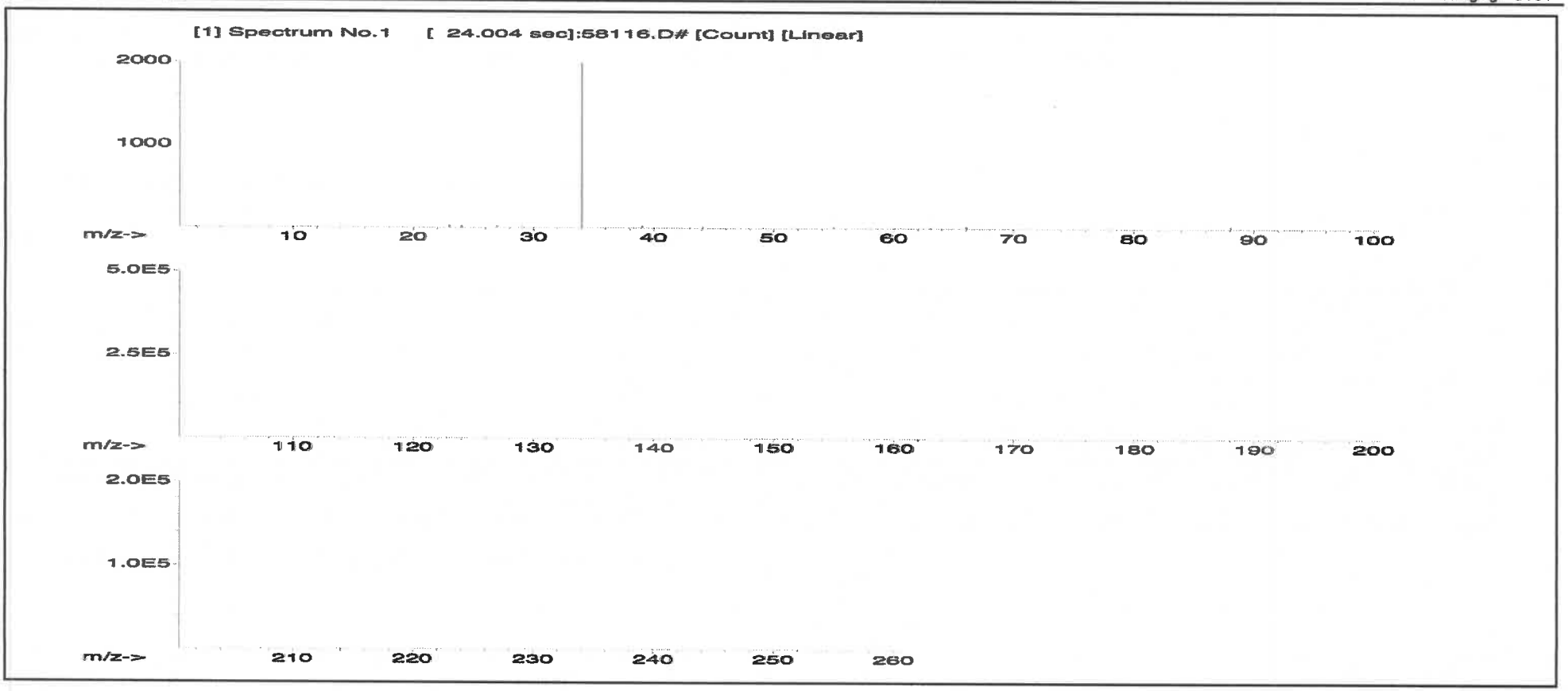
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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: 02/09/24 M.5818

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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

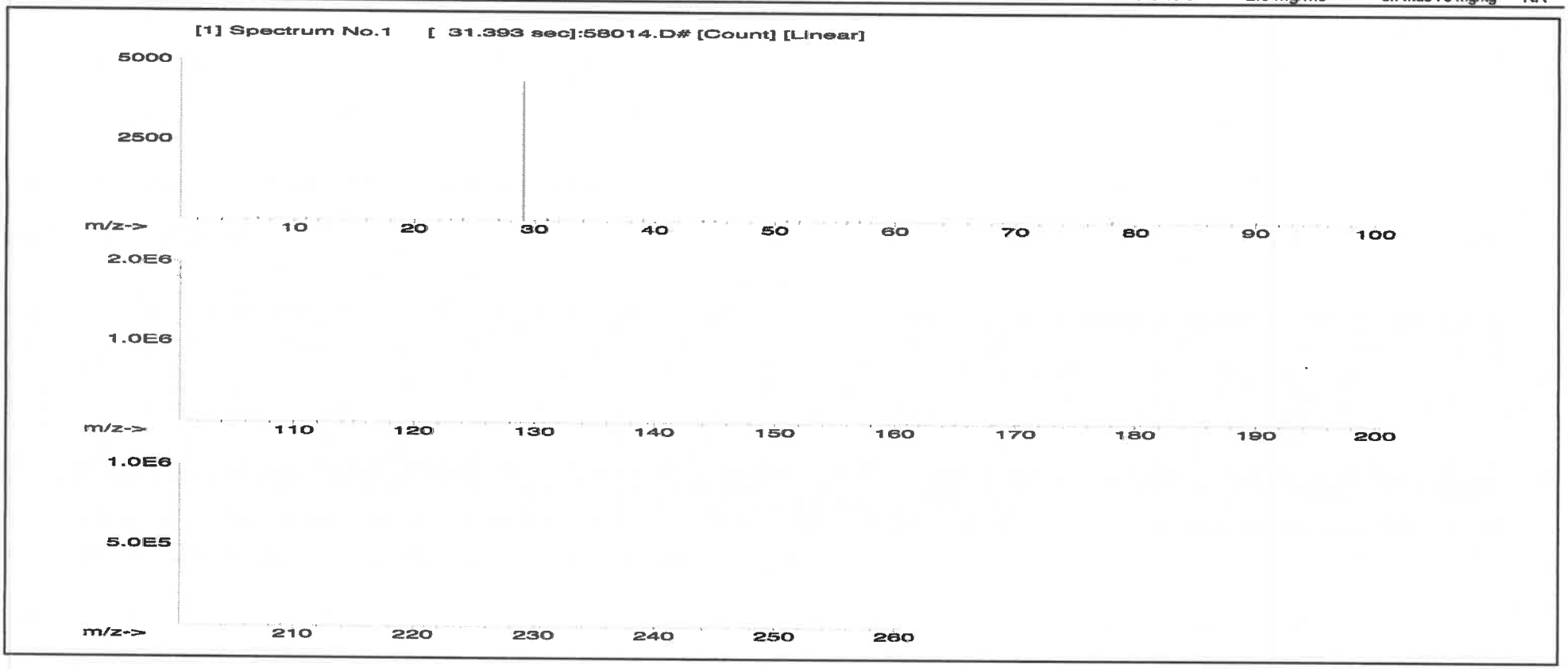
Aleah O'Brady

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



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	T	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* 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: 02/09/24 M5819

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

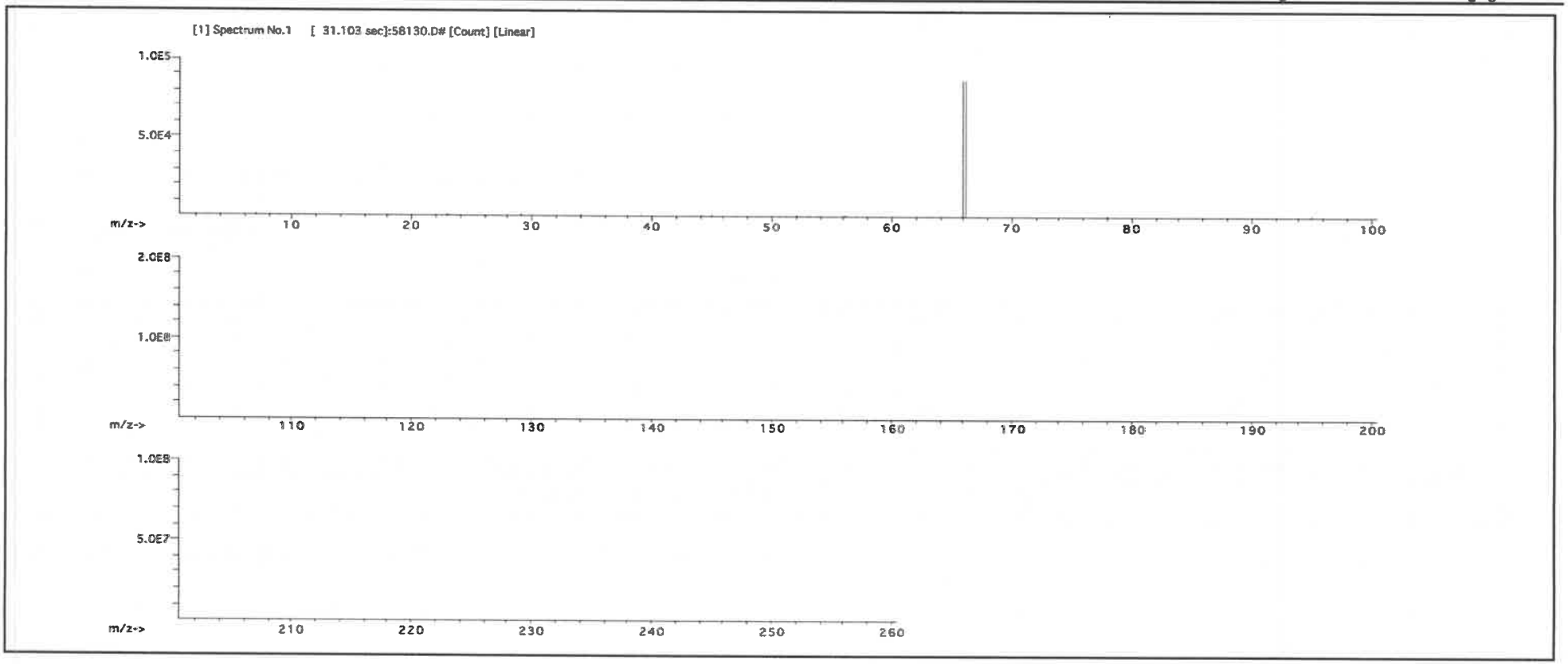
Weight shown below was diluted to (mL): 3000.4 | 0.06 Flask Uncertainty

	Lot #	
Solvent:	24002546	Nitric Acid
2%	60.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	111623
Reviewed By:	Pedro L. Rentas	111623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	12.3475	12.3502	**1000.2**	**2.0**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<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:

* 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).

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

MT884
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.

MSS28-37 MB MSS53 MB 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

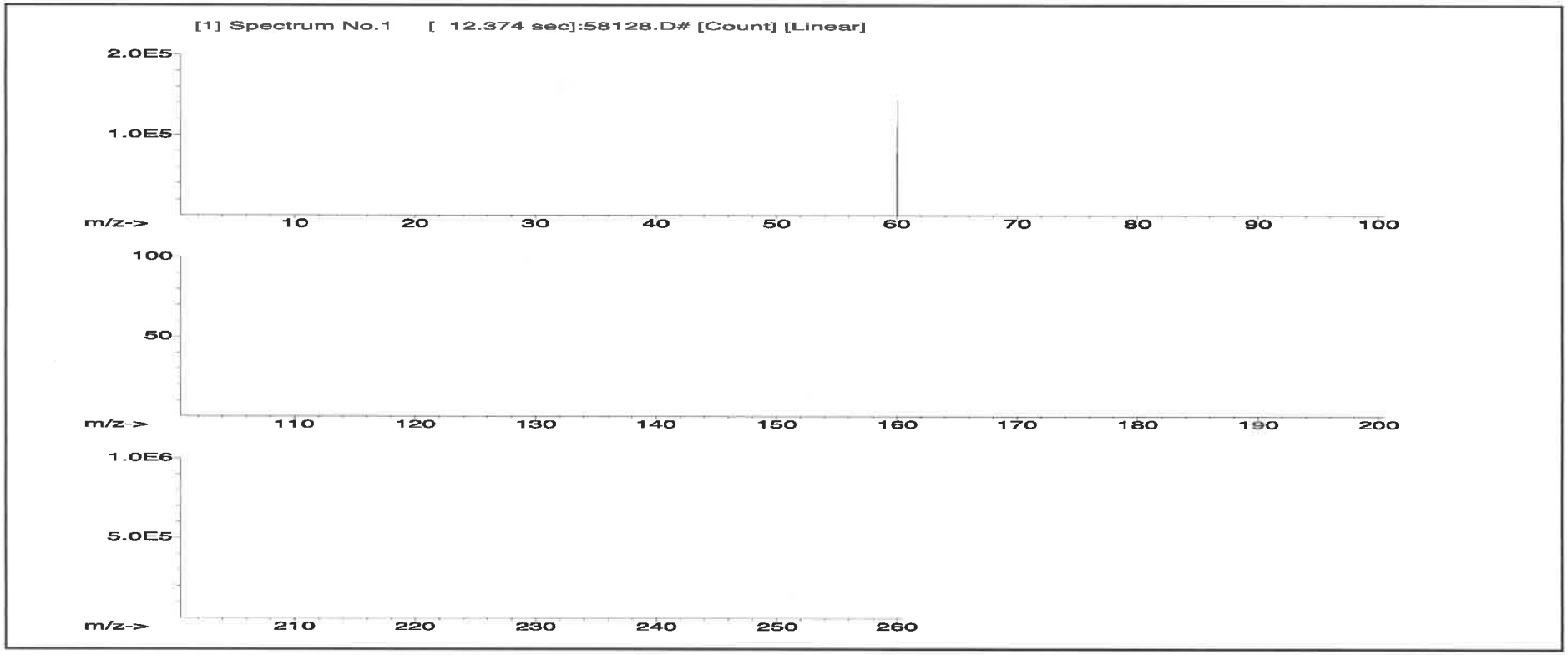
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



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	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

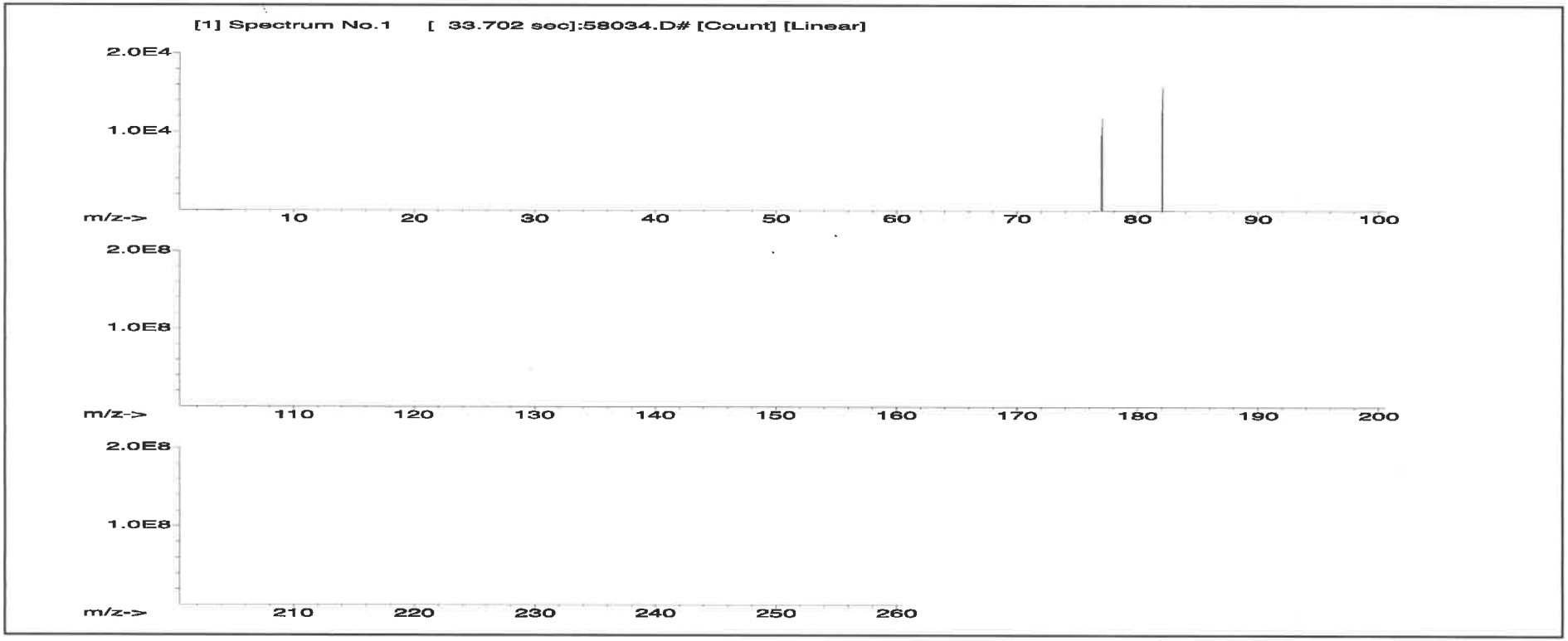
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



Absolute Standards, Inc.
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	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).

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

M5976, M5977
R: 02/22/24

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:	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.

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

R: 2/22/24

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 ($\pm$) = $u_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

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:

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

x_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

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

M	Ag	<	0.000536	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

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 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

H5981 R:6/11/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57092**	24002546	Nitric Acid		
Lot Number:	**060724**				
Description:	**Uranium (U)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	060727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

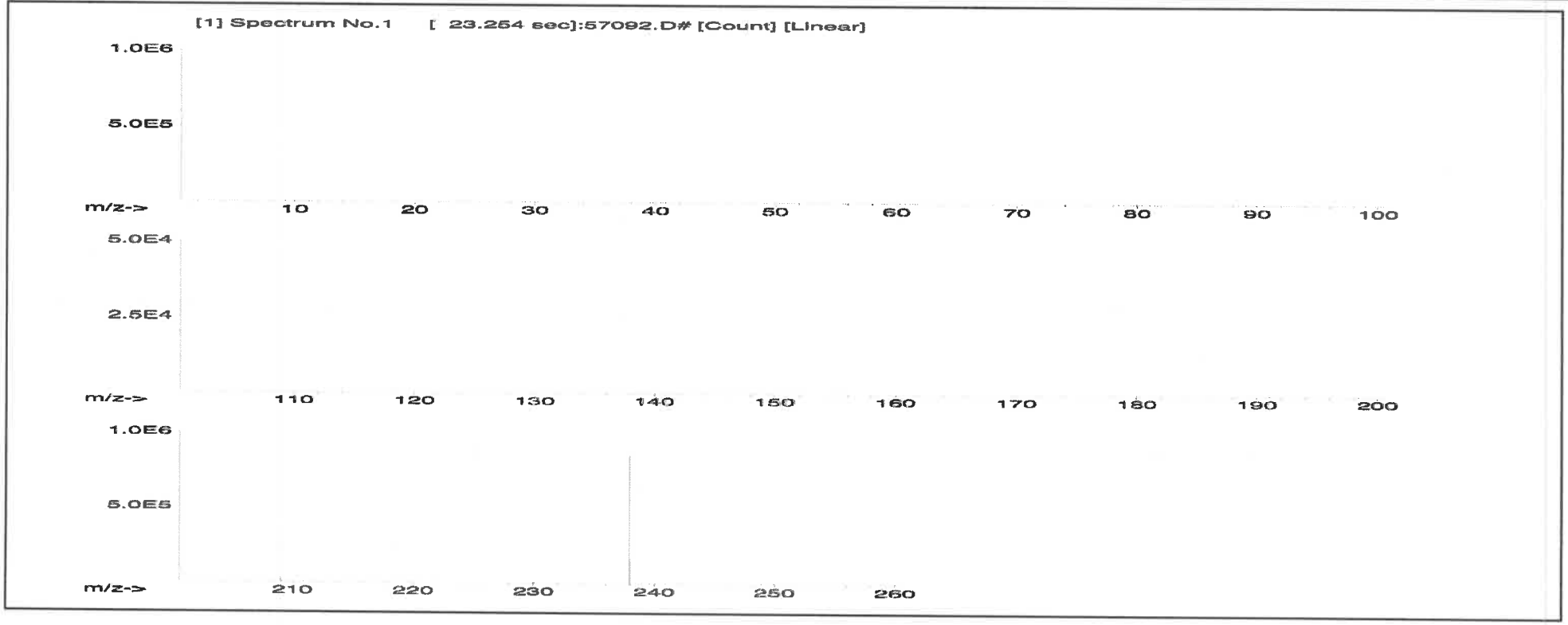
Giovanni Esposito

Formulated By:	Giovanni Esposito	060724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	060724

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Uranyl nitrate hexahydrate (U)	58192	041524	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13520-83-7	0.05 mg/m3	orl-rat 1040 mg/kg	3164



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	T
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Part # **57092** Lot # **060724**

Printed: 6/7/2024, 3:58:45 PM

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5983 R: 6/11/24

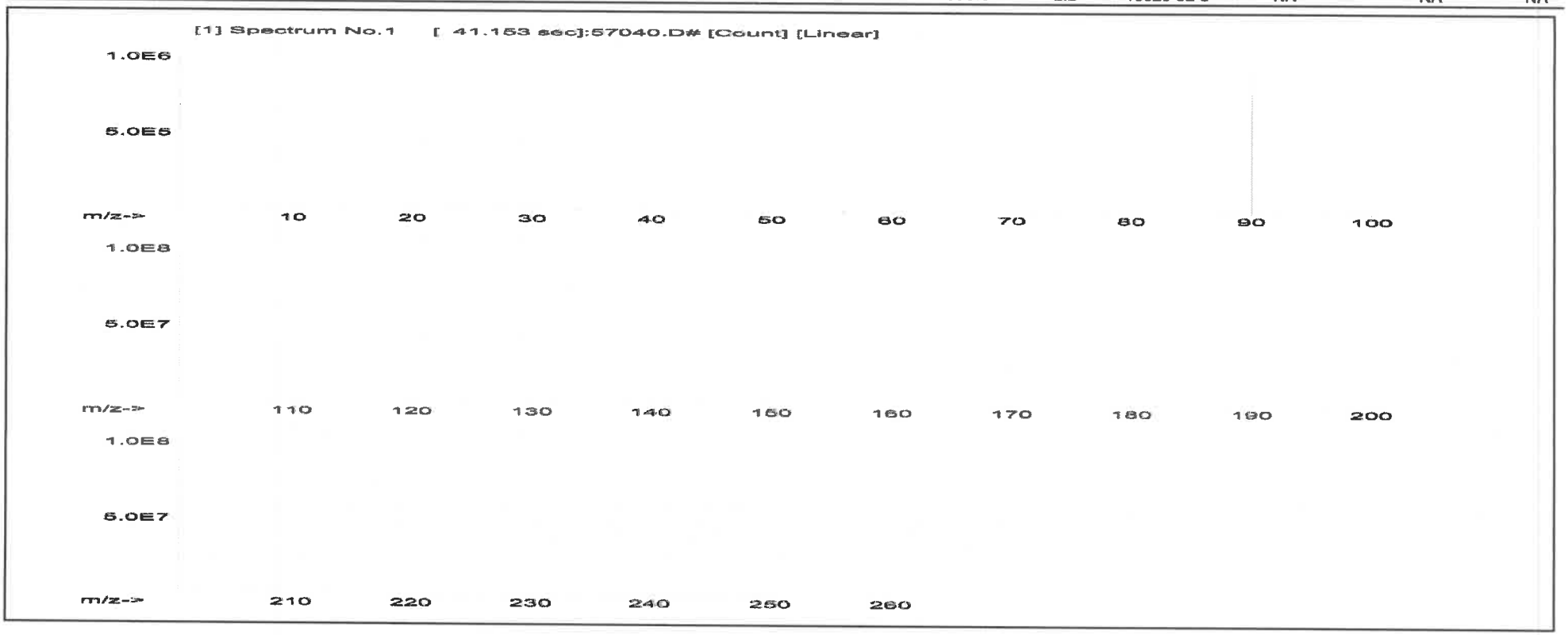
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57040**	21110221	Nitric Acid	
Lot Number:	**071423**			
Description:	**Zirconium (Zr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071426			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071423
Reviewed By:	Pedro L. Rentas	071423

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zirconyl chloride octahydrate (Zr)	58140	070621	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	13520-92-8	NA	NA	NA



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<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

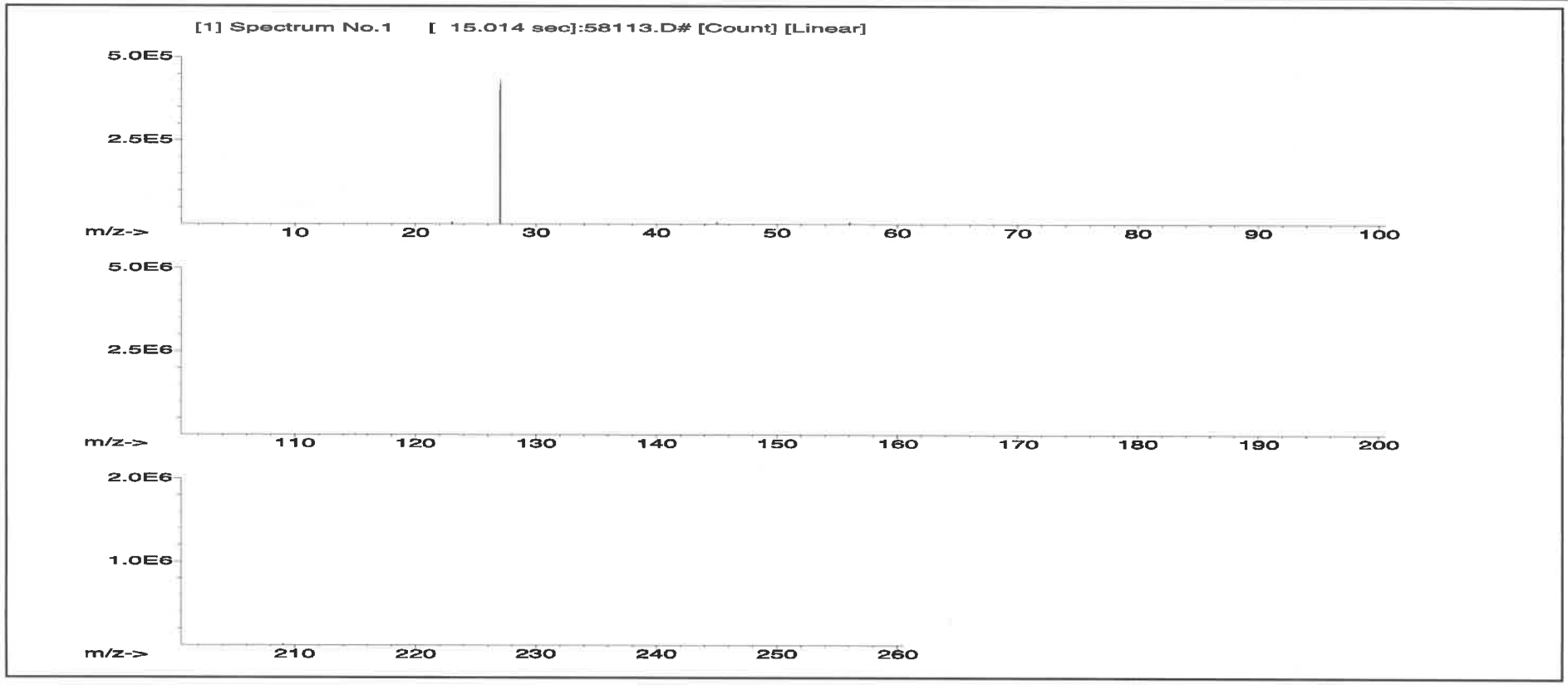
CERTIFIED WEIGHT REPORT:

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

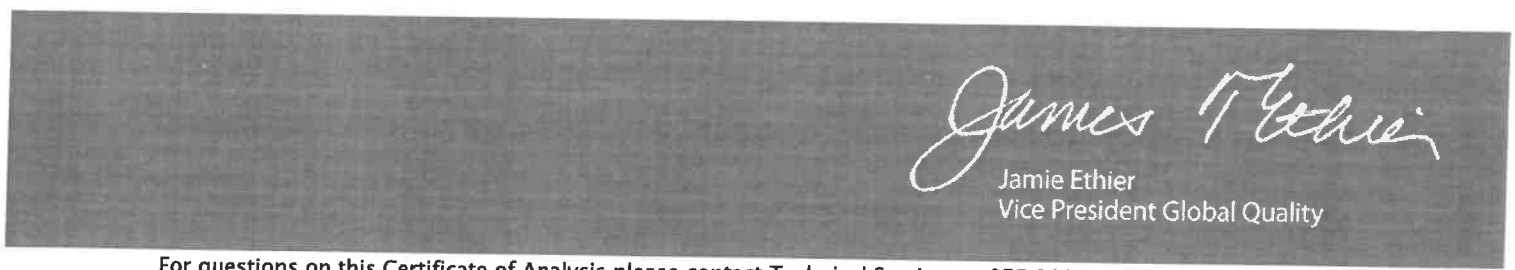
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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



For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

M6125 Receive -> 11/22/24

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

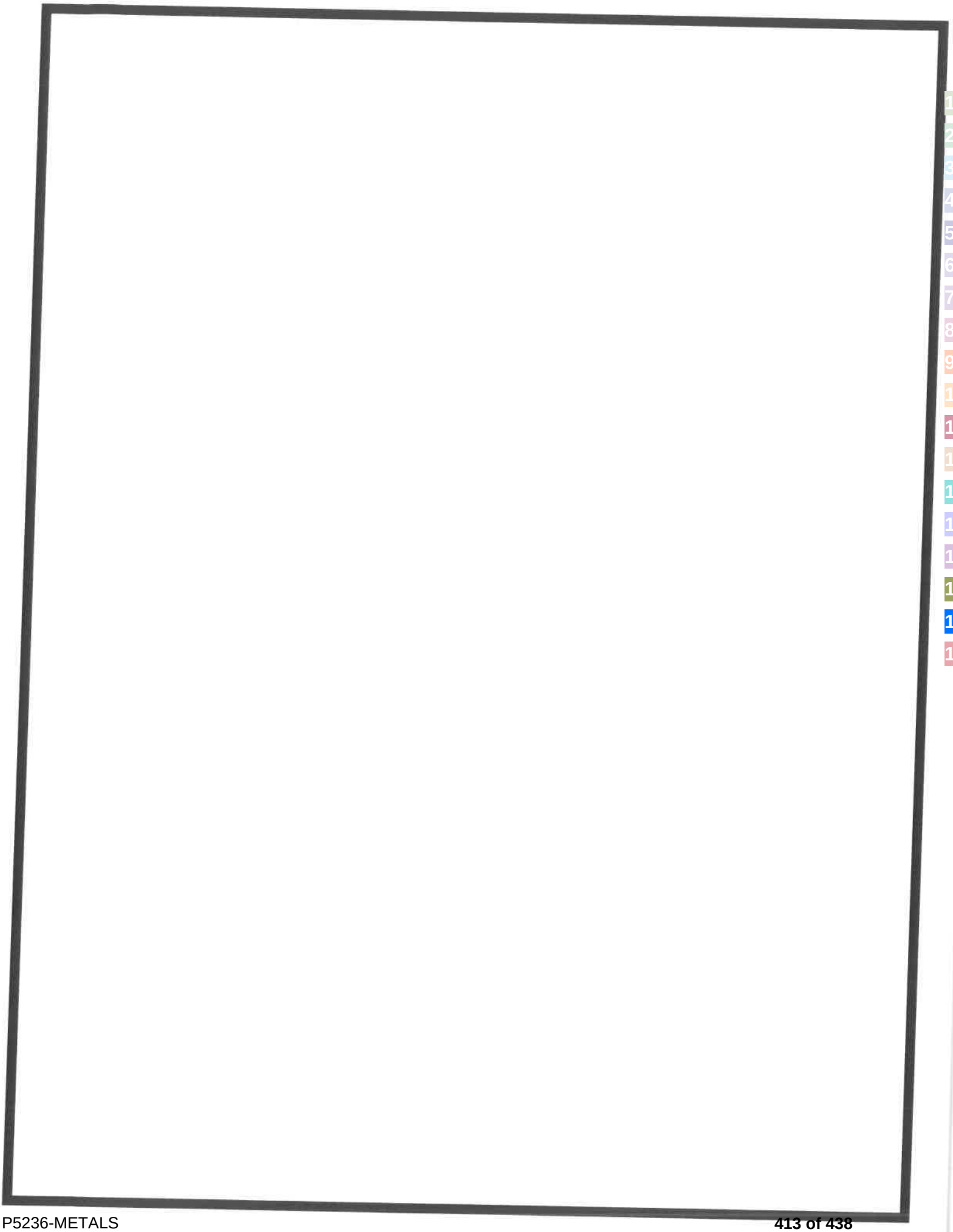
Office and Plant
299 Cedar Lane
Fairless Hills, PA 19030

Phone: 215-295-5006
Fax: 215-295-0781

Hydrogen Peroxide 30%, ACS

Reagent Grade

SPECIFICATION	MAXIMUM LIMITS
Appearance	Colorless and free from suspended matter or sediment
Assay	29-32%
Color (APHA)	10
Residue after Evaporation	0.002%
Titratable Acid	0.0006 meq/g
Chloride (Cl)	3 ppm
Nitrate (NO_3)	2 ppm
Phosphate	2 ppm
Sulfate (SO_4)	5 ppm
Ammonium (NH_4)	5 ppm
Heavy Metals (as Pb)	1 ppm
Iron (Fe)	0.5 ppm



Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R -> 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M5806, M5807

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 122223
Description: Sodium (Na)

Expiration Date: 122226
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

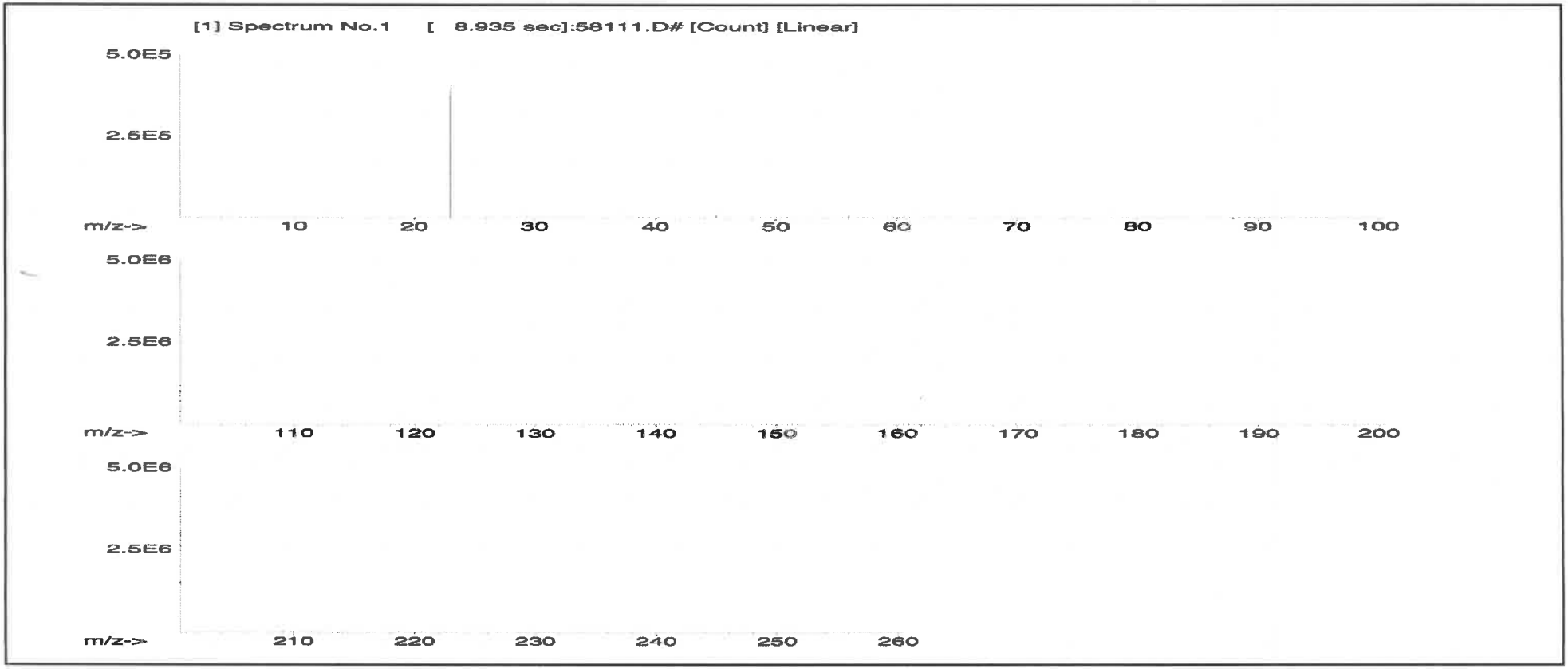
Weight shown below was diluted to (mL): 3000.4 | 0.06 Flask Uncertainty

	Lot #	
Solvent:	24002546	Nitric Acid
2%	60.0 (mL)	Nitric Acid
	5E-05	Balance 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.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<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).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

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

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

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

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

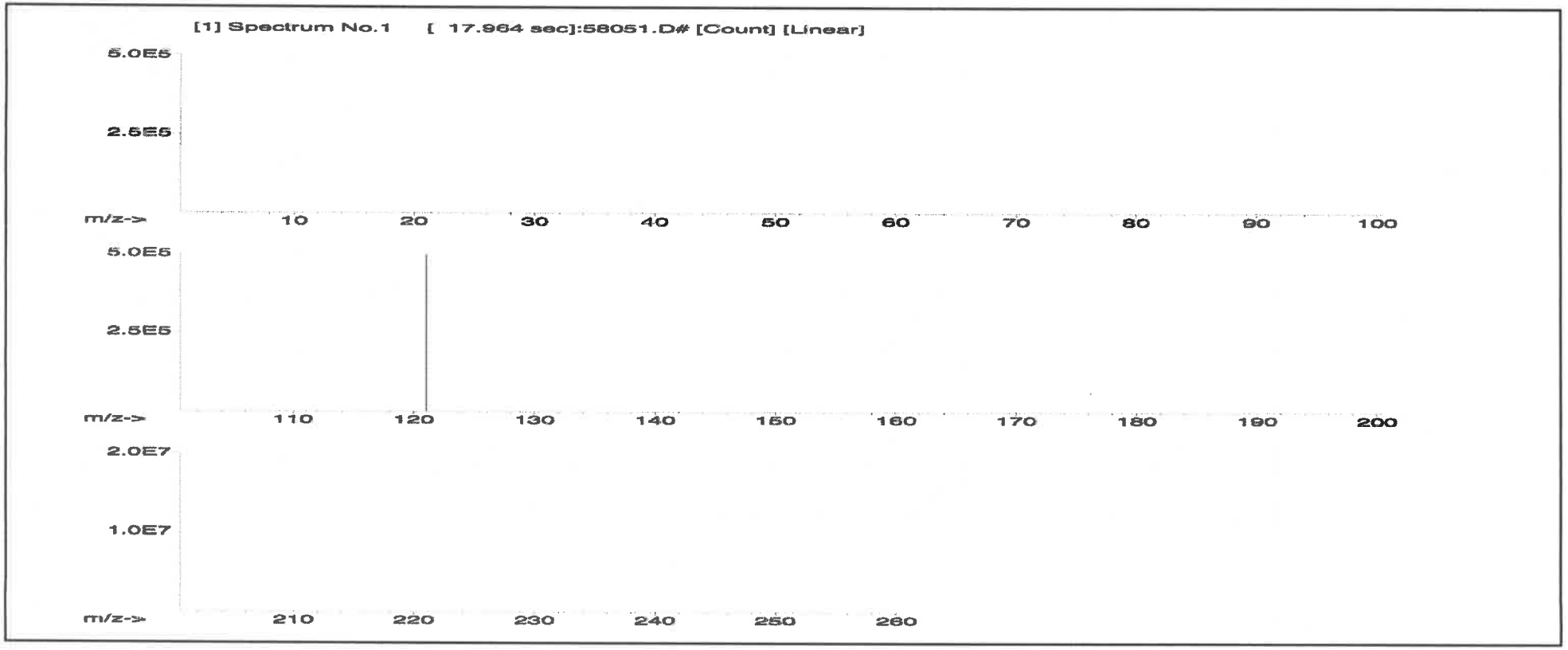
R: 01/03/24 M5802, M5803

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57051**	24002546	Nitric Acid	
Lot Number:	**120523**			
Description:	**Antimony (Sb)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	120526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Rentas	120523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	100923	0.1000	300.0	0.084	1000	10001.4	**1000.0**	2.1	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



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	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6030

R: 8/5/24

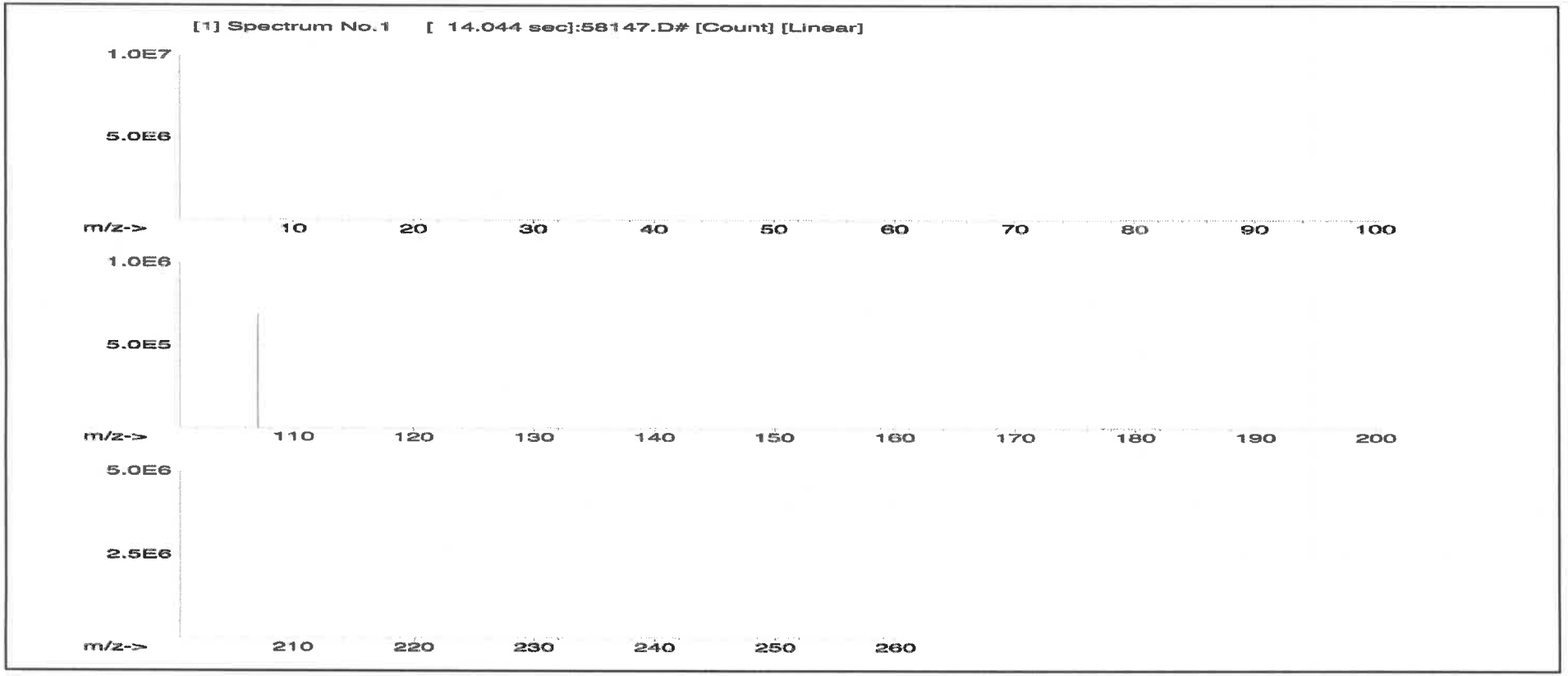
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57047**		**Lot #**		
Lot Number:	**122823**	**Solvent:**	24002546	Nitric Acid	
Description:	**Silver (Ag)**				
		2%	80.0 (mL)	Nitric Acid	
Expiration Date:	122826				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.30	0.058	Flask 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.

* 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

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

R: 03/16/23 M5473, M5474, M5475, M5476

CERTIFIED WEIGHT REPORT:

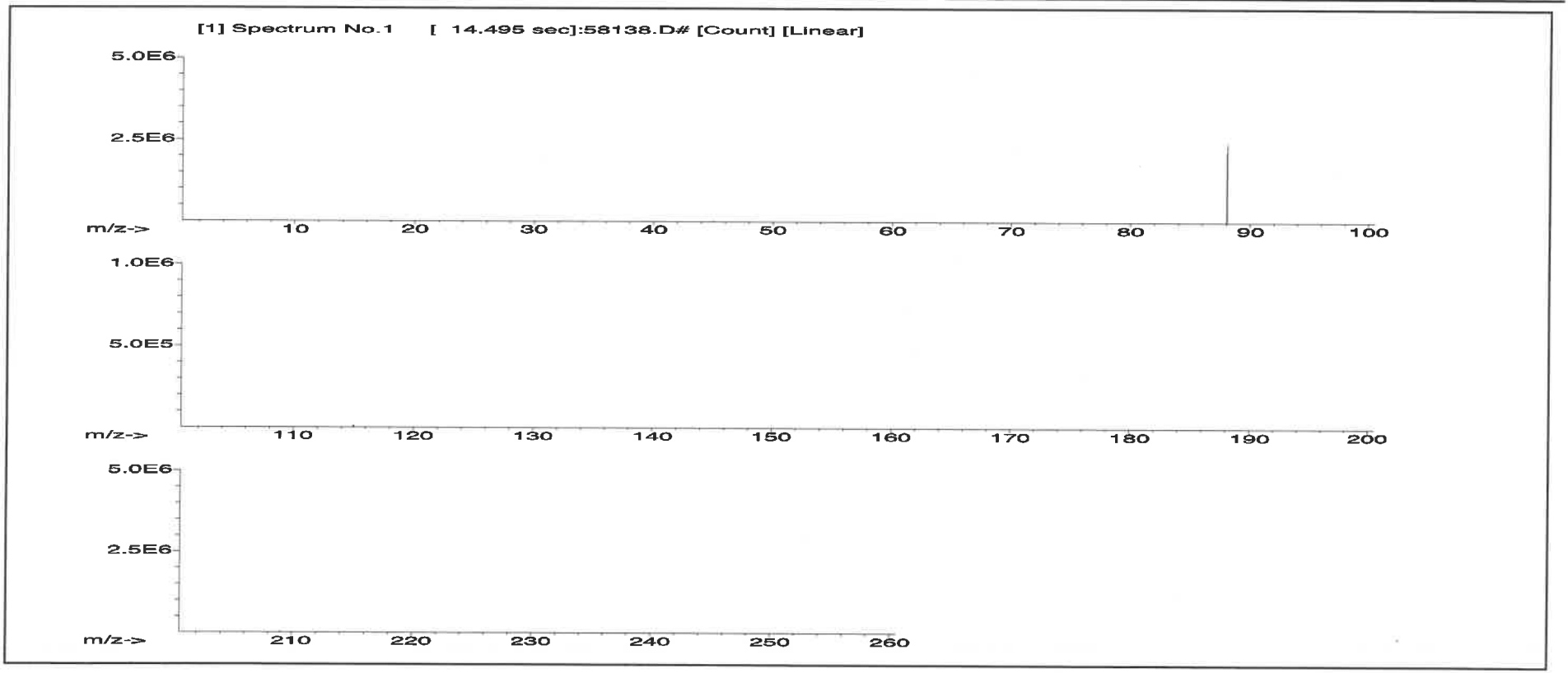
Part Number: 56138
Lot Number: 082922
Description: Strontium (Sr)

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



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 Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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

M6023

R ! 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57081
Lot Number: 062724
Description: Thallium (Tl)

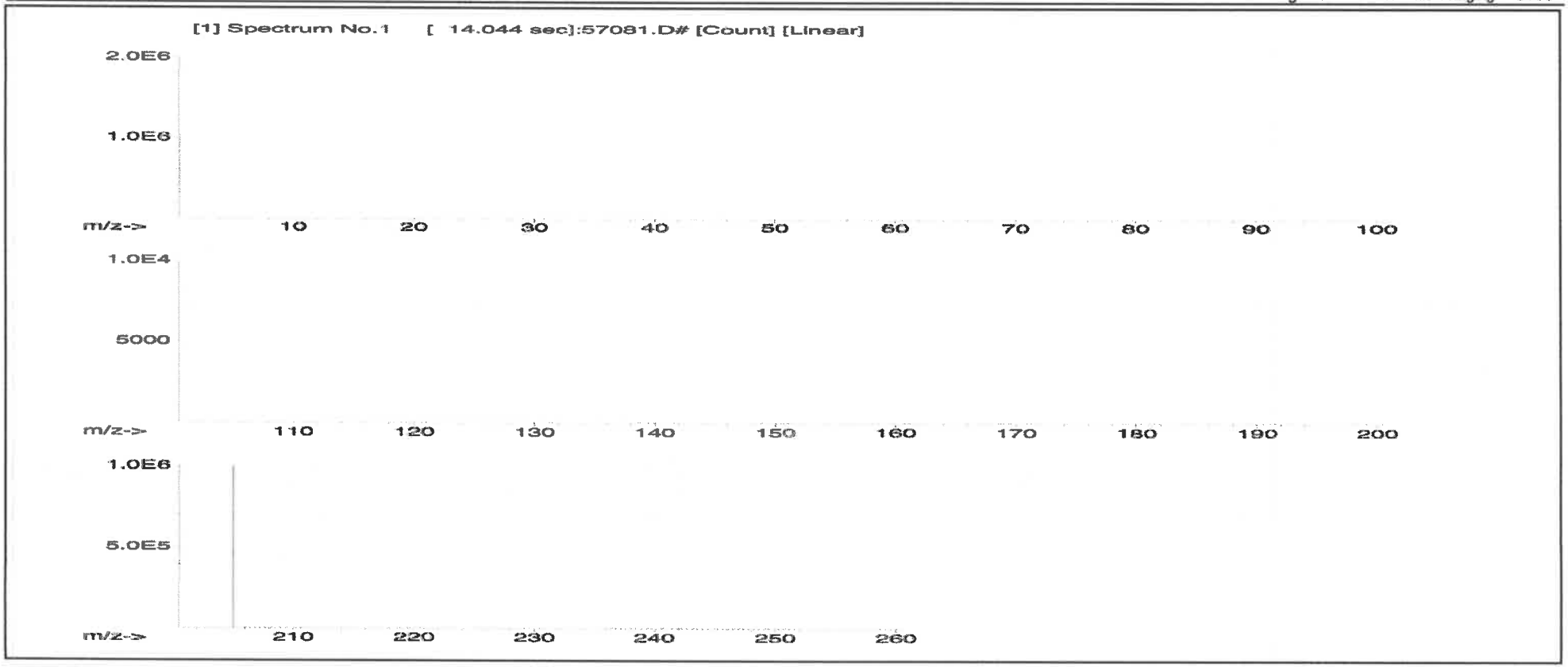
Expiration Date: 062727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.1

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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

M6021

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Rc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**	24002546	Nitric Acid	
Lot Number:	**062424**			
Description:	**Vanadium (V)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

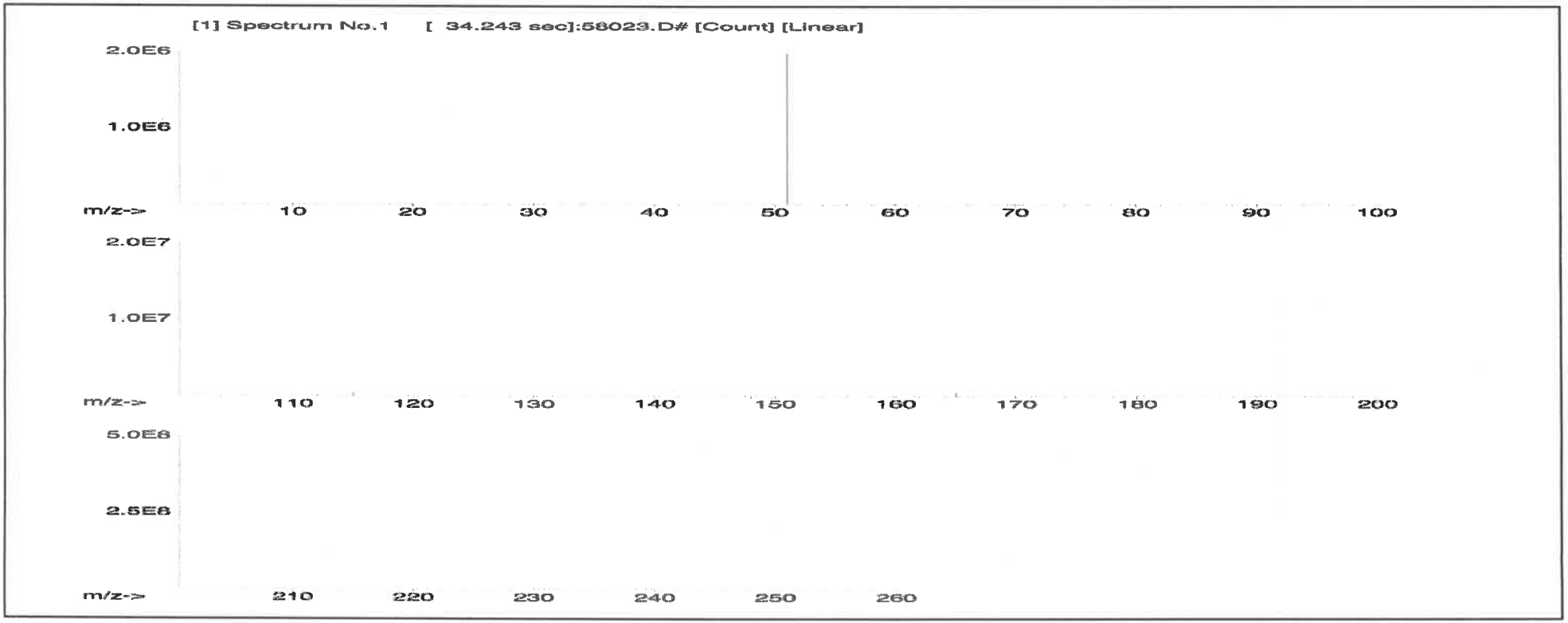
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

SHIPPING DOCUMENTS

P5236

Weston COC ID
Weston_20241209_1435

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

#	Sample ID	G/C	Matrix	# Cont	MS/MSD	Date Collected	Time Collected	Analyses Requested: Anions by EPA 9056A	pH by EPA 9045D	TAL Metals by EPA 6020B/7471B	TOC by 9060A						Special Instructions/Comments
	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						
1	TAPIAL3-SB03D-3-120724-00-T01	g	SB	3	no	12/7/2024	14:15	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.)	Sample	12/9/24	1800				QSM 6.0 Compliant
2.)	FedEx	12/10/24	1003		12/10/24	1003	Deliverable Requirements: DoD Level IV report, EnviroData EDD, and ERIS-compatible EDD
3.)							

3.1°C

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