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 : P5242

ATTENTION : Nathan Fretz

Laboratory Certification ID # 20012

Table Of Contents for P5242

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Cover Page

Order ID : P5242

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

Client : Weston Solutions

Lab Sample Number	Client Sample Number
P5242-01	TAPIAL1-SB04D-9-112224-00-T1
P5242-02	TAPIAL1-SB04D-4-112224-00-T1

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

Signature : _____

Date: 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 # P5242
Test Name: Metals ICP-TAL

A. Number of Samples and Date of Receipt:
2 Solid samples were received on 11/23/2024.

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

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

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate (TAPIAL1-SB04D-4-112224-00-T1DUP) analysis met criteria for all samples except for Copper, Nickel, Zinc due to matrix interference.
The Duplicate (TAPIAL1-SB04D-4-112224-00-T1MSD) analysis met criteria for all samples except for Nickel due to matrix interference.
The Matrix Spike (TAPIAL1-SB04D-4-112224-00-T1MS) analysis met criteria for all samples except for Antimony, Arsenic, Beryllium, Cadmium, Cobalt, Nickel, Selenium, Silver due to matrix interference.
The Matrix Spike Duplicate (TAPIAL1-SB04D-4-112224-00-T1MSD) analysis met criteria for all samples except for Arsenic, Beryllium, Cadmium, Cobalt, Nickel, Selenium, Silver, Thallium due to matrix interference..
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution (TAPIAL1-SB04D-4-112224-00-T1L) met criteria for all samples except for Chromium, Iron, Manganese due to unknown interference.

E. 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

F. Additional Comments:

Samples P5242-01 and P5242-02 are 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: P5242 MATRIX: Solid

METHOD: 6020B

		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 (TAPIAL1-SB04D-4-112224-00-T1L) met criteria for all samples except for Chromium, Iron, Manganese due to unknown interference.			
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 (TAPIAL1-SB04D-4-112224-00-T1MS) analysis met criteria for all samples except for Antimony, Arsenic, Beryllium, Cadmium, Cobalt, Nickel, Selenium, Silver due to matrix interference. The Matrix Spike Duplicate (TAPIAL1-SB04D-4-112224-00-T1MSD) analysis met criteria for all samples except for Arsenic, Beryllium, Cadmium, Cobalt, Nickel, Selenium, Silver, Thallium 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.			
	The Duplicate (TAPIAL1-SB04D-4-112224-00-T1DUP) analysis met criteria for all samples except for Copper, Nickel, Zinc due to matrix interference. The Duplicate (TAPIAL1-SB04D-4-112224-00-T1MSD) analysis met criteria for all samples except for Nickel due to matrix interference.			
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.			

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY (CONTINUED)

NA NO YES

ADDITIONAL COMMENTS: Samples P5242-01 and P5242-02 are 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 #: P5242

	Completed
For thorough review, the report must have the following:	
GENERAL:	
Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)	✓
Check chain-of-custody for proper relinquish/return of samples	✓
Is the chain of custody signed and complete	✓
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	✓
Collect information for each project id from server. Were all requirements followed	✓
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody on login page	✓
Do lab numbers and client Ids on cover page agree with the Chain of Custody	✓
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	✓
Do requested analyses on Chain of Custody agree with the log-in page	✓
Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody	✓
Were the samples received within hold time	✓
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	✓
ANALYTICAL:	
Was method requirement followed?	✓
Was client requirement followed?	✓
Does the case narrative summarize all QC failure?	✓
All runlogs and manual integration are reviewed for requirements	✓
All manual calculations and /or hand notations verified	✓

QA Review Signature: SOHIL JODHANI **Date:** 12/23/2024

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

LAB CHRONICLE

OrderID:	P5242	**OrderDate:**	12/10/2024 1:21:00 PM
Client:	Weston Solutions	**Project:**	Ft Meade Tipton Airfield Parcel RI - PO 0111169
Contact:	Nathan Fretz	**Location:**	L61

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P5242-01	**TAPIAL1-SB04D-9-11 2224-00-T1**	**SOIL**			**11/22/24**			**11/23/24**
			Metals ICP-TAL	6020B		12/09/24	12/11/24	
P5242-02	**TAPIAL1-SB04D-4-11 2224-00-T1**	**SOIL**			**11/22/24**			**11/23/24**
			Metals ICP-TAL	6020B		12/09/24	12/11/24	

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Hit Summary Sheet
SW-846

SDG No.: P5242 **Order ID:** P5242

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 : TAPIAL1-SB04D-9-112224-00-T1									
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Aluminum	4690	D	2.64	4.71	9.42	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Arsenic	2.16	D	0.042	0.12	0.47	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Barium	26.3	D	0.17	0.59	4.71	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Beryllium	0.40	JD	0.12	0.35	0.47	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Calcium	303	D	31.8	89.5	236	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Chromium	8.97	D	0.11	0.24	0.94	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Cobalt	5.91	D	0.038	0.12	0.47	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Copper	5.00	D	0.26	0.47	0.94	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Iron	9010	D	5.23	5.89	23.6	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Lead	4.47	D	0.071	0.35	0.47	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Magnesium	581	D	12.7	89.5	236	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Manganese	93.2	D	0.16	0.24	0.47	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Nickel	6.42	D	0.075	0.12	0.47	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Potassium	385	D	18.8	89.5	236	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Sodium	42.5	JD	28.8	118	236	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Thallium	0.094	JD	0.047	0.24	0.47	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Vanadium	14.6	D	0.038	0.12	2.36	mg/Kg
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SOIL	Zinc	18.8	D	0.61	0.71	2.36	mg/Kg
Client ID : TAPIAL1-SB04D-4-112224-00-T1									
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Aluminum	4230	D	2.62	4.69	9.37	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Arsenic	1.96	D	0.042	0.12	0.47	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Barium	22.3	D	0.17	0.59	4.69	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Beryllium	0.72	D	0.12	0.35	0.47	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Calcium	171	JD	31.6	89.0	234	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Chromium	31.2	D	0.11	0.23	0.94	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Cobalt	8.64	D	0.037	0.12	0.47	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Copper	7.18	D	0.26	0.47	0.94	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Iron	12000	D	5.20	5.86	23.4	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Lead	3.57	D	0.070	0.35	0.47	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Magnesium	842	D	12.6	89.0	234	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Manganese	274	D	0.16	0.23	0.47	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Nickel	7.45	D	0.075	0.12	0.47	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Potassium	686	D	18.6	89.0	234	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Sodium	55.4	JD	28.6	117	234	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Thallium	0.094	JD	0.047	0.23	0.47	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Vanadium	15.8	D	0.037	0.12	2.34	mg/Kg
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	SOIL	Zinc	15.4	D	0.61	0.70	2.34	mg/Kg

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

Hit Summary Sheet
SW-846

SDG No.:	P5242	**Order ID:**	P5242
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

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:	11/22/24
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	11/23/24
Client Sample ID:	TAPIAL1-SB04D-9-112224-00-T1	SDG No.:	P5242
Lab Sample ID:	P5242-01	Matrix:	SOIL
Level (low/med):	low	% Solid:	93.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	4690	D	5	2.64	4.71	9.42	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-36-0	Antimony	0.35	UDN	5	0.047	0.35	0.94	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-38-2	Arsenic	2.16	DN	5	0.042	0.12	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-39-3	Barium	26.3	D	5	0.17	0.59	4.71	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-41-7	Beryllium	0.40	JDN	5	0.12	0.35	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-43-9	Cadmium	0.35	UDN	5	0.13	0.35	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-70-2	Calcium	303	D	5	31.8	89.5	236	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-47-3	Chromium	8.97	D	5	0.11	0.24	0.94	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-48-4	Cobalt	5.91	DN	5	0.038	0.12	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-50-8	Copper	5.00	D*	5	0.26	0.47	0.94	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7439-89-6	Iron	9010	D	5	5.23	5.89	23.6	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7439-92-1	Lead	4.47	D	5	0.071	0.35	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7439-95-4	Magnesium	581	D	5	12.7	89.5	236	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7439-96-5	Manganese	93.2	D	5	0.16	0.24	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-02-0	Nickel	6.42	DN*	5	0.075	0.12	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-09-7	Potassium	385	D	5	18.8	89.5	236	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7782-49-2	Selenium	2.12	UDN	5	0.56	2.12	2.36	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-22-4	Silver	0.24	UDN	5	0.12	0.24	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-23-5	Sodium	42.5	JD	5	28.8	118	236	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-28-0	Thallium	0.094	JDN	5	0.047	0.24	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-62-2	Vanadium	14.6	D	5	0.038	0.12	2.36	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050
7440-66-6	Zinc	18.8	D*	5	0.61	0.71	2.36	mg/Kg	12/09/24 10:45	12/11/24 18:54	SW6020	SW3050

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

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:	11/22/24
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	11/23/24
Client Sample ID:	TAPIAL1-SB04D-4-112224-00-T1	SDG No.:	P5242
Lab Sample ID:	P5242-02	Matrix:	SOIL
Level (low/med):	low	% Solid:	92.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	4230	D	5	2.62	4.69	9.37	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-36-0	Antimony	0.35	UDN	5	0.047	0.35	0.94	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-38-2	Arsenic	1.96	DN	5	0.042	0.12	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-39-3	Barium	22.3	D	5	0.17	0.59	4.69	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-41-7	Beryllium	0.72	DN	5	0.12	0.35	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-43-9	Cadmium	0.35	UDN	5	0.13	0.35	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-70-2	Calcium	171	JD	5	31.6	89.0	234	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-47-3	Chromium	31.2	D	5	0.11	0.23	0.94	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-48-4	Cobalt	8.64	DN	5	0.037	0.12	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-50-8	Copper	7.18	D*	5	0.26	0.47	0.94	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7439-89-6	Iron	12000	D	5	5.20	5.86	23.4	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7439-92-1	Lead	3.57	D	5	0.070	0.35	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7439-95-4	Magnesium	842	D	5	12.6	89.0	234	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7439-96-5	Manganese	274	D	5	0.16	0.23	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-02-0	Nickel	7.45	DN*	5	0.075	0.12	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-09-7	Potassium	686	D	5	18.6	89.0	234	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7782-49-2	Selenium	2.11	UDN	5	0.56	2.11	2.34	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-22-4	Silver	0.23	UDN	5	0.12	0.23	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-23-5	Sodium	55.4	JD	5	28.6	117	234	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-28-0	Thallium	0.094	JDN	5	0.047	0.23	0.47	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-62-2	Vanadium	15.8	D	5	0.037	0.12	2.34	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050
7440-66-6	Zinc	15.4	D*	5	0.61	0.70	2.34	mg/Kg	12/09/24 10:45	12/11/24 18:58	SW6020	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Brown	Clarity After:		Artifacts:	
Comments:	METALS-TAL				

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

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

METAL CALIBRATION DATA

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** P5242

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5242 **SAS No.:** P5242

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	490	500	98	90 - 110	P	12/11/2024	17:25	LB133901
	Antimony	212	200	106	90 - 110	P	12/11/2024	17:25	LB133901
	Arsenic	218	200	109	90 - 110	P	12/11/2024	17:25	LB133901
	Barium	103	100	103	90 - 110	P	12/11/2024	17:25	LB133901
	Beryllium	110	100	110	90 - 110	P	12/11/2024	17:25	LB133901
	Cadmium	106	100	106	90 - 110	P	12/11/2024	17:25	LB133901
	Calcium	1980	2000	99	90 - 110	P	12/11/2024	17:25	LB133901
	Chromium	102	100	102	90 - 110	P	12/11/2024	17:25	LB133901
	Cobalt	106	100	106	90 - 110	P	12/11/2024	17:25	LB133901
	Copper	101	100	101	90 - 110	P	12/11/2024	17:25	LB133901
	Iron	2060	2000	103	90 - 110	P	12/11/2024	17:25	LB133901
	Lead	206	200	103	90 - 110	P	12/11/2024	17:25	LB133901
	Magnesium	1250	1200	104	90 - 110	P	12/11/2024	17:25	LB133901
	Manganese	103	100	103	90 - 110	P	12/11/2024	17:25	LB133901
	Nickel	107	110	97	90 - 110	P	12/11/2024	17:25	LB133901
	Potassium	1960	2000	98	90 - 110	P	12/11/2024	17:25	LB133901
	Selenium	220	200	110	90 - 110	P	12/11/2024	17:25	LB133901
	Silver	53.8	50.0	108	90 - 110	P	12/11/2024	17:25	LB133901
	Sodium	2130	2000	106	90 - 110	P	12/11/2024	17:25	LB133901
	Thallium	204	210	97	90 - 110	P	12/11/2024	17:25	LB133901
	Vanadium	101	100	101	90 - 110	P	12/11/2024	17:25	LB133901
	Zinc	203	200	102	90 - 110	P	12/11/2024	17:25	LB133901

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** P5242

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5242 **SAS No.:** P5242

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	21.9	20.0	110	80 - 120	P	12/11/2024	17:59	LB133901
	Antimony	2.13	2.0	106	80 - 120	P	12/11/2024	17:59	LB133901
	Arsenic	1.19	1.0	119	80 - 120	P	12/11/2024	17:59	LB133901
	Barium	10.6	10.0	106	80 - 120	P	12/11/2024	17:59	LB133901
	Beryllium	1.12	1.0	112	80 - 120	P	12/11/2024	17:59	LB133901
	Cadmium	1.07	1.0	107	80 - 120	P	12/11/2024	17:59	LB133901
	Calcium	522	500	104	80 - 120	P	12/11/2024	17:59	LB133901
	Chromium	2.22	2.0	111	80 - 120	P	12/11/2024	17:59	LB133901
	Cobalt	1.13	1.0	113	80 - 120	P	12/11/2024	17:59	LB133901
	Copper	1.99	2.0	100	80 - 120	P	12/11/2024	17:59	LB133901
	Iron	54.4	50.0	109	80 - 120	P	12/11/2024	17:59	LB133901
	Lead	1.01	1.0	101	80 - 120	P	12/11/2024	17:59	LB133901
	Magnesium	575	500	115	80 - 120	P	12/11/2024	17:59	LB133901
	Manganese	1.11	1.0	111	80 - 120	P	12/11/2024	17:59	LB133901
	Nickel	1.05	1.0	105	80 - 120	P	12/11/2024	17:59	LB133901
	Potassium	525	500	105	80 - 120	P	12/11/2024	17:59	LB133901
	Selenium	5.77	5.0	115	80 - 120	P	12/11/2024	17:59	LB133901
	Silver	1.05	1.0	105	80 - 120	P	12/11/2024	17:59	LB133901
	Sodium	549	500	110	80 - 120	P	12/11/2024	17:59	LB133901
	Thallium	1.00	1.0	100	80 - 120	P	12/11/2024	17:59	LB133901
	Vanadium	5.25	5.0	105	80 - 120	P	12/11/2024	17:59	LB133901
	Zinc	5.96	5.0	119	80 - 120	P	12/11/2024	17:59	LB133901

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** P5242

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5242 **SAS No.:** P5242

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	50900	50000	102	90 - 110	P	12/11/2024	18:11	LB133901
	Antimony	486	500	97	90 - 110	P	12/11/2024	18:11	LB133901
	Arsenic	517	500	103	90 - 110	P	12/11/2024	18:11	LB133901
	Barium	2520	2500	101	90 - 110	P	12/11/2024	18:11	LB133901
	Beryllium	538	500	108	90 - 110	P	12/11/2024	18:11	LB133901
	Cadmium	481	500	96	90 - 110	P	12/11/2024	18:11	LB133901
	Calcium	247000	250000	99	90 - 110	P	12/11/2024	18:11	LB133901
	Chromium	519	500	104	90 - 110	P	12/11/2024	18:11	LB133901
	Cobalt	508	500	102	90 - 110	P	12/11/2024	18:11	LB133901
	Copper	4920	5000	98	90 - 110	P	12/11/2024	18:11	LB133901
	Iron	127000	125000	102	90 - 110	P	12/11/2024	18:11	LB133901
	Lead	2560	2500	103	90 - 110	P	12/11/2024	18:11	LB133901
	Magnesium	258000	250000	103	90 - 110	P	12/11/2024	18:11	LB133901
	Manganese	5180	5000	104	90 - 110	P	12/11/2024	18:11	LB133901
	Nickel	470	500	94	90 - 110	P	12/11/2024	18:11	LB133901
	Potassium	124000	125000	99	90 - 110	P	12/11/2024	18:11	LB133901
	Selenium	495	500	99	90 - 110	P	12/11/2024	18:11	LB133901
	Silver	479	500	96	90 - 110	P	12/11/2024	18:11	LB133901
	Sodium	254000	250000	102	90 - 110	P	12/11/2024	18:11	LB133901
	Thallium	513	500	102	90 - 110	P	12/11/2024	18:11	LB133901
	Vanadium	526	500	105	90 - 110	P	12/11/2024	18:11	LB133901
	Zinc	4920	5000	98	90 - 110	P	12/11/2024	18:11	LB133901
CCV02	Aluminum	50700	50000	101	90 - 110	P	12/11/2024	19:16	LB133901
	Antimony	503	500	101	90 - 110	P	12/11/2024	19:16	LB133901
	Arsenic	511	500	102	90 - 110	P	12/11/2024	19:16	LB133901
	Barium	2550	2500	102	90 - 110	P	12/11/2024	19:16	LB133901
	Beryllium	528	500	106	90 - 110	P	12/11/2024	19:16	LB133901
	Cadmium	493	500	99	90 - 110	P	12/11/2024	19:16	LB133901
	Calcium	244000	250000	98	90 - 110	P	12/11/2024	19:16	LB133901
	Chromium	512	500	102	90 - 110	P	12/11/2024	19:16	LB133901
	Cobalt	506	500	101	90 - 110	P	12/11/2024	19:16	LB133901
	Copper	4880	5000	98	90 - 110	P	12/11/2024	19:16	LB133901
	Iron	127000	125000	101	90 - 110	P	12/11/2024	19:16	LB133901
	Lead	2590	2500	104	90 - 110	P	12/11/2024	19:16	LB133901

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions **SDG No.:** P5242

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5242 **SAS No.:** P5242

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	254000	250000	102	90 - 110	P	12/11/2024	19:16	LB133901
	Manganese	5130	5000	102	90 - 110	P	12/11/2024	19:16	LB133901
	Nickel	466	500	93	90 - 110	P	12/11/2024	19:16	LB133901
	Potassium	122000	125000	98	90 - 110	P	12/11/2024	19:16	LB133901
	Selenium	493	500	99	90 - 110	P	12/11/2024	19:16	LB133901
	Silver	484	500	97	90 - 110	P	12/11/2024	19:16	LB133901
	Sodium	250000	250000	100	90 - 110	P	12/11/2024	19:16	LB133901
	Thallium	516	500	103	90 - 110	P	12/11/2024	19:16	LB133901
	Vanadium	524	500	105	90 - 110	P	12/11/2024	19:16	LB133901
	Zinc	4930	5000	99	90 - 110	P	12/11/2024	19:16	LB133901
CCV03	Aluminum	49800	50000	100	90 - 110	P	12/11/2024	19:52	LB133901
	Antimony	497	500	100	90 - 110	P	12/11/2024	19:52	LB133901
	Arsenic	502	500	100	90 - 110	P	12/11/2024	19:52	LB133901
	Barium	2500	2500	100	90 - 110	P	12/11/2024	19:52	LB133901
	Beryllium	526	500	105	90 - 110	P	12/11/2024	19:52	LB133901
	Cadmium	492	500	98	90 - 110	P	12/11/2024	19:52	LB133901
	Calcium	244000	250000	97	90 - 110	P	12/11/2024	19:52	LB133901
	Chromium	510	500	102	90 - 110	P	12/11/2024	19:52	LB133901
	Cobalt	504	500	101	90 - 110	P	12/11/2024	19:52	LB133901
	Copper	4810	5000	96	90 - 110	P	12/11/2024	19:52	LB133901
	Iron	125000	125000	100	90 - 110	P	12/11/2024	19:52	LB133901
	Lead	2560	2500	102	90 - 110	P	12/11/2024	19:52	LB133901
	Magnesium	251000	250000	100	90 - 110	P	12/11/2024	19:52	LB133901
	Manganese	5080	5000	102	90 - 110	P	12/11/2024	19:52	LB133901
	Nickel	460	500	92	90 - 110	P	12/11/2024	19:52	LB133901
	Potassium	119000	125000	95	90 - 110	P	12/11/2024	19:52	LB133901
	Selenium	489	500	98	90 - 110	P	12/11/2024	19:52	LB133901
	Silver	478	500	96	90 - 110	P	12/11/2024	19:52	LB133901
	Sodium	247000	250000	99	90 - 110	P	12/11/2024	19:52	LB133901
	Thallium	519	500	104	90 - 110	P	12/11/2024	19:52	LB133901
	Vanadium	516	500	103	90 - 110	P	12/11/2024	19:52	LB133901
	Zinc	4840	5000	97	90 - 110	P	12/11/2024	19:52	LB133901

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Metals

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CRDL STANDARD FOR AA & ICP

Client: Weston Solutions **SDG No.:** P5242

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5242 **SAS No.:** P5242

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
CRI	Aluminum	20.2	20.0	101	70 - 130	P	12/11/2024	18:45	LB133901
	Antimony	2.14	2.0	107	70 - 130	P	12/11/2024	18:45	LB133901
	Arsenic	1.16	1.0	116	70 - 130	P	12/11/2024	18:45	LB133901
	Barium	10.5	10.0	105	70 - 130	P	12/11/2024	18:45	LB133901
	Beryllium	1.10	1.0	110	70 - 130	P	12/11/2024	18:45	LB133901
	Cadmium	1.06	1.0	106	70 - 130	P	12/11/2024	18:45	LB133901
	Calcium	525	500	105	70 - 130	P	12/11/2024	18:45	LB133901
	Chromium	2.16	2.0	108	70 - 130	P	12/11/2024	18:45	LB133901
	Cobalt	1.10	1.0	110	50 - 150	P	12/11/2024	18:45	LB133901
	Copper	2.02	2.0	101	70 - 130	P	12/11/2024	18:45	LB133901
	Iron	55.2	50.0	110	70 - 130	P	12/11/2024	18:45	LB133901
	Lead	0.99	1.0	99	70 - 130	P	12/11/2024	18:45	LB133901
	Magnesium	568	500	114	70 - 130	P	12/11/2024	18:45	LB133901
	Manganese	1.12	1.0	112	50 - 150	P	12/11/2024	18:45	LB133901
	Nickel	1.08	1.0	108	70 - 130	P	12/11/2024	18:45	LB133901
	Potassium	519	500	104	70 - 130	P	12/11/2024	18:45	LB133901
	Selenium	5.54	5.0	111	70 - 130	P	12/11/2024	18:45	LB133901
	Silver	1.06	1.0	106	70 - 130	P	12/11/2024	18:45	LB133901
	Sodium	553	500	111	70 - 130	P	12/11/2024	18:45	LB133901
	Thallium	0.98	1.0	98	70 - 130	P	12/11/2024	18:45	LB133901
	Vanadium	5.19	5.0	104	70 - 130	P	12/11/2024	18:45	LB133901
	Zinc	5.93	5.0	119	50 - 150	P	12/11/2024	18:45	LB133901

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5242

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5242 **SAS No.:** P5242

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	3.62	+/-20.0	J	10.0	20.0	P	12/11/2024	18:02	LB133901
	Antimony	2.00	+/-2.00	U	0.25	2.00	P	12/11/2024	18:02	LB133901
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	18:02	LB133901
	Barium	10.0	+/-10.0	U	1.25	10.0	P	12/11/2024	18:02	LB133901
	Beryllium	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	18:02	LB133901
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	12/11/2024	18:02	LB133901
	Calcium	500	+/-500	U	190	500	P	12/11/2024	18:02	LB133901
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	12/11/2024	18:02	LB133901
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	18:02	LB133901
	Copper	2.00	+/-2.00	U	1.50	2.00	P	12/11/2024	18:02	LB133901
	Iron	50.0	+/-50.0	U	25.0	50.0	P	12/11/2024	18:02	LB133901
	Lead	1.00	+/-1.00	U	0.75	1.00	P	12/11/2024	18:02	LB133901
	Magnesium	500	+/-500	U	190	500	P	12/11/2024	18:02	LB133901
	Manganese	1.00	+/-1.00	U	0.75	1.00	P	12/11/2024	18:02	LB133901
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	18:02	LB133901
	Potassium	500	+/-500	U	190	500	P	12/11/2024	18:02	LB133901
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	12/11/2024	18:02	LB133901
	Silver	1.00	+/-1.00	U	0.50	1.00	P	12/11/2024	18:02	LB133901
	Sodium	500	+/-500	U	190	500	P	12/11/2024	18:02	LB133901
	Thallium	1.00	+/-1.00	U	0.50	1.00	P	12/11/2024	18:02	LB133901
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	12/11/2024	18:02	LB133901
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	12/11/2024	18:02	LB133901

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5242

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5242 **SAS No.:** P5242

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	12/11/2024	18:15	LB133901
	Antimony	2.00	+/-2.00	U	0.25	2.00	P	12/11/2024	18:15	LB133901
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	18:15	LB133901
	Barium	10.0	+/-10.0	U	1.25	10.0	P	12/11/2024	18:15	LB133901
	Beryllium	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	18:15	LB133901
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	12/11/2024	18:15	LB133901
	Calcium	500	+/-500	U	190	500	P	12/11/2024	18:15	LB133901
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	12/11/2024	18:15	LB133901
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	18:15	LB133901
	Copper	0.40	+/-2.00	J	1.50	2.00	P	12/11/2024	18:15	LB133901
	Iron	50.0	+/-50.0	U	25.0	50.0	P	12/11/2024	18:15	LB133901
	Lead	0.12	+/-1.00	J	0.75	1.00	P	12/11/2024	18:15	LB133901
	Magnesium	500	+/-500	U	190	500	P	12/11/2024	18:15	LB133901
	Manganese	1.00	+/-1.00	U	0.75	1.00	P	12/11/2024	18:15	LB133901
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	18:15	LB133901
	Potassium	53.1	+/-500	J	190	500	P	12/11/2024	18:15	LB133901
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	12/11/2024	18:15	LB133901
	Silver	1.00	+/-1.00	U	0.50	1.00	P	12/11/2024	18:15	LB133901
	Sodium	103	+/-500	J	190	500	P	12/11/2024	18:15	LB133901
	Thallium	1.00	+/-1.00	U	0.50	1.00	P	12/11/2024	18:15	LB133901
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	12/11/2024	18:15	LB133901
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	12/11/2024	18:15	LB133901
CCB02	Aluminum	20.0	+/-20.0	U	10.0	20.0	P	12/11/2024	19:21	LB133901
	Antimony	2.00	+/-2.00	U	0.25	2.00	P	12/11/2024	19:21	LB133901
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	19:21	LB133901
	Barium	10.0	+/-10.0	U	1.25	10.0	P	12/11/2024	19:21	LB133901
	Beryllium	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	19:21	LB133901
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	12/11/2024	19:21	LB133901
	Calcium	500	+/-500	U	190	500	P	12/11/2024	19:21	LB133901
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	12/11/2024	19:21	LB133901
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	19:21	LB133901
	Copper	2.00	+/-2.00	U	1.50	2.00	P	12/11/2024	19:21	LB133901
	Iron	50.0	+/-50.0	U	25.0	50.0	P	12/11/2024	19:21	LB133901
	Lead	1.00	+/-1.00	U	0.75	1.00	P	12/11/2024	19:21	LB133901
	Magnesium	500	+/-500	U	190	500	P	12/11/2024	19:21	LB133901
	Manganese	1.00	+/-1.00	U	0.75	1.00	P	12/11/2024	19:21	LB133901
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	19:21	LB133901
	Potassium	500	+/-500	U	190	500	P	12/11/2024	19:21	LB133901
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	12/11/2024	19:21	LB133901

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5242

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5242 **SAS No.:** P5242

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	1.00	+/-1.00	U	0.50	1.00	P	12/11/2024	19:21	LB133901
	Sodium	500	+/-500	U	190	500	P	12/11/2024	19:21	LB133901
	Thallium	1.00	+/-1.00	U	0.50	1.00	P	12/11/2024	19:21	LB133901
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	12/11/2024	19:21	LB133901
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	12/11/2024	19:21	LB133901
CCB03	Aluminum	20.0	+/-20.0	U	10.0	20.0	P	12/11/2024	19:55	LB133901
	Antimony	0.12	+/-2.00	J	0.25	2.00	P	12/11/2024	19:55	LB133901
	Arsenic	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	19:55	LB133901
	Barium	10.0	+/-10.0	U	1.25	10.0	P	12/11/2024	19:55	LB133901
	Beryllium	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	19:55	LB133901
	Cadmium	1.00	+/-1.00	U	0.50	1.00	P	12/11/2024	19:55	LB133901
	Calcium	500	+/-500	U	190	500	P	12/11/2024	19:55	LB133901
	Chromium	2.00	+/-2.00	U	0.75	2.00	P	12/11/2024	19:55	LB133901
	Cobalt	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	19:55	LB133901
	Copper	2.00	+/-2.00	U	1.50	2.00	P	12/11/2024	19:55	LB133901
	Iron	50.0	+/-50.0	U	25.0	50.0	P	12/11/2024	19:55	LB133901
	Lead	0.13	+/-1.00	J	0.75	1.00	P	12/11/2024	19:55	LB133901
	Magnesium	500	+/-500	U	190	500	P	12/11/2024	19:55	LB133901
	Manganese	1.00	+/-1.00	U	0.75	1.00	P	12/11/2024	19:55	LB133901
	Nickel	1.00	+/-1.00	U	0.25	1.00	P	12/11/2024	19:55	LB133901
	Potassium	500	+/-500	U	190	500	P	12/11/2024	19:55	LB133901
	Selenium	5.00	+/-5.00	U	4.50	5.00	P	12/11/2024	19:55	LB133901
	Silver	1.00	+/-1.00	U	0.50	1.00	P	12/11/2024	19:55	LB133901
	Sodium	96.3	+/-500	J	190	500	P	12/11/2024	19:55	LB133901
	Thallium	1.00	+/-1.00	U	0.50	1.00	P	12/11/2024	19:55	LB133901
	Vanadium	5.00	+/-5.00	U	0.25	5.00	P	12/11/2024	19:55	LB133901
	Zinc	5.00	+/-5.00	U	1.50	5.00	P	12/11/2024	19:55	LB133901

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Metals
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PREPARATION BLANK SUMMARY

Client: Weston Solutions **SDG No.:** P5242

Instrument: P8

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB165537BL		**SOLID**		**Batch Number:**		**PB165537**		**Prep Date:**	**12/09/2024**	
	Aluminum	2.00	<2.00	U	1.00	2.00	P	12/11/2024	18:48	LB133901
	Antimony	0.20	<0.20	U	0.075	0.20	P	12/11/2024	18:48	LB133901
	Arsenic	0.10	<0.10	U	0.025	0.10	P	12/11/2024	18:48	LB133901
	Barium	1.00	<1.00	U	0.13	1.00	P	12/11/2024	18:48	LB133901
	Beryllium	0.10	<0.10	U	0.075	0.10	P	12/11/2024	18:48	LB133901
	Cadmium	0.10	<0.10	U	0.075	0.10	P	12/11/2024	18:48	LB133901
	Calcium	50.0	<50.0	U	19.0	50.0	P	12/11/2024	18:48	LB133901
	Chromium	0.20	<0.20	U	0.050	0.20	P	12/11/2024	18:48	LB133901
	Cobalt	0.10	<0.10	U	0.025	0.10	P	12/11/2024	18:48	LB133901
	Copper	0.20	<0.20	U	0.10	0.20	P	12/11/2024	18:48	LB133901
	Iron	5.00	<5.00	U	1.25	5.00	P	12/11/2024	18:48	LB133901
	Lead	0.10	<0.10	U	0.075	0.10	P	12/11/2024	18:48	LB133901
	Magnesium	50.0	<50.0	U	19.0	50.0	P	12/11/2024	18:48	LB133901
	Manganese	0.10	<0.10	U	0.050	0.10	P	12/11/2024	18:48	LB133901
	Nickel	0.10	<0.10	U	0.025	0.10	P	12/11/2024	18:48	LB133901
	Potassium	50.0	<50.0	U	19.0	50.0	P	12/11/2024	18:48	LB133901
	Selenium	0.50	<0.50	U	0.45	0.50	P	12/11/2024	18:48	LB133901
	Silver	0.10	<0.10	U	0.050	0.10	P	12/11/2024	18:48	LB133901
	Sodium	50.0	<50.0	U	25.0	50.0	P	12/11/2024	18:48	LB133901
	Thallium	0.10	<0.10	U	0.050	0.10	P	12/11/2024	18:48	LB133901
	Vanadium	0.50	<0.50	U	0.025	0.50	P	12/11/2024	18:48	LB133901
	Zinc	0.50	<0.50	U	0.15	0.50	P	12/11/2024	18:48	LB133901

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Weston Solutions **SDG No.:** P5242

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5242 **SAS No.:** P5242

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

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Aluminum	94300	100000	94	0	0	12/11/2024	18:05	LB133901
	Antimony	1.42	1.5	95	-2.5	5.5	12/11/2024	18:05	LB133901
	Arsenic	0.36	0.1	360	-1.9	2.1	12/11/2024	18:05	LB133901
	Barium	1.48	1.2	123	-18.8	21.2	12/11/2024	18:05	LB133901
	Beryllium	0.29			-2	2	12/11/2024	18:05	LB133901
	Cadmium	0.53	0.7	76	-1.3	2.7	12/11/2024	18:05	LB133901
	Calcium	103000	100000	103	0	0	12/11/2024	18:05	LB133901
	Chromium	19.9	21.0	95	17	25	12/11/2024	18:05	LB133901
	Cobalt	1.19	1.0	119	-1	3	12/11/2024	18:05	LB133901
	Copper	8.14	8.0	102	4	12	12/11/2024	18:05	LB133901
	Iron	104000	100000	104	0	0	12/11/2024	18:05	LB133901
	Lead	4.50	4.0	112	2	6	12/11/2024	18:05	LB133901
	Magnesium	104000	100000	104	0	0	12/11/2024	18:05	LB133901
	Manganese	7.57	7.0	108	5	9	12/11/2024	18:05	LB133901
	Nickel	5.40	6.0	90	4	8	12/11/2024	18:05	LB133901
	Potassium	99100	100000	99	0	0	12/11/2024	18:05	LB133901
	Selenium	0	0.3		-9.7	10	12/11/2024	18:05	LB133901
	Silver	0.060			-2	2	12/11/2024	18:05	LB133901
	Sodium	103000	100000	103	0	0	12/11/2024	18:05	LB133901
	Thallium	0.080			-2	2	12/11/2024	18:05	LB133901
	Vanadium	0.14	0.5	28	-9.5	10.5	12/11/2024	18:05	LB133901
	Zinc	10.5	11.0	96	7	15	12/11/2024	18:05	LB133901
ICSAB01	Aluminum	92000	100000	92	0	0	12/11/2024	18:08	LB133901
	Antimony	20.9	22.0	95	18	26	12/11/2024	18:08	LB133901
	Arsenic	21.2	19.0	112	16.2	21.9	12/11/2024	18:08	LB133901
	Barium	21.2	22.0	96	2	42	12/11/2024	18:08	LB133901
	Beryllium	20.8	19.0	110	16.2	21.9	12/11/2024	18:08	LB133901
	Cadmium	19.4	20.0	97	17	23	12/11/2024	18:08	LB133901
	Calcium	98600	100000	99	0	0	12/11/2024	18:08	LB133901
	Chromium	38.9	40.0	97	34	46	12/11/2024	18:08	LB133901
	Cobalt	20.9	20.0	104	17	23	12/11/2024	18:08	LB133901
	Copper	27.9	25.0	112	21	29	12/11/2024	18:08	LB133901
	Iron	103000	100000	103	0	0	12/11/2024	18:08	LB133901
	Lead	24.1	25.0	96	21.3	28.8	12/11/2024	18:08	LB133901
	Magnesium	102000	100000	102	0	0	12/11/2024	18:08	LB133901
	Manganese	26.9	27.0	100	23	31.1	12/11/2024	18:08	LB133901
	Nickel	26.6	24.0	111	20.4	27.6	12/11/2024	18:08	LB133901
	Potassium	97700	100000	98	0	0	12/11/2024	18:08	LB133901
	Selenium	20.7	19.0	109	9	29	12/11/2024	18:08	LB133901
	Silver	17.8	18.0	99	15.3	20.7	12/11/2024	18:08	LB133901
	Sodium	102000	100000	102	0	0	12/11/2024	18:08	LB133901
	Thallium	20.2	21.0	96	17.9	24.2	12/11/2024	18:08	LB133901

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Weston Solutions **SDG No.:** P5242

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5242 **SAS No.:** P5242

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

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSAB01	Vanadium	19.6	19.0	103	9	29	12/11/2024	18:08	LB133901
	Zinc	30.3	29.0	104	25	33	12/11/2024	18:08	LB133901

METAL QC DATA

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metals
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MATRIX SPIKE SUMMARY

client: Weston Solutions **level:** low **sdg no.:** P5242

contract: WEST04 **lab code:** CHEM **case no.:** P5242 **sas no.:** P5242

matrix: Solid **sample id:** P5242-02 **client id:** TAPIAL1-SB04D-4-112224-00-T1MS

Percent Solids for Sample: 92.8 **Spiked ID:** P5242-02MS **Percent Solids for Spike Sample:** 92.8

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	78 - 124	4430	D	4230	D	920	22		P
Antimony	mg/Kg	72 - 124	57.8	D	0.94	UD	46.1	125	N	P
Arsenic	mg/Kg	82 - 118	60.4	D	1.96	D	46.1	127	N	P
Barium	mg/Kg	86 - 116	280	D	22.3	D	230	112		P
Beryllium	mg/Kg	80 - 120	59.6	D	0.72	D	46.1	128	N	P
Cadmium	mg/Kg	84 - 116	58.5	D	0.47	UD	46.1	127	N	P
Calcium	mg/Kg	86 - 118	4620	D	171	JD	4600	97		P
Chromium	mg/Kg	83 - 119	79.4	D	31.2	D	46.1	105		P
Cobalt	mg/Kg	84 - 115	65.2	D	8.64	D	46.1	123	N	P
Copper	mg/Kg	84 - 119	496	D	7.18	D	460	106		P
Iron	mg/Kg	81 - 124	12600	D	12000	D	2300	27		P
Lead	mg/Kg	84 - 118	224	D	3.57	D	230	96		P
Magnesium	mg/Kg	80 - 123	5340	D	842	D	4600	98		P
Manganese	mg/Kg	85 - 116	682	D	274	D	460	88		P
Nickel	mg/Kg	84 - 119	64.8	D	7.45	D	46.1	125	N	P
Potassium	mg/Kg	85 - 119	3110	D	686	D	2300	105		P
Selenium	mg/Kg	80 - 119	57.7	D	2.34	UD	46.1	125	N	P
Silver	mg/Kg	83 - 118	1.67	D	0.47	UD	46.1	3	N	P
Sodium	mg/Kg	79 - 125	4640	D	55.4	JD	4600	100		P
Thallium	mg/Kg	83 - 118	54.4	D	0.094	JD	46.1	118		P
Vanadium	mg/Kg	82 - 116	68.3	D	15.8	D	46.1	114		P
Zinc	mg/Kg	82 - 119	464	D	15.4	D	460	97		P

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: Weston Solutions **level:** low **sdg no.:** P5242

contract: WEST04 **lab code:** CHEM **case no.:** P5242 **sas no.:** P5242

matrix: Solid **sample id:** P5242-02 **client id:** TAPIAL1-SB04D-4-112224-00-T1MSD

Percent Solids for Sample: 92.8 **Spiked ID:** P5242-02MSD **Percent Solids for Spike Sample:** 92.8

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	78 - 124	4480	D	4230	D	940	27		P
Antimony	mg/Kg	72 - 124	57.8	D	0.94	UD	46.9	123		P
Arsenic	mg/Kg	82 - 118	61.6	D	1.96	D	46.9	127	N	P
Barium	mg/Kg	86 - 116	277	D	22.3	D	230	109		P
Beryllium	mg/Kg	80 - 120	59.5	D	0.72	D	46.9	126	N	P
Cadmium	mg/Kg	84 - 116	58.4	D	0.47	UD	46.9	125	N	P
Calcium	mg/Kg	86 - 118	4690	D	171	JD	4700	96		P
Chromium	mg/Kg	83 - 119	80.3	D	31.2	D	46.9	105		P
Cobalt	mg/Kg	84 - 115	66.3	D	8.64	D	46.9	123	N	P
Copper	mg/Kg	84 - 119	524	D	7.18	D	470	110		P
Iron	mg/Kg	81 - 124	12800	D	12000	D	2300	36		P
Lead	mg/Kg	84 - 118	228	D	3.57	D	230	96		P
Magnesium	mg/Kg	80 - 123	5440	D	842	D	4700	98		P
Manganese	mg/Kg	85 - 116	684	D	274	D	470	87		P
Nickel	mg/Kg	84 - 119	135	D	7.45	D	46.9	272	N	P
Potassium	mg/Kg	85 - 119	3150	D	686	D	2300	105		P
Selenium	mg/Kg	80 - 119	57.7	D	2.34	UD	46.9	123	N	P
Silver	mg/Kg	83 - 118	1.67	D	0.47	UD	46.9	3	N	P
Sodium	mg/Kg	79 - 125	4670	D	55.4	JD	4700	98		P
Thallium	mg/Kg	83 - 118	55.6	D	0.094	JD	46.9	119	N	P
Vanadium	mg/Kg	82 - 116	68.9	D	15.8	D	46.9	113		P
Zinc	mg/Kg	82 - 119	468	D	15.4	D	470	97		P

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Metals
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POST DIGEST SPIKE SUMMARY

Client: Weston Solutions **SDG No.:** P5242

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5242 **SAS No.:** P5242

Matrix: Solid **Level:** LOW **Client ID:** TAPIAL1-SB04D-4-112224-00-T1A

Sample ID: P5242-02 **Spiked ID:** P5242-02A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	mg/Kg	72 - 124	59.9	D	0.94	UD	46.9	128		P
Arsenic	mg/Kg	82 - 118	61.1	D	1.96	D	46.9	126		P
Beryllium	mg/Kg	80 - 120	61.4	D	0.72	D	46.9	129		P
Cadmium	mg/Kg	84 - 116	60.3	D	0.47	UD	46.9	129		P
Cobalt	mg/Kg	84 - 115	65.3	D	8.64	D	46.9	121		P
Nickel	mg/Kg	84 - 119	70.9	D	7.45	D	46.9	135		P
Selenium	mg/Kg	80 - 119	59.7	D	2.34	UD	46.9	127		P
Silver	mg/Kg	83 - 118	1.74	D	0.47	UD	46.9	4		P
Thallium	mg/Kg	83 - 118	57.2	D	0.094	JD	46.9	122		P

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Weston Solutions **Level:** LOW **SDG No.:** P5242

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5242 **SAS No.:** P5242

Matrix: Solid **Sample ID:** P5242-02 **Client ID:** TAPIAL1-SB04D-4-112224-00-T1DUP

Percent Solids for Sample: 92.8 **Duplicate ID** P5242-02DUP **Percent Solids for Spike Sample:** 92.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	4230	D	3660	D	14		P
Antimony	mg/Kg	20	0.94	UD	0.91	UD			P
Arsenic	mg/Kg	20	1.96	D	1.66	D	17		P
Barium	mg/Kg	20	22.3	D	21.4	D	4		P
Beryllium	mg/Kg	20	0.72	D	0.69	D	4		P
Cadmium	mg/Kg	20	0.47	UD	0.46	UD			P
Calcium	mg/Kg	20	171	JD	303	D	56		P
Chromium	mg/Kg	20	31.2	D	26.9	D	15		P
Cobalt	mg/Kg	20	8.64	D	7.47	D	15		P
Copper	mg/Kg	20	7.18	D	5.73	D	22	*	P
Iron	mg/Kg	20	12000	D	10400	D	14		P
Lead	mg/Kg	20	3.57	D	3.48	D	3		P
Magnesium	mg/Kg	20	842	D	728	D	15		P
Manganese	mg/Kg	20	274	D	236	D	15		P
Nickel	mg/Kg	20	7.45	D	5.81	D	25	*	P
Potassium	mg/Kg	20	686	D	590	D	15		P
Selenium	mg/Kg	20	2.34	UD	2.28	UD			P
Silver	mg/Kg	20	0.47	UD	0.46	UD			P
Sodium	mg/Kg	20	55.4	JD	44.0	JD	23		P
Thallium	mg/Kg	20	0.094	JD	0.087	JD	8		P
Vanadium	mg/Kg	20	15.8	D	13.6	D	15		P
Zinc	mg/Kg	20	15.4	D	19.4	D	23	*	P

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Weston Solutions **Level:** LOW **SDG No.:** P5242

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5242 **SAS No.:** P5242

Matrix: Solid **Sample ID:** P5242-02MS **Client ID:** TAPIAL1-SB04D-4-112224-00-T1MSD

Percent Solids for Sample: 92.8 **Duplicate ID** P5242-02MSD **Percent Solids for Spike Sample:** 92.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	4430	D	4480	D	1		P
Antimony	mg/Kg	20	57.8	D	57.8	D	0		P
Arsenic	mg/Kg	20	60.4	D	61.6	D	2		P
Barium	mg/Kg	20	280	D	277	D	1		P
Beryllium	mg/Kg	20	59.6	D	59.5	D	0		P
Cadmium	mg/Kg	20	58.5	D	58.4	D	0		P
Calcium	mg/Kg	20	4620	D	4690	D	2		P
Chromium	mg/Kg	20	79.4	D	80.3	D	1		P
Cobalt	mg/Kg	20	65.2	D	66.3	D	2		P
Copper	mg/Kg	20	496	D	524	D	5		P
Iron	mg/Kg	20	12600	D	12800	D	2		P
Lead	mg/Kg	20	224	D	228	D	2		P
Magnesium	mg/Kg	20	5340	D	5440	D	2		P
Manganese	mg/Kg	20	682	D	684	D	0		P
Nickel	mg/Kg	20	64.8	D	135	D	70	*	P
Potassium	mg/Kg	20	3110	D	3150	D	1		P
Selenium	mg/Kg	20	57.7	D	57.7	D	0		P
Silver	mg/Kg	20	1.67	D	1.67	D	0		P
Sodium	mg/Kg	20	4640	D	4670	D	1		P
Thallium	mg/Kg	20	54.4	D	55.6	D	2		P
Vanadium	mg/Kg	20	68.3	D	68.9	D	1		P
Zinc	mg/Kg	20	464	D	468	D	1		P

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

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Weston Solutions **SDG No.:** P5242

Contract: WEST04 **Lab Code:** CHEM **Case No.:** P5242 **SAS No.:** P5242

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB165537BS							
Aluminum	mg/Kg	1000	978		98	78 - 124	P
Antimony	mg/Kg	50.0	50.2		100	72 - 124	P
Arsenic	mg/Kg	50.0	51.0		102	82 - 118	P
Barium	mg/Kg	250	250		100	86 - 116	P
Beryllium	mg/Kg	50.0	52.1		104	80 - 120	P
Cadmium	mg/Kg	50.0	51.6		103	84 - 116	P
Calcium	mg/Kg	5000	4930		99	86 - 118	P
Chromium	mg/Kg	50.0	50.9		102	83 - 119	P
Cobalt	mg/Kg	50.0	51.5		103	84 - 115	P
Copper	mg/Kg	500	509		102	84 - 119	P
Iron	mg/Kg	2500	2630		105	81 - 124	P
Lead	mg/Kg	250	249		100	84 - 118	P
Magnesium	mg/Kg	5000	5350		107	80 - 123	P
Manganese	mg/Kg	500	503		101	85 - 116	P
Nickel	mg/Kg	50.0	49.3		99	84 - 119	P
Potassium	mg/Kg	2500	2440		98	85 - 119	P
Selenium	mg/Kg	50.0	50.9		102	80 - 119	P
Silver	mg/Kg	50.0	50.6		101	83 - 118	P
Sodium	mg/Kg	5000	5130		103	79 - 125	P
Thallium	mg/Kg	50.0	50.0		100	83 - 118	P
Vanadium	mg/Kg	50.0	50.7		101	82 - 116	P
Zinc	mg/Kg	500	515		103	82 - 119	P

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FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Weston Solutions | Contract: WEST04

Lab Code: CHEM | Case no.: P5242 | Sas No.: P5242 | SDG No.: P5242

Instrument ID: P8 | Start Date : 12/11/2024

Run Number: LB133901 | End Date : 12/11/2024

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	1639	100		100		100		100		100	
S2	S2	1645	104		103		104		104		104	
S3	S3	1648	104		104		104		103		106	
S4	S4	1651	103		100		103		100		106	
S5	S5	1654	99		97		100		96		103	
S6	S6	1657	99		98		102		96		105	
S7	S7	1700	92		99		101		93		104	
S8	S8	1703	80		82		86		75		89	
ICV01	ICV01	1725	100		105		107		106		107	
LLICV	LLICV	1759	105		107		105		105		105	
ICB01	ICB01	1802	103		105		105		104		105	
ICSA01	ICSA01	1805	90		95		98		90		101	
ICSAB01	ICSAB01	1808	91		101		104		95		106	
CCV01	CCV01	1811	86		98		100		89		105	
CCB01	CCB01	1815	99		105		108		107		107	
CRI	CRI	1845	101		106		108		107		106	
PB165537BL	PB165537BL	1848	101		107		108		107		106	
PB165537BS	PB165537BS	1852	94		103		104		98		107	
P5242-01	TAPIAL1-SB0	1854	96		106		109		104		107	
P5242-02	TAPIAL1-SB0	1858	96		106		108		105		108	
P5242-02DUP	TAPIAL1-SB0	1901	95		105		107		104		108	
P5242-02L	TAPIAL1-SB0	1904	95		104		106		105		107	
P5242-02MS	TAPIAL1-SB0	1907	94		105		107		102		107	
P5242-02MSD	TAPIAL1-SB0	1910	95		105		107		102		108	
P5242-02A	TAPIAL1-SB0	1913	92		102		104		101		104	
CCV02	CCV02	1916	87		94		96		86		100	
CCB02	CCB02	1921	97		103		106		105		107	

Internal Standard %RI Limit: 30 - 120

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FORM 8A

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Client: Weston Solutions | Contract: WEST04

Lab Code: CHEM | Case no.: P5242 | Sas No.: P5242 | SDG No.: P5242

Instrument ID: P8 | Start Date : 12/11/2024

Run Number: LB133901 | End Date : 12/11/2024

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	1639	100		100		100		100		100	
S2	S2	1645	95		95		95		96		96	
S3	S3	1648	94		95		96		98		98	
S4	S4	1651	90		92		93		97		96	
S5	S5	1654	89		92		91		96		95	
S6	S6	1657	89		92		89		96		96	
S7	S7	1700	89		92		87		96		95	
S8	S8	1703	77		81		71		84		84	
ICV01	ICV01	1725	99		100		100		101		100	
LLICV	LLICV	1759	100		101		100		100		98	
ICB01	ICB01	1802	99		100		99		99		99	
ICSA01	ICSA01	1805	90		93		87		96		95	
ICSAB01	ICSAB01	1808	92		95		89		96		97	
CCV01	CCV01	1811	89		91		82		93		94	
CCB01	CCB01	1815	97		100		101		100		101	
CRI	CRI	1845	100		100		100		99		99	
PB165537BL	PB165537BL	1848	100		100		100		99		99	
PB165537BS	PB165537BS	1852	92		96		91		97		98	
P5242-01	TAPIAL1-SB0	1854	96		99		97		99		99	
P5242-02	TAPIAL1-SB0	1858	88		91		89		91		90	
P5242-02DUP	TAPIAL1-SB0	1901	98		101		100		102		102	
P5242-02L	TAPIAL1-SB0	1904	96		99		100		100		101	
P5242-02MS	TAPIAL1-SB0	1907	94		97		95		99		97	
P5242-02MSD	TAPIAL1-SB0	1910	93		95		95		98		98	
P5242-02A	TAPIAL1-SB0	1913	94		95		95		98		97	
CCV02	CCV02	1916	86		88		80		92		92	
CCB02	CCB02	1921	95		97		98		100		99	

Internal Standard %RI Limit: 30 - 120

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FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Weston Solutions Contract: WEST04

Lab Code: CHEM Case no.: P5242 Sas No.: P5242 SDG No.: P5242

Instrument ID: P8 Start Date : 12/11/2024

Run Number: LB133901 End Date : 12/11/2024

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	1639	100		100							
S2	S2	1645	104		105							
S3	S3	1648	104		105							
S4	S4	1651	105		105							
S5	S5	1654	103		102							
S6	S6	1657	105		101							
S7	S7	1700	105		99							
S8	S8	1703	90		80							
ICV01	ICV01	1725	106		105							
LLICV	LLICV	1759	106		105							
ICB01	ICB01	1802	104		104							
ICSA01	ICSA01	1805	102		95							
ICSAB01	ICSAB01	1808	105		97							
CCV01	CCV01	1811	103		94							
CCB01	CCB01	1815	109		109							
CRI	CRI	1845	107		106							
PB165537BL	PB165537BL	1848	106		106							
PB165537BS	PB165537BS	1852	107		101							
P5242-01	TAPIAL1-SB04	1854	108		107							
P5242-02	TAPIAL1-SB04	1858	109		107							
P5242-02DUP	TAPIAL1-SB04	1901	108		107							
P5242-02L	TAPIAL1-SB04	1904	107		108							
P5242-02MS	TAPIAL1-SB04	1907	108		106							
P5242-02MSD	TAPIAL1-SB04	1910	108		105							
P5242-02A	TAPIAL1-SB04	1913	105		104							
CCV02	CCV02	1916	100		92							
CCB02	CCB02	1921	107		108							

Internal Standard %RI Limit: 30 -120

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FORM 8B

ICP-MS INTERNAL STANDARD RELATIVE INTENSITY SUMMARY

Lab Name: Weston Solutions Contract: WEST04

Lab Code: CHEM Case no.: P5242 Sas No.: P5242 SDG No.: P5242

Instrument ID: P8 Start Date : 12/11/2024

Run Number: LB133901 End Date : 12/11/2024

Lab SampleID	Client SampleID	Time	Internal Standard %RI For: Collision Cell									
			Element 209Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	S0	1639	100									
S2	S2	1645	95									
S3	S3	1648	96									
S4	S4	1651	93									
S5	S5	1654	92									
S6	S6	1657	92									
S7	S7	1700	89									
S8	S8	1703	73									
ICV01	ICV01	1725	99									
LLICV	LLICV	1759	99									
ICB01	ICB01	1802	98									
ICSA01	ICSA01	1805	87									
ICSAB01	ICSAB01	1808	88									
CCV01	CCV01	1811	83									
CCB01	CCB01	1815	100									
CRI	CRI	1845	98									
PB165537BL	PB165537BL	1848	99									
PB165537BS	PB165537BS	1852	91									
P5242-01	TAPIAL1-SB04	1854	96									
P5242-02	TAPIAL1-SB04	1858	89									
P5242-02DUP	TAPIAL1-SB04	1901	100									
P5242-02L	TAPIAL1-SB04	1904	100									
P5242-02MS	TAPIAL1-SB04	1907	96									
P5242-02MSD	TAPIAL1-SB04	1910	94									
P5242-02A	TAPIAL1-SB04	1913	96									
CCV02	CCV02	1916	83									
CCB02	CCB02	1921	98									

Internal Standard %RI Limit: 30 -120

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

TAPIAL1-SB04D-4-112224-00-T1L

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

Lab Code: CHEM **Lb No.:** lb133901 **Lab Sample ID :** P5242-02L **SDG No.:** P5242

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	4230	D	4790	D	13		P
Antimony	0.94	UD	4.69	UD			P
Arsenic	1.96	D	2.23	JD	14		P
Barium	22.3	D	27.4	D	23		P
Beryllium	0.72	D	2.34	UD	41		P
Cadmium	0.47	UD	2.34	UD			P
Calcium	171	JD	451	JD	164		P
Chromium	31.2	D	9.42	D	70		P
Cobalt	8.64	D	6.42	D	26		P
Copper	7.18	D	44.3	D	517		P
Iron	12000	D	8800	D	26		P
Lead	3.57	D	4.59	D	28		P
Magnesium	842	D	594	JD	29		P
Manganese	274	D	96.0	D	65		P
Nickel	7.45	D	50.6	D	579		P
Potassium	686	D	473	JD	31		P
Selenium	2.34	UD	11.7	UD			P
Silver	0.47	UD	2.34	UD			P
Sodium	55.4	JD	1170	UD	100		P
Thallium	0.094	JD	2.34	UD	0		P
Vanadium	15.8	D	14.9	D	5		P
Zinc	15.4	D	25.7	D	66		P

METAL PREPARATION & INSTRUMENT DATA

METAL PREPARATION & ANALYICAL SUMMARY

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Metals
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SAMPLE PREPARATION SUMMARY

Client: Weston Solutions **SDG No.:** P5242

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

Case No.: P5242 **SAS No.:** P5242

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB165537**						
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	SAM	SOLID	12/09/2024	1.13	100.0	93.90
P5242-02	TAPIAL1-SB04I-4-112224-00-T1	SAM	SOLID	12/09/2024	1.15	100.0	92.80
P5242-02DUP	TAPIAL1-SB04I-4-112224-00-T1DUP	DUP	SOLID	12/09/2024	1.18	100.0	92.80
P5242-02MS	TAPIAL1-SB04I-4-112224-00-T1MS	MS	SOLID	12/09/2024	1.17	100.0	92.80
P5242-02MSD	TAPIAL1-SB04I-4-112224-00-T1MSD	MSD	SOLID	12/09/2024	1.15	100.0	92.80
PB165537BL	PB165537BL	MB	SOLID	12/09/2024	1.00	100.0	100.00
PB165537BS	PB165537BS	LCS	SOLID	12/09/2024	1.00	100.0	100.00

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ANALYSIS RUN LOG

Client: Weston Solutions **Contract:** WEST04

Lab code: CHEM **Case no.:** P5242 **Sas no.:** P5242 **Sdg no.:** P5242

Instrument id number: **Method:** **Run number:** LB133901

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

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1639	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	1645	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	1648	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	1651	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	1654	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	1657	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	1700	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	1703	Al,Ca,Fe,K,Mg,Na
ICV01	ICV01	1	1725	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	1759	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	1802	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	1805	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	1808	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	1811	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	1815	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	1845	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB165537BL	PB165537BL	1	1848	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB165537BS	PB165537BS	1	1852	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5242-01	TAPIAL1-SB04D-9-112224-00-[	5	1854	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5242-02	TAPIAL1-SB04D-4-112224-00-[	5	1858	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5242-02DUP	TAPIAL1-SB04D-4-112224-00-[	5	1901	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5242-02L	TAPIAL1-SB04D-4-112224-00-[	25	1904	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5242-02MS	TAPIAL1-SB04D-4-112224-00-[	5	1907	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5242-02MSD	TAPIAL1-SB04D-4-112224-00-[	5	1910	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5242-02A	TAPIAL1-SB04D-4-112224-00-[	5	1913	Ag,As,Be,Cd,Co,Ni,Sb,Se,Tl
CCV02	CCV02	1	1916	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	1921	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	1952	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	1955	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

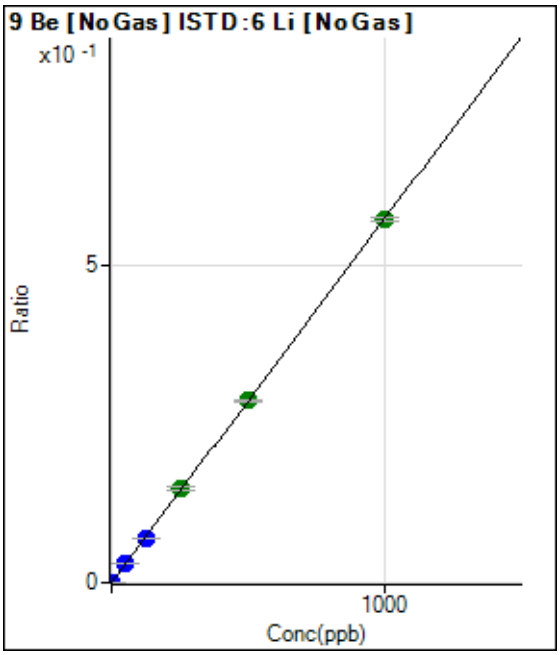
METAL
RAW DATA

Calibration for 044AREF.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\P8121124 MS.b\
Analysis File: P8121124 MS.batch.bin
DA Date-Time: 2024-12-12 00:42:05
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	S00	2024-12-11 16:39:02
2	006CALS.d	S02	2024-12-11 16:45:39
3	007CALB.d	S03	2024-12-11 16:48:57
4	008CALS.d	S04	2024-12-11 16:51:58
5	009CALS.d	S05	2024-12-11 16:54:50
6	010CALS.d	S06	2024-12-11 16:57:37
7	011CALS.d	S07	2024-12-11 17:00:22
8	012CALS.d	S08	2024-12-11 17:03:09

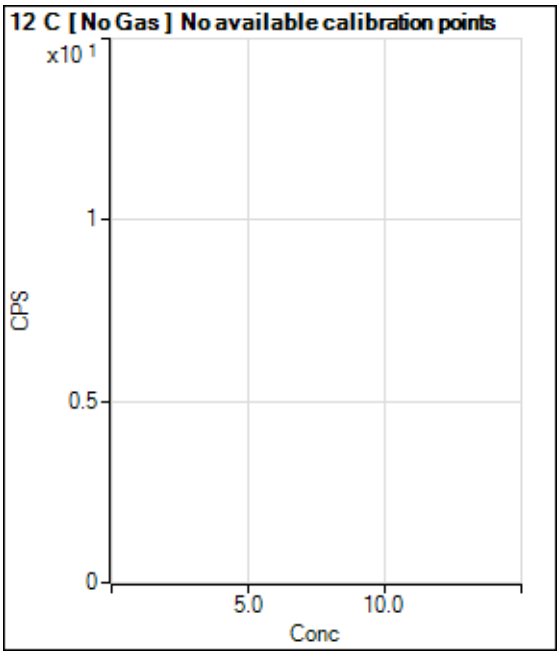
Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403.81	0.0000	P	13.4
2	☐	1.000	1.116	8068.16	0.0007	P	1.1
3	☐	50.000	51.365	352939.53	0.0294	P	3.1
4	☐	125.000	123.524	843716.33	0.0707	P	0.7
5	☐	250.000	260.342	1697067.76	0.1490	A	3.8
6	☐	500.000	500.164	3261794.87	0.2861	A	1.8
7	☐	1000.000	997.449	6095655.55	0.5706	A	1.0
8	☐			1679.16	0.0002	P	8.2

y = 5.7202E-004 * x + 3.4980E-005
R = 0.9999
DL = 0.02449
BEC = 0.06115

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			4100598.83		A	1.5
2	☐			4507680.91		A	1.3
3	☐			4642678.44		A	1.3
4	☐			4700370.42		A	0.9
5	☐			4831260.24		A	0.5
6	☐			4962893.40		A	0.5
7	☐			5774274.29		A	2.9
8	☐			4722731.46		A	0.5

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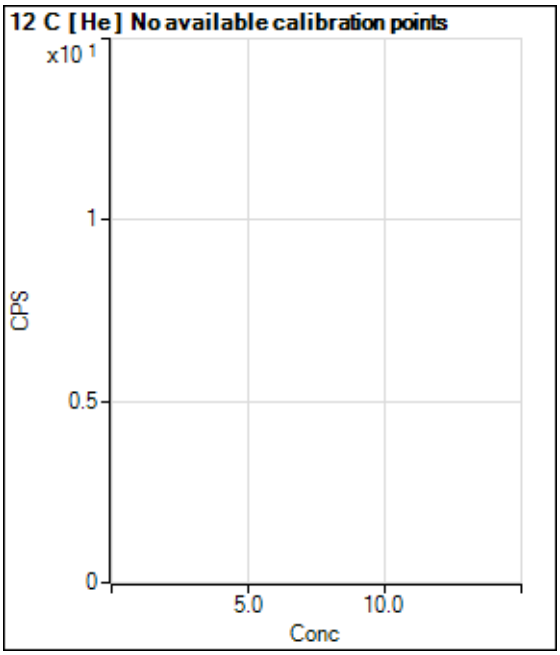
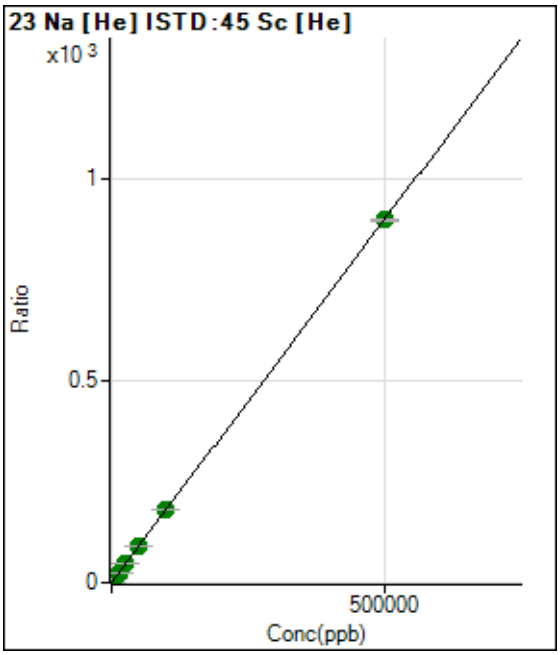


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			27743.99		P	1.7
2	☐			30864.55		P	0.9
3	☐			30616.30		P	2.0
4	☐			31697.54		P	2.5
5	☐			34098.43		P	0.9
6	☐			36124.28		P	0.9
7	☐			43905.27		P	0.4
8	☐			44754.53		P	0.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	71645.67	0.1667	P	7.0
2	☐	500.000	542.187	466750.45	1.1399	P	2.4
3	☐	5000.000	5257.000	3879389.56	9.6027	A	1.7
4	☐	12500.000	13180.816	9289297.85	23.8256	A	1.3
5	☐	25000.000	25836.085	17928901.40	46.5413	A	0.9
6	☐	50000.000	50989.765	35357416.69	91.6910	A	1.4
7	☐	100000.00	100899.13	69573182.30	181.2760	A	0.4
8	☐	500000.00	499659.76	297447182.2	897.0330	A	0.9

y = 0.0018 * x + 0.1667
R = 1.0000
DL = 19.63
BEC = 92.86

Weight: <None>
Min Conc: 0

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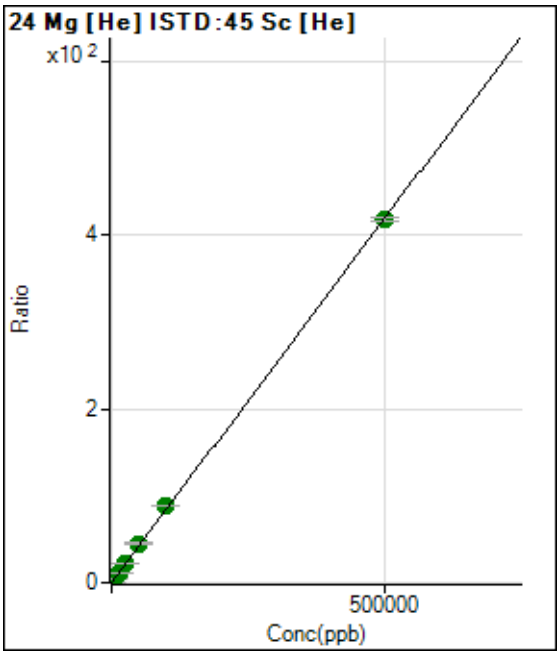

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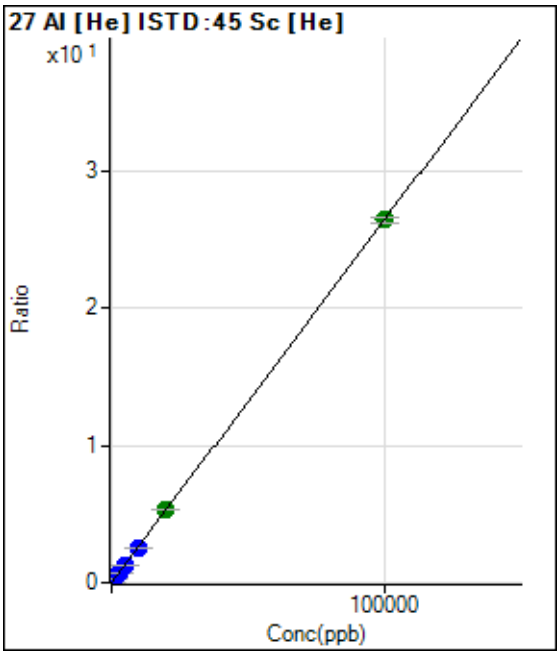
1	☐	0.000	0.000	504.46	0.0012	P	11.2
2	☐	500.000	590.389	202759.16	0.4952	P	2.6
3	☐	5000.000	5704.136	1928788.01	4.7741	A	1.1
4	☐	12500.000	14029.444	4577504.31	11.7403	A	1.1
5	☐	25000.000	27120.709	8742314.39	22.6944	A	2.0
6	☐	50000.000	54099.478	17456654.74	45.2689	A	1.0
7	☐	100000.00	105427.69	33856486.16	88.2178	A	0.4
8	☐	500000.00	498353.11	138248335.7	416.9981	A	1.2

y = 8.3675E-004 * x + 0.0012
R = 0.9999
DL = 0.4709
BEC = 1.397

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	170.01	0.0004	P	24.1
2	☐	20.000	19.875	2313.54	0.0056	P	1.5
3	☐	1000.000	1029.125	110014.17	0.2723	P	0.9
4	☐	2500.000	2531.719	260962.94	0.6693	P	1.0
5	☐	5000.000	4953.804	504375.08	1.3093	P	0.7
6	☐	10000.000	9787.893	997419.46	2.5865	P	0.3
7	☐	20000.000	20183.784	2046823.86	5.3332	A	0.9
8	☐	100000.00	99985.679	8759106.33	26.4181	A	1.6

y = 2.6421E-004 * x + 3.9802E-004
R = 1.0000
DL = 1.089
BEC = 1.506

Weight: <None>
Min Conc: 0

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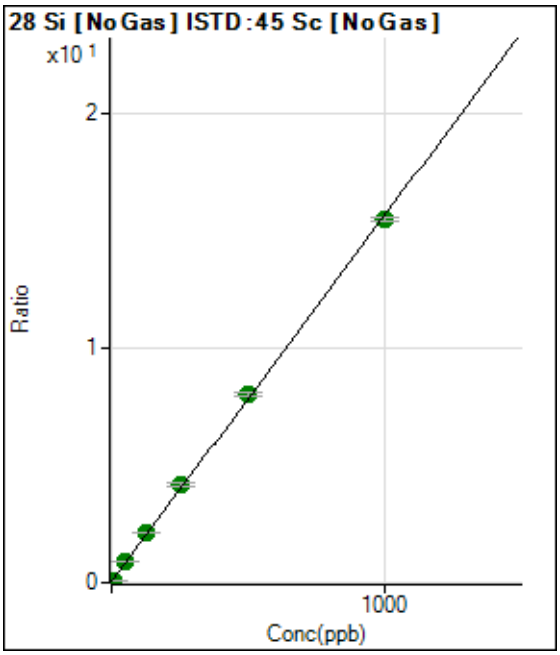
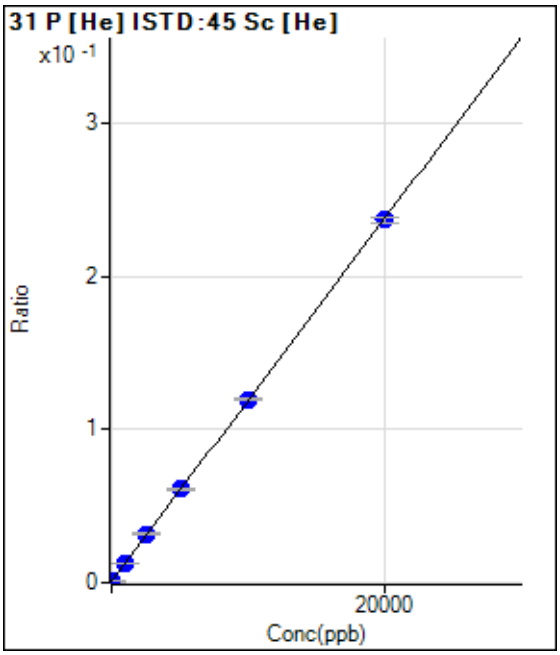


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	952257.08	0.0478	A	3.4
2	☐	10.000	0.250	1059621.28	0.0517	A	1.0
3	☐	50.000	53.346	18216575.42	0.8809	A	1.3
4	☐	125.000	132.931	42389814.92	2.1238	A	0.6
5	☐	250.000	264.561	80468551.58	4.1795	A	2.8
6	☐	500.000	513.804	157955843.2	8.0718	A	2.0
7	☐	1000.000	988.397	305599259.8	15.4835	A	1.2
8	☐			1121832.16	0.0686	A	2.1

y = 0.0156 * x + 0.0478
R = 0.9996
DL = 0.3112
BEC = 3.064

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-14.718	256.67	0.0006	P	10.5
2	☐	0.000	14.718	386.67	0.0009	P	15.1
3	☐	1000.000	1029.500	5244.33	0.0130	P	2.3
4	☐	2500.000	2620.068	12417.61	0.0318	P	1.8
5	☐	5000.000	5088.512	23548.07	0.0611	P	2.1
6	☐	10000.000	10038.808	46212.18	0.1198	P	1.2
7	☐	20000.000	19941.984	91068.80	0.2373	P	1.7
8	☐			237.78	0.0007	P	5.0

y = 1.1860E-005 * x + 7.7099E-004
R = 1.0000
DL = 25.95
BEC = 65.01

Weight: <None>
Min Conc: 0

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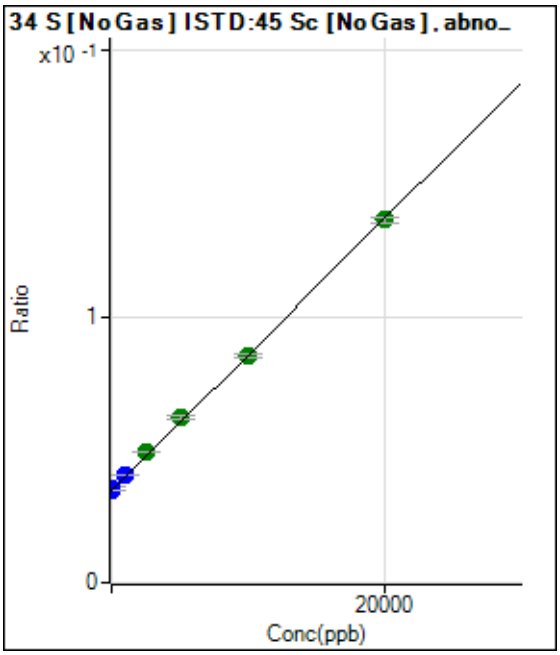

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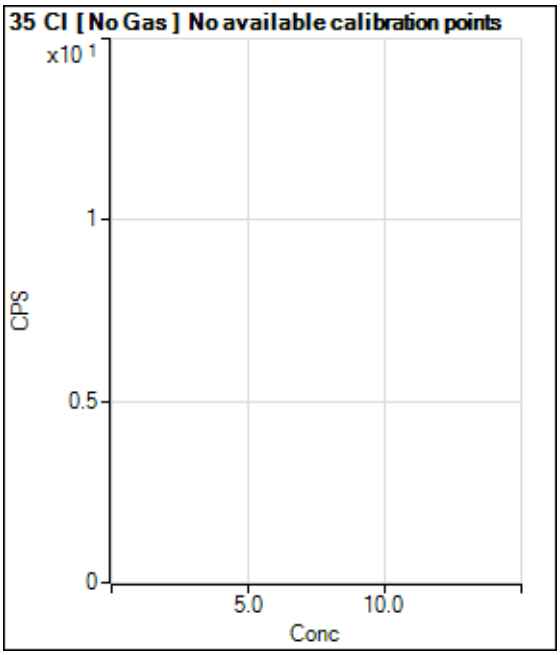
1	☐	0.000	58.797	701526.90	0.0353	P	3.7
2	☐	0.000	-58.797	709701.52	0.0347	P	0.8
3	☐	1000.000	1042.671	832534.76	0.0403	P	0.2
4	☐	2500.000	2753.385	977365.19	0.0490	A	0.4
5	☐	5000.000	5352.436	1197300.18	0.0622	A	3.0
6	☐	10000.000	9915.006	1671430.13	0.0854	A	1.5
7	☐	20000.000	19920.581	2690481.29	0.1363	A	1.6
8	☐			494179.41	0.0302	P	0.5

y = 5.0889E-006 * x + 0.0350
R = 0.9998
DL = 464.5
BEC = 6869

Weight: <None>
Min Conc: 0



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1	☐			192767.63		P	0.6
2	☐			192691.98		P	0.4
3	☐			187880.83		P	0.2
4	☐			190487.93		P	0.4
5	☐			194359.02		P	0.5
6	☐			209206.66		P	0.7
7	☐			242820.21		P	1.4
8	☐			162429.43		P	4.1

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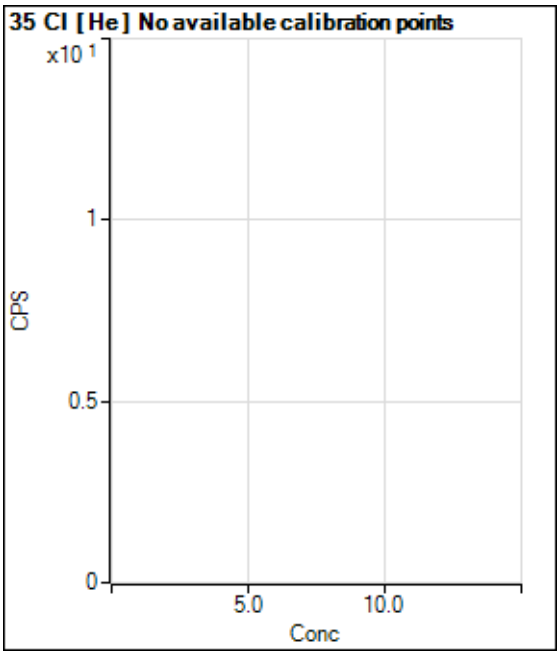
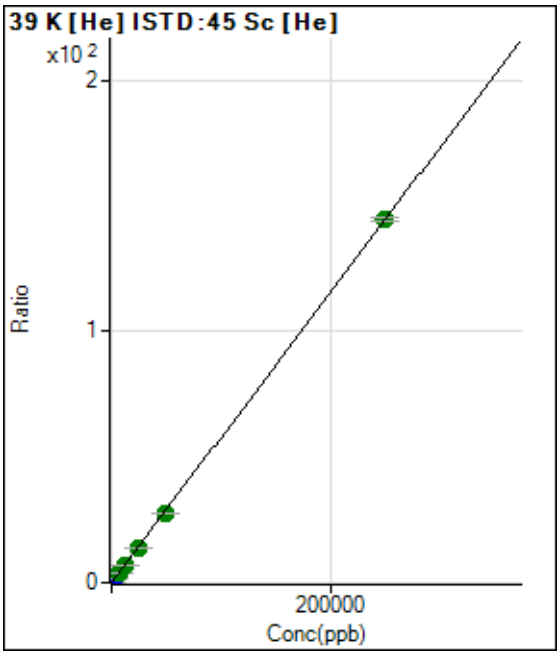


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			754.47		P	2.9
2	☐			826.70		P	10.2
3	☐			797.81		P	7.1
4	☐			767.81		P	4.5
5	☐			792.25		P	3.2
6	☐			857.81		P	8.6
7	☐			1075.61		P	3.2
8	☐			711.14		P	5.5

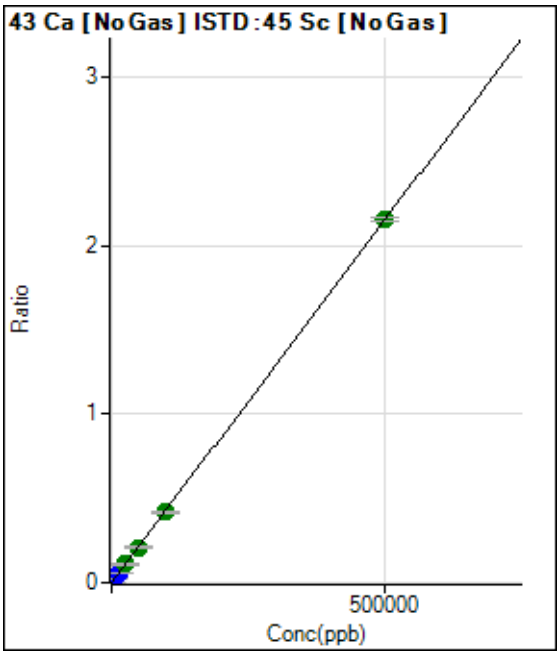


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18840.16	0.0438	P	5.2
2	☐	500.000	520.245	140724.69	0.3437	P	2.4
3	☐	2500.000	2441.114	586161.12	1.4509	P	1.2
4	☐	6250.000	6280.325	1428657.84	3.6638	A	1.0
5	☐	12500.000	12293.673	2746636.41	7.1300	A	2.0
6	☐	25000.000	24062.667	5365514.23	13.9138	A	0.7
7	☐	50000.000	48306.361	10703060.95	27.8881	A	0.3
8	☐	250000.00	250442.56	47881838.18	144.4016	A	0.9

y = 5.7641E-004 * x + 0.0438
R = 1.0000
DL = 11.85
BEC = 75.98

Weight: <None>
Min Conc: 0

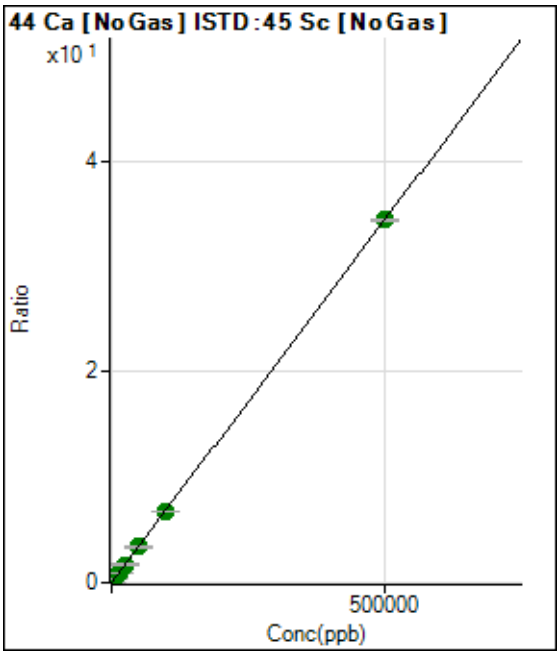
Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1555.66	0.0001	P	2.7
2	☐	500.000	503.465	45920.82	0.0022	P	0.6
3	☐	5000.000	4771.085	425677.02	0.0206	P	1.1
4	☐	12500.000	12018.244	1032663.77	0.0517	P	0.4
5	☐	25000.000	25543.116	2114737.19	0.1099	A	4.1
6	☐	50000.000	49073.318	4129931.36	0.2110	A	0.5
7	☐	100000.00	97000.967	8229067.10	0.4170	A	2.4
8	☐	500000.00	500679.64	35185177.53	2.1522	A	1.1

y = 4.2985E-006 * x + 7.8107E-005
R = 1.0000
DL = 1.456
BEC = 18.17

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33008.19	0.0017	P	2.0
2	☐	500.000	501.450	740941.20	0.0362	P	1.2
3	☐	5000.000	4951.548	7083583.37	0.3426	A	0.7
4	☐	12500.000	12479.608	17182040.30	0.8608	A	0.4
5	☐	25000.000	25141.156	33358818.39	1.7326	A	2.5
6	☐	50000.000	49295.886	66451309.57	3.3956	A	1.1
7	☐	100000.00	97883.290	133016289.1	6.7407	A	2.2
8	☐	500000.00	500487.68	563209222.7	34.4590	A	0.4

y = 6.8848E-005 * x + 0.0017
R = 1.0000
DL = 1.474
BEC = 24.08

Weight: <None>
Min Conc: 0

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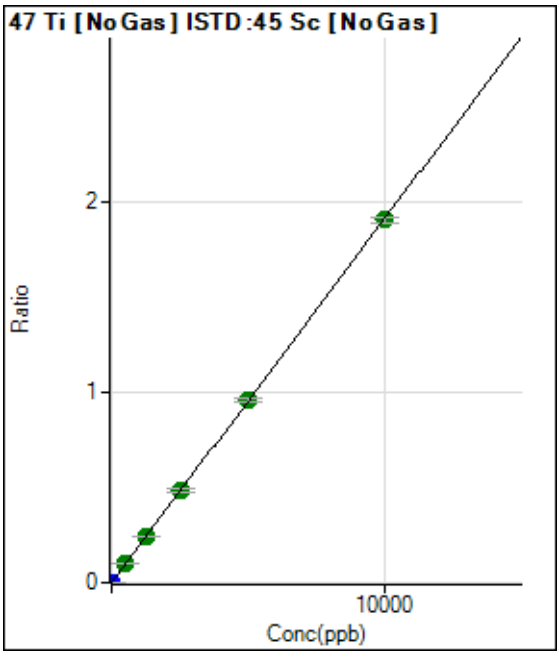
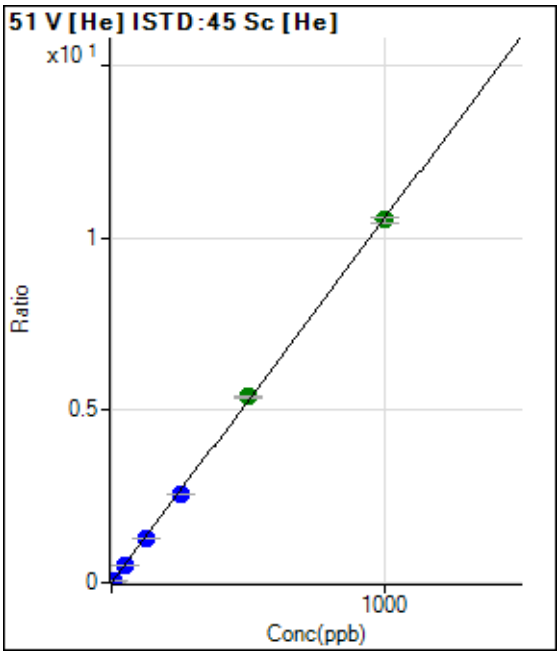


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	500.02	0.0000	P	14.1
2	☐	5.000	5.290	21228.01	0.0010	P	1.3
3	☐	500.000	511.563	2023070.20	0.0978	A	1.4
4	☐	1250.000	1278.929	4881165.55	0.2446	A	0.4
5	☐	2500.000	2555.134	9404192.64	0.4886	A	3.9
6	☐	5000.000	5019.179	18779474.30	0.9597	A	1.9
7	☐	10000.000	9972.432	37631694.44	1.9067	A	1.5
8	☐			5213.24	0.0003	P	2.0

y = 1.9120E-004 * x + 2.5169E-005
R = 1.0000
DL = 0.05557
BEC = 0.1316

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15.56	0.0000	P	54.0
2	☐	5.000	5.458	23608.45	0.0576	P	1.7
3	☐	50.000	49.603	211531.92	0.5236	P	0.9
4	☐	125.000	123.706	509110.27	1.3057	P	0.4
5	☐	250.000	244.326	993431.23	2.5789	P	0.7
6	☐	500.000	510.859	2079257.62	5.3921	A	1.2
7	☐	1000.000	996.168	4035426.50	10.5144	A	1.5
8	☐			534.46	0.0016	P	10.6

y = 0.0106 * x + 3.6480E-005
R = 0.9999
DL = 0.005603
BEC = 0.003456

Weight: <None>
Min Conc: 0

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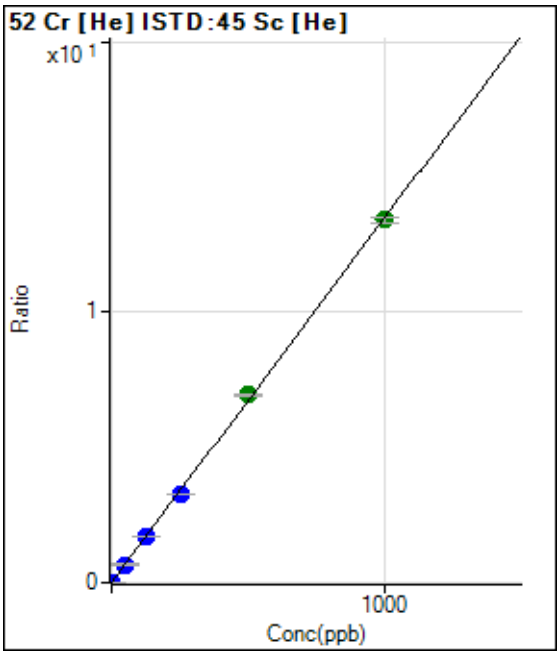
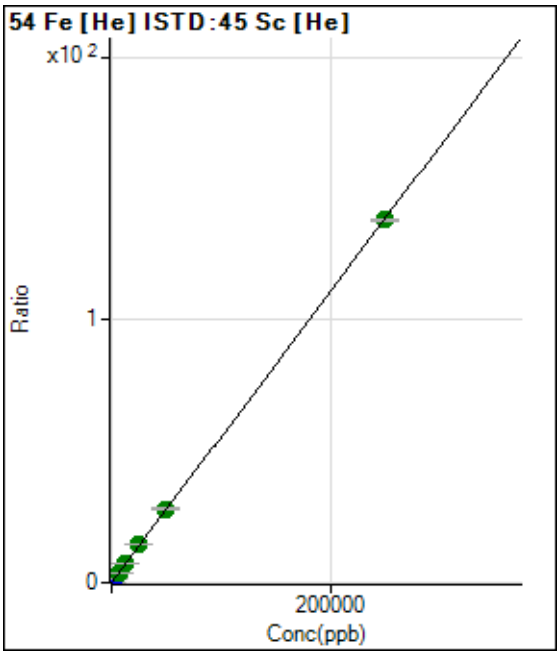


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2486.91	0.0058	P	7.6
2	☐	2.000	2.107	13993.57	0.0342	P	1.8
3	☐	50.000	49.567	272052.46	0.6734	P	1.3
4	☐	125.000	123.891	652909.79	1.6745	P	0.1
5	☐	250.000	241.925	1257537.34	3.2643	P	0.5
6	☐	500.000	514.623	2675248.64	6.9373	A	0.6
7	☐	1000.000	994.867	5144977.56	13.4058	A	1.6
8	☐			6943.82	0.0209	P	9.1

y = 0.0135 * x + 0.0058
R = 0.9998
DL = 0.09843
BEC = 0.4296

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	854.48	0.0020	P	6.3
2	☐	50.000	57.620	13860.15	0.0339	P	5.1
3	☐	2500.000	2597.903	581359.33	1.4389	P	0.4
4	☐	6250.000	6731.226	1452371.91	3.7251	A	1.3
5	☐	12500.000	13251.467	2824612.91	7.3316	A	1.3
6	☐	25000.000	26018.098	5550289.43	14.3930	A	1.4
7	☐	50000.000	50826.268	10790099.28	28.1148	A	0.7
8	☐	250000.00	249682.35	45795875.98	138.1053	A	0.7

y = 5.5312E-004 * x + 0.0020
R = 1.0000
DL = 0.676
BEC = 3.592

Weight: <None>
Min Conc: 0

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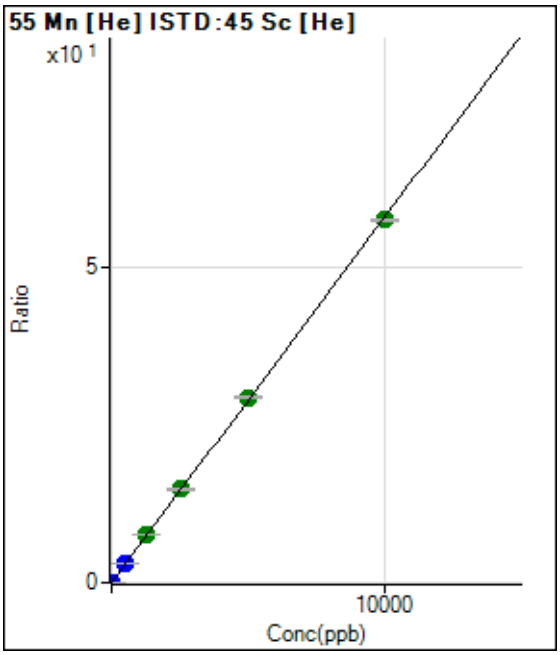
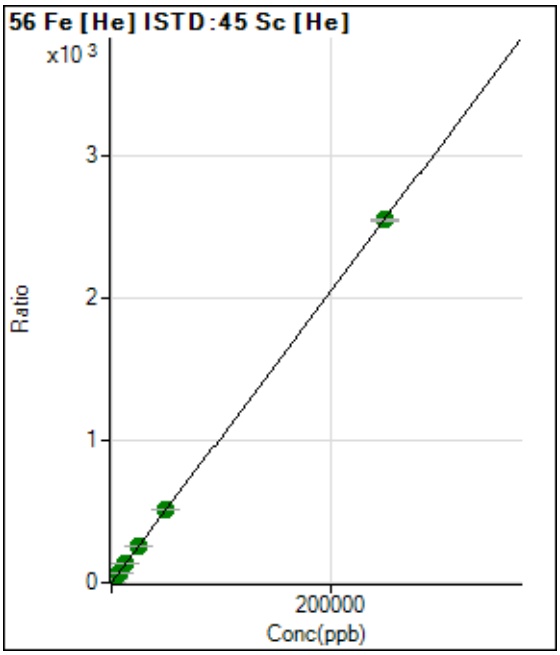


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	464.46	0.0011	P	8.3
2	☐	1.000	1.000	2810.31	0.0069	P	5.3
3	☐	500.000	504.612	1179540.58	2.9196	P	0.6
4	☐	1250.000	1315.297	2966690.93	7.6083	A	0.6
5	☐	2500.000	2562.004	5708665.68	14.8189	A	1.2
6	☐	5000.000	5078.936	11328442.19	29.3760	A	0.9
7	☐	10000.000	9936.639	22057037.17	57.4713	A	0.2
8	☐			6806.12	0.0205	P	0.7

y = 0.0058 * x + 0.0011
R = 0.9999
DL = 0.04646
BEC = 0.1868

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10028.03	0.0233	P	4.7
2	☐	50.000	55.270	240164.45	0.5865	P	1.9
3	☐	2500.000	2639.860	10876860.81	26.9216	A	0.4
4	☐	6250.000	6619.146	26308056.00	67.4678	A	0.9
5	☐	12500.000	13043.789	51207629.79	132.9304	A	1.1
6	☐	25000.000	25513.258	100256926.2	259.9857	A	0.4
7	☐	50000.000	50125.643	196020748.1	510.7687	A	1.3
8	☐	250000.00	249885.72	844250369.6	2,546.185	A	0.7

y = 0.0102 * x + 0.0233
R = 1.0000
DL = 0.3218
BEC = 2.287

Weight: <None>
Min Conc: 0

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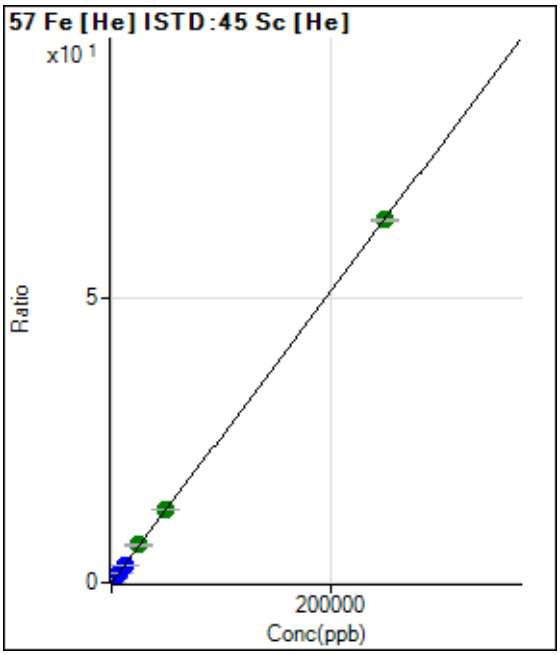
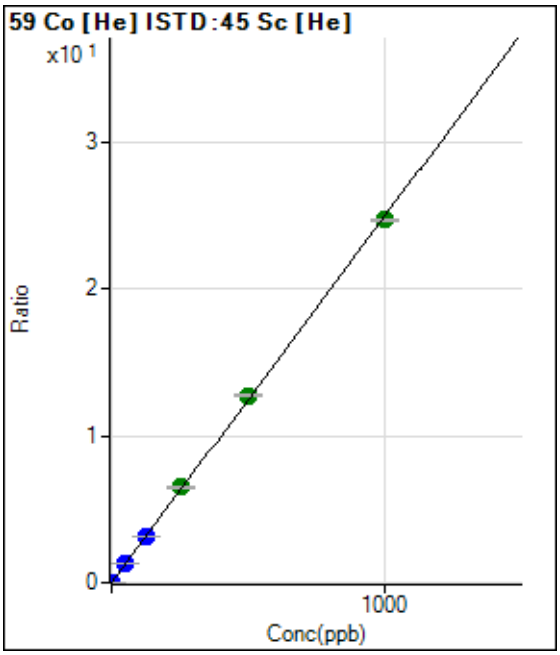


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	252.23	0.0006	P	11.7
2	☐	50.000	55.280	6026.89	0.0147	P	0.4
3	☐	2500.000	2559.500	264470.61	0.6547	P	1.6
4	☐	6250.000	6426.214	640491.46	1.6428	P	1.5
5	☐	12500.000	12558.082	1236519.74	3.2098	P	0.2
6	☐	25000.000	25838.919	2546529.63	6.6037	A	0.5
7	☐	50000.000	50320.512	4935148.99	12.8599	A	1.4
8	☐	250000.00	249844.10	21170977.18	63.8478	A	0.4

y = 2.5555E-004 * x + 5.8794E-004
R = 1.0000
DL = 0.806
BEC = 2.301

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	134.45	0.0003	P	19.3
2	☐	1.000	1.166	12036.29	0.0294	P	3.5
3	☐	50.000	51.000	513879.03	1.2720	P	1.5
4	☐	125.000	127.982	1244424.40	3.1917	P	1.0
5	☐	250.000	260.356	2501089.46	6.4925	A	1.4
6	☐	500.000	512.067	4924047.11	12.7691	A	0.5
7	☐	1000.000	990.955	9483374.23	24.7106	A	0.8
8	☐			17275.01	0.0521	P	2.7

y = 0.0249 * x + 3.1227E-004
R = 0.9998
DL = 0.007267
BEC = 0.01252

Weight: <None>
Min Conc: 0

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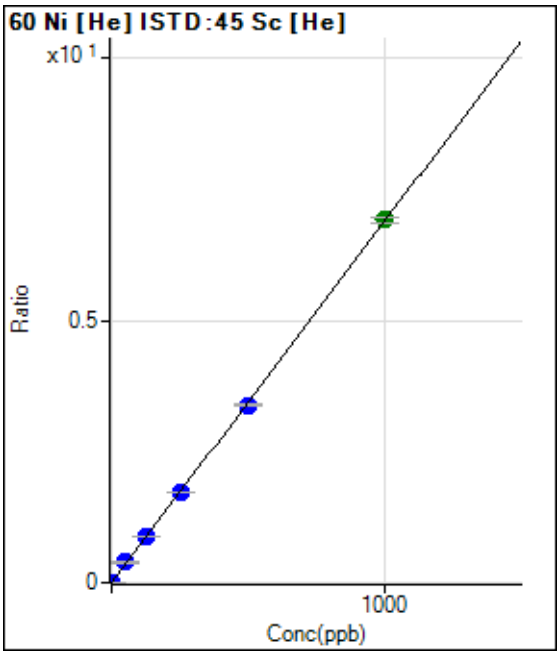
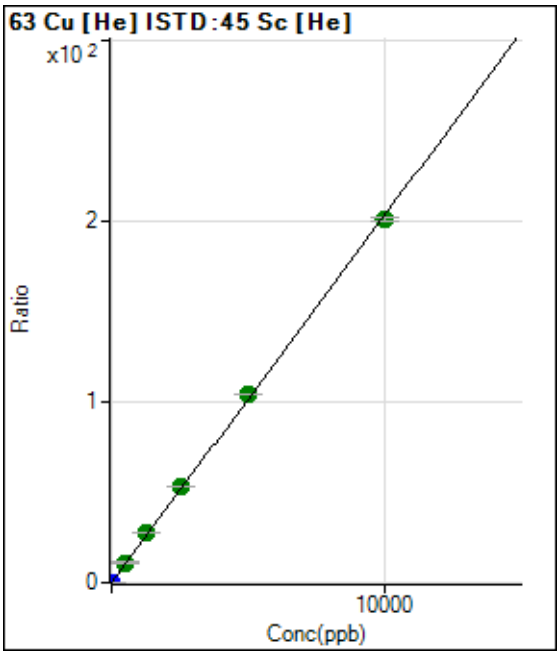


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	928.93	0.0022	P	11.6
2	☐	1.000	1.275	4479.63	0.0109	P	2.4
3	☐	50.000	55.890	156211.11	0.3867	P	1.3
4	☐	125.000	128.507	345551.36	0.8863	P	0.9
5	☐	250.000	248.697	659947.20	1.7131	P	0.4
6	☐	500.000	490.391	1301813.29	3.3759	P	0.8
7	☐	1000.000	1004.397	2652565.08	6.9121	A	1.7
8	☐			7180.76	0.0217	P	2.1

y = 0.0069 * x + 0.0022
R = 0.9999
DL = 0.1091
BEC = 0.3147

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5055.39	0.0118	P	10.3
2	☐	2.000	2.256	23554.04	0.0575	P	3.1
3	☐	500.000	548.466	4498610.83	11.1349	A	0.8
4	☐	1250.000	1346.411	10650761.99	27.3176	A	1.4
5	☐	2500.000	2621.923	20489407.19	53.1856	A	0.7
6	☐	5000.000	5146.786	40256274.12	104.3910	A	0.4
7	☐	10000.000	9881.652	76913612.19	200.4163	A	1.2
8	☐			20483.83	0.0618	P	1.4

y = 0.0203 * x + 0.0118
R = 0.9997
DL = 0.1801
BEC = 0.5807

Weight: <None>
Min Conc: 0

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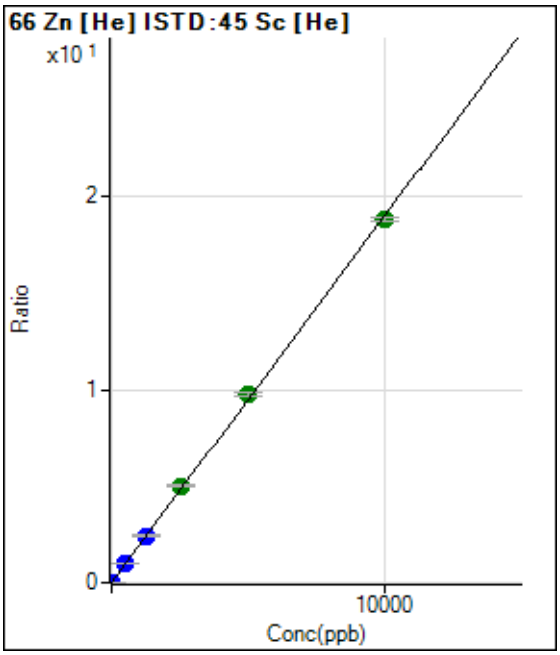
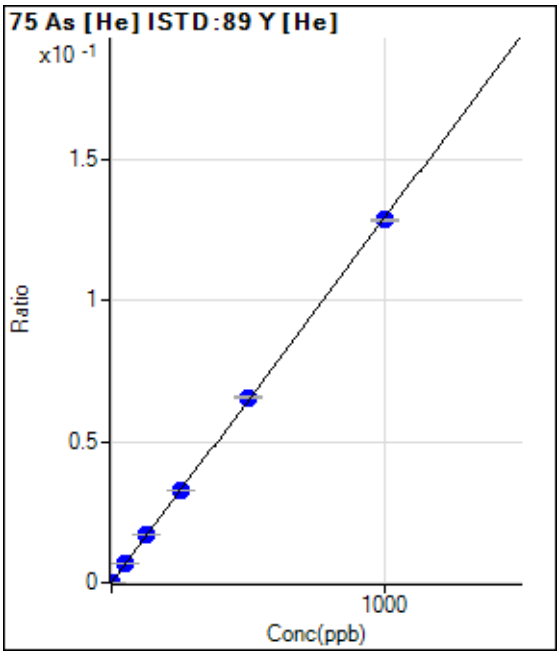


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	948.93	0.0022	P	5.7
2	☐	5.000	4.905	4719.72	0.0115	P	3.3
3	☐	500.000	511.084	393150.93	0.9732	P	1.4
4	☐	1250.000	1282.900	951156.09	2.4395	P	0.8
5	☐	2500.000	2626.418	1923165.00	4.9920	A	1.8
6	☐	5000.000	5132.806	3761312.83	9.7537	A	1.3
7	☐	10000.000	9897.326	7217175.38	18.8055	A	1.2
8	☐			3678.29	0.0111	P	2.3

y = 0.0019 * x + 0.0022
R = 0.9998
DL = 0.199
BEC = 1.161

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.56	0.0000	P	92.5
2	☐	1.000	1.170	514.46	0.0002	P	5.1
3	☐	50.000	51.835	22662.77	0.0067	P	1.4
4	☐	125.000	130.307	55126.15	0.0169	P	1.7
5	☐	250.000	253.790	107212.57	0.0328	P	0.6
6	☐	500.000	506.891	212735.48	0.0656	P	1.2
7	☐	1000.000	994.852	419343.42	0.1287	P	0.5
8	☐			206.67	0.0001	P	18.6

y = 1.2938E-004 * x + 1.5164E-006
R = 0.9999
DL = 0.03252
BEC = 0.01172

Weight: <None>
Min Conc: 0

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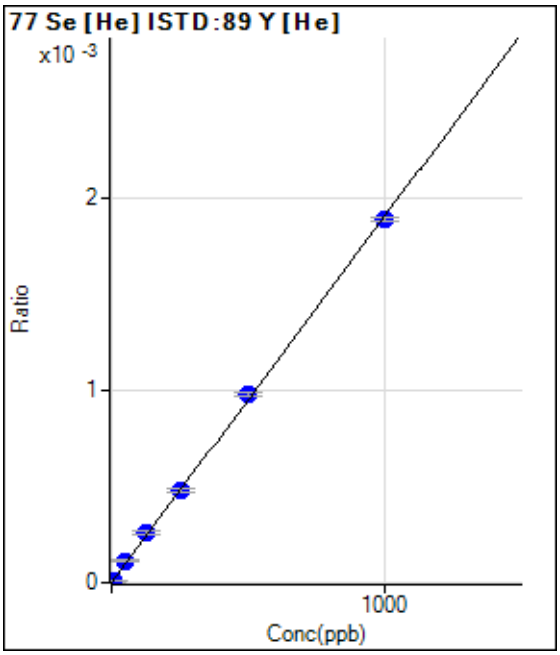
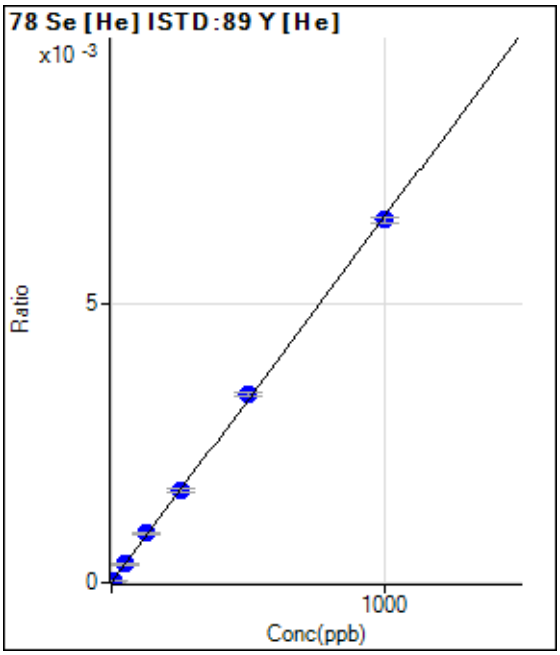


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.
2	☐	5.000	6.589	43.33	0.0000	P	5.2
3	☐	50.000	60.096	388.90	0.0001	P	15.8
4	☐	125.000	136.159	850.03	0.0003	P	4.8
5	☐	250.000	252.720	1575.66	0.0005	P	5.1
6	☐	500.000	512.768	3173.73	0.0010	P	2.1
7	☐	1000.000	991.028	6160.28	0.0019	P	1.1
8	☐			3.33	0.0000	P	102.

y = 1.9077E-006 * x + 2.9668E-007
R = 0.9998
DL = 0.8081
BEC = 0.1555

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11.11	0.0000	P	12.8
2	☐	5.000	6.465	153.34	0.0000	P	16.0
3	☐	50.000	49.511	1105.61	0.0003	P	11.6
4	☐	125.000	134.501	2887.00	0.0009	P	3.0
5	☐	250.000	250.120	5352.18	0.0016	P	3.7
6	☐	500.000	515.250	10945.45	0.0034	P	1.3
7	☐	1000.000	991.175	21135.98	0.0065	P	1.4
8	☐			20.00	0.0000	P	45.5

y = 6.5421E-006 * x + 3.1324E-006
R = 0.9998
DL = 0.1844
BEC = 0.4788

Weight: <None>
Min Conc: 0

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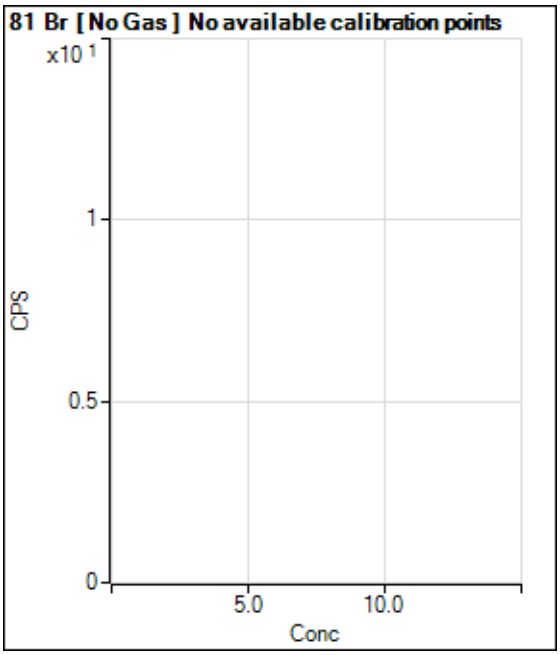

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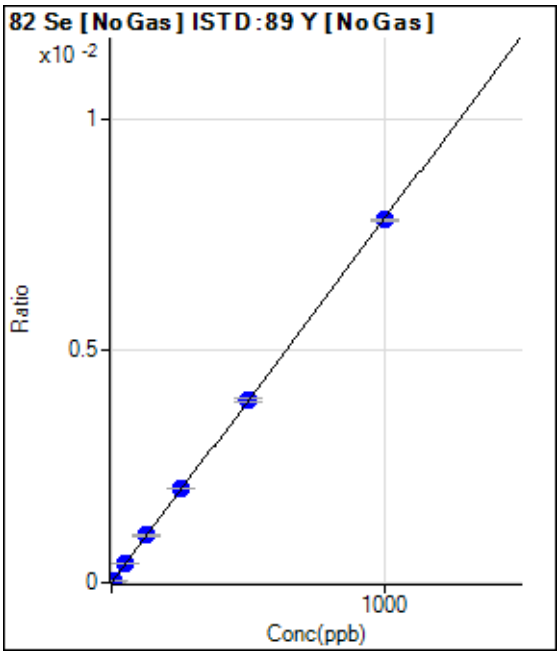
1	☐			14358.56		P	1.2
2	☐			14223.98		P	0.9
3	☐			14076.06		P	1.8
4	☐			13693.46		P	1.8
5	☐			13565.54		P	1.6
6	☐			13210.76		P	0.3
7	☐			13588.92		P	2.0
8	☐			13661.20		P	3.9



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7.78	0.0000	P	207.
2	☐	5.000	5.660	2042.43	0.0000	P	1.3
3	☐	50.000	51.178	18355.86	0.0004	P	0.3
4	☐	125.000	130.519	46412.96	0.0010	P	1.9
5	☐	250.000	258.152	88417.28	0.0020	P	1.3
6	☐	500.000	501.601	175262.32	0.0039	P	1.6
7	☐	1000.000	996.409	346140.51	0.0078	P	0.5
8	☐			-72.23	0.0000	P	-10.

y = 7.8509E-006 * x + 1.8700E-007
R = 1.0000
DL = 0.1484
BEC = 0.02382

Weight: <None>
Min Conc: 0

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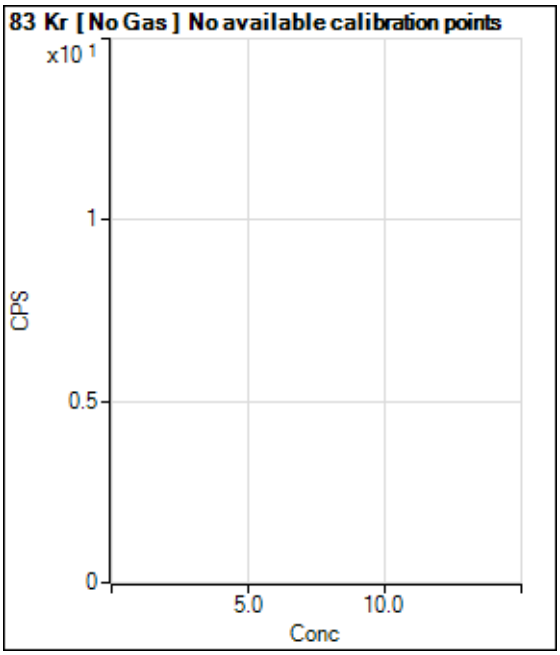
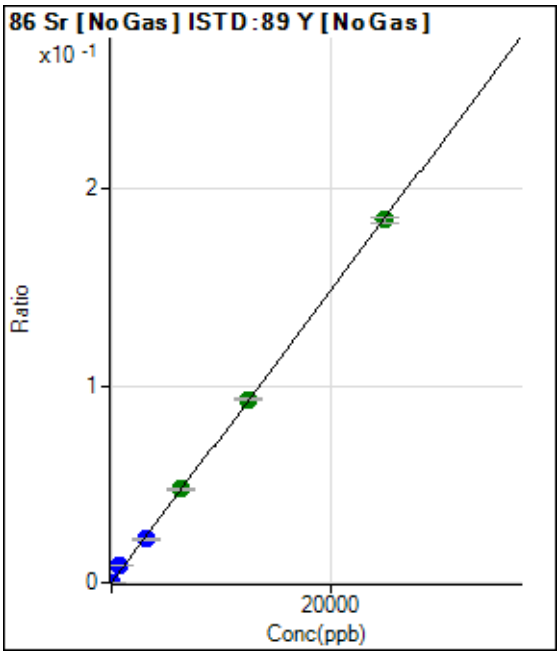


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			290.01		P	6.1
2	☐			281.12		P	8.6
3	☐			313.34		P	9.3
4	☐			276.67		P	9.9
5	☐			337.79		P	18.8
6	☐			310.01		P	7.1
7	☐			356.68		P	9.5
8	☐			614.47		P	5.4



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	615.58	0.0000	P	3.9
2	☐	1.000	25.202	9178.64	0.0002	P	2.8
3	☐	625.000	1203.922	407527.54	0.0089	P	0.6
4	☐	3125.000	2972.482	996995.56	0.0220	P	1.6
5	☐	6250.000	6435.419	2078024.71	0.0476	A	2.5
6	☐	12500.000	12594.437	4149269.80	0.0932	A	1.2
7	☐	25000.000	24911.017	8158409.39	0.1844	A	1.4
8	☐			20192.48	0.0005	P	2.1

y = 7.4015E-006 * x + 1.4040E-005
R = 0.9997
DL = 0.2231
BEC = 1.897

Weight: <None>
Min Conc: 0

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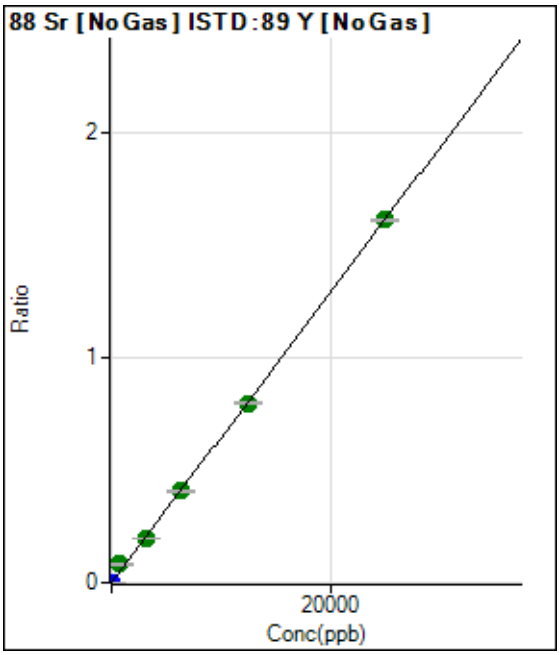
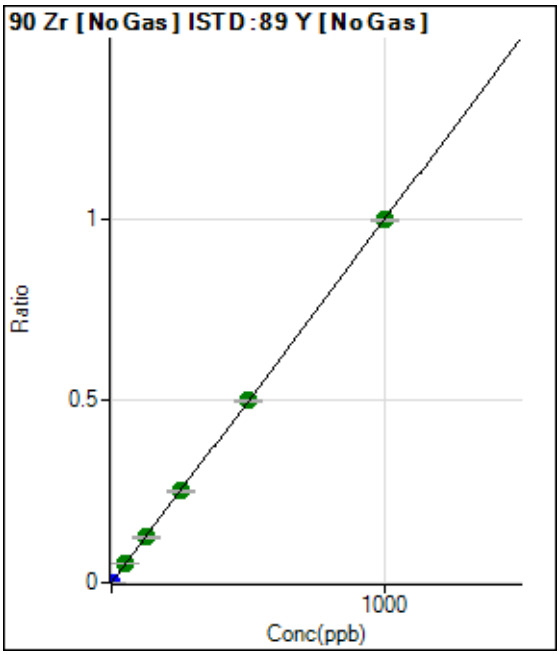


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	940.04	0.0000	P	7.6
2	☐	1.000	25.376	75711.39	0.0017	P	2.3
3	☐	625.000	1266.035	3720948.21	0.0815	A	1.6
4	☐	3125.000	3081.727	8981620.21	0.1983	A	1.6
5	☐	6250.000	6308.511	17705154.87	0.4060	A	2.9
6	☐	12500.000	12382.412	35460144.19	0.7968	A	1.7
7	☐	25000.000	25033.548	71276472.27	1.6109	A	0.8
8	☐			171701.90	0.0046	P	1.0

y = 6.4348E-005 * x + 2.1486E-005
R = 0.9997
DL = 0.07596
BEC = 0.3339

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1587.89	0.0000	P	7.5
2	☐	1.000	0.989	46762.56	0.0010	P	2.1
3	☐	50.000	51.135	2328517.43	0.0510	A	1.7
4	☐	125.000	124.512	5621131.58	0.1241	A	1.8
5	☐	250.000	252.472	10976286.50	0.2516	A	1.7
6	☐	500.000	500.690	22207319.95	0.4990	A	1.8
7	☐	1000.000	999.041	44057612.12	0.9957	A	0.6
8	☐			19026.53	0.0005	P	1.7

y = 9.9657E-004 * x + 3.6278E-005
R = 1.0000
DL = 0.008171
BEC = 0.0364

Weight: <None>
Min Conc: 0

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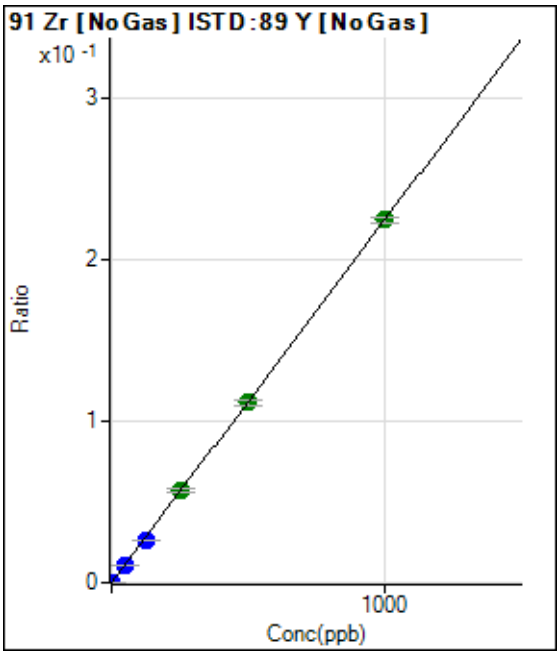
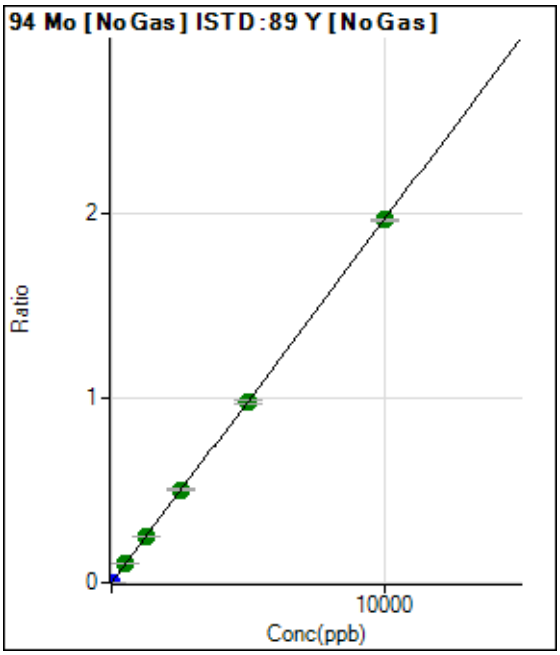


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	280.01	0.0000	P	6.7
2	☐	1.000	0.985	10411.78	0.0002	P	3.2
3	☐	50.000	47.820	490370.64	0.0107	P	0.2
4	☐	125.000	117.810	1197658.45	0.0264	P	2.2
5	☐	250.000	254.193	2488353.75	0.0571	A	3.0
6	☐	500.000	497.557	4969399.06	0.1117	A	3.0
7	☐	1000.000	1001.181	9942002.49	0.2247	A	1.7
8	☐			4198.45	0.0001	P	2.1

y = 2.2444E-004 * x + 6.3963E-006
R = 1.0000
DL = 0.005752
BEC = 0.0285

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	872.26	0.0000	P	8.3
2	☐	5.000	5.926	54257.44	0.0012	P	2.8
3	☐	500.000	507.970	4563987.92	0.0999	A	0.8
4	☐	1250.000	1258.784	11215700.11	0.2476	A	1.3
5	☐	2500.000	2561.347	21978132.45	0.5039	A	2.0
6	☐	5000.000	4996.002	43737617.13	0.9828	A	2.0
7	☐	10000.000	9985.165	86917604.26	1.9643	A	0.3
8	☐			14112.92	0.0004	P	4.9

y = 1.9672E-004 * x + 1.9930E-005
R = 1.0000
DL = 0.02512
BEC = 0.1013

Weight: <None>
Min Conc: 0

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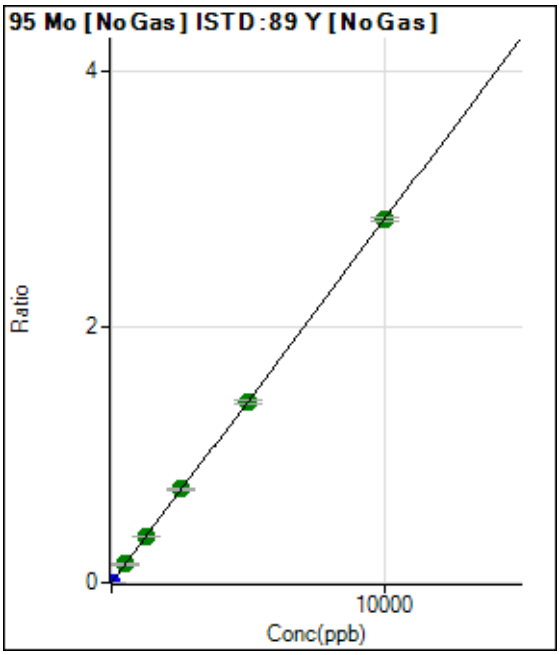
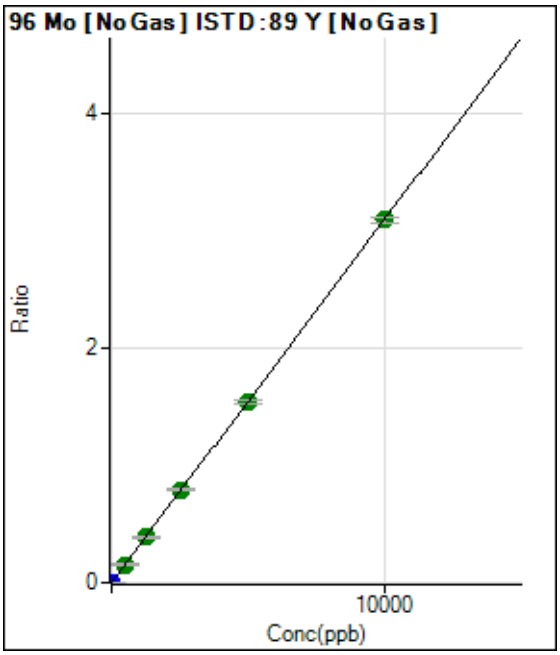


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	668.91	0.0000	P	5.5
2	☐	5.000	5.019	65872.92	0.0014	P	2.9
3	☐	500.000	505.343	6548225.74	0.1434	A	1.3
4	☐	1250.000	1257.973	16165860.03	0.3570	A	2.1
5	☐	2500.000	2567.685	31780324.81	0.7286	A	1.9
6	☐	5000.000	4990.800	63019617.39	1.4162	A	2.5
7	☐	10000.000	9986.415	125382422.5	2.8337	A	1.1
8	☐			15789.34	0.0004	P	8.9

y = 2.8376E-004 * x + 1.5277E-005
R = 1.0000
DL = 0.008939
BEC = 0.05384

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	688.91	0.0000	P	9.6
2	☐	5.000	5.065	72429.73	0.0016	P	3.0
3	☐	500.000	501.805	7089502.33	0.1553	A	1.0
4	☐	1250.000	1247.628	17480596.82	0.3860	A	1.8
5	☐	2500.000	2545.996	34355524.77	0.7877	A	2.3
6	☐	5000.000	4992.612	68738725.08	1.5446	A	1.7
7	☐	10000.000	9992.401	136780767.9	3.0914	A	1.2
8	☐			21657.48	0.0006	P	9.3

y = 3.0938E-004 * x + 1.5741E-005
R = 1.0000
DL = 0.01459
BEC = 0.05088

Weight: <None>
Min Conc: 0

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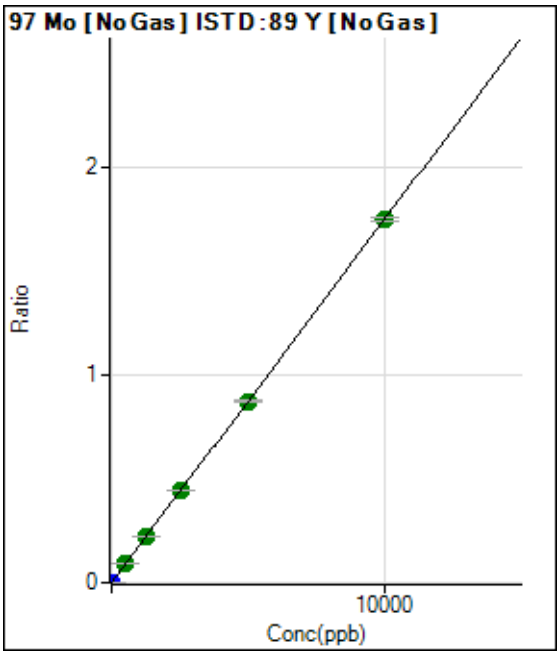
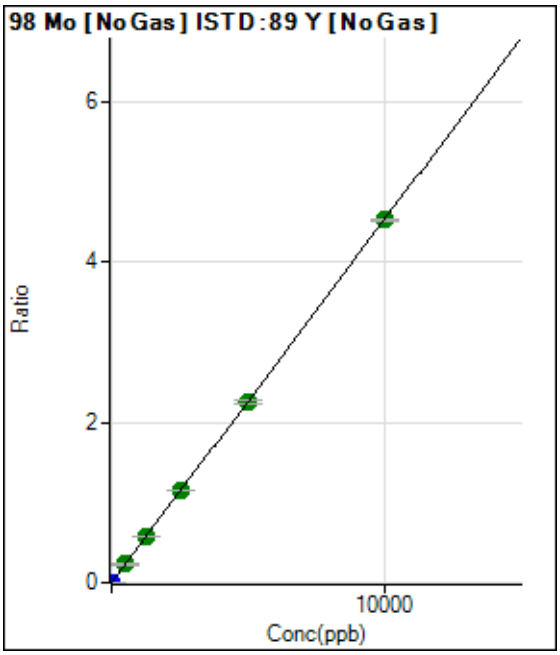


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	302.23	0.0000	P	13.0
2	☐	5.000	5.033	40544.60	0.0009	P	1.8
3	☐	500.000	509.792	4065266.71	0.0890	A	2.4
4	☐	1250.000	1260.624	9970859.64	0.2202	A	0.9
5	☐	2500.000	2542.095	19363782.35	0.4439	A	1.8
6	☐	5000.000	5001.217	38868575.81	0.8734	A	1.3
7	☐	10000.000	9987.050	77167332.18	1.7441	A	1.0
8	☐			8344.97	0.0002	P	13.8

y = 1.7463E-004 * x + 6.9067E-006
R = 1.0000
DL = 0.0154
BEC = 0.03955

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	773.36	0.0000	P	1.0
2	☐	5.000	5.023	104865.91	0.0023	P	2.9
3	☐	500.000	504.593	10431712.83	0.2285	A	0.8
4	☐	1250.000	1259.141	25818357.39	0.5700	A	1.0
5	☐	2500.000	2545.666	50272673.69	1.1525	A	1.1
6	☐	5000.000	4994.634	100626457.3	2.2611	A	2.1
7	☐	10000.000	9989.894	200109743.6	4.5225	A	0.9
8	☐			18866.10	0.0005	P	15.0

y = 4.5271E-004 * x + 1.7643E-005
R = 1.0000
DL = 0.001205
BEC = 0.03897

Weight: <None>
Min Conc: 0

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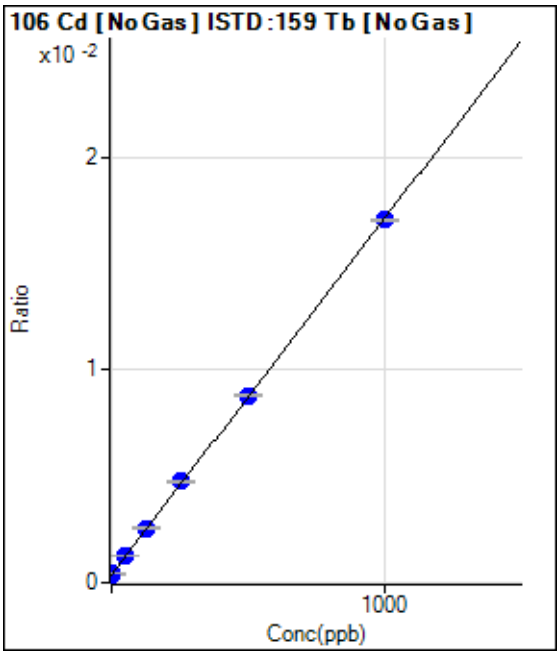
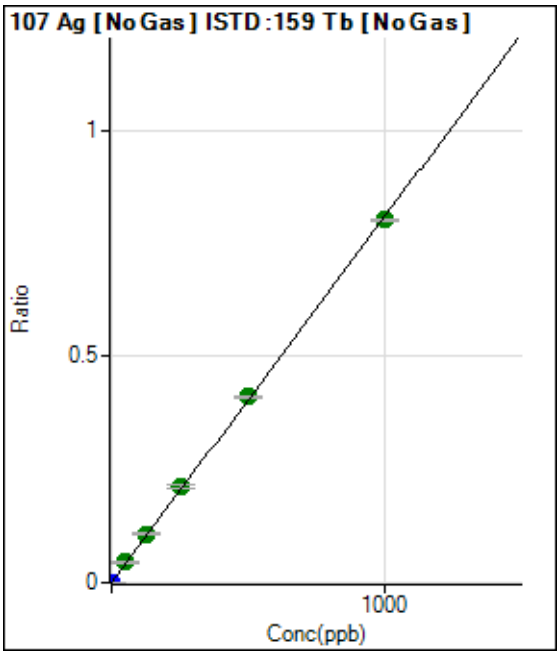


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14771.41	0.0004	P	3.2
2	☐	1.000	1.047	15980.47	0.0004	P	1.4
3	☐	50.000	52.408	49450.52	0.0013	P	2.0
4	☐	125.000	128.899	98407.59	0.0026	P	2.5
5	☐	250.000	259.850	176779.21	0.0047	P	2.6
6	☐	500.000	501.979	336024.21	0.0088	P	1.5
7	☐	1000.000	995.940	642132.97	0.0171	P	0.7
8	☐			12729.70	0.0004	P	0.4

y = 1.6712E-005 * x + 4.0653E-004
R = 0.9999
DL = 2.333
BEC = 24.33

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	668.80	0.0000	P	3.9
2	☐	1.000	1.057	32895.86	0.0009	P	2.0
3	☐	50.000	55.436	1728572.24	0.0448	A	1.0
4	☐	125.000	132.499	4116072.14	0.1071	A	2.5
5	☐	250.000	262.398	7892453.00	0.2121	A	4.0
6	☐	500.000	507.707	15677285.37	0.4104	A	1.4
7	☐	1000.000	991.838	30190452.92	0.8016	A	0.5
8	☐			3840.50	0.0001	P	9.9

y = 8.0822E-004 * x + 1.8400E-005
R = 0.9999
DL = 0.002654
BEC = 0.02277

Weight: <None>
Min Conc: 0

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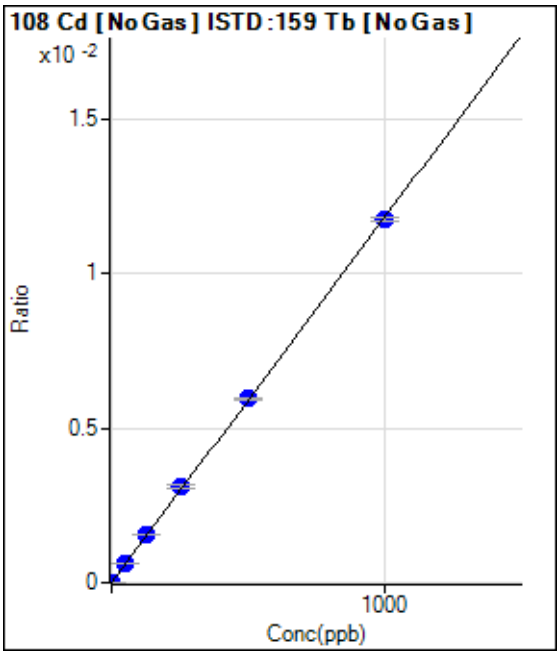
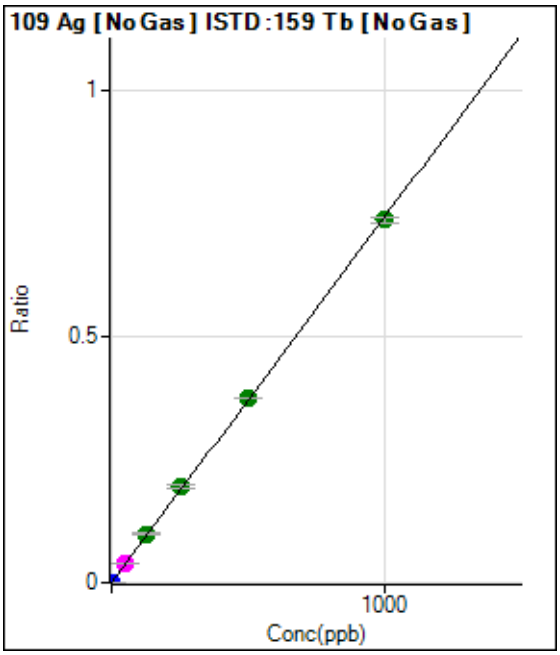


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31.11	0.0000	P	23.2
2	☐	1.000	1.128	534.46	0.0000	P	6.9
3	☐	50.000	52.788	24082.25	0.0006	P	3.5
4	☐	125.000	131.659	59811.23	0.0016	P	2.5
5	☐	250.000	262.864	115612.07	0.0031	P	3.6
6	☐	500.000	503.702	227398.62	0.0060	P	0.8
7	☐	1000.000	993.961	442281.38	0.0117	P	1.2
8	☐			200.01	0.0000	P	20.8

y = 1.1815E-005 * x + 8.5182E-007
R = 0.9999
DL = 0.05026
BEC = 0.0721

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	507.79	0.0000	P	9.0
2	☐	1.000	1.071	30470.42	0.0008	P	1.5
3	☐	50.000	53.558	1531731.38	0.0397	M	4.9
4	☐	125.000	133.660	3809617.61	0.0991	A	2.4
5	☐	250.000	262.993	7259731.49	0.1950	A	2.7
6	☐	500.000	505.285	14316549.37	0.3747	A	0.7
7	☐	1000.000	992.849	27726108.75	0.7363	A	1.7
8	☐			3369.34	0.0001	P	7.0

y = 7.4155E-004 * x + 1.3956E-005
R = 0.9999
DL = 0.005056
BEC = 0.01882

Weight: <None>
Min Conc: 0

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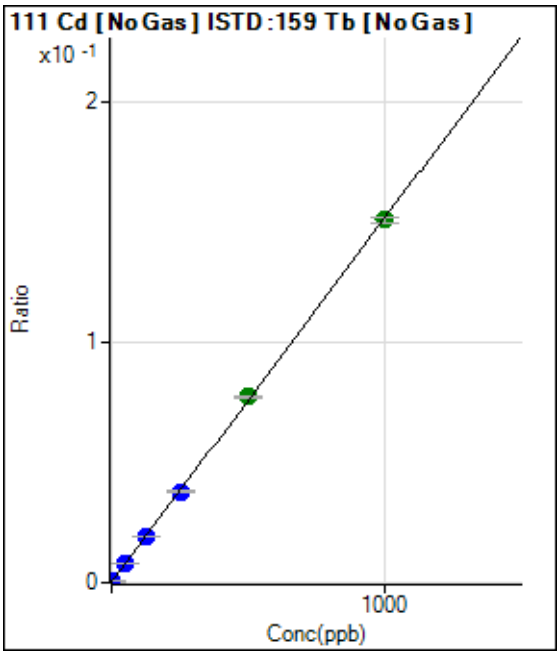
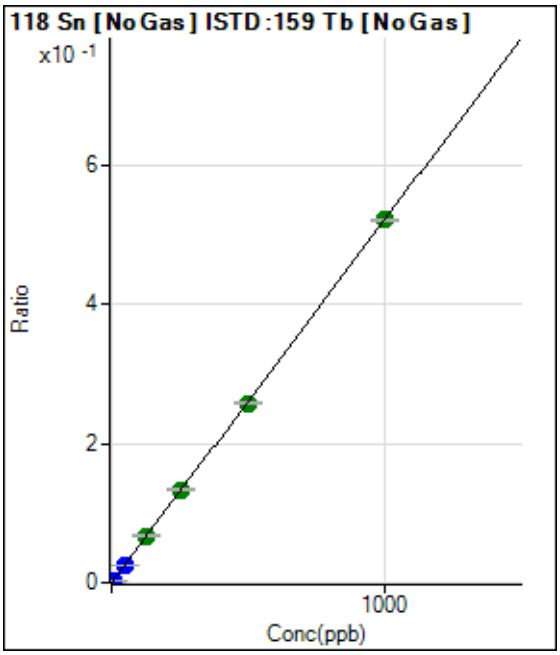


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10347.09	0.0003	P	3.2
2	☐	1.000	1.131	17190.41	0.0005	P	0.6
3	☐	50.000	51.037	309170.25	0.0080	P	1.9
4	☐	125.000	124.455	735610.78	0.0191	P	2.2
5	☐	250.000	249.251	1416286.84	0.0380	P	2.8
6	☐	500.000	509.193	2958558.39	0.0774	A	1.3
7	☐	1000.000	995.607	5691408.39	0.1511	A	1.6
8	☐			9447.47	0.0003	P	1.1

y = 1.5151E-004 * x + 2.8477E-004
R = 0.9999
DL = 0.1801
BEC = 1.879

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4544.13	0.0001	P	3.1
2	☐	5.000	5.275	108468.96	0.0029	P	0.5
3	☐	50.000	49.299	997009.01	0.0259	P	1.8
4	☐	125.000	128.895	2590269.07	0.0674	A	1.5
5	☐	250.000	256.701	4991111.28	0.1341	A	3.1
6	☐	500.000	495.409	9883548.54	0.2587	A	0.6
7	☐	1000.000	1000.167	19663152.21	0.5221	A	0.7
8	☐			6729.69	0.0002	P	1.3

y = 5.2190E-004 * x + 1.2522E-004
R = 1.0000
DL = 0.02249
BEC = 0.2399

Weight: <None>
Min Conc: 0

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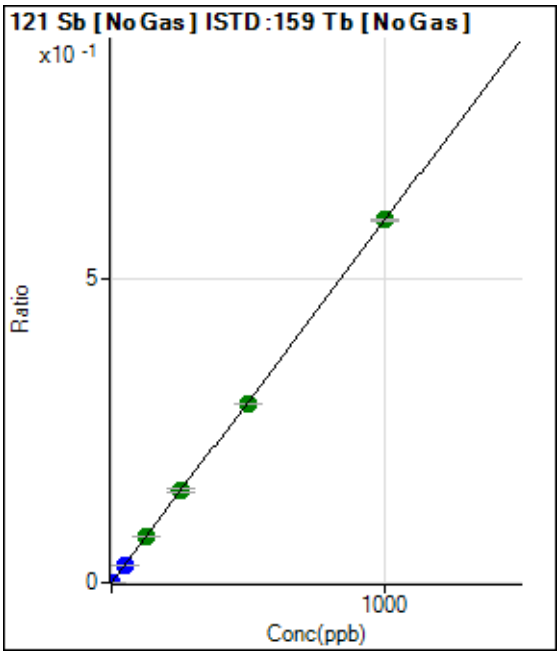
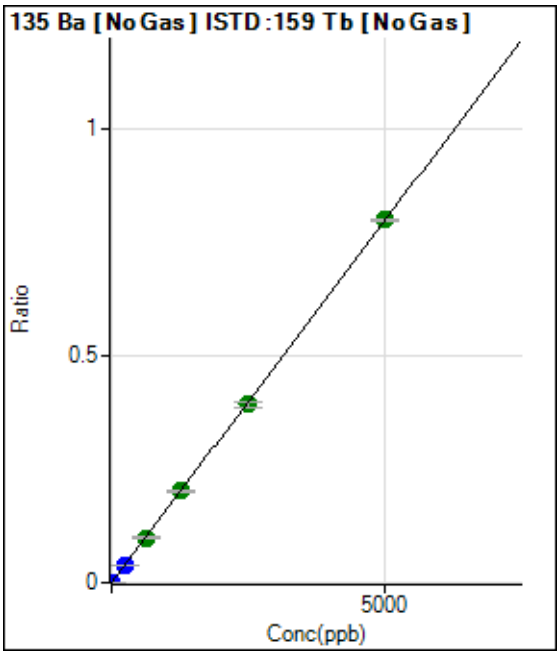


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0000	P	29.4
2	☐	2.000	2.113	47496.69	0.0013	P	2.0
3	☐	50.000	48.531	1114717.92	0.0289	P	1.1
4	☐	125.000	126.770	2901744.99	0.0755	A	1.9
5	☐	250.000	253.451	5617429.22	0.1509	A	3.8
6	☐	500.000	494.257	11246474.14	0.2944	A	0.9
7	☐	1000.000	1001.861	22471251.06	0.5967	A	0.7
8	☐			8898.60	0.0003	P	2.2

y = 5.9557E-004 * x + 2.0119E-006
R = 1.0000
DL = 0.002979
BEC = 0.003378

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153.34	0.0000	P	2.9
2	☐	10.000	10.310	61948.49	0.0016	P	0.2
3	☐	250.000	239.221	1467241.77	0.0380	P	1.1
4	☐	625.000	621.405	3797870.39	0.0988	A	2.2
5	☐	1250.000	1265.087	7488376.55	0.2012	A	3.0
6	☐	2500.000	2460.747	14949492.41	0.3913	A	2.6
7	☐	5000.000	5016.842	30046301.77	0.7978	A	0.7
8	☐			9191.00	0.0003	P	0.8

y = 1.5903E-004 * x + 4.2200E-006
R = 0.9999
DL = 0.002303
BEC = 0.02654

Weight: <None>
Min Conc: 0

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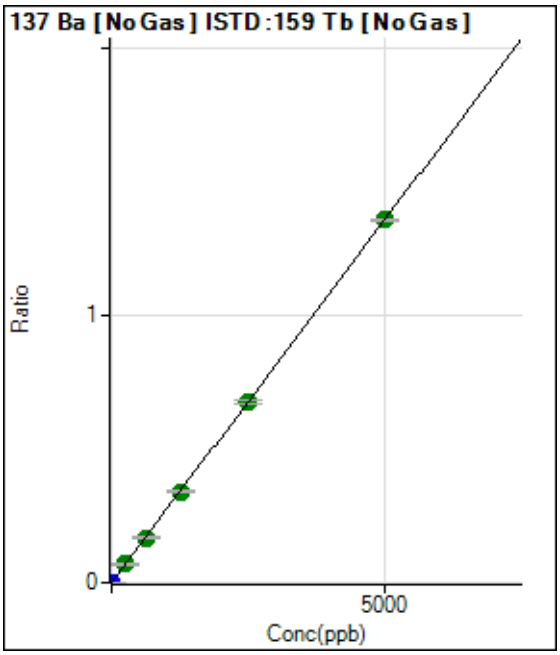
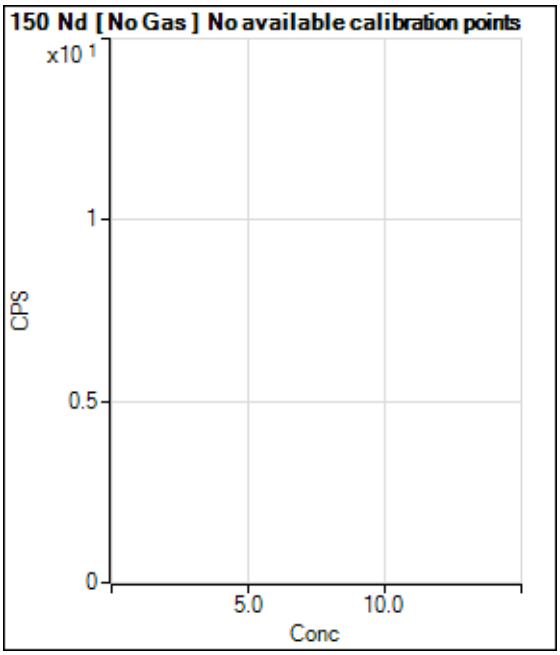


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	227.78	0.0000	P	9.2
2	☐	10.000	10.379	106131.02	0.0028	P	0.3
3	☐	250.000	252.686	2638477.70	0.0684	A	0.6
4	☐	625.000	620.975	6461843.45	0.1681	A	1.1
5	☐	1250.000	1257.468	12671829.95	0.3404	A	2.8
6	☐	2500.000	2485.524	25708824.90	0.6729	A	2.0
7	☐	5000.000	5005.739	51038287.02	1.3552	A	0.4
8	☐			15755.94	0.0005	P	0.8

y = 2.7073E-004 * x + 6.2780E-006
R = 1.0000
DL = 0.006375
BEC = 0.02319

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			13.34		P	43.3
2	☐			27.78		P	50.0
3	☐			185.56		P	9.9
4	☐			375.57		P	4.9
5	☐			767.81		P	4.1
6	☐			1507.88		P	4.2
7	☐			2937.02		P	0.4
8	☐			507.79		P	5.7

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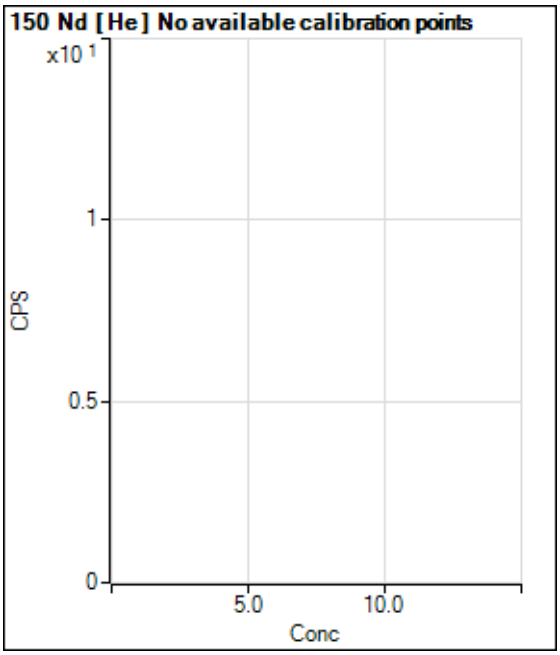
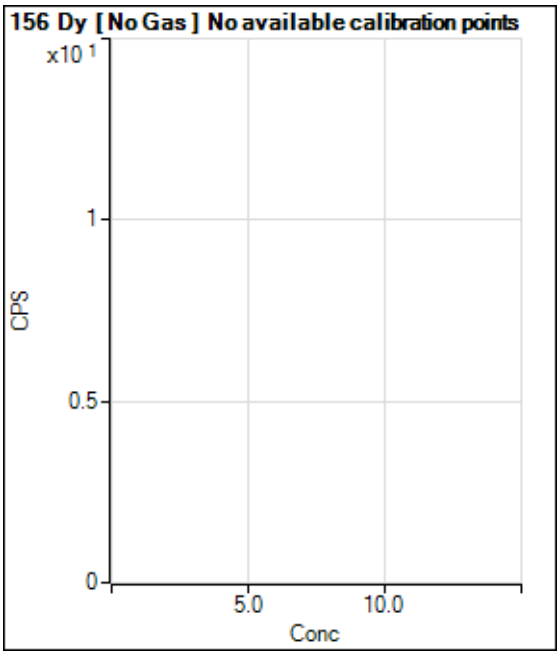


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			3.33		P	0.0
2	☐			1.11		P	173.
3	☐			16.67		P	34.6
4	☐			25.56		P	32.8
5	☐			62.22		P	11.1
6	☐			80.00		P	14.4
7	☐			191.11		P	4.4
8	☐			114.45		P	6.1



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			20.00		P	50.0
2	☐			27.78		P	6.9
3	☐			60.00		P	19.2
4	☐			125.56		P	14.6
5	☐			252.23		P	2.0
6	☐			443.35		P	10.4
7	☐			818.92		P	1.5
8	☐			923.38		P	5.6

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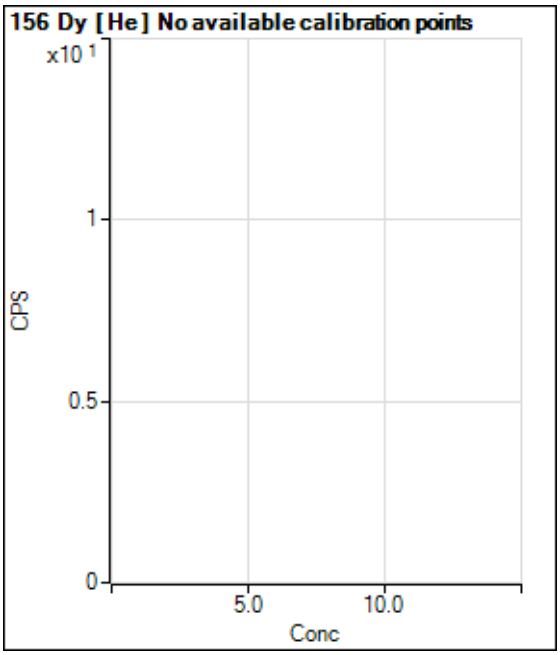
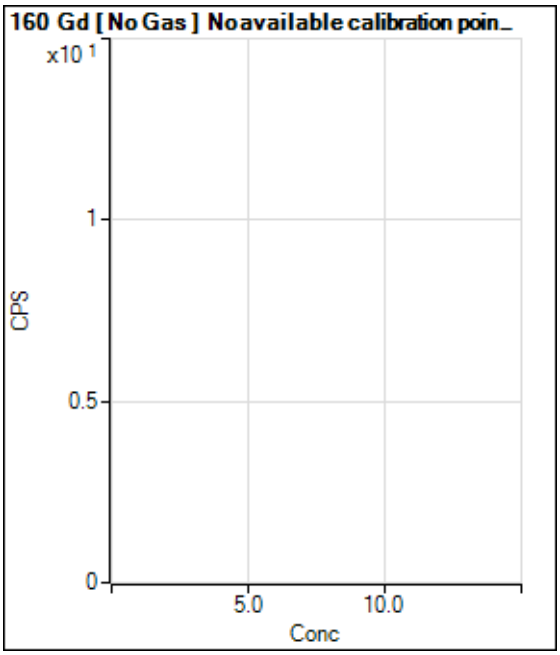


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			3.33		P	100.
2	☐			3.33		P	100.
3	☐			10.00		P	33.3
4	☐			21.11		P	36.5
5	☐			38.89		P	21.6
6	☐			62.22		P	17.2
7	☐			148.89		P	8.5
8	☐			292.23		P	6.7



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			255.56		P	22.5
2	☐			212.22		P	6.3
3	☐			247.78		P	12.7
4	☐			291.12		P	9.5
5	☐			325.56		P	10.1
6	☐			444.46		P	7.5
7	☐			706.69		P	7.1
8	☐			991.16		P	9.3

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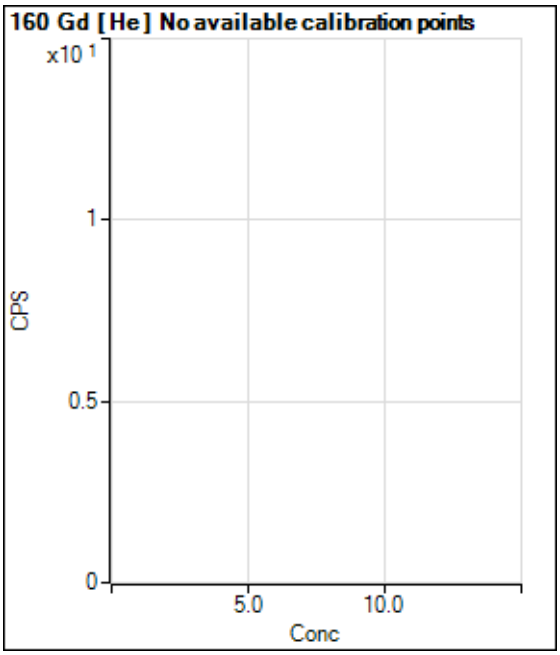

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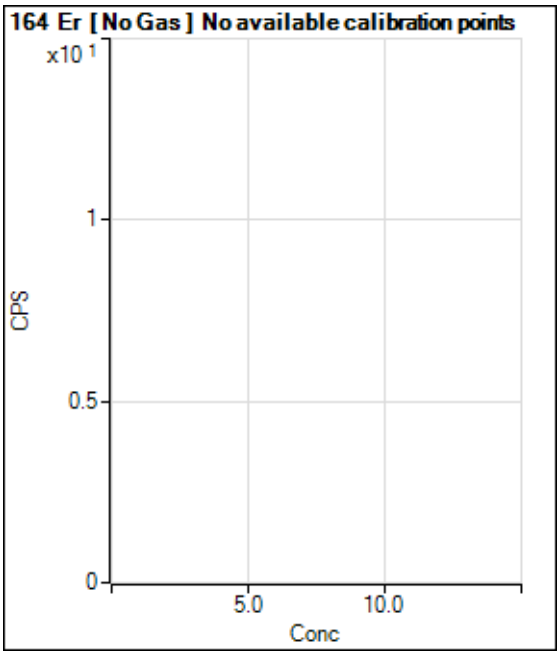
1	☐			60.00		P	22.2
2	☐			53.33		P	37.5
3	☐			50.00		P	11.5
4	☐			68.89		P	26.6
5	☐			82.22		P	24.8
6	☐			128.89		P	12.8
7	☐			210.00		P	6.3
8	☐			372.23		P	9.0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			185.56		P	10.4
2	☐			153.34		P	27.2
3	☐			186.68		P	31.4
4	☐			234.45		P	5.4
5	☐			341.12		P	9.6
6	☐			416.68		P	17.9
7	☐			725.58		P	9.5
8	☐			928.93		P	10.7

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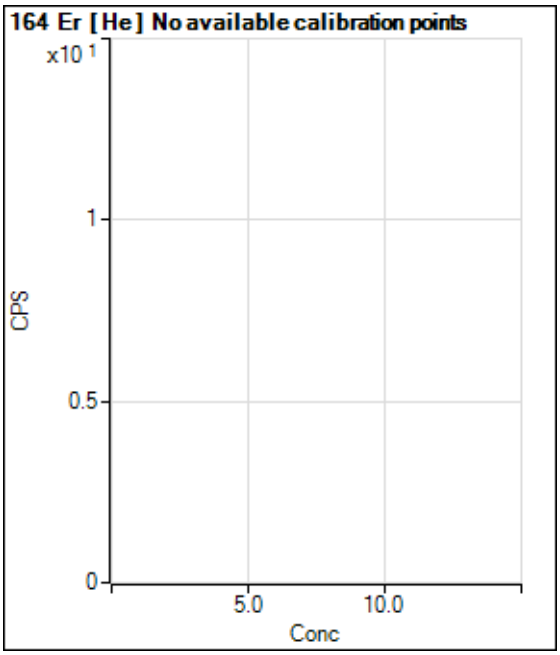

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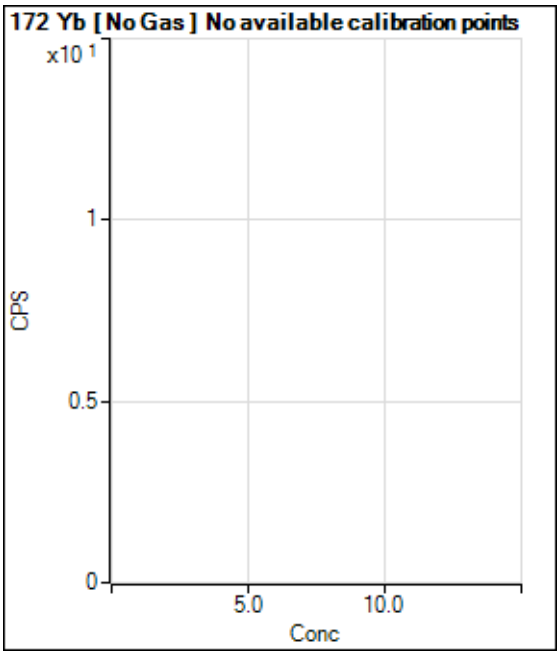
1	☐			48.89		P	20.8
2	☐			47.78		P	22.4
3	☐			66.67		P	21.8
4	☐			83.33		P	14.4
5	☐			100.00		P	17.6
6	☐			123.34		P	2.7
7	☐			233.34		P	2.9
8	☐			304.45		P	12.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			172.22		P	27.1
2	☐			186.67		P	4.7
3	☐			211.11		P	3.6
4	☐			275.56		P	4.9
5	☐			330.01		P	24.3
6	☐			488.90		P	10.1
7	☐			734.47		P	1.1
8	☐			1248.96		P	4.1

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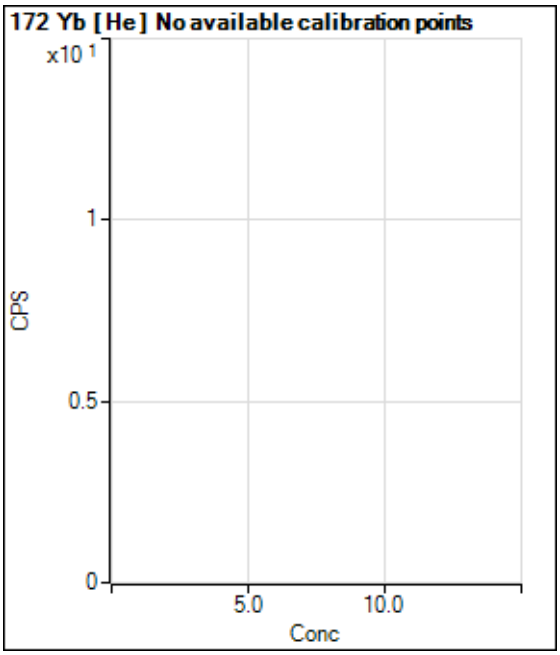
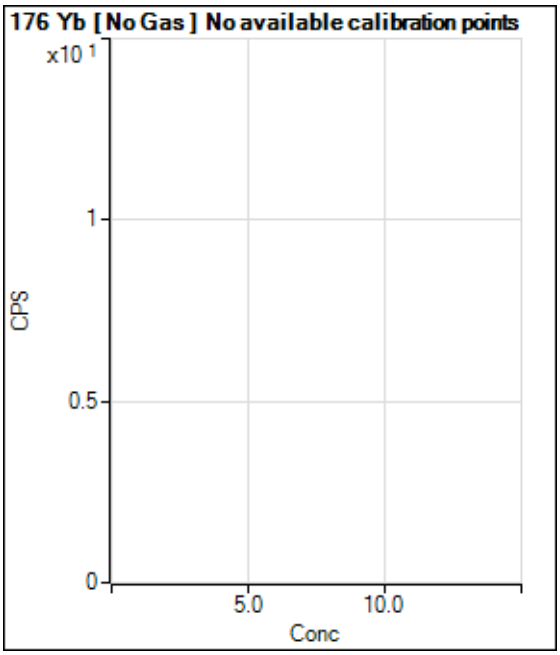


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			67.78		P	39.8
2	☐			83.33		P	13.9
3	☐			90.00		P	12.8
4	☐			117.78		P	18.8
5	☐			126.67		P	16.4
6	☐			177.78		P	17.4
7	☐			286.68		P	8.1
8	☐			460.01		P	12.4



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			4855.41		P	5.2
2	☐			4940.98		P	2.5
3	☐			10454.21		P	1.9
4	☐			18929.21		P	1.2
5	☐			32417.50		P	0.9
6	☐			60640.37		P	1.1
7	☐			117738.04		P	0.4
8	☐			4987.66		P	5.9

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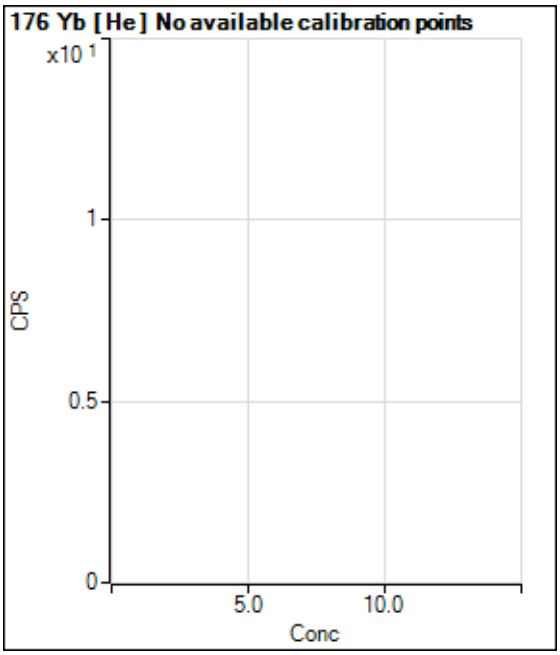
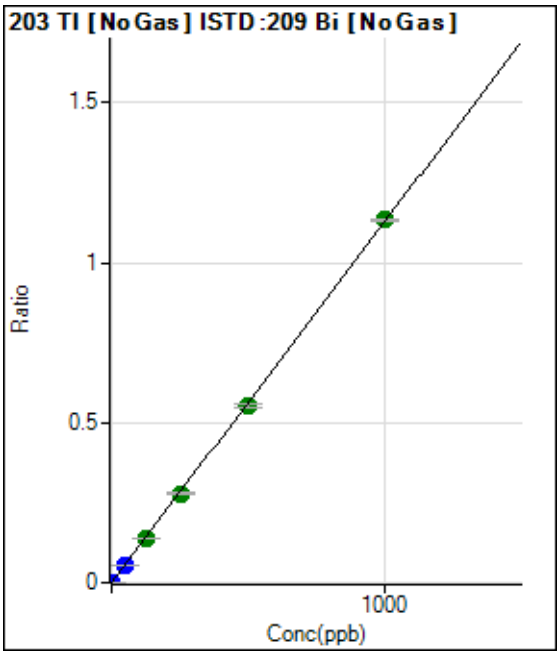


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1118.95		P	10.8
2	☐			944.49		P	6.0
3	☐			2892.57		P	4.1
4	☐			5806.89		P	0.3
5	☐			10386.38		P	1.8
6	☐			19730.39		P	1.5
7	☐			38704.42		P	0.7
8	☐			1067.83		P	13.9



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	328.90	0.0000	P	3.4
2	☐	1.000	0.963	25175.55	0.0011	P	1.3
3	☐	50.000	47.117	1213445.89	0.0531	P	2.1
4	☐	125.000	123.690	3201056.51	0.1394	A	1.5
5	☐	250.000	246.402	6170141.85	0.2777	A	1.5
6	☐	500.000	491.201	12229048.02	0.5536	A	1.7
7	☐	1000.000	1005.607	24390479.64	1.1334	A	0.6
8	☐			1412.33	0.0001	P	18.1

y = 0.0011 * x + 1.5073E-005
R = 0.9999
DL = 0.001371
BEC = 0.01337

Weight: <None>
Min Conc: 0

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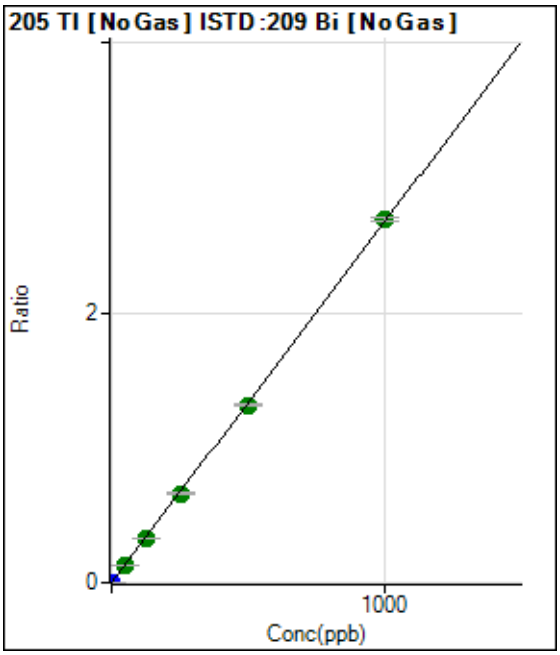
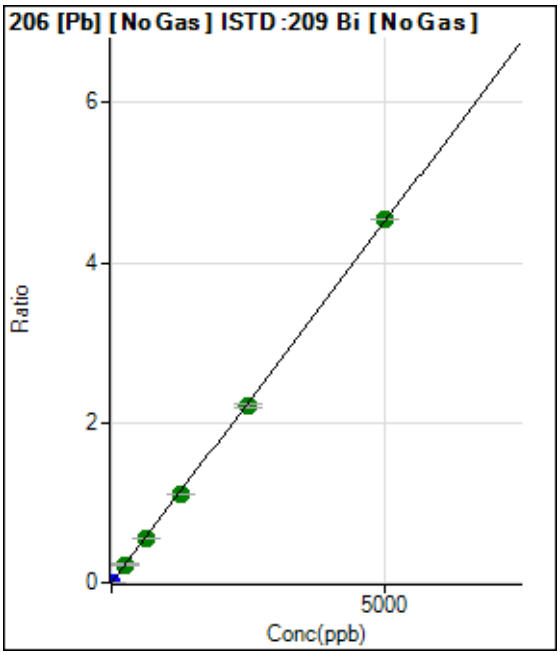


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	741.14	0.0000	P	7.6
2	☐	1.000	0.982	60794.78	0.0027	P	1.5
3	☐	50.000	49.959	3052106.45	0.1336	A	2.4
4	☐	125.000	121.453	7455635.31	0.3247	A	0.6
5	☐	250.000	246.478	14636704.78	0.6589	A	2.6
6	☐	500.000	491.696	29036759.85	1.3145	A	0.9
7	☐	1000.000	1005.478	57845969.14	2.6880	A	0.9
8	☐			3441.67	0.0002	P	18.0

y = 0.0027 * x + 3.3906E-005
R = 0.9999
DL = 0.002879
BEC = 0.01268

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1182.29	0.0001	P	15.1
2	☐	1.000	0.973	21311.98	0.0009	P	1.1
3	☐	250.000	251.168	5173572.21	0.2265	A	1.7
4	☐	625.000	612.493	12677611.06	0.5522	A	1.4
5	☐	1250.000	1227.351	24580214.08	1.1064	A	1.9
6	☐	2500.000	2451.467	48811884.83	2.2099	A	1.7
7	☐	5000.000	5031.434	97604932.99	4.5355	A	0.2
8	☐			12120.34	0.0007	P	3.3

y = 9.0143E-004 * x + 5.4382E-005
R = 0.9999
DL = 0.02733
BEC = 0.06033

Weight: <None>
Min Conc: 0

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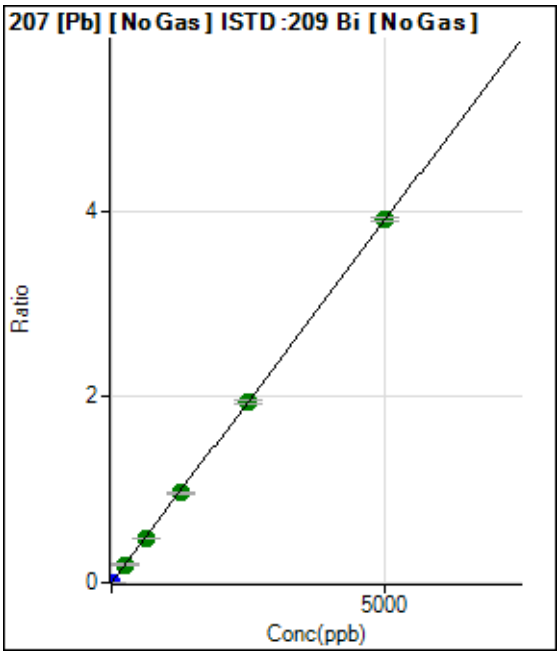
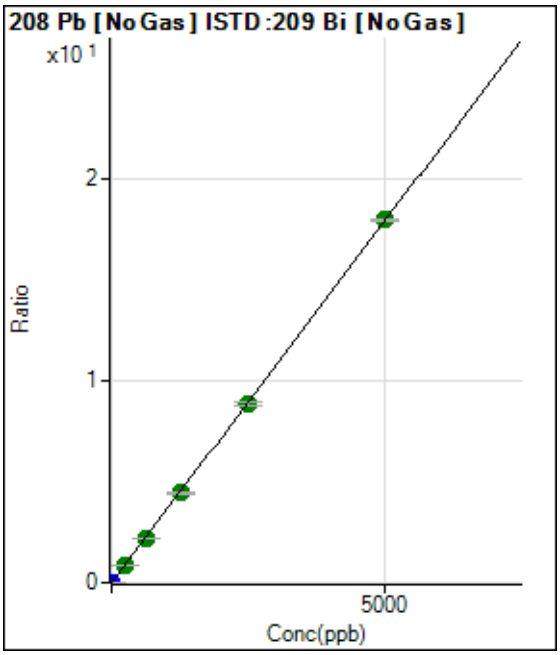


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1040.05	0.0000	P	1.9
2	☐	1.000	0.973	18422.10	0.0008	P	1.0
3	☐	250.000	251.224	4472485.73	0.1958	A	1.0
4	☐	625.000	607.782	10872668.93	0.4736	A	1.2
5	☐	1250.000	1241.978	21496603.29	0.9676	A	1.9
6	☐	2500.000	2489.832	42844796.31	1.9398	A	2.1
7	☐	5000.000	5009.181	83984706.53	3.9025	A	1.1
8	☐			10390.98	0.0006	P	2.3

y = 7.7907E-004 * x + 4.7663E-005
R = 1.0000
DL = 0.003476
BEC = 0.06118

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4629.26	0.0002	P	4.8
2	☐	1.000	0.973	84565.84	0.0037	P	0.6
3	☐	250.000	248.572	20336810.56	0.8902	A	0.6
4	☐	625.000	608.477	50024528.77	2.1787	A	0.6
5	☐	1250.000	1241.605	98749934.92	4.4454	A	2.3
6	☐	2500.000	2470.382	195364861.8	8.8448	A	1.6
7	☐	5000.000	5019.045	386713054.2	17.9696	A	0.4
8	☐			48180.64	0.0028	P	1.7

y = 0.0036 * x + 2.1232E-004
R = 1.0000
DL = 0.008603
BEC = 0.0593

Weight: <None>
Min Conc: 0

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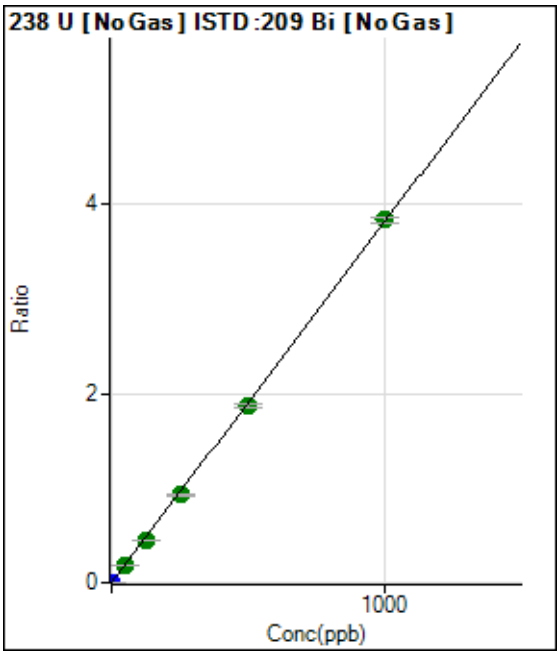
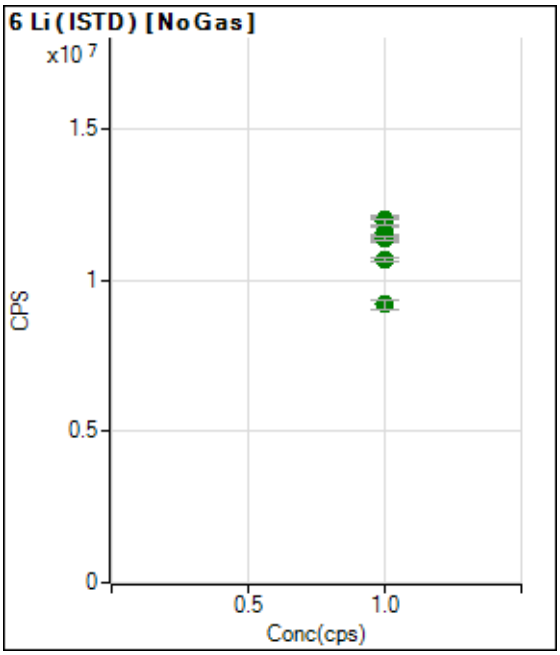


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0000	P	19.5
2	☐	1.000	0.926	80737.47	0.0035	P	1.2
3	☐	50.000	47.689	4148064.63	0.1816	A	2.1
4	☐	125.000	117.870	10305445.89	0.4488	A	1.6
5	☐	250.000	244.408	20669845.52	0.9306	A	2.9
6	☐	500.000	491.723	41354323.27	1.8722	A	2.0
7	☐	1000.000	1006.543	82472863.22	3.8324	A	1.5
8	☐			1769.08	0.0001	P	21.0

y = 0.0038 * x + 4.5546E-006
R = 0.9999
DL = 0.0007015
BEC = 0.001196

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		11570280.71		A	3.5
2	☐	1.000		11980513.60		A	2.2
3	☐	1.000		12004367.91		A	2.7
4	☐	1.000		11935729.62		A	1.5
5	☐	1.000		11397979.02		A	2.0
6	☐	1.000		11400076.15		A	0.8
7	☐	1.000		10683944.53		A	1.7
8	☐	1.000		9209290.52		A	3.5

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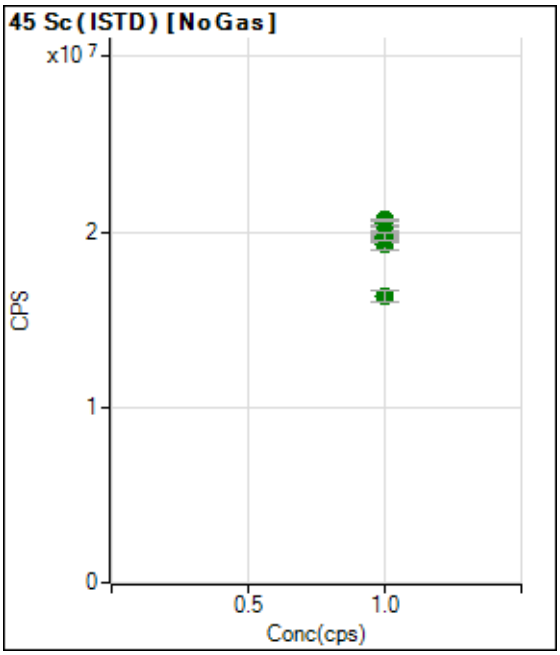
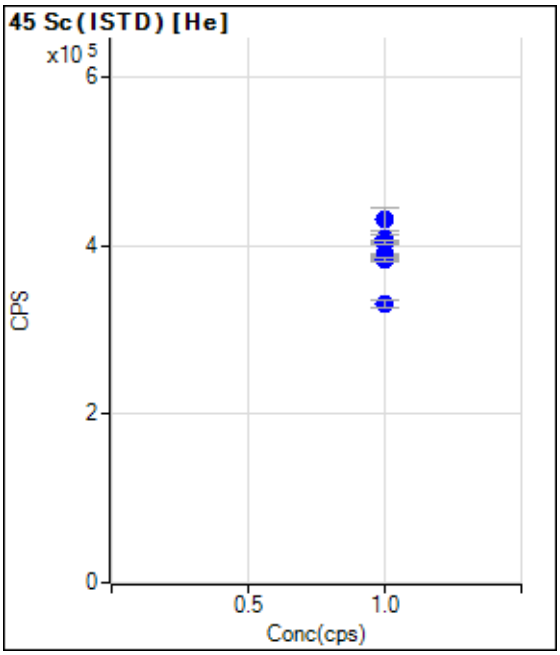


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		19919002.06		A	4.0
2	☐	1.000		20479894.55		A	1.0
3	☐	1.000		20678827.19		A	0.9
4	☐	1.000		19959744.84		A	0.8
5	☐	1.000		19264670.82		A	3.4
6	☐	1.000		19572274.29		A	1.7
7	☐	1.000		19740658.18		A	2.6
8	☐	1.000		16345203.23		A	3.9



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		431133.60		P	6.4
2	☐	1.000		409609.52		P	2.0
3	☐	1.000		404031.33		P	1.3
4	☐	1.000		389914.20		P	0.9
5	☐	1.000		385238.04		P	0.8
6	☐	1.000		385627.31		P	0.4
7	☐	1.000		383791.50		P	0.8
8	☐	1.000		331605.01		P	2.9

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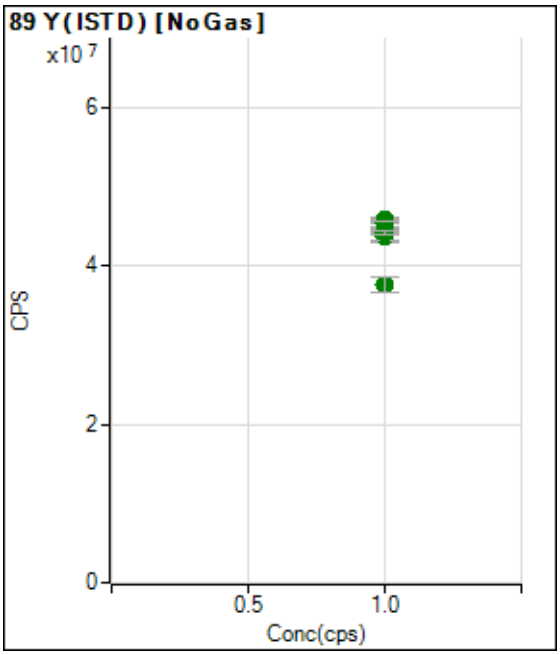

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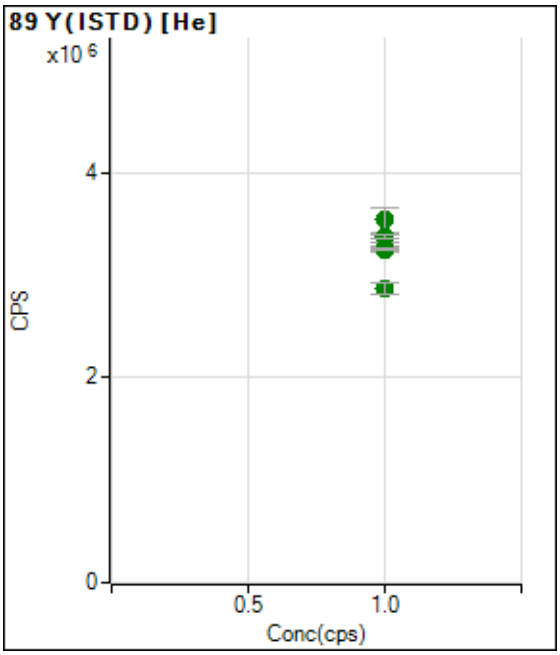
1	☐	1.000		43831922.40		A	4.4
2	☐	1.000		45776951.54		A	1.8
3	☐	1.000		45663089.87		A	0.6
4	☐	1.000		45294319.33		A	1.5
5	☐	1.000		43628170.74		A	1.9
6	☐	1.000		44507769.89		A	1.1
7	☐	1.000		44248426.28		A	1.0
8	☐	1.000		37651634.72		A	5.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3538550.92		A	7.1
2	☐	1.000		3365578.53		A	3.1
3	☐	1.000		3378673.63		A	1.4
4	☐	1.000		3269873.04		A	1.1
5	☐	1.000		3265095.51		A	1.1
6	☐	1.000		3243938.01		A	1.1
7	☐	1.000		3257893.18		A	0.3
8	☐	1.000		2870027.32		A	3.4

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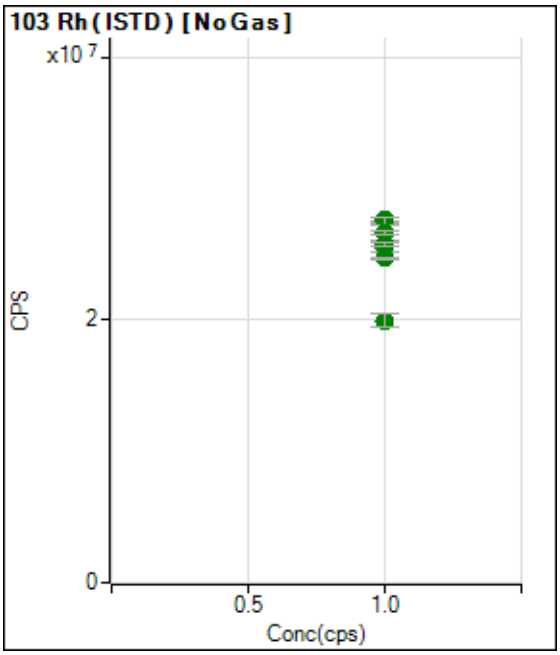

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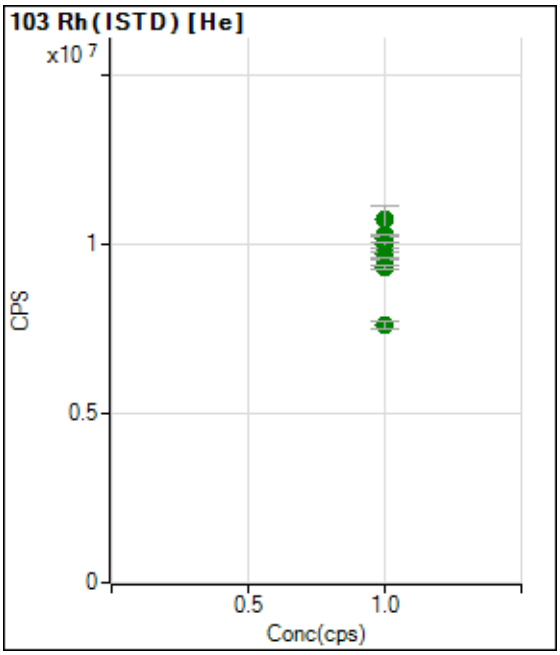
1		1.000		26662063.22		A	4.9
2		1.000		27604095.14		A	1.1
3		1.000		27461223.76		A	2.0
4		1.000		26631367.10		A	1.1
5		1.000		25495974.90		A	2.8
6		1.000		25704078.23		A	1.0
7		1.000		24706265.74		A	0.7
8		1.000		19925964.15		A	5.0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		10735782.96		A	8.0
2		1.000		10178843.67		A	1.6
3		1.000		10274724.15		A	0.8
4		1.000		10011843.67		A	1.7
5		1.000		9722283.19		A	1.9
6		1.000		9595977.08		A	0.5
7		1.000		9334555.21		A	0.8
8		1.000		7647751.48		A	3.0

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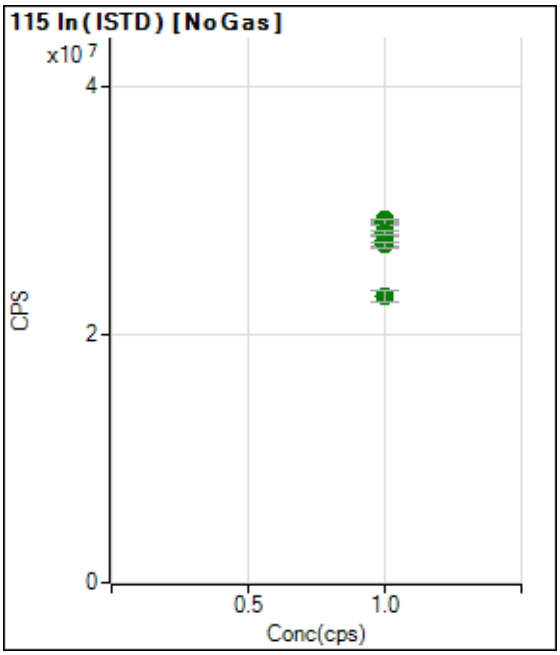
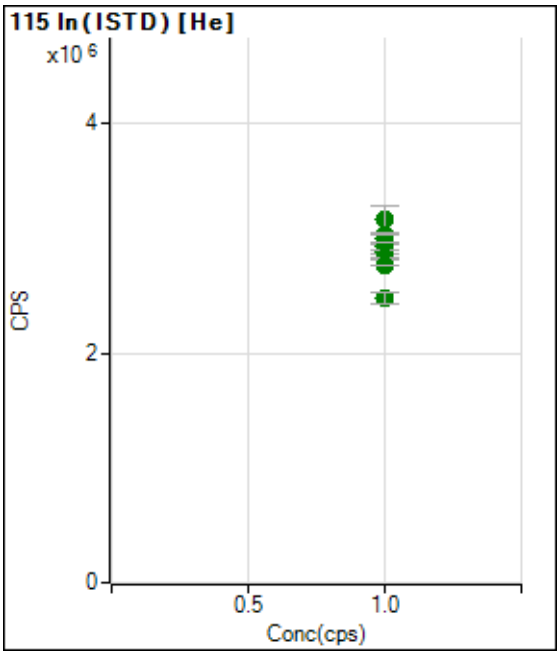
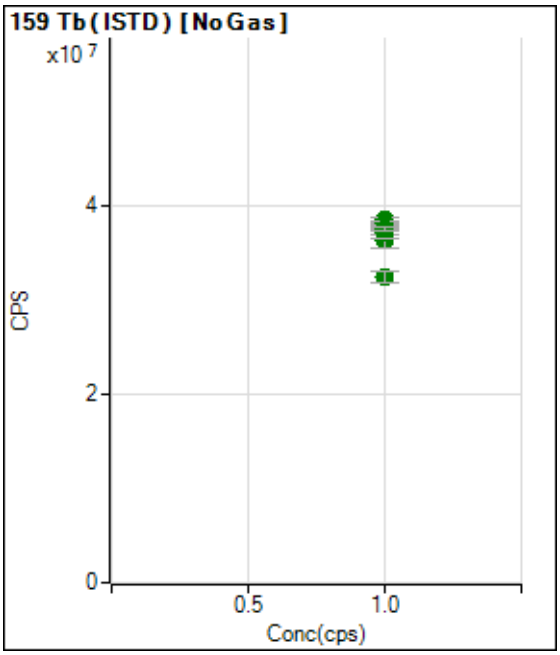


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		28361487.30		A	3.2
2	☐	1.000		29238100.23		A	0.5
3	☐	1.000		29175506.81		A	0.8
4	☐	1.000		29021605.70		A	1.3
5	☐	1.000		27599260.14		A	3.3
6	☐	1.000		28235460.31		A	1.3
7	☐	1.000		27228439.91		A	1.4
8	☐	1.000		23134299.18		A	4.1

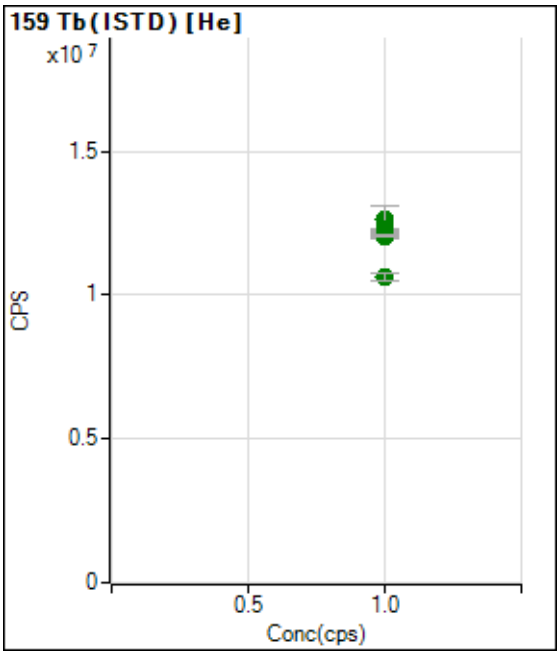


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3163958.04		A	7.6
2	☐	1.000		2997035.03		A	2.7
3	☐	1.000		3039219.72		A	0.6
4	☐	1.000		2929268.33		A	2.2
5	☐	1.000		2888339.81		A	1.3
6	☐	1.000		2826676.42		A	0.5
7	☐	1.000		2767354.37		A	0.6
8	☐	1.000		2484771.65		A	3.7

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

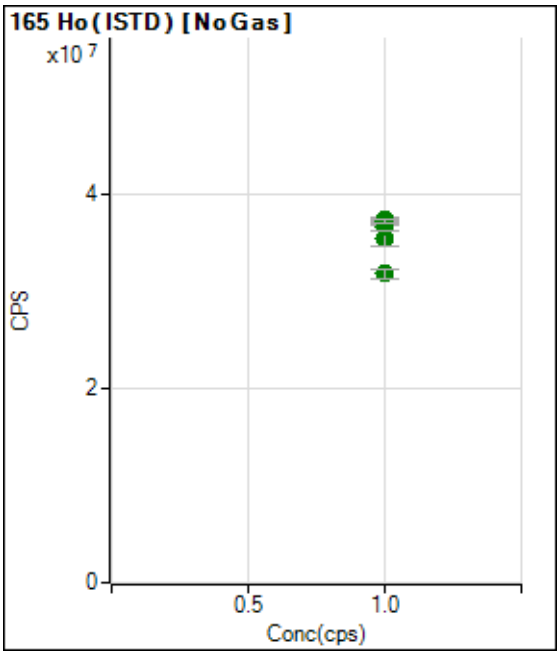


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		36312096.68		A	3.7
2	☐	1.000		37687444.44		A	0.4
3	☐	1.000		38566882.76		A	1.0
4	☐	1.000		38439594.70		A	1.6
5	☐	1.000		37244632.50		A	3.3
6	☐	1.000		38207103.32		A	0.9
7	☐	1.000		37662001.66		A	0.9
8	☐	1.000		32470352.29		A	3.5

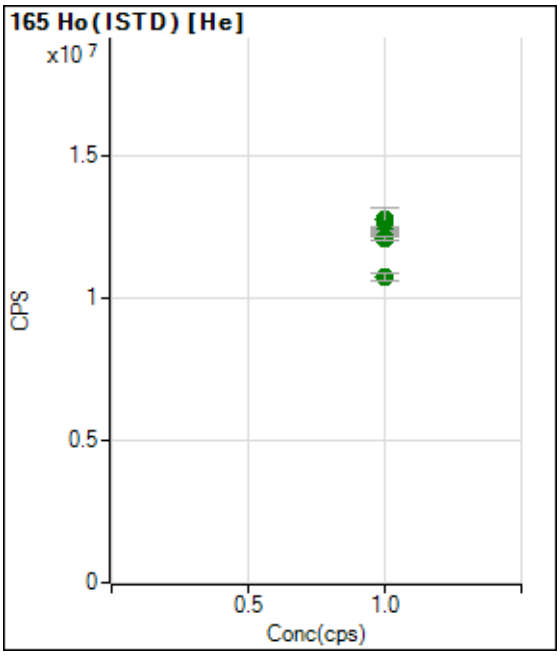


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12618540.65		A	7.5
2	☐	1.000		12104472.74		A	2.5
3	☐	1.000		12303460.93		A	0.2
4	☐	1.000		12205873.85		A	0.3
5	☐	1.000		12121224.82		A	1.1
6	☐	1.000		12127131.07		A	1.0
7	☐	1.000		12065554.40		A	0.8
8	☐	1.000		10623765.95		A	2.8

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

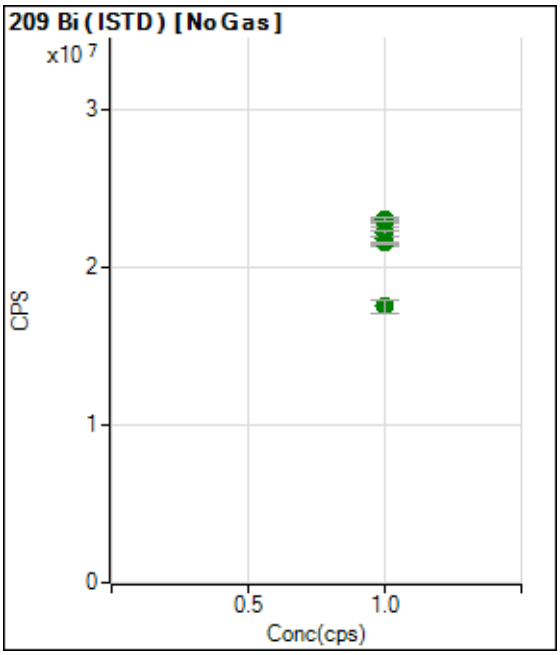


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		35583658.91		A	4.4
2	☐	1.000		37152742.22		A	1.4
3	☐	1.000		37030950.00		A	0.9
4	☐	1.000		37442766.11		A	0.4
5	☐	1.000		36639281.40		A	1.7
6	☐	1.000		37420713.89		A	1.1
7	☐	1.000		37340190.28		A	0.9
8	☐	1.000		31930162.02		A	3.2

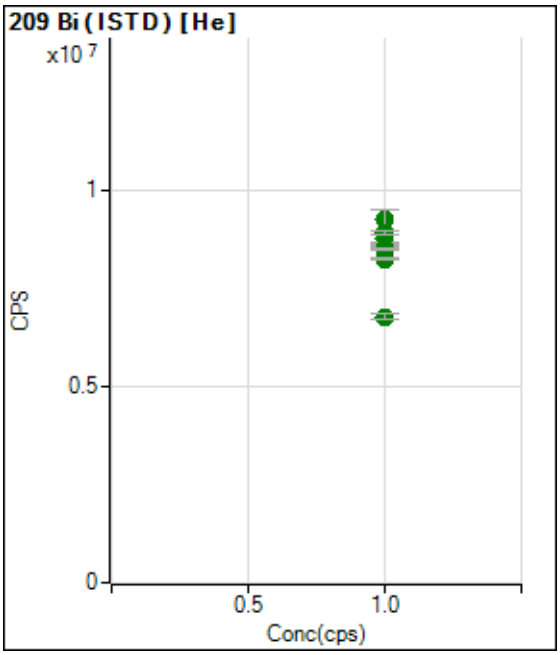


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12722665.36		A	6.7
2	☐	1.000		12164638.01		A	2.6
3	☐	1.000		12435844.26		A	0.5
4	☐	1.000		12207627.46		A	1.1
5	☐	1.000		12111790.65		A	1.4
6	☐	1.000		12276588.43		A	0.6
7	☐	1.000		12082827.18		A	0.9
8	☐	1.000		10739873.59		A	2.7

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		21833401.76		A	4.5
2	☐	1.000		22874614.38		A	1.2
3	☐	1.000		22847362.71		A	1.2
4	☐	1.000		22961542.99		A	0.9
5	☐	1.000		22221727.17		A	2.4
6	☐	1.000		22090829.67		A	1.1
7	☐	1.000		21520206.07		A	0.6
8	☐	1.000		17469663.49		A	4.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9242196.53		A	6.0
2	☐	1.000		8759504.04		A	2.0
3	☐	1.000		8909165.98		A	0.8
4	☐	1.000		8636196.19		A	0.6
5	☐	1.000		8510693.76		A	1.4
6	☐	1.000		8491672.30		A	0.4
7	☐	1.000		8240194.53		A	0.7
8	☐	1.000		6780691.08		A	2.5

US EPA Tune Check Report

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

Operator Name	Jaswal
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\P8121124 MS.b
Acq. Date-Time	2024-12-11 15:52:10
Report Comment	---
Instrument Name	G8403A SG19224459

[No Gas]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9		37836	378362.43			0.664	5.000
24		849783	8497828.44			0.998	5.000
25		117569	1175687.79			0.534	5.000
26		131486	1314860.12			1.552	5.000
59		224889	2248892.41			1.017	5.000
113		25282	252822.31			0.735	5.000
115		345633	3456326.24			0.704	5.000
206		81028	810276.40			1.093	5.000
207		71093	710930.71			0.466	5.000
208		178472	1784718.66			0.743	5.000
220		0	4.90			28.315	

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

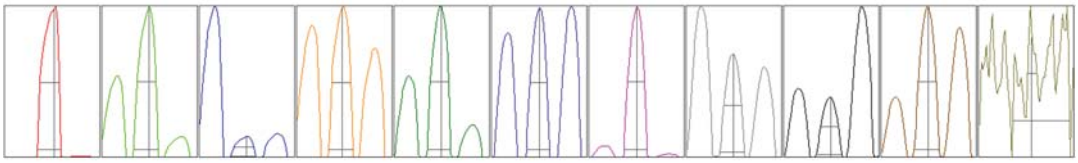
Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	37953	37816	37937	38061	37415
24	859988	856838	845361	839378	847348
25	117970	118254	117640	116621	117360
26	132779	133139	132077	128038	131397
59	226631	226241	225836	220999	224739
113	25150	25563	25114	25210	25374
115	341925	345644	348518	346836	345239
206	80842	80024	82165	81687	80420
207	71061	70634	71392	71433	70945
208	178578	177667	179700	179745	176669

US EPA Tune Check Report

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

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	66536.62	9.10	8.90 - 9.10	
24	1525568.81	24.00	23.90 - 24.10	
25	204687.61	25.00	24.90 - 25.10	
26	232631.68	25.95	25.90 - 26.10	
59	414289.71	59.00	58.90 - 59.10	
113	50429.50	113.05	112.90 - 113.10	
115	690447.89	115.05	114.90 - 115.10	
206	153048.59	206.00	205.90 - 206.10	
207	132872.03	207.00	206.90 - 207.10	
208	333784.64	208.00	207.90 - 208.10	
220	0.75	220.20	-	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.61	0.738	0.900	
24	0.59	0.782	0.900	
25	0.61	0.784	0.900	
26	0.60	0.777	0.900	
59	0.57	0.739	0.900	
113	0.52	0.727	0.900	
115	0.53	0.727	0.900	
206	0.55	0.776	0.900	
207	0.56	0.801	0.900	
208	0.56	0.797	0.900	
220	0.27	1.805		

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

Tune Parameters

Plasma Parameters

Plasma Mode --- Nebulizer Gas 0.78 L/min Dilution Gas 0.40 L/min

US EPA Tune Check Report

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

Lens Parameters

Extract 1	-6.0 V	Omega Lens	10.5 V	Deflect	15.4 V
Extract 2	-210.0 V	Cell Entrance	-30 V	Plate Bias	-50 V
Omega Bias	-95 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	4.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	190 V		

QP Parameters

Mass Gain	121	Axis Gain	0.9966	QP Bias	-4.0 V
Mass Offset	126	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	0.9 mm	Torch V	-1.1 mm

EM

Discriminator	4.1 mV	Analog HV	2165 V	Pulse HV	1040 V

[He]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
59		39484	394836.60			0.575	
89		32582	325820.85			0.796	
205		46900	468995.17			0.576	

Mass	RSD% (Flag)
59	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	39703	39338	39648	39566	39163
89	32945	32717	32445	32534	32270
205	47056	46890	47234	46519	46798

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.78 L/min	Dilution Gas	0.40 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	9.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	-6.0 V	Omega Lens	10.5 V	Deflect	3.4 V

US EPA Tune Check Report

Extract 2	-210.0 V	Cell Entrance	-50 V	Plate Bias	-60 V
Omega Bias	-95 V	Cell Exit	-70 V		

Cell Parameters

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

QP Parameters

Mass Gain	121	Axis Gain	0.9966	QP Bias	-13.0 V
Mass Offset	126	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	0.9 mm	Torch V	-1.1 mm		

EM

Discriminator	4.1 mV	Analog HV	2165 V	Pulse HV	1040 V

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:39:02	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.07	-0.39	0.32	0.00	N/A	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	N/A	ppb
Arsenic	75-2	0.01	0.00	-0.01	0.00	N/A	ppb
Barium	135-1	0.00	0.00	0.00	0.00	N/A	ppb
Barium	137-1	0.00	0.00	0.00	0.00	N/A	ppb
Beryllium	9-1	-0.01	0.01	0.00	0.00	N/A	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	0.02	0.00	-0.02	0.00	N/A	ppb
Cadmium	106-1	0.45	0.45	-0.90	0.00	N/A	ppb
Cadmium	111-1	0.04	0.03	-0.07	0.00	N/A	ppb
Calcium	43-1	-0.35	0.55	-0.21	0.00	N/A	ppb
Calcium	44-1	-0.42	-0.12	0.54	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	-0.03	0.03	0.00	N/A	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	N/A	ppb
Copper	63-2	-0.02	-0.05	0.07	0.00	N/A	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				100		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	54-2	-0.14	-0.13	0.26	0.00	N/A	ppb
Iron	56-2	-0.05	-0.08	0.12	0.00	N/A	ppb
Iron	57-2	-0.10	-0.20	0.30	0.00	N/A	ppb
Krypton	83-1						cps
Lead	206-1	-0.01	-0.01	0.01	0.00	N/A	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:39:02	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.00	0.00	0.00	0.00	N/A	ppb
Lead	208-1	0.00	0.00	0.00	0.00	N/A	ppb
Lithium	6-1				100		%
Magnesium	24-2	0.18	-0.10	-0.08	0.00	N/A	ppb
Manganese	55-2	0.01	-0.02	0.01	0.00	N/A	ppb
Molybdenum	94-1	0.00	-0.01	0.01	0.00	N/A	ppb
Molybdenum	95-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	96-1	0.00	0.01	0.00	0.00	N/A	ppb
Molybdenum	97-1	0.00	0.00	0.01	0.00	N/A	ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00	N/A	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.01	-0.03	0.04	0.00	N/A	ppb
Phosphorus	31-2	-9.98	-20.40	-13.77	-14.72		ppb
Potassium	39-2	-0.16	-3.87	4.03	0.00	N/A	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	-0.03	-0.02	0.06	0.00	N/A	ppb
Selenium	77-2	-0.16	0.31	-0.16	0.00	N/A	ppb
Selenium	78-2	-0.06	0.07	-0.01	0.00	N/A	ppb
Silicon	28-1	-0.06	-0.06	0.12	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	-2.95	-4.55	7.50	0.00	N/A	ppb
Strontium	86-1	-0.01	0.08	-0.07	0.00	N/A	ppb
Strontium	88-1	-0.02	-0.01	0.03	0.00	N/A	ppb
Sulfur	34-1	-209.99	82.69	303.69	58.80	438.24	ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.00	0.00	0.00	0.00	N/A	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	N/A	ppb
Tin	118-1	0.00	0.00	0.01	0.00	N/A	ppb
Titanium	47-1	-0.01	-0.02	0.02	0.00	N/A	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	N/A	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:39:02	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00	N/A	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	0.01	-0.07	0.06	0.00	N/A	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	N/A	ppb
Zirconium	91-1	0.00	0.00	0.00	0.00	N/A	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P8
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:45:39	DataFile Name :	006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20.24	19.68	19.71	19.87	1.58	ppb
Antimony	121-1	2.15	2.12	2.07	2.11	2.04	ppb
Arsenic	75-2	1.20	1.21	1.10	1.17	5.14	ppb
Barium	135-1	10.29	10.33	10.31	10.31	0.20	ppb
Barium	137-1	10.40	10.34	10.40	10.38	0.34	ppb
Beryllium	9-1	1.10	1.13	1.12	1.12	1.19	ppb
Bismuth	209-1				105		%
Bismuth	209-2				95		%
Bromine	81-1						cps
Cadmium	108-1	1.11	1.06	1.22	1.13	7.32	ppb
Cadmium	106-1	1.46	0.90	0.78	1.05	35.07	ppb
Cadmium	111-1	1.15	1.12	1.13	1.13	1.56	ppb
Calcium	43-1	500.72	506.81	502.86	503.47	0.61	ppb
Calcium	44-1	499.76	496.18	508.41	501.45	1.25	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.15	2.06	2.12	2.11	2.18	ppb
Cobalt	59-2	1.21	1.13	1.16	1.17	3.56	ppb
Copper	63-2	2.35	2.17	2.25	2.26	3.92	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				96		%
Indium	115-1				103		%
Indium	115-2				95		%
Iron	54-2	60.23	54.16	58.48	57.62	5.43	ppb
Iron	56-2	56.52	54.69	54.60	55.27	1.96	ppb
Iron	57-2	55.57	55.18	55.09	55.28	0.46	ppb
Krypton	83-1						cps
Lead	206-1	0.97	0.97	0.99	0.97	1.19	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P8
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:45:39	DataFile Name :	006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.98	0.97	0.96	0.97	1.09	ppb
Lead	208-1	0.98	0.97	0.97	0.97	0.60	ppb
Lithium	6-1				104		%
Magnesium	24-2	607.98	579.71	583.47	590.39	2.60	ppb
Manganese	55-2	1.02	0.93	1.05	1.00	6.28	ppb
Molybdenum	94-1	5.75	5.93	6.09	5.93	2.88	ppb
Molybdenum	95-1	4.86	5.05	5.15	5.02	2.89	ppb
Molybdenum	96-1	4.97	4.98	5.24	5.06	3.01	ppb
Molybdenum	97-1	4.96	5.00	5.14	5.03	1.84	ppb
Molybdenum	98-1	4.86	5.08	5.13	5.02	2.95	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.31	1.28	1.23	1.28	3.03	ppb
Phosphorus	31-2	27.65	12.64	3.86	14.72	81.74	ppb
Potassium	39-2	537.07	511.46	512.20	520.24	2.80	ppb
Rhodium	103-1				104		%
Rhodium	103-2				95		%
Scandium	45-1				103		%
Scandium	45-2				95		%
Selenium	82-1	5.58	5.69	5.71	5.66	1.29	ppb
Selenium	77-2	6.31	6.99	6.47	6.59	5.36	ppb
Selenium	78-2	5.33	6.51	7.55	6.46	17.15	ppb
Silicon	28-1	0.23	0.23	0.29	0.25	13.43	ppb
Silver	107-1	1.03	1.07	1.06	1.06	2.00	ppb
Silver	109-1	1.05	1.08	1.09	1.07	1.53	ppb
Sodium	23-2	559.60	529.67	537.29	542.19	2.87	ppb
Strontium	86-1	24.39	25.31	25.91	25.20	3.03	ppb
Strontium	88-1	24.75	25.46	25.92	25.38	2.33	ppb
Sulfur	34-1	-88.31	-89.34	1.26	-58.80		ppb
Terbium	159-1				104		%
Terbium	159-2				96		%
Thallium	203-1	0.96	0.98	0.95	0.96	1.29	ppb
Thallium	205-1	0.98	1.00	0.96	0.98	1.57	ppb
Tin	118-1	5.28	5.30	5.25	5.27	0.55	ppb
Titanium	47-1	5.23	5.28	5.36	5.29	1.31	ppb
Uranium	238-1	0.93	0.93	0.91	0.93	1.16	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P8
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:45:39	DataFile Name :	006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	5.54	5.47	5.36	5.46	1.66	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				95		%
Zinc	66-2	5.08	4.94	4.69	4.91	4.03	ppb
Zirconium	90-1	0.96	1.00	1.00	0.99	2.23	ppb
Zirconium	91-1	0.95	1.01	0.99	0.99	3.26	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P8
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:48:57	DataFile Name :	007CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1018.70	1034.79	1033.88	1029.12	0.88	ppb
Antimony	121-1	47.89	48.86	48.84	48.53	1.14	ppb
Arsenic	75-2	52.69	51.39	51.43	51.84	1.42	ppb
Barium	135-1	236.39	241.58	239.70	239.22	1.10	ppb
Barium	137-1	251.03	253.07	253.96	252.69	0.60	ppb
Beryllium	9-1	53.17	50.30	50.63	51.37	3.06	ppb
Bismuth	209-1				105		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	51.11	52.48	54.77	52.79	3.51	ppb
Cadmium	106-1	50.68	53.41	53.14	52.41	2.87	ppb
Cadmium	111-1	49.90	51.75	51.46	51.04	1.95	ppb
Calcium	43-1	4713.60	4788.37	4811.29	4771.08	1.07	ppb
Calcium	44-1	4940.50	4923.96	4990.18	4951.55	0.70	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	48.83	49.84	50.03	49.57	1.31	ppb
Cobalt	59-2	50.20	51.05	51.75	51.00	1.52	ppb
Copper	63-2	543.42	551.22	550.75	548.47	0.80	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				98		%
Indium	115-1				103		%
Indium	115-2				96		%
Iron	54-2	2586.57	2606.25	2600.89	2597.90	0.39	ppb
Iron	56-2	2634.93	2631.99	2652.67	2639.86	0.42	ppb
Iron	57-2	2530.82	2541.95	2605.73	2559.50	1.58	ppb
Krypton	83-1						cps
Lead	206-1	246.21	253.00	254.29	251.17	1.73	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P8
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:48:57	DataFile Name :	007CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	248.61	251.74	253.32	251.22	0.96	ppb
Lead	208-1	247.56	247.96	250.20	248.57	0.57	ppb
Lithium	6-1				104		%
Magnesium	24-2	5635.69	5765.97	5710.75	5704.14	1.15	ppb
Manganese	55-2	501.33	504.72	507.79	504.61	0.64	ppb
Molybdenum	94-1	505.85	512.44	505.62	507.97	0.76	ppb
Molybdenum	95-1	511.20	498.37	506.46	505.34	1.28	ppb
Molybdenum	96-1	507.72	498.86	498.84	501.80	1.02	ppb
Molybdenum	97-1	521.80	510.36	497.22	509.79	2.41	ppb
Molybdenum	98-1	506.35	507.47	499.96	504.59	0.80	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	55.09	56.07	56.51	55.89	1.30	ppb
Phosphorus	31-2	1002.88	1054.14	1031.49	1029.50	2.50	ppb
Potassium	39-2	2437.45	2412.46	2473.44	2441.11	1.26	ppb
Rhodium	103-1				103		%
Rhodium	103-2				96		%
Scandium	45-1				104		%
Scandium	45-2				94		%
Selenium	82-1	51.03	51.14	51.36	51.18	0.33	ppb
Selenium	77-2	51.97	70.58	57.74	60.10	15.85	ppb
Selenium	78-2	42.84	53.24	52.45	49.51	11.69	ppb
Silicon	28-1	52.94	54.18	52.92	53.35	1.35	ppb
Silver	107-1	54.82	55.68	55.82	55.44	0.98	ppb
Silver	109-1	50.55	55.37	54.76	53.56	4.90	ppb
Sodium	23-2	5151.82	5325.12	5294.06	5257.00	1.76	ppb
Strontium	86-1	1212.39	1197.08	1202.30	1203.92	0.65	ppb
Strontium	88-1	1279.77	1275.77	1242.56	1266.03	1.61	ppb
Sulfur	34-1	1026.38	1061.17	1040.46	1042.67	1.68	ppb
Terbium	159-1				106		%
Terbium	159-2				98		%
Thallium	203-1	46.01	47.36	47.98	47.12	2.13	ppb
Thallium	205-1	48.88	51.24	49.76	49.96	2.39	ppb
Tin	118-1	48.33	50.11	49.45	49.30	1.82	ppb
Titanium	47-1	511.05	504.74	518.90	511.56	1.39	ppb
Uranium	238-1	47.67	46.70	48.70	47.69	2.10	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P8
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:48:57	DataFile Name :	007CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	49.08	49.83	49.90	49.60	0.91	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				95		%
Zinc	66-2	503.53	512.20	517.53	511.08	1.38	ppb
Zirconium	90-1	51.97	50.26	51.17	51.14	1.67	ppb
Zirconium	91-1	47.95	47.76	47.75	47.82	0.24	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P8
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:51:58	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2501.10	2548.85	2545.21	2531.72	1.05	ppb
Antimony	121-1	124.18	128.90	127.23	126.77	1.89	ppb
Arsenic	75-2	129.02	129.11	132.80	130.31	1.66	ppb
Barium	135-1	605.47	628.43	630.32	621.40	2.23	ppb
Barium	137-1	613.65	626.36	622.92	620.97	1.06	ppb
Beryllium	9-1	124.29	122.51	123.77	123.52	0.74	ppb
Bismuth	209-1				105		%
Bismuth	209-2				93		%
Bromine	81-1						cps
Cadmium	108-1	128.00	134.20	132.78	131.66	2.47	ppb
Cadmium	106-1	124.92	129.39	132.38	128.90	2.91	ppb
Cadmium	111-1	121.21	126.00	126.15	124.45	2.26	ppb
Calcium	43-1	11993.40	11994.23	12067.11	12018.24	0.35	ppb
Calcium	44-1	12449.96	12451.21	12537.65	12479.61	0.40	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	123.81	123.98	123.89	123.89	0.07	ppb
Cobalt	59-2	128.00	126.69	129.25	127.98	1.00	ppb
Copper	63-2	1325.59	1354.41	1359.23	1346.41	1.35	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				96		%
Indium	115-1				102		%
Indium	115-2				93		%
Iron	54-2	6680.33	6680.39	6832.96	6731.23	1.31	ppb
Iron	56-2	6686.09	6603.84	6567.51	6619.15	0.92	ppb
Iron	57-2	6326.49	6434.97	6517.19	6426.21	1.49	ppb
Krypton	83-1						cps
Lead	206-1	619.79	614.73	602.96	612.49	1.41	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P8
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:51:58	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	614.33	608.85	600.16	607.78	1.18	ppb
Lead	208-1	612.43	608.09	604.91	608.48	0.62	ppb
Lithium	6-1				103		%
Magnesium	24-2	14018.15	13886.71	14183.47	14029.44	1.06	ppb
Manganese	55-2	1324.20	1312.34	1309.35	1315.30	0.60	ppb
Molybdenum	94-1	1239.30	1267.94	1269.12	1258.78	1.34	ppb
Molybdenum	95-1	1227.74	1271.16	1275.02	1257.97	2.09	ppb
Molybdenum	96-1	1223.84	1249.32	1269.73	1247.63	1.84	ppb
Molybdenum	97-1	1253.55	1254.15	1274.17	1260.62	0.93	ppb
Molybdenum	98-1	1246.18	1272.47	1258.77	1259.14	1.04	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	127.23	129.44	128.86	128.51	0.89	ppb
Phosphorus	31-2	2663.84	2568.90	2627.46	2620.07	1.83	ppb
Potassium	39-2	6302.62	6329.44	6208.92	6280.33	1.01	ppb
Rhodium	103-1				100		%
Rhodium	103-2				93		%
Scandium	45-1				100		%
Scandium	45-2				90		%
Selenium	82-1	128.33	130.11	133.12	130.52	1.85	ppb
Selenium	77-2	132.68	132.04	143.76	136.16	4.84	ppb
Selenium	78-2	129.78	136.94	136.79	134.50	3.04	ppb
Silicon	28-1	132.51	132.35	133.93	132.93	0.66	ppb
Silver	107-1	128.94	133.07	135.49	132.50	2.50	ppb
Silver	109-1	130.28	136.54	134.16	133.66	2.36	ppb
Sodium	23-2	13103.85	13064.57	13374.03	13180.82	1.28	ppb
Strontium	86-1	2919.39	2984.76	3013.29	2972.48	1.62	ppb
Strontium	88-1	3038.74	3069.28	3137.16	3081.73	1.63	ppb
Sulfur	34-1	2785.87	2713.33	2760.95	2753.38	1.34	ppb
Terbium	159-1				106		%
Terbium	159-2				97		%
Thallium	203-1	124.39	125.15	121.54	123.69	1.54	ppb
Thallium	205-1	121.61	122.14	120.61	121.45	0.64	ppb
Tin	118-1	126.73	129.98	129.97	128.89	1.45	ppb
Titanium	47-1	1273.23	1281.83	1281.72	1278.93	0.39	ppb
Uranium	238-1	118.67	115.76	119.18	117.87	1.57	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P8
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:51:58	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	123.21	123.71	124.20	123.71	0.40	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				103		%
Yttrium	89-2				92		%
Zinc	66-2	1278.24	1275.20	1295.26	1282.90	0.84	ppb
Zirconium	90-1	121.92	125.78	125.84	124.51	1.80	ppb
Zirconium	91-1	115.05	118.25	120.13	117.81	2.18	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P8
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:54:50	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4911.32	4977.09	4973.00	4953.80	0.74	ppb
Antimony	121-1	260.81	257.03	242.51	253.45	3.81	ppb
Arsenic	75-2	253.34	252.57	255.47	253.79	0.59	ppb
Barium	135-1	1288.61	1285.79	1220.86	1265.09	3.03	ppb
Barium	137-1	1288.04	1264.93	1219.43	1257.47	2.78	ppb
Beryllium	9-1	263.44	268.36	249.23	260.34	3.81	ppb
Bismuth	209-1				102		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Cadmium	108-1	269.14	267.59	251.86	262.86	3.64	ppb
Cadmium	106-1	266.81	260.69	252.05	259.85	2.85	ppb
Cadmium	111-1	254.93	251.38	241.45	249.25	2.80	ppb
Calcium	43-1	26738.68	25151.47	24739.20	25543.12	4.13	ppb
Calcium	44-1	25787.94	25076.39	24559.13	25141.16	2.45	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	240.62	242.72	242.43	241.93	0.47	ppb
Cobalt	59-2	256.08	262.01	262.97	260.36	1.43	ppb
Copper	63-2	2642.40	2614.30	2609.07	2621.92	0.68	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				95		%
Indium	115-1				97		%
Indium	115-2				91		%
Iron	54-2	13308.38	13389.85	13056.17	13251.47	1.31	ppb
Iron	56-2	12911.78	13032.74	13186.84	13043.79	1.06	ppb
Iron	57-2	12537.84	12551.51	12584.90	12558.08	0.19	ppb
Krypton	83-1						cps
Lead	206-1	1254.30	1211.94	1215.81	1227.35	1.91	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P8
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:54:50	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1268.79	1229.64	1227.51	1241.98	1.87	ppb
Lead	208-1	1272.78	1235.17	1216.87	1241.61	2.30	ppb
Lithium	6-1				99		%
Magnesium	24-2	27587.90	26542.06	27232.16	27120.71	1.96	ppb
Manganese	55-2	2525.41	2577.65	2582.95	2562.00	1.24	ppb
Molybdenum	94-1	2594.97	2586.99	2502.08	2561.35	2.01	ppb
Molybdenum	95-1	2608.10	2580.54	2514.41	2567.68	1.88	ppb
Molybdenum	96-1	2589.68	2567.79	2480.51	2546.00	2.27	ppb
Molybdenum	97-1	2582.93	2550.84	2492.51	2542.10	1.80	ppb
Molybdenum	98-1	2565.52	2558.44	2513.04	2545.67	1.12	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	248.89	247.51	249.68	248.70	0.44	ppb
Phosphorus	31-2	5212.36	5046.27	5006.90	5088.51	2.14	ppb
Potassium	39-2	12010.41	12402.80	12467.81	12293.67	2.01	ppb
Rhodium	103-1				96		%
Rhodium	103-2				91		%
Scandium	45-1				97		%
Scandium	45-2				89		%
Selenium	82-1	259.77	260.53	254.16	258.15	1.35	ppb
Selenium	77-2	257.01	262.83	238.32	252.72	5.07	ppb
Selenium	78-2	239.40	255.85	255.12	250.12	3.72	ppb
Silicon	28-1	270.88	266.59	256.22	264.56	2.85	ppb
Silver	107-1	271.54	264.63	251.02	262.40	3.98	ppb
Silver	109-1	268.95	264.90	255.13	262.99	2.70	ppb
Sodium	23-2	26008.59	25565.48	25934.19	25836.09	0.92	ppb
Strontium	86-1	6583.19	6464.05	6259.01	6435.42	2.55	ppb
Strontium	88-1	6426.06	6401.02	6098.45	6308.51	2.89	ppb
Sulfur	34-1	5743.48	5303.22	5010.61	5352.44	6.89	ppb
Terbium	159-1				103		%
Terbium	159-2				96		%
Thallium	203-1	250.28	245.74	243.19	246.40	1.46	ppb
Thallium	205-1	252.93	246.50	240.00	246.48	2.62	ppb
Tin	118-1	264.19	257.47	248.44	256.70	3.08	ppb
Titanium	47-1	2644.85	2571.29	2449.27	2555.13	3.87	ppb
Uranium	238-1	251.09	245.27	236.87	244.41	2.92	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P8
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:54:50	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	243.80	242.84	246.34	244.33	0.74	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				92		%
Zinc	66-2	2680.90	2604.19	2594.16	2626.42	1.81	ppb
Zirconium	90-1	256.67	252.87	247.88	252.47	1.75	ppb
Zirconium	91-1	259.31	257.86	245.41	254.19	3.01	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P8
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:57:37	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9792.43	9757.86	9813.40	9787.89	0.29	ppb
Antimony	121-1	493.47	490.45	498.85	494.26	0.86	ppb
Arsenic	75-2	501.71	505.24	513.72	506.89	1.22	ppb
Barium	135-1	2473.48	2391.21	2517.56	2460.75	2.61	ppb
Barium	137-1	2449.54	2464.17	2542.86	2485.52	2.02	ppb
Beryllium	9-1	501.45	508.26	490.78	500.16	1.76	ppb
Bismuth	209-1				101		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Cadmium	108-1	503.52	499.53	508.05	503.70	0.85	ppb
Cadmium	106-1	504.93	492.92	508.09	501.98	1.59	ppb
Cadmium	111-1	502.23	509.55	515.80	509.19	1.33	ppb
Calcium	43-1	48925.51	48945.78	49348.66	49073.32	0.49	ppb
Calcium	44-1	48696.75	49594.04	49596.87	49295.89	1.05	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	512.98	517.97	512.92	514.62	0.56	ppb
Cobalt	59-2	511.08	509.90	515.23	512.07	0.55	ppb
Copper	63-2	5171.50	5134.38	5134.48	5146.79	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				105		%
Holmium	165-2				96		%
Indium	115-1				100		%
Indium	115-2				89		%
Iron	54-2	26312.44	25620.97	26120.87	26018.10	1.37	ppb
Iron	56-2	25558.04	25401.09	25580.65	25513.26	0.38	ppb
Iron	57-2	25835.86	25722.87	25958.02	25838.92	0.46	ppb
Krypton	83-1						cps
Lead	206-1	2403.88	2469.05	2481.47	2451.47	1.70	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P8
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:57:37	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2436.06	2492.93	2540.51	2489.83	2.10	ppb
Lead	208-1	2434.04	2466.02	2511.08	2470.38	1.57	ppb
Lithium	6-1				99		%
Magnesium	24-2	54365.15	53489.09	54444.19	54099.48	0.98	ppb
Manganese	55-2	5118.68	5085.83	5032.30	5078.94	0.86	ppb
Molybdenum	94-1	4924.07	5110.29	4953.66	4996.00	2.00	ppb
Molybdenum	95-1	4877.40	5126.58	4968.42	4990.80	2.53	ppb
Molybdenum	96-1	4903.91	5073.18	5000.74	4992.61	1.70	ppb
Molybdenum	97-1	4935.65	5063.25	5004.75	5001.22	1.28	ppb
Molybdenum	98-1	4954.07	5111.79	4918.04	4994.63	2.06	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	486.19	490.49	494.49	490.39	0.85	ppb
Phosphorus	31-2	9932.45	10164.38	10019.59	10038.81	1.17	ppb
Potassium	39-2	24208.58	23882.59	24096.84	24062.67	0.69	ppb
Rhodium	103-1				96		%
Rhodium	103-2				89		%
Scandium	45-1				98		%
Scandium	45-2				89		%
Selenium	82-1	492.82	507.72	504.27	501.60	1.56	ppb
Selenium	77-2	501.25	521.97	515.09	512.77	2.06	ppb
Selenium	78-2	518.77	519.50	507.48	515.25	1.31	ppb
Silicon	28-1	502.66	522.82	515.93	513.80	1.99	ppb
Silver	107-1	510.18	499.86	513.08	507.71	1.37	ppb
Silver	109-1	501.55	506.14	508.16	505.28	0.67	ppb
Sodium	23-2	51118.62	50207.42	51643.25	50989.76	1.42	ppb
Strontium	86-1	12421.25	12633.31	12728.75	12594.44	1.25	ppb
Strontium	88-1	12143.85	12524.61	12478.78	12382.41	1.68	ppb
Sulfur	34-1	9685.65	9883.41	10175.95	9915.01	2.49	ppb
Terbium	159-1				105		%
Terbium	159-2				96		%
Thallium	203-1	482.14	498.90	492.57	491.20	1.72	ppb
Thallium	205-1	487.56	495.94	491.59	491.70	0.85	ppb
Tin	118-1	491.99	496.49	497.74	495.41	0.61	ppb
Titanium	47-1	4909.66	5072.29	5075.58	5019.18	1.89	ppb
Uranium	238-1	486.61	485.53	503.03	491.72	1.99	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P8
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:57:37	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	507.46	507.20	517.91	510.86	1.20	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				102		%
Yttrium	89-2				92		%
Zinc	66-2	5204.48	5066.23	5127.70	5132.81	1.35	ppb
Zirconium	90-1	495.08	510.89	496.10	500.69	1.77	ppb
Zirconium	91-1	483.97	513.64	495.06	497.56	3.01	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P8
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:00:22	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20158.81	20025.46	20367.09	20183.78	0.85	ppb
Antimony	121-1	996.78	1009.62	999.18	1001.86	0.68	ppb
Arsenic	75-2	1000.31	992.42	991.83	994.85	0.48	ppb
Barium	135-1	5019.96	5051.78	4978.78	5016.84	0.73	ppb
Barium	137-1	4997.20	5029.70	4990.32	5005.74	0.42	ppb
Beryllium	9-1	1005.31	986.37	1000.67	997.45	0.99	ppb
Bismuth	209-1				99		%
Bismuth	209-2				89		%
Bromine	81-1						cps
Cadmium	108-1	986.86	1007.57	987.46	993.96	1.19	ppb
Cadmium	106-1	988.52	1003.80	995.50	995.94	0.77	ppb
Cadmium	111-1	989.63	1014.02	983.17	995.61	1.63	ppb
Calcium	43-1	94289.28	97995.47	98718.15	97000.97	2.45	ppb
Calcium	44-1	95650.87	98126.15	99872.85	97883.29	2.17	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	995.95	978.60	1010.05	994.87	1.58	ppb
Cobalt	59-2	984.92	987.66	1000.29	990.95	0.83	ppb
Copper	63-2	9780.63	9855.23	10009.10	9881.65	1.18	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				95		%
Indium	115-1				96		%
Indium	115-2				87		%
Iron	54-2	50791.48	50470.66	51216.67	50826.27	0.74	ppb
Iron	56-2	49600.76	50830.71	49945.45	50125.64	1.27	ppb
Iron	57-2	49608.37	50325.34	51027.82	50320.51	1.41	ppb
Krypton	83-1						cps
Lead	206-1	5026.90	5026.63	5040.77	5031.43	0.16	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P8
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:00:22	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	5071.00	4963.03	4993.50	5009.18	1.11	ppb
Lead	208-1	5041.67	5012.43	5003.03	5019.04	0.40	ppb
Lithium	6-1				92		%
Magnesium	24-2	104946.71	105656.85	105679.52	105427.69	0.40	ppb
Manganese	55-2	9935.18	9958.87	9915.87	9936.64	0.22	ppb
Molybdenum	94-1	10019.52	9978.28	9957.69	9985.17	0.32	ppb
Molybdenum	95-1	10079.92	9871.70	10007.62	9986.42	1.06	ppb
Molybdenum	96-1	10041.46	9851.13	10084.61	9992.40	1.24	ppb
Molybdenum	97-1	9991.86	9888.02	10081.28	9987.05	0.97	ppb
Molybdenum	98-1	10076.50	9906.25	9986.94	9989.89	0.85	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	987.06	1004.24	1021.89	1004.40	1.73	ppb
Phosphorus	31-2	19934.32	19598.37	20293.26	19941.98	1.74	ppb
Potassium	39-2	48152.16	48431.05	48335.88	48306.36	0.29	ppb
Rhodium	103-1				93		%
Rhodium	103-2				87		%
Scandium	45-1				99		%
Scandium	45-2				89		%
Selenium	82-1	997.05	990.66	1001.51	996.41	0.55	ppb
Selenium	77-2	997.77	997.09	978.22	991.03	1.12	ppb
Selenium	78-2	976.02	995.54	1001.96	991.17	1.36	ppb
Silicon	28-1	978.58	985.67	1000.93	988.40	1.16	ppb
Silver	107-1	991.04	996.92	987.56	991.84	0.48	ppb
Silver	109-1	986.19	1011.89	980.46	992.85	1.69	ppb
Sodium	23-2	101263.91	100448.12	100985.36	100899.13	0.41	ppb
Strontium	86-1	24696.68	24715.84	25320.53	24911.02	1.42	ppb
Strontium	88-1	25177.13	24795.31	25128.21	25033.55	0.83	ppb
Sulfur	34-1	19413.92	20169.46	20178.36	19920.58	2.20	ppb
Terbium	159-1				104		%
Terbium	159-2				96		%
Thallium	203-1	1003.26	1001.57	1011.99	1005.61	0.56	ppb
Thallium	205-1	1000.06	1015.84	1000.54	1005.48	0.89	ppb
Tin	118-1	999.57	1007.57	993.36	1000.17	0.71	ppb
Titanium	47-1	9798.61	10090.51	10028.18	9972.43	1.54	ppb
Uranium	238-1	1015.95	989.45	1014.23	1006.54	1.47	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P8
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:00:22	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	1003.29	978.95	1006.27	996.17	1.50	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				92		%
Zinc	66-2	9858.87	9799.14	10033.97	9897.33	1.23	ppb
Zirconium	90-1	1002.34	1002.26	992.52	999.04	0.57	ppb
Zirconium	91-1	1008.63	981.83	1013.09	1001.18	1.69	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P8
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:03:09	DataFile Name :	012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	101547.11	98419.63	99990.29	99985.68	1.56	ppb
Antimony	121-1	0.47	0.46	0.45	0.46	2.18	ppb
Arsenic	75-2	0.52	0.46	0.66	0.54	18.96	ppb
Barium	135-1	1.75	1.74	1.77	1.75	0.82	ppb
Barium	137-1	1.76	1.78	1.76	1.77	0.77	ppb
Beryllium	9-1	0.28	0.26	0.23	0.26	10.11	ppb
Bismuth	209-1				80		%
Bismuth	209-2				73		%
Bromine	81-1						cps
Cadmium	108-1	0.56	0.35	0.43	0.45	24.18	ppb
Cadmium	106-1	-0.97	-0.79	-0.84	-0.87		ppb
Cadmium	111-1	0.02	0.06	0.04	0.04	51.60	ppb
Calcium	43-1	500168.74	506515.06	495355.15	500679.65	1.12	ppb
Calcium	44-1	498441.57	501828.70	501192.80	500487.69	0.36	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.04	1.29	1.05	1.13	12.54	ppb
Cobalt	59-2	2.14	2.05	2.04	2.08	2.73	ppb
Copper	63-2	2.51	2.44	2.45	2.47	1.71	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				90		%
Holmium	165-2				84		%
Indium	115-1				82		%
Indium	115-2				79		%
Iron	54-2	250893.74	247636.24	250517.08	249682.35	0.71	ppb
Iron	56-2	250230.98	251514.23	247911.97	249885.73	0.73	ppb
Iron	57-2	250318.64	250442.03	248771.63	249844.10	0.37	ppb
Krypton	83-1						cps
Lead	206-1	0.73	0.72	0.68	0.71	3.58	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P8
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:03:09	DataFile Name :	012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.70	0.72	0.69	0.70	2.51	ppb
Lead	208-1	0.72	0.72	0.70	0.71	1.89	ppb
Lithium	6-1				80		%
Magnesium	24-2	504907.06	496681.30	493470.98	498353.11	1.18	ppb
Manganese	55-2	3.38	3.37	3.34	3.36	0.70	ppb
Molybdenum	94-1	1.88	1.83	1.70	1.80	5.21	ppb
Molybdenum	95-1	1.56	1.39	1.31	1.42	9.23	ppb
Molybdenum	96-1	1.99	1.77	1.65	1.80	9.52	ppb
Molybdenum	97-1	1.40	1.23	1.05	1.22	14.29	ppb
Molybdenum	98-1	1.25	1.02	0.92	1.06	15.56	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.85	2.89	2.76	2.83	2.34	ppb
Phosphorus	31-2	-7.43	-1.39	-4.89	-4.57		ppb
Potassium	39-2	249815.12	252929.52	248583.07	250442.57	0.89	ppb
Rhodium	103-1				75		%
Rhodium	103-2				71		%
Scandium	45-1				82		%
Scandium	45-2				77		%
Selenium	82-1	-0.25	-0.26	-0.30	-0.27		ppb
Selenium	77-2	1.10	-0.16	0.43	0.46	136.91	ppb
Selenium	78-2	0.81	0.94	0.04	0.60	82.14	ppb
Silicon	28-1	1.42	1.24	1.33	1.33	6.84	ppb
Silver	107-1	0.14	0.13	0.11	0.12	11.72	ppb
Silver	109-1	0.13	0.12	0.11	0.12	8.06	ppb
Sodium	23-2	503341.85	494837.04	500800.39	499659.76	0.87	ppb
Strontium	86-1	69.06	70.67	72.11	70.61	2.16	ppb
Strontium	88-1	69.79	71.14	70.71	70.55	0.98	ppb
Sulfur	34-1	-925.07	-955.69	-900.73	-927.16		ppb
Terbium	159-1				89		%
Terbium	159-2				84		%
Thallium	203-1	0.07	0.06	0.04	0.06	22.32	ppb
Thallium	205-1	0.08	0.06	0.05	0.06	21.81	ppb
Tin	118-1	0.15	0.15	0.16	0.16	3.39	ppb
Titanium	47-1	1.54	1.50	1.57	1.54	2.13	ppb
Uranium	238-1	0.03	0.03	0.02	0.03	21.96	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P8
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:03:09	DataFile Name :	012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.16	0.16	0.13	0.15	10.89	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				86		%
Yttrium	89-2				81		%
Zinc	66-2	4.76	4.52	4.75	4.68	2.89	ppb
Zirconium	90-1	0.48	0.47	0.47	0.47	1.85	ppb
Zirconium	91-1	0.46	0.48	0.47	0.47	2.18	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P8
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:25:35	DataFile Name :	014ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	492.61	496.89	479.65	489.72	1.83	ppb
Antimony	121-1	206.89	215.54	214.55	212.33	2.23	ppb
Arsenic	75-2	213.92	221.30	217.30	217.51	1.70	ppb
Barium	135-1	97.67	101.97	101.57	100.40	2.37	ppb
Barium	137-1	100.04	104.23	105.18	103.15	2.65	ppb
Beryllium	9-1	106.00	112.88	109.61	109.50	3.14	ppb
Bismuth	209-1				105		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	86.64	90.40	88.69	88.58	2.13	ppb
Cadmium	106-1	83.42	88.13	86.77	86.11	2.82	ppb
Cadmium	111-1	103.28	107.51	108.19	106.33	2.50	ppb
Calcium	43-1	1838.82	1890.69	1961.97	1897.16	3.26	ppb
Calcium	44-1	1947.39	1974.98	2006.58	1976.32	1.50	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	103.87	103.34	100.24	102.48	1.92	ppb
Cobalt	59-2	106.90	107.95	103.25	106.03	2.33	ppb
Copper	63-2	101.71	102.82	99.05	101.20	1.91	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				100		%
Indium	115-1				105		%
Indium	115-2				100		%
Iron	54-2	2159.03	2163.71	2095.71	2139.48	1.78	ppb
Iron	56-2	2116.90	2153.88	2067.18	2112.65	2.06	ppb
Iron	57-2	2046.94	2103.98	2018.62	2056.51	2.11	ppb
Krypton	83-1						cps
Lead	206-1	212.95	210.89	212.89	212.24	0.55	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P8
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:25:35	DataFile Name :	014ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	200.84	205.10	208.61	204.85	1.90	ppb
Lead	208-1	203.33	205.81	209.11	206.08	1.41	ppb
Lithium	6-1				100		%
Magnesium	24-2	1252.46	1265.36	1217.97	1245.26	1.97	ppb
Manganese	55-2	103.49	103.90	100.52	102.63	1.80	ppb
Molybdenum	94-1	0.09	0.07	0.06	0.07	19.71	ppb
Molybdenum	95-1	0.10	0.08	0.08	0.09	9.31	ppb
Molybdenum	96-1	0.08	0.07	0.07	0.07	5.12	ppb
Molybdenum	97-1	0.07	0.05	0.05	0.06	17.66	ppb
Molybdenum	98-1	0.05	0.05	0.05	0.05	5.99	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	107.11	108.70	105.54	107.12	1.47	ppb
Phosphorus	31-2	-18.15	-26.36	-19.71	-21.41		ppb
Potassium	39-2	1976.90	1988.19	1925.73	1963.61	1.69	ppb
Rhodium	103-1				106		%
Rhodium	103-2				100		%
Scandium	45-1				105		%
Scandium	45-2				99		%
Selenium	82-1	211.32	221.00	227.56	219.96	3.71	ppb
Selenium	77-2	215.98	239.65	235.33	230.32	5.47	ppb
Selenium	78-2	219.43	242.84	218.07	226.78	6.14	ppb
Silicon	28-1	-0.17	-0.24	-0.10	-0.17		ppb
Silver	107-1	52.98	54.55	53.88	53.80	1.46	ppb
Silver	109-1	54.01	56.26	56.15	55.47	2.28	ppb
Sodium	23-2	2111.16	2201.68	2077.24	2130.03	3.02	ppb
Strontium	86-1	5.63	5.79	5.93	5.78	2.66	ppb
Strontium	88-1	5.82	6.06	5.97	5.95	2.07	ppb
Sulfur	34-1	-797.24	-707.52	-586.54	-697.10		ppb
Terbium	159-1				107		%
Terbium	159-2				101		%
Thallium	203-1	205.67	205.73	206.30	205.90	0.17	ppb
Thallium	205-1	201.60	204.12	204.94	203.55	0.85	ppb
Tin	118-1	-0.06	-0.06	-0.06	-0.06		ppb
Titanium	47-1	0.07	0.09	0.08	0.08	18.27	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	27.90	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P8
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:25:35	DataFile Name :	014ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	100.61	102.11	99.04	100.59	1.52	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				100		%
Zinc	66-2	203.29	207.56	197.94	202.93	2.37	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	42.44	ppb
Zirconium	91-1	0.08	0.10	0.09	0.09	10.25	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P8
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:59:02	DataFile Name :	018LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20.86	22.10	22.90	21.95	4.69	ppb
Antimony	121-1	2.10	2.15	2.15	2.13	1.39	ppb
Arsenic	75-2	1.18	1.13	1.27	1.19	6.10	ppb
Barium	135-1	10.30	10.18	10.54	10.34	1.79	ppb
Barium	137-1	10.50	10.48	10.72	10.57	1.24	ppb
Beryllium	9-1	1.09	1.17	1.11	1.12	3.31	ppb
Bismuth	209-1				105		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	1.31	1.14	1.04	1.16	11.42	ppb
Cadmium	106-1	-0.20	0.34	0.64	0.26	165.09	ppb
Cadmium	111-1	1.01	1.07	1.14	1.07	5.89	ppb
Calcium	43-1	507.77	516.31	512.25	512.11	0.83	ppb
Calcium	44-1	521.50	520.73	524.21	522.15	0.35	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.24	2.19	2.23	2.22	1.28	ppb
Cobalt	59-2	1.14	1.17	1.09	1.13	3.66	ppb
Copper	63-2	2.05	1.96	1.96	1.99	2.49	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				98		%
Indium	115-1				105		%
Indium	115-2				100		%
Iron	54-2	58.54	55.56	54.46	56.19	3.76	ppb
Iron	56-2	54.42	55.16	55.05	54.88	0.73	ppb
Iron	57-2	54.90	53.46	54.82	54.39	1.49	ppb
Krypton	83-1						cps
Lead	206-1	1.00	1.00	1.02	1.01	1.67	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P8
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:59:02	DataFile Name :	018LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.01	1.00	1.05	1.02	2.68	ppb
Lead	208-1	1.00	1.00	1.04	1.01	2.06	ppb
Lithium	6-1				105		%
Magnesium	24-2	576.53	570.02	577.67	574.74	0.72	ppb
Manganese	55-2	1.06	1.15	1.12	1.11	3.92	ppb
Molybdenum	94-1	6.04	6.03	6.15	6.07	1.11	ppb
Molybdenum	95-1	5.13	5.06	5.17	5.12	1.10	ppb
Molybdenum	96-1	5.16	5.06	5.27	5.16	2.05	ppb
Molybdenum	97-1	5.18	5.08	5.16	5.14	0.96	ppb
Molybdenum	98-1	5.06	5.00	5.16	5.07	1.62	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.99	1.02	1.12	1.05	6.57	ppb
Phosphorus	31-2	8.66	12.05	10.71	10.47	16.28	ppb
Potassium	39-2	522.83	525.20	527.27	525.10	0.42	ppb
Rhodium	103-1				105		%
Rhodium	103-2				100		%
Scandium	45-1				107		%
Scandium	45-2				100		%
Selenium	82-1	5.66	6.08	5.56	5.77	4.77	ppb
Selenium	77-2	2.77	4.77	6.27	4.60	38.23	ppb
Selenium	78-2	6.19	5.98	6.01	6.06	1.91	ppb
Silicon	28-1	0.07	0.02	0.08	0.06	60.90	ppb
Silver	107-1	1.05	1.04	1.06	1.05	0.98	ppb
Silver	109-1	1.03	1.05	1.06	1.05	1.32	ppb
Sodium	23-2	549.42	546.84	551.27	549.18	0.41	ppb
Strontium	86-1	27.18	26.54	26.20	26.64	1.88	ppb
Strontium	88-1	26.14	25.97	27.23	26.45	2.57	ppb
Sulfur	34-1	-444.19	-448.19	-424.27	-438.89		ppb
Terbium	159-1				105		%
Terbium	159-2				100		%
Thallium	203-1	0.99	0.99	1.01	1.00	1.31	ppb
Thallium	205-1	1.00	0.99	1.01	1.00	0.68	ppb
Tin	118-1	5.37	5.49	5.53	5.47	1.52	ppb
Titanium	47-1	5.17	5.33	5.24	5.25	1.52	ppb
Uranium	238-1	0.94	0.94	0.95	0.94	0.50	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P8
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:59:02	DataFile Name :	018LLIC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	5.18	5.33	5.22	5.25	1.44	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				105		%
Yttrium	89-2				101		%
Zinc	66-2	6.13	5.93	5.82	5.96	2.68	ppb
Zirconium	90-1	1.02	1.01	1.02	1.02	0.49	ppb
Zirconium	91-1	0.97	0.99	1.03	0.99	2.84	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P8
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:02:21	DataFile Name :	019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3.78	4.16	2.91	3.62	17.63	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	38.10	ppb
Arsenic	75-2	0.00	0.00	0.00	0.00		ppb
Barium	135-1	0.00	0.00	-0.01	-0.01		ppb
Barium	137-1	-0.01	-0.01	0.00	-0.01		ppb
Beryllium	9-1	0.01	0.00	0.01	0.00	97.29	ppb
Bismuth	209-1				104		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	-0.01	-0.02	0.04	0.00	1592.53	ppb
Cadmium	106-1	-0.87	-0.65	0.55	-0.32		ppb
Cadmium	111-1	-0.07	-0.05	0.04	-0.03		ppb
Calcium	43-1	-8.36	-9.11	-8.69	-8.72		ppb
Calcium	44-1	-6.68	-6.29	-6.57	-6.51		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.02	-0.01	0.00	-0.01		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00		ppb
Copper	63-2	0.01	0.02	0.02	0.02	41.06	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				104		%
Holmium	165-2				99		%
Indium	115-1				104		%
Indium	115-2				100		%
Iron	54-2	2.19	2.84	2.74	2.59	13.60	ppb
Iron	56-2	2.46	2.45	2.47	2.46	0.29	ppb
Iron	57-2	1.88	1.90	2.24	2.01	10.06	ppb
Krypton	83-1						cps
Lead	206-1	0.04	0.04	0.03	0.04	15.98	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P8
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:02:21	DataFile Name :	019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.04	0.04	0.03	0.03	9.97	ppb
Lead	208-1	0.04	0.04	0.03	0.04	10.76	ppb
Lithium	6-1				103		%
Magnesium	24-2	0.35	0.23	0.21	0.26	26.89	ppb
Manganese	55-2	0.06	0.03	0.05	0.05	39.64	ppb
Molybdenum	94-1	0.01	0.00	0.01	0.01	65.16	ppb
Molybdenum	95-1	0.01	0.02	0.02	0.02	11.17	ppb
Molybdenum	96-1	0.01	0.01	0.01	0.01	30.39	ppb
Molybdenum	97-1	0.01	0.01	0.01	0.01	15.02	ppb
Molybdenum	98-1	0.01	0.00	0.01	0.01	66.25	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.01	-0.02	0.01	0.00	641.32	ppb
Phosphorus	31-2	-26.88	-19.41	-18.74	-21.68		ppb
Potassium	39-2	6.96	9.52	8.35	8.28	15.52	ppb
Rhodium	103-1				104		%
Rhodium	103-2				99		%
Scandium	45-1				105		%
Scandium	45-2				99		%
Selenium	82-1	0.11	0.13	0.10	0.11	15.81	ppb
Selenium	77-2	-0.16	0.84	-0.16	0.17	327.16	ppb
Selenium	78-2	-0.04	-0.33	0.38	0.00	15784.07	ppb
Silicon	28-1	-0.24	-0.20	-0.20	-0.22		ppb
Silver	107-1	0.00	0.00	-0.01	-0.01		ppb
Silver	109-1	-0.01	-0.01	-0.01	-0.01		ppb
Sodium	23-2	23.05	24.32	22.88	23.42	3.36	ppb
Strontium	86-1	-0.20	-0.28	-0.31	-0.26		ppb
Strontium	88-1	-0.04	-0.07	-0.02	-0.04		ppb
Sulfur	34-1	-338.45	-299.55	-504.00	-380.67		ppb
Terbium	159-1				105		%
Terbium	159-2				99		%
Thallium	203-1	0.00	0.00	0.00	0.00		ppb
Thallium	205-1	0.00	0.00	0.00	0.00	62.44	ppb
Tin	118-1	-0.05	-0.04	0.04	-0.02		ppb
Titanium	47-1	-0.01	0.00	0.01	0.00	1832.91	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P8
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:02:21	DataFile Name :	019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00	198.30	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				105		%
Yttrium	89-2				100		%
Zinc	66-2	-0.09	-0.09	-0.05	-0.08		ppb
Zirconium	90-1	0.01	0.00	0.00	0.00	49.88	ppb
Zirconium	91-1	0.00	0.00	0.01	0.00	212.58	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P8
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:05:42	DataFile Name :	020ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	94811.75	93483.84	94686.55	94327.38	0.78	ppb
Antimony	121-1	1.36	1.50	1.41	1.42	4.88	ppb
Arsenic	75-2	0.43	0.41	0.24	0.36	28.13	ppb
Barium	135-1	1.40	1.57	1.42	1.46	6.24	ppb
Barium	137-1	1.44	1.55	1.45	1.48	4.23	ppb
Beryllium	9-1	0.29	0.30	0.27	0.29	4.25	ppb
Bismuth	209-1				95		%
Bismuth	209-2				87		%
Bromine	81-1						cps
Cadmium	108-1	17.97	17.41	16.42	17.27	4.53	ppb
Cadmium	106-1	-2.68	-2.05	-2.24	-2.33		ppb
Cadmium	111-1	0.45	0.65	0.48	0.53	20.37	ppb
Calcium	43-1	97794.32	107828.29	103249.49	102957.37	4.88	ppb
Calcium	44-1	99144.75	108627.49	102228.64	103333.63	4.68	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	19.73	20.19	19.85	19.92	1.20	ppb
Cobalt	59-2	1.17	1.18	1.20	1.19	1.28	ppb
Copper	63-2	8.02	8.24	8.16	8.14	1.42	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				95		%
Indium	115-1				95		%
Indium	115-2				90		%
Iron	54-2	102987.25	104356.74	104427.62	103923.87	0.78	ppb
Iron	56-2	103077.32	103471.82	103168.71	103239.28	0.20	ppb
Iron	57-2	103311.35	104557.77	104522.56	104130.56	0.68	ppb
Krypton	83-1						cps
Lead	206-1	4.63	4.93	4.66	4.74	3.48	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P8
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:05:42	DataFile Name :	020ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	4.25	4.64	4.24	4.38	5.19	ppb
Lead	208-1	4.39	4.71	4.39	4.50	4.10	ppb
Lithium	6-1				90		%
Magnesium	24-2	103948.90	103496.46	104040.99	103828.78	0.28	ppb
Manganese	55-2	7.65	7.41	7.65	7.57	1.87	ppb
Molybdenum	94-1	1623.14	1826.68	1674.22	1708.01	6.20	ppb
Molybdenum	95-1	1966.15	2210.41	2012.72	2063.09	6.29	ppb
Molybdenum	96-1	1926.15	2142.87	1944.27	2004.43	6.00	ppb
Molybdenum	97-1	1995.26	2226.51	2010.92	2077.56	6.22	ppb
Molybdenum	98-1	2017.39	2246.66	2020.76	2094.94	6.27	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	5.28	5.39	5.54	5.40	2.37	ppb
Phosphorus	31-2	106388.83	106923.50	107386.58	106899.64	0.47	ppb
Potassium	39-2	99450.82	98748.57	99107.94	99102.44	0.35	ppb
Rhodium	103-1				90		%
Rhodium	103-2				87		%
Scandium	45-1				95		%
Scandium	45-2				90		%
Selenium	82-1	-0.46	0.16	-0.17	-0.15		ppb
Selenium	77-2	0.37	-0.16	-0.16	0.02	1550.86	ppb
Selenium	78-2	-0.17	-0.01	0.29	0.04	635.15	ppb
Silicon	28-1	1.04	1.33	1.08	1.15	13.52	ppb
Silver	107-1	0.05	0.06	0.06	0.06	8.04	ppb
Silver	109-1	0.06	0.06	0.06	0.06	4.23	ppb
Sodium	23-2	103151.08	102217.69	103255.55	102874.77	0.56	ppb
Strontium	86-1	833.27	931.25	850.89	871.80	5.99	ppb
Strontium	88-1	897.34	971.55	904.40	924.43	4.43	ppb
Sulfur	34-1	106192.19	116676.33	107727.12	110198.55	5.14	ppb
Terbium	159-1				101		%
Terbium	159-2				96		%
Thallium	203-1	0.08	0.09	0.08	0.08	7.16	ppb
Thallium	205-1	0.08	0.09	0.09	0.08	7.00	ppb
Tin	118-1	0.07	0.10	0.07	0.08	25.29	ppb
Titanium	47-1	2141.61	2300.70	2153.73	2198.68	4.03	ppb
Uranium	238-1	0.02	0.02	0.02	0.02	8.78	ppb

Reviewed By:Mohan
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Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P8
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:05:42	DataFile Name :	020ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.13	0.16	0.14	0.14	13.56	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				98		%
Yttrium	89-2				93		%
Zinc	66-2	10.66	10.42	10.46	10.51	1.21	ppb
Zirconium	90-1	0.02	0.02	0.01	0.01	20.55	ppb
Zirconium	91-1	0.02	0.02	0.01	0.02	12.25	ppb

Reviewed By:Mohan
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LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P8
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:08:47	DataFile Name :	021ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	92186.01	92150.20	91688.68	92008.29	0.30	ppb
Antimony	121-1	20.65	20.99	21.01	20.88	0.98	ppb
Arsenic	75-2	20.93	21.11	21.64	21.23	1.75	ppb
Barium	135-1	20.54	20.99	20.87	20.80	1.12	ppb
Barium	137-1	21.16	21.22	21.29	21.22	0.29	ppb
Beryllium	9-1	20.97	20.74	20.75	20.82	0.63	ppb
Bismuth	209-1				97		%
Bismuth	209-2				88		%
Bromine	81-1						cps
Cadmium	108-1	32.23	32.20	31.47	31.97	1.35	ppb
Cadmium	106-1	12.49	13.01	12.94	12.81	2.20	ppb
Cadmium	111-1	19.29	19.39	19.42	19.37	0.35	ppb
Calcium	43-1	98690.86	98503.35	96189.50	97794.57	1.42	ppb
Calcium	44-1	100252.62	98451.85	97076.52	98593.66	1.62	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	39.18	38.88	38.59	38.88	0.76	ppb
Cobalt	59-2	20.78	21.01	20.87	20.89	0.57	ppb
Copper	63-2	27.91	27.77	27.96	27.88	0.35	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				97		%
Indium	115-1				100		%
Indium	115-2				91		%
Iron	54-2	101821.92	101459.51	99734.61	101005.35	1.10	ppb
Iron	56-2	101942.81	101342.44	101531.31	101605.52	0.30	ppb
Iron	57-2	103105.37	101860.79	102711.39	102559.18	0.62	ppb
Krypton	83-1						cps
Lead	206-1	24.98	24.51	24.31	24.60	1.39	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P8
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:08:47	DataFile Name :	021ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	24.53	23.95	23.81	24.09	1.58	ppb
Lead	208-1	24.42	24.01	23.87	24.10	1.20	ppb
Lithium	6-1				91		%
Magnesium	24-2	102492.89	100316.05	101927.52	101578.82	1.11	ppb
Manganese	55-2	27.11	26.83	26.63	26.86	0.91	ppb
Molybdenum	94-1	1612.97	1619.92	1598.07	1610.32	0.69	ppb
Molybdenum	95-1	1968.73	1976.85	1942.11	1962.56	0.93	ppb
Molybdenum	96-1	1919.70	1945.97	1891.70	1919.12	1.41	ppb
Molybdenum	97-1	1946.97	2003.94	1946.71	1965.87	1.68	ppb
Molybdenum	98-1	1951.58	1995.80	1955.30	1967.56	1.25	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	26.39	26.57	26.80	26.59	0.78	ppb
Phosphorus	31-2	104992.03	104212.15	104508.96	104571.05	0.38	ppb
Potassium	39-2	97688.31	97415.55	97979.58	97694.48	0.29	ppb
Rhodium	103-1				95		%
Rhodium	103-2				89		%
Scandium	45-1				101		%
Scandium	45-2				92		%
Selenium	82-1	21.62	20.15	20.44	20.74	3.75	ppb
Selenium	77-2	16.42	24.59	18.10	19.70	21.89	ppb
Selenium	78-2	20.67	21.77	20.81	21.08	2.83	ppb
Silicon	28-1	0.92	1.06	0.94	0.97	7.90	ppb
Silver	107-1	17.66	17.92	17.78	17.79	0.72	ppb
Silver	109-1	18.20	18.65	18.29	18.38	1.30	ppb
Sodium	23-2	101894.84	101495.91	101710.58	101700.44	0.20	ppb
Strontium	86-1	822.51	832.05	828.20	827.59	0.58	ppb
Strontium	88-1	881.72	876.42	870.80	876.31	0.62	ppb
Sulfur	34-1	104697.42	106618.04	102462.86	104592.77	1.99	ppb
Terbium	159-1				106		%
Terbium	159-2				96		%
Thallium	203-1	20.20	19.86	19.65	19.90	1.38	ppb
Thallium	205-1	20.68	19.90	19.89	20.16	2.23	ppb
Tin	118-1	0.07	0.07	0.07	0.07	5.76	ppb
Titanium	47-1	2099.62	2109.25	2058.77	2089.21	1.28	ppb
Uranium	238-1	0.02	0.02	0.02	0.02	3.68	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P8
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:08:47	DataFile Name :	021ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	19.57	19.68	19.56	19.61	0.32	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				95		%
Zinc	66-2	29.73	30.25	30.89	30.29	1.91	ppb
Zirconium	90-1	0.02	0.02	0.01	0.01	16.87	ppb
Zirconium	91-1	0.02	0.03	0.02	0.02	7.56	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P8
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:11:55	DataFile Name :	022CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	50679.31	50152.07	51810.70	50880.70	1.67	ppb
Antimony	121-1	487.22	481.47	490.53	486.41	0.94	ppb
Arsenic	75-2	505.88	517.28	527.38	516.85	2.08	ppb
Barium	135-1	2480.55	2471.98	2488.61	2480.38	0.34	ppb
Barium	137-1	2510.09	2529.34	2524.13	2521.19	0.39	ppb
Beryllium	9-1	538.96	532.40	541.97	537.77	0.91	ppb
Bismuth	209-1				94		%
Bismuth	209-2				83		%
Bromine	81-1						cps
Cadmium	108-1	487.19	482.83	493.21	487.74	1.07	ppb
Cadmium	106-1	482.08	483.66	484.59	483.44	0.26	ppb
Cadmium	111-1	477.28	481.04	483.64	480.65	0.67	ppb
Calcium	43-1	245743.64	248540.05	236862.57	243715.42	2.50	ppb
Calcium	44-1	248496.89	249879.86	241405.78	246594.18	1.84	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	508.89	520.09	527.97	518.98	1.85	ppb
Cobalt	59-2	507.01	498.94	518.11	508.02	1.89	ppb
Copper	63-2	4831.78	4881.50	5039.89	4917.72	2.21	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				94		%
Indium	115-1				96		%
Indium	115-2				87		%
Iron	54-2	124877.89	125364.75	129284.22	126508.95	1.91	ppb
Iron	56-2	126476.98	122675.96	129974.85	126375.93	2.89	ppb
Iron	57-2	128308.38	122814.45	129928.38	127017.07	2.94	ppb
Krypton	83-1						cps
Lead	206-1	2558.61	2604.64	2520.34	2561.19	1.65	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P8
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:11:55	DataFile Name :	022CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2569.87	2608.18	2505.96	2561.34	2.02	ppb
Lead	208-1	2588.33	2586.85	2517.53	2564.24	1.58	ppb
Lithium	6-1				86		%
Magnesium	24-2	254081.29	255014.67	263422.87	257506.28	2.00	ppb
Manganese	55-2	5107.30	5100.58	5339.57	5182.49	2.63	ppb
Molybdenum	94-1	5157.83	5232.71	4993.61	5128.05	2.38	ppb
Molybdenum	95-1	5185.29	5306.05	5022.96	5171.44	2.75	ppb
Molybdenum	96-1	5166.58	5240.97	5061.16	5156.24	1.75	ppb
Molybdenum	97-1	5148.76	5182.53	5057.33	5129.54	1.26	ppb
Molybdenum	98-1	5146.47	5278.31	4968.91	5131.23	3.03	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	467.78	460.28	480.95	469.67	2.23	ppb
Phosphorus	31-2	10227.74	10561.01	10757.09	10515.28	2.55	ppb
Potassium	39-2	124880.11	120508.38	126974.58	124121.03	2.66	ppb
Rhodium	103-1				89		%
Rhodium	103-2				82		%
Scandium	45-1				98		%
Scandium	45-2				89		%
Selenium	82-1	495.50	507.77	481.71	494.99	2.63	ppb
Selenium	77-2	508.08	486.67	510.58	501.78	2.62	ppb
Selenium	78-2	505.98	519.81	516.48	514.09	1.40	ppb
Silicon	28-1	405.06	407.20	390.49	400.91	2.27	ppb
Silver	107-1	477.79	477.25	482.60	479.21	0.62	ppb
Silver	109-1	474.22	467.51	475.31	472.35	0.89	ppb
Sodium	23-2	256385.12	248732.83	257763.95	254293.97	1.91	ppb
Strontium	86-1	12930.25	12857.82	12744.73	12844.27	0.73	ppb
Strontium	88-1	12707.80	13026.67	12640.62	12791.70	1.61	ppb
Sulfur	34-1	9964.95	10041.32	9311.34	9772.53	4.11	ppb
Terbium	159-1				105		%
Terbium	159-2				93		%
Thallium	203-1	507.66	519.83	511.48	512.99	1.21	ppb
Thallium	205-1	511.33	510.24	516.24	512.60	0.62	ppb
Tin	118-1	493.30	500.13	489.62	494.35	1.08	ppb
Titanium	47-1	5186.61	5183.53	5037.74	5135.96	1.66	ppb
Uranium	238-1	523.42	526.96	517.03	522.47	0.96	ppb

Reviewed By:Mohan
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LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P8
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:11:55	DataFile Name :	022CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	517.66	532.47	527.09	525.74	1.43	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				91		%
Zinc	66-2	4911.15	4875.82	4983.84	4923.61	1.12	ppb
Zirconium	90-1	509.64	524.78	499.09	511.17	2.53	ppb
Zirconium	91-1	517.08	525.40	501.67	514.72	2.34	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P8
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:15:01	DataFile Name :	023CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.23	-0.15	-0.54	-0.15		ppb
Antimony	121-1	0.07	0.06	0.06	0.06	15.56	ppb
Arsenic	75-2	0.05	0.02	0.01	0.03	67.30	ppb
Barium	135-1	0.04	0.02	0.02	0.03	55.46	ppb
Barium	137-1	0.03	0.02	0.01	0.02	41.55	ppb
Beryllium	9-1	0.09	0.09	0.07	0.08	10.77	ppb
Bismuth	209-1				109		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	0.09	0.03	-0.02	0.03	169.37	ppb
Cadmium	106-1	-1.04	-0.68	-0.39	-0.70		ppb
Cadmium	111-1	-0.07	-0.03	-0.01	-0.03		ppb
Calcium	43-1	-5.49	-8.08	-8.56	-7.38		ppb
Calcium	44-1	-2.32	-3.36	-4.27	-3.31		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	-0.04	-0.02	-0.02		ppb
Cobalt	59-2	0.01	0.01	0.00	0.00	52.74	ppb
Copper	63-2	0.42	0.39	0.39	0.40	4.91	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				109		%
Holmium	165-2				101		%
Indium	115-1				106		%
Indium	115-2				100		%
Iron	54-2	1.36	1.50	1.20	1.35	11.09	ppb
Iron	56-2	1.58	1.29	1.11	1.32	17.92	ppb
Iron	57-2	1.54	1.29	1.42	1.41	8.76	ppb
Krypton	83-1						cps
Lead	206-1	0.14	0.12	0.11	0.12	13.13	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P8
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:15:01	DataFile Name :	023CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.13	0.12	0.10	0.12	9.95	ppb
Lead	208-1	0.13	0.12	0.11	0.12	11.00	ppb
Lithium	6-1				99		%
Magnesium	24-2	1.95	1.86	1.52	1.78	12.82	ppb
Manganese	55-2	0.01	-0.01	0.02	0.01	221.65	ppb
Molybdenum	94-1	0.35	0.26	0.22	0.28	23.08	ppb
Molybdenum	95-1	0.44	0.29	0.23	0.32	33.97	ppb
Molybdenum	96-1	0.37	0.26	0.19	0.28	32.90	ppb
Molybdenum	97-1	0.38	0.28	0.22	0.30	27.33	ppb
Molybdenum	98-1	0.36	0.25	0.19	0.27	32.62	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.06	0.04	0.07	0.06	25.08	ppb
Phosphorus	31-2	-32.49	-24.67	-27.33	-28.16		ppb
Potassium	39-2	54.04	52.49	52.90	53.14	1.51	ppb
Rhodium	103-1				107		%
Rhodium	103-2				101		%
Scandium	45-1				105		%
Scandium	45-2				97		%
Selenium	82-1	0.00	0.09	0.11	0.07	83.36	ppb
Selenium	77-2	-0.16	0.83	0.34	0.34	145.65	ppb
Selenium	78-2	0.53	0.10	-0.19	0.14	249.22	ppb
Silicon	28-1	-0.26	-0.26	-0.26	-0.26		ppb
Silver	107-1	0.05	0.04	0.04	0.04	14.06	ppb
Silver	109-1	0.05	0.05	0.04	0.05	16.07	ppb
Sodium	23-2	107.53	100.59	101.27	103.13	3.71	ppb
Strontium	86-1	-0.06	-0.41	-0.37	-0.28		ppb
Strontium	88-1	0.07	-0.08	-0.08	-0.03		ppb
Sulfur	34-1	-1079.75	-1180.94	-1057.45	-1106.05		ppb
Terbium	159-1				107		%
Terbium	159-2				100		%
Thallium	203-1	0.06	0.05	0.05	0.05	14.18	ppb
Thallium	205-1	0.06	0.06	0.05	0.06	7.05	ppb
Tin	118-1	-0.03	-0.06	-0.06	-0.05		ppb
Titanium	47-1	0.15	0.12	0.13	0.13	10.58	ppb
Uranium	238-1	0.01	0.01	0.00	0.01	36.34	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P8
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:15:01	DataFile Name :	023CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00	27.58	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				108		%
Yttrium	89-2				100		%
Zinc	66-2	-0.41	-0.43	-0.38	-0.40		ppb
Zirconium	90-1	0.02	0.02	0.02	0.02	15.50	ppb
Zirconium	91-1	0.02	0.02	0.02	0.02	9.72	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P8
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:45:25	DataFile Name :	028LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20.17	20.82	19.64	20.21	2.92	ppb
Antimony	121-1	2.14	2.13	2.15	2.14	0.36	ppb
Arsenic	75-2	1.21	1.20	1.06	1.16	7.01	ppb
Barium	135-1	10.25	10.26	10.29	10.27	0.21	ppb
Barium	137-1	10.54	10.38	10.52	10.48	0.81	ppb
Beryllium	9-1	1.08	1.13	1.09	1.10	2.17	ppb
Bismuth	209-1				106		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	0.97	1.18	1.21	1.12	11.52	ppb
Cadmium	106-1	0.09	0.77	0.73	0.53	71.53	ppb
Cadmium	111-1	1.03	1.07	1.07	1.06	2.20	ppb
Calcium	43-1	513.36	517.19	522.96	517.84	0.93	ppb
Calcium	44-1	518.49	526.76	528.58	524.61	1.03	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.14	2.20	2.14	2.16	1.62	ppb
Cobalt	59-2	1.11	1.08	1.12	1.10	1.89	ppb
Copper	63-2	2.04	1.99	2.03	2.02	1.33	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				99		%
Indium	115-1				106		%
Indium	115-2				100		%
Iron	54-2	53.44	55.72	55.24	54.80	2.19	ppb
Iron	56-2	53.95	54.36	53.13	53.81	1.16	ppb
Iron	57-2	55.79	55.48	54.32	55.19	1.40	ppb
Krypton	83-1						cps
Lead	206-1	0.97	0.99	1.01	0.99	2.30	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P8
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:45:25	DataFile Name :	028LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.00	0.99	1.01	1.00	1.06	ppb
Lead	208-1	0.98	1.00	1.01	0.99	1.76	ppb
Lithium	6-1				101		%
Magnesium	24-2	568.62	565.19	571.51	568.44	0.56	ppb
Manganese	55-2	1.12	1.10	1.13	1.12	1.25	ppb
Molybdenum	94-1	5.93	5.87	5.92	5.91	0.48	ppb
Molybdenum	95-1	4.98	4.92	4.87	4.92	1.11	ppb
Molybdenum	96-1	5.02	4.94	5.01	4.99	0.83	ppb
Molybdenum	97-1	5.11	5.07	5.03	5.07	0.82	ppb
Molybdenum	98-1	4.94	4.90	4.89	4.91	0.53	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.10	1.08	1.05	1.08	2.35	ppb
Phosphorus	31-2	16.12	7.90	13.83	12.62	33.62	ppb
Potassium	39-2	522.26	522.96	511.43	518.88	1.25	ppb
Rhodium	103-1				107		%
Rhodium	103-2				100		%
Scandium	45-1				106		%
Scandium	45-2				100		%
Selenium	82-1	5.16	5.86	5.58	5.54	6.36	ppb
Selenium	77-2	5.69	6.34	6.25	6.10	5.75	ppb
Selenium	78-2	4.64	7.25	5.56	5.81	22.76	ppb
Silicon	28-1	0.02	0.04	-0.01	0.02	161.42	ppb
Silver	107-1	1.07	1.04	1.06	1.06	1.31	ppb
Silver	109-1	1.05	1.06	1.07	1.06	1.26	ppb
Sodium	23-2	554.55	554.61	549.69	552.95	0.51	ppb
Strontium	86-1	25.14	25.81	26.44	25.80	2.52	ppb
Strontium	88-1	25.66	25.43	25.53	25.54	0.44	ppb
Sulfur	34-1	-368.08	-286.93	-234.25	-296.42		ppb
Terbium	159-1				106		%
Terbium	159-2				99		%
Thallium	203-1	0.97	0.99	0.99	0.98	0.79	ppb
Thallium	205-1	0.97	0.98	1.00	0.98	1.33	ppb
Tin	118-1	5.45	5.34	5.39	5.39	1.01	ppb
Titanium	47-1	5.11	5.25	5.24	5.20	1.45	ppb
Uranium	238-1	0.92	0.91	0.93	0.92	0.58	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P8
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:45:25	DataFile Name :	028LLCC.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	5.15	5.16	5.26	5.19	1.14	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				108		%
Yttrium	89-2				100		%
Zinc	66-2	5.79	5.98	6.01	5.93	2.01	ppb
Zirconium	90-1	0.98	0.98	0.99	0.98	1.02	ppb
Zirconium	91-1	0.96	0.97	1.00	0.98	2.05	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165537BL	Instrumnet Name :	P8
Client Sample ID :	PB165537BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:48:46	DataFile Name :	029CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.21	-0.07	-0.23	-0.17		ppb
Antimony	121-1	0.00	0.00	0.00	0.00	43.25	ppb
Arsenic	75-2	-0.01	-0.01	0.01	0.00		ppb
Barium	135-1	0.00	0.01	0.01	0.01	56.54	ppb
Barium	137-1	0.01	0.01	0.01	0.01	14.92	ppb
Beryllium	9-1	0.00	-0.01	0.00	0.00		ppb
Bismuth	209-1				106		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	0.04	0.00	0.01	0.01	155.43	ppb
Cadmium	106-1	-0.50	0.18	0.34	0.01	6963.01	ppb
Cadmium	111-1	-0.04	0.01	0.02	0.00		ppb
Calcium	43-1	8.55	9.91	9.32	9.26	7.35	ppb
Calcium	44-1	12.31	12.61	12.54	12.49	1.25	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.10	0.13	0.08	0.10	22.39	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	152.09	ppb
Copper	63-2	-0.05	-0.04	-0.07	-0.05		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				99		%
Indium	115-1				106		%
Indium	115-2				99		%
Iron	54-2	0.48	0.24	0.47	0.40	33.84	ppb
Iron	56-2	0.57	0.50	0.48	0.52	9.83	ppb
Iron	57-2	1.11	0.37	0.27	0.58	78.49	ppb
Krypton	83-1						cps
Lead	206-1	0.01	0.00	0.01	0.01	66.29	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165537BL	Instrumnet Name :	P8
Client Sample ID :	PB165537BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:48:46	DataFile Name :	029CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.01	0.01	0.00	0.01	35.17	ppb
Lead	208-1	0.01	0.01	0.01	0.01	18.40	ppb
Lithium	6-1				101		%
Magnesium	24-2	0.46	0.74	0.49	0.57	27.01	ppb
Manganese	55-2	0.10	0.07	0.04	0.07	38.70	ppb
Molybdenum	94-1	0.00	-0.01	0.00	0.00		ppb
Molybdenum	95-1	0.01	0.00	0.00	0.01	63.57	ppb
Molybdenum	96-1	-0.01	-0.01	0.00	-0.01		ppb
Molybdenum	97-1	0.01	0.01	0.00	0.01	82.94	ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00		ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.00	-0.02	-0.02	-0.01		ppb
Phosphorus	31-2	-19.79	-29.75	-25.03	-24.86		ppb
Potassium	39-2	16.73	16.55	17.02	16.77	1.42	ppb
Rhodium	103-1				107		%
Rhodium	103-2				100		%
Scandium	45-1				107		%
Scandium	45-2				100		%
Selenium	82-1	0.02	-0.16	0.02	-0.04		ppb
Selenium	77-2	0.34	-0.16	0.34	0.17	164.51	ppb
Selenium	78-2	0.38	0.10	0.38	0.29	57.08	ppb
Silicon	28-1	-0.31	-0.31	-0.33	-0.31		ppb
Silver	107-1	0.00	-0.01	-0.01	0.00		ppb
Silver	109-1	-0.01	-0.01	-0.01	-0.01		ppb
Sodium	23-2	32.84	31.89	29.65	31.46	5.22	ppb
Strontium	86-1	0.09	0.03	0.22	0.11	84.78	ppb
Strontium	88-1	0.19	0.22	0.25	0.22	13.52	ppb
Sulfur	34-1	-315.63	-158.88	-299.65	-258.05		ppb
Terbium	159-1				106		%
Terbium	159-2				99		%
Thallium	203-1	0.00	0.00	0.01	0.00	31.94	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	10.05	ppb
Tin	118-1	0.06	0.06	0.07	0.07	5.99	ppb
Titanium	47-1	0.00	0.00	0.01	0.00	506.96	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165537BL	Instrumnet Name :	P8
Client Sample ID :	PB165537BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:48:46	DataFile Name :	029CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00	127.83	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				108		%
Yttrium	89-2				100		%
Zinc	66-2	0.72	0.75	0.80	0.76	4.96	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	45.27	ppb
Zirconium	91-1	0.00	0.01	0.00	0.00	77.22	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165537BS	Instrumnet Name :	P8
Client Sample ID :	PB165537BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:52:05	DataFile Name :	030LCSS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9785.68	9722.11	9822.57	9776.79	0.52	ppb
Antimony	121-1	493.16	505.46	507.10	501.90	1.52	ppb
Arsenic	75-2	507.53	506.04	516.72	510.10	1.13	ppb
Barium	135-1	2451.51	2513.71	2501.54	2488.92	1.32	ppb
Barium	137-1	2448.76	2505.12	2543.01	2498.96	1.90	ppb
Beryllium	9-1	523.06	519.00	521.32	521.13	0.39	ppb
Bismuth	209-1				101		%
Bismuth	209-2				91		%
Bromine	81-1						cps
Cadmium	108-1	497.92	528.10	507.59	511.20	3.01	ppb
Cadmium	106-1	504.70	511.26	512.11	509.36	0.80	ppb
Cadmium	111-1	502.99	524.97	519.20	515.72	2.21	ppb
Calcium	43-1	48164.43	49100.73	49146.26	48803.81	1.14	ppb
Calcium	44-1	48287.24	49690.96	49908.27	49295.49	1.78	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	499.60	511.74	515.24	508.86	1.61	ppb
Cobalt	59-2	513.72	512.16	519.42	515.10	0.74	ppb
Copper	63-2	5065.79	5080.20	5122.99	5089.66	0.58	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				98		%
Indium	115-1				102		%
Indium	115-2				92		%
Iron	54-2	26089.59	25532.71	26003.32	25875.20	1.16	ppb
Iron	56-2	25504.33	25170.85	25620.27	25431.82	0.92	ppb
Iron	57-2	26436.72	25998.59	26373.26	26269.53	0.90	ppb
Krypton	83-1						cps
Lead	206-1	2462.17	2510.26	2539.80	2504.08	1.56	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165537BS	Instrumnet Name :	P8
Client Sample ID :	PB165537BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:52:05	DataFile Name :	030LCSS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2429.80	2521.92	2544.71	2498.81	2.43	ppb
Lead	208-1	2439.10	2505.95	2529.48	2491.51	1.88	ppb
Lithium	6-1				94		%
Magnesium	24-2	52922.83	53422.30	54235.85	53527.00	1.24	ppb
Manganese	55-2	4993.57	5030.87	5055.00	5026.48	0.62	ppb
Molybdenum	94-1	5016.32	4985.77	5103.46	5035.18	1.21	ppb
Molybdenum	95-1	5066.99	4989.43	5107.84	5054.76	1.19	ppb
Molybdenum	96-1	5045.00	4952.69	5114.76	5037.48	1.61	ppb
Molybdenum	97-1	4967.72	4975.38	5112.09	5018.40	1.62	ppb
Molybdenum	98-1	4977.08	5002.03	5132.99	5037.37	1.66	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	492.19	490.89	495.56	492.88	0.49	ppb
Phosphorus	31-2	10089.65	10015.19	10195.23	10100.02	0.90	ppb
Potassium	39-2	24730.99	24073.90	24399.31	24401.40	1.35	ppb
Rhodium	103-1				98		%
Rhodium	103-2				91		%
Scandium	45-1				103		%
Scandium	45-2				92		%
Selenium	82-1	505.24	511.52	510.70	509.15	0.67	ppb
Selenium	77-2	520.76	534.77	527.55	527.69	1.33	ppb
Selenium	78-2	500.27	505.00	510.60	505.29	1.02	ppb
Silicon	28-1	503.70	513.86	500.90	506.15	1.35	ppb
Silver	107-1	495.52	520.80	502.97	506.43	2.56	ppb
Silver	109-1	500.13	526.35	505.08	510.52	2.73	ppb
Sodium	23-2	50885.56	51302.02	51634.27	51273.95	0.73	ppb
Strontium	86-1	12440.45	12360.86	12623.38	12474.90	1.08	ppb
Strontium	88-1	12358.72	12448.55	12503.09	12436.79	0.59	ppb
Sulfur	34-1	10479.52	10322.91	10161.74	10321.39	1.54	ppb
Terbium	159-1				107		%
Terbium	159-2				97		%
Thallium	203-1	493.44	503.53	509.98	502.31	1.66	ppb
Thallium	205-1	490.54	505.06	505.39	500.33	1.70	ppb
Tin	118-1	501.08	508.22	509.03	506.11	0.86	ppb
Titanium	47-1	4972.30	5006.74	5157.79	5045.61	1.96	ppb
Uranium	238-1	477.95	486.27	488.85	484.36	1.18	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165537BS	Instrumnet Name :	P8
Client Sample ID :	PB165537BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:52:05	DataFile Name :	030LCSS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	505.10	505.10	509.73	506.64	0.53	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				96		%
Zinc	66-2	5118.36	5186.79	5149.02	5151.39	0.67	ppb
Zirconium	90-1	495.74	499.40	504.53	499.89	0.88	ppb
Zirconium	91-1	509.49	498.71	507.65	505.28	1.14	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-9-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 18:54:48	DataFile Name :	031AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9799.06	9909.82	10146.08	9951.66	1.78	ppb
Antimony	121-1	0.11	0.09	0.08	0.09	11.22	ppb
Arsenic	75-2	4.93	4.28	4.52	4.58	7.29	ppb
Barium	135-1	55.12	56.28	55.61	55.67	1.05	ppb
Barium	137-1	55.31	55.08	56.74	55.71	1.61	ppb
Beryllium	9-1	0.83	0.88	0.83	0.85	3.71	ppb
Bismuth	209-1				107		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	1.24	1.20	1.34	1.26	5.72	ppb
Cadmium	106-1	2.35	1.46	2.38	2.06	25.32	ppb
Cadmium	111-1	0.19	0.11	0.18	0.16	27.13	ppb
Calcium	43-1	648.61	636.69	647.50	644.27	1.02	ppb
Calcium	44-1	642.46	646.02	642.18	643.55	0.33	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	18.79	19.07	19.28	19.04	1.30	ppb
Cobalt	59-2	12.32	12.54	12.80	12.55	1.94	ppb
Copper	63-2	10.53	10.52	10.81	10.62	1.55	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				99		%
Indium	115-1				106		%
Indium	115-2				98		%
Iron	54-2	18549.56	18659.88	18779.99	18663.14	0.62	ppb
Iron	56-2	18388.48	18465.16	19017.19	18623.61	1.84	ppb
Iron	57-2	18701.56	18932.48	19726.26	19120.10	2.81	ppb
Krypton	83-1						cps
Lead	206-1	9.72	9.77	9.51	9.67	1.44	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-9-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 18:54:48	DataFile Name :	031AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	9.30	9.49	9.15	9.31	1.82	ppb
Lead	208-1	9.46	9.60	9.38	9.48	1.13	ppb
Lithium	6-1				96		%
Magnesium	24-2	1228.73	1220.95	1249.01	1232.90	1.17	ppb
Manganese	55-2	196.12	197.79	199.56	197.82	0.87	ppb
Molybdenum	94-1	19.05	18.51	18.42	18.66	1.83	ppb
Molybdenum	95-1	1.00	0.96	0.77	0.91	13.34	ppb
Molybdenum	96-1	2.79	2.78	2.94	2.84	3.25	ppb
Molybdenum	97-1	0.99	0.85	0.81	0.88	10.71	ppb
Molybdenum	98-1	0.95	0.84	0.76	0.85	11.22	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	13.53	13.60	13.76	13.63	0.88	ppb
Phosphorus	31-2	251.42	259.36	229.65	246.81	6.23	ppb
Potassium	39-2	826.24	809.90	814.21	816.78	1.04	ppb
Rhodium	103-1				104		%
Rhodium	103-2				97		%
Scandium	45-1				106		%
Scandium	45-2				96		%
Selenium	82-1	0.47	0.28	0.21	0.32	42.34	ppb
Selenium	77-2	19.14	11.14	13.69	14.66	27.88	ppb
Selenium	78-2	3.99	3.53	3.41	3.64	8.47	ppb
Silicon	28-1	57.82	202.81	86.26	115.63	66.45	ppb
Silver	107-1	0.13	0.12	0.12	0.12	7.62	ppb
Silver	109-1	0.09	0.09	0.07	0.09	13.39	ppb
Sodium	23-2	88.71	89.72	92.45	90.29	2.14	ppb
Strontium	86-1	108.20	115.39	112.94	112.18	3.26	ppb
Strontium	88-1	105.49	106.32	112.54	108.12	3.56	ppb
Sulfur	34-1	-1075.06	-1072.00	-1069.94	-1072.33		ppb
Terbium	159-1				107		%
Terbium	159-2				99		%
Thallium	203-1	0.19	0.19	0.18	0.19	3.75	ppb
Thallium	205-1	0.20	0.19	0.19	0.20	4.18	ppb
Tin	118-1	0.20	0.22	0.20	0.21	7.49	ppb
Titanium	47-1	184.58	187.08	185.26	185.64	0.70	ppb
Uranium	238-1	0.96	0.95	0.98	0.96	1.35	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-9-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 18:54:48	DataFile Name :	031AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	30.37	30.92	31.37	30.89	1.62	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				109		%
Yttrium	89-2				99		%
Zinc	66-2	39.87	39.51	40.13	39.83	0.78	ppb
Zirconium	90-1	9.62	10.73	9.56	9.97	6.57	ppb
Zirconium	91-1	10.39	9.68	9.50	9.86	4.81	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 18:58:04	DataFile Name :	032AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8944.25	9620.86	8504.32	9023.14	6.23	ppb
Antimony	121-1	0.04	0.05	0.04	0.04	8.89	ppb
Arsenic	75-2	4.03	4.40	4.11	4.18	4.59	ppb
Barium	135-1	46.68	46.76	46.16	46.53	0.71	ppb
Barium	137-1	47.68	47.70	47.13	47.50	0.68	ppb
Beryllium	9-1	1.51	1.54	1.54	1.53	1.00	ppb
Bismuth	209-1				107		%
Bismuth	209-2				89		%
Bromine	81-1						cps
Cadmium	108-1	0.76	0.67	0.68	0.70	7.26	ppb
Cadmium	106-1	1.23	0.28	0.17	0.56	104.15	ppb
Cadmium	111-1	0.12	0.05	0.03	0.06	70.75	ppb
Calcium	43-1	362.67	349.86	351.35	354.63	1.97	ppb
Calcium	44-1	364.78	367.06	360.70	364.18	0.88	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	66.03	71.39	62.17	66.53	6.95	ppb
Cobalt	59-2	18.27	19.72	17.35	18.45	6.47	ppb
Copper	63-2	15.05	16.44	14.50	15.33	6.53	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				109		%
Holmium	165-2				90		%
Indium	115-1				107		%
Indium	115-2				89		%
Iron	54-2	24914.45	26622.46	23246.69	24927.87	6.77	ppb
Iron	56-2	24749.52	26683.04	23608.07	25013.54	6.21	ppb
Iron	57-2	25408.41	27168.80	24002.95	25526.72	6.21	ppb
Krypton	83-1						cps
Lead	206-1	7.85	7.92	7.84	7.87	0.54	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 18:58:04	DataFile Name :	032AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	7.42	7.55	7.43	7.47	0.93	ppb
Lead	208-1	7.57	7.69	7.64	7.63	0.77	ppb
Lithium	6-1				96		%
Magnesium	24-2	1786.53	1909.75	1694.81	1797.03	6.00	ppb
Manganese	55-2	586.22	624.35	546.89	585.82	6.61	ppb
Molybdenum	94-1	9.70	9.64	9.81	9.72	0.90	ppb
Molybdenum	95-1	0.84	0.86	0.86	0.85	0.87	ppb
Molybdenum	96-1	1.84	1.78	1.84	1.82	1.92	ppb
Molybdenum	97-1	0.84	0.86	0.84	0.85	1.51	ppb
Molybdenum	98-1	0.82	0.83	0.81	0.82	1.22	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	15.74	16.92	15.03	15.90	6.01	ppb
Phosphorus	31-2	652.56	647.76	595.32	631.88	5.02	ppb
Potassium	39-2	1461.37	1564.28	1369.48	1465.04	6.65	ppb
Rhodium	103-1				105		%
Rhodium	103-2				89		%
Scandium	45-1				106		%
Scandium	45-2				88		%
Selenium	82-1	0.21	0.69	0.46	0.45	52.98	ppb
Selenium	77-2	11.75	15.26	14.76	13.92	13.64	ppb
Selenium	78-2	2.36	3.02	2.37	2.58	14.55	ppb
Silicon	28-1	44.14	39.83	35.95	39.97	10.25	ppb
Silver	107-1	0.15	0.16	0.15	0.15	2.65	ppb
Silver	109-1	0.03	0.03	0.03	0.03	6.86	ppb
Sodium	23-2	120.41	127.83	106.42	118.22	9.20	ppb
Strontium	86-1	78.32	79.03	86.01	81.12	5.24	ppb
Strontium	88-1	80.07	81.17	81.15	80.80	0.78	ppb
Sulfur	34-1	-1521.80	-1622.49	-1676.67	-1606.98		ppb
Terbium	159-1				108		%
Terbium	159-2				91		%
Thallium	203-1	0.20	0.19	0.20	0.20	2.23	ppb
Thallium	205-1	0.20	0.20	0.20	0.20	1.68	ppb
Tin	118-1	1.83	2.09	1.98	1.97	6.69	ppb
Titanium	47-1	356.18	334.02	342.68	344.30	3.24	ppb
Uranium	238-1	4.08	4.15	4.06	4.10	1.12	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 18:58:04	DataFile Name :	032AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	33.23	36.01	31.68	33.64	6.53	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				108		%
Yttrium	89-2				91		%
Zinc	66-2	33.03	35.10	30.71	32.94	6.66	ppb
Zirconium	90-1	4.85	4.96	4.85	4.89	1.35	ppb
Zirconium	91-1	6.56	4.90	4.89	5.45	17.63	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:01:22	DataFile Name :	033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8506.54	7658.92	7883.00	8016.15	5.48	ppb
Antimony	121-1	0.03	0.03	0.04	0.03	7.92	ppb
Arsenic	75-2	3.68	3.71	3.53	3.64	2.56	ppb
Barium	135-1	45.91	46.44	46.77	46.37	0.94	ppb
Barium	137-1	46.30	46.65	47.72	46.89	1.57	ppb
Beryllium	9-1	1.50	1.49	1.55	1.51	1.98	ppb
Bismuth	209-1				107		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	0.59	0.72	0.83	0.71	16.81	ppb
Cadmium	106-1	0.35	1.27	1.08	0.90	53.59	ppb
Cadmium	111-1	0.04	0.11	0.10	0.08	41.38	ppb
Calcium	43-1	661.01	669.02	668.98	666.34	0.69	ppb
Calcium	44-1	655.66	671.85	663.39	663.63	1.22	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	63.08	55.99	57.83	58.97	6.24	ppb
Cobalt	59-2	17.34	15.67	16.05	16.35	5.36	ppb
Copper	63-2	13.42	11.86	12.35	12.55	6.36	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				102		%
Indium	115-1				105		%
Indium	115-2				100		%
Iron	54-2	24165.93	21334.53	21801.16	22433.87	6.77	ppb
Iron	56-2	23659.45	20885.58	21679.65	22074.89	6.47	ppb
Iron	57-2	24345.38	21355.39	22524.47	22741.75	6.63	ppb
Krypton	83-1						cps
Lead	206-1	7.88	7.92	7.82	7.87	0.62	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:01:22	DataFile Name :	033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	7.33	7.59	7.38	7.43	1.88	ppb
Lead	208-1	7.59	7.70	7.57	7.62	0.93	ppb
Lithium	6-1				95		%
Magnesium	24-2	1705.26	1507.83	1571.93	1595.01	6.31	ppb
Manganese	55-2	552.32	491.91	508.75	517.66	6.02	ppb
Molybdenum	94-1	9.60	9.80	9.76	9.72	1.09	ppb
Molybdenum	95-1	0.82	0.81	0.80	0.81	1.08	ppb
Molybdenum	96-1	2.06	1.84	1.76	1.89	8.38	ppb
Molybdenum	97-1	0.80	0.84	0.80	0.81	2.99	ppb
Molybdenum	98-1	0.81	0.78	0.78	0.79	1.96	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	13.22	12.23	12.71	12.72	3.89	ppb
Phosphorus	31-2	595.51	508.01	523.14	542.22	8.62	ppb
Potassium	39-2	1380.16	1223.28	1275.76	1293.07	6.18	ppb
Rhodium	103-1				104		%
Rhodium	103-2				100		%
Scandium	45-1				105		%
Scandium	45-2				98		%
Selenium	82-1	0.62	0.40	0.12	0.38	66.05	ppb
Selenium	77-2	13.80	11.99	14.36	13.38	9.24	ppb
Selenium	78-2	1.48	2.79	2.06	2.11	31.11	ppb
Silicon	28-1	40.52	40.99	52.81	44.77	15.56	ppb
Silver	107-1	0.13	0.15	0.15	0.14	4.26	ppb
Silver	109-1	0.02	0.03	0.02	0.02	21.15	ppb
Sodium	23-2	107.77	86.01	95.06	96.28	11.35	ppb
Strontium	86-1	83.49	82.51	81.47	82.49	1.22	ppb
Strontium	88-1	84.48	83.10	82.20	83.26	1.38	ppb
Sulfur	34-1	-1764.59	-1727.59	-1781.10	-1757.76		ppb
Terbium	159-1				108		%
Terbium	159-2				102		%
Thallium	203-1	0.19	0.20	0.19	0.19	3.78	ppb
Thallium	205-1	0.19	0.20	0.19	0.19	2.21	ppb
Tin	118-1	2.08	2.81	1.83	2.24	22.73	ppb
Titanium	47-1	332.93	348.71	357.26	346.30	3.56	ppb
Uranium	238-1	4.04	4.17	4.12	4.11	1.56	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:01:22	DataFile Name :	033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	31.71	28.45	29.28	29.82	5.68	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				101		%
Zinc	66-2	45.16	40.28	42.20	42.55	5.78	ppb
Zirconium	90-1	5.01	4.95	4.92	4.96	0.93	ppb
Zirconium	91-1	5.25	4.95	4.72	4.97	5.34	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	25
Date & Time Acquired :	2024-12-11 19:04:37	DataFile Name :	034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2064.57	2012.69	2061.58	2046.28	1.42	ppb
Antimony	121-1	0.02	0.02	0.02	0.02	6.68	ppb
Arsenic	75-2	0.93	0.92	1.02	0.95	5.63	ppb
Barium	135-1	11.23	11.47	11.51	11.40	1.31	ppb
Barium	137-1	11.41	12.07	11.62	11.70	2.88	ppb
Beryllium	9-1	0.18	0.19	0.18	0.18	2.19	ppb
Bismuth	209-1				108		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	0.38	0.22	0.41	0.34	29.86	ppb
Cadmium	106-1	-1.12	-0.33	-0.46	-0.64		ppb
Cadmium	111-1	-0.09	-0.03	-0.05	-0.06		ppb
Calcium	43-1	185.50	191.36	193.77	190.21	2.24	ppb
Calcium	44-1	191.10	192.22	194.24	192.52	0.83	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4.09	3.97	4.00	4.02	1.57	ppb
Cobalt	59-2	2.75	2.70	2.76	2.74	1.10	ppb
Copper	63-2	19.09	18.91	18.76	18.92	0.86	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				101		%
Indium	115-1				107		%
Indium	115-2				99		%
Iron	54-2	3754.79	3753.89	3764.45	3757.71	0.16	ppb
Iron	56-2	3905.88	3930.38	4092.24	3976.17	2.55	ppb
Iron	57-2	3783.97	3744.13	3744.80	3757.63	0.61	ppb
Krypton	83-1						cps
Lead	206-1	1.98	2.05	1.98	2.00	1.91	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	25
Date & Time Acquired :	2024-12-11 19:04:37	DataFile Name :	034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.89	1.94	2.00	1.95	2.79	ppb
Lead	208-1	1.94	1.99	1.95	1.96	1.25	ppb
Lithium	6-1				95		%
Magnesium	24-2	257.56	252.68	250.35	253.53	1.45	ppb
Manganese	55-2	41.36	40.78	40.81	40.98	0.80	ppb
Molybdenum	94-1	3.77	3.92	3.99	3.89	2.88	ppb
Molybdenum	95-1	0.14	0.14	0.13	0.14	2.30	ppb
Molybdenum	96-1	0.52	0.52	0.50	0.52	2.16	ppb
Molybdenum	97-1	0.14	0.14	0.12	0.13	8.05	ppb
Molybdenum	98-1	0.13	0.12	0.12	0.12	3.75	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	21.77	21.58	21.46	21.60	0.72	ppb
Phosphorus	31-2	32.03	30.42	37.88	33.44	11.73	ppb
Potassium	39-2	198.64	209.14	197.39	201.72	3.20	ppb
Rhodium	103-1				105		%
Rhodium	103-2				100		%
Scandium	45-1				104		%
Scandium	45-2				96		%
Selenium	82-1	0.29	0.09	0.22	0.20	52.59	ppb
Selenium	77-2	6.80	2.83	6.36	5.33	40.83	ppb
Selenium	78-2	1.55	1.12	0.25	0.97	67.89	ppb
Silicon	28-1	13.87	13.43	17.58	14.96	15.23	ppb
Silver	107-1	0.00	0.00	0.00	0.00	15.74	ppb
Silver	109-1	0.00	-0.01	0.00	0.00		ppb
Sodium	23-2	54.37	50.31	51.36	52.01	4.05	ppb
Strontium	86-1	22.61	25.26	22.20	23.36	7.11	ppb
Strontium	88-1	27.72	23.81	27.71	26.42	8.53	ppb
Sulfur	34-1	-1808.90	-1791.23	-1736.16	-1778.76		ppb
Terbium	159-1				107		%
Terbium	159-2				100		%
Thallium	203-1	0.04	0.04	0.04	0.04	4.19	ppb
Thallium	205-1	0.04	0.04	0.04	0.04	4.99	ppb
Tin	118-1	0.09	0.10	0.10	0.10	7.46	ppb
Titanium	47-1	38.33	38.50	42.49	39.77	5.91	ppb
Uranium	238-1	0.20	0.19	0.19	0.19	2.12	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	25
Date & Time Acquired :	2024-12-11 19:04:37	DataFile Name :	034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	6.50	6.37	6.28	6.38	1.67	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				106		%
Yttrium	89-2				99		%
Zinc	66-2	10.75	10.74	11.41	10.96	3.50	ppb
Zirconium	90-1	2.08	2.02	2.00	2.04	2.04	ppb
Zirconium	91-1	1.92	2.62	1.96	2.17	18.15	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:07:57	DataFile Name :	035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9546.89	9711.34	9593.23	9617.15	0.88	ppb
Antimony	121-1	125.35	126.19	124.76	125.43	0.57	ppb
Arsenic	75-2	130.81	131.28	131.52	131.20	0.27	ppb
Barium	135-1	603.50	620.02	605.79	609.77	1.47	ppb
Barium	137-1	608.57	609.77	604.14	607.49	0.49	ppb
Beryllium	9-1	127.84	129.98	130.33	129.38	1.04	ppb
Bismuth	209-1				106		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	125.96	126.78	127.49	126.75	0.60	ppb
Cadmium	106-1	128.00	128.78	130.18	128.99	0.86	ppb
Cadmium	111-1	125.66	128.46	126.76	126.96	1.11	ppb
Calcium	43-1	9660.38	9650.02	9643.28	9651.22	0.09	ppb
Calcium	44-1	10080.35	9894.30	10108.52	10027.72	1.16	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	172.49	172.89	172.15	172.51	0.22	ppb
Cobalt	59-2	147.64	138.15	139.28	141.69	3.66	ppb
Copper	63-2	1089.44	1072.91	1071.39	1077.91	0.93	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				97		%
Indium	115-1				105		%
Indium	115-2				94		%
Iron	54-2	27372.94	26935.26	26982.66	27096.95	0.89	ppb
Iron	56-2	26876.40	27343.46	27009.97	27076.61	0.89	ppb
Iron	57-2	27334.41	27083.19	27599.93	27339.18	0.95	ppb
Krypton	83-1						cps
Lead	206-1	488.65	475.10	482.87	482.20	1.41	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:07:57	DataFile Name :	035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	494.65	474.89	490.48	486.67	2.14	ppb
Lead	208-1	491.73	478.32	489.13	486.39	1.46	ppb
Lithium	6-1				94		%
Magnesium	24-2	11562.47	11686.78	11547.83	11599.03	0.66	ppb
Manganese	55-2	1466.71	1504.05	1471.90	1480.89	1.37	ppb
Molybdenum	94-1	781.61	747.57	754.72	761.30	2.36	ppb
Molybdenum	95-1	663.69	644.10	657.70	655.16	1.53	ppb
Molybdenum	96-1	666.23	664.89	669.14	666.75	0.33	ppb
Molybdenum	97-1	662.68	643.68	658.66	655.01	1.53	ppb
Molybdenum	98-1	659.15	631.59	658.23	649.66	2.41	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	140.59	140.98	140.57	140.71	0.16	ppb
Phosphorus	31-2	547.72	537.90	528.14	537.92	1.82	ppb
Potassium	39-2	6665.41	6895.03	6721.90	6760.78	1.77	ppb
Rhodium	103-1				102		%
Rhodium	103-2				95		%
Scandium	45-1				105		%
Scandium	45-2				94		%
Selenium	82-1	125.89	125.01	125.20	125.37	0.37	ppb
Selenium	77-2	128.24	150.47	142.61	140.44	8.03	ppb
Selenium	78-2	127.04	124.60	132.39	128.01	3.11	ppb
Silicon	28-1	27.54	37.23	26.99	30.58	18.83	ppb
Silver	107-1	3.57	3.64	3.64	3.62	1.19	ppb
Silver	109-1	0.13	0.14	0.14	0.14	3.10	ppb
Sodium	23-2	10103.02	9992.80	10144.59	10080.13	0.78	ppb
Strontium	86-1	2944.04	2914.32	2973.92	2944.10	1.01	ppb
Strontium	88-1	3044.75	3055.52	3054.43	3051.57	0.19	ppb
Sulfur	34-1	-1643.29	-1559.51	-1482.72	-1561.84		ppb
Terbium	159-1				107		%
Terbium	159-2				99		%
Thallium	203-1	120.58	116.15	122.20	119.64	2.62	ppb
Thallium	205-1	119.51	116.55	118.55	118.20	1.28	ppb
Tin	118-1	111.81	115.23	114.08	113.71	1.53	ppb
Titanium	47-1	740.40	751.93	749.83	747.39	0.82	ppb
Uranium	238-1	118.51	117.73	119.76	118.66	0.86	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:07:57	DataFile Name :	035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	148.25	147.82	148.92	148.33	0.37	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				97		%
Zinc	66-2	1003.69	1011.88	1005.04	1006.87	0.44	ppb
Zirconium	90-1	120.82	121.60	122.50	121.64	0.69	ppb
Zirconium	91-1	115.99	113.47	116.12	115.19	1.30	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:10:52	DataFile Name :	036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9710.61	9503.72	9481.71	9565.35	1.32	ppb
Antimony	121-1	124.46	122.37	123.37	123.40	0.85	ppb
Arsenic	75-2	134.59	130.20	129.66	131.49	2.05	ppb
Barium	135-1	596.50	601.56	607.27	601.77	0.90	ppb
Barium	137-1	584.24	591.35	596.16	590.58	1.02	ppb
Beryllium	9-1	128.85	125.89	126.46	127.07	1.24	ppb
Bismuth	209-1				105		%
Bismuth	209-2				94		%
Bromine	81-1						cps
Cadmium	108-1	122.85	125.37	125.77	124.66	1.27	ppb
Cadmium	106-1	127.21	124.28	127.96	126.48	1.54	ppb
Cadmium	111-1	123.57	124.95	125.45	124.66	0.78	ppb
Calcium	43-1	9555.32	9592.91	9665.26	9604.50	0.58	ppb
Calcium	44-1	10100.02	9896.80	10031.10	10009.31	1.03	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	174.51	169.26	170.13	171.30	1.64	ppb
Cobalt	59-2	149.50	136.42	138.45	141.46	4.98	ppb
Copper	63-2	1151.92	1084.93	1120.90	1119.25	3.00	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				98		%
Indium	115-1				104		%
Indium	115-2				96		%
Iron	54-2	27423.77	26577.10	26822.41	26941.09	1.62	ppb
Iron	56-2	27447.60	26622.68	26851.49	26973.92	1.58	ppb
Iron	57-2	27692.32	26947.04	27355.64	27331.67	1.37	ppb
Krypton	83-1						cps
Lead	206-1	483.97	477.74	489.40	483.70	1.21	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:10:52	DataFile Name :	036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	497.33	481.95	488.64	489.31	1.58	ppb
Lead	208-1	489.35	483.04	486.90	486.43	0.65	ppb
Lithium	6-1				95		%
Magnesium	24-2	11866.07	11335.95	11604.92	11602.31	2.28	ppb
Manganese	55-2	1494.64	1439.54	1443.48	1459.22	2.11	ppb
Molybdenum	94-1	749.58	755.47	745.45	750.17	0.67	ppb
Molybdenum	95-1	657.01	661.97	643.78	654.25	1.44	ppb
Molybdenum	96-1	645.84	668.06	652.82	655.57	1.73	ppb
Molybdenum	97-1	640.08	656.56	647.52	648.05	1.27	ppb
Molybdenum	98-1	641.57	660.82	652.52	651.64	1.48	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	291.06	283.16	288.51	287.58	1.40	ppb
Phosphorus	31-2	534.08	523.64	529.24	528.99	0.99	ppb
Potassium	39-2	6821.02	6604.61	6757.23	6727.62	1.65	ppb
Rhodium	103-1				102		%
Rhodium	103-2				95		%
Scandium	45-1				105		%
Scandium	45-2				93		%
Selenium	82-1	122.69	123.98	122.88	123.18	0.57	ppb
Selenium	77-2	149.51	138.54	131.10	139.72	6.63	ppb
Selenium	78-2	121.48	118.45	125.76	121.90	3.01	ppb
Silicon	28-1	26.13	25.98	26.69	26.27	1.44	ppb
Silver	107-1	3.55	3.60	3.55	3.57	0.72	ppb
Silver	109-1	0.14	0.14	0.14	0.14	0.60	ppb
Sodium	23-2	10127.44	9844.71	9904.81	9958.99	1.50	ppb
Strontium	86-1	2860.68	2942.71	2915.97	2906.45	1.44	ppb
Strontium	88-1	2996.85	3064.86	3041.89	3034.53	1.14	ppb
Sulfur	34-1	-1506.91	-1465.75	-1405.90	-1459.52		ppb
Terbium	159-1				108		%
Terbium	159-2				98		%
Thallium	203-1	119.89	119.64	121.48	120.34	0.83	ppb
Thallium	205-1	118.01	118.51	119.73	118.75	0.74	ppb
Tin	118-1	113.55	113.40	113.49	113.48	0.07	ppb
Titanium	47-1	734.06	741.03	725.43	733.50	1.07	ppb
Uranium	238-1	119.71	119.12	118.44	119.09	0.54	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:10:52	DataFile Name :	036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	149.86	144.44	146.72	147.00	1.85	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				95		%
Zinc	66-2	1015.61	982.74	996.39	998.25	1.65	ppb
Zirconium	90-1	120.23	123.45	120.12	121.27	1.56	ppb
Zirconium	91-1	112.76	117.55	113.77	114.70	2.20	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:13:47	DataFile Name :	037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9533.01	9412.00	9578.51	9507.84	0.91	ppb
Antimony	121-1	125.54	123.19	134.82	127.85	4.81	ppb
Arsenic	75-2	130.93	130.74	129.47	130.38	0.61	ppb
Barium	135-1	599.45	605.78	650.83	618.69	4.53	ppb
Barium	137-1	591.52	597.98	629.29	606.27	3.33	ppb
Beryllium	9-1	127.83	125.83	139.38	131.01	5.58	ppb
Bismuth	209-1				104		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	124.86	125.26	132.39	127.50	3.32	ppb
Cadmium	106-1	128.13	129.83	136.76	131.57	3.48	ppb
Cadmium	111-1	124.84	126.75	134.52	128.71	3.98	ppb
Calcium	43-1	9608.01	9749.51	10432.40	9929.97	4.44	ppb
Calcium	44-1	9957.62	10191.56	10897.91	10349.03	4.73	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	169.62	168.41	171.95	169.99	1.06	ppb
Cobalt	59-2	144.69	136.63	137.00	139.44	3.27	ppb
Copper	63-2	1070.50	1042.68	1076.14	1063.11	1.68	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				97		%
Indium	115-1				101		%
Indium	115-2				94		%
Iron	54-2	26798.11	26510.57	26880.39	26729.69	0.73	ppb
Iron	56-2	26819.06	26524.61	26803.52	26715.73	0.62	ppb
Iron	57-2	27162.92	27648.35	27453.90	27421.72	0.89	ppb
Krypton	83-1						cps
Lead	206-1	475.32	488.76	507.56	490.55	3.30	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:13:47	DataFile Name :	037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	481.11	487.26	519.27	495.88	4.13	ppb
Lead	208-1	481.57	486.81	516.03	494.80	3.75	ppb
Lithium	6-1				92		%
Magnesium	24-2	11562.66	11567.94	11511.60	11547.40	0.27	ppb
Manganese	55-2	1444.07	1433.31	1453.14	1443.51	0.69	ppb
Molybdenum	94-1	758.74	757.34	804.29	773.46	3.45	ppb
Molybdenum	95-1	658.84	657.14	679.48	665.15	1.87	ppb
Molybdenum	96-1	675.56	656.82	692.57	674.98	2.65	ppb
Molybdenum	97-1	671.56	654.58	686.89	671.01	2.41	ppb
Molybdenum	98-1	659.42	657.29	693.69	670.14	3.05	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	152.37	149.38	152.31	151.35	1.13	ppb
Phosphorus	31-2	519.55	528.71	529.76	526.01	1.07	ppb
Potassium	39-2	6607.26	6640.35	6695.31	6647.64	0.67	ppb
Rhodium	103-1				101		%
Rhodium	103-2				95		%
Scandium	45-1				102		%
Scandium	45-2				94		%
Selenium	82-1	126.14	124.37	131.48	127.33	2.91	ppb
Selenium	77-2	146.12	149.35	154.06	149.84	2.67	ppb
Selenium	78-2	126.73	125.91	122.48	125.04	1.81	ppb
Silicon	28-1	27.04	27.27	38.18	30.83	20.65	ppb
Silver	107-1	3.64	3.62	3.86	3.71	3.50	ppb
Silver	109-1	0.14	0.14	0.15	0.14	6.32	ppb
Sodium	23-2	9991.23	9930.78	9932.13	9951.38	0.35	ppb
Strontium	86-1	2946.51	2926.73	3092.93	2988.72	3.04	ppb
Strontium	88-1	3128.93	3068.62	3227.14	3141.56	2.55	ppb
Sulfur	34-1	-1496.62	-1392.39	-1063.61	-1317.54		ppb
Terbium	159-1				104		%
Terbium	159-2				98		%
Thallium	203-1	116.27	121.42	127.61	121.77	4.66	ppb
Thallium	205-1	119.49	119.20	127.50	122.06	3.86	ppb
Tin	118-1	116.46	115.35	121.45	117.76	2.76	ppb
Titanium	47-1	734.31	752.99	799.54	762.28	4.41	ppb
Uranium	238-1	117.96	118.51	126.41	120.96	3.91	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:13:47	DataFile Name :	037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	146.35	146.27	146.71	146.44	0.16	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				95		%
Zinc	66-2	1000.50	983.41	1000.24	994.72	0.98	ppb
Zirconium	90-1	123.56	121.45	127.66	124.22	2.54	ppb
Zirconium	91-1	116.14	115.68	121.59	117.80	2.79	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P8
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:16:40	DataFile Name :	038CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	51777.92	49724.84	50627.18	50709.98	2.03	ppb
Antimony	121-1	506.35	498.28	503.83	502.82	0.82	ppb
Arsenic	75-2	513.48	508.71	510.74	510.98	0.47	ppb
Barium	135-1	2554.03	2548.26	2533.51	2545.27	0.42	ppb
Barium	137-1	2548.58	2545.34	2557.40	2550.44	0.24	ppb
Beryllium	9-1	535.52	522.26	526.05	527.94	1.29	ppb
Bismuth	209-1				92		%
Bismuth	209-2				83		%
Bromine	81-1						cps
Cadmium	108-1	492.30	488.22	489.73	490.08	0.42	ppb
Cadmium	106-1	496.14	489.61	502.92	496.22	1.34	ppb
Cadmium	111-1	498.63	494.75	486.18	493.19	1.29	ppb
Calcium	43-1	243042.91	243321.07	245348.00	243903.99	0.52	ppb
Calcium	44-1	244113.06	242950.28	245468.23	244177.19	0.52	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	516.10	508.82	511.90	512.27	0.71	ppb
Cobalt	59-2	513.45	499.17	506.15	506.26	1.41	ppb
Copper	63-2	4906.87	4826.99	4907.66	4880.51	0.95	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				92		%
Indium	115-1				92		%
Indium	115-2				85		%
Iron	54-2	125920.01	126358.17	126108.86	126129.02	0.17	ppb
Iron	56-2	126691.53	125099.51	124735.95	125509.00	0.83	ppb
Iron	57-2	128341.69	126045.81	125696.93	126694.81	1.13	ppb
Krypton	83-1						cps
Lead	206-1	2581.59	2611.61	2584.75	2592.65	0.64	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P8
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:16:40	DataFile Name :	038CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2616.20	2613.40	2581.06	2603.55	0.75	ppb
Lead	208-1	2608.52	2586.31	2585.54	2593.46	0.50	ppb
Lithium	6-1				87		%
Magnesium	24-2	258141.08	251092.88	253518.96	254250.97	1.41	ppb
Manganese	55-2	5142.66	5077.96	5155.82	5125.48	0.81	ppb
Molybdenum	94-1	5162.41	5117.36	5168.93	5149.57	0.55	ppb
Molybdenum	95-1	5185.35	5145.03	5121.43	5150.60	0.63	ppb
Molybdenum	96-1	5144.35	5219.52	5161.20	5175.02	0.76	ppb
Molybdenum	97-1	5127.01	5215.07	5166.81	5169.63	0.85	ppb
Molybdenum	98-1	5199.53	5119.63	5169.21	5162.79	0.78	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	468.42	461.38	467.81	465.87	0.84	ppb
Phosphorus	31-2	10423.04	10147.57	10213.81	10261.47	1.40	ppb
Potassium	39-2	121895.89	121572.05	122084.80	121850.91	0.21	ppb
Rhodium	103-1				86		%
Rhodium	103-2				80		%
Scandium	45-1				94		%
Scandium	45-2				86		%
Selenium	82-1	496.06	494.58	488.48	493.04	0.82	ppb
Selenium	77-2	551.40	507.29	502.25	520.31	5.20	ppb
Selenium	78-2	511.69	489.63	500.89	500.74	2.20	ppb
Silicon	28-1	407.73	403.50	406.49	405.91	0.54	ppb
Silver	107-1	486.57	482.36	483.97	484.30	0.44	ppb
Silver	109-1	483.69	481.87	473.90	479.82	1.08	ppb
Sodium	23-2	256189.20	245350.69	247970.97	249836.95	2.26	ppb
Strontium	86-1	12950.02	12859.58	12991.90	12933.83	0.52	ppb
Strontium	88-1	12762.67	12898.48	12812.87	12824.67	0.54	ppb
Sulfur	34-1	10362.81	10347.95	10214.82	10308.52	0.79	ppb
Terbium	159-1				100		%
Terbium	159-2				92		%
Thallium	203-1	519.67	518.45	512.84	516.99	0.70	ppb
Thallium	205-1	520.17	515.88	513.21	516.42	0.68	ppb
Tin	118-1	507.72	494.49	496.77	499.66	1.42	ppb
Titanium	47-1	5145.67	5208.70	5173.97	5176.11	0.61	ppb
Uranium	238-1	535.44	525.57	531.94	530.98	0.94	ppb

Reviewed By:Mohan
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Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P8
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:16:40	DataFile Name :	038CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	526.50	522.57	523.87	524.31	0.38	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				96		%
Yttrium	89-2				88		%
Zinc	66-2	5007.81	4925.95	4851.04	4928.27	1.59	ppb
Zirconium	90-1	517.38	510.88	516.38	514.88	0.68	ppb
Zirconium	91-1	518.53	518.17	514.52	517.07	0.43	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P8
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:21:10	DataFile Name :	039CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.49	-0.11	-0.40	-0.33		ppb
Antimony	121-1	0.05	0.04	0.04	0.05	9.99	ppb
Arsenic	75-2	0.00	0.03	0.03	0.02	70.21	ppb
Barium	135-1	0.00	0.01	0.01	0.01	44.30	ppb
Barium	137-1	0.01	0.00	0.00	0.01	113.79	ppb
Beryllium	9-1	0.10	0.08	0.08	0.09	11.65	ppb
Bismuth	209-1				108		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	0.00	0.06	0.01	0.02	144.22	ppb
Cadmium	106-1	-0.47	-1.15	-0.63	-0.75		ppb
Cadmium	111-1	-0.02	-0.08	-0.04	-0.04		ppb
Calcium	43-1	-5.10	-5.59	-5.28	-5.33		ppb
Calcium	44-1	-3.08	-3.39	-3.58	-3.35		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.00	-0.01	-0.01	-0.01		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	79.83	ppb
Copper	63-2	0.16	0.18	0.16	0.17	6.45	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				99		%
Indium	115-1				106		%
Indium	115-2				98		%
Iron	54-2	1.12	1.17	0.68	0.99	27.49	ppb
Iron	56-2	1.17	1.01	0.98	1.05	9.68	ppb
Iron	57-2	0.84	0.76	1.04	0.88	16.80	ppb
Krypton	83-1						cps
Lead	206-1	0.07	0.06	0.06	0.06	6.24	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P8
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:21:10	DataFile Name :	039CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.06	0.06	0.05	0.06	10.76	ppb
Lead	208-1	0.07	0.07	0.06	0.06	6.11	ppb
Lithium	6-1				97		%
Magnesium	24-2	0.67	0.48	0.42	0.52	24.19	ppb
Manganese	55-2	0.01	-0.01	-0.02	-0.01		ppb
Molybdenum	94-1	0.17	0.11	0.10	0.13	27.14	ppb
Molybdenum	95-1	0.20	0.13	0.11	0.15	34.25	ppb
Molybdenum	96-1	0.18	0.12	0.10	0.13	30.60	ppb
Molybdenum	97-1	0.19	0.12	0.10	0.13	37.25	ppb
Molybdenum	98-1	0.18	0.11	0.10	0.13	34.60	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.08	0.08	0.08	0.08	5.58	ppb
Phosphorus	31-2	-33.59	-17.83	-35.49	-28.97		ppb
Potassium	39-2	32.23	31.44	31.25	31.64	1.65	ppb
Rhodium	103-1				105		%
Rhodium	103-2				98		%
Scandium	45-1				103		%
Scandium	45-2				95		%
Selenium	82-1	0.01	-0.20	-0.10	-0.09		ppb
Selenium	77-2	-0.16	-0.16	-0.16	-0.16		ppb
Selenium	78-2	0.42	-0.04	1.00	0.46	112.55	ppb
Silicon	28-1	-0.24	-0.22	-0.27	-0.24		ppb
Silver	107-1	0.01	0.01	0.01	0.01	19.65	ppb
Silver	109-1	0.01	0.01	0.01	0.01	15.50	ppb
Sodium	23-2	76.42	76.09	74.97	75.83	1.00	ppb
Strontium	86-1	-0.48	-0.15	-0.23	-0.29		ppb
Strontium	88-1	-0.09	-0.06	-0.10	-0.08		ppb
Sulfur	34-1	-849.97	-643.20	-713.95	-735.71		ppb
Terbium	159-1				107		%
Terbium	159-2				100		%
Thallium	203-1	0.02	0.02	0.02	0.02	11.44	ppb
Thallium	205-1	0.02	0.02	0.02	0.02	9.52	ppb
Tin	118-1	-0.04	-0.04	-0.04	-0.04		ppb
Titanium	47-1	0.06	0.05	0.04	0.05	14.11	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	23.67	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P8
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:21:10	DataFile Name :	039CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00	373.02	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				106		%
Yttrium	89-2				97		%
Zinc	66-2	-0.07	-0.22	-0.06	-0.11		ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	25.91	ppb
Zirconium	91-1	0.01	0.01	0.01	0.01	20.21	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165562BL	Instrumnet Name :	P8
Client Sample ID :	PB165562BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:24:30	DataFile Name :	040CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.24	-0.15	-0.55	-0.31		ppb
Antimony	121-1	0.02	0.02	0.02	0.02	10.77	ppb
Arsenic	75-2	0.02	0.01	0.00	0.01	73.18	ppb
Barium	135-1	0.01	0.01	0.01	0.01	9.00	ppb
Barium	137-1	0.01	0.01	0.01	0.01	38.23	ppb
Beryllium	9-1	0.06	0.05	0.05	0.06	4.33	ppb
Bismuth	209-1				105		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	0.06	0.02	0.03	0.04	67.06	ppb
Cadmium	106-1	0.07	-1.10	0.08	-0.32		ppb
Cadmium	111-1	0.01	-0.08	0.01	-0.02		ppb
Calcium	43-1	9.08	9.53	11.01	9.88	10.24	ppb
Calcium	44-1	11.33	11.35	14.05	12.24	12.77	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.17	0.11	0.08	0.12	40.86	ppb
Cobalt	59-2	0.01	0.00	0.01	0.00	79.83	ppb
Copper	63-2	0.01	-0.02	-0.04	-0.01		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				96		%
Indium	115-1				102		%
Indium	115-2				97		%
Iron	54-2	0.76	0.78	0.78	0.77	0.84	ppb
Iron	56-2	1.12	0.75	0.77	0.88	23.46	ppb
Iron	57-2	1.43	0.85	1.45	1.24	27.35	ppb
Krypton	83-1						cps
Lead	206-1	0.04	0.04	0.05	0.04	7.69	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165562BL	Instrumnet Name :	P8
Client Sample ID :	PB165562BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:24:30	DataFile Name :	040CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.05	0.04	0.05	0.05	15.11	ppb
Lead	208-1	0.05	0.05	0.05	0.05	5.44	ppb
Lithium	6-1				96		%
Magnesium	24-2	0.19	0.56	0.20	0.31	67.22	ppb
Manganese	55-2	0.15	0.08	0.07	0.10	40.17	ppb
Molybdenum	94-1	0.05	0.04	0.04	0.05	15.67	ppb
Molybdenum	95-1	0.05	0.05	0.06	0.05	4.35	ppb
Molybdenum	96-1	0.04	0.03	0.04	0.04	10.49	ppb
Molybdenum	97-1	0.06	0.04	0.04	0.05	21.39	ppb
Molybdenum	98-1	0.04	0.03	0.03	0.04	12.88	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.04	0.00	0.01	0.01	151.35	ppb
Phosphorus	31-2	-29.28	-22.48	-22.19	-24.65		ppb
Potassium	39-2	35.90	30.43	31.22	32.51	9.09	ppb
Rhodium	103-1				101		%
Rhodium	103-2				97		%
Scandium	45-1				101		%
Scandium	45-2				92		%
Selenium	82-1	0.06	0.12	-0.12	0.02	668.86	ppb
Selenium	77-2	-0.16	-0.16	-0.16	-0.16		ppb
Selenium	78-2	0.63	-0.33	-0.18	0.04	1228.75	ppb
Silicon	28-1	-0.28	-0.27	-0.04	-0.20		ppb
Silver	107-1	0.00	0.00	0.00	0.00		ppb
Silver	109-1	-0.01	0.00	0.00	0.00		ppb
Sodium	23-2	77.07	61.48	65.67	68.07	11.85	ppb
Strontium	86-1	0.13	0.31	0.12	0.18	56.75	ppb
Strontium	88-1	0.26	0.28	0.26	0.27	4.66	ppb
Sulfur	34-1	-487.36	-468.66	-24.19	-326.74		ppb
Terbium	159-1				104		%
Terbium	159-2				96		%
Thallium	203-1	0.01	0.02	0.01	0.01	15.93	ppb
Thallium	205-1	0.02	0.01	0.01	0.01	8.10	ppb
Tin	118-1	0.07	0.07	0.09	0.08	16.25	ppb
Titanium	47-1	0.02	0.03	0.03	0.03	25.03	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165562BL	Instrumnet Name :	P8
Client Sample ID :	PB165562BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:24:30	DataFile Name :	040CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00	43.17	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				103		%
Yttrium	89-2				94		%
Zinc	66-2	1.08	0.84	0.77	0.90	18.34	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	7.06	ppb
Zirconium	91-1	0.00	0.01	0.01	0.01	45.47	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165562BS	Instrumnet Name :	P8
Client Sample ID :	PB165562BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:27:49	DataFile Name :	041LCSS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9664.04	9687.74	9561.09	9637.62	0.70	ppb
Antimony	121-1	509.42	508.72	503.33	507.16	0.66	ppb
Arsenic	75-2	499.94	502.30	507.44	503.23	0.76	ppb
Barium	135-1	2521.56	2518.34	2476.36	2505.42	1.01	ppb
Barium	137-1	2530.71	2515.62	2489.77	2512.03	0.82	ppb
Beryllium	9-1	521.96	510.63	506.39	512.99	1.57	ppb
Bismuth	209-1				101		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Cadmium	108-1	522.08	518.84	519.81	520.25	0.32	ppb
Cadmium	106-1	519.53	522.66	515.42	519.20	0.70	ppb
Cadmium	111-1	531.48	523.02	523.54	526.01	0.90	ppb
Calcium	43-1	49258.77	49898.08	49563.50	49573.45	0.65	ppb
Calcium	44-1	49845.81	50010.38	49836.76	49897.65	0.20	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	515.17	509.42	510.14	511.57	0.61	ppb
Cobalt	59-2	509.23	507.49	516.76	511.16	0.96	ppb
Copper	63-2	5149.17	5095.55	5066.03	5103.58	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				105		%
Holmium	165-2				97		%
Indium	115-1				99		%
Indium	115-2				92		%
Iron	54-2	26329.22	25518.88	25462.60	25770.23	1.88	ppb
Iron	56-2	25553.43	25389.41	25745.26	25562.70	0.70	ppb
Iron	57-2	26060.14	26039.06	26006.09	26035.09	0.10	ppb
Krypton	83-1						cps
Lead	206-1	2537.54	2504.78	2441.34	2494.55	1.96	ppb

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Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165562BS	Instrumnet Name :	P8
Client Sample ID :	PB165562BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:27:49	DataFile Name :	041LCSS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2515.73	2505.37	2486.04	2502.38	0.60	ppb
Lead	208-1	2507.13	2492.74	2467.22	2489.03	0.81	ppb
Lithium	6-1				96		%
Magnesium	24-2	53076.22	52715.77	53215.27	53002.42	0.49	ppb
Manganese	55-2	5113.86	5035.71	5012.70	5054.09	1.05	ppb
Molybdenum	94-1	5088.88	5114.13	5007.29	5070.10	1.10	ppb
Molybdenum	95-1	5089.06	5141.69	5010.29	5080.35	1.30	ppb
Molybdenum	96-1	5074.93	5198.17	4945.68	5072.93	2.49	ppb
Molybdenum	97-1	5082.54	5203.53	4907.77	5064.61	2.94	ppb
Molybdenum	98-1	5068.38	5262.11	4965.68	5098.72	2.95	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	483.60	477.34	482.93	481.29	0.71	ppb
Phosphorus	31-2	10071.32	9932.24	10091.07	10031.54	0.86	ppb
Potassium	39-2	24185.50	24264.48	23974.46	24141.48	0.62	ppb
Rhodium	103-1				96		%
Rhodium	103-2				92		%
Scandium	45-1				98		%
Scandium	45-2				91		%
Selenium	82-1	505.75	530.81	501.65	512.74	3.08	ppb
Selenium	77-2	484.23	515.33	502.56	500.71	3.12	ppb
Selenium	78-2	504.87	521.49	498.51	508.29	2.33	ppb
Silicon	28-1	510.94	528.07	514.52	517.84	1.74	ppb
Silver	107-1	513.52	511.90	516.71	514.04	0.48	ppb
Silver	109-1	525.92	522.60	510.09	519.53	1.61	ppb
Sodium	23-2	51100.18	49769.18	50367.04	50412.13	1.32	ppb
Strontium	86-1	12437.45	12842.62	12486.25	12588.77	1.76	ppb
Strontium	88-1	12481.26	12882.17	12361.50	12574.98	2.17	ppb
Sulfur	34-1	10742.08	10815.65	10819.45	10792.40	0.40	ppb
Terbium	159-1				104		%
Terbium	159-2				98		%
Thallium	203-1	506.38	502.42	479.65	496.15	2.91	ppb
Thallium	205-1	502.54	497.84	484.69	495.02	1.87	ppb
Tin	118-1	516.24	517.18	502.97	512.13	1.55	ppb
Titanium	47-1	5114.81	5113.91	5094.17	5107.63	0.23	ppb
Uranium	238-1	486.20	493.64	483.77	487.87	1.05	ppb

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Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165562BS	Instrumnet Name :	P8
Client Sample ID :	PB165562BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:27:49	DataFile Name :	041LCSS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	511.33	503.51	499.38	504.74	1.20	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				94		%
Zinc	66-2	5233.11	5072.61	5055.66	5120.46	1.91	ppb
Zirconium	90-1	505.01	510.75	497.07	504.28	1.36	ppb
Zirconium	91-1	502.40	512.74	501.34	505.49	1.25	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:30:31	DataFile Name :	042AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9904.43	9869.58	9849.00	9874.34	0.28	ppb
Antimony	121-1	0.12	0.12	0.10	0.11	7.25	ppb
Arsenic	75-2	4.41	4.33	4.67	4.47	3.98	ppb
Barium	135-1	53.66	53.94	54.35	53.98	0.65	ppb
Barium	137-1	54.07	54.65	54.63	54.45	0.61	ppb
Beryllium	9-1	0.84	0.86	0.82	0.84	2.04	ppb
Bismuth	209-1				108		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Cadmium	108-1	1.32	1.34	1.23	1.30	4.55	ppb
Cadmium	106-1	1.26	1.80	1.54	1.53	17.82	ppb
Cadmium	111-1	0.08	0.14	0.12	0.11	25.90	ppb
Calcium	43-1	592.90	596.49	598.40	595.93	0.47	ppb
Calcium	44-1	596.98	591.84	601.49	596.77	0.81	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	19.86	20.03	19.73	19.87	0.75	ppb
Cobalt	59-2	12.67	12.71	12.71	12.70	0.17	ppb
Copper	63-2	16.89	16.77	16.75	16.81	0.46	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				99		%
Indium	115-1				105		%
Indium	115-2				97		%
Iron	54-2	19320.66	18645.37	19128.66	19031.57	1.83	ppb
Iron	56-2	18940.00	19226.20	18634.53	18933.58	1.56	ppb
Iron	57-2	19097.64	19390.84	18795.70	19094.73	1.56	ppb
Krypton	83-1						cps
Lead	206-1	9.48	9.69	9.41	9.52	1.51	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:30:31	DataFile Name :	042AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	8.98	9.26	9.17	9.14	1.58	ppb
Lead	208-1	9.27	9.36	9.29	9.31	0.55	ppb
Lithium	6-1				98		%
Magnesium	24-2	1233.58	1238.29	1231.03	1234.30	0.30	ppb
Manganese	55-2	198.68	198.18	198.45	198.44	0.13	ppb
Molybdenum	94-1	18.43	18.34	17.79	18.19	1.90	ppb
Molybdenum	95-1	0.94	0.84	0.74	0.84	11.74	ppb
Molybdenum	96-1	2.71	2.81	2.64	2.72	3.18	ppb
Molybdenum	97-1	0.89	0.84	0.75	0.83	8.73	ppb
Molybdenum	98-1	0.87	0.87	0.78	0.84	5.95	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	27.73	27.37	27.42	27.51	0.71	ppb
Phosphorus	31-2	258.90	248.61	235.44	247.65	4.75	ppb
Potassium	39-2	851.10	832.20	807.95	830.42	2.60	ppb
Rhodium	103-1				106		%
Rhodium	103-2				97		%
Scandium	45-1				103		%
Scandium	45-2				94		%
Selenium	82-1	0.38	0.29	0.17	0.28	38.81	ppb
Selenium	77-2	19.21	17.65	16.39	17.75	7.97	ppb
Selenium	78-2	3.83	2.12	1.71	2.55	44.01	ppb
Silicon	28-1	64.14	155.96	127.36	115.82	40.57	ppb
Silver	107-1	0.12	0.11	0.11	0.11	4.57	ppb
Silver	109-1	0.08	0.08	0.07	0.08	8.93	ppb
Sodium	23-2	101.91	97.80	96.35	98.69	2.92	ppb
Strontium	86-1	102.82	120.96	108.26	110.68	8.41	ppb
Strontium	88-1	99.82	122.56	101.15	107.84	11.84	ppb
Sulfur	34-1	-1179.38	-1232.78	-1239.67	-1217.27		ppb
Terbium	159-1				108		%
Terbium	159-2				99		%
Thallium	203-1	0.19	0.19	0.19	0.19	1.70	ppb
Thallium	205-1	0.19	0.19	0.19	0.19	2.42	ppb
Tin	118-1	0.25	0.20	0.17	0.21	20.44	ppb
Titanium	47-1	196.96	184.43	195.43	192.27	3.55	ppb
Uranium	238-1	0.93	0.92	0.92	0.92	0.31	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:30:31	DataFile Name :	042AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	31.36	30.46	31.20	31.01	1.55	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				98		%
Zinc	66-2	35.88	35.96	35.84	35.89	0.16	ppb
Zirconium	90-1	9.45	10.20	9.63	9.76	4.00	ppb
Zirconium	91-1	9.24	9.47	9.20	9.30	1.57	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:33:46	DataFile Name :	043AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	11368.86	11396.82	10972.72	11246.13	2.11	ppb
Antimony	121-1	0.05	0.06	0.05	0.05	13.75	ppb
Arsenic	75-2	4.89	4.98	4.86	4.91	1.22	ppb
Barium	135-1	55.06	65.64	59.89	60.20	8.80	ppb
Barium	137-1	56.47	67.07	61.80	61.78	8.58	ppb
Beryllium	9-1	0.84	0.97	0.90	0.90	7.00	ppb
Bismuth	209-1				107		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	3.93	1.44	1.24	2.20	68.12	ppb
Cadmium	106-1	1.09	2.10	0.83	1.34	50.16	ppb
Cadmium	111-1	-0.08	0.15	0.05	0.04	291.79	ppb
Calcium	43-1	1955.40	2355.40	2189.32	2166.71	9.27	ppb
Calcium	44-1	2046.73	2459.18	2308.72	2271.54	9.19	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	22.23	22.05	21.74	22.01	1.12	ppb
Cobalt	59-2	13.82	14.02	13.75	13.86	1.02	ppb
Copper	63-2	18.06	18.43	18.03	18.17	1.22	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				101		%
Indium	115-1				106		%
Indium	115-2				98		%
Iron	54-2	20685.05	20626.65	20905.04	20738.91	0.71	ppb
Iron	56-2	20208.58	20549.71	20799.70	20519.33	1.45	ppb
Iron	57-2	20666.56	21323.24	21069.60	21019.80	1.58	ppb
Krypton	83-1						cps
Lead	206-1	9.82	11.74	11.04	10.87	8.94	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:33:46	DataFile Name :	043AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	9.26	11.35	10.42	10.34	10.14	ppb
Lead	208-1	9.51	11.49	10.67	10.56	9.44	ppb
Lithium	6-1				96		%
Magnesium	24-2	1368.37	1368.85	1384.02	1373.75	0.65	ppb
Manganese	55-2	219.99	216.77	219.68	218.81	0.81	ppb
Molybdenum	94-1	17.53	21.66	20.33	19.84	10.63	ppb
Molybdenum	95-1	0.60	0.75	0.68	0.68	11.35	ppb
Molybdenum	96-1	2.45	3.00	2.84	2.76	10.28	ppb
Molybdenum	97-1	0.61	0.73	0.66	0.67	8.32	ppb
Molybdenum	98-1	0.62	0.73	0.65	0.67	8.60	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	25.52	25.79	25.29	25.54	0.98	ppb
Phosphorus	31-2	280.81	296.41	257.93	278.39	6.95	ppb
Potassium	39-2	916.61	931.96	879.93	909.50	2.94	ppb
Rhodium	103-1				106		%
Rhodium	103-2				99		%
Scandium	45-1				105		%
Scandium	45-2				96		%
Selenium	82-1	0.28	0.48	0.54	0.43	31.06	ppb
Selenium	77-2	18.57	17.86	13.86	16.76	15.12	ppb
Selenium	78-2	2.25	3.92	2.88	3.02	27.97	ppb
Silicon	28-1	99.73	100.01	76.49	92.08	14.66	ppb
Silver	107-1	0.06	0.08	0.07	0.07	14.00	ppb
Silver	109-1	0.03	0.04	0.03	0.03	16.62	ppb
Sodium	23-2	96.51	97.39	97.77	97.22	0.67	ppb
Strontium	86-1	131.53	146.48	129.74	135.92	6.76	ppb
Strontium	88-1	115.79	145.99	139.12	133.63	11.84	ppb
Sulfur	34-1	-2100.42	-1281.60	-1791.62	-1724.55		ppb
Terbium	159-1				109		%
Terbium	159-2				101		%
Thallium	203-1	0.18	0.19	0.19	0.19	2.67	ppb
Thallium	205-1	0.17	0.21	0.19	0.19	10.50	ppb
Tin	118-1	0.38	0.53	0.53	0.48	18.19	ppb
Titanium	47-1	190.89	221.23	223.08	211.73	8.54	ppb
Uranium	238-1	0.95	1.13	1.04	1.04	8.73	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:33:46	DataFile Name :	043AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	34.01	34.24	33.64	33.96	0.89	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				109		%
Yttrium	89-2				100		%
Zinc	66-2	128.33	129.77	130.71	129.61	0.92	ppb
Zirconium	90-1	9.45	11.80	10.99	10.75	11.13	ppb
Zirconium	91-1	9.30	11.17	10.26	10.24	9.10	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	25
Date & Time Acquired :	2024-12-11 19:37:02	DataFile Name :	044AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2017.00	1959.68	1974.24	1983.64	1.50	ppb
Antimony	121-1	0.03	0.03	0.03	0.03	1.14	ppb
Arsenic	75-2	0.85	0.97	0.93	0.91	6.54	ppb
Barium	135-1	10.69	10.97	10.79	10.82	1.29	ppb
Barium	137-1	11.19	11.59	11.30	11.36	1.80	ppb
Beryllium	9-1	0.21	0.20	0.20	0.20	3.11	ppb
Bismuth	209-1				108		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	0.25	0.24	0.30	0.26	11.93	ppb
Cadmium	106-1	-1.91	-1.31	-2.27	-1.83		ppb
Cadmium	111-1	-0.15	-0.10	-0.18	-0.15		ppb
Calcium	43-1	249.91	252.88	258.91	253.90	1.80	ppb
Calcium	44-1	249.71	254.38	257.65	253.91	1.57	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4.20	4.07	4.21	4.16	1.81	ppb
Cobalt	59-2	2.67	2.68	2.69	2.68	0.43	ppb
Copper	63-2	12.91	12.84	12.60	12.78	1.28	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				109		%
Holmium	165-2				100		%
Indium	115-1				107		%
Indium	115-2				100		%
Iron	54-2	3694.97	3656.36	3639.19	3663.50	0.78	ppb
Iron	56-2	3796.27	3776.39	3791.85	3788.17	0.28	ppb
Iron	57-2	3661.75	3684.68	3706.11	3684.18	0.60	ppb
Krypton	83-1						cps
Lead	206-1	2.00	1.99	2.00	2.00	0.28	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	25
Date & Time Acquired :	2024-12-11 19:37:02	DataFile Name :	044AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.87	1.89	1.91	1.89	0.87	ppb
Lead	208-1	1.94	1.93	1.96	1.95	0.76	ppb
Lithium	6-1				95		%
Magnesium	24-2	253.01	250.35	250.64	251.33	0.58	ppb
Manganese	55-2	40.19	40.48	40.69	40.45	0.63	ppb
Molybdenum	94-1	3.56	3.72	3.76	3.68	2.83	ppb
Molybdenum	95-1	0.13	0.14	0.15	0.14	4.57	ppb
Molybdenum	96-1	0.47	0.60	0.51	0.53	12.32	ppb
Molybdenum	97-1	0.13	0.13	0.14	0.13	3.65	ppb
Molybdenum	98-1	0.14	0.14	0.14	0.14	1.92	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	17.91	17.79	17.78	17.83	0.42	ppb
Phosphorus	31-2	20.80	24.91	22.14	22.62	9.25	ppb
Potassium	39-2	195.99	196.16	191.73	194.62	1.29	ppb
Rhodium	103-1				107		%
Rhodium	103-2				100		%
Scandium	45-1				106		%
Scandium	45-2				96		%
Selenium	82-1	-0.10	0.05	0.18	0.04	339.09	ppb
Selenium	77-2	2.89	4.33	2.36	3.19	32.00	ppb
Selenium	78-2	1.00	1.12	0.11	0.74	74.56	ppb
Silicon	28-1	8.51	10.63	15.51	11.55	31.06	ppb
Silver	107-1	0.01	0.01	0.01	0.01	12.33	ppb
Silver	109-1	-0.01	0.00	0.00	0.00		ppb
Sodium	23-2	57.84	56.27	57.37	57.16	1.41	ppb
Strontium	86-1	21.07	22.59	22.34	22.00	3.71	ppb
Strontium	88-1	21.39	21.94	22.67	22.00	2.93	ppb
Sulfur	34-1	-2116.78	-2061.33	-2019.07	-2065.72		ppb
Terbium	159-1				109		%
Terbium	159-2				101		%
Thallium	203-1	0.04	0.04	0.04	0.04	8.19	ppb
Thallium	205-1	0.04	0.04	0.04	0.04	3.18	ppb
Tin	118-1	0.13	0.12	0.13	0.12	7.36	ppb
Titanium	47-1	40.60	35.47	37.49	37.85	6.84	ppb
Uranium	238-1	0.19	0.18	0.19	0.18	4.00	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	25
Date & Time Acquired :	2024-12-11 19:37:02	DataFile Name :	044AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	6.32	6.25	6.26	6.28	0.60	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				108		%
Yttrium	89-2				98		%
Zinc	66-2	14.98	14.66	14.81	14.82	1.09	ppb
Zirconium	90-1	1.90	1.94	1.99	1.95	2.34	ppb
Zirconium	91-1	1.84	1.89	1.94	1.89	2.48	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:40:19	DataFile Name :	045AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	11187.00	11885.41	11558.21	11543.54	3.03	ppb
Antimony	121-1	120.31	120.42	119.49	120.07	0.42	ppb
Arsenic	75-2	129.50	127.17	129.01	128.56	0.95	ppb
Barium	135-1	616.17	616.07	604.76	612.33	1.07	ppb
Barium	137-1	605.78	606.82	605.01	605.87	0.15	ppb
Beryllium	9-1	127.15	127.58	127.33	127.35	0.17	ppb
Bismuth	209-1				107		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	121.31	125.28	122.91	123.17	1.62	ppb
Cadmium	106-1	127.61	128.81	128.46	128.29	0.48	ppb
Cadmium	111-1	124.35	126.20	124.54	125.03	0.82	ppb
Calcium	43-1	9846.53	9937.49	10059.32	9947.78	1.07	ppb
Calcium	44-1	10240.55	10456.61	10393.74	10363.64	1.07	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	131.52	132.71	130.28	131.50	0.93	ppb
Cobalt	59-2	131.36	132.11	130.90	131.46	0.46	ppb
Copper	63-2	1059.74	1070.29	1041.34	1057.12	1.39	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				109		%
Holmium	165-2				99		%
Indium	115-1				107		%
Indium	115-2				97		%
Iron	54-2	23402.36	23206.73	22838.76	23149.28	1.24	ppb
Iron	56-2	22521.74	23011.97	22529.86	22687.86	1.24	ppb
Iron	57-2	23391.38	23410.52	23436.11	23412.67	0.10	ppb
Krypton	83-1						cps
Lead	206-1	472.68	475.01	479.52	475.74	0.73	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:40:19	DataFile Name :	045AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	482.01	479.35	477.76	479.71	0.45	ppb
Lead	208-1	478.48	482.13	480.49	480.37	0.38	ppb
Lithium	6-1				93		%
Magnesium	24-2	11026.71	11114.38	11146.05	11095.71	0.56	ppb
Manganese	55-2	1133.06	1137.66	1143.80	1138.17	0.47	ppb
Molybdenum	94-1	753.52	757.64	762.85	758.00	0.62	ppb
Molybdenum	95-1	649.07	653.28	643.46	648.60	0.76	ppb
Molybdenum	96-1	659.75	655.59	664.23	659.86	0.66	ppb
Molybdenum	97-1	644.42	649.17	653.46	649.02	0.70	ppb
Molybdenum	98-1	641.06	653.73	648.61	647.80	0.98	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	133.28	136.14	133.67	134.36	1.15	ppb
Phosphorus	31-2	238.61	248.72	244.82	244.05	2.09	ppb
Potassium	39-2	6222.44	6281.67	6202.91	6235.67	0.66	ppb
Rhodium	103-1				104		%
Rhodium	103-2				97		%
Scandium	45-1				105		%
Scandium	45-2				95		%
Selenium	82-1	125.02	123.61	122.81	123.82	0.91	ppb
Selenium	77-2	160.42	118.75	143.34	140.84	14.87	ppb
Selenium	78-2	131.71	121.68	119.09	124.16	5.37	ppb
Silicon	28-1	41.48	36.44	49.54	42.48	15.55	ppb
Silver	107-1	3.46	3.49	3.40	3.45	1.42	ppb
Silver	109-1	0.14	0.14	0.14	0.14	2.50	ppb
Sodium	23-2	9814.15	9849.17	9719.41	9794.25	0.69	ppb
Strontium	86-1	2910.69	2902.91	2911.43	2908.34	0.16	ppb
Strontium	88-1	3057.06	2993.97	3017.49	3022.84	1.05	ppb
Sulfur	34-1	-1588.65	-1628.06	-1482.80	-1566.50		ppb
Terbium	159-1				108		%
Terbium	159-2				100		%
Thallium	203-1	115.39	114.42	118.26	116.02	1.72	ppb
Thallium	205-1	113.39	116.54	116.42	115.45	1.55	ppb
Tin	118-1	112.08	112.98	111.91	112.32	0.51	ppb
Titanium	47-1	584.04	609.51	605.87	599.80	2.30	ppb
Uranium	238-1	111.39	113.43	112.18	112.34	0.92	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:40:19	DataFile Name :	045AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	144.92	145.78	143.53	144.74	0.79	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				108		%
Yttrium	89-2				99		%
Zinc	66-2	1006.18	1028.91	999.56	1011.55	1.52	ppb
Zirconium	90-1	124.94	124.69	123.81	124.48	0.48	ppb
Zirconium	91-1	117.17	118.62	118.66	118.15	0.72	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:43:15	DataFile Name :	046AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	11098.35	11237.63	11225.14	11187.04	0.69	ppb
Antimony	121-1	120.81	123.24	121.32	121.79	1.05	ppb
Arsenic	75-2	128.94	128.91	130.72	129.52	0.80	ppb
Barium	135-1	602.25	612.05	604.39	606.23	0.85	ppb
Barium	137-1	600.25	610.15	601.67	604.03	0.89	ppb
Beryllium	9-1	126.19	123.98	124.24	124.80	0.97	ppb
Bismuth	209-1				107		%
Bismuth	209-2				95		%
Bromine	81-1						cps
Cadmium	108-1	120.59	127.10	125.19	124.30	2.69	ppb
Cadmium	106-1	128.19	131.19	132.81	130.73	1.79	ppb
Cadmium	111-1	122.74	125.55	125.91	124.73	1.39	ppb
Calcium	43-1	9688.21	9955.19	10016.81	9886.74	1.77	ppb
Calcium	44-1	10184.41	10224.43	10278.85	10229.23	0.46	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	130.62	131.51	130.48	130.87	0.43	ppb
Cobalt	59-2	131.00	132.12	132.18	131.77	0.50	ppb
Copper	63-2	1051.38	1045.34	1038.07	1044.93	0.64	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				100		%
Indium	115-1				104		%
Indium	115-2				95		%
Iron	54-2	23167.53	23146.40	22774.18	23029.37	0.96	ppb
Iron	56-2	22630.73	22897.41	22898.70	22808.95	0.68	ppb
Iron	57-2	22802.91	22912.19	23033.67	22916.26	0.50	ppb
Krypton	83-1						cps
Lead	206-1	475.86	473.23	469.93	473.01	0.63	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:43:15	DataFile Name :	046AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	486.69	477.19	471.46	478.45	1.61	ppb
Lead	208-1	482.14	480.83	472.70	478.56	1.07	ppb
Lithium	6-1				95		%
Magnesium	24-2	11275.76	11221.72	11196.55	11231.34	0.36	ppb
Manganese	55-2	1127.05	1151.24	1147.23	1141.84	1.14	ppb
Molybdenum	94-1	772.09	757.42	755.94	761.82	1.17	ppb
Molybdenum	95-1	648.72	654.24	646.37	649.78	0.62	ppb
Molybdenum	96-1	654.04	651.56	655.07	653.56	0.28	ppb
Molybdenum	97-1	636.43	638.89	647.93	641.08	0.94	ppb
Molybdenum	98-1	642.00	646.98	647.38	645.45	0.46	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	131.28	132.41	131.52	131.73	0.45	ppb
Phosphorus	31-2	247.78	224.98	212.60	228.45	7.81	ppb
Potassium	39-2	6249.52	6189.31	6144.20	6194.34	0.85	ppb
Rhodium	103-1				102		%
Rhodium	103-2				96		%
Scandium	45-1				104		%
Scandium	45-2				94		%
Selenium	82-1	120.20	124.56	120.12	121.63	2.09	ppb
Selenium	77-2	147.73	142.95	113.51	134.73	13.76	ppb
Selenium	78-2	116.45	124.42	121.26	120.71	3.32	ppb
Silicon	28-1	42.02	75.34	44.65	54.00	34.30	ppb
Silver	107-1	3.45	3.55	3.52	3.51	1.56	ppb
Silver	109-1	0.14	0.15	0.15	0.15	2.79	ppb
Sodium	23-2	10022.10	9984.43	9928.37	9978.30	0.47	ppb
Strontium	86-1	2883.36	2931.37	2902.29	2905.67	0.83	ppb
Strontium	88-1	2978.23	3000.76	2991.34	2990.11	0.38	ppb
Sulfur	34-1	-1460.68	-1314.94	-1238.03	-1337.88		ppb
Terbium	159-1				107		%
Terbium	159-2				99		%
Thallium	203-1	115.10	115.25	117.05	115.80	0.94	ppb
Thallium	205-1	114.38	116.41	117.25	116.01	1.27	ppb
Tin	118-1	109.34	114.07	112.90	112.10	2.20	ppb
Titanium	47-1	571.77	632.09	597.99	600.61	5.04	ppb
Uranium	238-1	113.20	114.35	111.76	113.10	1.15	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:43:15	DataFile Name :	046AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	144.66	145.55	145.13	145.11	0.31	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				97		%
Zinc	66-2	1003.27	1007.83	1008.33	1006.48	0.28	ppb
Zirconium	90-1	125.90	125.93	122.97	124.93	1.36	ppb
Zirconium	91-1	117.84	117.80	116.86	117.50	0.47	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:49:47	DataFile Name :	048AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	11292.91	11698.36	11027.92	11339.73	2.98	ppb
Antimony	121-1	110.97	143.96	129.61	128.18	12.90	ppb
Arsenic	75-2	127.07	127.73	128.70	127.83	0.64	ppb
Barium	135-1	565.17	709.72	666.12	647.00	11.46	ppb
Barium	137-1	570.85	704.05	641.98	638.96	10.43	ppb
Beryllium	9-1	114.44	140.82	131.42	128.89	10.37	ppb
Bismuth	209-1				100		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	114.63	146.89	132.85	131.45	12.30	ppb
Cadmium	106-1	117.32	148.64	135.40	133.79	11.75	ppb
Cadmium	111-1	114.96	144.48	133.49	130.98	11.39	ppb
Calcium	43-1	9459.47	11831.48	10682.96	10657.97	11.13	ppb
Calcium	44-1	9894.96	12253.48	10944.76	11031.07	10.71	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	132.05	130.83	130.24	131.04	0.71	ppb
Cobalt	59-2	132.81	131.13	131.37	131.77	0.69	ppb
Copper	63-2	1074.32	1052.01	1047.21	1057.85	1.37	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				98		%
Indium	115-1				97		%
Indium	115-2				94		%
Iron	54-2	23739.53	22938.28	22937.45	23205.08	1.99	ppb
Iron	56-2	23200.41	23393.56	22657.83	23083.93	1.65	ppb
Iron	57-2	23594.23	23402.45	23228.53	23408.41	0.78	ppb
Krypton	83-1						cps
Lead	206-1	455.79	573.82	507.05	512.22	11.55	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:49:47	DataFile Name :	048AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	456.77	570.98	517.67	515.14	11.09	ppb
Lead	208-1	454.36	567.45	514.02	511.94	11.05	ppb
Lithium	6-1				92		%
Magnesium	24-2	11178.88	11137.03	11185.66	11167.19	0.24	ppb
Manganese	55-2	1167.75	1124.16	1123.67	1138.53	2.22	ppb
Molybdenum	94-1	714.74	900.13	808.55	807.81	11.47	ppb
Molybdenum	95-1	616.30	766.05	687.91	690.09	10.85	ppb
Molybdenum	96-1	627.04	777.92	688.15	697.70	10.88	ppb
Molybdenum	97-1	616.70	771.81	683.96	690.82	11.26	ppb
Molybdenum	98-1	611.15	749.39	686.82	682.45	10.14	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	133.96	132.64	132.06	132.89	0.73	ppb
Phosphorus	31-2	263.95	244.31	206.37	238.21	12.29	ppb
Potassium	39-2	6323.63	6190.96	5996.15	6170.25	2.67	ppb
Rhodium	103-1				96		%
Rhodium	103-2				94		%
Scandium	45-1				97		%
Scandium	45-2				92		%
Selenium	82-1	116.30	142.33	132.57	130.40	10.08	ppb
Selenium	77-2	129.53	137.60	129.44	132.19	3.54	ppb
Selenium	78-2	127.62	118.39	126.31	124.11	4.03	ppb
Silicon	28-1	86.13	94.83	59.09	80.02	23.30	ppb
Silver	107-1	3.20	4.07	3.73	3.67	11.89	ppb
Silver	109-1	0.13	0.17	0.15	0.15	13.83	ppb
Sodium	23-2	10073.57	10090.33	9904.05	10022.65	1.03	ppb
Strontium	86-1	2755.72	3414.28	3110.02	3093.34	10.66	ppb
Strontium	88-1	2929.29	3583.60	3205.22	3239.37	10.14	ppb
Sulfur	34-1	-1527.81	-297.27	-949.74	-924.94		ppb
Terbium	159-1				101		%
Terbium	159-2				98		%
Thallium	203-1	111.94	138.28	121.75	123.99	10.74	ppb
Thallium	205-1	110.58	135.42	121.65	122.55	10.15	ppb
Tin	118-1	104.79	129.52	119.00	117.77	10.54	ppb
Titanium	47-1	564.25	704.06	656.47	641.60	11.08	ppb
Uranium	238-1	106.25	131.50	120.41	119.38	10.60	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:49:47	DataFile Name :	048AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	147.70	146.42	143.64	145.92	1.42	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				99		%
Yttrium	89-2				96		%
Zinc	66-2	1022.88	1008.10	991.99	1007.66	1.53	ppb
Zirconium	90-1	118.23	146.31	134.67	133.07	10.60	ppb
Zirconium	91-1	111.30	138.52	125.77	125.20	10.88	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P8
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:52:40	DataFile Name :	049CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	49764.98	49945.98	49613.98	49774.98	0.33	ppb
Antimony	121-1	505.25	490.63	496.33	497.40	1.48	ppb
Arsenic	75-2	501.82	503.94	501.61	502.45	0.26	ppb
Barium	135-1	2523.81	2508.04	2476.03	2502.63	0.97	ppb
Barium	137-1	2501.26	2531.16	2475.12	2502.51	1.12	ppb
Beryllium	9-1	528.41	525.84	524.09	526.11	0.41	ppb
Bismuth	209-1				91		%
Bismuth	209-2				83		%
Bromine	81-1						cps
Cadmium	108-1	495.63	491.30	482.76	489.90	1.34	ppb
Cadmium	106-1	498.91	481.79	479.68	486.79	2.17	ppb
Cadmium	111-1	496.98	492.39	485.63	491.67	1.16	ppb
Calcium	43-1	245765.34	243613.83	243119.66	244166.28	0.58	ppb
Calcium	44-1	247063.99	242351.06	241142.30	243519.12	1.28	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	511.34	510.01	508.82	510.06	0.25	ppb
Cobalt	59-2	505.71	506.35	501.35	504.47	0.54	ppb
Copper	63-2	4798.57	4859.51	4783.41	4813.83	0.84	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				93		%
Indium	115-1				93		%
Indium	115-2				86		%
Iron	54-2	122815.29	124218.92	124183.44	123739.22	0.65	ppb
Iron	56-2	124477.88	123173.17	123655.52	123768.85	0.53	ppb
Iron	57-2	125608.18	123482.75	125857.09	124982.68	1.04	ppb
Krypton	83-1						cps
Lead	206-1	2586.15	2568.71	2533.42	2562.76	1.05	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P8
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:52:40	DataFile Name :	049CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2628.57	2541.70	2511.90	2560.72	2.37	ppb
Lead	208-1	2614.03	2543.50	2524.76	2560.76	1.84	ppb
Lithium	6-1				87		%
Magnesium	24-2	248738.06	252240.63	252016.86	250998.52	0.78	ppb
Manganese	55-2	5063.96	5114.25	5053.79	5077.34	0.64	ppb
Molybdenum	94-1	5205.54	5139.37	5051.59	5132.17	1.50	ppb
Molybdenum	95-1	5244.32	5071.41	5007.74	5107.82	2.40	ppb
Molybdenum	96-1	5166.37	5101.12	5008.50	5092.00	1.56	ppb
Molybdenum	97-1	5146.88	5174.72	5000.49	5107.36	1.83	ppb
Molybdenum	98-1	5174.40	5124.44	5051.75	5116.87	1.21	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	460.77	460.64	458.37	459.93	0.29	ppb
Phosphorus	31-2	10175.76	10310.91	10070.93	10185.87	1.18	ppb
Potassium	39-2	120381.58	118861.70	118642.30	119295.19	0.79	ppb
Rhodium	103-1				86		%
Rhodium	103-2				82		%
Scandium	45-1				92		%
Scandium	45-2				86		%
Selenium	82-1	492.96	494.24	479.37	488.86	1.69	ppb
Selenium	77-2	443.20	491.10	532.35	488.88	9.13	ppb
Selenium	78-2	495.18	490.01	487.15	490.78	0.83	ppb
Silicon	28-1	411.65	403.22	399.46	404.78	1.54	ppb
Silver	107-1	480.70	478.39	473.97	477.69	0.72	ppb
Silver	109-1	476.01	479.51	479.19	478.24	0.40	ppb
Sodium	23-2	246988.58	248412.24	246837.19	247412.67	0.35	ppb
Strontium	86-1	12729.51	12929.89	12672.75	12777.38	1.06	ppb
Strontium	88-1	12940.20	12559.52	12374.17	12624.63	2.29	ppb
Sulfur	34-1	10567.15	9942.21	9713.09	10074.15	4.39	ppb
Terbium	159-1				99		%
Terbium	159-2				92		%
Thallium	203-1	519.06	518.20	508.92	515.39	1.09	ppb
Thallium	205-1	520.36	521.46	515.60	519.14	0.60	ppb
Tin	118-1	510.89	492.35	495.98	499.74	1.97	ppb
Titanium	47-1	5260.04	5147.76	5108.45	5172.08	1.52	ppb
Uranium	238-1	535.08	521.99	515.59	524.22	1.89	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P8
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:52:40	DataFile Name :	049CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	507.07	523.17	516.67	515.64	1.57	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				96		%
Yttrium	89-2				88		%
Zinc	66-2	4866.92	4849.26	4817.12	4844.43	0.52	ppb
Zirconium	90-1	519.21	512.33	505.73	512.42	1.32	ppb
Zirconium	91-1	524.07	507.08	498.96	510.04	2.51	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P8
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:55:25	DataFile Name :	050CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.11	0.32	0.52	0.25	130.34	ppb
Antimony	121-1	0.12	0.12	0.10	0.12	8.67	ppb
Arsenic	75-2	0.00	0.06	0.03	0.03	106.77	ppb
Barium	135-1	0.04	0.05	0.03	0.04	18.73	ppb
Barium	137-1	0.05	0.04	0.03	0.04	29.18	ppb
Beryllium	9-1	0.17	0.14	0.14	0.15	11.30	ppb
Bismuth	209-1				107		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Cadmium	108-1	0.08	0.06	0.03	0.06	42.49	ppb
Cadmium	106-1	-1.90	-1.36	-1.37	-1.54		ppb
Cadmium	111-1	-0.12	-0.08	-0.08	-0.09		ppb
Calcium	43-1	1.58	1.28	3.38	2.08	54.62	ppb
Calcium	44-1	5.10	3.88	4.07	4.35	15.12	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.02	0.05	0.05	0.04	47.90	ppb
Cobalt	59-2	0.01	0.01	0.00	0.01	49.65	ppb
Copper	63-2	0.24	0.25	0.23	0.24	4.09	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				99		%
Indium	115-1				104		%
Indium	115-2				99		%
Iron	54-2	1.58	1.65	1.37	1.53	9.64	ppb
Iron	56-2	2.19	1.59	1.91	1.90	16.00	ppb
Iron	57-2	1.88	1.58	2.16	1.87	15.62	ppb
Krypton	83-1						cps
Lead	206-1	0.14	0.13	0.11	0.12	14.06	ppb

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P8
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:55:25	DataFile Name :	050CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.14	0.12	0.11	0.12	12.66	ppb
Lead	208-1	0.15	0.13	0.11	0.13	12.16	ppb
Lithium	6-1				95		%
Magnesium	24-2	2.37	1.76	2.25	2.13	15.24	ppb
Manganese	55-2	0.08	0.06	0.07	0.07	13.09	ppb
Molybdenum	94-1	0.38	0.27	0.25	0.30	22.62	ppb
Molybdenum	95-1	0.41	0.30	0.26	0.33	24.71	ppb
Molybdenum	96-1	0.39	0.27	0.26	0.31	23.48	ppb
Molybdenum	97-1	0.39	0.28	0.23	0.30	26.76	ppb
Molybdenum	98-1	0.42	0.29	0.24	0.31	29.89	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.03	0.05	0.07	0.05	38.89	ppb
Phosphorus	31-2	-32.41	-23.58	-36.02	-30.67		ppb
Potassium	39-2	37.54	36.64	35.35	36.51	3.01	ppb
Rhodium	103-1				103		%
Rhodium	103-2				98		%
Scandium	45-1				102		%
Scandium	45-2				93		%
Selenium	82-1	0.04	-0.16	-0.03	-0.05		ppb
Selenium	77-2	-0.16	-0.16	-0.16	-0.16		ppb
Selenium	78-2	-0.03	0.27	-0.33	-0.03		ppb
Silicon	28-1	-0.15	-0.13	-0.15	-0.14		ppb
Silver	107-1	0.06	0.05	0.05	0.05	10.47	ppb
Silver	109-1	0.06	0.05	0.05	0.05	8.89	ppb
Sodium	23-2	95.42	97.55	96.02	96.33	1.14	ppb
Strontium	86-1	0.07	0.05	-0.21	-0.03		ppb
Strontium	88-1	0.23	0.20	0.17	0.20	15.61	ppb
Sulfur	34-1	-1201.07	-1153.28	-1127.38	-1160.58		ppb
Terbium	159-1				106		%
Terbium	159-2				99		%
Thallium	203-1	0.05	0.04	0.04	0.04	10.74	ppb
Thallium	205-1	0.04	0.04	0.03	0.04	13.53	ppb
Tin	118-1	0.03	0.02	0.01	0.02	42.81	ppb
Titanium	47-1	0.17	0.09	0.10	0.12	34.52	ppb
Uranium	238-1	0.01	0.01	0.00	0.01	25.85	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P8
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:55:25	DataFile Name :	050CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.01	0.00	0.01	0.01	49.60	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				105		%
Yttrium	89-2				96		%
Zinc	66-2	0.50	0.28	0.34	0.37	30.32	ppb
Zirconium	90-1	0.02	0.02	0.02	0.02	13.84	ppb
Zirconium	91-1	0.03	0.03	0.02	0.03	15.78	ppb

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:39:02	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	183	133	193	170	18.91	cps
Antimony	121-1	97	50	73	73	31.82	cps
Arsenic	75-2	10	7	0	6	91.64	cps
Barium	135-1	163	153	143	153	6.52	cps
Barium	137-1	220	250	213	228	8.58	cps
Beryllium	9-1	366	454	391	404	11.16	cps
Bismuth	209-1	22710818	22014014	20775373	21833402	4.49	cps
Bismuth	209-2	9453562	9655584	8617444	9242197	5.96	cps
Bromine	81-1	14494	14414	14167	14359	1.19	cps
Cadmium	108-1	40	30	23	31	26.97	cps
Cadmium	106-1	15636	14945	13734	14771	6.52	cps
Cadmium	111-1	10957	10464	9621	10347	6.53	cps
Calcium	43-1	1587	1603	1477	1556	4.42	cps
Calcium	44-1	33747	32858	32420	33008	2.05	cps
Carbon	12-1	4169166	4083070	4049561	4100599	1.50	cps
Carbon	12-2	28020	28000	27212	27744	1.66	cps
Chlorine	35-1	191962	194167	192174	192768	0.63	cps
Chlorine	35-2	733	777	753	754	2.88	cps
Chromium	52-2	2550	2420	2490	2487	2.62	cps
Cobalt	59-2	107	160	137	134	19.88	cps
Copper	63-2	5038	4874	5254	5055	3.77	cps
Dysprosium	156-1	10	30	20	20	50.00	cps
Dysprosium	156-2	3	7	0	3	100.05	cps
Erbium	164-1	163	197	197	186	10.37	cps
Erbium	164-2	60	47	40	49	20.83	cps
Gadolinium	160-1	320	210	237	256	22.46	cps
Gadolinium	160-2	47	60	73	60	22.22	cps
Holmium	165-1	37072328	35715624	33963024	35583659	4.38	cps
Holmium	165-2	13038591	13370896	11758509	12722665	6.69	cps
Indium	115-1	29240411	28397442	27446609	28361487	3.16	cps
Indium	115-2	3202089	3382080	2907705	3163958	7.57	cps
Iron	54-2	840	870	853	854	1.76	cps
Iron	56-2	10034	10217	9833	10028	1.91	cps
Iron	57-2	247	243	267	252	5.00	cps
Krypton	83-1	277	310	283	290	6.08	cps
Lead	206-1	1123	1097	1327	1182	10.64	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:39:02	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1063	1047	1010	1040	2.62	cps
Lead	208-1	4677	4554	4657	4629	1.43	cps
Lithium	6-1	12026403	11405696	11278742	11570281	3.46	cps
Magnesium	24-2	580	493	440	504	14.01	cps
Manganese	55-2	493	443	457	464	5.57	cps
Molybdenum	94-1	890	810	917	872	6.36	cps
Molybdenum	95-1	687	637	683	669	4.18	cps
Molybdenum	96-1	657	753	657	689	8.10	cps
Molybdenum	97-1	313	263	330	302	11.48	cps
Molybdenum	98-1	807	777	737	773	4.54	cps
Neodymium	150-1	17	17	7	13	43.29	cps
Neodymium	150-2	3	3	3	3	0.00	cps
Nickel	60-2	913	893	980	929	4.89	cps
Phosphorus	31-2	287	240	243	257	10.14	cps
Potassium	39-2	19196	18856	18469	18840	1.93	cps
Rhodium	103-1	28032228	26553200	25400761	26662063	4.95	cps
Rhodium	103-2	10833308	11539529	9834511	10735783	7.98	cps
Scandium	45-1	20712314	19921163	19123528	19919002	3.99	cps
Scandium	45-2	439276	453650	400475	431134	6.38	cps
Selenium	82-1	-3	0	27	8	211.36	cps
Selenium	77-2	0	3	0	1	173.21	cps
Selenium	78-2	10	13	10	11	17.30	cps
Silicon	28-1	970484	935577	950710	952257	1.84	cps
Silver	107-1	725	658	624	669	7.64	cps
Silver	109-1	563	520	440	508	12.32	cps
Sodium	23-2	70891	71906	72140	71646	0.93	cps
Strontium	86-1	640	637	570	616	6.41	cps
Strontium	88-1	937	900	983	940	4.44	cps
Sulfur	34-1	701856	704717	698008	701527	0.48	cps
Terbium	159-1	37760159	36098840	35077291	36312097	3.73	cps
Terbium	159-2	12856477	13427220	11571925	12618541	7.53	cps
Thallium	203-1	343	320	323	329	3.84	cps
Thallium	205-1	833	697	693	741	10.78	cps
Tin	118-1	4641	4441	4551	4544	2.20	cps
Titanium	47-1	500	443	557	500	11.33	cps
Uranium	238-1	117	110	73	100	23.34	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S0	Instrumnet Name :	P8
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:39:02	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	23	7	17	16	53.90	cps
Ytterbium	172-1	210	187	120	172	27.12	cps
Ytterbium	172-2	63	97	43	68	39.76	cps
Ytterbium	176-1	5021	4978	4568	4855	5.15	cps
Ytterbium	176-2	1020	1253	1083	1119	10.78	cps
Yttrium	89-1	45883936	43516910	42094921	43831922	4.37	cps
Yttrium	89-2	3614825	3741437	3259391	3538551	7.06	cps
Zinc	66-2	977	940	930	949	2.59	cps
Zirconium	90-1	1537	1693	1533	1588	5.76	cps
Zirconium	91-1	273	297	270	280	5.19	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P8
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:45:39	DataFile Name :	006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2300	2330	2310	2314	0.66	cps
Antimony	121-1	48312	47549	46629	47497	1.77	cps
Arsenic	75-2	510	540	493	514	4.60	cps
Barium	135-1	61800	61817	62229	61948	0.39	cps
Barium	137-1	106333	105299	106760	106131	0.71	cps
Beryllium	9-1	8116	8205	7883	8068	2.06	cps
Bismuth	209-1	22768025	22676966	23178852	22874614	1.17	cps
Bismuth	209-2	8559019	8866833	8852660	8759504	1.98	cps
Bromine	81-1	14104	14207	14361	14224	0.91	cps
Cadmium	108-1	527	500	577	534	7.28	cps
Cadmium	106-1	16240	15826	15876	15980	1.41	cps
Cadmium	111-1	17297	17040	17234	17190	0.78	cps
Calcium	43-1	45983	46431	45348	45921	1.19	cps
Calcium	44-1	743529	736992	742303	740941	0.47	cps
Carbon	12-1	4560448	4516549	4446046	4507681	1.28	cps
Carbon	12-2	30575	31113	30906	30865	0.88	cps
Chlorine	35-1	191759	193191	193127	192692	0.42	cps
Chlorine	35-2	730	863	887	827	10.22	cps
Chromium	52-2	13903	13947	14130	13994	0.86	cps
Cobalt	59-2	12219	11852	12038	12036	1.52	cps
Copper	63-2	23773	23226	23663	23554	1.23	cps
Dysprosium	156-1	27	27	30	28	6.92	cps
Dysprosium	156-2	3	0	7	3	100.05	cps
Erbium	164-1	110	157	193	153	27.24	cps
Erbium	164-2	40	60	43	48	22.43	cps
Gadolinium	160-1	197	220	220	212	6.35	cps
Gadolinium	160-2	73	33	53	53	37.50	cps
Holmium	165-1	37188312	36625942	37643973	37152742	1.37	cps
Holmium	165-2	11823806	12237127	12432981	12164638	2.56	cps
Indium	115-1	29131606	29190221	29392474	29238100	0.47	cps
Indium	115-2	2914200	3073548	3003357	2997035	2.66	cps
Iron	54-2	14134	13296	14150	13860	3.52	cps
Iron	56-2	239905	241667	238922	240164	0.58	cps
Iron	57-2	5921	6115	6045	6027	1.62	cps
Krypton	83-1	293	297	253	281	8.58	cps
Lead	206-1	21080	20984	21872	21312	2.29	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P8
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:45:39	DataFile Name :	006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	18530	18253	18483	18422	0.81	cps
Lead	208-1	84692	83733	85273	84566	0.92	cps
Lithium	6-1	12195248	12056462	11689831	11980514	2.18	cps
Magnesium	24-2	204155	202412	201711	202759	0.62	cps
Manganese	55-2	2797	2687	2947	2810	4.65	cps
Molybdenum	94-1	53783	54051	54938	54257	1.11	cps
Molybdenum	95-1	65138	65946	66535	65873	1.06	cps
Molybdenum	96-1	72535	70957	73798	72430	1.97	cps
Molybdenum	97-1	40803	40071	40760	40545	1.01	cps
Molybdenum	98-1	103472	105548	105578	104866	1.15	cps
Neodymium	150-1	43	17	23	28	49.95	cps
Neodymium	150-2	3	0	0	1	173.21	cps
Nickel	60-2	4481	4564	4394	4480	1.90	cps
Phosphorus	31-2	440	383	337	387	13.38	cps
Potassium	39-2	141482	140953	139739	140725	0.64	cps
Rhodium	103-1	27940450	27391287	27480549	27604095	1.07	cps
Rhodium	103-2	10014720	10344333	10177479	10178844	1.62	cps
Scandium	45-1	20616288	20575616	20247779	20479895	0.99	cps
Scandium	45-2	400383	416276	412169	409610	2.01	cps
Selenium	82-1	2054	2044	2030	2042	0.57	cps
Selenium	77-2	40	47	43	43	7.70	cps
Selenium	78-2	123	157	180	153	18.57	cps
Silicon	28-1	1061897	1057140	1059826	1059621	0.23	cps
Silver	107-1	32174	33301	33212	32896	1.91	cps
Silver	109-1	29953	30480	30978	30470	1.68	cps
Sodium	23-2	468899	465153	466200	466750	0.41	cps
Strontium	86-1	9086	9173	9276	9179	1.04	cps
Strontium	88-1	75375	75593	76166	75711	0.54	cps
Sulfur	34-1	711367	709856	707881	709702	0.25	cps
Terbium	159-1	37677650	37540900	37843783	37687444	0.40	cps
Terbium	159-2	11755359	12332452	12225607	12104473	2.54	cps
Thallium	203-1	25074	25271	25181	25176	0.39	cps
Thallium	205-1	60718	61093	60574	60795	0.44	cps
Tin	118-1	108459	108610	108338	108469	0.13	cps
Titanium	47-1	21119	21293	21272	21228	0.45	cps
Uranium	238-1	81146	80302	80764	80737	0.52	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S2	Instrumnet Name :	P8
Client Sample ID :	S2	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:45:39	DataFile Name :	006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	23436	24047	23342	23608	1.62	cps
Ytterbium	172-1	197	183	180	187	4.72	cps
Ytterbium	172-2	90	70	90	83	13.86	cps
Ytterbium	176-1	5071	4831	4921	4941	2.45	cps
Ytterbium	176-2	890	940	1003	944	6.01	cps
Yttrium	89-1	46702893	45547793	45080169	45776952	1.82	cps
Yttrium	89-2	3243661	3425855	3427220	3365579	3.14	cps
Zinc	66-2	4751	4824	4584	4720	2.61	cps
Zirconium	90-1	46537	47113	46638	46763	0.66	cps
Zirconium	91-1	10254	10641	10341	10412	1.95	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P8
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:48:57	DataFile Name :	007CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	110264	110724	109055	110014	0.78	cps
Antimony	121-1	1113080	1114668	1116406	1114718	0.15	cps
Arsenic	75-2	22855	22835	22298	22663	1.40	cps
Barium	135-1	1467042	1471577	1463107	1467242	0.29	cps
Barium	137-1	2652108	2624380	2638945	2638478	0.53	cps
Beryllium	9-1	354295	352733	351792	352940	0.36	cps
Bismuth	209-1	23046633	22963999	22531456	22847363	1.21	cps
Bismuth	209-2	8931151	8965567	8830780	8909166	0.79	cps
Bromine	81-1	14354	13884	13990	14076	1.75	cps
Cadmium	108-1	23597	23781	24869	24082	2.86	cps
Cadmium	106-1	48913	49756	49682	49451	0.94	cps
Cadmium	111-1	306125	311197	310189	309170	0.87	cps
Calcium	43-1	424603	426281	426147	425677	0.22	cps
Calcium	44-1	7135383	7028672	7086696	7083583	0.75	cps
Carbon	12-1	4711859	4607716	4608460	4642678	1.29	cps
Carbon	12-2	31303	30221	30325	30616	1.95	cps
Chlorine	35-1	187923	188142	187578	187881	0.15	cps
Chlorine	35-2	760	863	770	798	7.14	cps
Chromium	52-2	271382	273831	270944	272052	0.57	cps
Cobalt	59-2	512209	514881	514547	513879	0.28	cps
Copper	63-2	4513027	4525485	4457321	4498611	0.81	cps
Dysprosium	156-1	53	53	73	60	19.25	cps
Dysprosium	156-2	13	7	10	10	33.30	cps
Erbium	164-1	143	253	163	187	31.39	cps
Erbium	164-2	57	83	60	67	21.79	cps
Gadolinium	160-1	283	237	223	248	12.72	cps
Gadolinium	160-2	53	43	53	50	11.55	cps
Holmium	165-1	36698434	37058662	37335754	37030950	0.86	cps
Holmium	165-2	12483113	12461908	12362512	12435844	0.52	cps
Indium	115-1	28968669	29446327	29111524	29175507	0.84	cps
Indium	115-2	3052900	3018864	3045895	3039220	0.59	cps
Iron	54-2	586043	583758	574277	581359	1.07	cps
Iron	56-2	10992014	10854423	10784146	10876861	0.97	cps
Iron	57-2	264798	262927	265687	264471	0.53	cps
Krypton	83-1	327	280	333	313	9.27	cps
Lead	206-1	5116233	5238479	5166005	5173572	1.19	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P8
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:48:57	DataFile Name :	007CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	4464776	4504886	4447795	4472486	0.66	cps
Lead	208-1	20431510	20391147	20187775	20336811	0.64	cps
Lithium	6-1	11635409	12245318	12132376	12004368	2.70	cps
Magnesium	24-2	1929468	1951528	1905368	1928788	1.20	cps
Manganese	55-2	1186520	1180897	1171205	1179541	0.66	cps
Molybdenum	94-1	4515548	4624991	4551425	4563988	1.22	cps
Molybdenum	95-1	6581695	6487487	6575495	6548226	0.80	cps
Molybdenum	96-1	7127149	7080088	7061270	7089502	0.48	cps
Molybdenum	97-1	4134457	4088545	3972798	4065267	2.05	cps
Molybdenum	98-1	10400545	10538880	10355714	10431713	0.92	cps
Neodymium	150-1	177	207	173	186	9.89	cps
Neodymium	150-2	10	20	20	17	34.64	cps
Nickel	60-2	155924	156857	155853	156211	0.36	cps
Phosphorus	31-2	5181	5368	5184	5244	2.04	cps
Potassium	39-2	592633	580042	585809	586161	1.08	cps
Rhodium	103-1	27559345	27948673	26875653	27461224	1.98	cps
Rhodium	103-2	10247105	10366054	10211014	10274724	0.79	cps
Scandium	45-1	20875958	20632457	20528066	20678827	0.86	cps
Scandium	45-2	409060	404391	398643	404031	1.29	cps
Selenium	82-1	18186	18426	18456	18356	0.81	cps
Selenium	77-2	333	463	370	389	17.24	cps
Selenium	78-2	950	1207	1160	1106	12.37	cps
Silicon	28-1	18257989	18443879	17947858	18216575	1.38	cps
Silver	107-1	1729447	1724263	1732007	1728572	0.23	cps
Silver	109-1	1463173	1573052	1558969	1531731	3.90	cps
Sodium	23-2	3850876	3932712	3854581	3879390	1.19	cps
Strontium	86-1	407755	407064	407764	407528	0.10	cps
Strontium	88-1	3737146	3766667	3659032	3720948	1.49	cps
Sulfur	34-1	838747	832616	826241	832535	0.75	cps
Terbium	159-1	39021141	38300904	38378604	38566883	1.03	cps
Terbium	159-2	12279896	12310061	12320426	12303461	0.17	cps
Thallium	203-1	1195545	1226104	1218689	1213446	1.31	cps
Thallium	205-1	3012122	3146354	2997843	3052106	2.68	cps
Tin	118-1	989227	1006448	995352	997009	0.88	cps
Titanium	47-1	2040362	1991656	2037193	2023070	1.35	cps
Uranium	238-1	4182939	4083045	4178210	4148065	1.36	cps

Reviewed By:Mohan
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Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S3	Instrumnet Name :	P8
Client Sample ID :	S3	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:48:57	DataFile Name :	007CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	211939	212696	209960	211532	0.67	cps
Ytterbium	172-1	207	207	220	211	3.65	cps
Ytterbium	172-2	83	103	83	90	12.83	cps
Ytterbium	176-1	10384	10297	10681	10454	1.92	cps
Ytterbium	176-2	2797	3027	2854	2893	4.14	cps
Yttrium	89-1	45368864	45870268	45750138	45663090	0.57	cps
Yttrium	89-2	3352095	3433862	3350064	3378674	1.41	cps
Zinc	66-2	392216	394402	392835	393151	0.29	cps
Zirconium	90-1	2351385	2299427	2334741	2328517	1.14	cps
Zirconium	91-1	488567	491990	490555	490371	0.35	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P8
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:51:58	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	259985	263198	259706	260963	0.74	cps
Antimony	121-1	2895099	2927370	2882766	2901745	0.79	cps
Arsenic	75-2	55121	54763	55495	55126	0.66	cps
Barium	135-1	3769181	3810790	3813640	3797870	0.66	cps
Barium	137-1	6503355	6466071	6416105	6461843	0.68	cps
Beryllium	9-1	841284	851473	838392	843716	0.81	cps
Bismuth	209-1	22788000	22893912	23202717	22961543	0.94	cps
Bismuth	209-2	8695225	8628857	8584506	8636196	0.65	cps
Bromine	81-1	13927	13430	13723	13693	1.83	cps
Cadmium	108-1	59230	60489	59715	59811	1.06	cps
Cadmium	106-1	97632	97955	99636	98408	1.09	cps
Cadmium	111-1	730000	738818	738014	735611	0.66	cps
Calcium	43-1	1040348	1027838	1029805	1032664	0.65	cps
Calcium	44-1	17304605	17097064	17144453	17182040	0.63	cps
Carbon	12-1	4706846	4657124	4737141	4700370	0.86	cps
Carbon	12-2	32052	32255	30786	31698	2.51	cps
Chlorine	35-1	191327	189844	190293	190488	0.40	cps
Chlorine	35-2	757	740	807	768	4.52	cps
Chromium	52-2	657940	654506	646283	652910	0.92	cps
Cobalt	59-2	1255115	1234103	1244055	1244424	0.84	cps
Copper	63-2	10574894	10733481	10643911	10650762	0.75	cps
Dysprosium	156-1	147	117	113	126	14.62	cps
Dysprosium	156-2	17	30	17	21	36.45	cps
Erbium	164-1	240	220	243	234	5.38	cps
Erbium	164-2	80	97	73	83	14.43	cps
Gadolinium	160-1	300	313	260	291	9.53	cps
Gadolinium	160-2	60	90	57	69	26.65	cps
Holmium	165-1	37421540	37604761	37301997	37442766	0.41	cps
Holmium	165-2	12357728	12144399	12120755	12207627	1.07	cps
Indium	115-1	29443079	28934340	28687397	29021606	1.33	cps
Indium	115-2	3004777	2891303	2891725	2929268	2.23	cps
Iron	54-2	1453603	1444033	1459480	1452372	0.54	cps
Iron	56-2	26795593	26291592	25836983	26308056	1.82	cps
Iron	57-2	635904	642540	643030	640491	0.62	cps
Krypton	83-1	270	307	253	277	9.86	cps
Lead	206-1	12732813	12687526	12612494	12677611	0.48	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P8
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:51:58	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	10907611	10860440	10849956	10872669	0.28	cps
Lead	208-1	49971071	49847405	50255111	50024529	0.42	cps
Lithium	6-1	11826968	12144531	11835690	11935730	1.52	cps
Magnesium	24-2	4612411	4539042	4581060	4577504	0.80	cps
Manganese	55-2	3011733	2965095	2923244	2966691	1.49	cps
Molybdenum	94-1	11204604	11302417	11140080	11215700	0.73	cps
Molybdenum	95-1	16010646	16343900	16143034	16165860	1.04	cps
Molybdenum	96-1	17400756	17513452	17527582	17480597	0.40	cps
Molybdenum	97-1	10060500	9923886	9928193	9970860	0.78	cps
Molybdenum	98-1	25926817	26101900	25426355	25818357	1.36	cps
Neodymium	150-1	377	357	393	376	4.89	cps
Neodymium	150-2	33	27	17	26	32.81	cps
Nickel	60-2	344997	348662	342995	345551	0.83	cps
Phosphorus	31-2	12726	12202	12325	12418	2.20	cps
Potassium	39-2	1445624	1442131	1398219	1428658	1.85	cps
Rhodium	103-1	26921933	26636482	26335686	26631367	1.10	cps
Rhodium	103-2	10202700	9940386	9892445	10011844	1.67	cps
Scandium	45-1	20149578	19905922	19823734	19959745	0.85	cps
Scandium	45-2	393186	390594	385962	389914	0.94	cps
Selenium	82-1	46310	46290	46638	46413	0.42	cps
Selenium	77-2	837	827	887	850	3.78	cps
Selenium	78-2	2814	2947	2900	2887	2.34	cps
Silicon	28-1	42662361	42094694	42412389	42389815	0.67	cps
Silver	107-1	4079883	4101458	4166876	4116072	1.10	cps
Silver	109-1	3782183	3861209	3785460	3809618	1.17	cps
Sodium	23-2	9313591	9224645	9329657	9289298	0.61	cps
Strontium	86-1	993649	1001609	995728	996996	0.41	cps
Strontium	88-1	8987060	8949830	9007970	8981620	0.33	cps
Sulfur	34-1	989979	970660	971456	977365	1.12	cps
Terbium	159-1	39143931	38130307	38044546	38439595	1.59	cps
Terbium	159-2	12241045	12202759	12173817	12205874	0.28	cps
Thallium	203-1	3195056	3229457	3178657	3201057	0.81	cps
Thallium	205-1	7409167	7475932	7481807	7455635	0.54	cps
Tin	118-1	2593955	2591470	2585383	2590269	0.17	cps
Titanium	47-1	4905744	4879165	4858588	4881166	0.48	cps
Uranium	238-1	10296404	10090595	10529339	10305446	2.13	cps

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LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S4	Instrumnet Name :	P8
Client Sample ID :	S4	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:51:58	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	511328	510031	505972	509110	0.55	cps
Ytterbium	172-1	283	260	283	276	4.89	cps
Ytterbium	172-2	123	137	93	118	18.85	cps
Ytterbium	176-1	19067	19044	18677	18929	1.16	cps
Ytterbium	176-2	5791	5825	5805	5807	0.29	cps
Yttrium	89-1	45955576	45309838	44617544	45294319	1.48	cps
Yttrium	89-2	3301806	3278135	3229678	3269873	1.12	cps
Zinc	66-2	955704	947142	950623	951156	0.45	cps
Zirconium	90-1	5585238	5681034	5597122	5621132	0.93	cps
Zirconium	91-1	1186892	1202790	1203294	1197658	0.78	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P8
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:54:50	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	501175	510333	501617	504375	1.02	cps
Antimony	121-1	5623886	5655446	5572956	5617429	0.74	cps
Arsenic	75-2	107802	107267	106569	107213	0.58	cps
Barium	135-1	7419418	7554407	7491304	7488377	0.90	cps
Barium	137-1	12625167	12651971	12738351	12671830	0.47	cps
Beryllium	9-1	1689626	1740618	1660959	1697068	2.38	cps
Bismuth	209-1	21673136	22269442	22722604	22221727	2.37	cps
Bismuth	209-2	8644823	8474812	8412446	8510694	1.41	cps
Bromine	81-1	13660	13320	13717	13566	1.58	cps
Cadmium	108-1	115157	116833	114847	115612	0.92	cps
Cadmium	106-1	176152	175970	178215	176779	0.71	cps
Cadmium	111-1	1408732	1417626	1422502	1416287	0.49	cps
Calcium	43-1	2134405	2097514	2112293	2114737	0.88	cps
Calcium	44-1	32979147	33503140	33594168	33358818	1.00	cps
Carbon	12-1	4837039	4802994	4853748	4831260	0.54	cps
Carbon	12-2	33789	34400	34106	34098	0.90	cps
Chlorine	35-1	194376	195393	193308	194359	0.54	cps
Chlorine	35-2	803	763	810	792	3.19	cps
Chromium	52-2	1253596	1270612	1248404	1257537	0.92	cps
Cobalt	59-2	2465647	2534842	2502780	2501089	1.38	cps
Copper	63-2	20695401	20574067	20198754	20489407	1.26	cps
Dysprosium	156-1	247	257	253	252	2.02	cps
Dysprosium	156-2	47	40	30	39	21.57	cps
Erbium	164-1	363	303	357	341	9.64	cps
Erbium	164-2	120	87	93	100	17.64	cps
Gadolinium	160-1	303	310	363	326	10.10	cps
Gadolinium	160-2	100	87	60	82	24.77	cps
Holmium	165-1	35986931	36719296	37211617	36639281	1.68	cps
Holmium	165-2	12290048	12087562	11957762	12111791	1.38	cps
Indium	115-1	26836283	27371182	28590316	27599260	3.26	cps
Indium	115-2	2926767	2885604	2852648	2888340	1.29	cps
Iron	54-2	2842890	2874078	2756870	2824613	2.15	cps
Iron	56-2	50805311	51528408	51289171	51207630	0.72	cps
Iron	57-2	1237305	1244625	1227628	1236520	0.69	cps
Krypton	83-1	340	400	273	338	18.76	cps
Lead	206-1	24506107	24330035	24904500	24580214	1.20	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P8
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:54:50	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	21424301	21334513	21730996	21496603	0.97	cps
Lead	208-1	98765429	98484888	98999488	98749935	0.26	cps
Lithium	6-1	11209913	11336522	11647502	11397979	1.98	cps
Magnesium	24-2	8913285	8616748	8696910	8742314	1.75	cps
Manganese	55-2	5639873	5784273	5701851	5708666	1.27	cps
Molybdenum	94-1	21901493	22106695	21926210	21978132	0.51	cps
Molybdenum	95-1	31750870	31807515	31782590	31780325	0.09	cps
Molybdenum	96-1	34373335	34508168	34185071	34355525	0.47	cps
Molybdenum	97-1	19351826	19349973	19389547	19363782	0.12	cps
Molybdenum	98-1	49828499	50311118	50678404	50272674	0.85	cps
Neodymium	150-1	737	767	800	768	4.13	cps
Neodymium	150-2	57	60	70	62	11.15	cps
Nickel	60-2	661965	661471	656406	659947	0.47	cps
Phosphorus	31-2	24167	23519	22958	23548	2.57	cps
Potassium	39-2	2689861	2790579	2759470	2746636	1.88	cps
Rhodium	103-1	24873532	25323564	26290829	25495975	2.84	cps
Rhodium	103-2	9865946	9785888	9515015	9722283	1.89	cps
Scandium	45-1	18557901	19387199	19848912	19264671	3.40	cps
Scandium	45-2	386101	387963	381650	385238	0.84	cps
Selenium	82-1	87503	88855	88894	88417	0.90	cps
Selenium	77-2	1613	1647	1467	1576	6.08	cps
Selenium	78-2	5161	5504	5391	5352	3.27	cps
Silicon	28-1	79394130	81640785	80370739	80468552	1.40	cps
Silver	107-1	7946290	7902437	7828632	7892453	0.75	cps
Silver	109-1	7221202	7257747	7300246	7259731	0.54	cps
Sodium	23-2	18089198	17867842	17829664	17928901	0.78	cps
Strontium	86-1	2091029	2078823	2064222	2078025	0.65	cps
Strontium	88-1	17741245	17892651	17481568	17705155	1.17	cps
Sulfur	34-1	1191092	1200883	1199926	1197300	0.45	cps
Terbium	159-1	36204936	36944450	38584511	37244633	3.27	cps
Terbium	159-2	12171500	12223581	11968594	12121225	1.11	cps
Thallium	203-1	6113849	6168207	6228369	6170142	0.93	cps
Thallium	205-1	14654979	14675639	14579497	14636705	0.35	cps
Tin	118-1	4996577	4969034	5007723	4991111	0.40	cps
Titanium	47-1	9385082	9531787	9295710	9404193	1.27	cps
Uranium	238-1	20720036	20796377	20493124	20669846	0.76	cps

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LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S5	Instrumnet Name :	P8
Client Sample ID :	S5	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:54:50	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	993555	994405	992334	993431	0.10	cps
Ytterbium	172-1	267	303	420	330	24.26	cps
Ytterbium	172-2	143	133	103	127	16.44	cps
Ytterbium	176-1	32092	32640	32520	32418	0.89	cps
Ytterbium	176-2	10441	10177	10541	10386	1.81	cps
Yttrium	89-1	42902074	43437493	44544946	43628171	1.92	cps
Yttrium	89-2	3288739	3282480	3224068	3265096	1.09	cps
Zinc	66-2	1967377	1920319	1881799	1923165	2.23	cps
Zirconium	90-1	10975332	10948139	11005388	10976287	0.26	cps
Zirconium	91-1	2497111	2514141	2453809	2488354	1.25	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P8
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:57:37	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1000578	996754	994926	997419	0.29	cps
Antimony	121-1	11171235	11270499	11297688	11246474	0.59	cps
Arsenic	75-2	213347	210696	214164	212735	0.85	cps
Barium	135-1	14951578	14672582	15224318	14949492	1.85	cps
Barium	137-1	25207278	25740815	26178381	25708825	1.89	cps
Beryllium	9-1	3286162	3286046	3213177	3261795	1.29	cps
Bismuth	209-1	22355555	22066705	21850230	22090830	1.15	cps
Bismuth	209-2	8523145	8501246	8450627	8491672	0.44	cps
Bromine	81-1	13246	13213	13173	13211	0.28	cps
Cadmium	108-1	226156	227753	228287	227399	0.49	cps
Cadmium	106-1	336197	333532	338344	336024	0.72	cps
Cadmium	111-1	2903223	2989866	2982587	2958558	1.62	cps
Calcium	43-1	4194148	4099778	4095867	4129931	1.35	cps
Calcium	44-1	66870951	66542611	65940367	66451310	0.71	cps
Carbon	12-1	4945353	4953960	4989368	4962893	0.47	cps
Carbon	12-2	36492	35884	35997	36124	0.90	cps
Chlorine	35-1	207728	209304	210589	209207	0.68	cps
Chlorine	35-2	907	893	773	858	8.56	cps
Chromium	52-2	2673891	2699083	2652772	2675249	0.87	cps
Cobalt	59-2	4927857	4915023	4929261	4924047	0.16	cps
Copper	63-2	40558334	40255483	39955006	40256274	0.75	cps
Dysprosium	156-1	390	467	473	443	10.45	cps
Dysprosium	156-2	67	50	70	62	17.22	cps
Erbium	164-1	477	440	333	417	17.87	cps
Erbium	164-2	120	127	123	123	2.70	cps
Gadolinium	160-1	410	477	447	444	7.51	cps
Gadolinium	160-2	140	137	110	129	12.76	cps
Holmium	165-1	37772426	37504719	36984996	37420714	1.07	cps
Holmium	165-2	12214961	12265370	12349434	12276588	0.55	cps
Indium	115-1	27848751	28577706	28279924	28235460	1.30	cps
Indium	115-2	2811202	2833271	2835556	2826676	0.48	cps
Iron	54-2	5628254	5478764	5543850	5550289	1.35	cps
Iron	56-2	100704312	100056619	100009849	100256926	0.39	cps
Iron	57-2	2553122	2541214	2545253	2546530	0.24	cps
Krypton	83-1	333	290	307	310	7.05	cps
Lead	206-1	48444084	49114333	48877238	48811885	0.70	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P8
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:57:37	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	42428620	42858096	43247673	42844796	0.96	cps
Lead	208-1	194820820	194830047	196443719	195364862	0.48	cps
Lithium	6-1	11454963	11301174	11444091	11400076	0.75	cps
Magnesium	24-2	17589945	17301436	17478583	17456655	0.83	cps
Manganese	55-2	11447607	11370794	11166926	11328442	1.28	cps
Molybdenum	94-1	43608056	44262546	43342249	43737617	1.08	cps
Molybdenum	95-1	62305331	64049096	62704426	63019617	1.45	cps
Molybdenum	96-1	68300344	69104882	68810949	68738725	0.59	cps
Molybdenum	97-1	38802509	38930854	38872365	38868576	0.17	cps
Molybdenum	98-1	100965069	101889652	99024652	100626457	1.45	cps
Neodymium	150-1	1443	1570	1510	1508	4.20	cps
Neodymium	150-2	67	87	87	80	14.43	cps
Nickel	60-2	1294186	1305224	1306030	1301813	0.51	cps
Phosphorus	31-2	45849	46899	45889	46212	1.29	cps
Potassium	39-2	5412516	5338296	5345731	5365514	0.76	cps
Rhodium	103-1	25994360	25500935	25616940	25704078	1.00	cps
Rhodium	103-2	9645568	9601531	9540832	9595977	0.55	cps
Scandium	45-1	19935829	19479196	19301797	19572274	1.67	cps
Scandium	45-2	386667	386554	383661	385627	0.44	cps
Selenium	82-1	174187	175511	176089	175262	0.56	cps
Selenium	77-2	3144	3210	3167	3174	1.07	cps
Selenium	78-2	11164	10964	10708	10945	2.09	cps
Silicon	28-1	157450894	159975351	156441284	157955843	1.15	cps
Silver	107-1	15673738	15588622	15769496	15677285	0.58	cps
Silver	109-1	14137605	14482371	14329672	14316549	1.21	cps
Sodium	23-2	35543295	34900662	35628293	35357417	1.13	cps
Strontium	86-1	4139421	4117549	4190839	4149270	0.91	cps
Strontium	88-1	35179858	35485428	35715147	35460144	0.76	cps
Sulfur	34-1	1679470	1660605	1674216	1671430	0.58	cps
Terbium	159-1	38010474	38584604	38026232	38207103	0.86	cps
Terbium	159-2	12235698	12139546	12006149	12127131	0.95	cps
Thallium	203-1	12148343	12408265	12130536	12229048	1.27	cps
Thallium	205-1	29138472	29256225	28715582	29036760	0.98	cps
Tin	118-1	9764767	10002898	9882981	9883549	1.20	cps
Titanium	47-1	18714742	18891796	18731885	18779474	0.52	cps
Uranium	238-1	41419977	40793524	41849469	41354323	1.28	cps

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LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S6	Instrumnet Name :	P8
Client Sample ID :	S6	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 16:57:37	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	2071077	2069415	2097280	2079258	0.75	cps
Ytterbium	172-1	527	433	507	489	10.05	cps
Ytterbium	172-2	213	157	163	178	17.42	cps
Ytterbium	176-1	60072	60434	61415	60640	1.15	cps
Ytterbium	176-2	19999	19424	19768	19730	1.46	cps
Yttrium	89-1	45018133	44028711	44476466	44507770	1.11	cps
Yttrium	89-2	3286608	3223119	3222087	3243938	1.14	cps
Zinc	66-2	3824092	3721445	3738401	3761313	1.46	cps
Zirconium	90-1	22212981	22418305	21990675	22207320	0.96	cps
Zirconium	91-1	4890234	5075946	4942018	4969399	1.93	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P8
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:00:22	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2063991	2024420	2052061	2046824	0.99	cps
Antimony	121-1	22475765	22408380	22529609	22471251	0.27	cps
Arsenic	75-2	420686	419455	417889	419343	0.33	cps
Barium	135-1	30224170	29938778	29975957	30046302	0.52	cps
Barium	137-1	51220433	50745069	51149359	51038287	0.50	cps
Beryllium	9-1	6117454	6139866	6029647	6095656	0.96	cps
Bismuth	209-1	21605336	21572833	21382450	21520206	0.56	cps
Bismuth	209-2	8237231	8302141	8181211	8240195	0.73	cps
Bromine	81-1	13447	13897	13423	13589	1.97	cps
Cadmium	108-1	441460	443659	441725	442281	0.27	cps
Cadmium	106-1	640842	640309	645248	642133	0.42	cps
Cadmium	111-1	5687601	5736106	5650518	5691408	0.75	cps
Calcium	43-1	8230720	8260738	8195743	8229067	0.40	cps
Calcium	44-1	133741348	132494938	132812581	133016289	0.49	cps
Carbon	12-1	5600540	5790152	5932131	5774274	2.88	cps
Carbon	12-2	44032	43698	43986	43905	0.41	cps
Chlorine	35-1	238965	244467	245029	242820	1.38	cps
Chlorine	35-2	1087	1037	1103	1076	3.23	cps
Chromium	52-2	5200193	5045051	5189688	5144978	1.69	cps
Cobalt	59-2	9516626	9422488	9511009	9483374	0.56	cps
Copper	63-2	76864252	76471354	77405231	76913612	0.61	cps
Dysprosium	156-1	810	833	813	819	1.54	cps
Dysprosium	156-2	143	140	163	149	8.48	cps
Erbium	164-1	663	800	713	726	9.53	cps
Erbium	164-2	233	240	227	233	2.86	cps
Gadolinium	160-1	667	690	763	707	7.14	cps
Gadolinium	160-2	197	210	223	210	6.35	cps
Holmium	165-1	37404662	37641362	36974547	37340190	0.91	cps
Holmium	165-2	11956395	12142570	12149516	12082827	0.91	cps
Indium	115-1	27354595	26789023	27541702	27228440	1.44	cps
Indium	115-2	2785431	2758935	2757697	2767354	0.57	cps
Iron	54-2	10886579	10681068	10802651	10790099	0.96	cps
Iron	56-2	195842364	198161344	194058537	196020748	1.05	cps
Iron	57-2	4912491	4920489	4972468	4935149	0.66	cps
Krypton	83-1	363	387	320	357	9.49	cps
Lead	206-1	97903315	97750845	97160639	97604933	0.40	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P8
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:00:22	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	85356239	83413210	83184670	83984707	1.42	cps
Lead	208-1	389988524	387143586	383007053	386713054	0.91	cps
Lithium	6-1	10637335	10881290	10533209	10683945	1.67	cps
Magnesium	24-2	34027025	33824215	33718218	33856486	0.46	cps
Manganese	55-2	22265934	22036883	21868295	22057037	0.90	cps
Molybdenum	94-1	87300979	87690442	85761392	86917604	1.17	cps
Molybdenum	95-1	126685145	125136715	124325408	125382423	0.96	cps
Molybdenum	96-1	137596871	136151428	136594005	136780768	0.54	cps
Molybdenum	97-1	77284796	77140317	77076884	77167332	0.14	cps
Molybdenum	98-1	202046077	200343037	197940117	200109744	1.03	cps
Neodymium	150-1	2950	2927	2934	2937	0.41	cps
Neodymium	150-2	183	200	190	191	4.39	cps
Nickel	60-2	2632115	2644070	2681510	2652565	0.97	cps
Phosphorus	31-2	91912	89225	92069	91069	1.76	cps
Potassium	39-2	10771748	10697081	10640354	10703061	0.62	cps
Rhodium	103-1	24869658	24734014	24515125	24706266	0.72	cps
Rhodium	103-2	9362898	9392233	9248535	9334555	0.81	cps
Scandium	45-1	20303876	19607375	19310723	19740658	2.58	cps
Scandium	45-2	387484	382586	381305	383791	0.85	cps
Selenium	82-1	346715	347460	344247	346141	0.49	cps
Selenium	77-2	6188	6215	6078	6160	1.18	cps
Selenium	78-2	20765	21286	21356	21136	1.53	cps
Silicon	28-1	311263462	302756895	302777422	305599260	1.61	cps
Silver	107-1	30325535	30027131	30218693	30190453	0.50	cps
Silver	109-1	27687719	27963892	27526715	27726109	0.80	cps
Sodium	23-2	70495246	69043867	69180434	69573182	1.15	cps
Strontium	86-1	8096806	8172869	8205553	8158409	0.68	cps
Strontium	88-1	71758229	71278609	70792579	71276472	0.68	cps
Sulfur	34-1	2715641	2697873	2657930	2690481	1.10	cps
Terbium	159-1	37860027	37266314	37859664	37662002	0.91	cps
Terbium	159-2	12116535	12120331	11959798	12065554	0.76	cps
Thallium	203-1	24430321	24352450	24388668	24390480	0.16	cps
Thallium	205-1	57761142	58584197	57192567	57845969	1.21	cps
Tin	118-1	19755526	19601374	19632556	19663152	0.41	cps
Titanium	47-1	38039591	37828990	37026502	37631694	1.42	cps
Uranium	238-1	83574615	81271720	82572254	82472863	1.40	cps

Reviewed By:Mohan
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LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S7	Instrumnet Name :	P8
Client Sample ID :	S7	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:00:22	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	4103294	3953122	4049864	4035427	1.89	cps
Ytterbium	172-1	733	727	743	734	1.14	cps
Ytterbium	172-2	300	260	300	287	8.06	cps
Ytterbium	176-1	117191	117904	118119	117738	0.41	cps
Ytterbium	176-2	38536	39018	38559	38704	0.70	cps
Yttrium	89-1	44291599	44673039	43780640	44248426	1.01	cps
Yttrium	89-2	3250486	3266716	3256478	3257893	0.25	cps
Zinc	66-2	7258538	7123360	7269629	7217175	1.13	cps
Zirconium	90-1	44244598	44622378	43305861	44057612	1.54	cps
Zirconium	91-1	10026721	9844402	9954885	9942002	0.92	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P8
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:03:09	DataFile Name :	012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	8644041	8616683	9016595	8759106	2.55	cps
Antimony	121-1	9327	9010	8359	8899	5.54	cps
Arsenic	75-2	190	173	257	207	21.34	cps
Barium	135-1	9397	9270	8906	9191	2.77	cps
Barium	137-1	16106	16120	15042	15756	3.93	cps
Beryllium	9-1	1873	1681	1484	1679	11.60	cps
Bismuth	209-1	18072022	17694440	16642529	17469663	4.24	cps
Bismuth	209-2	6619044	6761381	6961648	6780691	2.54	cps
Bromine	81-1	13073	13804	14107	13661	3.89	cps
Cadmium	108-1	250	163	187	200	22.42	cps
Cadmium	106-1	13000	12956	12233	12730	3.38	cps
Cadmium	111-1	9578	9682	9083	9447	3.39	cps
Calcium	43-1	36266180	35989784	33299569	35185178	4.66	cps
Calcium	44-1	578869098	571114605	539643965	563209223	3.69	cps
Carbon	12-1	4749101	4714312	4704781	4722731	0.49	cps
Carbon	12-2	44808	44393	45062	44755	0.75	cps
Chlorine	35-1	167743	164566	154979	162429	4.09	cps
Chlorine	35-2	703	677	753	711	5.47	cps
Chromium	52-2	6368	7665	6798	6944	9.51	cps
Cobalt	59-2	17317	17020	17487	17275	1.37	cps
Copper	63-2	20221	20275	20956	20484	2.00	cps
Dysprosium	156-1	863	953	953	923	5.63	cps
Dysprosium	156-2	307	270	300	292	6.68	cps
Erbium	164-1	867	1043	877	929	10.68	cps
Erbium	164-2	260	320	333	304	12.83	cps
Gadolinium	160-1	990	1083	900	991	9.25	cps
Gadolinium	160-2	360	410	347	372	8.97	cps
Holmium	165-1	32782358	32205595	30802534	31930162	3.19	cps
Holmium	165-2	10428793	10795288	10995539	10739874	2.68	cps
Indium	115-1	23645474	23718422	22039002	23134299	4.10	cps
Indium	115-2	2417632	2447380	2589303	2484772	3.69	cps
Iron	54-2	44709334	45387009	47291284	45795876	2.92	cps
Iron	56-2	821439534	849192121	862119454	844250370	2.46	cps
Iron	57-2	20608963	21206992	21696976	21170977	2.57	cps
Krypton	83-1	580	647	617	614	5.43	cps
Lead	206-1	12823	12436	11101	12120	7.45	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P8
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:03:09	DataFile Name :	012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	10675	10791	9707	10391	5.73	cps
Lead	208-1	50316	49271	44955	48181	5.90	cps
Lithium	6-1	9501601	9265680	8860591	9209291	3.52	cps
Magnesium	24-2	136111341	137711308	140922358	138248336	1.77	cps
Manganese	55-2	6652	6812	6955	6806	2.23	cps
Molybdenum	94-1	15255	14544	12539	14113	9.98	cps
Molybdenum	95-1	17995	15689	13684	15789	13.67	cps
Molybdenum	96-1	24766	21510	18696	21657	14.03	cps
Molybdenum	97-1	9830	8479	6725	8345	18.66	cps
Molybdenum	98-1	22813	18323	15463	18866	19.64	cps
Neodymium	150-1	540	500	483	508	5.74	cps
Neodymium	150-2	107	120	117	114	6.06	cps
Nickel	60-2	7012	7309	7222	7181	2.13	cps
Phosphorus	31-2	220	250	243	238	6.63	cps
Potassium	39-2	46405428	48323331	48916756	47881838	2.74	cps
Rhodium	103-1	20754904	20197315	18825673	19925964	4.98	cps
Rhodium	103-2	7436452	7613125	7893678	7647751	3.01	cps
Scandium	45-1	16867729	16529451	15638429	16345203	3.89	cps
Scandium	45-2	322171	331356	341288	331605	2.88	cps
Selenium	82-1	-70	-70	-77	-72	-5.33	cps
Selenium	77-2	7	0	3	3	100.05	cps
Selenium	78-2	23	27	10	20	44.10	cps
Silicon	28-1	1181975	1111306	1072215	1121832	4.96	cps
Silver	107-1	4291	3937	3293	3841	13.18	cps
Silver	109-1	3691	3414	3004	3369	10.26	cps
Sodium	23-2	291127016	294368916	306845615	297447182	2.79	cps
Strontium	86-1	20599	20549	19430	20192	3.27	cps
Strontium	88-1	176986	175954	162166	171702	4.82	cps
Sulfur	34-1	510197	497389	474952	494179	3.61	cps
Terbium	159-1	33304842	32936141	31170074	32470352	3.51	cps
Terbium	159-2	10302591	10668055	10900652	10623766	2.84	cps
Thallium	203-1	1653	1520	1063	1412	21.91	cps
Thallium	205-1	4271	3234	2820	3442	21.71	cps
Tin	118-1	6845	6782	6562	6730	2.21	cps
Titanium	47-1	5388	5168	5084	5213	3.01	cps
Uranium	238-1	2044	1994	1270	1769	24.47	cps

Reviewed By:Mohan
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LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	S8	Instrumnet Name :	P8
Client Sample ID :	S8	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:03:09	DataFile Name :	012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	553	567	483	534	8.38	cps
Ytterbium	172-1	1293	1260	1193	1249	4.08	cps
Ytterbium	172-2	400	513	467	460	12.38	cps
Ytterbium	176-1	5124	5188	4651	4988	5.88	cps
Ytterbium	176-2	903	1107	1193	1068	13.94	cps
Yttrium	89-1	39223748	38256996	35474160	37651635	5.17	cps
Yttrium	89-2	2774250	2867569	2968263	2870027	3.38	cps
Zinc	66-2	3624	3577	3834	3678	3.72	cps
Zirconium	90-1	20205	19143	17732	19027	6.52	cps
Zirconium	91-1	4301	4364	3931	4198	5.58	cps

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LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P8
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:25:35	DataFile Name :	014ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	55599	55552	55221	55457	0.37	cps
Antimony	121-1	4885104	4937260	4873518	4898627	0.69	cps
Arsenic	75-2	99357	99736	99522	99538	0.19	cps
Barium	135-1	615974	623857	616201	618677	0.73	cps
Barium	137-1	1074017	1085563	1086276	1081952	0.64	cps
Beryllium	9-1	720158	732478	728064	726900	0.86	cps
Bismuth	209-1	23132746	23167478	22594019	22964748	1.40	cps
Bismuth	209-2	9128403	8981947	9267920	9126090	1.57	cps
Bromine	81-1	15122	15599	15716	15479	2.03	cps
Cadmium	108-1	40616	41111	39998	40575	1.37	cps
Cadmium	106-1	71387	72281	70810	71493	1.04	cps
Cadmium	111-1	631713	637434	636028	635058	0.47	cps
Calcium	43-1	171091	172029	173667	172262	0.76	cps
Calcium	44-1	2909272	2885549	2852574	2882465	0.99	cps
Carbon	12-1	4888066	4909854	4903247	4900389	0.23	cps
Carbon	12-2	33187	33431	33826	33481	0.96	cps
Chlorine	35-1	183639	183949	183278	183622	0.18	cps
Chlorine	35-2	753	763	887	801	9.27	cps
Chromium	52-2	598293	589640	588968	592301	0.88	cps
Cobalt	59-2	1135411	1135672	1118428	1129837	0.87	cps
Copper	63-2	883453	884691	877704	881949	0.42	cps
Dysprosium	156-1	20	37	43	33	36.05	cps
Dysprosium	156-2	10	7	7	8	24.71	cps
Erbium	164-1	150	157	180	162	9.71	cps
Erbium	164-2	37	47	37	40	14.43	cps
Gadolinium	160-1	210	223	210	214	3.59	cps
Gadolinium	160-2	53	63	50	56	12.49	cps
Holmium	165-1	38554714	37474786	37055124	37694874	2.05	cps
Holmium	165-2	12677471	12592428	12832097	12700665	0.96	cps
Indium	115-1	30169721	29910534	29013464	29697906	2.04	cps
Indium	115-2	3151453	3152367	3233577	3179132	1.48	cps
Iron	54-2	509421	505716	504373	506503	0.52	cps
Iron	56-2	9195893	9268274	9159329	9207832	0.60	cps
Iron	57-2	223021	227070	224327	224806	0.92	cps
Krypton	83-1	297	310	243	283	12.45	cps
Lead	206-1	4441713	4405456	4337133	4394767	1.21	cps

Reviewed By:Mohan
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Inst Id :P8
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LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P8
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:25:35	DataFile Name :	014ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3620575	3702875	3673075	3665508	1.14	cps
Lead	208-1	16844646	17075863	16919890	16946800	0.70	cps
Lithium	6-1	11870267	11337753	11605299	11604440	2.29	cps
Magnesium	24-2	446813	447157	443191	445720	0.49	cps
Manganese	55-2	255359	253961	252995	254105	0.47	cps
Molybdenum	94-1	1793	1520	1470	1595	10.92	cps
Molybdenum	95-1	2037	1807	1737	1860	8.44	cps
Molybdenum	96-1	1890	1717	1780	1796	4.89	cps
Molybdenum	97-1	907	750	710	789	13.18	cps
Molybdenum	98-1	2004	1803	1827	1878	5.82	cps
Neodymium	150-1	63	83	97	81	20.69	cps
Neodymium	150-2	10	0	0	3	173.21	cps
Nickel	60-2	314737	316389	316335	315820	0.30	cps
Phosphorus	31-2	237	193	233	221	10.91	cps
Potassium	39-2	503935	501936	501179	502350	0.28	cps
Rhodium	103-1	28088695	28431112	27870012	28129940	1.01	cps
Rhodium	103-2	10654728	10600329	10801856	10685638	0.98	cps
Scandium	45-1	21434049	20965935	20403775	20934586	2.46	cps
Scandium	45-2	425873	421863	434371	427369	1.49	cps
Selenium	82-1	79857	80310	81798	80655	1.26	cps
Selenium	77-2	1480	1593	1590	1555	4.15	cps
Selenium	78-2	5164	5544	5061	5257	4.84	cps
Silicon	28-1	966948	923938	944293	945060	2.28	cps
Silver	107-1	1698494	1696268	1661496	1685420	1.23	cps
Silver	109-1	1588461	1605048	1588611	1594040	0.60	cps
Sodium	23-2	1684805	1737480	1691975	1704753	1.68	cps
Strontium	86-1	2680	2634	2654	2656	0.88	cps
Strontium	88-1	19060	19056	18572	18896	1.48	cps
Sulfur	34-1	662258	657366	652302	657309	0.76	cps
Terbium	159-1	39646164	38460973	38139322	38748820	2.05	cps
Terbium	159-2	12777096	12618425	12937592	12777705	1.25	cps
Thallium	203-1	5362602	5372238	5253848	5329563	1.23	cps
Thallium	205-1	12467993	12642552	12379185	12496577	1.07	cps
Tin	118-1	3664	3614	3527	3602	1.92	cps
Titanium	47-1	807	907	833	849	6.10	cps
Uranium	238-1	170	213	213	199	12.58	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICV01	Instrumnet Name :	P8
Client Sample ID :	ICV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:25:35	DataFile Name :	014ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	452272	454661	454102	453679	0.28	cps
Ytterbium	172-1	227	197	253	226	12.57	cps
Ytterbium	172-2	53	50	50	51	3.76	cps
Ytterbium	176-1	4721	4828	4991	4846	2.81	cps
Ytterbium	176-2	980	1023	1203	1069	11.08	cps
Yttrium	89-1	48127459	46281311	45780839	46729870	2.64	cps
Yttrium	89-2	3589705	3483118	3539649	3537491	1.51	cps
Zinc	66-2	165422	167281	164306	165670	0.91	cps
Zirconium	90-1	2347	2280	1900	2176	11.08	cps
Zirconium	91-1	1153	1293	1177	1208	6.21	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P8
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:59:02	DataFile Name :	018LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2570	2707	2777	2685	3.92	cps
Antimony	121-1	48188	49279	48670	48712	1.12	cps
Arsenic	75-2	553	523	587	554	5.71	cps
Barium	135-1	63200	62329	63715	63081	1.11	cps
Barium	137-1	109616	109270	110265	109717	0.46	cps
Beryllium	9-1	8166	8434	8137	8246	1.98	cps
Bismuth	209-1	23069637	22997655	22537770	22868354	1.26	cps
Bismuth	209-2	9202517	9028998	9093238	9108251	0.96	cps
Bromine	81-1	15138	14511	14584	14745	2.33	cps
Cadmium	108-1	627	550	500	559	11.42	cps
Cadmium	106-1	15509	15839	15823	15724	1.18	cps
Cadmium	111-1	16839	17157	17321	17106	1.43	cps
Calcium	43-1	48107	48923	48267	48432	0.89	cps
Calcium	44-1	799290	798739	799128	799052	0.04	cps
Carbon	12-1	4037783	3923018	3883580	3948127	2.03	cps
Carbon	12-2	27122	27282	26080	26828	2.43	cps
Chlorine	35-1	163134	164337	164583	164018	0.47	cps
Chlorine	35-2	650	650	673	658	2.05	cps
Chromium	52-2	15649	15308	15445	15467	1.11	cps
Cobalt	59-2	12516	12759	11788	12354	4.09	cps
Copper	63-2	23162	22404	22144	22570	2.34	cps
Dysprosium	156-1	30	27	40	32	21.53	cps
Dysprosium	156-2	3	10	3	6	69.34	cps
Erbium	164-1	163	167	173	168	3.03	cps
Erbium	164-2	60	57	67	61	8.33	cps
Gadolinium	160-1	263	240	243	249	5.07	cps
Gadolinium	160-2	50	67	33	50	33.34	cps
Holmium	165-1	37735254	38078639	36926320	37580071	1.57	cps
Holmium	165-2	12546526	12456680	12555282	12519496	0.44	cps
Indium	115-1	30107158	29669491	29237441	29671364	1.47	cps
Indium	115-2	3181922	3163876	3113378	3153058	1.13	cps
Iron	54-2	14948	14200	13827	14325	3.99	cps
Iron	56-2	251307	254072	251572	252317	0.60	cps
Iron	57-2	6358	6185	6285	6276	1.39	cps
Krypton	83-1	363	320	327	337	6.93	cps
Lead	206-1	21949	21902	22042	21964	0.33	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P8
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:59:02	DataFile Name :	018LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	19168	19071	19538	19259	1.28	cps
Lead	208-1	87549	87258	88442	87750	0.70	cps
Lithium	6-1	12359481	12014728	12109746	12161319	1.46	cps
Magnesium	24-2	210322	207539	208632	208831	0.67	cps
Manganese	55-2	3147	3357	3250	3252	3.23	cps
Molybdenum	94-1	55775	56343	55771	55963	0.59	cps
Molybdenum	95-1	67861	67704	67155	67573	0.55	cps
Molybdenum	96-1	74475	73785	74605	74288	0.59	cps
Molybdenum	97-1	42057	41789	41178	41675	1.08	cps
Molybdenum	98-1	106659	106468	106720	106616	0.12	cps
Neodymium	150-1	23	37	20	27	33.08	cps
Neodymium	150-2	10	10	0	7	86.60	cps
Nickel	60-2	3917	3981	4261	4053	4.51	cps
Phosphorus	31-2	380	397	387	388	2.16	cps
Potassium	39-2	150121	150412	149720	150084	0.23	cps
Rhodium	103-1	27974478	28390967	27998168	28121204	0.83	cps
Rhodium	103-2	10833501	10610515	10646431	10696816	1.12	cps
Scandium	45-1	21279190	21294488	21169860	21247846	0.32	cps
Scandium	45-2	434929	434061	430581	433190	0.53	cps
Selenium	82-1	2060	2237	1987	2095	6.14	cps
Selenium	77-2	20	33	43	32	36.33	cps
Selenium	78-2	157	150	150	152	2.53	cps
Silicon	28-1	1042803	1024672	1040251	1035909	0.95	cps
Silver	107-1	33419	33117	33310	33282	0.46	cps
Silver	109-1	30036	30577	30343	30319	0.90	cps
Sodium	23-2	501413	498399	497826	499213	0.39	cps
Strontium	86-1	9937	9830	9427	9731	2.77	cps
Strontium	88-1	78663	79049	80403	79371	1.15	cps
Sulfur	34-1	695703	695770	694275	695249	0.12	cps
Terbium	159-1	38472724	38419758	37918067	38270183	0.80	cps
Terbium	159-2	12905566	12552986	12270626	12576393	2.53	cps
Thallium	203-1	26039	25966	26016	26007	0.14	cps
Thallium	205-1	62580	61853	61421	61951	0.95	cps
Tin	118-1	112726	114968	114257	113984	1.01	cps
Titanium	47-1	21576	22237	21736	21850	1.58	cps
Uranium	238-1	82348	82287	81220	81952	0.77	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	LLICV	Instrumnet Name :	P8
Client Sample ID :	LLICV	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 17:59:02	DataFile Name :	018LLIC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	23807	24431	23756	23998	1.57	cps
Ytterbium	172-1	180	167	163	170	5.19	cps
Ytterbium	172-2	77	50	77	68	22.72	cps
Ytterbium	176-1	4618	4994	4831	4814	3.92	cps
Ytterbium	176-2	1240	1090	1177	1169	6.44	cps
Yttrium	89-1	46168384	46697883	45335839	46067369	1.49	cps
Yttrium	89-2	3588373	3549621	3533041	3557012	0.80	cps
Zinc	66-2	6028	5845	5711	5861	2.71	cps
Zirconium	90-1	48765	48875	47568	48403	1.50	cps
Zirconium	91-1	10354	10634	10724	10571	1.83	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P8
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:02:21	DataFile Name :	019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	597	637	497	577	12.51	cps
Antimony	121-1	137	157	113	136	16.00	cps
Arsenic	75-2	3	3	3	3	0.00	cps
Barium	135-1	133	130	113	126	8.53	cps
Barium	137-1	187	163	193	181	8.70	cps
Beryllium	9-1	459	410	479	449	7.87	cps
Bismuth	209-1	22582234	23055663	22635571	22757823	1.14	cps
Bismuth	209-2	9118468	9067297	8965587	9050451	0.86	cps
Bromine	81-1	14838	14901	15055	14931	0.75	cps
Cadmium	108-1	27	23	50	33	43.59	cps
Cadmium	106-1	14898	14948	15903	15250	3.71	cps
Cadmium	111-1	10437	10471	11127	10678	3.64	cps
Calcium	43-1	883	807	867	852	4.73	cps
Calcium	44-1	25093	25383	25640	25372	1.08	cps
Carbon	12-1	4523586	4503301	4334924	4453937	2.33	cps
Carbon	12-2	30024	30719	30498	30414	1.17	cps
Chlorine	35-1	162962	164516	164769	164082	0.60	cps
Chlorine	35-2	570	693	660	641	9.95	cps
Chromium	52-2	2380	2397	2467	2415	1.90	cps
Cobalt	59-2	123	143	127	131	8.17	cps
Copper	63-2	5121	5211	5148	5160	0.90	cps
Dysprosium	156-1	23	20	20	21	9.11	cps
Dysprosium	156-2	0	7	7	4	86.60	cps
Erbium	164-1	147	180	157	161	10.62	cps
Erbium	164-2	57	53	47	52	9.75	cps
Gadolinium	160-1	243	190	227	220	12.40	cps
Gadolinium	160-2	33	37	60	43	33.53	cps
Holmium	165-1	36588549	37202471	37007316	36932779	0.85	cps
Holmium	165-2	12653772	12549593	12477978	12560448	0.70	cps
Indium	115-1	29740112	30099758	29008780	29616216	1.88	cps
Indium	115-2	3178777	3143464	3177868	3166703	0.64	cps
Iron	54-2	1367	1513	1490	1457	5.41	cps
Iron	56-2	20695	20551	20608	20618	0.35	cps
Iron	57-2	457	457	493	469	4.52	cps
Krypton	83-1	250	233	273	252	7.97	cps
Lead	206-1	2064	2004	1837	1968	5.97	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P8
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:02:21	DataFile Name :	019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1693	1767	1617	1692	4.43	cps
Lead	208-1	8024	7938	7414	7792	4.24	cps
Lithium	6-1	12100157	11758619	12052748	11970508	1.55	cps
Magnesium	24-2	623	580	573	592	4.58	cps
Manganese	55-2	620	527	577	574	8.13	cps
Molybdenum	94-1	1010	940	990	980	3.68	cps
Molybdenum	95-1	890	930	937	919	2.75	cps
Molybdenum	96-1	860	810	877	849	4.09	cps
Molybdenum	97-1	413	410	437	420	3.46	cps
Molybdenum	98-1	927	910	1107	981	11.12	cps
Neodymium	150-1	17	33	10	20	60.08	cps
Neodymium	150-2	0	0	0	0	0.00	cps
Nickel	60-2	957	873	960	930	5.28	cps
Phosphorus	31-2	193	230	233	219	10.14	cps
Potassium	39-2	20438	20962	20672	20691	1.27	cps
Rhodium	103-1	27852025	27767270	27957237	27858844	0.34	cps
Rhodium	103-2	10635614	10635072	10624238	10631641	0.06	cps
Scandium	45-1	20946750	20717900	21261886	20975512	1.30	cps
Scandium	45-2	427545	425349	425274	426056	0.30	cps
Selenium	82-1	50	57	43	50	13.34	cps
Selenium	77-2	0	7	0	2	173.21	cps
Selenium	78-2	10	3	20	11	75.52	cps
Silicon	28-1	922786	926364	949359	932836	1.55	cps
Silver	107-1	554	561	514	543	4.66	cps
Silver	109-1	360	383	317	353	9.57	cps
Sodium	23-2	88952	89465	88348	88922	0.63	cps
Strontium	86-1	580	553	540	558	3.65	cps
Strontium	88-1	863	800	923	862	7.15	cps
Sulfur	34-1	696106	692602	688667	692458	0.54	cps
Terbium	159-1	38008299	37773356	38255515	38012390	0.63	cps
Terbium	159-2	12679558	12593278	12380810	12551215	1.22	cps
Thallium	203-1	317	313	303	311	2.23	cps
Thallium	205-1	947	907	807	887	8.13	cps
Tin	118-1	3734	3901	5688	4441	24.39	cps
Titanium	47-1	473	530	590	531	10.99	cps
Uranium	238-1	30	50	30	37	31.49	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICB01	Instrumnet Name :	P8
Client Sample ID :	ICB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:02:21	DataFile Name :	019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	13	17	30	20	44.10	cps
Ytterbium	172-1	170	163	193	176	8.97	cps
Ytterbium	172-2	100	50	100	83	34.64	cps
Ytterbium	176-1	5058	4711	4914	4894	3.56	cps
Ytterbium	176-2	980	1080	1083	1048	5.60	cps
Yttrium	89-1	46056068	46334924	46104341	46165111	0.32	cps
Yttrium	89-2	3510352	3526632	3540282	3525755	0.42	cps
Zinc	66-2	867	867	900	878	2.19	cps
Zirconium	90-1	1907	1757	1850	1838	4.12	cps
Zirconium	91-1	330	257	403	330	22.22	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P8
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:05:42	DataFile Name :	020ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	9779041	9536945	9764663	9693550	1.40	cps
Antimony	121-1	30561	31185	31343	31030	1.33	cps
Arsenic	75-2	190	177	110	159	26.98	cps
Barium	135-1	8563	8863	8583	8670	1.94	cps
Barium	137-1	14935	14922	14892	14916	0.15	cps
Beryllium	9-1	2171	2068	2009	2083	3.96	cps
Bismuth	209-1	21129327	19660666	21306244	20698746	4.36	cps
Bismuth	209-2	8145021	7996949	7939353	8027108	1.32	cps
Bromine	81-1	16537	17831	17030	17133	3.81	cps
Cadmium	108-1	8029	7215	7269	7504	6.07	cps
Cadmium	106-1	13624	13003	13764	13463	3.01	cps
Cadmium	111-1	13296	13395	13359	13350	0.37	cps
Calcium	43-1	8235707	8421290	8446391	8367796	1.38	cps
Calcium	44-1	133738788	135889031	133954518	134527446	0.88	cps
Carbon	12-1	60720049	61910116	60946542	61192236	1.03	cps
Carbon	12-2	425425	416639	419928	420664	1.06	cps
Chlorine	35-1	114918892	121808722	120848462	119192025	3.13	cps
Chlorine	35-2	535029	533689	547587	538768	1.42	cps
Chromium	52-2	105972	107218	106623	106604	0.58	cps
Cobalt	59-2	11535	11501	11822	11619	1.52	cps
Copper	63-2	68059	69107	69171	68779	0.91	cps
Dysprosium	156-1	93	103	93	97	5.97	cps
Dysprosium	156-2	43	37	37	39	9.89	cps
Erbium	164-1	247	203	267	239	13.55	cps
Erbium	164-2	67	53	90	70	26.51	cps
Gadolinium	160-1	293	320	353	322	9.33	cps
Gadolinium	160-2	77	63	43	61	27.46	cps
Holmium	165-1	37433736	34424819	36861596	36240051	4.41	cps
Holmium	165-2	12164976	12056936	12087913	12103275	0.46	cps
Indium	115-1	27180559	25612618	27752044	26848407	4.13	cps
Indium	115-2	2873911	2861093	2821613	2852206	0.96	cps
Iron	54-2	22237460	22287458	22545076	22356664	0.74	cps
Iron	56-2	410003634	407085034	410305554	409131407	0.43	cps
Iron	57-2	10306260	10316864	10425521	10349548	0.64	cps
Krypton	83-1	530	367	413	437	19.27	cps
Lead	206-1	89402	88506	90734	89547	1.25	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P8
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:05:42	DataFile Name :	020ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	71030	72035	71429	71498	0.71	cps
Lead	208-1	336860	335730	339243	337278	0.53	cps
Lithium	6-1	10746260	10085749	10479644	10437218	3.18	cps
Magnesium	24-2	33954067	33437664	33979045	33790259	0.90	cps
Manganese	55-2	17698	16957	17694	17450	2.45	cps
Molybdenum	94-1	14394770	14566084	14447486	14469446	0.61	cps
Molybdenum	95-1	25150591	25423646	25052260	25208833	0.76	cps
Molybdenum	96-1	26863583	26872239	26385415	26707079	1.04	cps
Molybdenum	97-1	15707481	15760381	15404105	15623989	1.23	cps
Molybdenum	98-1	41170991	41226232	40128042	40841755	1.51	cps
Neodymium	150-1	110	113	100	108	6.44	cps
Neodymium	150-2	23	40	20	28	38.58	cps
Nickel	60-2	15031	15155	15715	15301	2.38	cps
Phosphorus	31-2	492871	489945	497416	493411	0.76	cps
Potassium	39-2	22394556	21994076	22314053	22234228	0.95	cps
Rhodium	103-1	24990685	23049375	24266205	24102089	4.07	cps
Rhodium	103-2	9358890	9328557	9371422	9352956	0.24	cps
Scandium	45-1	19588162	18166024	19028036	18927407	3.78	cps
Scandium	45-2	390365	386108	390306	388926	0.63	cps
Selenium	82-1	-153	60	-50	-48	-223.29	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	7	10	17	11	45.82	cps
Silicon	28-1	1256514	1246314	1231257	1244695	1.02	cps
Silver	107-1	2363	2438	2384	2395	1.62	cps
Silver	109-1	2164	2140	2217	2174	1.81	cps
Sodium	23-2	72341636	70905947	72403966	71883849	1.18	cps
Strontium	86-1	278656	279951	276864	278490	0.56	cps
Strontium	88-1	2603956	2534910	2553692	2564186	1.39	cps
Sulfur	34-1	11270156	11421127	11096514	11262599	1.44	cps
Terbium	159-1	37669059	34928660	37297632	36631784	4.06	cps
Terbium	159-2	12175642	12135604	11905965	12072404	1.21	cps
Thallium	203-1	2200	2300	2280	2260	2.34	cps
Thallium	205-1	5098	5254	5748	5367	6.32	cps
Tin	118-1	6068	6235	5961	6088	2.26	cps
Titanium	47-1	8021346	7991555	7836083	7949661	1.25	cps
Uranium	238-1	1563	1413	1347	1441	7.70	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICSA01	Instrumnet Name :	P8
Client Sample ID :	ICSA01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:05:42	DataFile Name :	020ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	530	677	577	594	12.61	cps
Ytterbium	172-1	250	263	190	234	16.66	cps
Ytterbium	172-2	63	100	130	98	34.15	cps
Ytterbium	176-1	4601	4217	4297	4372	4.63	cps
Ytterbium	176-2	953	940	903	932	2.78	cps
Yttrium	89-1	45079001	40533130	43863944	43158692	5.45	cps
Yttrium	89-2	3323580	3240298	3316006	3293294	1.40	cps
Zinc	66-2	8766	8496	8619	8627	1.57	cps
Zirconium	90-1	2354	2080	2057	2164	7.63	cps
Zirconium	91-1	447	423	420	430	3.38	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P8
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:08:47	DataFile Name :	021ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	9707471	9639801	9640151	9662474	0.40	cps
Antimony	121-1	472629	478194	480205	477009	0.82	cps
Arsenic	75-2	9140	9263	9387	9263	1.33	cps
Barium	135-1	125673	127775	127543	126997	0.91	cps
Barium	137-1	220394	219919	221396	220570	0.34	cps
Beryllium	9-1	126063	126567	125604	126078	0.38	cps
Bismuth	209-1	20874113	21312538	21551823	21246158	1.62	cps
Bismuth	209-2	8087543	8172026	8054349	8104639	0.75	cps
Bromine	81-1	17751	18432	19183	18456	3.88	cps
Cadmium	108-1	14665	14581	14301	14516	1.31	cps
Cadmium	106-1	23644	23861	23897	23801	0.58	cps
Cadmium	111-1	123250	123236	123835	123440	0.28	cps
Calcium	43-1	8444994	8447663	8372122	8421593	0.51	cps
Calcium	44-1	137409948	135241871	135339135	135996985	0.90	cps
Carbon	12-1	60350606	61605562	61773819	61243329	1.27	cps
Carbon	12-2	424469	418492	424482	422481	0.82	cps
Chlorine	35-1	119440442	124734308	125085018	123086589	2.57	cps
Chlorine	35-2	559711	551658	557922	556431	0.76	cps
Chromium	52-2	212637	209619	209143	210466	0.90	cps
Cobalt	59-2	206607	207593	207256	207152	0.24	cps
Copper	63-2	230250	227622	230310	229394	0.67	cps
Dysprosium	156-1	123	113	140	126	10.73	cps
Dysprosium	156-2	57	33	43	44	26.35	cps
Erbium	164-1	223	223	250	232	6.63	cps
Erbium	164-2	70	93	77	80	15.02	cps
Gadolinium	160-1	360	333	303	332	8.53	cps
Gadolinium	160-2	97	93	80	90	9.80	cps
Holmium	165-1	37235784	37911349	37261424	37469519	1.02	cps
Holmium	165-2	12539414	12070032	12353073	12320840	1.92	cps
Indium	115-1	28365903	28146288	28731802	28414664	1.04	cps
Indium	115-2	2891640	2871597	2832973	2865403	1.04	cps
Iron	54-2	22446567	22219393	21952394	22206118	1.11	cps
Iron	56-2	413988301	408840207	411678781	411502429	0.63	cps
Iron	57-2	10501252	10306179	10444929	10417454	0.96	cps
Krypton	83-1	397	547	527	490	16.62	cps
Lead	206-1	471120	472067	473465	472217	0.25	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P8
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:08:47	DataFile Name :	021ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	399864	398653	400772	399763	0.27	cps
Lead	208-1	1829687	1836565	1846219	1837490	0.45	cps
Lithium	6-1	10478267	10637199	10553356	10556274	0.75	cps
Magnesium	24-2	34180036	33233802	33938862	33784233	1.46	cps
Manganese	55-2	62928	61867	61716	62170	1.06	cps
Molybdenum	94-1	14410330	14519288	14515697	14481772	0.43	cps
Molybdenum	95-1	25369679	25556950	25444830	25457153	0.37	cps
Molybdenum	96-1	26971541	27429234	27022190	27140988	0.92	cps
Molybdenum	97-1	15440639	15943931	15696544	15693705	1.60	cps
Molybdenum	98-1	40122189	41164393	40870419	40719000	1.32	cps
Neodymium	150-1	120	140	153	138	12.18	cps
Neodymium	150-2	30	27	33	30	11.10	cps
Nickel	60-2	73220	73234	74235	73563	0.79	cps
Phosphorus	31-2	496597	489665	493548	493270	0.70	cps
Potassium	39-2	22458948	22248808	22490981	22399579	0.59	cps
Rhodium	103-1	25029040	25696622	25265362	25330342	1.34	cps
Rhodium	103-2	9542634	9449029	9524116	9505260	0.52	cps
Scandium	45-1	19903507	19947689	20244776	20031991	0.93	cps
Scandium	45-2	398545	395920	397928	397464	0.35	cps
Selenium	82-1	7716	7216	7419	7450	3.38	cps
Selenium	77-2	107	160	117	128	22.18	cps
Selenium	78-2	467	493	467	476	3.24	cps
Silicon	28-1	1236684	1284746	1267161	1262863	1.93	cps
Silver	107-1	549243	554408	552246	551966	0.47	cps
Silver	109-1	519032	529379	521173	523195	1.04	cps
Sodium	23-2	72958906	72194969	72714324	72622733	0.54	cps
Strontium	86-1	277100	281213	283674	280662	1.18	cps
Strontium	88-1	2577556	2570363	2588169	2578696	0.35	cps
Sulfur	34-1	11300191	11520239	11263733	11361388	1.22	cps
Terbium	159-1	38427140	38237671	38376785	38347199	0.26	cps
Terbium	159-2	12264166	12156882	12017938	12146329	1.02	cps
Thallium	203-1	475432	477436	477608	476825	0.25	cps
Thallium	205-1	1154570	1134708	1146869	1145382	0.87	cps
Tin	118-1	6131	6158	6282	6190	1.29	cps
Titanium	47-1	7990703	8045161	7969554	8001806	0.49	cps
Uranium	238-1	1377	1323	1420	1373	3.53	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	ICSAB01	Instrumnet Name :	P8
Client Sample ID :	ICSAB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:08:47	DataFile Name :	021ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	82355	82241	82187	82261	0.10	cps
Ytterbium	172-1	247	210	213	223	9.08	cps
Ytterbium	172-2	80	70	83	78	8.92	cps
Ytterbium	176-1	4644	4534	4544	4574	1.33	cps
Ytterbium	176-2	727	893	920	847	12.38	cps
Yttrium	89-1	45412233	45559401	46170999	45714211	0.88	cps
Yttrium	89-2	3373186	3389766	3350214	3371055	0.59	cps
Zinc	66-2	23393	23626	24227	23749	1.81	cps
Zirconium	90-1	2384	2357	2214	2318	3.95	cps
Zirconium	91-1	533	557	527	539	2.92	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P8
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:11:55	DataFile Name :	022CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5159360	5148101	5102881	5136780	0.58	cps
Antimony	121-1	11035062	10906742	11063209	11001671	0.76	cps
Arsenic	75-2	214024	215262	215496	214927	0.37	cps
Barium	135-1	15001576	14952277	14986930	14980261	0.17	cps
Barium	137-1	25842880	26045516	25877925	25922107	0.42	cps
Beryllium	9-1	3095514	3043568	3091646	3076909	0.94	cps
Bismuth	209-1	20781198	20312596	20670146	20587980	1.19	cps
Bismuth	209-2	7724104	7757929	7605442	7695825	1.04	cps
Bromine	81-1	15932	15712	16907	16184	3.93	cps
Cadmium	108-1	218927	217008	220702	218879	0.84	cps
Cadmium	106-1	321836	322896	322071	322267	0.17	cps
Cadmium	111-1	2760845	2783030	2785721	2776532	0.49	cps
Calcium	43-1	20487033	20503543	20277200	20422592	0.62	cps
Calcium	44-1	331820595	330179068	331012848	331004171	0.25	cps
Carbon	12-1	5527477	5541254	5491557	5520096	0.46	cps
Carbon	12-2	45320	45042	45353	45238	0.38	cps
Chlorine	35-1	5257484	4938935	4554015	4916811	7.16	cps
Chlorine	35-2	17394	16893	15952	16746	4.37	cps
Chromium	52-2	2643199	2723761	2652943	2673301	1.64	cps
Cobalt	59-2	4871315	4833587	4815929	4840277	0.58	cps
Copper	63-2	37760036	38465504	38104403	38109981	0.93	cps
Dysprosium	156-1	830	837	870	846	2.53	cps
Dysprosium	156-2	223	207	183	204	9.83	cps
Erbium	164-1	783	840	780	801	4.21	cps
Erbium	164-2	287	263	277	276	4.25	cps
Gadolinium	160-1	750	727	837	771	7.52	cps
Gadolinium	160-2	263	267	267	266	0.72	cps
Holmium	165-1	36733146	36109469	36735642	36526086	0.99	cps
Holmium	165-2	11861728	12109451	11746262	11905814	1.56	cps
Indium	115-1	27183802	27255629	27103738	27181056	0.28	cps
Indium	115-2	2768087	2769050	2725489	2754209	0.90	cps
Iron	54-2	26613965	26939677	26656324	26736655	0.66	cps
Iron	56-2	496545753	485624326	493671486	491947188	1.15	cps
Iron	57-2	12633717	12193234	12376881	12401277	1.78	cps
Krypton	83-1	487	523	507	506	3.63	cps
Lead	206-1	47930918	47692856	46961726	47528500	1.06	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P8
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:11:55	DataFile Name :	022CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	41607140	41275124	40355562	41079275	1.58	cps
Lead	208-1	192580256	188129698	186311403	189007119	1.71	cps
Lithium	6-1	10039613	9992777	9971399	10001263	0.35	cps
Magnesium	24-2	81915505	82899430	82163319	82326085	0.62	cps
Manganese	55-2	11381679	11461131	11512019	11451609	0.57	cps
Molybdenum	94-1	44579534	44404861	44075733	44353376	0.58	cps
Molybdenum	95-1	64645152	64948562	63949782	64514499	0.79	cps
Molybdenum	96-1	70227726	69944421	70254234	70142127	0.24	cps
Molybdenum	97-1	39504292	39040767	39625951	39390337	0.78	cps
Molybdenum	98-1	102363148	103077665	100928109	102122974	1.07	cps
Neodymium	150-1	1727	1750	1657	1711	2.84	cps
Neodymium	150-2	153	140	137	143	6.15	cps
Nickel	60-2	1240790	1231049	1234172	1235337	0.40	cps
Phosphorus	31-2	47036	48962	47845	47948	2.02	cps
Potassium	39-2	27751394	27002955	27298269	27350873	1.38	cps
Rhodium	103-1	23848968	23707868	23882093	23812976	0.39	cps
Rhodium	103-2	8970170	8854512	8662383	8829022	1.76	cps
Scandium	45-1	19393303	19190572	19914315	19499397	1.91	cps
Scandium	45-2	385297	388498	372758	382184	2.18	cps
Selenium	82-1	170921	171973	169690	170861	0.67	cps
Selenium	77-2	3170	2987	3077	3078	2.98	cps
Selenium	78-2	10834	10948	10681	10821	1.24	cps
Silicon	28-1	123604305	122953262	122395275	122984280	0.49	cps
Silver	107-1	14685710	14671781	14771323	14709605	0.37	cps
Silver	109-1	13373542	13186719	13348014	13302758	0.76	cps
Sodium	23-2	177377611	173514951	172527557	174473373	1.47	cps
Strontium	86-1	4205371	4105824	4232973	4181389	1.60	cps
Strontium	88-1	35928034	36160274	36496233	36194847	0.79	cps
Sulfur	34-1	1661329	1651421	1639723	1650824	0.66	cps
Terbium	159-1	38028879	38035369	37868749	37977665	0.25	cps
Terbium	159-2	11846565	11828591	11702913	11792690	0.66	cps
Thallium	203-1	11890591	11900969	11916059	11902540	0.11	cps
Thallium	205-1	28407258	27707269	28526335	28213620	1.57	cps
Tin	118-1	9795470	9932797	9681409	9803225	1.28	cps
Titanium	47-1	19232363	19020018	19182233	19144872	0.58	cps
Uranium	238-1	41415079	40755025	40691065	40953723	0.98	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV01	Instrumnet Name :	P8
Client Sample ID :	CCV01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:11:55	DataFile Name :	022CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	2105189	2183428	2073778	2120798	2.66	cps
Ytterbium	172-1	860	967	913	913	5.84	cps
Ytterbium	172-2	290	370	373	344	13.70	cps
Ytterbium	176-1	61703	62286	60886	61625	1.14	cps
Ytterbium	176-2	20049	20179	20266	20164	0.54	cps
Yttrium	89-1	43935276	43136874	44867279	43979810	1.97	cps
Yttrium	89-2	3269912	3216294	3158148	3214785	1.74	cps
Zinc	66-2	3595824	3599618	3530279	3575240	1.09	cps
Zirconium	90-1	22315900	22561459	22317605	22398321	0.63	cps
Zirconium	91-1	5099067	5086916	5052097	5079360	0.48	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P8
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:15:01	DataFile Name :	023CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	190	150	107	149	27.99	cps
Antimony	121-1	1807	1393	1417	1539	15.09	cps
Arsenic	75-2	27	17	10	18	47.19	cps
Barium	135-1	430	270	277	326	27.80	cps
Barium	137-1	593	490	387	490	21.09	cps
Beryllium	9-1	971	991	890	951	5.58	cps
Bismuth	209-1	23787667	23736616	23835298	23786527	0.21	cps
Bismuth	209-2	9258478	9225225	9177819	9220507	0.44	cps
Bromine	81-1	15953	16333	16199	16162	1.19	cps
Cadmium	108-1	77	47	23	49	54.69	cps
Cadmium	106-1	15195	15349	15546	15363	1.14	cps
Cadmium	111-1	10730	10891	11006	10876	1.28	cps
Calcium	43-1	1133	913	860	969	14.95	cps
Calcium	44-1	31158	30039	28413	29870	4.62	cps
Carbon	12-1	4359133	4304174	4279875	4314394	0.94	cps
Carbon	12-2	29209	28538	29727	29158	2.04	cps
Chlorine	35-1	2474814	2375295	2255211	2368440	4.64	cps
Chlorine	35-2	8719	8836	8399	8652	2.61	cps
Chromium	52-2	2330	2184	2314	2276	3.53	cps
Cobalt	59-2	193	197	150	180	14.46	cps
Copper	63-2	8446	8202	8239	8296	1.58	cps
Dysprosium	156-1	3	27	13	14	81.07	cps
Dysprosium	156-2	0	7	0	2	173.21	cps
Erbium	164-1	150	187	153	163	12.41	cps
Erbium	164-2	37	63	57	52	26.57	cps
Gadolinium	160-1	273	283	223	260	12.36	cps
Gadolinium	160-2	43	47	70	53	27.24	cps
Holmium	165-1	39093554	38722541	38610194	38808763	0.65	cps
Holmium	165-2	12920373	12961565	12748273	12876737	0.88	cps
Indium	115-1	30014674	30046785	29957923	30006460	0.15	cps
Indium	115-2	3181589	3175350	3176007	3177649	0.11	cps
Iron	54-2	1137	1177	1107	1140	3.08	cps
Iron	56-2	16337	15219	14451	15336	6.19	cps
Iron	57-2	407	383	397	396	2.96	cps
Krypton	83-1	333	287	280	300	9.69	cps
Lead	206-1	4224	3774	3571	3856	8.67	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P8
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:15:01	DataFile Name :	023CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3494	3327	3074	3298	6.41	cps
Lead	208-1	16254	15311	14060	15208	7.24	cps
Lithium	6-1	11372508	11453846	11560163	11462172	0.82	cps
Magnesium	24-2	1163	1140	1020	1108	6.94	cps
Manganese	55-2	467	433	490	463	6.15	cps
Molybdenum	94-1	4147	3327	3057	3511	16.17	cps
Molybdenum	95-1	6572	4587	3827	4995	28.37	cps
Molybdenum	96-1	6178	4514	3634	4775	27.06	cps
Molybdenum	97-1	3480	2670	2194	2781	23.39	cps
Molybdenum	98-1	8563	6152	4988	6567	27.77	cps
Neodymium	150-1	20	13	20	18	21.66	cps
Neodymium	150-2	3	3	10	6	69.34	cps
Nickel	60-2	1067	1030	1113	1070	3.90	cps
Phosphorus	31-2	160	200	187	182	11.18	cps
Potassium	39-2	31094	30957	31033	31028	0.22	cps
Rhodium	103-1	28093594	28370895	28771362	28411950	1.20	cps
Rhodium	103-2	10728379	10877399	10836722	10814166	0.71	cps
Scandium	45-1	20792481	21055744	20828522	20892249	0.68	cps
Scandium	45-2	414890	418050	417758	416899	0.42	cps
Selenium	82-1	10	43	50	34	62.22	cps
Selenium	77-2	0	7	3	3	100.05	cps
Selenium	78-2	23	13	7	14	58.06	cps
Silicon	28-1	910174	921421	911609	914401	0.67	cps
Silver	107-1	2279	2073	1885	2079	9.48	cps
Silver	109-1	1987	1954	1603	1848	11.49	cps
Sodium	23-2	149227	145157	145564	146650	1.53	cps
Strontium	86-1	640	520	540	567	11.35	cps
Strontium	88-1	1210	773	783	922	27.03	cps
Sulfur	34-1	612542	609455	615967	612655	0.53	cps
Terbium	159-1	39051384	38841070	38855210	38915888	0.30	cps
Terbium	159-2	12708719	12732150	12567822	12669564	0.70	cps
Thallium	203-1	2057	1730	1673	1820	11.37	cps
Thallium	205-1	4634	4654	4207	4499	5.61	cps
Tin	118-1	4217	3707	3734	3886	7.39	cps
Titanium	47-1	1113	1023	1027	1054	4.84	cps
Uranium	238-1	843	597	467	636	30.10	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB01	Instrumnet Name :	P8
Client Sample ID :	CCB01	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:15:01	DataFile Name :	023CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	27	33	27	29	13.31	cps
Ytterbium	172-1	213	223	247	228	7.51	cps
Ytterbium	172-2	70	93	60	74	22.98	cps
Ytterbium	176-1	4714	4998	5064	4925	3.77	cps
Ytterbium	176-2	890	903	960	918	4.05	cps
Yttrium	89-1	47120898	47195351	47918843	47411697	0.93	cps
Yttrium	89-2	3542296	3546358	3519058	3535904	0.42	cps
Zinc	66-2	593	583	623	600	3.47	cps
Zirconium	90-1	2727	2520	2520	2589	4.61	cps
Zirconium	91-1	530	513	567	537	5.08	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P8
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:45:25	DataFile Name :	028LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2480	2547	2410	2479	2.76	cps
Antimony	121-1	49295	49412	49305	49338	0.13	cps
Arsenic	75-2	567	547	493	536	7.08	cps
Barium	135-1	63016	63525	63166	63235	0.41	cps
Barium	137-1	110197	109408	109854	109820	0.36	cps
Beryllium	9-1	7754	7904	7680	7780	1.47	cps
Bismuth	209-1	23360930	23173869	22807310	23114036	1.22	cps
Bismuth	209-2	8977138	9190080	9078119	9081779	1.17	cps
Bromine	81-1	15128	15749	15205	15361	2.20	cps
Cadmium	108-1	477	577	583	546	10.95	cps
Cadmium	106-1	15729	16286	16116	16044	1.78	cps
Cadmium	111-1	16998	17375	17198	17190	1.10	cps
Calcium	43-1	48692	48893	48849	48811	0.22	cps
Calcium	44-1	796090	805741	799089	800307	0.62	cps
Carbon	12-1	4122409	3993207	3919806	4011807	2.56	cps
Carbon	12-2	27249	27082	26885	27072	0.67	cps
Chlorine	35-1	305320	304987	304673	304993	0.11	cps
Chlorine	35-2	1407	1170	1403	1327	10.23	cps
Chromium	52-2	14988	15308	14955	15084	1.29	cps
Cobalt	59-2	12112	11728	12135	11992	1.91	cps
Copper	63-2	23019	22498	22822	22779	1.15	cps
Dysprosium	156-1	37	20	40	32	33.25	cps
Dysprosium	156-2	3	7	7	6	34.70	cps
Erbium	164-1	117	187	180	161	23.98	cps
Erbium	164-2	67	43	57	56	21.08	cps
Gadolinium	160-1	323	200	247	257	24.26	cps
Gadolinium	160-2	67	77	47	63	24.12	cps
Holmium	165-1	38600439	37816833	37848386	38088553	1.16	cps
Holmium	165-2	12417465	12557332	12678857	12551218	1.04	cps
Indium	115-1	30715452	29809989	29452661	29992701	2.17	cps
Indium	115-2	3212545	3128535	3156927	3166002	1.35	cps
Iron	54-2	13660	14164	14037	13954	1.88	cps
Iron	56-2	248155	249190	243606	246983	1.20	cps
Iron	57-2	6428	6375	6241	6348	1.52	cps
Krypton	83-1	280	337	270	296	12.16	cps
Lead	206-1	21628	22035	22046	21903	1.09	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P8
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:45:25	DataFile Name :	028LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	19368	18944	19007	19106	1.20	cps
Lead	208-1	86583	87734	87352	87223	0.67	cps
Lithium	6-1	11845560	11632009	11681828	11719799	0.95	cps
Magnesium	24-2	206549	204693	206801	206014	0.56	cps
Manganese	55-2	3267	3217	3284	3256	1.07	cps
Molybdenum	94-1	56314	56069	55594	55992	0.65	cps
Molybdenum	95-1	67861	67329	65624	66938	1.75	cps
Molybdenum	96-1	74488	73701	73500	73896	0.71	cps
Molybdenum	97-1	42732	42565	41552	42283	1.51	cps
Molybdenum	98-1	106968	106659	104648	106092	1.19	cps
Neodymium	150-1	30	20	10	20	50.00	cps
Neodymium	150-2	3	3	7	4	43.40	cps
Nickel	60-2	4227	4137	4061	4142	2.01	cps
Phosphorus	31-2	417	373	403	398	5.58	cps
Potassium	39-2	149330	149057	146063	148150	1.22	cps
Rhodium	103-1	28615905	28492181	28367768	28491951	0.44	cps
Rhodium	103-2	10748700	10686477	10810223	10748467	0.58	cps
Scandium	45-1	21311751	21246279	21001163	21186398	0.77	cps
Scandium	45-2	433049	431758	431391	432066	0.20	cps
Selenium	82-1	1934	2204	2067	2068	6.53	cps
Selenium	77-2	40	43	43	42	4.55	cps
Selenium	78-2	120	177	140	146	19.75	cps
Silicon	28-1	1025740	1030345	1001196	1019094	1.54	cps
Silver	107-1	33917	33343	33670	33644	0.86	cps
Silver	109-1	30430	30968	31142	30847	1.20	cps
Sodium	23-2	503234	501780	497539	500851	0.59	cps
Strontium	86-1	9507	9784	9847	9712	1.86	cps
Strontium	88-1	79434	79089	78130	78884	0.86	cps
Sulfur	34-1	705022	711630	709051	708568	0.47	cps
Terbium	159-1	38543660	38837587	38488374	38623207	0.49	cps
Terbium	159-2	12350701	12688937	12386960	12475533	1.49	cps
Thallium	203-1	26016	26153	25749	25973	0.79	cps
Thallium	205-1	61458	61361	61535	61451	0.14	cps
Tin	118-1	114417	113082	113086	113528	0.68	cps
Titanium	47-1	21376	21870	21553	21600	1.16	cps
Uranium	238-1	82076	80824	80459	81120	1.05	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CRI	Instrumnet Name :	P8
Client Sample ID :	CRI	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:45:25	DataFile Name :	028LLCC.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	23546	23523	23943	23671	1.00	cps
Ytterbium	172-1	183	193	170	182	6.43	cps
Ytterbium	172-2	87	77	67	77	13.04	cps
Ytterbium	176-1	4904	4861	4701	4822	2.22	cps
Ytterbium	176-2	923	1070	973	989	7.54	cps
Yttrium	89-1	47498159	47703338	46944289	47381929	0.83	cps
Yttrium	89-2	3584611	3495503	3546275	3542130	1.26	cps
Zinc	66-2	5721	5861	5878	5820	1.48	cps
Zirconium	90-1	47942	48163	48199	48101	0.29	cps
Zirconium	91-1	10514	10734	10811	10686	1.44	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165537BL	Instrumnet Name :	P8
Client Sample ID :	PB165537BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:48:46	DataFile Name :	029CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	147	163	147	152	6.32	cps
Antimony	121-1	163	113	123	133	19.85	cps
Arsenic	75-2	0	0	10	3	173.21	cps
Barium	135-1	183	227	207	206	10.55	cps
Barium	137-1	337	347	323	336	3.49	cps
Beryllium	9-1	425	341	446	404	13.74	cps
Bismuth	209-1	23209068	23047297	23031155	23095840	0.43	cps
Bismuth	209-2	9201966	9161735	8998446	9120715	1.18	cps
Bromine	81-1	15525	15649	15469	15548	0.59	cps
Cadmium	108-1	50	30	37	39	26.18	cps
Cadmium	106-1	15532	15489	15752	15591	0.91	cps
Cadmium	111-1	10864	10841	11021	10909	0.90	cps
Calcium	43-1	2467	2540	2540	2516	1.68	cps
Calcium	44-1	53812	53169	54193	53725	0.96	cps
Carbon	12-1	3911802	3912413	3796030	3873415	1.73	cps
Carbon	12-2	26414	26083	25459	25985	1.87	cps
Chlorine	35-1	288048	282198	280897	283714	1.34	cps
Chlorine	35-2	1233	1273	1323	1277	3.53	cps
Chromium	52-2	3070	3244	3010	3108	3.90	cps
Cobalt	59-2	143	140	133	139	3.67	cps
Copper	63-2	4647	4718	4511	4625	2.27	cps
Dysprosium	156-1	20	20	10	17	34.64	cps
Dysprosium	156-2	3	10	7	7	50.03	cps
Erbium	164-1	187	123	177	162	20.99	cps
Erbium	164-2	73	53	63	63	15.79	cps
Gadolinium	160-1	263	253	213	243	10.87	cps
Gadolinium	160-2	40	57	27	41	36.56	cps
Holmium	165-1	37756721	38221367	36935301	37637796	1.73	cps
Holmium	165-2	12598561	12609533	12597951	12602015	0.05	cps
Indium	115-1	30156371	29916440	30236886	30103233	0.55	cps
Indium	115-2	3138252	3151860	3121069	3137060	0.49	cps
Iron	54-2	967	913	980	953	3.70	cps
Iron	56-2	12499	12229	12269	12332	1.18	cps
Iron	57-2	373	293	287	318	15.18	cps
Krypton	83-1	320	373	317	337	9.44	cps
Lead	206-1	1510	1303	1553	1456	9.18	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165537BL	Instrumnet Name :	P8
Client Sample ID :	PB165537BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:48:46	DataFile Name :	029CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1217	1243	1167	1209	3.22	cps
Lead	208-1	5841	5557	5841	5746	2.85	cps
Lithium	6-1	11661003	11484385	11797149	11647513	1.35	cps
Magnesium	24-2	667	770	690	709	7.65	cps
Manganese	55-2	710	637	583	643	9.89	cps
Molybdenum	94-1	983	860	950	931	6.85	cps
Molybdenum	95-1	853	787	747	796	6.77	cps
Molybdenum	96-1	620	660	713	664	7.05	cps
Molybdenum	97-1	407	383	327	372	11.05	cps
Molybdenum	98-1	903	840	763	836	8.39	cps
Neodymium	150-1	27	3	30	20	72.66	cps
Neodymium	150-2	7	7	3	6	34.70	cps
Nickel	60-2	940	873	887	900	3.92	cps
Phosphorus	31-2	230	180	207	206	12.17	cps
Potassium	39-2	22918	22958	23366	23081	1.07	cps
Rhodium	103-1	28752380	28784601	28249206	28595396	1.05	cps
Rhodium	103-2	10663374	10852107	10771244	10762242	0.88	cps
Scandium	45-1	21475409	21044838	21496068	21338772	1.19	cps
Scandium	45-2	428884	430481	435894	431753	0.85	cps
Selenium	82-1	17	-50	17	-6	-692.66	cps
Selenium	77-2	3	0	3	2	86.60	cps
Selenium	78-2	20	13	20	18	21.66	cps
Silicon	28-1	923612	906548	918518	916226	0.96	cps
Silver	107-1	710	527	467	568	22.32	cps
Silver	109-1	387	337	360	361	6.93	cps
Sodium	23-2	96768	96392	95849	96336	0.48	cps
Strontium	86-1	707	680	733	707	3.77	cps
Strontium	88-1	1627	1703	1767	1699	4.13	cps
Sulfur	34-1	716169	718597	718606	717790	0.20	cps
Terbium	159-1	39015646	37813064	38214774	38347828	1.60	cps
Terbium	159-2	12419187	12710397	12413329	12514305	1.36	cps
Thallium	203-1	453	433	503	463	7.78	cps
Thallium	205-1	1003	1043	1030	1026	1.99	cps
Tin	118-1	6201	5961	6178	6114	2.17	cps
Titanium	47-1	533	510	590	544	7.56	cps
Uranium	238-1	30	20	30	27	21.65	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165537BL	Instrumnet Name :	P8
Client Sample ID :	PB165537BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:48:46	DataFile Name :	029CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	13	23	30	22	37.76	cps
Ytterbium	172-1	173	217	183	191	11.87	cps
Ytterbium	172-2	83	67	73	74	11.26	cps
Ytterbium	176-1	4858	4854	5098	4937	2.83	cps
Ytterbium	176-2	917	890	1047	951	8.81	cps
Yttrium	89-1	48002014	47668654	46793294	47487988	1.31	cps
Yttrium	89-2	3541697	3529878	3545775	3539117	0.23	cps
Zinc	66-2	1533	1563	1620	1572	2.80	cps
Zirconium	90-1	1837	1807	1870	1838	1.72	cps
Zirconium	91-1	320	380	333	344	9.15	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165537BS	Instrumnet Name :	P8
Client Sample ID :	PB165537BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:52:05	DataFile Name :	030LCSS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1038762	1026128	1021321	1028737	0.88	cps
Antimony	121-1	11524046	11525503	11659189	11569579	0.67	cps
Arsenic	75-2	224261	223095	221839	223065	0.54	cps
Barium	135-1	15296509	15304971	15357693	15319724	0.22	cps
Barium	137-1	26011536	25966099	26578360	26185332	1.30	cps
Beryllium	9-1	3277679	3271998	3171766	3240481	1.84	cps
Bismuth	209-1	22199179	21828262	21880113	21969185	0.91	cps
Bismuth	209-2	8527028	8444142	8350217	8440462	1.05	cps
Bromine	81-1	14541	14828	14387	14586	1.53	cps
Cadmium	108-1	230849	238914	231551	233771	1.91	cps
Cadmium	106-1	346887	342685	346088	345220	0.65	cps
Cadmium	111-1	3001339	3056192	3047869	3035133	0.97	cps
Calcium	43-1	4309932	4326205	4326680	4320939	0.22	cps
Calcium	44-1	69215724	70132922	70381971	69910206	0.88	cps
Carbon	12-1	5058970	5110723	4995851	5055181	1.14	cps
Carbon	12-2	36575	36849	36806	36744	0.40	cps
Chlorine	35-1	293511	289034	292338	291628	0.80	cps
Chlorine	35-2	1280	1177	1153	1203	5.60	cps
Chromium	52-2	2705455	2755293	2732930	2731226	0.91	cps
Cobalt	59-2	5145900	5101052	5096427	5114460	0.53	cps
Copper	63-2	41274019	41155222	40885049	41104763	0.48	cps
Dysprosium	156-1	403	517	400	440	15.09	cps
Dysprosium	156-2	73	87	87	82	9.37	cps
Erbium	164-1	420	513	457	463	10.15	cps
Erbium	164-2	140	130	143	138	5.04	cps
Gadolinium	160-1	433	417	443	431	3.12	cps
Gadolinium	160-2	110	140	123	124	12.08	cps
Holmium	165-1	38266805	38027565	37486909	37927093	1.05	cps
Holmium	165-2	12449532	12507920	12363343	12440265	0.58	cps
Indium	115-1	29373867	28694243	28661634	28909915	1.39	cps
Indium	115-2	2922959	2959846	2837009	2906605	2.17	cps
Iron	54-2	5797553	5641455	5660028	5699679	1.50	cps
Iron	56-2	104399645	102446895	102726095	103190878	1.02	cps
Iron	57-2	2714063	2653861	2652091	2673338	1.32	cps
Krypton	83-1	357	317	363	346	7.30	cps
Lead	206-1	49271539	49394573	50094584	49586899	0.90	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165537BS	Instrumnet Name :	P8
Client Sample ID :	PB165537BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:52:05	DataFile Name :	030LCSS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	42023697	42888068	43378463	42763409	1.60	cps
Lead	208-1	193859951	195845079	198153485	195952838	1.10	cps
Lithium	6-1	10953521	11020003	10634799	10869441	1.89	cps
Magnesium	24-2	17789012	17854455	17856940	17833469	0.22	cps
Manganese	55-2	11601993	11621962	11504135	11576030	0.54	cps
Molybdenum	94-1	45335349	44719306	45451331	45168662	0.87	cps
Molybdenum	95-1	66053474	64551777	65616609	65407287	1.18	cps
Molybdenum	96-1	71705004	69861994	71638127	71068375	1.47	cps
Molybdenum	97-1	39854880	39615242	40416028	39962050	1.03	cps
Molybdenum	98-1	103512225	103246462	105200538	103986408	1.02	cps
Neodymium	150-1	1757	1567	1593	1639	6.28	cps
Neodymium	150-2	103	87	87	92	10.43	cps
Nickel	60-2	1361076	1349739	1342314	1351043	0.70	cps
Phosphorus	31-2	48380	47752	47882	48005	0.69	cps
Potassium	39-2	5743905	5559861	5551028	5618265	1.94	cps
Rhodium	103-1	26183375	25989564	26259947	26144295	0.53	cps
Rhodium	103-2	9889715	9768490	9698234	9785480	0.99	cps
Scandium	45-1	20809771	20490173	20473443	20591129	0.92	cps
Scandium	45-2	401700	399408	393472	398193	1.07	cps
Selenium	82-1	182236	183110	181523	182290	0.44	cps
Selenium	77-2	3394	3477	3340	3404	2.02	cps
Selenium	78-2	11188	11268	11094	11183	0.78	cps
Silicon	28-1	164691184	165412514	161131478	163745059	1.40	cps
Silver	107-1	15714260	16116011	15693861	15841377	1.50	cps
Silver	109-1	14552002	14944131	14459720	14651951	1.76	cps
Sodium	23-2	36757107	36845980	36533009	36712032	0.44	cps
Strontium	86-1	4230764	4171989	4230465	4211073	0.80	cps
Strontium	88-1	36535896	36523817	36424541	36494751	0.17	cps
Sulfur	34-1	1837163	1792618	1774363	1801381	1.79	cps
Terbium	159-1	39235847	38286119	38604944	38708970	1.25	cps
Terbium	159-2	12377635	12173196	12184182	12245005	0.94	cps
Thallium	203-1	12346089	12387975	12576613	12436892	0.99	cps
Thallium	205-1	29111313	29472669	29562060	29382014	0.81	cps
Tin	118-1	10265750	10159836	10260870	10228819	0.58	cps
Titanium	47-1	19784369	19615467	20190743	19863527	1.49	cps
Uranium	238-1	40398278	40414773	40725294	40512782	0.45	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165537BS	Instrumnet Name :	P8
Client Sample ID :	PB165537BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 18:52:05	DataFile Name :	030LCSS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	2141556	2129374	2116940	2129290	0.58	cps
Ytterbium	172-1	420	490	407	439	10.20	cps
Ytterbium	172-2	210	187	200	199	5.88	cps
Ytterbium	176-1	61774	60243	61740	61252	1.43	cps
Ytterbium	176-2	19548	19848	19578	19658	0.84	cps
Yttrium	89-1	45940531	45593976	45271698	45602068	0.73	cps
Yttrium	89-2	3415135	3407394	3318186	3380238	1.59	cps
Zinc	66-2	3907041	3936674	3849931	3897882	1.13	cps
Zirconium	90-1	22698341	22693196	22764402	22718646	0.17	cps
Zirconium	91-1	5253563	5103623	5158316	5171834	1.47	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-9-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 18:54:48	DataFile Name :	031AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1081043	1084652	1089457	1085051	0.39	cps
Antimony	121-1	2520	2267	2010	2266	11.26	cps
Arsenic	75-2	2260	1974	1997	2077	7.67	cps
Barium	135-1	342205	350363	342065	344878	1.38	cps
Barium	137-1	584527	583640	594045	587404	0.98	cps
Beryllium	9-1	5697	5953	5669	5773	2.71	cps
Bismuth	209-1	23610651	23137731	23515235	23421206	1.07	cps
Bismuth	209-2	9002880	9010883	8685291	8899685	2.09	cps
Bromine	81-1	16734	16900	17064	16899	0.98	cps
Cadmium	108-1	603	587	643	611	4.77	cps
Cadmium	106-1	17398	16860	17251	17170	1.62	cps
Cadmium	111-1	12233	11792	12049	12024	1.84	cps
Calcium	43-1	60861	59546	59830	60079	1.15	cps
Calcium	44-1	974448	975932	959142	969841	0.96	cps
Carbon	12-1	4774887	4945163	4962797	4894282	2.12	cps
Carbon	12-2	34988	35316	34099	34801	1.81	cps
Chlorine	35-1	258609	255836	258313	257586	0.59	cps
Chlorine	35-2	1117	1163	940	1073	10.98	cps
Chromium	52-2	108057	108773	107869	108233	0.44	cps
Cobalt	59-2	128352	129667	129869	129296	0.64	cps
Copper	63-2	94102	93267	93901	93757	0.47	cps
Dysprosium	156-1	60357	59940	60724	60340	0.65	cps
Dysprosium	156-2	17188	17896	17395	17493	2.08	cps
Erbium	164-1	47203	47003	46989	47065	0.25	cps
Erbium	164-2	14918	15012	15499	15143	2.06	cps
Gadolinium	160-1	51827	52915	53032	52591	1.26	cps
Gadolinium	160-2	20316	19708	20576	20200	2.20	cps
Holmium	165-1	38361683	38313328	38167516	38280842	0.26	cps
Holmium	165-2	12709261	12508770	12512169	12576733	0.91	cps
Indium	115-1	30287952	29800427	29698960	29929113	1.05	cps
Indium	115-2	3130082	3059218	3068540	3085947	1.25	cps
Iron	54-2	4284193	4275730	4221674	4260532	0.80	cps
Iron	56-2	78231104	77938699	78746882	78305562	0.52	cps
Iron	57-2	1995443	2004172	2048606	2016074	1.41	cps
Krypton	83-1	387	427	397	403	5.16	cps
Lead	206-1	208215	205105	202904	205408	1.30	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-9-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 18:54:48	DataFile Name :	031AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	172170	172196	168818	171062	1.14	cps
Lead	208-1	804494	799748	795045	799762	0.59	cps
Lithium	6-1	11170756	11007451	11131578	11103262	0.77	cps
Magnesium	24-2	429714	423636	425145	426165	0.74	cps
Manganese	55-2	473997	474255	469437	472563	0.57	cps
Molybdenum	94-1	182901	172271	171815	175662	3.57	cps
Molybdenum	95-1	14474	13498	11028	13000	13.66	cps
Molybdenum	96-1	42646	41216	43709	42524	2.94	cps
Molybdenum	97-1	8700	7305	6962	7656	12.02	cps
Molybdenum	98-1	21747	18736	17071	19185	12.36	cps
Neodymium	150-1	88298	82975	83342	84871	3.50	cps
Neodymium	150-2	20870	20576	20489	20645	0.97	cps
Nickel	60-2	39755	39662	39351	39589	0.53	cps
Phosphorus	31-2	1567	1593	1420	1527	6.11	cps
Potassium	39-2	217109	211499	208498	212369	2.06	cps
Rhodium	103-1	27557693	27689480	28087529	27778234	0.99	cps
Rhodium	103-2	10572884	10423043	10259322	10418416	1.51	cps
Scandium	45-1	21234504	21153832	20909908	21099415	0.80	cps
Scandium	45-2	417479	414192	406341	412671	1.39	cps
Selenium	82-1	190	113	87	130	41.26	cps
Selenium	77-2	130	77	90	99	28.07	cps
Selenium	78-2	103	93	87	94	8.88	cps
Silicon	28-1	20188343	68012680	29167507	39122843	64.97	cps
Silver	107-1	4900	4456	4313	4556	6.72	cps
Silver	109-1	3207	3200	2604	3004	11.54	cps
Sodium	23-2	136057	135736	135156	135650	0.34	cps
Strontium	86-1	39560	40837	40091	40163	1.60	cps
Strontium	88-1	330568	322863	342570	332000	2.99	cps
Sulfur	34-1	626071	624022	617045	622379	0.76	cps
Terbium	159-1	39018618	39124932	38658276	38933942	0.63	cps
Terbium	159-2	12626016	12557931	12325390	12503112	1.26	cps
Thallium	203-1	5491	5241	5101	5278	3.75	cps
Thallium	205-1	13684	12743	12623	13017	4.46	cps
Tin	118-1	8916	9478	8816	9070	3.93	cps
Titanium	47-1	749927	757188	741207	749440	1.07	cps
Uranium	238-1	86579	83864	87550	85998	2.22	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-9-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 18:54:48	DataFile Name :	031AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	133832	135208	134536	134525	0.51	cps
Ytterbium	172-1	14685	14795	14094	14525	2.59	cps
Ytterbium	172-2	5675	5811	5771	5752	1.22	cps
Ytterbium	176-1	15142	15139	15082	15121	0.22	cps
Ytterbium	176-2	6665	4708	4868	5413	20.08	cps
Yttrium	89-1	48545948	47042266	47165996	47584737	1.75	cps
Yttrium	89-2	3531609	3557911	3407810	3499110	2.29	cps
Zinc	66-2	32541	32003	31876	32140	1.10	cps
Zirconium	90-1	467224	504531	451209	474321	5.77	cps
Zirconium	91-1	113560	102507	100829	105632	6.55	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 18:58:04	DataFile Name :	032AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	907340	911344	904009	907564	0.40	cps
Antimony	121-1	987	1163	1140	1097	8.75	cps
Arsenic	75-2	1690	1747	1813	1750	3.53	cps
Barium	135-1	289243	291287	291071	290534	0.39	cps
Barium	137-1	502979	505769	505954	504901	0.33	cps
Beryllium	9-1	10051	10162	10192	10135	0.74	cps
Bismuth	209-1	23544336	23139861	23522271	23402156	0.97	cps
Bismuth	209-2	8274742	7840382	8660711	8258612	4.97	cps
Bromine	81-1	16290	16603	16740	16544	1.40	cps
Cadmium	108-1	383	343	350	359	5.97	cps
Cadmium	106-1	16633	16096	16226	16319	1.72	cps
Cadmium	111-1	11775	11427	11467	11556	1.65	cps
Calcium	43-1	34689	33532	33663	33961	1.86	cps
Calcium	44-1	567297	570802	561439	566513	0.84	cps
Carbon	12-1	5011602	5123236	5272492	5135777	2.55	cps
Carbon	12-2	36238	36068	36178	36161	0.24	cps
Chlorine	35-1	295684	299957	300412	298684	0.87	cps
Chlorine	35-2	1260	1300	1263	1275	1.74	cps
Chromium	52-2	343640	346737	339180	343186	1.11	cps
Cobalt	59-2	174984	176365	174185	175178	0.63	cps
Copper	63-2	121652	123770	123050	122824	0.88	cps
Dysprosium	156-1	75719	75890	76356	75989	0.43	cps
Dysprosium	156-2	16340	15613	15930	15961	2.29	cps
Erbium	164-1	45685	45400	45588	45558	0.32	cps
Erbium	164-2	15092	14672	14969	14911	1.45	cps
Gadolinium	160-1	42812	43384	43614	43270	0.95	cps
Gadolinium	160-2	17091	16904	19562	17852	8.31	cps
Holmium	165-1	38612305	38883115	38551258	38682226	0.46	cps
Holmium	165-2	11569729	10890251	12059559	11506513	5.10	cps
Indium	115-1	30552430	29934267	30226469	30237722	1.02	cps
Indium	115-2	2794147	2704306	2965660	2821371	4.71	cps
Iron	54-2	5290860	5279180	5173018	5247686	1.24	cps
Iron	56-2	96816125	97467689	96771319	97018377	0.40	cps
Iron	57-2	2492791	2488994	2467623	2483136	0.55	cps
Krypton	83-1	393	293	350	346	14.51	cps
Lead	206-1	167892	166401	167471	167255	0.46	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 18:58:04	DataFile Name :	032AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	137184	137127	137329	137213	0.08	cps
Lead	208-1	643470	642100	647987	644519	0.48	cps
Lithium	6-1	11160103	11075916	11163056	11133025	0.44	cps
Magnesium	24-2	574303	573235	570919	572819	0.30	cps
Manganese	55-2	1301969	1294808	1272784	1289854	1.18	cps
Molybdenum	94-1	91455	90092	91841	91130	1.01	cps
Molybdenum	95-1	12085	12145	12182	12138	0.40	cps
Molybdenum	96-1	27795	26676	27604	27358	2.19	cps
Molybdenum	97-1	7289	7389	7205	7294	1.26	cps
Molybdenum	98-1	18436	18439	18048	18308	1.23	cps
Neodymium	150-1	78387	78464	77606	78153	0.61	cps
Neodymium	150-2	18676	19611	18917	19068	2.55	cps
Nickel	60-2	42400	42510	42473	42461	0.13	cps
Phosphorus	31-2	3267	3030	3150	3149	3.76	cps
Potassium	39-2	340173	338912	335148	338078	0.77	cps
Rhodium	103-1	28610100	27709430	28038397	28119309	1.62	cps
Rhodium	103-2	9654057	9018600	9995327	9555995	5.19	cps
Scandium	45-1	21189943	21196554	21193059	21193186	0.02	cps
Scandium	45-2	383881	358462	402253	381532	5.76	cps
Selenium	82-1	87	263	180	177	50.03	cps
Selenium	77-2	73	90	97	87	13.87	cps
Selenium	78-2	60	70	63	64	7.90	cps
Silicon	28-1	15620254	14198595	12911328	14243392	9.51	cps
Silver	107-1	5574	5682	5498	5585	1.66	cps
Silver	109-1	1533	1423	1550	1502	4.58	cps
Sodium	23-2	146949	141996	143881	144275	1.73	cps
Strontium	86-1	28148	28155	30633	28979	4.94	cps
Strontium	88-1	245293	246538	246869	246233	0.34	cps
Sulfur	34-1	576584	565902	559966	567484	1.48	cps
Terbium	159-1	38944854	39147974	39632968	39241932	0.90	cps
Terbium	159-2	11492452	10984193	11811948	11429531	3.65	cps
Thallium	203-1	5535	5364	5681	5527	2.87	cps
Thallium	205-1	13364	13067	13681	13370	2.30	cps
Tin	118-1	42051	47622	45980	45218	6.33	cps
Titanium	47-1	1443618	1354253	1389121	1395664	3.23	cps
Uranium	238-1	366065	365889	364123	365359	0.29	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 18:58:04	DataFile Name :	032AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	134653	136264	134501	135139	0.72	cps
Ytterbium	172-1	17528	18723	18136	18129	3.30	cps
Ytterbium	172-2	6955	7125	7332	7138	2.64	cps
Ytterbium	176-1	16631	17061	16267	16653	2.39	cps
Ytterbium	176-2	5691	5525	5495	5570	1.90	cps
Yttrium	89-1	47411303	47005404	47083086	47166598	0.46	cps
Yttrium	89-2	3228695	3060668	3397123	3228829	5.21	cps
Zinc	66-2	24935	24692	24354	24661	1.18	cps
Zirconium	90-1	231069	234250	229085	231468	1.13	cps
Zirconium	91-1	70093	52031	51927	58017	18.03	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:01:22	DataFile Name :	033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	895388	894531	890032	893317	0.32	cps
Antimony	121-1	810	807	893	837	5.87	cps
Arsenic	75-2	1613	1800	1657	1690	5.78	cps
Barium	135-1	290757	289576	287677	289337	0.54	cps
Barium	137-1	499193	495184	499582	497986	0.49	cps
Beryllium	9-1	9812	9619	10163	9865	2.80	cps
Bismuth	209-1	23554011	23077964	23389661	23340545	1.04	cps
Bismuth	209-2	8637786	9685919	9337639	9220448	5.79	cps
Bromine	81-1	16443	16293	16393	16376	0.47	cps
Cadmium	108-1	310	367	410	362	13.84	cps
Cadmium	106-1	16417	16764	16410	16530	1.22	cps
Cadmium	111-1	11598	11798	11580	11659	1.04	cps
Calcium	43-1	61822	60978	61541	61447	0.70	cps
Calcium	44-1	991007	989095	986148	988750	0.25	cps
Carbon	12-1	5153928	5111995	5275565	5180496	1.64	cps
Carbon	12-2	36251	36682	36505	36480	0.59	cps
Chlorine	35-1	282175	290884	292714	288591	1.95	cps
Chlorine	35-2	1290	1183	1257	1243	4.39	cps
Chromium	52-2	340743	335856	335271	337290	0.89	cps
Cobalt	59-2	172339	172784	171135	172086	0.50	cps
Copper	63-2	113119	111523	112067	112237	0.72	cps
Dysprosium	156-1	75113	75629	75223	75322	0.36	cps
Dysprosium	156-2	16257	15729	15786	15924	1.82	cps
Erbium	164-1	45588	44835	45755	45393	1.08	cps
Erbium	164-2	14251	14301	14535	14362	1.05	cps
Gadolinium	160-1	43079	43126	43127	43111	0.06	cps
Gadolinium	160-2	16791	16317	16704	16604	1.52	cps
Holmium	165-1	38523378	37610053	38658059	38263830	1.49	cps
Holmium	165-2	12327046	13585979	13069051	12994026	4.87	cps
Indium	115-1	30201793	29797064	29256593	29751817	1.59	cps
Indium	115-2	2997906	3320531	3212792	3177077	5.17	cps
Iron	54-2	5324869	5216250	5152780	5231300	1.66	cps
Iron	56-2	96031959	94064249	94388012	94828073	1.11	cps
Iron	57-2	2478308	2412200	2459496	2450002	1.39	cps
Krypton	83-1	313	320	353	329	6.52	cps
Lead	206-1	168499	165992	166185	166892	0.84	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:01:22	DataFile Name :	033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	135550	137584	135656	136263	0.84	cps
Lead	208-1	644994	641075	638608	641559	0.50	cps
Lithium	6-1	10970652	10836520	11044793	10950655	0.96	cps
Magnesium	24-2	568811	558132	562455	563132	0.95	cps
Manganese	55-2	1272818	1257875	1257596	1262763	0.69	cps
Molybdenum	94-1	88835	91026	91621	90494	1.62	cps
Molybdenum	95-1	11528	11431	11465	11475	0.43	cps
Molybdenum	96-1	30457	27314	26452	28074	7.51	cps
Molybdenum	97-1	6858	7195	6898	6984	2.63	cps
Molybdenum	98-1	17888	17394	17571	17618	1.42	cps
Neodymium	150-1	77224	76704	78240	77390	1.01	cps
Neodymium	150-2	18860	18366	18683	18636	1.34	cps
Nickel	60-2	37095	38151	38281	37842	1.72	cps
Phosphorus	31-2	3120	3004	2980	3035	2.47	cps
Potassium	39-2	334316	330989	332889	332731	0.50	cps
Rhodium	103-1	27537378	28037632	27919440	27831483	0.94	cps
Rhodium	103-2	10121067	11314548	10896162	10777259	5.62	cps
Scandium	45-1	21175979	20643446	20835356	20884927	1.29	cps
Scandium	45-2	398313	441963	427242	422506	5.26	cps
Selenium	82-1	237	157	53	149	61.73	cps
Selenium	77-2	90	87	100	92	7.52	cps
Selenium	78-2	43	80	60	61	30.04	cps
Silicon	28-1	14413616	14201789	18181748	15599051	14.35	cps
Silver	107-1	5067	5314	5253	5212	2.47	cps
Silver	109-1	1047	1277	1233	1186	10.31	cps
Sodium	23-2	143440	141898	144110	143149	0.79	cps
Strontium	86-1	29421	29194	29148	29254	0.50	cps
Strontium	88-1	254073	250898	250863	251945	0.73	cps
Sulfur	34-1	550040	540095	539442	543192	1.09	cps
Terbium	159-1	39801271	39188593	38653905	39214590	1.46	cps
Terbium	159-2	12287743	13239533	12928121	12818466	3.79	cps
Thallium	203-1	5321	5541	5288	5383	2.56	cps
Thallium	205-1	12593	12843	12653	12696	1.03	cps
Tin	118-1	48276	62359	41704	50779	20.78	cps
Titanium	47-1	1348495	1376880	1423746	1383040	2.75	cps
Uranium	238-1	362357	366095	367308	365253	0.71	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:01:22	DataFile Name :	033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	133337	132749	132055	132714	0.48	cps
Ytterbium	172-1	17729	17902	18096	17909	1.03	cps
Ytterbium	172-2	7165	6982	7102	7083	1.32	cps
Ytterbium	176-1	16370	16550	21290	18070	15.44	cps
Ytterbium	176-2	5488	5635	5505	5542	1.45	cps
Yttrium	89-1	46551553	46731879	47236178	46839870	0.76	cps
Yttrium	89-2	3380161	3739622	3611662	3577148	5.09	cps
Zinc	66-2	35053	34796	35194	35014	0.58	cps
Zirconium	90-1	234100	232380	233245	233242	0.37	cps
Zirconium	91-1	55147	52241	50341	52576	4.60	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	25
Date & Time Acquired :	2024-12-11 19:04:37	DataFile Name :	034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	226088	221000	227832	224974	1.58	cps
Antimony	121-1	580	590	530	567	5.67	cps
Arsenic	75-2	427	423	463	438	5.07	cps
Barium	135-1	70603	70184	70998	70595	0.58	cps
Barium	137-1	122082	125720	121959	123254	1.73	cps
Beryllium	9-1	1500	1531	1532	1521	1.18	cps
Bismuth	209-1	23771777	23513222	23602032	23629010	0.56	cps
Bismuth	209-2	9347002	9303144	9072560	9240902	1.60	cps
Bromine	81-1	15612	15766	15876	15751	0.84	cps
Cadmium	108-1	210	133	220	188	25.25	cps
Cadmium	106-1	15292	15402	15435	15376	0.49	cps
Cadmium	111-1	10674	10768	10727	10723	0.44	cps
Calcium	43-1	18242	18662	18562	18489	1.19	cps
Calcium	44-1	308675	308559	306252	307829	0.44	cps
Carbon	12-1	4530433	4505894	4439488	4491938	1.05	cps
Carbon	12-2	29937	29880	30665	30161	1.45	cps
Chlorine	35-1	225560	223865	221770	223731	0.85	cps
Chlorine	35-2	833	963	957	918	7.98	cps
Chromium	52-2	25232	24625	24948	24935	1.22	cps
Cobalt	59-2	28525	28118	28889	28511	1.35	cps
Copper	63-2	165188	164133	163965	164429	0.40	cps
Dysprosium	156-1	12596	12669	11979	12415	3.06	cps
Dysprosium	156-2	3374	3501	3551	3475	2.62	cps
Erbium	164-1	10194	9774	9940	9969	2.12	cps
Erbium	164-2	3197	3875	3090	3387	12.56	cps
Gadolinium	160-1	11035	10961	11098	11031	0.62	cps
Gadolinium	160-2	4197	4027	4121	4115	2.07	cps
Holmium	165-1	38234979	38448133	37741775	38141629	0.95	cps
Holmium	165-2	12719051	12775592	12903176	12799273	0.74	cps
Indium	115-1	30431394	29769523	30590744	30263887	1.44	cps
Indium	115-2	3129677	3120154	3106933	3118921	0.37	cps
Iron	54-2	860977	863072	871109	865053	0.62	cps
Iron	56-2	16492713	16640468	17437685	16856955	3.02	cps
Iron	57-2	400737	397579	400229	399515	0.42	cps
Krypton	83-1	223	317	320	287	19.14	cps
Lead	206-1	43777	44633	43329	43913	1.51	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	25
Date & Time Acquired :	2024-12-11 19:04:37	DataFile Name :	034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	36217	36642	37947	36935	2.44	cps
Lead	208-1	170249	172211	169624	170695	0.79	cps
Lithium	6-1	10936076	10835643	11146488	10972736	1.45	cps
Magnesium	24-2	89744	88285	88044	88691	1.04	cps
Manganese	55-2	99514	98393	99094	99000	0.57	cps
Molybdenum	94-1	35609	36737	37398	36581	2.47	cps
Molybdenum	95-1	2547	2517	2457	2507	1.83	cps
Molybdenum	96-1	8259	8239	7962	8154	2.03	cps
Molybdenum	97-1	1450	1440	1293	1395	6.29	cps
Molybdenum	98-1	3530	3424	3317	3424	3.12	cps
Neodymium	150-1	17535	17695	17461	17564	0.68	cps
Neodymium	150-2	4261	4221	4164	4215	1.15	cps
Nickel	60-2	62928	62560	62614	62701	0.32	cps
Phosphorus	31-2	477	470	510	486	4.41	cps
Potassium	39-2	65560	68248	65859	66556	2.21	cps
Rhodium	103-1	28041961	28308139	27693373	28014491	1.10	cps
Rhodium	103-2	10717807	10679652	10659506	10685655	0.28	cps
Scandium	45-1	20835959	20720188	20374667	20643605	1.16	cps
Scandium	45-2	414166	415273	417965	415802	0.47	cps
Selenium	82-1	117	40	90	82	47.33	cps
Selenium	77-2	47	20	43	37	39.63	cps
Selenium	78-2	47	37	17	33	45.82	cps
Silicon	28-1	5511197	5338134	6569197	5806176	11.48	cps
Silver	107-1	843	861	864	856	1.31	cps
Silver	109-1	427	373	440	413	8.54	cps
Sodium	23-2	109450	106717	108194	108120	1.27	cps
Strontium	86-1	8483	9324	8296	8701	6.30	cps
Strontium	88-1	84444	72081	83929	80151	8.73	cps
Sulfur	34-1	536510	535392	532173	534692	0.42	cps
Terbium	159-1	39434905	38399343	38698001	38844083	1.37	cps
Terbium	159-2	12681693	12555486	12785564	12674248	0.91	cps
Thallium	203-1	1343	1367	1290	1333	2.95	cps
Thallium	205-1	3194	3337	3120	3217	3.43	cps
Tin	118-1	6792	6848	6939	6860	1.08	cps
Titanium	47-1	153241	153036	166025	157434	4.73	cps
Uranium	238-1	17980	17055	17412	17482	2.67	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	25
Date & Time Acquired :	2024-12-11 19:04:37	DataFile Name :	034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	28412	27931	27737	28026	1.24	cps
Ytterbium	172-1	2924	2940	3251	3038	6.06	cps
Ytterbium	172-2	1327	1197	1147	1223	7.60	cps
Ytterbium	176-1	6942	6879	6999	6940	0.87	cps
Ytterbium	176-2	1637	1697	1793	1709	4.63	cps
Yttrium	89-1	46769934	46386273	46507474	46554560	0.42	cps
Yttrium	89-2	3518875	3513098	3486531	3506168	0.49	cps
Zinc	66-2	9373	9387	9980	9580	3.62	cps
Zirconium	90-1	98769	95213	94505	96162	2.38	cps
Zirconium	91-1	20485	27620	20792	22966	17.56	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:07:57	DataFile Name :	035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1027689	1042072	1024715	1031492	0.90	cps
Antimony	121-1	2920226	2910079	2878839	2903048	0.74	cps
Arsenic	75-2	58507	58133	57694	58111	0.70	cps
Barium	135-1	3754105	3817871	3732593	3768189	1.18	cps
Barium	137-1	6444631	6392001	6337025	6391219	0.84	cps
Beryllium	9-1	805640	809146	800840	805209	0.52	cps
Bismuth	209-1	23009401	23418724	22922720	23116949	1.15	cps
Bismuth	209-2	8843258	8833107	8841642	8839335	0.06	cps
Bromine	81-1	15535	16049	15983	15856	1.76	cps
Cadmium	108-1	58246	58028	58393	58222	0.32	cps
Cadmium	106-1	99573	99073	100043	99563	0.49	cps
Cadmium	111-1	755839	764615	755120	758525	0.70	cps
Calcium	43-1	868686	869355	864152	867398	0.33	cps
Calcium	44-1	14525809	14284616	14515923	14442116	0.95	cps
Carbon	12-1	5231666	5280570	5355053	5289097	1.17	cps
Carbon	12-2	38203	37735	37755	37898	0.70	cps
Chlorine	35-1	536982	577312	595500	569931	5.25	cps
Chlorine	35-2	2717	2800	2727	2748	1.66	cps
Chromium	52-2	948794	947957	939588	945446	0.54	cps
Cobalt	59-2	1499870	1398963	1403974	1434269	3.96	cps
Copper	63-2	9005099	8840361	8787695	8877718	1.28	cps
Dysprosium	156-1	69469	70032	70407	69969	0.68	cps
Dysprosium	156-2	14615	14411	14241	14422	1.30	cps
Erbium	164-1	42548	46664	42190	43801	5.68	cps
Erbium	164-2	13634	13911	13614	13719	1.21	cps
Gadolinium	160-1	39889	40013	40297	40067	0.52	cps
Gadolinium	160-2	15149	15556	15893	15533	2.40	cps
Holmium	165-1	38182230	39087846	37692700	38320926	1.85	cps
Holmium	165-2	12477978	12259163	12309221	12348788	0.93	cps
Indium	115-1	29795312	29809430	29689559	29764767	0.22	cps
Indium	115-2	2972764	2952939	3028036	2984580	1.30	cps
Iron	54-2	6168354	6050480	6033539	6084125	1.21	cps
Iron	56-2	111564835	113143325	111254828	111987663	0.90	cps
Iron	57-2	2845732	2810634	2851220	2835862	0.78	cps
Krypton	83-1	437	413	437	429	3.14	cps
Lead	206-1	10136403	10030761	9978864	10048676	0.80	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:07:57	DataFile Name :	035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	8868066	8665419	8760304	8764596	1.16	cps
Lead	208-1	40513063	40109325	40146766	40256385	0.55	cps
Lithium	6-1	11011844	10878014	10737027	10875628	1.26	cps
Magnesium	24-2	3941608	3971341	3906268	3939739	0.83	cps
Manganese	55-2	3456042	3532761	3441523	3476775	1.41	cps
Molybdenum	94-1	7164694	6957148	6892721	7004854	2.03	cps
Molybdenum	95-1	8774972	8645855	8663751	8694859	0.80	cps
Molybdenum	96-1	9603915	9730840	9610281	9648345	0.74	cps
Molybdenum	97-1	5392133	5317358	5339672	5349721	0.72	cps
Molybdenum	98-1	13903608	13525648	13833245	13754167	1.46	cps
Neodymium	150-1	71311	73188	73654	72718	1.71	cps
Neodymium	150-2	18086	17325	17134	17515	2.87	cps
Nickel	60-2	394892	394708	391784	393794	0.44	cps
Phosphorus	31-2	2960	2904	2844	2903	2.01	cps
Potassium	39-2	1582910	1631631	1583868	1599470	1.74	cps
Rhodium	103-1	27344470	27252517	27109105	27235364	0.44	cps
Rhodium	103-2	10111370	10172490	10238406	10174089	0.62	cps
Scandium	45-1	20880450	20918920	20808227	20869199	0.27	cps
Scandium	45-2	407357	406064	404216	405879	0.39	cps
Selenium	82-1	46057	46435	45635	46042	0.87	cps
Selenium	77-2	847	983	923	918	7.46	cps
Selenium	78-2	2884	2800	2947	2877	2.56	cps
Silicon	28-1	9978630	13162983	9765485	10969033	17.35	cps
Silver	107-1	113451	114760	114558	114256	0.62	cps
Silver	109-1	4434	4634	4494	4521	2.27	cps
Sodium	23-2	7455083	7351098	7427768	7411316	0.73	cps
Strontium	86-1	1015891	1020979	1022414	1019761	0.34	cps
Strontium	88-1	9129372	9301372	9124650	9185131	1.10	cps
Sulfur	34-1	555252	565194	570335	563594	1.36	cps
Terbium	159-1	39114615	38718999	38743657	38859091	0.57	cps
Terbium	159-2	12424059	12527000	12401030	12450696	0.54	cps
Thallium	203-1	3127446	3066131	3157391	3116989	1.49	cps
Thallium	205-1	7351894	7297579	7265072	7304848	0.60	cps
Tin	118-1	2287480	2333303	2311562	2310781	0.99	cps
Titanium	47-1	2956457	3007997	2983735	2982730	0.86	cps
Uranium	238-1	10382413	10497655	10452105	10444058	0.56	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:07:57	DataFile Name :	035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	637439	633570	635391	635467	0.30	cps
Ytterbium	172-1	16651	17041	17358	17017	2.08	cps
Ytterbium	172-2	6762	6618	6432	6604	2.51	cps
Ytterbium	176-1	22018	21494	22309	21941	1.88	cps
Ytterbium	176-2	7169	7489	7339	7332	2.19	cps
Yttrium	89-1	46591106	47301606	46419499	46770737	1.00	cps
Yttrium	89-2	3456651	3422193	3390315	3423053	0.97	cps
Zinc	66-2	777664	781519	772710	777298	0.57	cps
Zirconium	90-1	5611499	5733812	5668507	5671273	1.08	cps
Zirconium	91-1	1213203	1204936	1210054	1209398	0.34	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:10:52	DataFile Name :	036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1019741	1022914	1008549	1017068	0.74	cps
Antimony	121-1	2928258	2865440	2851810	2881836	1.41	cps
Arsenic	75-2	58354	56884	56958	57399	1.44	cps
Barium	135-1	3747526	3761401	3748350	3752426	0.21	cps
Barium	137-1	6248656	6294786	6264447	6269296	0.37	cps
Beryllium	9-1	795394	805447	800121	800321	0.63	cps
Bismuth	209-1	22844034	23151960	22706146	22900713	1.00	cps
Bismuth	209-2	8688247	8761692	8726054	8725331	0.42	cps
Bromine	81-1	14998	15575	14948	15174	2.30	cps
Cadmium	108-1	57372	58272	57707	57784	0.79	cps
Cadmium	106-1	100042	97642	98777	98820	1.22	cps
Cadmium	111-1	750855	755558	748766	751726	0.46	cps
Calcium	43-1	867703	866895	862290	865630	0.34	cps
Calcium	44-1	14697145	14332443	14341343	14456977	1.44	cps
Carbon	12-1	5242527	5237092	5340352	5273324	1.10	cps
Carbon	12-2	36763	37254	37207	37074	0.73	cps
Chlorine	35-1	574722	609023	619754	601166	3.91	cps
Chlorine	35-2	2807	2637	2777	2740	3.31	cps
Chromium	52-2	936363	930939	924724	930676	0.63	cps
Cobalt	59-2	1481592	1385681	1389757	1419010	3.82	cps
Copper	63-2	9288320	8966716	9154945	9136660	1.77	cps
Dysprosium	156-1	69268	70280	69777	69775	0.73	cps
Dysprosium	156-2	14528	14725	14661	14638	0.69	cps
Erbium	164-1	42180	42036	42775	42330	0.93	cps
Erbium	164-2	13554	13797	13387	13579	1.52	cps
Gadolinium	160-1	39766	39154	39826	39582	0.94	cps
Gadolinium	160-2	15436	15312	15306	15351	0.48	cps
Holmium	165-1	38384239	38418394	38301829	38368154	0.16	cps
Holmium	165-2	12455147	12668051	12436971	12520056	1.03	cps
Indium	115-1	29366366	29757154	29552815	29558778	0.66	cps
Indium	115-2	3015009	3050097	3001657	3022254	0.83	cps
Iron	54-2	6028642	5988279	5972510	5996477	0.48	cps
Iron	56-2	111148688	110497682	110137385	110594585	0.46	cps
Iron	57-2	2812469	2805050	2814110	2810543	0.17	cps
Krypton	83-1	390	333	350	358	8.14	cps
Lead	206-1	9967218	9971526	10018210	9985651	0.28	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:10:52	DataFile Name :	036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	8852038	8693935	8644995	8730322	1.24	cps
Lead	208-1	40027506	40043634	39586871	39886004	0.65	cps
Lithium	6-1	10786106	11179092	11055727	11006975	1.83	cps
Magnesium	24-2	3946145	3863906	3909085	3906379	1.05	cps
Manganese	55-2	3435693	3391599	3360902	3396064	1.11	cps
Molybdenum	94-1	7035873	6844227	6856407	6912169	1.55	cps
Molybdenum	95-1	8894945	8650026	8540588	8695186	2.09	cps
Molybdenum	96-1	9533183	9517835	9442497	9497838	0.51	cps
Molybdenum	97-1	5333090	5279864	5286609	5299854	0.55	cps
Molybdenum	98-1	13857474	13776076	13810400	13814650	0.30	cps
Neodymium	150-1	71905	71409	72220	71844	0.57	cps
Neodymium	150-2	17435	17478	16944	17286	1.72	cps
Nickel	60-2	796594	794340	799811	796915	0.35	cps
Phosphorus	31-2	2824	2844	2837	2835	0.36	cps
Potassium	39-2	1579833	1568434	1585408	1577892	0.55	cps
Rhodium	103-1	27429661	27136790	26893465	27153306	0.99	cps
Rhodium	103-2	10165034	10142753	10156650	10154812	0.11	cps
Scandium	45-1	21085693	20983676	20716258	20928542	0.91	cps
Scandium	45-2	397392	407305	402518	402405	1.23	cps
Selenium	82-1	45963	44829	45107	45300	1.30	cps
Selenium	77-2	957	893	850	900	5.96	cps
Selenium	78-2	2674	2627	2804	2701	3.39	cps
Silicon	28-1	9611616	9517682	9627332	9585543	0.62	cps
Silver	107-1	114220	115038	112122	113793	1.32	cps
Silver	109-1	4741	4768	4674	4728	1.02	cps
Sodium	23-2	7290143	7265290	7223322	7259585	0.47	cps
Strontium	86-1	1010814	1003570	1009617	1008000	0.39	cps
Strontium	88-1	9201213	9082297	9151667	9145059	0.65	cps
Sulfur	34-1	575345	576956	575912	576071	0.14	cps
Terbium	159-1	39504466	39317297	38812419	39211394	0.91	cps
Terbium	159-2	12354788	12205570	12367106	12309155	0.73	cps
Thallium	203-1	3087143	3122267	3109054	3106154	0.57	cps
Thallium	205-1	7207547	7335514	7268379	7270480	0.88	cps
Tin	118-1	2345974	2331794	2303736	2327168	0.92	cps
Titanium	47-1	2959961	2973572	2873884	2935806	1.84	cps
Uranium	238-1	10412653	10501074	10239553	10384427	1.28	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:10:52	DataFile Name :	036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	628580	620952	623353	624295	0.62	cps
Ytterbium	172-1	16554	16634	16898	16695	1.08	cps
Ytterbium	172-2	7042	6161	6242	6482	7.51	cps
Ytterbium	176-1	21558	21601	21595	21584	0.11	cps
Ytterbium	176-2	7375	7069	7906	7450	5.68	cps
Yttrium	89-1	47708171	46046861	46748863	46834632	1.78	cps
Yttrium	89-2	3350797	3376415	3394843	3374018	0.66	cps
Zinc	66-2	767645	761359	762847	763950	0.43	cps
Zirconium	90-1	5718197	5666802	5598136	5661045	1.06	cps
Zirconium	91-1	1207731	1215169	1193965	1205622	0.89	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:13:47	DataFile Name :	037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1015067	1014991	1013183	1014414	0.11	cps
Antimony	121-1	2889892	2836226	2930249	2885456	1.63	cps
Arsenic	75-2	57071	56744	56375	56730	0.61	cps
Barium	135-1	3684602	3724006	3777015	3728541	1.24	cps
Barium	137-1	6189719	6258123	6217198	6221680	0.55	cps
Beryllium	9-1	793209	801247	802694	799050	0.64	cps
Bismuth	209-1	23272491	22971113	21709938	22651181	3.66	cps
Bismuth	209-2	8728104	8889067	8865591	8827587	0.98	cps
Bromine	81-1	14267	14951	15272	14830	3.46	cps
Cadmium	108-1	57051	57238	57111	57133	0.17	cps
Cadmium	106-1	98472	99582	98240	98765	0.73	cps
Cadmium	111-1	742090	753373	754161	749875	0.90	cps
Calcium	43-1	867871	864666	862867	865134	0.29	cps
Calcium	44-1	14413894	14484315	14443794	14447334	0.24	cps
Carbon	12-1	5247400	5448245	5430660	5375435	2.07	cps
Carbon	12-2	37939	37705	38103	37915	0.53	cps
Chlorine	35-1	576379	606865	616594	599946	3.50	cps
Chlorine	35-2	2734	2724	2970	2809	4.97	cps
Chromium	52-2	922919	928025	929366	926770	0.37	cps
Cobalt	59-2	1453956	1390462	1367531	1403983	3.19	cps
Copper	63-2	8752684	8634269	8740677	8709210	0.75	cps
Dysprosium	156-1	69255	68809	69044	69036	0.32	cps
Dysprosium	156-2	14545	14618	14254	14472	1.33	cps
Erbium	164-1	41454	42254	42197	41968	1.06	cps
Erbium	164-2	14141	13143	13477	13587	3.74	cps
Gadolinium	160-1	39321	39679	40057	39685	0.93	cps
Gadolinium	160-2	15399	15576	15429	15468	0.61	cps
Holmium	165-1	38166194	37956544	36240047	37454262	2.82	cps
Holmium	165-2	12507237	12368182	12200885	12358768	1.24	cps
Indium	115-1	29293523	29423152	27269699	28662125	4.21	cps
Indium	115-2	2997597	2988231	2975658	2987162	0.37	cps
Iron	54-2	5973350	5984776	5952162	5970096	0.28	cps
Iron	56-2	110119562	110302388	109329768	109917239	0.47	cps
Iron	57-2	2797213	2883582	2808526	2829774	1.66	cps
Krypton	83-1	400	353	347	367	7.93	cps
Lead	206-1	9972667	10122003	9934010	10009560	0.99	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:13:47	DataFile Name :	037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	8724027	8721070	8783685	8742927	0.40	cps
Lead	208-1	40129697	40040737	40114099	40094844	0.12	cps
Lithium	6-1	10842759	11126257	10063589	10677535	5.15	cps
Magnesium	24-2	3898927	3950555	3856106	3901863	1.21	cps
Manganese	55-2	3365783	3383415	3364598	3371266	0.31	cps
Molybdenum	94-1	6818427	6919297	6984969	6907564	1.21	cps
Molybdenum	95-1	8539819	8659776	8511470	8570355	0.92	cps
Molybdenum	96-1	9547066	9437035	9458699	9480934	0.61	cps
Molybdenum	97-1	5356964	5308614	5295288	5320289	0.61	cps
Molybdenum	98-1	13636207	13818697	13863099	13772668	0.87	cps
Neodymium	150-1	71215	71107	71285	71202	0.13	cps
Neodymium	150-2	17629	16988	17108	17241	1.98	cps
Nickel	60-2	423254	420265	420310	421276	0.41	cps
Phosphorus	31-2	2794	2874	2824	2830	1.43	cps
Potassium	39-2	1552238	1579857	1562313	1564803	0.89	cps
Rhodium	103-1	27595736	27587846	25597545	26927042	4.28	cps
Rhodium	103-2	10140233	10207058	10146814	10164702	0.36	cps
Scandium	45-1	20974342	20594141	19208383	20258955	4.59	cps
Scandium	45-2	402939	408088	400281	403769	0.98	cps
Selenium	82-1	45241	45351	45575	45389	0.38	cps
Selenium	77-2	940	957	990	962	2.65	cps
Selenium	78-2	2804	2774	2707	2761	1.79	cps
Silicon	28-1	9859489	9755071	12370551	10661704	13.89	cps
Silver	107-1	114541	113857	114413	114271	0.32	cps
Silver	109-1	4521	4477	4671	4556	2.23	cps
Sodium	23-2	7293390	7342311	7202814	7279505	0.97	cps
Strontium	86-1	996768	1006590	1011129	1004829	0.73	cps
Strontium	88-1	9197425	9170558	9167520	9178501	0.18	cps
Sulfur	34-1	573404	573934	567452	571597	0.63	cps
Terbium	159-1	38650151	38654828	36491640	37932206	3.29	cps
Terbium	159-2	12258162	12294020	12426432	12326205	0.72	cps
Thallium	203-1	3050045	3144002	3122775	3105607	1.59	cps
Thallium	205-1	7434807	7320651	7400432	7385296	0.79	cps
Tin	118-1	2354031	2332014	2317685	2334577	0.78	cps
Titanium	47-1	2945317	2965476	2936885	2949226	0.50	cps
Uranium	238-1	10452770	10365318	10449294	10422461	0.48	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5242-02ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL1-SB04D-4-11222	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:13:47	DataFile Name :	037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	622426	630041	619837	624101	0.85	cps
Ytterbium	172-1	16567	16814	16844	16742	0.91	cps
Ytterbium	172-2	6412	6748	6545	6568	2.58	cps
Ytterbium	176-1	21942	22513	21638	22031	2.02	cps
Ytterbium	176-2	7179	7252	7219	7216	0.51	cps
Yttrium	89-1	45675784	46437379	44141836	45418333	2.57	cps
Yttrium	89-2	3368841	3354342	3365179	3362787	0.22	cps
Zinc	66-2	766793	763341	761535	763890	0.35	cps
Zirconium	90-1	5625860	5621952	5617256	5621689	0.08	cps
Zirconium	91-1	1190849	1205919	1204854	1200540	0.70	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P8
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:16:40	DataFile Name :	038CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5022634	4885775	4934291	4947567	1.40	cps
Antimony	121-1	10944309	10788534	10845417	10859420	0.73	cps
Arsenic	75-2	206284	206037	206176	206166	0.06	cps
Barium	135-1	14740077	14732260	14562152	14678163	0.68	cps
Barium	137-1	25039954	25051553	25024394	25038634	0.05	cps
Beryllium	9-1	3052513	3054744	2996124	3034460	1.09	cps
Bismuth	209-1	20029981	20077260	20020815	20042685	0.15	cps
Bismuth	209-2	7592432	7671219	7618077	7627243	0.53	cps
Bromine	81-1	13510	13700	13657	13622	0.73	cps
Cadmium	108-1	211112	209727	209159	209999	0.48	cps
Cadmium	106-1	315660	312235	318471	315455	0.99	cps
Cadmium	111-1	2752096	2735509	2672701	2720102	1.54	cps
Calcium	43-1	19537632	19579956	19474565	19530718	0.27	cps
Calcium	44-1	314315642	313137915	312080482	313178013	0.36	cps
Carbon	12-1	5327616	5400538	5400753	5376302	0.78	cps
Carbon	12-2	45015	45116	45119	45083	0.13	cps
Chlorine	35-1	246742	247800	245772	246771	0.41	cps
Chlorine	35-2	973	1057	1023	1018	4.12	cps
Chromium	52-2	2554197	2550732	2545433	2550121	0.17	cps
Cobalt	59-2	4700531	4628891	4655684	4661702	0.78	cps
Copper	63-2	36538548	36407991	36717674	36554738	0.43	cps
Dysprosium	156-1	730	807	817	784	6.04	cps
Dysprosium	156-2	160	187	210	186	13.48	cps
Erbium	164-1	783	740	787	770	3.38	cps
Erbium	164-2	190	303	240	244	23.24	cps
Gadolinium	160-1	693	773	763	743	5.86	cps
Gadolinium	160-2	243	247	240	243	1.37	cps
Holmium	165-1	35960169	35466762	35226116	35551016	1.05	cps
Holmium	165-2	11702780	11716338	11594758	11671292	0.57	cps
Indium	115-1	26485766	25955845	25538088	25993233	1.83	cps
Indium	115-2	2711818	2648665	2668378	2676287	1.21	cps
Iron	54-2	25570593	25990933	25730337	25763954	0.82	cps
Iron	56-2	473933553	474021593	468830100	472261749	0.63	cps
Iron	57-2	12041095	11978414	11848870	11956126	0.82	cps
Krypton	83-1	457	470	417	448	6.20	cps
Lead	206-1	46613264	47266454	46648826	46842848	0.78	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P8
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:16:40	DataFile Name :	038CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	40826044	40878574	40259138	40654585	0.84	cps
Lead	208-1	187066253	185911586	185333346	186103728	0.47	cps
Lithium	6-1	9963668	10224170	9955696	10047845	1.52	cps
Magnesium	24-2	79299900	78130844	78249189	78559978	0.82	cps
Manganese	55-2	10920039	10921919	10999886	10947281	0.42	cps
Molybdenum	94-1	42779978	42420879	42888769	42696542	0.57	cps
Molybdenum	95-1	61981271	61519857	61295442	61598857	0.57	cps
Molybdenum	96-1	67043402	68045772	67348967	67479381	0.76	cps
Molybdenum	97-1	37715956	38376626	38057374	38049985	0.87	cps
Molybdenum	98-1	99155875	97664822	98703725	98508141	0.78	cps
Neodymium	150-1	1577	1777	1657	1670	6.03	cps
Neodymium	150-2	127	133	103	121	13.01	cps
Nickel	60-2	1183908	1181170	1187949	1184343	0.29	cps
Phosphorus	31-2	45668	45043	44969	45227	0.85	cps
Potassium	39-2	25811258	26075168	25973777	25953401	0.51	cps
Rhodium	103-1	23068092	22761838	23177997	23002642	0.94	cps
Rhodium	103-2	8597676	8623562	8519648	8580295	0.63	cps
Scandium	45-1	18700088	18719175	18464613	18627958	0.76	cps
Scandium	45-2	367128	371869	368868	369288	0.65	cps
Selenium	82-1	164063	163628	161762	163151	0.75	cps
Selenium	77-2	3267	3030	2990	3096	4.83	cps
Selenium	78-2	10404	10037	10234	10225	1.80	cps
Silicon	28-1	119966245	118851988	118099065	118972433	0.79	cps
Silver	107-1	14272074	14173209	14138198	14194494	0.49	cps
Silver	109-1	13017377	12990792	12702036	12903401	1.36	cps
Sodium	23-2	168884211	163830594	164243478	165652761	1.69	cps
Strontium	86-1	4038197	4011343	4056433	4035324	0.56	cps
Strontium	88-1	34595892	34975717	34776354	34782654	0.55	cps
Sulfur	34-1	1639806	1640065	1605251	1628374	1.23	cps
Terbium	159-1	36290919	36353909	36143266	36262698	0.30	cps
Terbium	159-2	11527709	11601031	11590319	11573020	0.34	cps
Thallium	203-1	11731877	11732073	11572363	11678771	0.79	cps
Thallium	205-1	27853251	27689215	27468044	27670170	0.70	cps
Tin	118-1	9621015	9386576	9375182	9460925	1.47	cps
Titanium	47-1	18398548	18642903	18266752	18436068	1.04	cps
Uranium	238-1	40835068	40177119	40549084	40520424	0.81	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV02	Instrumnet Name :	P8
Client Sample ID :	CCV02	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:16:40	DataFile Name :	038CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	2040170	2051091	2039621	2043627	0.32	cps
Ytterbium	172-1	827	973	910	903	8.14	cps
Ytterbium	172-2	383	347	320	350	9.08	cps
Ytterbium	176-1	59818	60658	60745	60407	0.85	cps
Ytterbium	176-2	19404	19922	19818	19715	1.39	cps
Yttrium	89-1	42124344	42138444	42178193	42146993	0.07	cps
Yttrium	89-2	3105013	3130349	3120011	3118458	0.41	cps
Zinc	66-2	3493677	3480965	3400379	3458341	1.46	cps
Zirconium	90-1	21721026	21455623	21706956	21627868	0.69	cps
Zirconium	91-1	4902642	4900817	4870877	4891445	0.36	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P8
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:21:10	DataFile Name :	039CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	110	150	120	127	16.43	cps
Antimony	121-1	1247	1037	1093	1126	9.65	cps
Arsenic	75-2	7	17	17	13	43.29	cps
Barium	135-1	187	200	213	200	6.67	cps
Barium	137-1	403	270	263	312	25.30	cps
Beryllium	9-1	999	928	918	948	4.67	cps
Bismuth	209-1	23789407	23280426	23513495	23527776	1.08	cps
Bismuth	209-2	8963990	9155525	8936887	9018801	1.32	cps
Bromine	81-1	15532	15369	15315	15405	0.73	cps
Cadmium	108-1	33	63	37	44	36.99	cps
Cadmium	106-1	15666	15209	15202	15359	1.73	cps
Cadmium	111-1	11086	10712	10712	10837	1.99	cps
Calcium	43-1	1170	1093	1140	1135	3.41	cps
Calcium	44-1	30122	28813	29046	29327	2.38	cps
Carbon	12-1	4281923	4236092	4223670	4247228	0.72	cps
Carbon	12-2	28922	28471	28431	28608	0.95	cps
Chlorine	35-1	203814	202800	202759	203124	0.29	cps
Chlorine	35-2	780	760	877	806	7.74	cps
Chromium	52-2	2394	2270	2317	2327	2.68	cps
Cobalt	59-2	147	130	160	146	10.33	cps
Copper	63-2	6181	6235	6145	6187	0.73	cps
Dysprosium	156-1	17	23	37	26	39.85	cps
Dysprosium	156-2	7	10	7	8	24.71	cps
Erbium	164-1	177	147	157	160	9.55	cps
Erbium	164-2	50	40	40	43	13.32	cps
Gadolinium	160-1	260	223	270	251	9.79	cps
Gadolinium	160-2	47	67	23	46	47.61	cps
Holmium	165-1	37699233	37847451	38149426	37898703	0.61	cps
Holmium	165-2	12733144	12579424	12573163	12628577	0.72	cps
Indium	115-1	30016242	30657589	29489526	30054452	1.95	cps
Indium	115-2	3122226	3132117	3080928	3111757	0.87	cps
Iron	54-2	1073	1067	967	1036	5.77	cps
Iron	56-2	14478	13590	13620	13896	3.63	cps
Iron	57-2	330	317	350	332	5.05	cps
Krypton	83-1	310	340	313	321	5.12	cps
Lead	206-1	2774	2620	2570	2655	3.99	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P8
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:21:10	DataFile Name :	039CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2294	2247	2067	2202	5.44	cps
Lead	208-1	10765	10365	10005	10378	3.66	cps
Lithium	6-1	10941199	11306996	11377902	11208699	2.09	cps
Magnesium	24-2	710	637	623	657	7.11	cps
Manganese	55-2	460	407	390	419	8.73	cps
Molybdenum	94-1	2437	1937	1867	2080	14.95	cps
Molybdenum	95-1	3387	2360	2164	2637	24.92	cps
Molybdenum	96-1	3290	2444	2180	2638	21.99	cps
Molybdenum	97-1	1873	1267	1103	1415	28.69	cps
Molybdenum	98-1	4711	3220	2910	3614	26.64	cps
Neodymium	150-1	7	13	3	8	65.47	cps
Neodymium	150-2	3	3	10	6	69.34	cps
Nickel	60-2	1130	1090	1123	1115	1.92	cps
Phosphorus	31-2	153	227	143	174	26.08	cps
Potassium	39-2	25666	25082	25306	25351	1.16	cps
Rhodium	103-1	28313630	28201083	27749454	28088056	1.06	cps
Rhodium	103-2	10511747	10621192	10590247	10574395	0.53	cps
Scandium	45-1	20827666	20223386	20575560	20542204	1.48	cps
Scandium	45-2	411492	405106	409419	408672	0.80	cps
Selenium	82-1	13	-63	-27	-26	-150.03	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	20	10	33	21	55.45	cps
Silicon	28-1	919060	897787	896091	904313	1.42	cps
Silver	107-1	1139	1033	992	1055	7.20	cps
Silver	109-1	870	840	920	877	4.61	cps
Sodium	23-2	125026	122848	123336	123737	0.92	cps
Strontium	86-1	487	600	577	554	10.79	cps
Strontium	88-1	737	823	710	757	7.83	cps
Sulfur	34-1	637933	640703	644453	641030	0.51	cps
Terbium	159-1	39289375	39261957	38380793	38977375	1.33	cps
Terbium	159-2	12468476	12690781	12507164	12555474	0.95	cps
Thallium	203-1	977	867	847	897	7.81	cps
Thallium	205-1	2274	1977	2107	2119	7.02	cps
Tin	118-1	4134	4074	4061	4090	0.96	cps
Titanium	47-1	747	707	683	712	4.50	cps
Uranium	238-1	270	293	223	262	13.60	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB02	Instrumnet Name :	P8
Client Sample ID :	CCB02	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:21:10	DataFile Name :	039CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	13	30	10	18	60.28	cps
Ytterbium	172-1	163	197	183	181	9.26	cps
Ytterbium	172-2	57	93	80	77	24.20	cps
Ytterbium	176-1	4841	4808	4891	4846	0.87	cps
Ytterbium	176-2	753	957	907	872	12.15	cps
Yttrium	89-1	46478739	46425638	46648078	46517485	0.25	cps
Yttrium	89-2	3396208	3451990	3436459	3428219	0.84	cps
Zinc	66-2	857	727	860	814	9.34	cps
Zirconium	90-1	2107	1943	1990	2014	4.18	cps
Zirconium	91-1	420	400	380	400	5.00	cps

Reviewed By:Mohan
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Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165562BL	Instrumnet Name :	P8
Client Sample ID :	PB165562BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:24:30	DataFile Name :	040CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	127	147	103	126	17.28	cps
Antimony	121-1	490	470	523	494	5.45	cps
Arsenic	75-2	13	10	7	10	33.30	cps
Barium	135-1	233	230	227	230	1.45	cps
Barium	137-1	350	373	280	334	14.52	cps
Beryllium	9-1	766	749	705	740	4.27	cps
Bismuth	209-1	23141914	23263031	22084276	22829740	2.84	cps
Bismuth	209-2	8432413	9117345	8941736	8830498	4.03	cps
Bromine	81-1	15315	14998	14935	15083	1.35	cps
Cadmium	108-1	60	40	43	48	22.43	cps
Cadmium	106-1	15485	15045	14741	15091	2.48	cps
Cadmium	111-1	10858	10550	10339	10582	2.47	cps
Calcium	43-1	2414	2444	2410	2422	0.76	cps
Calcium	44-1	50228	50064	50435	50242	0.37	cps
Carbon	12-1	3978984	3886520	3856753	3907419	1.63	cps
Carbon	12-2	26828	25986	26327	26380	1.60	cps
Chlorine	35-1	195505	196089	195667	195753	0.15	cps
Chlorine	35-2	797	850	773	807	4.87	cps
Chromium	52-2	3067	2994	2770	2944	5.25	cps
Cobalt	59-2	177	133	210	173	22.18	cps
Copper	63-2	4547	4661	4494	4567	1.86	cps
Dysprosium	156-1	27	37	27	30	19.24	cps
Dysprosium	156-2	3	7	10	7	50.03	cps
Erbium	164-1	160	180	147	162	10.34	cps
Erbium	164-2	50	57	67	58	14.52	cps
Gadolinium	160-1	233	233	227	231	1.67	cps
Gadolinium	160-2	40	67	73	60	29.40	cps
Holmium	165-1	37730330	37590530	35554645	36958502	3.30	cps
Holmium	165-2	11643560	12508678	12370399	12174212	3.82	cps
Indium	115-1	29815246	29183480	27954725	28984484	3.26	cps
Indium	115-2	2932612	3108043	3139273	3059976	3.64	cps
Iron	54-2	910	990	983	961	4.62	cps
Iron	56-2	13096	12666	12696	12819	1.88	cps
Iron	57-2	360	330	390	360	8.33	cps
Krypton	83-1	293	310	343	316	8.07	cps
Lead	206-1	2190	2104	2127	2140	2.10	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165562BL	Instrumnet Name :	P8
Client Sample ID :	PB165562BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:24:30	DataFile Name :	040CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1940	1830	1980	1917	4.05	cps
Lead	208-1	8718	8755	8668	8713	0.50	cps
Lithium	6-1	11234942	11278116	10760951	11091336	2.59	cps
Magnesium	24-2	500	670	543	571	15.47	cps
Manganese	55-2	730	640	610	660	9.46	cps
Molybdenum	94-1	1397	1287	1213	1299	7.10	cps
Molybdenum	95-1	1387	1340	1353	1360	1.77	cps
Molybdenum	96-1	1313	1187	1183	1228	6.04	cps
Molybdenum	97-1	770	643	593	669	13.61	cps
Molybdenum	98-1	1657	1453	1447	1519	7.86	cps
Neodymium	150-1	20	30	13	21	39.75	cps
Neodymium	150-2	7	10	3	7	50.03	cps
Nickel	60-2	917	880	900	899	2.04	cps
Phosphorus	31-2	160	207	207	191	14.10	cps
Potassium	39-2	24351	25132	25149	24877	1.83	cps
Rhodium	103-1	27365811	27508527	26297452	27057263	2.45	cps
Rhodium	103-2	9976249	10607295	10504326	10362623	3.27	cps
Scandium	45-1	20602268	20521835	19212130	20112077	3.88	cps
Scandium	45-2	377617	409774	406997	398129	4.48	cps
Selenium	82-1	30	50	-33	16	279.64	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	23	3	7	11	96.43	cps
Silicon	28-1	897060	894230	906770	899353	0.73	cps
Silver	107-1	597	657	760	672	12.28	cps
Silver	109-1	330	427	440	399	15.05	cps
Sodium	23-2	115180	113520	115808	114836	1.03	cps
Strontium	86-1	687	737	653	692	6.06	cps
Strontium	88-1	1763	1797	1673	1745	3.66	cps
Sulfur	34-1	669046	668387	669186	668873	0.06	cps
Terbium	159-1	37989551	38759814	36136429	37628598	3.58	cps
Terbium	159-2	11606834	12378055	12422308	12135732	3.78	cps
Thallium	203-1	700	767	620	696	10.56	cps
Thallium	205-1	1767	1640	1577	1661	5.82	cps
Tin	118-1	6171	6325	6305	6267	1.33	cps
Titanium	47-1	603	653	610	622	4.36	cps
Uranium	238-1	67	47	30	48	38.43	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165562BL	Instrumnet Name :	P8
Client Sample ID :	PB165562BL	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:24:30	DataFile Name :	040CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	20	30	23	24	20.83	cps
Ytterbium	172-1	147	240	177	188	25.37	cps
Ytterbium	172-2	53	93	87	78	27.56	cps
Ytterbium	176-1	5074	5254	4618	4982	6.59	cps
Ytterbium	176-2	737	930	943	870	13.30	cps
Yttrium	89-1	45857456	45201058	43730476	44929663	2.42	cps
Yttrium	89-2	3203726	3428752	3382325	3338267	3.56	cps
Zinc	66-2	1610	1557	1493	1553	3.76	cps
Zirconium	90-1	1970	1907	1847	1908	3.23	cps
Zirconium	91-1	327	347	363	346	5.31	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165562BS	Instrumnet Name :	P8
Client Sample ID :	PB165562BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:27:49	DataFile Name :	041LCSS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	997161	1006513	983568	995747	1.16	cps
Antimony	121-1	11412111	11405909	11363812	11393944	0.23	cps
Arsenic	75-2	217263	216355	216356	216658	0.24	cps
Barium	135-1	15083376	15076582	14928793	15029584	0.58	cps
Barium	137-1	25771100	25638680	25552478	25654086	0.43	cps
Beryllium	9-1	3226568	3277050	3237518	3247046	0.82	cps
Bismuth	209-1	21886094	21869188	22189328	21981537	0.82	cps
Bismuth	209-2	8554585	8531167	8481889	8522547	0.44	cps
Bromine	81-1	13680	13837	14501	14006	3.11	cps
Cadmium	108-1	232048	230798	232847	231898	0.45	cps
Cadmium	106-1	341873	344125	341940	342646	0.37	cps
Cadmium	111-1	3039666	2993910	3017834	3017137	0.76	cps
Calcium	43-1	4181186	4135426	4174313	4163642	0.59	cps
Calcium	44-1	67775049	66393126	67235587	67134587	1.04	cps
Carbon	12-1	4966117	5089496	5197678	5084431	2.28	cps
Carbon	12-2	36144	36833	37220	36732	1.48	cps
Chlorine	35-1	216315	217177	218233	217242	0.44	cps
Chlorine	35-2	893	903	907	901	0.77	cps
Chromium	52-2	2711640	2699953	2677108	2696234	0.65	cps
Cobalt	59-2	4958268	4975447	5016429	4983381	0.60	cps
Copper	63-2	40779890	40634110	40000671	40471557	1.02	cps
Dysprosium	156-1	470	460	403	444	8.09	cps
Dysprosium	156-2	60	63	80	68	15.81	cps
Erbium	164-1	447	417	447	437	3.97	cps
Erbium	164-2	137	130	167	144	13.52	cps
Gadolinium	160-1	443	413	403	420	4.96	cps
Gadolinium	160-2	120	140	130	130	7.69	cps
Holmium	165-1	36915920	37196779	37636460	37249720	0.97	cps
Holmium	165-2	12284802	12374315	12422674	12360597	0.57	cps
Indium	115-1	28018337	27867872	28322050	28069420	0.82	cps
Indium	115-2	2903352	2908423	2909711	2907162	0.12	cps
Iron	54-2	5687159	5550237	5483423	5573607	1.86	cps
Iron	56-2	101675102	101720585	102129722	101841803	0.25	cps
Iron	57-2	2600579	2616430	2587367	2601459	0.56	cps
Krypton	83-1	320	300	320	313	3.69	cps
Lead	206-1	50063548	49379204	48833134	49425295	1.25	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165562BS	Instrumnet Name :	P8
Client Sample ID :	PB165562BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:27:49	DataFile Name :	041LCSS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	42896082	42686437	42977278	42853265	0.35	cps
Lead	208-1	196456455	195178313	196008087	195880952	0.33	cps
Lithium	6-1	10805293	11218019	11175284	11066199	2.05	cps
Magnesium	24-2	17341593	17342843	17334648	17339695	0.03	cps
Manganese	55-2	11549146	11451257	11286586	11428996	1.16	cps
Molybdenum	94-1	44836533	43364533	44059433	44086833	1.67	cps
Molybdenum	95-1	64675731	62887282	63590634	63717882	1.41	cps
Molybdenum	96-1	70319679	69318684	68438397	69358920	1.36	cps
Molybdenum	97-1	39752439	39168196	38334844	39085160	1.82	cps
Molybdenum	98-1	102764768	102680628	100549635	101998344	1.23	cps
Neodymium	150-1	1653	1560	1453	1556	6.43	cps
Neodymium	150-2	90	117	107	104	12.90	cps
Nickel	60-2	1299935	1291989	1294210	1295378	0.32	cps
Phosphorus	31-2	46942	46618	46892	46817	0.37	cps
Potassium	39-2	5460483	5516116	5396681	5457760	1.10	cps
Rhodium	103-1	25893058	25330828	25423476	25549121	1.18	cps
Rhodium	103-2	9783718	9869744	9889592	9847685	0.57	cps
Scandium	45-1	19739807	19273714	19586239	19533253	1.22	cps
Scandium	45-2	390465	393163	389289	390972	0.51	cps
Selenium	82-1	177843	179635	176166	177881	0.98	cps
Selenium	77-2	3104	3274	3160	3179	2.72	cps
Selenium	78-2	11104	11368	10758	11077	2.76	cps
Silicon	28-1	158454551	159868158	158314751	158879153	0.54	cps
Silver	107-1	15611821	15575588	15831809	15673073	0.88	cps
Silver	109-1	14669741	14589239	14339559	14532846	1.18	cps
Sodium	23-2	35879487	35188113	35259110	35442237	1.07	cps
Strontium	86-1	4123561	4097753	4134273	4118529	0.46	cps
Strontium	88-1	35971838	35731100	35579679	35760872	0.55	cps
Sulfur	34-1	1769078	1734523	1763027	1755543	1.05	cps
Terbium	159-1	37614334	37645540	37908402	37722759	0.43	cps
Terbium	159-2	12401596	12416486	12199511	12339198	0.98	cps
Thallium	203-1	12491198	12383851	11995709	12290253	2.12	cps
Thallium	205-1	29403180	29105690	28751515	29086795	1.12	cps
Tin	118-1	10139107	10165959	9955815	10086960	1.13	cps
Titanium	47-1	19305025	18845868	19077533	19076142	1.20	cps
Uranium	238-1	40516125	41104016	40871936	40830692	0.73	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	PB165562BS	Instrumnet Name :	P8
Client Sample ID :	PB165562BS	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:27:49	DataFile Name :	041LCSS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	2107340	2089446	2051892	2082893	1.36	cps
Ytterbium	172-1	467	510	433	470	8.18	cps
Ytterbium	172-2	220	127	213	187	27.89	cps
Ytterbium	176-1	59832	59215	60273	59773	0.89	cps
Ytterbium	176-2	19281	19388	19565	19411	0.74	cps
Yttrium	89-1	44787249	43103019	44728138	44206135	2.16	cps
Yttrium	89-2	3358803	3329056	3295381	3327747	0.95	cps
Zinc	66-2	3882893	3789836	3739953	3804228	1.91	cps
Zirconium	90-1	22541921	21940871	22158530	22213774	1.37	cps
Zirconium	91-1	5050353	4960469	5033064	5014629	0.95	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:30:31	DataFile Name :	042AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1058351	1054165	1059101	1057206	0.25	cps
Antimony	121-1	2874	2780	2470	2708	7.80	cps
Arsenic	75-2	1960	1983	2110	2018	4.00	cps
Barium	135-1	338274	338045	337295	337871	0.15	cps
Barium	137-1	580234	583011	577129	580124	0.51	cps
Beryllium	9-1	5717	5995	5829	5847	2.40	cps
Bismuth	209-1	23761126	23534017	23663325	23652823	0.48	cps
Bismuth	209-2	8784183	9045753	8981849	8937261	1.53	cps
Bromine	81-1	15969	16139	16036	16048	0.53	cps
Cadmium	108-1	653	657	600	637	4.99	cps
Cadmium	106-1	16940	17201	16860	17001	1.05	cps
Cadmium	111-1	11784	12068	11799	11884	1.34	cps
Calcium	43-1	53693	55021	54543	54419	1.24	cps
Calcium	44-1	874050	883075	886365	881163	0.72	cps
Carbon	12-1	4920666	5122509	5173635	5072270	2.64	cps
Carbon	12-2	36489	36362	36368	36406	0.20	cps
Chlorine	35-1	200580	201682	201647	201303	0.31	cps
Chlorine	35-2	873	897	820	863	4.55	cps
Chromium	52-2	110516	111382	110506	110801	0.45	cps
Cobalt	59-2	127918	128184	129145	128416	0.50	cps
Copper	63-2	143302	142214	143056	142857	0.40	cps
Dysprosium	156-1	58554	59040	59070	58888	0.49	cps
Dysprosium	156-2	17799	17058	16964	17274	2.65	cps
Erbium	164-1	46568	48096	46374	47013	2.01	cps
Erbium	164-2	16430	15145	15099	15558	4.85	cps
Gadolinium	160-1	53857	50780	51922	52186	2.98	cps
Gadolinium	160-2	20192	21895	20179	20755	4.76	cps
Holmium	165-1	38349399	38364439	38677046	38463628	0.48	cps
Holmium	165-2	12505685	12674645	12489763	12556698	0.82	cps
Indium	115-1	30191734	29838608	29668703	29899682	0.89	cps
Indium	115-2	3075041	3055246	3033316	3054535	0.68	cps
Iron	54-2	4322116	4169250	4306300	4265889	1.97	cps
Iron	56-2	78046684	79191200	77274861	78170915	1.23	cps
Iron	57-2	1973706	2003126	1954819	1977217	1.23	cps
Krypton	83-1	367	410	380	386	5.76	cps
Lead	206-1	204312	206740	201973	204341	1.17	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:30:31	DataFile Name :	042AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	167391	170956	170253	169533	1.11	cps
Lead	208-1	793294	793934	792011	793080	0.12	cps
Lithium	6-1	11110168	11399739	11509071	11339659	1.82	cps
Magnesium	24-2	417862	419271	419643	418925	0.22	cps
Manganese	55-2	465103	463733	467501	465446	0.41	cps
Molybdenum	94-1	171782	169363	165982	169042	1.72	cps
Molybdenum	95-1	13283	11815	10654	11918	11.06	cps
Molybdenum	96-1	40218	41326	39233	40259	2.60	cps
Molybdenum	97-1	7672	7185	6502	7120	8.26	cps
Molybdenum	98-1	19347	19162	17512	18674	5.41	cps
Neodymium	150-1	80590	81941	82620	81717	1.26	cps
Neodymium	150-2	19965	20830	20903	20566	2.54	cps
Nickel	60-2	78012	76970	77653	77545	0.68	cps
Phosphorus	31-2	1553	1503	1450	1502	3.44	cps
Potassium	39-2	216086	211588	207334	211669	2.07	cps
Rhodium	103-1	28184610	28261285	28159114	28201670	0.19	cps
Rhodium	103-2	10391170	10481852	10377220	10416748	0.55	cps
Scandium	45-1	20441500	20825013	20579939	20615484	0.94	cps
Scandium	45-2	404369	404192	406932	405164	0.38	cps
Selenium	82-1	150	117	70	112	35.81	cps
Selenium	77-2	127	120	110	119	7.06	cps
Selenium	78-2	97	60	50	69	35.67	cps
Silicon	28-1	21452075	51717538	41916304	38361972	40.26	cps
Silver	107-1	4495	4292	4102	4296	4.58	cps
Silver	109-1	2987	2997	2600	2861	7.91	cps
Sodium	23-2	141364	138326	138200	139297	1.29	cps
Strontium	86-1	36524	42456	38449	39143	7.73	cps
Strontium	88-1	303714	369221	307933	326956	11.21	cps
Sulfur	34-1	591838	597283	589532	592885	0.67	cps
Terbium	159-1	39622704	39390136	39004512	39339117	0.79	cps
Terbium	159-2	12393986	12491561	12433987	12439845	0.39	cps
Thallium	203-1	5441	5525	5395	5453	1.21	cps
Thallium	205-1	13134	13030	12583	12916	2.27	cps
Tin	118-1	10187	9136	8299	9207	10.27	cps
Titanium	47-1	770298	734892	769520	758237	2.67	cps
Uranium	238-1	83794	82489	83116	83133	0.79	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01DLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:30:31	DataFile Name :	042AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	133860	129960	134018	132612	1.73	cps
Ytterbium	172-1	14301	14408	17107	15272	10.41	cps
Ytterbium	172-2	5651	6162	5708	5840	4.79	cps
Ytterbium	176-1	15045	14939	15082	15022	0.50	cps
Ytterbium	176-2	5088	4794	4964	4949	2.98	cps
Yttrium	89-1	47125766	46687569	47156126	46989820	0.56	cps
Yttrium	89-2	3428102	3532175	3485099	3481792	1.50	cps
Zinc	66-2	28459	28502	28609	28523	0.27	cps
Zirconium	90-1	445446	476118	454212	458592	3.44	cps
Zirconium	91-1	98018	99524	97656	98399	1.01	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:33:46	DataFile Name :	043AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1252584	1245981	1203757	1234107	2.15	cps
Antimony	121-1	1317	1370	1200	1296	6.71	cps
Arsenic	75-2	2250	2317	2200	2256	2.60	cps
Barium	135-1	373787	376366	376365	375506	0.40	cps
Barium	137-1	652632	654702	661105	656146	0.67	cps
Beryllium	9-1	6173	6089	5970	6077	1.68	cps
Bismuth	209-1	25506185	21379616	23178208	23354670	8.86	cps
Bismuth	209-2	9039288	9223767	9021567	9094874	1.23	cps
Bromine	81-1	15946	16810	15862	16206	3.24	cps
Cadmium	108-1	2016	643	610	1090	73.62	cps
Cadmium	106-1	18122	15916	16603	16880	6.69	cps
Cadmium	111-1	11631	11061	11555	11416	2.71	cps
Calcium	43-1	195510	195851	195945	195768	0.12	cps
Calcium	44-1	3285723	3281873	3316569	3294722	0.58	cps
Carbon	12-1	5137492	5234788	5373555	5248612	2.26	cps
Carbon	12-2	37180	37087	37210	37159	0.17	cps
Chlorine	35-1	198646	199721	202448	200272	0.98	cps
Chlorine	35-2	787	860	890	846	6.29	cps
Chromium	52-2	127274	125263	123995	125511	1.32	cps
Cobalt	59-2	143831	144780	142455	143689	0.81	cps
Copper	63-2	157640	159478	156656	157925	0.91	cps
Dysprosium	156-1	65865	66016	66411	66097	0.43	cps
Dysprosium	156-2	19197	19841	19498	19512	1.65	cps
Erbium	164-1	52111	53022	53782	52972	1.58	cps
Erbium	164-2	17165	16581	16807	16851	1.75	cps
Gadolinium	160-1	56824	57185	57107	57039	0.33	cps
Gadolinium	160-2	23274	22860	22556	22896	1.57	cps
Holmium	165-1	41675199	35433669	38144285	38417718	8.15	cps
Holmium	165-2	12937736	12852157	12715301	12835065	0.87	cps
Indium	115-1	32799684	26894129	30108195	29934003	9.88	cps
Indium	115-2	3098064	3110520	3071519	3093368	0.64	cps
Iron	54-2	4771156	4720998	4801203	4764452	0.85	cps
Iron	56-2	85862769	86638702	87994939	86832136	1.24	cps
Iron	57-2	2202241	2254687	2235553	2230827	1.19	cps
Krypton	83-1	350	370	373	364	3.46	cps
Lead	206-1	227136	227349	231976	228821	1.20	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:33:46	DataFile Name :	043AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	185178	190068	189213	188153	1.39	cps
Lead	208-1	873854	884265	890414	882845	0.95	cps
Lithium	6-1	11982437	10367286	10876292	11075338	7.46	cps
Magnesium	24-2	477880	474360	481264	477835	0.72	cps
Manganese	55-2	530950	519135	527917	526001	1.17	cps
Molybdenum	94-1	182574	187884	190361	186940	2.13	cps
Molybdenum	95-1	9703	9994	9887	9861	1.49	cps
Molybdenum	96-1	40694	41408	42376	41493	2.04	cps
Molybdenum	97-1	6015	5865	5821	5900	1.72	cps
Molybdenum	98-1	15686	15269	14735	15230	3.13	cps
Neodymium	150-1	91859	94155	93708	93241	1.31	cps
Neodymium	150-2	22860	28366	22983	24736	12.71	cps
Nickel	60-2	74115	74316	73143	73858	0.85	cps
Phosphorus	31-2	1710	1773	1590	1691	5.51	cps
Potassium	39-2	238549	240370	228747	235888	2.65	cps
Rhodium	103-1	30559439	26064710	27932837	28185662	8.01	cps
Rhodium	103-2	10741121	10715602	10458363	10638362	1.47	cps
Scandium	45-1	23046343	19195990	20650126	20964153	9.27	cps
Scandium	45-2	416942	413726	415153	415274	0.39	cps
Selenium	82-1	127	173	210	170	24.57	cps
Selenium	77-2	127	123	93	114	16.05	cps
Selenium	78-2	63	103	77	81	25.12	cps
Silicon	28-1	36998042	30900542	25655096	31184560	18.20	cps
Silver	107-1	3006	3134	3026	3056	2.26	cps
Silver	109-1	1407	1460	1510	1459	3.54	cps
Sodium	23-2	141718	141279	142054	141684	0.27	cps
Strontium	86-1	51994	48198	46155	48782	6.07	cps
Strontium	88-1	393411	413228	425080	410573	3.90	cps
Sulfur	34-1	559235	545792	533540	546189	2.35	cps
Terbium	159-1	42670261	36042703	39497186	39403383	8.41	cps
Terbium	159-2	12768519	12788356	12527054	12694643	1.15	cps
Thallium	203-1	5615	4931	5308	5284	6.48	cps
Thallium	205-1	12603	12876	12830	12770	1.15	cps
Tin	118-1	13804	14441	15972	14739	7.56	cps
Titanium	47-1	841743	812447	881312	845167	4.09	cps
Uranium	238-1	92571	92409	91963	92314	0.34	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01DUPDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:33:46	DataFile Name :	043AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	149680	149522	147414	148872	0.85	cps
Ytterbium	172-1	15850	16003	16070	15974	0.71	cps
Ytterbium	172-2	6175	6322	5885	6127	3.63	cps
Ytterbium	176-1	16414	14935	15783	15711	4.72	cps
Ytterbium	176-2	5258	5431	5528	5406	2.53	cps
Yttrium	89-1	52647066	43887496	47370434	47968332	9.19	cps
Yttrium	89-2	3546508	3589372	3489594	3541825	1.41	cps
Zinc	66-2	102575	102917	104011	103168	0.73	cps
Zirconium	90-1	497517	517649	520735	511967	2.46	cps
Zirconium	91-1	110253	110261	109336	109950	0.48	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	25
Date & Time Acquired :	2024-12-11 19:37:02	DataFile Name :	044AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	220093	215427	215500	217007	1.23	cps
Antimony	121-1	717	687	697	700	2.18	cps
Arsenic	75-2	383	443	423	417	7.33	cps
Barium	135-1	68074	68100	67940	68038	0.13	cps
Barium	137-1	121246	122416	121090	121584	0.60	cps
Beryllium	9-1	1700	1628	1642	1656	2.29	cps
Bismuth	209-1	23635825	23523541	23256171	23471846	0.83	cps
Bismuth	209-2	9204016	9059334	9108258	9123869	0.81	cps
Bromine	81-1	14995	15058	15342	15132	1.22	cps
Cadmium	108-1	153	143	173	157	9.75	cps
Cadmium	106-1	14962	14978	14558	14833	1.60	cps
Cadmium	111-1	10459	10484	10149	10364	1.80	cps
Calcium	43-1	24574	24631	24938	24715	0.79	cps
Calcium	44-1	401988	405293	406140	404474	0.54	cps
Carbon	12-1	4361247	4390312	4343217	4364925	0.54	cps
Carbon	12-2	29814	29710	29366	29630	0.79	cps
Chlorine	35-1	179400	180716	181499	180538	0.59	cps
Chlorine	35-2	707	777	820	768	7.45	cps
Chromium	52-2	25713	25219	25807	25580	1.23	cps
Cobalt	59-2	27597	27867	27834	27766	0.53	cps
Copper	63-2	112948	113143	110364	112152	1.38	cps
Dysprosium	156-1	12032	11845	11655	11844	1.59	cps
Dysprosium	156-2	3454	3427	5497	4126	28.78	cps
Erbium	164-1	9497	9440	9977	9638	3.06	cps
Erbium	164-2	3090	3144	3037	3090	1.73	cps
Gadolinium	160-1	10688	10161	10614	10488	2.72	cps
Gadolinium	160-2	4017	4181	4154	4117	2.13	cps
Holmium	165-1	39490095	38520734	38163344	38724724	1.77	cps
Holmium	165-2	12817505	12741235	12604287	12721009	0.85	cps
Indium	115-1	30570901	29574892	30508566	30218120	1.85	cps
Indium	115-2	3193299	3130146	3172574	3165340	1.02	cps
Iron	54-2	844247	841619	831782	839216	0.78	cps
Iron	56-2	15972891	16006954	15959461	15979769	0.15	cps
Iron	57-2	386416	391713	391220	389783	0.75	cps
Krypton	83-1	407	303	290	333	19.16	cps
Lead	206-1	43923	43489	43165	43526	0.87	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	25
Date & Time Acquired :	2024-12-11 19:37:02	DataFile Name :	044AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	35612	35823	35626	35687	0.33	cps
Lead	208-1	169272	167876	168341	168496	0.42	cps
Lithium	6-1	11053494	10800660	11196892	11017015	1.82	cps
Magnesium	24-2	87851	87574	87062	87496	0.46	cps
Manganese	55-2	96372	97775	97607	97252	0.79	cps
Molybdenum	94-1	35219	35238	35322	35259	0.16	cps
Molybdenum	95-1	2617	2640	2654	2637	0.70	cps
Molybdenum	96-1	7932	9447	8086	8488	9.82	cps
Molybdenum	97-1	1427	1427	1433	1429	0.27	cps
Molybdenum	98-1	4021	3797	3714	3844	4.13	cps
Neodymium	150-1	16547	16487	17395	16810	3.02	cps
Neodymium	150-2	4321	4111	4331	4254	2.92	cps
Nickel	60-2	51757	51784	51392	51644	0.42	cps
Phosphorus	31-2	420	443	427	430	2.80	cps
Potassium	39-2	64695	65214	63701	64536	1.19	cps
Rhodium	103-1	28986737	28618200	27928805	28511247	1.88	cps
Rhodium	103-2	10804832	10644716	10671688	10707078	0.80	cps
Scandium	45-1	21325365	21140850	20938947	21135054	0.91	cps
Scandium	45-2	412687	415742	412820	413750	0.42	cps
Selenium	82-1	-30	27	73	23	221.77	cps
Selenium	77-2	20	30	17	22	31.22	cps
Selenium	78-2	33	37	13	28	45.44	cps
Silicon	28-1	3855658	4520240	6072953	4816284	23.63	cps
Silver	107-1	1001	1008	1063	1024	3.33	cps
Silver	109-1	403	520	507	477	13.40	cps
Sodium	23-2	111629	111287	111317	111411	0.17	cps
Strontium	86-1	8316	8506	8353	8392	1.20	cps
Strontium	88-1	68372	67248	68932	68184	1.26	cps
Sulfur	34-1	515700	517203	516766	516556	0.15	cps
Terbium	159-1	39934308	38946233	39491677	39457406	1.25	cps
Terbium	159-2	12760490	12716493	12615487	12697490	0.59	cps
Thallium	203-1	1460	1287	1363	1370	6.34	cps
Thallium	205-1	3344	3494	3380	3406	2.30	cps
Tin	118-1	7629	7215	7692	7512	3.45	cps
Titanium	47-1	166091	143892	150620	153535	7.41	cps
Uranium	238-1	17105	15813	16674	16531	3.98	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01LDLX25	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	25
Date & Time Acquired :	2024-12-11 19:37:02	DataFile Name :	044AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	27547	27453	27286	27429	0.48	cps
Ytterbium	172-1	3200	3134	3170	3168	1.05	cps
Ytterbium	172-2	1230	1137	1173	1180	3.99	cps
Ytterbium	176-1	6635	6615	6768	6673	1.25	cps
Ytterbium	176-2	1607	1730	1700	1679	3.83	cps
Yttrium	89-1	48915428	46925493	46559066	47466662	2.67	cps
Yttrium	89-2	3441186	3503677	3477625	3474163	0.90	cps
Zinc	66-2	12656	12496	12526	12559	0.68	cps
Zirconium	90-1	94631	92266	94241	93713	1.35	cps
Zirconium	91-1	20542	20215	20532	20430	0.91	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:40:19	DataFile Name :	045AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1220525	1277448	1266228	1254734	2.40	cps
Antimony	121-1	2814759	2798322	2812876	2808652	0.32	cps
Arsenic	75-2	58715	57798	58340	58284	0.79	cps
Barium	135-1	3849422	3822603	3801432	3824486	0.63	cps
Barium	137-1	6442784	6409870	6474242	6442299	0.50	cps
Beryllium	9-1	776762	783844	787048	782551	0.67	cps
Bismuth	209-1	23661918	23275227	23272295	23403147	0.96	cps
Bismuth	209-2	8807955	8885460	8984056	8892490	0.99	cps
Bromine	81-1	16179	16503	16647	16443	1.46	cps
Cadmium	108-1	56338	57784	57429	57183	1.32	cps
Cadmium	106-1	99744	99848	100922	100171	0.65	cps
Cadmium	111-1	751298	757152	757069	755173	0.44	cps
Calcium	43-1	893002	901661	898068	897577	0.48	cps
Calcium	44-1	14882896	15203340	14869948	14985395	1.26	cps
Carbon	12-1	5121560	5376082	5411531	5303058	2.98	cps
Carbon	12-2	37822	37648	38169	37880	0.70	cps
Chlorine	35-1	509781	544019	560205	538002	4.79	cps
Chlorine	35-2	2500	2434	2364	2432	2.81	cps
Chromium	52-2	733764	729403	729863	731010	0.33	cps
Cobalt	59-2	1352572	1340003	1353384	1348653	0.56	cps
Copper	63-2	8878379	8833498	8760329	8824068	0.68	cps
Dysprosium	156-1	56419	56760	55930	56370	0.74	cps
Dysprosium	156-2	16320	16410	16884	16538	1.83	cps
Erbium	164-1	44146	44902	49640	46230	6.44	cps
Erbium	164-2	14408	14111	14241	14253	1.04	cps
Gadolinium	160-1	47551	47855	48655	48021	1.19	cps
Gadolinium	160-2	18924	18793	18506	18741	1.14	cps
Holmium	165-1	38391672	39069861	38428241	38629925	0.99	cps
Holmium	165-2	12665705	12552344	12750508	12656186	0.79	cps
Indium	115-1	30352462	29754528	30528831	30211940	1.34	cps
Indium	115-2	3107275	3046390	3062680	3072115	1.03	cps
Iron	54-2	5345154	5221733	5237993	5268293	1.27	cps
Iron	56-2	94756359	95380335	95182059	95106251	0.34	cps
Iron	57-2	2468250	2433571	2483184	2461669	1.03	cps
Krypton	83-1	400	380	413	398	4.22	cps
Lead	206-1	10083287	9967513	10060860	10037220	0.61	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:40:19	DataFile Name :	045AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	8886701	8693157	8663162	8747673	1.39	cps
Lead	208-1	40539274	40180988	40039875	40253379	0.64	cps
Lithium	6-1	10674405	10735774	10800650	10736943	0.59	cps
Magnesium	24-2	3809908	3783144	3867041	3820031	1.12	cps
Manganese	55-2	2706122	2676720	2743044	2708629	1.23	cps
Molybdenum	94-1	7025084	7028643	7076328	7043352	0.41	cps
Molybdenum	95-1	8728170	8741486	8609293	8692983	0.84	cps
Molybdenum	96-1	9672757	9564387	9689634	9642259	0.70	cps
Molybdenum	97-1	5333057	5345847	5380643	5353182	0.46	cps
Molybdenum	98-1	13752952	13955531	13844988	13851157	0.73	cps
Neodymium	150-1	78683	77754	79260	78565	0.97	cps
Neodymium	150-2	18807	18683	18706	18732	0.35	cps
Nickel	60-2	379458	381828	382145	381143	0.39	cps
Phosphorus	31-2	1487	1513	1523	1508	1.26	cps
Potassium	39-2	1498930	1490547	1500454	1496644	0.36	cps
Rhodium	103-1	27663880	27827503	27631085	27707489	0.38	cps
Rhodium	103-2	10499705	10461199	10331696	10430867	0.84	cps
Scandium	45-1	21059856	21069806	20732131	20953931	0.92	cps
Scandium	45-2	412874	406740	414580	411398	1.00	cps
Selenium	82-1	46521	45769	45468	45920	1.18	cps
Selenium	77-2	1073	797	957	942	14.74	cps
Selenium	78-2	3030	2807	2734	2857	5.41	cps
Silicon	28-1	14649961	12997219	17030879	14892686	13.62	cps
Silver	107-1	110551	110862	109226	110213	0.79	cps
Silver	109-1	4771	4728	4614	4704	1.72	cps
Sodium	23-2	7341985	7258483	7301815	7300761	0.57	cps
Strontium	86-1	1021530	1013774	1016657	1017320	0.39	cps
Strontium	88-1	9322715	9085267	9155822	9187935	1.33	cps
Sulfur	34-1	565879	561921	568241	565347	0.56	cps
Terbium	159-1	39283369	39015576	39525276	39274741	0.65	cps
Terbium	159-2	12481561	12858284	12477801	12605882	1.73	cps
Thallium	203-1	3077663	3001942	3102154	3060586	1.71	cps
Thallium	205-1	7173016	7251999	7243458	7222824	0.60	cps
Tin	118-1	2302884	2305488	2313408	2307260	0.24	cps
Titanium	47-1	2352228	2455950	2402163	2403447	2.16	cps
Uranium	238-1	10035681	10052453	9940554	10009563	0.60	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01MSDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:40:19	DataFile Name :	045AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	631551	625878	628069	628500	0.46	cps
Ytterbium	172-1	13420	13844	13600	13622	1.56	cps
Ytterbium	172-2	5328	5161	5311	5267	1.74	cps
Ytterbium	176-1	20780	20746	21184	20903	1.17	cps
Ytterbium	176-2	6745	6742	6645	6711	0.85	cps
Yttrium	89-1	47386253	47152424	47148214	47228964	0.29	cps
Yttrium	89-2	3504109	3512383	3494771	3503754	0.25	cps
Zinc	66-2	790149	795981	788201	791444	0.51	cps
Zirconium	90-1	5901667	5861030	5819058	5860585	0.70	cps
Zirconium	91-1	1246483	1255604	1255977	1252688	0.43	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:43:15	DataFile Name :	046AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1188538	1191551	1201270	1193786	0.56	cps
Antimony	121-1	2812023	2830824	2782169	2808338	0.87	cps
Arsenic	75-2	57363	57232	57985	57527	0.70	cps
Barium	135-1	3743098	3754087	3700826	3732670	0.75	cps
Barium	137-1	6351093	6371147	6271943	6331394	0.83	cps
Beryllium	9-1	783222	788708	787966	786632	0.38	cps
Bismuth	209-1	23233128	23209810	23529014	23323984	0.76	cps
Bismuth	209-2	8728971	8727788	8797744	8751501	0.46	cps
Bromine	81-1	16169	16186	16460	16272	1.00	cps
Cadmium	108-1	55715	57951	56984	56883	1.97	cps
Cadmium	106-1	99613	100237	101110	100320	0.75	cps
Cadmium	111-1	737902	744633	745507	742681	0.56	cps
Calcium	43-1	880683	883901	878152	880912	0.33	cps
Calcium	44-1	14835408	14547840	14440748	14607999	1.40	cps
Carbon	12-1	5325262	5352856	5408037	5362052	0.79	cps
Carbon	12-2	37588	37682	38437	37902	1.23	cps
Chlorine	35-1	536933	577708	591718	568787	5.00	cps
Chlorine	35-2	2547	2577	2640	2588	1.84	cps
Chromium	52-2	715325	713076	714106	714169	0.16	cps
Cobalt	59-2	1323962	1322061	1334947	1326990	0.52	cps
Copper	63-2	8645980	8511389	8530607	8562659	0.85	cps
Dysprosium	156-1	55274	55377	55220	55290	0.14	cps
Dysprosium	156-2	16590	16107	16667	16455	1.85	cps
Erbium	164-1	43343	44648	44618	44203	1.68	cps
Erbium	164-2	14101	14445	14108	14218	1.38	cps
Gadolinium	160-1	47668	47538	47645	47617	0.15	cps
Gadolinium	160-2	18586	18877	18583	18682	0.90	cps
Holmium	165-1	38443172	38496528	38633921	38524540	0.26	cps
Holmium	165-2	12781817	12627487	12625991	12678432	0.71	cps
Indium	115-1	29581638	29770580	29365764	29572661	0.68	cps
Indium	115-2	3060416	2989358	2982166	3010646	1.44	cps
Iron	54-2	5194000	5137947	5102243	5144730	0.90	cps
Iron	56-2	93460002	93626109	94500139	93862083	0.60	cps
Iron	57-2	2361815	2349665	2384038	2365173	0.74	cps
Krypton	83-1	370	380	427	392	7.71	cps
Lead	206-1	9967119	9902239	9968457	9945938	0.38	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:43:15	DataFile Name :	046AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	8810353	8629647	8643341	8694447	1.16	cps
Lead	208-1	40109381	39960204	39824890	39964825	0.36	cps
Lithium	6-1	10845399	11115751	11081644	11014264	1.34	cps
Magnesium	24-2	3824143	3768182	3794614	3795647	0.74	cps
Manganese	55-2	2642153	2672155	2687558	2667289	0.87	cps
Molybdenum	94-1	7093943	6947151	6987088	7009394	1.08	cps
Molybdenum	95-1	8597123	8655392	8617260	8623258	0.34	cps
Molybdenum	96-1	9450261	9398214	9521685	9456720	0.66	cps
Molybdenum	97-1	5190576	5201692	5316009	5236092	1.33	cps
Molybdenum	98-1	13573514	13655291	13769281	13666029	0.72	cps
Neodymium	150-1	79718	77321	77750	78263	1.63	cps
Neodymium	150-2	18673	18790	19301	18921	1.76	cps
Nickel	60-2	366893	366379	367305	366859	0.13	cps
Phosphorus	31-2	1503	1380	1333	1406	6.25	cps
Potassium	39-2	1477628	1449091	1452007	1459575	1.08	cps
Rhodium	103-1	27335050	27093812	27257086	27228650	0.45	cps
Rhodium	103-2	10351439	10246037	10293872	10297116	0.51	cps
Scandium	45-1	21108121	20618127	20358246	20694831	1.84	cps
Scandium	45-2	405265	401257	404980	403834	0.55	cps
Selenium	82-1	44080	45598	44315	44664	1.83	cps
Selenium	77-2	970	937	743	883	13.86	cps
Selenium	78-2	2630	2804	2730	2721	3.20	cps
Silicon	28-1	14861038	25244857	15169587	18425160	32.07	cps
Silver	107-1	109606	111511	110219	110445	0.88	cps
Silver	109-1	4631	4798	4718	4715	1.77	cps
Sodium	23-2	7357942	7258048	7284639	7300209	0.71	cps
Strontium	86-1	997286	1012137	1009835	1006419	0.79	cps
Strontium	88-1	8950781	9002964	9043965	8999237	0.52	cps
Sulfur	34-1	580922	582729	583351	582334	0.22	cps
Terbium	159-1	39080723	38568374	38502823	38717306	0.82	cps
Terbium	159-2	12387197	12668043	12343766	12466335	1.41	cps
Thallium	203-1	3014139	3015253	3104304	3044565	1.70	cps
Thallium	205-1	7104927	7223304	7375861	7234697	1.88	cps
Tin	118-1	2235067	2300911	2273501	2269826	1.46	cps
Titanium	47-1	2308114	2492316	2328161	2376197	4.25	cps
Uranium	238-1	10013628	10105335	10012488	10043817	0.53	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01MSDDLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:43:15	DataFile Name :	046AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	618794	616437	620377	618536	0.32	cps
Ytterbium	172-1	13937	13580	13363	13627	2.13	cps
Ytterbium	172-2	5264	5158	5131	5184	1.36	cps
Ytterbium	176-1	20406	20566	20686	20553	0.68	cps
Ytterbium	176-2	6625	6675	7015	6772	3.14	cps
Yttrium	89-1	46699838	46619474	46979224	46766179	0.40	cps
Yttrium	89-2	3438307	3431082	3428102	3432497	0.15	cps
Zinc	66-2	773348	769178	776703	773076	0.49	cps
Zirconium	90-1	5861046	5852282	5759092	5824140	0.97	cps
Zirconium	91-1	1235454	1232873	1232440	1233589	0.13	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:49:47	DataFile Name :	048AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1170311	1224694	1161981	1185662	2.87	cps
Antimony	121-1	2725144	2822365	2769303	2772271	1.76	cps
Arsenic	75-2	56051	56185	55686	55974	0.46	cps
Barium	135-1	3706061	3715419	3800446	3740642	1.39	cps
Barium	137-1	6372604	6274660	6235387	6294217	1.12	cps
Beryllium	9-1	780783	782856	786032	783223	0.34	cps
Bismuth	209-1	24220521	19816418	21581374	21872771	10.13	cps
Bismuth	209-2	8900342	8908384	8771193	8859973	0.87	cps
Bromine	81-1	15235	15402	15105	15247	0.98	cps
Cadmium	108-1	55876	57155	56338	56456	1.15	cps
Cadmium	106-1	97602	95155	95759	96172	1.33	cps
Cadmium	111-1	729903	729998	735816	731906	0.46	cps
Calcium	43-1	875607	874154	883701	877821	0.59	cps
Calcium	44-1	14677569	14506755	14508151	14564158	0.67	cps
Carbon	12-1	5306174	5448459	5429801	5394812	1.43	cps
Carbon	12-2	38303	37535	38042	37960	1.03	cps
Chlorine	35-1	539387	566621	591554	565854	4.61	cps
Chlorine	35-2	2470	2497	2460	2476	0.77	cps
Chromium	52-2	699816	700429	701774	700673	0.14	cps
Cobalt	59-2	1298900	1295579	1306342	1300274	0.42	cps
Copper	63-2	8549198	8457195	8473111	8493168	0.58	cps
Dysprosium	156-1	55870	56613	55670	56051	0.89	cps
Dysprosium	156-2	16000	16317	15946	16088	1.24	cps
Erbium	164-1	42979	43715	44738	43811	2.02	cps
Erbium	164-2	13784	13771	13697	13751	0.34	cps
Gadolinium	160-1	47853	47571	47437	47620	0.45	cps
Gadolinium	160-2	18583	18209	18109	18300	1.37	cps
Holmium	165-1	39851430	31819445	35588552	35753143	11.24	cps
Holmium	165-2	12387338	12556168	12364211	12435906	0.84	cps
Indium	115-1	30868866	24549481	27079090	27499146	11.57	cps
Indium	115-2	2968757	3011289	2985918	2988655	0.72	cps
Iron	54-2	5150324	5027300	5059628	5079084	1.26	cps
Iron	56-2	92717895	94443729	92065309	93075644	1.32	cps
Iron	57-2	2364840	2369555	2367157	2367184	0.10	cps
Krypton	83-1	313	427	347	362	16.08	cps
Lead	206-1	9952660	10251351	9865352	10023121	2.02	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:49:47	DataFile Name :	048AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	8620194	8815877	8704711	8713594	1.13	cps
Lead	208-1	39404678	40263049	39720798	39796175	1.09	cps
Lithium	6-1	11920462	9714214	10451306	10695328	10.50	cps
Magnesium	24-2	3668840	3692404	3732511	3697918	0.87	cps
Manganese	55-2	2649136	2576272	2591818	2605742	1.47	cps
Molybdenum	94-1	6821695	6951567	6837271	6870178	1.03	cps
Molybdenum	95-1	8484217	8533259	8390483	8469320	0.86	cps
Molybdenum	96-1	9411407	9447876	9151226	9336836	1.73	cps
Molybdenum	97-1	5224689	5291078	5133954	5216574	1.51	cps
Molybdenum	98-1	13422412	13317774	13364716	13368300	0.39	cps
Neodymium	150-1	77149	76449	76969	76856	0.47	cps
Neodymium	150-2	18700	18783	18309	18597	1.36	cps
Nickel	60-2	362286	362392	363121	362600	0.13	cps
Phosphorus	31-2	1530	1453	1283	1422	8.88	cps
Potassium	39-2	1446657	1431123	1395604	1424462	1.84	cps
Rhodium	103-1	28537820	22952748	24990634	25493734	11.09	cps
Rhodium	103-2	10099784	10184655	10124673	10136370	0.43	cps
Scandium	45-1	21492953	17162066	19211568	19288862	11.23	cps
Scandium	45-2	392176	396178	398740	395698	0.84	cps
Selenium	82-1	44304	43870	44742	44305	0.98	cps
Selenium	77-2	843	893	827	854	4.06	cps
Selenium	78-2	2857	2644	2774	2758	3.90	cps
Silicon	28-1	29938295	26237286	18646214	24940598	23.08	cps
Silver	107-1	107542	108889	108830	108420	0.70	cps
Silver	109-1	4537	4627	4424	4530	2.25	cps
Sodium	23-2	7156525	7241476	7154980	7184327	0.69	cps
Strontium	86-1	990123	992531	989969	990874	0.15	cps
Strontium	88-1	9145025	9052776	8865758	9021187	1.58	cps
Sulfur	34-1	584170	573930	578679	578926	0.89	cps
Terbium	159-1	41232574	32918240	35874920	36675245	11.49	cps
Terbium	159-2	12413366	12485521	12352689	12417192	0.54	cps
Thallium	203-1	3056221	3088707	2961638	3035522	2.17	cps
Thallium	205-1	7160798	7174494	7019252	7118182	1.21	cps
Tin	118-1	2260149	2229277	2232520	2240649	0.76	cps
Titanium	47-1	2319310	2310725	2411851	2347295	2.39	cps
Uranium	238-1	9798188	9921863	9894017	9871356	0.66	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	P5241-01ADLX5	Instrumnet Name :	P8
Client Sample ID :	TAPIAL2-SB02D-13-1124	Dilution Factor :	5
Date & Time Acquired :	2024-12-11 19:49:47	DataFile Name :	048AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	611384	612264	604535	609394	0.69	cps
Ytterbium	172-1	13380	12876	13400	13219	2.25	cps
Ytterbium	172-2	5188	5374	5191	5251	2.04	cps
Ytterbium	176-1	20436	19381	20256	20024	2.82	cps
Ytterbium	176-2	6735	6698	6722	6718	0.28	cps
Yttrium	89-1	48510428	39253994	42980739	43581720	10.69	cps
Yttrium	89-2	3409059	3399587	3343855	3384167	1.04	cps
Zinc	66-2	762980	759647	752353	758327	0.72	cps
Zirconium	90-1	5717265	5724935	5769753	5737318	0.49	cps
Zirconium	91-1	1212121	1220580	1213525	1215409	0.37	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P8
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:52:40	DataFile Name :	049CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4868652	4885479	4857044	4870392	0.29	cps
Antimony	121-1	10733393	10619397	10720829	10691206	0.58	cps
Arsenic	75-2	202172	202252	204463	202962	0.64	cps
Barium	135-1	14316159	14495124	14280772	14364018	0.80	cps
Barium	137-1	24154095	24903928	24302660	24453561	1.62	cps
Beryllium	9-1	2988004	3030264	3029980	3016082	0.81	cps
Bismuth	209-1	19590892	20088107	20157432	19945477	1.55	cps
Bismuth	209-2	7696410	7608024	7617545	7640660	0.63	cps
Bromine	81-1	13507	13303	13523	13444	0.91	cps
Cadmium	108-1	208903	210984	206893	208926	0.98	cps
Cadmium	106-1	311901	307391	305477	308256	1.07	cps
Cadmium	111-1	2696050	2721629	2678878	2698852	0.80	cps
Calcium	43-1	19306093	19333471	19293508	19311024	0.11	cps
Calcium	44-1	310863035	308062762	306514522	308480107	0.71	cps
Carbon	12-1	5331126	5321842	5358176	5337048	0.35	cps
Carbon	12-2	44133	44460	43765	44119	0.79	cps
Chlorine	35-1	228992	229020	226400	228137	0.66	cps
Chlorine	35-2	937	1000	1040	992	5.25	cps
Chromium	52-2	2552317	2545199	2541361	2546292	0.22	cps
Cobalt	59-2	4669262	4674400	4632013	4658558	0.50	cps
Copper	63-2	36037701	36488752	35947311	36157921	0.80	cps
Dysprosium	156-1	767	850	770	796	5.93	cps
Dysprosium	156-2	197	197	220	204	6.59	cps
Erbium	164-1	810	697	760	756	7.52	cps
Erbium	164-2	257	293	257	269	7.87	cps
Gadolinium	160-1	787	767	720	758	4.51	cps
Gadolinium	160-2	257	210	263	243	11.94	cps
Holmium	165-1	35895704	35800037	36222674	35972805	0.62	cps
Holmium	165-2	11774949	11716394	11856464	11782602	0.60	cps
Indium	115-1	26002723	26365365	26404638	26257575	0.84	cps
Indium	115-2	2738805	2703826	2714960	2719197	0.66	cps
Iron	54-2	25153374	25436254	25450153	25346594	0.66	cps
Iron	56-2	469634140	464628033	466835686	467032620	0.54	cps
Iron	57-2	11885400	11682184	11916716	11828100	1.08	cps
Krypton	83-1	447	423	457	442	3.87	cps
Lead	206-1	45671958	46515151	46034586	46073898	0.92	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P8
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:52:40	DataFile Name :	049CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	40119785	39778471	39447809	39782022	0.84	cps
Lead	208-1	183351821	182933124	182212087	182832344	0.32	cps
Lithium	6-1	9884405	10073062	10105813	10021093	1.19	cps
Magnesium	24-2	77064666	78135756	78131407	77777276	0.79	cps
Manganese	55-2	10844884	10950609	10830160	10875218	0.60	cps
Molybdenum	94-1	42519741	42539217	42441952	42500303	0.12	cps
Molybdenum	95-1	61788567	60548364	60687982	61008305	1.11	cps
Molybdenum	96-1	66366292	66402162	66177797	66315417	0.18	cps
Molybdenum	97-1	37320074	38022383	37295159	37545872	1.10	cps
Molybdenum	98-1	97263805	97609512	97673025	97515447	0.23	cps
Neodymium	150-1	1507	1750	1447	1568	10.25	cps
Neodymium	150-2	100	127	97	108	15.26	cps
Nickel	60-2	1174544	1173983	1169184	1172570	0.25	cps
Phosphorus	31-2	44973	45558	44541	45024	1.13	cps
Potassium	39-2	25708751	25379798	25354062	25480870	0.78	cps
Rhodium	103-1	22539717	23223287	23421600	23061535	2.01	cps
Rhodium	103-2	8847913	8761677	8735895	8781828	0.67	cps
Scandium	45-1	18273797	18461315	18460599	18398570	0.59	cps
Scandium	45-2	370267	370200	370508	370325	0.04	cps
Selenium	82-1	160703	163269	160741	161571	0.91	cps
Selenium	77-2	2634	2907	3200	2914	9.73	cps
Selenium	78-2	10097	9954	10050	10034	0.73	cps
Silicon	28-1	118349518	117135242	116046162	117176974	0.98	cps
Silver	107-1	13858431	14052246	13893727	13934801	0.74	cps
Silver	109-1	12591234	12922909	12888021	12800722	1.42	cps
Sodium	23-2	164213334	165129761	164219708	164520934	0.32	cps
Strontium	86-1	3912610	4027203	4006527	3982113	1.53	cps
Strontium	88-1	34574867	34005364	34007736	34195989	0.96	cps
Sulfur	34-1	1621427	1579354	1557769	1586183	2.04	cps
Terbium	159-1	35669337	36342232	36267674	36093081	1.02	cps
Terbium	159-2	11735833	11666598	11529387	11643939	0.90	cps
Thallium	203-1	11461304	11732542	11562278	11585374	1.18	cps
Thallium	205-1	27252689	28003706	27784325	27680240	1.40	cps
Tin	118-1	9515189	9342936	9392575	9416900	0.94	cps
Titanium	47-1	18378726	18171001	18031527	18193751	0.96	cps
Uranium	238-1	39912559	39924888	39570900	39802782	0.50	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCV03	Instrumnet Name :	P8
Client Sample ID :	CCV03	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:52:40	DataFile Name :	049CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1981710	2044250	2020547	2015502	1.57	cps
Ytterbium	172-1	953	893	897	914	3.69	cps
Ytterbium	172-2	330	333	347	337	2.62	cps
Ytterbium	176-1	58613	59825	60675	59704	1.74	cps
Ytterbium	176-2	20032	19658	19304	19665	1.85	cps
Yttrium	89-1	41521200	42075033	42708241	42101491	1.41	cps
Yttrium	89-2	3113802	3101933	3150424	3122053	0.81	cps
Zinc	66-2	3424441	3411401	3391617	3409153	0.48	cps
Zirconium	90-1	21485871	21484134	21526187	21498731	0.11	cps
Zirconium	91-1	4883981	4788750	4783014	4818581	1.18	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P8
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:55:25	DataFile Name :	050CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	150	193	213	186	17.45	cps
Antimony	121-1	2897	2807	2430	2711	9.13	cps
Arsenic	75-2	3	30	20	18	75.79	cps
Barium	135-1	410	447	357	404	11.19	cps
Barium	137-1	757	603	520	627	19.16	cps
Beryllium	9-1	1488	1293	1287	1356	8.45	cps
Bismuth	209-1	23676829	23358956	22947035	23327607	1.57	cps
Bismuth	209-2	8933319	9100689	8945816	8993275	1.04	cps
Bromine	81-1	14334	14708	14151	14398	1.97	cps
Cadmium	108-1	70	60	47	59	19.88	cps
Cadmium	106-1	14591	14625	14621	14612	0.13	cps
Cadmium	111-1	10381	10365	10392	10380	0.13	cps
Calcium	43-1	1733	1687	1873	1765	5.51	cps
Calcium	44-1	41033	38844	39201	39693	2.96	cps
Carbon	12-1	4275035	4213684	4071630	4186783	2.49	cps
Carbon	12-2	27579	28331	27245	27718	2.01	cps
Chlorine	35-1	188689	185755	184357	186267	1.19	cps
Chlorine	35-2	763	870	763	799	7.71	cps
Chromium	52-2	2440	2594	2554	2529	3.15	cps
Cobalt	59-2	227	193	157	192	18.21	cps
Copper	63-2	6742	6708	6508	6653	1.90	cps
Dysprosium	156-1	17	13	27	19	36.75	cps
Dysprosium	156-2	3	3	7	4	43.40	cps
Erbium	164-1	140	217	173	177	21.76	cps
Erbium	164-2	57	40	73	57	29.41	cps
Gadolinium	160-1	247	270	207	241	13.29	cps
Gadolinium	160-2	77	17	37	43	70.50	cps
Holmium	165-1	38204211	37514857	37095654	37604907	1.49	cps
Holmium	165-2	12747553	12599022	12389684	12578753	1.43	cps
Indium	115-1	29632163	29488478	29656396	29592346	0.31	cps
Indium	115-2	3164451	3114415	3093606	3124157	1.17	cps
Iron	54-2	1160	1160	1090	1137	3.56	cps
Iron	56-2	18493	15796	16998	17096	7.90	cps
Iron	57-2	433	397	453	428	6.72	cps
Krypton	83-1	297	323	333	318	5.97	cps
Lead	206-1	4311	3921	3454	3895	11.01	cps

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P8
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:55:25	DataFile Name :	050CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3714	3324	3044	3360	10.02	cps
Lead	208-1	17418	15958	14273	15883	9.91	cps
Lithium	6-1	11089886	11024009	11020274	11044723	0.35	cps
Magnesium	24-2	1277	1057	1213	1182	9.58	cps
Manganese	55-2	623	573	590	596	4.27	cps
Molybdenum	94-1	4274	3350	3187	3604	16.26	cps
Molybdenum	95-1	6055	4664	4077	4932	20.59	cps
Molybdenum	96-1	6208	4597	4407	5071	19.51	cps
Molybdenum	97-1	3434	2607	2190	2744	23.07	cps
Molybdenum	98-1	9430	6789	5741	7320	25.97	cps
Neodymium	150-1	27	20	23	23	14.29	cps
Neodymium	150-2	0	0	3	1	173.21	cps
Nickel	60-2	960	1007	1047	1004	4.32	cps
Phosphorus	31-2	157	197	137	163	18.70	cps
Potassium	39-2	26518	25987	25509	26005	1.94	cps
Rhodium	103-1	27366001	27518660	27313988	27399550	0.39	cps
Rhodium	103-2	10580971	10389753	10553124	10507949	0.98	cps
Scandium	45-1	20421473	20175739	20228201	20275137	0.64	cps
Scandium	45-2	405281	400330	397534	401049	0.98	cps
Selenium	82-1	23	-50	-3	-10	-371.34	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	10	17	3	10	66.70	cps
Silicon	28-1	930564	922891	921843	925099	0.51	cps
Silver	107-1	2535	2268	2152	2318	8.47	cps
Silver	109-1	2200	2010	1890	2034	7.69	cps
Sodium	23-2	136962	136821	134771	136185	0.90	cps
Strontium	86-1	663	663	577	634	7.89	cps
Strontium	88-1	1643	1567	1480	1563	5.23	cps
Sulfur	34-1	589004	586823	591016	588948	0.36	cps
Terbium	159-1	38929773	38099539	38116804	38382039	1.24	cps
Terbium	159-2	12376631	12373767	12577074	12442491	0.94	cps
Thallium	203-1	1567	1387	1300	1418	9.60	cps
Thallium	205-1	3407	3027	2704	3046	11.56	cps
Tin	118-1	5525	5138	5058	5240	4.76	cps
Titanium	47-1	1167	870	887	974	17.11	cps
Uranium	238-1	830	787	523	713	23.27	cps

Reviewed By:Mohan
On:12/13/2024 7:01:39 AM
Inst Id :P8
LB :LB133901

LB Number :	LB133901	Operator :	Jaswal
Lab Sample ID :	CCB03	Instrumnet Name :	P8
Client Sample ID :	CCB03	Dilution Factor :	1
Date & Time Acquired :	2024-12-11 19:55:25	DataFile Name :	050CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	63	33	40	46	34.58	cps
Ytterbium	172-1	197	163	170	177	9.98	cps
Ytterbium	172-2	80	77	77	78	2.47	cps
Ytterbium	176-1	4731	4568	4911	4736	3.63	cps
Ytterbium	176-2	797	947	893	879	8.65	cps
Yttrium	89-1	45605814	46030691	46092891	45909799	0.58	cps
Yttrium	89-2	3405380	3390881	3393345	3396535	0.23	cps
Zinc	66-2	1277	1097	1130	1168	8.20	cps
Zirconium	90-1	2784	2547	2617	2649	4.59	cps
Zirconium	91-1	567	593	513	558	7.30	cps

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165537

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: 12/09/2024 **Time :** 10:45 **Temp :** 96 °C

End Digest Date: 12/09/2024 **Time :** 13:50 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #3

Dig Technician Signature: SLG.

Supervisor Signature: SJ

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
Spike Sol 1	1.00	MP83051
Spike Sol 2	2.00	MP83052
Spike Sol 3	2.00	MP83053
Spike Sol 4	2.00	MP83054
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	10.00	MP83498
Conc. HNO3	5.00	M6126
30% H2O2	3.00	M6125
PTFE Boiling Stones	N/A	M5585
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#3 CELL #33 Temp: 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/09/24 14:20	SLG. met. digestion	SJ (Metals Lab)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165537

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P5242-01	TAPIAL1-SB04D-9-112224-00-T1	N/A	1.13	100	Brown	Brown	Medium	N/A	N/A	1
P5242-02	TAPIAL1-SB04D-4-112224-00-T1	N/A	1.15	100	Brown	Brown	Medium	N/A	N/A	2
P5242-02MS	TAPIAL1-SB04D-4-112224-00-T1MS	N/A	1.17	100	Brown	Brown	Medium	N/A	MP83051,MP83052,MP83053,N	4
P5242-02MSD	TAPIAL1-SB04D-4-112224-00-T1MSD	N/A	1.15	100	Brown	Brown	Medium	N/A	MP83051,MP83052,MP83053,N	5
P5242-02DUP	TAPIAL1-SB04D-4-112224-00-T1DUP	N/A	1.18	100	Brown	Brown	Medium	N/A	N/A	3
PB165537BL	PBS537	N/A	1.00	100	Colorless	Colorless	Fine	N/A	N/A	6
PB165537BS	LCS537	N/A	1.00	100	Colorless	Colorless	Fine	N/A	MP83051,MP83052,MP83053,N	7

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB165537 **WorkList ID :** 186199 **Department :** Digestion **Date :** 12-10-2024 17:33:24

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5242-01	TAPIAL1-SB04D-9-112224-00-T	Solid	Metals ICP-TAL	Cool 4 deg C	WEST04	L61	11/22/2024	6020B
P5242-02	TAPIAL1-SB04D-4-112224-00-	Solid	Metals ICP-TAL	Cool 4 deg C	WEST04	L61	11/22/2024	6020B

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Date/Time 12/09/24 10:20

Raw Sample Received by: Stag. met. digestion

Raw Sample Relinquished by: CPSM

Date/Time 12/09/24 11:20

Raw Sample Received by: CPSM.

Raw Sample Relinquished by: Stag. met. digest

P5242-METALS

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)

WB 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
					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]

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Instrument ID: P8

Daily Analysis Runlog For Sequence/QCBatch ID # LB133901

Review By	Jaswal	Review On	12/13/2024 6:56:12 AM
Supervise By	Mohan	Supervise On	12/13/2024 7:01:39 AM

STD. NAME	STD REF.#
ICAL Standard	MP83014,MP83039,MP83038,MP83036,MP83034,MP83035,MP83033,MP83032,MP83016
ICV Standard	MP83041
CCV Standard	MP83042
ICSA Standard	MP83043,MP83044
CRI Standard	MP83038
LCS Standard	
Chk Standard	MP83050,MP83049

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	TUNE	TUNE	TUNE	12/11/24 15:55		Jaswal	OK
2	S0	S0	CAL1	12/11/24 16:39		Jaswal	OK
3	S2	S2	CAL3	12/11/24 16:45		Jaswal	OK
4	S3	S3	CAL4	12/11/24 16:48		Jaswal	OK
5	S4	S4	CAL5	12/11/24 16:51		Jaswal	OK
6	S5	S5	CAL6	12/11/24 16:54		Jaswal	OK
7	S6	S6	CAL7	12/11/24 16:57		Jaswal	OK
8	S7	S7	CAL8	12/11/24 17:00		Jaswal	OK
9	S8	S8	CAL9	12/11/24 17:03		Jaswal	OK
10	ICV01	ICV01	ICV	12/11/24 17:25		Jaswal	OK
11	LLICV	LLICV	LLICV	12/11/24 17:59		Jaswal	OK
12	ICB01	ICB01	ICB	12/11/24 18:02		Jaswal	OK
13	ICSA01	ICSA01	ICSA	12/11/24 18:05		Jaswal	OK
14	ICSAB01	ICSAB01	ICSAB	12/11/24 18:08		Jaswal	OK
15	CCV01	CCV01	CCV	12/11/24 18:11		Jaswal	OK
16	CCB01	CCB01	CCB	12/11/24 18:15		Jaswal	OK
17	CRI	CRI	CRDL	12/11/24 18:45		Jaswal	OK
18	PB165537BL	PB165537BL	MB	12/11/24 18:48		Jaswal	OK

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Instrument ID: P8

Daily Analysis Runlog For Sequence/QCBatch ID # LB133901

Review By	Jaswal	Review On	12/13/2024 6:56:12 AM
Supervise By	Mohan	Supervise On	12/13/2024 7:01:39 AM

STD. NAME	STD REF.#
ICAL Standard	MP83014,MP83039,MP83038,MP83036,MP83034,MP83035,MP83033,MP83032,MP83016
ICV Standard	MP83041
CCV Standard	MP83042
ICSA Standard	MP83043,MP83044
CRI Standard	MP83038
LCS Standard	
Chk Standard	MP83050,MP83049

19	PB165537BS	PB165537BS	LCS	12/11/24 18:52		Jaswal	OK
20	P5242-01DL	TAPIAL1-SB04D-9-11	SAM	12/11/24 18:54	Straight 5x Dilution for all elements	Jaswal	OK
21	P5242-02DL	TAPIAL1-SB04D-4-11	SAM	12/11/24 18:58	Straight 5x Dilution for all elements	Jaswal	OK
22	P5242-02DUPDL	TAPIAL1-SB04D-4-11	DUP	12/11/24 19:01	Straight 5x Dilution for all elements	Jaswal	OK
23	P5242-02LDL	TAPIAL1-SB04D-4-11	SD	12/11/24 19:04	Straight 25x Dilution for all elements	Jaswal	OK
24	P5242-02MSDL	TAPIAL1-SB04D-4-11	MS	12/11/24 19:07	Straight 5x Dilution for all elements	Jaswal	OK
25	P5242-02MSDDL	TAPIAL1-SB04D-4-11	MSD	12/11/24 19:10	Straight 5x Dilution for all elements	Jaswal	OK
26	P5242-02ADL	TAPIAL1-SB04D-4-11	PS	12/11/24 19:13	Straight 5x Dilution for all elements	Jaswal	OK
27	CCV02	CCV02	CCV	12/11/24 19:16		Jaswal	OK
28	CCB02	CCB02	CCB	12/11/24 19:21		Jaswal	OK
29	PB165562BL	PB165562BL	MB	12/11/24 19:24		Jaswal	OK
30	PB165562BS	PB165562BS	LCS	12/11/24 19:27		Jaswal	OK
31	P5241-01DL	TAPIAL2-SB02D-13-1	SAM	12/11/24 19:30	Straight 5x Dilution for all elements	Jaswal	OK
32	P5241-01DUPDL	TAPIAL2-SB02D-13-1	DUP	12/11/24 19:33	Straight 5x Dilution for all elements	Jaswal	OK
33	P5241-01LDL	TAPIAL2-SB02D-13-1	SD	12/11/24 19:37	Straight 25x Dilution for all elements	Jaswal	OK
34	P5241-01MSDL	TAPIAL2-SB02D-13-1	MS	12/11/24 19:40	Straight 5x Dilution for all elements	Jaswal	OK

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Instrument ID: P8

Daily Analysis Runlog For Sequence/QCBatch ID # LB133901

Review By	Jaswal	Review On	12/13/2024 6:56:12 AM
Supervise By	Mohan	Supervise On	12/13/2024 7:01:39 AM

STD. NAME	STD REF.#
ICAL Standard	MP83014,MP83039,MP83038,MP83036,MP83034,MP83035,MP83033,MP83032,MP83016
ICV Standard	MP83041
CCV Standard	MP83042
ICSA Standard	MP83043,MP83044
CRI Standard	MP83038
LCS Standard	
Chk Standard	MP83050,MP83049

35	P5241-01MSDDL	TAPIAL2-SB02D-13-1	MSD	12/11/24 19:43	Straight 5x Dilution for all elements	Jaswal	OK
36	P5241-01ADL	TAPIAL2-SB02D-13-1	PS	12/11/24 19:49	Straight 5x Dilution for all elements	Jaswal	OK
37	CCV03	CCV03	CCV	12/11/24 19:52		Jaswal	OK
38	CCB03	CCB03	CCB	12/11/24 19:55		Jaswal	OK

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Prep Standard - Chemical Standard Summary

Order ID : P5242

Test : Metals ICP-TAL

Prepbatch ID : PB165537,

Sequence ID/Qc Batch ID: LB133901,

Standard ID :
MP83014,MP83016,MP83032,MP83033,MP83034,MP83035,MP83036,MP83037,MP83038,MP83039,MP83041,MP83042,MP83043,MP83044,MP83048,MP83049,MP83050,MP83051,MP83052,MP83053,MP83054,MP83498,

Chemical ID :
M5288,M5294,M5304,M5390,M5476,M5496,M5498,M5513,M5515,M5519,M5585,M5658,M5698,M5739,M5751,M5768,M5769,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5817,M5818,M5819,M5873,M5874,M5961,M5962,M5976,M5978,M5981,M5982,M5983,M6021,M6023,M6025,M6028,M6030,M6033,M6055,M6095,M6115,M6125,M6126,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP83014	11/02/2024	12/13/2024	Sarabjit Jaswal	None	None	Mohan Bera 11/04/2024

FROM 25.00000ml of M6095 + 4925.00000ml of W3112 + 50.00000ml of M6115 = Final Quantity: 5000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2902	S8 ICPMS	MP83016	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 1.00000ml of M6033 + 2.50000ml of M5288 + 2.50000ml of M5515 + 5.00000ml of M5498 + 5.00000ml of M5769 + 5.00000ml of M5806 + 79.00000ml of MP83014 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3947	S7(SFAM,6020,200.8)	MP83032	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.40000ml of M5513 + 1.00000ml of M5799 + 1.00000ml of M5818 + 1.00000ml of M5981 + 1.00000ml of M5983 + 1.90000ml of M6033 + 10.00000ml of M6115 + 2.00000ml of M5815 + 2.00000ml of M5817 + 2.50000ml of M5476 + 4.00000ml of M5390 + 4.90000ml of M5515 + 4.90000ml of M5519 + 5.00000ml of M6095 + 50.00000ml of M5304 + 832.80000ml of W3112 + 9.00000ml of M5698 + 9.00000ml of M5819 + 9.00000ml of M5976 + 9.00000ml of M5978 + 9.90000ml of M5498 + 9.90000ml of M5751 + 9.90000ml of M5769 + 9.90000ml of M5806 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3948	S6(SFAM,6020,200.8)	MP83033	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 48.50000ml of W3112 + 50.00000ml of MP83032 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3954	S4(SFAM,6020,200.8)	MP83034	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 86.00000ml of W3112 + 12.50000ml of MP83032 = 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)	MP83035	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 73.50000ml of W3112 + 25.00000ml of MP83032 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3951	S3(SFAM, 6020,200.8)	MP83036	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 48.50000ml of W3112 + 10.00000ml of MP83033 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3955	S2CONC(SFAM,6020,200.8)	MP83037	11/02/2024	12/06/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 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 M5982 + 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 M6095 + 226.25000ml of W3112 + 5.00000ml of M6115 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3956	S2(SFAM,6020,200.8)	MP83038	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 88.50000ml of W3112 + 0.50000ml of MP83037 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3957	S1(SFAM,6020,200.8)	MP83039	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 88.50000ml of W3112 + 10.00000ml of MP83038 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3958	ICV(SFAM)	MP83041	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 2.00000ml of M5294 + 98.00000ml of MP83014 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3961	CCV	MP83042	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.20000ml of M5513 + 0.50000ml of M5799 + 0.50000ml of M5818 + 0.50000ml of M5981 + 0.50000ml of M5983 + 1.00000ml of M5815 + 1.00000ml of M5817 + 1.25000ml of M5476 + 10.00000ml of M6115 + 12.45000ml of M5515 + 12.45000ml of M5519 + 2.00000ml of M5390 + 24.95000ml of M5498 + 24.95000ml of M5769 + 24.95000ml of M5806 + 25.00000ml of M5304 + 4.50000ml of M5698 + 4.50000ml of M5751 + 4.50000ml of M5819 + 4.95000ml of M6033 + 5.00000ml of M5976 + 5.00000ml of M5978 + 5.00000ml of M6095 + 823.45000ml of W3112 = Final Quantity: 1000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1142	ICSA ICPMS	MP83043	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 10.00000ml of M5873 + 90.00000ml of MP83014 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1143	ICSAB ICPMS	MP83044	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 10.00000ml of M5873 + 10.00000ml of M5874 + 80.00000ml of MP83014 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3962	MG 10PPM FOR TUNE	MP83048	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.01000ml of M5769 + 9.99000ml of MP83014 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3894	TUNE 200PPB	MP83049	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 2.00000ml of M6055 + 2.00000ml of MP83048 + 98.00000ml of MP83014 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3903	ISS 3PPM	MP83050	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 5.00000ml of M6115 + 75.00000ml of M5739 + 30.00000ml of MP83014 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3880	M&B SPIKE-1	MP83051	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 5.00000ml of M5658 + 5.00000ml of M5798 + 5.00000ml of M5800 + 5.00000ml of M5802 + 5.00000ml of M5961 + 5.00000ml of M5962 + 5.00000ml of M5981 + 5.00000ml of M5982 + 5.00000ml of M5983 + 5.00000ml of M6021 + 5.00000ml of M6023 + 5.00000ml of M6028 + 5.00000ml of M6030 + 30.00000ml of MP83014 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3881	M&B SPIKE-2	MP83052	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 10.00000ml of M5976 + 12.50000ml of M5390 + 12.50000ml of M5515 + 12.50000ml of M5519 + 2.50000ml of M5799 + 2.50000ml of M5818 + 5.00000ml of M5496 + 30.00000ml of MP83014 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3882	M&B SPIKE-3	MP83053	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.62500ml of M5513 + 12.50000ml of M5698 + 12.50000ml of M5751 + 12.50000ml of M5819 + 11.87500ml of MP83014 = Final Quantity: 50.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3900	M&B SPIKE-4	MP83054	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 6.25000ml of M5498 + 6.25000ml of M5768 + 6.25000ml of M5806 + 6.25000ml of MP83014 = Final Quantity: 25.000 ml

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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	01/01/2025	12/13/2023 / bin	02/20/2020 / bin	M5294

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	08/09/2025	07/29/2024 / jaswal	03/16/2023 / jaswal	M5476

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5496

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	102623	10/26/2026	04/18/2024 / jaswal	10/27/2023 / jaswal	M5698

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	6020ISS / 6020ISS, 10 ug/ml, Bi, Ho, In, 6Li, Rh, Sc, TB, Y	T2-MEB709511	09/03/2026	08/07/2024 / jaswal	04/11/2022 / jaswal	M5739

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	091823	09/18/2026	01/08/2024 / bin	01/03/2024 / bin	M5768

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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

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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

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 #
Absolute Standards, Inc.	57028 / Ni, 1000 PPM, 125 ml	041124	04/11/2027	07/02/2024 / Jaswal	06/11/2024 / Jaswal	M5961

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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.	57038 / Sr, 1000 PPM, 125 ml	031524	03/15/2027	07/01/2024 / Jaswal	06/11/2024 / Jaswal	M5982

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57040 / Zr, 1000 PPM, 125 ml	071423	07/14/2026	07/29/2024 / Jaswal	06/11/2024 / Jaswal	M5983

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / Tl, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57082 / Pb, 1000 PPM, 125 ml	061224	06/12/2027	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	01/25/2019 / 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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	IV-STOCK-12 / ICP-MS TUNING SOLUTION, 125mL	U2-MEB734294	06/21/2028	08/21/2024 / Jaswal	08/19/2024 / Jaswal	M6055

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)		03/17/2029	10/26/2024 / Janvi	10/21/2024 / Janvi	M6095

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)	24B1362001	05/04/2025	11/02/2024 / Janvi	09/29/2024 / Eman	M6115

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

Absolute Standards, Inc.
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Certified Reference Material CRM

M6028

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R 8/15/24

CERTIFIED WEIGHT REPORT:

Part Number: 57048
Lot Number: 070124
Description: Cadmium (Cd)

Expiration Date: 070127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.07 0.100 Flask Uncertainty

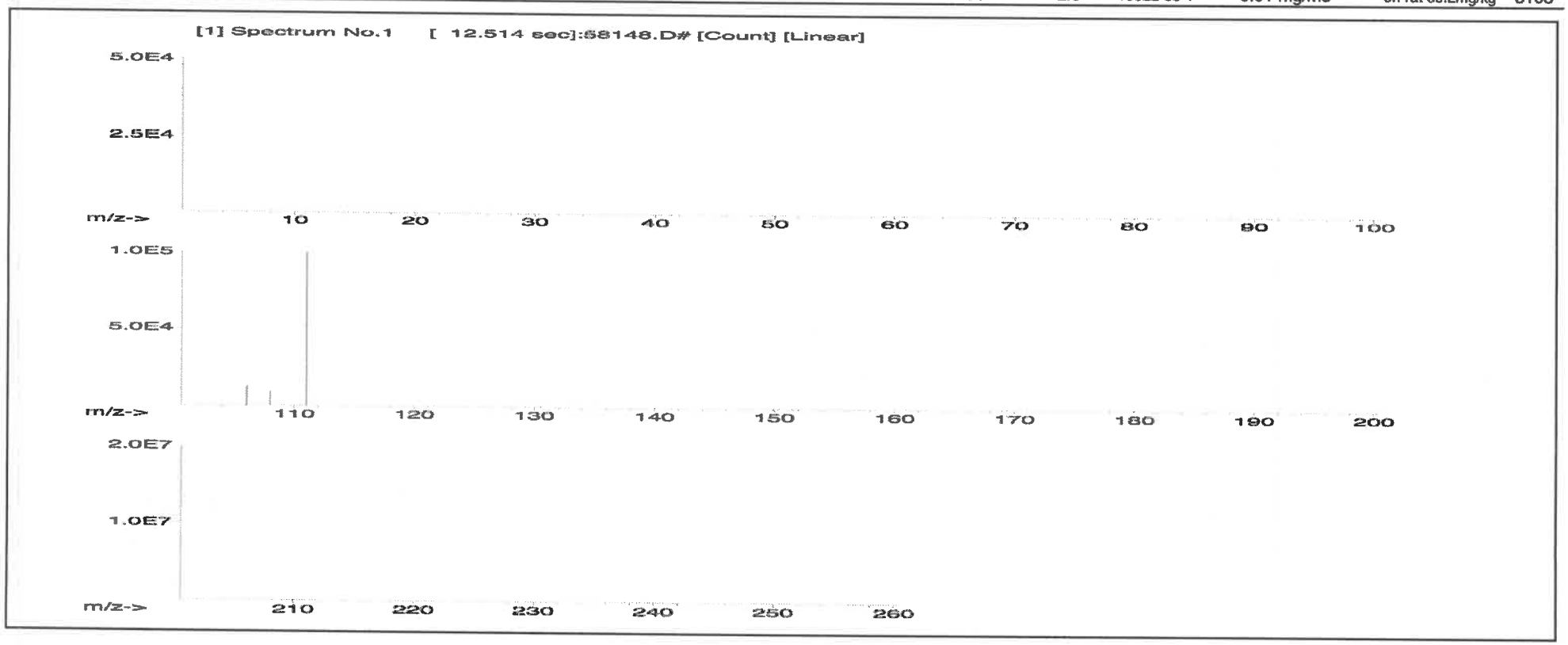
		Lot #	
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Aleah O'Brady
Formulated By: Aleah O'Brady 070124

Pedro Rentas
Reviewed By: Pedro L. Rentas 070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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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

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

R: 8/5/24

CERTIFIED WEIGHT REPORT:

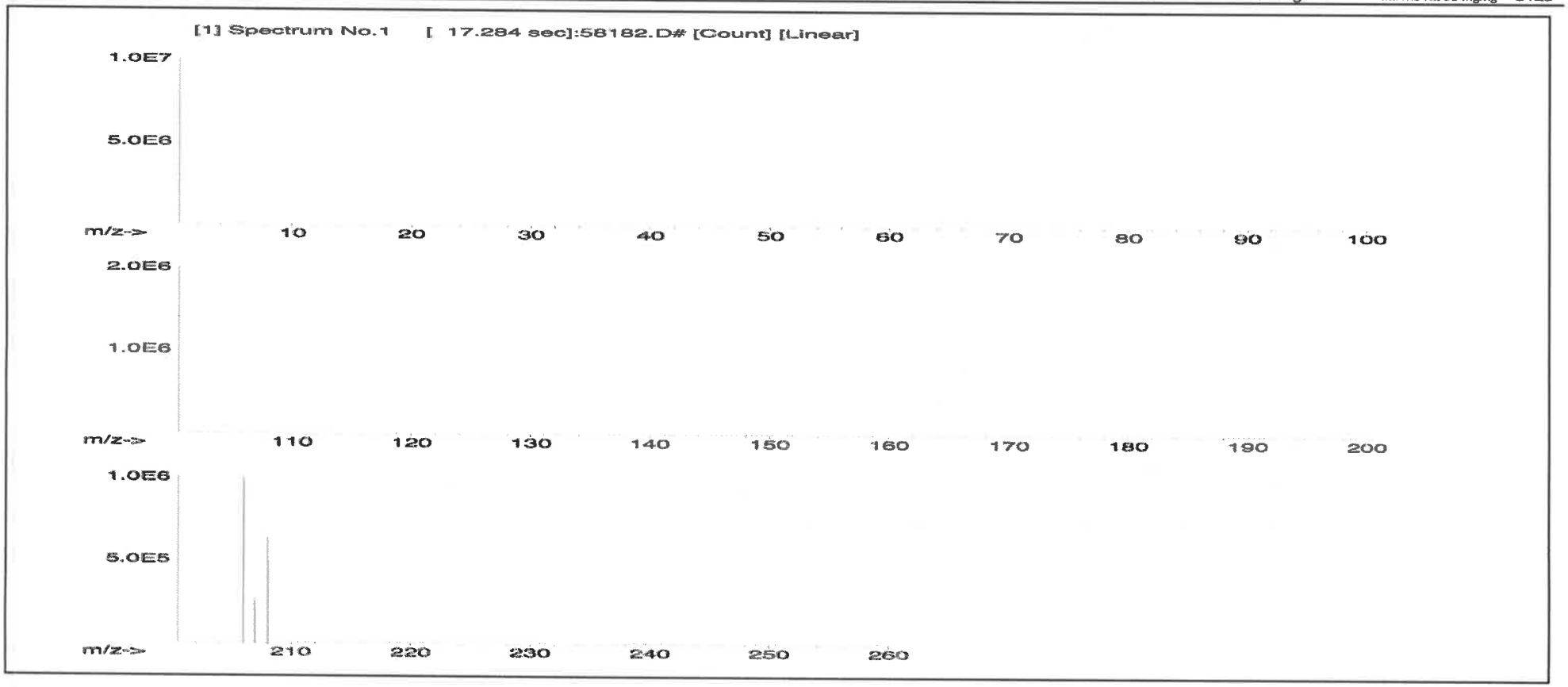
Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

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).

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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58119
Lot Number: 071122
Description: Potassium (K)

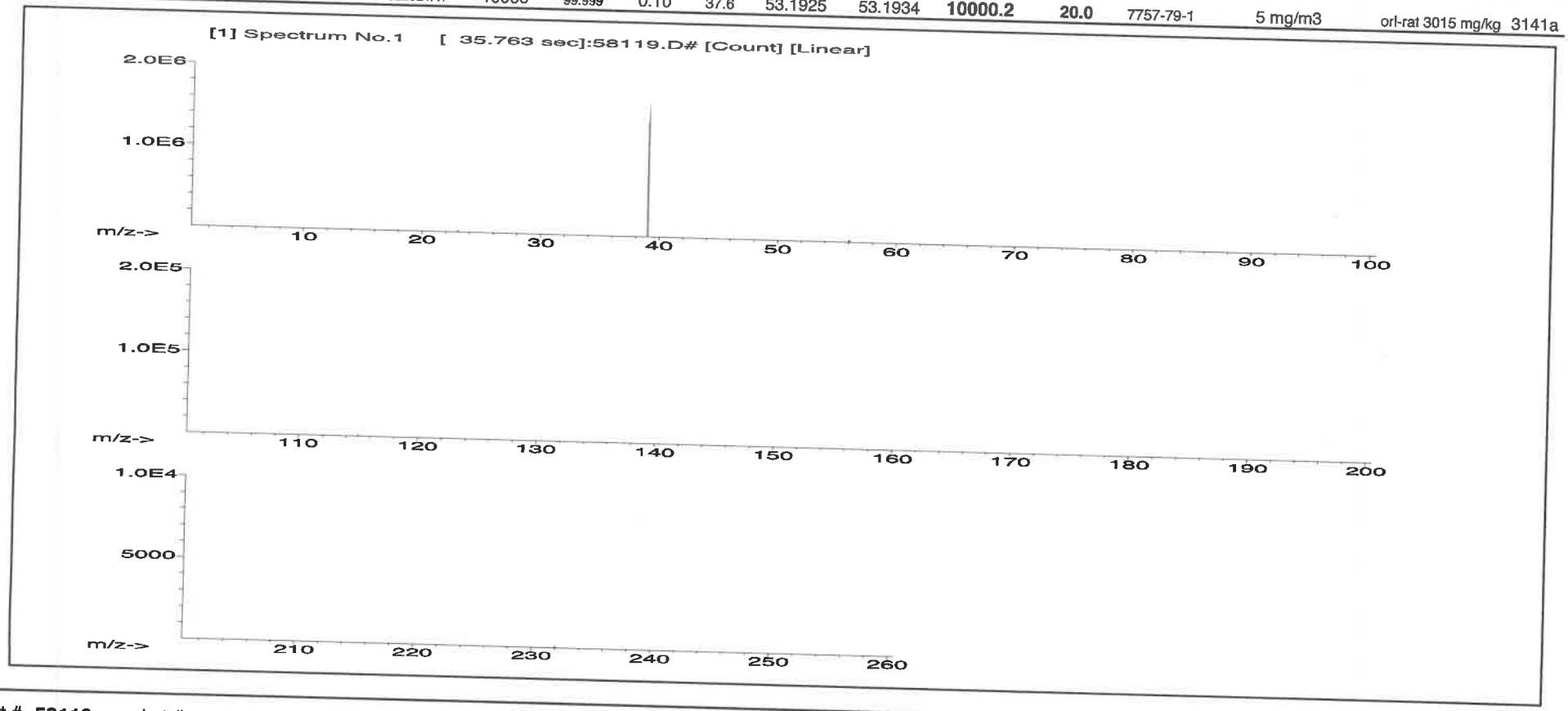
Expiration Date: 071125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

QATS LABORATORY INORGANIC REFERENCE MATERIAL
INITIAL CALIBRATION VERIFICATION SOLUTIONS
(ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

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

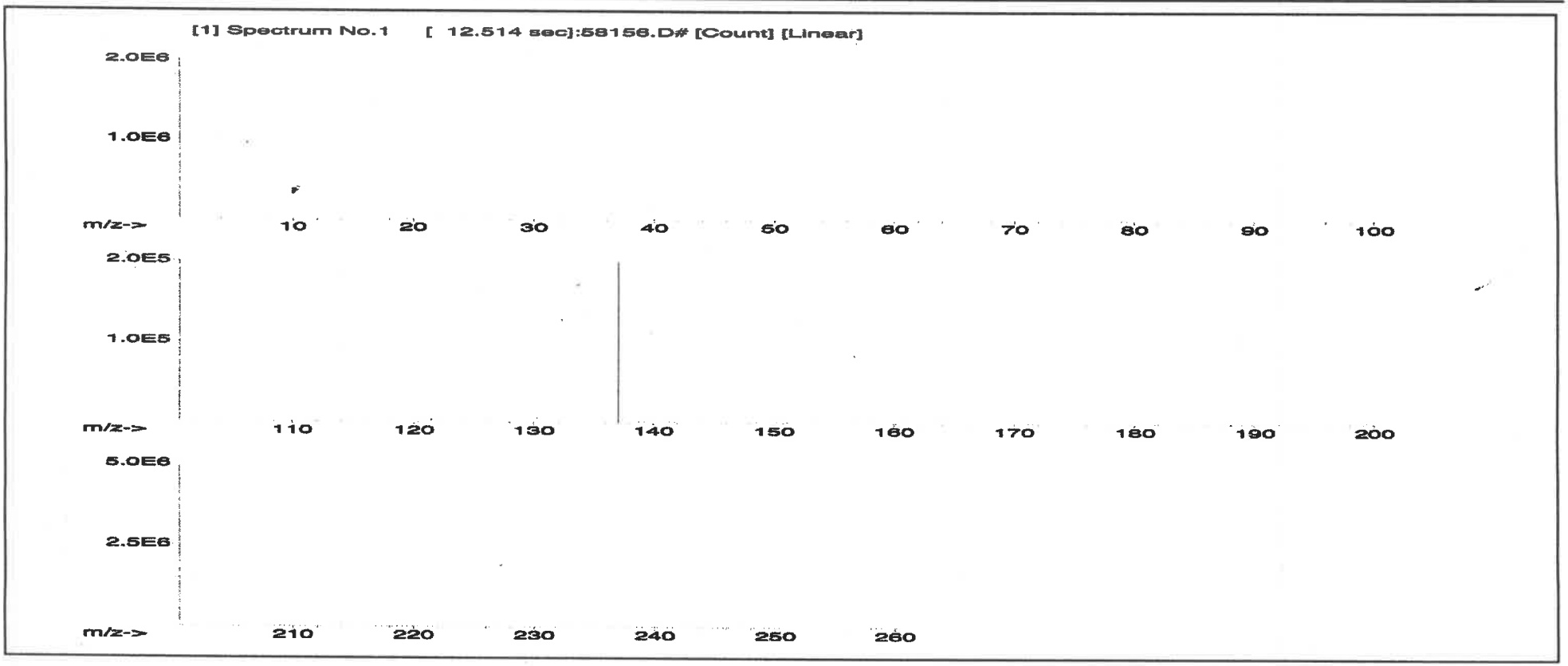
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
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As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<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.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5497 - M5498 R: 03/17/23 (BA)

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CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

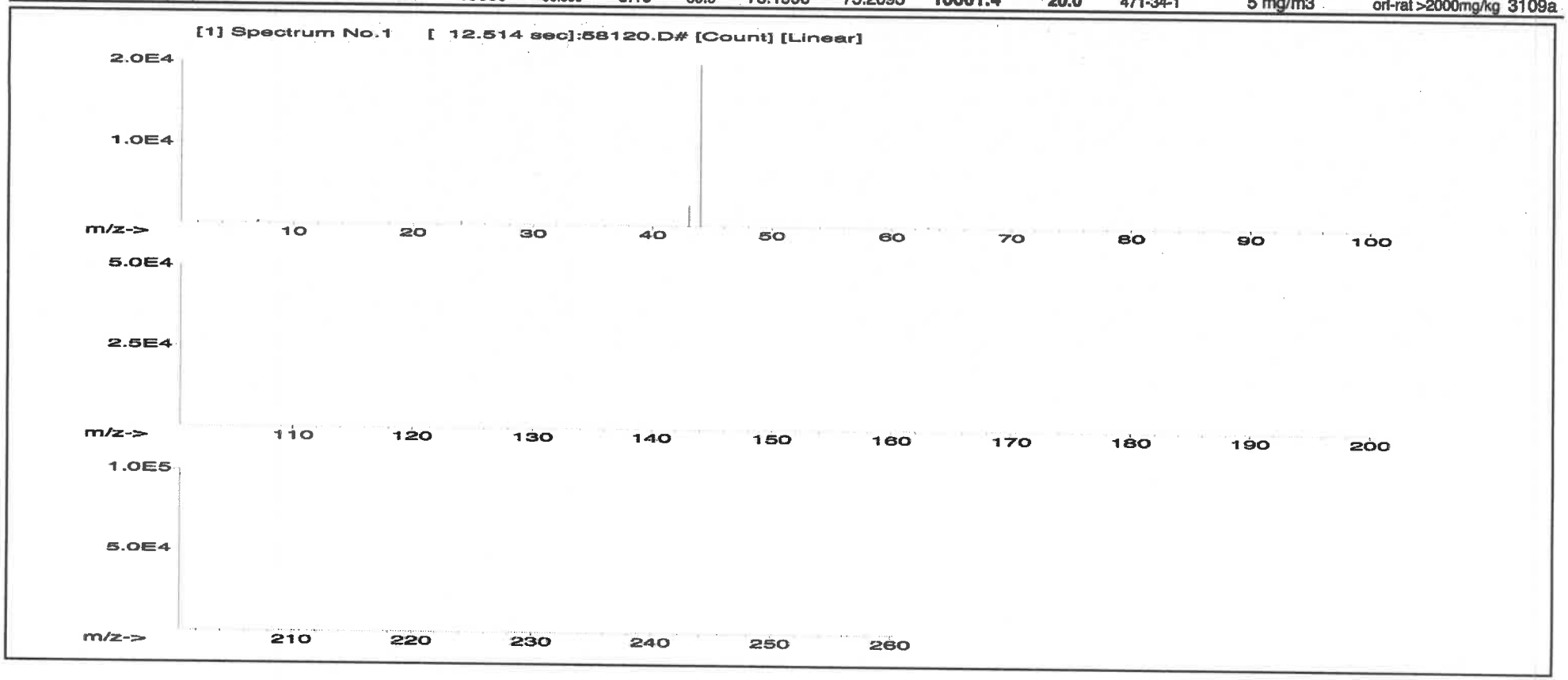
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	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.
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Certified Reference Material CRM

M 5513 R: 03/17/23 BE

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CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 061522
Description: Lead (Pb)

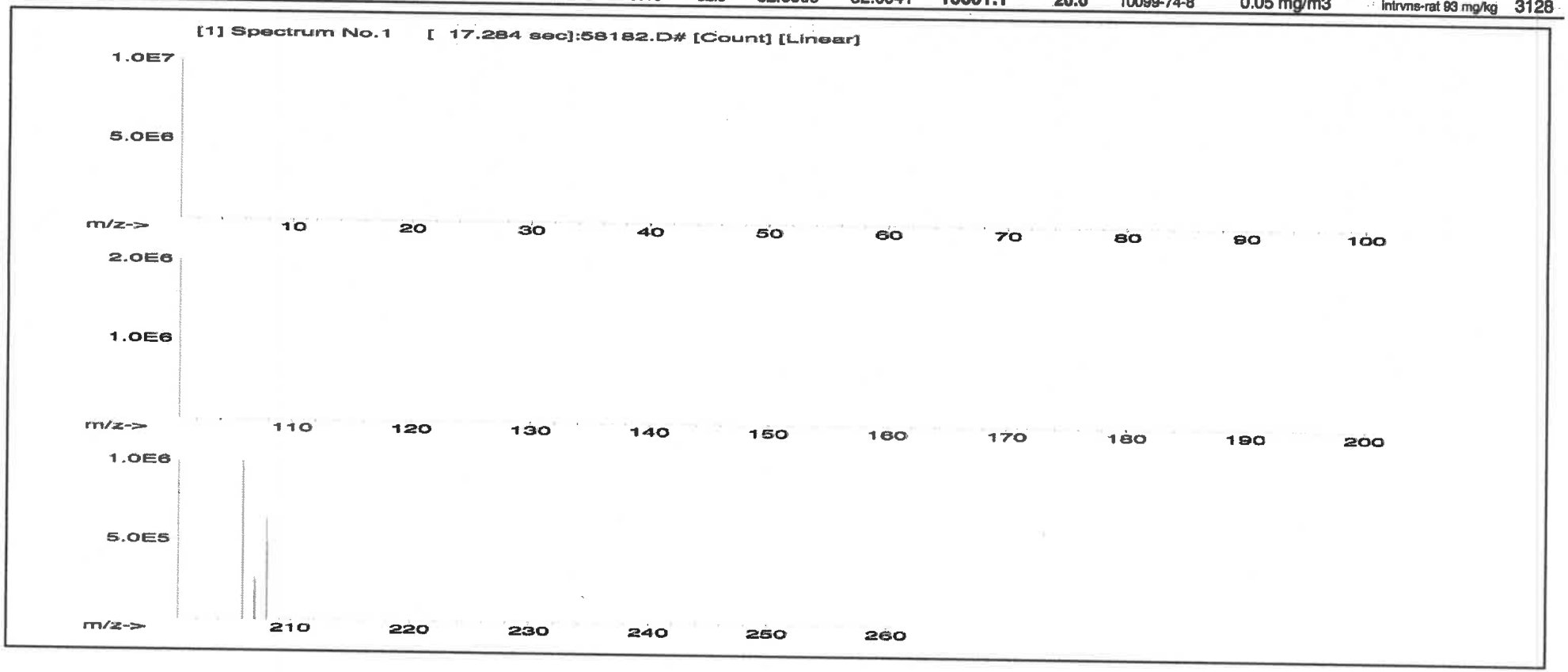
Expiration Date: 061525
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Giovanni Esposito	061522
Reviewed By:	Pedro L. Rentas	061522

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0041	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	Intrvns-rat 93 mg/kg	3128



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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MS514 - MS515 R: 03/17/22

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 092122
Description: Iron (Fe)

Expiration Date: 092125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 5000.1 ± 0.12 Flask Uncertainty

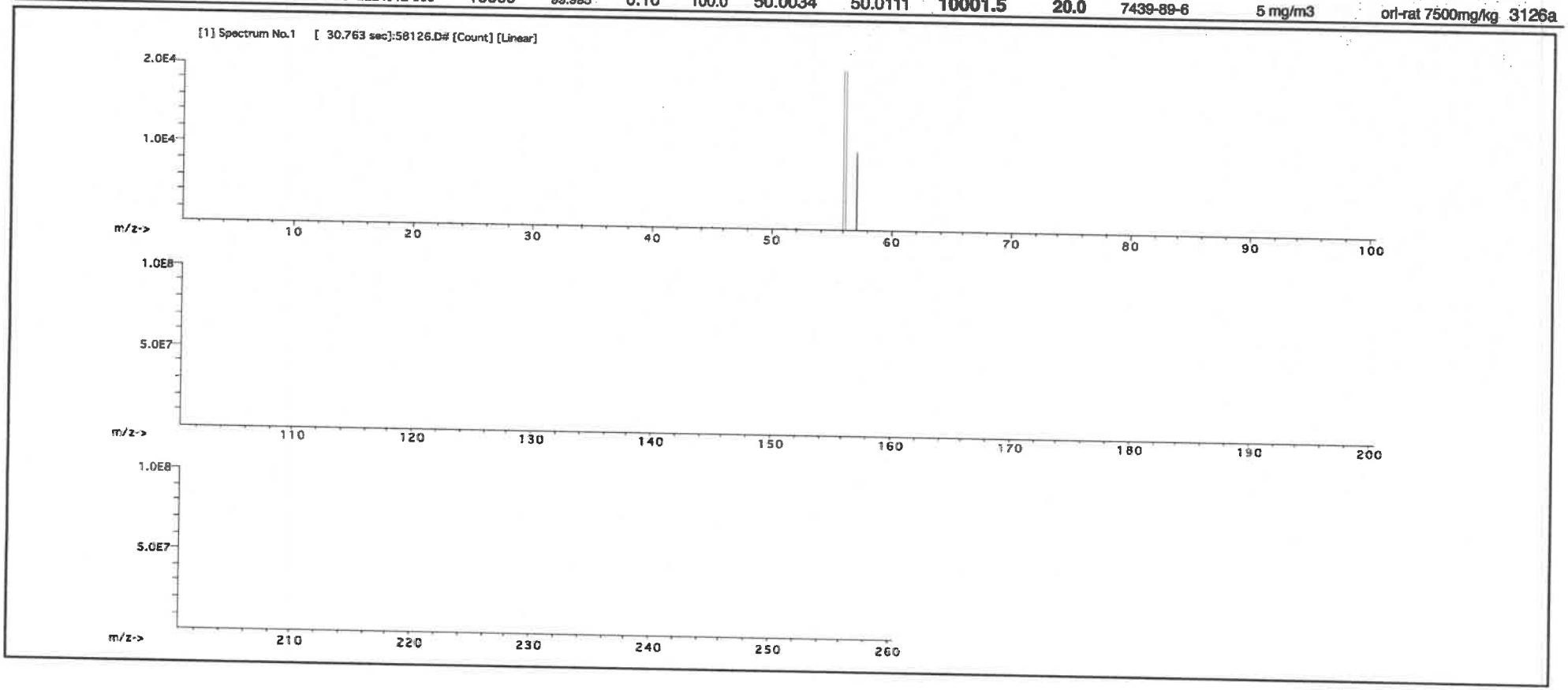
		Lot #	
Solvent:	20510011	Nitric Acid	
7.0%	350.0 (mL)	Nitric Acid	

5E-05 Balance 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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																			
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.10	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.05	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.05
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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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Certified Reference Material CRM

M5519. M5520 (BH) R:03/17/23

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58119
Lot Number: 120822
Description: Potassium (K)

Expiration Date: 120825
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 ± 0.06 Flask Uncertainty

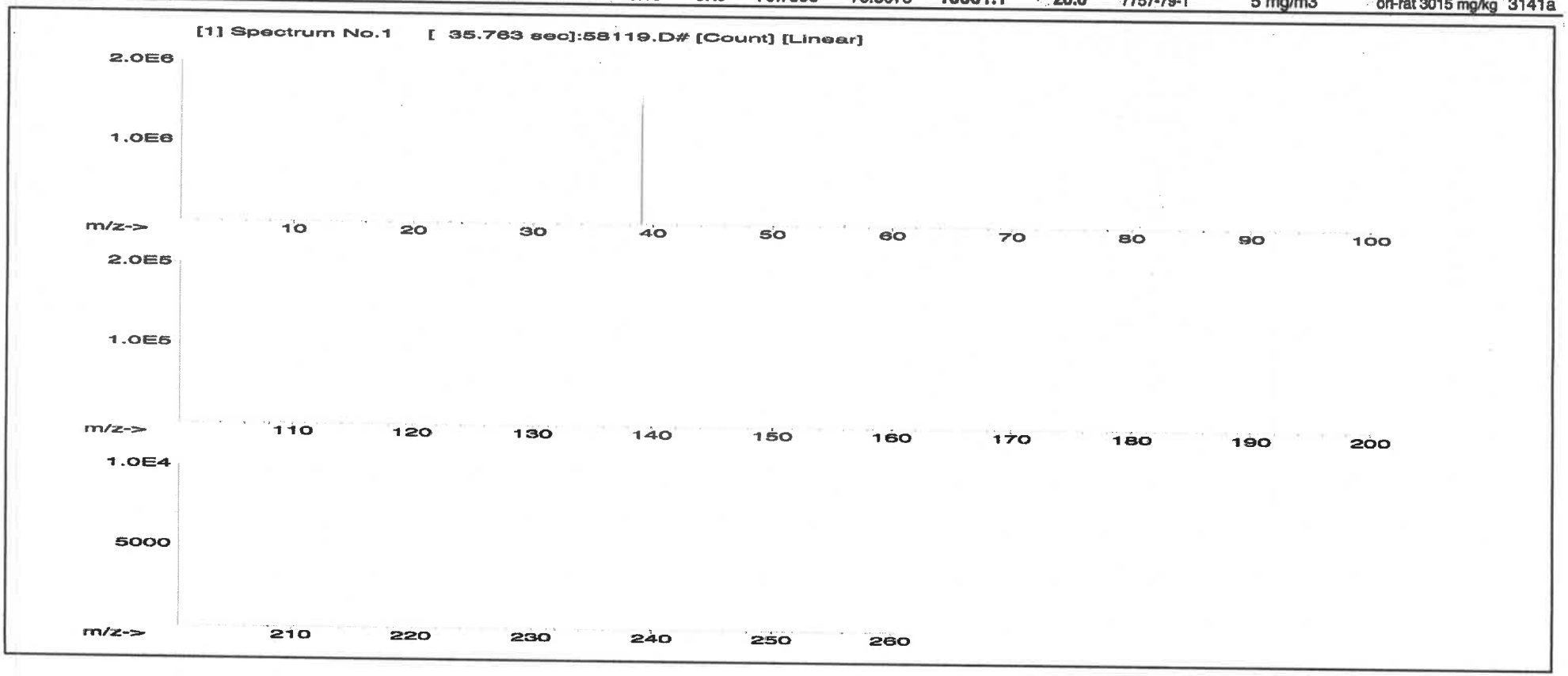
		Lot #	
Solvent:	20510011		Nitric Acid
	2%	60.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	120822
Reviewed By:	Pedro L. Rentas	120822

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD022021A1	10000	99.999	0.10	37.6	79.7990	79.8075	**10001.1**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 mg/kg	3141a



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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
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Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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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-55118-BOI5021-061223

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M5658 R ! 8/25/23

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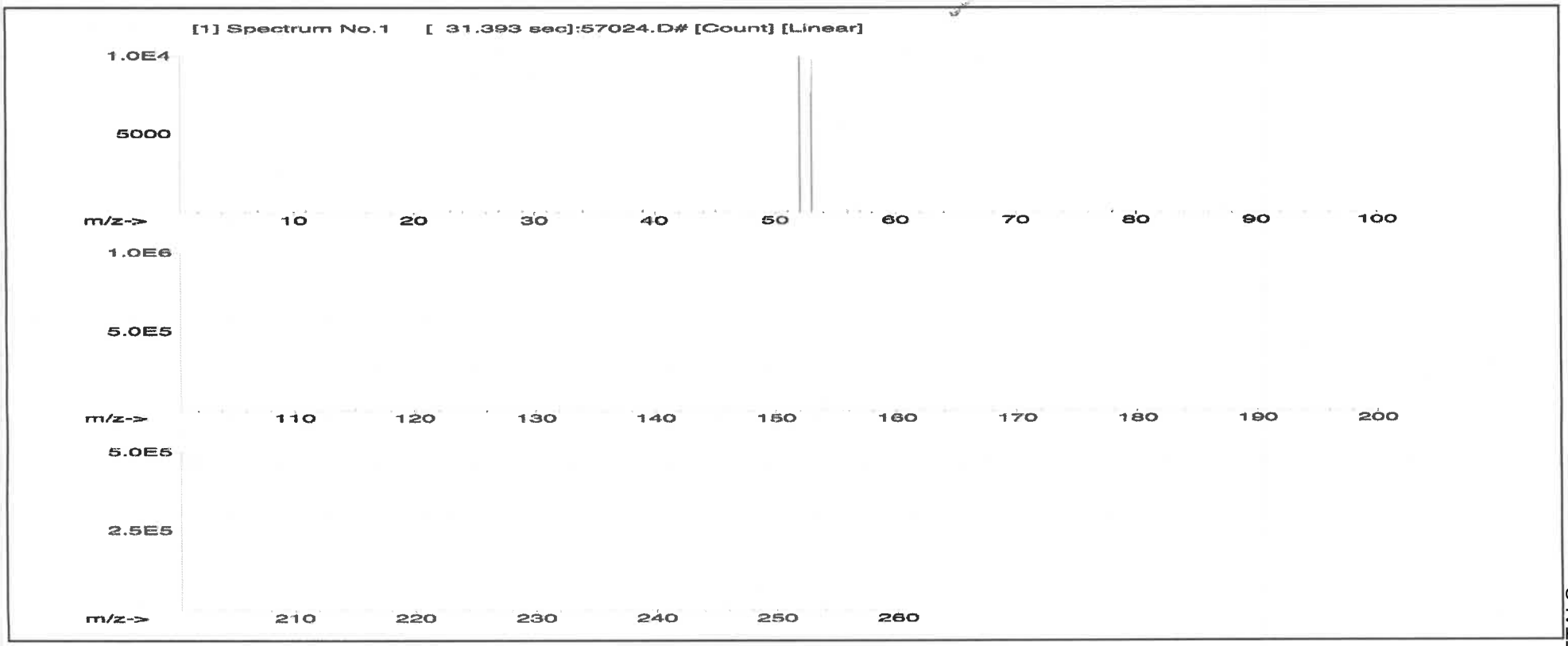
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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M5648 R: 10/27/23

ANAB ISO 17034 Accredited
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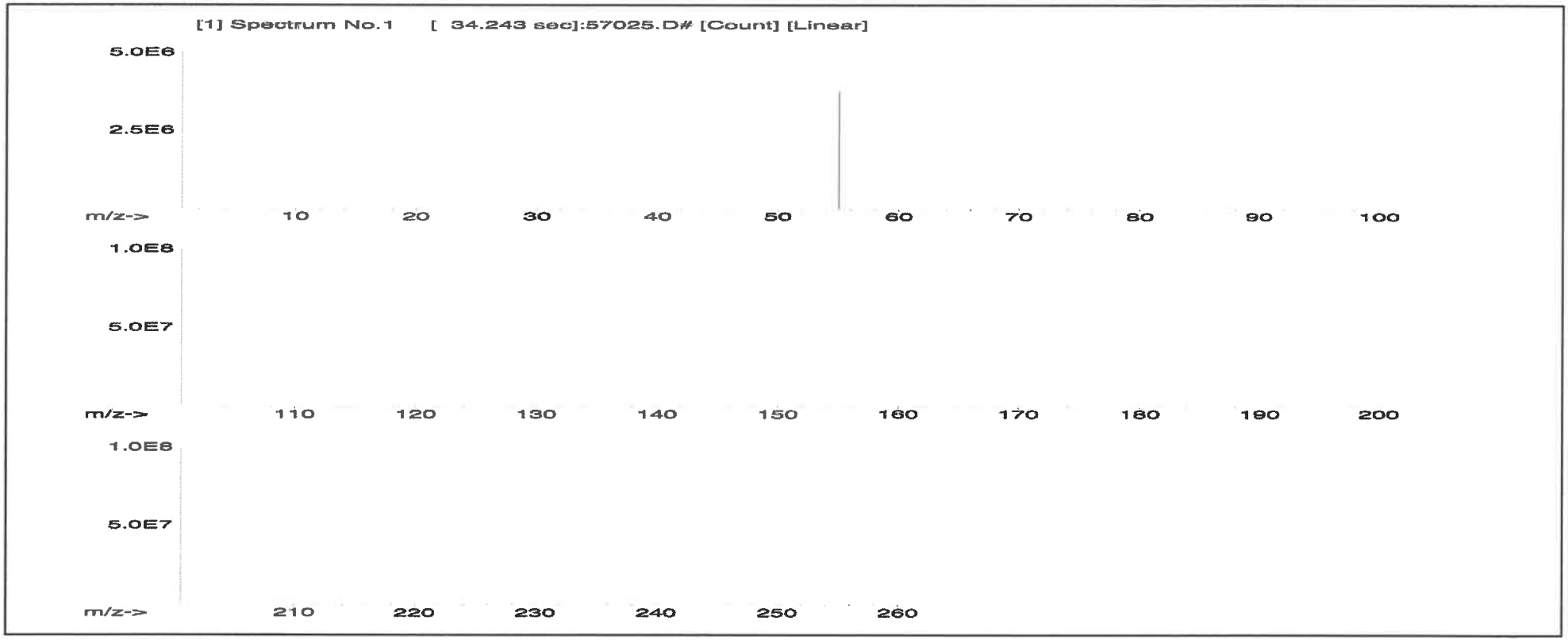
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58025**	24002546	Nitric Acid	
Lot Number:	**102623**			
Description:	**Manganese (Mn)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	102626			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102623
Reviewed By:	Pedro L. Rentas	102623

	Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1.	Manganese(II) nitrate tetrahydrate (Mn)	58125	071123	0.1000	300.0	0.084	1000	10000.1	**1000.0**	**2.1**	20694-39-7	5 mg/m3	orl-rat >300mg/kg	3132



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* 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).

art # **58025** Lot # **102623**

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R: 8/25/23 M5751

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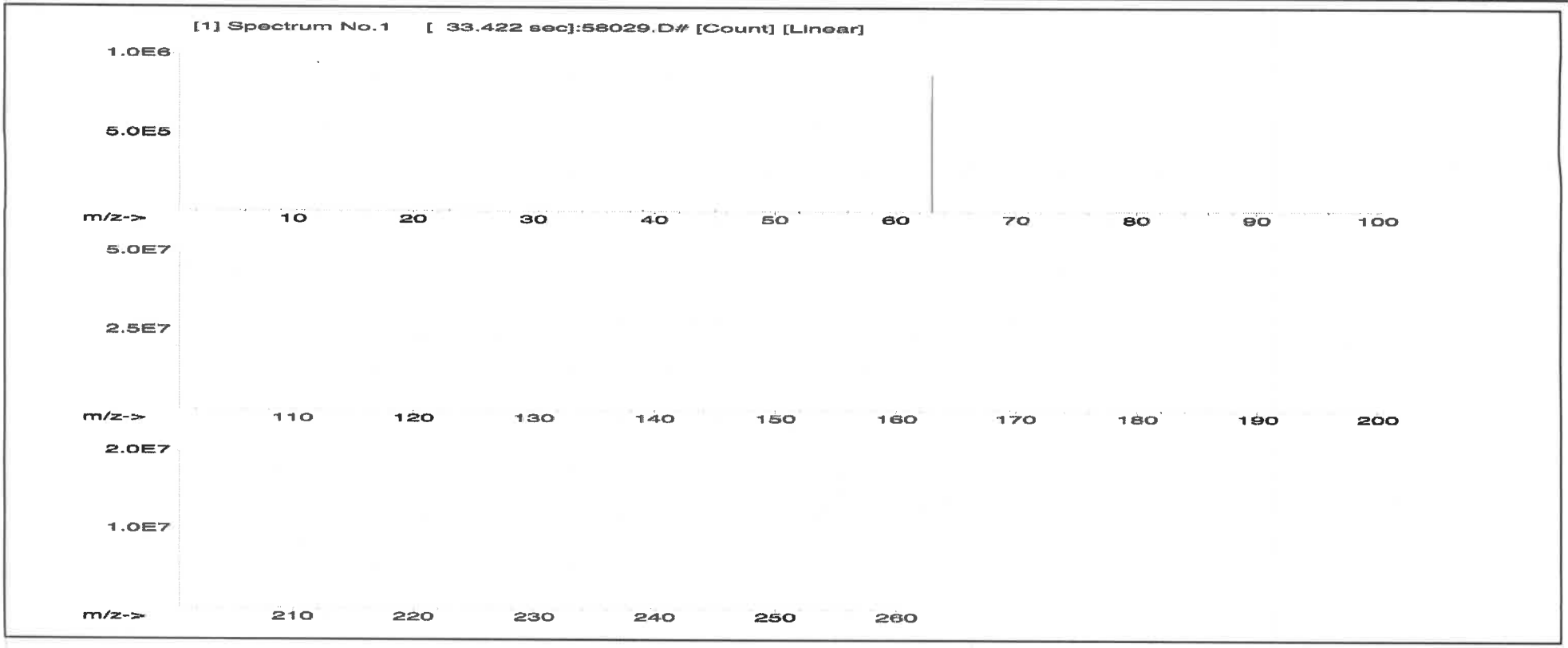
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	21110221	Nitric Acid	
Lot Number:	**071723**			
Description:	**Copper (Cu)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Rentas	071723

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	022723	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5768 M5769 (BP) R:1/3/24

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CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Expiration Date: 091826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02 ± 0.058 Flask Uncertainty

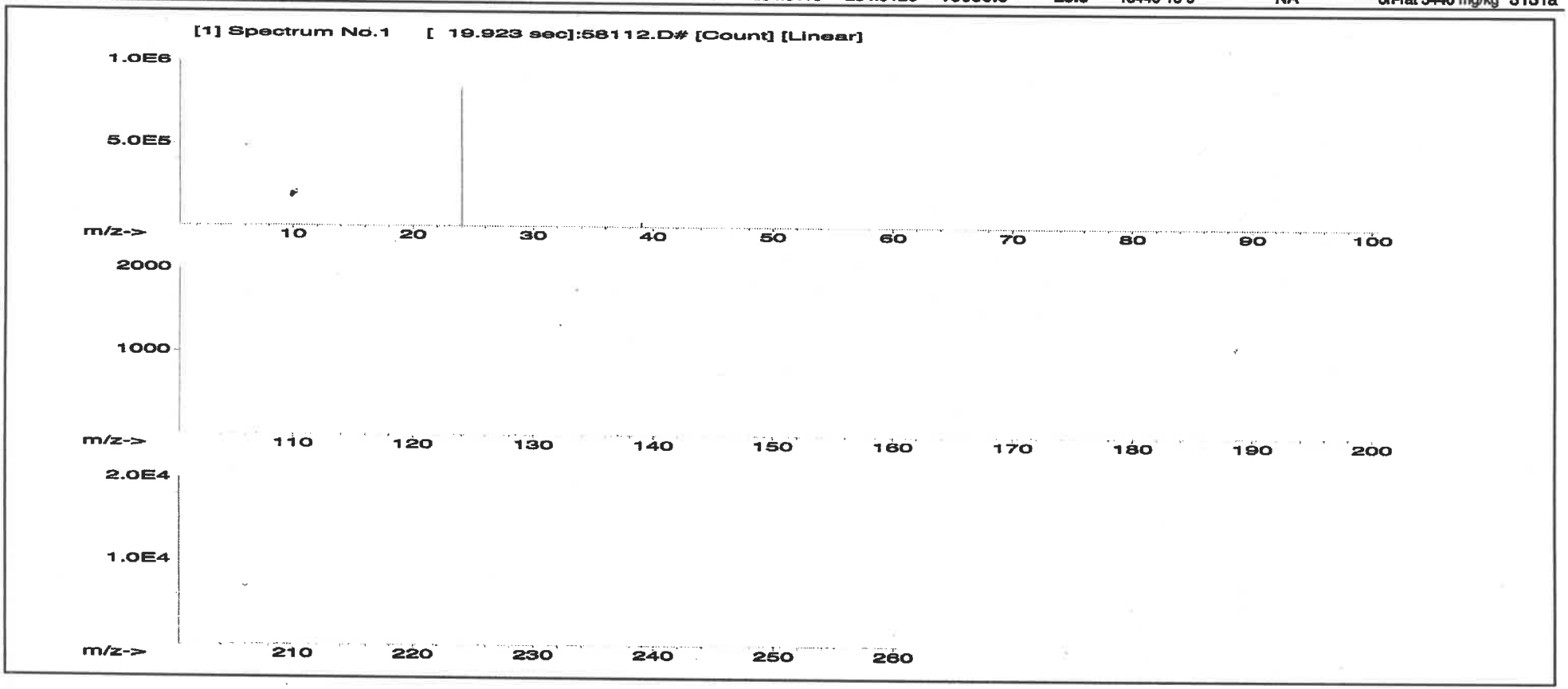
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

M5768, M5769 (BP) R: 1/3/24

Formulated By:	Lawrence Barry	091823
Reviewed By:	Pedro L. Rentas	091823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9118	234.9126	**10000.0**	**20.0**	13446-18-9	NA	ori-rat 5440 mg/kg	3131a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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M5768 M5769 (BP) R:1/3/24

Certified Reference Material CRM

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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Expiration Date: 091826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

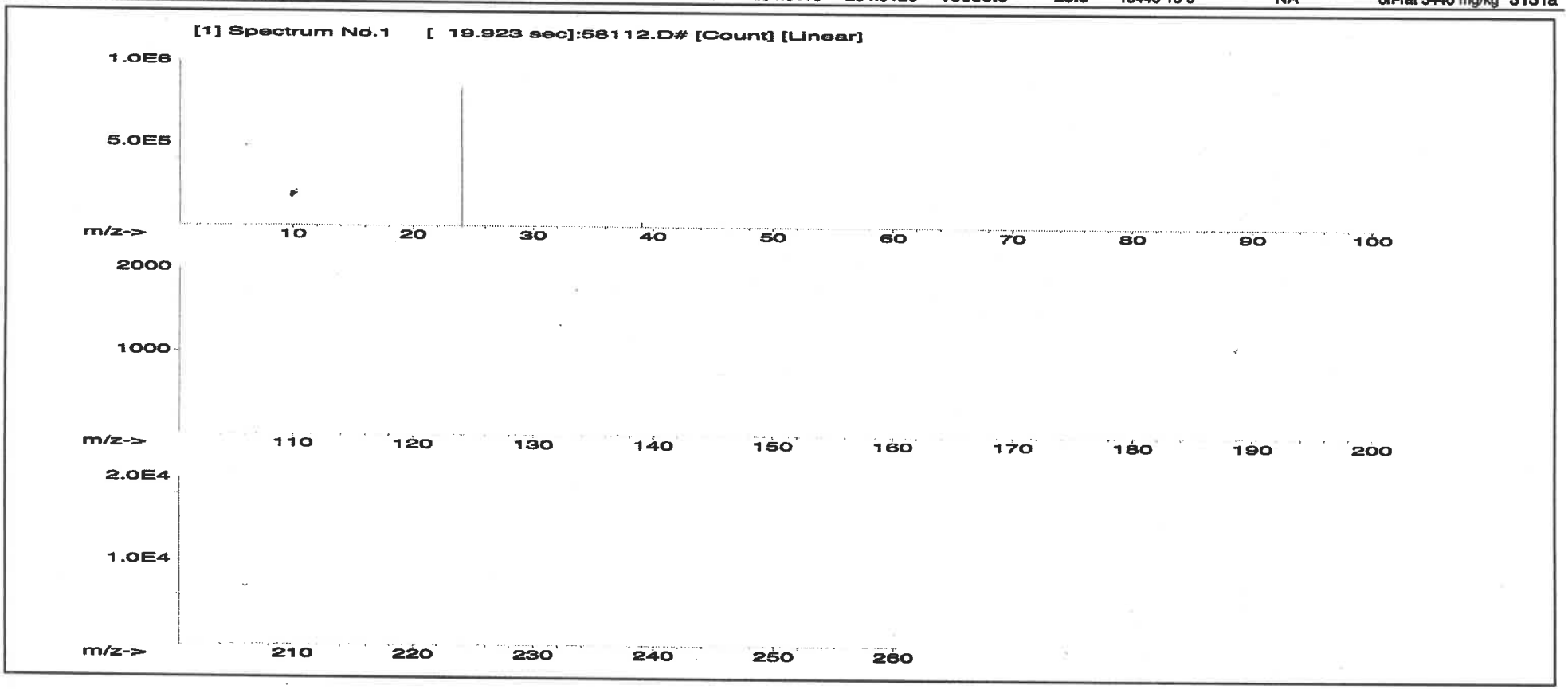
		Lot #	
Solvent:	2%	24002546	Nitric Acid
		40.0 (mL)	Nitric Acid

M5768, M5769 (BP) R: 1/3/24

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	091823
Reviewed By:	Pedro L. Rentas	091823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9118	234.9126	**10000.0**	**20.0**	13446-18-9	NA	ori-rat 5440 mg/kg	3131a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R: 02/09/24 M5798

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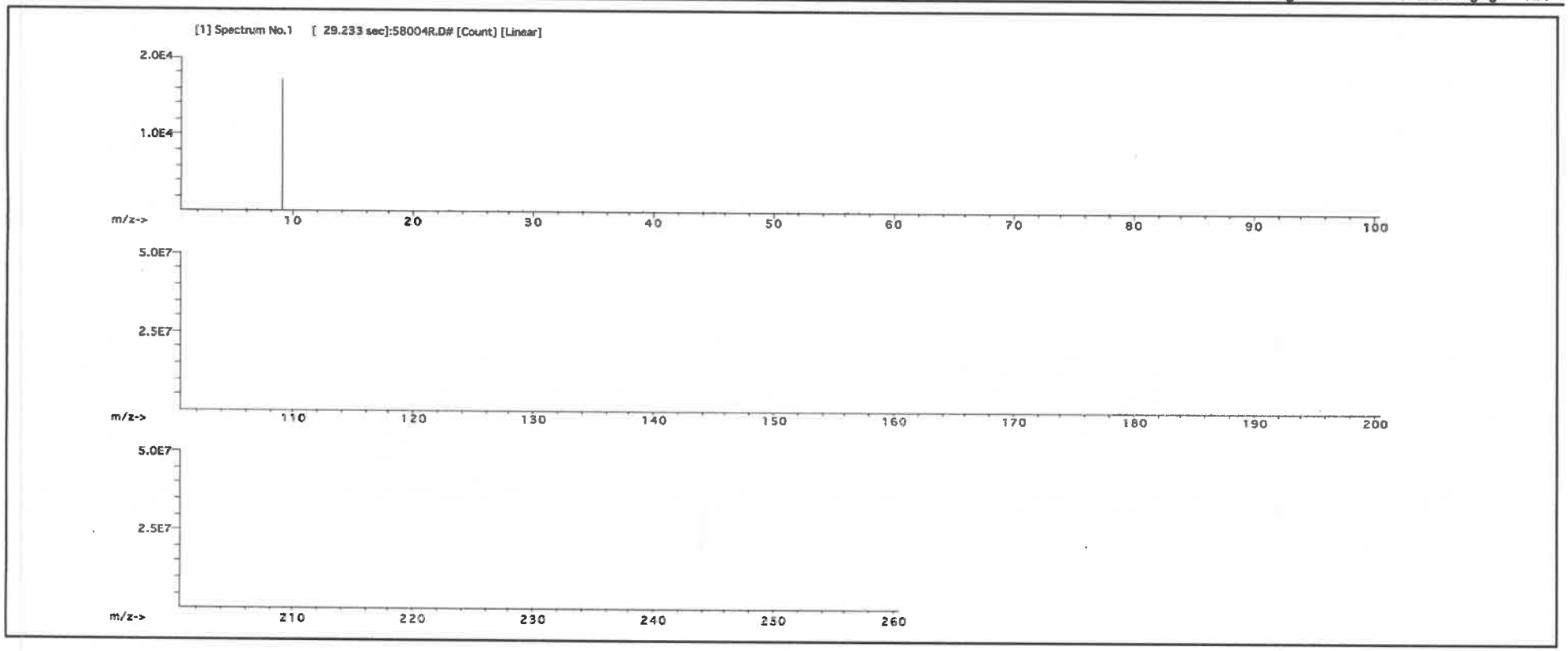
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:
Part Number:	**57004**	24002546	Nitric Acid
Lot Number:	**102523**		
Description:	**Beryllium (Be)**		
		2.0%	40.0 (mL) Nitric Acid
Expiration Date:	102526		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05	Balance Uncertainty
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R? 02/09/24 IV15799

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

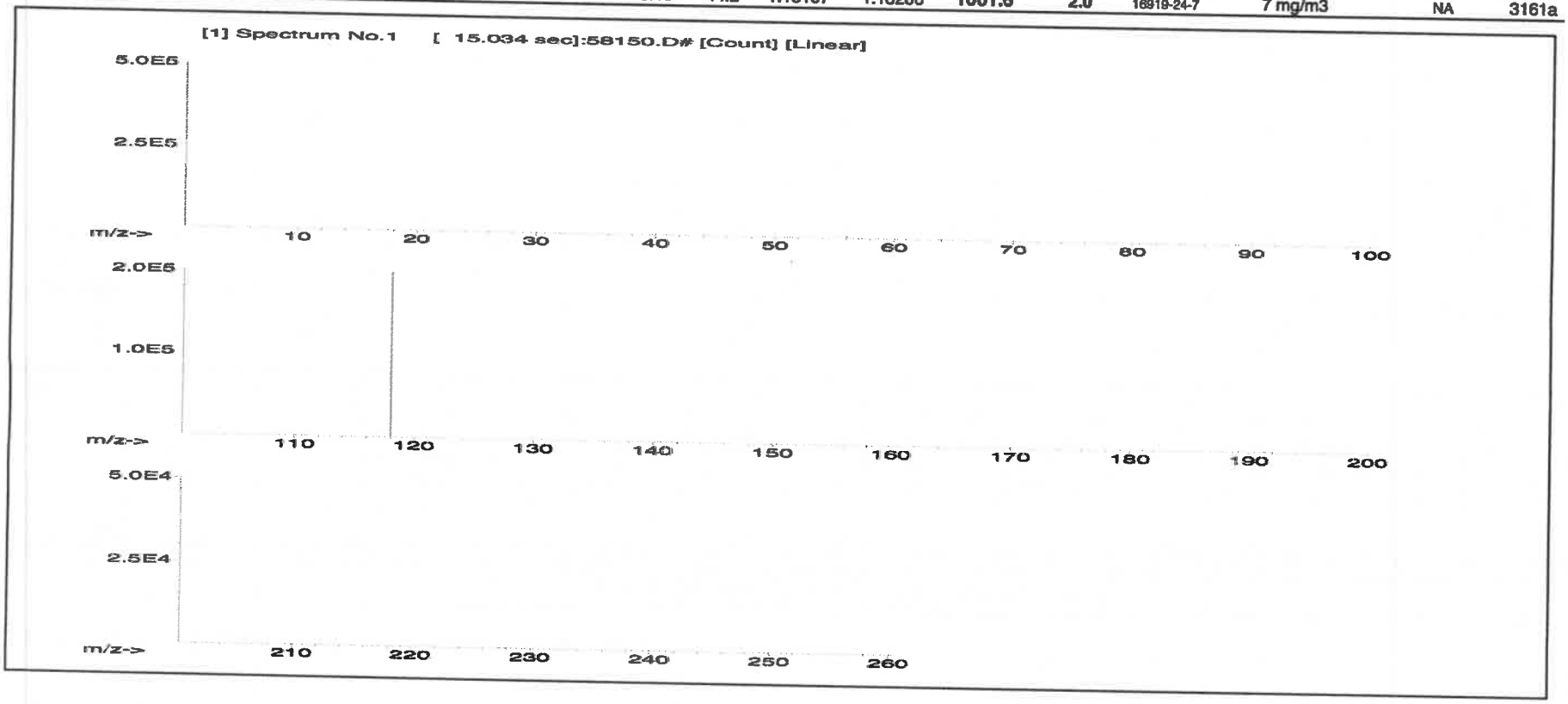
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

Solvents:	Lot #	
	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 IM5800 BH

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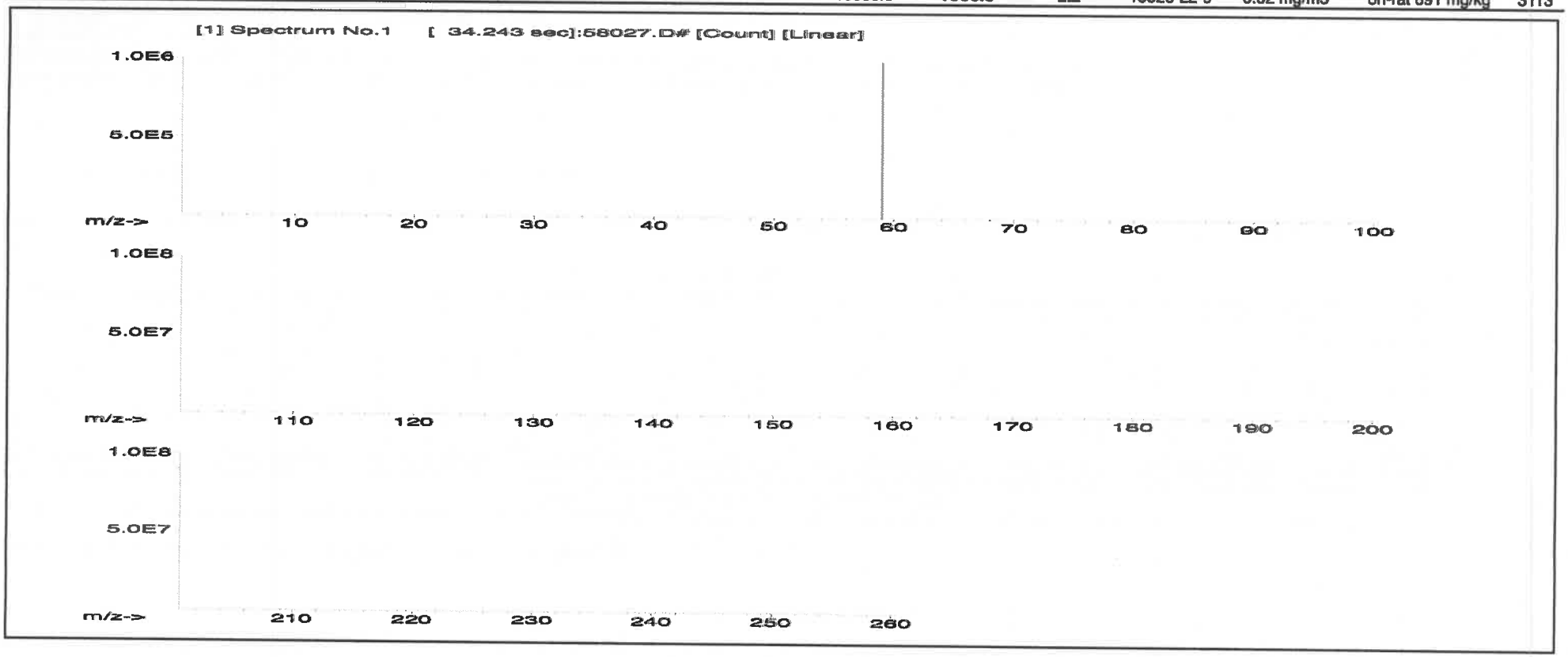
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By: Lawrence Barry 091923

Reviewed By: Pedro L. Rentas 091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	2.2	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R: 02/09/24 M5801 BH

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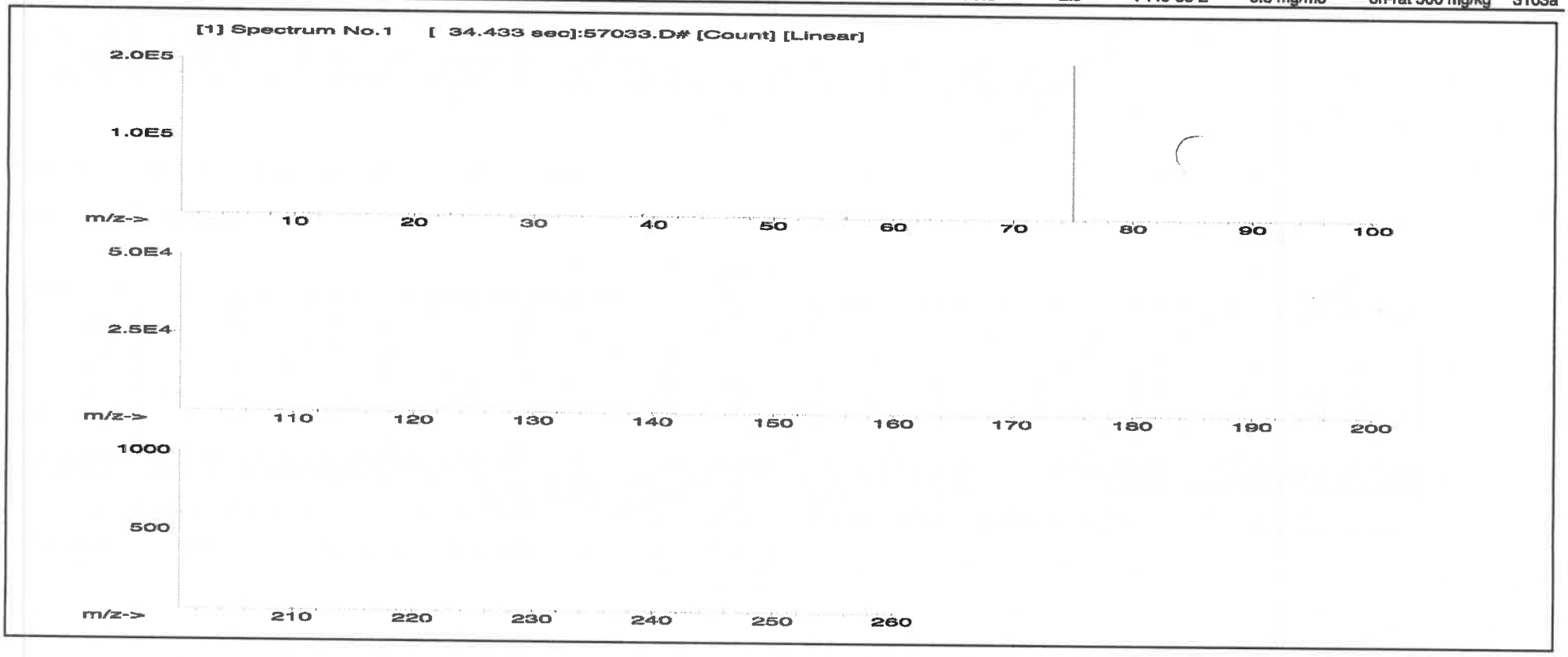
CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**				
Lot Number:	**111323**	24002546	Nitric Acid		
Description:	**Arsenic (As)**				
		2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	2.0	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R1 02/09/24. M58165

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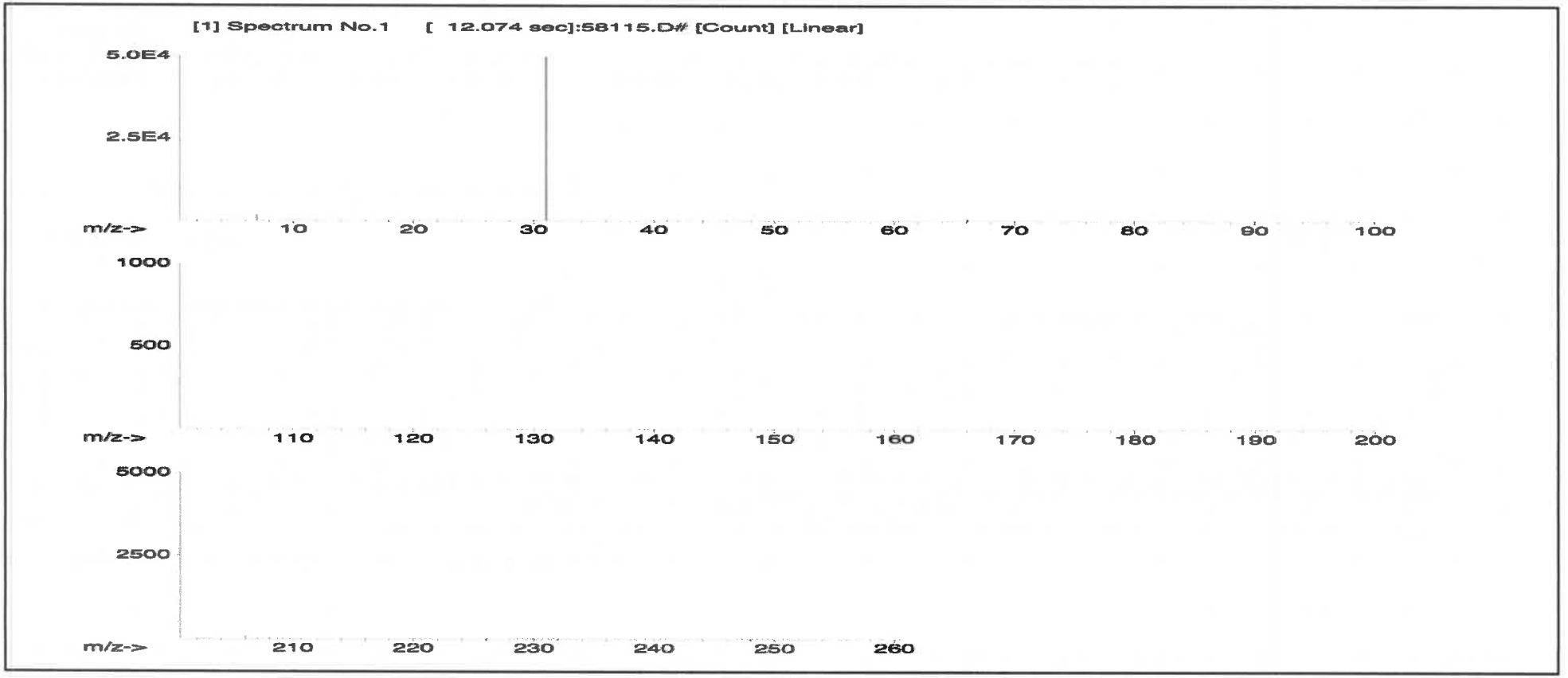
CERTIFIED WEIGHT REPORT:

Part Number:	**57115**		**Solvent:**	**Lot #** 21110221	Nitric Acid
Lot Number:	**041723**				
Description:	**Phosphorous (P)**		2%	40.0 (mL)	Nitric Acid
Expiration Date:	041726				
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		

Formulated By:	Lawrence Barry	041723
Reviewed By:	Pedro L. Rentas	041723

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	10000	99.999	0.10	27.5	72.7287	72.7289	**10000.0**	**20.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/kg	3186



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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Certified Reference Material CRM

R: 02/09/24 M5817

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CERTIFIED WEIGHT REPORT:

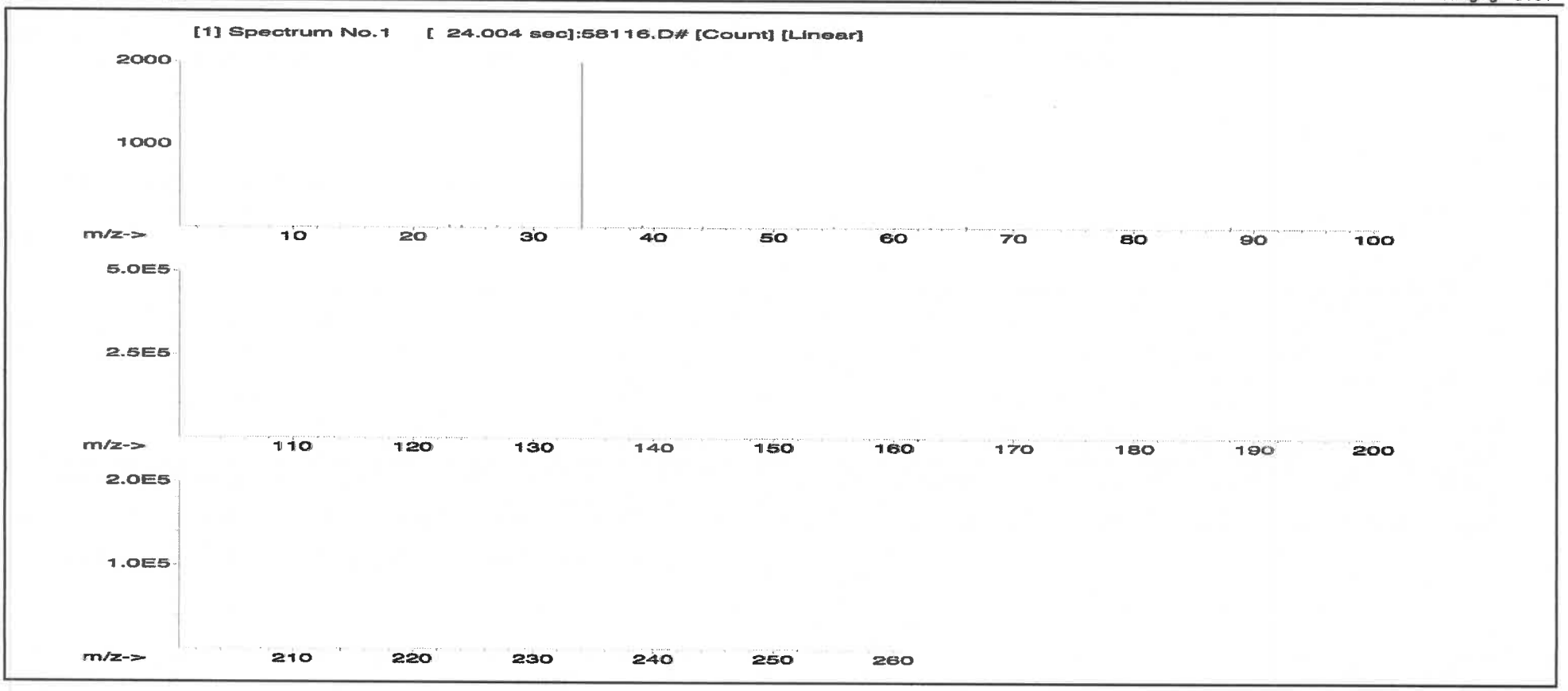
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

Lot #
Solvent: 071123 ASTM Type 1 Water

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 1999.48 0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 02/09/24 M.5818

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CERTIFIED WEIGHT REPORT:

Part Number: 57014
Lot Number: 122023
Description: Silicon (Si)

Expiration Date: 122026
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1999.48 ± 0.058 Flask Uncertainty

Solvent: 24002546 Nitric Acid

2% 40.0 (mL) Nitric Acid

5E-05 Balance Uncertainty

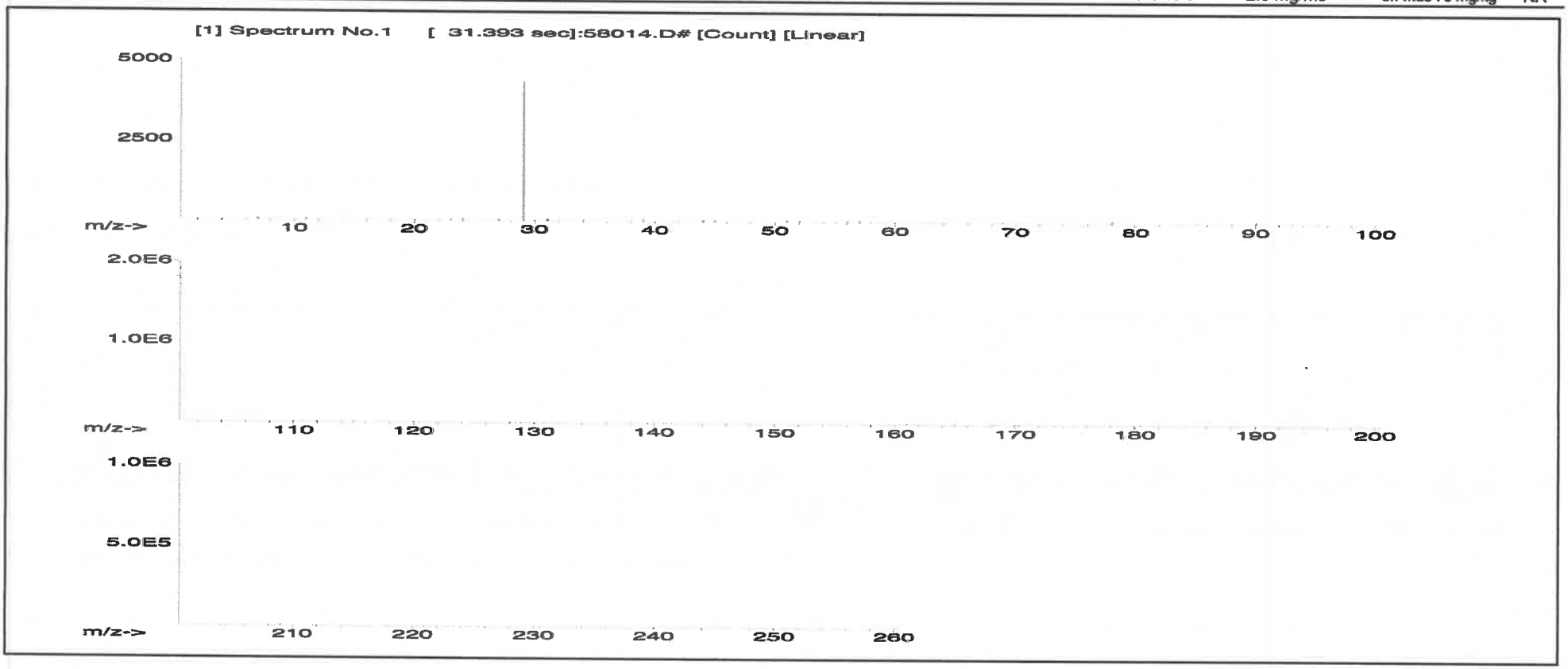
Aleah O'Brady

Formulated By:	Aleah O'Brady	122023

Pedro Rentas

Reviewed By:	Pedro L. Rentas	122023

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorosilicate (Si)	IN009	SID082022A1	1000	99.999	0.10	14.4	13.8854	13.8855	**1000.0**	**2.0**	16919-19-0	2.5 mg/m3	orl-mus 70 mg/kg	NA



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	T	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 02/09/24 M5819

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CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

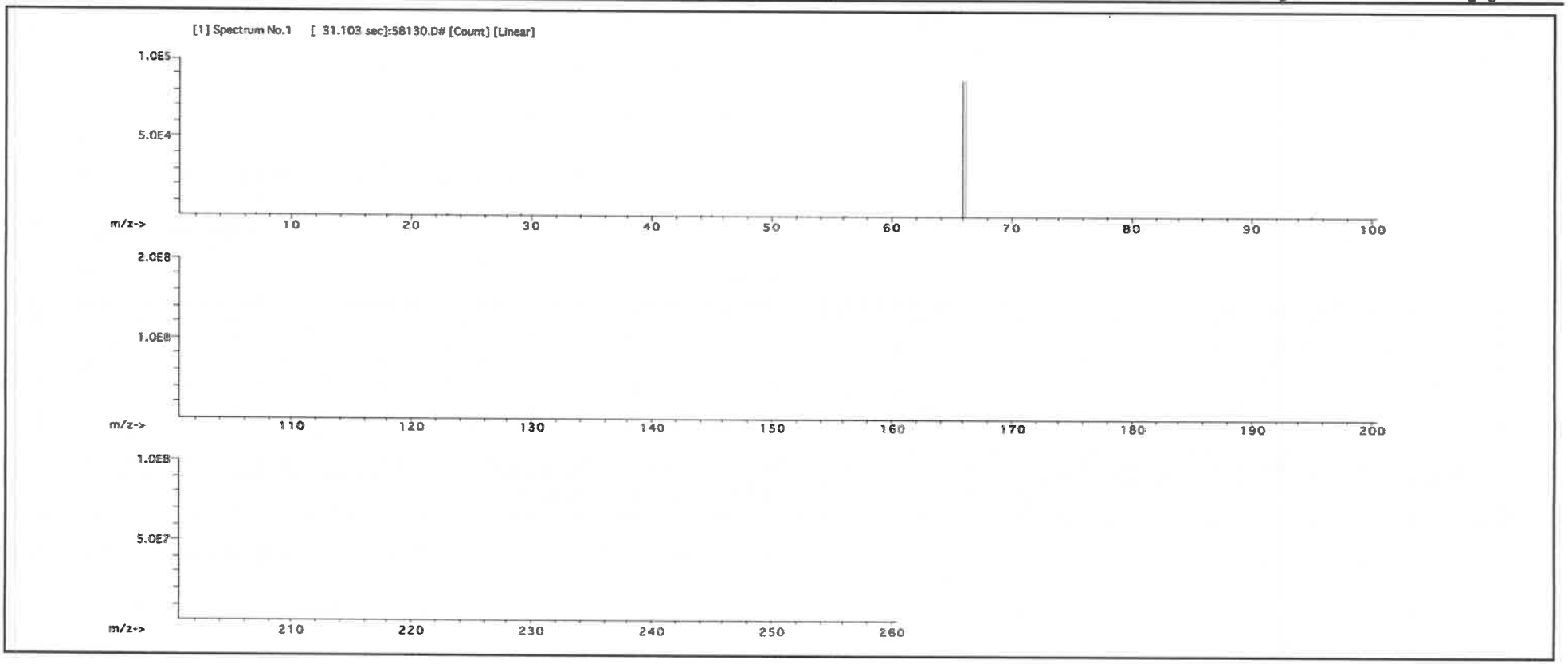
Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 ± 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	

Formulated By:	Benson Chan	111623
Reviewed By:	Pedro L. Rentas	111623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	12.3475	12.3502	**1000.2**	**2.0**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* 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

M5961 R: 6/11/24

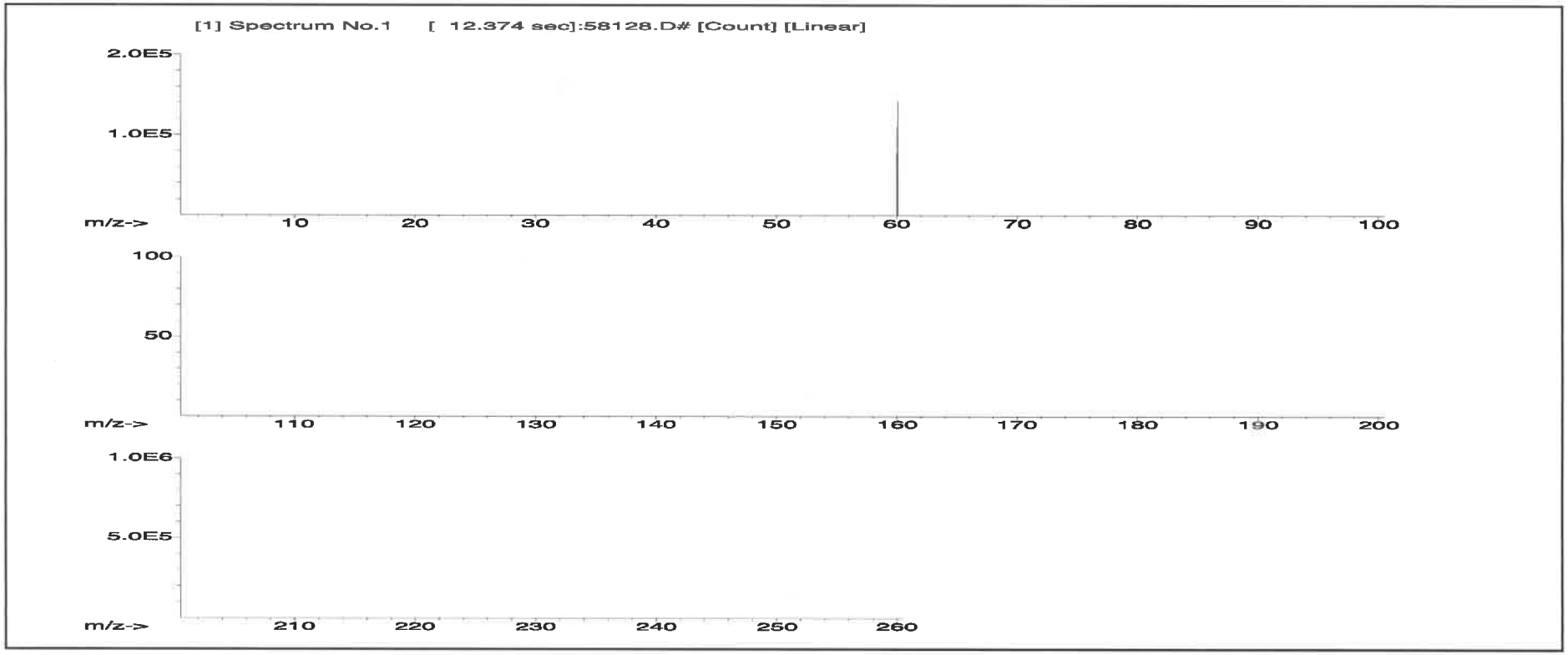
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57028**		**Lot #**		
Lot Number:	**041124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Nickel (Ni)**				
		2%	5.0 (mL)	Nitric Acid	
Expiration Date:	041127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	249.85	0.002	Flask Uncertainty		

Formulated By:	Brian Geddes	041124
Reviewed By:	Pedro L. Rentas	041124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	IN033	NIM052023A1	1000	99.999	0.10	20.2	1.2369	1.2369	**1000.0**	**2.0**	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5962 R! 06/14/24.

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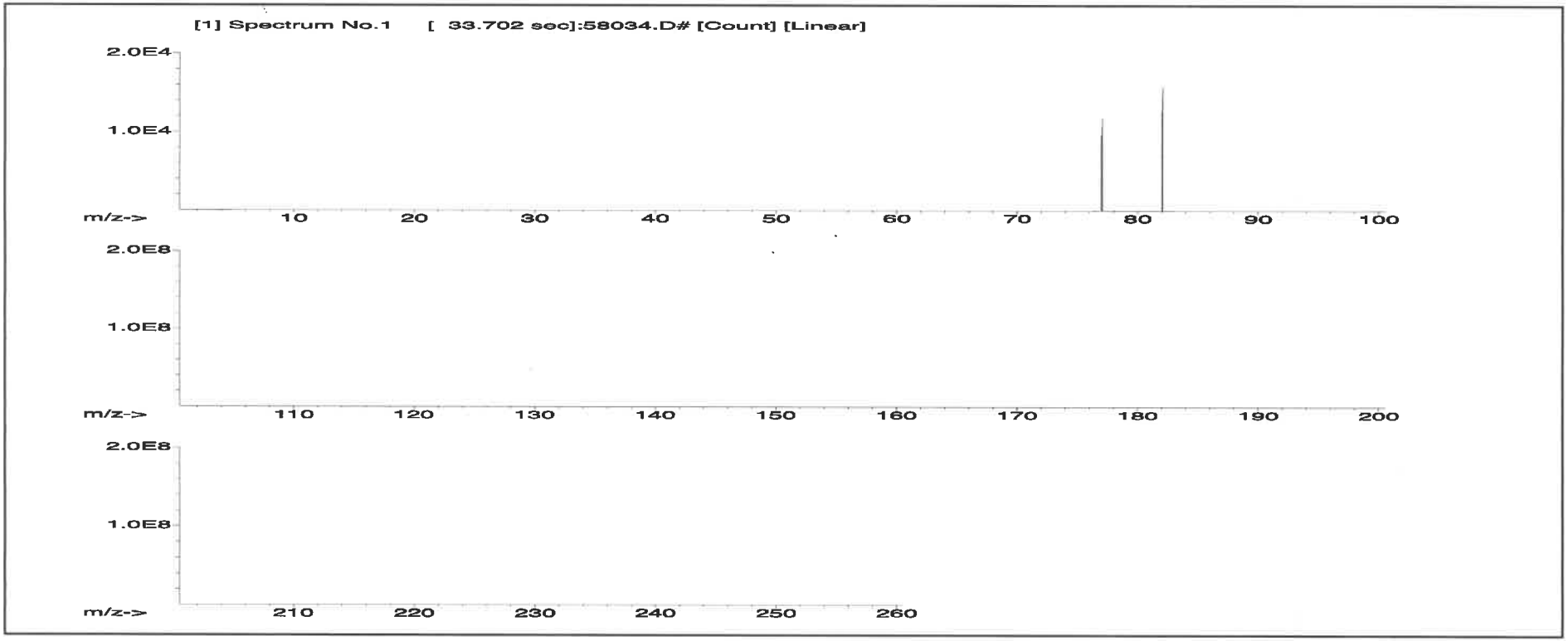
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



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AR-1539 Certificate Number
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
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M5976, M5977
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1.0 ACCREDITATION / REGISTRATION

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

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 17, 2022

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

11.2 Lot Expiration Date

- July 17, 2027

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

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

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

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

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

MS978, MS979

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 865.01 — ACCREDITED Reference Material Producer Certificate 865.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGT11
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	TI Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**1002 ± 4 µg/mL**
	ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

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

Characterization of CRM/RM by Two or More Methods

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

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

x_i = mean of Assay Method i with standard uncertainty $u_{Char\ i}$

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

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

CRM/RM Expanded Uncertainty ($\pm$) = $u_{CRM/RM} = k\,(u^2_{Char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

$$X_{CRM/RM} = (\Sigma x_a)\,(v_{Char\ a})$$

X_a = mean of Assay Method A with $u_{Char\ a}$ = the standard uncertainty of characterization Method A

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

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

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

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

6.0 INTENDED USE

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

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

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

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

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

Atomic Weight; Valence; Coordination Number; Chemical Form In Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 for months in 1% 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

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

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

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

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.5798; 540.585.3030; Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

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

11.2 Lot Expiration Date

- June 17, 2027

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

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

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

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

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozlkowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certified Reference Material CRM

H5981 R:6/11/24

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CERTIFIED WEIGHT REPORT:

Part Number:	57092
Lot Number:	060724
Description:	Uranium (U)
Expiration Date:	060727
Recommended Storage:	Ambient (20 °C)
Nominal Concentration (µg/mL):	1000
NIST Test Number:	6UTB
Volume shown below was diluted to (mL):	2000.07

Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.100	Flask Uncertainty	

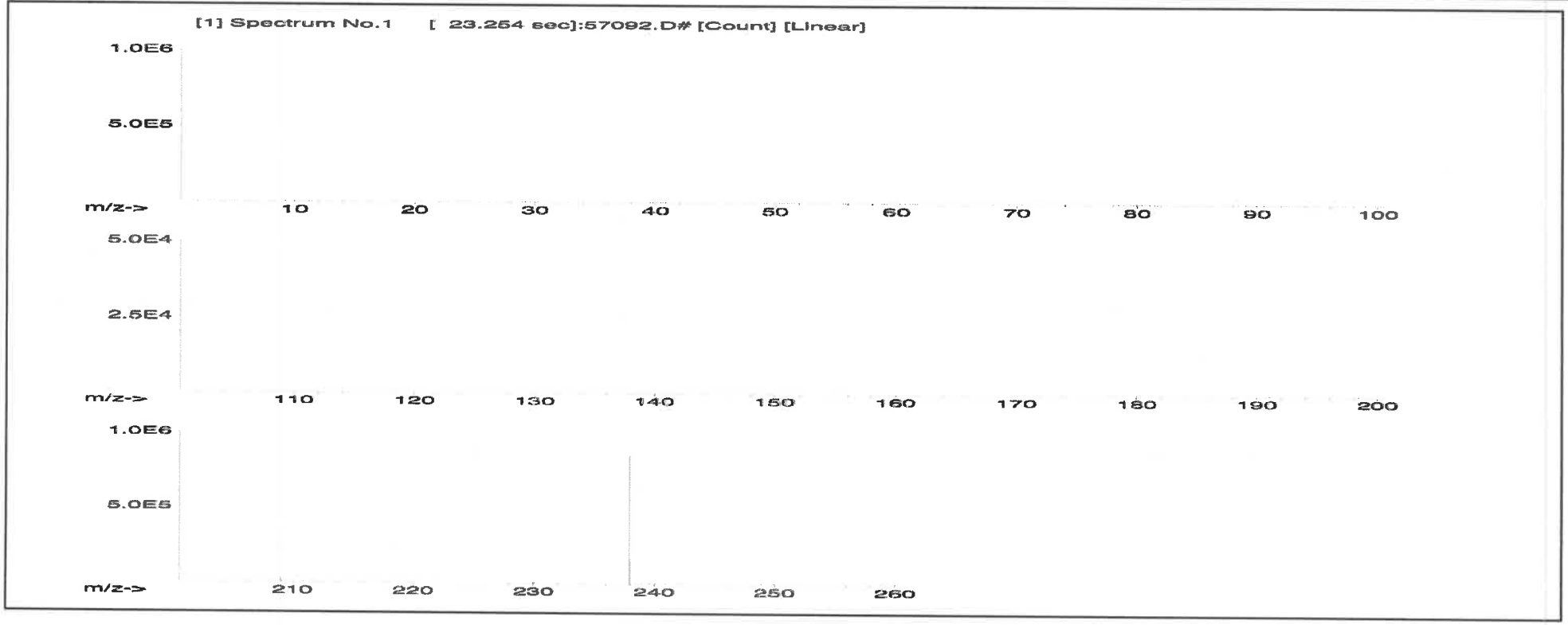
Giovanni Esposito

Formulated By:	Giovanni Esposito	060724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	060724

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Uranyl nitrate hexahydrate (U)	58192	041524	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13520-83-7	0.05 mg/m3	orl-rat 1040 mg/kg	3164



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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:

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).

Part # **57092** Lot # **060724**

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Certified Reference Material CRM

45982 R: 6/11/24

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CERTIFIED WEIGHT REPORT:

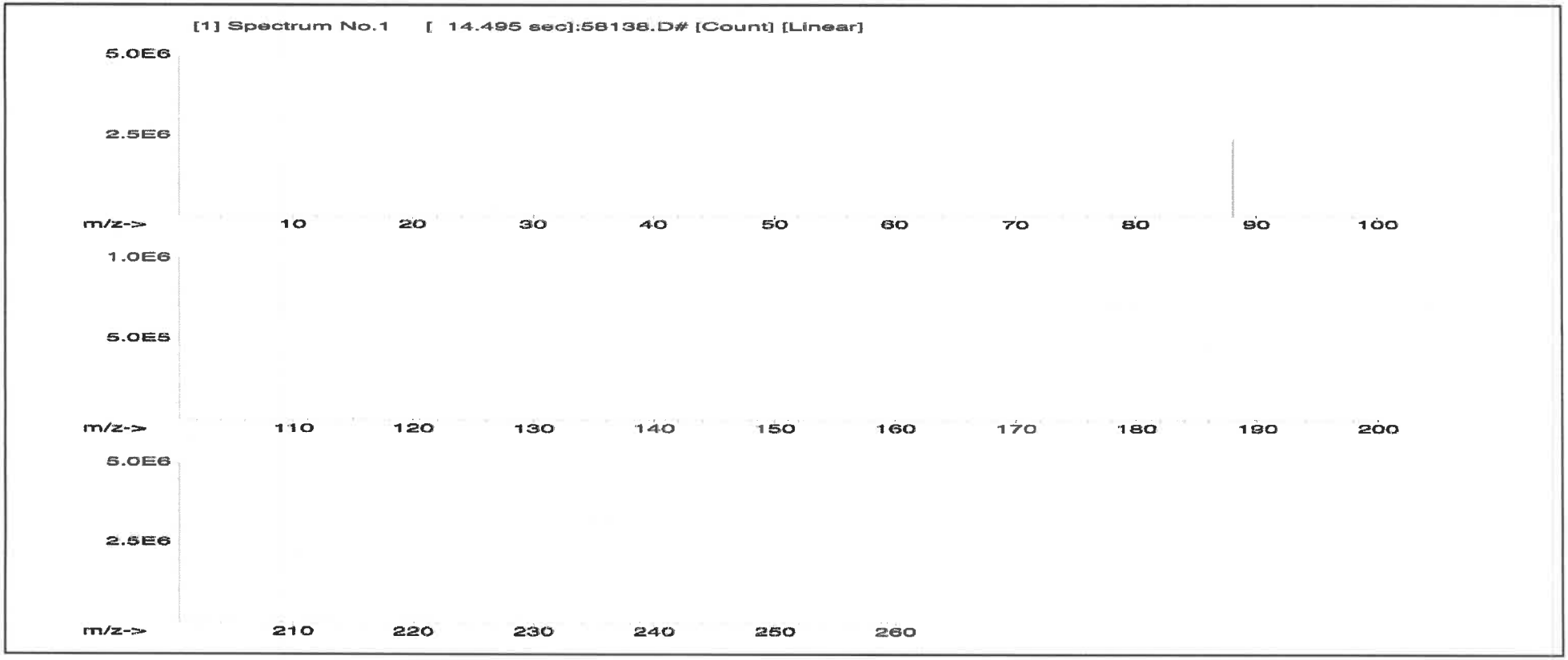
Part Number: 57038
Lot Number: 031524
Description: Strontium (Sr)

Expiration Date: 031527
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.100	Flask Uncertainty		

Formulated By:	Benson Chan	031524
Reviewed By:	Pedro L. Rentas	031524

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	1000	99.997	0.10	41.2	4.85470	4.85502	**1000.1**	**2.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5983 R: 6/11/24

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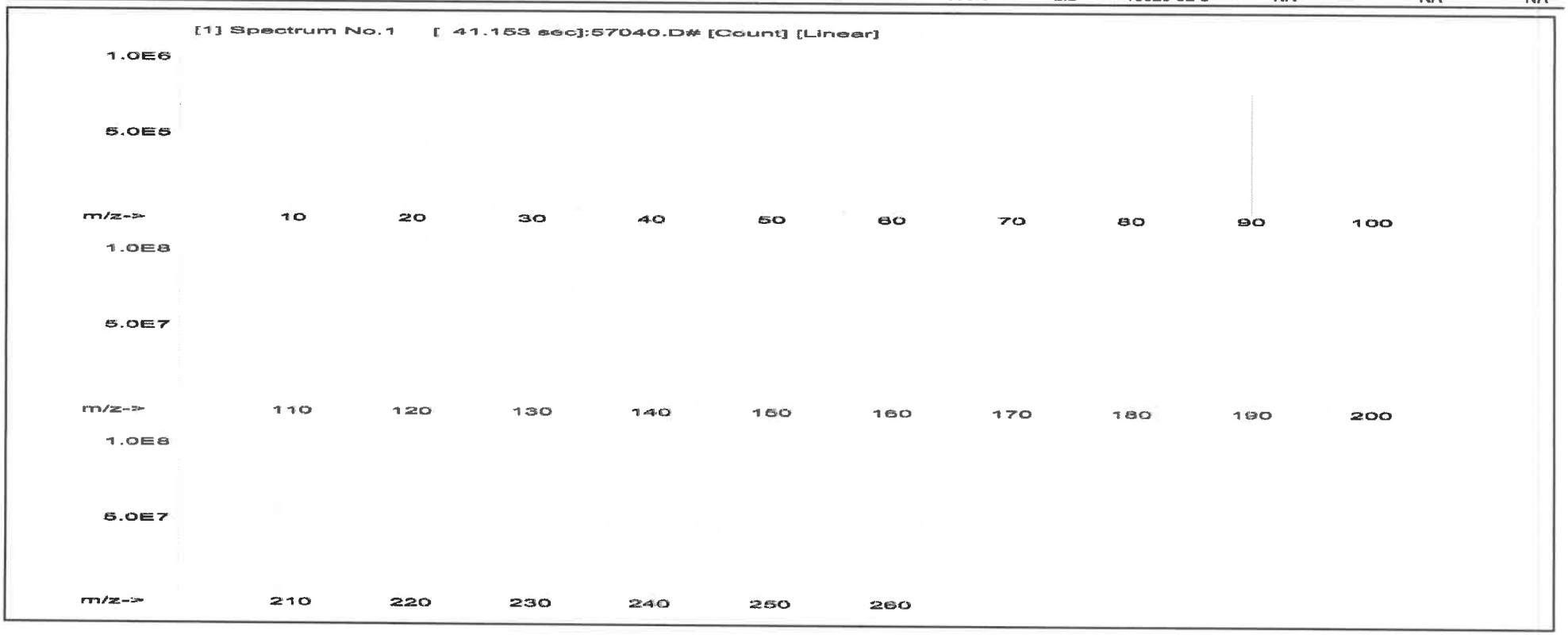
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57040**	21110221	Nitric Acid	
Lot Number:	**071423**			
Description:	**Zirconium (Zr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071426			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071423
Reviewed By:	Pedro L. Rentas	071423

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zirconyl chloride octahydrate (Zr)	58140	070621	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	13520-92-8	NA	NA	NA



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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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* 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 # **57040** Lot # **071423**

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Certified Reference Material CRM

R: 01/03/24 M6033

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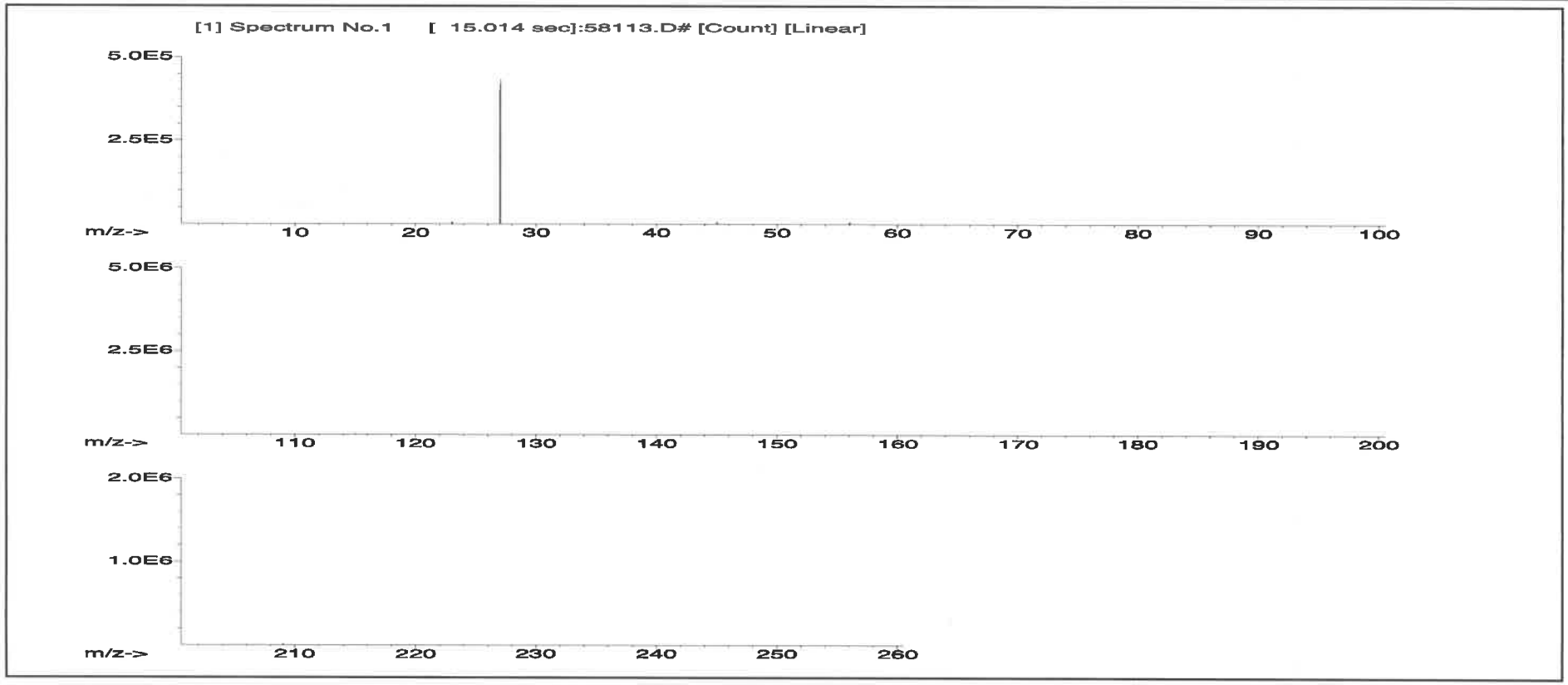
CERTIFIED WEIGHT REPORT:

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		

Giovanni Esposito

Formulated By:	Giovanni Esposito	011623
Reviewed By:	Pedro L. Rentas	011623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALM112021A1	10000	99.999	0.10	7.30	273.9779	274.0078	**10001.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



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Certificate of Analysis

R 18/19/24, M60055

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Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

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

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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®

M6094
M6095.

metdig
10/21/24.

Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.192
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	3 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	2.2 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	0.2 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 1.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	2.0 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.4 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Nitric Acid 69%
CMOS

M6112
M6113
M6114
M6115
M6116
M6117

Receive:
9/29/24
Met dig

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.6 %
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	< 0.2 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	< 50 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.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

M6125 Receive -> 11/22/24

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

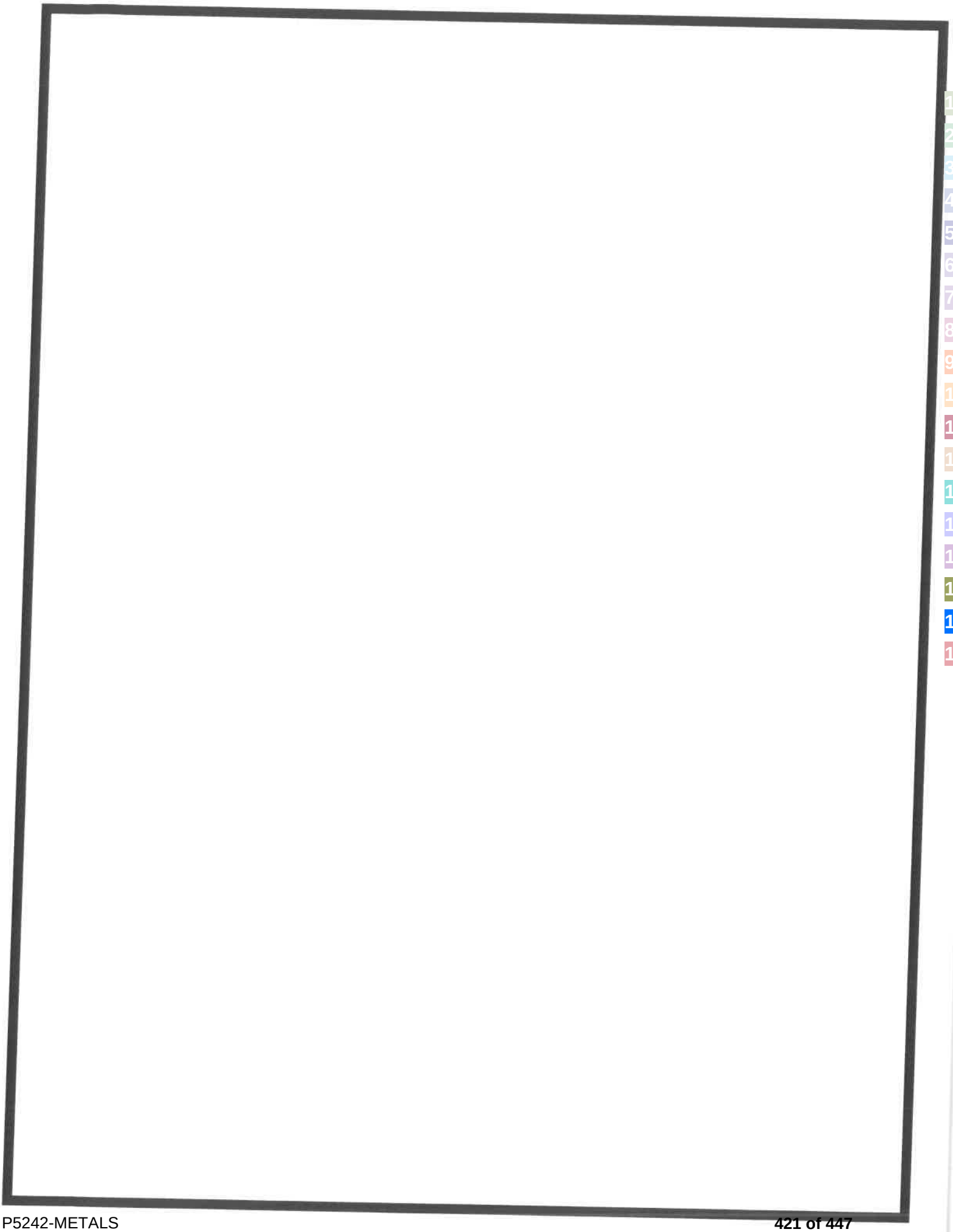
Office and Plant
299 Cedar Lane
Fairless Hills, PA 19030

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

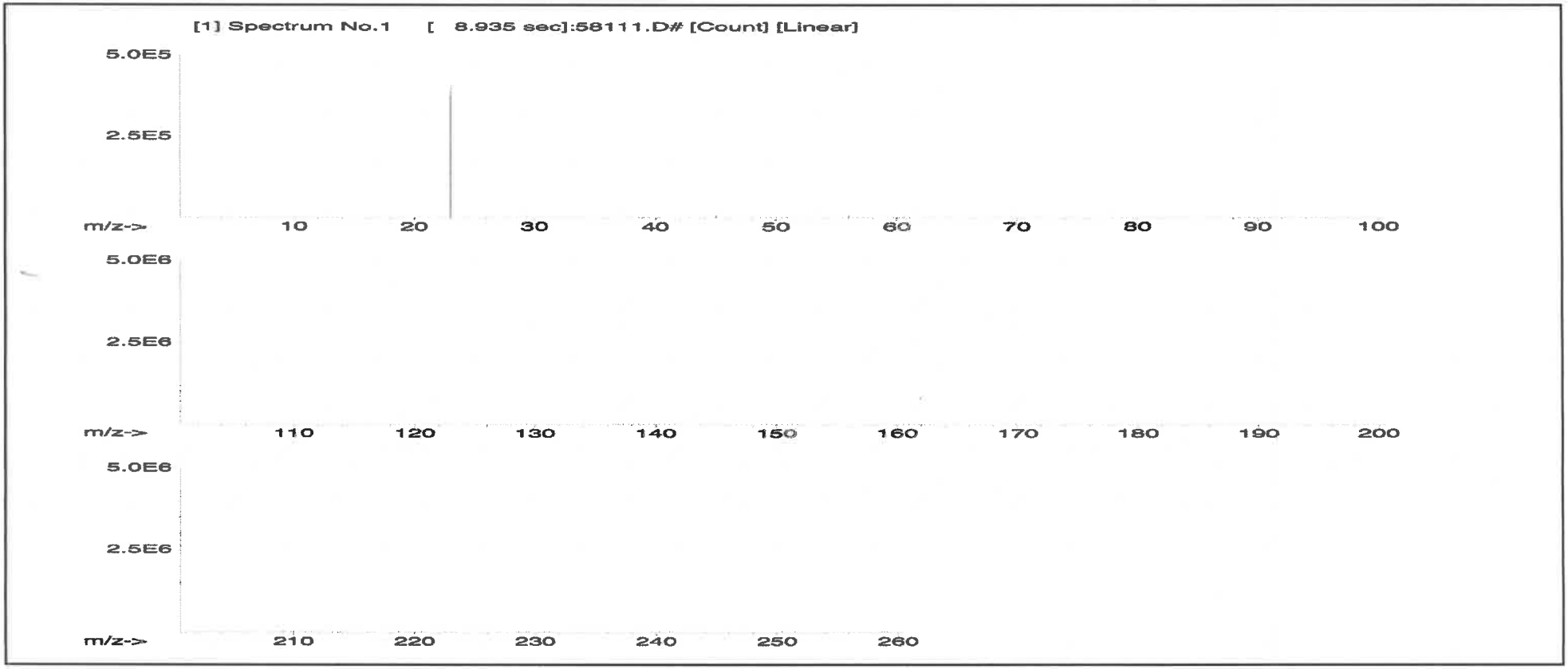
CERTIFIED WEIGHT REPORT:

Part Number:	**58111**		**Lot #**		
Lot Number:	**122223**	**Solvent:**	24002546	Nitric Acid	
Description:	**Sodium (Na)**				
		2%	60.0 (mL)	Nitric Acid	
Expiration Date:	122226				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	3000.4	0.06	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	122223
Reviewed By:	Pedro L. Rentas	122223

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	111.5406	111.5479	**10000.7**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



Absolute Standards, Inc.
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:

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)

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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".**

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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

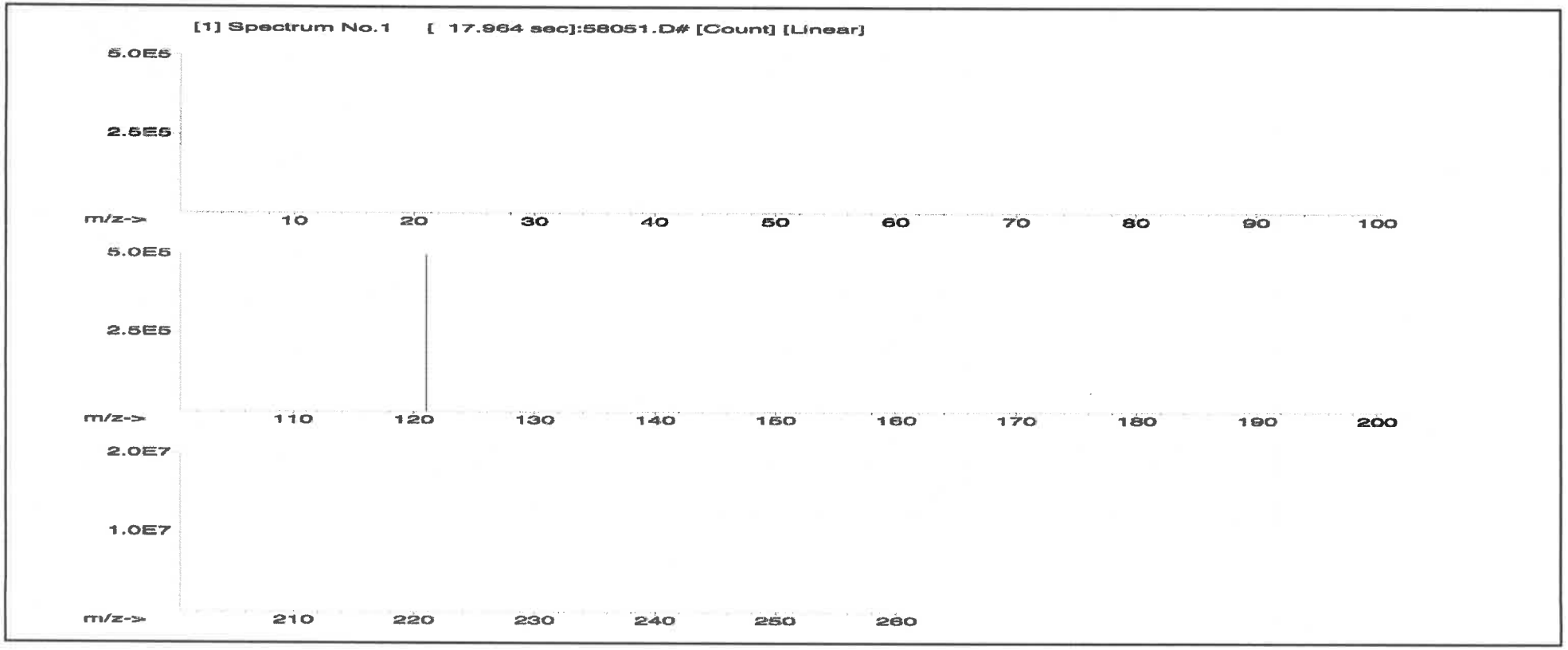
R: 01/03/24 M5802, M5803

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



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Certified Reference Material CRM

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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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 Number: 122823
Description: Silver (Ag)

Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

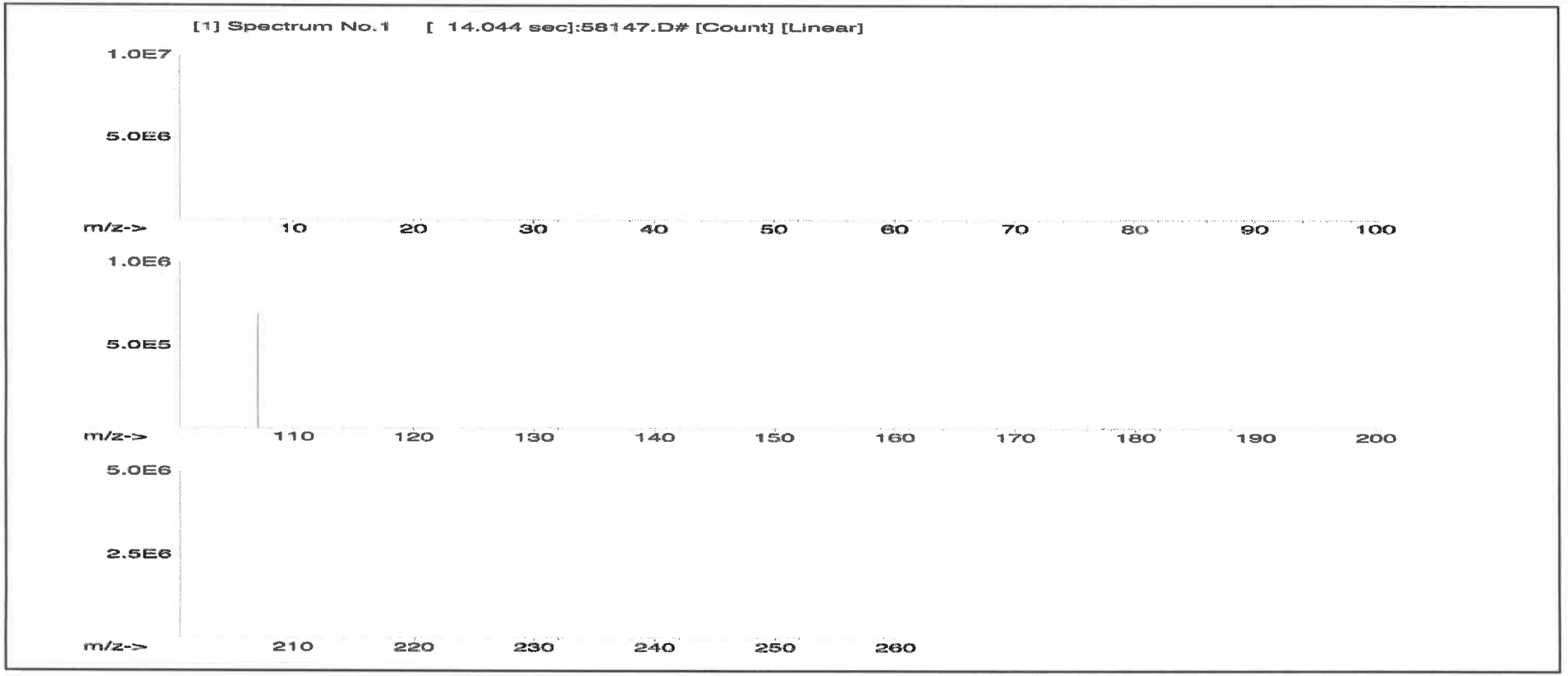
Weight shown below was diluted to (mL): 4000.30 0.058 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 03/16/23 M5473, M5474, M5475, M5476

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

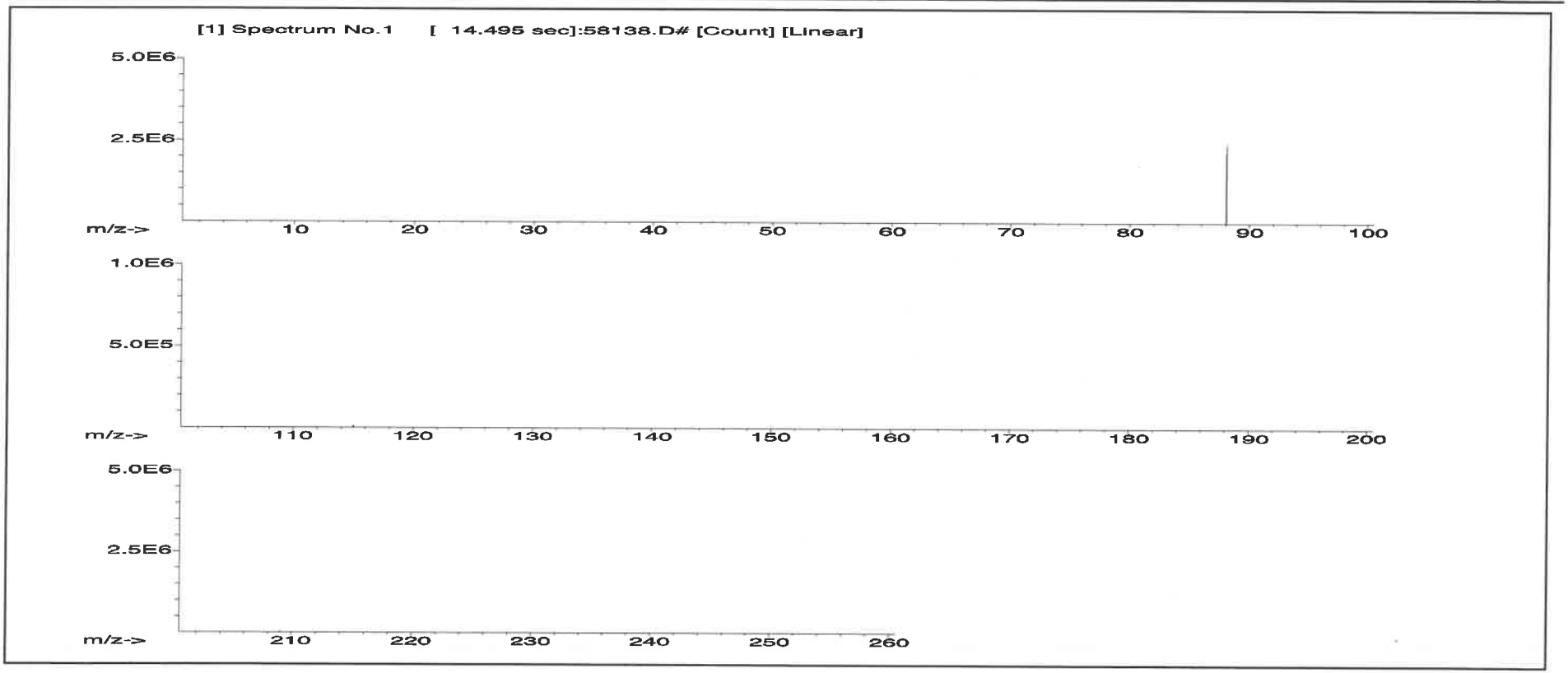
Part Number: 56138
Lot Number: 082922
Description: Strontium (Sr)
Expiration Date: 082925
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	082922
Reviewed By:	Pedro L. Rentas	082922

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	10000	99.997	0.10	41.2	24.2756	24.2758	**10000.1**	**20.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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M6023

R ! 8/5/24

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https://Absolutestandards.com

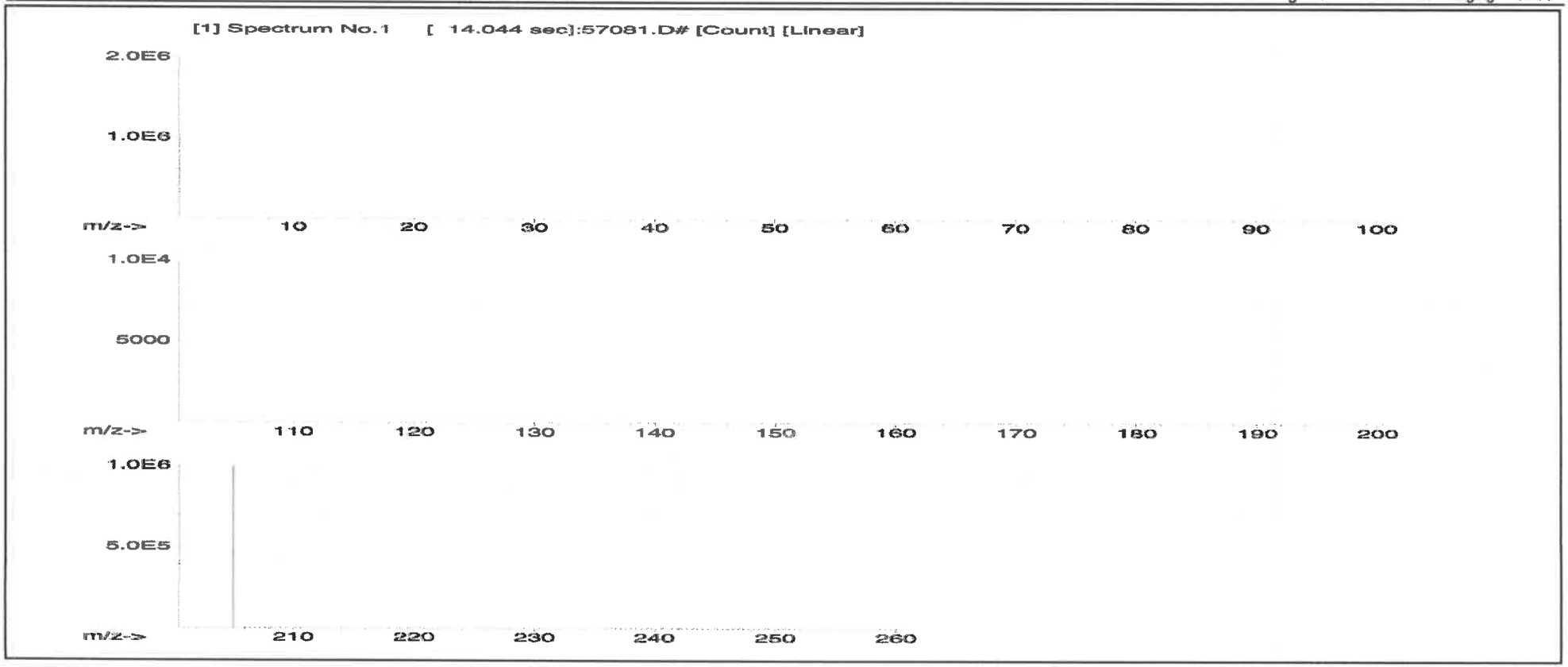
CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	062724
Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



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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:

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Certified by:

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M6021

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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	

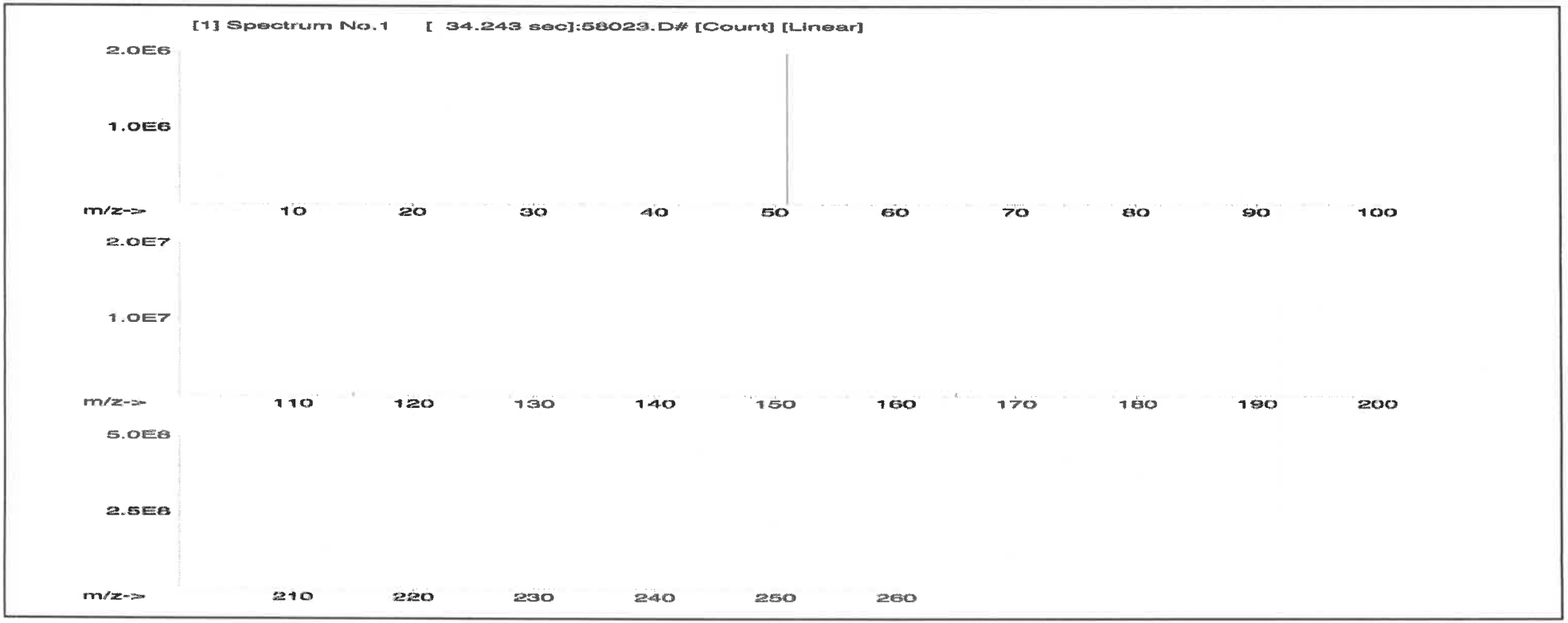
Aleah O'Brady

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



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AR-1539 Certificate Number
https://Absolutestandards.com

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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

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SHIPPING DOCUMENTS

P4986 &P5242

Weston COC ID
Weston_20241122_1439

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:	908-728-3148
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: TAL Metals by EPA 6020B/7471B	pH by EPA 9045D	Anions by EPA 9056A	TOC by EPA 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	TAPIAL1-SB04D-9-112224-00-T1	g	SB		no	11/22/2024	11:35	X	X	X	X							TOC, pH in 1 8oz jar ???
2	TAPIAL1-SB04I-4-112224-00-T1	g	SB		no	11/22/2024	12:50	X	X		X							TOC & pH in 1 8oz jar ???
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

Shipping Airbill Number: 7701 6148 1829

Cooler Number: ____ of ____

	Relinquished By	Date	Time	Received By	Date	Time	Additional Comments
1.)	[signature]	11/28/24	1620	Dean	11/23/24	10:00	QSM 6.0 Compliant
2.)						1.3°C	Deliverable Requirements: DoD Level IV report, EnviroData EDD, and ERIS-compatible EDD
3.)							

From: Harrington, Cheyenne <Cheyenne.Harrington@WestonSolutions.com>
Sent: Saturday, November 23, 2024 3:49 PM
To: Jordan Hedvat; ProjectManagers@chemtech.net
Cc: Sembrot, David; Sollenberger, Christopher; Fretz, Nathan
Subject: Ft Meade Sample Shipment 11.22.24
Attachments: 11.22.24 COC.pdf

Hi there,

We shipped one sample cooler yesterday via FedEx that was delivered this morning. Please correct the sample ID for sample number 2 on all three chains to TAPIAL1-SB04D-4-112224-00-T1. Note that the sample container column was accidentally left blank on all chains, but the sample containers will be clearly labeled. A copy of the COCs is attached.

Please confirm this sample cooler was received.

Thank you,
Cheyenne

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From: Budnovitch, Joe <Joe.Budnovitch@WestonSolutions.com>
Sent: Friday, November 22, 2024 5:15:16 PM
To: Harrington, Cheyenne <Cheyenne.Harrington@WestonSolutions.com>
Subject: 11.22.24 Shipping Docs

Attached is the shipping label, receipt, and COCs.

Joe

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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