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

DATA PACKAGE

METALS

PROJECT NAME : RAYMARK SUPERFUND SITE

NOBIS GROUP

585 Middlesex Street

Lowell, MA - 01851

Phone No: 978-683-0891

ORDER ID : Q2558

ATTENTION : Adam Roy

Laboratory Certification ID # 20012

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Cover Page

Order ID : Q2558

Project ID : Raymark Superfund Site

Client : Nobis Group

Lab Sample Number	Client Sample Number
Q2558-01	OU4-TS-Denali-070925
Q2558-02	OU4-TS-Denali-070925
Q2558-03	OU4-TS-Grillo-OG-070925
Q2558-04	OU4-TS-Grillo-OG-070925

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: 7/22/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Nobis Group
Project Name: Raymark Superfund Site
Project # N/A
Order ID # Q2558
Test Name: Mercury,Metals ICP-TAL

A. Number of Samples and Date of Receipt:
4 Solid samples were received on 07/10/2025.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Cyanide, Herbicide Group1, Mercury, Metals ICP-TAL, METALS-TAL, PCB, Pesticide-TCL, SPLP Extraction, SPLP Mercury, SPLP MetalGroup3, SPLP MetalGroup4, SPLP MetalGroup6, SVOCMS Group3 and VOCMS Group3. This data package contains results for Mercury,Metals ICP-TAL.

C. Analytical Techniques:

The analysis of Metals ICP-TAL was based on method 6010D, digestion based on method 3050 (soils). The analysis and digestion of Mercury was based on method 7471B.

D. QA/ QC Samples:

The Holding Times were met for all analysis.
The Blank Spike met requirements for all compounds.
The Duplicate (ARS20-0039DUP) analysis met criteria for all compounds except for Copper due to sample matrix interference.
The Matrix Spike (ARS20-0039MS) analysis met criteria for all compounds except for Antimony, Silver, and Vanadium due to Chemical Interference during Digestion Process.
The Matrix Spike (OU4-TS-Grillo-OG-070925MS) analysis met criteria for all compounds except for Mercury due to sample matrix interference.
The Matrix Spike Duplicate (ARS20-0039MSD) analysis met criteria for all compounds except for Antimony, Arsenic, Copper, Lead, Silver and Vanadium due to Chemical Interference during Digestion Process. The Matrix Spike Duplicate (OU4-TS-Grillo-OG-070925MSD) analysis met criteria for all compounds except for Mercury due to matrix interference.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution (ARS20-0039L) met criteria for all compounds except for Iron due to sample matrix interference.

E. Additional Comments:

The Post Digest Spike (ARS20-0039A) analysis met criteria for all compounds except for Silver due to unknown chemical interference of matrix with the addition of spike amount after digestion and before analysis; matrix has suppression effect during addition of spike.

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_____

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

DATA REPORTING QUALIFIERS- INORGANIC

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

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

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

ORDER ID: Q2558 MATRIX: Solid

METHOD: 6010D,7471B

		NA	NO	YES
1.	Calibration Summary met criteria.			✓
2.	ICP Interference Check Sample Results Summary Submitted.			✓
3.	Serial Dilution Summary (if applicable) Submitted.		✓	
	The Serial Dilution (ARS20-0039L) met criteria for all compounds except for Iron due to sample matrix 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 (ARS20-0039MS) analysis met criteria for all compounds except for Antimony, Silver, and Vanadium due to Chemical Interference during Digestion Process. The Matrix Spike (OU4-TS-Grillo-OG-070925MS) analysis met criteria for all compounds except for Mercury due to sample matrix interference. The Matrix Spike Duplicate (ARS20-0039MSD) analysis met criteria for all compounds except for Antimony, Arsenic, Copper, Lead, Silver and Vanadium due to Chemical Interference during Digestion Process. The Matrix Spike Duplicate (OU4-TS-Grillo-OG-070925MSD) analysis met criteria for all compounds except for Mercury 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 (ARS20-0039DUP) analysis met criteria for all compounds except for Copper due to sample matrix interference.			
8.	Digestion Holding Time Met			✓
	If not met, list number of days exceeded for each sample:			

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY (CONTINUED)

		NA	NO	YES
9.	Analysis Holding Time Met			✓
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			

ADDITIONAL COMMENTS:

The Post Digest Spike (ARS20-0039A) analysis met criteria for all compounds except for Silver due to unknown chemical interference of matrix with the addition of spike amount after digestion and before analysis; matrix has suppression effect during addition of spike.

_____ _____

QA REVIEW Date

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q2558

	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:** 07/22/2025

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LAB CHRONICLE

OrderID:	Q2558	**OrderDate:**	7/10/2025 11:16:00 AM
Client:	Nobis Group	**Project:**	Raymark Superfund Site
Contact:	Adam Roy	**Location:**	O13,VOA Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2558-01	**OU4-TS-Denali-070925**	**SOIL**			**07/09/25**			**07/10/25**
			Mercury	7471B		07/10/25	07/11/25	
			Metals ICP-TAL	6010D		07/11/25	07/14/25	
Q2558-02	**OU4-TS-Denali-070925**	**Water**			**07/09/25**			**07/10/25**
			SPLP Mercury	7470A		07/15/25	07/15/25	
			SPLP MetalGroup3	6020B		07/15/25	07/16/25	
Q2558-03	**OU4-TS-Grillo-OG-070925**	**SOIL**			**07/09/25**			**07/10/25**
			Mercury	7471B		07/10/25	07/11/25	
			Metals ICP-TAL	6010D		07/11/25	07/14/25	
Q2558-04	**OU4-TS-Grillo-OG-070925**	**Water**			**07/09/25**			**07/10/25**
			SPLP Mercury	7470A		07/15/25	07/15/25	
			SPLP MetalGroup3	6020B		07/15/25	07/16/25	

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Hit Summary Sheet
SW-846

SDG No.: Q2558 **Order ID:** Q2558

Client: Nobis Group **Project ID:** Raymark Superfund Site

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : OU4-TS-Denali-070925									
Q2558-01	OU4-TS-Denali-070925	SOIL	Aluminum	5600		0.96	4.57	5.71	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Antimony	0.94	J	0.25	0.71	2.86	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Arsenic	1.99		0.22	0.91	1.14	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Barium	26.9		0.83	1.43	5.71	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Beryllium	0.36		0.029	0.086	0.34	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Cadmium	0.049	J	0.027	0.086	0.34	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Calcium	1600		12.7	28.6	114	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Chromium	5.52		0.054	0.14	0.57	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Cobalt	5.32		0.11	0.43	1.71	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Copper	9.17		0.25	0.91	1.14	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Iron	8140		4.56	4.57	5.71	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Lead	11.5		0.15	0.55	0.69	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Magnesium	1800		13.7	28.6	114	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Manganese	193		0.16	0.29	1.14	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Mercury	0.017		0.0090	0.013	0.016	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Nickel	6.84		0.15	0.57	2.28	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Potassium	1020		31.6	91.4	114	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Selenium	0.96	J	0.30	0.91	1.14	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Sodium	63.8	J	20.3	91.4	114	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Vanadium	12.7		0.29	1.14	2.28	mg/Kg
Q2558-01	OU4-TS-Denali-070925	SOIL	Zinc	25.6		0.13	0.57	2.28	mg/Kg
Client ID : OU4-TS-Grillo-OG-070925									
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Aluminum	6270		0.91	4.34	5.43	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Antimony	1.36	J	0.24	0.68	2.72	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Arsenic	4.86		0.21	0.87	1.09	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Barium	49.3		0.79	1.36	5.43	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Beryllium	0.41		0.027	0.081	0.33	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Cadmium	0.18	J	0.026	0.081	0.33	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Calcium	6400		12.1	27.2	109	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Chromium	9.96		0.051	0.14	0.54	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Cobalt	5.58		0.11	0.41	1.63	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Copper	23.7		0.24	0.87	1.09	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Iron	10100		4.33	4.34	5.43	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Lead	37.2		0.14	0.52	0.65	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Magnesium	3200		13.0	27.2	109	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Manganese	204		0.15	0.27	1.09	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Mercury	0.035		0.0090	0.012	0.015	mg/Kg

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Hit Summary Sheet
SW-846

SDG No.: Q2558 **Order ID:** Q2558

Client: Nobis Group **Project ID:** Raymark Superfund Site

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Nickel	8.88		0.14	0.54	2.17	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Potassium	1850		30.1	86.9	109	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Selenium	0.93	J	0.28	0.87	1.09	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Sodium	127		19.3	86.9	109	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Vanadium	19.2		0.27	1.09	2.17	mg/Kg
Q2558-03	OU4-TS-Grillo-OG-070925	SOIL	Zinc	46.1		0.12	0.54	2.17	mg/Kg

SAMPLE DATA

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

Report of Analysis

Client:	Nobis Group	Date Collected:	07/09/25
Project:	Raymark Superfund Site	Date Received:	07/10/25
Client Sample ID:	OU4-TS-Denali-070925	SDG No.:	Q2558
Lab Sample ID:	Q2558-01	Matrix:	SOIL
Level (low/med):	low	% Solid:	79.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	5600		1	0.96	4.57	5.71	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-36-0	Antimony	0.94	JN	1	0.25	0.71	2.86	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-38-2	Arsenic	1.99	N	1	0.22	0.91	1.14	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-39-3	Barium	26.9		1	0.83	1.43	5.71	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-41-7	Beryllium	0.36		1	0.029	0.086	0.34	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-43-9	Cadmium	0.049	J	1	0.027	0.086	0.34	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-70-2	Calcium	1600		1	12.7	28.6	114	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-47-3	Chromium	5.52		1	0.054	0.14	0.57	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-48-4	Cobalt	5.32		1	0.11	0.43	1.71	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-50-8	Copper	9.17	N*	1	0.25	0.91	1.14	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7439-89-6	Iron	8140		1	4.56	4.57	5.71	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7439-92-1	Lead	11.5	N	1	0.15	0.55	0.69	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7439-95-4	Magnesium	1800		1	13.7	28.6	114	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7439-96-5	Manganese	193		1	0.16	0.29	1.14	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7439-97-6	Mercury	0.017	N	1	0.0090	0.013	0.016	mg/Kg	07/10/25 16:00	07/11/25 15:24	7471B	
7440-02-0	Nickel	6.84		1	0.15	0.57	2.28	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-09-7	Potassium	1020		1	31.6	91.4	114	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7782-49-2	Selenium	0.96	J	1	0.30	0.91	1.14	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-22-4	Silver	0.29	UN	1	0.14	0.29	0.57	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-23-5	Sodium	63.8	J	1	20.3	91.4	114	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-28-0	Thallium	1.14	U	1	0.26	1.14	2.28	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-62-2	Vanadium	12.7	N	1	0.29	1.14	2.28	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050
7440-66-6	Zinc	25.6		1	0.13	0.57	2.28	mg/Kg	07/11/25 08:50	07/14/25 19:44	6010D	SW3050

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

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

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

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Report of Analysis

Client:	Nobis Group	Date Collected:	07/09/25
Project:	Raymark Superfund Site	Date Received:	07/10/25
Client Sample ID:	OU4-TS-Grillo-OG-070925	SDG No.:	Q2558
Lab Sample ID:	Q2558-03	Matrix:	SOIL
Level (low/med):	low	% Solid:	78.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	6270		1	0.91	4.34	5.43	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-36-0	Antimony	1.36	JN	1	0.24	0.68	2.72	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-38-2	Arsenic	4.86	N	1	0.21	0.87	1.09	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-39-3	Barium	49.3		1	0.79	1.36	5.43	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-41-7	Beryllium	0.41		1	0.027	0.081	0.33	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-43-9	Cadmium	0.18	J	1	0.026	0.081	0.33	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-70-2	Calcium	6400		1	12.1	27.2	109	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-47-3	Chromium	9.96		1	0.051	0.14	0.54	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-48-4	Cobalt	5.58		1	0.11	0.41	1.63	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-50-8	Copper	23.7	N*	1	0.24	0.87	1.09	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7439-89-6	Iron	10100		1	4.33	4.34	5.43	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7439-92-1	Lead	37.2	N	1	0.14	0.52	0.65	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7439-95-4	Magnesium	3200		1	13.0	27.2	109	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7439-96-5	Manganese	204		1	0.15	0.27	1.09	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7439-97-6	Mercury	0.035	N	1	0.0090	0.012	0.015	mg/Kg	07/10/25 16:00	07/11/25 15:36	7471B	
7440-02-0	Nickel	8.88		1	0.14	0.54	2.17	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-09-7	Potassium	1850		1	30.1	86.9	109	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7782-49-2	Selenium	0.93	J	1	0.28	0.87	1.09	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-22-4	Silver	0.27	UN	1	0.13	0.27	0.54	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-23-5	Sodium	127		1	19.3	86.9	109	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-28-0	Thallium	1.09	U	1	0.25	1.09	2.17	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-62-2	Vanadium	19.2	N	1	0.27	1.09	2.17	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050
7440-66-6	Zinc	46.1		1	0.12	0.54	2.17	mg/Kg	07/11/25 08:50	07/14/25 19:49	6010D	SW3050

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

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

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

METAL CALIBRATION DATA

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV25	Mercury	3.77	4.0	94	90 - 110	CV	07/11/2025	14:13	LB136438

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV82	Mercury	5.49	5.0	110	90 - 110	CV	07/11/2025	14:18	LB136438
CCV83	Mercury	4.89	5.0	98	90 - 110	CV	07/11/2025	14:56	LB136438
CCV84	Mercury	5.25	5.0	105	90 - 110	CV	07/11/2025	15:26	LB136438
CCV85	Mercury	4.73	5.0	95	90 - 110	CV	07/11/2025	16:02	LB136438
CCV86	Mercury	4.75	5.0	95	90 - 110	CV	07/11/2025	16:32	LB136438

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Aluminum	7880	8000	98	90 - 110	P	07/14/2025	13:44	LB136469
	Antimony	3740	4000	94	90 - 110	P	07/14/2025	13:44	LB136469
	Arsenic	3640	4000	91	90 - 110	P	07/14/2025	13:44	LB136469
	Barium	7890	8000	99	90 - 110	P	07/14/2025	13:44	LB136469
	Beryllium	208	200	104	90 - 110	P	07/14/2025	13:44	LB136469
	Cadmium	1860	2000	93	90 - 110	P	07/14/2025	13:44	LB136469
	Calcium	19700	20000	99	90 - 110	P	07/14/2025	13:44	LB136469
	Chromium	803	800	100	90 - 110	P	07/14/2025	13:44	LB136469
	Cobalt	1980	2000	99	90 - 110	P	07/14/2025	13:44	LB136469
	Copper	1050	1000	105	90 - 110	P	07/14/2025	13:44	LB136469
	Iron	4060	4000	102	90 - 110	P	07/14/2025	13:44	LB136469
	Lead	3700	4000	92	90 - 110	P	07/14/2025	13:44	LB136469
	Magnesium	19900	20000	100	90 - 110	P	07/14/2025	13:44	LB136469
	Manganese	1980	2000	99	90 - 110	P	07/14/2025	13:44	LB136469
	Nickel	1970	2000	98	90 - 110	P	07/14/2025	13:44	LB136469
	Potassium	18800	20000	94	90 - 110	P	07/14/2025	13:44	LB136469
	Selenium	3770	4000	94	90 - 110	P	07/14/2025	13:44	LB136469
	Silver	1040	1000	104	90 - 110	P	07/14/2025	13:44	LB136469
	Sodium	19700	20000	99	90 - 110	P	07/14/2025	13:44	LB136469
	Thallium	3730	4000	93	90 - 110	P	07/14/2025	13:44	LB136469
	Vanadium	2010	2000	100	90 - 110	P	07/14/2025	13:44	LB136469
	Zinc	1980	2000	99	90 - 110	P	07/14/2025	13:44	LB136469

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Aluminum	9950	10000	100	90 - 110	P	07/14/2025	14:54	LB136469
	Antimony	5070	5000	101	90 - 110	P	07/14/2025	14:54	LB136469
	Arsenic	5000	5000	100	90 - 110	P	07/14/2025	14:54	LB136469
	Barium	9980	10000	100	90 - 110	P	07/14/2025	14:54	LB136469
	Beryllium	255	250	102	90 - 110	P	07/14/2025	14:54	LB136469
	Cadmium	2540	2500	102	90 - 110	P	07/14/2025	14:54	LB136469
	Calcium	25100	25000	100	90 - 110	P	07/14/2025	14:54	LB136469
	Chromium	1030	1000	103	90 - 110	P	07/14/2025	14:54	LB136469
	Cobalt	2520	2500	101	90 - 110	P	07/14/2025	14:54	LB136469
	Copper	1270	1250	101	90 - 110	P	07/14/2025	14:54	LB136469
	Iron	5110	5000	102	90 - 110	P	07/14/2025	14:54	LB136469
	Lead	5040	5000	101	90 - 110	P	07/14/2025	14:54	LB136469
	Magnesium	25100	25000	100	90 - 110	P	07/14/2025	14:54	LB136469
	Manganese	2520	2500	101	90 - 110	P	07/14/2025	14:54	LB136469
	Nickel	2530	2500	101	90 - 110	P	07/14/2025	14:54	LB136469
	Potassium	24600	25000	99	90 - 110	P	07/14/2025	14:54	LB136469
	Selenium	5090	5000	102	90 - 110	P	07/14/2025	14:54	LB136469
	Silver	1270	1250	102	90 - 110	P	07/14/2025	14:54	LB136469
	Sodium	24700	25000	99	90 - 110	P	07/14/2025	14:54	LB136469
	Thallium	5030	5000	101	90 - 110	P	07/14/2025	14:54	LB136469
	Vanadium	2520	2500	101	90 - 110	P	07/14/2025	14:54	LB136469
	Zinc	2520	2500	101	90 - 110	P	07/14/2025	14:54	LB136469
CCV02	Aluminum	9900	10000	99	90 - 110	P	07/14/2025	16:01	LB136469
	Antimony	5030	5000	101	90 - 110	P	07/14/2025	16:01	LB136469
	Arsenic	4960	5000	99	90 - 110	P	07/14/2025	16:01	LB136469
	Barium	9880	10000	99	90 - 110	P	07/14/2025	16:01	LB136469
	Beryllium	256	250	102	90 - 110	P	07/14/2025	16:01	LB136469
	Cadmium	2520	2500	101	90 - 110	P	07/14/2025	16:01	LB136469
	Calcium	24900	25000	100	90 - 110	P	07/14/2025	16:01	LB136469
	Chromium	1000	1000	100	90 - 110	P	07/14/2025	16:01	LB136469
	Cobalt	2510	2500	101	90 - 110	P	07/14/2025	16:01	LB136469
	Copper	1270	1250	102	90 - 110	P	07/14/2025	16:01	LB136469
	Iron	5150	5000	103	90 - 110	P	07/14/2025	16:01	LB136469
	Lead	5010	5000	100	90 - 110	P	07/14/2025	16:01	LB136469

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV02	Magnesium	24500	25000	98	90 - 110	P	07/14/2025	16:01	LB136469
	Manganese	2470	2500	99	90 - 110	P	07/14/2025	16:01	LB136469
	Nickel	2520	2500	101	90 - 110	P	07/14/2025	16:01	LB136469
	Potassium	24600	25000	98	90 - 110	P	07/14/2025	16:01	LB136469
	Selenium	5040	5000	101	90 - 110	P	07/14/2025	16:01	LB136469
	Silver	1250	1250	100	90 - 110	P	07/14/2025	16:01	LB136469
	Sodium	24800	25000	99	90 - 110	P	07/14/2025	16:01	LB136469
	Thallium	5150	5000	103	90 - 110	P	07/14/2025	16:01	LB136469
	Vanadium	2460	2500	98	90 - 110	P	07/14/2025	16:01	LB136469
	Zinc	2460	2500	98	90 - 110	P	07/14/2025	16:01	LB136469

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV01	Aluminum	102	100	102	80 - 120	P	07/14/2025	16:27	LB136469
	Antimony	50.4	50.0	101	80 - 120	P	07/14/2025	16:27	LB136469
	Arsenic	19.2	20.0	96	80 - 120	P	07/14/2025	16:27	LB136469
	Barium	102	100	102	80 - 120	P	07/14/2025	16:27	LB136469
	Beryllium	6.73	6.0	112	80 - 120	P	07/14/2025	16:27	LB136469
	Cadmium	5.79	6.0	96	80 - 120	P	07/14/2025	16:27	LB136469
	Calcium	2100	2000	105	80 - 120	P	07/14/2025	16:27	LB136469
	Chromium	11.4	10.0	114	80 - 120	P	07/14/2025	16:27	LB136469
	Cobalt	31.4	30.0	105	80 - 120	P	07/14/2025	16:27	LB136469
	Copper	23.0	20.0	115	80 - 120	P	07/14/2025	16:27	LB136469
	Iron	119	100	118	80 - 120	P	07/14/2025	16:27	LB136469
	Lead	9.68	12.0	81	80 - 120	P	07/14/2025	16:27	LB136469
	Magnesium	2280	2000	114	80 - 120	P	07/14/2025	16:27	LB136469
	Manganese	23.8	20.0	119	80 - 120	P	07/14/2025	16:27	LB136469
	Nickel	41.0	40.0	103	80 - 120	P	07/14/2025	16:27	LB136469
	Potassium	1610	2000	80	80 - 120	P	07/14/2025	16:27	LB136469
	Selenium	21.6	20.0	108	80 - 120	P	07/14/2025	16:27	LB136469
	Silver	11.2	10.0	112	80 - 120	P	07/14/2025	16:27	LB136469
	Sodium	1850	2000	93	80 - 120	P	07/14/2025	16:27	LB136469
	Thallium	39.9	40.0	100	80 - 120	P	07/14/2025	16:27	LB136469
	Vanadium	40.6	40.0	101	80 - 120	P	07/14/2025	16:27	LB136469
	Zinc	41.4	40.0	104	80 - 120	P	07/14/2025	16:27	LB136469

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV03	Aluminum	10100	10000	101	90 - 110	P	07/14/2025	18:01	LB136469
	Antimony	5060	5000	101	90 - 110	P	07/14/2025	18:01	LB136469
	Arsenic	5010	5000	100	90 - 110	P	07/14/2025	18:01	LB136469
	Barium	10100	10000	101	90 - 110	P	07/14/2025	18:01	LB136469
	Beryllium	258	250	103	90 - 110	P	07/14/2025	18:01	LB136469
	Cadmium	2530	2500	101	90 - 110	P	07/14/2025	18:01	LB136469
	Calcium	25200	25000	101	90 - 110	P	07/14/2025	18:01	LB136469
	Chromium	1020	1000	102	90 - 110	P	07/14/2025	18:01	LB136469
	Cobalt	2520	2500	101	90 - 110	P	07/14/2025	18:01	LB136469
	Copper	1290	1250	103	90 - 110	P	07/14/2025	18:01	LB136469
	Iron	5200	5000	104	90 - 110	P	07/14/2025	18:01	LB136469
	Lead	5040	5000	101	90 - 110	P	07/14/2025	18:01	LB136469
	Magnesium	25100	25000	101	90 - 110	P	07/14/2025	18:01	LB136469
	Manganese	2510	2500	100	90 - 110	P	07/14/2025	18:01	LB136469
	Nickel	2530	2500	101	90 - 110	P	07/14/2025	18:01	LB136469
	Potassium	25400	25000	102	90 - 110	P	07/14/2025	18:01	LB136469
	Selenium	5070	5000	101	90 - 110	P	07/14/2025	18:01	LB136469
	Silver	1260	1250	101	90 - 110	P	07/14/2025	18:01	LB136469
	Sodium	25500	25000	102	90 - 110	P	07/14/2025	18:01	LB136469
	Thallium	5170	5000	103	90 - 110	P	07/14/2025	18:01	LB136469
	Vanadium	2510	2500	100	90 - 110	P	07/14/2025	18:01	LB136469
	Zinc	2510	2500	100	90 - 110	P	07/14/2025	18:01	LB136469
CCV04	Aluminum	9440	10000	94	90 - 110	P	07/14/2025	19:00	LB136469
	Antimony	4580	5000	92	90 - 110	P	07/14/2025	19:00	LB136469
	Arsenic	4520	5000	90	90 - 110	P	07/14/2025	19:00	LB136469
	Barium	9620	10000	96	90 - 110	P	07/14/2025	19:00	LB136469
	Beryllium	247	250	99	90 - 110	P	07/14/2025	19:00	LB136469
	Cadmium	2290	2500	92	90 - 110	P	07/14/2025	19:00	LB136469
	Calcium	23700	25000	95	90 - 110	P	07/14/2025	19:00	LB136469
	Chromium	966	1000	97	90 - 110	P	07/14/2025	19:00	LB136469
	Cobalt	2280	2500	91	90 - 110	P	07/14/2025	19:00	LB136469
	Copper	1240	1250	99	90 - 110	P	07/14/2025	19:00	LB136469
	Iron	4950	5000	99	90 - 110	P	07/14/2025	19:00	LB136469
	Lead	4560	5000	91	90 - 110	P	07/14/2025	19:00	LB136469

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV04	Magnesium	24100	25000	96	90 - 110	P	07/14/2025	19:00	LB136469
	Manganese	2390	2500	96	90 - 110	P	07/14/2025	19:00	LB136469
	Nickel	2280	2500	91	90 - 110	P	07/14/2025	19:00	LB136469
	Potassium	25200	25000	101	90 - 110	P	07/14/2025	19:00	LB136469
	Selenium	4560	5000	91	90 - 110	P	07/14/2025	19:00	LB136469
	Silver	1190	1250	95	90 - 110	P	07/14/2025	19:00	LB136469
	Sodium	25300	25000	101	90 - 110	P	07/14/2025	19:00	LB136469
	Thallium	4670	5000	93	90 - 110	P	07/14/2025	19:00	LB136469
	Vanadium	2390	2500	96	90 - 110	P	07/14/2025	19:00	LB136469
	Zinc	2390	2500	96	90 - 110	P	07/14/2025	19:00	LB136469
CCV05	Aluminum	9430	10000	94	90 - 110	P	07/14/2025	19:53	LB136469
	Antimony	4740	5000	95	90 - 110	P	07/14/2025	19:53	LB136469
	Arsenic	4700	5000	94	90 - 110	P	07/14/2025	19:53	LB136469
	Barium	9540	10000	95	90 - 110	P	07/14/2025	19:53	LB136469
	Beryllium	239	250	96	90 - 110	P	07/14/2025	19:53	LB136469
	Cadmium	2370	2500	95	90 - 110	P	07/14/2025	19:53	LB136469
	Calcium	23500	25000	94	90 - 110	P	07/14/2025	19:53	LB136469
	Chromium	966	1000	97	90 - 110	P	07/14/2025	19:53	LB136469
	Cobalt	2360	2500	94	90 - 110	P	07/14/2025	19:53	LB136469
	Copper	1200	1250	96	90 - 110	P	07/14/2025	19:53	LB136469
	Iron	4790	5000	96	90 - 110	P	07/14/2025	19:53	LB136469
	Lead	4730	5000	94	90 - 110	P	07/14/2025	19:53	LB136469
	Magnesium	23800	25000	95	90 - 110	P	07/14/2025	19:53	LB136469
	Manganese	2360	2500	94	90 - 110	P	07/14/2025	19:53	LB136469
	Nickel	2360	2500	94	90 - 110	P	07/14/2025	19:53	LB136469
	Potassium	24100	25000	96	90 - 110	P	07/14/2025	19:53	LB136469
	Selenium	4720	5000	94	90 - 110	P	07/14/2025	19:53	LB136469
	Silver	1190	1250	95	90 - 110	P	07/14/2025	19:53	LB136469
	Sodium	24400	25000	98	90 - 110	P	07/14/2025	19:53	LB136469
	Thallium	4830	5000	96	90 - 110	P	07/14/2025	19:53	LB136469
	Vanadium	2360	2500	94	90 - 110	P	07/14/2025	19:53	LB136469
	Zinc	2400	2500	96	90 - 110	P	07/14/2025	19:53	LB136469
CCV06	Aluminum	9660	10000	97	90 - 110	P	07/14/2025	20:07	LB136469
	Antimony	4850	5000	97	90 - 110	P	07/14/2025	20:07	LB136469

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV06	Arsenic	4800	5000	96	90 - 110	P	07/14/2025	20:07	LB136469
	Barium	9750	10000	98	90 - 110	P	07/14/2025	20:07	LB136469
	Beryllium	245	250	98	90 - 110	P	07/14/2025	20:07	LB136469
	Cadmium	2410	2500	96	90 - 110	P	07/14/2025	20:07	LB136469
	Calcium	23800	25000	95	90 - 110	P	07/14/2025	20:07	LB136469
	Chromium	986	1000	99	90 - 110	P	07/14/2025	20:07	LB136469
	Cobalt	2400	2500	96	90 - 110	P	07/14/2025	20:07	LB136469
	Copper	1230	1250	98	90 - 110	P	07/14/2025	20:07	LB136469
	Iron	4900	5000	98	90 - 110	P	07/14/2025	20:07	LB136469
	Lead	4810	5000	96	90 - 110	P	07/14/2025	20:07	LB136469
	Magnesium	24400	25000	98	90 - 110	P	07/14/2025	20:07	LB136469
	Manganese	2420	2500	97	90 - 110	P	07/14/2025	20:07	LB136469
	Nickel	2400	2500	96	90 - 110	P	07/14/2025	20:07	LB136469
	Potassium	24600	25000	98	90 - 110	P	07/14/2025	20:07	LB136469
	Selenium	4810	5000	96	90 - 110	P	07/14/2025	20:07	LB136469
	Silver	1210	1250	97	90 - 110	P	07/14/2025	20:07	LB136469
	Sodium	25000	25000	100	90 - 110	P	07/14/2025	20:07	LB136469
	Thallium	4920	5000	98	90 - 110	P	07/14/2025	20:07	LB136469
	Vanadium	2430	2500	97	90 - 110	P	07/14/2025	20:07	LB136469
	Zinc	2450	2500	98	90 - 110	P	07/14/2025	20:07	LB136469

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Aluminum	7770	8000	97	90 - 110	P	07/15/2025	19:27	LB136488
	Antimony	3990	4000	100	90 - 110	P	07/15/2025	19:27	LB136488
	Arsenic	3760	4000	94	90 - 110	P	07/15/2025	19:27	LB136488
	Barium	7990	8000	100	90 - 110	P	07/15/2025	19:27	LB136488
	Beryllium	207	200	104	90 - 110	P	07/15/2025	19:27	LB136488
	Cadmium	1910	2000	96	90 - 110	P	07/15/2025	19:27	LB136488
	Calcium	19400	20000	97	90 - 110	P	07/15/2025	19:27	LB136488
	Chromium	778	800	97	90 - 110	P	07/15/2025	19:27	LB136488
	Cobalt	1960	2000	98	90 - 110	P	07/15/2025	19:27	LB136488
	Copper	1050	1000	105	90 - 110	P	07/15/2025	19:27	LB136488
	Iron	4090	4000	102	90 - 110	P	07/15/2025	19:27	LB136488
	Lead	3810	4000	95	90 - 110	P	07/15/2025	19:27	LB136488
	Magnesium	19900	20000	100	90 - 110	P	07/15/2025	19:27	LB136488
	Manganese	1980	2000	99	90 - 110	P	07/15/2025	19:27	LB136488
	Nickel	1950	2000	98	90 - 110	P	07/15/2025	19:27	LB136488
	Potassium	18700	20000	94	90 - 110	P	07/15/2025	19:27	LB136488
	Selenium	3830	4000	96	90 - 110	P	07/15/2025	19:27	LB136488
	Silver	1030	1000	103	90 - 110	P	07/15/2025	19:27	LB136488
	Sodium	20100	20000	101	90 - 110	P	07/15/2025	19:27	LB136488
	Thallium	3790	4000	95	90 - 110	P	07/15/2025	19:27	LB136488
	Vanadium	2000	2000	100	90 - 110	P	07/15/2025	19:27	LB136488
	Zinc	2020	2000	101	90 - 110	P	07/15/2025	19:27	LB136488

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Aluminum	91.6	100	92	80 - 120	P	07/15/2025	19:37	LB136488
	Antimony	50.7	50.0	101	80 - 120	P	07/15/2025	19:37	LB136488
	Arsenic	18.5	20.0	92	80 - 120	P	07/15/2025	19:37	LB136488
	Barium	109	100	109	80 - 120	P	07/15/2025	19:37	LB136488
	Beryllium	6.62	6.0	110	80 - 120	P	07/15/2025	19:37	LB136488
	Cadmium	5.57	6.0	93	80 - 120	P	07/15/2025	19:37	LB136488
	Calcium	2090	2000	104	80 - 120	P	07/15/2025	19:37	LB136488
	Chromium	11.5	10.0	115	80 - 120	P	07/15/2025	19:37	LB136488
	Cobalt	30.7	30.0	102	80 - 120	P	07/15/2025	19:37	LB136488
	Copper	23.2	20.0	116	80 - 120	P	07/15/2025	19:37	LB136488
	Iron	118	100	118	80 - 120	P	07/15/2025	19:37	LB136488
	Lead	11.7	12.0	98	80 - 120	P	07/15/2025	19:37	LB136488
	Magnesium	2290	2000	114	80 - 120	P	07/15/2025	19:37	LB136488
	Manganese	23.8	20.0	119	80 - 120	P	07/15/2025	19:37	LB136488
	Nickel	39.6	40.0	99	80 - 120	P	07/15/2025	19:37	LB136488
	Potassium	1860	2000	93	80 - 120	P	07/15/2025	19:37	LB136488
	Selenium	21.1	20.0	106	80 - 120	P	07/15/2025	19:37	LB136488
	Silver	10.7	10.0	107	80 - 120	P	07/15/2025	19:37	LB136488
	Sodium	1970	2000	98	80 - 120	P	07/15/2025	19:37	LB136488
	Thallium	41.6	40.0	104	80 - 120	P	07/15/2025	19:37	LB136488
	Vanadium	35.0	40.0	88	80 - 120	P	07/15/2025	19:37	LB136488
	Zinc	43.4	40.0	109	80 - 120	P	07/15/2025	19:37	LB136488

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Aluminum	9680	10000	97	90 - 110	P	07/15/2025	20:25	LB136488
	Antimony	4670	5000	94	90 - 110	P	07/15/2025	20:25	LB136488
	Arsenic	4860	5000	97	90 - 110	P	07/15/2025	20:25	LB136488
	Barium	10800	10000	108	90 - 110	P	07/15/2025	20:25	LB136488
	Beryllium	254	250	101	90 - 110	P	07/15/2025	20:25	LB136488
	Cadmium	2460	2500	98	90 - 110	P	07/15/2025	20:25	LB136488
	Calcium	24900	25000	100	90 - 110	P	07/15/2025	20:25	LB136488
	Chromium	936	1000	94	90 - 110	P	07/15/2025	20:25	LB136488
	Cobalt	2460	2500	98	90 - 110	P	07/15/2025	20:25	LB136488
	Copper	1290	1250	103	90 - 110	P	07/15/2025	20:25	LB136488
	Iron	5250	5000	105	90 - 110	P	07/15/2025	20:25	LB136488
	Lead	4930	5000	99	90 - 110	P	07/15/2025	20:25	LB136488
	Magnesium	26300	25000	105	90 - 110	P	07/15/2025	20:25	LB136488
	Manganese	2650	2500	106	90 - 110	P	07/15/2025	20:25	LB136488
	Nickel	2460	2500	99	90 - 110	P	07/15/2025	20:25	LB136488
	Potassium	24600	25000	98	90 - 110	P	07/15/2025	20:25	LB136488
	Selenium	4660	5000	93	90 - 110	P	07/15/2025	20:25	LB136488
	Silver	1150	1250	92	90 - 110	P	07/15/2025	20:25	LB136488
	Sodium	25600	25000	102	90 - 110	P	07/15/2025	20:25	LB136488
	Thallium	5030	5000	100	90 - 110	P	07/15/2025	20:25	LB136488
	Vanadium	2700	2500	108	90 - 110	P	07/15/2025	20:25	LB136488
	Zinc	2640	2500	106	90 - 110	P	07/15/2025	20:25	LB136488
CCV02	Aluminum	9540	10000	95	90 - 110	P	07/15/2025	22:12	LB136488
	Antimony	4800	5000	96	90 - 110	P	07/15/2025	22:12	LB136488
	Arsenic	4750	5000	95	90 - 110	P	07/15/2025	22:12	LB136488
	Barium	10800	10000	108	90 - 110	P	07/15/2025	22:12	LB136488
	Beryllium	250	250	100	90 - 110	P	07/15/2025	22:12	LB136488
	Cadmium	2410	2500	96	90 - 110	P	07/15/2025	22:12	LB136488
	Calcium	24600	25000	98	90 - 110	P	07/15/2025	22:12	LB136488
	Chromium	1040	1000	104	90 - 110	P	07/15/2025	22:12	LB136488
	Cobalt	2420	2500	97	90 - 110	P	07/15/2025	22:12	LB136488
	Copper	1290	1250	103	90 - 110	P	07/15/2025	22:12	LB136488
	Iron	5230	5000	104	90 - 110	P	07/15/2025	22:12	LB136488
	Lead	4840	5000	97	90 - 110	P	07/15/2025	22:12	LB136488

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV02	Magnesium	26100	25000	104	90 - 110	P	07/15/2025	22:12	LB136488
	Manganese	2660	2500	106	90 - 110	P	07/15/2025	22:12	LB136488
	Nickel	2420	2500	97	90 - 110	P	07/15/2025	22:12	LB136488
	Potassium	24200	25000	97	90 - 110	P	07/15/2025	22:12	LB136488
	Selenium	4780	5000	96	90 - 110	P	07/15/2025	22:12	LB136488
	Silver	1230	1250	98	90 - 110	P	07/15/2025	22:12	LB136488
	Sodium	25300	25000	101	90 - 110	P	07/15/2025	22:12	LB136488
	Thallium	4940	5000	99	90 - 110	P	07/15/2025	22:12	LB136488
	Vanadium	2720	2500	109	90 - 110	P	07/15/2025	22:12	LB136488
	Zinc	2630	2500	105	90 - 110	P	07/15/2025	22:12	LB136488
CCV03	Aluminum	9540	10000	95	90 - 110	P	07/15/2025	22:39	LB136488
	Antimony	4850	5000	97	90 - 110	P	07/15/2025	22:39	LB136488
	Arsenic	4740	5000	95	90 - 110	P	07/15/2025	22:39	LB136488
	Barium	10600	10000	106	90 - 110	P	07/15/2025	22:39	LB136488
	Beryllium	248	250	99	90 - 110	P	07/15/2025	22:39	LB136488
	Cadmium	2410	2500	96	90 - 110	P	07/15/2025	22:39	LB136488
	Calcium	24500	25000	98	90 - 110	P	07/15/2025	22:39	LB136488
	Chromium	1050	1000	105	90 - 110	P	07/15/2025	22:39	LB136488
	Cobalt	2420	2500	97	90 - 110	P	07/15/2025	22:39	LB136488
	Copper	1270	1250	102	90 - 110	P	07/15/2025	22:39	LB136488
	Iron	5090	5000	102	90 - 110	P	07/15/2025	22:39	LB136488
	Lead	4820	5000	96	90 - 110	P	07/15/2025	22:39	LB136488
	Magnesium	25800	25000	103	90 - 110	P	07/15/2025	22:39	LB136488
	Manganese	2620	2500	105	90 - 110	P	07/15/2025	22:39	LB136488
	Nickel	2420	2500	97	90 - 110	P	07/15/2025	22:39	LB136488
	Potassium	23800	25000	95	90 - 110	P	07/15/2025	22:39	LB136488
	Selenium	4820	5000	96	90 - 110	P	07/15/2025	22:39	LB136488
	Silver	1240	1250	99	90 - 110	P	07/15/2025	22:39	LB136488
	Sodium	24900	25000	100	90 - 110	P	07/15/2025	22:39	LB136488
	Thallium	4930	5000	98	90 - 110	P	07/15/2025	22:39	LB136488
	Vanadium	2670	2500	107	90 - 110	P	07/15/2025	22:39	LB136488
	Zinc	2590	2500	104	90 - 110	P	07/15/2025	22:39	LB136488

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Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source:

Continuing Calibration Source:

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRA	Mercury	0.23	0.2	116	70 - 130	CV	07/11/2025	14:28	LB136438
CRI01	Aluminum	126	100	126	65 - 135	P	07/14/2025	14:26	LB136469
	Antimony	49.5	50.0	99	65 - 135	P	07/14/2025	14:26	LB136469
	Arsenic	16.7	20.0	83	65 - 135	P	07/14/2025	14:26	LB136469
	Barium	99.1	100	99	65 - 135	P	07/14/2025	14:26	LB136469
	Beryllium	6.42	6.0	107	65 - 135	P	07/14/2025	14:26	LB136469
	Cadmium	5.57	6.0	93	65 - 135	P	07/14/2025	14:26	LB136469
	Calcium	2030	2000	101	65 - 135	P	07/14/2025	14:26	LB136469
	Chromium	10.6	10.0	106	65 - 135	P	07/14/2025	14:26	LB136469
	Cobalt	29.7	30.0	99	65 - 135	P	07/14/2025	14:26	LB136469
	Copper	22.4	20.0	112	65 - 135	P	07/14/2025	14:26	LB136469
	Iron	114	100	114	65 - 135	P	07/14/2025	14:26	LB136469
	Lead	9.89	12.0	82	65 - 135	P	07/14/2025	14:26	LB136469
	Magnesium	2160	2000	108	65 - 135	P	07/14/2025	14:26	LB136469
	Manganese	20.7	20.0	104	65 - 135	P	07/14/2025	14:26	LB136469
	Nickel	39.2	40.0	98	65 - 135	P	07/14/2025	14:26	LB136469
	Potassium	1540	2000	77	65 - 135	P	07/14/2025	14:26	LB136469
	Selenium	20.4	20.0	102	65 - 135	P	07/14/2025	14:26	LB136469
	Silver	11.9	10.0	119	65 - 135	P	07/14/2025	14:26	LB136469
	Sodium	1800	2000	90	65 - 135	P	07/14/2025	14:26	LB136469
	Thallium	36.6	40.0	91	65 - 135	P	07/14/2025	14:26	LB136469
	Vanadium	37.6	40.0	94	65 - 135	P	07/14/2025	14:26	LB136469
	Zinc	40.6	40.0	102	65 - 135	P	07/14/2025	14:26	LB136469
CRI01	Aluminum	90.7	100	91	65 - 135	P	07/15/2025	19:56	LB136488
	Antimony	48.4	50.0	97	65 - 135	P	07/15/2025	19:56	LB136488
	Arsenic	20.0	20.0	100	65 - 135	P	07/15/2025	19:56	LB136488
	Barium	112	100	112	65 - 135	P	07/15/2025	19:56	LB136488
	Beryllium	6.56	6.0	109	65 - 135	P	07/15/2025	19:56	LB136488
	Cadmium	5.68	6.0	95	65 - 135	P	07/15/2025	19:56	LB136488
	Calcium	2120	2000	106	65 - 135	P	07/15/2025	19:56	LB136488
	Chromium	10.9	10.0	110	65 - 135	P	07/15/2025	19:56	LB136488
	Cobalt	30.4	30.0	101	65 - 135	P	07/15/2025	19:56	LB136488
	Copper	23.9	20.0	120	65 - 135	P	07/15/2025	19:56	LB136488
	Iron	113	100	113	65 - 135	P	07/15/2025	19:56	LB136488
	Lead	10.6	12.0	88	65 - 135	P	07/15/2025	19:56	LB136488

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Metals

- 2b -

CRDL STANDARD FOR AA & ICP

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source:

Continuing Calibration Source:

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRI01	Magnesium	2380	2000	119	65 - 135	P	07/15/2025	19:56	LB136488
	Manganese	23.3	20.0	117	65 - 135	P	07/15/2025	19:56	LB136488
	Nickel	39.9	40.0	100	65 - 135	P	07/15/2025	19:56	LB136488
	Potassium	1860	2000	93	65 - 135	P	07/15/2025	19:56	LB136488
	Selenium	23.6	20.0	118	65 - 135	P	07/15/2025	19:56	LB136488
	Silver	11.3	10.0	113	65 - 135	P	07/15/2025	19:56	LB136488
	Sodium	1970	2000	98	65 - 135	P	07/15/2025	19:56	LB136488
	Thallium	40.4	40.0	101	65 - 135	P	07/15/2025	19:56	LB136488
	Vanadium	39.5	40.0	99	65 - 135	P	07/15/2025	19:56	LB136488
	Zinc	44.1	40.0	110	65 - 135	P	07/15/2025	19:56	LB136488

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB25	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	07/11/2025	14:15	LB136438

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB82	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	07/11/2025	14:25	LB136438
CCB83	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	07/11/2025	15:01	LB136438
CCB84	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	07/11/2025	15:29	LB136438
CCB85	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	07/11/2025	16:04	LB136438
CCB86	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	07/11/2025	16:34	LB136438

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	27.3	+/-50	J	80.0	100	P	07/14/2025	14:16	LB136469
	Antimony	6.76	+/-25	U	12.5	50.0	P	07/14/2025	14:16	LB136469
	Arsenic	5.12	+/-10	U	16.0	20.0	P	07/14/2025	14:16	LB136469
	Barium	14.6	+/-50	U	25.0	100	P	07/14/2025	14:16	LB136469
	Beryllium	0.56	+/-3	U	1.50	6.00	P	07/14/2025	14:16	LB136469
	Cadmium	0.50	+/-3	U	1.50	6.00	P	07/14/2025	14:16	LB136469
	Calcium	234	+/-1000	U	500	2000	P	07/14/2025	14:16	LB136469
	Chromium	2.12	+/-5	U	5.00	10.0	P	07/14/2025	14:16	LB136469
	Cobalt	2.26	+/-15	U	7.50	30.0	P	07/14/2025	14:16	LB136469
	Copper	4.60	+/-10	U	16.0	20.0	P	07/14/2025	14:16	LB136469
	Iron	23.4	+/-50	U	80.0	100	P	07/14/2025	14:16	LB136469
	Lead	2.30	+/-6	U	9.60	12.0	P	07/14/2025	14:16	LB136469
	Magnesium	244	+/-1000	U	500	2000	P	07/14/2025	14:16	LB136469
	Manganese	5.94	+/-10	U	5.00	20.0	P	07/14/2025	14:16	LB136469
	Nickel	3.06	+/-20	U	10.0	40.0	P	07/14/2025	14:16	LB136469
	Potassium	918	+/-1000	U	1600	2000	P	07/14/2025	14:16	LB136469
	Selenium	9.64	+/-10	U	16.0	20.0	P	07/14/2025	14:16	LB136469
	Silver	1.62	+/-5	U	5.00	10.0	P	07/14/2025	14:16	LB136469
	Sodium	868	+/-1000	U	1000	2000	P	07/14/2025	14:16	LB136469
	Thallium	4.38	+/-20	U	20.0	40.0	P	07/14/2025	14:16	LB136469
	Vanadium	6.26	+/-20	U	20.0	40.0	P	07/14/2025	14:16	LB136469
	Zinc	3.50	+/-20	U	15.0	40.0	P	07/14/2025	14:16	LB136469

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	11.3	+/-50	U	80.0	100	P	07/14/2025	14:59	LB136469
	Antimony	6.76	+/-25	U	12.5	50.0	P	07/14/2025	14:59	LB136469
	Arsenic	5.12	+/-10	U	16.0	20.0	P	07/14/2025	14:59	LB136469
	Barium	14.6	+/-50	U	25.0	100	P	07/14/2025	14:59	LB136469
	Beryllium	0.56	+/-3	U	1.50	6.00	P	07/14/2025	14:59	LB136469
	Cadmium	0.50	+/-3	U	1.50	6.00	P	07/14/2025	14:59	LB136469
	Calcium	234	+/-1000	U	500	2000	P	07/14/2025	14:59	LB136469
	Chromium	2.12	+/-5	U	5.00	10.0	P	07/14/2025	14:59	LB136469
	Cobalt	2.26	+/-15	U	7.50	30.0	P	07/14/2025	14:59	LB136469
	Copper	4.60	+/-10	U	16.0	20.0	P	07/14/2025	14:59	LB136469
	Iron	23.4	+/-50	U	80.0	100	P	07/14/2025	14:59	LB136469
	Lead	2.30	+/-6	U	9.60	12.0	P	07/14/2025	14:59	LB136469
	Magnesium	244	+/-1000	U	500	2000	P	07/14/2025	14:59	LB136469
	Manganese	5.94	+/-10	U	5.00	20.0	P	07/14/2025	14:59	LB136469
	Nickel	3.06	+/-20	U	10.0	40.0	P	07/14/2025	14:59	LB136469
	Potassium	918	+/-1000	U	1600	2000	P	07/14/2025	14:59	LB136469
	Selenium	9.64	+/-10	U	16.0	20.0	P	07/14/2025	14:59	LB136469
	Silver	1.62	+/-5	U	5.00	10.0	P	07/14/2025	14:59	LB136469
	Sodium	868	+/-1000	U	1000	2000	P	07/14/2025	14:59	LB136469
	Thallium	4.38	+/-20	U	20.0	40.0	P	07/14/2025	14:59	LB136469
	Vanadium	6.26	+/-20	U	20.0	40.0	P	07/14/2025	14:59	LB136469
	Zinc	3.50	+/-20	U	15.0	40.0	P	07/14/2025	14:59	LB136469
CCB02	Aluminum	16.9	+/-50	J	80.0	100	P	07/14/2025	16:57	LB136469
	Antimony	6.76	+/-25	U	12.5	50.0	P	07/14/2025	16:57	LB136469
	Arsenic	5.12	+/-10	U	16.0	20.0	P	07/14/2025	16:57	LB136469
	Barium	14.6	+/-50	U	25.0	100	P	07/14/2025	16:57	LB136469
	Beryllium	0.56	+/-3	U	1.50	6.00	P	07/14/2025	16:57	LB136469
	Cadmium	0.50	+/-3	U	1.50	6.00	P	07/14/2025	16:57	LB136469
	Calcium	234	+/-1000	U	500	2000	P	07/14/2025	16:57	LB136469
	Chromium	2.12	+/-5	U	5.00	10.0	P	07/14/2025	16:57	LB136469
	Cobalt	2.26	+/-15	U	7.50	30.0	P	07/14/2025	16:57	LB136469
	Copper	4.60	+/-10	U	16.0	20.0	P	07/14/2025	16:57	LB136469
	Iron	23.4	+/-50	U	80.0	100	P	07/14/2025	16:57	LB136469
	Lead	2.30	+/-6	U	9.60	12.0	P	07/14/2025	16:57	LB136469
	Magnesium	244	+/-1000	U	500	2000	P	07/14/2025	16:57	LB136469
	Manganese	5.94	+/-10	U	5.00	20.0	P	07/14/2025	16:57	LB136469
	Nickel	3.06	+/-20	U	10.0	40.0	P	07/14/2025	16:57	LB136469
	Potassium	918	+/-1000	U	1600	2000	P	07/14/2025	16:57	LB136469
	Selenium	9.64	+/-10	U	16.0	20.0	P	07/14/2025	16:57	LB136469

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	1.62	+/-5	U	5.00	10.0	P	07/14/2025	16:57	LB136469
	Sodium	868	+/-1000	U	1000	2000	P	07/14/2025	16:57	LB136469
	Thallium	4.38	+/-20	U	20.0	40.0	P	07/14/2025	16:57	LB136469
	Vanadium	6.26	+/-20	U	20.0	40.0	P	07/14/2025	16:57	LB136469
	Zinc	3.50	+/-20	U	15.0	40.0	P	07/14/2025	16:57	LB136469
CCB03	Aluminum	20.5	+/-50	J	80.0	100	P	07/14/2025	18:05	LB136469
	Antimony	6.76	+/-25	U	12.5	50.0	P	07/14/2025	18:05	LB136469
	Arsenic	5.12	+/-10	U	16.0	20.0	P	07/14/2025	18:05	LB136469
	Barium	14.6	+/-50	U	25.0	100	P	07/14/2025	18:05	LB136469
	Beryllium	0.56	+/-3	U	1.50	6.00	P	07/14/2025	18:05	LB136469
	Cadmium	0.50	+/-3	U	1.50	6.00	P	07/14/2025	18:05	LB136469
	Calcium	234	+/-1000	U	500	2000	P	07/14/2025	18:05	LB136469
	Chromium	2.12	+/-5	U	5.00	10.0	P	07/14/2025	18:05	LB136469
	Cobalt	2.26	+/-15	U	7.50	30.0	P	07/14/2025	18:05	LB136469
	Copper	4.60	+/-10	U	16.0	20.0	P	07/14/2025	18:05	LB136469
	Iron	23.4	+/-50	U	80.0	100	P	07/14/2025	18:05	LB136469
	Lead	2.30	+/-6	U	9.60	12.0	P	07/14/2025	18:05	LB136469
	Magnesium	244	+/-1000	U	500	2000	P	07/14/2025	18:05	LB136469
	Manganese	5.94	+/-10	U	5.00	20.0	P	07/14/2025	18:05	LB136469
	Nickel	3.06	+/-20	U	10.0	40.0	P	07/14/2025	18:05	LB136469
	Potassium	918	+/-1000	U	1600	2000	P	07/14/2025	18:05	LB136469
	Selenium	9.64	+/-10	U	16.0	20.0	P	07/14/2025	18:05	LB136469
	Silver	1.62	+/-5	U	5.00	10.0	P	07/14/2025	18:05	LB136469
	Sodium	868	+/-1000	U	1000	2000	P	07/14/2025	18:05	LB136469
	Thallium	4.38	+/-20	U	20.0	40.0	P	07/14/2025	18:05	LB136469
	Vanadium	6.26	+/-20	U	20.0	40.0	P	07/14/2025	18:05	LB136469
	Zinc	3.50	+/-20	U	15.0	40.0	P	07/14/2025	18:05	LB136469
CCB04	Aluminum	11.3	+/-50	U	80.0	100	P	07/14/2025	19:04	LB136469
	Antimony	6.76	+/-25	U	12.5	50.0	P	07/14/2025	19:04	LB136469
	Arsenic	5.12	+/-10	U	16.0	20.0	P	07/14/2025	19:04	LB136469
	Barium	14.6	+/-50	U	25.0	100	P	07/14/2025	19:04	LB136469
	Beryllium	0.56	+/-3	U	1.50	6.00	P	07/14/2025	19:04	LB136469
	Cadmium	0.50	+/-3	U	1.50	6.00	P	07/14/2025	19:04	LB136469
	Calcium	234	+/-1000	U	500	2000	P	07/14/2025	19:04	LB136469
	Chromium	2.12	+/-5	U	5.00	10.0	P	07/14/2025	19:04	LB136469
	Cobalt	2.26	+/-15	U	7.50	30.0	P	07/14/2025	19:04	LB136469
	Copper	4.60	+/-10	U	16.0	20.0	P	07/14/2025	19:04	LB136469
	Iron	23.4	+/-50	U	80.0	100	P	07/14/2025	19:04	LB136469
	Lead	2.30	+/-6	U	9.60	12.0	P	07/14/2025	19:04	LB136469

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB04	Magnesium	244	+/-1000	U	500	2000	P	07/14/2025	19:04	LB136469
	Manganese	5.94	+/-10	U	5.00	20.0	P	07/14/2025	19:04	LB136469
	Nickel	3.06	+/-20	U	10.0	40.0	P	07/14/2025	19:04	LB136469
	Potassium	918	+/-1000	U	1600	2000	P	07/14/2025	19:04	LB136469
	Selenium	9.64	+/-10	U	16.0	20.0	P	07/14/2025	19:04	LB136469
	Silver	1.62	+/-5	U	5.00	10.0	P	07/14/2025	19:04	LB136469
	Sodium	868	+/-1000	U	1000	2000	P	07/14/2025	19:04	LB136469
	Thallium	4.38	+/-20	U	20.0	40.0	P	07/14/2025	19:04	LB136469
	Vanadium	6.26	+/-20	U	20.0	40.0	P	07/14/2025	19:04	LB136469
	Zinc	3.50	+/-20	U	15.0	40.0	P	07/14/2025	19:04	LB136469
CCB05	Aluminum	18.1	+/-50	J	80.0	100	P	07/14/2025	19:58	LB136469
	Antimony	6.76	+/-25	U	12.5	50.0	P	07/14/2025	19:58	LB136469
	Arsenic	5.12	+/-10	U	16.0	20.0	P	07/14/2025	19:58	LB136469
	Barium	14.6	+/-50	U	25.0	100	P	07/14/2025	19:58	LB136469
	Beryllium	0.56	+/-3	U	1.50	6.00	P	07/14/2025	19:58	LB136469
	Cadmium	0.50	+/-3	U	1.50	6.00	P	07/14/2025	19:58	LB136469
	Calcium	234	+/-1000	U	500	2000	P	07/14/2025	19:58	LB136469
	Chromium	2.12	+/-5	U	5.00	10.0	P	07/14/2025	19:58	LB136469
	Cobalt	2.26	+/-15	U	7.50	30.0	P	07/14/2025	19:58	LB136469
	Copper	4.60	+/-10	U	16.0	20.0	P	07/14/2025	19:58	LB136469
	Iron	23.4	+/-50	U	80.0	100	P	07/14/2025	19:58	LB136469
	Lead	2.30	+/-6	U	9.60	12.0	P	07/14/2025	19:58	LB136469
	Magnesium	244	+/-1000	U	500	2000	P	07/14/2025	19:58	LB136469
	Manganese	5.94	+/-10	U	5.00	20.0	P	07/14/2025	19:58	LB136469
	Nickel	3.06	+/-20	U	10.0	40.0	P	07/14/2025	19:58	LB136469
	Potassium	918	+/-1000	U	1600	2000	P	07/14/2025	19:58	LB136469
	Selenium	9.64	+/-10	U	16.0	20.0	P	07/14/2025	19:58	LB136469
	Silver	1.62	+/-5	U	5.00	10.0	P	07/14/2025	19:58	LB136469
	Sodium	868	+/-1000	U	1000	2000	P	07/14/2025	19:58	LB136469
	Thallium	4.38	+/-20	U	20.0	40.0	P	07/14/2025	19:58	LB136469
	Vanadium	6.26	+/-20	U	20.0	40.0	P	07/14/2025	19:58	LB136469
	Zinc	3.50	+/-20	U	15.0	40.0	P	07/14/2025	19:58	LB136469
CCB06	Aluminum	11.3	+/-50	U	80.0	100	P	07/14/2025	20:11	LB136469
	Antimony	6.76	+/-25	U	12.5	50.0	P	07/14/2025	20:11	LB136469
	Arsenic	5.12	+/-10	U	16.0	20.0	P	07/14/2025	20:11	LB136469
	Barium	14.6	+/-50	U	25.0	100	P	07/14/2025	20:11	LB136469
	Beryllium	0.56	+/-3	U	1.50	6.00	P	07/14/2025	20:11	LB136469
	Cadmium	0.50	+/-3	U	1.50	6.00	P	07/14/2025	20:11	LB136469
	Calcium	234	+/-1000	U	500	2000	P	07/14/2025	20:11	LB136469

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Chromium	2.12	+/-5	U	5.00	10.0	P	07/14/2025	20:11	LB136469
	Cobalt	2.26	+/-15	U	7.50	30.0	P	07/14/2025	20:11	LB136469
	Copper	4.60	+/-10	U	16.0	20.0	P	07/14/2025	20:11	LB136469
	Iron	23.4	+/-50	U	80.0	100	P	07/14/2025	20:11	LB136469
	Lead	2.30	+/-6	U	9.60	12.0	P	07/14/2025	20:11	LB136469
	Magnesium	244	+/-1000	U	500	2000	P	07/14/2025	20:11	LB136469
	Manganese	5.94	+/-10	U	5.00	20.0	P	07/14/2025	20:11	LB136469
	Nickel	3.06	+/-20	U	10.0	40.0	P	07/14/2025	20:11	LB136469
	Potassium	918	+/-1000	U	1600	2000	P	07/14/2025	20:11	LB136469
	Selenium	9.64	+/-10	U	16.0	20.0	P	07/14/2025	20:11	LB136469
	Silver	1.62	+/-5	U	5.00	10.0	P	07/14/2025	20:11	LB136469
	Sodium	868	+/-1000	U	1000	2000	P	07/14/2025	20:11	LB136469
	Thallium	4.38	+/-20	U	20.0	40.0	P	07/14/2025	20:11	LB136469
	Vanadium	6.26	+/-20	U	20.0	40.0	P	07/14/2025	20:11	LB136469
	Zinc	3.50	+/-20	U	15.0	40.0	P	07/14/2025	20:11	LB136469

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	11.3	+/-50	U	80.0	100	P	07/15/2025	19:42	LB136488
	Antimony	6.76	+/-25	U	12.5	50.0	P	07/15/2025	19:42	LB136488
	Arsenic	5.12	+/-10	U	16.0	20.0	P	07/15/2025	19:42	LB136488
	Barium	14.6	+/-50	U	25.0	100	P	07/15/2025	19:42	LB136488
	Beryllium	0.56	+/-3	U	1.50	6.00	P	07/15/2025	19:42	LB136488
	Cadmium	0.50	+/-3	U	1.50	6.00	P	07/15/2025	19:42	LB136488
	Calcium	234	+/-1000	U	500	2000	P	07/15/2025	19:42	LB136488
	Chromium	2.12	+/-5	U	5.00	10.0	P	07/15/2025	19:42	LB136488
	Cobalt	2.26	+/-15	U	7.50	30.0	P	07/15/2025	19:42	LB136488
	Copper	4.60	+/-10	U	16.0	20.0	P	07/15/2025	19:42	LB136488
	Iron	23.4	+/-50	U	80.0	100	P	07/15/2025	19:42	LB136488
	Lead	2.30	+/-6	U	9.60	12.0	P	07/15/2025	19:42	LB136488
	Magnesium	244	+/-1000	U	500	2000	P	07/15/2025	19:42	LB136488
	Manganese	5.94	+/-10	U	5.00	20.0	P	07/15/2025	19:42	LB136488
	Nickel	3.06	+/-20	U	10.0	40.0	P	07/15/2025	19:42	LB136488
	Potassium	918	+/-1000	U	1600	2000	P	07/15/2025	19:42	LB136488
	Selenium	9.64	+/-10	U	16.0	20.0	P	07/15/2025	19:42	LB136488
	Silver	1.62	+/-5	U	5.00	10.0	P	07/15/2025	19:42	LB136488
	Sodium	868	+/-1000	U	1000	2000	P	07/15/2025	19:42	LB136488
	Thallium	4.38	+/-20	U	20.0	40.0	P	07/15/2025	19:42	LB136488
	Vanadium	6.26	+/-20	U	20.0	40.0	P	07/15/2025	19:42	LB136488
	Zinc	3.50	+/-20	U	15.0	40.0	P	07/15/2025	19:42	LB136488

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	11.3	+/-50	U	80.0	100	P	07/15/2025	20:29	LB136488
	Antimony	6.76	+/-25	U	12.5	50.0	P	07/15/2025	20:29	LB136488
	Arsenic	5.12	+/-10	U	16.0	20.0	P	07/15/2025	20:29	LB136488
	Barium	14.6	+/-50	U	25.0	100	P	07/15/2025	20:29	LB136488
	Beryllium	0.56	+/-3	U	1.50	6.00	P	07/15/2025	20:29	LB136488
	Cadmium	0.50	+/-3	U	1.50	6.00	P	07/15/2025	20:29	LB136488
	Calcium	234	+/-1000	U	500	2000	P	07/15/2025	20:29	LB136488
	Chromium	2.12	+/-5	U	5.00	10.0	P	07/15/2025	20:29	LB136488
	Cobalt	2.26	+/-15	U	7.50	30.0	P	07/15/2025	20:29	LB136488
	Copper	4.60	+/-10	U	16.0	20.0	P	07/15/2025	20:29	LB136488
	Iron	23.4	+/-50	U	80.0	100	P	07/15/2025	20:29	LB136488
	Lead	2.30	+/-6	U	9.60	12.0	P	07/15/2025	20:29	LB136488
	Magnesium	244	+/-1000	U	500	2000	P	07/15/2025	20:29	LB136488
	Manganese	5.94	+/-10	U	5.00	20.0	P	07/15/2025	20:29	LB136488
	Nickel	3.06	+/-20	U	10.0	40.0	P	07/15/2025	20:29	LB136488
	Potassium	918	+/-1000	U	1600	2000	P	07/15/2025	20:29	LB136488
	Selenium	9.64	+/-10	U	16.0	20.0	P	07/15/2025	20:29	LB136488
	Silver	1.62	+/-5	U	5.00	10.0	P	07/15/2025	20:29	LB136488
	Sodium	868	+/-1000	U	1000	2000	P	07/15/2025	20:29	LB136488
	Thallium	4.38	+/-20	U	20.0	40.0	P	07/15/2025	20:29	LB136488
	Vanadium	6.26	+/-20	U	20.0	40.0	P	07/15/2025	20:29	LB136488
	Zinc	3.50	+/-20	U	15.0	40.0	P	07/15/2025	20:29	LB136488
CCB02	Aluminum	11.3	+/-50	U	80.0	100	P	07/15/2025	22:17	LB136488
	Antimony	6.76	+/-25	U	12.5	50.0	P	07/15/2025	22:17	LB136488
	Arsenic	5.12	+/-10	U	16.0	20.0	P	07/15/2025	22:17	LB136488
	Barium	14.6	+/-50	U	25.0	100	P	07/15/2025	22:17	LB136488
	Beryllium	0.56	+/-3	U	1.50	6.00	P	07/15/2025	22:17	LB136488
	Cadmium	0.50	+/-3	U	1.50	6.00	P	07/15/2025	22:17	LB136488
	Calcium	234	+/-1000	U	500	2000	P	07/15/2025	22:17	LB136488
	Chromium	2.12	+/-5	U	5.00	10.0	P	07/15/2025	22:17	LB136488
	Cobalt	2.26	+/-15	U	7.50	30.0	P	07/15/2025	22:17	LB136488
	Copper	4.60	+/-10	U	16.0	20.0	P	07/15/2025	22:17	LB136488
	Iron	23.4	+/-50	U	80.0	100	P	07/15/2025	22:17	LB136488
	Lead	2.30	+/-6	U	9.60	12.0	P	07/15/2025	22:17	LB136488
	Magnesium	244	+/-1000	U	500	2000	P	07/15/2025	22:17	LB136488
	Manganese	5.94	+/-10	U	5.00	20.0	P	07/15/2025	22:17	LB136488
	Nickel	3.06	+/-20	U	10.0	40.0	P	07/15/2025	22:17	LB136488
	Potassium	918	+/-1000	U	1600	2000	P	07/15/2025	22:17	LB136488
	Selenium	9.64	+/-10	U	16.0	20.0	P	07/15/2025	22:17	LB136488

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	1.62	+/-5	U	5.00	10.0	P	07/15/2025	22:17	LB136488
	Sodium	868	+/-1000	U	1000	2000	P	07/15/2025	22:17	LB136488
	Thallium	4.38	+/-20	U	20.0	40.0	P	07/15/2025	22:17	LB136488
	Vanadium	6.26	+/-20	U	20.0	40.0	P	07/15/2025	22:17	LB136488
	Zinc	3.50	+/-20	U	15.0	40.0	P	07/15/2025	22:17	LB136488
CCB03	Aluminum	11.3	+/-50	U	80.0	100	P	07/15/2025	22:43	LB136488
	Antimony	6.76	+/-25	U	12.5	50.0	P	07/15/2025	22:43	LB136488
	Arsenic	5.12	+/-10	U	16.0	20.0	P	07/15/2025	22:43	LB136488
	Barium	14.6	+/-50	U	25.0	100	P	07/15/2025	22:43	LB136488
	Beryllium	0.56	+/-3	U	1.50	6.00	P	07/15/2025	22:43	LB136488
	Cadmium	0.50	+/-3	U	1.50	6.00	P	07/15/2025	22:43	LB136488
	Calcium	234	+/-1000	U	500	2000	P	07/15/2025	22:43	LB136488
	Chromium	2.12	+/-5	U	5.00	10.0	P	07/15/2025	22:43	LB136488
	Cobalt	2.26	+/-15	U	7.50	30.0	P	07/15/2025	22:43	LB136488
	Copper	4.60	+/-10	U	16.0	20.0	P	07/15/2025	22:43	LB136488
	Iron	23.4	+/-50	U	80.0	100	P	07/15/2025	22:43	LB136488
	Lead	2.30	+/-6	U	9.60	12.0	P	07/15/2025	22:43	LB136488
	Magnesium	244	+/-1000	U	500	2000	P	07/15/2025	22:43	LB136488
	Manganese	5.94	+/-10	U	5.00	20.0	P	07/15/2025	22:43	LB136488
	Nickel	3.06	+/-20	U	10.0	40.0	P	07/15/2025	22:43	LB136488
	Potassium	918	+/-1000	U	1600	2000	P	07/15/2025	22:43	LB136488
	Selenium	9.64	+/-10	U	16.0	20.0	P	07/15/2025	22:43	LB136488
	Silver	1.62	+/-5	U	5.00	10.0	P	07/15/2025	22:43	LB136488
	Sodium	868	+/-1000	U	1000	2000	P	07/15/2025	22:43	LB136488
	Thallium	4.38	+/-20	U	20.0	40.0	P	07/15/2025	22:43	LB136488
	Vanadium	6.26	+/-20	U	20.0	40.0	P	07/15/2025	22:43	LB136488
	Zinc	3.50	+/-20	U	15.0	40.0	P	07/15/2025	22:43	LB136488

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Metals
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PREPARATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Instrument: CV1

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB168821BL		**SOLID**		**Batch Number:**		**PB168821**		**Prep Date:**	**07/10/2025**	
	Mercury	0.0080	<0.013	U	0.011	0.013	CV	07/11/2025	14:35	LB136438

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Instrument: P5

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB168806BL		**SOLID**		**Batch Number:**		**PB168806**		**Prep Date:**	**07/11/2025**	
	Aluminum	0.84	<2.5	U	4.00	5.00	P	07/14/2025	18:15	LB136469
	Antimony	0.22	<1.25	U	0.63	2.50	P	07/14/2025	18:15	LB136469
	Arsenic	0.19	<0.5	U	0.80	1.00	P	07/14/2025	18:15	LB136469
	Barium	0.73	<2.5	U	1.25	5.00	P	07/14/2025	18:15	LB136469
	Beryllium	0.025	<0.15	U	0.075	0.30	P	07/14/2025	18:15	LB136469
	Cadmium	0.024	<0.15	U	0.075	0.30	P	07/14/2025	18:15	LB136469
	Calcium	11.1	<50	U	25.0	100	P	07/14/2025	18:15	LB136469
	Chromium	0.047	<0.25	U	0.13	0.50	P	07/14/2025	18:15	LB136469
	Cobalt	0.10	<0.75	U	0.38	1.50	P	07/14/2025	18:15	LB136469
	Copper	0.22	<0.5	U	0.80	1.00	P	07/14/2025	18:15	LB136469
	Iron	3.99	<2.5	U	4.00	5.00	P	07/14/2025	18:15	LB136469
	Lead	0.13	<0.3	U	0.48	0.60	P	07/14/2025	18:15	LB136469
	Magnesium	12.0	<50	U	25.0	100	P	07/14/2025	18:15	LB136469
	Manganese	0.14	<0.5	U	0.25	1.00	P	07/14/2025	18:15	LB136469
	Nickel	0.13	<1	U	0.50	2.00	P	07/14/2025	18:15	LB136469
	Potassium	27.7	<50	U	80.0	100	P	07/14/2025	18:15	LB136469
	Selenium	0.26	<0.5	U	0.80	1.00	P	07/14/2025	18:15	LB136469
	Silver	0.12	<0.25	U	0.25	0.50	P	07/14/2025	18:15	LB136469
	Sodium	17.8	<50	U	80.0	100	P	07/14/2025	18:15	LB136469
	Thallium	0.23	<1	U	1.00	2.00	P	07/14/2025	18:15	LB136469
	Vanadium	0.25	<1	U	1.00	2.00	P	07/14/2025	18:15	LB136469
	Zinc	0.11	<1	U	0.50	2.00	P	07/14/2025	18:15	LB136469

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

ICS Source: EPA **Instrument ID:** P5

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	258000	250000	103	216000	294000	07/14/2025	14:37	LB136469
	Antimony	20.8			-50	50	07/14/2025	14:37	LB136469
	Arsenic	2.40			-20	20	07/14/2025	14:37	LB136469
	Barium	6.88	6.0	115	-94	106	07/14/2025	14:37	LB136469
	Beryllium	1.18			-6	6	07/14/2025	14:37	LB136469
	Cadmium	-0.081	1.0	8	-5	7	07/14/2025	14:37	LB136469
	Calcium	248000	240000	103	208000	282000	07/14/2025	14:37	LB136469
	Chromium	53.4	52.0	103	42	62	07/14/2025	14:37	LB136469
	Cobalt	-17.9			-30	30	07/14/2025	14:37	LB136469
	Copper	-6.35	2.0	318	-18	22	07/14/2025	14:37	LB136469
	Iron	99000	100000	99	85600	116500	07/14/2025	14:37	LB136469
	Lead	4.49			-12	12	07/14/2025	14:37	LB136469
	Magnesium	256000	260000	98	216000	294000	07/14/2025	14:37	LB136469
	Manganese	7.27	7.0	104	-13	27	07/14/2025	14:37	LB136469
	Nickel	17.4	2.0	870	-38	42	07/14/2025	14:37	LB136469
	Potassium	6.93			0	0	07/14/2025	14:37	LB136469
	Selenium	-9.51			-20	20	07/14/2025	14:37	LB136469
	Silver	4.04			-10	10	07/14/2025	14:37	LB136469
	Sodium	99.1			0	0	07/14/2025	14:37	LB136469
	Thallium	21.9			-40	40	07/14/2025	14:37	LB136469
	Vanadium	0.58			-40	40	07/14/2025	14:37	LB136469
	Zinc	11.6			-40	40	07/14/2025	14:37	LB136469
ICSAB01	Aluminum	248000	250000	99	209000	285000	07/14/2025	14:41	LB136469
	Antimony	626	620	101	525	711	07/14/2025	14:41	LB136469
	Arsenic	96.3	100	96	88.4	120	07/14/2025	14:41	LB136469
	Barium	508	540	94	437	637	07/14/2025	14:41	LB136469
	Beryllium	515	500	103	420	570	07/14/2025	14:41	LB136469
	Cadmium	996	970	103	826	1120	07/14/2025	14:41	LB136469
	Calcium	241000	230000	105	199000	271000	07/14/2025	14:41	LB136469
	Chromium	555	540	103	460	624	07/14/2025	14:41	LB136469
	Cobalt	473	480	98	404	548	07/14/2025	14:41	LB136469
	Copper	485	510	95	434	588	07/14/2025	14:41	LB136469
	Iron	97200	99000	98	84400	114500	07/14/2025	14:41	LB136469
	Lead	46.0	49.0	94	37	61	07/14/2025	14:41	LB136469
	Magnesium	246000	250000	98	210000	286000	07/14/2025	14:41	LB136469
	Manganese	492	510	96	430	584	07/14/2025	14:41	LB136469
	Nickel	998	950	105	810	1100	07/14/2025	14:41	LB136469
	Potassium	6.60			0	0	07/14/2025	14:41	LB136469
	Selenium	35.1	46.0	76	26	66	07/14/2025	14:41	LB136469
	Silver	217	200	108	170	232	07/14/2025	14:41	LB136469
	Sodium	118			0	0	07/14/2025	14:41	LB136469
	Thallium	104	110	94	68	148	07/14/2025	14:41	LB136469

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

ICS Source: EPA **Instrument ID:** P5

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	483	490	99	417	565	07/14/2025	14:41	LB136469
	Zinc	1010	950	106	809	1095	07/14/2025	14:41	LB136469
ICSA01	Aluminum	239000	250000	96	216000	294000	07/15/2025	20:01	LB136488
	Antimony	23.5			-50	50	07/15/2025	20:01	LB136488
	Arsenic	-5.02			-20	20	07/15/2025	20:01	LB136488
	Barium	8.98	6.0	150	-94	106	07/15/2025	20:01	LB136488
	Beryllium	1.32			-6	6	07/15/2025	20:01	LB136488
	Cadmium	-1.36	1.0	136	-5	7	07/15/2025	20:01	LB136488
	Calcium	235000	240000	98	208000	282000	07/15/2025	20:01	LB136488
	Chromium	46.9	52.0	90	42	62	07/15/2025	20:01	LB136488
	Cobalt	2.07			-30	30	07/15/2025	20:01	LB136488
	Copper	-6.09	2.0	304	-18	22	07/15/2025	20:01	LB136488
	Iron	99100	100000	99	85600	116500	07/15/2025	20:01	LB136488
	Lead	1.80			-12	12	07/15/2025	20:01	LB136488
	Magnesium	254000	260000	98	216000	294000	07/15/2025	20:01	LB136488
	Manganese	5.23	7.0	75	-13	27	07/15/2025	20:01	LB136488
	Nickel	3.59	2.0	180	-38	42	07/15/2025	20:01	LB136488
	Potassium	0.67			0	0	07/15/2025	20:01	LB136488
	Selenium	-6.59			-20	20	07/15/2025	20:01	LB136488
	Silver	-4.70			-10	10	07/15/2025	20:01	LB136488
	Sodium	140			0	0	07/15/2025	20:01	LB136488
	Thallium	1.76			-40	40	07/15/2025	20:01	LB136488
	Vanadium	2.24			-40	40	07/15/2025	20:01	LB136488
	Zinc	11.6			-40	40	07/15/2025	20:01	LB136488
ICSAB01	Aluminum	236000	250000	94	209000	285000	07/15/2025	20:05	LB136488
	Antimony	578	620	93	525	711	07/15/2025	20:05	LB136488
	Arsenic	94.1	100	94	88.4	120	07/15/2025	20:05	LB136488
	Barium	535	540	99	437	637	07/15/2025	20:05	LB136488
	Beryllium	511	500	102	420	570	07/15/2025	20:05	LB136488
	Cadmium	963	970	99	826	1120	07/15/2025	20:05	LB136488
	Calcium	233000	230000	101	199000	271000	07/15/2025	20:05	LB136488
	Chromium	502	540	93	460	624	07/15/2025	20:05	LB136488
	Cobalt	478	480	100	404	548	07/15/2025	20:05	LB136488
	Copper	487	510	96	434	588	07/15/2025	20:05	LB136488
	Iron	99500	99000	100	84400	114500	07/15/2025	20:05	LB136488
	Lead	48.0	49.0	98	37	61	07/15/2025	20:05	LB136488
	Magnesium	253000	250000	101	210000	286000	07/15/2025	20:05	LB136488
	Manganese	511	510	100	430	584	07/15/2025	20:05	LB136488
	Nickel	953	950	100	810	1100	07/15/2025	20:05	LB136488
	Potassium	-3.20			0	0	07/15/2025	20:05	LB136488
	Selenium	41.7	46.0	91	26	66	07/15/2025	20:05	LB136488
	Silver	190	200	95	170	232	07/15/2025	20:05	LB136488

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

ICS Source: EPA **Instrument ID:** P5

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	Sodium	155			0	0	07/15/2025	20:05	LB136488
	Thallium	83.7	110	76	68	148	07/15/2025	20:05	LB136488
	Vanadium	506	490	103	417	565	07/15/2025	20:05	LB136488
	Zinc	1040	950	110	809	1095	07/15/2025	20:05	LB136488

METAL QC DATA

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metals
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MATRIX SPIKE SUMMARY

client: Nobis Group **level:** low **sdg no.:** Q2558

contract: NOBI03 **lab code:** ACE

matrix: Solid **sample id:** Q2558-03 **client id:** OU4-TS-Grillo-OG-070925MS

Percent Solids for Sample: 78.7 **Spiked ID:** Q2558-03MS **Percent Solids for Spike Sample:** 78.7

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 124	0.29		0.035		0.32	79	N	CV

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MATRIX SPIKE DUPLICATE SUMMARY

client: Nobis Group **level:** low **sdg no.:** Q2558

contract: NOBI03 **lab code:** ACE

matrix: Solid **sample id:** Q2558-03 **client id:** OU4-TS-Grillo-OG-070925MSD

Percent Solids for Sample: 78.7 **Spiked ID:** Q2558-03MSD **Percent Solids for Spike Sample:** 78.7

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 124	0.28		0.035		0.32	75	N	CV

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MATRIX SPIKE SUMMARY

client: Nobis Group **level:** low **sdg no.:** Q2558

contract: NOBI03 **lab code:** ACE

matrix: Solid **sample id:** Q2564-05 **client id:** ARS20-0039MS

Percent Solids for Sample: 87.2 **Spiked ID:** Q2564-05MS **Percent Solids for Spike Sample:** 87.2

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	74 - 119	7450		5580		98.0	1906		P
Antimony	mg/Kg	79 - 114	13.9		1.32	J	39.2	32	N	P
Arsenic	mg/Kg	82 - 111	49.4		9.90		39.2	101		P
Barium	mg/Kg	83 - 113	39.4		29.6		9.8	99		P
Beryllium	mg/Kg	83 - 113	9.83		0.57		9.8	94		P
Cadmium	mg/Kg	82 - 113	9.97		0.30	U	9.8	102		P
Calcium	mg/Kg	81 - 116	2970		3050		49.0	-165		P
Chromium	mg/Kg	85 - 113	29.2		11.5		19.6	90		P
Cobalt	mg/Kg	85 - 112	9.95		1.52	U	9.8	102		P
Copper	mg/Kg	81 - 117	29.0		13.8		14.7	103		P
Iron	mg/Kg	81 - 118	14400		13800		150	414		P
Lead	mg/Kg	81 - 112	157		104		49.0	109		P
Magnesium	mg/Kg	78 - 115	1660		1550		98.0	118		P
Manganese	mg/Kg	84 - 114	128		123		9.8	60		P
Nickel	mg/Kg	83 - 113	32.6		6.94		24.5	105		P
Potassium	mg/Kg	81 - 116	1100		678		490	86		P
Selenium	mg/Kg	78 - 111	80.6		2.95		98.0	79		P
Silver	mg/Kg	82 - 112	2.78		0.51	U	3.7	76	N	P
Sodium	mg/Kg	83 - 118	254		128		150	86		P
Thallium	mg/Kg	83 - 111	96.3		2.02	U	98.0	98		P
Vanadium	mg/Kg	82 - 114	38.7		21.9		14.7	115	N	P
Zinc	mg/Kg	82 - 113	74.8		73.7		9.8	12		P

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: Nobis Group **level:** low **sdg no.:** Q2558

contract: NOBI03 **lab code:** ACE

matrix: Solid **sample id:** Q2564-05 **client id:** ARS20-0039MSD

Percent Solids for Sample: 87.2 **Spiked ID:** Q2564-05MSD **Percent Solids for Spike Sample:** 87.2

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	74 - 119	7250		5580		110	1571		P
Antimony	mg/Kg	79 - 114	15.1		1.32	J	42.5	32	N	P
Arsenic	mg/Kg	82 - 111	57.7		9.90		42.5	113	N	P
Barium	mg/Kg	83 - 113	39.6		29.6		10.6	94		P
Beryllium	mg/Kg	83 - 113	10.9		0.57		10.6	98		P
Cadmium	mg/Kg	82 - 113	10.8		0.30	U	10.6	102		P
Calcium	mg/Kg	81 - 116	2640		3050		53.1	-786		P
Chromium	mg/Kg	85 - 113	31.6		11.5		21.2	94		P
Cobalt	mg/Kg	85 - 112	10.7		1.52	U	10.6	101		P
Copper	mg/Kg	81 - 117	32.7		13.8		15.9	118	N	P
Iron	mg/Kg	81 - 118	14700		13800		160	566		P
Lead	mg/Kg	81 - 112	172		104		53.1	128	N	P
Magnesium	mg/Kg	78 - 115	1490		1550		110	-51		P
Manganese	mg/Kg	84 - 114	125		123		10.6	24		P
Nickel	mg/Kg	83 - 113	34.9		6.94		26.5	105		P
Potassium	mg/Kg	81 - 116	1220		678		530	101		P
Selenium	mg/Kg	78 - 111	88.4		2.95		110	80		P
Silver	mg/Kg	82 - 112	3.15		0.51	U	4.0	79	N	P
Sodium	mg/Kg	83 - 118	292		128		160	103		P
Thallium	mg/Kg	83 - 111	105		2.02	U	110	99		P
Vanadium	mg/Kg	82 - 114	40.3		21.9		15.9	116	N	P
Zinc	mg/Kg	82 - 113	84.0		73.7		10.6	98		P

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Metals
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POST DIGEST SPIKE SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Matrix: Solid **Level:** LOW **Client ID:** OU4-TS-Grillo-OG-070925A

Sample ID: Q2558-03 **Spiked ID:** Q2558-03A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 124	0.34		0.035		0.31	99		CV

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Metals
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POST DIGEST SPIKE SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Matrix: Solid **Level:** LOW **Client ID:** ARS20-0039A

Sample ID: Q2564-05 **Spiked ID:** Q2564-05A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	mg/Kg	79 - 114	33.6		1.32	J	40.4	80		P
Arsenic	mg/Kg	82 - 111	48.6		9.90		40.4	96		P
Copper	mg/Kg	81 - 117	28.6		13.8		15.2	97		P
Lead	mg/Kg	81 - 112	149		104		50.5	90		P
Silver	mg/Kg	82 - 112	2.75		0.51	U	3.80	72	N	P
Vanadium	mg/Kg	82 - 114	36.3		21.9		15.2	95		P

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Nobis Group **Level:** LOW **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Matrix: Solid **Sample ID:** Q2558-03 **Client ID:** OU4-TS-Grillo-OG-070925DUP

Percent Solids for Sample: 78.7 **Duplicate ID** Q2558-03DUP **Percent Solids for Spike Sample:** 78.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.035		0.032		9		CV

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Nobis Group **Level:** LOW **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Matrix: Solid **Sample ID:** Q2558-03MS **Client ID:** OU4-TS-Grillo-OG-070925MSD

Percent Solids for Sample: 78.7 **Duplicate ID** Q2558-03MSD **Percent Solids for Spike Sample:** 78.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.29		0.28		4		CV

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Nobis Group **Level:** LOW **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Matrix: Solid **Sample ID:** Q2564-05 **Client ID:** ARS20-0039DUP

Percent Solids for Sample: 87.2 **Duplicate ID** Q2564-05DUP **Percent Solids for Spike Sample:** 87.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	5580		5550		1		P
Antimony	mg/Kg	20	1.32	J	1.10	J	18		P
Arsenic	mg/Kg	20	9.90		10.1		2		P
Barium	mg/Kg	20	29.6		27.6		7		P
Beryllium	mg/Kg	20	0.57		0.56		1		P
Cadmium	mg/Kg	20	0.30	U	0.30	U			P
Calcium	mg/Kg	20	3050		2700		12		P
Chromium	mg/Kg	20	11.5		11.4		1		P
Cobalt	mg/Kg	20	1.52	U	1.48	U			P
Copper	mg/Kg	20	13.8		50.0		113	*	P
Iron	mg/Kg	20	13800		14000		1		P
Lead	mg/Kg	20	104		113		8		P
Magnesium	mg/Kg	20	1550		1380		12		P
Manganese	mg/Kg	20	123		115		7		P
Nickel	mg/Kg	20	6.94		6.03		14		P
Potassium	mg/Kg	20	678		592		14		P
Selenium	mg/Kg	20	2.95		3.09		5		P
Silver	mg/Kg	20	0.51	U	0.49	U			P
Sodium	mg/Kg	20	128		139		8		P
Thallium	mg/Kg	20	2.02	U	1.97	U			P
Vanadium	mg/Kg	20	21.9		22.3		2		P
Zinc	mg/Kg	20	73.7		74.0		0		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: Nobis Group **Level:** LOW **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Matrix: Solid **Sample ID:** Q2564-05MS **Client ID:** ARS20-0039MSD

Percent Solids for Sample: 87.2 **Duplicate ID** Q2564-05MSD **Percent Solids for Spike Sample:** 87.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	7450		7250		3		P
Antimony	mg/Kg	20	13.9		15.1		8		P
Arsenic	mg/Kg	20	49.4		57.7		15		P
Barium	mg/Kg	20	39.4		39.6		1		P
Beryllium	mg/Kg	20	9.83		10.9		11		P
Cadmium	mg/Kg	20	9.97		10.8		8		P
Calcium	mg/Kg	20	2970		2640		12		P
Chromium	mg/Kg	20	29.2		31.6		8		P
Cobalt	mg/Kg	20	9.95		10.7		8		P
Copper	mg/Kg	20	29.0		32.7		12		P
Iron	mg/Kg	20	14400		14700		2		P
Lead	mg/Kg	20	157		172		9		P
Magnesium	mg/Kg	20	1660		1490		11		P
Manganese	mg/Kg	20	128		125		2		P
Nickel	mg/Kg	20	32.6		34.9		7		P
Potassium	mg/Kg	20	1100		1220		10		P
Selenium	mg/Kg	20	80.6		88.4		9		P
Silver	mg/Kg	20	2.78		3.15		12		P
Sodium	mg/Kg	20	254		292		14		P
Thallium	mg/Kg	20	96.3		105		9		P
Vanadium	mg/Kg	20	38.7		40.3		4		P
Zinc	mg/Kg	20	74.8		84.0		12		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: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB168806BS							
Aluminum	mg/Kg	100	100		100	74 - 119	P
Antimony	mg/Kg	40.0	39.1		98	79 - 114	P
Arsenic	mg/Kg	40.0	35.6		89	82 - 111	P
Barium	mg/Kg	10.0	10.0		100	83 - 113	P
Beryllium	mg/Kg	10.0	10.6		106	83 - 113	P
Cadmium	mg/Kg	10.0	9.50		95	82 - 113	P
Calcium	mg/Kg	50.0	50.4	J	101	81 - 116	P
Chromium	mg/Kg	20.0	20.2		101	85 - 113	P
Cobalt	mg/Kg	10.0	9.66		97	85 - 112	P
Copper	mg/Kg	15.0	16.4		109	81 - 117	P
Iron	mg/Kg	150	170		113	81 - 118	P
Lead	mg/Kg	50.0	47.3		95	81 - 112	P
Magnesium	mg/Kg	100	105		105	78 - 115	P
Manganese	mg/Kg	10.0	10.2		102	84 - 114	P
Nickel	mg/Kg	25.0	24.3		97	83 - 113	P
Potassium	mg/Kg	500	462		92	81 - 116	P
Selenium	mg/Kg	100	97.7		98	78 - 111	P
Silver	mg/Kg	3.8	3.51		92	82 - 112	P
Sodium	mg/Kg	150	153		102	83 - 118	P
Thallium	mg/Kg	100	101		101	83 - 111	P
Vanadium	mg/Kg	15.0	14.7		98	82 - 114	P
Zinc	mg/Kg	10.0	10.3		102	82 - 113	P

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB168821BS							
Mercury	mg/Kg	0.26	0.24		91	80 - 124	CV

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

OU4-TS-Grillo-OG-070925L

Lab Name: Alliance **Contract:** NOBI03

Lab Code: ACE **Lb No.:** lb136438 **Lab Sample ID :** Q2558-03L **SDG No.:** Q2558

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

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Mercury	0.035		0.077	U	100.0		CV

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

ARS20-0039L

Lab Name: Alliance **Contract:** NOBI03

Lab Code: ACE **Lb No.:** lb136488 **Lab Sample ID :** Q2564-05L **SDG No.:** Q2558

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	5580		6360		14		P
Antimony	1.32	J	12.6	U	100.0		P
Arsenic	9.90		9.36		5		P
Barium	29.6		34.2		16		P
Beryllium	0.57		0.64	J	12		P
Cadmium	0.30	U	1.52	U			P
Calcium	3050		3500		14		P
Chromium	11.5		12.8		11		P
Cobalt	1.52	U	7.58	U			P
Copper	13.8		16.0		16		P
Iron	13800		16900		22		P
Lead	104		101		3		P
Magnesium	1550		1800		17		P
Manganese	123		141		15		P
Nickel	6.94		6.59	J	5		P
Potassium	678		497	J	27		P
Selenium	2.95		3.24	J	10		P
Silver	0.51	U	2.53	U			P
Sodium	128		141	J	10		P
Thallium	2.02	U	10.1	U			P
Vanadium	21.9		24.4		12		P
Zinc	73.7		82.2		12		P

METAL PREPARATION & INSTRUMENT DATA

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ICP INTERELEMENT CORRECTION FACTORS

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Al	Ca	Fe	Mg	Ag
Aluminum	396.100	0.0000000	-0.0002060	0.0000000	0.0000000	0.0000000
Antimony	206.833	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	0.0000000	0.0000000	-0.0000440	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	-0.0075970	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0007850	0.0000000	0.0000000
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	-0.0001440	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	-0.0001490	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0001050	0.0000000	0.0000000

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ICP INTERELEMENT CORRECTION FACTORS

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: As	Ba	Be	Cd	Co
Aluminum	396.100	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.833	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0002870
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0000000	0.0009530
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	-0.0039600
Lead	220.353	0.0000000	0.0003170	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	-0.0003570
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0054900
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Cr	Cu	K	Mn	Mo
Aluminum	396.100	0.0000000	0.0000000	0.0000590	0.0000000	0.0396900
Antimony	206.833	0.0122000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	-0.0029000	0.0000000	0.0000000	0.0000000	0.0004900
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	-0.0000710	-0.0003400
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000070	0.0002200	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	-0.0007860
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0006510	0.0020500
Iron	240.488	0.0000000	0.0000000	0.0000730	0.0000000	-0.0015250
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0007460	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000120
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0017400	-0.0100400
Vanadium	292.402	-0.0025100	0.0000000	0.0000000	0.0000000	-0.0072000
Zinc	213.800	0.0000000	0.0009010	0.0000000	0.0000000	0.0000000

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ICP INTERELEMENT CORRECTION FACTORS

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Na	Ni	Pb	Sb	Se
Aluminum	396.100	0.0000000	0.0000000	0.0012800	0.0000000	0.0000000
Antimony	206.833	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	-0.0047000	0.0036100	0.0000000	0.0000000
Iron	240.488	0.0000000	-0.0017000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0003330	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0067600	0.0000000	0.0000000	0.0000000

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ICP INTERELEMENT CORRECTION FACTORS

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Sn	Ti	Tl	V	Zn
Aluminum	396.100	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.833	-0.0035600	-0.0007970	0.0000000	-0.0018900	0.0000000
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000630	0.0001280	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0001110	0.0000000
Cobalt	228.616	0.0000000	0.0018800	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0003840	0.0000000	0.0000000	0.0000000
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0003610	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	-0.0007420	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	-0.0039700	0.0000000	-0.0115600	0.0000000
Vanadium	292.402	0.0000000	0.0005320	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

METAL PREPARATION & ANALYICAL SUMMARY

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Fax : 908 789 8922

Metals
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SAMPLE PREPARATION SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE **Method:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB168806**						
PB168806BL	PB168806BL	MB	SOLID	07/11/2025	2.00	100.0	100.00
PB168806BS	PB168806BS	LCS	SOLID	07/11/2025	2.00	100.0	100.00
Q2558-01	OU4-TS-Denali-070925	SAM	SOLID	07/11/2025	2.20	100.0	79.60
Q2558-03	OU4-TS-Grillo-OG-070925	SAM	SOLID	07/11/2025	2.34	100.0	78.70
Q2564-05DUP	ARS20-0039DUP	DUP	SOLID	07/11/2025	2.33	100.0	87.20
Q2564-05MS	ARS20-0039MS	MS	SOLID	07/11/2025	2.34	100.0	87.20
Q2564-05MSD	ARS20-0039MSD	MSD	SOLID	07/11/2025	2.16	100.0	87.20

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Metals
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SAMPLE PREPARATION SUMMARY

Client: Nobis Group **SDG No.:** Q2558

Contract: NOBI03 **Lab Code:** ACE **Method:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB168821**						
PB168821BL	PB168821BL	MB	SOLID	07/10/2025	0.52	35.0	100.00
PB168821BS	PB168821BS	LCS	SOLID	07/10/2025	0.54	35.0	100.00
Q2558-01	OU4-TS-Denali-070925	SAM	SOLID	07/10/2025	0.55	35.0	79.60
Q2558-03	OU4-TS-Grillo-OG-070925	SAM	SOLID	07/10/2025	0.58	35.0	78.70
Q2558-03DUP	OU4-TS-Grillo-OG-070925DUP	DUP	SOLID	07/10/2025	0.57	35.0	78.70
Q2558-03MS	OU4-TS-Grillo-OG-070925MS	MS	SOLID	07/10/2025	0.56	35.0	78.70
Q2558-03MSD	OU4-TS-Grillo-OG-070925MSD	MSD	SOLID	07/10/2025	0.56	35.0	78.70

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metals
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ANALYSIS RUN LOG

Client: Nobis Group **Contract:** NOBI03

Lab code: ACE **Sdg no.:** Q2558

Instrument id number: **Method:** **Run number:** LB136438

Start date: 07/11/2025 **End date:** 07/11/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1356	HG
S0.2	S0.2	1	1358	HG
S2.5	S2.5	1	1400	HG
S5	S5	1	1403	HG
S7.5	S7.5	1	1405	HG
S10	S10	1	1410	HG
ICV25	ICV25	1	1413	HG
ICB25	ICB25	1	1415	HG
CCV82	CCV82	1	1418	HG
CCB82	CCB82	1	1425	HG
CRA	CRA	1	1428	HG
PB168821BL	PB168821BL	1	1435	HG
PB168821BS	PB168821BS	1	1440	HG
CCV83	CCV83	1	1456	HG
CCB83	CCB83	1	1501	HG
Q2558-01	OU4-TS-Denali-070925	1	1524	HG
CCV84	CCV84	1	1526	HG
CCB84	CCB84	1	1529	HG
Q2558-03	OU4-TS-Grillo-OG-070925	1	1536	HG
Q2558-03DUP	OU4-TS-Grillo-OG-070925DUP	1	1538	HG
Q2558-03MS	OU4-TS-Grillo-OG-070925MS	1	1541	HG
Q2558-03MSD	OU4-TS-Grillo-OG-070925MSD	1	1543	HG
CCV85	CCV85	1	1602	HG
CCB85	CCB85	1	1604	HG
Q2558-03L	OU4-TS-Grillo-OG-070925L	5	1623	HG
Q2558-03A	OU4-TS-Grillo-OG-070925A	1	1625	HG
CCV86	CCV86	1	1632	HG
CCB86	CCB86	1	1634	HG

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metals
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ANALYSIS RUN LOG

Client: Nobis Group **Contract:** NOBI03

Lab code: ACE **Sdg no.:** Q2558

Instrument id number: **Method:** **Run number:** LB136469

Start date: 07/14/2025 **End date:** 07/14/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1305	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S1	S1	1	1309	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	1314	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	1318	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	1322	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	1326	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICV01	ICV01	1	1344	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	1416	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CRI01	CRI01	1	1426	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	1437	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	1441	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	1454	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	1459	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV02	CCV02	1	1601	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
LLCCV01	LLCCV01	1	1627	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	1657	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	1801	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	1805	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB168806BL	PB168806BL	1	1815	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB168806BS	PB168806BS	1	1833	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV04	CCV04	1	1900	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB04	CCB04	1	1904	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2558-01	OU4-TS-Denali-070925	1	1944	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2558-03	OU4-TS-Grillo-OG-070925	1	1949	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV05	CCV05	1	1953	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB05	CCB05	1	1958	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV06	CCV06	1	2007	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB06	CCB06	1	2011	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

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metals
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ANALYSIS RUN LOG

Client: Nobis Group **Contract:** NOBI03

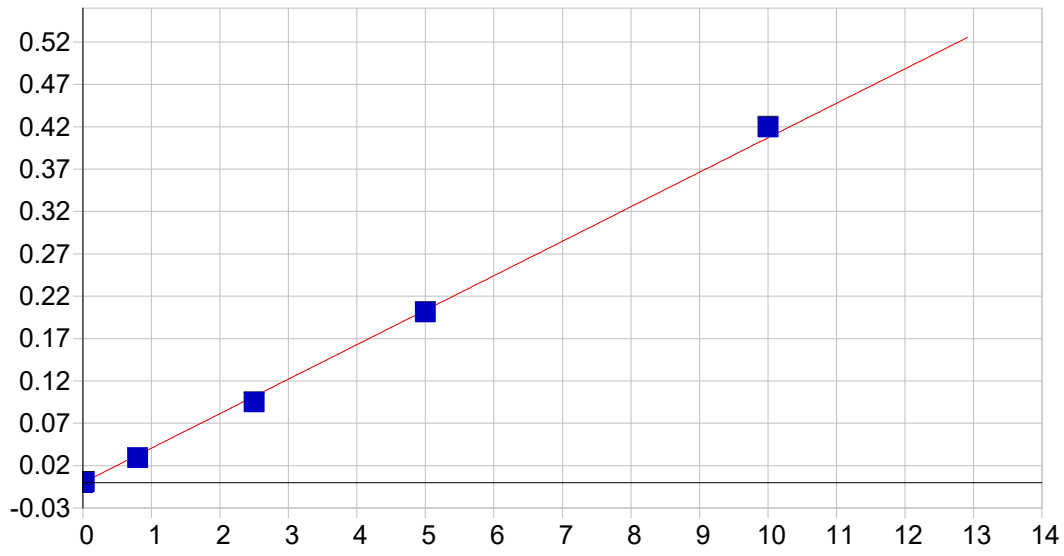
Lab code: ACE **Sdg no.:** Q2558

Instrument id number: **Method:** **Run number:** LB136488

Start date: 07/15/2025 **End date:** 07/15/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1901	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S1	S1	1	1905	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	1910	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	1914	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	1918	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	1922	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICV01	ICV01	1	1927	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
LLICV01	LLICV01	1	1937	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	1942	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CRI01	CRI01	1	1956	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	2001	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	2005	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	2025	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	2029	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2564-05DUP	ARS20-0039DUP	1	2111	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2564-05L	ARS20-0039L	5	2115	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2564-05MS	ARS20-0039MS	1	2120	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2564-05MSD	ARS20-0039MSD	1	2124	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2564-05A	ARS20-0039A	1	2129	Ag,As,Cu,Pb,Sb,V
CCV02	CCV02	1	2212	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	2217	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	2239	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	2243	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

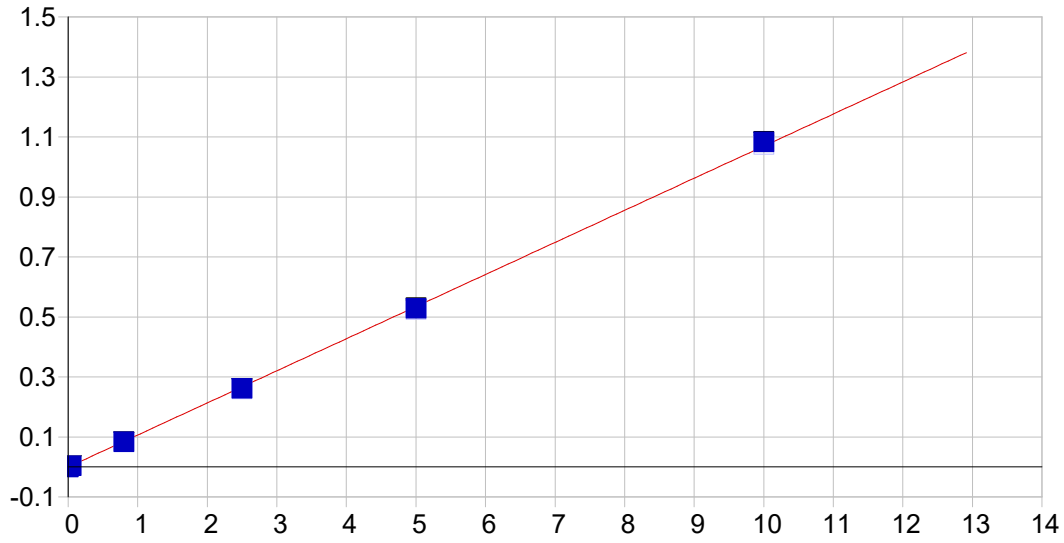


As 189.042 {479}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000023	Re-Slope:	1.000000
A1 (Gain):	0.040701	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999205	Status:	OK.
Std Error of Est:	0.000038		
Predicted MDL:	0.003292		
Predicted MQL:	0.010972		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00002	.000	1
S1	.02000	.01749	-.003	-12.6	.00069	.000	1
S2	.80000	.72104	-.079	-9.87	.02932	.000	1
S3	2.5000	2.3346	-.165	-6.61	.09498	.000	1
S4	5.0000	4.9404	-.060	-1.19	.20102	.000	1
S5	10.000	10.306	.306	3.06	.41939	.001	1

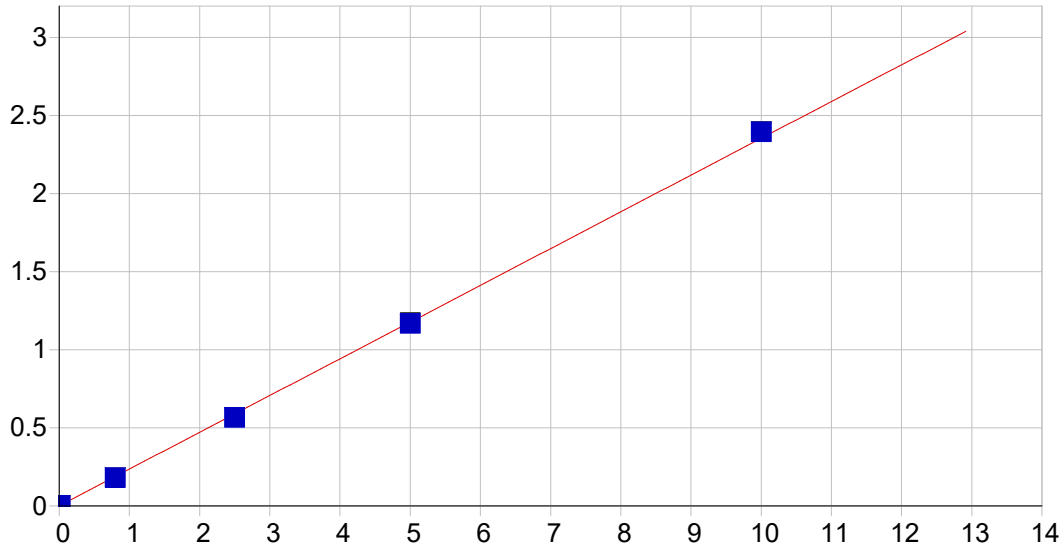


Tl 190.856 {477}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000608	Re-Slope:	1.000000
A1 (Gain):	0.106987	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999897	Status:	OK.
Std Error of Est:	0.000051		
Predicted MDL:	0.002045		
Predicted MQL:	0.006818		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00061	.000	1
S1	.04000	.03892	-.001	-2.70	.00346	.000	1
S2	.80000	.78139	-.019	-2.33	.08232	.000	1
S3	2.5000	2.4509	-.049	-1.96	.25952	.000	1
S4	5.0000	4.9414	-.059	-1.17	.52389	.002	1
S5	10.000	10.127	.127	1.27	1.0745	.002	1

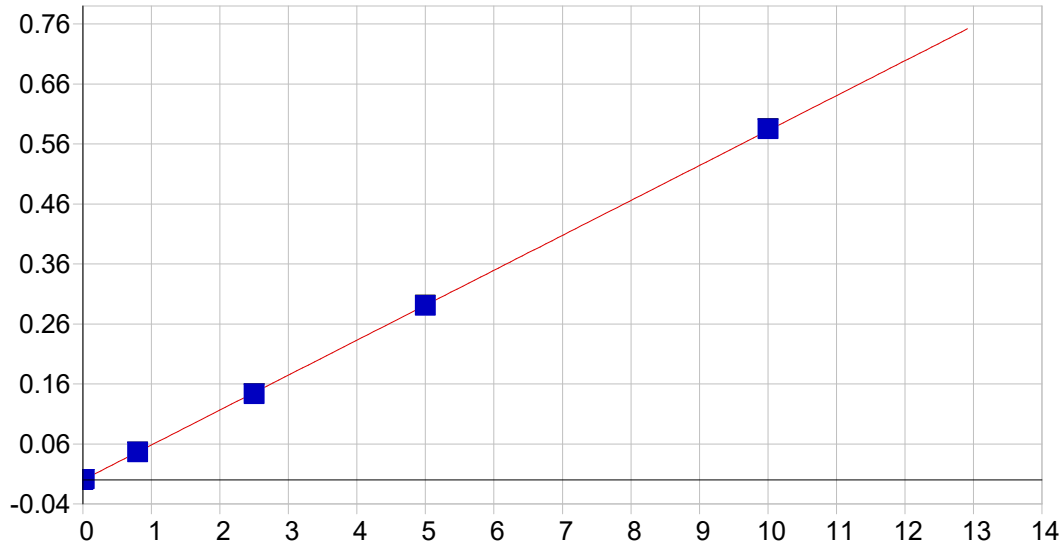


Pb 220.353 {453}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000580	Re-Slope:	1.000000
A1 (Gain):	0.235252	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999740	Status:	OK.
Std Error of Est:	0.000097		
Predicted MDL:	0.001879		
Predicted MQL:	0.006264		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00058	.000	1
S1	.01200	.01055	-.001	-12.1	.00300	.000	1
S2	.80000	.76116	-.039	-4.86	.17946	.001	1
S3	2.5000	2.3989	-.101	-4.04	.56435	.001	1
S4	5.0000	4.9646	-.035	-.708	1.1674	.003	1
S5	10.000	10.177	.177	1.77	2.3924	.001	1

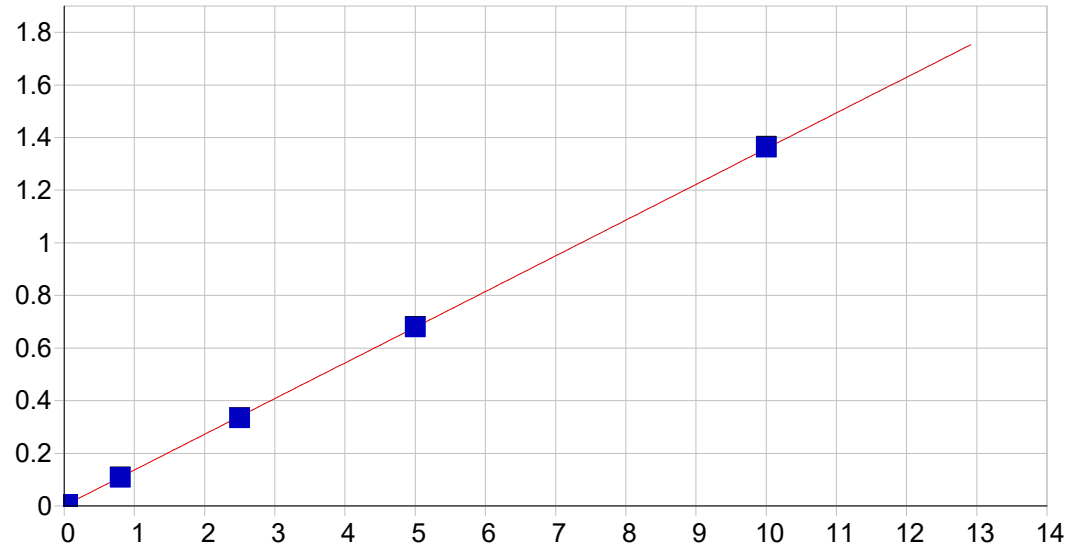


Se 196.090 {472}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.058229	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999956	Status:	OK.
Std Error of Est:	0.000013		
Predicted MDL:	0.004707		
Predicted MQL:	0.015691		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00000	.000	1
S1	.02000	.02376	.004	18.8	.00138	.000	1
S2	.80000	.79375	-.006	-.781	.04619	.000	1
S3	2.5000	2.4603	-.040	-1.59	.14318	.000	1
S4	5.0000	4.9952	-.005	-.097	.29069	.000	1
S5	10.000	10.047	.047	.470	.58469	.000	1

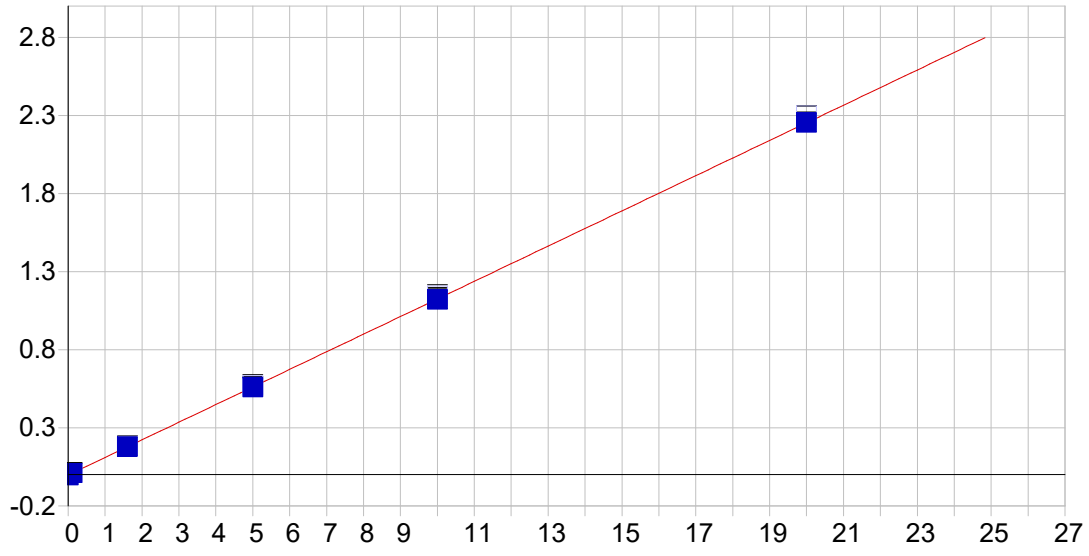


Sb 206.833 {463}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000807	Re-Slope:	1.000000
A1 (Gain):	0.135696	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999972	Status:	OK.
Std Error of Est:	0.000038		
Predicted MDL:	0.002827		
Predicted MQL:	0.009424		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00081	.000	1
S1	.05000	.04850	-.002	-3.01	.00732	.000	1
S2	.80000	.79270	-.007	-.912	.10821	.001	1
S3	2.5000	2.4574	-.043	-1.70	.33376	.000	1
S4	5.0000	5.0076	.008	.153	.67930	.002	1
S5	10.000	10.044	.044	.437	1.3616	.004	1

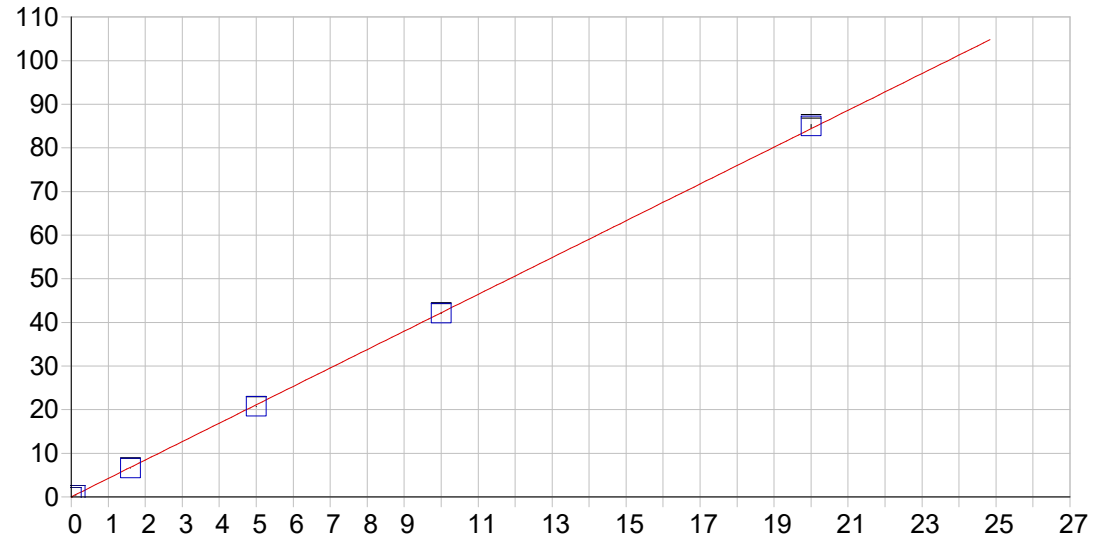


Al 396.152 { 85}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002389	Re-Slope:	1.000000
A1 (Gain):	0.112744	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999981	Status:	OK.
Std Error of Est:	0.000052		
Predicted MDL:	0.025595		
Predicted MQL:	0.085315		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00239	.002	1
S1	.10000	.11111	.011	11.1	.01098	.003	1
S2	1.6000	1.6088	.009	.550	.18235	.003	1
S3	5.0000	4.9823	-.018	-.354	.56983	.006	1
S4	10.000	9.9748	-.025	-.252	1.1432	.009	1
S5	20.000	20.022	.022	.112	2.2970	.003	1

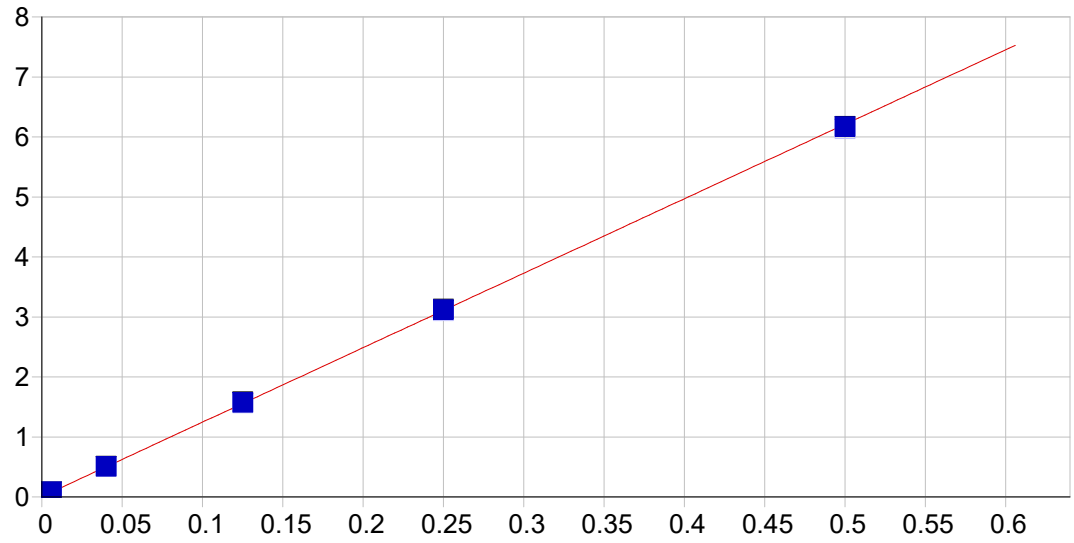


Ba 493.409 { 68}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.016861	Re-Slope:	1.000000
A1 (Gain):	4.218402	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999955	Status:	OK.
Std Error of Est:	0.002952		
Predicted MDL:	0.001084		
Predicted MQL:	0.003615		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.01687	.007	1
S1	.10000	.10133	.001	1.33	.44429	.016	1
S2	1.6000	1.5665	-.033	-2.09	6.6251	.026	1
S3	5.0000	4.9117	-.088	-1.77	20.736	.031	1
S4	10.000	9.9821	-.018	-.179	42.126	.104	1
S5	20.000	20.138	.138	.692	84.969	.432	1

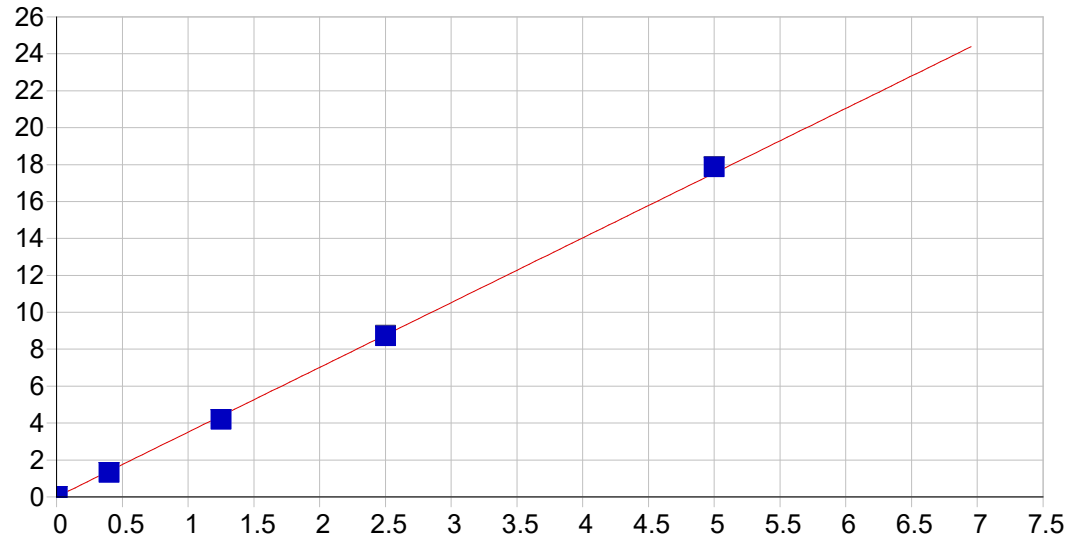


Be 234.861 {144}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004727	Re-Slope:	1.000000
A1 (Gain):	12.413160	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999962	Status:	OK.
Std Error of Est:	0.000309		
Predicted MDL:	0.000137		
Predicted MQL:	0.000457		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00472	.001	1
S1	.00600	.00638	.000	6.29	.08310	.004	1
S2	.04000	.04058	.001	1.44	.50510	.004	1
S3	.12500	.12632	.001	1.05	1.5624	.012	1
S4	.25000	.25087	.001	.350	3.0982	.011	1
S5	.50000	.49685	-.003	-.629	6.1309	.005	1

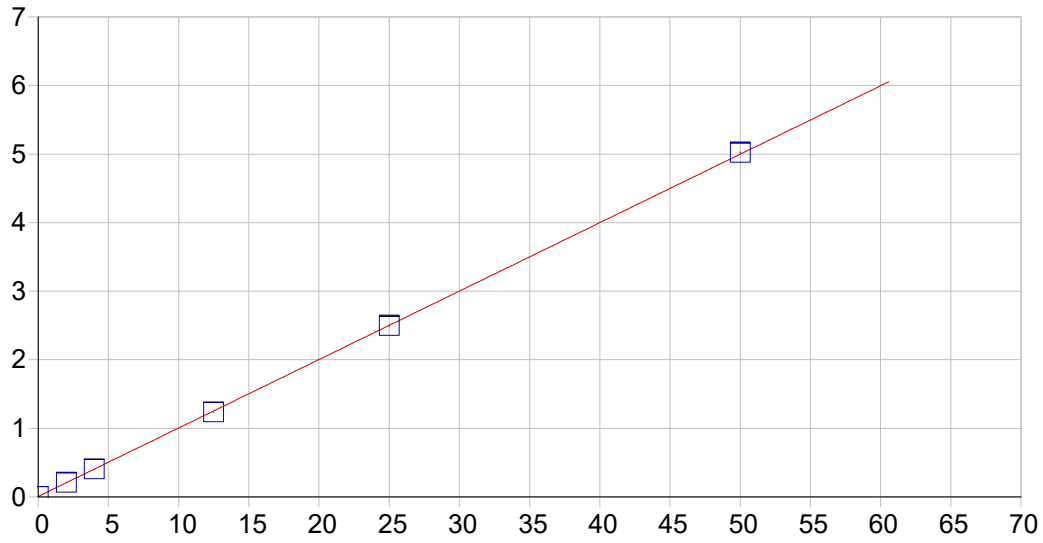


Cd 214.438 {457}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000580	Re-Slope:	1.000000
A1 (Gain):	3.507183	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999676	Status:	OK.
Std Error of Est:	0.000810		
Predicted MDL:	0.000083		
Predicted MQL:	0.000277		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00058	.000	1
S1	.00600	.00552	-.000	-8.00	.01995	.000	1
S2	.40000	.37459	-.025	-6.35	1.3144	.003	1
S3	1.2500	1.1944	-.056	-4.44	4.1900	.007	1
S4	2.5000	2.4880	-.012	-.481	8.7270	.020	1
S5	5.0000	5.0935	.093	1.87	17.866	.020	1

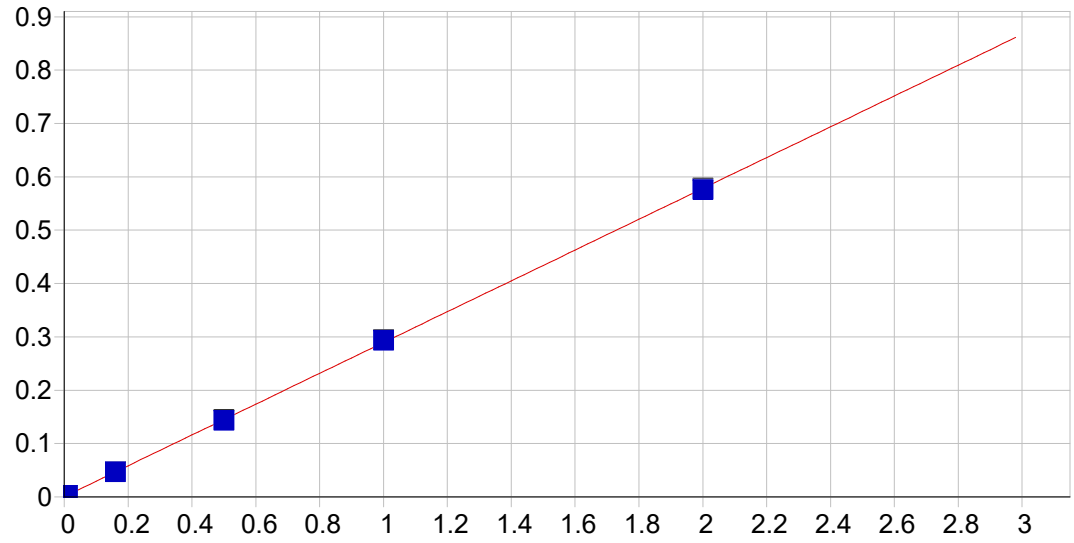


Ca 373.690 { 90}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006829	Re-Slope:	1.000000
A1 (Gain):	0.099812	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999972	Status:	OK.
Std Error of Est:	0.000398		
Predicted MDL:	0.023417		
Predicted MQL:	0.078056		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00683	.001	1
S1	2.0000	2.0350	.035	1.75	.20995	.006	1
S2	4.0000	3.9763	-.024	-.591	.40371	.001	1
S3	12.500	12.301	-.199	-1.59	1.2346	.002	1
S4	25.000	24.940	-.060	-.241	2.4961	.010	1
S5	50.000	50.248	.248	.496	5.0222	.007	1

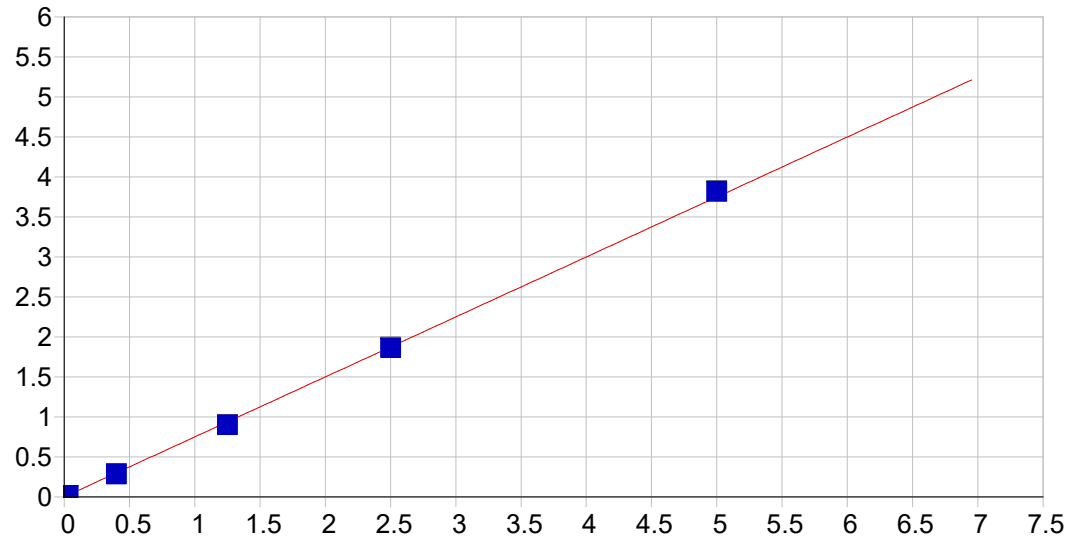


Cr 267.716 {126}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000563	Re-Slope:	1.000000
A1 (Gain):	0.288851	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999963	Status:	OK.
Std Error of Est:	0.000018		
Predicted MDL:	0.000916		
Predicted MQL:	0.003052		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00056	.000	1
S1	.01000	.01008	.000	.792	.00348	.000	1
S2	.16000	.16079	.001	.497	.04710	.000	1
S3	.50000	.49442	-.006	-1.12	.14365	.001	1
S4	1.0000	1.0130	.013	1.30	.29372	.001	1
S5	2.0000	1.9917	-.008	-.416	.57696	.002	1

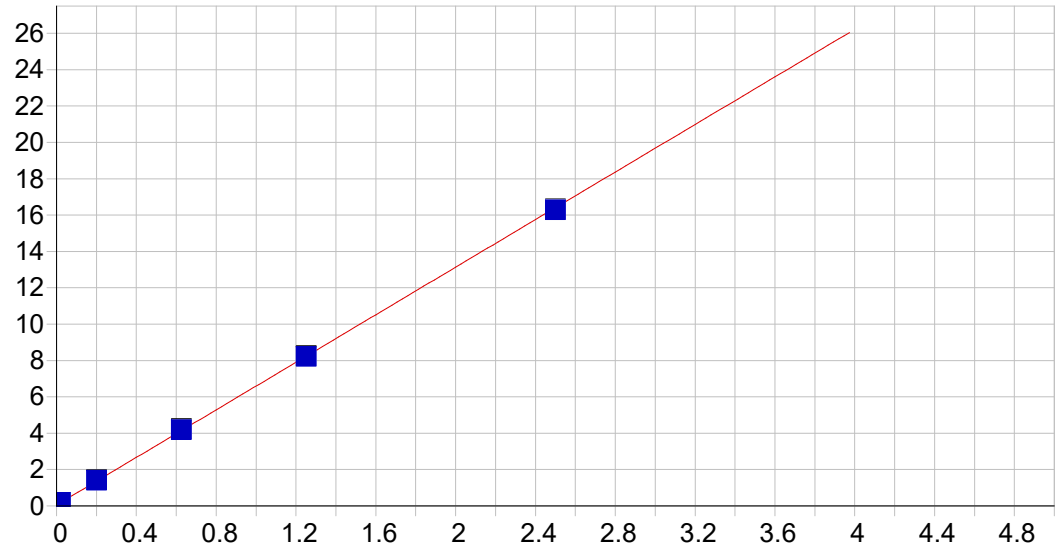


Co 228.616 {448}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000397	Re-Slope:	1.000000
A1 (Gain):	0.749720	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999742	Status:	OK.
Std Error of Est:	0.000347		
Predicted MDL:	0.000390		
Predicted MQL:	0.001299		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00040	.000	1
S1	.03000	.02949	-.001	-1.71	.02241	.000	1
S2	.40000	.37986	-.020	-5.04	.28585	.000	1
S3	1.2500	1.1988	-.051	-4.10	.90125	.002	1
S4	2.5000	2.4841	-.016	-.635	1.8670	.005	1
S5	5.0000	5.0877	.088	1.75	3.8231	.004	1

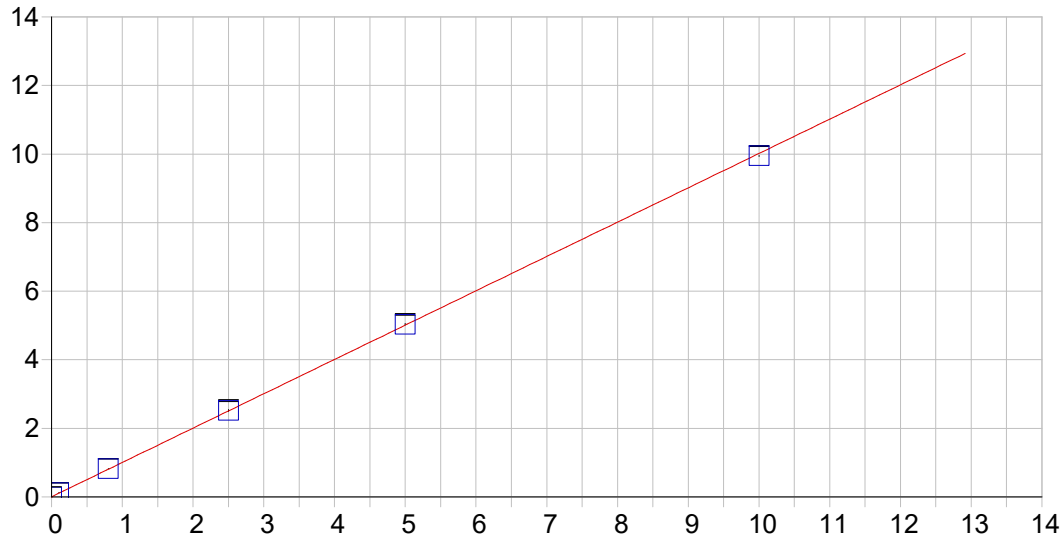


Cu 324.754 {104}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.051435	Re-Slope:	1.000000
A1 (Gain):	6.542203	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999902	Status:	OK.
Std Error of Est:	0.001076		
Predicted MDL:	0.000632		
Predicted MQL:	0.002106		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.05141	.004	1
S1	.02000	.02254	.003	12.7	.19896	.008	1
S2	.20000	.20816	.008	4.08	1.4139	.008	1
S3	.62500	.63340	.008	1.34	4.1972	.039	1
S4	1.2500	1.2491	-.001	-.072	8.2273	.024	1
S5	2.5000	2.4818	-.018	-.728	16.296	.039	1

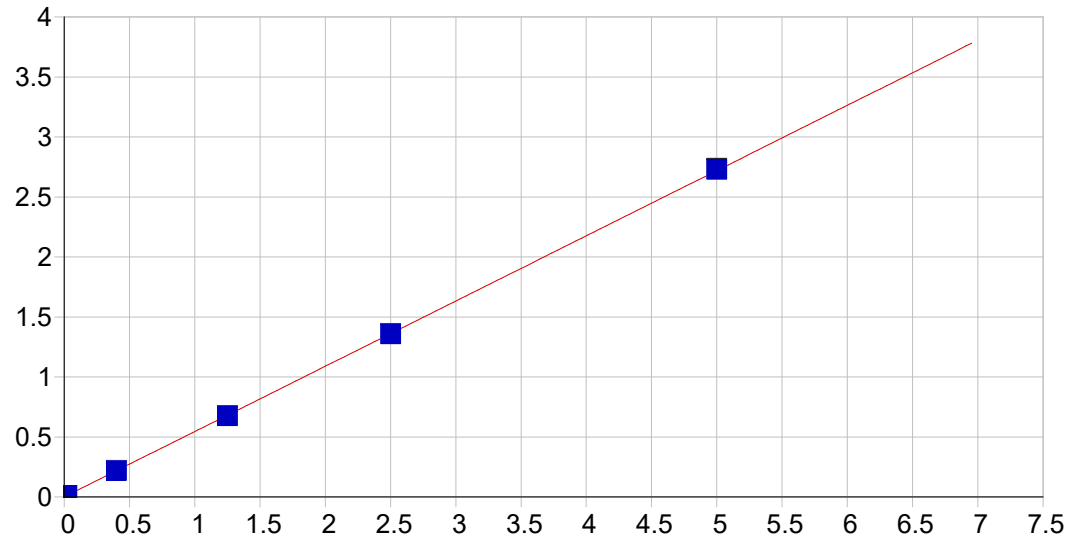


Fe 259.837 {130}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003860	Re-Slope:	1.000000
A1 (Gain):	1.001272	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999890	Status:	OK.
Std Error of Est:	0.000780		
Predicted MDL:	0.002053		
Predicted MQL:	0.006843		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00384	.002	1
S1	.10000	.11718	.017	17.2	.12119	.004	1
S2	.80000	.81804	.018	2.26	.82294	.003	1
S3	2.5000	2.5137	.014	.546	2.5207	.028	1
S4	5.0000	5.0227	.023	.453	5.0329	.021	1
S5	10.000	9.9285	-.072	-.715	9.9449	.011	1

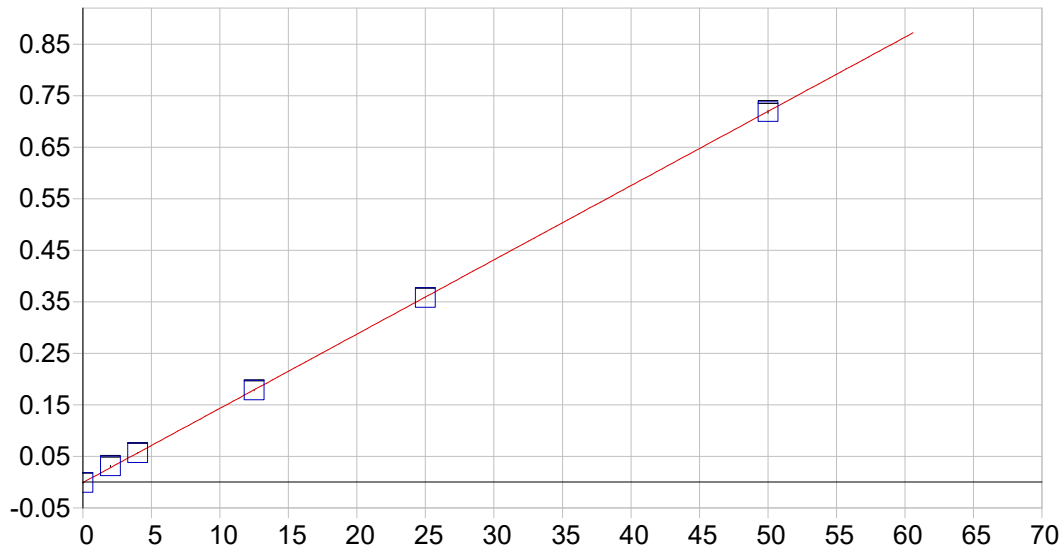


Mn 257.610 {131}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001075	Re-Slope:	1.000000
A1 (Gain):	0.543667	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999989	Status:	OK.
Std Error of Est:	0.000042		
Predicted MDL:	0.001331		
Predicted MQL:	0.004435		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00107	.000	1
S1	.02000	.02045	.000	2.26	.01221	.001	1
S2	.40000	.39947	-.001	-.132	.21845	.002	1
S3	1.2500	1.2378	-.012	-.976	.67464	.002	1
S4	2.5000	2.4946	-.005	-.215	1.3585	.003	1
S5	5.0000	5.0177	.018	.353	2.7314	.006	1

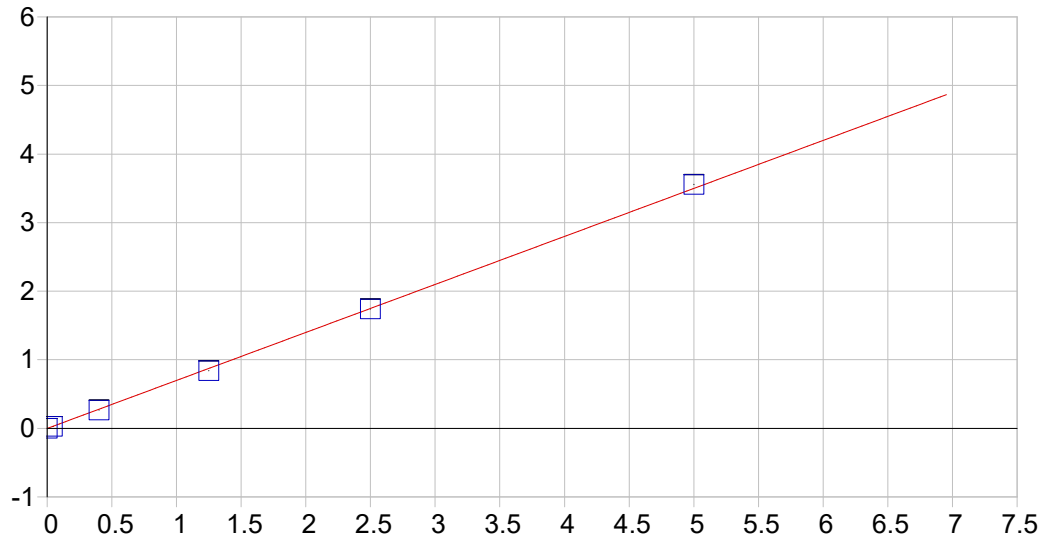


Mg 279.079 {121}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000863	Re-Slope:	1.000000
A1 (Gain):	0.014406	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999870	Status:	OK.
Std Error of Est:	0.000123		
Predicted MDL:	0.062160		
Predicted MQL:	0.207201		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00020	-.000	.000	-.00087	.001	1
S1	2.0000	2.2162	.216	10.8	.03106	.002	1
S2	4.0000	4.0134	.013	.336	.05695	.000	1
S3	12.500	12.438	-.062	-.498	.17832	.001	1
S4	25.000	24.898	-.102	-.407	.35782	.000	1
S5	50.000	49.934	-.066	-.131	.71850	.003	1

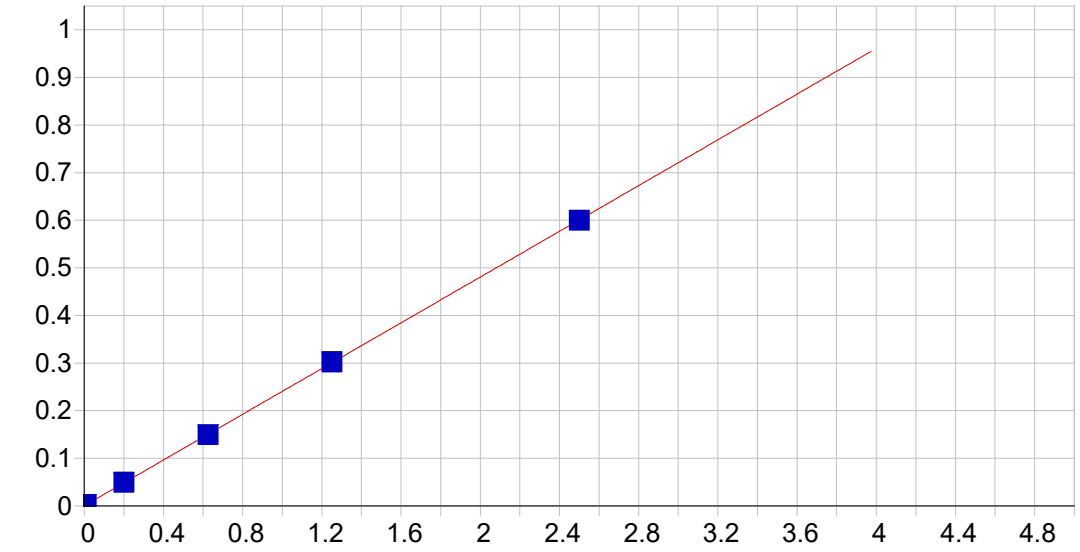


Ni 231.604 {446}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000543	Re-Slope:	1.000000
A1 (Gain):	0.700182	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999778	Status:	OK.
Std Error of Est:	0.000346		
Predicted MDL:	0.000489		
Predicted MQL:	0.001631		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00054	.000	1
S1	.04000	.03927	-.001	-1.83	.02695	.000	1
S2	.40000	.38193	-.018	-4.52	.26688	.001	1
S3	1.2500	1.2010	-.049	-3.92	.84039	.001	1
S4	2.5000	2.4882	-.012	-.473	1.7416	.004	1
S5	5.0000	5.0796	.080	1.59	3.5561	.001	1

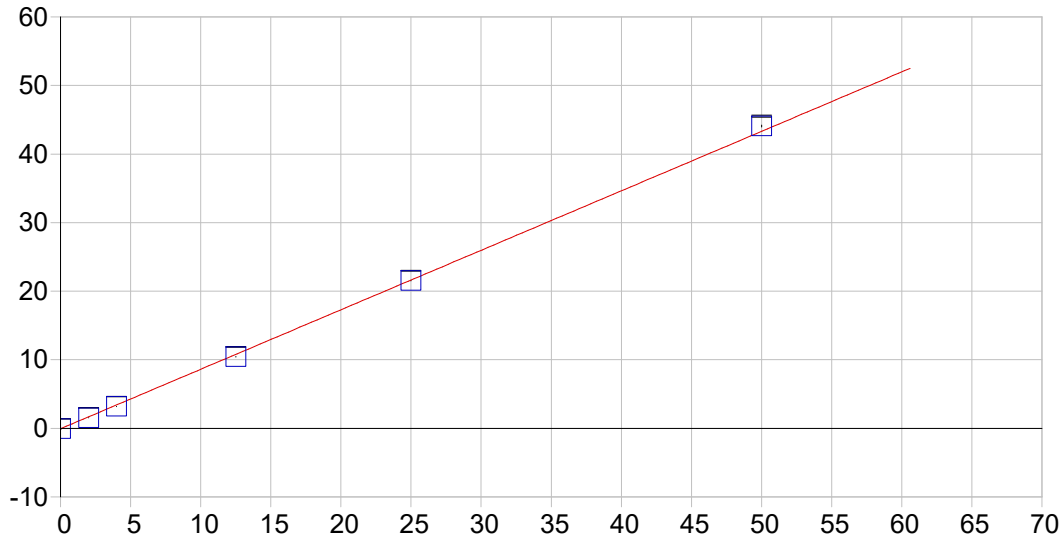


Ag 328.068 {103}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000388	Re-Slope:	1.000000
A1 (Gain):	0.240206	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999967	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.001300		
Predicted MQL:	0.004332		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00039	.000	1
S1	.01000	.01140	.001	14.0	.00312	.000	1
S2	.20000	.20294	.003	1.47	.04910	.000	1
S3	.62500	.62015	-.005	-.776	.14923	.000	1
S4	1.2500	1.2551	.005	.409	.30164	.002	1
S5	2.5000	2.4954	-.005	-.184	.59932	.001	1

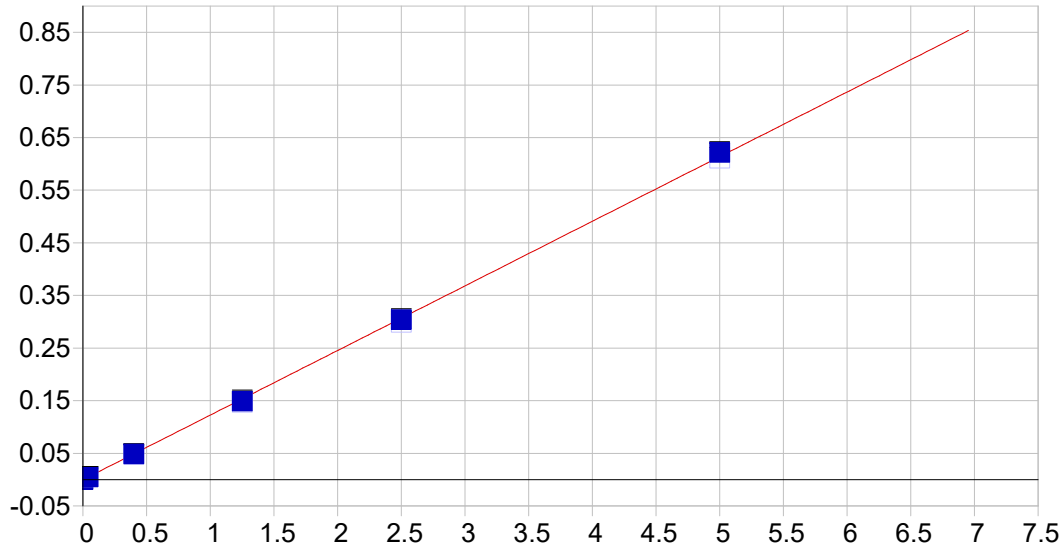


Na 818.326 { 41}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.055784	Re-Slope:	1.000000
A1 (Gain):	0.867289	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999683	Status:	OK.
Std Error of Est:	0.011555		
Predicted MDL:	0.014089		
Predicted MQL:	0.046965		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00032	.000	.000	-.05550	.010	1
S1	2.0000	1.8420	-.158	-7.90	1.5417	.032	1
S2	4.0000	3.7408	-.259	-6.48	3.1886	.026	1
S3	12.500	12.095	-.405	-3.24	10.434	.054	1
S4	25.000	24.913	-.087	-.347	21.551	.051	1
S5	50.000	50.909	.909	1.82	44.097	.142	1

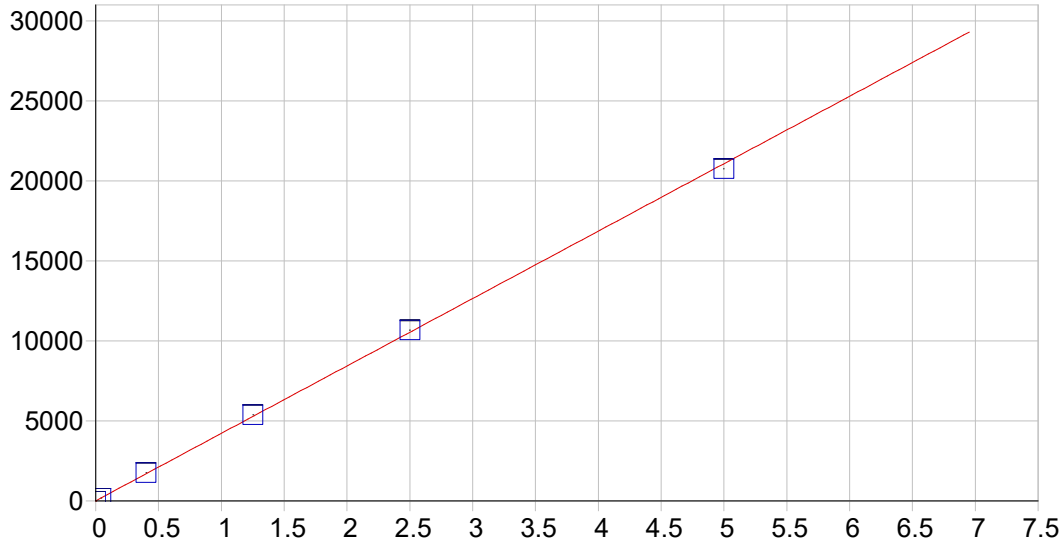


V 292.402 {115}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000202	Re-Slope:	1.000000
A1 (Gain):	0.122801	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999883	Status:	OK.
Std Error of Est:	0.000043		
Predicted MDL:	0.008549		
Predicted MQL:	0.028498		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00020	.001	1
S1	.04000	.03954	-.000	-1.15	.00444	.001	1
S2	.40000	.39497	-.005	-1.26	.04742	.001	1
S3	1.2500	1.2162	-.034	-2.70	.14641	.002	1
S4	2.5000	2.4748	-.025	-1.01	.29823	.002	1
S5	5.0000	5.0644	.064	1.29	.61076	.002	1

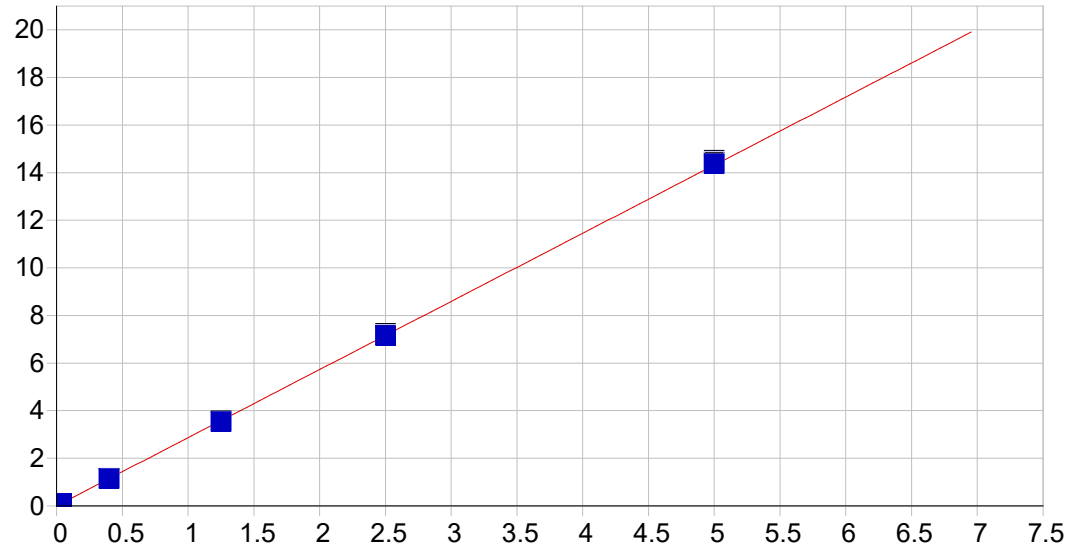


Zn 206.200 {464}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	7.685607	Re-Slope:	1.000000
A1 (Gain):	4213.772552	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999840	Status:	OK.
Std Error of Est:	1.769078		
Predicted MDL:	0.000290		
Predicted MQL:	0.000968		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	7.6647	.349	1
S1	.04000	.04260	.003	6.49	187.18	.903	1
S2	.40000	.41660	.017	4.15	1763.1	3.86	1
S3	1.2500	1.2755	.025	2.04	5382.2	6.78	1
S4	2.5000	2.5316	.032	1.27	10675.	31.8	1
S5	5.0000	4.9237	-.076	-1.53	20755.	19.7	1

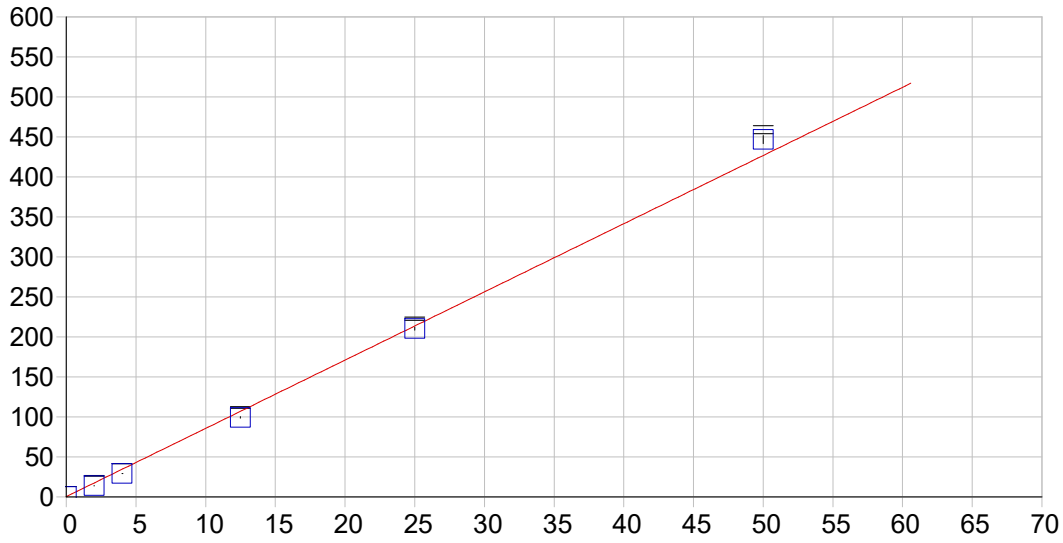


Zn 213.856 {158}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004940	Re-Slope:	1.000000
A1 (Gain):	2.862203	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	0.000370		
Predicted MDL:	0.000454		
Predicted MQL:	0.001513		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00494	.001	1
S1	.04000	.04087	.001	2.18	.12276	.002	1
S2	.40000	.39816	-.002	-.461	1.1529	.009	1
S3	1.2500	1.2347	-.015	-1.23	3.5648	.005	1
S4	2.5000	2.4986	-.001	-.056	7.2086	.036	1
S5	5.0000	5.0177	.018	.354	14.471	.047	1

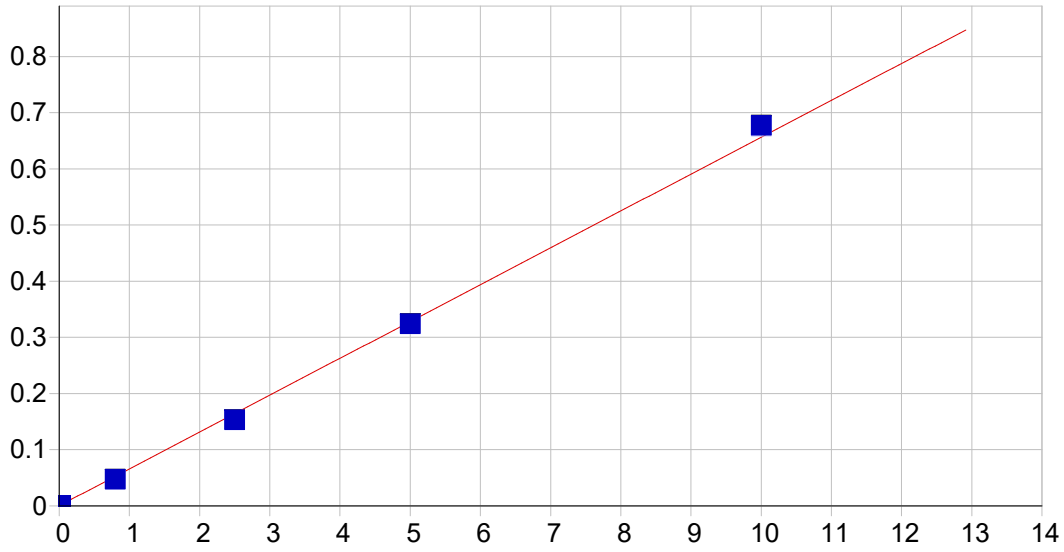


K 769.896 { 44}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.436697	Re-Slope:	1.000000
A1 (Gain):	8.526736	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998021	Status:	OK.
Std Error of Est:	0.284204		
Predicted MDL:	0.001276		
Predicted MQL:	0.004253		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00082	.001	.000	.44372	.001	1
S1	2.0000	1.5718	-.428	-21.4	13.839	.401	1
S2	4.0000	3.3687	-.631	-15.8	29.160	.080	1
S3	12.500	11.606	-.894	-7.15	99.398	.871	1
S4	25.000	24.614	-.386	-1.54	210.32	1.92	1
S5	50.000	52.339	2.34	4.68	446.72	4.93	1

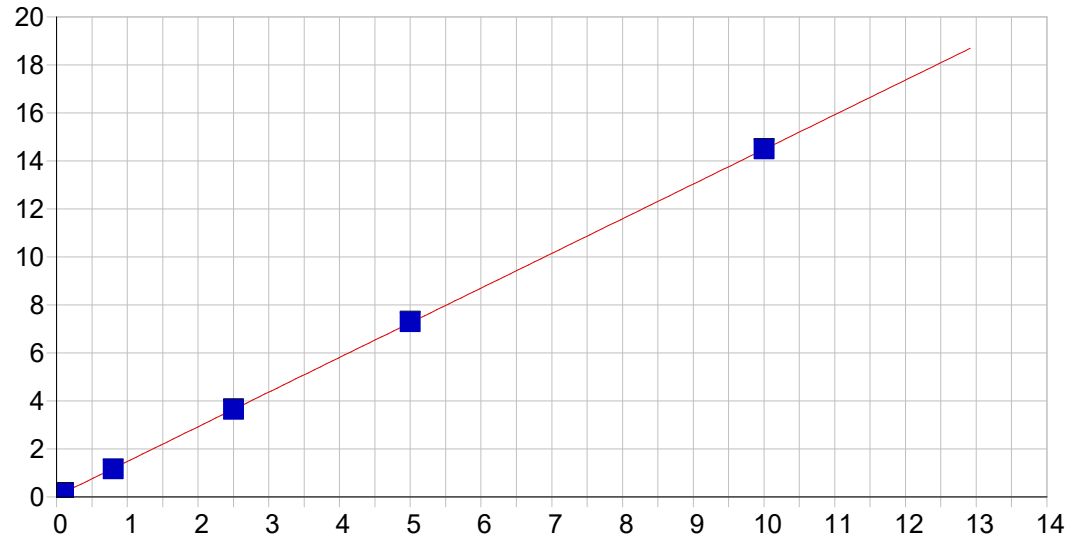


P 177.495 {490}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000334	Re-Slope:	1.000000
A1 (Gain):	0.065603	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999126	Status:	OK.
Std Error of Est:	0.000064		
Predicted MDL:	0.002304		
Predicted MQL:	0.007681		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00033	.000	1
S1	.02000	.01783	-.002	-10.8	.00149	.000	1
S2	.80000	.71504	-.085	-10.6	.04712	.000	1
S3	2.5000	2.3290	-.171	-6.84	.15274	.000	1
S4	5.0000	4.9385	-.061	-1.23	.32356	.000	1
S5	10.000	10.320	.320	3.20	.67581	.001	1

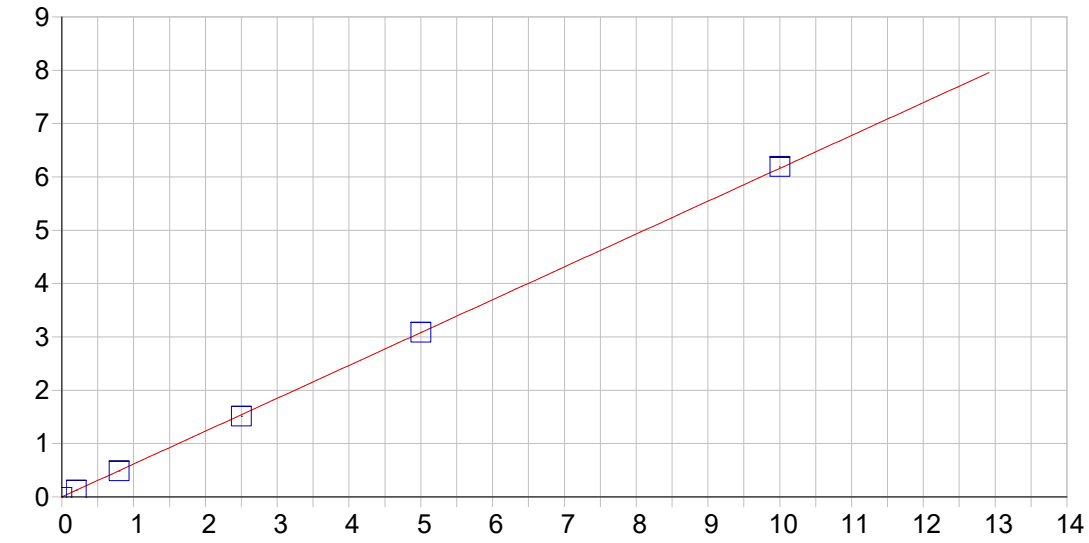


B 249.678 {135}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.031475	Re-Slope:	1.000000
A1 (Gain):	1.444730	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999957	Status:	OK.
Std Error of Est:	0.000703		
Predicted MDL:	0.001498		
Predicted MQL:	0.004994		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.03149	.003	1
S1	.10000	.09046	-.010	-9.54	.16200	.006	1
S2	.80000	.77920	-.021	-2.60	1.1563	.008	1
S3	2.5000	2.4999	-.000	-.006	3.6404	.029	1
S4	5.0000	5.0248	.025	.496	7.2855	.031	1
S5	10.000	10.006	.006	.057	14.476	.025	1

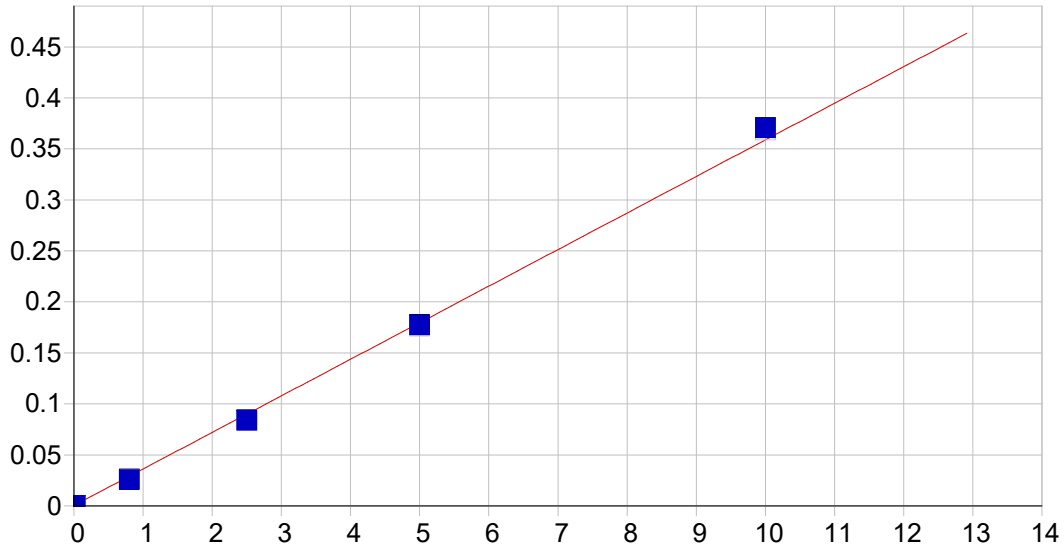


Mo 202.030 {467}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000840	Re-Slope:	1.000000
A1 (Gain):	0.616023	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999968	Status:	OK.
Std Error of Est:	0.000368		
Predicted MDL:	0.000510		
Predicted MQL:	0.001701		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00084	.000	1
S1	.20000	.20191	.002	.956	.12522	.000	1
S2	.80000	.79064	-.009	-1.17	.48789	.001	1
S3	2.5000	2.4541	-.046	-1.84	1.5126	.002	1
S4	5.0000	5.0072	.007	.144	3.0854	.003	1
S5	10.000	10.046	.046	.461	6.1895	.010	1

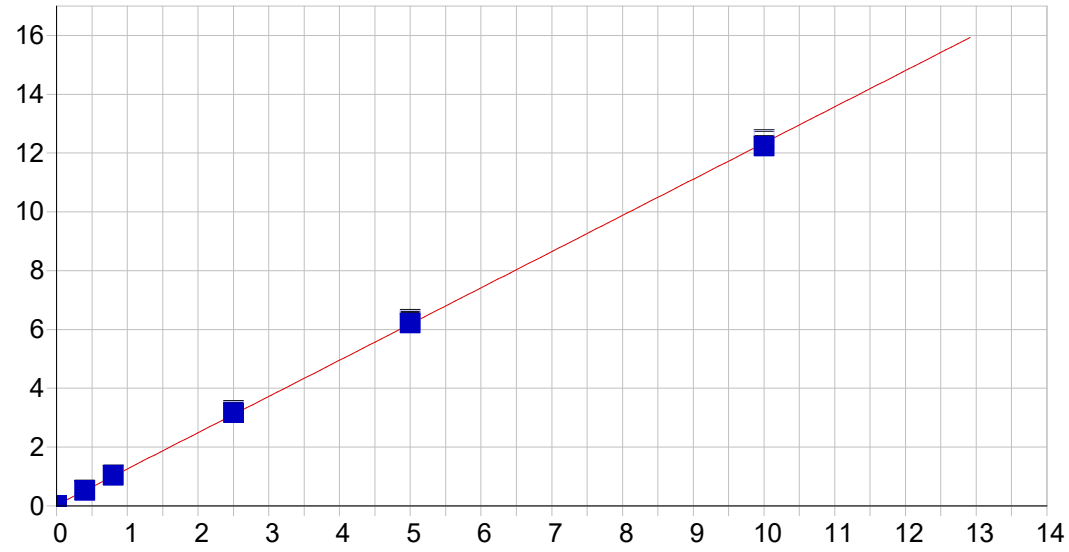


S 182.034 {485}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000368	Re-Slope:	1.000000
A1 (Gain):	0.035846	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999074	Status:	OK.
Std Error of Est:	0.000036		
Predicted MDL:	0.004042		
Predicted MQL:	0.013474		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00037	.000	1
S1	.02000	.01675	-.003	-16.2	.00091	.000	1
S2	.80000	.71162	-.088	-11.0	.02569	.000	1
S3	2.5000	2.3303	-.170	-6.79	.08330	.000	1
S4	5.0000	4.9326	-.067	-1.35	.17599	.001	1
S5	10.000	10.329	.329	3.29	.36822	.000	1

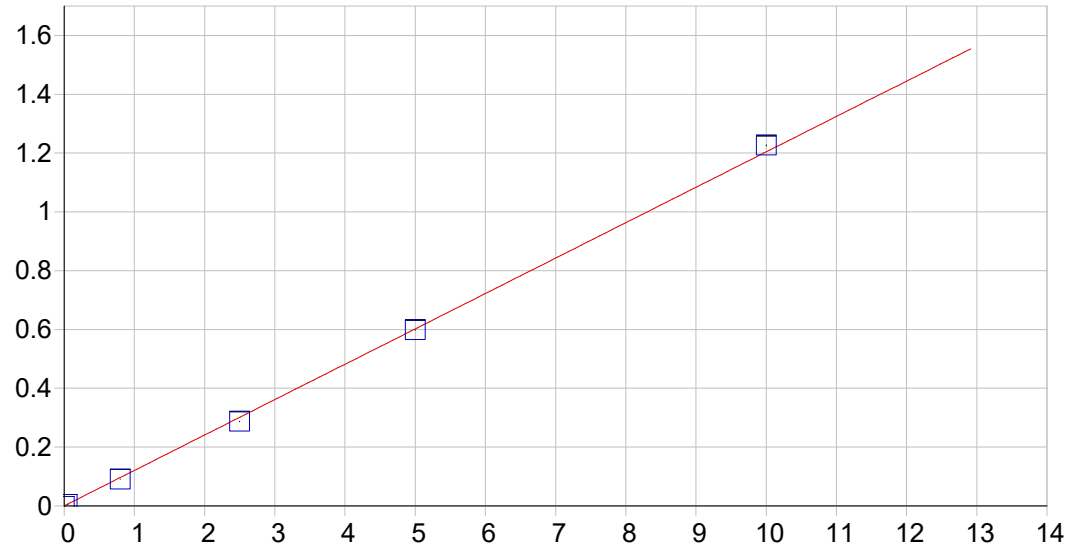


Si 251.611 {134}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.027353	Re-Slope:	1.000000
A1 (Gain):	1.231534	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999943	Status:	OK.
Std Error of Est:	0.001408		
Predicted MDL:	0.001598		
Predicted MQL:	0.005326		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.02734	.003	1
S1	.40000	.39886	-.001	-.286	.52143	.014	1
S2	.80000	.81882	.019	2.35	1.0517	.006	1
S3	2.5000	2.5466	.047	1.87	3.2134	.025	1
S4	5.0000	5.0229	.023	.458	6.3128	.028	1
S5	10.000	9.9127	-.087	-.873	12.434	.024	1

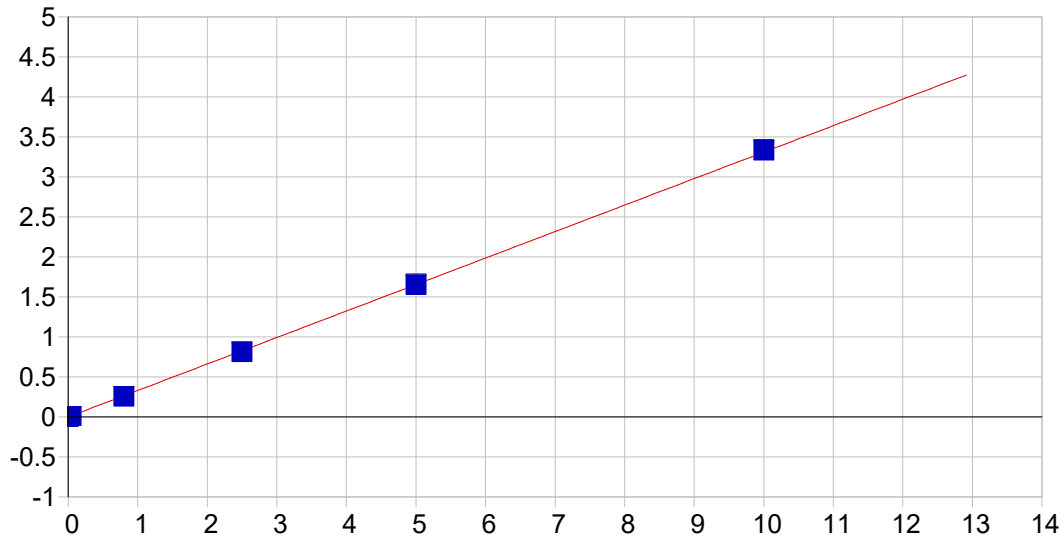


Sn 189.989 {478}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000288	Re-Slope:	1.000000
A1 (Gain):	0.120370	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999686	Status:	OK.
Std Error of Est:	0.000100		
Predicted MDL:	0.001139		
Predicted MQL:	0.003797		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00029	.000	1
S1	.04000	.04210	.002	5.25	.00536	.000	1
S2	.80000	.75177	-.048	-6.03	.09078	.000	1
S3	2.5000	2.3883	-.112	-4.47	.28777	.001	1
S4	5.0000	4.9737	-.026	-.526	.59897	.001	1
S5	10.000	10.184	.184	1.84	1.2262	.001	1

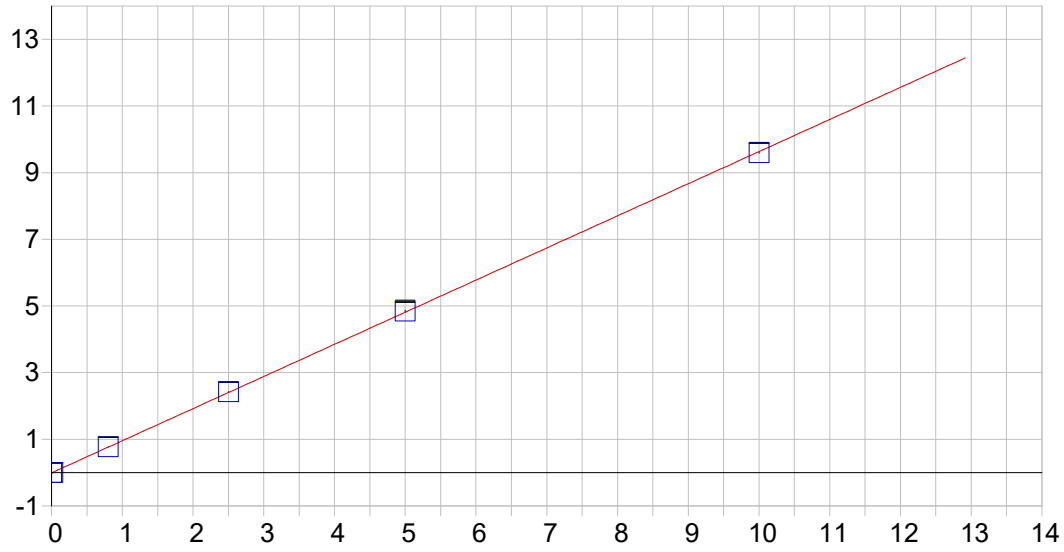


Ti 336.121 {100}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000392	Re-Slope:	1.000000
A1 (Gain):	0.330984	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999942	Status:	OK.
Std Error of Est:	0.000118		
Predicted MDL:	0.004467		
Predicted MQL:	0.014891		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00039	.001	1
S1	.04000	.03978	-.000	-.558	.01276	.001	1
S2	.80000	.77711	-.023	-2.86	.25669	.001	1
S3	2.5000	2.4523	-.048	-1.91	.81085	.002	1
S4	5.0000	4.9970	-.003	-.061	1.6527	.006	1
S5	10.000	10.074	.074	.739	3.3322	.005	1

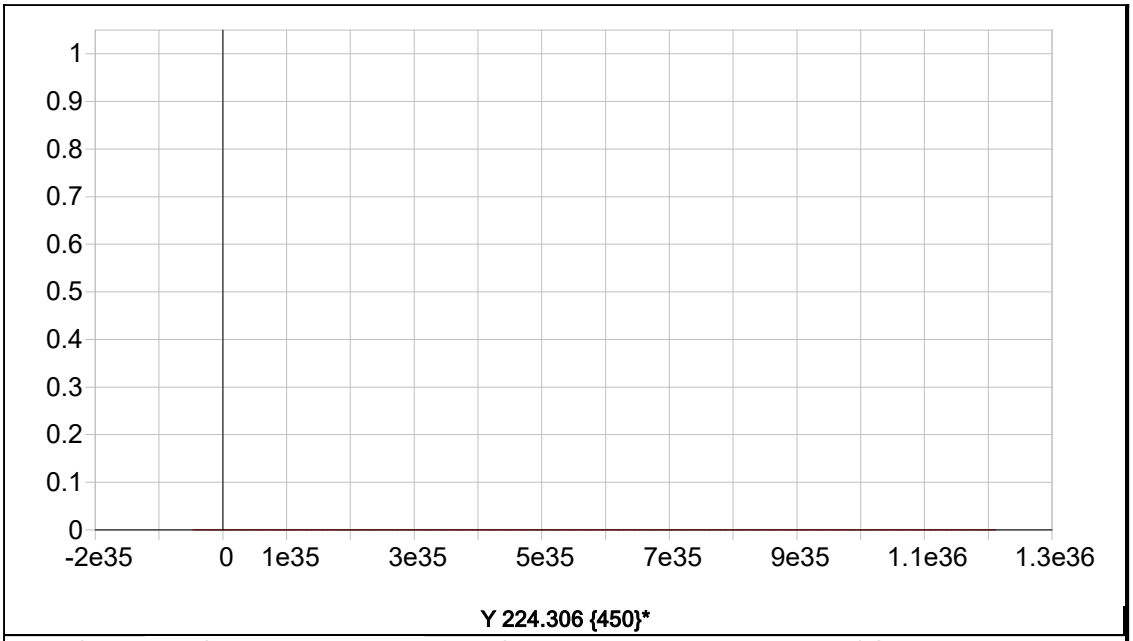


Li 670.784 { 50}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.007187	Re-Slope:	1.000000
A1 (Gain):	0.964047	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999773	Status:	OK.
Std Error of Est:	0.000482		
Predicted MDL:	0.006932		
Predicted MQL:	0.023108		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00718	.004	1
S5	10.000	9.9600	-.040	-.400	9.5947	.015	1
S4	5.0000	5.0309	.031	.618	4.8429	.033	1
S3	2.5000	2.5158	.016	.630	2.4181	.013	1
S2	.80000	.80589	.006	.736	.76973	.008	1
S1	.02000	.00749	-.013	-62.6	.00003	.005	1

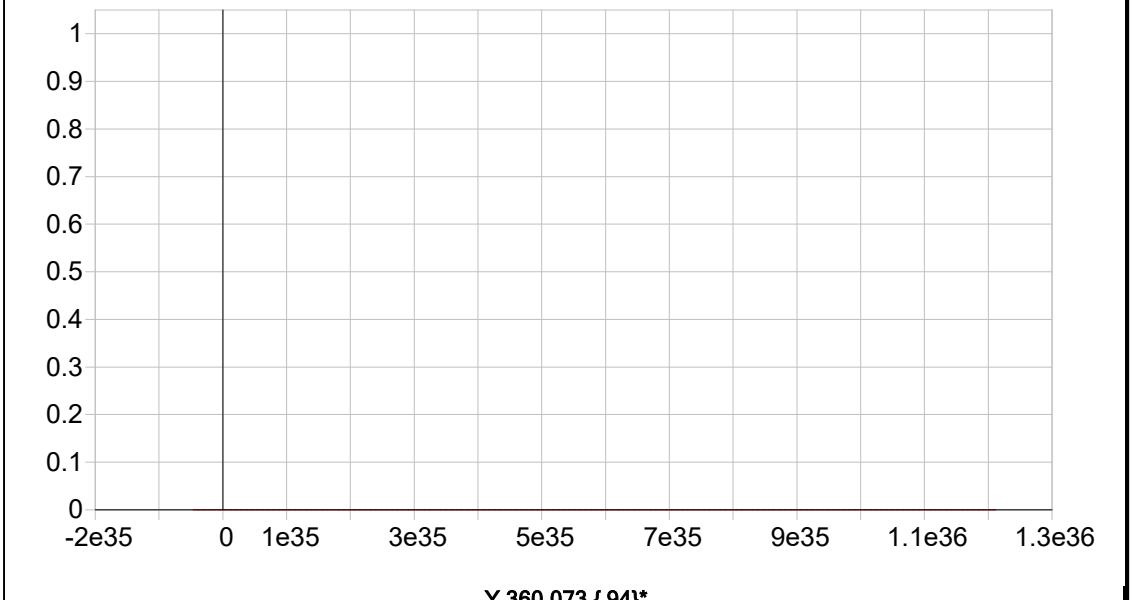


Y 224.306 {450}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



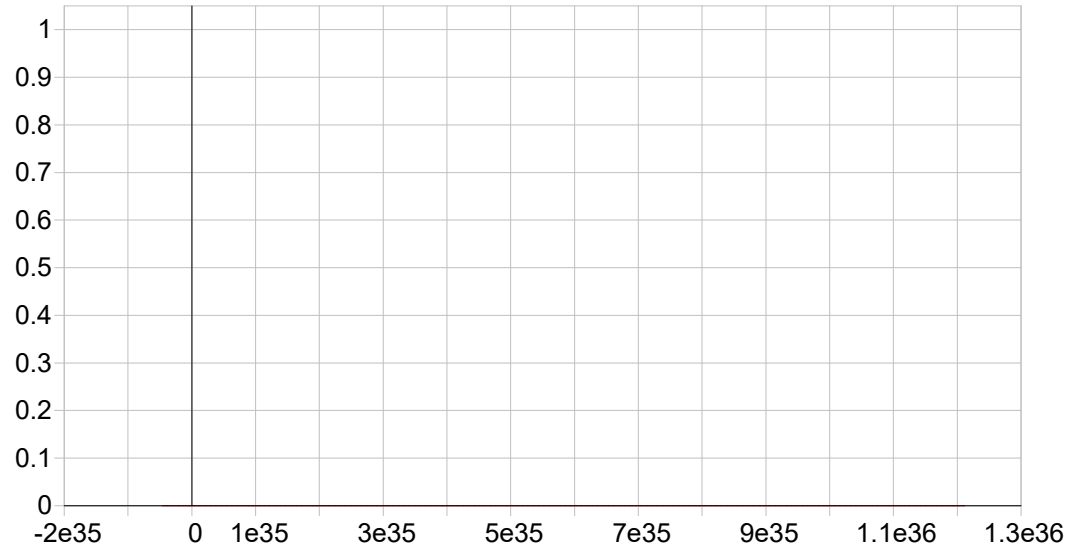
Y 360.073 { 94}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000

A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

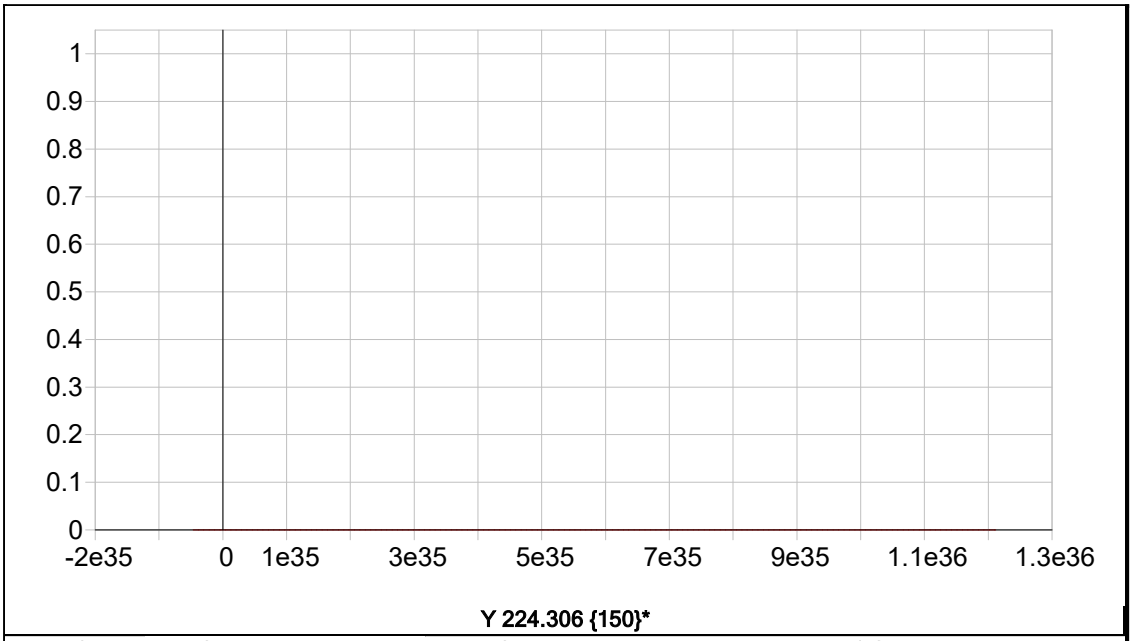
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 371.030 { 91}*

Date of Fit:	<not fit>		Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):		0.000000		Re-Slope:	1.000000	
A1 (Gain):		0.000000		Y-int:	0.000000	
A2 (Curvature):		0.000000				
n (Exponent):		1.000000				
Correlation:		0.000000		Status:	Warning	Zero Gain
Std Error of Est:		0.000000				
Predicted MDL:		n/a				
Predicted MQL:		n/a				

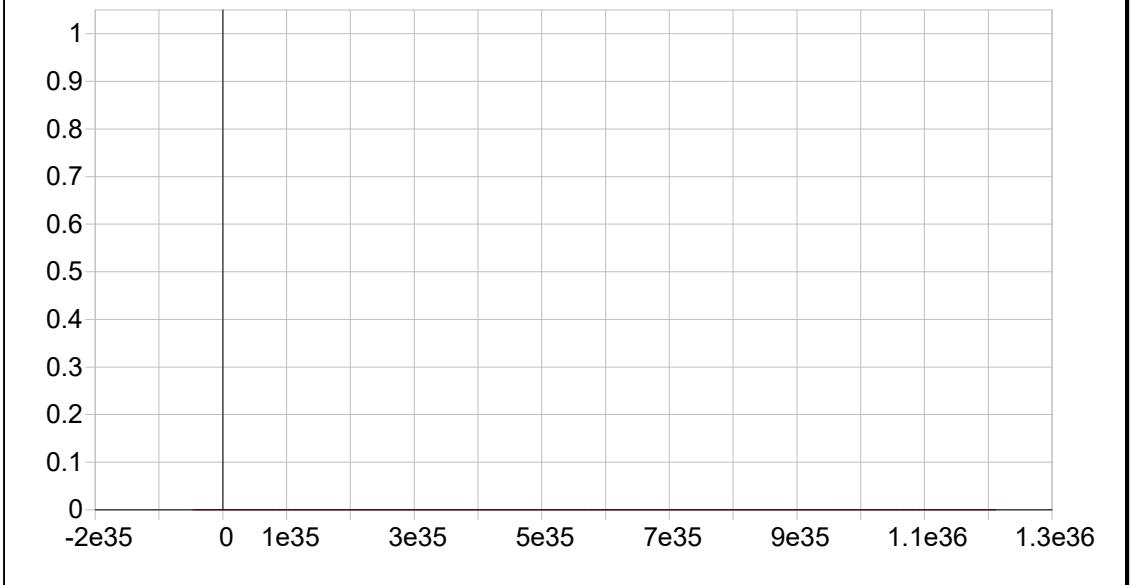
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 224.306 {150}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis

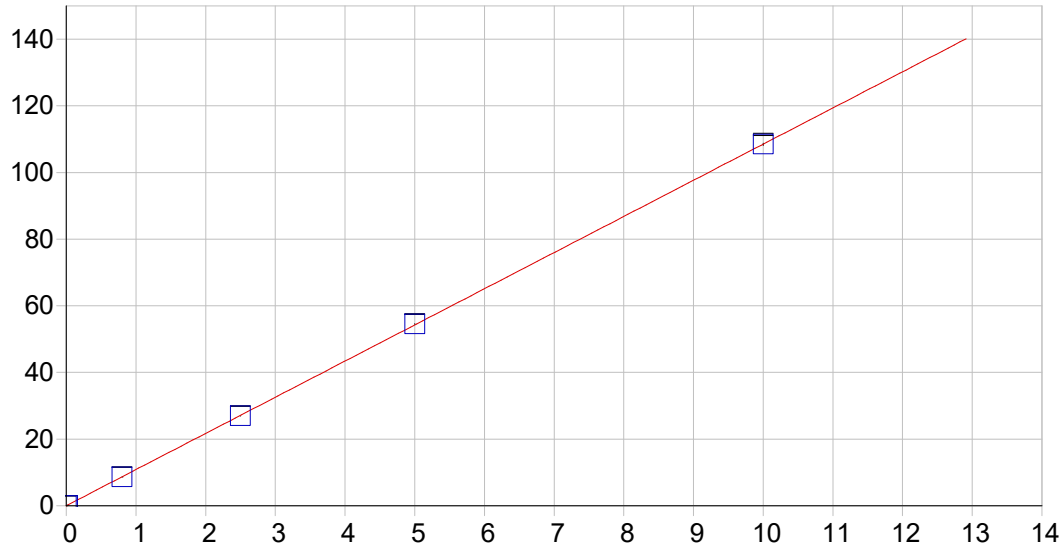


In 230.606 {446}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	

A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000	Status:	Warning	Zero Gain	
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Sr 407.771 { 83}

Date of Fit:	7/14/2025 1:30:41	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000712	Re-Slope:	1.000000
A1 (Gain):	10.852196	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999992	Status:	OK.
Std Error of Est:	0.001019		
Predicted MDL:	0.000241		
Predicted MQL:	0.000802		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00071	.000	1
S1	.02000	.02073	.001	3.67	.22572	.005	1
S2	.80000	.79465	-.005	-.669	8.6244	.020	1
S3	2.5000	2.4826	-.017	-.695	26.943	.053	1
S4	5.0000	5.0235	.024	.470	54.517	.088	1
S5	10.000	9.9985	-.002	-.015	108.51	.337	1

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: S0 Acquired: 7/14/2025 13:05:05 Type: Cal
Method: METHOD 6010D, 200.7 M(v34) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00002**	**-.00061**	**.00058**	**.00000**	**.00081**	**-.00239**	**.01687**	**.00472**
Stddev	.00014	.00007	.00023	.00018	.00013	.00178	.00717	.00091
%RSD	626.73	11.719	40.018	90478.	16.502	74.343	42.528	19.329
#1	.00014	-.00067	.00080	.00006	.00088	-.00182	.01070	.00388
#2	-.00012	-.00053	.00034	.00014	.00065	-.00097	.01517	.00459
#3	-.00010	-.00062	.00060	-.00021	.00088	-.00438	.02474	.00569

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00058**	**.00683**	**.00056**	**.00040**	**.05141**	**.00384**	**.00107**	**-.00087**
Stddev	.00030	.00093	.00023	.00030	.00403	.00152	.00036	.00078
%RSD	51.866	13.675	40.409	74.680	7.8404	39.643	33.737	89.634
#1	.00034	.00641	.00063	.00006	.05552	.00450	.00142	-.00170
#2	.00092	.00618	.00075	.00052	.04746	.00210	.00070	-.00074
#3	.00049	.00790	.00031	.00061	.05125	.00492	.00111	-.00016

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00054**	**.00039**	**-.05550**	**-.00020**	**.00494**	**.44372**	**.00033**	**.03149**
Stddev	.00013	.00022	.00960	.00069	.00119	.00088	.00012	.00280
%RSD	24.391	55.793	17.292	339.65	24.087	.19858	36.190	8.8798
#1	-.00069	.00063	-.05057	-.00087	.00600	.44450	.00021	.03455
#2	-.00047	.00030	-.04937	.00050	.00517	.44277	.00034	.03086
#3	-.00046	.00023	-.06656	-.00023	.00365	.44390	.00045	.02907

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00084**	**.00037**	**.02734**	**.00029**	**-.00039**	**-.00718**	**.00071**
Stddev	.00012	.00015	.00321	.00003	.00059	.00355	.00049
%RSD	14.399	40.844	11.756	11.973	150.44	49.419	69.044
#1	.00082	.00023	.02908	.00025	-.00047	-.00501	.00075
#2	.00073	.00053	.02363	.00030	.00023	-.00525	.00020
#3	.00097	.00035	.02930	.00032	-.00094	-.01127	.00117

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: S0 Acquired: 7/14/2025 13:05:05 Type: Cal
Method: METHOD 6010D, 200.7 M(v34) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3581.0	36469.	2506.8	2229.3	5356.6
Stddev	4.8	252.	19.6	16.7	9.7
%RSD	.13292	.69214	.78250	.74731	.18079
#1	3576.7	36210.	2496.7	2210.3	5367.6
#2	3580.2	36482.	2494.3	2235.8	5352.8
#3	3586.1	36714.	2529.4	2241.6	5349.4

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: S1 Acquired: 7/14/2025 13:09:36 Type: Cal
Method: METHOD 6010D, 200.7 M(v34) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00069**	**.00346**	**.00300**	**.00138**	**.00732**	**.01098**	**.44429**	**.08310**
Stddev	.00013	.00026	.00045	.00012	.00038	.00305	.01555	.00379
%RSD	18.602	7.5104	15.027	8.4738	5.1552	27.807	3.4999	4.5564
#1	.00071	.00337	.00313	.00151	.00768	.00783	.43191	.07891
#2	.00081	.00375	.00337	.00134	.00734	.01118	.46175	.08629
#3	.00055	.00325	.00250	.00129	.00693	.01392	.43922	.08409

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.01995**	**.20995**	**.00348**	**.02241**	**.19896**	**.12119**	**.01221**	**.03106**
Stddev	.00028	.00629	.00011	.00012	.00789	.00446	.00115	.00156
%RSD	1.3934	2.9959	3.2142	.52425	3.9678	3.6805	9.4201	5.0076
#1	.01967	.20339	.00338	.02254	.19001	.11719	.01095	.02942
#2	.02022	.21593	.00361	.02232	.20494	.12600	.01319	.03252
#3	.01997	.21053	.00346	.02238	.20193	.12038	.01250	.03125

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.02695**	**.00312**	**1.5417**	**.00444**	**.12276**	**13.839**	**.00149**	**.16200**
Stddev	.00022	.00022	.0319	.00123	.00250	.401	.00011	.00583
%RSD	.81873	7.1447	2.0664	27.744	2.0362	2.8954	7.0584	3.5988
#1	.02684	.00338	1.5050	.00474	.12237	13.404	.00141	.15529
#2	.02681	.00300	1.5611	.00309	.12543	14.192	.00161	.16490
#3	.02720	.00298	1.5591	.00550	.12047	13.923	.00146	.16581

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.12522**	**.00091**	**.52143**	**.00536**	**.01276**	**.00003**	**.22572**
Stddev	.00018	.00011	.01380	.00006	.00099	.00513	.00521
%RSD	.14370	11.813	2.6471	1.0432	7.7211	17690.	2.3064
#1	.12504	.00080	.50606	.00532	.01241	-.00186	.21974
#2	.12523	.00092	.53277	.00533	.01387	-.00389	.22921
#3	.12540	.00102	.52546	.00542	.01200	.00584	.22822

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: S1 Acquired: 7/14/2025 13:09:36 Type: Cal
Method: METHOD 6010D, 200.7 M(v34) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3570.7	35935.	2487.6	2193.6	5323.1
Stddev	.7	291.	69.5	17.3	6.4
%RSD	.01839	.81050	2.7959	.78795	.12053
#1	3571.3	35636.	2561.7	2178.8	5330.2
#2	3570.8	35950.	2423.8	2189.4	5321.2
#3	3570.0	36218.	2477.3	2212.6	5317.8

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: S2 Acquired: 7/14/2025 13:14:01 Type: Cal
Method: METHOD 6010D, 200.7 M(v34) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.02932**	**.08232**	**.17946**	**.04619**	**.10821**	**.18235**	**6.6251**	**.50510**
Stddev	.00000	.00037	.00060	.00010	.00099	.00346	.0259	.00408
%RSD	.01554	.45214	.33606	.20929	.91528	1.8976	.39050	.80751
#1	.02932	.08190	.17890	.04618	.10752	.18252	6.5962	.50289
#2	.02931	.08258	.17938	.04610	.10934	.17881	6.6328	.50260
#3	.02932	.08249	.18010	.04629	.10776	.18572	6.6462	.50980

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.3144**	**.40371**	**.04710**	**.28585**	**1.4139**	**.82294**	**.21845**	**.05695**
Stddev	.0028	.00093	.00032	.00034	.0082	.00259	.00167	.00049
%RSD	.20989	.23151	.67798	.11996	.57881	.31462	.76416	.85694
#1	1.3119	.40315	.04745	.28579	1.4160	.82378	.21815	.05675
#2	1.3140	.40320	.04683	.28554	1.4049	.82004	.22025	.05661
#3	1.3174	.40479	.04700	.28622	1.4208	.82500	.21695	.05751

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.26688**	**.04910**	**3.1886**	**.04742**	**1.1529**	**29.160**	**.04712**	**1.1563**
Stddev	.00101	.00047	.0257	.00096	.0094	.080	.00008	.0081
%RSD	.37985	.94895	.80713	2.0328	.81544	.27292	.17838	.70119
#1	.26596	.04920	3.2167	.04820	1.1632	29.235	.04706	1.1600
#2	.26670	.04859	3.1663	.04772	1.1507	29.169	.04722	1.1470
#3	.26797	.04951	3.1827	.04635	1.1447	29.077	.04708	1.1620

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.48789**	**.02569**	**1.0517**	**.09078**	**.25669**	**.76973**	**8.6244**
Stddev	.00098	.00034	.0057	.00014	.00110	.00827	.0199
%RSD	.20099	1.3293	.54235	.15225	.42943	1.0741	.23070
#1	.48677	.02534	1.0545	.09064	.25579	.76131	8.6043
#2	.48833	.02569	1.0451	.09092	.25636	.77784	8.6247
#3	.48858	.02603	1.0555	.09077	.25791	.77003	8.6441

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: S2 Acquired: 7/14/2025 13:14:01 Type: Cal
Method: METHOD 6010D, 200.7 M(v34) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3558.2	35971.	2498.8	2196.0	5167.9
Stddev	4.1	201.	7.8	20.1	9.5
%RSD	.11513	.55929	.31201	.91472	.18296
#1	3554.4	35801.	2489.8	2178.2	5169.4
#2	3562.5	35919.	2502.2	2192.0	5176.5
#3	3557.9	36193.	2504.3	2217.8	5157.7

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: S3 Acquired: 7/14/2025 13:18:18 Type: Cal
Method: METHOD 6010D, 200.7 M(v34) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.09498**	**.25952**	**.56435**	**.14318**	**.33376**	**.56983**	**20.736**	**1.5624**
Stddev	.00017	.00038	.00112	.00017	.00014	.00565	.031	.0121
%RSD	.18226	.14549	.19818	.11891	.04244	.99200	.15052	.77637
#1	.09479	.25914	.56319	.14337	.33390	.57544	20.770	1.5520
#2	.09505	.25951	.56444	.14310	.33375	.56991	20.709	1.5757
#3	.09511	.25990	.56542	.14306	.33362	.56414	20.729	1.5594

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4.1900**	**1.2346**	**.14365**	**.90125**	**4.1972**	**2.5207**	**.67464**	**.17832**
Stddev	.0073	.0016	.00066	.00248	.0387	.0283	.00237	.00106
%RSD	.17429	.13073	.46207	.27555	.92130	1.1216	.35086	.59575
#1	4.1840	1.2364	.14442	.89960	4.1655	2.5034	.67698	.17711
#2	4.1880	1.2342	.14331	.90004	4.2403	2.5533	.67469	.17870
#3	4.1982	1.2332	.14323	.90410	4.1858	2.5054	.67225	.17913

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.84039**	**.14923**	**10.434**	**.14641**	**3.5648**	**99.398**	**.15274**	**3.6404**
Stddev	.00142	.00029	.054	.00188	.0053	.871	.00023	.0287
%RSD	.16905	.19235	.51945	1.2821	.14734	.87588	.15259	.78910
#1	.83974	.14895	10.408	.14848	3.5708	99.333	.15272	3.6149
#2	.83941	.14923	10.497	.14594	3.5627	100.30	.15252	3.6715
#3	.84202	.14952	10.398	.14482	3.5610	98.562	.15299	3.6346

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.5126**	**.08330**	**3.2134**	**.28777**	**.81085**	**2.4181**	**26.943**
Stddev	.0020	.00038	.0249	.00118	.00211	.0126	.053
%RSD	.13355	.45970	.77347	.40988	.26029	.52186	.19805
#1	1.5141	.08320	3.1896	.28699	.81287	2.4150	27.004
#2	1.5103	.08299	3.2392	.28719	.80866	2.4320	26.919
#3	1.5134	.08373	3.2115	.28912	.81104	2.4073	26.905

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: S3 Acquired: 7/14/2025 13:18:18 Type: Cal
Method: METHOD 6010D, 200.7 M(v34) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3533.5**	**35769.**	**2488.3**	**2191.4**	**4960.8**
Stddev	4.1	287.	17.8	16.0	6.1
%RSD	.11719	.80101	.71622	.72828	.12218
#1	3529.2	35447.	2491.5	2175.4	4967.2
#2	3537.4	35867.	2469.1	2191.4	4959.9
#3	3534.0	35995.	2504.4	2207.3	4955.2

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: S4 Acquired: 7/14/2025 13:22:36 Type: Cal
Method: METHOD 6010D, 200.7 M(v34) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.20102**	**.52389**	**1.1674**	**.29069**	**.67930**	**1.1432**	**42.126**	**3.0982**
Stddev	.00038	.00238	.0027	.00030	.00160	.0094	.104	.0105
%RSD	.19067	.45456	.23285	.10258	.23546	.82259	.24588	.34021
#1	.20143	.52202	1.1698	.29054	.68001	1.1368	42.236	3.1103
#2	.20067	.52307	1.1644	.29104	.68041	1.1540	42.110	3.0923
#3	.20096	.52657	1.1678	.29051	.67746	1.1388	42.030	3.0919

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**8.7270**	**2.4961**	**.29372**	**1.8670**	**8.2273**	**5.0329**	**1.3585**	**.35782**
Stddev	.0202	.0099	.00105	.0046	.0243	.0213	.0028	.00019
%RSD	.23134	.39806	.35780	.24734	.29534	.42284	.20747	.05433
#1	8.7375	2.4847	.29493	1.8692	8.2552	5.0479	1.3598	.35775
#2	8.7038	2.5008	.29303	1.8616	8.2154	5.0423	1.3605	.35804
#3	8.7398	2.5028	.29322	1.8700	8.2111	5.0086	1.3553	.35768

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.7416**	**.30164**	**21.551**	**.29823**	**7.2086**	**210.32**	**.32356**	**7.2855**
Stddev	.0037	.00160	.051	.00190	.0356	1.92	.00036	.0313
%RSD	.21124	.52926	.23676	.63549	.49350	.91328	.11146	.42968
#1	1.7440	.30345	21.583	.29733	7.2470	210.11	.32387	7.3211
#2	1.7374	.30103	21.492	.30040	7.2018	212.33	.32316	7.2623
#3	1.7435	.30043	21.578	.29695	7.1769	208.51	.32363	7.2730

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.0854**	**.17599**	**6.3128**	**.59897**	**1.6527**	**4.8429**	**54.517**
Stddev	.0034	.00069	.0283	.00106	.0061	.0328	.088
%RSD	.11164	.39465	.44833	.17738	.36715	.67781	.16122
#1	3.0841	.17667	6.3454	.59948	1.6457	4.8086	54.513
#2	3.0893	.17529	6.2942	.59775	1.6567	4.8741	54.606
#3	3.0827	.17601	6.2989	.59968	1.6557	4.8459	54.431

Sample Name: S4 Acquired: 7/14/2025 13:22:36 Type: Cal
Method: METHOD 6010D, 200.7 M(v34) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3459.1**	**34889.**	**2478.9**	**2140.4**	**4710.4**
Stddev	10.9	33.	.7	7.1	9.7
%RSD	.31623	.09334	.02876	.33004	.20608
#1	3470.6	34894.	2478.5	2136.7	4720.6
#2	3448.8	34919.	2479.7	2135.9	4709.3
#3	3457.9	34854.	2478.4	2148.5	4701.3

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: S5 Acquired: 7/14/2025 13:26:53 Type: Cal
Method: METHOD 6010D, 200.7 M(v34) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.41939**	**1.0745**	**2.3924**	**.58469**	**1.3616**	**2.2970**	**84.969**	**6.1309**
Stddev	.00100	.0023	.0010	.00048	.0035	.0026	.432	.0051
%RSD	.23834	.21535	.04039	.08199	.25949	.11162	.50801	.08279
#1	.41844	1.0721	2.3914	.58501	1.3618	2.2956	85.429	6.1347
#2	.41929	1.0767	2.3923	.58414	1.3580	2.2954	84.904	6.1327
#3	.42044	1.0748	2.3934	.58492	1.3651	2.2999	84.573	6.1251

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**17.866**	**5.0222**	**.57696**	**3.8231**	**16.296**	**9.9449**	**2.7314**	**.71850**
Stddev	.020	.0073	.00163	.0039	.039	.0107	.0061	.00279
%RSD	.11214	.14443	.28210	.10066	.23859	.10802	.22180	.38777
#1	17.844	5.0253	.57538	3.8202	16.331	9.9379	2.7249	.71590
#2	17.869	5.0139	.57863	3.8216	16.303	9.9573	2.7369	.72144
#3	17.884	5.0273	.57688	3.8275	16.254	9.9397	2.7325	.71815

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.5561**	**.59932**	**44.097**	**.61076**	**14.471**	**446.72**	**.67581**	**14.476**
Stddev	.0011	.00054	.142	.00170	.047	4.93	.00090	.025
%RSD	.03099	.09062	.32145	.27755	.32245	1.1028	.13311	.16932
#1	3.5549	.59928	44.224	.61268	14.505	448.06	.67485	14.495
#2	3.5564	.59988	44.122	.60947	14.418	450.84	.67595	14.484
#3	3.5570	.59880	43.944	.61012	14.490	441.26	.67663	14.448

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6.1895**	**.36822**	**12.434**	**1.2262**	**3.3322**	**9.5947**	**108.51**
Stddev	.0099	.00023	.024	.0014	.0047	.0154	.34
%RSD	.16036	.06173	.19573	.10982	.13996	.16075	.31024
#1	6.1924	.36848	12.441	1.2246	3.3302	9.5778	108.13
#2	6.1784	.36806	12.455	1.2266	3.3376	9.6081	108.78
#3	6.1977	.36812	12.407	1.2272	3.3290	9.5981	108.61

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: S5 Acquired: 7/14/2025 13:26:53 Type: Cal
Method: METHOD 6010D, 200.7 M(v34) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3352.5**	**34293.**	**2422.3**	**2082.1**	**4438.6**
Stddev	10.9	94.	5.8	2.3	8.2
%RSD	.32364	.27471	.23921	.11260	.18362
#1	3349.3	34364.	2426.2	2082.1	4440.2
#2	3364.6	34186.	2415.6	2084.5	4445.9
#3	3343.7	34329.	2425.0	2079.8	4429.8

Sample Name: ICV01 Acquired: 7/14/2025 13:44:51 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.641805**	**3.725404**	**3.696359**	**3.769927**	**3.738334**	**7.877948**
Stddev	.019192	.012397	.015300	.029284	.005869	.013457
%RSD	.5269942	.3327609	.4139099	.7767690	.1569882	.1708138
#1	3.631729	3.724762	3.695068	3.740570	3.733380	7.892083
#2	3.629750	3.713341	3.681745	3.770072	3.736806	7.865292
#3	3.663937	3.738109	3.712263	3.799137	3.744815	7.876468

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.894177**	**.2082510**	**1.863796**	**19.73441**	**.8032427**	**1.976695**
Stddev	.062326	.0023626	.009477	.05276	.0016822	.001572
%RSD	.7895127	1.134484	.5084607	.2673435	.2094317	.0795208
#1	7.822712	.2055597	1.858789	19.71856	.8051461	1.978507
#2	7.922553	.2099832	1.857873	19.79328	.8019553	1.975865
#3	7.937264	.2092102	1.874726	19.69139	.8026267	1.975712

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.047762**	**4.060753**	**1.975309**	**19.90403**	**1.968201**	**1.044120**
Stddev	.012017	.048646	.003359	.07702	.002972	.001498
%RSD	1.146958	1.197945	.1700336	.3869456	.1510061	.1434460
#1	1.033886	4.004729	1.974972	19.82311	1.971404	1.044857
#2	1.054776	4.092283	1.978823	19.91253	1.965532	1.042396
#3	1.054625	4.085246	1.972131	19.97644	1.967667	1.045106

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.74489**	**2.008050**	**1.978571**	**18.84744**	F **.0158698**	F **-.014663**
Stddev	.17207	.012329	.004176	.17450	.0025518	.000619
%RSD	.8714897	.6139607	.2110645	.9258492	16.07962	4.220689
#1	19.54682	1.993876	1.978912	18.64698	.0137076	-.014672
#2	19.83030	2.016281	1.982566	18.96530	.0152173	-.015277
#3	19.85755	2.013994	1.974235	18.93005	.0186845	-.014039

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: ICV01 Acquired: 7/14/2025 13:44:51 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.005195	F .0153458	F -.001063	F .0004168	F -.004414	F -.006213
Stddev	.000790	.0004541	.002382	.0009209	.003994	.002004
%RSD	15.21747	2.959021	224.0080	220.9317	90.48038	32.26245
#1	-.005981	.0148659	-.003344	-.000448	-.008546	-.007350
#2	-.005202	.0154028	-.001254	.000314	-.004123	-.007390
#3	-.004400	.0157687	.001408	.001385	-.000574	-.003898

Elem	Sr4077
Units	ppm
Avg	F .0003458
Stddev	.0000898
%RSD	25.96178
#1	.0003827
#2	.0002435
#3	.0004113

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3516.988	35360.86	2472.429	2182.369	4859.270
Stddev	9.104	147.45	22.449	4.595	8.441
%RSD	.2588456	.4169839	.9079693	.2105600	.1737183
#1	3527.492	35193.42	2497.943	2177.154	4849.524
#2	3512.092	35471.31	2463.635	2184.126	4864.053
#3	3511.381	35417.86	2455.708	2185.826	4864.234

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: ICB01 Acquired: 7/14/2025 14:16:08 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003787**	**-.000510**	**-.001929**	**-.003814**	**-.003106**	**.0272836**	**-.000578**
Stddev	.001984	.001459	.001513	.006440	.001794	.0105323	.001508
%RSD	52.38987	285.8837	78.40934	168.8336	57.74262	38.60320	260.8522
#1	-.002076	.000183	-.003502	-.005909	-.004631	.0394446	.000873
#2	-.003323	.000472	-.000486	.003412	-.003557	.0210913	-.002137
#3	-.005962	-.002187	-.001799	-.008945	-.001130	.0213149	-.000470

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000405**	**-.000032**	**.0161474**	**.0005169**	**-.000124**	**-.000320**	**.0059747**
Stddev	.0001587	.000088	.0112658	.0002108	.000136	.000313	.0015545
%RSD	392.0363	271.9439	69.76820	40.77690	109.7548	97.71178	26.01733
#1	-.000099	.000057	.0125700	.0003528	.000014	-.000291	.0074585
#2	.000213	-.000119	.0071047	.0004433	-.000259	-.000646	.0061077
#3	.000008	-.000035	.0287675	.0007546	-.000127	-.000023	.0043581

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002037**	**.0504050**	**.0006472**	**.0009538**	**.0072345**	**-.001541**	**-.000074**
Stddev	.001896	.0243152	.0006882	.0010059	.0059552	.006787	.000288
%RSD	93.11907	48.23956	106.3430	105.4646	82.31626	440.4665	387.5479
#1	-.003563	.0398228	.0014416	.0009301	.0014030	.004798	-.000404
#2	-.002634	.0782181	.0002322	.0019713	.0069945	-.000719	.000055
#3	.000087	.0331741	.0002677	-.000040	.0133061	-.008702	.000126

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013855**	**.0005131**	**-.021038**	**-.000190**	**-.004220**	**-.004648**	**.0044402**
Stddev	.0004657	.0015350	.001796	.000233	.001648	.001156	.0011438
%RSD	33.61165	299.1912	8.535863	122.8963	39.05729	24.88087	25.75947
#1	.0014778	-.000144	-.023080	.000079	-.005600	-.004506	.0046139
#2	.0017981	-.000584	-.019704	-.000344	-.002395	-.003568	.0054873
#3	.0008806	.002267	-.020331	-.000304	-.004664	-.005868	.0032196

Sample Name: ICB01 Acquired: 7/14/2025 14:16:08 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0048243	-.010107	.0001064
Stddev	.0036658	.004522	.0000149
%RSD	75.98454	44.74357	14.01505
#1	.0087345	-.014934	.0001190
#2	.0014654	-.009419	.0000900
#3	.0042732	-.005968	.0001103

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3572.506	36770.45	2501.975	2242.861	5359.767
Stddev	7.369	144.71	9.584	8.068	12.004
%RSD	.2062664	.3935422	.3830485	.3597158	.2239563
#1	3569.373	36807.82	2491.024	2240.918	5348.681
#2	3580.923	36892.81	2506.067	2251.723	5372.515
#3	3567.221	36610.72	2508.833	2235.942	5358.105

Sample Name: CRI01 Acquired: 7/14/2025 14:26:05 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0166700**	**.0365681**	**.0098941**	**.0204286**	**.0495006**	**.1258640**	**.0990522**
Stddev	.0021681	.0005569	.0013906	.0013090	.0018617	.0283040	.0000861
%RSD	13.00605	1.522778	14.05468	6.407836	3.761030	22.48779	.0868787
#1	.0188947	.0364740	.0083431	.0211056	.0496054	.1326407	.0989724
#2	.0145633	.0360643	.0110294	.0212604	.0475886	.1501646	.0991434
#3	.0165519	.0371660	.0103098	.0189197	.0513077	.0947867	.0990409

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0064184**	**.0055667**	**2.025210**	**.0105626**	**.0297149**	**.0223944**	**.1144881**
Stddev	.0000664	.0000231	.011916	.0005028	.0002628	.0002835	.0012399
%RSD	1.034395	.4146467	.5883995	4.760459	.8845054	1.266040	1.082950
#1	.0064167	.0055863	2.032370	.0108306	.0294615	.0223781	.1152075
#2	.0063529	.0055725	2.031807	.0108747	.0299862	.0226856	.1130565
#3	.0064857	.0055412	2.011454	.0099825	.0296969	.0221193	.1152004

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0207184**	**2.155870**	**.0391667**	**.0119140**	**1.795769**	**.0375728**	**.0406122**
Stddev	.0009715	.007049	.0004204	.0009497	.028157	.0062447	.0004676
%RSD	4.688990	.3269904	1.073354	7.971312	1.567935	16.62028	1.151437
#1	.0214266	2.157145	.0395201	.0115505	1.779486	.0416216	.0401222
#2	.0196109	2.162194	.0392782	.0111997	1.779541	.0303810	.0410537
#3	.0211176	2.148270	.0387018	.0129917	1.828282	.0407158	.0406607

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.539123**	**.0165226**	**.0812829**	**.2025955**	**.0161104**	**.3912752**	**.0420161**
Stddev	.036110	.0016021	.0009372	.0005112	.0037636	.0053833	.0004376
%RSD	2.346117	9.696370	1.153061	.2523185	23.36120	1.375840	1.041476
#1	1.520724	.0147438	.0820743	.2024530	.0175837	.3928389	.0416462
#2	1.515919	.0169721	.0815264	.2031628	.0118330	.3852831	.0419030
#3	1.580727	.0178519	.0802479	.2021707	.0189144	.3957035	.0424992

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CRI01 Acquired: 7/14/2025 14:26:05 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0381053	.0191653	.0201170
Stddev	.0045924	.0020601	.0003260
%RSD	12.05193	10.74900	1.620525
#1	.0405762	.0209311	.0201531
#2	.0409332	.0169020	.0197745
#3	.0328064	.0196628	.0204235

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3566.399	36733.25	2512.148	2250.382	5317.216
Stddev	8.578	125.03	7.446	18.477	10.381
%RSD	.2405290	.3403717	.2964038	.8210486	.1952420
#1	3557.844	36622.84	2514.482	2240.281	5308.569
#2	3575.000	36707.89	2518.148	2239.159	5328.729
#3	3566.355	36869.01	2503.815	2271.708	5314.349

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: ICSA01 Acquired: 7/14/2025 14:37:11 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0023992**	**.0219431**	**.0044876**	**-.009505**	**.0207853**	**258.3077**
Stddev	.0026568	.0031995	.0031788	.002902	.0007326	.8159
%RSD	110.7381	14.58090	70.83438	30.53548	3.524729	.3158816
#1	.0025541	.0255641	.0075487	-.010482	.0208072	258.9374
#2	.0049752	.0207673	.0047111	-.011792	.0200420	258.5999
#3	-.000332	.0194978	.0012030	-.006240	.0215067	257.3859

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0068835**	**.0011767**	**-.000081**	**248.2760**	**.0533861**	**-.017898**
Stddev	.0012179	.0003405	.000050	.6026	.0005617	.000496
%RSD	17.69261	28.93690	61.35672	.2427273	1.052227	2.770532
#1	.0077855	.0010971	-.000104	248.6513	.0540262	-.018399
#2	.0054982	.0015500	-.000024	248.5959	.0529753	-.017887
#3	.0073669	.0008831	-.000115	247.5809	.0531567	-.017408

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.006354**	**99.03998**	**.0072726**	**255.6926**	**.0173937**	**.0040383**
Stddev	.001491	1.01842	.0008000	.3074	.0006246	.0015383
%RSD	23.46826	1.028291	11.00049	.1202320	3.590844	38.09243
#1	-.005387	100.2139	.0076825	255.9944	.0181147	.0042544
#2	-.008071	98.3924	.0077846	255.3798	.0170185	.0054571
#3	-.005604	98.5137	.0063507	255.7036	.0170479	.0024034

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0990977**	**.0005815**	**.0116070**	**.0069262**	**.0105591**	**.0020015**
Stddev	.0101699	.0009543	.0009904	.0006758	.0036750	.0008975
%RSD	10.26249	164.1023	8.533093	9.756984	34.80445	44.84371
#1	.1089411	.0008251	.0126178	.0072061	.0067373	.0029899
#2	.0886301	.0013904	.0115652	.0061555	.0108726	.0017769
#3	.0997220	-.000471	.0106382	.0074171	.0140673	.0012375

Sample Name: ICSA01 Acquired: 7/14/2025 14:37:11 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008708	.0192372	-.005749	.0048383	-.002514	-.006884
Stddev	.001178	.0009807	.001217	.0005511	.002832	.005588
%RSD	13.52816	5.097799	21.16394	11.39107	112.6569	81.17783
#1	-.009156	.0181099	-.007145	.0042038	-.005470	-.013155
#2	-.009595	.0197078	-.004915	.0051130	-.002245	-.005065
#3	-.007371	.0198939	-.005186	.0051981	.000174	-.002432

Elem	Sr4077
Units	ppm
Avg	F .1040644
Stddev	.0003121
%RSD	.2998800
#1	.1044149
#2	.1039617
#3	.1038167

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3291.547	32537.61	2431.894	2049.566	4286.232
Stddev	7.612	145.53	8.294	13.831	6.685
%RSD	.2312563	.4472554	.3410522	.6748155	.1559657
#1	3292.329	32375.36	2428.223	2035.579	4284.754
#2	3283.574	32656.60	2441.390	2063.235	4280.411
#3	3298.738	32580.86	2426.069	2049.885	4293.533

Sample Name: ICSAB01 Acquired: 7/14/2025 14:41:41 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0962936**	**.1036299**	**.0460267**	**.0351262**	**.6264083**	**248.1052**
Stddev	.0023374	.0016749	.0066827	.0043466	.0024222	1.2063
%RSD	2.427373	1.616256	14.51919	12.37430	.3866895	.4862074
#1	.0984890	.1018805	.0449299	.0303752	.6240883	246.8193
#2	.0965555	.1052187	.0399602	.0389032	.6289213	248.2842
#3	.0938363	.1037905	.0531899	.0361003	.6262153	249.2119

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5079921**	**.5146772**	**.9956114**	**240.5100**	**.5550426**	**.4726253**
Stddev	.0056927	.0036972	.0010529	1.6107	.0005351	.0003021
%RSD	1.120634	.7183581	.1057578	.6697226	.0964052	.0639201
#1	.5015584	.5111274	.9953169	238.6864	.5548515	.4722794
#2	.5123762	.5185060	.9947370	241.1048	.5556471	.4728373
#3	.5100418	.5143983	.9967802	241.7387	.5546294	.4727592

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4848543**	**97.21531**	**.4923676**	**245.9157**	**.9983125**	**.2167055**
Stddev	.0029444	.69032	.0041860	2.4834	.0010236	.0006152
%RSD	.6072733	.7100947	.8501733	1.009839	.1025281	.2838927
#1	.4817910	96.62963	.4876143	243.0771	.9990671	.2170107
#2	.4876633	97.03989	.4955039	246.9830	.9971474	.2171085
#3	.4851085	97.97642	.4939846	247.6869	.9987228	.2159974

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1181818**	**.4834418**	**1.009087**	**.0065952**	F **.0230169**	F **.0009390**
Stddev	.0060691	.0068245	.006823	.0001382	.0038155	.0024809
%RSD	5.135366	1.411639	.6761893	2.095441	16.57673	264.1990
#1	.1190738	.4831693	1.016734	.0066708	.0257759	-.000002
#2	.1237555	.4767577	1.003619	.0064357	.0186628	-.000934
#3	.1117161	.4903985	1.006909	.0066791	.0246121	.003753

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: ICSAB01 Acquired: 7/14/2025 14:41:41 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.008682	F .0259090	F -.010833	F .0109980	F .0016184	F -.004680
Stddev	.000511	.0034463	.001290	.0014245	.0026609	.002710
%RSD	5.884866	13.30174	11.90398	12.95214	164.4214	57.90478
#1	-.008092	.0244858	-.011017	.0094395	.0005135	-.007781
#2	-.008972	.0234023	-.012021	.0122327	.0046538	-.002763
#3	-.008981	.0298391	-.009461	.0113217	-.000312	-.003498

Elem	Sr4077
Units	ppm
Avg	F .0996501
Stddev	.0008446
%RSD	.8475424
#1	.0987100
#2	.0998952
#3	.1003450

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3269.308	32460.98	2407.088	2034.923	4269.176
Stddev	5.303	253.43	14.530	18.889	5.244
%RSD	.1622105	.7807263	.6036176	.9282450	.1228297
#1	3274.555	32378.04	2420.940	2022.510	4275.008
#2	3263.951	32745.49	2408.358	2056.662	4264.850
#3	3269.417	32259.41	2391.964	2025.599	4267.668

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: ICSADLX20 Acquired: 7/14/2025 14:46:08 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSA01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.004561**	**.0044811**	**.0005342**	**-.005565**	**-.000046**	**12.42148**	**.0007953**
Stddev	.003119	.0005498	.0012248	.003755	.001004	.01390	.0011806
%RSD	68.37304	12.26943	229.2721	67.48399	2173.651	.1119072	148.4578
#1	-.003164	.0042048	-.000877	-.002687	.000594	12.41071	.0006366
#2	-.002386	.0051143	.001326	-.009813	.000471	12.41657	-.000298
#3	-.008134	.0041243	.001153	-.004195	-.001203	12.43717	.002047

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000971**	**-.000124**	**12.30211**	**.0029076**	**.0047497**	**-.000192**	**5.341475**
Stddev	.0001131	.000141	.05745	.0009385	.0001174	.000450	.029658
%RSD	116.4744	113.8455	.4670073	32.27728	2.472089	234.2107	.5552380
#1	.0001827	-.000276	12.36235	.0032245	.0046172	-.000482	5.368208
#2	.0001398	.000004	12.24792	.0036467	.0048407	.000327	5.309572
#3	-.000031	-.000101	12.29607	.0018517	.0047912	-.000422	5.346646

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000055**	**12.89065**	**.0018935**	**.0009775**	**-.007072**	**-.001666**	**.0006159**
Stddev	.000428	.03423	.0007832	.0005662	.008334	.004032	.0002786
%RSD	778.3614	.2655442	41.36028	57.92675	117.8581	241.9814	45.23585
#1	-.000223	12.89136	.0010946	.0006079	-.013102	-.000535	.0003793
#2	.000432	12.92452	.0026600	.0006952	.002439	-.006144	.0005454
#3	-.000374	12.85607	.0019260	.0016293	-.010552	.001680	.0009230

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000177**	**.0005501**	**-.020852**	**-.002680**	**.0040843**	**-.005200**	**.0040697**
Stddev	.001035	.0016279	.001062	.000351	.0057904	.001049	.0010275
%RSD	586.1158	295.9105	5.092395	13.10181	141.7695	20.17793	25.24871
#1	.000754	.0023515	-.021790	-.003084	.0009893	-.005836	.0037731
#2	-.001291	-.000816	-.019699	-.002517	.0004993	-.003989	.0052129
#3	.000007	.000115	-.021066	-.002441	.0107645	-.005775	.0032231

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: ICSADLX20 Acquired: 7/14/2025 14:46:08 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSA01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.000338**	**-.012435**	**.0050479**
Stddev	.002432	.001641	.0002029
%RSD	720.1670	13.19700	4.018956
#1	-.002675	-.011736	.0052527
#2	.002179	-.014310	.0048470
#3	-.000518	-.011259	.0050442

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3538.150**	**35797.87**	**2476.956**	**2198.948**	**5111.636**
Stddev	2.601	25.87	15.319	5.422	7.075
%RSD	.0734994	.0722766	.6184481	.2465673	.1384032
#1	3539.242	35824.30	2464.685	2194.162	5108.019
#2	3540.026	35772.59	2494.124	2204.836	5119.788
#3	3535.181	35796.72	2472.058	2197.846	5107.102

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: ICSABDLX20 Acquired: 7/14/2025 14:50:34 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSAB01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000251**	**.0073522**	**.0023089**	**-.003263**	**.0292140**	**12.48136**	**.0241157**
Stddev	.001480	.0014321	.0017904	.002069	.0024942	.06109	.0009539
%RSD	590.3703	19.47792	77.54443	63.41795	8.537861	.4894390	3.955504
#1	.001204	.0089895	.0005585	-.004820	.0267916	12.41255	.0247017
#2	-.000202	.0067345	.0041367	-.000915	.0290761	12.52922	.0230150
#3	-.001754	.0063327	.0022314	-.004053	.0317744	12.50231	.0246303

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0262035**	**.0470213**	**12.21724**	**.0283545**	**.0285942**	**.0260322**	**5.371066**
Stddev	.0001862	.0001094	.00523	.0006957	.0003331	.0002075	.010285
%RSD	.7103852	.2327051	.0428140	2.453407	1.164874	.7970770	.1914965
#1	.0263720	.0468968	12.21662	.0276920	.0282118	.0260835	5.379411
#2	.0260037	.0470646	12.21234	.0282924	.0288213	.0262092	5.374212
#3	.0262348	.0471024	12.22275	.0290791	.0287495	.0258038	5.359575

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0255762**	**12.81179**	**.0487323**	**.0104052**	**.0066274**	**.0174155**	**.0502441**
Stddev	.0013125	.11525	.0002094	.0007194	.0129635	.0071378	.0004964
%RSD	5.131761	.8995356	.4296420	6.914027	195.6050	40.98533	.9879494
#1	.0267486	12.69270	.0486158	.0103436	.0198925	.0256575	.0501430
#2	.0258216	12.92277	.0489740	.0111534	.0060013	.0133341	.0498060
#3	.0241583	12.81988	.0486071	.0097185	-.006012	.0132551	.0507832

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000324**	**-.000737**	**-.020845**	**-.003088**	**.0016691**	**-.005530**	**.0055584**
Stddev	.000710	.000859	.001123	.000888	.0041392	.001675	.0009093
%RSD	219.4249	116.4583	5.387574	28.76584	247.9864	30.28650	16.35900
#1	-.000355	-.001011	-.019998	-.002234	.0002564	-.003660	.0066077
#2	-.001018	.000225	-.022119	-.003023	.0063298	-.006035	.0050010
#3	.000402	-.001426	-.020418	-.004007	-.001579	-.006894	.0050665

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: ICSABDLX20 Acquired: 7/14/2025 14:50:34 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSAB01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0002915	-.013299	.0051285
Stddev	.0020706	.003853	.0002086
%RSD	710.3780	28.97560	4.066389
#1	.0023692	-.015626	.0048949
#2	-.001772	-.015419	.0051948
#3	.000277	-.008851	.0052959

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3553.856	36275.07	2505.704	2229.128	5123.135
Stddev	4.670	16.30	6.249	6.121	5.788
%RSD	.1314132	.0449238	.2494087	.2745864	.1129708
#1	3554.577	36281.44	2498.682	2222.923	5127.421
#2	3558.124	36256.55	2507.776	2235.161	5125.434
#3	3548.867	36287.22	2510.655	2229.300	5116.552

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCV01 Acquired: 7/14/2025 14:54:56 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.996039**	**5.034468**	**5.039727**	**5.089831**	**5.069420**	**9.952505**	**9.978591**
Stddev	.006593	.026517	.004339	.011999	.007899	.073197	.075713
%RSD	.1319688	.5267155	.0860882	.2357531	.1558114	.7354634	.7587564
#1	4.988436	5.004047	5.034731	5.077136	5.078287	10.03391	10.05228
#2	5.000173	5.046663	5.041910	5.100986	5.066837	9.89211	9.90100
#3	4.999510	5.052694	5.042541	5.091370	5.063136	9.93150	9.98249

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2545806**	**2.541942**	**25.11589**	**1.025512**	**2.523937**	**1.265460**	**5.107838**
Stddev	.0035147	.002444	.15117	.001724	.003122	.015858	.066056
%RSD	1.380572	.0961519	.6018909	.1680626	.1237003	1.253121	1.293237
#1	.2568691	2.539740	25.28764	1.023523	2.522993	1.275366	5.147717
#2	.2505338	2.541514	25.00305	1.026455	2.521396	1.247170	5.031589
#3	.2563389	2.544572	25.05697	1.026559	2.527423	1.273844	5.144207

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.523968**	**25.07187**	**2.531591**	**1.271197**	**24.69828**	**2.517631**	**2.517406**
Stddev	.013362	.08953	.003415	.002569	.22347	.022769	.020035
%RSD	.5293932	.3570839	.1348871	.2020688	.9047872	.9043975	.7958441
#1	2.535378	25.15908	2.532951	1.268311	24.86559	2.533146	2.539387
#2	2.509269	24.98019	2.527705	1.273230	24.44450	2.491491	2.500169
#3	2.527257	25.07634	2.534116	1.272051	24.78474	2.528255	2.512663

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.64295**	**5.097801**	**5.079702**	**5.092210**	**5.036055**	**5.062531**	**5.067148**
Stddev	.24536	.007313	.062174	.001332	.013897	.069988	.011328
%RSD	.9956447	.1434481	1.223967	.0261648	.2759468	1.382473	.2235600
#1	24.89985	5.094129	5.126228	5.093748	5.035971	5.111948	5.054072
#2	24.41105	5.093053	5.009089	5.091437	5.049994	4.982444	5.073388
#3	24.61796	5.106222	5.103791	5.091444	5.022201	5.093200	5.073985

Sample Name: CCV01 Acquired: 7/14/2025 14:54:56 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.018203**	**5.075896**	**5.094258**
Stddev	.035682	.028164	.029503
%RSD	.7110567	.5548583	.5791429
#1	5.050985	5.101893	5.123734
#2	4.980196	5.045976	5.064728
#3	5.023429	5.079817	5.094313

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3411.644**	**34593.27**	**2447.980**	**2121.285**	**4641.724**
Stddev	5.433	217.63	23.473	15.505	8.274
%RSD	.1592384	.6291023	.9588886	.7309159	.1782474
#1	3408.126	34598.59	2424.436	2104.983	4642.372
#2	3417.901	34373.02	2471.383	2123.026	4649.654
#3	3408.905	34808.18	2448.121	2135.846	4633.145

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCB01 Acquired: 7/14/2025 14:59:12 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000835**	**.0016200**	**-.002507**	**.0002544**	**-.002355**	**.0065650**
Stddev	.001622	.0016684	.000647	.0017684	.003235	.0051748
%RSD	194.1490	102.9903	25.80031	695.1621	137.3930	78.82365
#1	-.001872	.0014942	-.003056	-.001639	-.002759	.0064556
#2	-.001668	.0000180	-.002671	.000540	.001064	.0014458
#3	.001033	.0033478	-.001794	.001863	-.005368	.0117936

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000792**	**-.000034**	**-.000029**	**.0279827**	**-.000170**	**-.000023**
Stddev	.000591	.000089	.000031	.0300689	.001057	.000115
%RSD	74.66803	263.7232	105.6210	107.4554	621.2322	503.9503
#1	-.000127	-.000109	-.000007	-.003649	-.001248	.000089
#2	-.001260	.000064	-.000016	.056197	-.000127	-.000140
#3	-.000989	-.000056	-.000064	.031400	.000865	-.000017

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002077**	**.0018951**	**-.001754**	**-.021988**	**.0005588**	**.0004910**
Stddev	.0002329	.0017942	.001079	.039828	.0002086	.0006527
%RSD	112.1663	94.67398	61.49798	181.1307	37.32777	132.9314
#1	.0000427	.0026456	-.002921	-.004650	.0007946	.0000427
#2	.0004741	.0031922	-.001550	.006232	.0003986	.0012398
#3	.0001062	-.000152	-.000792	-.067546	.0004831	.0001904

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.034672**	**-.003199**	**-.000461**	**-.001901**	**-.000440**	**-.006686**
Stddev	.018889	.007680	.000233	.000786	.001483	.001614
%RSD	54.47874	240.0768	50.65124	41.35106	336.8011	24.13440
#1	-.054999	-.001487	-.000259	-.001415	-.002114	-.005270
#2	-.031356	-.011590	-.000408	-.002809	.000079	-.008443
#3	-.017660	.003481	-.000716	-.001481	.000713	-.006346

Sample Name: CCB01 Acquired: 7/14/2025 14:59:12 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000090	-.001519	-.004349	.0048673	.0056638	F -.033422
Stddev	.000518	.004851	.000346	.0003263	.0061717	.011129
%RSD	576.5905	319.4311	7.951455	6.703966	108.9663	33.29950
#1	.000451	-.005756	-.004748	.0051891	-.001461	-.045614
#2	-.000581	-.002573	-.004137	.0045367	.009368	-.023809
#3	-.000139	.003773	-.004161	.0048759	.009085	-.030842

Elem	Sr4077
Units	ppm
Avg	.0000940
Stddev	.0002202
%RSD	234.1586
#1	.0002778
#2	-.000150
#3	.000154

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3569.412	36541.60	2517.412	2234.842	5340.989
Stddev	5.096	174.46	19.146	18.483	12.724
%RSD	.1427607	.4774359	.7605391	.8270299	.2382313
#1	3568.270	36501.40	2495.361	2219.386	5332.024
#2	3574.982	36390.75	2527.073	2229.823	5355.552
#3	3564.984	36732.65	2529.803	2255.315	5335.391

Sample Name: Q2540-01 Acquired: 7/14/2025 15:05:06 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.005269**	**.0061867**	**.0158227**	**-.016283**	**.0061393**	**6.000914**
Stddev	.003146	.0013551	.0007422	.001155	.0013476	.013060
%RSD	59.70872	21.90343	4.690525	7.093563	21.95060	.2176391
#1	-.008359	.0048241	.0164465	-.015187	.0062158	5.995580
#2	-.002070	.0075341	.0160197	-.017489	.0074469	5.991365
#3	-.005377	.0062018	.0150019	-.016173	.0047550	6.015797

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0822389**	**.0001667**	**.0009247**	**45.48402**	**.0043835**	**.0200908**
Stddev	.0011638	.0000774	.0000306	.24095	.0007047	.0000938
%RSD	1.415200	46.44052	3.306443	.5297565	16.07619	.4669763
#1	.0809741	.0001206	.0009587	45.23394	.0043753	.0201427
#2	.0824780	.0002561	.0008995	45.71467	.0050922	.0201472
#3	.0832646	.0001234	.0009159	45.50346	.0036829	.0199825

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0102080**	**3.792937**	**.3413956**	**7.749234**	**.0100851**	**-.000848**
Stddev	.0001195	.047578	.0020438	.119592	.0006041	.000757
%RSD	1.170309	1.254388	.5986691	1.543270	5.989731	89.25489
#1	.0101975	3.738754	.3390516	7.655001	.0100515	-.001555
#2	.0103324	3.827891	.3428054	7.883770	.0107053	-.000049
#3	.0100941	3.812167	.3423297	7.708930	.0094985	-.000940

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**266.1644**	**.0230137**	**.0582734**	**12.22641**	**.5241449**	**.1380506**
Stddev	1.0735	.0037081	.0008036	.17106	.0014375	.0006100
%RSD	.4033310	16.11245	1.378959	1.399133	.2742477	.4418698
#1	264.9492	.0255437	.0577403	12.04027	.5227904	.1377163
#2	266.9838	.0247401	.0591976	12.26224	.5239912	.1387547
#3	266.5603	.0187572	.0578822	12.37672	.5256530	.1376808

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2540-01 Acquired: 7/14/2025 15:05:06 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063328	18.64486	F 13.66762	.0013246	.1012369	-.050399
Stddev	.0005372	.01300	.16946	.0018711	.0055064	.001492
%RSD	8.483095	.0697430	1.239896	141.2552	5.439157	2.959789
#1	.0068896	18.65467	13.47483	.0014143	.0965069	-.051447
#2	.0058175	18.63011	13.79306	.0031492	.1072817	-.048691
#3	.0062914	18.64980	13.73496	-.000590	.0999221	-.051060

Elem	Sr4077
Units	ppm
Avg	.2262181
Stddev	.0008348
%RSD	.3690276
#1	.2255696
#2	.2271600
#3	.2259248

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3413.325	34019.92	2475.749	2127.456	4556.538
Stddev	2.973	217.82	19.526	7.409	2.161
%RSD	.0870963	.6402651	.7886952	.3482560	.0474233
#1	3409.898	33823.46	2497.761	2120.302	4556.324
#2	3415.213	34254.15	2468.970	2135.096	4558.798
#3	3414.863	33982.16	2460.515	2126.970	4554.492

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2487-11DL2X10 Acquired: 7/14/2025 15:09:45 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0199822**	**.0127105**	**4.380934**	**.0167206**	**.0244191**	**13.51983**	**1.967322**
Stddev	.0020247	.0006622	.022962	.0048805	.0012591	.07839	.015204
%RSD	10.13266	5.209939	.5241438	29.18842	5.156146	.5797949	.7728375
#1	.0196418	.0134461	4.406891	.0211293	.0241552	13.50498	1.983958
#2	.0181492	.0121619	4.372645	.0175561	.0233129	13.44993	1.954147
#3	.0221555	.0125237	4.363268	.0114763	.0257892	13.60458	1.963860

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025011**	**.0066614**	**72.78216**	**.1875600**	**.0523314**	**1.733335**	**142.5433**
Stddev	.0001229	.0001449	.33816	.0002572	.0012885	.008637	1.8964
%RSD	4.912275	2.175095	.4646216	.1371230	2.462118	.4983004	1.330420
#1	.0024417	.0066133	72.96812	.1878134	.0523618	1.739565	144.1173
#2	.0024192	.0068242	72.39182	.1875675	.0536045	1.723475	140.4378
#3	.0026423	.0065467	72.98652	.1872992	.0510281	1.736965	143.0748

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8847220**	**13.28320**	**.0874224**	**.0074284**	**2.687034**	**.0626175**	**12.11398**
Stddev	.0075503	.01888	.0003815	.0000867	.011200	.0085634	.00902
%RSD	.8534123	.1421379	.4364319	1.166553	.4168157	13.67577	.0744414
#1	.8920149	13.28159	.0877635	.0073898	2.689463	.0564353	12.12045
#2	.8769382	13.26518	.0870104	.0075277	2.674819	.0590253	12.11780
#3	.8852129	13.30284	.0874934	.0073678	2.696820	.0723920	12.10367

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.954429**	**.7472201**	**.1187186**	**.1624785**	**4.120598**	**3.759074**	**1.279926**
Stddev	.006143	.0025852	.0025494	.0003527	.018344	.015362	.005944
%RSD	.3143058	.3459788	2.147425	.2170714	.4451836	.4086774	.4643729
#1	1.958562	.7500964	.1215083	.1628798	4.141532	3.776578	1.286696
#2	1.947370	.7450900	.1165098	.1622181	4.107333	3.747828	1.275568
#3	1.957354	.7464740	.1181376	.1623374	4.112929	3.752817	1.277514

Sample Name: Q2487-11DL2X10 Acquired: 7/14/2025 15:09:45 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6962938	.0083368	.3032447
Stddev	.0082930	.0060835	.0013430
%RSD	1.191021	72.97113	.4428916
#1	.6984019	.0127261	.3046300
#2	.6871502	.0108918	.3019484
#3	.7033293	.0013925	.3031556

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3527.624	35294.27	2502.831	2184.310	4856.068
Stddev	10.219	121.21	10.667	4.049	14.213
%RSD	.2896896	.3434331	.4261840	.1853873	.2926760
#1	3520.170	35156.50	2494.293	2179.675	4840.586
#2	3523.428	35341.79	2514.788	2187.164	4859.096
#3	3539.273	35384.52	2499.411	2186.090	4868.523

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2487-16DL2X10 Acquired: 7/14/2025 15:14:10 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0352216**	**.0118298**	**3.435177**	**.0172713**	**.0113169**	**13.55648**	**1.329673**
Stddev	.0036610	.0002652	.003503	.0037914	.0038752	.07698	.006423
%RSD	10.39413	2.241585	.1019647	21.95167	34.24305	.5678590	.4830669
#1	.0392858	.0120186	3.431583	.0161274	.0075406	13.50593	1.331933
#2	.0321821	.0115266	3.435367	.0141837	.0152840	13.51844	1.322425
#3	.0341970	.0119441	3.438581	.0215029	.0111260	13.64508	1.334660

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024178**	**.0069823**	**73.08272**	**.2616383**	**.0600573**	**1.479353**	**134.6534**
Stddev	.0001182	.0001713	.17986	.0020999	.0002129	.009137	.4123
%RSD	4.890240	2.452945	.2461048	.8026123	.3544634	.6176158	.3062185
#1	.0025209	.0068069	73.16288	.2629689	.0598236	1.470561	135.1063
#2	.0024438	.0069908	72.87672	.2627285	.0601079	1.478698	134.5540
#3	.0022888	.0071491	73.20857	.2592175	.0602403	1.488799	134.2998

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9435143**	**10.34059**	**.0588165**	**.0069766**	**1.659101**	**.0535341**	**12.50612**
Stddev	.0027277	.12786	.0005819	.0014164	.013903	.0007395	.00690
%RSD	.2891011	1.236513	.9893345	20.30248	.8379648	1.381463	.0552088
#1	.9443834	10.47911	.0583932	.0070928	1.649386	.0531301	12.51401
#2	.9457015	10.22707	.0594800	.0083313	1.652890	.0543877	12.50313
#3	.9404579	10.31561	.0585762	.0055057	1.675026	.0530845	12.50121

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.827969**	**1.146781**	**.0696326**	**.1265470**	**11.67856**	**3.368523**	**1.234130**
Stddev	.013580	.001861	.0026928	.0009099	.01328	.031213	.004558
%RSD	.7428770	.1622484	3.867181	.7190511	.1137459	.9265978	.3692951
#1	1.818721	1.145612	.0722345	.1258266	11.67767	3.337062	1.232097
#2	1.821627	1.145803	.0698061	.1262448	11.66574	3.369026	1.230943
#3	1.843559	1.148926	.0668572	.1275696	11.69226	3.399482	1.239350

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2487-16DL2X10 Acquired: 7/14/2025 15:14:10 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6482387	-.013920	.3524461
Stddev	.0023509	.007474	.0014561
%RSD	.3626551	53.68997	.4131346
#1	.6496277	-.012601	.3514337
#2	.6495639	-.007194	.3517898
#3	.6455244	-.021966	.3541148

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3486.956	35071.85	2504.327	2163.781	4804.520
Stddev	7.244	189.93	12.394	7.233	12.743
%RSD	.2077490	.5415477	.4949005	.3342942	.2652202
#1	3478.783	34857.69	2508.541	2155.495	4790.473
#2	3489.499	35219.86	2514.065	2167.015	4807.749
#3	3492.585	35138.01	2490.375	2168.833	4815.336

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2545-01DUP Acquired: 7/14/2025 15:24:14 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016893**	**.0062279**	**.0139567**	**-.010774**	**.0048350**	**.1833907**	**.0289122**
Stddev	.0011036	.0019133	.0030542	.004484	.0031677	.0137292	.0009711
%RSD	65.32835	30.72115	21.88324	41.61601	65.51529	7.486317	3.358733
#1	.0018926	.0040231	.0144591	-.006885	.0082362	.1716699	.0283750
#2	.0026771	.0074527	.0106825	-.009759	.0019690	.1984955	.0300332
#3	.0004982	.0072078	.0167286	-.015679	.0042999	.1800067	.0283285

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000406**	**.0002055**	**34.06273**	**.0010371**	**.0164029**	**.0130300**	**3.546944**
Stddev	.0002209	.0000712	.13903	.0003497	.0005001	.0007415	.130307
%RSD	544.6064	34.63135	.4081565	33.71898	3.048850	5.690941	3.673782
#1	.0000353	.0002278	34.11454	.0009452	.0159817	.0135759	3.681134
#2	.0002640	.0001259	33.90524	.0014236	.0162714	.0121858	3.420903
#3	-.000178	.0002629	34.16842	.0007425	.0169556	.0133284	3.538796

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3026668**	**2.707419**	**.0063846**	**-.000352**	**78.54377**	**.0002863**	**.4409128**
Stddev	.0031151	.057646	.0001874	.000524	4.75736	.0070344	.0061751
%RSD	1.029205	2.129196	2.934793	148.5977	6.056951	2456.709	1.400524
#1	.3038853	2.719036	.0063457	-.000878	76.39559	.0078900	.4382175
#2	.2991266	2.644849	.0065883	.000170	83.99638	-.001041	.4479773
#3	.3049883	2.758372	.0062197	-.000350	75.23933	-.005990	.4365434

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**52.64988**	**3.276894**	**.0397829**	**.0006746**	**9.031912**	**12.22223**	**-.001525**
Stddev	2.47411	.084178	.0032631	.0010175	.231969	.25483	.001498
%RSD	4.699178	2.568842	8.202217	150.8188	2.568329	2.084963	98.21811
#1	54.42394	3.374095	.0430803	.0016413	9.298917	12.51611	-.001791
#2	53.70213	3.228589	.0365553	-.000387	8.916884	12.06246	.000088
#3	49.82358	3.228000	.0397130	.000770	8.879936	12.08813	-.002873

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2545-01DUP Acquired: 7/14/2025 15:24:14 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0088192	-.047620	.0862505
Stddev	.0013549	.002027	.0003100
%RSD	15.36313	4.257640	.3593666
#1	.0101912	-.049610	.0865498
#2	.0087843	-.047692	.0862708
#3	.0074821	-.045557	.0859309

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3503.495	34982.12	2439.108	2187.527	4832.240
Stddev	21.933	1772.84	47.348	50.657	48.640
%RSD	.6260401	5.067851	1.941210	2.315717	1.006566
#1	3484.635	36031.64	2401.221	2215.167	4777.890
#2	3527.564	32935.24	2423.915	2129.062	4871.678
#3	3498.285	35979.48	2492.188	2218.351	4847.152

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2545-01 Acquired: 7/14/2025 15:28:43 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022807**	**.0050106**	**.0142214**	**-.012415**	**.0052318**	**.1634342**	**.0288973**
Stddev	.0008829	.0020917	.0009773	.005441	.0011967	.0252797	.0004775
%RSD	38.71475	41.74536	6.872029	43.82611	22.87421	15.46781	1.652471
#1	.0018107	.0029673	.0148526	-.017673	.0049331	.1501318	.0284481
#2	.0017321	.0071475	.0147159	-.006808	.0065495	.1475833	.0293989
#3	.0032992	.0049169	.0130957	-.012765	.0042126	.1925876	.0288450

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000521**	**.0002607**	**34.20146**	**.0026225**	**.0162059**	**.0124730**	**3.450849**
Stddev	.0001356	.0000764	.06333	.0006123	.0004617	.0020393	.336800
%RSD	260.1769	29.30686	.1851531	23.34956	2.849256	16.34966	9.759914
#1	-.000022	.0002964	34.17485	.0022511	.0165348	.0127750	3.476344
#2	-.000030	.0001730	34.15578	.0022871	.0156780	.0143445	3.774177
#3	.000209	.0003127	34.27375	.0033292	.0164047	.0102996	3.102026

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3102975**	**2.680586**	**.0073808**	**-.000047**	**76.22850**	**.0025324**	**.4472802**
Stddev	.0012086	.012767	.0008491	.000784	5.24552	.0118767	.0095248
%RSD	.3895043	.4762896	11.50405	1673.216	6.881309	468.9967	2.129497
#1	.3090395	2.676131	.0073255	.000441	73.67810	.0007608	.4440676
#2	.3114498	2.670643	.0082561	-.000952	82.26154	.0151953	.4397771
#3	.3104034	2.694984	.0065607	.000370	72.74586	-.008359	.4579960

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**56.12818**	**3.313968**	**.0390584**	**.0006984**	**9.220768**	**11.91120**	**-.000339**
Stddev	5.07380	.016933	.0036775	.0004331	.055184	.99732	.001735
%RSD	9.039663	.5109450	9.415518	62.02249	.5984712	8.372976	511.4297
#1	50.27902	3.312650	.0400686	.0003898	9.190646	11.87249	.001072
#2	59.34246	3.331521	.0421252	.0005118	9.284457	12.92732	-.002276
#3	58.76307	3.297733	.0349813	.0011935	9.187200	10.93381	.000187

Sample Name: Q2545-01 Acquired: 7/14/2025 15:28:43 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0046466	-.041577	.0866187
Stddev	.0015765	.003858	.0002171
%RSD	33.92893	9.279822	.2506772
#1	.0030881	-.040695	.0864641
#2	.0062406	-.045800	.0865251
#3	.0046111	-.038236	.0868670

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3496.975	34001.80	2466.138	2121.099	4817.698
Stddev	78.208	2817.91	92.745	153.499	89.248
%RSD	2.236453	8.287544	3.760727	7.236757	1.852508
#1	3560.804	35475.48	2539.897	2185.457	4888.670
#2	3409.735	35777.30	2362.018	2231.944	4717.501
#3	3520.385	30752.63	2496.500	1945.898	4846.925

Sample Name: Q2545-01LX5 Acquired: 7/14/2025 15:39:10 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001277**	**.0032788**	**.0017559**	**-.006096**	**-.002011**	**.0346142**	**.0038071**
Stddev	.001985	.0011877	.0022464	.003584	.003532	.0291669	.0008731
%RSD	155.4433	36.22210	127.9312	58.78917	175.6191	84.26274	22.93461
#1	-.000833	.0020437	.0004191	-.009674	.000293	.0013633	.0031706
#2	.000448	.0033802	.0004993	-.002507	-.006077	.0558756	.0034481
#3	-.003447	.0044126	.0043494	-.006106	-.000249	.0466037	.0048024

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000360**	**-.000008**	**6.702839**	**-.000235**	**.0046374**	**.0027983**	**.7167252**
Stddev	.0001739	.000036	.079733	.000457	.0002268	.0005535	.0091408
%RSD	483.6350	444.3690	1.189540	194.6728	4.890557	19.78141	1.275350
#1	-.000101	-.000018	6.650236	-.000735	.0044281	.0023551	.7073390
#2	.000232	.000032	6.794578	-.000129	.0048784	.0034188	.7255990
#3	-.000022	-.000039	6.663704	.000160	.0046057	.0026211	.7172375

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0607910**	**.6088833**	**.0010149**	**.0007217**	**14.79333**	**.0100857**	**.0863264**
Stddev	.0018962	.0190366	.0005201	.0021842	.13648	.0065422	.0001605
%RSD	3.119286	3.126486	51.24711	302.6669	.9225960	64.86542	.1858617
#1	.0607307	.6256601	.0004144	-.001780	14.78890	.0106698	.0861599
#2	.0627167	.6127953	.0013200	.001693	14.93197	.0163163	.0864800
#3	.0589257	.5881946	.0013104	.002252	14.65911	.0032711	.0863392

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.105157**	**.6015284**	**-.009789**	**-.000321**	**1.641820**	**2.461605**	**-.000564**
Stddev	.112689	.0047368	.000376	.000228	.011710	.027449	.000764
%RSD	1.237642	.7874677	3.841814	71.26349	.7132175	1.115102	135.3367
#1	9.026315	.5977476	-.009955	-.000121	1.635119	2.437120	.000253
#2	9.234226	.5999958	-.009359	-.000570	1.635000	2.491278	-.001259
#3	9.054930	.6068418	-.010054	-.000270	1.655341	2.456417	-.000687

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2545-01LX5 Acquired: 7/14/2025 15:39:10 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0043106	-.034174	.0171565
Stddev	.0040563	.005083	.0002640
%RSD	94.10072	14.87299	1.538661
#1	.0043127	-.038512	.0172550
#2	.0002533	-.028581	.0168574
#3	.0083658	-.035430	.0173570

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3468.935	35163.81	2356.242	2162.655	4995.888
Stddev	23.006	46.67	28.683	5.585	30.389
%RSD	.6632104	.1327093	1.217301	.2582385	.6082781
#1	3468.732	35111.29	2378.476	2168.137	4994.832
#2	3492.043	35179.66	2323.867	2156.973	5026.791
#3	3446.031	35200.49	2366.385	2162.854	4966.041

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2480-02 Acquired: 7/14/2025 15:43:45 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0584343**	**-.010055**	**.4127623**	**.0529736**	**.0149255**	**106.5104**
Stddev	.0022102	.001045	.0014487	.0050482	.0017992	.5841
%RSD	3.782413	10.38906	.3509843	9.529631	12.05445	.5483896
#1	.0579480	-.009423	.4127477	.0492336	.0148992	107.1773
#2	.0565077	-.011261	.4142183	.0509716	.0167376	106.2640
#3	.0608472	-.009481	.4113210	.0587158	.0131396	106.0898

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8547906**	**.0075759**	**.0012062**	**19.50726**	**.1107001**	**.0079276**
Stddev	.0036255	.0007835	.0003828	.11905	.0029570	.0041827
%RSD	.4241382	10.34239	31.73271	.6103021	2.671218	52.76109
#1	.8572616	.0072225	.0008064	19.61936	.1077692	.0035983
#2	.8564816	.0084739	.0015692	19.52012	.1106485	.0119464
#3	.8506285	.0070314	.0012430	19.38230	.1136826	.0082380

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1912554**	**203.7393**	**4.200044**	**22.51888**	**.1586452**	**.0249692**
Stddev	.0183735	7.9455	.030339	.13415	.0006775	.0022215
%RSD	9.606776	3.899838	.7223589	.5957030	.4270379	8.896823
#1	.1872387	211.5498	4.224560	22.64005	.1593796	.0275027
#2	.2113050	195.6653	4.209459	22.54187	.1585114	.0240509
#3	.1752226	204.0027	4.166113	22.37473	.1580447	.0233542

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.105136**	**.2723585**	**.6820401**	**^ *****	**4.278615**	**.0652818**
Stddev	.164852	.0097927	.0105154	-----	.014784	.0208931
%RSD	5.309016	3.595517	1.541760	-----	.3455298	32.00442
#1	2.928829	.2654086	.6733767	6.044645	4.279786	.0804950
#2	3.255444	.2835582	.6790042	6.640353	4.292779	.0414598
#3	3.131134	.2681087	.6937395	^ -----	4.263281	.0738907

Sample Name: Q2480-02 Acquired: 7/14/2025 15:43:45 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008239	1.346342	F 20.82771	.1634144	3.054632	.0645435
Stddev	.0003030	.016412	1.43891	.0022006	.037381	.0025265
%RSD	36.77513	1.218982	6.908641	1.346622	1.223742	3.914430
#1	.0011591	1.341902	19.87107	.1639268	3.091736	.0652056
#2	.0007432	1.364517	22.48250	.1653136	3.055181	.0617519
#3	.0005695	1.332608	20.12955	.1610028	3.016980	.0666731

Elem	Sr4077
Units	ppm
Avg	.1414329
Stddev	.0008250
%RSD	.5832936
#1	.1417034
#2	.1420886
#3	.1405066

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3857.390	37976.62	2640.363	2386.427	4551.058
Stddev	5.777	985.77	215.520	29.095	11.982
%RSD	.1497769	2.595740	8.162500	1.219172	.2632789
#1	3852.329	38530.05	2713.201	2410.910	4551.080
#2	3856.155	38561.33	2397.862	2394.108	4539.065
#3	3863.685	36838.49	2810.025	2354.262	4563.028

Sample Name: Q2545-01MS Acquired: 7/14/2025 15:48:13 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8342143**	**2.126848**	**1.061766**	**2.016925**	**.8407516**	**2.295124**
Stddev	.0165188	.020934	.013223	.036683	.0035126	.018338
%RSD	1.980167	.9842559	1.245363	1.818734	.4177906	.7990035
#1	.8244396	2.121557	1.053457	1.996309	.8430537	2.276285
#2	.8249165	2.109067	1.054827	1.995189	.8367086	2.296169
#3	.8532866	2.149919	1.077014	2.059277	.8424926	2.312917

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2384539**	**.2119948**	**.2162251**	**37.54319**	**.4334992**	**.2314250**
Stddev	.0017688	.0026593	.0033761	.19253	.0030463	.0014212
%RSD	.7417966	1.254431	1.561363	.5128192	.7027247	.6141121
#1	.2364362	.2142187	.2141916	37.33055	.4300371	.2315264
#2	.2397374	.2127167	.2143614	37.59336	.4346911	.2299559
#3	.2391881	.2090491	.2201222	37.70568	.4357693	.2327929

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3407927**	**7.191524**	**.5134444**	**4.953650**	**.5495211**	**.0597447**
Stddev	.0052385	.073382	.0008223	.095346	.0033336	.0019288
%RSD	1.537151	1.020399	.1601520	1.924772	.6066297	3.228449
#1	.3453456	7.265473	.5124995	4.844447	.5479351	.0612097
#2	.3419652	7.190377	.5139977	4.996129	.5472767	.0604651
#3	.3350673	7.118722	.5138360	5.020375	.5533516	.0575594

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**83.56743**	**.3241306**	**.6725918**	**63.71645**	**10.09097**	**.3354225**
Stddev	3.54891	.0059908	.0090533	2.25095	.22584	.0049987
%RSD	4.246762	1.848269	1.346033	3.532768	2.238036	1.490282
#1	80.48339	.3268205	.6689651	63.21544	9.96994	.3374939
#2	87.44639	.3283050	.6828962	66.17570	9.95144	.3390527
#3	82.77251	.3172663	.6659141	61.75821	10.35152	.3297211

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2545-01MS Acquired: 7/14/2025 15:48:13 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4385532	9.592363	F 13.71507	.7701197	.2176565	.1872349
Stddev	.0011703	.223228	.21347	.0089012	.0076080	.0038157
%RSD	.2668461	2.327142	1.556483	1.155813	3.495411	2.037941
#1	.4391732	9.500144	13.74593	.7657889	.2204763	.1910577
#2	.4392831	9.430019	13.91144	.7642126	.2090412	.1834262
#3	.4372034	9.846925	13.48786	.7803574	.2234521	.1872208

Elem	Sr4077
Units	ppm
Avg	.3010440
Stddev	.0015005
%RSD	.4984221
#1	.2993162
#2	.3017965
#3	.3020194

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3406.592	34019.65	2394.558	2117.839	4618.910
Stddev	11.297	842.74	57.426	35.395	28.496
%RSD	.3316199	2.477226	2.398188	1.671267	.6169468
#1	3396.194	34622.52	2393.685	2123.704	4623.611
#2	3418.613	33056.68	2337.573	2079.878	4644.763
#3	3404.970	34379.75	2452.415	2149.935	4588.355

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2545-01MSD Acquired: 7/14/2025 15:52:32 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7857161**	**2.033645**	**1.006990**	**1.922786**	**.8198096**	**2.251725**
Stddev	.0026002	.002503	.003460	.003714	.0013249	.020377
%RSD	.3309374	.1230708	.3436307	.1931494	.1616097	.9049435
#1	.7858422	2.034245	1.007905	1.918579	.8209914	2.236070
#2	.7882510	2.030897	1.009901	1.924172	.8183774	2.244341
#3	.7830552	2.035794	1.003165	1.925608	.8200600	2.274765

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2360766**	**.2115842**	**.2043568**	**37.11789**	**.4197014**	**.2222715**
Stddev	.0019831	.0014143	.0003579	.14154	.0026226	.0002642
%RSD	.8400056	.6684303	.1751332	.3813330	.6248639	.1188610
#1	.2376714	.2124865	.2047112	37.14274	.4225851	.2220327
#2	.2338562	.2099542	.2043635	36.96556	.4190600	.2222266
#3	.2367022	.2123118	.2039955	37.24536	.4174590	.2225553

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3400002**	**7.257396**	**.5151074**	**4.903045**	**.5263240**	**.0538666**
Stddev	.0006889	.041687	.0041776	.123196	.0000698	.0005405
%RSD	.2026220	.5744009	.8110258	2.512648	.0132581	1.003385
#1	.3399987	7.281260	.5172989	4.917269	.5263791	.0535149
#2	.3393120	7.209261	.5102900	4.773354	.5262455	.0535959
#3	.3406899	7.281667	.5177333	5.018512	.5263473	.0544890

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**80.94904**	**.3187570**	**.6529580**	**63.28763**	**9.515575**	**.3324614**
Stddev	.64893	.0084592	.0037392	.65344	.006496	.0028670
%RSD	.8016545	2.653822	.5726585	1.032486	.0682633	.8623667
#1	81.57614	.3283481	.6539155	63.77751	9.516402	.3311303
#2	80.28028	.3155633	.6561254	63.53966	9.521617	.3305019
#3	80.99069	.3123595	.6488332	62.54570	9.508705	.3357520

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2545-01MSD Acquired: 7/14/2025 15:52:32 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4274216	9.049631	F 13.68178	.7294370	.2178926	.1976409
Stddev	.0004155	.015158	.05810	.0007861	.0047497	.0016487
%RSD	.0972048	.1674981	.4246163	.1077606	2.179847	.8342040
#1	.4269421	9.051643	13.72563	.7287110	.2131393	.1957383
#2	.4276733	9.033568	13.61589	.7293282	.2226387	.1985347
#3	.4276495	9.063683	13.70382	.7302718	.2178998	.1986498

Elem	Sr4077
Units	ppm
Avg	.2960994
Stddev	.0019348
%RSD	.6534317
#1	.2979238
#2	.2940705
#3	.2963040

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3486.127	35427.45	2416.053	2180.101	4768.940
Stddev	6.760	49.79	6.813	9.993	11.177
%RSD	.1939072	.1405370	.2819685	.4583702	.2343640
#1	3491.892	35416.82	2412.022	2181.097	4779.433
#2	3478.687	35383.83	2423.918	2169.648	4757.187
#3	3487.802	35481.69	2412.218	2189.560	4770.201

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2545-01A Acquired: 7/14/2025 15:56:52 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7736197**	**1.994457**	**.9869527**	**1.899785**	**.7998084**	**2.151316**	**.2264410**
Stddev	.0057786	.010685	.0069714	.017152	.0045489	.028291	.0024743
%RSD	.7469608	.5357408	.7063514	.9028576	.5687538	1.315052	1.092689
#1	.7716119	1.984077	.9813069	1.880160	.7982140	2.179226	.2236692
#2	.7691128	1.993871	.9848063	1.907284	.7962713	2.152063	.2272268
#3	.7801345	2.005423	.9947449	1.911910	.8049399	2.122659	.2284269

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2056449**	**.2001708**	**33.99041**	**.4087891**	**.2159677**	**.3307607**	**6.760203**
Stddev	.0019039	.0008065	.16941	.0016680	.0004985	.0032688	.051845
%RSD	.9258219	.4029193	.4983911	.4080232	.2308201	.9882701	.7669196
#1	.2035906	.1995151	33.79501	.4068683	.2155103	.3271979	6.705552
#2	.2073500	.1999260	34.08033	.4096276	.2158937	.3336213	6.808691
#3	.2059942	.2010714	34.09590	.4098714	.2164990	.3314628	6.766366

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4904698**	**4.567349**	**.5161770**	**.0651259**	**76.31247**	**.2990118**	**.6190053**
Stddev	.0055930	.036553	.0023977	.0003173	.78712	.0043206	.0014221
%RSD	1.140328	.8003165	.4645049	.4871865	1.031437	1.444951	.2297400
#1	.4840442	4.565378	.5141508	.0654575	75.42368	.3012782	.6175634
#2	.4942436	4.604848	.5155563	.0648252	76.92147	.3017276	.6190457
#3	.4931215	4.531821	.5188240	.0650951	76.59225	.2940295	.6204067

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**59.91771**	**9.204602**	**.3231955**	**.4148345**	**8.668645**	**12.78727**	**.7255987**
Stddev	.07441	.045816	.0043198	.0013573	.050237	.13649	.0030412
%RSD	.1241927	.4977522	1.336580	.3272010	.5795275	1.067423	.4191278
#1	59.83296	9.163743	.3182075	.4144423	8.629678	12.64221	.7230123
#2	59.94781	9.195927	.3256933	.4137165	8.650913	12.91318	.7248349
#3	59.97236	9.254135	.3256857	.4163448	8.725343	12.80641	.7289490

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2545-01A Acquired: 7/14/2025 15:56:52 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2039286	.1911523	.2793632
Stddev	.0056625	.0054980	.0022790
%RSD	2.776686	2.876241	.8157874
#1	.1999185	.1886917	.2767350
#2	.2014611	.1873144	.2807927
#3	.2104061	.1974508	.2805619

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3588.737	36630.79	2494.783	2263.822	4900.351
Stddev	2.955	102.33	25.968	5.146	7.690
%RSD	.0823482	.2793618	1.040886	.2272939	.1569202
#1	3587.352	36715.20	2518.421	2259.281	4899.842
#2	3592.130	36516.97	2466.987	2262.775	4908.283
#3	3586.729	36660.20	2498.942	2269.411	4892.929

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCV02 Acquired: 7/14/2025 16:01:10 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.955071**	**5.147994**	**5.013701**	**5.039181**	**5.029435**	**9.898924**	**9.883540**
Stddev	.011191	.016011	.015073	.007221	.009759	.069831	.037436
%RSD	.2258523	.3110114	.3006441	.1433035	.1940309	.7054441	.3787687
#1	4.949367	5.130587	4.998943	5.031981	5.021956	9.979489	9.906927
#2	4.947882	5.151305	5.013088	5.039137	5.025875	9.861546	9.840363
#3	4.967965	5.162091	5.029071	5.046424	5.040474	9.855737	9.903331

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2557687**	**2.524228**	**24.91487**	**1.004613**	**2.514228**	**1.270850**	**5.149815**
Stddev	.0008421	.005544	.06852	.002224	.005975	.004763	.011544
%RSD	.3292237	.2196494	.2750201	.2214097	.2376292	.3747750	.2241641
#1	.2564562	2.519276	24.99084	1.006712	2.508195	1.274560	5.162833
#2	.2560204	2.523191	24.89602	1.002282	2.514348	1.272510	5.145790
#3	.2548295	2.530218	24.85775	1.004846	2.520142	1.265479	5.140823

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.468523**	**24.54439**	**2.519339**	**1.251155**	**24.75339**	**2.457351**	**2.457998**
Stddev	.011375	.19283	.005881	.004986	.31812	.020973	.009203
%RSD	.4608126	.7856346	.2334277	.3985487	1.285149	.8534691	.3744037
#1	2.481379	24.70522	2.515075	1.245541	25.08515	2.473495	2.448519
#2	2.464428	24.33062	2.516894	1.252856	24.72407	2.433647	2.466897
#3	2.459763	24.59733	2.526048	1.255069	24.45095	2.464912	2.458577

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.60932**	**5.103175**	**5.059404**	**5.070336**	**4.970870**	**5.099071**	**5.046782**
Stddev	.27035	.017115	.019097	.014691	.008519	.022403	.018255
%RSD	1.098585	.3353818	.3774519	.2897346	.1713876	.4393555	.3617177
#1	24.87114	5.086682	5.078772	5.059132	4.962028	5.113745	5.031408
#2	24.62565	5.101990	5.058848	5.064908	4.971556	5.110185	5.041981
#3	24.33117	5.120851	5.040590	5.086968	4.979025	5.073284	5.066958

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCV02 Acquired: 7/14/2025 16:01:10 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.957070**	**5.147643**	**4.982788**
Stddev	.019367	.015761	.014620
%RSD	.3906912	.3061749	.2934082
#1	4.967201	5.165804	4.993321
#2	4.934739	5.139584	4.966096
#3	4.969270	5.137542	4.988947

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3412.730**	**35047.59**	**2421.266**	**2151.972**	**4644.723**
Stddev	12.415	140.48	5.878	14.175	15.845
%RSD	.3637914	.4008232	.2427474	.6587104	.3411473
#1	3420.446	35083.18	2415.187	2167.633	4657.876
#2	3419.335	35166.85	2426.918	2148.266	4649.160
#3	3398.409	34892.74	2421.693	2140.019	4627.132

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: LLCCV01 Acquired: 7/14/2025 16:27:09 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: LLCCV Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0192318**	**.0398681**	**.0096792**	**.0215675**	**.0504228**	**.1015559**
Stddev	.0030290	.0019619	.0011987	.0037720	.0033222	.0172828
%RSD	15.75014	4.920941	12.38453	17.48918	6.588767	17.01802
#1	.0160710	.0395839	.0097559	.0173849	.0467744	.0828459
#2	.0195152	.0380637	.0108377	.0247111	.0532737	.1048985
#3	.0221092	.0419565	.0084440	.0226064	.0512205	.1169232

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1023661**	**.0067342**	**.0057885**	**2.100675**	**.0113562**	**.0314095**
Stddev	.0007653	.0000473	.0000728	.017691	.0004212	.0002469
%RSD	.7475701	.7016411	1.256998	.8421598	3.708506	.7860171
#1	.1018333	.0067296	.0057959	2.084285	.0113855	.0311907
#2	.1020220	.0066893	.0058572	2.098311	.0109212	.0316772
#3	.1032430	.0067835	.0057123	2.119429	.0117620	.0313606

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0229809**	**.1185093**	**.0237539**	**2.278990**	**.0410386**	**.0112062**
Stddev	.0006137	.0040311	.0015157	.031367	.0002811	.0008181
%RSD	2.670671	3.401459	6.380988	1.376353	.6848773	7.300193
#1	.0234298	.1153670	.0220224	2.269189	.0407141	.0117718
#2	.0232315	.1171066	.0248406	2.253694	.0411960	.0115786
#3	.0222816	.1230543	.0243987	2.314087	.0412056	.0102682

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.853197**	**.0405576**	**.0414272**	**1.607580**	**.0178820**	**.0866541**
Stddev	.010614	.0085879	.0004185	.015770	.0002140	.0015600
%RSD	.5727392	21.17456	1.010281	.9809541	1.196820	1.800323
#1	1.841968	.0413136	.0418777	1.598597	.0178825	.0851554
#2	1.854557	.0316167	.0413537	1.598353	.0176678	.0865379
#3	1.863065	.0487425	.0410503	1.625788	.0180958	.0882690

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: LLCCV01 Acquired: 7/14/2025 16:27:09 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: LLCCV Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2114866**	**.0192680**	**.4233722**	**.0382174**	**.0362358**	F **-.000935**
Stddev	.0008136	.0057385	.0049385	.0006644	.0033054	.006662
%RSD	.3847204	29.78251	1.166467	1.738485	9.121929	712.4554
#1	.2109797	.0252305	.4217738	.0388332	.0386273	.000303
#2	.2110551	.0137833	.4194309	.0383056	.0376161	.005021
#3	.2124251	.0187903	.4289119	.0375132	.0324639	-.008130

Elem	Sr4077
Units	ppm
Avg	**.0209697**
Stddev	.0001621
%RSD	.7731827
#1	.0208631
#2	.0208897
#3	.0211563

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3411.915**	**35125.82**	**2375.622**	**2150.846**	**5046.471**
Stddev	5.708	29.80	24.793	.412	3.112
%RSD	.1673008	.0848505	1.043662	.0191767	.0616626
#1	3405.329	35137.19	2393.148	2150.834	5043.239
#2	3415.438	35092.01	2386.464	2151.264	5049.447
#3	3414.978	35148.27	2347.255	2150.440	5046.728

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCB02 Acquired: 7/14/2025 16:57:38 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001646**	**-.003338**	**-.001497**	**-.003797**	**-.003286**	**.0169090**	**.0006721**
Stddev	.000613	.001263	.001381	.003725	.001948	.0186849	.0005217
%RSD	37.22165	37.84941	92.26218	98.11621	59.27997	110.5028	77.62254
#1	-.001151	-.001882	-.000178	-.003949	-.003857	.0356358	.0003494
#2	-.002331	-.004151	-.002933	-.007443	-.001117	-.001734	.0003929
#3	-.001457	-.003980	-.001379	.000002	-.004885	.016825	.0012740

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000729**	**-.000113**	**.0118437**	**.0002964**	**-.000269**	**-.000187**	**.0002654**
Stddev	.0000751	.000075	.0476813	.0003905	.000342	.000619	.0014036
%RSD	103.1117	66.17230	402.5899	131.7455	127.1866	331.7774	528.9615
#1	.0000621	-.000099	.0109225	.0007474	-.000503	-.000873	.0018179
#2	.0001529	-.000195	.0599789	.0000673	-.000427	.000330	-.000914
#3	.0000037	-.000047	-.035370	.0000746	.000123	-.000016	-.000108

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017459**	**.0143217**	**.0004070**	**.0006012**	**-.008099**	**-.005005**	**-.001179**
Stddev	.0008241	.0938285	.0004116	.0007391	.021033	.005756	.000429
%RSD	47.20056	655.1470	101.1299	122.9424	259.6891	114.9953	36.40194
#1	.0008626	.0110516	.0004200	.0014139	.012958	-.011240	-.001573
#2	.0024941	-.077829	.0008118	-.000031	-.029109	.000106	-.000722
#3	.0018810	.109743	-.000011	.000421	-.008147	-.003881	-.001241

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0041660**	**-.001653**	**-.022617**	**-.000114**	**-.006744**	**.0053216**	**-.001570**
Stddev	.0009153	.001069	.001786	.000594	.003006	.0018524	.000149
%RSD	21.97072	64.67182	7.898674	521.5252	44.56966	34.80840	9.493747
#1	.0034024	-.000578	-.024632	-.000220	-.009515	.0032107	-.001723
#2	.0039149	-.001665	-.021226	-.000647	-.003548	.0060785	-.001562
#3	.0051806	-.002717	-.021994	.000526	-.007170	.0066757	-.001425

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCB02 Acquired: 7/14/2025 16:57:38 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0008391	-.015678	.0001495
Stddev	.0030474	.013310	.0001117
%RSD	363.1897	84.89658	74.69546
#1	-.000176	-.009401	.0000207
#2	-.001571	-.006667	.0002195
#3	.004265	-.030966	.0002083

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3613.248	37448.22	2457.754	2306.295	5391.276
Stddev	15.100	211.36	15.226	7.826	19.061
%RSD	.4178992	.5644031	.6195189	.3393399	.3535557
#1	3629.105	37520.54	2449.191	2306.977	5409.775
#2	3611.599	37210.19	2475.333	2298.150	5392.356
#3	3599.041	37613.92	2448.736	2313.758	5371.698

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: PB168793BL Acquired: 7/14/2025 17:03:11 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000782**	**-.002587**	**-.001294**	**-.003150**	**-.002462**	**.0186553**
Stddev	.004071	.001803	.000658	.001571	.001516	.0216163
%RSD	520.6300	69.70999	50.83362	49.86669	61.58853	115.8726
#1	-.000449	-.003660	-.001211	-.004901	-.004088	.0256952
#2	-.005009	-.000505	-.001989	-.002686	-.001087	-.005603
#3	.003112	-.003596	-.000681	-.001864	-.002212	.035874

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010465**	**.0001025**	**-.000106**	**-.004543**	**.0005981**	**-.000284**
Stddev	.0004427	.0000625	.000081	.019128	.0005497	.000351
%RSD	42.30484	60.96897	76.90789	421.0758	91.91065	123.7123
#1	.0014508	.0000866	-.000154	-.012522	.0001172	.000109
#2	.0011152	.0000495	-.000152	-.018389	.0011973	-.000392
#3	.0005734	.0001714	-.000012	.017283	.0004796	-.000567

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008891**	**-.000349**	**.0018631**	**.0541291**	**.0002387**	**.0015419**
Stddev	.0007545	.001417	.0010039	.0282827	.0004792	.0007285
%RSD	84.85913	405.8472	53.88415	52.25051	200.8085	47.25004
#1	.0017168	.000973	.0007082	.0456785	.0002953	.0023106
#2	.0002397	-.001844	.0023543	.0856739	.0006870	.0008616
#3	.0007110	-.000176	.0025268	.0310349	-.000266	.0014535

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.015077**	**-.005702**	**-.000337**	**.0058864**	**.0000803**	**-.022028**
Stddev	.004321	.012901	.000321	.0011128	.0018213	.002469
%RSD	28.66011	226.2421	95.29780	18.90481	2268.877	11.20722
#1	-.019163	-.009417	-.000286	.0064233	-.001942	-.019545
#2	-.015513	.008648	-.000045	.0046069	.000591	-.024482
#3	-.010554	-.016339	-.000681	.0066290	.001592	-.022055

Sample Name: PB168793BL Acquired: 7/14/2025 17:03:11 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000208	-.004385	.0039738	-.002663	-.003221	F -.025596
Stddev	.000241	.000969	.0013233	.000712	.004133	.005358
%RSD	115.7932	22.09339	33.30010	26.75071	128.3252	20.93331
#1	-.000432	-.004942	.0049037	-.003285	-.006521	-.030331
#2	-.000239	-.004947	.0045588	-.001886	-.004558	-.019780
#3	.000047	-.003266	.0024588	-.002817	.001415	-.026679

Elem	Sr4077
Units	ppm
Avg	.0003049
Stddev	.0000668
%RSD	21.91430
#1	.0003797
#2	.0002841
#3	.0002510

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3584.111	36452.87	2396.404	2247.242	5341.498
Stddev	5.400	176.58	9.888	7.832	8.657
%RSD	.1506562	.4844059	.4126164	.3485030	.1620679
#1	3581.000	36633.39	2407.515	2256.274	5331.995
#2	3590.346	36444.71	2393.124	2242.337	5343.566
#3	3580.986	36280.51	2388.573	2243.114	5348.934

Sample Name: PB168793BS Acquired: 7/14/2025 17:07:40 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7231627**	**2.067172**	**.9622191**	**2.003098**	**.8033372**	**2.020529**
Stddev	.0075485	.002624	.0042872	.009907	.0044363	.024927
%RSD	1.043815	.1269158	.4455506	.4946077	.5522366	1.233710
#1	.7225094	2.065209	.9664616	2.011147	.8079931	2.049272
#2	.7159621	2.066156	.9578886	1.992033	.8028592	2.007485
#3	.7310166	2.070152	.9623072	2.006113	.7991592	2.004831

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1991897**	**.2186013**	**.1941621**	**1.030881**	**.4027378**	**.1973283**
Stddev	.0006031	.0006786	.0004623	.014895	.0015278	.0002969
%RSD	.3027828	.3104431	.2380985	1.444840	.3793475	.1504540
#1	.1994921	.2193778	.1940573	1.046690	.4010781	.1976650
#2	.1995817	.2181219	.1937613	1.017110	.4030498	.1972157
#3	.1984952	.2183041	.1946679	1.028844	.4040855	.1971042

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3362336**	**3.540138**	**.2072704**	**2.093791**	**.4982450**	**.0712485**
Stddev	.0019596	.010605	.0003258	.051252	.0002952	.0006788
%RSD	.5828241	.2995675	.1571793	2.447788	.0592497	.9527513
#1	.3379713	3.544283	.2076354	2.051967	.4982809	.0706575
#2	.3341095	3.528086	.2070091	2.078444	.4979336	.0710980
#3	.3366199	3.548044	.2071666	2.150963	.4985207	.0719899

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.046901**	**.2961770**	**.2002203**	**9.297135**	**5.752134**	**.2931419**
Stddev	.011103	.0075863	.0007198	.035834	.013663	.0004988
%RSD	.3644037	2.561403	.3595298	.3854253	.2375281	.1701586
#1	3.050671	.3011438	.1995394	9.293447	5.748764	.2926216
#2	3.055628	.2999426	.2001479	9.263289	5.740471	.2936160
#3	3.034404	.2874446	.2009737	9.334671	5.767167	.2931882

Sample Name: PB168793BS Acquired: 7/14/2025 17:07:40 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4051038	F -.006577	1.005723	.6943196	.1994987	.2025541
Stddev	.0010886	.002865	.004347	.0016770	.0040768	.0029103
%RSD	.2687279	43.56157	.4322251	.2415270	2.043515	1.436792
#1	.4061962	-.007700	1.009168	.6930922	.1964790	.2052625
#2	.4050963	-.003321	1.000839	.6936362	.2041360	.2029228
#3	.4040190	-.008711	1.007162	.6962304	.1978810	.1994771

Elem	Sr4077
Units	ppm
Avg	.2014248
Stddev	.0002109
%RSD	.1047222
#1	.2012229
#2	.2014078
#3	.2016438

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3619.199	36985.92	2424.941	2286.070	5249.257
Stddev	12.032	151.49	3.095	11.319	15.284
%RSD	.3324375	.4095933	.1276493	.4951308	.2911705
#1	3609.114	37138.51	2421.485	2299.140	5248.223
#2	3632.516	36835.55	2425.882	2279.535	5265.031
#3	3615.966	36983.68	2427.458	2279.535	5234.515

Sample Name: PB168808BL Acquired: 7/14/2025 17:12:01 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.004478**	**-.001496**	**-.002748**	**.0000060**	**-.002564**	**-.001400**
Stddev	.001331	.001310	.001483	.0034478	.002094	.005294
%RSD	29.72211	87.51772	53.97996	57875.93	81.66618	378.0014
#1	-.005852	-.002764	-.001630	.0039532	-.001395	-.007405
#2	-.004389	-.001578	-.004431	-.001519	-.001316	.000608
#3	-.003194	-.000148	-.002183	-.002417	-.004982	.002595

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000534**	**.0000129**	**.0000173**	**-.009826**	**-.000228**	**-.000319**
Stddev	.001178	.0001769	.0000913	.013129	.000115	.000120
%RSD	220.5697	1377.278	528.1543	133.6181	50.42721	37.48933
#1	.000722	.0000687	.0000533	-.009545	-.000097	-.000202
#2	-.000709	.0001551	.0000851	-.023093	-.000313	-.000441
#3	-.001615	-.000185	-.000087	.003160	-.000275	-.000316

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000411**	**.0012556**	**.0000921**	**.0496949**	**.0002379**	**.0002020**
Stddev	.000249	.0011972	.0008536	.0807807	.0003668	.0010310
%RSD	60.62616	95.35085	927.2131	162.5533	154.2007	510.3455
#1	-.000657	.0026366	-.000359	-.005259	.0003420	.0006015
#2	-.000417	.0005108	-.000441	.011898	.0005414	-.000969
#3	-.000159	.0006194	.001077	.142445	-.000170	.000974

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.005183**	**-.011786**	**-.000889**	**.0070159**	**.0009732**	**-.018924**
Stddev	.021818	.011105	.000610	.0020608	.0010600	.001452
%RSD	420.9670	94.22188	68.56011	29.37252	108.9222	7.672520
#1	-.010774	-.001054	-.000278	.0048585	.0018382	-.020242
#2	.018887	-.023230	-.001497	.0072253	-.000209	-.017368
#3	-.023661	-.011074	-.000893	.0089640	.001291	-.019161

Sample Name: PB168808BL Acquired: 7/14/2025 17:12:01 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000446	-.003702	.0044552	-.002255	.0032161	F -.028431
Stddev	.000444	.002778	.0011749	.000579	.0051429	.011706
%RSD	99.42732	75.03134	26.37096	25.67432	159.9102	41.17237
#1	-.000905	-.005311	.0031316	-.002881	.0030005	-.030050
#2	-.000415	-.000495	.0053746	-.001738	.0084634	-.039243
#3	-.000019	-.005301	.0048594	-.002146	-.001816	-.016000

Elem	Sr4077
Units	ppm
Avg	.0000007
Stddev	.0002548
%RSD	35933.64
#1	.0002736
#2	-.000231
#3	-.000040

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3618.614	37300.40	2447.090	2308.939	5392.585
Stddev	15.517	130.15	9.681	11.042	19.145
%RSD	.4288042	.3489365	.3955987	.4782407	.3550319
#1	3624.652	37164.42	2455.945	2297.900	5393.773
#2	3630.205	37312.94	2448.570	2308.932	5411.108
#3	3600.986	37423.82	2436.755	2319.985	5372.873

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2557-02 Acquired: 7/14/2025 17:20:50 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.008904**	**.0075214**	**.0158501**	**-.003530**	**.0066553**	**8.980067**
Stddev	.000404	.0006583	.0012637	.000707	.0029615	.037042
%RSD	4.535187	8.752018	7.972728	20.03312	44.49763	.4124958
#1	-.009093	.0082764	.0166831	-.004345	.0066864	8.943841
#2	-.008440	.0072201	.0164710	-.003161	.0096010	9.017875
#3	-.009179	.0070677	.0143960	-.003083	.0036784	8.978483

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1301708**	**.0004854**	**.0001904**	**40.65298**	**.0093675**	**.0323279**
Stddev	.0021205	.0001456	.0001105	.09481	.0002565	.0003629
%RSD	1.628997	29.98749	58.06736	.2332164	2.738311	1.122673
#1	.1321109	.0005724	.0000862	40.57009	.0092097	.0319586
#2	.1304943	.0003174	.0003063	40.63248	.0096635	.0323410
#3	.1279071	.0005665	.0001786	40.75636	.0092294	.0326841

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0365101**	**22.85929**	**2.245537**	**14.83202**	**.0087345**	**-.001947**
Stddev	.0043163	1.76011	.005190	.12067	.0004007	.001091
%RSD	11.82225	7.699780	.2311471	.8135690	4.587559	56.06732
#1	.0413805	24.88631	2.239844	14.75459	.0091932	-.002470
#2	.0331586	21.71767	2.250006	14.77042	.0084529	-.000692
#3	.0349910	21.97390	2.246760	14.97106	.0085574	-.002678

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**180.3917**	**.0045749**	**.2245440**	**8.628560**	**.3090243**	**1.139914**
Stddev	15.1959	.0050920	.0010042	1.087241	.0074518	.086878
%RSD	8.423831	111.3038	.4472102	12.60049	2.411391	7.621476
#1	196.4845	.0041738	.2253152	9.875703	.3115971	1.239847
#2	166.2887	.0098556	.2249083	7.880213	.3148487	1.082339
#3	178.4020	-.000305	.2234086	8.129764	.3006270	1.097557

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2557-02 Acquired: 7/14/2025 17:20:50 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005529	F 50.90610	F 33.68335	.0003242	.2439323	-.032931
Stddev	.000417	1.35891	2.72246	.0005838	.0013134	.003350
%RSD	7.532705	2.669454	8.082503	180.0833	.5384322	10.17364
#1	-.006007	51.37073	36.82448	-.000349	.2430945	-.035821
#2	-.005243	51.97175	32.00439	.000639	.2432564	-.029259
#3	-.005337	49.37581	32.22117	.000683	.2454460	-.033712

Elem	Sr4077
Units	ppm
Avg	.1976702
Stddev	.0002652
%RSD	.1341698
#1	.1977116
#2	.1973867
#3	.1979123

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3415.301	34413.32	2260.905	2160.314	4594.199
Stddev	59.698	25.29	163.356	8.736	83.861
%RSD	1.747965	.0734747	7.225233	.4043911	1.825372
#1	3464.599	34393.97	2074.115	2152.664	4640.957
#2	3348.924	34441.93	2377.042	2169.833	4497.383
#3	3432.379	34404.05	2331.558	2158.443	4644.257

Sample Name: PB168808BS Acquired: 7/14/2025 17:34:32 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7169307**	**2.047645**	**.9512733**	**1.985926**	**.8107299**	**2.012320**
Stddev	.0025658	.002200	.0040626	.008674	.0049372	.040904
%RSD	.3578853	.1074368	.4270664	.4367987	.6089886	2.032698
#1	.7156149	2.045190	.9491829	1.986296	.8056706	2.016051
#2	.7152898	2.049436	.9486816	1.977073	.8155353	1.969678
#3	.7198875	2.048310	.9559554	1.994410	.8109839	2.051231

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2005501**	**.2106906**	**.1915973**	**1.007785**	**.4042416**	**.1962719**
Stddev	.0013907	.0012988	.0002736	.015721	.0009619	.0004999
%RSD	.6934599	.6164569	.1427782	1.559955	.2379411	.2546947
#1	.2020967	.2119914	.1917762	.992219	.4033307	.1966079
#2	.2001511	.2106866	.1912824	1.023656	.4052474	.1956974
#3	.1994025	.2093937	.1917333	1.007480	.4041466	.1965103

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3265469**	**3.396364**	**.2091421**	**2.115816**	**.4956657**	**.0711090**
Stddev	.0016227	.003498	.0016437	.076947	.0009906	.0012104
%RSD	.4969253	.1029820	.7859064	3.636731	.1998497	1.702146
#1	.3282520	3.400201	.2098752	2.173908	.4955033	.0724925
#2	.3263671	3.395537	.2102917	2.144992	.4947664	.0705887
#3	.3250216	3.393353	.2072595	2.028548	.4967275	.0702457

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.829417**	**.2969959**	**.2039799**	**8.476437**	**5.695601**	**.2862838**
Stddev	.023513	.0112440	.0001323	.048501	.011804	.0006783
%RSD	.8310342	3.785915	.0648596	.5721912	.2072562	.2369381
#1	2.842697	.3058135	.2038522	8.466109	5.691351	.2864364
#2	2.843286	.3008403	.2041164	8.529271	5.686510	.2868728
#3	2.802268	.2843339	.2039712	8.433932	5.708942	.2855422

Sample Name: PB168808BS Acquired: 7/14/2025 17:34:32 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4102250	F .0019906	.9787877	.6892090	.1973644	.2043559
Stddev	.0005711	.0032376	.0018851	.0027887	.0028916	.0037211
%RSD	.1392105	162.6422	.1925982	.4046264	1.465129	1.820891
#1	.4104888	.0050668	.9809453	.6888346	.1980632	.2019416
#2	.4106165	.0022923	.9779587	.6866263	.1998426	.2024849
#3	.4095697	-.001387	.9774592	.6921659	.1941874	.2086412

Elem	Sr4077
Units	ppm
Avg	.2029829
Stddev	.0015585
%RSD	.7677898
#1	.2045381
#2	.2029896
#3	.2014212

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3503.877	36011.71	2458.629	2202.954	5109.399
Stddev	12.284	128.41	14.224	7.427	13.151
%RSD	.3505912	.3565868	.5785434	.3371231	.2573868
#1	3489.761	35980.00	2445.588	2194.749	5094.990
#2	3509.732	35902.12	2456.503	2204.899	5112.450
#3	3512.139	36153.01	2473.797	2209.215	5120.756

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2557-02DUP Acquired: 7/14/2025 17:38:53 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.007773**	**.0079205**	**.0184021**	**-.008880**	**.0045342**	**8.860867**
Stddev	.000886	.0023390	.0010812	.005172	.0014843	.043609
%RSD	11.39676	29.53090	5.875275	58.24991	32.73541	.4921494
#1	-.008517	.0062667	.0192823	-.010697	.0054939	8.906115
#2	-.008009	.0105966	.0187288	-.003044	.0028246	8.857378
#3	-.006793	.0068982	.0171953	-.012898	.0052841	8.819107

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1303448**	**.0004698**	**.0002531**	**40.19271**	**.0110283**	**.0321271**
Stddev	.0019795	.0001698	.0001402	.15723	.0019861	.0005319
%RSD	1.518672	36.13816	55.39326	.3911798	18.00902	1.655480
#1	.1314133	.0006549	.0001253	40.37186	.0099758	.0315243
#2	.1315604	.0003213	.0002310	40.07769	.0097900	.0325301
#3	.1280606	.0004332	.0004030	40.12857	.0133191	.0323270

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0329526**	**21.50709**	**2.248419**	**14.91840**	**.0086296**	**-.002676**
Stddev	.0042512	2.08119	.013683	.15235	.0001839	.001360
%RSD	12.90091	9.676759	.6085478	1.021238	2.131094	50.81460
#1	.0357520	22.77240	2.264139	15.06251	.0084188	-.003990
#2	.0350450	22.64378	2.239187	14.93372	.0087569	-.001275
#3	.0280607	19.10508	2.241932	14.75897	.0087132	-.002762

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**173.3733**	**.0103086**	**.1998669**	**^ *****	**.3054339**	**1.077396**
Stddev	9.8863	.0067754	.0044113	-----	.0039300	.097961
%RSD	5.702317	65.72601	2.207132	-----	1.286702	9.092359
#1	184.5540	.0025914	.2001917	^ -----	.3094926	1.131902
#2	169.7789	.0152809	.1953022	8.069097	.3051625	1.135980
#3	165.7871	.0130533	.2041069	7.563847	.3016466	.964305

Sample Name: Q2557-02DUP Acquired: 7/14/2025 17:38:53 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.005914**	F **49.34473**	F **31.10716**	**-.000201**	**.2509003**	**-.027688**
Stddev	.000359	.06869	2.55213	.000587	.0041551	.002331
%RSD	6.064711	.1391964	8.204326	292.3275	1.656061	8.419415
#1	-.005769	49.28248	32.88059	.000090	.2541203	-.025863
#2	-.005651	49.33329	32.25873	-.000877	.2462100	-.026886
#3	-.006323	49.41842	28.18217	.000184	.2523706	-.030314

Elem	Sr4077
Units	ppm
Avg	**.1970498**
Stddev	.0009142
%RSD	.4639536
#1	.1981036
#2	.1965769
#3	.1964689

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3438.507**	**32724.67**	**2305.165**	**2085.898**	**4648.863**
Stddev	7.620	2067.94	98.601	114.473	10.078
%RSD	.2215960	6.319199	4.277387	5.487939	.2167926
#1	3438.409	33578.87	2234.327	2142.344	4657.760
#2	3430.936	34228.66	2263.391	2161.185	4637.918
#3	3446.175	30366.48	2417.776	1954.164	4650.912

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2557-02LX5 Acquired: 7/14/2025 17:43:23 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002743**	**.0023180**	**.0025462**	**-.003096**	**-.000453**	**1.711011**	**.0247684**
Stddev	.002888	.0022092	.0013549	.006547	.001228	.019505	.0001938
%RSD	105.3010	95.30821	53.21306	211.4755	271.1780	1.139970	.7822778
#1	-.002567	.0047182	.0024915	-.000940	.000965	1.711068	.0247990
#2	-.005714	.0018662	.0012194	-.010448	-.001181	1.691477	.0245612
#3	.000053	.0003696	.0039276	.002101	-.001143	1.730487	.0249451

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000567**	**.0000078**	**7.947319**	**.0013478**	**.0082244**	**.0070271**	**4.297175**
Stddev	.0001829	.0000274	.030250	.0001677	.0001872	.0004755	.024353
%RSD	322.4809	353.0475	.3806255	12.44255	2.276120	6.766409	.5667235
#1	.0000727	-.000024	7.971588	.0014325	.0084311	.0065043	4.269947
#2	-.000134	.000023	7.956941	.0014563	.0080662	.0074337	4.304703
#3	.000231	.000024	7.913429	.0011547	.0081759	.0071433	4.316876

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4432679**	**3.009747**	**.0018421**	**-.001004**	**34.18537**	**-.001141**	**.0412715**
Stddev	.0017569	.107196	.0003819	.000262	.26530	.009785	.0005008
%RSD	.3963583	3.561643	20.73517	26.14280	.7760592	857.4551	1.213453
#1	.4421972	3.121349	.0021519	-.000834	33.89143	.009659	.0417322
#2	.4452955	2.907579	.0014153	-.000872	34.25763	-.009416	.0407384
#3	.4423109	3.000313	.0019590	-.001306	34.40706	-.003667	.0413439

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.259932**	**.0552183**	**.2126583**	**-.001679**	**9.256517**	**6.282385**	**-.001956**
Stddev	.009736	.0018657	.0025571	.000147	.011197	.051314	.000842
%RSD	.7727508	3.378726	1.202426	8.745685	.1209681	.8167844	43.05714
#1	1.248967	.0572256	.2103428	-.001746	9.247165	6.229750	-.002173
#2	1.267563	.0548920	.2122294	-.001510	9.253460	6.285139	-.001027
#3	1.263266	.0535373	.2154026	-.001780	9.268925	6.332266	-.002669

Sample Name: Q2557-02LX5 Acquired: 7/14/2025 17:43:23 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0462455	-.014540	.0391777
Stddev	.0038560	.005996	.0001427
%RSD	8.338108	41.24134	.3641217
#1	.0442937	-.015922	.0390979
#2	.0437557	-.007973	.0390929
#3	.0506872	-.019725	.0393424

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3525.426	35606.18	2388.966	2208.034	5023.513
Stddev	6.645	47.22	16.421	3.212	6.947
%RSD	.1884991	.1326224	.6873709	.1454570	.1382856
#1	3531.304	35600.87	2407.915	2209.986	5029.593
#2	3526.760	35561.84	2380.073	2204.327	5025.003
#3	3518.215	35655.84	2378.909	2209.789	5015.942

Sample Name: Q2557-02MS Acquired: 7/14/2025 17:47:46 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4948802**	**1.249918**	**.6375892**	**1.213551**	**.8369906**	**10.30582**
Stddev	.0022132	.010624	.0026755	.016087	.0046442	.03193
%RSD	.4472107	.8499715	.4196327	1.325624	.5548734	.3098602
#1	.4923536	1.250308	.6393614	1.221776	.8352473	10.29259
#2	.4958116	1.239105	.6345116	1.195014	.8334703	10.34224
#3	.4964754	1.260342	.6388948	1.223863	.8422542	10.28263

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2503434**	**.1377140**	**.1308381**	**40.44528**	**.2677847**	**.1609801**
Stddev	.0017422	.0058967	.0003824	.10523	.0022879	.0003809
%RSD	.6959411	4.281817	.2922685	.2601843	.8543932	.2366347
#1	.2520983	.1368372	.1309464	40.53076	.2661584	.1613665
#2	.2486141	.1323049	.1304132	40.32775	.2704009	.1606048
#3	.2503176	.1440000	.1311546	40.47733	.2667947	.1609689

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2465053**	**24.62386**	**2.341456**	**15.93517**	**.3353730**	**.0400322**
Stddev	.0105514	1.03250	.007326	.05939	.0013364	.0006181
%RSD	4.280400	4.193068	.3128928	.3727121	.3984828	1.543905
#1	.2447366	24.49239	2.348542	15.97541	.3357938	.0407432
#2	.2369500	23.66340	2.333911	15.86696	.3338768	.0397302
#3	.2578293	25.71579	2.341915	15.96315	.3364484	.0396232

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**191.1419**	**.2046097**	**.3304538**	**15.42739**	**4.222356**	**1.288524**
Stddev	20.5662	.0056016	.0009645	1.11005	.028012	.052647
%RSD	10.75964	2.737688	.2918813	7.195300	.6634304	4.085845
#1	174.7254	.2102586	.3303185	16.24967	4.234066	1.283079
#2	184.4894	.1990567	.3295641	14.16473	4.190389	1.238810
#3	214.2109	.2045137	.3314788	15.86778	4.242613	1.343681

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2557-02MS Acquired: 7/14/2025 17:47:46 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4393044	F 48.56506	F 27.60214	.7423401	.4303518	.0965325
Stddev	.0006626	.30265	1.09736	.0038193	.0051921	.0071076
%RSD	.1508248	.6231924	3.975646	.5144888	1.206474	7.362888
#1	.4385976	48.70755	27.42209	.7422825	.4342445	.0951957
#2	.4394042	48.21746	26.60594	.7385500	.4244566	.1042136
#3	.4399114	48.77016	28.77840	.7461878	.4323541	.0901882

Elem	Sr4077
Units	ppm
Avg	.3207812
Stddev	.0014466
%RSD	.4509571
#1	.3201005
#2	.3198006
#3	.3224426

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3441.061	34637.87	2287.906	2147.245	4647.429
Stddev	23.695	116.54	90.631	15.660	38.713
%RSD	.6886009	.3364646	3.961301	.7292966	.8329896
#1	3447.059	34522.99	2287.700	2131.499	4651.976
#2	3461.181	34634.62	2378.640	2162.817	4683.667
#3	3414.943	34756.01	2197.379	2147.420	4606.643

Sample Name: Q2557-02MSD Acquired: 7/14/2025 17:52:14 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6939899**	**1.745676**	**.8844694**	**1.693331**	**.8271667**	**11.18605**
Stddev	.0095554	.010163	.0102885	.028542	.0084359	.07534
%RSD	1.376875	.5821538	1.163242	1.685582	1.019850	.6734986
#1	.7050226	1.756875	.8963440	1.723739	.8367868	11.23899
#2	.6883535	1.743112	.8782173	1.689133	.8210320	11.21935
#3	.6885935	1.737042	.8788469	1.667119	.8236814	11.09980

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3052534**	**.1956018**	**.1819677**	**40.81451**	**.3757299**	**.2127018**
Stddev	.0011753	.0051150	.0019315	.26257	.0040119	.0008902
%RSD	.3850169	2.614982	1.061454	.6433219	1.067764	.4185216
#1	.3050255	.1918537	.1841959	40.84889	.3728300	.2133724
#2	.3065259	.1935228	.1809381	41.05819	.3740512	.2116918
#3	.3042087	.2014289	.1807692	40.53644	.3803085	.2130411

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3376599**	**26.26522**	**2.416175**	**16.68051**	**.4635124**	**.0508802**
Stddev	.0096390	.57354	.009492	.05733	.0021421	.0007363
%RSD	2.854647	2.183652	.3928684	.3436872	.4621503	1.447110
#1	.3310642	25.83365	2.417837	16.74506	.4659773	.0505651
#2	.3331935	26.04596	2.424726	16.66091	.4621013	.0503540
#3	.3487219	26.91604	2.405961	16.63554	.4624586	.0517216

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**186.7455**	**.2816467**	**.3669430**	**22.28616**	**5.778473**	**1.403318**
Stddev	18.0534	.0119355	.0065790	3.93998	.092855	.040478
%RSD	9.667396	4.237737	1.792917	17.67903	1.606906	2.884439
#1	169.8982	.2721321	.3628026	18.02420	5.885179	1.374707
#2	184.5364	.2950388	.3634973	25.79563	5.734190	1.385614
#3	205.8018	.2777693	.3745292	23.03866	5.716049	1.449631

Sample Name: Q2557-02MSD Acquired: 7/14/2025 17:52:14 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4372886	F 48.90917	F 29.18643	.7272908	.4391663	.1449843
Stddev	.0011277	.90277	1.24615	.0073926	.0058408	.0081038
%RSD	.2578759	1.845808	4.269628	1.016450	1.329978	5.589420
#1	.4381819	49.94836	28.34430	.7358256	.4350500	.1505007
#2	.4360215	48.46063	28.59705	.7228898	.4458512	.1487721
#3	.4376624	48.31851	30.61794	.7231569	.4365976	.1356803

Elem	Sr4077
Units	ppm
Avg	.3753421
Stddev	.0017758
%RSD	.4731119
#1	.3748039
#2	.3773248
#3	.3738977

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3417.988	33288.90	2197.758	2093.652	4615.907
Stddev	40.911	1933.67	153.141	77.304	64.526
%RSD	1.196919	5.808768	6.968072	3.692323	1.397908
#1	3370.842	34434.06	2296.354	2138.525	4541.690
#2	3444.123	34376.30	2275.587	2138.041	4658.716
#3	3439.001	31056.33	2021.332	2004.389	4647.314

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2480-02DLX5 Acquired: 7/14/2025 17:56:40 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0162744**	**-.002789**	**.0807088**	**.0093926**	**.0007998**	**23.74157**	**.1915671**
Stddev	.0029560	.000752	.0018759	.0049672	.0006890	.03310	.0020158
%RSD	18.16372	26.94891	2.324320	52.88369	86.14607	.1393988	1.052289
#1	.0180907	-.003577	.0789428	.0051899	.0001520	23.77967	.1938903
#2	.0178690	-.002080	.0805056	.0081138	.0015237	23.71997	.1905312
#3	.0128635	-.002710	.0826781	.0148741	.0007238	23.72507	.1902799

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017221**	**-.000375**	**4.363914**	**.0219400**	**.0216670**	**.0449615**	**52.56554**
Stddev	.0002581	.000065	.028855	.0006451	.0001326	.0007002	.55031
%RSD	14.98575	17.39984	.6612128	2.940139	.6119496	1.557382	1.046902
#1	.0015746	-.000351	4.394737	.0219296	.0217190	.0444853	52.68241
#2	.0015717	-.000449	4.359460	.0213001	.0215163	.0457655	53.04804
#3	.0020201	-.000326	4.337545	.0225901	.0217658	.0446336	51.96619

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9538934**	**5.183555**	**.0308880**	**-.004857**	**.6247820**	**.0582870**	**.1538012**
Stddev	.0060614	.009116	.0001308	.001274	.0100186	.0065840	.0008383
%RSD	.6354374	.1758630	.4233408	26.22940	1.603534	11.29576	.5450809
#1	.9516642	5.189155	.0310235	-.005942	.6196516	.0585081	.1543481
#2	.9607538	5.188473	.0308781	-.003454	.6363267	.0515952	.1528360
#3	.9492624	5.173036	.0307625	-.005176	.6183677	.0647576	.1542196

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.107831**	**.8069343**	**.0109277**	**-.000359**	**.2665273**	**2.349786**	**.0290383**
Stddev	.022731	.0072425	.0006544	.000350	.0102008	.090970	.0006632
%RSD	2.051868	.8975383	5.988689	97.47642	3.827293	3.871419	2.283710
#1	1.125341	.8130976	.0108115	-.000697	.2764369	2.263759	.0289987
#2	1.116010	.8087480	.0116324	.000003	.2670868	2.445002	.0297204
#3	1.082142	.7989573	.0103391	-.000384	.2560584	2.340598	.0283959

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2480-02DLX5 Acquired: 7/14/2025 17:56:40 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6239110	.0218357	.0316977
Stddev	.0057291	.0031295	.0001416
%RSD	.9182493	14.33192	.4467684
#1	.6258815	.0251919	.0316728
#2	.6283947	.0189976	.0315701
#3	.6174567	.0213177	.0318500

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3662.017	36984.35	2496.815	2281.090	5074.146
Stddev	2.032	276.64	12.891	14.757	1.397
%RSD	.0554793	.7479850	.5162864	.6469157	.0275330
#1	3659.678	36918.93	2489.412	2276.480	5074.156
#2	3663.346	37287.83	2489.333	2297.601	5075.537
#3	3663.026	36746.29	2511.700	2269.189	5072.743

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCV03 Acquired: 7/14/2025 18:01:02 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.010731**	**5.170745**	**5.036742**	**5.065329**	**5.062967**	**10.06551**	**10.09478**
Stddev	.002681	.009494	.002135	.006212	.009710	.07040	.01625
%RSD	.0534982	.1836016	.0423927	.1226310	.1917939	.6993751	.1610084
#1	5.010893	5.175022	5.038702	5.059448	5.059975	10.10213	10.08645
#2	5.013328	5.159866	5.037058	5.064712	5.055105	10.11004	10.08438
#3	5.007974	5.177349	5.034467	5.071826	5.073822	9.98435	10.11351

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2584262**	**2.531363**	**25.17476**	**1.016648**	**2.522566**	**1.287514**	**5.197185**
Stddev	.0018428	.001529	.08664	.004729	.001408	.008173	.026778
%RSD	.7130912	.0604182	.3441403	.4651573	.0558028	.6347872	.5152359
#1	.2597315	2.531678	25.20476	1.014198	2.523976	1.290751	5.212753
#2	.2592291	2.529700	25.24240	1.013647	2.522563	1.293573	5.212537
#3	.2563182	2.532710	25.07711	1.022099	2.521160	1.278218	5.166265

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.512996**	**25.14575**	**2.526012**	**1.259937**	**25.52436**	**2.510815**	**2.511242**
Stddev	.005829	.03696	.001475	.002864	.17945	.010464	.005490
%RSD	.2319711	.1470027	.0583798	.2272795	.7030656	.4167448	.2186179
#1	2.506414	25.17903	2.527713	1.256694	25.70523	2.508506	2.513776
#2	2.517509	25.10597	2.525096	1.260997	25.52148	2.522241	2.504943
#3	2.515064	25.15225	2.525227	1.262119	25.34636	2.501700	2.515007

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.44342**	**5.191942**	**5.154752**	**5.086222**	**5.046309**	**5.181954**	**5.073685**
Stddev	.14708	.004477	.033116	.002986	.009265	.034223	.002802
%RSD	.5780794	.0862298	.6424444	.0587068	.1835947	.6604274	.0552201
#1	25.43617	5.191492	5.172303	5.087638	5.045335	5.195974	5.072133
#2	25.59399	5.187707	5.175398	5.082792	5.037570	5.206941	5.072002
#3	25.30009	5.196627	5.116554	5.088237	5.056022	5.142947	5.076919

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCV03 Acquired: 7/14/2025 18:01:02 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.047101**	**5.097976**	**5.086297**
Stddev	.013394	.018193	.004648
%RSD	.2653747	.3568767	.0913878
#1	5.032680	5.102774	5.085852
#2	5.059151	5.113290	5.081887
#3	5.049472	5.077865	5.091151

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3427.126**	**34951.45**	**2412.348**	**2135.508**	**4655.698**
Stddev	.592	209.77	9.890	11.992	4.254
%RSD	.0172727	.6001892	.4099914	.5615351	.0913630
#1	3426.606	34975.00	2402.768	2133.455	4651.356
#2	3427.770	35148.46	2411.755	2148.394	4659.858
#3	3427.003	34730.89	2422.522	2124.676	4655.880

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCB03 Acquired: 7/14/2025 18:05:17 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001753**	**.0004973**	**-.001764**	**-.001711**	**-.001957**	**.0205079**	**.0000954**
Stddev	.003216	.0007531	.002619	.003260	.000764	.0242965	.0006899
%RSD	183.4930	151.4392	148.4712	190.5500	39.04710	118.4735	723.6079
#1	-.000694	-.000005	.001101	.001919	-.002593	.0289286	.0008915
#2	-.005365	.000134	-.004037	-.004387	-.002169	-.006879	-.000327
#3	.000801	.001363	-.002357	-.002664	-.001110	.039474	-.000279

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000066**	**-.000046**	**-.002836**	**.0004946**	**-.000284**	**.0007431**	**.0028816**
Stddev	.000099	.000037	.025454	.0004229	.000101	.0008317	.0019385
%RSD	150.4601	80.49408	897.4584	85.50673	35.56835	111.9265	67.27222
#1	-.000155	-.000070	-.008283	.0005938	-.000291	.0016435	.0009084
#2	-.000085	-.000003	.024901	.0008591	-.000382	.0005823	.0029529
#3	.000041	-.000064	-.025126	.0000309	-.000180	.0000035	.0047834

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000604**	**.0389671**	**.0004346**	**.0006382**	**-.013583**	**-.001752**	**-.000368**
Stddev	.001520	.0557558	.0002676	.0002936	.032615	.008641	.000286
%RSD	251.5252	143.0842	61.56892	45.99990	240.1098	493.3175	77.82669
#1	-.002322	.0570867	.0001426	.0007313	.007142	-.002559	-.000694
#2	-.000056	-.023595	.0004933	.0008739	-.051178	-.009961	-.000251
#3	.000565	.083409	.0006681	.0003094	.003286	.007265	-.000158

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0043274**	**-.000837**	**-.003979**	**.0000503**	**.0001959**	**.0080269**	**-.000170**
Stddev	.0017497	.001025	.002446	.0006866	.0018644	.0020527	.000906
%RSD	40.43417	122.4566	61.46448	1363.786	951.6951	25.57208	533.5505
#1	.0062783	-.001393	-.001352	.0000308	-.001618	.0057882	-.000584
#2	.0038069	-.001464	-.004396	.0007466	.002107	.0098204	.000869
#3	.0028970	.000346	-.006189	-.000626	.000098	.0084722	-.000795

Sample Name: CCB03 Acquired: 7/14/2025 18:05:17 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0040990	-.019015	.0003189
Stddev	.0026768	.009635	.0003862
%RSD	65.30406	50.67381	121.0870
#1	.0067151	-.019936	.0001544
#2	.0013654	-.008951	.0007601
#3	.0042164	-.028156	.0000422

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3558.599	36277.95	2386.573	2234.242	5296.556
Stddev	9.232	183.04	19.356	5.798	3.531
%RSD	.2594311	.5045361	.8110465	.2594952	.0666574
#1	3569.259	36089.08	2375.667	2233.350	5292.493
#2	3553.273	36290.24	2375.130	2228.942	5298.301
#3	3553.265	36454.53	2408.921	2240.434	5298.874

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2557-02A Acquired: 7/14/2025 18:09:47 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7757192**	**1.934512**	**.9841603**	**1.889425**	**.7934254**	**10.88724**
Stddev	.0077262	.005796	.0066939	.019318	.0067575	.03520
%RSD	.9960015	.2996168	.6801674	1.022431	.8516884	.3233392
#1	.7690111	1.929142	.9765647	1.868720	.7929134	10.86396
#2	.7841668	1.933736	.9867176	1.906966	.8004244	10.87002
#3	.7739796	1.940657	.9891986	1.892588	.7869385	10.92773

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3281260**	**.2099700**	**.2017129**	**40.33176**	**.4190792**	**.2311011**
Stddev	.0008777	.0095626	.0012305	.23535	.0057669	.0001995
%RSD	.2674927	4.554265	.6100081	.5835403	1.376090	.0863264
#1	.3271198	.2063320	.2003798	40.51254	.4179386	.2311975
#2	.3285239	.2208177	.2019538	40.06564	.4253311	.2308717
#3	.3287343	.2027603	.2028050	40.41710	.4139678	.2312341

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3550871**	**24.73217**	**2.393055**	**16.51692**	**.5118202**	**.0632358**
Stddev	.0163447	1.12213	.018987	.04797	.0008781	.0017952
%RSD	4.603010	4.537135	.7934314	.2904461	.1715597	2.838912
#1	.3482589	24.36133	2.410608	16.50861	.5119803	.0637878
#2	.3737387	25.99278	2.372902	16.47365	.5108730	.0646901
#3	.3432637	23.84240	2.395655	16.56851	.5126071	.0612294

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**174.6813**	**.3108570**	**.4279324**	**20.05162**	**6.416396**	**1.377104**
Stddev	13.5670	.0168168	.0069524	1.99710	.062590	.069879
%RSD	7.766690	5.409816	1.624638	9.959802	.9754712	5.074376
#1	174.9696	.3251263	.4255572	19.83919	6.347124	1.351684
#2	188.1017	.2923164	.4357610	22.14645	6.468881	1.456136
#3	160.9724	.3151284	.4224788	18.16923	6.433183	1.323494

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2557-02A Acquired: 7/14/2025 18:09:47 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4025675	F 48.47168	F 33.63564	.7338701	.4443804	.1615999
Stddev	.0008043	.44091	2.15340	.0064343	.0043632	.0112627
%RSD	.1997945	.9096262	6.402130	.8767657	.9818716	6.969499
#1	.4023971	48.02018	32.82782	.7265748	.4489375	.1626218
#2	.4034434	48.90118	36.07614	.7362996	.4402410	.1498611
#3	.4018621	48.49368	32.00297	.7387359	.4439627	.1723168

Elem	Sr4077
Units	ppm
Avg	.3921458
Stddev	.0017837
%RSD	.4548599
#1	.3932305
#2	.3900871
#3	.3931198

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3421.420	33652.95	2292.735	2142.239	4616.873
Stddev	24.526	1417.66	166.246	46.549	28.194
%RSD	.7168476	4.212594	7.250980	2.172911	.6106754
#1	3434.629	34370.04	2361.794	2174.945	4633.787
#2	3393.121	32020.00	2103.090	2088.947	4584.325
#3	3436.512	34568.80	2413.321	2162.827	4632.506

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: PB168806BL Acquired: 7/14/2025 18:15:17 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001754**	**-.002652**	**-.002107**	**.0013087**	**-.002003**	**.0053100**	**.0004527**
Stddev	.003738	.003040	.000528	.0015591	.001138	.0211301	.0013049
%RSD	213.1479	114.6148	25.06828	119.1365	56.81734	397.9306	288.2550
#1	-.001940	-.004399	-.001531	.0012976	-.000732	-.017777	-.000519
#2	.002074	-.004415	-.002568	-.000245	-.002349	.010018	-.000058
#3	-.005394	.000858	-.002222	.002873	-.002928	.023689	.001936

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000058**	**-.000091**	**-.008121**	**.0005332**	**-.000157**	**.0002163**	**.0022689**
Stddev	.000095	.000017	.023196	.0005282	.000332	.0003858	.0016707
%RSD	162.3846	18.63330	285.6131	99.05370	211.6338	178.3386	73.63309
#1	.000016	-.000102	-.001629	.0003063	.000227	.0006094	.0028380
#2	-.000027	-.000098	.011136	.0001564	-.000358	-.000162	.0003880
#3	-.000165	-.000071	-.033872	.0011370	-.000339	.000201	.0035807

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006409**	**.0098730**	**.0004984**	**.0012236**	**-.006233**	**.0003905**	**-.000124**
Stddev	.0004323	.0538379	.0002492	.0007148	.007004	.0049157	.000519
%RSD	67.45272	545.3071	50.00388	58.41532	112.3616	1258.823	418.0886
#1	.0003014	.0021745	.0005980	.0004758	-.006733	-.001422	-.000518
#2	.0011275	.0671457	.0002148	.0019000	.001007	.005955	.000464
#3	.0004937	-.039701	.0006824	.0012949	-.012974	-.003362	-.000318

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024451**	**.0004231**	**-.016012**	**.0001057**	**.0092627**	**.0094707**	**-.001220**
Stddev	.0012654	.0009451	.002410	.0002783	.0020706	.0025627	.000802
%RSD	51.75354	223.3809	15.05006	263.4121	22.35462	27.05964	65.68428
#1	.0038321	.0006614	-.013440	.0003879	.0091307	.0077686	-.001323
#2	.0021495	-.000618	-.016378	-.000169	.0113962	.0124181	-.000373
#3	.0013536	.001226	-.018217	.000098	.0072612	.0082253	-.001966

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: PB168806BL Acquired: 7/14/2025 18:15:17 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.001439**	**-.012504**	**.0004095**
Stddev	.002149	.001424	.0003740
%RSD	149.3417	11.38729	91.33229
#1	-.003323	-.013439	.0002364
#2	-.001897	-.013208	.0001534
#3	.000902	-.010865	.0008388

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3521.965**	**35990.97**	**2419.980**	**2191.568**	**5265.508**
Stddev	6.014	85.30	5.276	5.610	13.680
%RSD	.1707529	.2369915	.2180371	.2559610	.2598084
#1	3524.357	35922.23	2426.021	2186.951	5274.116
#2	3526.414	36086.43	2416.276	2197.811	5272.676
#3	3515.123	35964.26	2417.642	2189.942	5249.734

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2556-01 Acquired: 7/14/2025 18:24:06 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0518921**	**-.003936**	**.2621030**	**-.002591**	**.0351503**	**133.0440**
Stddev	.0070780	.000935	.0019769	.002220	.0019419	.4337
%RSD	13.63977	23.74693	.7542425	85.67437	5.524547	.3259875
#1	.0525324	-.005014	.2612395	-.003674	.0330276	132.5732
#2	.0586282	-.003443	.2643647	-.000038	.0368373	133.4272
#3	.0445158	-.003351	.2607047	-.004063	.0355862	133.1318

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7253667**	**.0078338**	**.0021478**	**1221.243**	**.7442906**	**.1621652**
Stddev	.0015951	.0001342	.0000590	3.300	.0023809	.0011096
%RSD	.2199041	1.712440	2.746488	.2702562	.3198888	.6842537
#1	.7238330	.0079318	.0021483	1217.749	.7419016	.1634378
#2	.7252503	.0078888	.0022065	1224.307	.7466633	.1616573
#3	.7270168	.0076809	.0020886	1221.674	.7443068	.1614003

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3588428**	**203.5252**	**7.120635**	**335.6555**	**.2219473**	**-.035799**
Stddev	.0013968	.2042	.012553	1.5311	.0016025	.001627
%RSD	.3892461	.1003322	.1762961	.4561438	.7220416	4.543429
#1	.3580574	203.4541	7.106997	333.9726	.2237874	-.037341
#2	.3580155	203.7554	7.123200	336.0277	.2208576	-.034100
#3	.3604555	203.3661	7.131707	336.9662	.2211969	-.035957

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.66449**	**.5635037**	**1.946006**	**20.61608**	**5.521579**	**.1545029**
Stddev	.01885	.0098346	.010050	.32359	.014339	.0006622
%RSD	.1379629	1.745252	.5164655	1.569598	.2596971	.4285979
#1	13.64431	.5577024	1.955674	20.27124	5.538122	.1543572
#2	13.66750	.5748588	1.946732	20.91310	5.512713	.1552259
#3	13.68165	.5579500	1.935613	20.66388	5.513901	.1539257

Sample Name: Q2556-01 Acquired: 7/14/2025 18:24:06 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0199483	F 39.13881	11.48346	.0484040	6.800039	.1406596
Stddev	.0005247	.09532	.03185	.0017400	.023436	.0055139
%RSD	2.630501	.2435481	.2773650	3.594642	.3446456	3.920016
#1	.0200664	39.24888	11.48618	.0469583	6.773471	.1347700
#2	.0204039	39.08320	11.45034	.0479187	6.817779	.1456990
#3	.0193746	39.08436	11.51386	.0503351	6.808868	.1415099

Elem	Sr4077
Units	ppm
Avg	4.318305
Stddev	.013740
%RSD	.3181714
#1	4.302457
#2	4.325595
#3	4.326864

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3407.430	33278.94	2523.859	2104.719	3772.581
Stddev	4.193	138.50	7.145	10.985	7.838
%RSD	.1230652	.4161776	.2830951	.5219178	.2077579
#1	3405.595	33370.51	2532.108	2102.468	3764.934
#2	3412.228	33119.61	2519.875	2095.034	3780.597
#3	3404.466	33346.71	2519.594	2116.655	3772.213

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2557-01 Acquired: 7/14/2025 18:28:39 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0645440**	**.0016611**	**.5432984**	**.0495191**	**.0157554**	**2.185636**	**.0761647**
Stddev	.0023230	.0014900	.0039601	.0039428	.0033548	.021135	.0005963
%RSD	3.599072	89.70407	.7288958	7.962162	21.29292	.9670007	.7828524
#1	.0649239	.0007472	.5441670	.0457792	.0133556	2.194085	.0765043
#2	.0620544	.0008555	.5467521	.0491406	.0143219	2.161583	.0765136
#3	.0666536	.0033805	.5389761	.0536375	.0195889	2.201240	.0754762

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029471**	**.0463323**	**2.951989**	**.1147539**	**.0255318**	**1.097161**	**250.3762**
Stddev	.0002267	.0004469	.030685	.0011795	.0006639	.006148	.9799
%RSD	7.692138	.9645803	1.039478	1.027816	2.600268	.5603769	.3913637
#1	.0031810	.0463952	2.985926	.1141583	.0262736	1.094327	250.3284
#2	.0027284	.0467444	2.926200	.1139910	.0249934	1.092941	249.4211
#3	.0029318	.0458573	2.943842	.1161124	.0253284	1.104215	251.3791

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.266145**	**1.475998**	**.4038604**	**-.036552**	**24.31666**	**.0132186**	**.4488688**
Stddev	.012534	.004392	.0027200	.000645	.23695	.0015284	.0006950
%RSD	.5530761	.2975598	.6735117	1.765709	.9744276	11.56232	.1548406
#1	2.277725	1.478465	.4065371	-.036860	24.37436	.0121251	.4482718
#2	2.252838	1.478602	.4039451	-.035811	24.51942	.0125656	.4487028
#3	2.267872	1.470927	.4010990	-.036986	24.05619	.0149649	.4496318

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6347514**	**.3193470**	**.0634829**	**.0607756**	**1.788103**	**2.699110**	**.0647034**
Stddev	.0102145	.0051061	.0021168	.0002362	.029380	.026805	.0007431
%RSD	1.609219	1.598929	3.334364	.3886251	1.643105	.9930867	1.148518
#1	.6325917	.3185938	.0610467	.0610242	1.796168	2.694364	.0651433
#2	.6458730	.3247879	.0648718	.0607483	1.812608	2.674996	.0638453
#3	.6257893	.3146593	.0645303	.0605542	1.755532	2.727971	.0651214

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2557-01 Acquired: 7/14/2025 18:28:39 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1925937	-.024203	.0178098
Stddev	.0059484	.004346	.0005544
%RSD	3.088572	17.95659	3.112979
#1	.1861024	-.027141	.0184081
#2	.1938949	-.026256	.0177077
#3	.1977838	-.019210	.0173135

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3543.376	35905.04	2423.114	2220.539	4954.054
Stddev	58.398	90.50	9.762	4.204	85.178
%RSD	1.648098	.2520461	.4028550	.1893129	1.719361
#1	3515.990	36007.39	2432.609	2221.004	4912.073
#2	3503.705	35835.61	2423.627	2216.122	4898.014
#3	3610.435	35872.12	2413.106	2224.491	5052.073

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: PB168806BS Acquired: 7/14/2025 18:33:08 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7129478**	**2.016696**	**.9450650**	**1.953842**	**.7827982**	**2.004599**
Stddev	.0027335	.001412	.0005154	.005431	.0030483	.033065
%RSD	.3834060	.0699992	.0545334	.2779789	.3894151	1.649453
#1	.7100684	2.017863	.9451420	1.952589	.7860482	2.032151
#2	.7132677	2.017098	.9445154	1.959791	.7800026	2.013714
#3	.7155072	2.015127	.9455375	1.949147	.7823439	1.967933

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2002787**	**.2111764**	**.1899747**	**1.008128**	**.4037113**	**.1932920**
Stddev	.0012917	.0013208	.0001698	.028690	.0022445	.0003341
%RSD	.6449489	.6254537	.0893516	2.845854	.5559735	.1728286
#1	.2001427	.2117249	.1897849	.975493	.4032470	.1929209
#2	.1990604	.2121346	.1900271	1.029375	.4017352	.1935688
#3	.2016330	.2096697	.1901120	1.019517	.4061516	.1933864

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3282746**	**3.397895**	**.2042540**	**2.099197**	**.4869953**	**.0702531**
Stddev	.0008361	.031277	.0009736	.011364	.0007919	.0006050
%RSD	.2547029	.9204959	.4766403	.5413628	.1626053	.8611109
#1	.3291785	3.413214	.2031908	2.092872	.4873274	.0695554
#2	.3281164	3.418561	.2051018	2.112316	.4875670	.0705718
#3	.3275288	3.361911	.2044695	2.092402	.4860914	.0706321

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.052063**	**.2938527**	**.2049522**	**9.233601**	**5.644479**	**.2893445**
Stddev	.011245	.0023634	.0011041	.058970	.003462	.0037665
%RSD	.3684321	.8042781	.5387123	.6386429	.0613287	1.301739
#1	3.064800	.2945608	.2037692	9.257099	5.644234	.2926891
#2	3.043510	.2957811	.2051320	9.277200	5.648056	.2900800
#3	3.047879	.2912162	.2059554	9.166505	5.641146	.2852646

Sample Name: PB168806BS Acquired: 7/14/2025 18:33:08 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3939768	F .0020307	.9874470	.6722902	.1920251	.1930811
Stddev	.0008872	.0033318	.0119774	.0015607	.0019772	.0067956
%RSD	.2251871	164.0740	1.212971	.2321406	1.029644	3.519574
#1	.3934533	-.001811	1.000505	.6705494	.1898413	.1992288
#2	.3934761	.003778	.984864	.6735643	.1925403	.1857841
#3	.3950012	.004125	.976972	.6727569	.1936937	.1942304

Elem	Sr4077
Units	ppm
Avg	.2014022
Stddev	.0005998
%RSD	.2978145
#1	.2007101
#2	.2017257
#3	.2017707

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3627.733	36348.20	2437.757	2239.469	5256.958
Stddev	2.949	233.23	12.807	17.139	8.066
%RSD	.0812804	.6416571	.5253603	.7653241	.1534278
#1	3624.597	36602.98	2442.500	2258.786	5249.985
#2	3630.449	36296.36	2423.255	2226.082	5255.099
#3	3628.153	36145.24	2447.515	2233.539	5265.791

Sample Name: Q2559-01 Acquired: 7/14/2025 18:37:29 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0318475**	**.0020925**	**.0953048**	**-.025822**	**.0220426**	**167.2804**
Stddev	.0032051	.0053853	.0016699	.001777	.0047459	1.2294
%RSD	10.06395	257.3602	1.752173	6.881734	21.53074	.7349436
#1	.0329216	-.001691	.0956945	-.024766	.0222737	168.1318
#2	.0343776	-.000289	.0967454	-.027874	.0266687	167.8384
#3	.0282433	.008258	.0934745	-.024827	.0171853	165.8709

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8231568**	**.0065752**	**.0001022**	**2218.915**	**.4063662**	**.1014667**
Stddev	.0077959	.0007140	.0001152	154.408	.0111440	.0018515
%RSD	.9470711	10.85880	112.7453	6.958703	2.742354	1.824754
#1	.8299570	.0073889	.0001723	2181.754	.4157665	.1035690
#2	.8248648	.0060534	-.000031	2388.512	.4092763	.1007527
#3	.8146485	.0062833	.000165	2086.479	.3940559	.1000785

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4006529**	**123.7076**	**4.572969**	**82.80235**	**.1437404**	**-.016971**
Stddev	.0226750	4.6491	.053149	1.20192	.0025611	.001130
%RSD	5.659503	3.758164	1.162241	1.451554	1.781752	6.655550
#1	.4182343	127.2146	4.619073	83.86035	.1466957	-.018105
#2	.3750597	125.4742	4.584997	83.05122	.1421676	-.015846
#3	.4086647	118.4342	4.514837	81.49548	.1423580	-.016961

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	^ *****	**.2293347**	**1.803471**	**24.30937**	**9.853262**	**.3897910**
Stddev	-----	.0075716	.058686	1.13395	.282746	.0172457
%RSD	-----	3.301564	3.254052	4.664661	2.869572	4.424331
#1	6.096491	.2242812	1.812820	25.21728	10.17165	.4091536
#2	^ -----	.2380402	1.856921	24.67250	9.75664	.3760812
#3	5.682107	.2256827	1.740672	23.03834	9.63149	.3841383

Sample Name: Q2559-01 Acquired: 7/14/2025 18:37:29 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0165356	F 100.8276	6.007885	.0404426	7.402775	.1352411
Stddev	.0001477	3.4530	.395229	.0008352	.075103	.0061838
%RSD	.8933220	3.424683	6.578502	2.065087	1.014522	4.572423
#1	.0164736	104.7450	6.355741	.0413990	7.460293	.1283989
#2	.0167042	99.5122	5.578119	.0398574	7.430224	.1368936
#3	.0164289	98.2256	6.089795	.0400713	7.317809	.1404307

Elem	Sr4077
Units	ppm
Avg	12.23040
Stddev	.21440
%RSD	1.753007
#1	12.38131
#2	12.32491
#3	11.98498

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3533.695	31451.54	2553.510	2051.534	3881.941
Stddev	90.599	2877.21	99.977	163.577	106.199
%RSD	2.563855	9.148059	3.915261	7.973406	2.735726
#1	3430.098	31367.90	2459.008	2085.914	3761.676
#2	3572.889	28617.07	2543.337	1873.500	3921.324
#3	3598.098	34369.66	2658.183	2195.189	3962.823

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2560-01 Acquired: 7/14/2025 18:42:17 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0760209**	**-.040274**	**.5768980**	**.0606279**	**.0309522**	**175.8015**	**.6980961**
Stddev	.0024588	.002125	.0029158	.0049416	.0038162	.9905	.0063781
%RSD	3.234343	5.277095	.5054260	8.150690	12.32939	.5634437	.9136391
#1	.0765454	-.041588	.5761734	.0652922	.0285058	175.2829	.6977452
#2	.0781750	-.037822	.5744129	.0554493	.0290013	176.9437	.7046424
#3	.0733421	-.041413	.5801078	.0611422	.0353495	175.1779	.6919007

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0102031**	**.0054744**	**27.40867**	**.2792607**	**.2255029**	**.4529315**	**339.3178**
Stddev	.0002397	.0001766	.13181	.0013380	.0010436	.0089699	4.6094
%RSD	2.349160	3.224939	.4809127	.4791030	.4628051	1.980401	1.358427
#1	.0104502	.0052932	27.40713	.2801744	.2248190	.4632524	344.4109
#2	.0099716	.0054842	27.54124	.2798828	.2249856	.4485243	338.1097
#3	.0101874	.0056459	27.27763	.2777250	.2267041	.4470178	335.4327

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.461178**	**56.47011**	**.3074682**	**-.062347**	**3.440161**	**.7926219**	**1.348525**
Stddev	.065637	.33712	.0013924	.000889	.074873	.0167307	.006115
%RSD	1.015861	.5969815	.4528538	1.426196	2.176449	2.110800	.4534830
#1	6.477659	56.53231	.3077774	-.063369	3.523413	.7880707	1.355493
#2	6.517004	56.77180	.3059472	-.061754	3.378341	.8111572	1.346034
#3	6.388872	56.10623	.3086799	-.061918	3.418728	.7786377	1.344049

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.543533**	**6.615958**	**.0626212**	**-.002353**	**1.303655**	**3.104455**	**.0236128**
Stddev	.150830	.017684	.0020354	.000423	.003967	.066545	.0007562
%RSD	2.720834	.2672959	3.250272	17.98635	.3043197	2.143533	3.202552
#1	5.716729	6.604913	.0625882	-.002503	1.299174	3.180683	.0228762
#2	5.441057	6.606606	.0646728	-.002681	1.306722	3.057958	.0235749
#3	5.472813	6.636354	.0606025	-.001875	1.305069	3.074724	.0243872

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2560-01 Acquired: 7/14/2025 18:42:17 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**9.342491**	**.1185702**	**.1381919**
Stddev	.081597	.0036269	.0014521
%RSD	.8733999	3.058818	1.050770
#1	9.341853	.1184163	.1377818
#2	9.424405	.1222716	.1398050
#3	9.261214	.1150228	.1369890

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4519.144**	**44253.41**	**3150.966**	**2780.995**	**4956.607**
Stddev	5.266	100.38	41.070	7.783	6.779
%RSD	.1165251	.2268368	1.303400	.2798677	.1367729
#1	4518.425	44339.03	3106.154	2789.551	4959.315
#2	4514.274	44278.26	3186.812	2779.099	4948.892
#3	4524.732	44142.93	3159.932	2774.335	4961.613

Sample Name: Q2564-01 Acquired: 7/14/2025 18:46:41 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4816489**	**-.019911**	**2.366196**	**.0464004**	**.0268910**	**132.6738**	**.6272873**
Stddev	.0067436	.001896	.030225	.0139504	.0027803	.9037	.0034601
%RSD	1.400114	9.521943	1.277347	30.06520	10.33929	.6811162	.5515958
#1	.4794438	-.022009	2.362652	.0375024	.0294676	133.0541	.6237305
#2	.4762838	-.019404	2.337900	.0392204	.0272613	133.3251	.6274894
#3	.4892190	-.018320	2.398037	.0624783	.0239441	131.6421	.6306419

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0097025**	**.0041301**	**51.74271**	**.2853100**	**.1322471**	**.6319743**	**296.5995**
Stddev	.0012570	.0012032	.29020	.0094332	.0024755	.0681591	33.6699
%RSD	12.95592	29.13319	.5608494	3.306311	1.871889	10.78511	11.35199
#1	.0089167	.0050674	51.62824	.2899539	.1336274	.6016367	275.8320
#2	.0090384	.0045497	52.07268	.2915211	.1293891	.5842512	278.5193
#3	.0111523	.0027733	51.52720	.2744551	.1337247	.7100350	335.4473

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.435170**	**44.63147**	**.2652296**	**-.050013**	**4.703585**	**.5578336**	**2.352788**
Stddev	.013711	.19289	.0044766	.000249	.679789	.0062820	.008992
%RSD	.5630476	.4321833	1.687828	.4981822	14.45257	1.126135	.3822014
#1	2.419434	44.47254	.2673186	-.049796	4.121811	.5506012	2.358974
#2	2.441522	44.84607	.2600903	-.050285	4.538109	.5619320	2.356917
#3	2.444553	44.57580	.2682798	-.049957	5.450835	.5609675	2.342472

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.48147**	**12.57199**	**.1182097**	**.0004868**	**3.949542**	**5.495720**	**.0387286**
Stddev	1.24817	.13148	.0137429	.0004026	.032142	.633426	.0007254
%RSD	11.90837	1.045801	11.62588	82.69241	.8138285	11.52581	1.873171
#1	9.49816	12.58392	.1085091	.0000411	3.939055	5.138217	.0379217
#2	10.06055	12.43495	.1121838	.0008240	3.923952	5.121866	.0389369
#3	11.88568	12.69709	.1339362	.0005954	3.985618	6.227077	.0393270

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2564-01 Acquired: 7/14/2025 18:46:41 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.996101	.0545657	.2486105
Stddev	.010741	.0061144	.0011988
%RSD	.3584852	11.20556	.4822166
#1	2.987761	.0562002	.2474478
#2	3.008220	.0596968	.2498425
#3	2.992321	.0478002	.2485411

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4559.329	43457.13	2917.538	2804.005	5124.416
Stddev	20.026	829.55	335.205	7.044	34.471
%RSD	.4392238	1.908900	11.48931	.2512186	.6726902
#1	4546.388	44399.65	3124.915	2812.139	5109.880
#2	4582.395	43133.83	3096.883	2799.925	5163.774
#3	4549.204	42837.90	2530.815	2799.950	5099.593

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2564-03 Acquired: 7/14/2025 18:51:13 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1420547**	**-.013323**	**.3553998**	**.0489685**	**.0145558**	**95.93060**	**.6209218**
Stddev	.0051892	.000716	.0074399	.0163415	.0014793	.31462	.0032375
%RSD	3.652937	5.372362	2.093387	33.37142	10.16271	.3279660	.5214059
#1	.1430029	-.013632	.3479696	.0558893	.0159458	95.93140	.6237970
#2	.1467043	-.012504	.3553803	.0607108	.0130011	95.61558	.6174150
#3	.1364567	-.013832	.3628493	.0303055	.0147205	96.24482	.6215534

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0093062**	**.0045680**	**15.17449**	**.2282900**	**.0838433**	**.2334862**	**237.1376**
Stddev	.0011260	.0014848	.05325	.0110634	.0028534	.0260527	25.8390
%RSD	12.09943	32.50348	.3508872	4.846220	3.403200	11.15813	10.89622
#1	.0095337	.0039635	15.20227	.2343126	.0813322	.2326177	239.0355
#2	.0103010	.0034808	15.11310	.2155219	.0832515	.2599622	261.9753
#3	.0080838	.0062596	15.20810	.2350356	.0869462	.2078785	210.4019

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.369649**	**29.61827**	**.1718292**	**-.034806**	**1.452698**	**.3875509**	**.6929814**
Stddev	.008613	.22181	.0052173	.001442	.169805	.0015656	.0110484
%RSD	.2556155	.7489030	3.036309	4.141926	11.68892	.4039679	1.594323
#1	3.375666	29.81237	.1670520	-.036025	1.510708	.3881012	.6989836
#2	3.359782	29.37650	.1710392	-.033215	1.585896	.3887671	.6802311
#3	3.373499	29.66594	.1773964	-.035180	1.261490	.3857845	.6997295

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.54824**	**4.167017**	**.0975280**	**.0036395**	**1.890902**	**8.519788**	**.0158268**
Stddev	4.50342	.209480	.0137919	.0002029	.094797	.917829	.0005851
%RSD	19.97240	5.027098	14.14151	5.575441	5.013343	10.77290	3.696564
#1	20.26327	3.980501	.0955434	.0037892	1.814978	8.636374	.0154113
#2	19.64535	4.126893	.1122047	.0037208	1.860577	9.373754	.0155733
#3	27.73609	4.393657	.0848359	.0034086	1.997152	7.549237	.0164959

Sample Name: Q2564-03 Acquired: 7/14/2025 18:51:13 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.349789**	**.1427920**	**.1766885**
Stddev	.011956	.0125174	.0005013
%RSD	.5087950	8.766173	.2837363
#1	2.348928	.1290704	.1770964
#2	2.338287	.1457190	.1768404
#3	2.362151	.1535865	.1761288

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4285.966**	**43469.88**	**2695.081**	**2741.342**	**5142.496**
Stddev	139.049	646.68	296.949	41.491	188.033
%RSD	3.244286	1.487646	11.01818	1.513522	3.656447
#1	4353.479	42890.07	2653.655	2753.273	5259.102
#2	4378.369	44167.29	2421.021	2775.560	5242.808
#3	4126.050	43352.29	3010.568	2695.192	4925.579

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2564-05 Acquired: 7/14/2025 18:55:47 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1824110**	**-.007701**	**1.929300**	**.0312040**	**.0203346**	**100.3117**	**.4686410**
Stddev	.0068308	.001858	.027545	.0016881	.0023257	.2416	.0018933
%RSD	3.744710	24.12990	1.427718	5.409976	11.43730	.2408422	.4040036
#1	.1803614	-.008128	1.903139	.0328240	.0182192	100.2102	.4664788
#2	.1768397	-.009309	1.926715	.0313330	.0228251	100.1375	.4700022
#3	.1900319	-.005667	1.958046	.0294551	.0199595	100.5875	.4694419

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0093884**	**.0014619**	**52.33002**	**.1833703**	**.0699659**	**.4479918**	**244.5745**
Stddev	.0003670	.0002601	.29574	.0028050	.0001167	.0123404	4.9356
%RSD	3.908994	17.78931	.5651430	1.529700	.1667901	2.754596	2.018044
#1	.0092764	.0016830	52.06863	.1807551	.0699073	.4532982	240.3243
#2	.0097983	.0011754	52.27039	.1830231	.0698902	.4567914	249.9878
#3	.0090904	.0015271	52.65102	.1863328	.0701003	.4338858	243.4114

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.005380**	**25.09121**	**.1161294**	**-.042054**	**^ *****	**.3557737**	**1.264736**
Stddev	.010321	.28853	.0010398	.000818	-----	.0070637	.019276
%RSD	.5146736	1.149941	.8953909	1.946222	-----	1.985442	1.524134
#1	1.993650	24.81159	.1154649	-.041290	2.356554	.3592525	1.250615
#2	2.009421	25.07414	.1155955	-.042918	2.630597	.3476454	1.256896
#3	2.013069	25.38790	.1173277	-.041955	^ -----	.3604233	1.286697

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.95649**	**7.112711**	**.0682738**	**.0021044**	**5.262949**	**6.778548**	**.1640670**
Stddev	1.88435	.082335	.0030190	.0000475	.061099	.142630	.0022535
%RSD	17.19847	1.157573	4.421926	2.255112	1.160933	2.104138	1.373499
#1	9.83953	7.074490	.0653085	.0020870	5.239055	6.771200	.1619443
#2	13.13209	7.056432	.0681691	.0020682	5.217408	6.924710	.1638250
#3	9.89786	7.207209	.0713438	.0021582	5.332385	6.639734	.1664317

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2564-05 Acquired: 7/14/2025 18:55:47 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.106435	.0520488	.2237656
Stddev	.009383	.0050584	.0003074
%RSD	.8480286	9.718517	.1373685
#1	1.098587	.0572161	.2238748
#2	1.103890	.0518235	.2234185
#3	1.116827	.0471069	.2240035

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4198.421	40400.14	2933.648	2562.164	5033.129
Stddev	57.730	2004.17	59.860	101.551	69.099
%RSD	1.375044	4.960810	2.040478	3.963467	1.372890
#1	4148.491	42145.76	3002.228	2623.404	4982.849
#2	4261.635	40843.14	2906.834	2618.146	5111.922
#3	4185.137	38211.54	2891.883	2444.943	5004.617

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCV04 Acquired: 7/14/2025 19:00:19 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.516635**	**4.668046**	**4.558944**	**4.555433**	**4.578836**	**9.443832**	**9.615297**
Stddev	.019943	.015195	.020747	.021006	.010359	.038910	.007648
%RSD	.4415382	.3255108	.4550790	.4611242	.2262308	.4120151	.0795364
#1	4.535877	4.682863	4.576100	4.568461	4.584459	9.484051	9.622534
#2	4.496059	4.652499	4.535886	4.531200	4.566882	9.406378	9.616061
#3	4.517969	4.668775	4.564847	4.566637	4.585167	9.441066	9.607296

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2465032**	**2.287738**	**23.66080**	**.9655546**	**2.275271**	**1.236156**	**4.952970**
Stddev	.0026076	.008949	.04440	.0042446	.008714	.010734	.031025
%RSD	1.057837	.3911904	.1876333	.4396009	.3830070	.8683562	.6263899
#1	.2460302	2.295051	23.68751	.9619136	2.280709	1.235164	4.944751
#2	.2493149	2.277758	23.60955	.9645337	2.265220	1.247351	4.987277
#3	.2441645	2.290405	23.68534	.9702166	2.279885	1.225952	4.926882

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.388856**	**24.05337**	**2.279211**	**1.190135**	**25.26090**	**2.390958**	**2.390109**
Stddev	.007222	.07497	.008779	.008063	.30685	.016071	.014193
%RSD	.3023132	.3116896	.3851709	.6774456	1.214707	.6721460	.5938226
#1	2.393157	24.00546	2.286255	1.184572	25.45774	2.397819	2.389135
#2	2.380519	24.01489	2.269376	1.186451	25.41762	2.372596	2.376427
#3	2.392893	24.13977	2.282003	1.199381	24.90734	2.402460	2.404763

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.18725**	**4.694201**	**4.947127**	**4.609285**	**4.533123**	**4.986541**	**4.573081**
Stddev	.44216	.019634	.041342	.017307	.022081	.033372	.012298
%RSD	1.755501	.4182611	.8356818	.3754794	.4871117	.6692408	.2689237
#1	25.47844	4.696129	4.947783	4.623817	4.550889	4.987304	4.574675
#2	25.40486	4.673674	4.988137	4.590139	4.508401	5.019525	4.560064
#3	24.67846	4.712799	4.905460	4.613901	4.540077	4.952794	4.584504

Sample Name: CCV04 Acquired: 7/14/2025 19:00:19 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.790757**	**4.773744**	**4.846491**
Stddev	.006627	.004500	.012905
%RSD	.1383186	.0942669	.2662772
#1	4.793456	4.778916	4.861044
#2	4.783207	4.771588	4.836440
#3	4.795608	4.770728	4.841989

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3615.926**	**35116.72**	**2395.986**	**2163.044**	**4923.497**
Stddev	15.292	216.27	17.034	17.044	19.413
%RSD	.4228954	.6158615	.7109243	.7879456	.3942977
#1	3598.569	35191.88	2394.653	2165.159	4902.215
#2	3627.409	35285.38	2379.658	2178.932	4940.235
#3	3621.801	34872.90	2413.647	2145.042	4928.043

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCB04 Acquired: 7/14/2025 19:04:34 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000698**	**.0000337**	**-.001394**	**-.001444**	**-.002603**	**-.000378**
Stddev	.003605	.0007139	.002436	.002824	.002396	.018850
%RSD	516.3216	2116.996	174.7400	195.5846	92.05640	4989.443
#1	-.001058	.0006786	.000089	.000884	-.003392	.016102
#2	.003073	.0001559	-.004206	-.000631	-.004506	.003696
#3	-.004109	-.000733	-.000066	-.004585	.000088	-.020931

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000419**	**.0001965**	**-.000085**	**-.014325**	**.0004424**	**-.000262**
Stddev	.0005812	.0001052	.000044	.022343	.0006202	.000121
%RSD	1386.357	53.52477	51.87538	155.9761	140.1993	45.99469
#1	-.000383	.0003168	-.000076	-.002388	.0010261	-.000129
#2	-.000196	.0001503	-.000046	-.000485	.0005099	-.000292
#3	.000704	.0001222	-.000133	-.040101	-.000209	-.000365

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000405**	**.0003108**	**.0000303**	**.0481917**	**.0005276**	**.0005230**
Stddev	.000818	.0019330	.0018388	.0390166	.0000178	.0002613
%RSD	202.0976	621.9313	6064.346	80.96118	3.370311	49.96440
#1	.000145	.0010325	.0003425	.0729575	.0005477	.0006362
#2	-.000014	-.001879	.0016930	.0032161	.0005217	.0007086
#3	-.001345	.001779	-.001945	.0684015	.0005136	.0002242

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.025097**	**.0049947**	**-.000447**	**-.003031**	**-.000816**	**-.005460**
Stddev	.001994	.0029447	.000371	.000482	.001945	.000249
%RSD	7.945206	58.95650	83.04528	15.91357	238.2429	4.562066
#1	-.026004	.0030620	-.000867	-.003486	-.002379	-.005188
#2	-.026477	.0083838	-.000161	-.003082	-.001431	-.005677
#3	-.022811	.0035383	-.000314	-.002525	.001362	-.005514

Sample Name: CCB04 Acquired: 7/14/2025 19:04:34 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000034	-.002697	.0041967	-.000217	-.001121	F -.026279
Stddev	.000334	.002676	.0011942	.000717	.007056	.008895
%RSD	974.7431	99.21397	28.45556	331.0976	629.4945	33.84780
#1	.000279	-.000120	.0049309	-.000647	.004720	-.033830
#2	-.000386	-.005462	.0028187	-.000614	.000878	-.016474
#3	.000004	-.002508	.0048404	.000611	-.008960	-.028533

Elem	Sr4077
Units	ppm
Avg	.0001248
Stddev	.0001509
%RSD	120.9470
#1	.0000808
#2	.0002928
#3	.0000008

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3687.733	37477.59	2522.625	2279.757	5498.777
Stddev	13.203	84.64	19.277	11.122	20.325
%RSD	.3580292	.2258384	.7641445	.4878726	.3696195
#1	3675.596	37390.60	2500.809	2291.010	5479.982
#2	3701.792	37559.66	2537.358	2279.490	5520.346
#3	3685.811	37482.50	2529.709	2268.770	5496.001

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2571-01 Acquired: 7/14/2025 19:09:04 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0772413**	**-.010448**	**.2308663**	**.0370104**	**.0173135**	**87.46680**	**1.361595**
Stddev	.0051874	.000670	.0014990	.0023260	.0029610	.14918	.003590
%RSD	6.715878	6.411747	.6492864	6.284840	17.10222	.1705510	.2636462
#1	.0827725	-.010159	.2322603	.0396948	.0195495	87.31897	1.365700
#2	.0724847	-.011214	.2292807	.0355901	.0139554	87.46414	1.359044
#3	.0764666	-.009971	.2310577	.0357463	.0184354	87.61728	1.360041

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0121867**	**.0008873**	**26.80436**	**.1614725**	**.1447711**	**.5731084**	**244.5974**
Stddev	.0001726	.0001522	.04946	.0024202	.0002374	.0030701	2.0334
%RSD	1.416084	17.15694	.1845297	1.498841	.1639954	.5356859	.8313104
#1	.0120111	.0008534	26.75613	.1613122	.1450272	.5718858	244.7585
#2	.0123561	.0010536	26.80199	.1639689	.1445584	.5708380	242.4883
#3	.0121929	.0007548	26.85497	.1591364	.1447275	.5766014	246.5454

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.781344**	**44.59493**	**.2563845**	**-.044087**	**10.37839**	**.3273745**	**.4701588**
Stddev	.009033	.18043	.0006568	.001668	.06757	.0056803	.0061137
%RSD	.1562526	.4046074	.2561934	3.783067	.6510305	1.735102	1.300350
#1	5.780393	44.39641	.2566676	-.042316	10.32532	.3294887	.4660530
#2	5.790816	44.63939	.2556336	-.044318	10.35539	.3209403	.4771851
#3	5.772824	44.74897	.2568524	-.045628	10.45445	.3316944	.4672384

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**18.75511**	**5.716897**	**.0750680**	**-.003744**	**.4069727**	**7.228521**	**.0187032**
Stddev	.16797	.010748	.0044764	.000206	.0078925	.035200	.0002066
%RSD	.8955966	.1879962	5.963075	5.504248	1.939322	.4869660	1.104634
#1	18.84777	5.717535	.0778090	-.003621	.4031797	7.198500	.0189007
#2	18.56122	5.705845	.0699024	-.003982	.4160457	7.219800	.0184885
#3	18.85634	5.727311	.0774926	-.003630	.4016928	7.267262	.0187203

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2571-01 Acquired: 7/14/2025 19:09:04 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**3.472544**	**.1590420**	**.1836574**
Stddev	.004217	.0027244	.0003551
%RSD	.1214401	1.713007	.1933269
#1	3.467826	.1602110	.1840235
#2	3.475945	.1609867	.1836343
#3	3.473862	.1559281	.1833145

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4497.895**	**44069.89**	**3105.556**	**2763.889**	**4838.908**
Stddev	4.289	346.69	27.054	22.424	6.643
%RSD	.0953491	.7866810	.8711462	.8113210	.1372843
#1	4502.766	44414.97	3122.794	2785.886	4837.224
#2	4494.685	43721.61	3119.499	2741.061	4846.231
#3	4496.234	44073.08	3074.375	2764.721	4833.269

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2564-05DUP Acquired: 7/14/2025 19:13:38 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1949327**	**-.007331**	**2.119948**	**.0377366**	**.0239485**	**106.8323**	**.4892451**
Stddev	.0015917	.001834	.002650	.0072566	.0017098	.5228	.0002969
%RSD	.8165493	25.01678	.1249896	19.22959	7.139496	.4893767	.0606965
#1	.1937388	-.005215	2.121828	.0433902	.0254540	106.8520	.4895031
#2	.1967398	-.008312	2.116917	.0295539	.0220896	107.3450	.4889205
#3	.1943196	-.008465	2.121098	.0402657	.0243018	106.2999	.4893118

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0101175**	**.0018196**	**51.88956**	**.1941931**	**.0711513**	**.7934906**	**247.1457**
Stddev	.0001775	.0001972	.07781	.0012012	.0004415	.0109225	4.4475
%RSD	1.754453	10.83616	.1499552	.6185386	.6205115	1.376506	1.799530
#1	.0103214	.0016334	51.90017	.1953692	.0712779	.8051389	251.3632
#2	.0100336	.0017993	51.96153	.1942418	.0706603	.7918542	247.5746
#3	.0099976	.0020261	51.80699	.1929683	.0715157	.7834787	242.4993

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.051774**	**25.34084**	**.1169775**	**-.044444**	**2.632206**	**.3869713**	**1.326823**
Stddev	.005548	.04687	.0002252	.001306	.110025	.0032310	.008737
%RSD	.2703861	.1849543	.1925473	2.939188	4.179964	.8349508	.6585130
#1	2.058180	25.38957	.1167417	-.045642	2.725033	.3901558	1.328997
#2	2.048549	25.29609	.1170002	-.044639	2.660910	.3836957	1.334267
#3	2.048593	25.33685	.1171905	-.043051	2.510673	.3870624	1.317204

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.93561**	**7.523896**	**.0753654**	**.0013625**	**5.521534**	**12.59173**	**.1048208**
Stddev	.67947	.017487	.0035973	.0006504	.017181	.28013	.0020865
%RSD	5.692801	.2324150	4.773104	47.73373	.3111690	2.224704	1.990590
#1	11.17542	7.504112	.0794311	.0013334	5.505532	12.83902	.1028228
#2	12.48382	7.537283	.0740691	.0007272	5.519379	12.64865	.1046535
#3	12.14758	7.530293	.0725959	.0020269	5.539691	12.28751	.1069859

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2564-05DUP Acquired: 7/14/2025 19:13:38 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.200437	.0489955	.2186598
Stddev	.004127	.0049134	.0006999
%RSD	.3437851	10.02830	.3200615
#1	1.200585	.0446488	.2180457
#2	1.196238	.0543266	.2194218
#3	1.204488	.0480111	.2185120

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3986.231	40230.45	2823.100	2536.840	4796.186
Stddev	20.050	550.33	54.217	17.209	28.216
%RSD	.5029772	1.367937	1.920463	.6783489	.5883085
#1	4007.926	39718.35	2767.541	2520.263	4825.398
#2	3968.384	40160.65	2825.891	2535.639	4769.083
#3	3982.382	40812.35	2875.867	2554.617	4794.078

Sample Name: Q2564-05LX5 Acquired: 7/14/2025 19:18:10 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0346018**	**-.000817**	**.3666393**	**.0081751**	**.0029834**	**22.57542**	**.1039154**
Stddev	.0003122	.002738	.0028554	.0028722	.0013191	.22950	.0006264
%RSD	.9023996	335.2465	.7788121	35.13336	44.21238	1.016597	.6028217
#1	.0349620	.002283	.3672799	.0058537	.0044732	22.82570	.1044966
#2	.0344363	-.002904	.3691201	.0072846	.0025129	22.52569	.1039976
#3	.0344073	-.001829	.3635180	.0113871	.0019642	22.37486	.1032519

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0021747**	**-.000179**	**12.11040**	**.0385358**	**.0176052**	**.0565835**	**58.33189**
Stddev	.0001396	.000118	.14618	.0008862	.0000924	.0008383	.68632
%RSD	6.418899	66.13695	1.207101	2.299660	.5249854	1.481541	1.176585
#1	.0022408	-.000265	12.27703	.0392379	.0175719	.0574469	58.89748
#2	.0022690	-.000228	12.05043	.0375401	.0175340	.0565310	58.52986
#3	.0020144	-.000044	12.00372	.0388296	.0177096	.0557727	57.56834

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4636266**	**5.854730**	**.0237489**	**-.010817**	**.4830617**	**.0779482**	**.2799806**
Stddev	.0046252	.043021	.0002616	.000558	.0092016	.0053582	.0011153
%RSD	.9976226	.7348003	1.101621	5.155447	1.904851	6.874087	.3983636
#1	.4689434	5.900863	.0234509	-.010806	.4802033	.0838852	.2812656
#2	.4614061	5.815709	.0238548	-.010266	.4933532	.0764878	.2794132
#3	.4605303	5.847617	.0239410	-.011381	.4756285	.0734715	.2792630

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.795870**	**1.340385**	**.0041515**	**-.000531**	**1.004116**	**.7813665**	**.0392801**
Stddev	.021405	.007360	.0006221	.000337	.007031	.0095616	.0020528
%RSD	1.191883	.5490642	14.98614	63.54928	.7002220	1.223702	5.226109
#1	1.814589	1.346773	.0040690	-.000906	1.007565	.7896621	.0415158
#2	1.800489	1.342044	.0035747	-.000254	1.008757	.7835282	.0374802
#3	1.772533	1.332337	.0048107	-.000431	.996027	.7709091	.0388443

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2564-05LX5 Acquired: 7/14/2025 19:18:10 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2412008	-.014157	.0529494
Stddev	.0014797	.003772	.0005107
%RSD	.6134719	26.64276	.9645285
#1	.2422633	-.018326	.0535363
#2	.2418284	-.013163	.0527066
#3	.2395107	-.010981	.0526055

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3817.078	37979.09	2618.669	2339.800	5278.251
Stddev	29.864	141.53	25.280	8.783	33.153
%RSD	.7823915	.3726613	.9653808	.3753639	.6280991
#1	3801.419	37849.99	2593.818	2331.918	5255.223
#2	3798.298	38130.43	2617.830	2349.268	5263.283
#3	3851.515	37956.86	2644.358	2338.215	5316.249

Sample Name: Q2564-05MS Acquired: 7/14/2025 19:22:28 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9696143**	**1.890776**	**2.987735**	**1.653105**	**.3061404**	**145.7293**
Stddev	.0022918	.003522	.003416	.014879	.0020983	.4286
%RSD	.2363665	.1862694	.1143353	.9000669	.6853923	.2941145
#1	.9677008	1.893963	2.989580	1.656448	.3085621	146.2204
#2	.9721542	1.886995	2.989832	1.636838	.3048654	145.4304
#3	.9689880	1.891370	2.983793	1.666028	.3049936	145.5370

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6961205**	**.1957688**	**.1945329**	**56.81869**	**.5758610**	**.2712129**
Stddev	.0010787	.0064534	.0006011	.12587	.0116133	.0000283
%RSD	.1549552	3.296432	.3090024	.2215274	2.016690	.0104224
#1	.6955703	.1883542	.1952037	56.69040	.5728057	.2712079
#2	.6973633	.2001194	.1940431	56.94198	.5886966	.2711875
#3	.6954278	.1988330	.1943520	56.82369	.5660808	.2712434

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5757506**	**279.0597**	**2.296205**	**30.41232**	**.6222019**	**.0136419**
Stddev	.0169700	9.3973	.001560	.15910	.0010127	.0011883
%RSD	2.947453	3.367483	.0679578	.5231525	.1627592	8.710952
#1	.5572361	268.6112	2.296314	30.22874	.6221698	.0132908
#2	.5794499	286.8200	2.297708	30.49798	.6212057	.0149662
#3	.5905658	281.7478	2.294593	30.51024	.6232303	.0126687

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.412756**	**.6712811**	**1.370384**	**27.44431**	**13.62808**	**.2985677**
Stddev	.598026	.0075564	.007608	7.08954	.06118	.0061407
%RSD	11.04846	1.125669	.5551509	25.83248	.4489507	2.056707
#1	4.923154	.6660649	1.367212	35.60793	13.66917	.2924145
#2	6.079283	.6678318	1.379065	23.88990	13.55777	.2985930
#3	5.235831	.6799466	1.364876	22.83510	13.65732	.3046957

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2564-05MS Acquired: 7/14/2025 19:22:28 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3193764	5.605707	F 15.64385	.7156377	1.443775	.2543834
Stddev	.0016209	.029249	.68740	.0013839	.007647	.0064039
%RSD	.5075156	.5217674	4.394034	.1933839	.5296315	2.517410
#1	.3204556	5.620274	14.87339	.7151688	1.444148	.2609124
#2	.3175125	5.572036	16.19432	.7145492	1.451229	.2541254
#3	.3201611	5.624812	15.86384	.7171952	1.435949	.2481124

Elem	Sr4077
Units	ppm
Avg	.4007499
Stddev	.0014586
%RSD	.3639610
#1	.4010910
#2	.4020077
#3	.3991510

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4015.967	39520.89	2664.065	2455.082	4767.841
Stddev	50.487	733.10	112.865	14.887	55.780
%RSD	1.257145	1.854959	4.236572	.6063828	1.169913
#1	3981.316	39999.52	2793.276	2446.379	4733.727
#2	4073.892	38676.92	2584.731	2472.272	4832.212
#3	3992.692	39886.24	2614.188	2446.596	4737.586

Sample Name: Q2564-05MSD Acquired: 7/14/2025 19:26:53 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.055245**	**1.933245**	**3.079724**	**1.699987**	**.3082676**	**133.4941**
Stddev	.026872	.024612	.060225	.044133	.0083075	.8980
%RSD	2.546541	1.273116	1.955522	2.596061	2.694895	.6726723
#1	1.086262	1.959246	3.147250	1.750906	.3176961	134.1971
#2	1.040496	1.910309	3.031568	1.672751	.3020231	132.4825
#3	1.038977	1.930179	3.060352	1.676305	.3050836	133.8026

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6637717**	**.2003886**	**.1994569**	**47.45455**	**.5684697**	**.2708879**
Stddev	.0006972	.0235125	.0056383	.19916	.0133723	.0036040
%RSD	.1050307	11.73344	2.826804	.4196944	2.352336	1.330452
#1	.6631105	.1857298	.2055220	47.48069	.5818598	.2744044
#2	.6637045	.2275088	.1943747	47.24361	.5551153	.2672023
#3	.6644999	.1879271	.1984741	47.63935	.5684341	.2710571

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6031201**	**263.0925**	**2.118461**	**25.47513**	**.6233471**	**.0172574**
Stddev	.0714866	28.0625	.006981	.09307	.0092346	.0012580
%RSD	11.85279	10.66640	.3295261	.3653208	1.481455	7.289764
#1	.5566862	247.7260	2.116297	25.36769	.6331046	.0177034
#2	.6854408	295.4822	2.112819	25.52716	.6147439	.0158372
#3	.5672334	246.0694	2.126268	25.53055	.6221927	.0182317

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.500984**	**.6649071**	**1.429629**	**24.89578**	**13.00448**	**.3050356**
Stddev	.531816	.0067277	.000662	2.69348	.43141	.0351121
%RSD	9.667648	1.011822	.0462790	10.81901	3.317429	11.51081
#1	5.516403	.6634259	1.429230	22.05308	13.49599	.2838567
#2	6.024923	.6590435	1.430392	25.22436	12.68848	.3455658
#3	4.961627	.6722520	1.429264	27.40988	12.82897	.2856843

Sample Name: Q2564-05MSD Acquired: 7/14/2025 19:26:53 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3318978	5.145705	F 14.14488	.7265836	1.395691	.2542106
Stddev	.0041640	.183676	1.57892	.0160605	.020404	.0144095
%RSD	1.254619	3.569511	11.16251	2.210409	1.461897	5.668321
#1	.3362419	5.355433	13.23907	.7446157	1.410505	.2626875
#2	.3279408	5.013499	15.96806	.7138164	1.372418	.2375729
#3	.3315107	5.068182	13.22753	.7213186	1.404149	.2623713

Elem	Sr4077
Units	ppm
Avg	.4038076
Stddev	.0020173
%RSD	.4995772
#1	.4054559
#2	.4015580
#3	.4044089

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3972.420	39401.52	2659.060	2461.036	4767.445
Stddev	101.787	436.81	285.054	9.987	132.862
%RSD	2.562343	1.108600	10.72012	.4058085	2.786860
#1	3855.247	38897.49	2828.847	2472.507	4615.068
#2	4038.975	39637.23	2329.963	2456.322	4859.069
#3	4023.037	39669.83	2818.370	2454.278	4828.200

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2564-05A Acquired: 7/14/2025 19:31:19 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba493
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9424158**	**1.892918**	k **2.861477**	**1.647971**	**.6910953**	^ *****	**.653450**
Stddev	.0039522	.005857	.005947	.012207	.0030120	-----	.003734
%RSD	.4193738	.3094184	.2078379	.7407472	.4358351	-----	.571557
#1	.9468367	1.896569	2.863302	1.657981	.6876347	103.7834	.652707
#2	.9392244	1.886162	2.854831	1.634371	.6931270	103.4131	.650142
#3	.9411864	1.896022	k 2.866298	1.651559	.6925240	^ -----	.657500

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe259
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1768977**	**.1912595**	**55.90038**	**.5254317**	**.2646964**	**.5124124**	**248.976**
Stddev	.0105972	.0011777	.22498	.0140604	.0007908	.0339631	7.373
%RSD	5.990569	.6157712	.4024614	2.675970	.2987434	6.628084	2.96157
#1	.1844882	.1909223	55.85217	.5189657	.2637871	.5339211	254.514
#2	.1814143	.1902871	55.70342	.5157674	.2650794	.5300574	251.806
#3	.1647905	.1925690	56.14556	.5415619	.2652227	.4732586	240.606

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn213
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.231234**	**27.83040**	**.6056122**	**.0130458**	**4.968956**	**.6114619**	**1.45834**
Stddev	.007147	.09514	.0015658	.0003164	.152273	.0066974	.019873
%RSD	.3203375	.3418584	.2585475	2.424942	3.064481	1.095301	1.362686
#1	2.229941	27.94010	.6043726	.0128102	4.974498	.6135391	1.444629
#2	2.224822	27.77034	.6050920	.0134054	4.813988	.6168745	1.449266
#3	2.238940	27.78077	.6073718	.0129218	5.118382	.6039721	1.481133

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.32423**	**13.16735**	**.3138239**	**.3419402**	**5.569422**	**5.608801**	**.9089006**
Stddev	1.73841	.10119	.0157088	.0008560	.041020	.230223	.0040425
%RSD	8.553368	.7684779	5.005599	.2503262	.7365183	4.104667	.4447650
#1	19.70308	13.15315	.3243713	.3416235	5.561629	5.781308	.9062320
#2	22.28789	13.07402	.3213303	.3412877	5.532858	5.697716	.9069181
#3	18.98172	13.27489	.2957702	.3429094	5.613779	5.347381	.9135516

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2564-05A Acquired: 7/14/2025 19:31:19 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.285268	.2245239	.4095479
Stddev	.002203	.0105300	.0012785
%RSD	.1714292	4.689948	.3121783
#1	1.285837	.2360613	.4091295
#2	1.282835	.2154312	.4085310
#3	1.287130	.2220792	.4109832

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4092.516	39552.05	2837.371	2477.624	4805.351
Stddev	23.736	2231.75	59.852	62.817	33.454
%RSD	.5799929	5.642563	2.109418	2.535373	.6961891
#1	4102.299	40725.82	2782.144	2518.228	4822.390
#2	4109.797	40951.97	2829.001	2509.376	4826.855
#3	4065.452	36978.36	2900.967	2405.270	4766.807

Sample Name: Q2555-01 Acquired: 7/14/2025 19:35:45 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5815080**	**-.060149**	**.6096986**	**.0547363**	**.0425206**	**266.9484**
Stddev	.0083913	.003955	.0001551	.0187937	.0022877	.9844
%RSD	1.443018	6.574622	.0254372	34.33498	5.380242	.3687781
#1	.5849278	-.060932	.6098775	.0431023	.0451619	267.0872
#2	.5719468	-.063654	.6096023	.0446886	.0412363	267.8560
#3	.5876493	-.055862	.6096160	.0764180	.0411636	265.9018

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.811951**	**.0185358**	**.0083275**	**65.90071**	**.3071789**	**.3156610**
Stddev	.003629	.0011147	.0014447	.11778	.0121048	.0033051
%RSD	.2002930	6.013731	17.34887	.1787220	3.940625	1.047038
#1	1.808506	.0178316	.0094199	66.01460	.3115766	.3185218
#2	1.811605	.0179548	.0088731	65.90815	.3164701	.3164182
#3	1.815740	.0198210	.0066894	65.77939	.2934901	.3120430

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7281925**	**398.7535**	**7.645473**	**98.29943**	**.5153934**	**-.084053**
Stddev	.0608497	32.9398	.007475	.27896	.0041451	.000505
%RSD	8.356267	8.260704	.0977715	.2837850	.8042653	.6002264
#1	.6972738	375.0748	7.641801	97.99560	.5192209	-.083710
#2	.6890102	384.8144	7.654074	98.35870	.5159686	-.084632
#3	.7982935	436.3712	7.640545	98.54400	.5109908	-.083817

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.275425**	**.6391516**	**1.370665**	**89.51984**	F **20.64605**	**.1071018**
Stddev	.240756	.0101154	.009031	6.88244	.26727	.0156579
%RSD	7.350366	1.582621	.6588474	7.688168	1.294532	14.61968
#1	3.046726	.6433669	1.380600	82.88968	20.92908	.0957312
#2	3.252895	.6464777	1.368442	89.04037	20.61108	.1006132
#3	3.526653	.6276104	1.362954	96.62948	20.39798	.1249609

Sample Name: Q2555-01 Acquired: 7/14/2025 19:35:45 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0150432**	**15.40906**	**6.754629**	**.0419912**	**17.71100**	**.4847339**
Stddev	.0001836	.19502	.540114	.0009799	.06601	.0111976
%RSD	1.220380	1.265597	7.996201	2.333543	.3727192	2.310046
#1	.0149111	15.61892	6.399836	.0411091	17.73322	.4926891
#2	.0149656	15.37485	6.487825	.0418184	17.76304	.4895835
#3	.0152528	15.23342	7.376226	.0430459	17.63675	.4719289

Elem	Sr4077
Units	ppm
Avg	**.3132751**
Stddev	.0008236
%RSD	.2628888
#1	.3126906
#2	.3142170
#3	.3129176

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4906.852**	**47754.50**	**3391.064**	**3015.659**	**4527.908**
Stddev	24.194	318.34	265.171	21.605	26.398
%RSD	.4930563	.6666085	7.819703	.7164135	.5829973
#1	4926.314	48087.70	3569.622	2994.181	4527.170
#2	4879.764	47453.47	3517.199	3037.388	4501.887
#3	4914.477	47722.35	3086.370	3015.410	4554.666

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2555-03 Acquired: 7/14/2025 19:40:15 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4987062**	**-.052547**	**.5252790**	**.0377318**	**.0376998**	**232.3283**
Stddev	.0058085	.003392	.0079475	.0024297	.0022713	12.9604
%RSD	1.164715	6.455172	1.513002	6.439421	6.024753	5.578464
#1	.4938379	-.048959	.5161064	.0350744	.0397134	247.2093
#2	.5051358	-.055702	.5301099	.0382814	.0381483	226.2619
#3	.4971449	-.052979	.5296207	.0398397	.0352377	223.5137

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.549038**	**.0149198**	**.0089181**	**55.55108**	**.2497620**	**.2946254**
Stddev	.089217	.0002403	.0003769	3.23067	.0163238	.0047594
%RSD	5.759529	1.610382	4.226623	5.815672	6.535729	1.615408
#1	1.651365	.0149497	.0091372	59.25948	.2309187	.2891299
#2	1.508201	.0146660	.0084829	54.04762	.2595877	.2974203
#3	1.487548	.0151437	.0091344	53.34613	.2587795	.2973258

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5943428**	**330.5167**	**6.965794**	**85.41090**	**.4665396**	**-.068633**
Stddev	.0116591	8.6724	.402417	4.76960	.0054859	.002665
%RSD	1.961679	2.623896	5.777040	5.584302	1.175879	3.883006
#1	.5945843	323.6571	7.426540	90.87271	.4602103	-.065615
#2	.5825648	340.2647	6.787620	83.29281	.4699282	-.070662
#3	.6058792	327.6283	6.683224	82.06717	.4694804	-.069621

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.667862**	**.5452383**	**1.115827**	**78.14333**	F **18.17820**	**.0756299**
Stddev	.007187	.0347758	.054017	1.53807	.22520	.0158054
%RSD	.2694067	6.378093	4.840942	1.968265	1.238861	20.89843
#1	2.662420	.5820678	1.053653	78.74141	17.93301	.0662316
#2	2.676010	.5406819	1.151231	76.39605	18.37581	.0938777
#3	2.665156	.5129653	1.142596	79.29251	18.22578	.0667803

Sample Name: Q2555-03 Acquired: 7/14/2025 19:40:15 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0120374**	**14.04915**	**8.518690**	**.0352719**	**15.63480**	**.4183387**
Stddev	.0004120	.18323	.195746	.0008891	.91951	.0184601
%RSD	3.422224	1.304233	2.297843	2.520660	5.881178	4.412706
#1	.0117576	13.84618	8.534515	.0359489	16.68692	.4396372
#2	.0125105	14.20238	8.315512	.0356018	15.23235	.4069451
#3	.0118442	14.09888	8.706044	.0342650	14.98512	.4084338

Elem	Sr4077
Units	ppm
Avg	**.2523737**
Stddev	.0147764
%RSD	5.854977
#1	.2692869
#2	.2458667
#3	.2419676

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5030.967**	**51556.36**	**3682.129**	**3239.108**	**4760.873**
Stddev	14.974	1820.30	89.431	99.083	29.367
%RSD	.2976441	3.530692	2.428795	3.058952	.6168363
#1	5047.447	53483.69	3583.841	3346.884	4794.776
#2	5027.259	49866.38	3758.706	3151.970	4744.498
#3	5018.195	51319.01	3703.840	3218.470	4743.344

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2558-01 Acquired: 7/14/2025 19:44:45 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0348278**	**-.013830**	**.2020603**	**.0168551**	**.0165340**	**98.00674**	**.4704666**
Stddev	.0046143	.002344	.0046985	.0158947	.0013491	.27864	.0016392
%RSD	13.24880	16.95215	2.325287	94.30172	8.159747	.2843115	.3484227
#1	.0389603	-.015727	.2067693	.0266035	.0150975	98.29595	.4721254
#2	.0356743	-.014554	.2020392	.0254483	.0167303	97.74003	.4704268
#3	.0298489	-.011209	.1973724	-.001486	.0177743	97.98423	.4688477

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0063772**	**.0008601**	**27.93173**	**.0965965**	**.0931455**	**.1606615**	**142.6101**
Stddev	.0003282	.0017070	.06830	.0096506	.0001050	.0027600	38.4878
%RSD	5.147103	198.4598	.2445313	9.990596	.1127163	1.717876	26.98810
#1	.0061428	-.000186	27.92556	.0885929	.0930275	.1638108	164.5023
#2	.0062364	-.000063	27.86672	.0938834	.0931802	.1586639	165.1581
#3	.0067523	.002830	28.00291	.1073132	.0932287	.1595098	98.1699

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.381715**	**31.51259**	**.1196977**	**-.028214**	**1.117125**	**.2216192**	**.4482196**
Stddev	.008341	.15898	.0003245	.000833	.075110	.0039089	.0009737
%RSD	.2466537	.5044872	.2711136	2.951401	6.723537	1.763771	.2172299
#1	3.390877	31.54682	.1195164	-.027257	1.069468	.2232445	.4475683
#2	3.379709	31.65167	.1195043	-.028612	1.203709	.2171600	.4477515
#3	3.374561	31.33929	.1200723	-.028774	1.078199	.2244533	.4493389

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.77879**	**9.205349**	**.0673200**	**-.001885**	**2.438059**	**6.669645**	**.0318448**
Stddev	.34710	.081620	.0455141	.000572	.023200	.037127	.0015329
%RSD	1.952348	.8866548	67.60859	30.35406	.9515774	.5566573	4.813606
#1	17.62523	9.224725	.0939517	-.002481	2.434015	6.648860	.0330143
#2	18.17618	9.115785	.0932417	-.001340	2.417147	6.647566	.0301094
#3	17.53495	9.275537	.0147664	-.001834	2.463015	6.712509	.0324106

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2558-01 Acquired: 7/14/2025 19:44:45 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.669123	.0746439	.1081574
Stddev	.021043	.0108305	.0005352
%RSD	.3711888	14.50957	.4947941
#1	5.683648	.0751941	.1087649
#2	5.644991	.0635488	.1077559
#3	5.678729	.0851888	.1079512

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3993.948	39262.05	2667.751	2463.871	4900.807
Stddev	10.526	816.18	9.755	14.027	8.734
%RSD	.2635552	2.078788	.3656489	.5692903	.1782135
#1	3994.771	39678.61	2676.893	2467.897	4907.828
#2	3983.035	38321.65	2668.879	2475.444	4903.565
#3	4004.039	39785.90	2657.482	2448.272	4891.026

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2558-03 Acquired: 7/14/2025 19:49:17 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0894734**	**-.007263**	**.6844393**	**.0170421**	**.0249953**	**115.4139**	**.9072082**
Stddev	.0042405	.002572	.0022269	.0031618	.0037389	.6525	.0028537
%RSD	4.739446	35.40721	.3253656	18.55264	14.95854	.5653728	.3145593
#1	.0851324	-.009497	.6867990	.0153278	.0267318	115.5280	.9093358
#2	.0896821	-.007840	.6841444	.0151078	.0275501	116.0018	.9083236
#3	.0936058	-.004452	.6823746	.0206908	.0207038	114.7118	.9039653

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0074674**	**.0032920**	**117.7857**	**.1834130**	**.1027706**	**.4363823**	**185.9341**
Stddev	.0001968	.0002013	.7891	.0004397	.0004987	.0072524	1.0962
%RSD	2.636042	6.114852	.6699771	.2397447	.4852442	1.661948	.5895832
#1	.0076947	.0033506	118.3057	.1839158	.1029504	.4439825	186.6989
#2	.0073580	.0030678	118.1737	.1831005	.1022069	.4356278	186.4252
#3	.0073496	.0034574	116.8777	.1832227	.1031544	.4295366	184.6782

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.757095**	**58.86690**	**.1635286**	**-.033056**	**2.332378**	**.3533473**	**.8483757**
Stddev	.020631	.37102	.0005965	.000810	.029767	.0051171	.0018334
%RSD	.5491244	.6302718	.3647700	2.450404	1.276259	1.448169	.2161074
#1	3.772002	59.12523	.1628895	-.032357	2.356444	.3573087	.8488608
#2	3.765733	59.03373	.1636256	-.033944	2.341598	.3551632	.8499178
#3	3.733548	58.44175	.1640707	-.032867	2.299092	.3475699	.8463485

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**34.06097**	**11.19696**	**.0945124**	**-.002929**	**5.780827**	**10.06600**	**.0855925**
Stddev	.74004	.03305	.0018260	.000285	.035305	.16865	.0016973
%RSD	2.172696	.2951870	1.931997	9.741528	.6107331	1.675413	1.982970
#1	34.80307	11.20966	.0952592	-.002616	5.782944	10.23004	.0854841
#2	34.05684	11.15944	.0958466	-.003175	5.744511	10.07487	.0839520
#3	33.32300	11.22178	.0924314	-.002996	5.815027	9.89309	.0873414

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2558-03 Acquired: 7/14/2025 19:49:17 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	6.709312	.1377752	.3256575
Stddev	.018197	.0052111	.0013476
%RSD	.2712171	3.782298	.4138193
#1	6.714035	.1318111	.3268773
#2	6.724683	.1414485	.3258844
#3	6.689220	.1400660	.3242108

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3899.668	38788.26	2717.105	2404.536	4712.102
Stddev	16.352	207.17	35.884	9.864	13.681
%RSD	.4193158	.5341021	1.320657	.4102094	.2903447
#1	3890.095	38959.46	2687.668	2415.229	4701.052
#2	3890.361	38557.97	2706.570	2395.792	4707.849
#3	3918.549	38847.37	2757.077	2402.589	4727.405

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCV05 Acquired: 7/14/2025 19:53:50 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.703975**	**4.825729**	**4.726110**	**4.719619**	**4.739995**	**9.425640**	**9.538512**
Stddev	.010615	.010167	.013615	.010873	.012556	.045872	.020403
%RSD	.2256523	.2106935	.2880834	.2303709	.2649008	.4866772	.2139006
#1	4.696734	4.819172	4.723478	4.710857	4.726395	9.391071	9.522071
#2	4.699032	4.820574	4.714003	4.716212	4.742443	9.408168	9.561346
#3	4.716160	4.837442	4.740849	4.731786	4.751147	9.477681	9.532119

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2391863**	**2.369803**	**23.45330**	**.9656797**	**2.359488**	**1.199555**	**4.786656**
Stddev	.0008979	.003721	.11650	.0023235	.005687	.005080	.018339
%RSD	.3753979	.1570004	.4967279	.2406036	.2410264	.4235131	.3831250
#1	.2381589	2.368737	23.31984	.9666592	2.357011	1.193818	4.768387
#2	.2398205	2.366732	23.53463	.9673530	2.355461	1.203485	4.805064
#3	.2395794	2.373940	23.50543	.9630269	2.365994	1.201361	4.786516

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.360556**	**23.81623**	**2.359747**	**1.185488**	**24.42371**	**2.361716**	**2.398662**
Stddev	.006537	.14125	.002763	.002325	.12293	.007061	.002803
%RSD	.2769358	.5930887	.1171082	.1961517	.5033072	.2989918	.1168669
#1	2.353639	23.95089	2.360095	1.186581	24.35345	2.361169	2.399550
#2	2.366632	23.82860	2.356827	1.187065	24.56565	2.354944	2.400914
#3	2.361397	23.66920	2.362321	1.182818	24.35203	2.369035	2.395523

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.09808**	**4.867444**	**4.808956**	**4.754770**	**4.722558**	**4.873709**	**4.735513**
Stddev	.31451	.008678	.030136	.002367	.005490	.028651	.009783
%RSD	1.305120	.1782893	.6266688	.0497869	.1162464	.5878694	.2065955
#1	24.33912	4.858554	4.782165	4.752688	4.720427	4.843144	4.725884
#2	24.21281	4.867883	4.841584	4.754279	4.718452	4.899956	4.735212
#3	23.74232	4.875894	4.803118	4.757345	4.728793	4.878028	4.745444

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCV05 Acquired: 7/14/2025 19:53:50 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.759255**	**4.746510**	**4.806179**
Stddev	.010974	.021695	.011361
%RSD	.2305861	.4570702	.2363837
#1	4.748938	4.725328	4.793121
#2	4.770786	4.745517	4.811619
#3	4.758042	4.768684	4.813798

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3505.191**	**35025.10**	**2452.253**	**2144.791**	**4750.809**
Stddev	6.236	276.09	14.417	13.897	9.391
%RSD	.1778958	.7882695	.5879150	.6479524	.1976744
#1	3501.385	34802.45	2449.100	2130.462	4740.640
#2	3501.801	34938.82	2439.673	2145.700	4752.630
#3	3512.388	35334.03	2467.985	2158.212	4759.155

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCB05 Acquired: 7/14/2025 19:58:06 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001102**	**-.000844**	**-.002233**	**-.003710**	**-.002146**	**.0180578**	**.0009300**
Stddev	.002565	.000441	.001110	.002688	.002618	.0538905	.0003680
%RSD	232.7759	52.27612	49.70001	72.45764	122.0014	298.4330	39.56535
#1	-.000639	-.001275	-.003487	-.000654	.000115	-.035787	.0005327
#2	-.003867	-.000394	-.001838	-.005708	-.001538	.071994	.0012591
#3	.001200	-.000862	-.001375	-.004768	-.005015	.017967	.0009982

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001652**	**-.000051**	**-.004422**	**.0002361**	**-.000197**	**.0008300**	**.0019155**
Stddev	.0001313	.000045	.016817	.0004673	.000247	.0001677	.0037100
%RSD	79.52029	88.11980	380.3481	197.9354	125.4089	20.20299	193.6800
#1	.0003077	-.000086	.013608	-.000188	.000086	.0010053	-.001664
#2	.0000491	-.000066	-.019684	.000159	-.000368	.0008136	.005743
#3	.0001386	-.000000	-.007188	.000737	-.000308	.0006711	.001667

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001476**	**.0623259**	**.0004448**	**.0008997**	**-.023777**	**-.000763**	**-.000340**
Stddev	.0020682	.0369216	.0003204	.0007612	.003643	.015520	.000372
%RSD	1400.855	59.23953	72.01855	84.60907	15.32162	2034.116	109.5492
#1	-.001285	.1046913	.0004004	.0005056	-.020293	-.007974	-.000715
#2	-.000791	.0370096	.0007851	.0004164	-.023478	-.011366	.000029
#3	.002519	.0452769	.0001490	.0017772	-.027561	.017051	-.000333

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022543**	**-.000004**	**-.006408**	**.0002472**	**-.003431**	**.0060984**	**-.000927**
Stddev	.0029641	.001949	.001473	.0002626	.002746	.0022451	.000932
%RSD	131.4833	44224.30	22.98804	106.2036	80.03888	36.81423	100.5575
#1	.0006867	.002171	-.006880	.0005003	-.006556	.0039108	-.001794
#2	.0056730	-.000592	-.004757	-.000024	-.002334	.0083969	.000059
#3	.0004033	-.001593	-.007587	.000265	-.001403	.0059876	-.001046

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCB05 Acquired: 7/14/2025 19:58:06 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001601	-.018939	.0003812
Stddev	.002602	.009534	.0002587
%RSD	162.4602	50.33914	67.87692
#1	-.000884	-.010482	.0004408
#2	-.004487	-.029271	.0000979
#3	.000566	-.017063	.0006049

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3628.734	36645.26	2389.262	2227.107	5403.821
Stddev	2.486	150.91	114.301	23.722	4.060
%RSD	.0685042	.4118217	4.783937	1.065139	.0751353
#1	3631.546	36764.10	2438.418	2253.973	5399.800
#2	3627.829	36475.46	2258.606	2209.047	5407.919
#3	3626.827	36696.21	2470.761	2218.301	5403.744

Sample Name: Q2571-05 Acquired: 7/14/2025 20:02:35 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0530384**	**-.011815**	**.6742882**	**.0248583**	**.0225717**	**88.28129**	**.5035156**
Stddev	.0018167	.002062	.0018647	.0034246	.0016782	.29452	.0026690
%RSD	3.425259	17.44870	.2765408	13.77653	7.434865	.3336110	.5300699
#1	.0531394	-.012549	.6723541	.0263426	.0241638	88.15337	.5006064
#2	.0511733	-.009487	.6760747	.0209419	.0227322	88.07236	.5058510
#3	.0548025	-.013409	.6744357	.0272903	.0208190	88.61813	.5040893

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0084046**	**.0047433**	**55.08266**	**.1619951**	**.1300631**	**.5482741**	**210.5709**
Stddev	.0002974	.0001024	.04081	.0013006	.0002738	.0029165	1.2029
%RSD	3.539054	2.159462	.0740921	.8028362	.2105361	.5319489	.5712472
#1	.0085828	.0046273	55.03994	.1605293	.1301425	.5491100	210.5212
#2	.0080613	.0048211	55.12124	.1630109	.1297583	.5450309	209.3937
#3	.0085698	.0047817	55.08681	.1624451	.1302884	.5506815	211.7979

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.779955**	**40.54007**	**.3303389**	**-.038526**	**5.037917**	**.3724386**	**1.551978**
Stddev	.005800	.11844	.0012969	.001332	.017942	.0035969	.005908
%RSD	.3258296	.2921573	.3925822	3.457457	.3561451	.9657752	.3807023
#1	1.773259	40.52882	.3292751	-.039004	5.053957	.3763694	1.545658
#2	1.783389	40.66373	.3299581	-.039553	5.018541	.3693116	1.557364
#3	1.783217	40.42766	.3317835	-.037021	5.041253	.3716349	1.552912

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.04071**	**5.353575**	**.0690443**	**-.003609**	**1.863890**	**5.615664**	**.0612728**
Stddev	.11333	.031739	.0031425	.000446	.016764	.025197	.0006103
%RSD	.8071344	.5928480	4.551349	12.35446	.8993840	.4486995	.9960548
#1	14.16347	5.336646	.0721661	-.004008	1.851951	5.613684	.0606039
#2	14.01856	5.390189	.0658817	-.003693	1.883055	5.591515	.0617995
#3	13.94008	5.333890	.0690852	-.003128	1.856664	5.641793	.0614149

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: Q2571-05 Acquired: 7/14/2025 20:02:35 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.521647	.1083454	.2222282
Stddev	.020562	.0075569	.0008883
%RSD	.5838796	6.974839	.3997028
#1	3.498694	.1011881	.2218180
#2	3.527865	.1076012	.2216192
#3	3.538383	.1162469	.2232474

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4125.632	41040.65	2832.028	2562.501	4772.057
Stddev	43.936	214.39	1.623	17.861	45.984
%RSD	1.064961	.5223849	.0573039	.6970282	.9636172
#1	4164.495	41036.83	2832.832	2575.405	4813.172
#2	4077.958	40828.19	2833.092	2542.115	4722.401
#3	4134.445	41256.92	2830.160	2569.983	4780.597

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCV06 Acquired: 7/14/2025 20:07:08 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.795539**	**4.921519**	**4.813208**	**4.806465**	**4.850493**	**9.657321**	**9.751669**
Stddev	.013244	.012585	.003443	.013416	.013189	.013871	.018680
%RSD	.2761711	.2557161	.0715245	.2791283	.2719013	.1436302	.1915594
#1	4.780521	4.913406	4.809521	4.791497	4.838196	9.658931	9.737125
#2	4.805549	4.915134	4.813765	4.810489	4.864422	9.670316	9.745145
#3	4.800546	4.936017	4.816339	4.817409	4.848861	9.642715	9.772736

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2446104**	**2.413706**	**23.84065**	**.9858556**	**2.400165**	**1.228484**	**4.901163**
Stddev	.0011053	.002359	.05139	.0013095	.002756	.005142	.018823
%RSD	.4518650	.0977260	.2155587	.1328289	.1148118	.4185590	.3840422
#1	.2458865	2.412092	23.80525	.9846757	2.397306	1.231778	4.922897
#2	.2439907	2.412613	23.81711	.9856266	2.400384	1.231115	4.890402
#3	.2439539	2.416413	23.89960	.9872645	2.402804	1.222559	4.890189

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.416771**	**24.41881**	**2.403562**	**1.210580**	**25.03082**	**2.430690**	**2.452914**
Stddev	.005479	.08953	.002540	.002807	.14914	.015803	.019950
%RSD	.2267235	.3666610	.1056848	.2319124	.5958235	.6501364	.8133259
#1	2.414300	24.31646	2.401211	1.207776	25.15281	2.422078	2.453367
#2	2.412962	24.45729	2.403217	1.210573	25.07509	2.421064	2.472634
#3	2.423050	24.48266	2.406257	1.213391	24.86456	2.448928	2.432742

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.55093**	**4.963583**	**4.930793**	**4.841924**	**4.817810**	**4.993428**	**4.818013**
Stddev	.28166	.012017	.013889	.009359	.005783	.014551	.002690
%RSD	1.147247	.2421088	.2816693	.1932949	.1200354	.2914066	.0558385
#1	24.80938	4.950107	4.938212	4.831228	4.811568	4.999085	4.815168
#2	24.59268	4.973186	4.939395	4.848614	4.818874	5.004301	4.818354
#3	24.25072	4.967456	4.914770	4.845929	4.822986	4.976898	4.820516

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCV06 Acquired: 7/14/2025 20:07:08 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.845541**	**4.806945**	**4.923648**
Stddev	.015589	.014899	.007833
%RSD	.3217148	.3099451	.1590945
#1	4.827542	4.802540	4.916781
#2	4.854761	4.794746	4.921983
#3	4.854320	4.823550	4.932180

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3476.399**	**34727.25**	**2427.185**	**2126.599**	**4713.933**
Stddev	2.900	28.75	9.930	11.085	2.697
%RSD	.0834127	.0827963	.4091291	.5212549	.0572049
#1	3478.824	34760.07	2416.420	2121.476	4711.097
#2	3473.187	34715.24	2429.146	2119.002	4716.465
#3	3477.187	34706.46	2435.988	2139.319	4714.238

Reviewed By:jaswal
On:7/16/2025 6:41:06 PM
Inst Id :P5
LB :LB136469

Sample Name: CCB06 Acquired: 7/14/2025 20:11:24 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001547**	**-.001731**	**-.001210**	**-.004035**	**.0003881**	**-.020646**
Stddev	.001693	.003830	.001991	.002408	.0015295	.018992
%RSD	109.3928	221.2776	164.6093	59.69058	394.1417	91.99046
#1	-.002790	-.005704	.001089	-.005857	-.001378	-.027968
#2	-.002232	-.001424	-.002313	-.001304	.001281	-.034888
#3	.000380	.001937	-.002406	-.004943	.001261	.000917

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000563**	**-.000086**	**-.000061**	**-.014076**	**.0000270**	**-.000369**
Stddev	.000857	.000120	.000089	.011347	.0003968	.000222
%RSD	152.3162	139.4233	144.6051	80.61368	1471.000	60.11247
#1	-.000828	-.000212	.000006	-.001566	.0001468	-.000460
#2	-.001256	-.000073	-.000028	-.023704	-.000416	-.000116
#3	.000396	.000027	-.000162	-.016958	.000350	-.000530

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000225**	**.0011152**	**.0014906**	**.0271119**	**.0004219**	**.0001437**
Stddev	.000940	.0017492	.0006778	.0646093	.0001921	.0010549
%RSD	416.9049	156.8587	45.47169	238.3062	45.52325	733.9345
#1	-.001224	-.000783	.0007108	-.001838	.0003496	.0013128
#2	.000643	.002663	.0019387	-.017960	.0002765	-.000737
#3	-.000096	.001466	.0018222	.101133	.0006397	-.000144

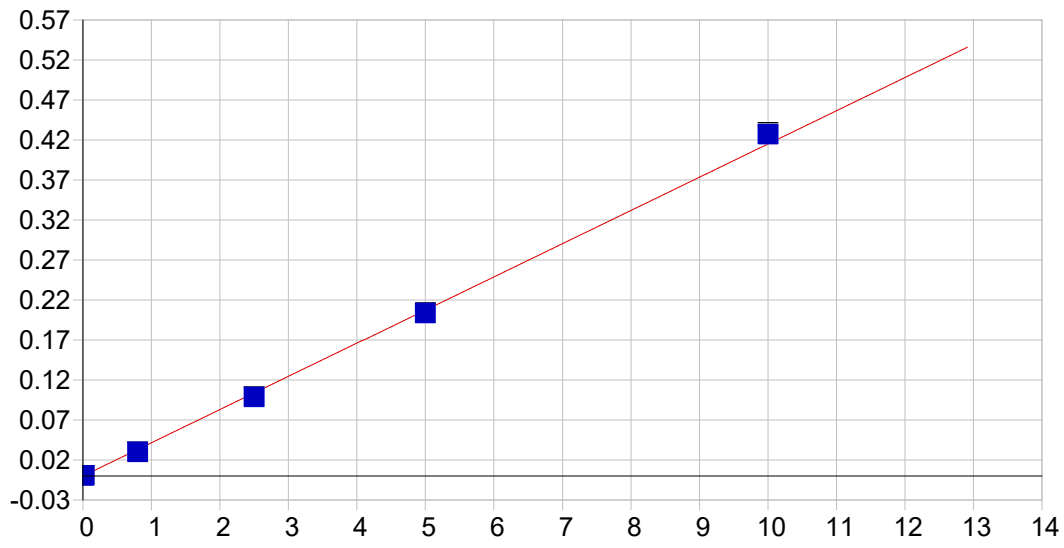
Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.024828**	**.0002525**	**-.000021**	**.0002422**	**.0011954**	**-.006118**
Stddev	.022369	.0082979	.000406	.0005393	.0020092	.002021
%RSD	90.09605	3286.774	1949.838	222.6497	168.0715	33.03759
#1	-.050359	.0020698	-.000406	.0000907	-.000825	-.004304
#2	-.008673	.0074911	.000403	.0008411	.001219	-.005753
#3	-.015451	-.008804	-.000059	-.000205	.003193	-.008297

Sample Name: CCB06 Acquired: 7/14/2025 20:11:24 Type: Unk
Method: METHOD 6010D, 200.7 M(v34) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000012	-.002191	.0035829	-.000262	-.002167	F -.026616
Stddev	.000366	.000872	.0008518	.001574	.001992	.005660
%RSD	3117.275	39.80942	23.77318	600.4863	91.91295	21.26384
#1	.000407	-.002545	.0027503	.001555	.000115	-.024946
#2	-.000273	-.001198	.0044526	-.001217	-.003063	-.032923
#3	-.000169	-.002831	.0035459	-.001124	-.003553	-.021979

Elem	Sr4077
Units	ppm
Avg	.0003372
Stddev	.0001871
%RSD	55.49473
#1	.0004799
#2	.0004063
#3	.0001253

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3607.631	36303.84	2492.249	2206.797	5364.552
Stddev	5.612	159.48	20.009	8.535	4.188
%RSD	.1555672	.4392940	.8028521	.3867756	.0780715
#1	3605.439	36463.20	2469.367	2216.425	5368.920
#2	3614.008	36304.09	2506.461	2200.159	5364.164
#3	3603.445	36144.24	2500.918	2203.805	5360.571

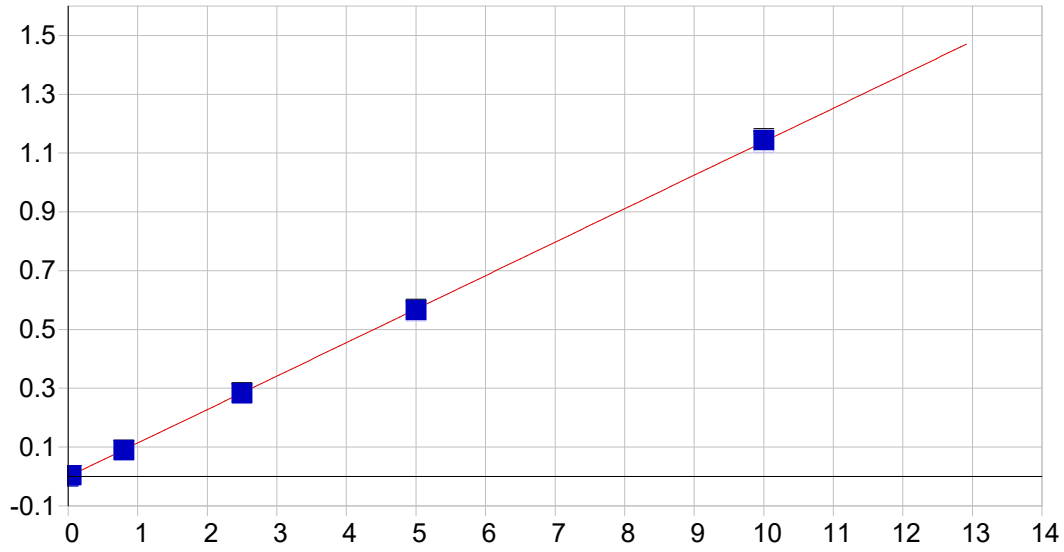


As 189.042 {479}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000049	Re-Slope:	1.000000
A1 (Gain):	0.041502	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999335	Status:	OK.
Std Error of Est:	0.000035		
Predicted MDL:	0.003342		
Predicted MQL:	0.011139		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00005	.000	1
S1	.02000	.01796	-.002	-10.2	.00070	.000	1
S2	.80000	.72090	-.079	-9.89	.02986	.000	1
S3	2.5000	2.3770	-.123	-4.92	.09858	.000	1
S4	5.0000	4.9097	-.090	-1.81	.20368	.001	1
S5	10.000	10.294	.294	2.94	.42712	.002	1

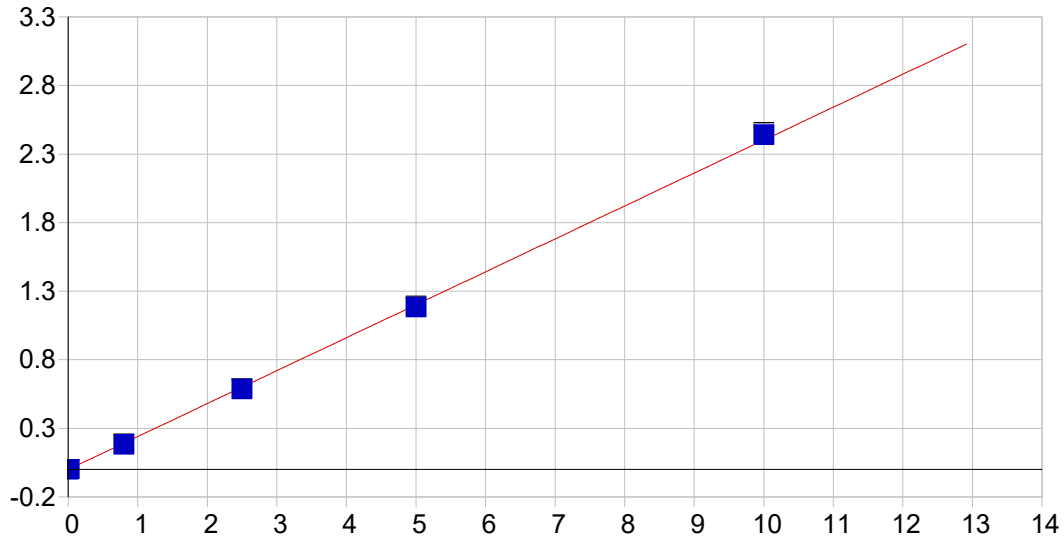


Tl 190.856 {477}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000105	Re-Slope:	1.000000
A1 (Gain):	0.113864	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999976	Status:	OK.
Std Error of Est:	0.000026		
Predicted MDL:	0.001992		
Predicted MQL:	0.006641		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00010	.000	1
S1	.04000	.04310	.003	7.76	.00470	.000	1
S2	.80000	.78737	-.013	-1.58	.08885	.000	1
S3	2.5000	2.4866	-.013	-.535	.28086	.002	1
S4	5.0000	4.9743	-.026	-.514	.56195	.003	1
S5	10.000	10.049	.049	.487	1.1354	.005	1

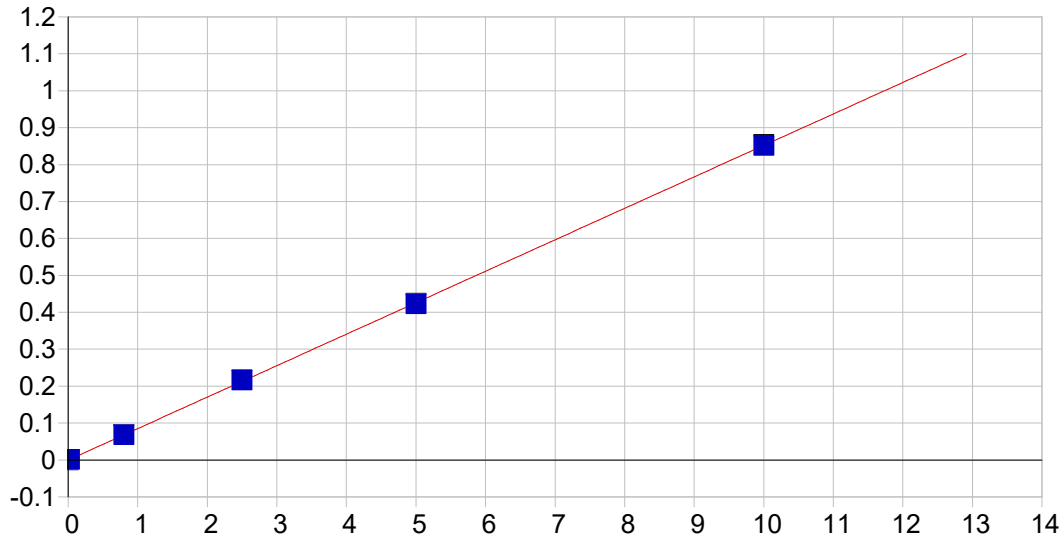


Pb 220.353 {453}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000154	Re-Slope:	1.000000
A1 (Gain):	0.240141	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999821	Status:	OK.
Std Error of Est:	0.000082		
Predicted MDL:	0.001916		
Predicted MQL:	0.006387		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00015	.000	1
S1	.01200	.01115	-.001	-7.05	.00277	.001	1
S2	.80000	.76333	-.037	-4.58	.18327	.001	1
S3	2.5000	2.4430	-.057	-2.28	.58623	.003	1
S4	5.0000	4.9330	-.067	-1.34	1.1836	.006	1
S5	10.000	10.162	.162	1.62	2.4380	.018	1

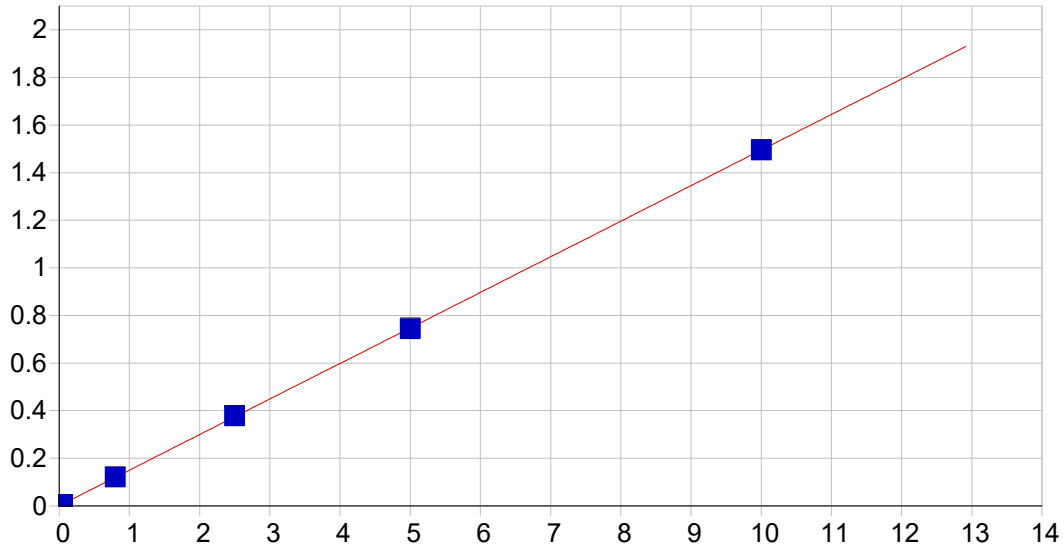


Se 196.090 {472}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000191	Re-Slope:	1.000000
A1 (Gain):	0.085219	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999978	Status:	OK.
Std Error of Est:	0.000013		
Predicted MDL:	0.003737		
Predicted MQL:	0.012457		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00019	.000	1
S1	.02000	.02049	.000	2.45	.00155	.000	1
S2	.80000	.80356	.004	.445	.06825	.001	1
S3	2.5000	2.5363	.036	1.45	.21585	.001	1
S4	5.0000	4.9661	-.034	-.677	.42281	.001	1
S5	10.000	9.9935	-.007	-.065	.85104	.003	1

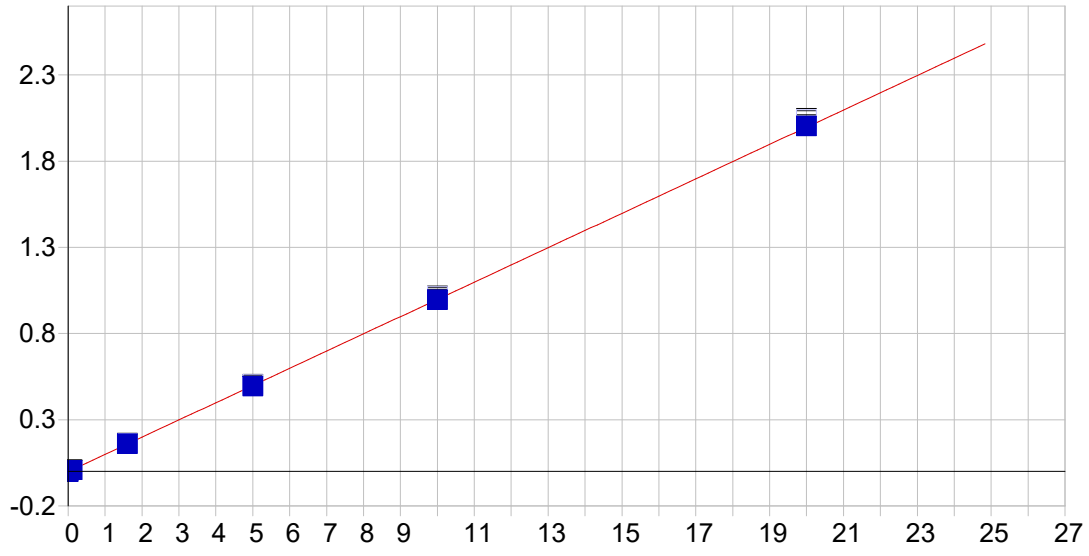


Sb 206.833 {463}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000750	Re-Slope:	1.000000
A1 (Gain):	0.149404	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999990	Status:	OK.
Std Error of Est:	0.000024		
Predicted MDL:	0.002815		
Predicted MQL:	0.009383		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00075	.000	1
S1	.05000	.05188	.002	3.75	.00842	.000	1
S2	.80000	.80087	.001	.108	.12022	.001	1
S3	2.5000	2.5203	.020	.811	.37672	.002	1
S4	5.0000	4.9755	-.025	-.490	.74298	.004	1
S5	10.000	10.002	.002	.015	1.4928	.002	1

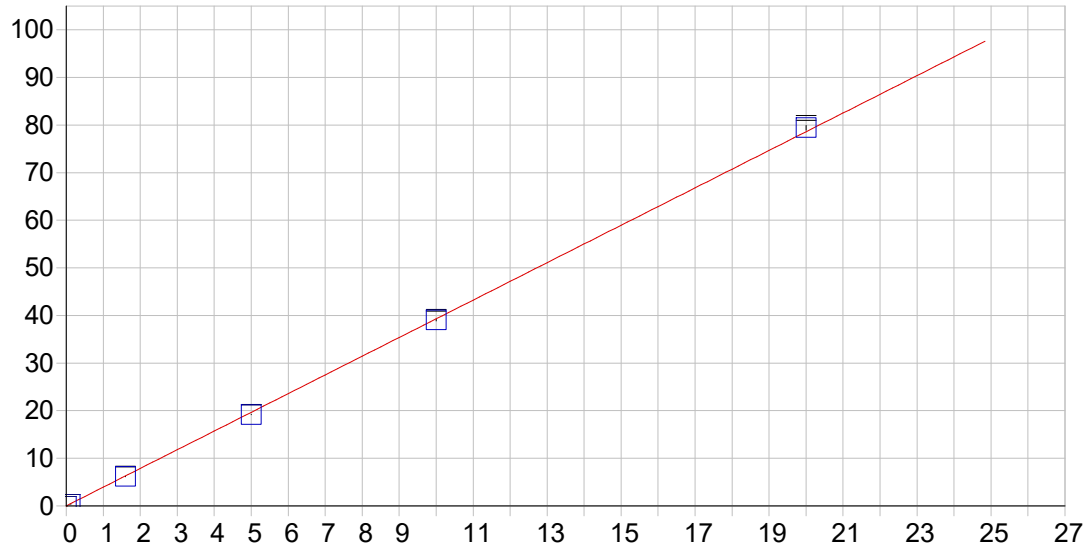


Al 396.152 { 85}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001034	Re-Slope:	1.000000
A1 (Gain):	0.099909	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999969	Status:	OK.
Std Error of Est:	0.000059		
Predicted MDL:	0.026103		
Predicted MQL:	0.087011		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00103	.002	1
S1	.10000	.08739	-.013	-12.6	.00844	.001	1
S2	1.6000	1.6109	.011	.679	.16288	.002	1
S3	5.0000	4.9577	-.042	-.845	.50359	.002	1
S4	10.000	9.9723	-.028	-.277	1.0139	.004	1
S5	20.000	20.072	.072	.362	2.0416	.007	1

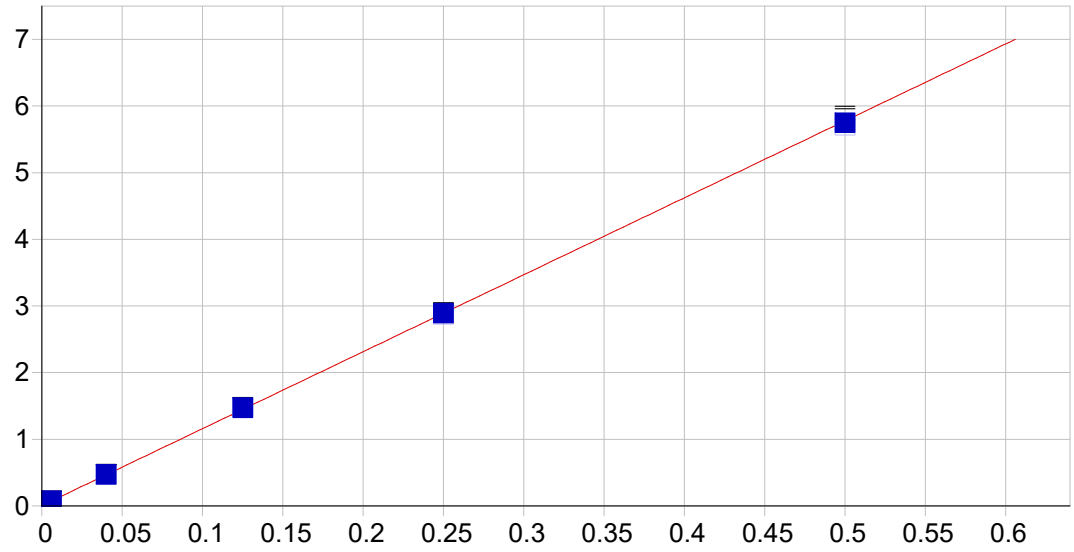


Ba 493.409 { 68}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.010259	Re-Slope:	1.000000
A1 (Gain):	3.929591	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999915	Status:	OK.
Std Error of Est:	0.003791		
Predicted MDL:	0.001133		
Predicted MQL:	0.003775		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.01027	.003	1
S1	.10000	.10177	.002	1.77	.41017	.000	1
S2	1.6000	1.5713	-.029	-1.80	6.1847	.037	1
S3	5.0000	4.8784	-.122	-2.43	19.180	.011	1
S4	10.000	9.9349	-.065	-.651	39.050	.168	1
S5	20.000	20.214	.214	1.07	79.442	.517	1

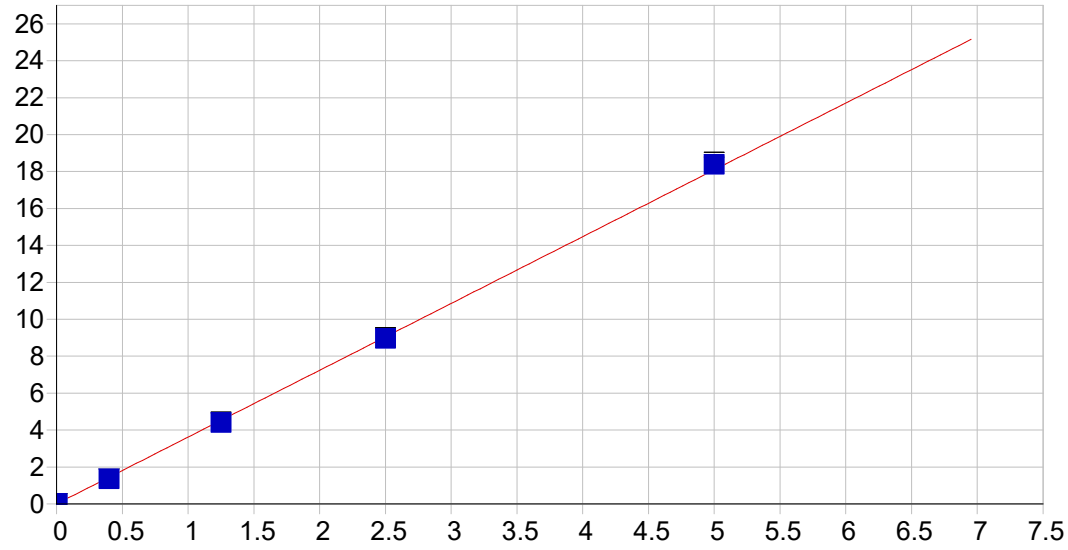


Be 234.861 {144}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004068	Re-Slope:	1.000000
A1 (Gain):	11.548087	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999960	Status:	OK.
Std Error of Est:	0.000296		
Predicted MDL:	0.000142		
Predicted MQL:	0.000473		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00406	.001	1
S1	.00600	.00634	.000	5.72	.07658	.001	1
S2	.04000	.04040	.000	1.00	.46755	.003	1
S3	.12500	.12710	.002	1.68	1.4622	.009	1
S4	.25000	.24979	-.000	-.085	2.8694	.009	1
S5	.50000	.49737	-.003	-.527	5.7092	.103	1

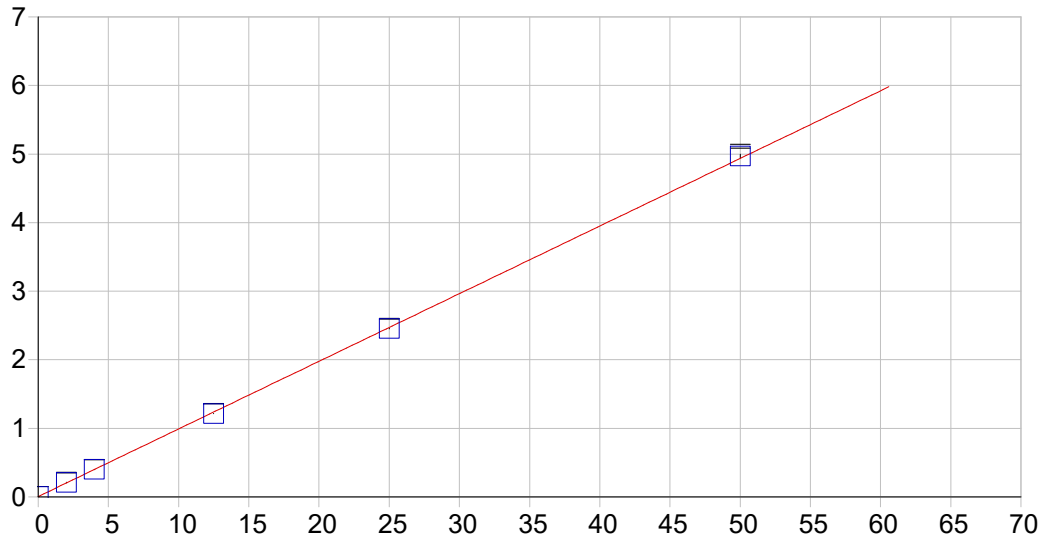


Cd 214.438 {457}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000405	Re-Slope:	1.000000
A1 (Gain):	3.618392	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999794	Status:	OK.
Std Error of Est:	0.000667		
Predicted MDL:	0.000084		
Predicted MQL:	0.000280		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00041	.000	1
S1	.00600	.00572	-.000	-4.70	.02111	.000	1
S2	.40000	.37583	-.024	-6.04	1.3604	.004	1
S3	1.2500	1.2183	-.032	-2.54	4.4090	.023	1
S4	2.5000	2.4763	-.024	-.946	8.9615	.049	1
S5	5.0000	5.0798	.080	1.60	18.383	.127	1

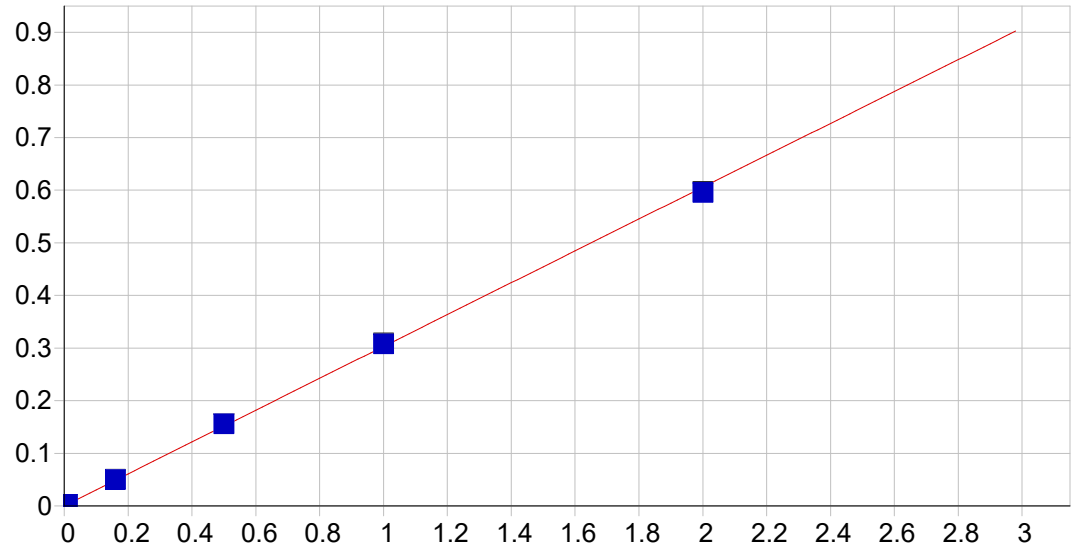


Ca 373.690 { 90}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005694	Re-Slope:	1.000000
A1 (Gain):	0.098607	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999945	Status:	OK.
Std Error of Est:	0.000549		
Predicted MDL:	0.023210		
Predicted MQL:	0.077366		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00003	-.000	.000	.00569	.000	1
S1	2.0000	2.0679	.068	3.39	.20960	.004	1
S2	4.0000	3.9944	-.006	-.139	.39957	.004	1
S3	12.500	12.264	-.236	-1.89	1.2150	.002	1
S4	25.000	24.827	-.173	-.693	2.4538	.006	1
S5	50.000	50.347	.347	.693	4.9702	.026	1

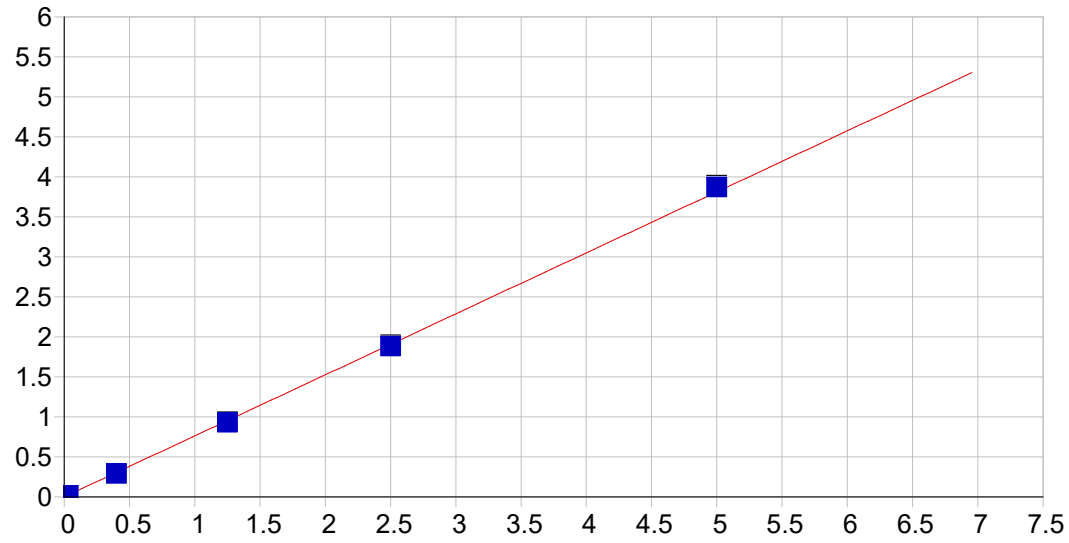


Cr 267.716 {126}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000306	Re-Slope:	1.000000
A1 (Gain):	0.302798	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999806	Status:	OK.
Std Error of Est:	0.000044		
Predicted MDL:	0.000946		
Predicted MQL:	0.003152		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00031	.000	1
S1	.01000	.01124	.001	12.4	.00371	.000	1
S2	.16000	.16335	.003	2.09	.04981	.000	1
S3	.50000	.51401	.014	2.80	.15608	.000	1
S4	1.0000	1.0154	.015	1.54	.30803	.001	1
S5	2.0000	1.9660	-.034	-1.70	.59616	.001	1

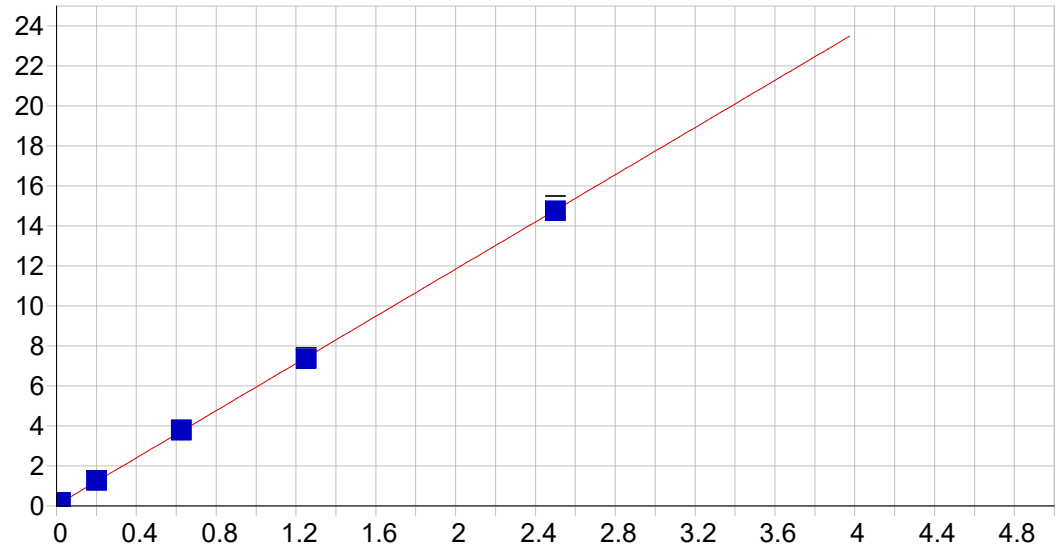


Co 228.616 {448}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000244	Re-Slope:	1.000000
A1 (Gain):	0.762580	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999819	Status:	OK.
Std Error of Est:	0.000295		
Predicted MDL:	0.000400		
Predicted MQL:	0.001333		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00025	.000	1
S1	.03000	.03039	.000	1.32	.02331	.000	1
S2	.40000	.38005	-.020	-4.99	.29062	.001	1
S3	1.2500	1.2204	-.030	-2.37	.93266	.004	1
S4	2.5000	2.4696	-.030	-1.22	1.8870	.011	1
S5	5.0000	5.0796	.080	1.59	3.8807	.015	1

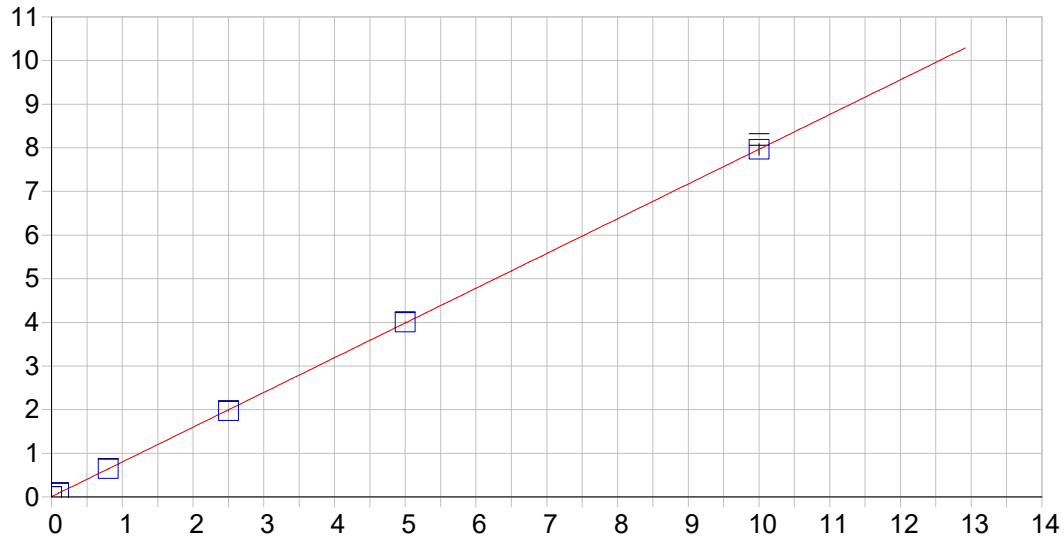


Cu 324.754 {104}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.041534	Re-Slope:	1.000000
A1 (Gain):	5.901199	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999938	Status:	OK.
Std Error of Est:	0.000773		
Predicted MDL:	0.000665		
Predicted MQL:	0.002216		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.04152	.004	1
S1	.02000	.02203	.002	10.1	.17156	.000	1
S2	.20000	.20639	.006	3.19	1.2601	.004	1
S3	.62500	.63230	.007	1.17	3.7747	.021	1
S4	1.2500	1.2416	-.008	-.669	7.3723	.039	1
S5	2.5000	2.4927	-.007	-.294	14.758	.250	1

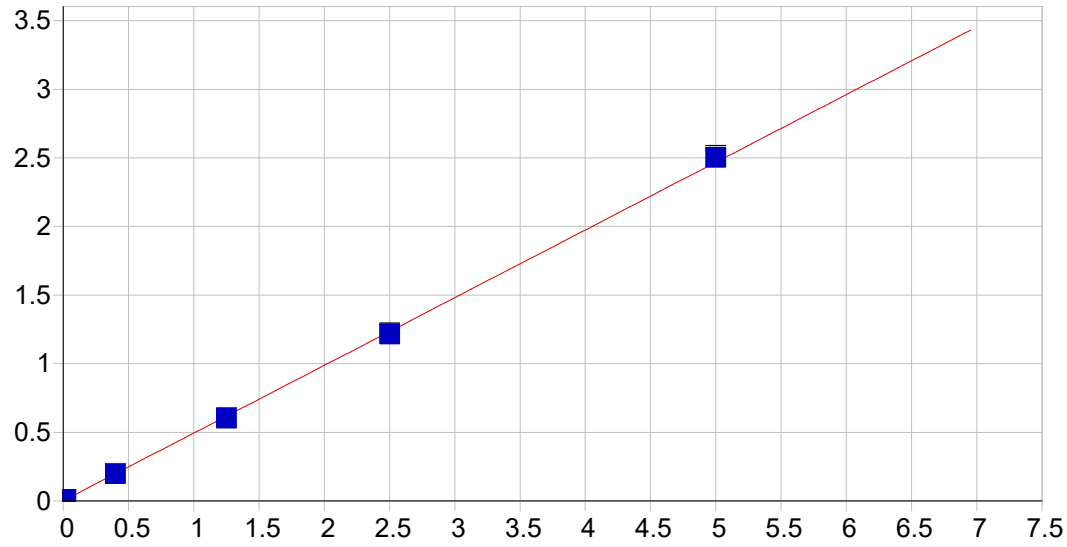


Fe 259.837 {130}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005032	Re-Slope:	1.000000
A1 (Gain):	0.796227	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999957	Status:	OK.
Std Error of Est:	0.000389		
Predicted MDL:	0.002376		
Predicted MQL:	0.007919		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00502	.001	1
S1	.10000	.11019	.010	10.2	.09277	.002	1
S2	.80000	.80544	.005	.680	.64635	.001	1
S3	2.5000	2.4673	-.033	-1.31	1.9695	.001	1
S4	5.0000	5.0208	.021	.415	4.0027	.007	1
S5	10.000	9.9963	-.004	-.037	7.9644	.131	1

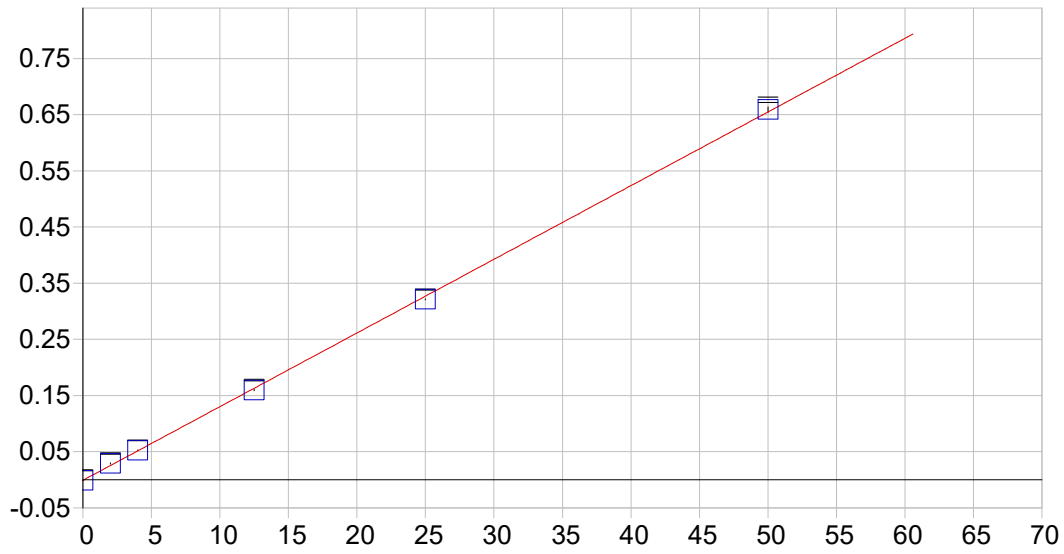


Mn 257.610 {131}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000980	Re-Slope:	1.000000
A1 (Gain):	0.493422	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999859	Status:	OK.
Std Error of Est:	0.000137		
Predicted MDL:	0.001381		
Predicted MQL:	0.004603		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00098	.001	1
S1	.02000	.02242	.002	12.1	.01206	.001	1
S2	.40000	.39900	-.001	-.251	.19803	.002	1
S3	1.2500	1.2196	-.030	-2.43	.60333	.005	1
S4	2.5000	2.4607	-.039	-1.57	1.2162	.008	1
S5	5.0000	5.0683	.068	1.37	2.5040	.015	1

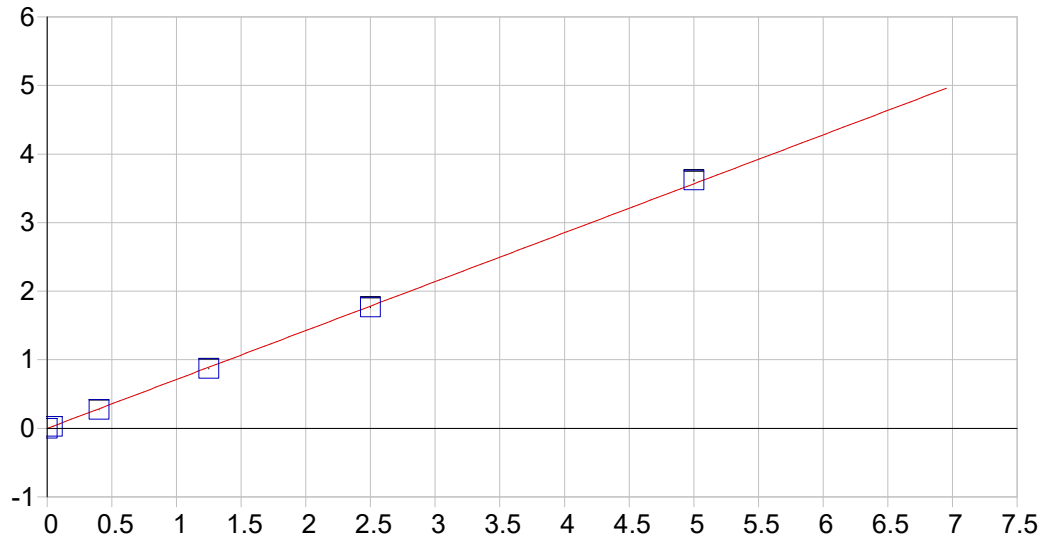


Mg 279.079 {121}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000899	Re-Slope:	1.000000
A1 (Gain):	0.013118	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999701	Status:	OK.
Std Error of Est:	0.000170		
Predicted MDL:	0.064679		
Predicted MQL:	0.215596		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00026	-.000	.000	-.00090	.001	1
S1	2.0000	2.2803	.280	14.0	.02901	.001	1
S2	4.0000	4.0854	.085	2.13	.05269	.000	1
S3	12.500	12.257	-.243	-1.95	.15988	.001	1
S4	25.000	24.556	-.444	-1.78	.32122	.001	1
S5	50.000	50.322	.322	.643	.65921	.005	1

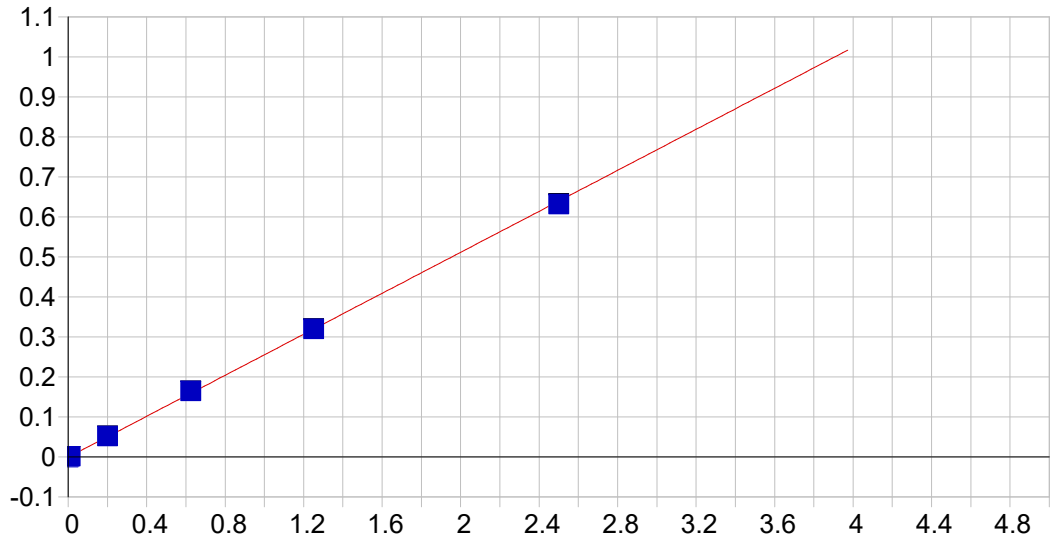


Ni 231.604 {446}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000373	Re-Slope:	1.000000
A1 (Gain):	0.713325	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999848	Status:	OK.
Std Error of Est:	0.000292		
Predicted MDL:	0.000500		
Predicted MQL:	0.001667		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00037	.001	1
S1	.04000	.03974	-.000	-.660	.02797	.000	1
S2	.40000	.38209	-.018	-4.48	.27218	.001	1
S3	1.2500	1.2206	-.029	-2.35	.87029	.004	1
S4	2.5000	2.4751	-.025	-.996	1.7652	.009	1
S5	5.0000	5.0725	.072	1.45	3.6180	.011	1

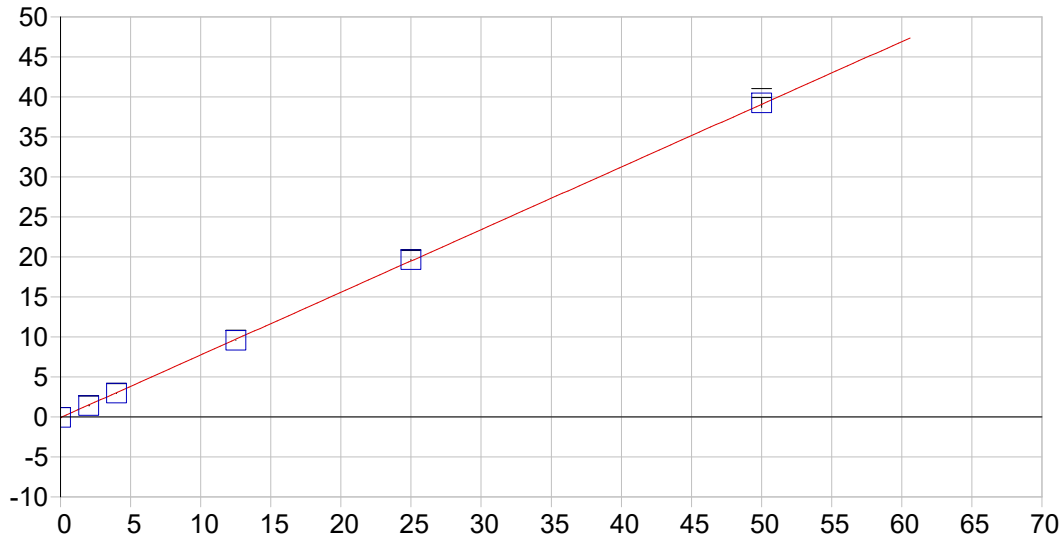


Ag 328.068 {103}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000875	Re-Slope:	1.000000
A1 (Gain):	0.256189	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999854	Status:	OK.
Std Error of Est:	0.000036		
Predicted MDL:	0.001339		
Predicted MQL:	0.004465		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00088	.000	1
S1	.01000	.01080	.001	8.03	.00189	.000	1
S2	.20000	.20646	.006	3.23	.05196	.000	1
S3	.62500	.64611	.021	3.38	.16446	.000	1
S4	1.2500	1.2510	.001	.081	.31924	.001	1
S5	2.5000	2.4706	-.029	-1.18	.63130	.002	1

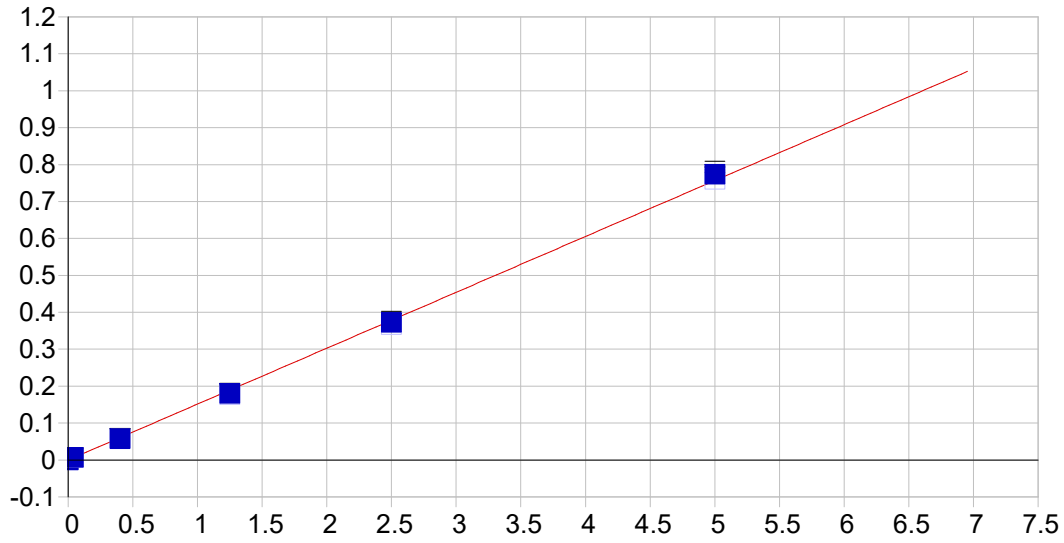


Na 818.326 { 41}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.088104	Re-Slope:	1.000000
A1 (Gain):	0.783221	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999929	Status:	OK.
Std Error of Est:	0.004921		
Predicted MDL:	0.014830		
Predicted MQL:	0.049433		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00017	.000	.000	-.08797	.009	1
S1	2.0000	1.9018	-.098	-4.91	1.4014	.013	1
S2	4.0000	3.8731	-.127	-3.17	2.9454	.022	1
S3	12.500	12.335	-.165	-1.32	9.5730	.026	1
S4	25.000	25.173	.173	.692	19.628	.050	1
S5	50.000	50.217	.217	.434	39.243	.565	1

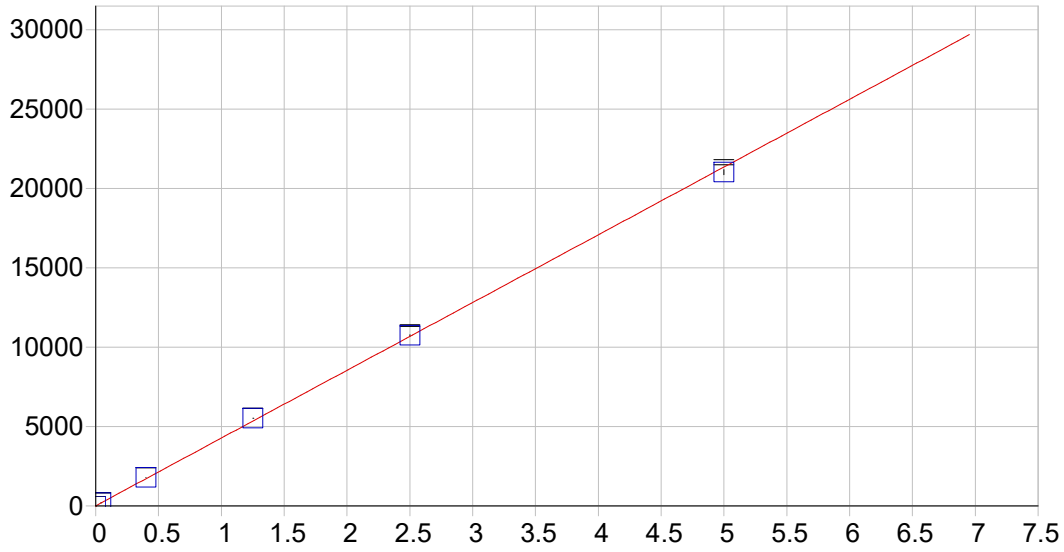


V 292.402 {115}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000012	Re-Slope:	1.000000
A1 (Gain):	0.151338	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999593	Status:	OK.
Std Error of Est:	0.000100		
Predicted MDL:	0.007182		
Predicted MQL:	0.023940		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00001	.000	1
S1	.04000	.04453	.005	11.3	.00649	.001	1
S2	.40000	.38403	-.016	-3.99	.05705	.000	1
S3	1.2500	1.1884	-.062	-4.93	.17648	.001	1
S4	2.5000	2.4623	-.038	-1.51	.36590	.003	1
S5	5.0000	5.1109	.111	2.22	.75997	.008	1

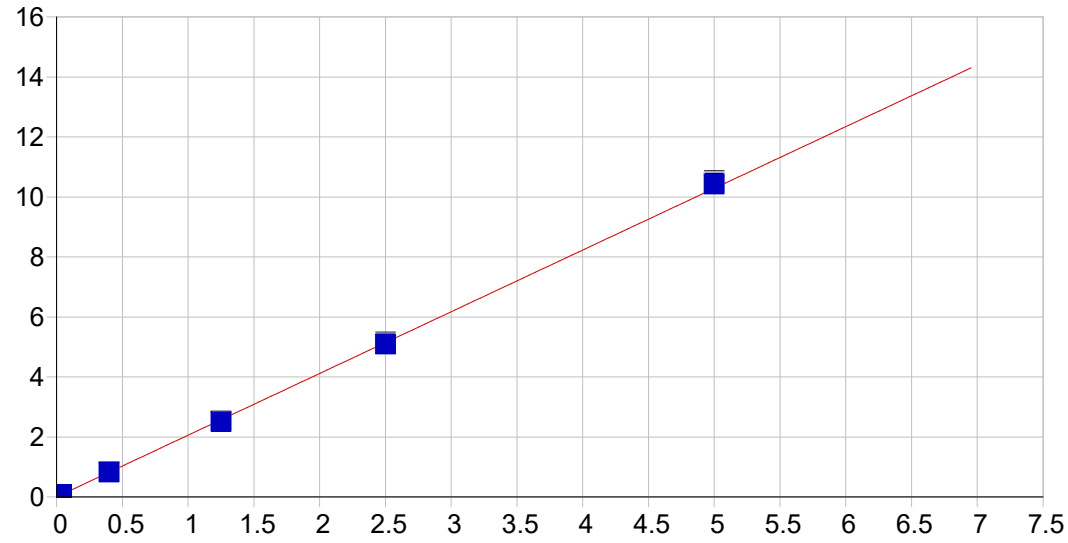


Zn 206.200 {464}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	7.376611	Re-Slope:	1.000000
A1 (Gain):	4269.578492	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999805	Status:	OK.
Std Error of Est:	1.980834		
Predicted MDL:	0.000296		
Predicted MQL:	0.000987		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	7.3508	.353	1
S1	.04000	.04340	.003	8.50	192.68	.527	1
S2	.40000	.41707	.017	4.27	1788.1	6.79	1
S3	1.2500	1.2912	.041	3.30	5520.3	4.63	1
S4	2.5000	2.5138	.014	.551	10740.	46.7	1
S5	5.0000	4.9245	-.075	-1.51	21033.	169.	1

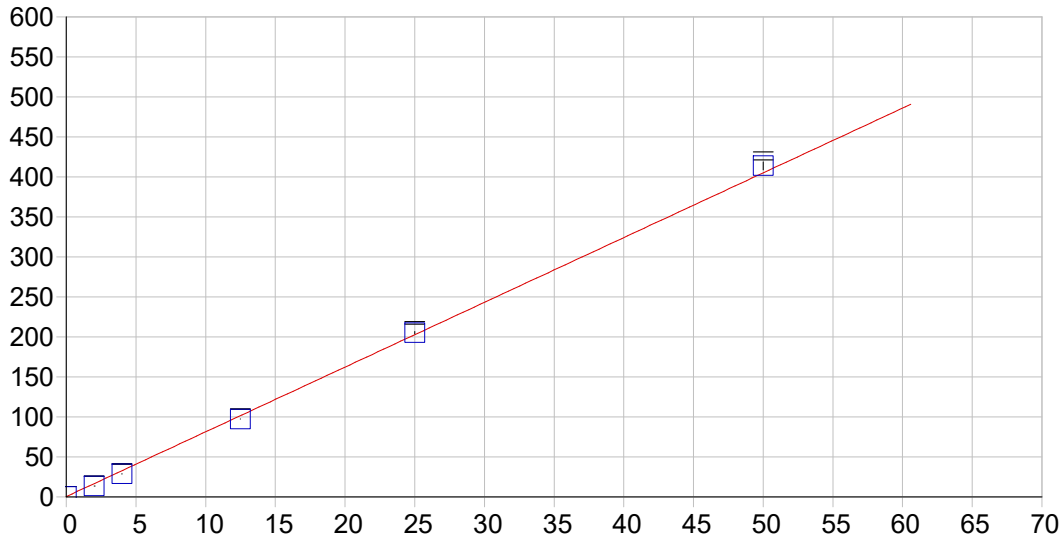


Zn 213.856 {158}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003353	Re-Slope:	1.000000
A1 (Gain):	2.057229	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999881	Status:	OK.
Std Error of Est:	0.000751		
Predicted MDL:	0.000508		
Predicted MQL:	0.001694		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00335	.000	1
S1	.04000	.04203	.002	5.08	.09042	.001	1
S2	.40000	.39775	-.002	-.563	.82760	.007	1
S3	1.2500	1.2149	-.035	-2.81	2.5215	.004	1
S4	2.5000	2.4718	-.028	-1.13	5.1259	.032	1
S5	5.0000	5.0635	.063	1.27	10.495	.047	1

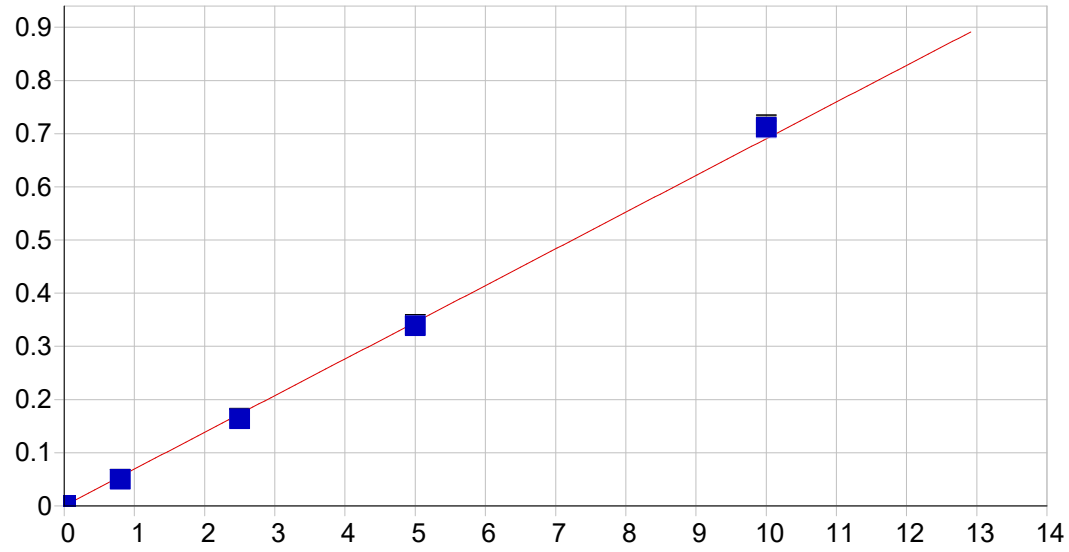


K 769.896 { 44}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.445229	Re-Slope:	1.000000
A1 (Gain):	8.092518	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999016	Status:	OK.
Std Error of Est:	0.190010		
Predicted MDL:	0.001262		
Predicted MQL:	0.004207		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00065	.001	.000	.45045	.008	1
S1	2.0000	1.6157	-.384	-19.2	13.521	.107	1
S2	4.0000	3.5078	-.492	-12.3	28.832	.363	1
S3	12.500	11.976	-.524	-4.19	97.360	.078	1
S4	25.000	25.316	.316	1.26	205.31	1.61	1
S5	50.000	51.085	1.08	2.17	413.85	5.14	1

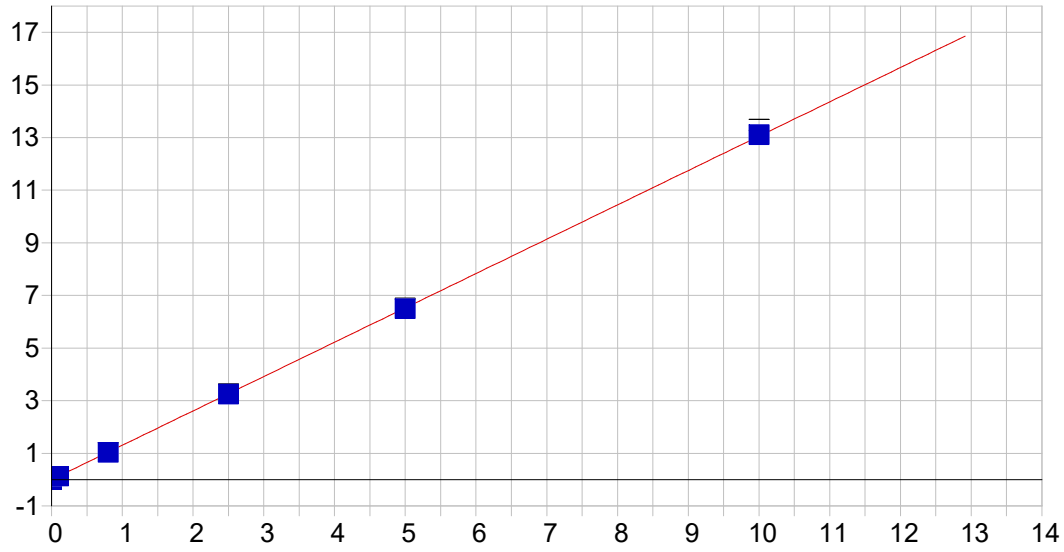


P 177.495 {490}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000321	Re-Slope:	1.000000
A1 (Gain):	0.069008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999260	Status:	OK.
Std Error of Est:	0.000062		
Predicted MDL:	0.002294		
Predicted MQL:	0.007648		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00032	.000	1
S1	.02000	.01696	-.003	-15.2	.00148	.000	1
S2	.80000	.71818	-.082	-10.2	.04975	.000	1
S3	2.5000	2.3674	-.133	-5.30	.16329	.001	1
S4	5.0000	4.9091	-.091	-1.82	.33829	.002	1
S5	10.000	10.308	.308	3.08	.71009	.005	1

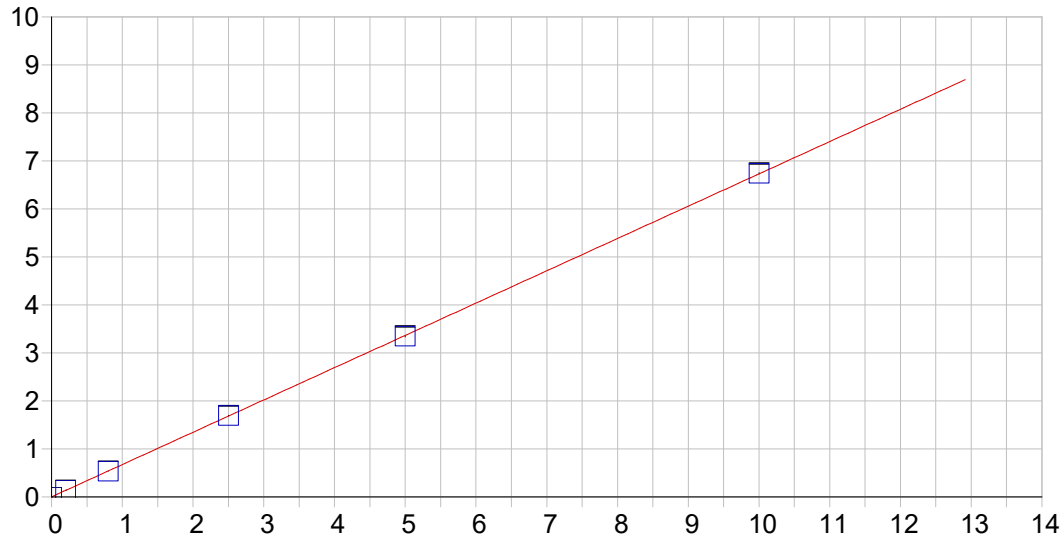


B 249.678 {135}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000171	Re-Slope:	1.000000
A1 (Gain):	1.305387	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999984	Status:	OK.
Std Error of Est:	0.000387		
Predicted MDL:	0.001564		
Predicted MQL:	0.005214		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00017	.001	1
S1	.10000	.10224	.002	2.24	.13314	.002	1
S2	.80000	.78709	-.013	-1.61	1.0265	.005	1
S3	2.5000	2.4906	-.009	-.377	3.2485	.011	1
S4	5.0000	4.9770	-.023	-.460	6.4918	.022	1
S5	10.000	10.043	.043	.431	13.100	.212	1

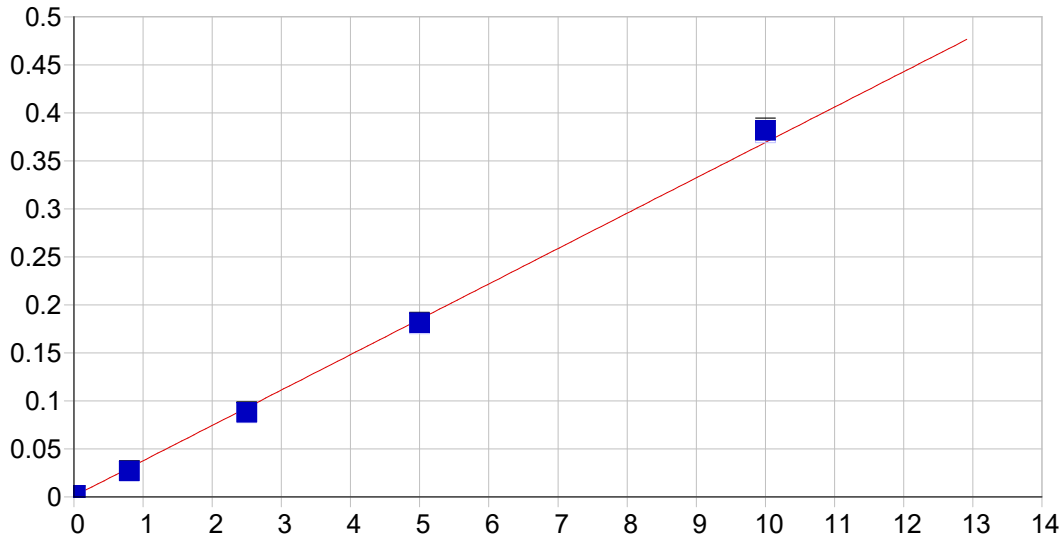


Mo 202.030 {467}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000781	Re-Slope:	1.000000
A1 (Gain):	0.672904	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999989	Status:	OK.
Std Error of Est:	0.000236		
Predicted MDL:	0.000512		
Predicted MQL:	0.001708		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00078	.000	1
S1	.20000	.20522	.005	2.61	.13888	.000	1
S2	.80000	.79542	-.005	-.572	.53602	.003	1
S3	2.5000	2.5124	.012	.497	1.6914	.007	1
S4	5.0000	4.9716	-.028	-.569	3.3462	.016	1
S5	10.000	10.015	.015	.154	6.7402	.013	1

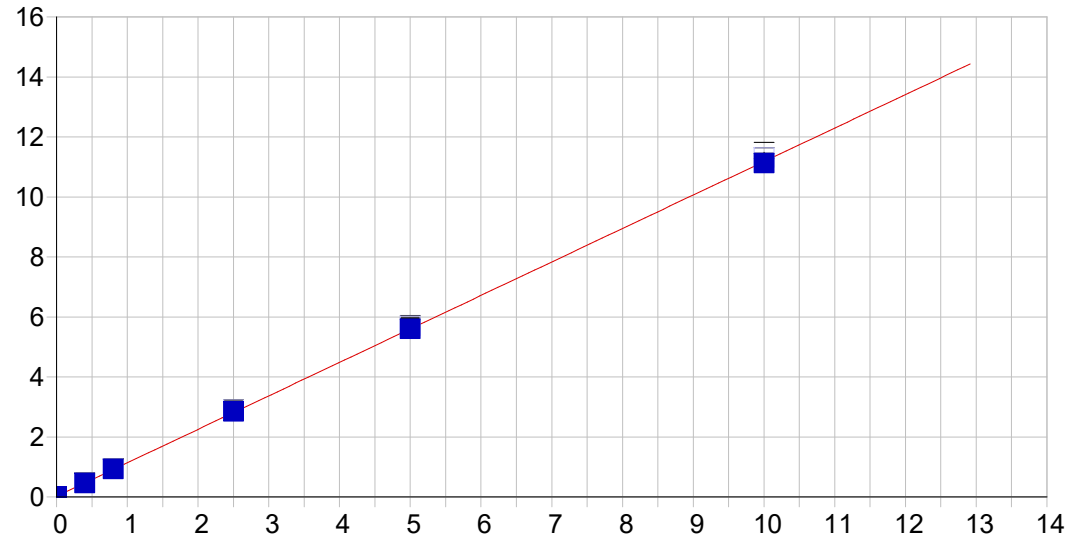


S 182.034 {485}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000803	Re-Slope:	1.000000
A1 (Gain):	0.036838	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999063	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.004080		
Predicted MQL:	0.013601		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00080	.000	1
S1	.02000	.01188	-.008	-40.6	.00118	.000	1
S2	.80000	.70948	-.091	-11.3	.02674	.000	1
S3	2.5000	2.3675	-.133	-5.30	.08740	.001	1
S4	5.0000	4.8960	-.104	-2.08	.17994	.001	1
S5	10.000	10.335	.335	3.35	.37906	.003	1

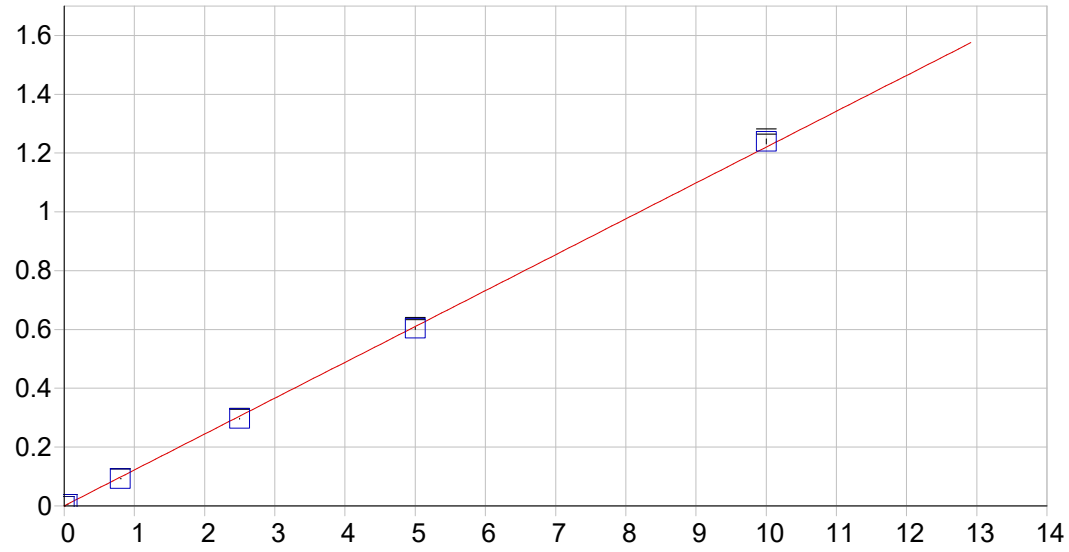


Si 251.611 {134}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.020501	Re-Slope:	1.000000
A1 (Gain):	1.115863	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999973	Status:	OK.
Std Error of Est:	0.000881		
Predicted MDL:	0.001669		
Predicted MQL:	0.005563		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.02049	.003	1
S1	.40000	.39704	-.003	-.740	.46614	.002	1
S2	.80000	.81383	.014	1.73	.94306	.001	1
S3	2.5000	2.5368	.037	1.47	2.8963	.008	1
S4	5.0000	5.0011	.001	.022	5.6913	.024	1
S5	10.000	9.9512	-.049	-.488	11.305	.181	1

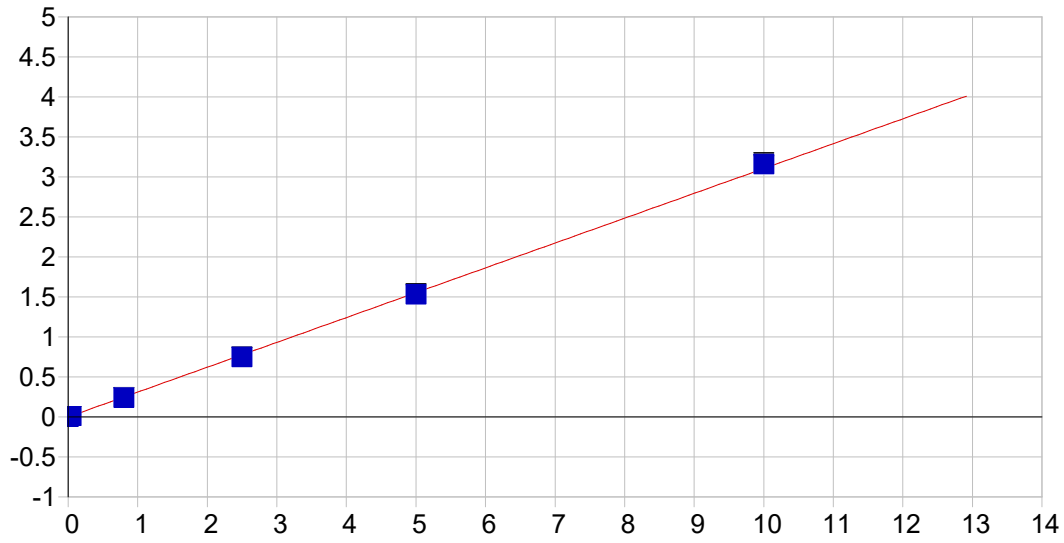


Sn 189.989 {478}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000303	Re-Slope:	1.000000
A1 (Gain):	0.121984	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999788	Status:	OK.
Std Error of Est:	0.000083		
Predicted MDL:	0.001163		
Predicted MQL:	0.003878		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00030	.000	1
S1	.04000	.04391	.004	9.77	.00566	.000	1
S2	.80000	.75682	-.043	-5.40	.09262	.000	1
S3	2.5000	2.4304	-.070	-2.78	.29678	.002	1
S4	5.0000	4.9481	-.052	-1.04	.60389	.004	1
S5	10.000	10.161	.161	1.61	1.2398	.009	1

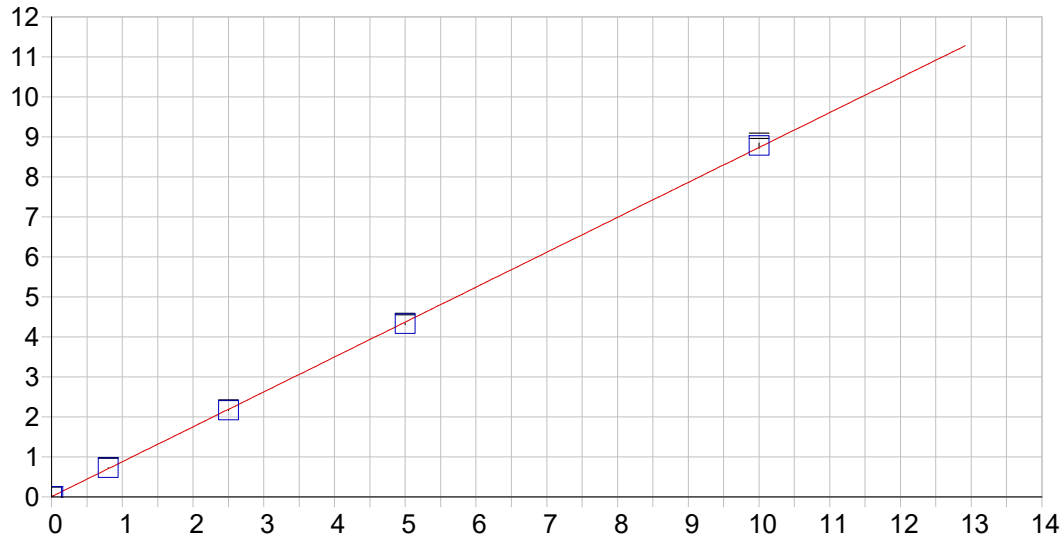


Ti 336.121 {100}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000188	Re-Slope:	1.000000
A1 (Gain):	0.310523	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999793	Status:	OK.
Std Error of Est:	0.000209		
Predicted MDL:	0.004573		
Predicted MQL:	0.015244		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00019	.002	1
S1	.04000	.04128	.001	3.21	.01262	.000	1
S2	.80000	.77967	-.020	-2.54	.24179	.001	1
S3	2.5000	2.4094	-.091	-3.62	.74761	.002	1
S4	5.0000	4.9374	-.063	-1.25	1.5322	.007	1
S5	10.000	10.172	.172	1.72	3.1570	.017	1

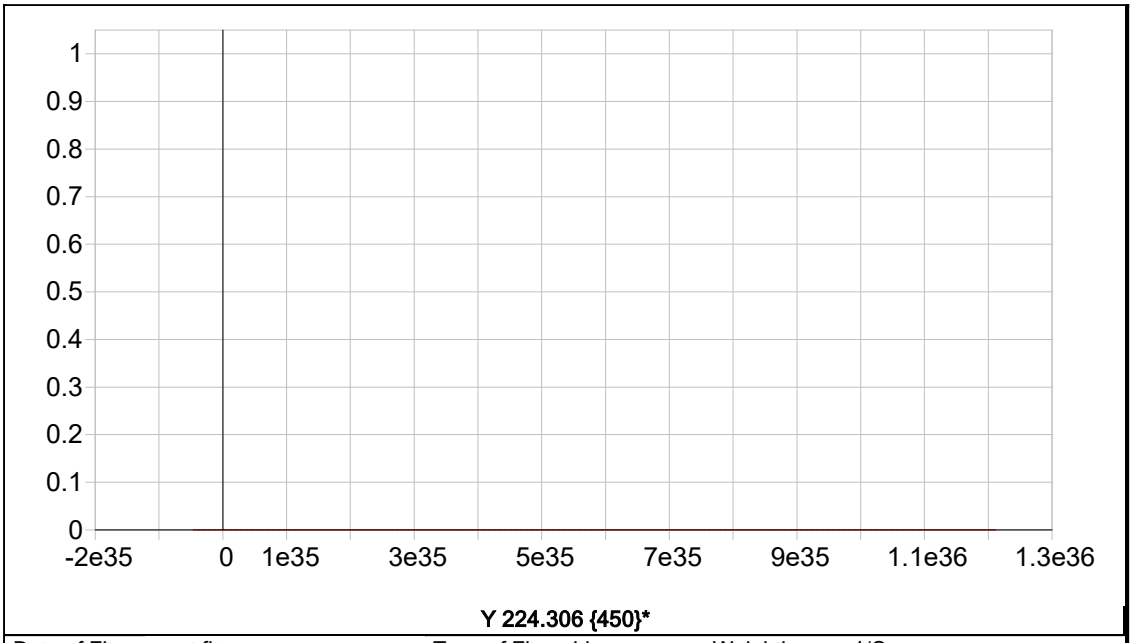


Li 670.784 { 50}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006143	Re-Slope:	1.000000
A1 (Gain):	0.872914	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999942	Status:	OK.
Std Error of Est:	0.000219		
Predicted MDL:	0.007217		
Predicted MQL:	0.024056		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00615	.005	1
S5	10.000	10.053	.053	.526	8.7812	.066	1
S4	5.0000	4.9492	-.051	-1.02	4.3264	.021	1
S3	2.5000	2.4751	-.025	-.996	2.1667	.007	1
S2	.80000	.82539	.025	3.17	.72664	.007	1
S1	.02000	.01771	-.002	-11.4	.02160	.001	1

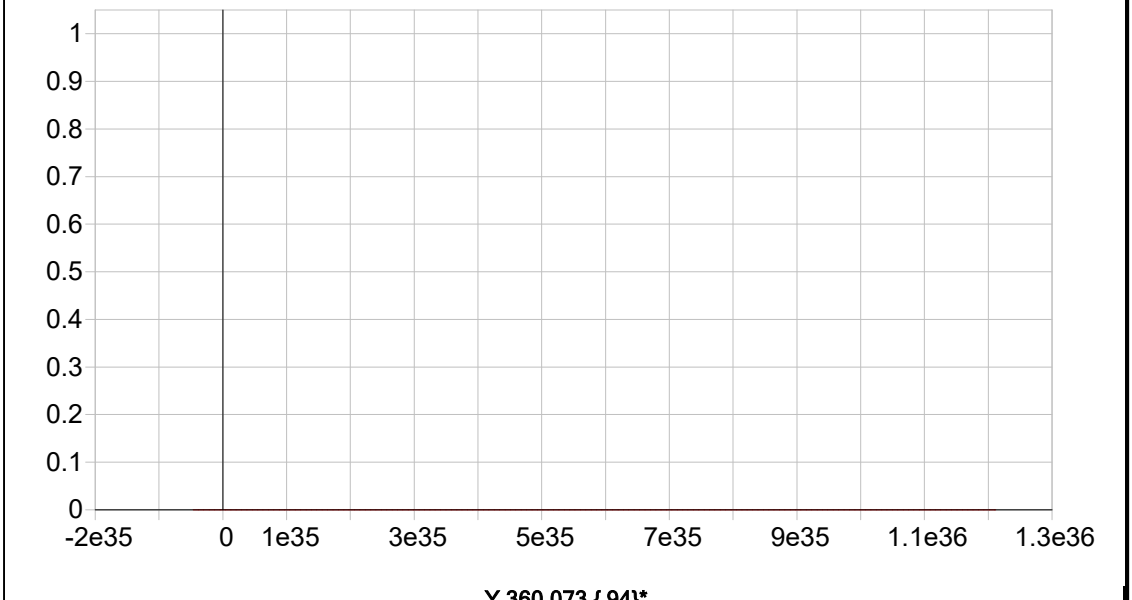


Y 224.306 {450}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



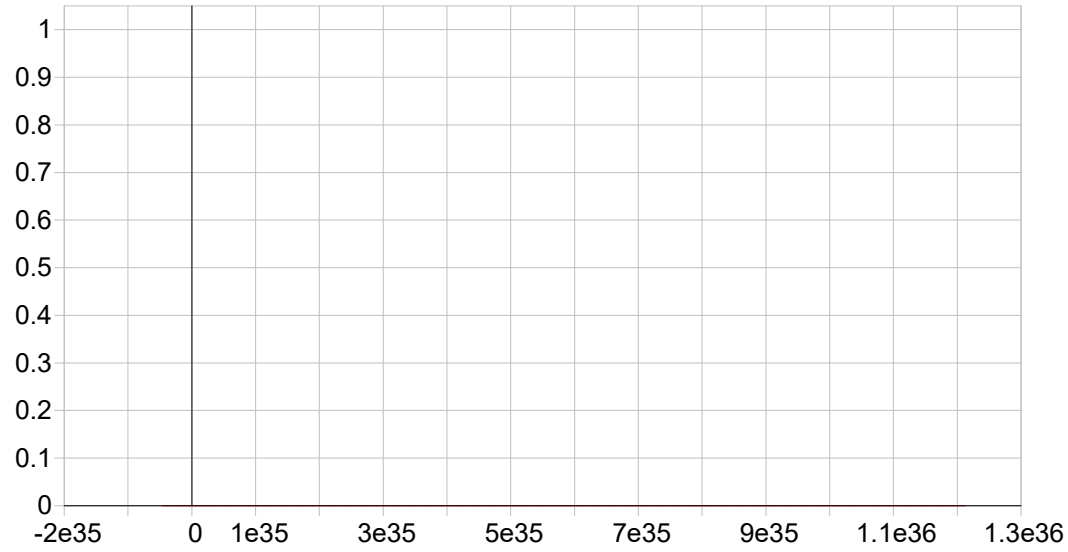
Y 360.073 { 94}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000

A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

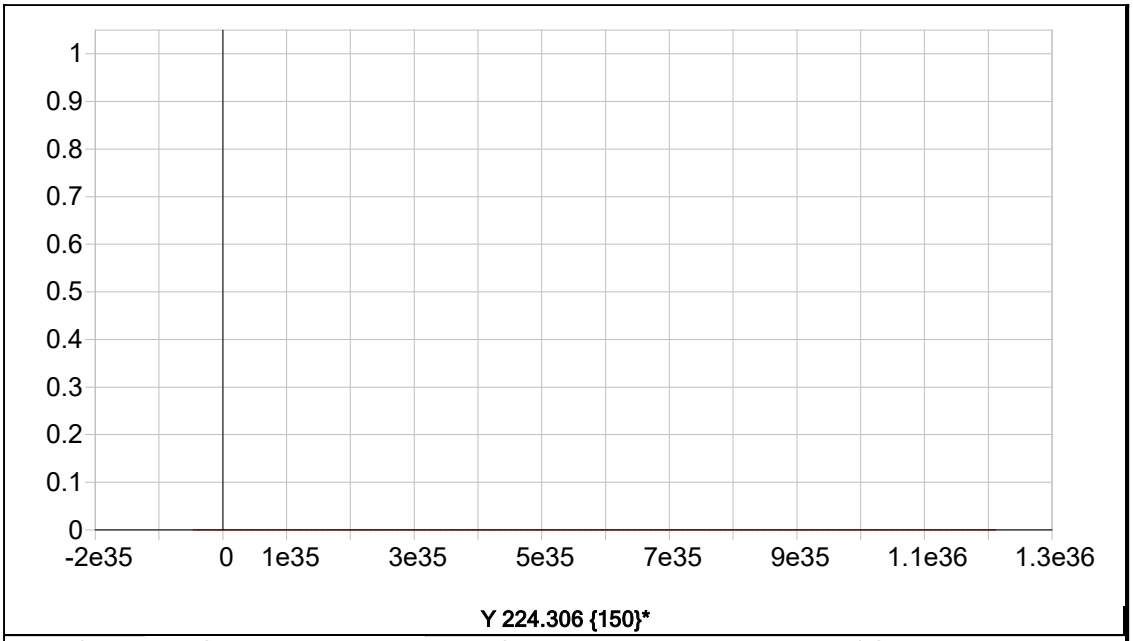
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 371.030 { 91}*

Date of Fit:	<not fit>		Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):		0.000000		Re-Slope:	1.000000	
A1 (Gain):		0.000000		Y-int:	0.000000	
A2 (Curvature):		0.000000				
n (Exponent):		1.000000				
Correlation:		0.000000		Status:	Warning	Zero Gain
Std Error of Est:		0.000000				
Predicted MDL:		n/a				
Predicted MQL:		n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis

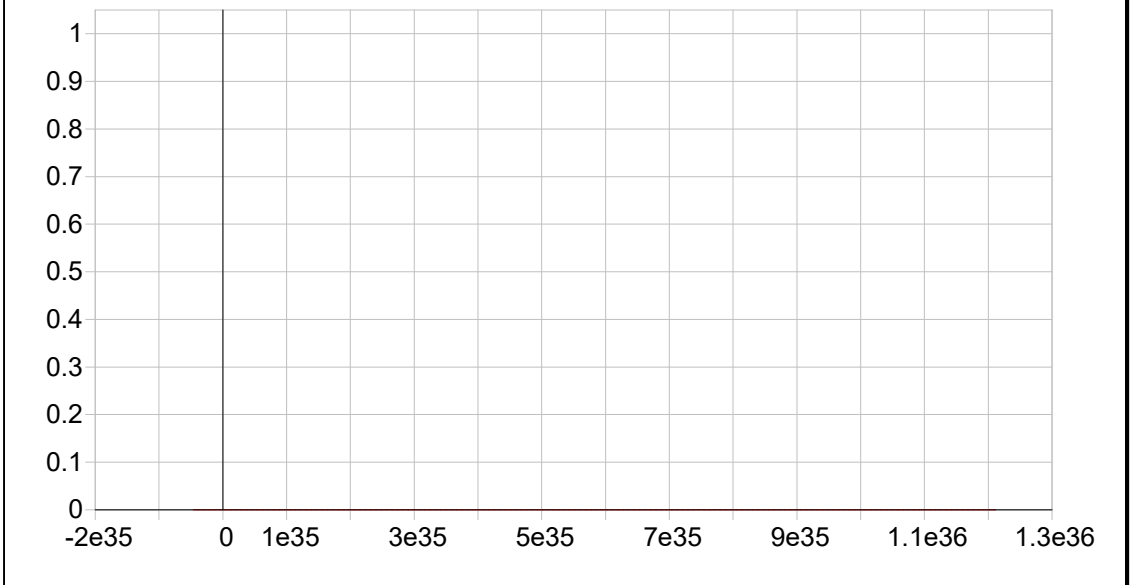


Y 224.306 {150}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



In 230.606 {446}*

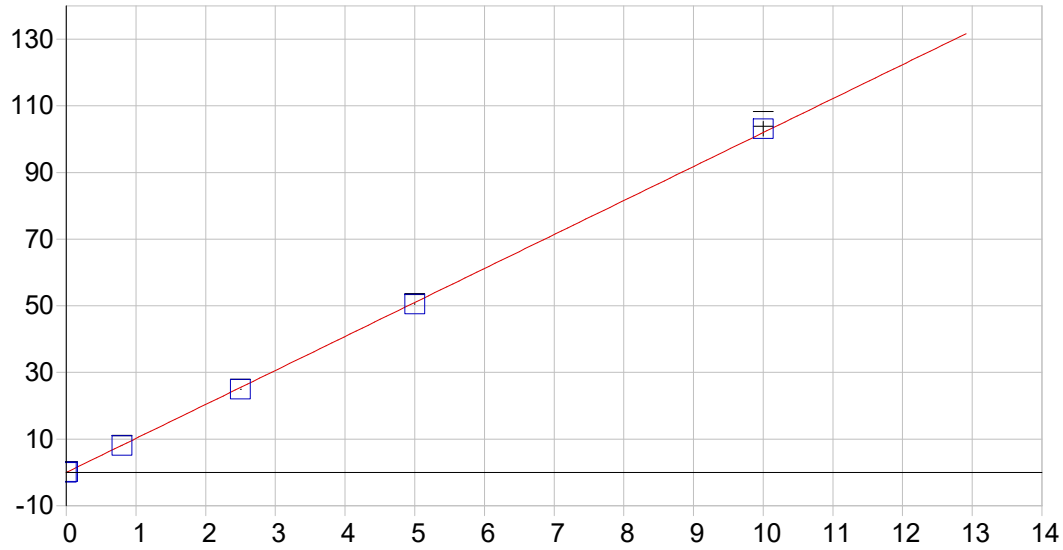
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

A2 (Curvature):	0.000000			
n (Exponent):	1.000000			
Correlation:	0.000000	Status:	Warning	Zero Gain
Std Error of Est:	0.000000			
Predicted MDL:	n/a			
Predicted MQL:	n/a			

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Sr 407.771 { 83}

Date of Fit:	7/15/2025 7:25:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000902	Re-Slope:	1.000000
A1 (Gain):	10.198193	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999920	Status:	OK.
Std Error of Est:	0.003031		
Predicted MDL:	0.000248		
Predicted MQL:	0.000825		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00091	.003	1
S1	.02000	.02096	.001	4.79	.21284	.004	1
S2	.80000	.79086	-.009	-1.14	8.0644	.054	1
S3	2.5000	2.4445	-.055	-2.22	24.929	.014	1
S4	5.0000	4.9555	-.044	-.890	50.536	.159	1
S5	10.000	10.108	.108	1.08	103.08	2.20	1

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: S0 Acquired: 7/15/2025 19:01:03 Type: Cal
Method: METHOD 6010D, 200.7 M(v41) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00005**	**-.00010**	**.00015**	**-.00019**	**.00075**	**-.00103**	**.01027**	**.00406**
Stddev	.00005	.00007	.00019	.00029	.00035	.00184	.00265	.00101
%RSD	110.37	62.631	123.95	153.53	46.202	177.86	25.794	24.748
#1	-.00010	-.00014	.00036	-.00050	.00077	.00101	.00788	.00290
#2	.00001	-.00003	-.00002	.00009	.00039	-.00255	.01312	.00459
#3	-.00005	-.00015	.00013	-.00016	.00109	-.00156	.00980	.00469

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00041**	**.00569**	**.00031**	**.00025**	**.04152**	**.00466**	**.00098**	**-.00090**
Stddev	.00028	.00040	.00008	.00006	.00372	.00062	.00069	.00094
%RSD	68.821	7.0531	25.539	23.893	8.9546	13.218	70.568	104.21
#1	.00009	.00615	.00029	.00031	.03801	.00410	.00087	-.00011
#2	.00052	.00543	.00039	.00021	.04541	.00457	.00035	-.00194
#3	.00062	.00549	.00024	.00021	.04113	.00532	.00172	-.00065

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00037**	**-.00088**	**-.08797**	**.00001**	**.00335**	**.45045**	**.00032**	**-.00017**
Stddev	.00051	.00022	.00923	.00047	.00046	.00775	.00019	.00088
%RSD	136.39	25.403	10.496	4058.8	13.755	1.7204	59.708	515.09
#1	.00018	-.00074	-.09489	.00041	.00375	.45895	.00010	.00007
#2	-.00081	-.00113	-.07749	-.00050	.00346	.44865	.00043	.00057
#3	-.00049	-.00075	-.09154	.00013	.00285	.44376	.00044	-.00115

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00078**	**.00080**	**.02049**	**.00030**	**-.00019**	**.00615**	**-.00091**
Stddev	.00031	.00010	.00257	.00013	.00159	.00492	.00325
%RSD	39.318	12.781	12.564	42.291	847.87	80.136	358.39
#1	.00047	.00090	.01805	.00038	.00152	.00279	.00117
#2	.00108	.00070	.02024	.00038	-.00046	.01180	-.00465
#3	.00078	.00081	.02318	.00015	-.00162	.00385	.00076

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: S0 Acquired: 7/15/2025 19:01:03 Type: Cal
Method: METHOD 6010D, 200.7 M(v41) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3281.9	34686.	2693.1	2887.6	5252.3
Stddev	7.2	208.	17.3	4.9	17.6
%RSD	.21809	.60072	.64252	.17119	.33483
#1	3276.8	34457.	2711.9	2889.9	5232.0
#2	3278.9	34865.	2689.6	2890.9	5262.3
#3	3290.1	34736.	2677.8	2881.9	5262.7

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: S1 Acquired: 7/15/2025 19:05:36 Type: Cal
Method: METHOD 6010D, 200.7 M(v41) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00070**	**.00470**	**.00277**	**.00155**	**.00842**	**.00844**	**.41017**	**.07658**	**.02111**
Stddev	.00015	.00011	.00061	.00036	.00019	.00092	.00050	.00122	.00040
%RSD	21.173	2.2479	22.025	23.363	2.2773	10.916	.12185	1.5979	1.8822
#1	.00063	.00459	.00311	.00152	.00822	.00882	.40988	.07535	.02119
#2	.00086	.00471	.00314	.00120	.00860	.00911	.40989	.07660	.02068
#3	.00059	.00480	.00207	.00193	.00845	.00739	.41075	.07780	.02146

Elem	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.20960**	**.00371**	**.02331**	**.17156**	**.08863**	**.01206**	**.02901**	**.02797**	**.00189**
Stddev	.00369	.00008	.00014	.00037	.00224	.00086	.00122	.00024	.00037
%RSD	1.7615	2.0771	.59955	.21520	2.5311	7.1172	4.1971	.84422	19.825
#1	.21173	.00368	.02320	.17115	.08604	.01220	.02899	.02804	.00205
#2	.21173	.00380	.02347	.17185	.09002	.01284	.02781	.02816	.00215
#3	.20534	.00366	.02328	.17170	.08983	.01114	.03024	.02771	.00146

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.4014**	**.00649**	**.09042**	**13.521**	**.00148**	**.13314**	**.13888**	**.00118**	**.46614**
Stddev	.0134	.00148	.00059	.107	.00018	.00237	.00025	.00014	.00171
%RSD	.95468	22.755	.65186	.78971	12.397	1.7780	.17671	11.555	.36596
#1	1.3963	.00532	.08976	13.579	.00161	.13042	.13862	.00134	.46807
#2	1.4166	.00600	.09063	13.586	.00156	.13478	.13910	.00108	.46555
#3	1.3913	.00815	.09089	13.397	.00127	.13421	.13891	.00113	.46481

Elem	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00566**	**.01262**	**.02160**	**.21284**
Stddev	.00015	.00025	.00150	.00377
%RSD	2.7229	1.9815	6.9347	1.7728
#1	.00548	.01233	.02276	.21609
#2	.00574	.01280	.01991	.20870
#3	.00576	.01272	.02215	.21374

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: S1 Acquired: 7/15/2025 19:05:36 Type: Cal
Method: METHOD 6010D, 200.7 M(v41) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3219.4	35079.	2716.2	2938.4	5176.3
Stddev	3.9	163.	8.7	17.0	11.8
%RSD	.12043	.46485	.32005	.57948	.22790
#1	3219.1	35099.	2717.1	2948.3	5166.8
#2	3215.8	35230.	2707.0	2948.1	5172.5
#3	3223.5	34906.	2724.3	2918.7	5189.5

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: S2 Acquired: 7/15/2025 19:10:05 Type: Cal
Method: METHOD 6010D, 200.7 M(v41) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.02986	.08885	.18327	.06825	.12022	.16288	6.1847	.46755	1.3604
Stddev	.00033	.00033	.00074	.00052	.00068	.00188	.0368	.00331	.0037
%RSD	1.1010	.36928	.40215	.75657	.56956	1.1557	.59542	.70896	.27206
#1	.02950	.08849	.18258	.06777	.12080	.16109	6.1642	.46405	1.3564
#2	.02994	.08894	.18319	.06820	.11946	.16272	6.2272	.47064	1.3612
#3	.03015	.08913	.18405	.06879	.12040	.16484	6.1627	.46796	1.3636

Elem	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.39957	.04981	.29062	1.2601	.61143	.19803	.05269	.27218	.05196
Stddev	.00400	.00043	.00100	.0043	.00076	.00182	.00048	.00069	.00024
%RSD	.99997	.87179	.34335	.34221	.12376	.92003	.91569	.25390	.45768
#1	.39767	.05019	.28961	1.2551	.61190	.19727	.05215	.27144	.05168
#2	.40416	.04934	.29064	1.2627	.61055	.20011	.05306	.27229	.05208
#3	.39688	.04990	.29161	1.2624	.61183	.19671	.05287	.27281	.05211

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.9454	.05705	.82760	28.832	.04975	1.0265	.53602	.02674	.94306
Stddev	.0216	.00039	.00746	.363	.00024	.0051	.00269	.00031	.00134
%RSD	.73408	.67924	.90128	1.2588	.48407	.49429	.50227	1.1663	.14238
#1	2.9225	.05748	.83352	28.414	.04951	1.0209	.53558	.02675	.94351
#2	2.9482	.05672	.83005	29.060	.04977	1.0279	.53358	.02643	.94155
#3	2.9654	.05696	.81922	29.023	.04999	1.0307	.53891	.02705	.94412

Elem	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.09262	.24179	.72664	8.0644
Stddev	.00019	.00129	.00663	.0544
%RSD	.20576	.53302	.91207	.67445
#1	.09242	.24178	.71900	8.0356
#2	.09279	.24309	.73084	8.1272
#3	.09266	.24051	.73007	8.0305

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: S2 Acquired: 7/15/2025 19:10:05 Type: Cal
Method: METHOD 6010D, 200.7 M(v41) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3182.4	34230.	2680.7	2926.1	5077.6
Stddev	3.6	126.	11.7	22.6	7.1
%RSD	.11283	.36882	.43705	.77306	.14024
#1	3179.6	34354.	2690.9	2912.9	5082.8
#2	3186.4	34102.	2667.9	2913.1	5069.5
#3	3181.2	34235.	2683.3	2952.2	5080.5

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: S3 Acquired: 7/15/2025 19:14:21 Type: Cal
Method: METHOD 6010D, 200.7 M(v41) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.09858**	**.28086**	**.58623**	**.21585**	**.37672**	**.50359**	**19.180**	**1.4622**	**4.4090**
Stddev	.00033	.00179	.00348	.00073	.00175	.00190	.011	.0087	.0225
%RSD	.33573	.63719	.59311	.33609	.46531	.37635	.05954	.59487	.51102
#1	.09857	.28002	.58451	.21501	.37560	.50511	19.191	1.4685	4.3916
#2	.09892	.28292	.59023	.21621	.37874	.50419	19.183	1.4659	4.4344
#3	.09826	.27966	.58394	.21632	.37583	.50147	19.168	1.4523	4.4009

Elem	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.2150**	**.15608**	**.93266**	**3.7747**	**1.8639**	**.60333**	**.15988**	**.87029**	**.16446**
Stddev	.0021	.00024	.00384	.0206	.0013	.00457	.00130	.00419	.00017
%RSD	.16930	.15634	.41141	.54693	.06895	.75733	.81461	.48134	.10226
#1	1.2127	.15623	.92937	3.7983	1.8644	.60598	.16096	.86689	.16457
#2	1.2165	.15580	.93687	3.7603	1.8649	.59805	.16025	.87497	.16427
#3	1.2160	.15622	.93174	3.7654	1.8624	.60595	.15843	.86901	.16454

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**9.5730**	**.17648**	**2.5215**	**97.360**	**.16329**	**3.2485**	**1.6914**	**.08740**	**2.8963**
Stddev	.0256	.00055	.0038	.078	.00125	.0107	.0070	.00053	.0083
%RSD	.26776	.31396	.15224	.08034	.76764	.32936	.41391	.60106	.28636
#1	9.5780	.17602	2.5177	97.285	.16237	3.2594	1.6865	.08741	2.9059
#2	9.5452	.17634	2.5213	97.441	.16472	3.2481	1.6994	.08793	2.8915
#3	9.5957	.17710	2.5254	97.356	.16279	3.2380	1.6883	.08688	2.8915

Elem	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.29678**	**.74761**	**2.1667**	**24.929**
Stddev	.00155	.00169	.0072	.014
%RSD	.52169	.22650	.33283	.05675
#1	.29560	.74892	2.1713	24.941
#2	.29853	.74570	2.1704	24.932
#3	.29621	.74820	2.1584	24.913

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: S3 Acquired: 7/15/2025 19:14:21 Type: Cal
Method: METHOD 6010D, 200.7 M(v41) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3130.5	33857.	2700.1	2970.6	4841.4
Stddev	10.6	120.	7.6	14.2	22.2
%RSD	.33787	.35530	.28138	.47855	.45921
#1	3135.9	33996.	2706.9	2987.0	4854.5
#2	3118.3	33782.	2691.9	2963.3	4815.7
#3	3137.2	33794.	2701.4	2961.6	4854.0

Sample Name: S4 Acquired: 7/15/2025 19:18:38 Type: Cal
Method: METHOD 6010D, 200.7 M(v41) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.20368**	**.56195**	**1.1836**	**.42281**	**.74298**	**1.0139**	**39.050**	**2.8694**	**8.9615**
Stddev	.00087	.00344	.0062	.00138	.00380	.0036	.168	.0094	.0491
%RSD	.42546	.61298	.52733	.32743	.51207	.34975	.42894	.32866	.54781
#1	.20348	.56120	1.1807	.42185	.74012	1.0101	38.921	2.8657	8.9468
#2	.20293	.55895	1.1793	.42219	.74151	1.0144	38.990	2.8623	8.9214
#3	.20463	.56571	1.1907	.42440	.74730	1.0171	39.240	2.8801	9.0163

Elem	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.4538**	**.30803**	**1.8870**	**7.3723**	**3.7972**	**1.2162**	**.32122**	**1.7652**	**.31924**
Stddev	.0056	.00126	.0111	.0386	.0067	.0077	.00066	.0094	.00148
%RSD	.22703	.40810	.59014	.52328	.17685	.63287	.20628	.53179	.46247
#1	2.4502	.30944	1.8853	7.3544	3.7910	1.2125	.32066	1.7617	.32093
#2	2.4510	.30704	1.8768	7.3458	3.7962	1.2111	.32106	1.7580	.31824
#3	2.4602	.30760	1.8988	7.4165	3.8043	1.2251	.32195	1.7758	.31854

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**19.628**	**.36590**	**5.1259**	**205.31**	**.33829**	**6.4918**	**3.3462**	**.17994**	**5.6913**
Stddev	.050	.00273	.0318	1.61	.00203	.0216	.0159	.00075	.0243
%RSD	.25656	.74736	.61962	.78432	.60108	.33193	.47505	.41912	.42715
#1	19.637	.36355	5.1626	204.05	.33848	6.4819	3.3336	.17974	5.6864
#2	19.673	.36524	5.1066	207.13	.33617	6.4769	3.3408	.17930	5.6698
#3	19.574	.36890	5.1085	204.76	.34023	6.5165	3.3640	.18077	5.7177

Elem	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.60389**	**1.5322**	**4.3264**	**50.536**
Stddev	.00372	.0068	.0214	.159
%RSD	.61644	.44294	.49343	.31462
#1	.60249	1.5280	4.3173	50.430
#2	.60106	1.5286	4.3111	50.460
#3	.60811	1.5401	4.3508	50.719

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: S4 Acquired: 7/15/2025 19:18:38 Type: Cal
Method: METHOD 6010D, 200.7 M(v41) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3119.0	33603.	2651.4	2862.4	4634.0
Stddev	4.2	158.	2.1	15.7	7.6
%RSD	.13541	.46930	.07792	.54781	.16369
#1	3123.0	33438.	2653.2	2846.3	4629.4
#2	3114.6	33618.	2649.2	2863.2	4642.8
#3	3119.5	33752.	2651.9	2877.7	4629.9

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: S5 Acquired: 7/15/2025 19:22:54 Type: Cal
Method: METHOD 6010D, 200.7 M(v41) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.42712	1.1354	2.4380	.85104	1.4928	2.0416	79.442	5.7092	18.383
Stddev	.00205	.0049	.0176	.00270	.0020	.0067	.517	.1028	.127
%RSD	.47949	.43171	.72394	.31701	.13282	.32781	.65026	1.8014	.68951
#1	.42613	1.1315	2.4272	.84798	1.4946	2.0339	79.910	5.8136	18.299
#2	.42576	1.1338	2.4284	.85206	1.4931	2.0453	78.887	5.7059	18.320
#3	.42948	1.1409	2.4584	.85307	1.4906	2.0456	79.528	5.6080	18.529

Elem	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4.9702	.59616	3.8807	14.758	7.5732	2.5040	.65921	3.6180	.63130
Stddev	.0259	.00116	.0148	.250	.1179	.0152	.00482	.0106	.00176
%RSD	.52166	.19484	.38113	1.6919	1.5573	.60775	.73121	.29393	.27859
#1	4.9447	.59732	3.8717	15.014	7.6799	2.4994	.65923	3.6109	.63331
#2	4.9965	.59499	3.8728	14.747	7.5932	2.5210	.66402	3.6128	.63004
#3	4.9694	.59618	3.8978	14.515	7.4466	2.4916	.65438	3.6302	.63055

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	39.243	.75997	10.495	413.85	.71009	13.100	6.7402	.37906	11.305
Stddev	.565	.00841	.047	5.14	.00510	.212	.0133	.00274	.181
%RSD	1.4403	1.1062	.44335	1.2426	.71753	1.6171	.19689	.72170	1.6019
#1	39.765	.75650	10.441	419.27	.70699	13.307	6.7359	.37731	11.487
#2	39.321	.76956	10.523	413.23	.70730	13.110	6.7551	.37765	11.304
#3	38.642	.75386	10.521	409.04	.71597	12.883	6.7296	.38221	11.125

Elem	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.2398	3.1570	8.7812	103.08
Stddev	.0087	.0172	.0664	2.20
%RSD	.70298	.54396	.75574	2.1362
#1	1.2337	3.1429	8.7455	105.58
#2	1.2358	3.1761	8.8578	102.25
#3	1.2497	3.1519	8.7403	101.42

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: S5 Acquired: 7/15/2025 19:22:54 Type: Cal
Method: METHOD 6010D, 200.7 M(v41) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3049.9	33546.	2609.5	2778.4	4389.1
Stddev	16.1	45.	43.1	11.7	10.7
%RSD	.52856	.13278	1.6511	.42068	.24461
#1	3053.0	33532.	2570.4	2790.9	4399.8
#2	3032.5	33510.	2602.4	2767.8	4378.3
#3	3064.3	33596.	2655.7	2776.4	4389.3

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: ICV01 Acquired: 7/15/2025 19:27:27 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.756499**	**3.794167**	**3.806208**	**3.831454**	**3.987402**	**7.768521**	**7.991583**
Stddev	.012268	.010263	.001185	.005596	.002107	.024778	.051312
%RSD	.3265724	.2704976	.0311454	.1460568	.0528420	.3189594	.6420813
#1	3.742757	3.783320	3.805770	3.836375	3.988581	7.740473	7.933666
#2	3.760392	3.795459	3.805303	3.832619	3.984970	7.787439	8.009716
#3	3.766348	3.803724	3.807549	3.825367	3.988656	7.777652	8.031367

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2069664**	**1.914691**	**19.43509**	**.7782337**	**1.959659**	**1.045636**	**4.091699**
Stddev	.0018923	.001864	.03564	.0049471	.001223	.011333	.052339
%RSD	.9143206	.0973512	.1833569	.6356782	.0624259	1.083816	1.279150
#1	.2048199	1.912839	19.39606	.7740852	1.958532	1.034015	4.046438
#2	.2076859	1.916567	19.44333	.7837088	1.959483	1.046235	4.079646
#3	.2083935	1.914666	19.46588	.7769072	1.960960	1.056657	4.149013

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.982803**	**19.92884**	**1.950008**	**1.033818**	**20.12239**	**1.995344**	**2.018191**
Stddev	.010076	.14281	.002959	.008591	.20311	.015283	.013006
%RSD	.5081613	.7166143	.1517628	.8310387	1.009351	.7659519	.6444387
#1	1.972997	19.78912	1.947311	1.029475	19.96916	1.980425	2.014594
#2	1.993129	19.92283	1.953174	1.043714	20.04525	2.010968	2.007362
#3	1.982283	20.07456	1.949540	1.028266	20.35277	1.994639	2.032617

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**18.69091**	**.0188433**	**.0345543**	**.0021059**	**.0112938**	**.0064033**	**.0077238**
Stddev	.17305	.0010073	.0016185	.0003074	.0012290	.0010224	.0008153
%RSD	.9258511	5.345777	4.683927	14.59695	10.88217	15.96635	10.55582
#1	18.59699	.0178117	.0338357	.0023670	.0120282	.0075165	.0079236
#2	18.58511	.0188938	.0364077	.0017671	.0098749	.0055063	.0068271
#3	18.89061	.0198244	.0334195	.0021835	.0119782	.0061870	.0084206

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: ICV01 Acquired: 7/15/2025 19:27:27 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.006170	.0375427	.0005457
Stddev	.001528	.0068579	.0001179
%RSD	24.77116	18.26706	21.60404
#1	-.005967	.0332244	.0005197
#2	-.004753	.0339533	.0006744
#3	-.007789	.0454504	.0004430

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3213.061	34866.07	2643.842	2879.186	4779.056
Stddev	7.263	282.59	10.200	11.841	11.516
%RSD	.2260397	.8105144	.3858026	.4112727	.2409589
#1	3216.887	34758.80	2655.558	2865.945	4785.549
#2	3204.685	34652.82	2639.029	2882.857	4765.760
#3	3217.611	35186.60	2636.939	2888.758	4785.858

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: LLICV01 Acquired: 7/15/2025 19:37:43 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0184758**	**.0415986**	**.0117059**	**.0211118**	**.0507112**	**.0915918**
Stddev	.0037775	.0010756	.0019120	.0016801	.0014087	.0057020
%RSD	20.44579	2.585574	16.33364	7.957881	2.777912	6.225456
#1	.0212851	.0407720	.0098011	.0198787	.0490860	.0953863
#2	.0199609	.0428146	.0136251	.0204314	.0515822	.0850347
#3	.0141814	.0412091	.0116916	.0230253	.0514655	.0943544

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1087635**	**.0066183**	**.0055743**	**2.089856**	**.0114917**	**.0307019**
Stddev	.0015890	.0001176	.0000349	.028275	.0006308	.0004285
%RSD	1.460948	1.776470	.6252186	1.352975	5.489069	1.395722
#1	.1076725	.0065162	.0056136	2.107138	.0112451	.0302188
#2	.1105866	.0067468	.0055620	2.057226	.0110215	.0310359
#3	.1080315	.0065917	.0055471	2.105204	.0122085	.0308511

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0231852**	**.1182445**	**.0238480**	**2.287664**	**.0396092**	**.0106564**
Stddev	.0008337	.0027247	.0010253	.043472	.0005102	.0005230
%RSD	3.595959	2.304296	4.299326	1.900272	1.287973	4.907386
#1	.0224567	.1189326	.0248398	2.269481	.0401972	.0100536
#2	.0230043	.1152417	.0227922	2.256235	.0392846	.0109885
#3	.0240945	.1205592	.0239120	2.337274	.0393457	.0109272

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.969915**	**.0350152**	**.0434212**	**1.856514**	**.0182452**	**.1178480**
Stddev	.021360	.0074437	.0005139	.015887	.0015301	.0014458
%RSD	1.084332	21.25866	1.183539	.8557222	8.386192	1.226805
#1	1.970012	.0425956	.0428307	1.873826	.0195059	.1188443
#2	1.991227	.0347338	.0436652	1.853111	.0165429	.1185099
#3	1.948507	.0277160	.0437676	1.842604	.0186868	.1161897

Sample Name: LLICV01 Acquired: 7/15/2025 19:37:43 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2024114	F .0081405	.4134749	.0439096	.0390513	F .0385080
Stddev	.0003790	.0028269	.0012727	.0009104	.0027807	.0023794
%RSD	.1872564	34.72591	.3078012	2.073259	7.120729	6.179049
#1	.2026082	.0064654	.4146785	.0428781	.0396027	.0376518
#2	.2026516	.0065518	.4121429	.0442504	.0415151	.0411971
#3	.2019745	.0114044	.4136033	.0446005	.0360362	.0366752

Elem	Sr4077
Units	ppm
Avg	.0216027
Stddev	.0001783
%RSD	.8251333
#1	.0216095
#2	.0217774
#3	.0214211

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3332.801	36328.15	2663.038	2916.267	5228.314
Stddev	7.775	142.68	11.044	11.326	14.723
%RSD	.2332727	.3927528	.4147246	.3883571	.2815949
#1	3328.258	36246.86	2655.721	2926.271	5217.776
#2	3328.367	36244.70	2657.651	2903.971	5222.030
#3	3341.778	36492.90	2675.742	2918.560	5245.136

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: ICB01 Acquired: 7/15/2025 19:42:06 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017539**	**.0015018**	**-.000172**	**.0024860**	**.0009901**	**-.010923**	**.0025713**
Stddev	.0011078	.0017636	.002105	.0007837	.0028126	.027446	.0008347
%RSD	63.15863	117.4321	1223.996	31.52560	284.0669	251.2707	32.46320
#1	.0008164	.0023564	.000812	.0029942	-.001002	-.027198	.0026376
#2	.0029763	.0026753	-.002589	.0028804	.004207	.020765	.0033709
#3	.0014691	-.000526	.001261	.0015834	-.000235	-.026335	.0017054

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001231**	**-.000001**	**.0443450**	**.0008665**	**-.000235**	**.0003343**	**-.005278**
Stddev	.0001652	.000081	.0316336	.0001669	.000090	.0009375	.001525
%RSD	134.1764	5837.260	71.33523	19.26331	38.47060	280.4763	28.89687
#1	.0003124	.000085	.0808108	.0007420	-.000338	.0006357	-.004430
#2	.0000491	-.000075	.0242764	.0010562	-.000197	.0010840	-.004365
#3	.0000079	-.000014	.0279478	.0008013	-.000170	-.000717	-.007039

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013098**	**-.016872**	**.0001533**	**.0008235**	**.0195823**	**-.005765**	**.0008560**
Stddev	.0010267	.022130	.0002259	.0005098	.0051149	.007438	.0004116
%RSD	78.38122	131.1660	147.3272	61.90652	26.11991	129.0277	48.08185
#1	.0011726	-.035491	-.000098	.0003237	.0221035	.000173	.0012171
#2	.0023982	-.022721	.000339	.0008040	.0229471	-.014108	.0009430
#3	.0003587	.007595	.000219	.0013427	.0136963	-.003359	.0004079

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0031060**	**-.002668**	**.0079426**	**-.000197**	**-.013074**	**-.001028**	**.0048158**
Stddev	.0029188	.000507	.0019132	.000609	.003996	.000383	.0004457
%RSD	93.97218	18.98523	24.08796	309.8162	30.56521	37.21918	9.255218
#1	.0017517	-.002664	.0075196	-.000854	-.013798	-.000593	.0050332
#2	.0011104	-.003177	.0100318	-.000087	-.016658	-.001179	.0051111
#3	.0064560	-.002164	.0062762	.000350	-.008765	-.001312	.0043031

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: ICB01 Acquired: 7/15/2025 19:42:06 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0069961	.0167017	.0003587
Stddev	.0079024	.0099137	.0000741
%RSD	112.9535	59.35756	20.65467
#1	.0158748	.0083650	.0004300
#2	.0007336	.0276639	.0003640
#3	.0043799	.0140761	.0002821

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3337.693	35975.55	2604.229	2871.671	5260.439
Stddev	39.495	1425.04	15.971	89.100	57.474
%RSD	1.183313	3.961136	.6132634	3.102707	1.092571
#1	3356.228	36900.42	2585.788	2913.955	5283.347
#2	3364.511	36691.75	2613.491	2931.756	5302.926
#3	3292.339	34334.47	2613.409	2769.303	5195.043

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: CRI01 Acquired: 7/15/2025 19:56:56 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0199968**	**.0404020**	**.0105731**	**.0236338**	**.0484416**	**.0907159**
Stddev	.0021591	.0014437	.0010024	.0011117	.0008781	.0252212
%RSD	10.79732	3.573215	9.480524	4.703635	1.812681	27.80243
#1	.0213079	.0412467	.0094188	.0224963	.0491231	.0680582
#2	.0175048	.0387350	.0112240	.0236873	.0487509	.1178903
#3	.0211777	.0412242	.0110765	.0247177	.0474507	.0861993

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1120580**	**.0065598**	**.0056756**	**2.115222**	**.0109475**	**.0303783**
Stddev	.0003205	.0000745	.0000354	.024178	.0005571	.0002942
%RSD	.2859916	1.136138	.6236179	1.143071	5.089063	.9683080
#1	.1119185	.0066385	.0057071	2.142510	.0109528	.0306893
#2	.1124245	.0065508	.0056373	2.106687	.0103877	.0303411
#3	.1118309	.0064903	.0056825	2.096468	.0115020	.0301045

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0239473**	**.1127549**	**.0233323**	**2.378848**	**.0398964**	**.0112564**
Stddev	.0001956	.0010389	.0015176	.020981	.0006846	.0007533
%RSD	.8166244	.9213976	6.504104	.8819923	1.716058	6.691803
#1	.0239951	.1139516	.0216381	2.402339	.0402378	.0111393
#2	.0237323	.1122293	.0237915	2.372237	.0403433	.0120614
#3	.0241146	.1120838	.0245672	2.361969	.0391082	.0105686

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.967047**	**.0394776**	**.0440648**	**1.855601**	**.0168632**	**.1132648**
Stddev	.015926	.0053064	.0001772	.005725	.0010933	.0015784
%RSD	.8096349	13.44168	.4020577	.3085453	6.483130	1.393559
#1	1.983975	.0455118	.0439184	1.861787	.0156561	.1116616
#2	1.952361	.0373825	.0442617	1.854529	.0177867	.1133156
#3	1.964805	.0355385	.0440141	1.850487	.0171469	.1148172

Sample Name: CRI01 Acquired: 7/15/2025 19:56:56 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1983732	F .0085173	.4161759	.0430441	.0446058	F .0387305
Stddev	.0008173	.0042173	.0018380	.0013815	.0004278	.0033916
%RSD	.4119970	49.51484	.4416527	3.209590	.9589657	8.756955
#1	.1992929	.0107681	.4180669	.0421416	.0443823	.0423357
#2	.1977301	.0036521	.4160650	.0423562	.0450990	.0356032
#3	.1980966	.0111319	.4143958	.0446345	.0443360	.0382525

Elem	Sr4077
Units	ppm
Avg	.0220438
Stddev	.0002170
%RSD	.9846196
#1	.0218864
#2	.0219535
#3	.0222914

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3402.096	36667.91	2627.529	2891.659	5220.051
Stddev	5.170	52.32	3.389	15.533	3.100
%RSD	.1519553	.1426899	.1289628	.5371592	.0593769
#1	3399.217	36720.93	2628.070	2908.767	5217.309
#2	3408.064	36666.49	2623.903	2887.770	5219.431
#3	3399.007	36616.32	2630.615	2878.440	5223.414

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: ICSA01 Acquired: 7/15/2025 20:01:19 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.005019**	**.0017580**	**.0017968**	**-.006586**	**.0234523**	**238.6677**
Stddev	.001115	.0010851	.0004604	.006105	.0026491	.7041
%RSD	22.22276	61.72313	25.62616	92.69015	11.29573	.2950278
#1	-.006079	.0016539	.0012964	.000145	.0259329	238.1089
#2	-.003855	.0028914	.0022026	-.008139	.0237621	238.4357
#3	-.005125	.0007287	.0018914	-.011765	.0206619	239.4586

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0089819**	**.0013162**	**-.001357**	**235.2365**	**.0468839**	**.0020654**
Stddev	.0001841	.0000126	.000061	1.1461	.0004998	.0002251
%RSD	2.049776	.9581428	4.509440	.4872099	1.066125	10.90051
#1	.0087727	.0013149	-.001341	234.4711	.0463546	.0020319
#2	.0090541	.0013294	-.001305	234.6841	.0473479	.0023054
#3	.0091190	.0013043	-.001424	236.5541	.0469491	.0018589

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.006086**	**99.13980**	**.0052347**	**253.6911**	**.0035889**	**-.004704**
Stddev	.000699	.40421	.0006408	1.2723	.0000209	.000713
%RSD	11.48083	.4077154	12.24170	.5015249	.5823074	15.16178
#1	-.006889	99.35008	.0055385	253.6563	.0035715	-.005522
#2	-.005612	98.67380	.0056672	252.4365	.0036121	-.004375
#3	-.005758	99.39552	.0044985	254.9805	.0035832	-.004214

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1404028**	**.0022414**	**.0116104**	**.0006651**	**.0093671**	**.0294774**
Stddev	.0140559	.0041962	.0008666	.0004904	.0026102	.0011786
%RSD	10.01111	187.2100	7.464015	73.72413	27.86585	3.998198
#1	.1436609	-.002252	.0119824	.0012194	.0120101	.0306309
#2	.1250040	.002919	.0122289	.0002878	.0067909	.0282752
#3	.1525435	.006058	.0106199	.0004882	.0093003	.0295262

Sample Name: ICSA01 Acquired: 7/15/2025 20:01:19 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063325	.0144602	-.008651	.0160111	-.000837	.0100190
Stddev	.0002170	.0021554	.003249	.0002968	.002026	.0050646
%RSD	3.427054	14.90547	37.55798	1.853689	242.0402	50.54979
#1	.0060953	.0145840	-.005545	.0160518	-.001571	.0152967
#2	.0063813	.0165510	-.012027	.0162854	.001453	.0095620
#3	.0065210	.0122456	-.008383	.0156960	-.002393	.0051984

Elem	Sr4077
Units	ppm
Avg	F .1022631
Stddev	.0008426
%RSD	.8239605
#1	.1025031
#2	.1013265
#3	.1029596

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3142.939	32797.38	2547.827	2640.505	4214.137
Stddev	3.935	66.22	10.662	4.831	3.108
%RSD	.1252036	.2019145	.4184794	.1829414	.0737503
#1	3138.953	32724.19	2542.491	2646.052	4211.264
#2	3146.821	32814.79	2560.104	2637.222	4217.436
#3	3143.043	32853.15	2540.886	2638.241	4213.711

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: ICSAB01 Acquired: 7/15/2025 20:05:48 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0941357**	**.0837256**	**.0479806**	**.0416890**	**.5779112**	**236.4525**
Stddev	.0018091	.0021856	.0013706	.0010866	.0062349	.5025
%RSD	1.921790	2.610368	2.856592	2.606476	1.078863	.2125037
#1	.0959282	.0818496	.0480222	.0408151	.5766704	236.1820
#2	.0941686	.0861255	.0493299	.0429057	.5723900	236.1433
#3	.0923104	.0832018	.0465896	.0413462	.5846731	237.0323

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5351460**	**.5112137**	**.9633411**	**232.9005**	**.5017556**	**.4777580**
Stddev	.0014895	.0041421	.0020177	.5377	.0029296	.0009482
%RSD	.2783264	.8102542	.2094498	.2308506	.5838696	.1984731
#1	.5334262	.5157896	.9610535	232.5926	.5051382	.4766717
#2	.5359948	.5101311	.9641025	232.5875	.5000964	.4784195
#3	.5360170	.5077203	.9648673	233.5213	.5000322	.4781829

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4868469**	**99.52460**	**.5105909**	**252.6397**	**.9532203**	**.1895164**
Stddev	.0037424	.17297	.0046238	.3162	.0016406	.0014323
%RSD	.7687006	.1737944	.9055719	.1251416	.1721079	.7557763
#1	.4911514	99.44075	.5158284	252.2759	.9516609	.1901582
#2	.4843644	99.40954	.5088698	252.7954	.9530684	.1878755
#3	.4850249	99.72351	.5070745	252.8478	.9549315	.1905156

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1547575**	**.5056029**	**1.044559**	**-.003201**	F **.0194116**	F **.0292175**
Stddev	.0198245	.0069539	.002628	.001897	.0052800	.0009066
%RSD	12.81006	1.375360	.2516034	59.25622	27.20002	3.103054
#1	.1741580	.5124768	1.042556	-.005189	.0184255	.0287787
#2	.1555800	.5057601	1.043585	-.003004	.0146942	.0286138
#3	.1345345	.4985717	1.047535	-.001411	.0251151	.0302601

Sample Name: ICSAB01 Acquired: 7/15/2025 20:05:48 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0065945	F .0112298	F -.006311	F .0139431	F -.001789	F .0118801
Stddev	.0004446	.0021389	.000382	.0007696	.007124	.0014661
%RSD	6.742399	19.04692	6.050021	5.519792	398.2594	12.34052
#1	.0071043	.0134307	-.005877	.0137178	-.010006	.0119113
#2	.0062866	.0110998	-.006459	.0133113	.002644	.0133304
#3	.0063927	.0091588	-.006596	.0148002	.001996	.0103988

Elem	Sr4077
Units	ppm
Avg	F .1017203
Stddev	.0002207
%RSD	.2169267
#1	.1014735
#2	.1017886
#3	.1018986

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3128.905	32975.44	2521.552	2645.126	4223.480
Stddev	7.429	227.62	9.690	28.903	4.283
%RSD	.2374253	.6902799	.3842765	1.092707	.1014075
#1	3126.986	33109.34	2530.575	2674.387	4225.236
#2	3137.105	33104.36	2522.769	2644.395	4226.606
#3	3122.625	32712.62	2511.311	2616.594	4218.598

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: ICSADLX20 Acquired: 7/15/2025 20:10:14 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSADLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.004831**	**.0018898**	**.0016114**	**-.001365**	**.0017273**	**11.81854**	**.0015579**
Stddev	.000289	.0025087	.0022157	.002498	.0025843	.06534	.0002608
%RSD	5.977520	132.7484	137.5044	183.0500	149.6114	.5528304	16.73795
#1	-.004794	-.000254	-.000677	-.000958	.0003694	11.84176	.0014986
#2	-.004562	.001275	.001765	-.004041	.0001051	11.86908	.0018432
#3	-.005136	.004649	.003747	.000905	.0047074	11.74476	.0013319

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001583**	**-.000079**	**11.79534**	**.0036096**	**.0057952**	**.0000862**	**5.531218**
Stddev	.0001746	.000053	.08416	.0003660	.0003786	.0008157	.061145
%RSD	110.3279	67.23709	.7135050	10.14006	6.532563	946.3213	1.105459
#1	.0003540	-.000029	11.82436	.0035260	.0055381	.0002669	5.580139
#2	.0001023	-.000135	11.86116	.0032926	.0056176	-.000805	5.550847
#3	.0000185	-.000073	11.70051	.0040101	.0062299	.000796	5.462669

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025188**	**13.09109**	**.0004062**	**.0003542**	**.0278329**	**-.003878**	**.0021926**
Stddev	.0004806	.10526	.0000633	.0018206	.0129065	.001377	.0001667
%RSD	19.07993	.8040301	15.57230	514.0215	46.37120	35.51805	7.601182
#1	.0026174	13.16764	.0003343	-.000074	.0426963	-.002852	.0022571
#2	.0029424	13.13457	.0004535	-.001214	.0213430	-.003338	.0023174
#3	.0019965	12.97106	.0004308	.002351	.0194595	-.005443	.0020034

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.035470**	**.0011011**	**.0032657**	**.0011666**	**-.010878**	**-.005133**	**-.000071**
Stddev	.000395	.0016492	.0024558	.0002430	.000424	.001146	.000465
%RSD	1.113254	149.7799	75.19943	20.83318	3.902319	22.31653	657.2977
#1	-.035069	.0002172	.0060566	.0008927	-.011116	-.003820	.000250
#2	-.035482	.0000822	.0023049	.0013564	-.010387	-.005926	-.000604
#3	-.035859	.0030038	.0014356	.0012507	-.011129	-.005653	.000141

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: ICSADLX20 Acquired: 7/15/2025 20:10:14 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSADLX20 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0009838	-.002140	.0052446
Stddev	.0019644	.001849	.0001321
%RSD	199.6689	86.42422	2.517742
#1	.0013297	-.000046	.0052337
#2	-.001131	-.002824	.0053818
#3	.002752	-.003549	.0051183

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3454.985	37521.96	2620.707	2905.449	5206.654
Stddev	9.087	153.49	16.505	6.639	8.760
%RSD	.2630088	.4090734	.6297835	.2284905	.1682485
#1	3465.457	37599.07	2605.149	2909.634	5215.790
#2	3450.320	37621.62	2618.954	2908.919	5198.326
#3	3449.178	37345.20	2638.018	2897.795	5205.844

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: ICSABDLX20 Acquired: 7/15/2025 20:20:58 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSABDLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001505**	**.0042087**	**.0024459**	**.0012224**	**.0277363**	**11.20347**	**.0274689**
Stddev	.001093	.0020451	.0015429	.0016461	.0002113	.01947	.0007472
%RSD	72.59947	48.59114	63.08014	134.6579	.7618527	.1738008	2.720019
#1	-.002767	.0033414	.0040726	.0030583	.0275971	11.18389	.0268783
#2	-.000842	.0027402	.0022615	-.000122	.0279795	11.22284	.0283088
#3	-.000908	.0065445	.0010035	.000731	.0276324	11.20368	.0272195

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0242495**	**.0426673**	**11.24953**	**.0240594**	**.0270530**	**.0252574**	**5.176523**
Stddev	.0000218	.0001103	.01109	.0001008	.0003461	.0010967	.008460
%RSD	.0897572	.2584658	.0985440	.4190486	1.279539	4.342091	.1634258
#1	.0242595	.0427939	11.23734	.0239991	.0268029	.0239917	5.180788
#2	.0242645	.0426156	11.25226	.0241758	.0274481	.0258556	5.182002
#3	.0242245	.0425924	11.25900	.0240033	.0269081	.0259249	5.166780

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0260453**	**12.59013**	**.0434165**	**.0094224**	**.0221657**	**.0225707**	**.0502258**
Stddev	.0020812	.04943	.0005229	.0008432	.0066380	.0046587	.0002556
%RSD	7.990733	.3926047	1.204369	8.948855	29.94741	20.64056	.5088181
#1	.0255913	12.54918	.0428649	.0099420	.0184334	.0224714	.0505175
#2	.0242286	12.64504	.0434794	.0084495	.0182338	.0272783	.0500416
#3	.0283160	12.57617	.0439050	.0098757	.0298297	.0179625	.0501182

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000403**	**-.001603**	**.0018463**	**.0007073**	**-.009266**	**-.001689**	**.0057005**
Stddev	.001117	.000556	.0007881	.0001624	.003753	.000596	.0007315
%RSD	277.3649	34.69139	42.68447	22.96663	40.49834	35.30967	12.83162
#1	-.000759	-.002004	.0011952	.0007419	-.004985	-.001014	.0051455
#2	.000849	-.001837	.0027224	.0005304	-.011984	-.001907	.0065294
#3	-.001298	-.000968	.0016214	.0008497	-.010830	-.002146	.0054266

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: ICSABDLX20 Acquired: 7/15/2025 20:20:58 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSABDLX20 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0039889	.0044742	.0052158
Stddev	.0022680	.0090679	.0001618
%RSD	56.85764	202.6719	3.101932
#1	.0059120	-.005621	.0050346
#2	.0014879	.007116	.0053459
#3	.0045667	.011928	.0052668

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3420.300	36701.49	2612.928	2830.680	5040.646
Stddev	4.033	116.90	3.044	16.188	4.101
%RSD	.1179031	.3185233	.1165083	.5718592	.0813615
#1	3419.923	36741.48	2615.024	2815.260	5045.378
#2	3416.468	36793.15	2614.324	2847.539	5038.430
#3	3424.507	36569.84	2609.436	2829.242	5038.129

Sample Name: CCV01 Acquired: 7/15/2025 20:25:21 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.864943**	**5.026442**	**4.933873**	**4.661125**	**4.674811**	**9.680690**	**10.76907**
Stddev	.012045	.006668	.006739	.015018	.010584	.048057	.04960
%RSD	.2475970	.1326558	.1365952	.3221984	.2264017	.4964177	.4606102
#1	4.869270	5.033862	4.941486	4.667598	4.679489	9.736016	10.71792
#2	4.874228	5.020954	4.928670	4.671820	4.682249	9.649329	10.77233
#3	4.851332	5.024509	4.931462	4.643955	4.662694	9.656724	10.81697

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2535771**	**2.457117**	**24.86753**	**.9362366**	**2.461558**	**1.292397**	**5.245699**
Stddev	.0012745	.001704	.05933	.0030858	.001755	.000689	.010739
%RSD	.5026250	.0693455	.2385771	.3296010	.0713036	.0533127	.2047114
#1	.2542326	2.458833	24.84629	.9363832	2.462940	1.292927	5.255678
#2	.2521083	2.455426	24.93455	.9392465	2.459583	1.291619	5.247085
#3	.2543906	2.457091	24.82174	.9330800	2.462152	1.292646	5.234336

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.653412**	**26.25495**	**2.464646**	**1.154223**	**25.59669**	**2.702345**	**2.637064**
Stddev	.010853	.17161	.002317	.003841	.05191	.031974	.009767
%RSD	.4090107	.6536357	.0939941	.3327577	.2027988	1.183186	.3703788
#1	2.641650	26.10128	2.467309	1.150332	25.56704	2.669237	2.625902
#2	2.655551	26.22345	2.463532	1.154326	25.56640	2.704748	2.644044
#3	2.663036	26.44013	2.463097	1.158011	25.65663	2.733049	2.641246

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.59283**	**4.957541**	**5.241195**	**4.740942**	**4.862505**	**5.201182**	**4.966494**
Stddev	.00460	.007747	.008245	.008096	.018979	.003564	.012036
%RSD	.0187193	.1562768	.1573203	.1707673	.3903146	.0685167	.2423441
#1	24.59502	4.966481	5.240362	4.743990	4.884217	5.202710	4.976119
#2	24.59594	4.952790	5.249825	4.747071	4.849070	5.197109	4.952999
#3	24.58754	4.953351	5.233397	4.731764	4.854228	5.203727	4.970364

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: CCV01 Acquired: 7/15/2025 20:25:21 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.263839**	**5.454424**	**5.275561**
Stddev	.021749	.028941	.018372
%RSD	.4131784	.5305879	.3482487
#1	5.238770	5.428691	5.254817
#2	5.275081	5.448827	5.282084
#3	5.277667	5.485754	5.289781

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3315.384**	**35782.28**	**2566.207**	**2772.909**	**4641.250**
Stddev	10.628	121.66	7.102	17.630	3.008
%RSD	.3205633	.3400049	.2767559	.6357847	.0648046
#1	3314.632	35922.12	2573.198	2793.172	4640.746
#2	3305.151	35723.99	2566.424	2764.465	4638.525
#3	3326.367	35700.73	2558.999	2761.089	4644.477

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: CCB01 Acquired: 7/15/2025 20:29:38 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000600**	**.0010417**	**-.000730**	**.0040021**	**-.001253**	**-.016997**
Stddev	.001763	.0019930	.002423	.0025642	.003095	.019915
%RSD	293.6868	191.3158	331.9221	64.07059	247.0867	117.1643
#1	.000011	.0008189	-.001758	.0017698	-.001810	-.031584
#2	.000776	-.000830	-.002470	.0068028	-.004030	.005691
#3	-.002588	.003137	.002038	.0034339	.002083	-.025099

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029938**	**.0001414**	**.0000837**	**.0141411**	**.0012790**	**-.000191**
Stddev	.0004641	.0001622	.0000633	.0069310	.0012338	.000100
%RSD	15.50349	114.7376	75.57657	49.01295	96.46824	52.32845
#1	.0026055	.0000844	.0001501	.0201842	.0006747	-.000087
#2	.0028681	.0003244	.0000241	.0156636	.0026985	-.000200
#3	.0035079	.0000154	.0000769	.0065754	.0004638	-.000286

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006667**	**-.003436**	**.0000163**	**.0313644**	**-.000183**	**.0009313**
Stddev	.0005458	.002727	.0003783	.0137588	.000299	.0007253
%RSD	81.86036	79.36977	2322.470	43.86759	163.4781	77.88256
#1	.0002348	-.000311	.0004244	.0255122	-.000272	.0011091
#2	.0004851	-.004660	-.000053	.0214991	.000151	.0015511
#3	.0012801	-.005338	-.000323	.0470818	-.000427	.0001336

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0261225**	**.0002477**	**.0003764**	**-.001364**	**-.000607**	F **.0159061**
Stddev	.0109814	.0076138	.0003663	.001666	.001405	.0015750
%RSD	42.03819	3073.564	97.32276	122.1588	231.3350	9.901902
#1	.0263842	-.008065	.0007693	-.002326	-.000603	.0162026
#2	.0369708	.001925	.0000442	.000560	.000795	.0173117
#3	.0150126	.006883	.0003157	-.002325	-.002014	.0142039

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: CCB01 Acquired: 7/15/2025 20:29:38 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000495	-.012189	.0002786	.0042268	-.000268	.0100383
Stddev	.000232	.001437	.0004489	.0008556	.001510	.0115525
%RSD	47.00136	11.78806	161.1404	20.24184	563.6247	115.0842
#1	-.000424	-.011713	-.000086	.0049958	.001112	.0214437
#2	-.000754	-.011051	.000142	.0033052	-.000036	-.001656
#3	-.000306	-.013804	.000780	.0043793	-.001880	.010327

Elem	Sr4077
Units	ppm
Avg	.0000157
Stddev	.0002950
%RSD	1878.524
#1	-.000323
#2	.000218
#3	.000152

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3432.692	37093.93	2618.717	2852.191	5266.507
Stddev	10.936	22.07	18.047	7.797	14.216
%RSD	.3185926	.0595056	.6891683	.2733765	.2699331
#1	3424.268	37073.28	2606.400	2843.871	5253.804
#2	3428.758	37091.30	2639.433	2853.371	5281.862
#3	3445.052	37117.19	2610.318	2859.332	5263.857

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: PB168772BL Acquired: 7/15/2025 20:34:06 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013051**	**.0003855**	**-.000894**	**-.000387**	**-.000678**	**-.003385**	**.0027118**
Stddev	.0014099	.0005354	.000447	.000625	.003821	.017878	.0007430
%RSD	108.0321	138.8816	49.98261	161.3138	563.3411	528.2197	27.40002
#1	.0006019	.0005577	-.000699	-.000290	-.002517	.014004	.0028038
#2	.0029282	-.000215	-.000577	-.001055	.003714	-.021715	.0019271
#3	.0003850	.000813	-.001405	.000183	-.003233	-.002443	.0034046

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001895**	**-.000020**	**.0282758**	**.0015965**	**-.000208**	**.0004844**	**-.001702**
Stddev	.0000410	.000053	.0315346	.0000007	.000099	.0011311	.000365
%RSD	21.63859	258.1435	111.5249	.0448225	47.51389	233.4966	21.42461
#1	.0002017	-.000010	.0583359	.0015958	-.000196	-.000821	-.001853
#2	.0002230	.000026	.0310426	.0015964	-.000312	.001118	-.001286
#3	.0001438	-.000078	-.004551	.0015972	-.000116	.001157	-.001966

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008827**	**.0473650**	**.0000050**	**.0030650**	**.0214153**	**-.002621**	**.0005568**
Stddev	.0012484	.0257498	.0001217	.0004617	.0068367	.000574	.0002202
%RSD	141.4204	54.36469	2428.025	15.06494	31.92456	21.90094	39.55768
#1	.0000652	.0183301	-.000023	.0029403	.0275538	-.001994	.0003073
#2	.0023197	.0674309	.000138	.0035763	.0140472	-.002748	.0006390
#3	.0002633	.0563339	-.000100	.0026784	.0226450	-.003120	.0007241

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000150**	**.0001486**	**.0079284**	**-.000408**	**-.014853**	**.0008524**	**.0052363**
Stddev	.001349	.0013110	.0005435	.000574	.004843	.0015878	.0004015
%RSD	900.8329	882.2404	6.854988	140.6626	32.60596	186.2768	7.667572
#1	.000631	-.001073	.0074216	-.000995	-.009628	.0012472	.0049982
#2	-.001708	-.000015	.0078613	-.000383	-.015739	-.000896	.0050109
#3	.000628	.001534	.0085023	.000153	-.019191	.002206	.0056999

Sample Name: PB168772BL Acquired: 7/15/2025 20:34:06 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001005	.0051114	.0000804
Stddev	.001885	.0090956	.0001061
%RSD	187.4473	177.9486	131.9434
#1	-.002617	.0095040	.0002026
#2	.001067	-.005347	.0000129
#3	-.001466	.011177	.0000257

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3446.400	37366.89	2597.069	2857.856	5255.987
Stddev	3.688	169.41	4.635	25.307	13.661
%RSD	.1070078	.4533721	.1784648	.8855258	.2599194
#1	3448.169	37273.82	2592.430	2842.287	5259.452
#2	3448.871	37264.42	2597.076	2844.224	5267.582
#3	3442.161	37562.43	2601.700	2887.057	5240.927

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: PB168772BS Acquired: 7/15/2025 21:01:26 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6955637**	**1.978176**	**.9276863**	**1.776344**	**.7268799**	**1.933873**
Stddev	.0025943	.007415	.0040619	.007269	.0033748	.031048
%RSD	.3729744	.3748587	.4378522	.4092246	.4642917	1.605499
#1	.6983788	1.975125	.9279524	1.784305	.7298642	1.901673
#2	.6932692	1.972774	.9234979	1.770059	.7275580	1.963625
#3	.6950432	1.986631	.9316086	1.774667	.7232175	1.936321

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2187381**	**.2074204**	**.1844584**	**1.120440**	**.3627702**	**.1907627**
Stddev	.0017568	.0015887	.0004337	.013674	.0006426	.0006704
%RSD	.8031516	.7659224	.2351004	1.220379	.1771364	.3514563
#1	.2177984	.2056621	.1845329	1.114535	.3621009	.1914758
#2	.2207649	.2087525	.1839924	1.136074	.3633822	.1906672
#3	.2176511	.2078466	.1848501	1.110712	.3628275	.1901452

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3273951**	**3.449174**	**.2187313**	**2.164920**	**.4795984**	**.0700626**
Stddev	.0023119	.026399	.0004607	.050133	.0008642	.0007520
%RSD	.7061589	.7653703	.2106409	2.315675	.1801828	1.073355
#1	.3251044	3.421512	.2185836	2.144548	.4787695	.0706383
#2	.3297277	3.474096	.2183624	2.128180	.4795316	.0703378
#3	.3273532	3.451913	.2192477	2.222031	.4804940	.0692118

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.906521**	**.3235624**	**.2161276**	F **8.121394**	**5.423809**	**.3097349**
Stddev	.023666	.0015416	.0006132	.085526	.011705	.0035533
%RSD	.8142227	.4764449	.2837014	1.053096	.2158073	1.147213
#1	2.879855	.3248804	.2168082	8.024746	5.433429	.3057860
#2	2.914678	.3218672	.2156183	8.187297	5.410777	.3126741
#3	2.925028	.3239396	.2159564	8.152140	5.427222	.3107446

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: PB168772BS Acquired: 7/15/2025 21:01:26 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3688903	F -.013839	.9698558	.6724599	.2090339	F .2438343
Stddev	.0011833	.003949	.0108222	.0019025	.0035248	.0113769
%RSD	.3207672	28.53204	1.115851	.2829119	1.686233	4.665817
#1	.3681832	-.018136	.9581756	.6708935	.2049970	.2454104
#2	.3702564	-.013014	.9795427	.6719093	.2115017	.2543410
#3	.3682314	-.010369	.9718493	.6745769	.2106029	.2317516

Elem	Sr4077
Units	ppm
Avg	.2108540
Stddev	.0002576
%RSD	.1221823
#1	.2105672
#2	.2109289
#3	.2110658

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3476.609	37101.95	2592.417	2831.010	5106.068
Stddev	14.616	81.21	19.477	16.002	14.379
%RSD	.4204187	.2188711	.7513002	.5652576	.2816116
#1	3473.114	37031.28	2609.906	2812.812	5096.587
#2	3464.056	37083.92	2571.427	2837.329	5099.003
#3	3492.656	37190.66	2595.918	2842.887	5122.613

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: Q2564-05 Acquired: 7/15/2025 21:06:47 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1960244**	**-.056835**	**2.050471**	**.0584177**	**.0260619**	**110.5486**	**.5860409**
Stddev	.0039393	.002683	.022244	.0049248	.0032910	.3401	.0026221
%RSD	2.009583	4.721029	1.084818	8.430267	12.62754	.3076553	.4474282
#1	.1953326	-.054939	2.057409	.0535522	.0228129	110.3336	.5885147
#2	.1924768	-.055661	2.025585	.0583012	.0259796	110.9407	.5863158
#3	.2002637	-.059905	2.068419	.0633997	.0293933	110.3715	.5832922

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0112072**	**-.001572**	**60.45051**	**.2286017**	**-.001007**	**.2737287**	**272.5472**
Stddev	.0002630	.000101	.16964	.0015811	.000613	.0018066	1.7431
%RSD	2.347005	6.425739	.2806188	.6916461	60.85403	.6599926	.6395741
#1	.0113543	-.001541	60.50295	.2270500	-.000540	.2758138	271.7763
#2	.0113639	-.001685	60.58773	.2302107	-.000780	.2727396	271.3224
#3	.0109036	-.001490	60.26085	.2285445	-.001701	.2726325	274.5429

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.425708**	**30.63213**	**.1373445**	**-.006243**	**2.528638**	**.4328162**	**1.457879**
Stddev	.012246	.08997	.0006179	.001843	.071283	.0070272	.009320
%RSD	.5048424	.2937057	.4498606	29.51492	2.819022	1.623604	.6393082
#1	2.428022	30.64680	.1367726	-.007247	2.476895	.4400935	1.447899
#2	2.436631	30.71387	.1372611	-.007366	2.609946	.4322860	1.459380
#3	2.412470	30.53573	.1379999	-.004117	2.499072	.4260691	1.466358

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.42859**	**7.614001**	**.0961041**	**.0123968**	**5.793116**	**13.31615**	**.2354501**
Stddev	4.50272	.101265	.0028031	.0000255	.074744	.03632	.0027473
%RSD	33.53084	1.329981	2.916775	.2057721	1.290224	.2727139	1.166820
#1	10.68247	7.623373	.0972242	.0124245	5.804915	13.32773	.2374831
#2	10.97823	7.508377	.0929141	.0123743	5.713174	13.34527	.2323246
#3	18.62508	7.710255	.0981739	.0123917	5.861259	13.27546	.2365426

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: Q2564-05 Acquired: 7/15/2025 21:06:47 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.390526	.1009059	.2794668
Stddev	.013347	.0065762	.0009215
%RSD	.9598573	6.517105	.3297422
#1	1.391930	.0986646	.2794537
#2	1.403116	.1083098	.2803948
#3	1.376533	.0957435	.2785518

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3901.330	41568.85	2996.717	3208.424	4647.019
Stddev	18.002	150.55	17.760	34.659	15.634
%RSD	.4614217	.3621740	.5926544	1.080256	.3364356
#1	3918.253	41583.48	2978.919	3211.532	4662.347
#2	3882.416	41711.55	3014.439	3241.425	4647.612
#3	3903.321	41411.51	2996.793	3172.316	4631.096

Sample Name: Q2564-05DUP Acquired: 7/15/2025 21:11:20 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2057133**	**-.061555**	**2.298164**	**.0626933**	**.0224436**	**112.8249**
Stddev	.0020070	.003810	.019682	.0130364	.0004509	.4375
%RSD	.9756413	6.190300	.8564146	20.79387	2.009265	.3877850
#1	.2077324	-.065941	2.279296	.0777368	.0229234	112.3629
#2	.2037185	-.059062	2.296626	.0547069	.0220285	113.2329
#3	.2056889	-.059661	2.318569	.0556362	.0223791	112.8790

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5615934**	**.0113752**	**-.002084**	**54.90859**	**.2321220**	**-.009710**
Stddev	.0019653	.0007433	.001264	.10669	.0032360	.008895
%RSD	.3499452	6.534399	60.64416	.1942977	1.394073	91.60961
#1	.5594080	.0122064	-.003542	54.79792	.2301301	-.019970
#2	.5621565	.0107743	-.001410	54.91706	.2303801	-.004998
#3	.5632156	.0111450	-.001300	55.01078	.2358557	-.004161

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.016664**	**284.6258**	**2.335055**	**28.01451**	**.1225714**	**-.003333**
Stddev	.061440	28.2510	.019681	.06993	.0005246	.007796
%RSD	6.043266	9.925653	.8428445	.2496266	.4279953	233.9265
#1	1.087078	317.2355	2.312379	28.07468	.1222567	.005669
#2	.988955	269.0776	2.347691	27.93779	.1222805	-.007738
#3	.973959	267.5642	2.345095	28.03106	.1231770	-.007928

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.830381**	**.4538695**	**1.502580**	**12.03552**	**7.712829**	**.1113291**
Stddev	.323731	.0060702	.010773	2.23995	.089010	.0149220
%RSD	11.43774	1.337429	.7169692	18.61114	1.154047	13.40349
#1	3.170970	.4492319	1.512453	14.56125	7.622251	.1279067
#2	2.526665	.4516368	1.504198	10.29008	7.716053	.1071089
#3	2.793506	.4607399	1.491090	11.25522	7.800183	.0989717

Sample Name: Q2564-05DUP Acquired: 7/15/2025 21:11:20 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0119496	5.645099	F 19.31248	.0742022	1.392471	.0832000
Stddev	.0003290	.063618	1.32882	.0013151	.010741	.0013849
%RSD	2.753381	1.126964	6.880620	1.772299	.7713653	1.664503
#1	.0118113	5.590177	20.84686	.0726897	1.380232	.0845788
#2	.0123252	5.630310	18.54658	.0748417	1.400328	.0818091
#3	.0117124	5.714809	18.54398	.0750753	1.396854	.0832121

Elem	Sr4077
Units	ppm
Avg	.2357529
Stddev	.0013551
%RSD	.5747980
#1	.2341913
#2	.2366188
#3	.2364487

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3841.671	40000.24	2827.399	3120.416	4688.412
Stddev	19.888	1456.85	242.429	78.583	28.840
%RSD	.5177010	3.642093	8.574294	2.518363	.6151415
#1	3845.523	38330.64	2547.514	3037.575	4707.659
#2	3859.352	41013.13	2962.798	3129.768	4702.325
#3	3820.139	40656.96	2971.883	3193.905	4655.253

Sample Name: Q2564-05LX5 Acquired: 7/15/2025 21:15:53 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0370614**	**-.014325**	**.3985788**	**.0128076**	**.0034453**	**25.17178**	**.1354708**
Stddev	.0046419	.001918	.0031364	.0033035	.0035748	.01135	.0004328
%RSD	12.52496	13.39031	.7868966	25.79312	103.7583	.0451084	.3194806
#1	.0377533	-.014218	.4009916	.0090503	-.000666	25.16128	.1356282
#2	.0413186	-.016295	.3997113	.0152564	.005179	25.17023	.1358029
#3	.0321124	-.012463	.3950334	.0141161	.005823	25.18383	.1349814

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025196**	**-.000877**	**13.83995**	**.0507975**	**-.000325**	**.0632784**	**66.72387**
Stddev	.0001438	.000052	.02071	.0015085	.000050	.0014649	1.18593
%RSD	5.705541	5.936109	.1496107	2.969553	15.53094	2.315034	1.777372
#1	.0026583	-.000919	13.84174	.0519911	-.000351	.0649695	67.96527
#2	.0023713	-.000892	13.85971	.0512994	-.000357	.0624010	66.60380
#3	.0025291	-.000819	13.81842	.0491021	-.000267	.0624646	65.60254

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5596447**	**7.144489**	**.0260862**	**.0007452**	**.5573024**	**.0965564**	**.3255399**
Stddev	.0034249	.024393	.0005070	.0005325	.0326445	.0016694	.0011285
%RSD	.6119830	.3414235	1.943739	71.45662	5.857599	1.728894	.3466661
#1	.5628030	7.126079	.0265951	.0011999	.5948446	.0948044	.3267214
#2	.5560043	7.172155	.0260826	.0008765	.5414641	.0981285	.3244730
#3	.5601268	7.135232	.0255810	.0001594	.5355984	.0967363	.3254254

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.967722**	**1.414080**	**.0269543**	**.0029238**	**1.060486**	**2.816718**	**.0484077**
Stddev	.119920	.009499	.0008521	.0002837	.010282	.056614	.0004385
%RSD	6.094348	.6717710	3.161159	9.704858	.9695409	2.009924	.9058175
#1	2.105283	1.417673	.0263073	.0032507	1.061382	2.875540	.0479920
#2	1.885219	1.421259	.0279197	.0027791	1.070291	2.812007	.0488659
#3	1.912662	1.403308	.0266360	.0027415	1.049786	2.762606	.0483652

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: Q2564-05LX5 Acquired: 7/15/2025 21:15:53 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3086091	.0232205	.0639346
Stddev	.0044528	.0070215	.0005831
%RSD	1.442872	30.23822	.9120509
#1	.3127512	.0312657	.0642602
#2	.3038999	.0183278	.0632614
#3	.3091763	.0200680	.0642822

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3582.562	38122.94	2703.499	2924.407	5001.499
Stddev	15.779	215.88	6.701	38.849	20.236
%RSD	.4404484	.5662621	.2478679	1.328449	.4046062
#1	3571.319	38282.72	2697.311	2968.768	4995.860
#2	3575.767	38208.74	2702.570	2907.999	4984.680
#3	3600.601	37877.35	2710.617	2896.453	5023.956

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: Q2564-05MS Acquired: 7/15/2025 21:20:13 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.008912**	**1.965291**	**3.201153**	**1.644416**	**.2827624**	**152.0740**
Stddev	.004225	.015212	.025316	.012711	.0007125	.1546
%RSD	.4187307	.7740209	.7908535	.7729699	.2519694	.1016537
#1	1.006204	1.962689	3.176836	1.629920	.2819486	152.1174
#2	1.013780	1.981636	3.227363	1.653655	.2832735	151.9023
#3	1.006752	1.951548	3.199260	1.649672	.2830652	152.2022

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8029586**	**.2004780**	**.2033966**	**60.66439**	**.5956514**	**.2030309**
Stddev	.0017510	.0016700	.0018585	.05201	.0048955	.0022648
%RSD	.2180627	.8329953	.9137428	.0857368	.8218738	1.115499
#1	.8041356	.2018221	.2016993	60.70990	.5957469	.2011532
#2	.8037938	.1986086	.2053826	60.67558	.6004985	.2055462
#3	.8009464	.2010035	.2031078	60.60769	.5907089	.2023934

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5917205**	**293.3808**	**2.619564**	**33.94117**	**.6656794**	**.0566725**
Stddev	.0066316	6.0640	.012292	.17026	.0030353	.0024310
%RSD	1.120730	2.066949	.4692521	.5016293	.4559676	4.289543
#1	.5955144	296.5563	2.621480	34.05431	.6644088	.0573498
#2	.5840631	286.3884	2.630786	33.74536	.6691434	.0539747
#3	.5955839	297.1975	2.606426	34.02384	.6634858	.0586930

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.190184**	**.7901986**	**1.526618**	**22.41170**	**14.18420**	**.3317646**
Stddev	.036014	.0060905	.009201	.43568	.13949	.0078977
%RSD	.6938783	.7707612	.6026757	1.944004	.9834087	2.380504
#1	5.210881	.7956347	1.526687	22.89759	14.05467	.3365876
#2	5.148599	.7913447	1.517384	22.05581	14.33187	.3226503
#3	5.211072	.7836165	1.535784	22.28171	14.16608	.3360559

Sample Name: Q2564-05MS Acquired: 7/15/2025 21:20:13 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3264852	5.854841	F 19.29679	.7703749	1.656711	.3389298
Stddev	.0009724	.051781	.18795	.0029225	.002801	.0066792
%RSD	.2978381	.8844166	.9740055	.3793586	.1690840	1.970667
#1	.3260453	5.814166	19.41874	.7675032	1.659822	.3460106
#2	.3275998	5.913132	19.08034	.7733457	1.655923	.3380367
#3	.3258104	5.837227	19.39128	.7702757	1.654389	.3327421

Elem	Sr4077
Units	ppm
Avg	.4437439
Stddev	.0001019
%RSD	.0229680
#1	.4437831
#2	.4436282
#3	.4438203

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3849.685	40630.46	2893.855	3111.688	4602.792
Stddev	23.669	79.34	30.943	10.450	25.456
%RSD	.6148415	.1952715	1.069274	.3358188	.5530615
#1	3822.736	40608.10	2877.581	3112.063	4573.722
#2	3859.214	40564.70	2929.539	3121.945	4613.555
#3	3867.105	40718.58	2874.445	3101.055	4621.099

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: Q2564-05MSD Acquired: 7/15/2025 21:24:39 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.086843**	**1.978047**	**3.232036**	**1.664941**	**.2847960**	**136.6070**
Stddev	.018482	.024552	.068246	.027754	.0026138	.5318
%RSD	1.700509	1.241227	2.111543	1.666985	.9177651	.3892621
#1	1.106997	2.005289	3.303533	1.695260	.2874462	137.1264
#2	1.070688	1.957628	3.167589	1.640787	.2847215	136.6308
#3	1.082844	1.971224	3.224986	1.658777	.2822203	136.0637

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7455326**	**.2058941**	**.2040059**	**49.66282**	**.5955066**	**.2021960**
Stddev	.0033762	.0008439	.0042191	.26660	.0011158	.0027033
%RSD	.4528564	.4098748	2.068123	.5368132	.1873638	1.336984
#1	.7466862	.2065320	.2084744	49.84356	.5962442	.2042201
#2	.7417309	.2062130	.2000909	49.78826	.5942230	.1991260
#3	.7481809	.2049371	.2034523	49.35664	.5960527	.2032419

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6156873**	**276.3126**	**2.357157**	**28.12277**	**.6564796**	**.0594079**
Stddev	.0033150	1.0657	.014885	.18612	.0049884	.0005616
%RSD	.5384262	.3856840	.6314608	.6617968	.7598707	.9452780
#1	.6194868	275.7979	2.373979	28.32012	.6614194	.0590743
#2	.6141901	277.5380	2.345692	28.09777	.6514440	.0590932
#3	.6133849	275.6020	2.351802	27.95041	.6565753	.0600563

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.506381**	**.7585941**	**1.582580**	**22.92500**	**13.26404**	**.3356066**
Stddev	.094131	.0051815	.009354	.77670	.29282	.0025291
%RSD	1.709485	.6830363	.5910525	3.388020	2.207608	.7535955
#1	5.403663	.7641349	1.580765	22.12036	13.58375	.3368549
#2	5.588520	.7577786	1.574268	23.67037	13.00889	.3372688
#3	5.526959	.7538687	1.592709	22.98427	13.19948	.3326960

Sample Name: Q2564-05MSD Acquired: 7/15/2025 21:24:39 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3343287**	**5.277398**	F **18.03323**	**.7771793**	**1.576262**	**.3245343**
Stddev	.0009852	.110070	.06370	.0144033	.001507	.0046894
%RSD	.2946874	2.085679	.3532268	1.853278	.0956227	1.444975
#1	.3345049	5.397454	18.05505	.7923207	1.574693	.3299474
#2	.3352140	5.181242	18.08315	.7636497	1.577699	.3219497
#3	.3332673	5.253499	17.96149	.7755675	1.576394	.3217058

Elem	Sr4077
Units	ppm
Avg	**.4371005**
Stddev	.0010060
%RSD	.2301486
#1	.4381795
#2	.4361885
#3	.4369335

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3763.686**	**40051.21**	**2852.075**	**3125.874**	**4586.248**
Stddev	16.561	43.22	13.969	14.644	20.695
%RSD	.4400247	.1079035	.4897986	.4684809	.4512368
#1	3758.212	40004.58	2851.004	3128.356	4562.671
#2	3750.554	40059.16	2838.672	3139.119	4594.665
#3	3782.291	40089.91	2866.549	3110.147	4601.409

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: Q2564-05A Acquired: 7/15/2025 21:29:05 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9610953**	**1.906658**	**2.952029**	**1.614165**	**.6658764**	**109.2582**	**.7630913**
Stddev	.0092219	.016216	.027480	.014757	.0035720	.2340	.0023184
%RSD	.9595233	.8504731	.9308845	.9142120	.5364408	.2141495	.3038178
#1	.9554981	1.891022	2.922311	1.601318	.6634170	109.2281	.7623659
#2	.9560486	1.905556	2.957255	1.610895	.6642386	109.0407	.7612224
#3	.9717391	1.923397	2.976520	1.630283	.6699737	109.5058	.7656857

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1938450**	**.1917691**	**60.40296**	**.5393989**	**.1940011**	**.5653275**	**275.5894**
Stddev	.0045197	.0021464	.09666	.0031748	.0028289	.0118308	6.9515
%RSD	2.331585	1.119263	.1600197	.5885751	1.458170	2.092729	2.522396
#1	.1989282	.1895597	60.43875	.5430637	.1908838	.5784871	283.1565
#2	.1923276	.1919013	60.29352	.5374876	.1947145	.5619237	274.1247
#3	.1902794	.1938464	60.47662	.5376455	.1964049	.5555717	269.4870

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.573452**	**31.85126**	**.6333572**	**.0544687**	**5.003003**	**.7182422**	**1.608517**
Stddev	.009787	.05227	.0031872	.0021416	.113705	.0114663	.001064
%RSD	.3802962	.1640965	.5032290	3.931793	2.272728	1.596438	.0661536
#1	2.563999	31.89754	.6297646	.0569389	5.129671	.7086525	1.607503
#2	2.572815	31.79457	.6358450	.0533350	4.969587	.7151310	1.609625
#3	2.583541	31.86166	.6344621	.0531323	4.909750	.7309430	1.608424

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.74021**	**13.31961**	**.3650496**	**.3437171**	**5.699961**	**13.02682**	**.9372767**
Stddev	.70352	.21163	.0117434	.0012651	.107970	.27674	.0095065
%RSD	3.563870	1.588859	3.216924	.3680726	1.894224	2.124380	1.014264
#1	20.54588	13.13290	.3783602	.3434086	5.611622	13.33382	.9266143
#2	19.42741	13.27643	.3606368	.3426347	5.667942	12.95014	.9403478
#3	19.24735	13.54950	.3561519	.3451080	5.820319	12.79651	.9448679

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: Q2564-05A Acquired: 7/15/2025 21:29:05 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.534363	.3012123	.4577895
Stddev	.008912	.0021371	.0012401
%RSD	.5808538	.7095025	.2708970
#1	1.530762	.3030570	.4572272
#2	1.527814	.2988704	.4569301
#3	1.544512	.3017094	.4592112

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3862.480	41443.17	2913.840	3174.660	4614.334
Stddev	40.117	201.45	58.682	12.661	45.717
%RSD	1.038638	.4860981	2.013911	.3988048	.9907601
#1	3869.026	41288.74	2846.613	3185.833	4631.883
#2	3898.922	41671.04	2940.105	3177.238	4648.676
#3	3819.493	41369.74	2954.802	3160.909	4562.443

Sample Name: Q2559-01 Acquired: 7/15/2025 21:33:32 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0328699**	**-.021093**	**.1043064**	**-.007947**	**.0189695**	**177.2567**
Stddev	.0010090	.002835	.0021422	.002926	.0011276	.3311
%RSD	3.069803	13.44063	2.053766	36.81612	5.944462	.1867883
#1	.0340327	-.021869	.1052825	-.004571	.0179102	177.1321
#2	.0323524	-.017950	.1057868	-.009514	.0188436	177.6320
#3	.0322247	-.023458	.1018500	-.009756	.0201549	177.0059

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9677222**	**.0070271**	**-.001451**	F **2467.846**	**.4262305**	**.0701411**
Stddev	.0080568	.0000722	.000128	55.328	.0037128	.0017989
%RSD	.8325542	1.028050	8.825848	2.241942	.8710783	2.564746
#1	.9677678	.0069437	-.001505	2524.659	.4242916	.0692844
#2	.9757561	.0070703	-.001544	2464.745	.4238885	.0689306
#3	.9596427	.0070673	-.001305	2414.133	.4305114	.0722083

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4479372**	**136.4699**	**5.291469**	**94.01346**	**.1594902**	**-.002922**
Stddev	.0162907	.6541	.032345	.68097	.0007925	.000464
%RSD	3.636834	.4793253	.6112605	.7243357	.4968769	15.87882
#1	.4349709	137.1695	5.298277	94.32905	.1591181	-.002966
#2	.4662227	136.3669	5.319867	94.47938	.1589523	-.003363
#3	.4426181	135.8734	5.256262	93.23194	.1604003	-.002438

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.035730**	**.2662874**	**2.096529**	**25.43180**	**10.62616**	**.4543060**
Stddev	.202253	.0137313	.039084	1.04709	.15358	.0064170
%RSD	3.350922	5.156584	1.864212	4.117239	1.445278	1.412485
#1	5.822930	.2594256	2.123812	25.98644	10.51769	.4490292
#2	6.225456	.2820972	2.051754	24.22406	10.55889	.4614493
#3	6.058802	.2573395	2.114021	26.08490	10.80189	.4524394

Sample Name: Q2559-01 Acquired: 7/15/2025 21:33:32 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0224406	F 110.1586	9.196639	.0221836	8.563348	.1577892
Stddev	.0006796	2.0154	.303837	.0044915	.083603	.0101963
%RSD	3.028498	1.829506	3.303781	20.24714	.9762841	6.461945
#1	.0217615	108.8157	8.911912	.0206355	8.540753	.1480981
#2	.0224396	109.1841	9.516526	.0186708	8.655926	.1684249
#3	.0231207	112.4760	9.161480	.0272444	8.493365	.1568446

Elem	Sr4077
Units	ppm
Avg	13.84762
Stddev	.75925
%RSD	5.482879
#1	14.48334
#2	14.05261
#3	13.00693

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3215.065	31458.53	2644.987	2501.110	3568.198
Stddev	49.764	1684.56	44.519	143.285	59.645
%RSD	1.547852	5.354873	1.683143	5.728867	1.671567
#1	3244.371	29881.56	2593.662	2355.307	3603.676
#2	3243.218	33233.24	2673.149	2641.737	3601.582
#3	3157.606	31260.79	2668.149	2506.285	3499.337

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: CCV02 Acquired: 7/15/2025 22:12:55 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.745154**	**4.940316**	**4.837831**	**4.778659**	**4.800276**	**9.544486**	**10.75861**
Stddev	.004729	.013400	.004660	.006449	.006161	.065652	.02186
%RSD	.0996564	.2712451	.0963200	.1349438	.1283414	.6878488	.2032320
#1	4.745280	4.925198	4.832888	4.781409	4.801775	9.557421	10.78278
#2	4.749819	4.945021	4.838462	4.783277	4.793505	9.473330	10.74019
#3	4.740364	4.950729	4.842143	4.771292	4.805550	9.602708	10.75287

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2496449**	**2.411745**	**24.57686**	**1.042913**	**2.424152**	**1.285421**	**5.227162**
Stddev	.0020502	.002652	.04311	.001508	.004074	.009912	.046546
%RSD	.8212424	.1099720	.1753892	.1446290	.1680456	.7710734	.8904573
#1	.2506902	2.409113	24.59743	1.041174	2.419800	1.291484	5.246971
#2	.2472827	2.411704	24.52732	1.043871	2.424782	1.273983	5.173989
#3	.2509617	2.414417	24.60582	1.043694	2.427874	1.290796	5.260527

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.656401**	**26.06104**	**2.422552**	**1.227767**	**25.25660**	**2.720671**	**2.626637**
Stddev	.003471	.10590	.002311	.002841	.30585	.009786	.005788
%RSD	.1306688	.4063693	.0953980	.2314095	1.210976	.3596861	.2203416
#1	2.654988	26.18293	2.420704	1.224490	25.28444	2.723799	2.632099
#2	2.653858	25.99165	2.421808	1.229536	24.93778	2.728510	2.620571
#3	2.660355	26.00852	2.425143	1.229275	25.54758	2.709703	2.627239

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.21201**	**4.903863**	**5.206775**	**4.577535**	**4.759934**	**5.176389**	**4.877045**
Stddev	.31086	.009377	.055894	.003917	.016440	.054809	.006177
%RSD	1.283927	.1912171	1.073494	.0855677	.3453788	1.058821	.1266484
#1	24.25143	4.896184	5.240464	4.581652	4.743230	5.204672	4.873876
#2	23.88331	4.901091	5.142254	4.573855	4.776096	5.113216	4.873095
#3	24.50128	4.914313	5.237606	4.577099	4.760478	5.211278	4.884162

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: CCV02 Acquired: 7/15/2025 22:12:55 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.241365**	**5.469029**	**5.247620**
Stddev	.025028	.010774	.015151
%RSD	.4775127	.1969984	.2887218
#1	5.266769	5.481459	5.263830
#2	5.216731	5.462369	5.233815
#3	5.240594	5.463258	5.245214

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3361.619**	**36197.54**	**2534.283**	**2747.505**	**4619.658**
Stddev	6.012	170.66	18.890	12.311	.786
%RSD	.1788326	.4714612	.7453660	.4480687	.0170067
#1	3354.680	36143.79	2516.586	2739.265	4618.952
#2	3364.941	36060.23	2554.174	2741.594	4619.520
#3	3365.237	36388.60	2532.089	2761.657	4620.504

Sample Name: CCB02 Acquired: 7/15/2025 22:17:11 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000964**	**-.000404**	**-.000127**	**.0037843**	**-.001239**	**-.007648**
Stddev	.002094	.000851	.001531	.0058379	.001390	.042404
%RSD	217.2924	210.5348	1206.505	154.2681	112.1507	554.4779
#1	-.002533	.000163	.000304	.0103437	-.001314	.027954
#2	.001414	.000008	-.001827	.0018504	.000186	.003663
#3	-.001772	-.001382	.001143	-.000841	-.002590	-.054560

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029888**	**.0000557**	**.0000331**	**.0273597**	**.0007888**	**-.000130**
Stddev	.0006729	.0001000	.0000485	.0160594	.0001495	.000177
%RSD	22.51341	179.5184	146.6275	58.69742	18.95311	135.5182
#1	.0037636	-.000053	.0000767	.0396887	.0009021	-.000175
#2	.0025512	.000145	.0000418	.0331911	.0008449	-.000281
#3	.0026516	.000075	-.000019	.0091993	.0006193	.000064

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016012**	**-.001741**	**.0020440**	**.0380914**	**.0003681**	**.0013263**
Stddev	.0003647	.001854	.0019287	.0235651	.0001373	.0003392
%RSD	22.77407	106.4386	94.35795	61.86462	37.28581	25.57264
#1	.0012024	-.003755	-.000054	.0633569	.0003478	.0013669
#2	.0019177	-.000106	.002447	.0167091	.0002422	.0009687
#3	.0016833	-.001363	.003740	.0342081	.0005144	.0016433

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0159013**	**-.005411**	**.0007363**	**-.001131**	**-.001228**	F **.0249843**
Stddev	.0032970	.004292	.0002457	.000709	.002038	.0013527
%RSD	20.73390	79.31972	33.37839	62.66214	165.9689	5.414156
#1	.0195268	-.000459	.0005610	-.001490	-.003057	.0264821
#2	.0130826	-.007715	.0010172	-.001589	.000969	.0238517
#3	.0150946	-.008060	.0006306	-.000315	-.001596	.0246190

Sample Name: CCB02 Acquired: 7/15/2025 22:17:11 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000334	-.012114	.0026213	.0055871	.0051690	F .0229731
Stddev	.000202	.003197	.0025370	.0004528	.0030837	.0149624
%RSD	60.32903	26.39363	96.78584	8.103779	59.65779	65.13009
#1	-.000440	-.010977	.0001562	.0054786	.0076823	.0385189
#2	-.000460	-.009641	.0024829	.0060842	.0060967	.0086719
#3	-.000102	-.015725	.0052246	.0051984	.0017279	.0217283

Elem	Sr4077
Units	ppm
Avg	.0005260
Stddev	.0001416
%RSD	26.92000
#1	.0004010
#2	.0006798
#3	.0004972

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3503.284	37549.17	2603.071	2831.363	5284.397
Stddev	6.271	180.28	6.117	4.861	8.183
%RSD	.1790061	.4801225	.2349762	.1716906	.1548542
#1	3497.189	37679.08	2606.009	2836.892	5275.279
#2	3509.718	37343.34	2596.039	2829.438	5291.101
#3	3502.945	37625.08	2607.164	2827.760	5286.813

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: Q2559-01DLX5 Acquired: 7/15/2025 22:21:40 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001766**	**.0113535**	**.0328066**	**-.027326**	**.0185420**	**39.63796**	**.2191127**
Stddev	.005216	.0011726	.0023306	.003963	.0016446	.02660	.0012158
%RSD	295.3822	10.32844	7.104096	14.50342	8.869772	.0671021	.5548933
#1	-.006057	.0127068	.0306851	-.022802	.0182224	39.65489	.2191088
#2	-.003281	.0106377	.0324334	-.030189	.0170806	39.60730	.2178989
#3	.004040	.0107160	.0353013	-.028986	.0203229	39.65170	.2203305

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016003**	**-.000592**	**574.7517**	**.0983745**	**.0374797**	**.1150467**	**34.06271**
Stddev	.0001094	.000073	.7223	.0002129	.0004020	.0012258	.41802
%RSD	6.835733	12.39800	.1256682	.2163853	1.072721	1.065479	1.227211
#1	.0017235	-.000636	575.4369	.0981507	.0376721	.1152301	34.15300
#2	.0015148	-.000633	574.8210	.0985745	.0370176	.1161704	34.42821
#3	.0015625	-.000507	573.9973	.0983982	.0377493	.1137395	33.60692

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.238173**	**22.42581**	**.0318809**	**.0007189**	**1.768825**	**.0587213**	**.4596433**
Stddev	.006410	.16340	.0002993	.0005704	.033925	.0032351	.0013241
%RSD	.5177352	.7286375	.9388579	79.33584	1.917950	5.509206	.2880645
#1	1.234669	22.24526	.0321886	.0013145	1.780919	.0619877	.4590696
#2	1.245572	22.46866	.0315907	.0006646	1.795046	.0586578	.4611575
#3	1.234279	22.56353	.0318633	.0001777	1.730510	.0555185	.4587029

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.447518**	**2.012533**	**.1305269**	**.0082711**	**20.46937**	**2.271992**	**.0162336**
Stddev	.053729	.005372	.0017948	.0006697	.05929	.027950	.0017478
%RSD	1.208059	.2669523	1.375073	8.096398	.2896580	1.230210	10.76638
#1	4.452644	2.006665	.1318481	.0084590	20.43585	2.277394	.0168823
#2	4.498500	2.013723	.1312490	.0088267	20.43444	2.296847	.0142542
#3	4.391410	2.017210	.1284834	.0075275	20.53783	2.241735	.0175643

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: Q2559-01DLX5 Acquired: 7/15/2025 22:21:40 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**1.944068**	**.0560656**	**3.185450**
Stddev	.004476	.0082072	.008773
%RSD	.2302367	14.63862	.2754191
#1	1.940556	.0486897	3.183389
#2	1.949108	.0546003	3.195070
#3	1.942539	.0649068	3.177890

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3308.462**	**34760.13**	**2586.021**	**2694.810**	**4286.611**
Stddev	13.337	85.57	25.779	1.705	12.958
%RSD	.4031211	.2461671	.9968654	.0632587	.3022912
#1	3297.329	34686.52	2576.815	2695.619	4279.872
#2	3304.813	34854.01	2566.108	2695.959	4278.411
#3	3323.244	34739.84	2615.139	2692.851	4301.550

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: Q2520-06 Acquired: 7/15/2025 22:25:56 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.008554**	**.0016838**	**.0019852**	**-.005365**	**.0022603**	**.2493185**	**.0327028**
Stddev	.002502	.0015931	.0021515	.004901	.0016435	.0168896	.0007046
%RSD	29.24306	94.61296	108.3756	91.34808	72.71446	6.774293	2.154677
#1	-.010684	.0034289	.0042099	-.000715	.0006055	.2647135	.0333968
#2	-.009180	.0003074	.0018303	-.010483	.0022828	.2519895	.0327238
#3	-.005799	.0013151	-.000085	-.004896	.0038924	.2312526	.0319879

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000127**	**-.000011**	**13.64167**	**.0016389**	**.0079950**	**.4437064**	**.0783974**
Stddev	.000061	.000022	.03336	.0003878	.0002818	.0016027	.0020846
%RSD	48.02191	198.5696	.2445761	23.66171	3.525008	.3612015	2.658952
#1	-.000196	-.000034	13.67320	.0012331	.0081321	.4454504	.0768541
#2	-.000101	-.000008	13.60673	.0020058	.0081820	.4433706	.0807687
#3	-.000082	.000009	13.64509	.0016779	.0076709	.4422982	.0775693

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0277288**	**2.702434**	**.0237850**	**.0019117**	**21.86233**	**-.009529**	**.0365297**
Stddev	.0016671	.051846	.0004983	.0006032	.07702	.008804	.0004440
%RSD	6.012165	1.918488	2.095020	31.55111	.3522992	92.39167	1.215425
#1	.0295683	2.752613	.0243588	.0012567	21.78948	-.016241	.0370388
#2	.0273007	2.649068	.0234619	.0020343	21.94294	-.012787	.0362225
#3	.0263175	2.705619	.0235341	.0024442	21.85457	.000440	.0363279

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.103950**	**1.282524**	**.0203207**	**.0013405**	**2.014251**	**2.011370**	**-.000130**
Stddev	.003997	.003576	.0011715	.0001817	.004612	.009957	.000222
%RSD	.3620828	.2788581	5.764924	13.55341	.2289734	.4950603	171.4197
#1	1.099852	1.280642	.0207020	.0015496	2.012031	2.019812	.000092
#2	1.104160	1.286648	.0212541	.0012512	2.019554	2.013908	-.000129
#3	1.107838	1.280281	.0190061	.0012208	2.011169	2.000389	-.000352

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: Q2520-06 Acquired: 7/15/2025 22:25:56 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0085970	-.015623	.0537587
Stddev	.0032309	.001697	.0001065
%RSD	37.58197	10.86144	.1980178
#1	.0105134	-.014562	.0536924
#2	.0104108	-.014727	.0537022
#3	.0048667	-.017580	.0538815

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3489.710	37892.33	2621.949	2852.302	5192.810
Stddev	9.018	87.17	8.008	8.249	7.706
%RSD	.2584290	.2300425	.3054029	.2891967	.1484066
#1	3500.090	37901.44	2613.791	2853.611	5200.370
#2	3485.235	37974.59	2622.258	2859.817	5184.965
#3	3483.804	37800.97	2629.797	2843.477	5193.094

Sample Name: Q2520-04 Acquired: 7/15/2025 22:30:19 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.006234**	**.0019495**	**.0024260**	**-.005978**	**.0009121**	**.9737518**	**.0280919**
Stddev	.001363	.0016345	.0009776	.001481	.0007402	.0360428	.0004904
%RSD	21.86420	83.84310	40.29765	24.77173	81.14897	3.701434	1.745857
#1	-.004891	.0003092	.0027346	-.005079	.0017540	.9531827	.0275483
#2	-.006194	.0035782	.0032121	-.007688	.0003636	1.015370	.0285014
#3	-.007617	.0019611	.0013313	-.005168	.0006188	.952703	.0282259

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000041**	**.0000062**	**12.99406**	**.0014066**	**.0084036**	**.6347542**	**.0635937**
Stddev	.000159	.0000628	.02833	.0000986	.0002063	.0022264	.0019252
%RSD	392.7689	1016.117	.2180525	7.007781	2.455194	.3507483	3.027329
#1	-.000203	.0000243	12.96372	.0014534	.0086047	.6351431	.0626442
#2	-.000033	-.000064	12.99864	.0014731	.0084137	.6323590	.0658091
#3	.000115	.000058	13.01983	.0012934	.0081924	.6367606	.0623276

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0336517**	**2.561651**	**.0014558**	**.0013767**	**21.40821**	**-.002694**	**.0864170**
Stddev	.0011201	.128673	.0002217	.0004067	.09054	.009031	.0003122
%RSD	3.328562	5.023063	15.22695	29.53813	.4229171	335.2622	.3613074
#1	.0328390	2.425889	.0012296	.0013801	21.43594	.000567	.0866142
#2	.0349295	2.681813	.0014651	.0009684	21.30705	-.012902	.0860570
#3	.0331867	2.577253	.0016727	.0017817	21.48165	.004254	.0865797

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.070940**	**1.082512**	**.0159340**	**.0012458**	**1.971786**	**1.976154**	**.0015681**
Stddev	.004170	.008191	.0005067	.0001167	.011682	.003544	.0008157
%RSD	.3894171	.7566902	3.180074	9.370671	.5924639	.1793194	52.01956
#1	1.070454	1.073557	.0161541	.0012388	1.958307	1.980128	.0023281
#2	1.067034	1.084352	.0153545	.0011327	1.978968	1.973324	.0007062
#3	1.075332	1.089627	.0162935	.0013659	1.978085	1.975009	.0016701

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: Q2520-04 Acquired: 7/15/2025 22:30:19 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0041504	-.006958	.0503364
Stddev	.0033419	.004173	.0005557
%RSD	80.51976	59.96439	1.103946
#1	.0007314	-.005304	.0497064
#2	.0074093	-.003866	.0505461
#3	.0043104	-.011704	.0507567

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3495.867	37714.99	2616.217	2869.206	5184.902
Stddev	3.297	173.68	12.257	19.662	10.798
%RSD	.0943071	.4605027	.4684922	.6852682	.2082653
#1	3494.818	37914.32	2621.512	2890.603	5179.510
#2	3499.560	37634.41	2624.936	2851.933	5197.335
#3	3493.222	37596.23	2602.203	2865.082	5177.862

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: CCV03 Acquired: 7/15/2025 22:39:05 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.741089**	**4.925281**	**4.822192**	**4.818458**	**4.845166**	**9.537900**	**10.58438**
Stddev	.013718	.010942	.005265	.017624	.013139	.028740	.04658
%RSD	.2893400	.2221545	.1091916	.3657548	.2711714	.3013218	.4400541
#1	4.729097	4.925014	4.821885	4.807591	4.833816	9.565816	10.62848
#2	4.738124	4.914476	4.817087	4.808990	4.842123	9.539483	10.58901
#3	4.756048	4.936355	4.827604	4.838792	4.859559	9.508402	10.53567

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2475115**	**2.406171**	**24.47079**	**1.050744**	**2.416688**	**1.268682**	**5.093978**
Stddev	.0014704	.005512	.06564	.003561	.005360	.003153	.013136
%RSD	.5940856	.2290844	.2682450	.3389058	.2217962	.2485347	.2578714
#1	.2487721	2.405960	24.52643	1.048482	2.414773	1.271129	5.087230
#2	.2478662	2.400768	24.48754	1.048901	2.412548	1.269794	5.109116
#3	.2458961	2.411786	24.39840	1.054849	2.422742	1.265124	5.085587

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.621544**	**25.78930**	**2.416021**	**1.237932**	**24.91906**	**2.671478**	**2.590962**
Stddev	.008917	.21063	.004839	.005031	.14941	.036592	.012302
%RSD	.3401365	.8167507	.2003028	.4064258	.5995620	1.369729	.4747879
#1	2.631344	26.02837	2.414982	1.232905	24.94460	2.698705	2.581495
#2	2.619379	25.63102	2.411786	1.237925	25.05404	2.685846	2.586524
#3	2.613909	25.70852	2.421296	1.242967	24.75853	2.629882	2.604867

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.76803**	**4.882709**	**5.113867**	**4.607798**	**4.772009**	**5.087655**	**4.867678**
Stddev	.27753	.008842	.011194	.012239	.014671	.003167	.008193
%RSD	1.167675	.1810865	.2188945	.2656044	.3074340	.0622443	.1683089
#1	23.65905	4.879055	5.122675	4.598292	4.772795	5.090690	4.868198
#2	24.08351	4.876280	5.117654	4.603496	4.756961	5.087903	4.859237
#3	23.56152	4.892792	5.101270	4.621607	4.786270	5.084371	4.875598

Reviewed By:jaswal
On:7/16/2025 6:31:51 PM
Inst Id :P5
LB :LB136488

Sample Name: CCV03 Acquired: 7/15/2025 22:39:05 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.174213**	**5.352246**	**5.188073**
Stddev	.020023	.020220	.019876
%RSD	.3869856	.3777869	.3831046
#1	5.188630	5.374346	5.199034
#2	5.182659	5.347717	5.200056
#3	5.151350	5.334674	5.165131

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3338.808**	**36015.49**	**2565.184**	**2767.622**	**4632.832**
Stddev	3.178	76.52	14.366	9.073	6.256
%RSD	.0951789	.2124710	.5600500	.3278228	.1350327
#1	3339.877	36092.05	2561.805	2776.511	4626.551
#2	3335.233	35939.01	2552.808	2758.375	4632.883
#3	3341.313	36015.39	2580.938	2767.981	4639.062

Sample Name: CCB03 Acquired: 7/15/2025 22:43:21 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002336**	**-.000178**	**.0012201**	**.0040392**	**-.001300**	**-.001162**
Stddev	.001101	.001272	.0022125	.0020024	.000883	.015229
%RSD	47.13093	715.7606	181.3428	49.57520	67.93142	1310.817
#1	-.002982	-.001180	-.000991	.0022552	-.000605	-.016844
#2	-.001065	-.000606	.003434	.0062051	-.001001	-.000209
#3	-.002960	.001253	.001217	.0036573	-.002294	.013568

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0023692**	**.0000730**	**.0000303**	**.0769335**	**.0010522**	**-.000100**
Stddev	.0016225	.0001078	.0000565	.0160623	.0004698	.000044
%RSD	68.48382	147.7739	186.1550	20.87816	44.65175	43.75887
#1	.0017608	.0000906	-.000035	.0604470	.0015773	-.000060
#2	.0011388	-.000043	.000059	.0778184	.0006715	-.000147
#3	.0042079	.000171	.000067	.0925350	.0009079	-.000094

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008560**	**-.000869**	**.0008679**	**.0021762**	**.0001001**	**.0010714**
Stddev	.0011557	.001746	.0018852	.0591968	.0007658	.0009973
%RSD	135.0177	200.9373	217.2203	2720.124	764.5630	93.08965
#1	.0021803	.000112	.0029231	-.027564	.0009795	.0019248
#2	.0000513	-.002885	.0004615	-.036254	-.000259	-.000025
#3	.0003363	.000166	-.000781	.070346	-.000420	.001314

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0084258**	**.0008902**	**.0003927**	**-.002201**	**-.000131**	F **.0166392**
Stddev	.0054606	.0025002	.0004205	.000801	.000559	.0009331
%RSD	64.80852	280.8450	107.0932	36.39620	427.1203	5.607716
#1	.0095853	.0025830	.0003760	-.002240	.000048	.0170142
#2	.0132136	-.001981	-.000019	-.001382	-.000758	.0173264
#3	.0024785	.002069	.000821	-.002983	.000317	.0155770

Sample Name: CCB03 Acquired: 7/15/2025 22:43:21 Type: Unk
Method: METHOD 6010D, 200.7 M(v41) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001408**	**-.008678**	**.0027677**	**.0041472**	**.0000464**	F **.0209365**
Stddev	.0004608	.004707	.0008844	.0003322	.0048282	.0085164
%RSD	327.2497	54.24232	31.95410	8.010811	10395.20	40.67724
#1	.0002687	-.011280	.0031544	.0038103	.0053150	.0113105
#2	-.000370	-.003244	.0017558	.0044745	-.001009	.0274912
#3	.000524	-.011509	.0033929	.0041568	-.004167	.0240077

Elem	Sr4077
Units	ppm
Avg	**.0002850**
Stddev	.0003138
%RSD	110.0870
#1	-.000018
#2	.000609
#3	.000264

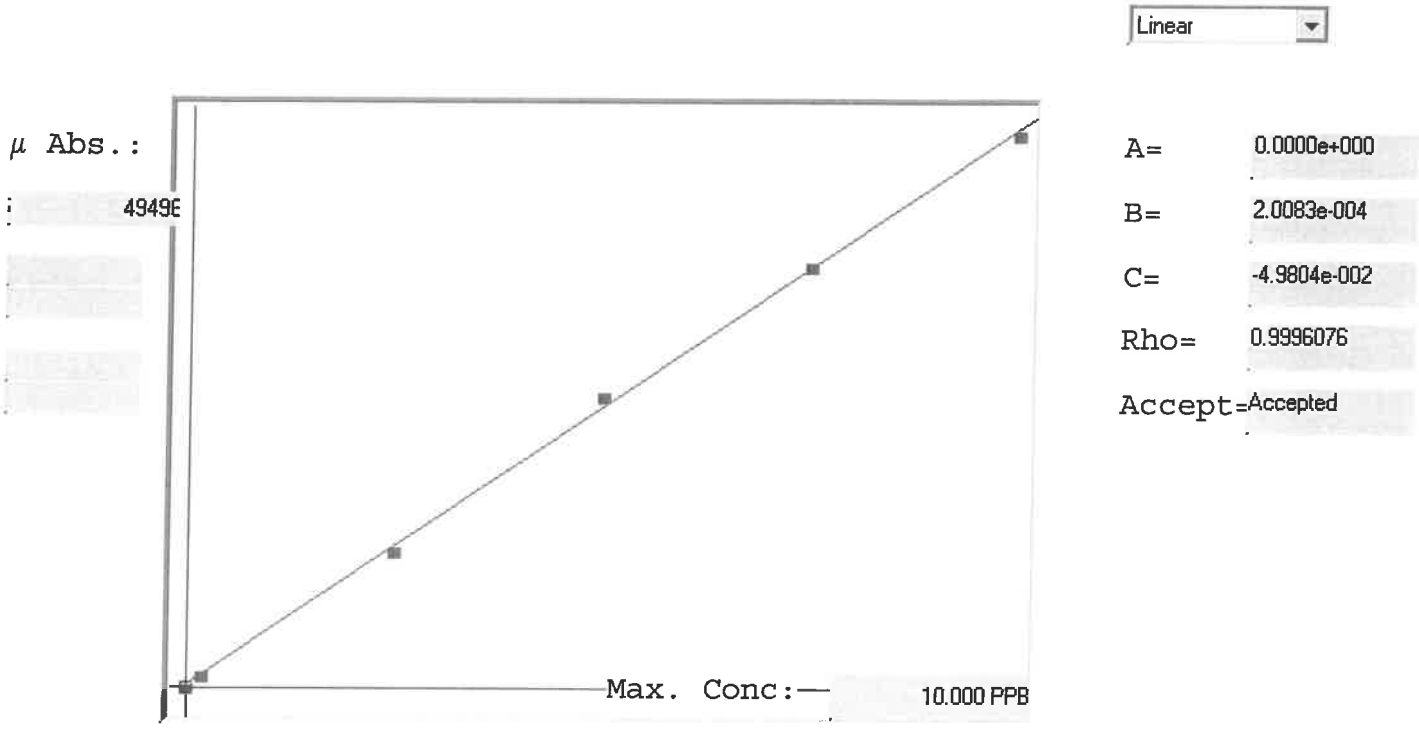
Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3474.552**	**37672.44**	**2614.425**	**2860.054**	**5283.952**
Stddev	8.401	83.53	10.209	16.148	15.239
%RSD	.2417731	.2217233	.3904699	.5645936	.2884095
#1	3478.362	37695.76	2613.988	2869.931	5290.082
#2	3464.922	37741.84	2604.442	2868.811	5266.602
#3	3480.373	37579.73	2624.845	2841.419	5295.171

Reviewed By:jaswal
On:7/14/2025 11:09:31 PM
Inst Id :CV1
LB :LB136438

LB136438

7471B

INSTRUMENT ID: CV1



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	%D
0.0	0.000	-0.027	-0.027	115	0.000	115					-1
0.2	0.200	0.185	-0.015	1167	0.0 %	1167					-8
2.5	2.500	2.416	-0.084	12280	0.0 %	12280					-3
5.0	5.000	5.209	0.209	26183	0.0 %	26183					4
7.5	7.500	7.526	0.026	37724	0.0 %	37724					0
10.0	10.000	9.891	-0.109	49496	0.0 %	49496					-1

Reviewed By:jaswal
On:7/14/2025 11:09:31 PM
Inst Id :CV1
LB :LB136438

LB136438 INSTYRUMENT ID : CV1

Method: 7471B Operator: Admin Date of Analysis: 11 Jul 2025 13:55:58

Type	Sample ID	Extended ID	Conc.	µ Abs.	Units	Stnd Conc	Method	Date
S	0.0 - 1	S0	-	115	PPB	0.00000	7471B	11 Jul 2025 13:56:11
S	0.2 - 1	S0.2	-	1167	PPB	0.20000	7471B	11 Jul 2025 13:58:28
S	2.5 - 1	S2.5	-	12280	PPB	2.50000	7471B	11 Jul 2025 14:00:4
S	5.0 - 1	S5	-	26183	PPB	5.00000	7471B	11 Jul 2025 14:03:0
S	7.5 - 1	S7.5	-	37724	PPB	7.50000	7471B	11 Jul 2025 14:05:2
S	10.0 - 1	S10	-	49496	PPB	10.00000	7471B	11 Jul 2025 14:10:2
U	ICV25 - 1	ICV25	3.7723	19031	PPB		-7471B	11 Jul 2025 14:13:21
U	ICB25 - 1	ICB25	-0.0906	-203	PPB		-7471B	11 Jul 2025 14:15:3
U	CCV82 - 1	CCV82	5.4904	27586	PPB		-7471B	11 Jul 2025 14:18:0
U	CCB82 - 1	CCB82	0.0221	358	PPB		-7471B	11 Jul 2025 14:25:5
U	CRA - 1	CRA	0.2314	1400	PPB		-7471B	11 Jul 2025 14:28:0
U	HighStd - 1	HighStd	9.7653	48872	PPB		-7471B	11 Jul 2025 14:30:2
U	ChkStd - 1	ChkStd	6.9404	34806	PPB		-7471B	11 Jul 2025 14:32:4
U	PB168821BL - 1	PBS	-0.0825	-163	PPB		-7471B	11 Jul 2025 14:35:04
U	PB168821BS - 1	LCSS	3.6512	18428	PPB		-7471B	11 Jul 2025 14:40:1
U	Q2537-01 - 1	TR-04-7.9-2025	0.2243	1365	PPB		-7471B	11 Jul 2025 14:42:34
U	Q2539-01 - 1	HACKENSACK	1.4285	7361	PPB		-7471B	11 Jul 2025 14:44:5
U	Q2542-01 - 1	VNJ-245	0.6286	3378	PPB		-7471B	11 Jul 2025 14:47:1
U	Q2543-01 - 1	TP-41	-0.0502	-2	PPB		-7471B	11 Jul 2025 14:49:41
U	Q2543-02 - 1	TP-49	0.4334	2406	PPB		-7471B	11 Jul 2025 14:51:5
U	CCV83 - 1	CCV83	4.8879	24586	PPB		-7471B	11 Jul 2025 14:56:52
U	CCB83 - 1	CCB83	-0.0351	73	PPB		-7471B	11 Jul 2025 15:01:50
U	Q2543-03 - 1	TP-23	0.0934	713	PPB		-7471B	11 Jul 2025 15:04:06
U	Q2543-04 - 1	TP-23-99	0.0669	581	PPB		-7471B	11 Jul 2025 15:06:21
U	Q2546-01 - 1	HD-02-7-9-2025	0.1703	1096	PPB		-7471B	11 Jul 2025 15:08:36
U	Q2550-02 - 1	VNJ-203	1.0528	5490	PPB		-7471B	11 Jul 2025 15:10:52
U	Q2551-02 - 1	VNJ-204	0.8180	4321	PPB		-7471B	11 Jul 2025 15:13:09
U	Q2555-01 - 1	OU4-TS-29-070925	1.0377	5415	PPB		-7471B	11 Jul 2025 15:15:27
U	Q2555-03 - 1	OU4-TS-30-070925	0.0552	523	PPB		-7471B	11 Jul 2025 15:17:46
U	Q2556-01 - 1	RT3997	0.2565	1525	PPB		-7471B	11 Jul 2025 15:20:05
U	Q2557-01 - 1	OILY SPILL DEBRIS	3.4316	17335	PPB		-7471B	11 Jul 2025 15:22:22
U	Q2558-01 - 1	OU4-TS-Denali-070925	0.2103	1295	PPB		-7471B	11 Jul 2025 15:24:38
U	CCV84 - 1	CCV84	5.2490	26384	PPB		-7471B	11 Jul 2025 15:26:56
U	CCB84 - 1	CCB84	-0.0464	17	PPB		-7471B	11 Jul 2025 15:29:12
U	Q2558-03 - 1	OU4-TS-Grillo-OG-070925	0.4595	2536	PPB		-7471B	11 Jul 2025 15:36:35
U	Q2558-03DUP - 1	OU4-TS-Grillo-OG-070925DUP	0.4119	2299	PPB		-7471B	11 Jul 2025 15:38:50
U	Q2558-03MS - 1	OU4-TS-Grillo-OG-070925MS	3.6226	18286	PPB		-7471B	11 Jul 2025 15:41:07
U	Q2558-03MSD - 1	OU4-TS-Grillo-OG-070925MSD	3.4792	17572	PPB		-7471B	11 Jul 2025 15:43:24
U	Q2560-01 - 1	LP-7102025	1.1917	6182	PPB		-7471B	11 Jul 2025 15:45:43
U	PB168822BL - 1	PBS	-0.0368	65	PPB		-7471B	11 Jul 2025 15:48:03
U	PB168822BS - 1	LCSS	4.0408	20368	PPB		-7471B	11 Jul 2025 15:50:21
U	Q2559-01 - 1	500-3B CONCRETE CHIP	-0.0627	-64	PPB		-7471B	11 Jul 2025 15:52:41
U	Q2564-01 - 1	ARS20-0030	0.6889	3678	PPB		-7471B	11 Jul 2025 15:55:01
U	Q2564-03 - 1	ARS20-0013	0.3217	1850	PPB		-7471B	11 Jul 2025 15:57:16
U	CCV85 - 1	CCV85	4.7300	23800	PPB		-7471B	11 Jul 2025 16:02:21
U	CCB85 - 1	CCB85	-0.0378	60	PPB		-7471B	11 Jul 2025 16:04:37
U	Q2564-05 - 1	ARS20-0039	0.4284	2381	PPB		-7471B	11 Jul 2025 16:06:57
U	Q2564-05DUP - 1	ARS20-0039DUP	0.4234	2356	PPB		-7471B	11 Jul 2025 16:09:12
U	Q2564-05MS - 1	ARS20-0039MS	3.9313	19823	PPB		-7471B	11 Jul 2025 16:11:28
U	Q2564-05MSD - 1	ARS20-0039MSD	3.8154	19246	PPB		-7471B	11 Jul 2025 16:16:23
U	Q2571-01 - 1	TP-18	0.6993	3730	PPB		-7471B	11 Jul 2025 16:18:41
U	Q2571-05 - 1	TP-17	0.2105	1296	PPB		-7471B	11 Jul 2025 16:21:02
U	Q2558-03LX5 - 1		0.0358	426	PPB		-7471B	11 Jul 2025 16:23:20
U	Q2558-03A - 1		4.4722	22516	PPB		-7471B	11 Jul 2025 16:25:37
U	Q2564-05LX5 - 1		0.0036	266	PPB		-7471B	11 Jul 2025 16:27:54
U	Q2564-05A - 1		4.4264	22288	PPB		-7471B	11 Jul 2025 16:30:13
U	CCV86 - 1	CCV86	4.7515	23907	PPB		-7471B	11 Jul 2025 16:32:29
U	CCB86 - 1	CCB86	-0.0165	166	PPB		-7471B	11 Jul 2025 16:34:49

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB168806

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: 07/11/2025 **Time :** 08:50 **Temp :** 96 °C

End Digest Date: 07/11/2025 **Time :** 10:55 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #3

Dig Technician Signature: SKS.

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	1.00	M6007
LFS-2	1.00	M6015
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
Conc. HNO3	5.00	M6158
1:1 HNO3	10.00	MP84041
30% H2O2	3.00	M6170
CONC: HCL	10.00	M6151
PTFE Boiling Stones	N/A	M5581
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK #3 CELL#35 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
07/11/25 11:050	SKS met dig	(Meta Scale)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB168806

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
PB168806BL	PBS806	N/A	2.00	100	Colorless	Colorless	Fine	N/A	N/A	1
PB168806BS	LCS806	N/A	2.00	100	Colorless	Colorless	Fine	N/A	M6007,M6015	2
Q2555-01	OU4-TS-29-070925	N/A	2.38	100	Brown	Yellow	Medium	N/A	N/A	3
Q2555-03	OU4-TS-30-070925	N/A	2.32	100	Brown	Yellow	Medium	N/A	N/A	4
Q2556-01	RT3997	N/A	2.26	100	Brown	Yellow	Medium	N/A	N/A	5
Q2557-01	OILY SPILL DEBRIS	N/A	2.23	100	Brown	Yellow	Medium	N/A	N/A	6
Q2558-01	OU4-TS-DENALI-070925	N/A	2.20	100	Brown	Yellow	Medium	N/A	N/A	7
Q2558-03	OU4-TS-GRILLO-OG-070925	N/A	2.34	100	Brown	Yellow	Medium	N/A	N/A	8
Q2559-01	500-3B CONCRETE CHIP	N/A	2.40	100	Brown	Yellow	Medium	N/A	N/A	9
Q2560-01	LP-7102025	N/A	2.43	100	Brown	Yellow	Medium	N/A	N/A	10
Q2564-01	ARS20-0030	N/A	2.18	100	Brown	Yellow	Medium	N/A	N/A	11
Q2564-03	ARS20-0013	N/A	2.31	100	Brown	Yellow	Medium	N/A	N/A	12
Q2564-05	ARS20-0039	N/A	2.27	100	Brown	Yellow	Medium	N/A	N/A	13
Q2564-05MS	ARS20-0039MS	N/A	2.34	100	Brown	Yellow	Medium	N/A	M6007,M6015	15
Q2564-05MSD	ARS20-0039MSD	N/A	2.16	100	Brown	Yellow	Medium	N/A	M6007,M6015	16
Q2564-05DUP	ARS20-0039DUP	N/A	2.33	100	Brown	Yellow	Medium	N/A	N/A	14
Q2571-01	TP-18	N/A	2.44	100	Brown	Yellow	Medium	N/A	N/A	17
Q2571-05	TP-17	N/A	2.10	100	Brown	Yellow	Medium	N/A	N/A	18

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB168806 **WorkList ID :** 190656 **Department :** Digestion **Date :** 07-11-2025 08:14:11

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2555-01	OU4-TS-29-070925	Solid	Metals ICP-TAL	Cool 4 deg C	NOBI03	O13	07/09/2025	6010D
Q2555-03	OU4-TS-30-070925	Solid	Metals ICP-TAL	Cool 4 deg C	NOBI03	O13	07/09/2025	6010D
Q2556-01	RT3997	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	O22	07/10/2025	6010D
Q2557-01	OILY SPILL DEBRIS	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	O21	07/10/2025	6010D
Q2558-01	OU4-TS-Denali-070925	Solid	Metals ICP-TAL	Cool 4 deg C	NOBI03	O13	07/09/2025	6010D
Q2558-03	OU4-TS-Grillo-OG-070925	Solid	Metals ICP-TAL	Cool 4 deg C	NOBI03	O13	07/09/2025	6010D
Q2559-01	500-3B CONCRETE CHIP	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	O31	07/10/2025	6010D
Q2560-01	LP-7102025	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	O23	07/10/2025	6010D
Q2564-01	ARS20-0030	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	O22	07/10/2025	6010D
Q2564-03	ARS20-0013	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	O22	07/10/2025	6010D
Q2564-05	ARS20-0039	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	O22	07/10/2025	6010D
Q2571-01	TP-18	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	O22	07/10/2025	6010D
Q2571-05	TP-17	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03		07/10/2025	6010D

Date/Time 07/22/25 08:35
Raw Sample Received by: SKBmcdd
Raw Sample Relinquished by:

Date/Time 07/22/25 09:58
Raw Sample Received by:
Raw Sample Relinquished by: SKBmcdd

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB168821

SOP ID : M7471B-Mercury-19

SDG No : NA

Matrix : SOIL

Pippete ID: HG A

Balance ID : M SC-3

Filter paper ID : NA

pH Strip ID : NA

Hood ID : #1

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

Start Digest Date: 07/10/2025 **Time :** 16:00 **Temp :** 95 °C

End Digest Date: 07/10/2025 **Time :** 16:30 **Temp :** 94 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: MB

Supervisor Signature: [signature]

Temp : 1. 95°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP86344
CCV	30mL	MP86346
CRA	30mL	MP86348
Blank Spike	0.48mL	MP86337
Matrix Spike	0.48mL	MP86337

Chemical Used	ML/SAMPLE USED	Lot Number
AQUA REGIA	1.5mL	MP86350
KMnO4 (5%)	4.5mL	MP85893
Hydroxylamine HCL (12%)	2.0mL	MP85895
PTFE Boiling Stones	----------	M5582
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
0.0 ppb	S0	30mL	MP86338
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP86339
2.5 ppb	S2.5	30mL	MP86340
5.0 ppb	S5.0	30mL	MP86341
7.5 ppb	S7.5	30mL	MP86342
10.0 ppb	S10.0	30mL	MP86343
ICV	ICV	30mL	MP86344
ICB	ICB	30mL	MP86345
CCV	CCV	30mL	MP86346
CCB	CCB	30mL	MP86347
CRI	CRI	30mL	MP86348
CHK STD	CHK STD	30mL	MP86349

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
7/10/25 @ 17:10	MB - HG Lab	MB - Metals Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB168821

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Comment	Prep Pos
PB168821BL	PBS821	0.52	35	NA	N/A	3-1
PB168821BS	LCS821	0.54	35	NA	MP86337	2
Q2537-01	TR-04-7.9-2025	0.52	35	NA	N/A	3
Q2539-01	HACKENSACK	0.50	35	NA	N/A	4
Q2542-01	VNJ-245	0.57	35	NA	N/A	5
Q2543-01	TP-41	0.56	35	NA	N/A	6
Q2543-02	TP-49	0.56	35	NA	N/A	7
Q2543-03	TP-23	0.59	35	NA	N/A	8
Q2543-04	TP-23-99	0.51	35	NA	N/A	9
Q2546-01	HD-02-7-9-2025	0.53	35	NA	N/A	10
Q2550-02	VNJ-203	0.57	35	NA	N/A	11
Q2551-02	VNJ-204	0.56	35	NA	N/A	12
Q2555-01	OU4-TS-29-070925	0.57	35	NA	N/A	13
Q2555-03	OU4-TS-30-070925	0.54	35	NA	N/A	14
Q2556-01	RT3997	0.55	35	NA	N/A	15
Q2557-01	OILY SPILL DEBRIS	0.59	35	NA	N/A	16
Q2558-01	OU4-TS-DENALI-070925	0.55	35	NA	N/A	17
Q2558-03	OU4-TS-GRILLO-OG-070925	0.58	35	NA	N/A	18
Q2558-03DUP	OU4-TS-GRILLO-OG-070925DUP	0.57	35	NA	N/A	19
Q2558-03MS	OU4-TS-GRILLO-OG-070925MS	0.56	35	NA	MP86337	20
Q2558-03MSD	OU4-TS-GRILLO-OG-070925MSD	0.56	35	NA	MP86337	21
Q2560-01	LP-7102025	0.56	35	NA	N/A	22

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 071025_7471 **WorkList ID :** 190643 **Department :** Digestion **Date :** 07-10-2025 14:43:31

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2543-01	TP-41	Solid	Mercury	Cool 4 deg C	CAMP02	O42	07/08/2025	7471B
Q2543-02	TP-49	Solid	Mercury	Cool 4 deg C	CAMP02	O42	07/09/2025	7471B
Q2543-03	TP-23	Solid	Mercury	Cool 4 deg C	CAMP02	O42	07/09/2025	7471B
Q2543-04	TP-23-99	Solid	Mercury	Cool 4 deg C	CAMP02	O42	07/09/2025	7471B
Q2555-01	OU4-TS-29-070925	Solid	Mercury	Cool 4 deg C	NOBI03	O13	07/09/2025	7471B
Q2555-03	OU4-TS-30-070925	Solid	Mercury	Cool 4 deg C	NOBI03	O13	07/09/2025	7471B
Q2558-01	OU4-TS-Denali-070925	Solid	Mercury	Cool 4 deg C	NOBI03	O13	07/09/2025	7471B
Q2558-03	OU4-TS-Grillo-OG-070925	Solid	Mercury	Cool 4 deg C	NOBI03	O13	07/09/2025	7471B
Q2537-01	TR-04-7.9-2025	Solid	Mercury	Cool 4 deg C	PSEG03	O33	07/09/2025	7471B
Q2539-01	HACKENSACK	Solid	Mercury	Cool 4 deg C	PSEG03	O32	07/09/2025	7471B
Q2542-01	VNJ-245	Solid	Mercury	Cool 4 deg C	PSEG03	O32	07/09/2025	7471B
Q2550-02	VNJ-203	Solid	Mercury	Cool 4 deg C	PSEG03	O41	07/09/2025	7471B
Q2551-02	VNJ-204	Solid	Mercury	Cool 4 deg C	PSEG03	O11	07/09/2025	7471B
Q2556-01	RT3997	Solid	Mercury	Cool 4 deg C	PSEG03	O22	07/10/2025	7471B
Q2557-01	OILY SPILL DEBRIS	Solid	Mercury	Cool 4 deg C	PSEG03	O21	07/10/2025	7471B
Q2560-01	LP-7102025	Solid	Mercury	Cool 4 deg C	PSEG03	O23	07/10/2025	7471B
Q2546-01	HD-02-7-9-2025	Solid	Mercury	Cool 4 deg C	PSEG05	O23	07/09/2025	7471B

Date/Time 7/10/25 15:30

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

Date/Time 7/10/25 16:20

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 7/11/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:10
In Date: 07/10/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 104
Time OUT: 08:25
Out Date: 07/11/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID-OVEN

QC: LB136427

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
Q2550-02	VNJ-203	1	1.13	10.33	11.46	10.67	92.4	
Q2550-03	VNJ-203-E2	2	1.16	10.18	11.34	10.36	90.4	
Q2555-01	OU4-TS-29-070925	3	1.18	10.34	11.52	8.84	74.1	
Q2555-03	OU4-TS-30-070925	4	1.14	10.85	11.99	9.45	76.6	
Q2556-01	RT3997	5	1.16	10.62	11.78	10.4	87.0	
Q2557-01	OILY SPILL DEBRIS	6	1.00	1.00	2.00	2.00	100.0	debris
Q2558-01	OU4-TS-Denali-070925	7	1.15	10.60	11.75	9.59	79.6	
Q2558-03	OU4-TS-Grillo-OG-070925	8	1.19	10.63	11.82	9.56	78.7	
Q2559-01	500-3B CONCRETE CHIP	9	1.00	1.00	2.00	2.00	100.0	Concreate sample
Q2559-02	500-3B CONCRETE CHIP-EPH	10	1.00	1.00	2.00	2.00	100.0	Concreate sample
Q2560-01	LP-7102025	11	1.14	9.97	11.11	9.53	84.2	
Q2560-02	LP-7102025-EPH-2	12	1.19	10.36	11.55	10.07	85.7	
Q2560-03	LP-7102025-VOC	13	1.13	10.68	11.81	10.11	84.1	
Q2561-03	AUD-25-0115-0116	14	1.14	10.21	11.35	11.07	97.3	
Q2561-04	AUD-25-0067	15	1.17	10.34	11.51	10.88	93.9	
Q2561-05	AUD-25-0117	16	1.15	10.84	11.99	11.85	98.7	
Q2564-01	ARS20-0030	17	1.18	10.66	11.84	11.32	95.1	
Q2564-02	ARS20-0030-E2	18	1.19	10.47	11.66	11.00	93.7	
Q2564-03	ARS20-0013	19	1.13	10.70	11.83	10.87	91.0	
Q2564-04	ARS20-0013-E2	20	1.15	10.81	11.96	10.82	89.5	
Q2564-05	ARS20-0039	21	1.14	10.39	11.53	10.2	87.2	
Q2564-06	ARS20-0039-E2	22	1.13	10.64	11.77	11.09	93.6	
Q2565-02	MOO-25-0194-0195	23	1.14	10.11	11.25	9.82	85.9	
Q2565-03	MOO-25-0191	24	1.00	1.00	2.00	2.00	100.0	debris
Q2565-04	MOO-25-0196	25	1.19	10.56	11.75	9.2	75.9	
Q2565-05	MOO-25-0180	26	1.13	10.69	11.82	11.4	96.1	
Q2571-01	TP-18	27	1.15	10.82	11.97	11.71	97.6	

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 7/11/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:10
In Date: 07/10/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 104
Time OUT: 08:25
Out Date: 07/11/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID-OVEN

QC: LB136427

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
Q2571-02	TP-18 EPH	28	1.14	10.85	11.99	11.44	94.9	
Q2571-03	TP-18 VOC	29	1.18	10.59	11.77	10.45	87.5	
Q2571-05	TP-17	30	1.15	10.88	12.03	10.72	88.0	
Q2571-06	TP-17-EPH	31	1.15	11.16	12.31	11.1	89.2	
Q2571-07	TP-17-VOC	32	1.14	10.85	11.99	10.9	90.0	

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

WORKLIST(Hardcopy Internal Chain)

WB6427

WorkList Name : %1-071025 **WorkList ID :** 190631 **Department :** Wet-Chemistry **Date :** 07-10-2025 08:43:25

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2550-02	VNJ-203	Solid	Percent Solids	Cool 4 deg C	PSEG03	O41	07/09/2025	Chemtech -SO
Q2550-03	VNJ-203-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	O41	07/09/2025	Chemtech -SO
Q2555-01	OU4-TS-29-070925	Solid	Percent Solids	Cool 4 deg C	NOBI03	O13	07/09/2025	Chemtech -SO
Q2555-03	OU4-TS-30-070925	Solid	Percent Solids	Cool 4 deg C	NOBI03	O13	07/09/2025	Chemtech -SO
Q2556-01	RT3997	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/10/2025	Chemtech -SO
Q2557-01	OILY SPILL DEBRIS	Solid	Percent Solids	Cool 4 deg C	PSEG03	O21	07/10/2025	Chemtech -SO
Q2558-01	OU4-TS-Denali-070925	Solid	Percent Solids	Cool 4 deg C	NOBI03	O13	07/09/2025	Chemtech -SO
Q2558-03	OU4-TS-Grillo-OG-070925	Solid	Percent Solids	Cool 4 deg C	NOBI03	O13	07/09/2025	Chemtech -SO
Q2559-01	500-3B CONCRETE CHIP	Solid	Percent Solids	Cool 4 deg C	PSEG03	O31	07/10/2025	Chemtech -SO
Q2559-02	500-3B CONCRETE CHIP-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	O31	07/10/2025	Chemtech -SO
Q2560-01	LP-7102025	Solid	Percent Solids	Cool 4 deg C	PSEG03		07/10/2025	Chemtech -SO
Q2560-02	LP-7102025-EPH-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	O23	07/10/2025	Chemtech -SO
Q2560-03	LP-7102025-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	O23	07/10/2025	Chemtech -SO
Q2561-03	AUD-25-0115-0116	Solid	Percent Solids	Cool 4 deg C	PSEG03	O21	07/10/2025	Chemtech -SO
Q2561-04	AUD-25-0067	Solid	Percent Solids	Cool 4 deg C	PSEG03	O21	07/10/2025	Chemtech -SO
Q2561-05	AUD-25-0117	Solid	Percent Solids	Cool 4 deg C	PSEG03	O21	07/10/2025	Chemtech -SO
Q2564-01	ARS20-0030	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/10/2025	Chemtech -SO
Q2564-02	ARS20-0030-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/10/2025	Chemtech -SO
Q2564-03	ARS20-0013	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/10/2025	Chemtech -SO
Q2564-04	ARS20-0013-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/10/2025	Chemtech -SO
Q2564-05	ARS20-0039	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/10/2025	Chemtech -SO

Date/Time 07/10/25 : 1510

Raw Sample Received by: R (WC)

Raw Sample Relinquished by: [signature]

Date/Time 07/10/25 1720

Raw Sample Received by: [signature]

Raw Sample Relinquished by: R (WC)

VB 136427

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-071025 **WorkList ID :** 190631 **Department :** Wet-Chemistry **Date :** 07-10-2025 08:43:25

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2564-06	ARS20-0039-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/10/2025	Chemtech -SO
Q2565-02	MOO-25-0194-0195	Solid	Percent Solids	Cool 4 deg C	PSEG03	O11	07/10/2025	Chemtech -SO
Q2565-03	MOO-25-0191	Solid	Percent Solids	Cool 4 deg C	PSEG03	O11	07/10/2025	Chemtech -SO
Q2565-04	MOO-25-0196	Solid	Percent Solids	Cool 4 deg C	PSEG03	O11	07/10/2025	Chemtech -SO
Q2565-05	MOO-25-0180	Solid	Percent Solids	Cool 4 deg C	PSEG03	O11	07/10/2025	Chemtech -SO
Q2571-01	TP-18	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/10/2025	Chemtech -SO
Q2571-02	TP-18 EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/10/2025	Chemtech -SO
Q2571-03	TP-18 VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/10/2025	Chemtech -SO
Q2571-05	TP-17	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/10/2025	Chemtech -SO
Q2571-06	TP-17-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/10/2025	Chemtech -SO
Q2571-07	TP-17-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/10/2025	Chemtech -SO

Date/Time 07/10/25 15:10

Raw Sample Received by: WC

Raw Sample Relinquished by:

Date/Time 07/10/25 17:20

Raw Sample Received by:

Raw Sample Relinquished by: WC

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136438

Review By	MOHAN	Review On	7/14/2025 1:14:06 PM
Supervise By	jaswal	Supervise On	7/14/2025 11:09:31 PM

STD. NAME	STD REF.#
ICAL Standard	MP86338,MP86339,MP86340,MP86341,MP86342,MP86343
ICV Standard	MP86344
CCV Standard	MP86346
ICSA Standard	
CRI Standard	MP86348
LCS Standard	
Chk Standard	MP86345,MP86347,MP86349,MP86353

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	07/11/25 13:56		MOHAN	OK
2	S0.2	S0.2	CAL2	07/11/25 13:58		MOHAN	OK
3	S2.5	S2.5	CAL3	07/11/25 14:00		MOHAN	OK
4	S5	S5	CAL4	07/11/25 14:03		MOHAN	OK
5	S7.5	S7.5	CAL5	07/11/25 14:05		MOHAN	OK
6	S10	S10	CAL6	07/11/25 14:10		MOHAN	OK
7	ICV25	ICV25	ICV	07/11/25 14:13		MOHAN	OK
8	ICB25	ICB25	ICB	07/11/25 14:15		MOHAN	OK
9	CCV82	CCV82	CCV	07/11/25 14:18		MOHAN	OK
10	CCB82	CCB82	CCB	07/11/25 14:25		MOHAN	OK
11	CRA	CRA	CRDL	07/11/25 14:28		MOHAN	OK
12	HighStd	HighStd	HIGH STD	07/11/25 14:30		MOHAN	OK
13	ChkStd	ChkStd	SAM	07/11/25 14:32		MOHAN	OK
14	PB168821BL	PB168821BL	MB	07/11/25 14:35		MOHAN	OK
15	PB168821BS	PB168821BS	LCS	07/11/25 14:40		MOHAN	OK
16	Q2537-01	TR-04-07092025	SAM	07/11/25 14:42		MOHAN	OK
17	Q2539-01	HACKENSACK	SAM	07/11/25 14:44		MOHAN	OK
18	Q2542-01	VNJ-245	SAM	07/11/25 14:47		MOHAN	OK

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136438

Review By	MOHAN	Review On	7/14/2025 1:14:06 PM
Supervise By	jaswal	Supervise On	7/14/2025 11:09:31 PM

STD. NAME	STD REF.#
ICAL Standard	MP86338,MP86339,MP86340,MP86341,MP86342,MP86343
ICV Standard	MP86344
CCV Standard	MP86346
ICSA Standard	
CRI Standard	MP86348
LCS Standard	
Chk Standard	MP86345,MP86347,MP86349,MP86353

19	Q2543-01	TP-41	SAM	07/11/25 14:49		MOHAN	OK
20	Q2543-02	TP-49	SAM	07/11/25 14:51		MOHAN	OK
21	CCV83	CCV83	CCV	07/11/25 14:56		MOHAN	OK
22	CCB83	CCB83	CCB	07/11/25 15:01		MOHAN	OK
23	Q2543-03	TP-23	SAM	07/11/25 15:04		MOHAN	OK
24	Q2543-04	TP-23-99	SAM	07/11/25 15:06		MOHAN	OK
25	Q2546-01	HD-02-7-9-2025	SAM	07/11/25 15:08		MOHAN	OK
26	Q2550-02	VNJ-203	SAM	07/11/25 15:10		MOHAN	OK
27	Q2551-02	VNJ-204	SAM	07/11/25 15:13		MOHAN	OK
28	Q2555-01	OU4-TS-29-070925	SAM	07/11/25 15:15		MOHAN	OK
29	Q2555-03	OU4-TS-30-070925	SAM	07/11/25 15:17		MOHAN	OK
30	Q2556-01	RT3997	SAM	07/11/25 15:20		MOHAN	OK
31	Q2557-01	OILY SPILL DEBRIS	SAM	07/11/25 15:22		MOHAN	OK
32	Q2558-01	OU4-TS-Denali-07092	SAM	07/11/25 15:24		MOHAN	OK
33	CCV84	CCV84	CCV	07/11/25 15:26		MOHAN	OK
34	CCB84	CCB84	CCB	07/11/25 15:29		MOHAN	OK
35	Q2558-03	OU4-TS-Grillo-OG-07	SAM	07/11/25 15:36		MOHAN	OK
36	Q2558-03DUP	OU4-TS-Grillo-OG-07	DUP	07/11/25 15:38		MOHAN	OK
37	Q2558-03MS	OU4-TS-Grillo-OG-07	MS	07/11/25 15:41		MOHAN	OK
38	Q2558-03MSD	OU4-TS-Grillo-OG-07	MSD	07/11/25 15:43		MOHAN	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136438

Review By	MOHAN	Review On	7/14/2025 1:14:06 PM
Supervise By	jaswal	Supervise On	7/14/2025 11:09:31 PM

STD. NAME	STD REF.#
ICAL Standard	MP86338,MP86339,MP86340,MP86341,MP86342,MP86343
ICV Standard	MP86344
CCV Standard	MP86346
ICSA Standard	
CRI Standard	MP86348
LCS Standard	
Chk Standard	MP86345,MP86347,MP86349,MP86353

39	Q2560-01	LP-7102025	SAM	07/11/25 15:45		MOHAN	OK
40	PB168822BL	PB168822BL	MB	07/11/25 15:48		MOHAN	OK
41	PB168822BS	PB168822BS	LCS	07/11/25 15:50		MOHAN	OK
42	Q2559-01	500-3B CONCRETE C	SAM	07/11/25 15:52		MOHAN	OK
43	Q2564-01	ARS20-0030	SAM	07/11/25 15:55		MOHAN	OK
44	Q2564-03	ARS20-0013	SAM	07/11/25 15:57		MOHAN	OK
45	CCV85	CCV85	CCV	07/11/25 16:02		MOHAN	OK
46	CCB85	CCB85	CCB	07/11/25 16:04		MOHAN	OK
47	Q2564-05	ARS20-0039	SAM	07/11/25 16:06		MOHAN	OK
48	Q2564-05DUP	ARS20-0039DUP	DUP	07/11/25 16:09		MOHAN	OK
49	Q2564-05MS	ARS20-0039MS	MS	07/11/25 16:11		MOHAN	OK
50	Q2564-05MSD	ARS20-0039MSD	MSD	07/11/25 16:16		MOHAN	OK
51	Q2571-01	TP-18	SAM	07/11/25 16:18		MOHAN	OK
52	Q2571-05	TP-17	SAM	07/11/25 16:21		MOHAN	OK
53	Q2558-03L	OU4-TS-Grillo-OG-07	SD	07/11/25 16:23		MOHAN	OK
54	Q2558-03A	OU4-TS-Grillo-OG-07	PS	07/11/25 16:25		MOHAN	OK
55	Q2564-05L	ARS20-0039L	SD	07/11/25 16:27		MOHAN	OK
56	Q2564-05A	ARS20-0039A	PS	07/11/25 16:30		MOHAN	OK
57	CCV86	CCV86	CCV	07/11/25 16:32		MOHAN	OK
58	CCB86	CCB86	CCB	07/11/25 16:34		MOHAN	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB136469

Review By	Janvi	Review On	7/15/2025 11:43:51 AM
Supervise By	jaswal	Supervise On	7/16/2025 6:41:06 PM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86213
CCV Standard	MP86216
ICSA Standard	MP86214,MP86215
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	07/14/25 13:05		Janvi	OK
2	S1	S1	CAL2	07/14/25 13:09		Janvi	OK
3	S2	S2	CAL3	07/14/25 13:14		Janvi	OK
4	S3	S3	CAL4	07/14/25 13:18		Janvi	OK
5	S4	S4	CAL5	07/14/25 13:22		Janvi	OK
6	S5	S5	CAL6	07/14/25 13:26		Janvi	OK
7	ICV01	ICV01	ICV	07/14/25 13:44		Janvi	OK
8	ICB01	ICB01	ICB	07/14/25 14:16		Janvi	OK
9	CRI01	CRI01	CRDL	07/14/25 14:26		Janvi	OK
10	ICSA01	ICSA01	ICSA	07/14/25 14:37		Janvi	OK
11	ICSAB01	ICSAB01	ICSAB	07/14/25 14:41		Janvi	OK
12	ICSADL	ICSADL	ICSA	07/14/25 14:46		Janvi	OK
13	ICSABDL	ICSABDL	ICSAB	07/14/25 14:50		Janvi	OK
14	CCV01	CCV01	CCV	07/14/25 14:54		Janvi	OK
15	CCB01	CCB01	CCB	07/14/25 14:59		Janvi	OK
16	Q2540-01	A597	SAM	07/14/25 15:05		Janvi	OK
17	Q2487-11DL2	G3(0-6)DL2	SAM	07/14/25 15:09	10x for Zn	Janvi	Confirms
18	Q2487-16DL2	G1(6-12)DL2	SAM	07/14/25 15:14	10x for Zn	Janvi	Confirms

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB136469

Review By	Janvi	Review On	7/15/2025 11:43:51 AM
Supervise By	jaswal	Supervise On	7/16/2025 6:41:06 PM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86213
CCV Standard	MP86216
ICSA Standard	MP86214,MP86215
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

19	Q2545-01DUP	3918DUP	DUP	07/14/25 15:24		Janvi	OK
20	Q2545-01	3918	SAM	07/14/25 15:28		Janvi	OK
21	Q2545-01L	3918L	SD	07/14/25 15:39		Janvi	OK
22	Q2580-02	WC-URBAN-FILL-B2	SAM	07/14/25 15:43		Janvi	OK
23	Q2545-01MS	3918MS	MS	07/14/25 15:48		Janvi	OK
24	Q2545-01MSD	3918MSD	MSD	07/14/25 15:52		Janvi	OK
25	Q2545-01A	3918A	PS	07/14/25 15:56	0.1ml of M6013,M6004 in 10ml sample.	Janvi	OK
26	CCV02	CCV02	CCV	07/14/25 16:01		Janvi	OK
27	LLCCV01	LLCCV01	LLCCV	07/14/25 16:27		Janvi	OK
28	CCB02	CCB02	CCB	07/14/25 16:57		Janvi	OK
29	PB168793BL	PB168793BL	MB	07/14/25 17:03		Janvi	OK
30	PB168793BS	PB168793BS	LCS	07/14/25 17:07		Janvi	OK
31	PB168808BL	PB168808BL	MB	07/14/25 17:12		Janvi	OK
32	Q2557-02	OILY WATER	SAM	07/14/25 17:20		Janvi	OK
33	PB168808BS	PB168808BS	LCS	07/14/25 17:34		Janvi	OK
34	Q2557-02DUP	OILY WATERDUP	DUP	07/14/25 17:38	K oversaturated	Janvi	Dilution
35	Q2557-02L	OILY WATERL	SD	07/14/25 17:43		Janvi	OK
36	Q2557-02MS	OILY WATERMS	MS	07/14/25 17:47	MS/MSD & DUP RPD fail for more than 50% parameters	Janvi	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB136469

Review By	Janvi	Review On	7/15/2025 11:43:51 AM
Supervise By	jaswal	Supervise On	7/16/2025 6:41:06 PM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86213
CCV Standard	MP86216
ICSA Standard	MP86214,MP86215
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

37	Q2557-02MSD	OILY WATERMSD	MSD	07/14/25 17:52	MS/MSD & DUP RPD fail for more than 50% parameters	Janvi	OK
38	Q2580-02DL	WC-URBAN-FILL-B2[	SAM	07/14/25 17:56	NOT USE	Janvi	Not Ok
39	CCV03	CCV03	CCV	07/14/25 18:01		Janvi	OK
40	CCB03	CCB03	CCB	07/14/25 18:05		Janvi	OK
41	Q2557-02A	OILY WATERA	PS	07/14/25 18:09	0.1ml of M6013,M6004 in 10ml sample.	Janvi	OK
42	PB168806BL	PB168806BL	MB	07/14/25 18:15		Janvi	OK
43	Q2556-01	RT3997	SAM	07/14/25 18:24		Janvi	OK
44	Q2557-01	OILY SPILL DEBRIS	SAM	07/14/25 18:28		Janvi	OK
45	PB168806BS	PB168806BS	LCS	07/14/25 18:33		Janvi	OK
46	Q2559-01	500-3B CONCRETE (	SAM	07/14/25 18:37	Not use	Janvi	Not Ok
47	Q2560-01	LP-7102025	SAM	07/14/25 18:42		Janvi	OK
48	Q2564-01	ARS20-0030	SAM	07/14/25 18:46		Janvi	OK
49	Q2564-03	ARS20-0013	SAM	07/14/25 18:51		Janvi	OK
50	Q2564-05	ARS20-0039	SAM	07/14/25 18:55	Not Use	Janvi	Not Ok
51	CCV04	CCV04	CCV	07/14/25 19:00		Janvi	OK
52	CCB04	CCB04	CCB	07/14/25 19:04		Janvi	OK
53	Q2571-01	TP-18	SAM	07/14/25 19:09		Janvi	OK
54	Q2564-05DUP	ARS20-0039DUP	DUP	07/14/25 19:13	Not Use	Janvi	Not Ok
55	Q2564-05L	ARS20-0039L	SD	07/14/25 19:18	Not Use	Janvi	Not Ok

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB136469

Review By	Janvi	Review On	7/15/2025 11:43:51 AM
Supervise By	jaswal	Supervise On	7/16/2025 6:41:06 PM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86213
CCV Standard	MP86216
ICSA Standard	MP86214,MP86215
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

56	Q2564-05MS	ARS20-0039MS	MS	07/14/25 19:22	Not Use	Janvi	Not Ok
57	Q2564-05MSD	ARS20-0039MSD	MSD	07/14/25 19:26	Not Use	Janvi	Not Ok
58	Q2564-05A	ARS20-0039A	PS	07/14/25 19:31	Not Use	Janvi	Not Ok
59	Q2555-01	OU4-TS-29-070925	SAM	07/14/25 19:35		Janvi	OK
60	Q2555-03	OU4-TS-30-070925	SAM	07/14/25 19:40		Janvi	OK
61	Q2558-01	OU4-TS-Denali-07092	SAM	07/14/25 19:44		Janvi	OK
62	Q2558-03	OU4-TS-Grillo-OG-07	SAM	07/14/25 19:49		Janvi	OK
63	CCV05	CCV05	CCV	07/14/25 19:53		Janvi	OK
64	CCB05	CCB05	CCB	07/14/25 19:58		Janvi	OK
65	Q2571-05	TP-17	SAM	07/14/25 20:02		Janvi	OK
66	CCV06	CCV06	CCV	07/14/25 20:07		Janvi	OK
67	CCB06	CCB06	CCB	07/14/25 20:11		Janvi	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB136488

Review By	Janvi	Review On	7/16/2025 12:40:30 PM
Supervise By	jaswal	Supervise On	7/16/2025 6:31:51 PM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86213
CCV Standard	MP86216
ICSA Standard	MP86214,MP86215
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	07/15/25 19:01		Janvi	OK
2	S1	S1	CAL2	07/15/25 19:05		Janvi	OK
3	S2	S2	CAL3	07/15/25 19:10		Janvi	OK
4	S3	S3	CAL4	07/15/25 19:14		Janvi	OK
5	S4	S4	CAL5	07/15/25 19:18		Janvi	OK
6	S5	S5	CAL6	07/15/25 19:22		Janvi	OK
7	ICV01	ICV01	ICV	07/15/25 19:27		Janvi	OK
8	LLICV01	LLICV01	LLICV	07/15/25 19:37		Janvi	OK
9	ICB01	ICB01	ICB	07/15/25 19:42		Janvi	OK
10	CRI01	CRI01	CRDL	07/15/25 19:56		Janvi	OK
11	ICSA01	ICSA01	ICSA	07/15/25 20:01		Janvi	OK
12	ICSAB01	ICSAB01	ICSAB	07/15/25 20:05		Janvi	OK
13	ICSADL	ICSADL	ICSA	07/15/25 20:10		Janvi	OK
14	ICSABDL	ICSABDL	ICSAB	07/15/25 20:20		Janvi	OK
15	CCV01	CCV01	CCV	07/15/25 20:25		Janvi	OK
16	CCB01	CCB01	CCB	07/15/25 20:29		Janvi	OK
17	PB168772BL	PB168772BL	MB	07/15/25 20:34		Janvi	OK
18	PB168772BS	PB168772BS	LCS	07/15/25 21:01		Janvi	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB136488

Review By	Janvi	Review On	7/16/2025 12:40:30 PM
Supervise By	jaswal	Supervise On	7/16/2025 6:31:51 PM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86213
CCV Standard	MP86216
ICSA Standard	MP86214,MP86215
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

19	Q2564-05	ARS20-0039	SAM	07/15/25 21:06		Janvi	OK
20	Q2564-05DUP	ARS20-0039DUP	DUP	07/15/25 21:11		Janvi	OK
21	Q2564-05L	ARS20-0039L	SD	07/15/25 21:15		Janvi	OK
22	Q2564-05MS	ARS20-0039MS	MS	07/15/25 21:20		Janvi	OK
23	Q2564-05MSD	ARS20-0039MSD	MSD	07/15/25 21:24		Janvi	OK
24	Q2564-05A	ARS20-0039A	PS	07/15/25 21:29	0.1ml of M6013,M6004 in10 ml of sample.	Janvi	OK
25	Q2559-01	500-3B CONCRETE C	SAM	07/15/25 21:33	Ca High	Janvi	Dilution
26	CCV02	CCV02	CCV	07/15/25 22:12		Janvi	OK
27	CCB02	CCB02	CCB	07/15/25 22:17		Janvi	OK
28	Q2559-01DL	500-3B CONCRETE C	SAM	07/15/25 22:21	5X For Ca	Janvi	Confirms
29	Q2520-06	A-6	SAM	07/15/25 22:25		Janvi	OK
30	Q2520-04	A-4	SAM	07/15/25 22:30		Janvi	OK
31	CCV03	CCV03	CCV	07/15/25 22:39		Janvi	OK
32	CCB03	CCB03	CCB	07/15/25 22:43		Janvi	OK

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Prep Standard - Chemical Standard Summary

Order ID : Q2558

Test : Mercury,Metals ICP-TAL

Prepbatch ID : PB168806,PB168821,

Sequence ID/Qc Batch ID: LB136438,LB136469,LB136488,

Standard ID :
MP84041,MP85893,MP85895,MP86192,MP86193,MP86194,MP86195,MP86196,MP86211,MP86212,MP86213,MP86214,MP86215,MP86216,MP86217,MP86218,MP86337,MP86338,MP86339,MP86340,MP86341,MP86342,MP86343,MP86344,MP86345,MP86346,MP86347,MP86348,MP86349,MP86350,MP86353,

Chemical ID :
M4371,M4916,M5062,M5467,M5470,M5471,M5499,M5581,M5582,M5658,M5747,M5748,M5751,M5798,M5799,M5800,M5801,M5811,M5814,M5816,M5820,M5882,M5884,M5942,M5962,M5970,M5984,M5985,M5996,M5997,M6007,M6015,M6021,M6023,M6028,M6030,M6032,M6076,M6126,M6127,M6128,M6137,M6142,M6144,M6145,M6146,M6151,M6152,M6155,M6158,M6159,M6161,M6162,M6163,M6164,M6165,M6170,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP84041	01/14/2025	07/14/2025	Eman Mughal	None	None	Sarabjit Jaswal 01/16/2025

FROM 1250.00000ml of M6126 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP85893	06/05/2025	12/05/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 06/14/2025

FROM 100.00000gram of M4916 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
67	SODIUM CHLORIDE - HYDROXYL- CHLORIDE SOLUTION	MP85895	06/05/2025	08/08/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 06/14/2025

FROM 2000.00000ml of W3112 + 240.00000gram of M4371 + 240.00000gram of M5884 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP86192	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 125.00000ml of M6151 + 2350.00000ml of W3112 + 25.00000ml of M6162 = Final Quantity: 2500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP86193	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 5.00000ml of M5467 + 5.00000ml of M5470 + 5.00000ml of M5816 + 5.00000ml of M5820 + 5.00000ml of M5970 + 5.00000ml of M5996 + 5.00000ml of M5997 + 5.00000ml of M6076 + 5.00000ml of M6146 + 455.00000ml of MP86192 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP86194	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 50.00000ml of MP86192 + 50.00000ml of MP86193 = 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
909	ICP AES STD S3	MP86195	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 25.00000ml of MP86193 + 75.00000ml of MP86192 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP86196	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 16.00000ml of MP86193 + 184.00000ml of MP86192 = Final Quantity: 200.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP86211	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 0.04000ml of M6137 + 0.05000ml of M5658 + 0.05000ml of M5811 + 0.05000ml of M6030 + 0.05000ml of M6159 + 0.06000ml of M5747 + 0.10000ml of M5471 + 0.10000ml of M5751 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5970 + 0.10000ml of M6128 + 0.15000ml of M5800 + 0.20000ml of M5748 + 0.20000ml of M5799 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.20000ml of M6145 + 0.25000ml of M5467 + 0.25000ml of M6146 + 0.50000ml of M5814 + 0.50000ml of M6032 + 1.00000ml of M5499 + 1.00000ml of M5942 + 1.00000ml of M6127 + 1.00000ml of M6142 + 1.00000ml of M6144 + 2.00000ml of M5816 + 89.29000ml of MP86192 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2951	ICP AES S1/CRI WORK STD	MP86212	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 2.00000ml of MP86211 + 98.00000ml of MP86192 = 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
4163	NEW ICV-060925	MP86213	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 0.20000ml of M6163 + 0.20000ml of M6164 + 0.20000ml of M6165 + 49.40000ml of MP86192 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP86214	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 10.00000ml of M6152 + 80.00000ml of MP86192 = 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
3494	ICP AES ICSAB SOLN-1	MP86215	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 10.00000ml of M6152 + 10.00000ml of M6155 + 80.00000ml of MP86192 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP86216	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 50.00000ml of MP86192 + 50.00000ml of MP86193 = 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
919	ICP AES INTERNAL STD	MP86217	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 1.00000ml of M5984 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6162 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP86218	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 200.00000ml of M6162 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP86337	07/10/2025	07/11/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 1.00000ml of M6162 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP86338	07/10/2025	07/11/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1341	Hg 0.2 PPB STD	MP86339	07/10/2025	07/11/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP86337 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP86340	07/10/2025	07/11/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 245.00000ml of W3112 + 2.50000ml of MP86337 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP86341	07/10/2025	07/11/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 242.50000ml of W3112 + 5.00000ml of MP86337 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP86342	07/10/2025	07/11/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 240.00000ml of W3112 + 7.50000ml of MP86337 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP86343	07/10/2025	07/11/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 237.50000ml of W3112 + 10.00000ml of MP86337 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP86344	07/10/2025	07/11/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6161 + 2.50000ml of M6162 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP86345	07/10/2025	07/11/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP86346	07/10/2025	07/11/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6162 + 10.00000ml of MP86337 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP86347	07/10/2025	07/11/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6162 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP86348	07/10/2025	07/11/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP86337 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP86349	07/10/2025	07/11/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 240.50000ml of W3112 + 7.00000ml of MP86337 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
887	AQUA REGIA FOR HG ON 7471A	MP86350	07/10/2025	07/11/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 150.00000ml of M6151 + 50.00000ml of M6162 = Final Quantity: 200.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP86353	07/11/2025	07/12/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 07/16/2025

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6151 = Final Quantity: 500.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-2196-01 / Hydroxylamine Hydrochloride, Crystal (cs/4x500g)	0000215387	06/25/2025	07/01/2019 / RICHARD	06/07/2019 / RICHARD	M4371

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3227-05 / Potassium Permanganate (2.5kg)	210800	03/31/2026	11/30/2022 / mohan	07/28/2021 / mohan	M4916

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCl 125mL 10ug/mL	S2-HG709270	09/22/2026	05/28/2022 / mohan	01/27/2022 / mohan	M5062

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57058 / Cerium, 1000PPM, 100ML	020623	02/06/2026	03/06/2023 / bin	03/01/2023 / bin	M5467

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	082922	08/29/2025	04/14/2025 / jaswal	03/16/2023 / jaswal	M5470

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	082922	08/29/2025	04/14/2025 / jaswal	03/16/2023 / jaswal	M5471

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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	04/17/2025 / Janvi	03/17/2023 / bin	M5499

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	03/20/2026	03/20/2025 / jaswal	06/12/2023 / jaswal	M5581

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	12/31/2025	06/17/2023 / Al-Terek	06/12/2023 / jaswal	M5582

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Lead (Pb) 1000PPM	100923	10/09/2026	05/20/2024 / Jaswal	12/20/2023 / jaswal	M5747

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Nickel (Ni) 1000PPM	091223	09/12/2026	01/02/2024 / bin	12/20/2023 / jaswal	M5748

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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.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	051523	05/15/2026	02/06/2025 / kareem	01/03/2024 / jaswal	M5811

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57005 / B, 1000 PPM, 125 ml	071123	07/11/2026	03/26/2024 / Sohil	01/03/2024 / jaswal	M5814

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	232820	08/31/2028	04/30/2024 / mohan	04/25/2024 / mohan	M5882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	04/30/2024 / mohan	04/25/2024 / mohan	M5884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	06/18/2024 / Jaswal	02/22/2024 / Jaswal	M5942

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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 #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	07/01/2024 / Jaswal	07/01/2024 / Jaswal	M5970

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	08/05/2024 / kareem	06/14/2024 / Jaswal	M5984

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGIN10-5 / INDIUM 1 x 500 ml	U2-IN729349	02/21/2028	10/08/2024 / Jaswal	06/14/2024 / Jaswal	M5985

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-1 / CLP CAL SOLUTION #1, 125mL	T2-MEB714417	01/27/2027	05/07/2024 / JANVI	02/22/2024 / kareem	M5996

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB727800	12/21/2027	02/03/2025 / JANVI	02/22/2024 / kareem	M5997

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml	T2-MEB723367	05/27/2026	05/27/2025 / Janvi	05/14/2024 / Jaswal	M6007

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-2 / Laboratory Fortified Stock Solution 2, 125 ml	U2-MEB731108	03/17/2028	06/19/2025 / MOHAN	05/14/2024 / Jaswal	M6015

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.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	010924	01/09/2027	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6032

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	01/01/2026	01/01/2025 / kareem	09/19/2024 / kareem	M6076

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	06/03/2025	12/03/2024 / Janvi	11/12/2024 / Janvi	M6126

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	112124	11/21/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6127

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	V2-SI744713	07/10/2029	01/14/2025 / Jaswal	10/03/2024 / Jaswal	M6137

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Fax : 908 789 8922

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58119 / K, 10000 PPM, 500 ml	103024	10/30/2027	05/06/2025 / JANVI	01/13/2025 / Jaswal	M6142

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	072424	07/24/2027	01/23/2025 / kareem	01/13/2025 / Jaswal	M6144

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	121724	12/17/2027	02/04/2025 / Jaswal	01/13/2025 / Jaswal	M6145

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	071724	07/17/2027	01/31/2025 / kareem	10/18/2024 / kareem	M6146

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	08/18/2025	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	08/24/2025	02/24/2025 / kareem	04/20/2021 / kareem	M6152

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSAB (ICP) STOCK SOLN	ICSB-0710	06/30/2025	02/10/2025 / kareem	02/09/2024 / kareem	M6155

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	03/25/2029	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011325	03/18/2026	03/18/2025 / kareem	02/09/2025 / kareem	M6159

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV 5 0415	07/31/2025	05/01/2025 / mohan	03/30/2024 / mohan	M6161

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24H0162012	11/27/2025	05/27/2025 / Sagar	04/27/2025 / Sagar	M6162

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-1-125ML / EPA CLP ICP Verification Standard1	V2-MEB744107	05/22/2029	06/09/2025 / jaswal	06/06/2025 / jaswal	M6163

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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	QCP-CICV-2-125ML / EPA CLP ICP Verification Standard2	U2-MEB733713	06/01/2028	06/09/2025 / jaswal	06/09/2025 / jaswal	M6164

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-3-125ML / EPA CLP ICP Verification Standard3	V2-MEB749572	01/02/2030	06/09/2025 / jaswal	06/09/2025 / jaswal	M6165

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-2186-03 / Hydrogen Peroxide (cs/4x4L)	24D1961001	10/16/2025	06/25/2025 / jaswal	05/20/2025 / Sagar	M6170

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

ThermoFisher SCIENTIFIC

M5882 M3

Certificate of Analysis

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Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	T142	Quality Test / Release Date	08/17/2023
Lot Number	232820		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Aug/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	100.65
CALCIUM	%	<= 0.005	0.0017
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	0.0011
LEAD (Pb)	%	<= 0.01	0.0006
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	0.0001
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)

Harout Sahagian - Quality Control Supervisor - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

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CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**010924**	**Solvent:**	24002546	Nitric Acid	
Description:	**Barium (Ba)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	010927				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Giovanni Esposito

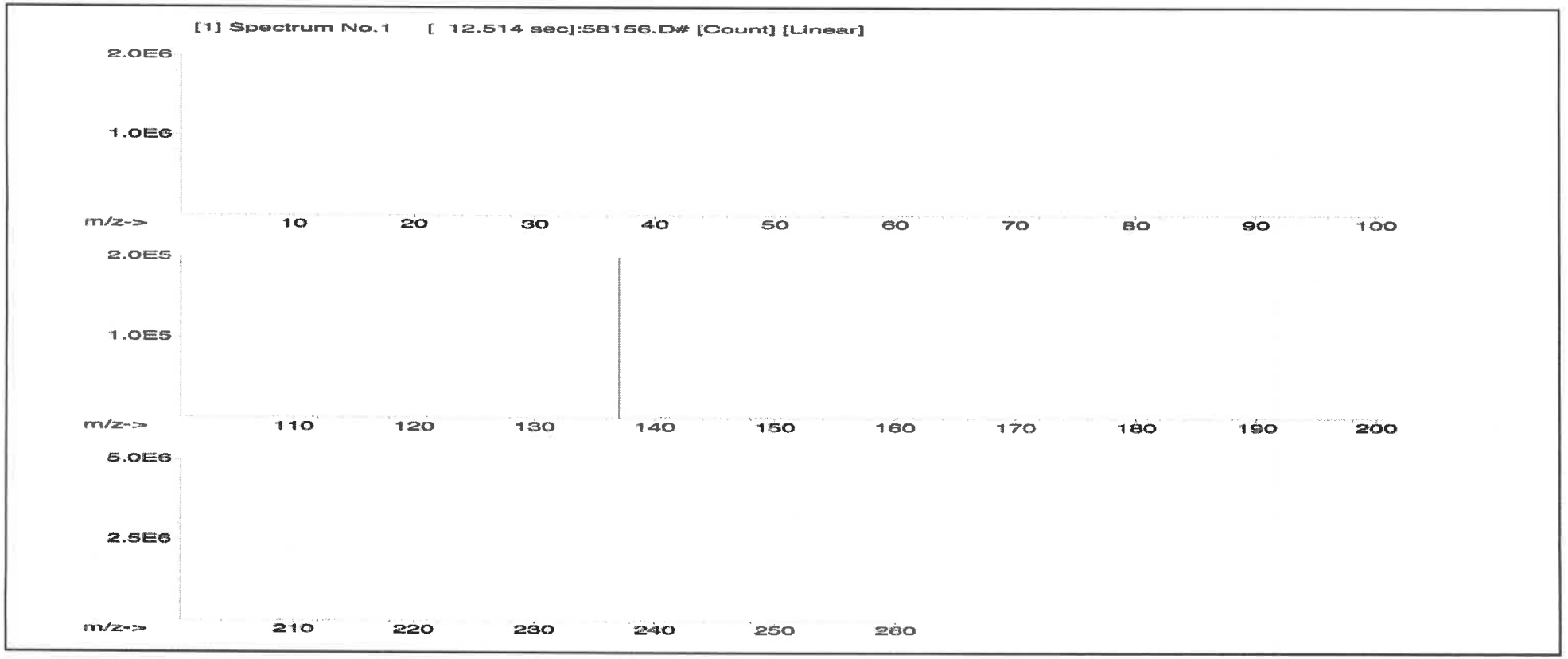
Formulated By:	Giovanni Esposito	010924

Pedro Rentas

Reviewed By:	Pedro L. Rentas	010924

393 of 536

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	**1000.1**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M6028

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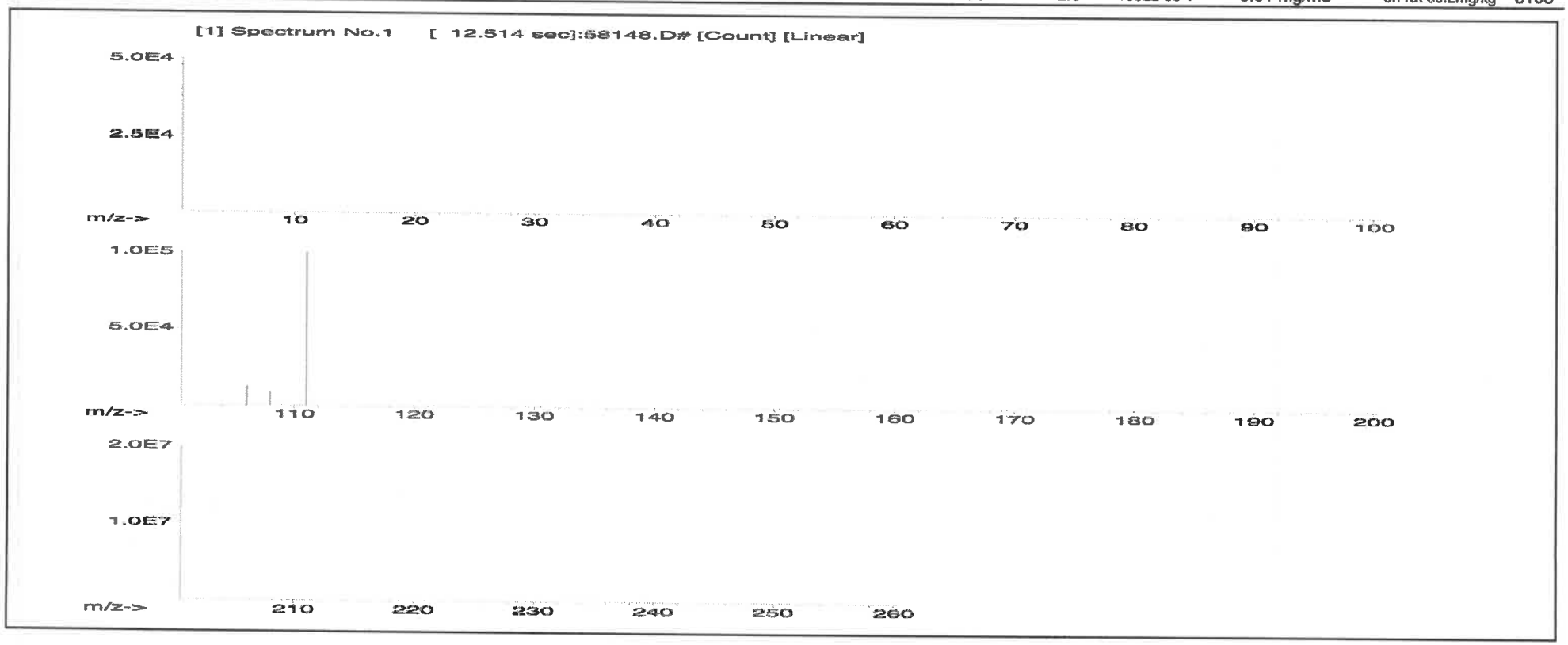
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CERTIFIED WEIGHT REPORT:

Part Number:	**57048**			**Lot #**	
Lot Number:	**070124**		**Solvent:**	24002546	Nitric Acid
Description:	**Cadmium (Cd)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Aleah O'Brady		
Formulated By:	Aleah O'Brady	070124
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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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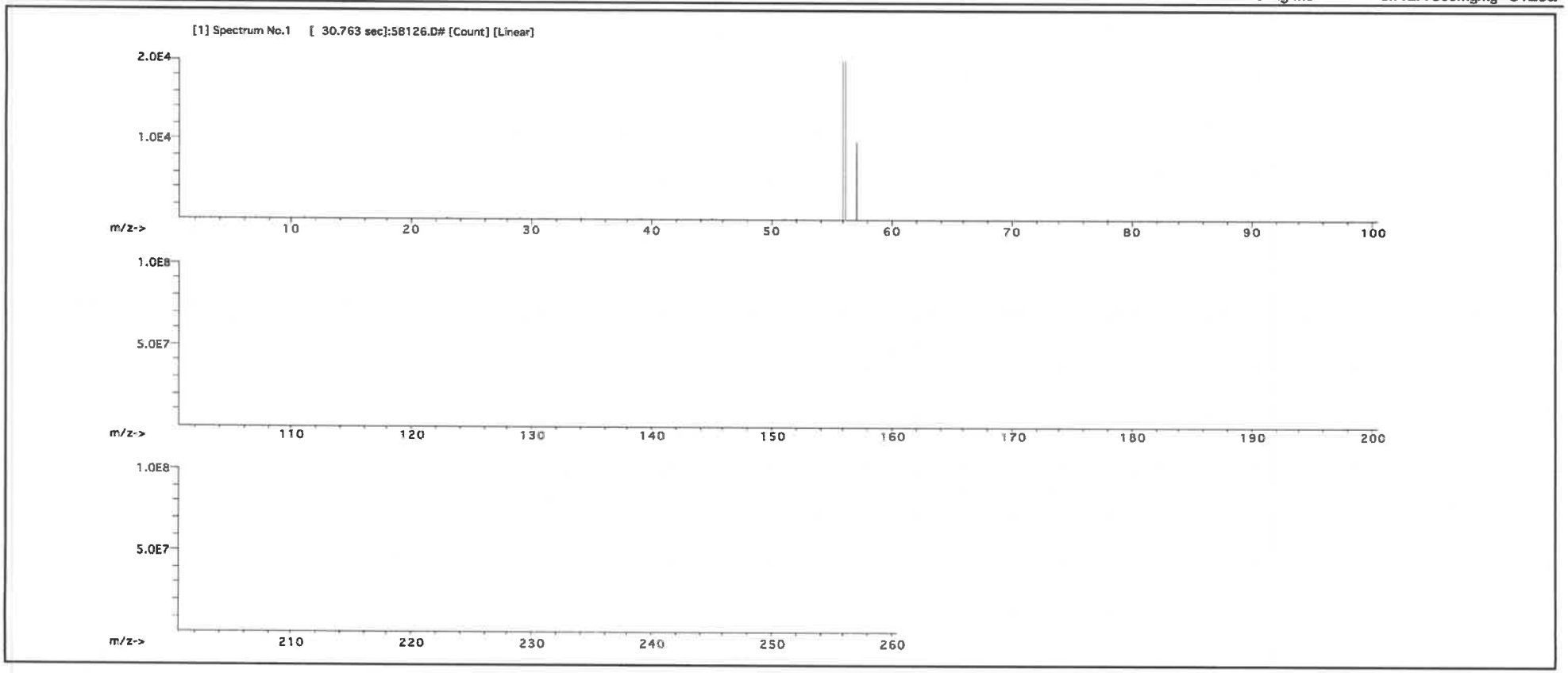
CERTIFIED WEIGHT REPORT:

Part Number:	**58126**		**Lot #**	
Lot Number:	**051523**	**Solvent:**	21110221	Nitric Acid
Description:	**Iron (Fe)**	5.0%	250.0 (mL)	Nitric Acid
Expiration Date:	051526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	5000.1	0.12	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	051523
Reviewed By:	Pedro L. Rentas	051523

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron (Fe)	IN346	2302010-500	10000	99.995	0.10	100.0	50.0034	50.0111	**10001.5**	**20.0**	7439-89-6	5 mg/m3	orl-rat 7500mg/kg	3126a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.10	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.05	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.10
B	<0.02	Cu	<0.10	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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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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RD:05/14/2024

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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).

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:	WW-LFS-1
Lot Number:	T2-MEB723367
Matrix:	5% (v/v) HNO3

Value / Analyte(s):	1 000 µg/mL ea: Potassium,	
	600 µg/mL ea: Phosphorus,	
	300 µg/mL ea: Sodium,	Iron,
	200 µg/mL ea: Magnesium, Cerium, Thallium,	Aluminum, Selenium,
	100 µg/mL ea: Lead,	Calcium,
	80 µg/mL ea: Arsenic,	
	70 µg/mL ea: Mercury,	
	50 µg/mL ea: Nickel,	
	40 µg/mL ea: Chromium,	
	30 µg/mL ea: Copper, Vanadium,	Boron,
	20 µg/mL ea: Zinc, Barium, Cadmium, Manganese,	Strontium, Beryllium, Cobalt, Lithium,
	7.5 µg/mL ea: Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	80.0 ± 0.7 µg/mL
Barium, Ba	20.00 ± 0.09 µg/mL	Beryllium, Be	20.00 ± 0.13 µg/mL
Boron, B	30.00 ± 0.18 µg/mL	Cadmium, Cd	20.00 ± 0.09 µg/mL
Calcium, Ca	100.0 ± 0.4 µg/mL	Cerium, Ce	200.0 ± 0.8 µg/mL
Chromium, Cr	40.00 ± 0.30 µg/mL	Cobalt, Co	20.00 ± 0.10 µg/mL
Copper, Cu	30.00 ± 0.13 µg/mL	Iron, Fe	300.0 ± 1.3 µg/mL
Lead, Pb	100.0 ± 0.4 µg/mL	Lithium, Li	20.00 ± 0.08 µg/mL
Magnesium, Mg	200.0 ± 0.8 µg/mL	Manganese, Mn	20.00 ± 0.08 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.00 ± 0.22 µg/mL
Phosphorus, P	600.0 ± 2.7 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	200.0 ± 1.3 µg/mL	Silver, Ag	7.50 ± 0.03 µg/mL
Sodium, Na	300.0 ± 1.4 µg/mL	Strontium, Sr	20.01 ± 0.08 µg/mL
Thallium, Tl	200.0 ± 1.4 µg/mL	Vanadium, V	30.00 ± 0.13 µg/mL
Zinc, Zn	20.00 ± 0.09 µg/mL		

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
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
Ce	ICP Assay	3110	090504
Ce	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
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	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	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	IC 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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)

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**

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

August 30, 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

- **August 30, 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:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



INORGANIC VENTURES

Refine your results. Redefine your industry.

Certificate of Analysis

RD:05/14/2024

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 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-2
Lot Number:	U2-MEB731108
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	200 µg/mL ea: Silica, 80 µg/mL ea: Antimony, 70 µg/mL ea: Tin, 40 µg/mL ea: Molybdenum, 20 µg/mL ea: Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.6 µg/mL	Molybdenum, Mo	40.03 ± 0.18 µg/mL
Silica, SiO2	200.2 ± 1.3 µg/mL	Tin, Sn	70.0 ± 0.4 µg/mL
Titanium, Ti	20.01 ± 0.13 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO2	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	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

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**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 17, 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



M4371

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(hydroxylammonium chloride)

Rec – 06.07.19

J.T.Baker® | avantor™

Material No.: 2196-01
Batch No.: 0000215387
Manufactured Date: 2018/06/27
Retest Date: 2025/06/25
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($NH_2OH \cdot HCl$) (by $KMnO_4$ titrn)	>= 96.0 %	99.1
Clarity of Alcohol Solution	Passes Test	PT
Residue after Ignition	<= 0.050 %	0.017
Titrable Free Acid (meq/g)	<= 0.25	0.19
Ammonium (NH_4)	Passes Test	PT
Sulfur Compounds (as SO_4)	<= 0.005 %	< 0.003
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	4
Trace Impurities - Iron (Fe)	<= 5 ppm	< 3
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	< 0.005

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2015, FSSC22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Gliwice, Poland 9001:2015, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2015, 17025:2005
Panoli, India 9001:2015

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

M4913-16
MB

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	P279	Quality Test / Release Date	01/12/2021
Lot Number	210306		
Description	POTASSIUM PERMANGANATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Jan/2026

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Dark purple to purple green crystals
ASSAY	%	>= 99	99.3
CHLORIDE & CHLORATE	%	<= 0.005	<0.005
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
INSOLUBLE MATTER	%	<= 0.2	<0.2
MERCURY (Hg)	ppm	<= 0.05	<0.004
SULFATE (SO4)	%	<= 0.02	<0.02

Julian Burton

Julian Burton - Quality Control Manager – Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

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Refine your results. Redefine your industry.

Certificate of Analysis

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Christiansburg, VA 24073 USA
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F: 540-585-3012
info@inorganicventures.com

M5062
M5063
M3

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	S2-HG709270
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \Sigma(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)(u_{char\ a})$$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/4}$$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 22, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5467 R: 03/01/23 (LA)

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57058
Lot Number: 020623
Description: Cerium (Ce)

Expiration Date: 020626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

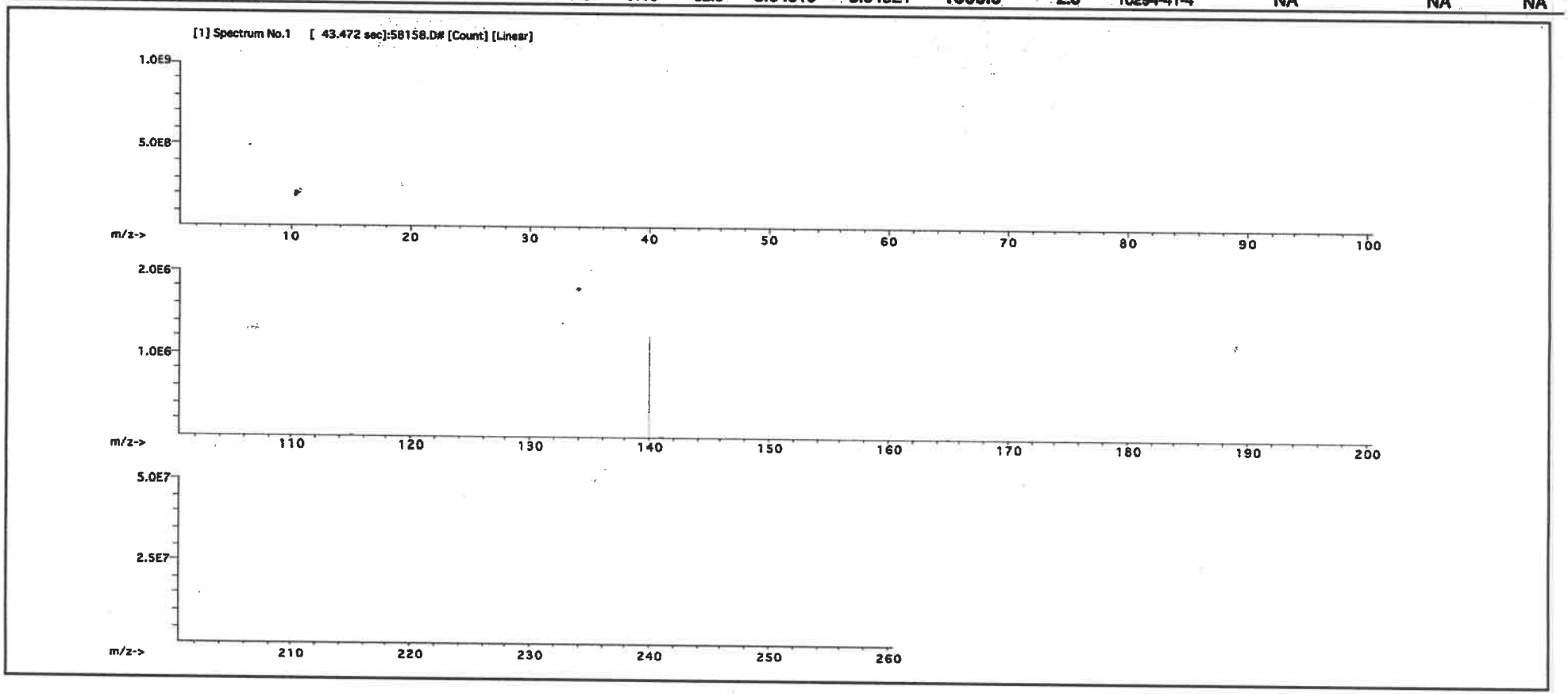
Weight shown below was diluted to (mL): 1000.12 0.058 Flask Uncertainty

		Lot #	
Solvent:	21110221	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	020623
Reviewed By:	Pedro L. Rentas	020623

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. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04921	1000.0	2.0	10294-41-4	NA	NA	NA



2358-METALS

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	T	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.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

M5493 - M5308
Rad on 4/14/23
JMG

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 2

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Sulfate (SO_4)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory,Research,or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

James T Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

JENSEN INERT PRODUCTS

MATERIAL CERTIFICATE OF COMPLIANCE

DATE: JUNE 12, 2023

CUSTOMER:	PCI SCIENTIFIC SUPPLY, INC
PURCHASE ORDER NO.	6054931
CATALOG NO.	BOI5021-450L
PRODUCT DESCRIPTION:	BOILING STONES, TFE, 454GMS
QUANTITY:	10 EACH
LOT NO.	W126678
SPECIFICATION (S):	Made from Virgin PTFE Resin

We certify that we have complied with the terms and conditions of the above Purchase Order and the Part Specifications in the manufacturing of the above product.

Laura Valencia

Laura Valencia
Quality Assurance Inspector

F:U:J:CF:PCISCI:COC-58118-BOI5021-061223

3773 NW 126th Avenue • Coral Springs, Florida 33065 • Fax (954) 344-2008 • 1-800 446-3781
Email: jensen@jenseninert.com Visit our Web Site at www.jenseninert.com

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Quality Assurance Inspector

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3773 NW 126th Avenue • Coral Springs, Florida 33065 • Fax (954) 344-2008 • 1-800 446-3781
Email: jensen@jenseninert.com Visit our Web Site at www.jenseninert.com

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M5658 R ! 8/25/23

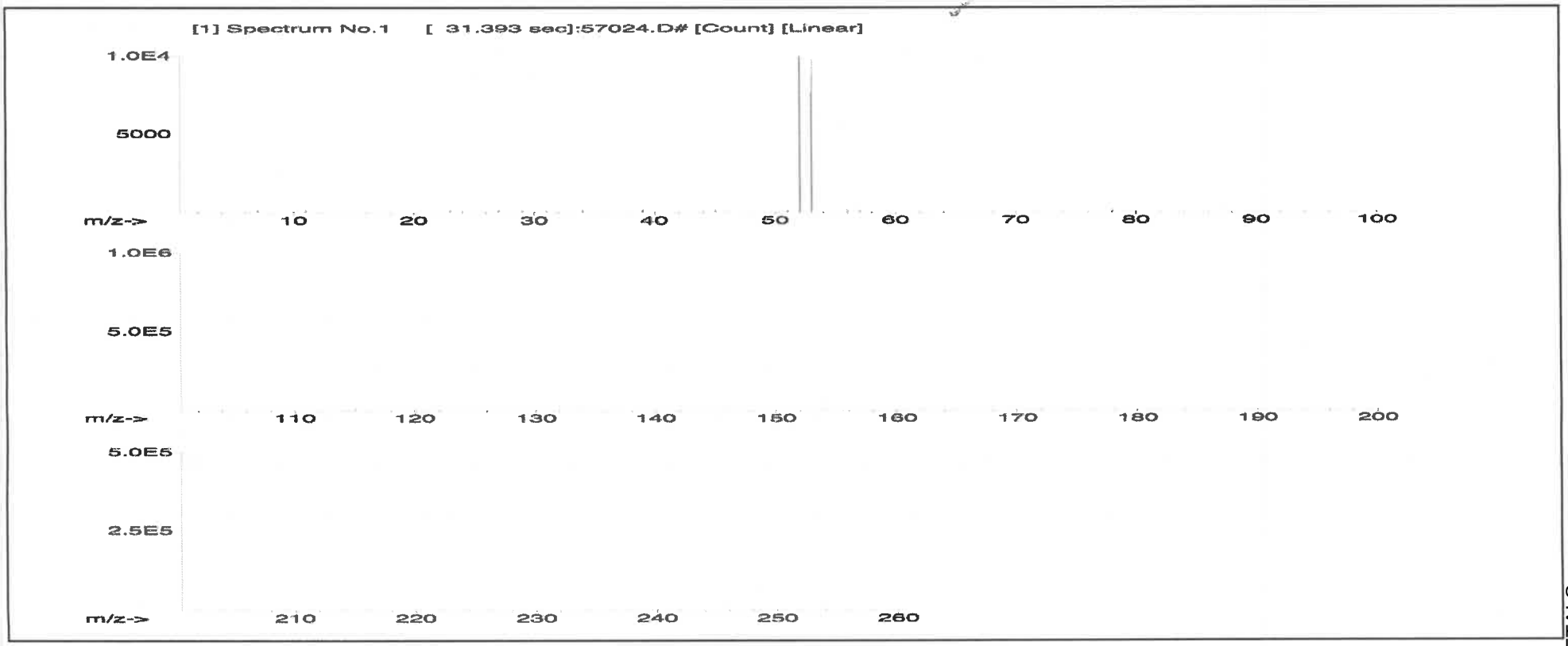
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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AR-1539 Certificate Number
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 12/20/23 M5747

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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number: 57082
Lot Number: 100923
Description: Lead (Pb)

Expiration Date: 100926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

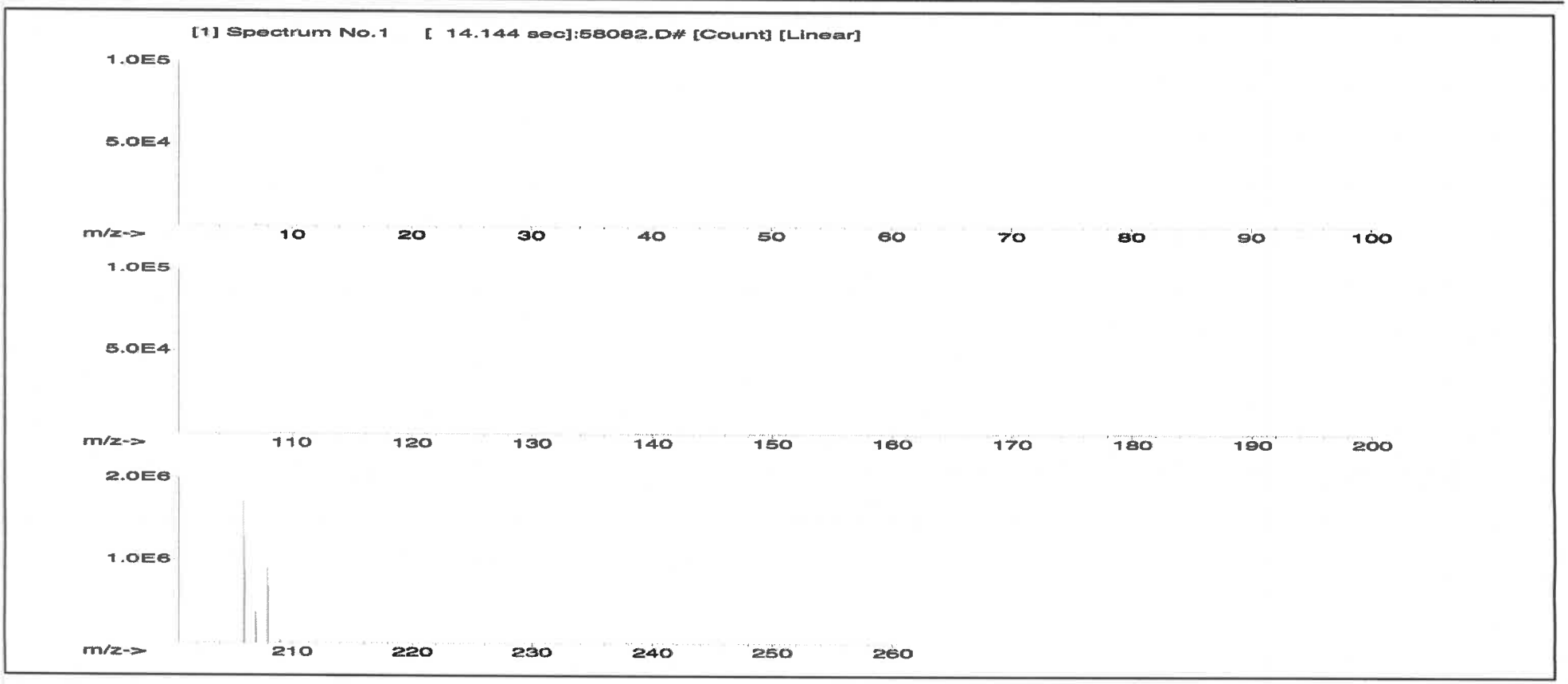
Weight shown below was diluted to (mL): 3000.41 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	100923
Reviewed By:	Pedro L. Rentas	100923

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	1000	99.999	0.10	62.5	4.80071	4.80077	**1000.0**	**2.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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AR-1539 Certificate Number
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
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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	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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Certified Reference Material CRM

R: 12/20/23 M5748

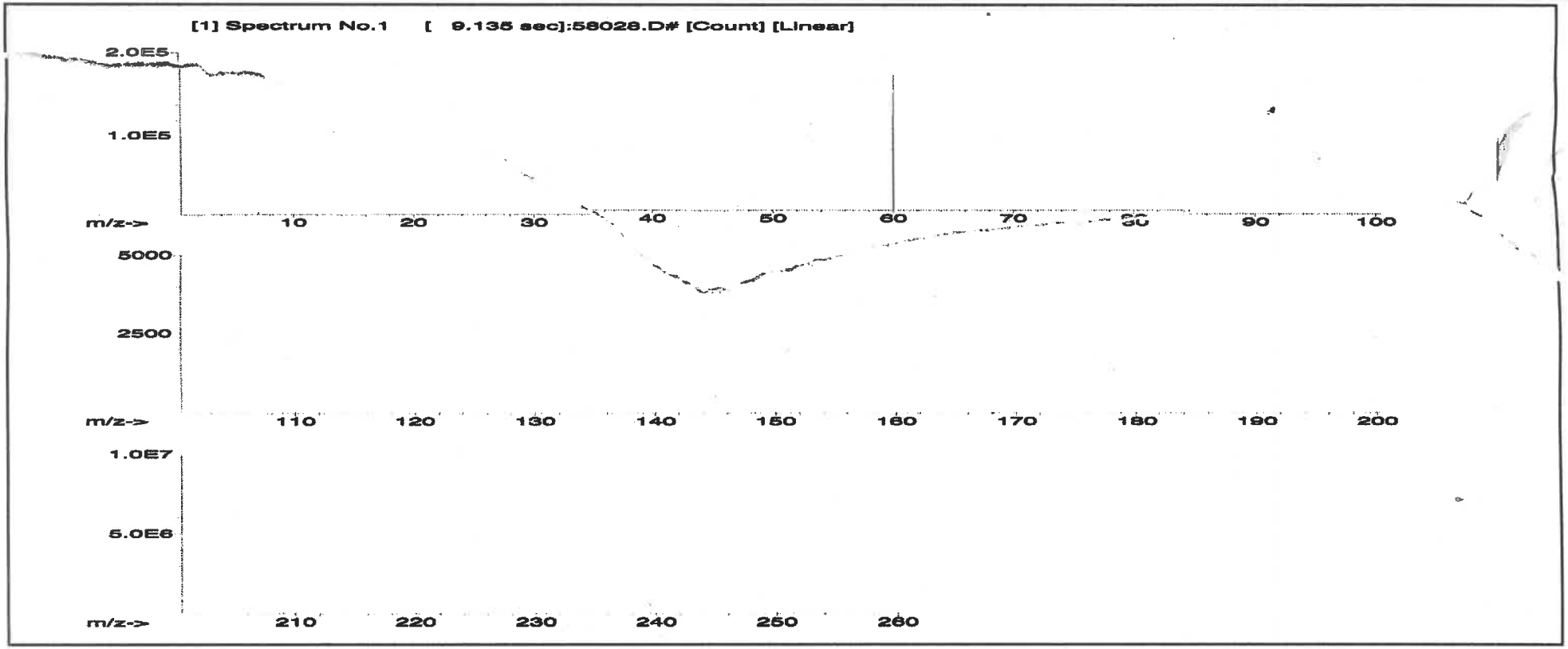
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**091223**			
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	091226			
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	091223
Reviewed By:	Pedro L. Rentas	091223

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. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	2.2	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

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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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R: 8/25/23 M5751

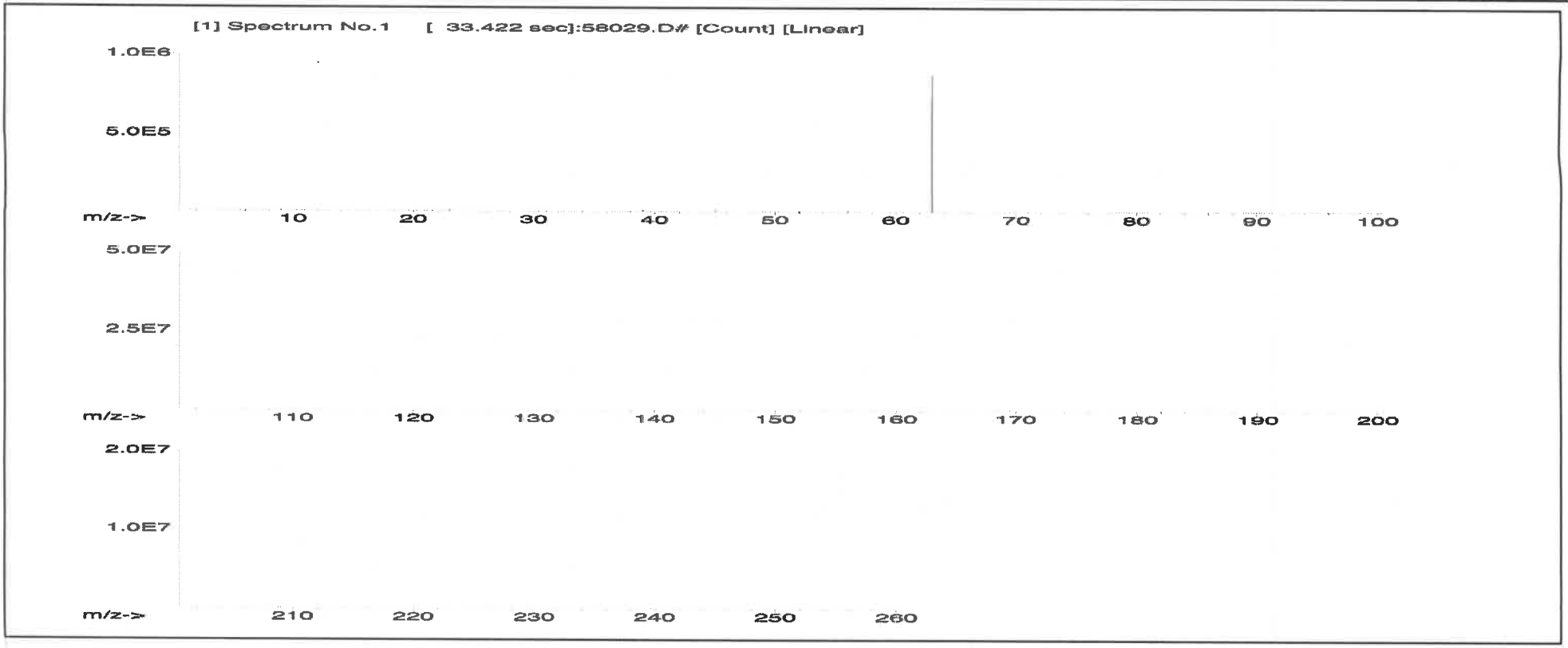
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CERTIFIED WEIGHT REPORT:

Part Number:	**58029**		**Lot #**	**Solvent:**	
Lot Number:	**071723**		21110221	Nitric Acid	
Description:	**Copper (Cu)**		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Rentas	071723

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	022723	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



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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.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M5798

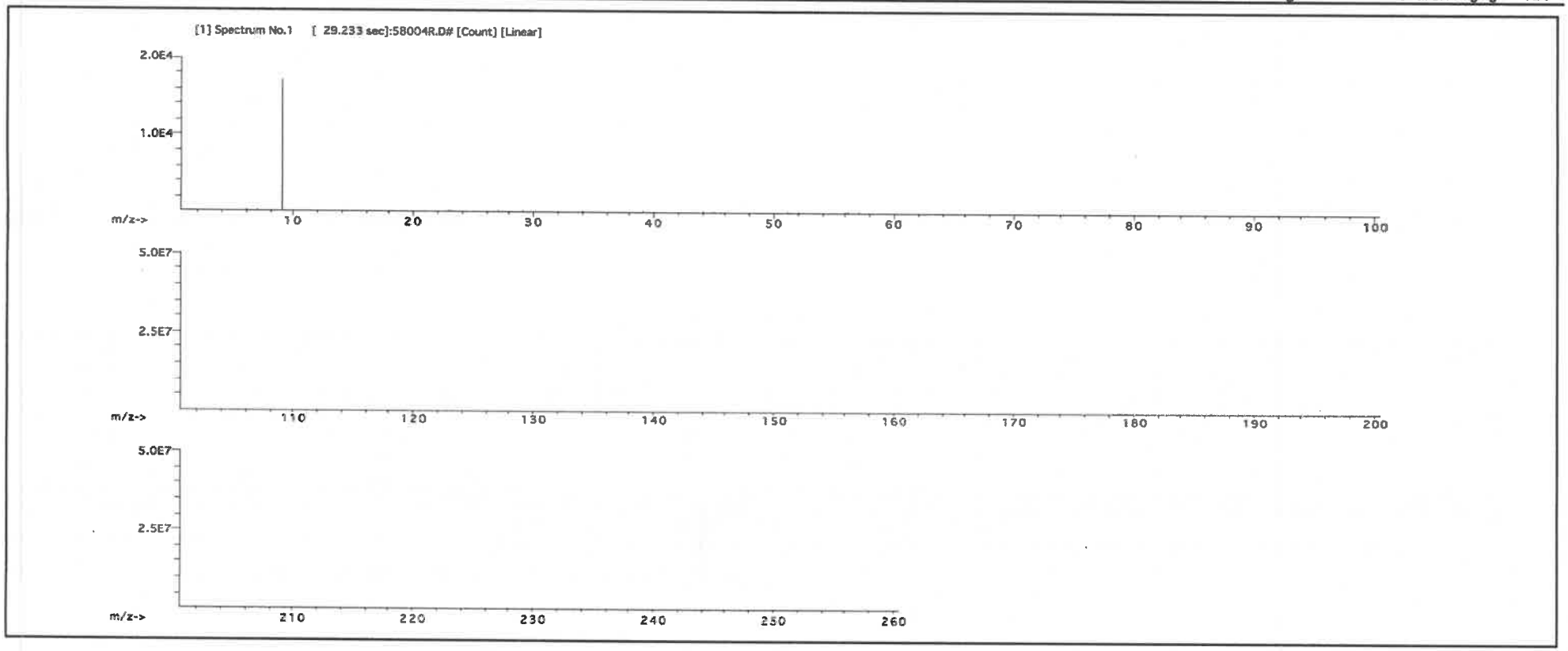
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CERTIFIED WEIGHT REPORT:

		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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

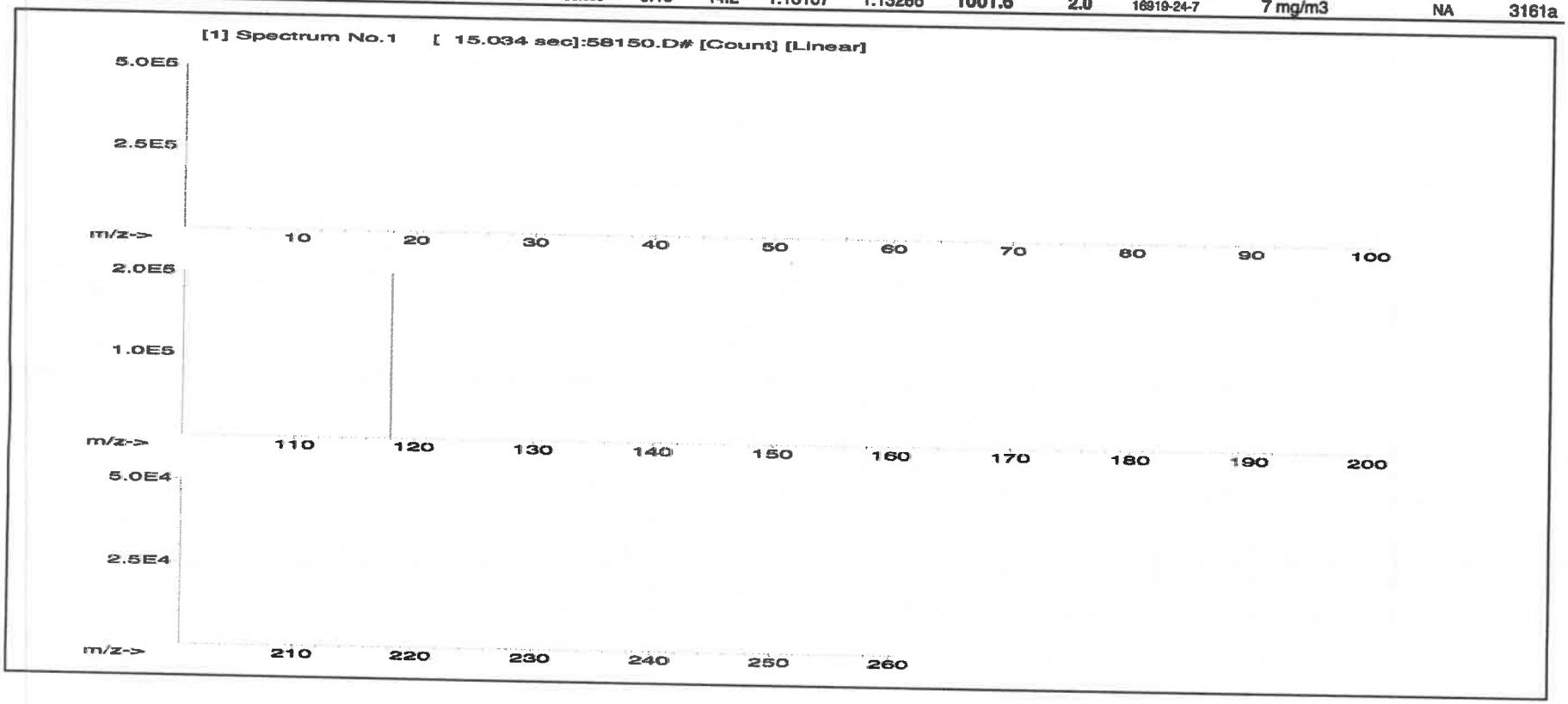
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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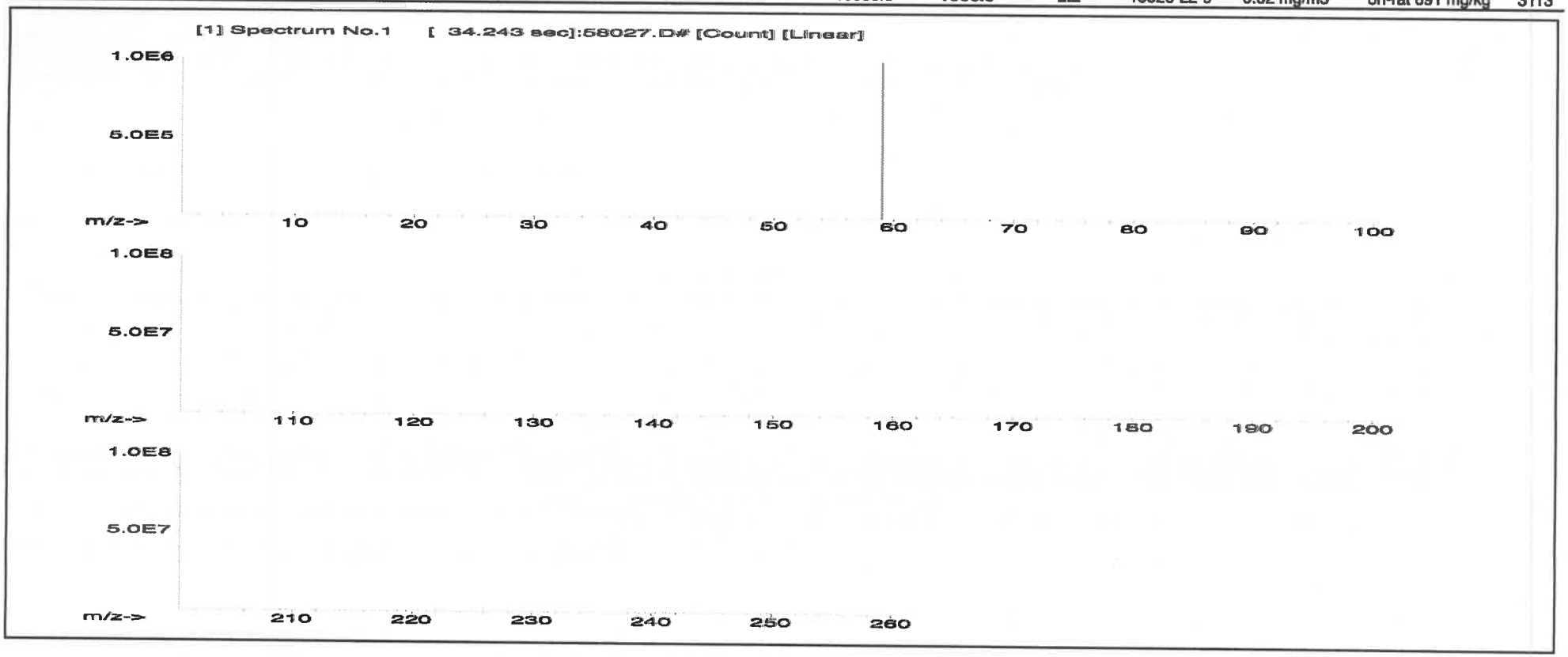
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By: Lawrence Barry 091923

Reviewed By: Pedro L. Rentas 091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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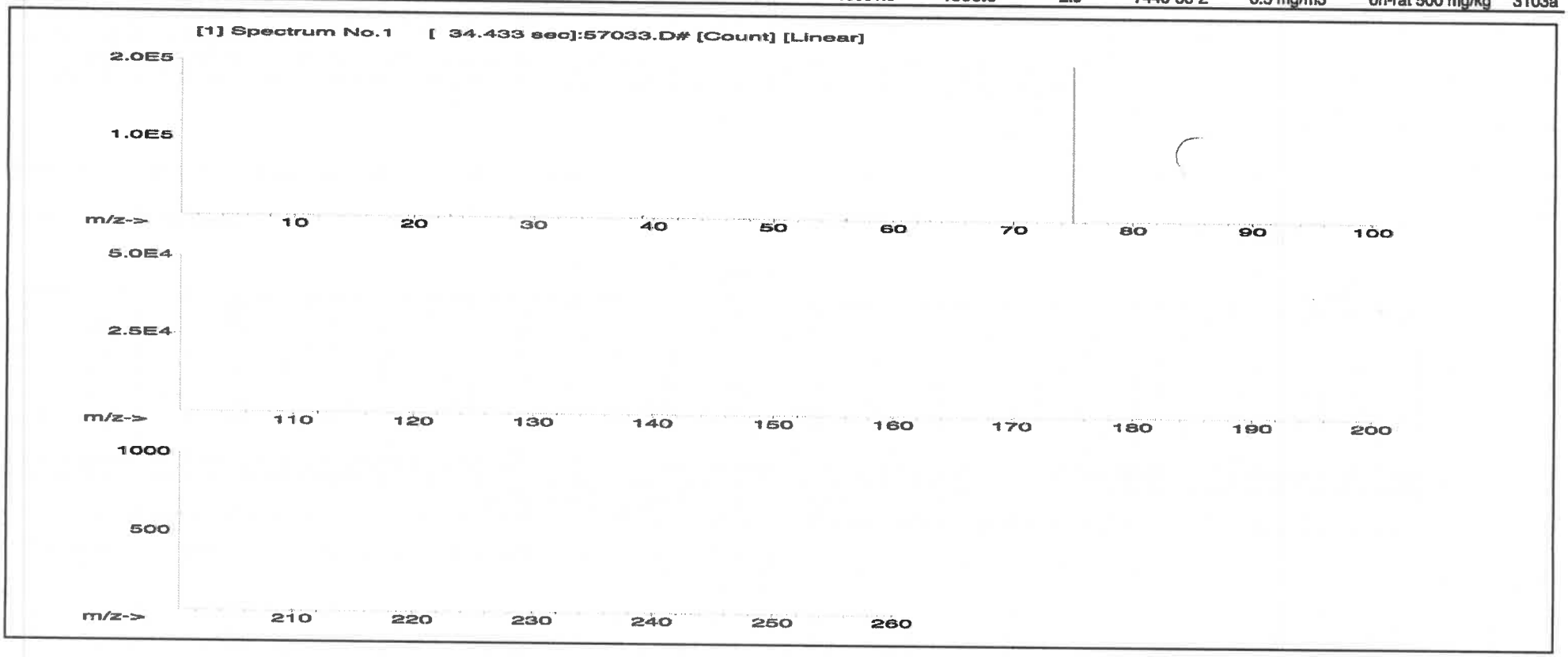
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CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:
Part Number:	**57033**		
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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A: 02/09/24 M.5814

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CERTIFIED WEIGHT REPORT:

Part Number: 57005
Lot Number: 071123
Description: Boron (B)

Expiration Date: 071126
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

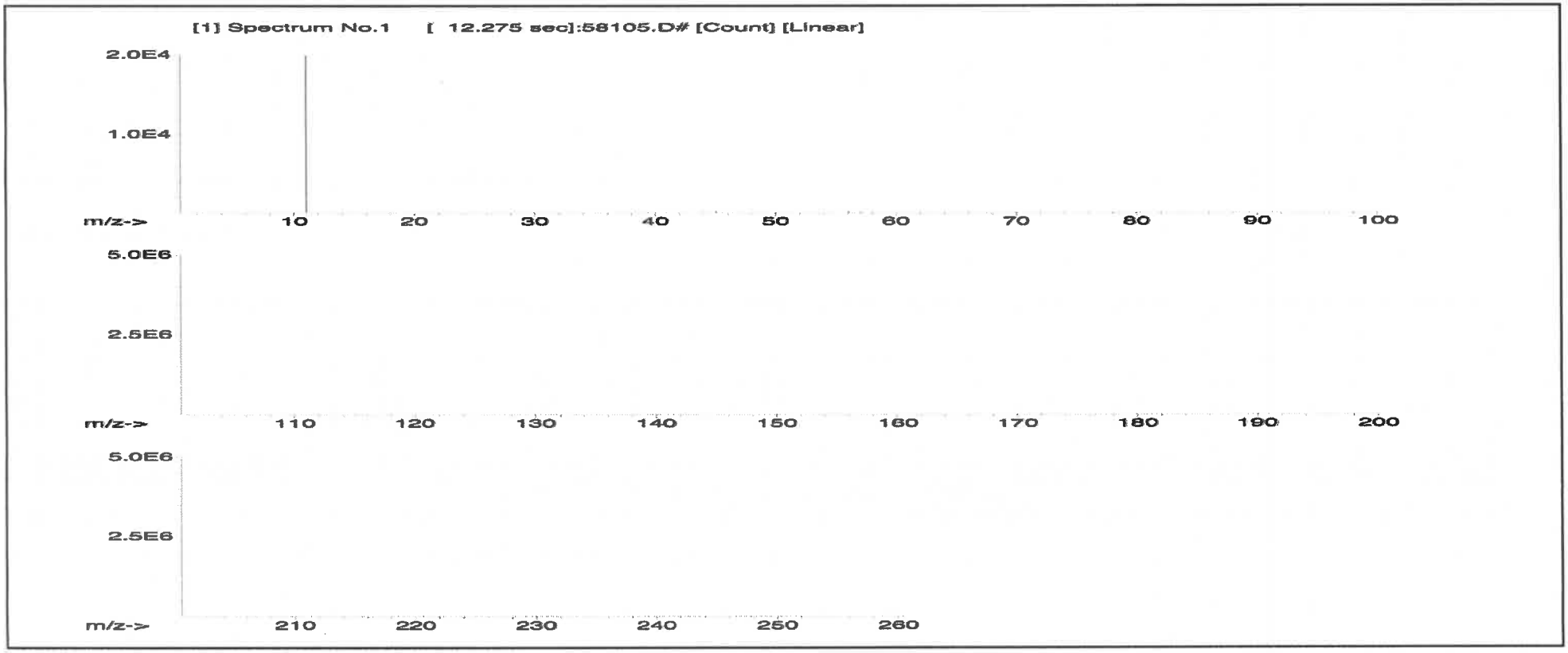
	Lot #			
Solvent:	MKBQ8597V	Ammonium hydroxide		
	2.0%	40.0 (mL)	Ammonium hydroxide	

5E-05 Balance 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. Boric acid (B)	IN018	BV092016A1	1000	99.9999	0.10	17.3	11.55772	11.56201	**1000.4**	**2.0**	10043-35-3	2 mg/m3	orl-rat 2660 mg/kg	3107



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	T	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 02/09/24 M5816

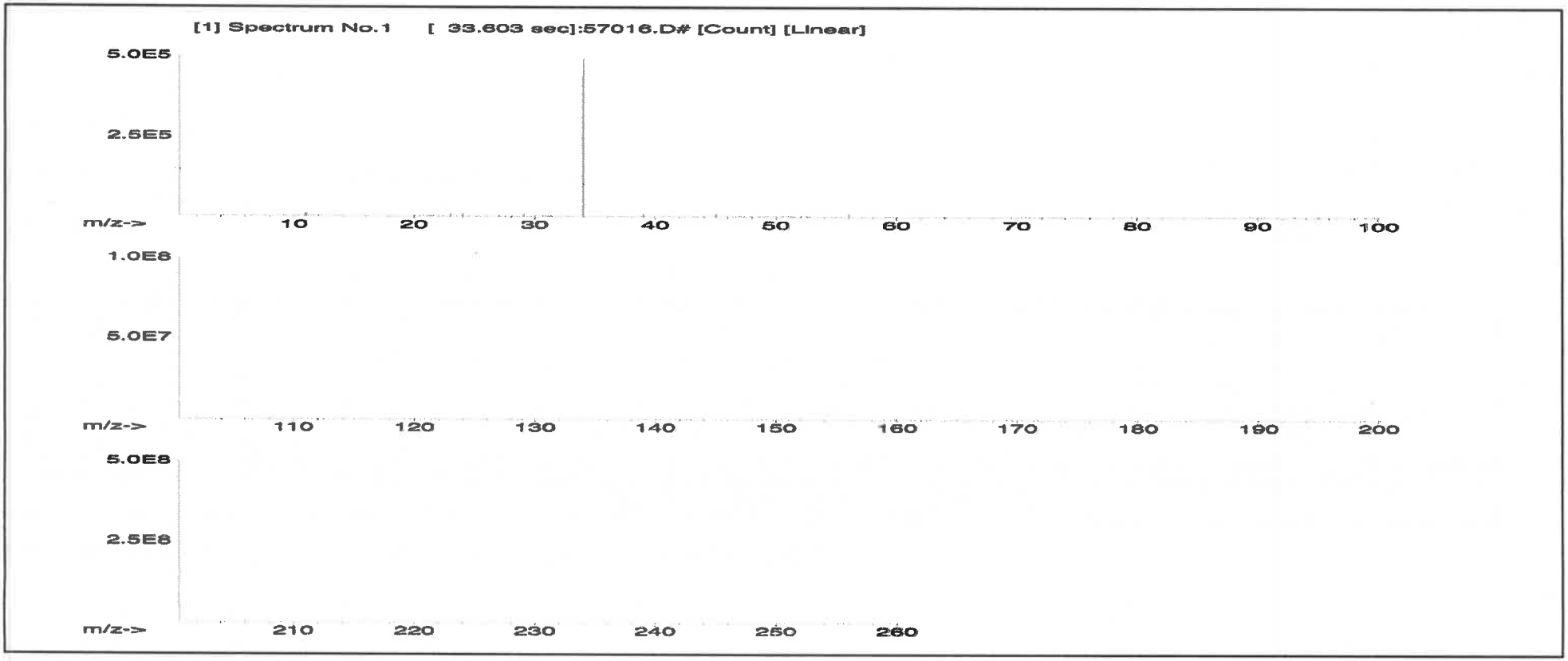
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CERTIFIED WEIGHT REPORT:

Part Number:	**57016**		**Solvent:**	**Lot #** 122923 ASTM Type 1 Water
Lot Number:	**122923**			
Description:	**Sulfur (S)**			
Expiration Date:	122926			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty	

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

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	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	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:

* 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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Certified Reference Material CRM

R: 02/09/24 M5820

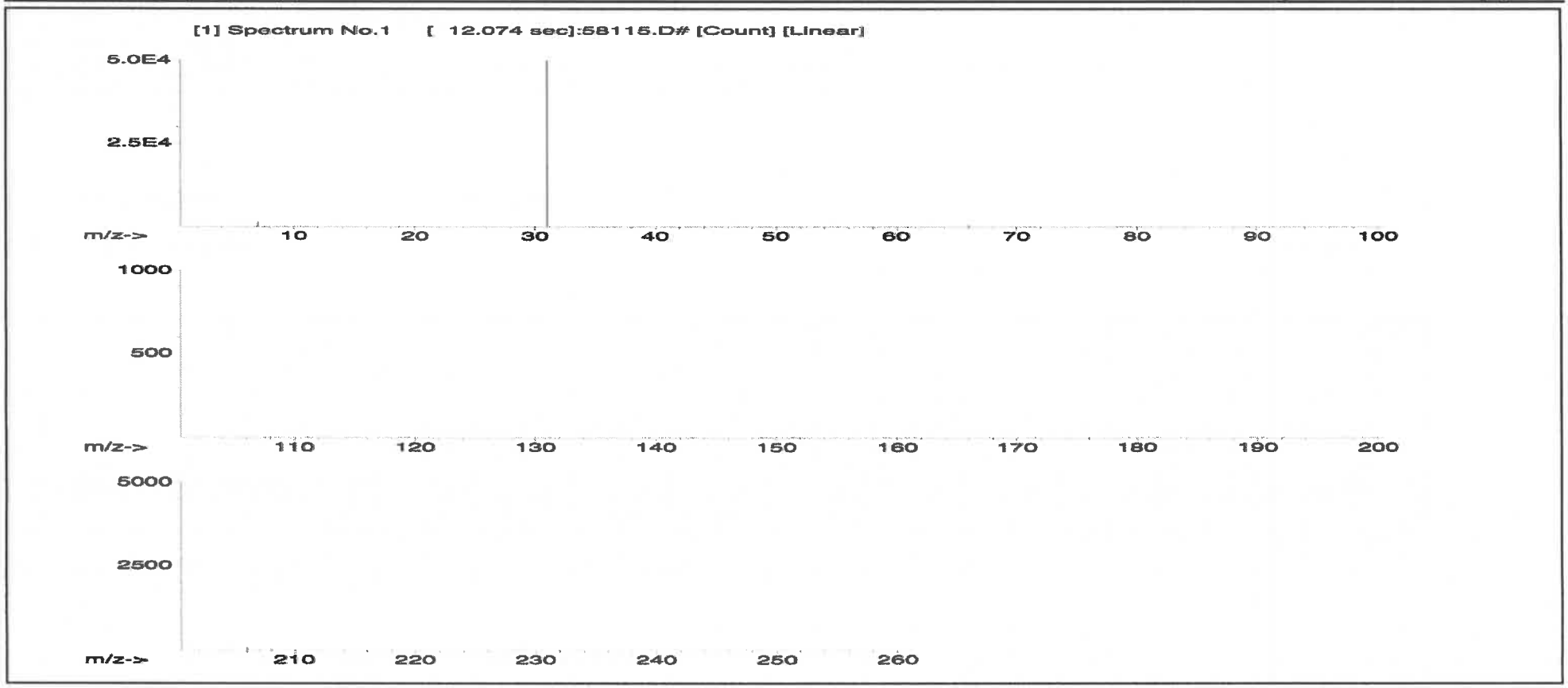
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CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

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	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



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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	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

MF884
MB

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 1

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Sulfate (SO_4)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory,Research,or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

James T Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Mansford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

R: 02/22/24 M5942

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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	<	0.000536	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 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 17, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

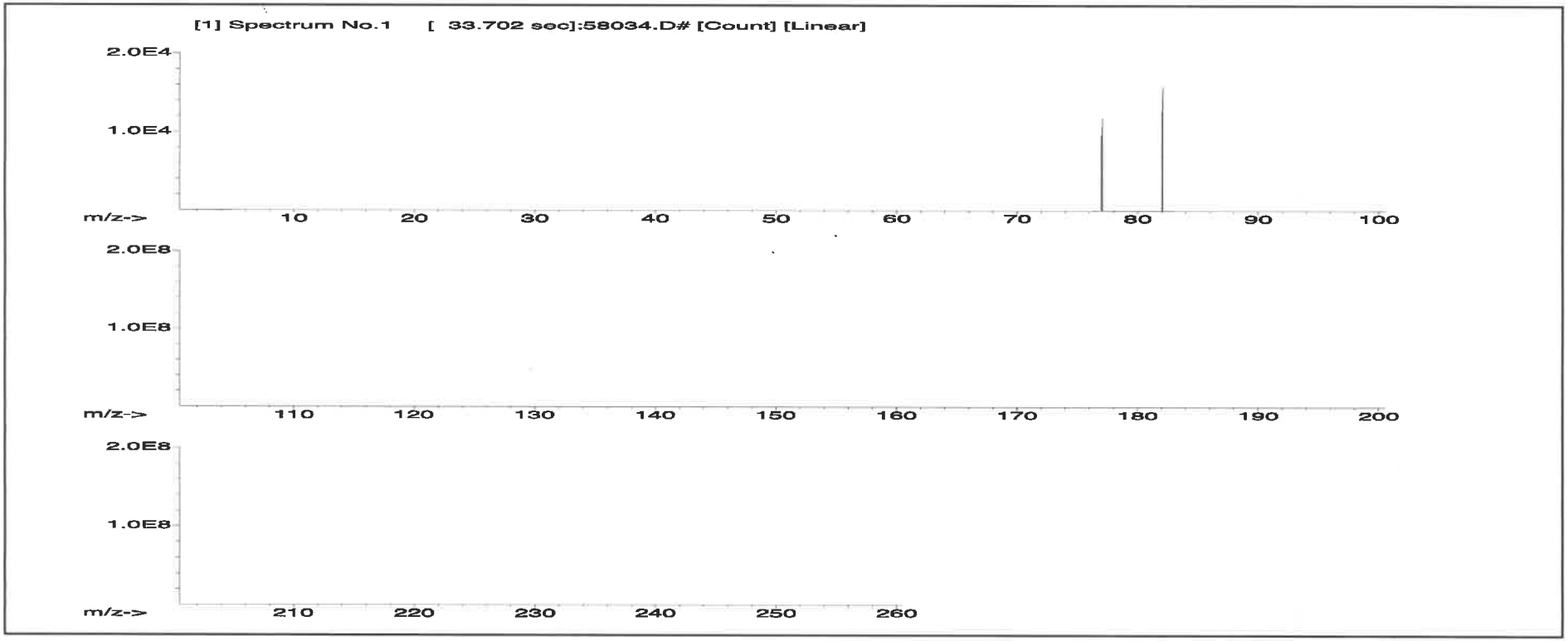
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CERTIFIED WEIGHT REPORT:

		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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800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5970, M5971 R: 7/01/24

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CERTIFIED WEIGHT REPORT:

Part Number: 57003
Lot Number: 062124
Description: Lithium (Li)
Expiration Date: 062127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 250.11

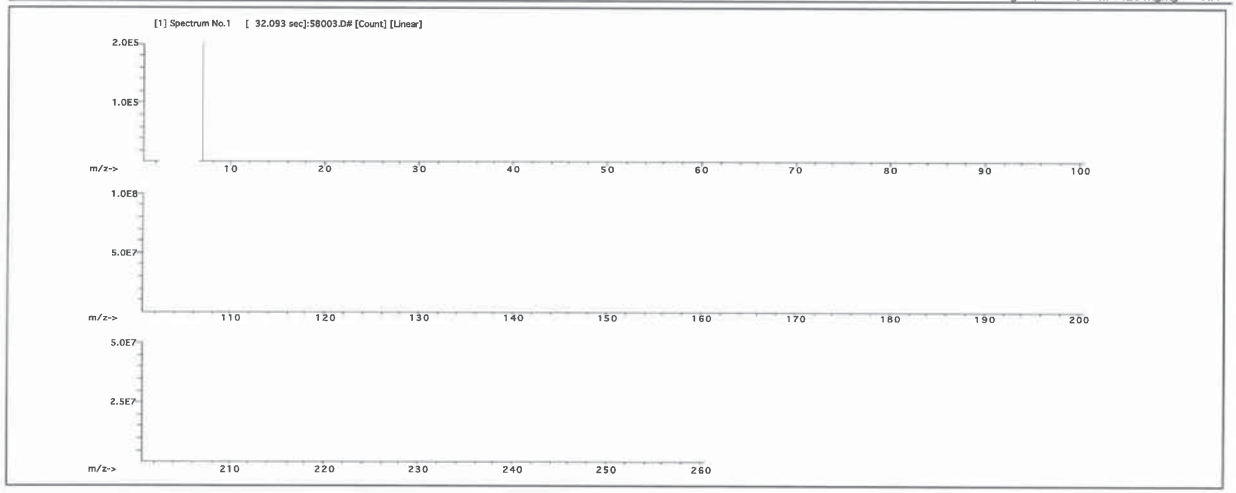
Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	5.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.016 Flask Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 062124

Pedro Rentas
Reviewed By: Pedro L. Rentas 062124

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. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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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	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

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	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

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 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

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

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

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

February 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

- February 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



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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:
	Calcium, Potassium,
	Magnesium, Sodium,
	2 000 µg/mL ea:
	Aluminum, Barium,
	1 000 µg/mL ea:
	Iron,
	500 µg/mL ea:
	Nickel, Vanadium,
	Zinc, Cobalt,
	Manganese,
	250 µg/mL ea:
	Silver, Copper,
	200 µg/mL ea:
	Chromium,
	50 µg/mL ea:
	Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.00 ± 0.26 µg/mL	Calcium, Ca	5 000 ± 22 µg/mL
Chromium, Cr	200.0 ± 1.0 µg/mL	Cobalt, Co	500.0 ± 2.4 µg/mL
Copper, Cu	250.0 ± 1.0 µg/mL	Iron, Fe	1 000 ± 4 µg/mL
Magnesium, Mg	5 000 ± 20 µg/mL	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Potassium, K	5 000 ± 19 µg/mL
Silver, Ag	250.0 ± 1.1 µg/mL	Sodium, Na	5 000 ± 18 µg/mL
Vanadium, V	499.7 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.118 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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)

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**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 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

- January 27, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB727800
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**1 000 ± 7 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.2 µg/mL**
Lead, Pb	**1 000 ± 4 µg/mL**	**Selenium, Se**	**1 000 ± 6 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.042 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/(u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i}^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 21, 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

- December 21, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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EXP.: 9/6/2029

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:	CHEM-CLP-4
Lot Number:	V2-MEB746762
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 5 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 6 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

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)

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**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 06, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R -> 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

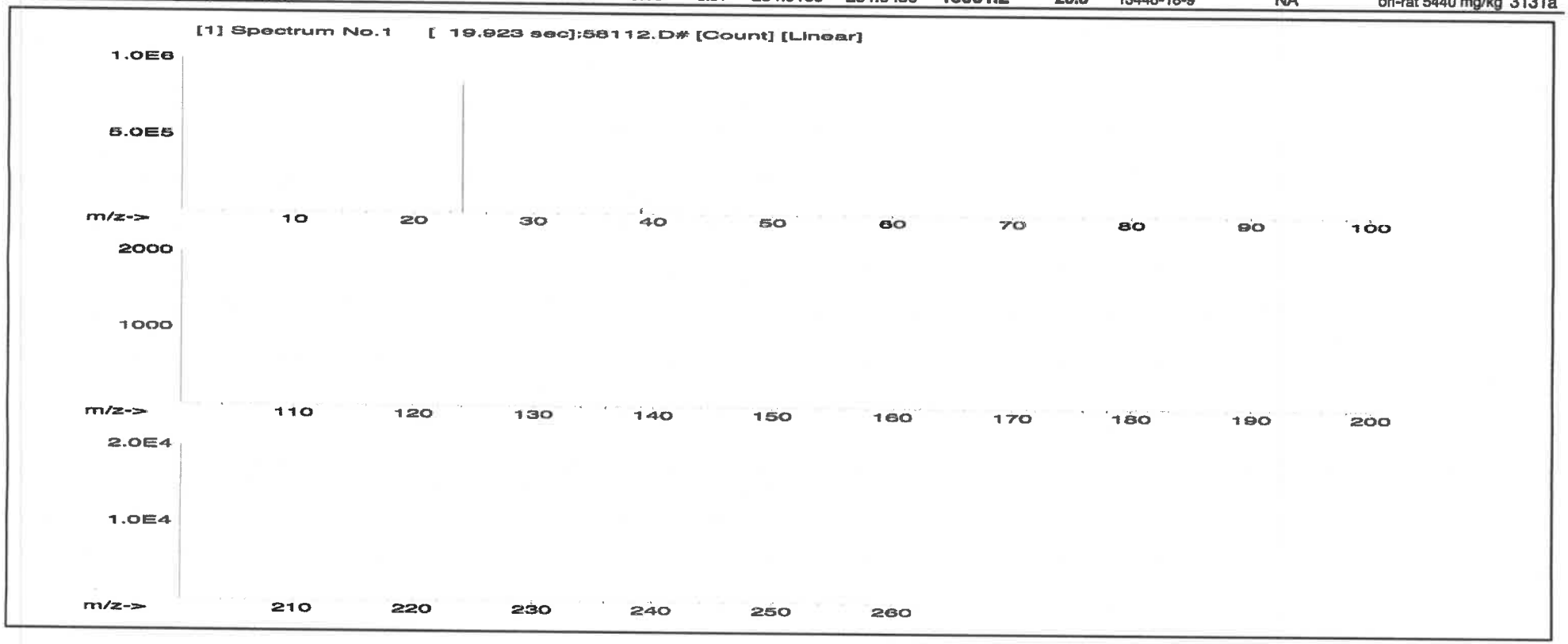
R -> 1/13/25
M 6127

Part Number:	**58112**		**Solvent:**	**Lot #** 24012496	Nitric Acid
Lot Number:	**112124**				
Description:	**Magnesium (Mg)**		2%	40.0 (mL)	Nitric Acid
Expiration Date:	112127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	112124
Reviewed By:	Pedro L. Rentas	112124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9183	234.9459	**10001.2**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



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www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

R->1/13/25
M6128

Part Number:	**58025**		**Lot #**		
Lot Number:	**101124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid	
Expiration Date:	101127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty		

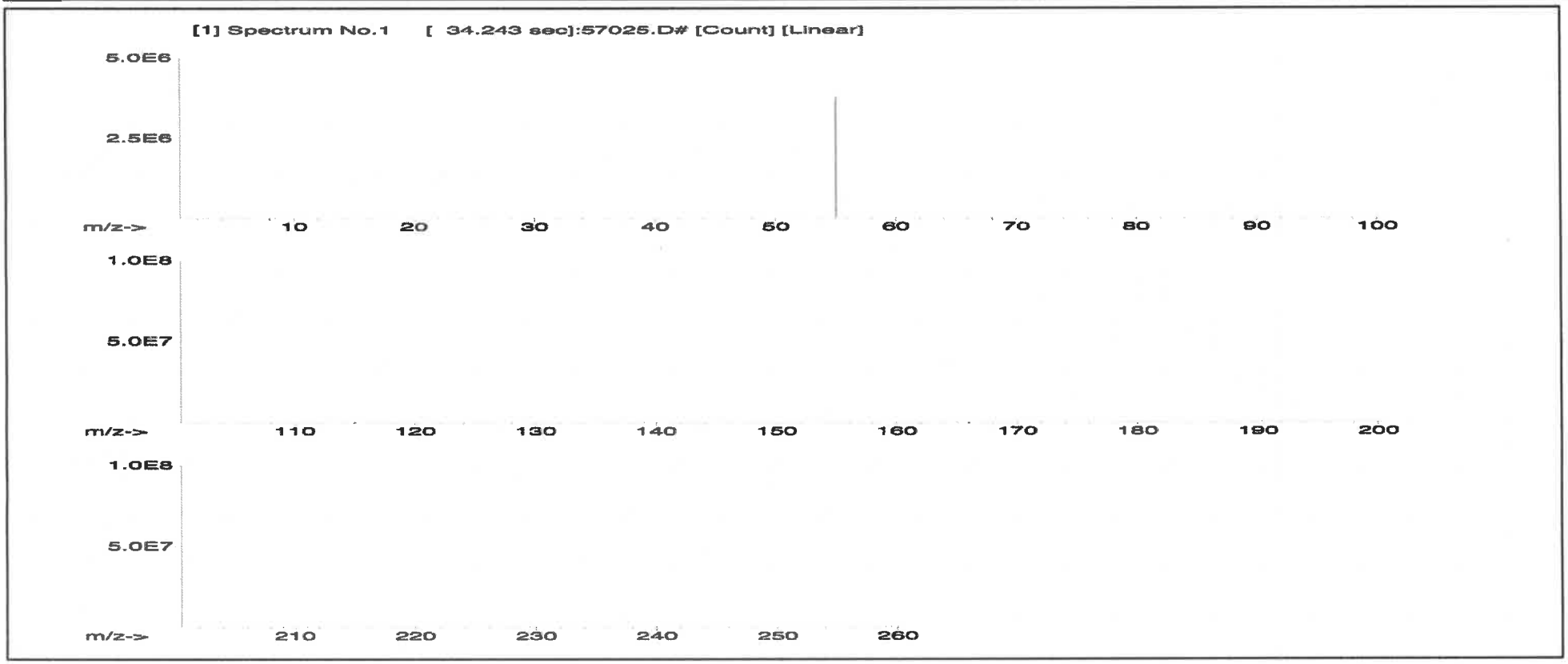
Giovanni Esposito

Formulated By:	Giovanni Esposito	101124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	101124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate hydrate (Mn)	IN031	MNM092020A1	1000	99.999	0.10	20.8	19.2322	19.2344	**1000.1**	**2.0**	15710-66-4	5 mg/m3	orl-rat >300mg/kg	3132



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

M6137 R→10/3/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI1
Lot Number:	V2-SI744713
Matrix:	tr. HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon
Starting Material:	Silica
Starting Material Lot#:	1771
Starting Material Purity:	99.9981%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 6 µg/mL

Density: 1.003 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **999 ± 5 µg/mL**
ICP Assay NIST SRM Traceable to 3150 Lot Number: S2-SI702546

Assay Method #2 **1000 ± 7 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	O	Na		0.001656	M	Se	<	0.022000	M	Zn	<	0.002500
M	Al		0.010787	M	Fe	<	0.027000	M	Nb	<	0.001300	s	Si	<		O	Zr	<	0.001900
M	As	<	0.001900	M	Ga	<	0.001300	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	M	Ni	<	0.005500	M	Sn		0.000096				
M	B		0.016180	M	Ge	<	0.001900	M	Os	<	0.000610	O	Sr		0.000092				
M	Ba		0.000096	M	Hf		0.000423	i	P	<		M	Ta		0.002542				
O	Be	<	0.000570	M	Hg	<	0.000610	M	Pb	<	0.000310	M	Tb	<	0.000310				
M	Bi	<	0.000310	M	Ho	<	0.000610	M	Pd	<	0.000610	M	Te	<	0.000910				
O	Ca		0.011557	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.001900				
M	Cd	<	0.000310	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.001078				
M	Ce	<	0.000610	O	K		0.000577	M	Rb	<	0.009100	M	Tl	<	0.000310				
M	Co	<	0.001600	M	La	<	0.000310	M	Re	<	0.000310	M	Tm	<	0.000310				
M	Cr	<	0.010000	O	Li	<	0.000460	M	Rh	<	0.000310	M	U	<	0.000310				
M	Cs	<	0.000310	M	Lu	<	0.000310	M	Ru	<	0.000310	O	V	<	0.001300				
M	Cu	<	0.002500	O	Mg		0.001348	O	S	<	0.570000	M	W	<	0.001900				
M	Dy	<	0.000310	M	Mn	<	0.002500	M	Sb	<	0.000310	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000310	O	Sc	<	0.000590	M	Yb	<	0.000310				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphic (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 10, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 10, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

R-> 1/13/25

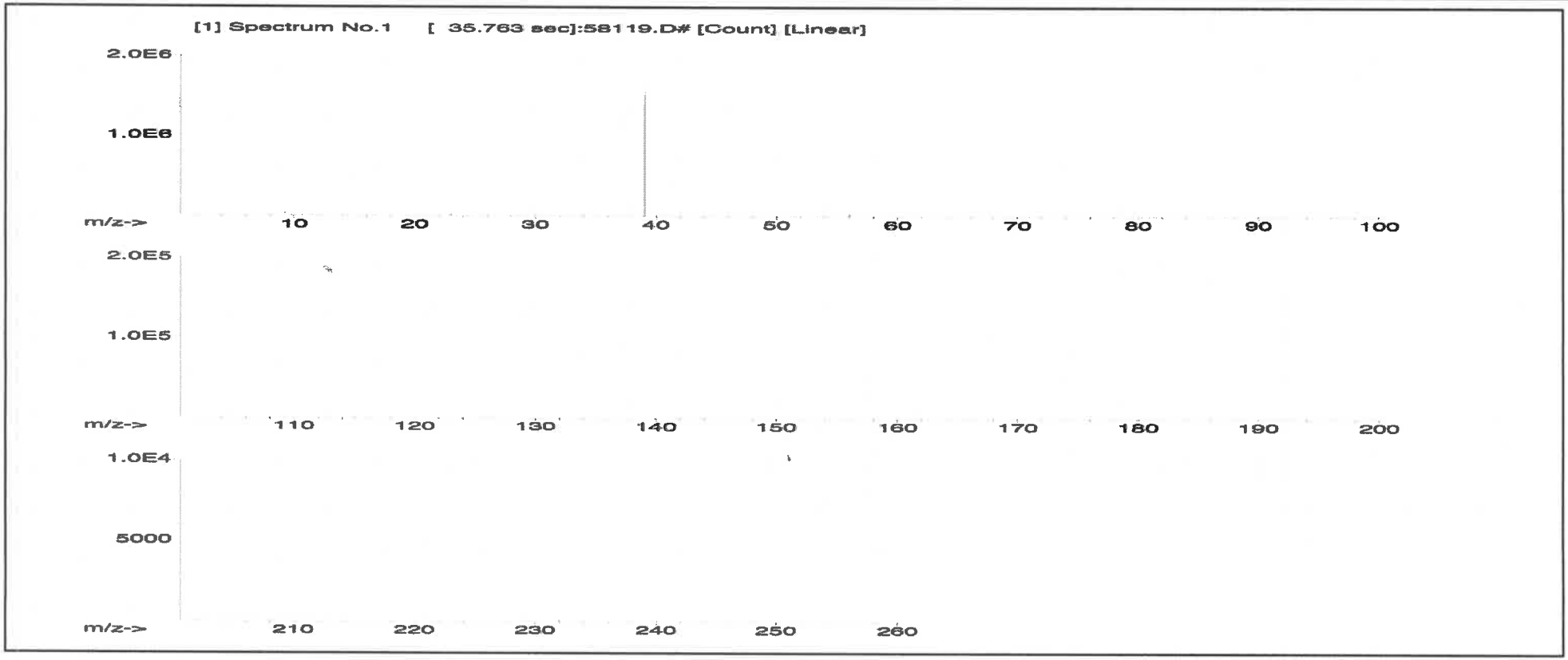
Part Number:	**57119**		**Lot #**		
Lot Number:	**103024**		**Solvent:**	24002546	Nitric Acid
Description:	**Potassium (K)**		2%	80.0 (mL)	Nitric Acid
Expiration Date:	103027				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.1	0.15	Flask Uncertainty		

M6141
M6142
M6143

Giovanni Esposito

Formulated By:	Giovanni Esposito	103024
Reviewed By:	Pedro L. Rentas	103024

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	KD062022A1	10000	99.999	0.10	37.7	106.1040	######	**10001.1**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3750 mg/kg	3141a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

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CERTIFIED WEIGHT REPORT:

R->1/13/25

Part Number: 58111
Lot Number: 072424
Description: Sodium (Na)

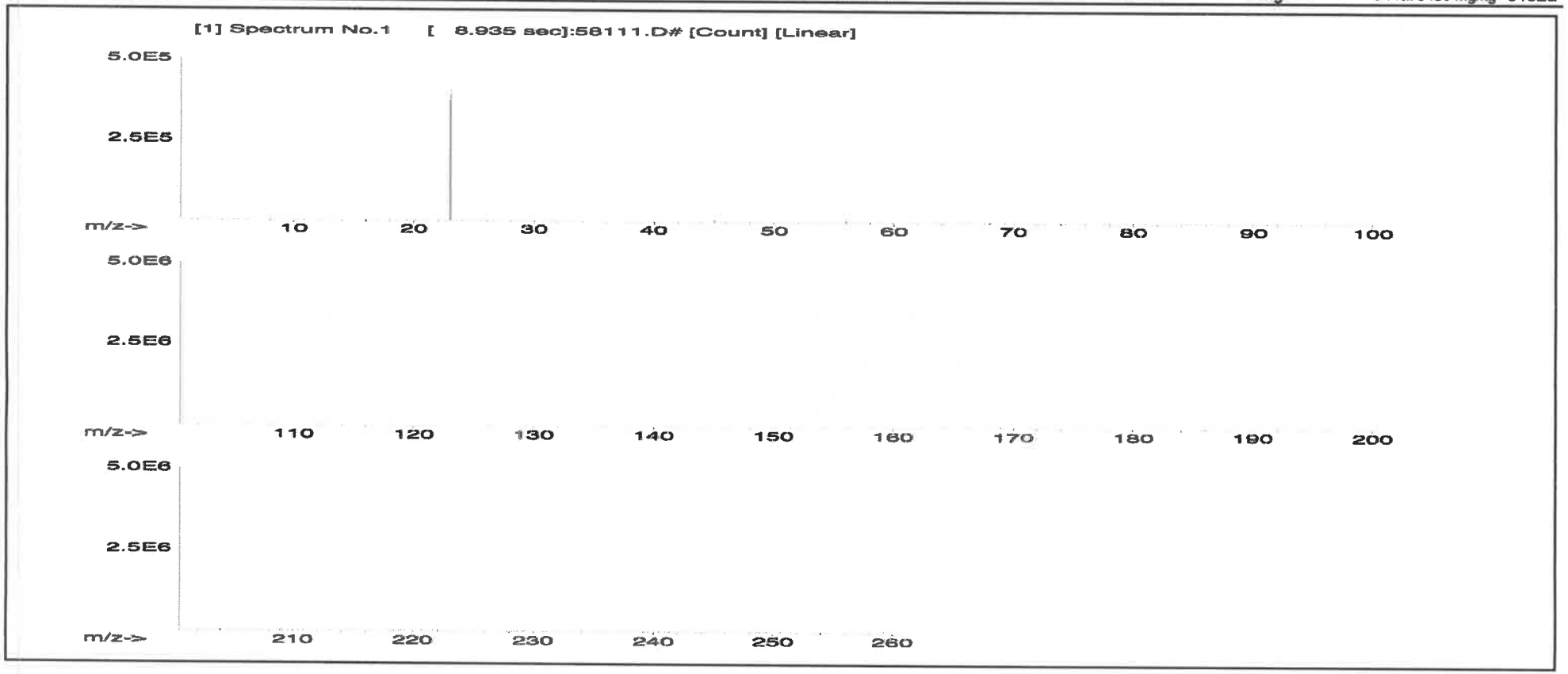
MG144

Expiration Date: 072427
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.2

		Lot #	
Solvent:	24002546	Nitric Acid	
	2%	80.0 (mL)	Nitric Acid
5E-05	Balance Uncertainty		
0.10	Flask Uncertainty		

Formulated By:	Benson Chan	072424
Reviewed By:	Pedro L. Rentas	072424

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	148.7096	######	**10000.0**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



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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	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

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CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 121724
Description: Zinc (Zn)

R → 1/13/25

M6145

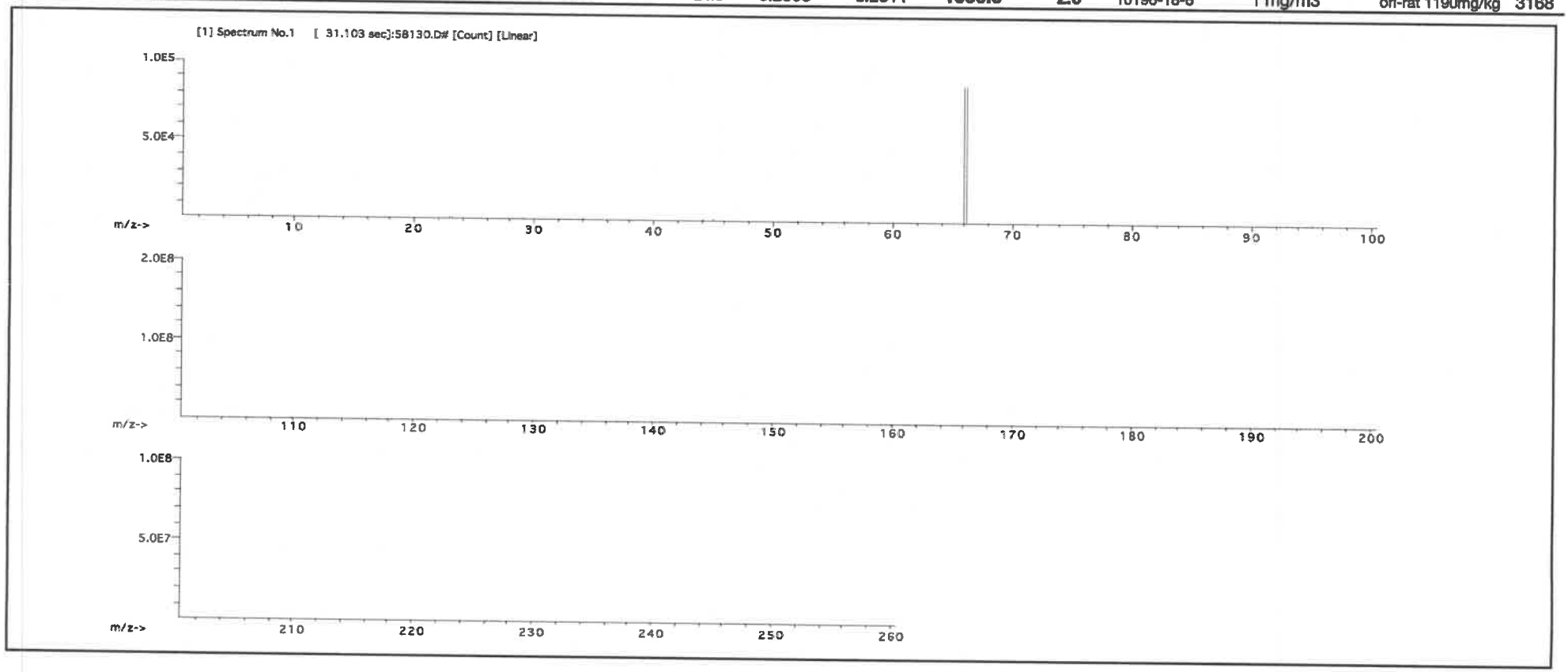
Expiration Date: 121727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

				Lot #	
Solvent:	24012496	Nitric Acid			
	2%	40.0 (mL)	Nitric Acid		
		5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	121724
Reviewed By:	Pedro L. Rentas	121724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	8.2308	8.2311	**1000.0**	**2.0**	10196-18-6	1 mg/m3	ori-rat 1190mg/kg	3168



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

M6151

R-> 1/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

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

James T Ethier

Jamie Ethier
Vice President Global Quality

Nitric Acid 69%
CMOS

R-02102/2025

M-6158

avantor™ | J.T.Baker®

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
Trace Impurities - Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities - Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities - Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities - Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities - Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count - 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

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

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

M-6162

R. Date :- 04/27/2025

Material No.: 9606-03
Batch No.: 24H0162012
Manufactured Date: 2024-06-28
Retest Date: 2029-06-27
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 – 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	0.1 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	0.1 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 1 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 1 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 1.0 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855 282 6867 or +1 610 386 1700

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24H0162012

Test	Specification	Result
Trace Impurities - Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities - Potassium (K)	≤ 50 ppb	< 1 ppb
Trace Impurities - Silicon (Si)	≤ 50 ppb	1 ppb
Trace Impurities - Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Sodium (Na)	≤ 150.0 ppb	< 1.0 ppb
Trace Impurities - Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Tantalum (Ta)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Thallium (Tl)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Tin (Sn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count - 0.5 µm and greater	≤ 60 par/ml	13 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	5 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24H0162012

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-CICV-1
Lot Number:	V2-MEB744107
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 1 000 µg/mL ea: Aluminum, Barium, 500 µg/mL ea: Iron, 250 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 125 µg/mL ea: Silver, Copper, 100 µg/mL ea: Chromium, 25 µg/mL ea: Beryllium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 000 ± 4 µg/mL	Barium, Ba	1 000 ± 6 µg/mL
Beryllium, Be	24.98 ± 0.12 µg/mL	Calcium, Ca	2 500 ± 8 µg/mL
Chromium, Cr	99.9 ± 0.6 µg/mL	Cobalt, Co	250.2 ± 1.2 µg/mL
Copper, Cu	125.0 ± 0.5 µg/mL	Iron, Fe	500.0 ± 2.2 µg/mL
Magnesium, Mg	2 500 ± 11 µg/mL	Manganese, Mn	249.9 ± 1.1 µg/mL
Nickel, Ni	250.0 ± 1.2 µg/mL	Potassium, K	2 500 ± 11 µg/mL
Silver, Ag	125.0 ± 0.6 µg/mL	Sodium, Na	2 500 ± 11 µg/mL
Vanadium, V	250.0 ± 1.1 µg/mL	Zinc, Zn	249.9 ± 1.1 µg/mL

Density: 1.081 g/mL (measured at 20 ± 4 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
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	120618
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	200413
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, 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)

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**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information (https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver)

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 22, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 22, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

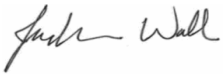
Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

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:	QCP-CICV-2
Lot Number:	U2-MEB733713
Matrix:	3% (w/v) Tartaric acid 1% (v/v) HNO3
Value / Analyte(s):	500 µg/mL ea: Antimony

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**500.0 ± 2.8 µg/mL**		

Density: 1.017 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Sb	ICP Assay	3102a	140911

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

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)

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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 01, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 01, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

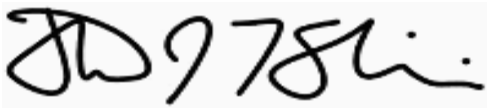
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

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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:	QCP-CICV-3
Lot Number:	V2-MEB749572
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	500 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 250 µg/mL ea: Cadmium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**500.0 ± 3.1 µg/mL**	**Cadmium, Cd**	**250.1 ± 1.1 µg/mL**
Lead, Pb	**500.0 ± 2.3 µg/mL**	**Selenium, Se**	**500.0 ± 3.2 µg/mL**
Thallium, Tl	**500.0 ± 3.0 µg/mL**		

Density: 1.040 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, 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)

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

January 02, 2025

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 02, 2030**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

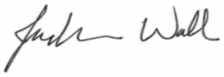
Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Hydrogen Peroxide, 30%
CMOS
(Stabilized)

M-6170

R.Date . 8-05|20|2025

avantor™ | J.T.Baker®

Material No.: 2190-03
Batch No.: 24D1961001

Test	Specification	Result
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Niobium (Nb)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 600.0 ppb	176.7 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 50.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	190.0 – 500.0 ppb	272.3 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)	≤ 50 ppb	< 1 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.2 µm and greater	≤ 1175 par/ml	202 par/ml
Particle Count – 0.5 µm and greater	≤ 100 par/ml	33 par/ml

>>> Continued on page 3 >>>

Hydrogen Peroxide, 30%
CMOS
(Stabilized)

avantor™ | J.T.Baker®

Material No.: 2190-03
Batch No.: 24D1961001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

Michelle Bales
Sr. Manager, Quality Assurance

Hydrogen Peroxide, 30%
CMOS
(Stabilized)

avantor™ | J.T.Baker®

Material No.: 2190-03
Batch No.: 24D1961001
Manufactured Date: 2024-04-17
Expiration Date: 2025-10-16
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (H_2O_2)	30.0 - 32.0 %	31.6 %
Color (APHA)	≤ 10	< 5
Free Acid (µeq/g)	≤ 0.2	0.1
Residue after Evaporation	≤ 10 ppm	2 ppm
Ammonium (NH_4)	≤ 3 ppm	< 3 ppm
Chloride (Cl)	≤ 0.2 ppm	< 0.2 ppm
Nitrate (NO_3)	≤ 2 ppm	< 2 ppm
Phosphate (PO_4)	≤ 1 ppm	1 ppm
Sulfate (SO_4)	≤ 3 ppm	< 3 ppm
Trace Impurities - Aluminum (Al)	≤ 70.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Barium (Ba)	≤ 20.0 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)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities - Chromium (Cr)	≤ 20.0 ppb	1.5 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)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Gold (Au)	≤ 10.0 ppb	< 5.0 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 250.0 ppb
Trace Impurities - Iron (Fe)	≤ 50.0 ppb	4.6 ppb
Trace Impurities - Lead (Pb)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	< 1.0 ppb

>>> Continued on page 2 >>>

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

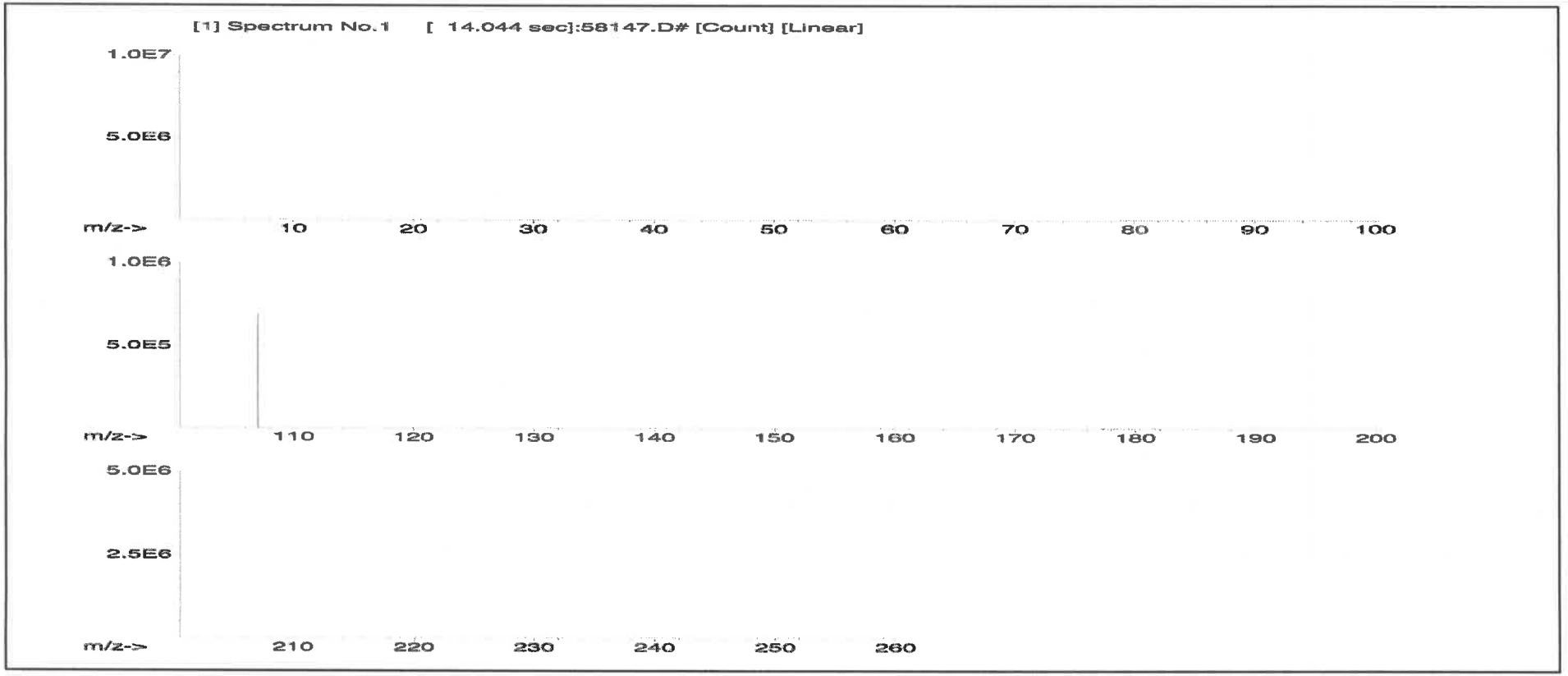
Weight shown below was diluted to (mL): 4000.30 0.058 Flask Uncertainty

	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:

* 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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800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 10/18/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

MG146

Part Number: 57051
Lot Number: 071724
Description: Antimony (Sb)
Expiration Date: 071727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.26 ± 0.058 Flask Uncertainty

Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

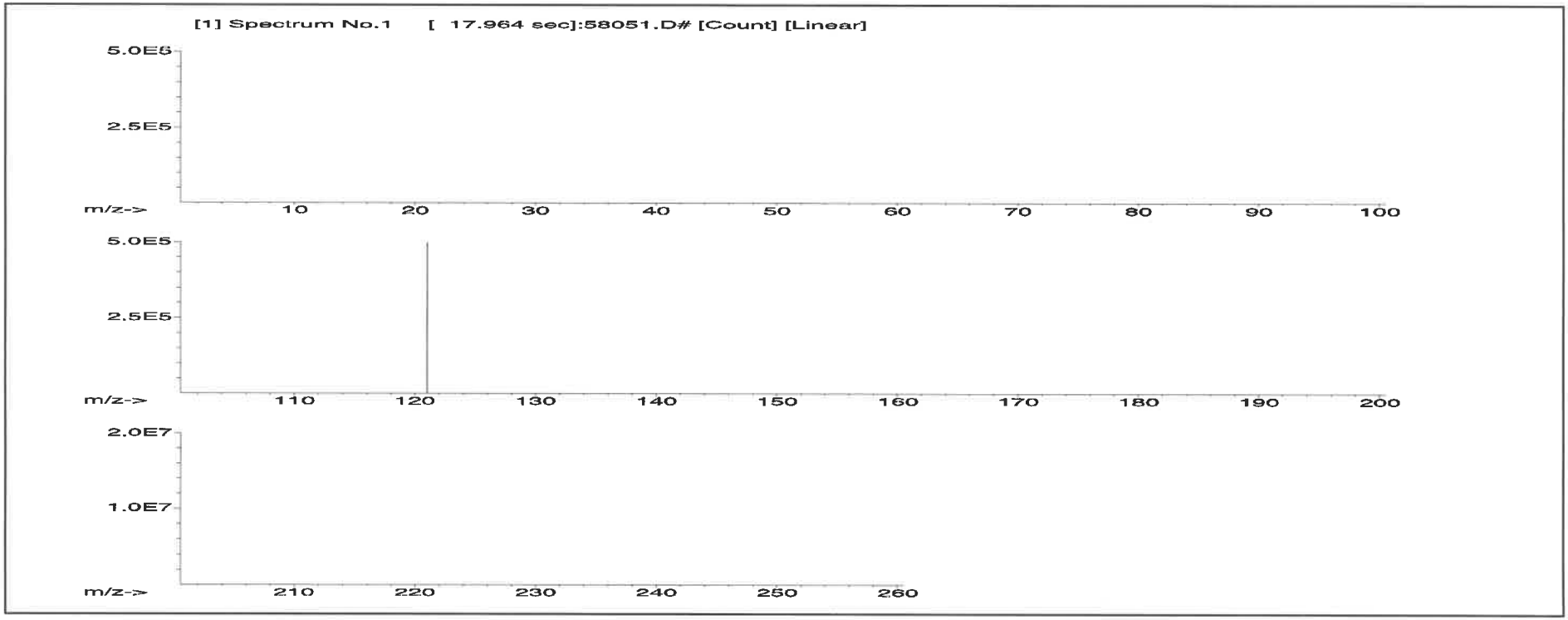
Giovanni Esposito

Formulated By:	Giovanni Esposito	071724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	071724

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	060324	0.1000	200.0	0.084	1000	10001.4	**1000.0**	**2.2**	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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).

APTIM

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *ICP-AES ICS*

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (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.

M6152

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 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-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES 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-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, 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 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES 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-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 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.

APTIM

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *ICP-AES ICS*

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (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.

M6155

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 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-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES 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-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, 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 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES 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-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

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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 888.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	U2-SR730227
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	M2-2192
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985

Assay Method #2 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 2 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001980	M	Eu	<	0.000495	O	Na		0.000200	M	Se	<	0.013862	O	Zn		0.000143
O	Al		0.000370	O	Fe		0.000410	M	Nb	<	0.000495	i	Si	<		M	Zr	<	0.000495
M	As	<	0.000495	M	Ga	<	0.000495	M	Nd	<	0.000495	M	Sm	<	0.000495				
M	Au	<	0.000989	M	Gd	<	0.000495	O	Ni	<	0.007631	M	Sn	<	0.000990				
M	B	<	0.039606	M	Ge	<	0.000495	M	Os	<	0.000494	s	Sr	<					
M	Ba		0.006486	M	Hf	<	0.000495	i	P	<		M	Ta	<	0.000495				
M	Be	<	0.000990	M	Hg	<	0.000989	M	Pb	<	0.002970	M	Tb	<	0.000495				
M	Bi	<	0.000495	M	Ho	<	0.000495	M	Pd	<	0.003957	M	Te	<	0.027724				
O	Ca		0.004255	M	In	<	0.000495	M	Pr	<	0.000495	M	Th	<	0.000990				
M	Cd		0.001339	M	Ir	<	0.000494	M	Pt	<	0.002970	M	Ti	<	0.005940				
M	Ce	<	0.004950	O	K	<	0.008184	M	Rb	<	0.002970	M	Tl	<	0.000495				
M	Co	<	0.000495	M	La	<	0.000495	M	Re	<	0.000495	M	Tm	<	0.000495				
O	Cr	<	0.003207	O	Li	<	0.000884	O	Rh	<	0.012829	M	U	<	0.001485				
M	Cs	<	0.000990	M	Lu	<	0.002970	M	Ru	<	0.000989	M	V	<	0.001980				
M	Cu		0.000099	O	Mg		0.000064	i	S	<		M	W	<	0.003960				
M	Dy	<	0.000495	O	Mn		0.000066	M	Sb	<	0.014852	O	Y	<	0.000995				
M	Er	<	0.000495	M	Mo	<	0.001980	M	Sc	<	0.001980	M	Yb	<	0.000495				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 $Sr(H_2O)_{6}^{+2}$

Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO_3 / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 03, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 03, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 888.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	U2-SR730227
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	M2-2192
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985

Assay Method #2 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 2 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001980	M	Eu	<	0.000495	O	Na		0.000200	M	Se	<	0.013862	O	Zn		0.000143
O	Al		0.000370	O	Fe		0.000410	M	Nb	<	0.000495	i	Si	<		M	Zr	<	0.000495
M	As	<	0.000495	M	Ga	<	0.000495	M	Nd	<	0.000495	M	Sm	<	0.000495				
M	Au	<	0.000989	M	Gd	<	0.000495	O	Ni	<	0.007631	M	Sn	<	0.000990				
M	B	<	0.039606	M	Ge	<	0.000495	M	Os	<	0.000494	s	Sr	<					
M	Ba		0.006486	M	Hf	<	0.000495	i	P	<		M	Ta	<	0.000495				
M	Be	<	0.000990	M	Hg	<	0.000989	M	Pb	<	0.002970	M	Tb	<	0.000495				
M	Bi	<	0.000495	M	Ho	<	0.000495	M	Pd	<	0.003957	M	Te	<	0.027724				
O	Ca		0.004255	M	In	<	0.000495	M	Pr	<	0.000495	M	Th	<	0.000990				
M	Cd		0.001339	M	Ir	<	0.000494	M	Pt	<	0.002970	M	Ti	<	0.005940				
M	Ce	<	0.004950	O	K	<	0.008184	M	Rb	<	0.002970	M	Tl	<	0.000495				
M	Co	<	0.000495	M	La	<	0.000495	M	Re	<	0.000495	M	Tm	<	0.000495				
O	Cr	<	0.003207	O	Li	<	0.000884	O	Rh	<	0.012829	M	U	<	0.001485				
M	Cs	<	0.000990	M	Lu	<	0.002970	M	Ru	<	0.000989	M	V	<	0.001980				
M	Cu		0.000099	O	Mg		0.000064	i	S	<		M	W	<	0.003960				
M	Dy	<	0.000495	O	Mn		0.000066	M	Sb	<	0.014852	O	Y	<	0.000995				
M	Er	<	0.000495	M	Mo	<	0.001980	M	Sc	<	0.001980	M	Yb	<	0.000495				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 $Sr(H_2O)_{6}^{+2}$

Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO_3 / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 03, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 03, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6023

R ! 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
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		

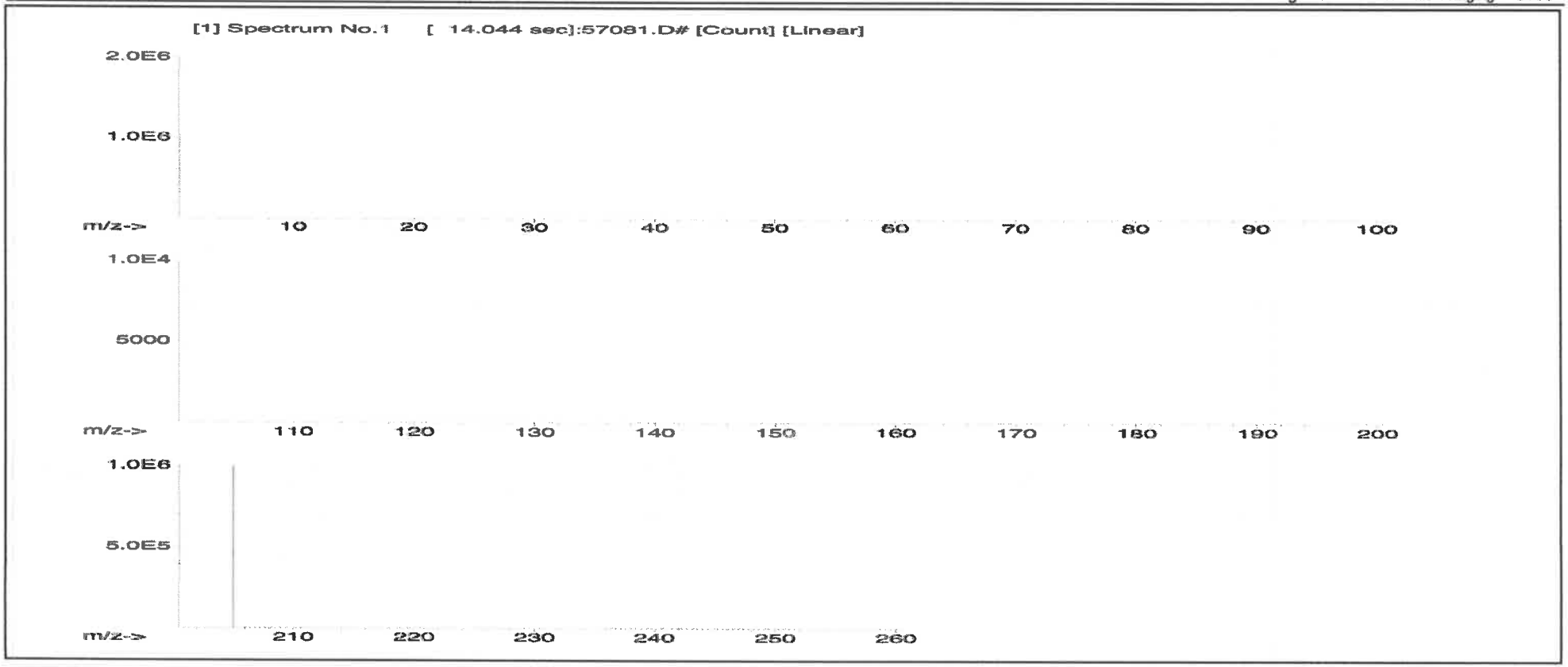
Aleah O'Brady

Formulated By:	Aleah O'Brady	062724

Pedro Rentas

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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Certified Reference Material CRM

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AR-1539 Certificate Number
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
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www.absolutestandards.com

Certified Reference Material CRM

M6021

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Rc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**	24002546	Nitric Acid	
Lot Number:	**062424**			
Description:	**Vanadium (V)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

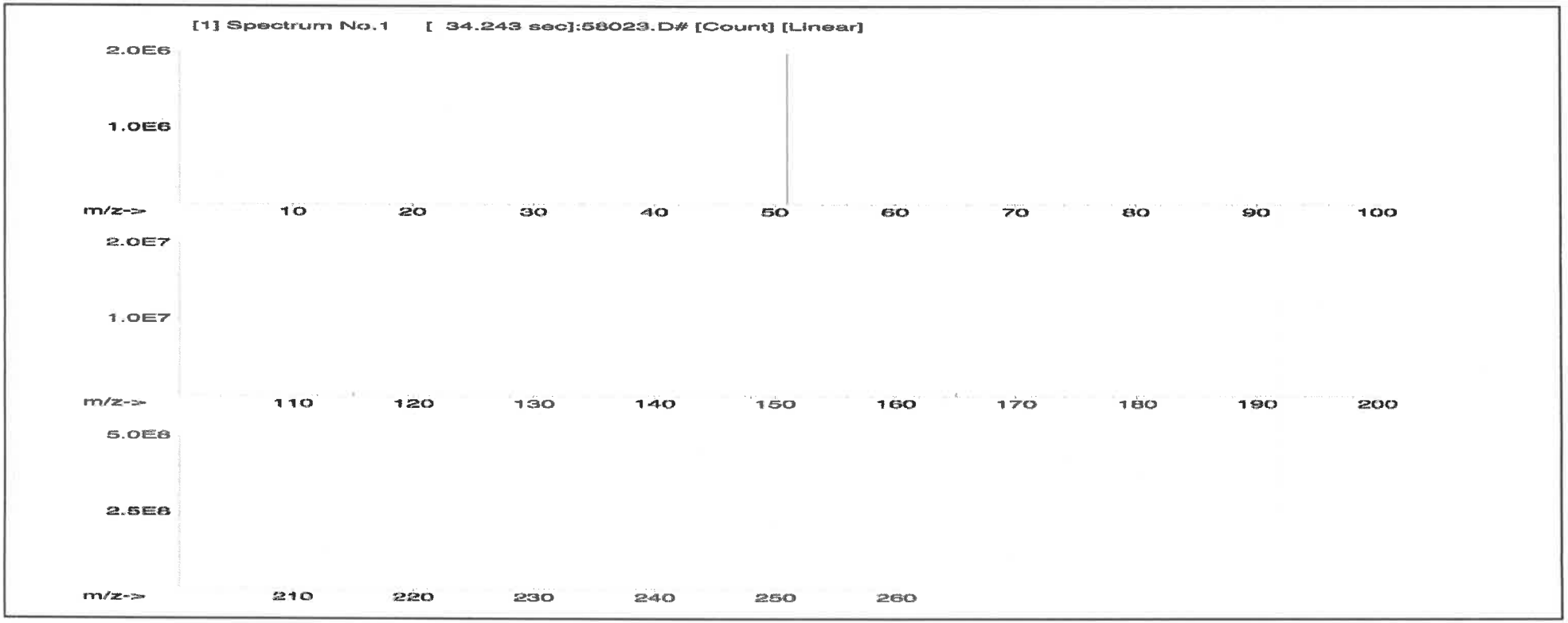
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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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).

SHIPPING DOCUMENTS

Q 2558

Chemtech

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

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 4_01/08/2020

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 1

Company Name:	Nobis Group
Address:	55 Technology Dr Suite 101, Lowell, MA 01851
Phone:	978-703-6014
Project Name:	Raymark
Project Location:	Stratford, CT
Project Number:	95700
Project Manager:	Adam Roy
Con-Test Quote Name/Number:	
Invoice Recipient:	
Sampled By:	A. Brittingham

Requested Turnaround Time

5-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other:
CLP Like Data Pkg Required: ☐ No
Email To: aroy@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	M/O	RCP VOCs	% Solids	PAHs	Herbicides	Pesticides	PCBs	Metals ICP + Hg - 6010	Cyanide	SPLP RCP Metals - 6020
	OU4-TS-Denali-070925	7/9/25	11:15	G	SO		3	2	1				X	X	X	X	X	X	X	X	X
	OU4-TS-Grillo-OG-070925	7/9/25	11:30	G	SO		3	2	1				X	X	X	X	X	X	X	X	X

[2] Preservation Code

Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Contest is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 7/9/25 1200
Received by: (signature)	Date/Time: 7/10/25 1000
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments:

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☑ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Lt Cont #1 4.3 -1

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID :	Q2558 NOBI03	**Order Date :**	7/10/2025 11:16:00 AM	**Project Mgr :**	
Client Name :	Nobis Group	**Project Name :**	Raymark Superfund Site	**Report Type :**	Level 4
Client Contact :	Adam Roy	**Receive DateTime :**	7/10/2025 10:00:00 AM	**EDD Type :**	EQUIS
Invoice Name :	Nobis Group	**Purchase Order :**		**Hard Copy Date :**	
Invoice Contact :	Adam Roy			**Date Signoff :**	

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2558-01	OU4-TS-Denali-070925	Solid	07/09/2025	11:15					
					VOCMS Group3		8260D		~~10~~ Bus. Days 5
Q2558-03	OU4-TS-Grillo-OG-070925	Solid	07/09/2025	11:30					
					VOCMS Group3		8260D		~~10~~ Bus. Days 5

Relinguished By : Ad

Date / Time : 7/10/25 1305

Received By : Sam

Date / Time : 07/10/25 13:05

Storage Area : **VOA Refridgerator Room**