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

Order ID : Q2795

Project ID : Girard School - PA

Client : Kleinfelder

Lab Sample Number	Client Sample Number
Q2795-01	COMP-1
Q2795-02	COMP-2
Q2795-03	COMP-3

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: 8/18/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

Alliance TECHNICAL GROUP

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

DATA REPORTING QUALIFIERS- INORGANIC

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

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

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: **Q2795**

	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: **KETAN PATEL** **Date:** **08/18/2025**

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LAB CHRONICLE

OrderID:	Q2795	**OrderDate:**	8/7/2025 11:57:00 AM
Client:	Kleinfelder	**Project:**	Girard School - PA
Contact:	Mark Warchol	**Location:**	D31,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2795-01	**COMP-1**	**SOIL**			**08/06/25**			**08/07/25**
			Mercury	7471B		08/08/25	08/11/25	
			Metals ICP-Group1	6010D		08/08/25	08/11/25	
Q2795-02	**COMP-2**	**SOIL**			**08/06/25**			**08/07/25**
			Mercury	7471B		08/08/25	08/11/25	
			Metals ICP-Group1	6010D		08/08/25	08/11/25	
Q2795-03	**COMP-3**	**SOIL**			**08/06/25**			**08/07/25**
			Mercury	7471B		08/08/25	08/11/25	
			Metals ICP-Group1	6010D		08/08/25	08/11/25	

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Hit Summary Sheet
SW-846

SDG No.: Q2795 **Order ID:** Q2795

Client: Kleinfelder **Project ID:** Girard School - PA

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : COMP-1								
Q2795-01	COMP-1	SOIL	Aluminum	5910		0.94	5.61	mg/Kg
Q2795-01	COMP-1	SOIL	Arsenic	4.42		0.21	1.12	mg/Kg
Q2795-01	COMP-1	SOIL	Barium	83.8		0.82	5.61	mg/Kg
Q2795-01	COMP-1	SOIL	Beryllium	0.67		0.028	0.34	mg/Kg
Q2795-01	COMP-1	SOIL	Cadmium	0.50		0.027	0.34	mg/Kg
Q2795-01	COMP-1	SOIL	Calcium	5200		12.5	112	mg/Kg
Q2795-01	COMP-1	SOIL	Chromium	10.7		0.053	0.56	mg/Kg
Q2795-01	COMP-1	SOIL	Cobalt	6.12		0.11	1.68	mg/Kg
Q2795-01	COMP-1	SOIL	Copper	18.5		0.25	1.12	mg/Kg
Q2795-01	COMP-1	SOIL	Iron	10400		4.48	5.61	mg/Kg
Q2795-01	COMP-1	SOIL	Lead	149		0.15	0.67	mg/Kg
Q2795-01	COMP-1	SOIL	Magnesium	1760		13.5	112	mg/Kg
Q2795-01	COMP-1	SOIL	Manganese	334		0.16	1.12	mg/Kg
Q2795-01	COMP-1	SOIL	Mercury	5.25	D	0.082	0.15	mg/Kg
Q2795-01	COMP-1	SOIL	Nickel	8.24		0.15	2.24	mg/Kg
Q2795-01	COMP-1	SOIL	Potassium	512		31.1	112	mg/Kg
Q2795-01	COMP-1	SOIL	Silver	0.48	J	0.14	0.56	mg/Kg
Q2795-01	COMP-1	SOIL	Sodium	84.0	J	20.0	112	mg/Kg
Q2795-01	COMP-1	SOIL	Vanadium	15.4		0.28	2.24	mg/Kg
Q2795-01	COMP-1	SOIL	Zinc	44.2		0.26	2.24	mg/Kg
Client ID : COMP-2								
Q2795-02	COMP-2	SOIL	Aluminum	6600		0.92	5.45	mg/Kg
Q2795-02	COMP-2	SOIL	Arsenic	5.99		0.21	1.09	mg/Kg
Q2795-02	COMP-2	SOIL	Barium	70.2		0.80	5.45	mg/Kg
Q2795-02	COMP-2	SOIL	Beryllium	0.62		0.027	0.33	mg/Kg
Q2795-02	COMP-2	SOIL	Cadmium	0.59		0.026	0.33	mg/Kg
Q2795-02	COMP-2	SOIL	Calcium	8300		12.1	109	mg/Kg
Q2795-02	COMP-2	SOIL	Chromium	12.9		0.051	0.55	mg/Kg
Q2795-02	COMP-2	SOIL	Cobalt	7.36		0.11	1.64	mg/Kg
Q2795-02	COMP-2	SOIL	Copper	22.8		0.24	1.09	mg/Kg
Q2795-02	COMP-2	SOIL	Iron	15700		4.35	5.45	mg/Kg
Q2795-02	COMP-2	SOIL	Lead	91.2		0.14	0.65	mg/Kg
Q2795-02	COMP-2	SOIL	Magnesium	5080		13.1	109	mg/Kg
Q2795-02	COMP-2	SOIL	Manganese	279		0.15	1.09	mg/Kg
Q2795-02	COMP-2	SOIL	Mercury	4.67	D	0.082	0.15	mg/Kg
Q2795-02	COMP-2	SOIL	Nickel	8.98		0.14	2.18	mg/Kg
Q2795-02	COMP-2	SOIL	Potassium	1230		30.2	109	mg/Kg

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Hit Summary Sheet
SW-846

SDG No.: Q2795 **Order ID:** Q2795

Client: Kleinfelder **Project ID:** Girard School - PA

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Q2795-02	COMP-2	SOIL	Silver	0.59		0.13	0.55	mg/Kg
Q2795-02	COMP-2	SOIL	Sodium	184		19.4	109	mg/Kg
Q2795-02	COMP-2	SOIL	Vanadium	21.9		0.27	2.18	mg/Kg
Q2795-02	COMP-2	SOIL	Zinc	64.5		0.25	2.18	mg/Kg
Client ID : COMP-3								
Q2795-03	COMP-3	SOIL	Aluminum	7270		0.84	4.98	mg/Kg
Q2795-03	COMP-3	SOIL	Antimony	0.31	J	0.22	2.49	mg/Kg
Q2795-03	COMP-3	SOIL	Arsenic	6.37		0.19	1.00	mg/Kg
Q2795-03	COMP-3	SOIL	Barium	76.3		0.73	4.98	mg/Kg
Q2795-03	COMP-3	SOIL	Beryllium	0.66		0.025	0.30	mg/Kg
Q2795-03	COMP-3	SOIL	Cadmium	0.55		0.024	0.30	mg/Kg
Q2795-03	COMP-3	SOIL	Calcium	4490		11.1	99.6	mg/Kg
Q2795-03	COMP-3	SOIL	Chromium	14.0		0.047	0.50	mg/Kg
Q2795-03	COMP-3	SOIL	Cobalt	6.97		0.10	1.49	mg/Kg
Q2795-03	COMP-3	SOIL	Copper	71.4		0.22	1.00	mg/Kg
Q2795-03	COMP-3	SOIL	Iron	16800		3.97	4.98	mg/Kg
Q2795-03	COMP-3	SOIL	Lead	121		0.13	0.60	mg/Kg
Q2795-03	COMP-3	SOIL	Magnesium	1930		11.9	99.6	mg/Kg
Q2795-03	COMP-3	SOIL	Manganese	249		0.14	1.00	mg/Kg
Q2795-03	COMP-3	SOIL	Mercury	2.91	D	0.085	0.15	mg/Kg
Q2795-03	COMP-3	SOIL	Nickel	9.67		0.13	1.99	mg/Kg
Q2795-03	COMP-3	SOIL	Potassium	1000		27.6	99.6	mg/Kg
Q2795-03	COMP-3	SOIL	Silver	0.75		0.12	0.50	mg/Kg
Q2795-03	COMP-3	SOIL	Sodium	65.7	J	17.7	99.6	mg/Kg
Q2795-03	COMP-3	SOIL	Vanadium	22.0		0.25	1.99	mg/Kg
Q2795-03	COMP-3	SOIL	Zinc	80.7		0.23	1.99	mg/Kg

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SAMPLE DATA

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Report of Analysis

Client:	Kleinfelder	Date Collected:	08/06/25
Project:	Girard School - PA	Date Received:	08/07/25
Client Sample ID:	COMP-1	SDG No.:	Q2795
Lab Sample ID:	Q2795-01	Matrix:	SOIL
Level (low/med):	low	% Solid:	82.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	5910		1	0.94	5.61	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-36-0	Antimony	0.25	UN	1	0.25	2.81	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-38-2	Arsenic	4.42	N	1	0.21	1.12	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-39-3	Barium	83.8		1	0.82	5.61	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-41-7	Beryllium	0.67	N	1	0.028	0.34	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-43-9	Cadmium	0.50		1	0.027	0.34	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-70-2	Calcium	5200		1	12.5	112	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-47-3	Chromium	10.7	N	1	0.053	0.56	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-48-4	Cobalt	6.12		1	0.11	1.68	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-50-8	Copper	18.5	N	1	0.25	1.12	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7439-89-6	Iron	10400		1	4.48	5.61	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7439-92-1	Lead	149		1	0.15	0.67	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7439-95-4	Magnesium	1760		1	13.5	112	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7439-96-5	Manganese	334		1	0.16	1.12	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7439-97-6	Mercury	5.25	D*	10	0.082	0.15	mg/Kg	08/08/25 11:35	08/11/25 13:17	7471B	
7440-02-0	Nickel	8.24		1	0.15	2.24	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-09-7	Potassium	512	N	1	31.1	112	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7782-49-2	Selenium	0.29	UN	1	0.29	1.12	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-22-4	Silver	0.48	JN	1	0.14	0.56	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-23-5	Sodium	84.0	JN	1	20.0	112	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-28-0	Thallium	0.26	U	1	0.26	2.24	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-62-2	Vanadium	15.4	N	1	0.28	2.24	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050
7440-66-6	Zinc	44.2		1	0.26	2.24	mg/Kg	08/08/25 13:15	08/11/25 15:23	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	N/A
Comments:	Metals Group1				

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:	Kleinfelder	Date Collected:	08/06/25
Project:	Girard School - PA	Date Received:	08/07/25
Client Sample ID:	COMP-2	SDG No.:	Q2795
Lab Sample ID:	Q2795-02	Matrix:	SOIL
Level (low/med):	low	% Solid:	80.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	6600		1	0.92	5.45	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-36-0	Antimony	0.24	UN	1	0.24	2.73	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-38-2	Arsenic	5.99	N	1	0.21	1.09	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-39-3	Barium	70.2		1	0.80	5.45	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-41-7	Beryllium	0.62	N	1	0.027	0.33	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-43-9	Cadmium	0.59		1	0.026	0.33	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-70-2	Calcium	8300		1	12.1	109	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-47-3	Chromium	12.9	N	1	0.051	0.55	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-48-4	Cobalt	7.36		1	0.11	1.64	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-50-8	Copper	22.8	N	1	0.24	1.09	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7439-89-6	Iron	15700		1	4.35	5.45	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7439-92-1	Lead	91.2		1	0.14	0.65	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7439-95-4	Magnesium	5080		1	13.1	109	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7439-96-5	Manganese	279		1	0.15	1.09	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7439-97-6	Mercury	4.67	D*	10	0.082	0.15	mg/Kg	08/08/25 11:35	08/11/25 13:20	7471B	
7440-02-0	Nickel	8.98		1	0.14	2.18	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-09-7	Potassium	1230	N	1	30.2	109	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7782-49-2	Selenium	0.28	UN	1	0.28	1.09	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-22-4	Silver	0.59	N	1	0.13	0.55	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-23-5	Sodium	184	N	1	19.4	109	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-28-0	Thallium	0.25	U	1	0.25	2.18	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-62-2	Vanadium	21.9	N	1	0.27	2.18	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050
7440-66-6	Zinc	64.5		1	0.25	2.18	mg/Kg	08/08/25 13:15	08/11/25 15:27	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	N/A
Comments:	Metals Group1				

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:	Kleinfelder	Date Collected:	08/06/25
Project:	Girard School - PA	Date Received:	08/07/25
Client Sample ID:	COMP-3	SDG No.:	Q2795
Lab Sample ID:	Q2795-03	Matrix:	SOIL
Level (low/med):	low	% Solid:	82

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	7270		1	0.84	4.98	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-36-0	Antimony	0.31	JN	1	0.22	2.49	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-38-2	Arsenic	6.37	N	1	0.19	1.00	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-39-3	Barium	76.3		1	0.73	4.98	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-41-7	Beryllium	0.66	N	1	0.025	0.30	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-43-9	Cadmium	0.55		1	0.024	0.30	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-70-2	Calcium	4490		1	11.1	99.6	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-47-3	Chromium	14.0	N	1	0.047	0.50	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-48-4	Cobalt	6.97		1	0.10	1.49	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-50-8	Copper	71.4	N	1	0.22	1.00	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7439-89-6	Iron	16800		1	3.97	4.98	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7439-92-1	Lead	121		1	0.13	0.60	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7439-95-4	Magnesium	1930		1	11.9	99.6	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7439-96-5	Manganese	249		1	0.14	1.00	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7439-97-6	Mercury	2.91	D*	10	0.085	0.15	mg/Kg	08/08/25 11:35	08/11/25 13:22	7471B	
7440-02-0	Nickel	9.67		1	0.13	1.99	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-09-7	Potassium	1000	N	1	27.6	99.6	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7782-49-2	Selenium	0.26	UN	1	0.26	1.00	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-22-4	Silver	0.75	N	1	0.12	0.50	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-23-5	Sodium	65.7	JN	1	17.7	99.6	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-28-0	Thallium	0.23	U	1	0.23	1.99	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-62-2	Vanadium	22.0	N	1	0.25	1.99	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050
7440-66-6	Zinc	80.7		1	0.23	1.99	mg/Kg	08/08/25 13:15	08/11/25 15:31	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	N/A
Comments:	Metals Group1				

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

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

METAL CALIBRATION DATA

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

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Kleinfelder
SDG No.: Q2795
Contract: POWE02
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
ICV06	Mercury	3.69	4.0	92	90 - 110	CV	08/11/2025	10:33	LB136768

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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
CCV15	Mercury	5.16	5.0	103	90 - 110	CV	08/11/2025	11:06	LB136768
CCV16	Mercury	5.27	5.0	105	90 - 110	CV	08/11/2025	11:53	LB136768
CCV17	Mercury	4.90	5.0	98	90 - 110	CV	08/11/2025	12:26	LB136768
CCV18	Mercury	5.07	5.0	101	90 - 110	CV	08/11/2025	13:32	LB136768
CCV19	Mercury	5.03	5.0	101	90 - 110	CV	08/11/2025	13:56	LB136768

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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	7500	8000	94	90 - 110	P	08/11/2025	11:09	LB136778
	Antimony	3860	4000	96	90 - 110	P	08/11/2025	11:09	LB136778
	Arsenic	3700	4000	93	90 - 110	P	08/11/2025	11:09	LB136778
	Barium	7500	8000	94	90 - 110	P	08/11/2025	11:09	LB136778
	Beryllium	190	200	95	90 - 110	P	08/11/2025	11:09	LB136778
	Cadmium	1840	2000	92	90 - 110	P	08/11/2025	11:09	LB136778
	Calcium	18800	20000	94	90 - 110	P	08/11/2025	11:09	LB136778
	Chromium	755	800	94	90 - 110	P	08/11/2025	11:09	LB136778
	Cobalt	1880	2000	94	90 - 110	P	08/11/2025	11:09	LB136778
	Copper	962	1000	96	90 - 110	P	08/11/2025	11:09	LB136778
	Iron	3710	4000	93	90 - 110	P	08/11/2025	11:09	LB136778
	Lead	3840	4000	96	90 - 110	P	08/11/2025	11:09	LB136778
	Magnesium	18800	20000	94	90 - 110	P	08/11/2025	11:09	LB136778
	Manganese	1880	2000	94	90 - 110	P	08/11/2025	11:09	LB136778
	Nickel	1870	2000	94	90 - 110	P	08/11/2025	11:09	LB136778
	Potassium	18400	20000	92	90 - 110	P	08/11/2025	11:09	LB136778
	Selenium	3720	4000	93	90 - 110	P	08/11/2025	11:09	LB136778
	Silver	940	1000	94	90 - 110	P	08/11/2025	11:09	LB136778
	Sodium	18300	20000	91	90 - 110	P	08/11/2025	11:09	LB136778
	Thallium	3830	4000	96	90 - 110	P	08/11/2025	11:09	LB136778
	Vanadium	1910	2000	96	90 - 110	P	08/11/2025	11:09	LB136778
	Zinc	1860	2000	93	90 - 110	P	08/11/2025	11:09	LB136778

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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	119	100	119	80 - 120	P	08/11/2025	11:33	LB136778
	Antimony	48.4	50.0	97	80 - 120	P	08/11/2025	11:33	LB136778
	Arsenic	19.2	20.0	96	80 - 120	P	08/11/2025	11:33	LB136778
	Barium	97.3	100	97	80 - 120	P	08/11/2025	11:33	LB136778
	Beryllium	5.80	6.0	97	80 - 120	P	08/11/2025	11:33	LB136778
	Cadmium	5.81	6.0	97	80 - 120	P	08/11/2025	11:33	LB136778
	Calcium	2020	2000	101	80 - 120	P	08/11/2025	11:33	LB136778
	Chromium	9.94	10.0	99	80 - 120	P	08/11/2025	11:33	LB136778
	Cobalt	28.1	30.0	94	80 - 120	P	08/11/2025	11:33	LB136778
	Copper	20.7	20.0	103	80 - 120	P	08/11/2025	11:33	LB136778
	Iron	98.4	100	98	80 - 120	P	08/11/2025	11:33	LB136778
	Lead	12.4	12.0	103	80 - 120	P	08/11/2025	11:33	LB136778
	Magnesium	2060	2000	103	80 - 120	P	08/11/2025	11:33	LB136778
	Manganese	23.8	20.0	119	80 - 120	P	08/11/2025	11:33	LB136778
	Nickel	38.5	40.0	96	80 - 120	P	08/11/2025	11:33	LB136778
	Potassium	1670	2000	84	80 - 120	P	08/11/2025	11:33	LB136778
	Selenium	21.6	20.0	108	80 - 120	P	08/11/2025	11:33	LB136778
	Silver	10.2	10.0	102	80 - 120	P	08/11/2025	11:33	LB136778
	Sodium	1660	2000	83	80 - 120	P	08/11/2025	11:33	LB136778
	Thallium	37.3	40.0	93	80 - 120	P	08/11/2025	11:33	LB136778
	Vanadium	42.0	40.0	105	80 - 120	P	08/11/2025	11:33	LB136778
	Zinc	41.5	40.0	104	80 - 120	P	08/11/2025	11:33	LB136778

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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	9900	10000	99	90 - 110	P	08/11/2025	12:05	LB136778
	Antimony	4990	5000	100	90 - 110	P	08/11/2025	12:05	LB136778
	Arsenic	4930	5000	99	90 - 110	P	08/11/2025	12:05	LB136778
	Barium	10000	10000	100	90 - 110	P	08/11/2025	12:05	LB136778
	Beryllium	248	250	99	90 - 110	P	08/11/2025	12:05	LB136778
	Cadmium	2420	2500	97	90 - 110	P	08/11/2025	12:05	LB136778
	Calcium	24900	25000	99	90 - 110	P	08/11/2025	12:05	LB136778
	Chromium	985	1000	98	90 - 110	P	08/11/2025	12:05	LB136778
	Cobalt	2440	2500	98	90 - 110	P	08/11/2025	12:05	LB136778
	Copper	1230	1250	99	90 - 110	P	08/11/2025	12:05	LB136778
	Iron	4980	5000	100	90 - 110	P	08/11/2025	12:05	LB136778
	Lead	4830	5000	97	90 - 110	P	08/11/2025	12:05	LB136778
	Magnesium	24700	25000	99	90 - 110	P	08/11/2025	12:05	LB136778
	Manganese	2500	2500	100	90 - 110	P	08/11/2025	12:05	LB136778
	Nickel	2430	2500	97	90 - 110	P	08/11/2025	12:05	LB136778
	Potassium	24500	25000	98	90 - 110	P	08/11/2025	12:05	LB136778
	Selenium	4890	5000	98	90 - 110	P	08/11/2025	12:05	LB136778
	Silver	1240	1250	99	90 - 110	P	08/11/2025	12:05	LB136778
	Sodium	24900	25000	100	90 - 110	P	08/11/2025	12:05	LB136778
	Thallium	4760	5000	95	90 - 110	P	08/11/2025	12:05	LB136778
	Vanadium	2480	2500	99	90 - 110	P	08/11/2025	12:05	LB136778
	Zinc	2490	2500	100	90 - 110	P	08/11/2025	12:05	LB136778
CCV02	Aluminum	9660	10000	97	90 - 110	P	08/11/2025	13:00	LB136778
	Antimony	4960	5000	99	90 - 110	P	08/11/2025	13:00	LB136778
	Arsenic	4890	5000	98	90 - 110	P	08/11/2025	13:00	LB136778
	Barium	9690	10000	97	90 - 110	P	08/11/2025	13:00	LB136778
	Beryllium	231	250	92	90 - 110	P	08/11/2025	13:00	LB136778
	Cadmium	2340	2500	94	90 - 110	P	08/11/2025	13:00	LB136778
	Calcium	24100	25000	96	90 - 110	P	08/11/2025	13:00	LB136778
	Chromium	961	1000	96	90 - 110	P	08/11/2025	13:00	LB136778
	Cobalt	2370	2500	95	90 - 110	P	08/11/2025	13:00	LB136778
	Copper	1210	1250	97	90 - 110	P	08/11/2025	13:00	LB136778
	Iron	5030	5000	101	90 - 110	P	08/11/2025	13:00	LB136778
	Lead	4680	5000	94	90 - 110	P	08/11/2025	13:00	LB136778

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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	23700	25000	95	90 - 110	P	08/11/2025	13:00	LB136778
	Manganese	2420	2500	97	90 - 110	P	08/11/2025	13:00	LB136778
	Nickel	2360	2500	95	90 - 110	P	08/11/2025	13:00	LB136778
	Potassium	25400	25000	102	90 - 110	P	08/11/2025	13:00	LB136778
	Selenium	4890	5000	98	90 - 110	P	08/11/2025	13:00	LB136778
	Silver	1220	1250	97	90 - 110	P	08/11/2025	13:00	LB136778
	Sodium	25200	25000	101	90 - 110	P	08/11/2025	13:00	LB136778
	Thallium	4640	5000	93	90 - 110	P	08/11/2025	13:00	LB136778
	Vanadium	2430	2500	97	90 - 110	P	08/11/2025	13:00	LB136778
	Zinc	2460	2500	98	90 - 110	P	08/11/2025	13:00	LB136778
CCV03	Aluminum	9140	10000	91	90 - 110	P	08/11/2025	14:54	LB136778
	Antimony	4880	5000	98	90 - 110	P	08/11/2025	14:54	LB136778
	Arsenic	4840	5000	97	90 - 110	P	08/11/2025	14:54	LB136778
	Barium	9090	10000	91	90 - 110	P	08/11/2025	14:54	LB136778
	Beryllium	269	250	108	90 - 110	P	08/11/2025	14:54	LB136778
	Cadmium	2320	2500	93	90 - 110	P	08/11/2025	14:54	LB136778
	Calcium	22800	25000	91	90 - 110	P	08/11/2025	14:54	LB136778
	Chromium	913	1000	91	90 - 110	P	08/11/2025	14:54	LB136778
	Cobalt	2320	2500	93	90 - 110	P	08/11/2025	14:54	LB136778
	Copper	1180	1250	95	90 - 110	P	08/11/2025	14:54	LB136778
	Iron	4740	5000	95	90 - 110	P	08/11/2025	14:54	LB136778
	Lead	4620	5000	92	90 - 110	P	08/11/2025	14:54	LB136778
	Magnesium	22500	25000	90	90 - 110	P	08/11/2025	14:54	LB136778
	Manganese	2270	2500	91	90 - 110	P	08/11/2025	14:54	LB136778
	Nickel	2330	2500	93	90 - 110	P	08/11/2025	14:54	LB136778
	Potassium	23800	25000	95	90 - 110	P	08/11/2025	14:54	LB136778
	Selenium	4950	5000	99	90 - 110	P	08/11/2025	14:54	LB136778
	Silver	1170	1250	94	90 - 110	P	08/11/2025	14:54	LB136778
	Sodium	23200	25000	93	90 - 110	P	08/11/2025	14:54	LB136778
	Thallium	5170	5000	103	90 - 110	P	08/11/2025	14:54	LB136778
	Vanadium	2300	2500	92	90 - 110	P	08/11/2025	14:54	LB136778
	Zinc	2350	2500	94	90 - 110	P	08/11/2025	14:54	LB136778
CCV04	Aluminum	9270	10000	93	90 - 110	P	08/11/2025	16:02	LB136778
	Antimony	5030	5000	100	90 - 110	P	08/11/2025	16:02	LB136778

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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	Arsenic	4990	5000	100	90 - 110	P	08/11/2025	16:02	LB136778
	Barium	9100	10000	91	90 - 110	P	08/11/2025	16:02	LB136778
	Beryllium	227	250	91	90 - 110	P	08/11/2025	16:02	LB136778
	Cadmium	2370	2500	95	90 - 110	P	08/11/2025	16:02	LB136778
	Calcium	23000	25000	92	90 - 110	P	08/11/2025	16:02	LB136778
	Chromium	921	1000	92	90 - 110	P	08/11/2025	16:02	LB136778
	Cobalt	2380	2500	95	90 - 110	P	08/11/2025	16:02	LB136778
	Copper	1210	1250	97	90 - 110	P	08/11/2025	16:02	LB136778
	Iron	4770	5000	95	90 - 110	P	08/11/2025	16:02	LB136778
	Lead	4740	5000	95	90 - 110	P	08/11/2025	16:02	LB136778
	Magnesium	22900	25000	92	90 - 110	P	08/11/2025	16:02	LB136778
	Manganese	2300	2500	92	90 - 110	P	08/11/2025	16:02	LB136778
	Nickel	2390	2500	95	90 - 110	P	08/11/2025	16:02	LB136778
	Potassium	23700	25000	95	90 - 110	P	08/11/2025	16:02	LB136778
	Selenium	5090	5000	102	90 - 110	P	08/11/2025	16:02	LB136778
	Silver	1180	1250	94	90 - 110	P	08/11/2025	16:02	LB136778
	Sodium	23000	25000	92	90 - 110	P	08/11/2025	16:02	LB136778
	Thallium	5410	5000	108	90 - 110	P	08/11/2025	16:02	LB136778
	Vanadium	2350	2500	94	90 - 110	P	08/11/2025	16:02	LB136778
	Zinc	2370	2500	95	90 - 110	P	08/11/2025	16:02	LB136778

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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	7870	8000	98	90 - 110	P	08/15/2025	11:50	LB136851
	Antimony	4130	4000	103	90 - 110	P	08/15/2025	11:50	LB136851
	Arsenic	3980	4000	99	90 - 110	P	08/15/2025	11:50	LB136851
	Barium	7840	8000	98	90 - 110	P	08/15/2025	11:50	LB136851
	Beryllium	195	200	98	90 - 110	P	08/15/2025	11:50	LB136851
	Cadmium	1940	2000	97	90 - 110	P	08/15/2025	11:50	LB136851
	Calcium	19400	20000	97	90 - 110	P	08/15/2025	11:50	LB136851
	Chromium	795	800	99	90 - 110	P	08/15/2025	11:50	LB136851
	Cobalt	1970	2000	98	90 - 110	P	08/15/2025	11:50	LB136851
	Copper	1010	1000	102	90 - 110	P	08/15/2025	11:50	LB136851
	Iron	3940	4000	98	90 - 110	P	08/15/2025	11:50	LB136851
	Lead	3820	4000	96	90 - 110	P	08/15/2025	11:50	LB136851
	Magnesium	19300	20000	96	90 - 110	P	08/15/2025	11:50	LB136851
	Manganese	1940	2000	97	90 - 110	P	08/15/2025	11:50	LB136851
	Nickel	1960	2000	98	90 - 110	P	08/15/2025	11:50	LB136851
	Potassium	19600	20000	98	90 - 110	P	08/15/2025	11:50	LB136851
	Selenium	4030	4000	101	90 - 110	P	08/15/2025	11:50	LB136851
	Silver	997	1000	100	90 - 110	P	08/15/2025	11:50	LB136851
	Sodium	19700	20000	98	90 - 110	P	08/15/2025	11:50	LB136851
	Thallium	3810	4000	95	90 - 110	P	08/15/2025	11:50	LB136851
	Vanadium	1960	2000	98	90 - 110	P	08/15/2025	11:50	LB136851
	Zinc	2020	2000	101	90 - 110	P	08/15/2025	11:50	LB136851

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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	106	100	106	80 - 120	P	08/15/2025	11:56	LB136851
	Antimony	50.7	50.0	101	80 - 120	P	08/15/2025	11:56	LB136851
	Arsenic	19.5	20.0	98	80 - 120	P	08/15/2025	11:56	LB136851
	Barium	93.5	100	94	80 - 120	P	08/15/2025	11:56	LB136851
	Beryllium	6.22	6.0	104	80 - 120	P	08/15/2025	11:56	LB136851
	Cadmium	5.88	6.0	98	80 - 120	P	08/15/2025	11:56	LB136851
	Calcium	2050	2000	103	80 - 120	P	08/15/2025	11:56	LB136851
	Chromium	10.2	10.0	102	80 - 120	P	08/15/2025	11:56	LB136851
	Cobalt	29.6	30.0	99	80 - 120	P	08/15/2025	11:56	LB136851
	Copper	21.8	20.0	109	80 - 120	P	08/15/2025	11:56	LB136851
	Iron	103	100	103	80 - 120	P	08/15/2025	11:56	LB136851
	Lead	11.7	12.0	98	80 - 120	P	08/15/2025	11:56	LB136851
	Magnesium	2160	2000	108	80 - 120	P	08/15/2025	11:56	LB136851
	Manganese	21.6	20.0	108	80 - 120	P	08/15/2025	11:56	LB136851
	Nickel	40.1	40.0	100	80 - 120	P	08/15/2025	11:56	LB136851
	Potassium	1960	2000	98	80 - 120	P	08/15/2025	11:56	LB136851
	Selenium	21.3	20.0	106	80 - 120	P	08/15/2025	11:56	LB136851
	Silver	10.6	10.0	106	80 - 120	P	08/15/2025	11:56	LB136851
	Sodium	1900	2000	95	80 - 120	P	08/15/2025	11:56	LB136851
	Thallium	39.8	40.0	99	80 - 120	P	08/15/2025	11:56	LB136851
	Vanadium	39.0	40.0	98	80 - 120	P	08/15/2025	11:56	LB136851
	Zinc	42.5	40.0	106	80 - 120	P	08/15/2025	11:56	LB136851

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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	9820	10000	98	90 - 110	P	08/15/2025	12:26	LB136851
	Antimony	5030	5000	101	90 - 110	P	08/15/2025	12:26	LB136851
	Arsenic	4990	5000	100	90 - 110	P	08/15/2025	12:26	LB136851
	Barium	9720	10000	97	90 - 110	P	08/15/2025	12:26	LB136851
	Beryllium	241	250	96	90 - 110	P	08/15/2025	12:26	LB136851
	Cadmium	2440	2500	98	90 - 110	P	08/15/2025	12:26	LB136851
	Calcium	24400	25000	98	90 - 110	P	08/15/2025	12:26	LB136851
	Chromium	989	1000	99	90 - 110	P	08/15/2025	12:26	LB136851
	Cobalt	2440	2500	98	90 - 110	P	08/15/2025	12:26	LB136851
	Copper	1240	1250	99	90 - 110	P	08/15/2025	12:26	LB136851
	Iron	4980	5000	100	90 - 110	P	08/15/2025	12:26	LB136851
	Lead	4870	5000	97	90 - 110	P	08/15/2025	12:26	LB136851
	Magnesium	24200	25000	97	90 - 110	P	08/15/2025	12:26	LB136851
	Manganese	2420	2500	97	90 - 110	P	08/15/2025	12:26	LB136851
	Nickel	2440	2500	98	90 - 110	P	08/15/2025	12:26	LB136851
	Potassium	24900	25000	100	90 - 110	P	08/15/2025	12:26	LB136851
	Selenium	5060	5000	101	90 - 110	P	08/15/2025	12:26	LB136851
	Silver	1240	1250	99	90 - 110	P	08/15/2025	12:26	LB136851
	Sodium	24900	25000	100	90 - 110	P	08/15/2025	12:26	LB136851
	Thallium	5250	5000	105	90 - 110	P	08/15/2025	12:26	LB136851
	Vanadium	2460	2500	98	90 - 110	P	08/15/2025	12:26	LB136851
	Zinc	2520	2500	101	90 - 110	P	08/15/2025	12:26	LB136851
CCV02	Aluminum	9430	10000	94	90 - 110	P	08/15/2025	13:40	LB136851
	Antimony	4960	5000	99	90 - 110	P	08/15/2025	13:40	LB136851
	Arsenic	4910	5000	98	90 - 110	P	08/15/2025	13:40	LB136851
	Barium	9430	10000	94	90 - 110	P	08/15/2025	13:40	LB136851
	Beryllium	229	250	91	90 - 110	P	08/15/2025	13:40	LB136851
	Cadmium	2340	2500	93	90 - 110	P	08/15/2025	13:40	LB136851
	Calcium	23400	25000	94	90 - 110	P	08/15/2025	13:40	LB136851
	Chromium	951	1000	95	90 - 110	P	08/15/2025	13:40	LB136851
	Cobalt	2340	2500	94	90 - 110	P	08/15/2025	13:40	LB136851
	Copper	1210	1250	96	90 - 110	P	08/15/2025	13:40	LB136851
	Iron	4840	5000	97	90 - 110	P	08/15/2025	13:40	LB136851
	Lead	4680	5000	94	90 - 110	P	08/15/2025	13:40	LB136851

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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	23100	25000	92	90 - 110	P	08/15/2025	13:40	LB136851
	Manganese	2330	2500	93	90 - 110	P	08/15/2025	13:40	LB136851
	Nickel	2350	2500	94	90 - 110	P	08/15/2025	13:40	LB136851
	Potassium	24200	25000	97	90 - 110	P	08/15/2025	13:40	LB136851
	Selenium	5010	5000	100	90 - 110	P	08/15/2025	13:40	LB136851
	Silver	1200	1250	96	90 - 110	P	08/15/2025	13:40	LB136851
	Sodium	23900	25000	96	90 - 110	P	08/15/2025	13:40	LB136851
	Thallium	5400	5000	108	90 - 110	P	08/15/2025	13:40	LB136851
	Vanadium	2370	2500	95	90 - 110	P	08/15/2025	13:40	LB136851
	Zinc	2440	2500	98	90 - 110	P	08/15/2025	13:40	LB136851
CCV03	Aluminum	9550	10000	96	90 - 110	P	08/15/2025	15:04	LB136851
	Antimony	5010	5000	100	90 - 110	P	08/15/2025	15:04	LB136851
	Arsenic	4970	5000	99	90 - 110	P	08/15/2025	15:04	LB136851
	Barium	9500	10000	95	90 - 110	P	08/15/2025	15:04	LB136851
	Beryllium	226	250	90	90 - 110	P	08/15/2025	15:04	LB136851
	Cadmium	2360	2500	94	90 - 110	P	08/15/2025	15:04	LB136851
	Calcium	23500	25000	94	90 - 110	P	08/15/2025	15:04	LB136851
	Chromium	969	1000	97	90 - 110	P	08/15/2025	15:04	LB136851
	Cobalt	2360	2500	94	90 - 110	P	08/15/2025	15:04	LB136851
	Copper	1220	1250	97	90 - 110	P	08/15/2025	15:04	LB136851
	Iron	5030	5000	101	90 - 110	P	08/15/2025	15:04	LB136851
	Lead	4720	5000	94	90 - 110	P	08/15/2025	15:04	LB136851
	Magnesium	23200	25000	93	90 - 110	P	08/15/2025	15:04	LB136851
	Manganese	2330	2500	93	90 - 110	P	08/15/2025	15:04	LB136851
	Nickel	2380	2500	95	90 - 110	P	08/15/2025	15:04	LB136851
	Potassium	25300	25000	101	90 - 110	P	08/15/2025	15:04	LB136851
	Selenium	5080	5000	102	90 - 110	P	08/15/2025	15:04	LB136851
	Silver	1210	1250	97	90 - 110	P	08/15/2025	15:04	LB136851
	Sodium	24900	25000	100	90 - 110	P	08/15/2025	15:04	LB136851
	Thallium	5050	5000	101	90 - 110	P	08/15/2025	15:04	LB136851
	Vanadium	2400	2500	96	90 - 110	P	08/15/2025	15:04	LB136851
	Zinc	2490	2500	99	90 - 110	P	08/15/2025	15:04	LB136851
CCV04	Aluminum	9750	10000	98	90 - 110	P	08/15/2025	15:55	LB136851
	Antimony	5130	5000	102	90 - 110	P	08/15/2025	15:55	LB136851

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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	Arsenic	5080	5000	102	90 - 110	P	08/15/2025	15:55	LB136851
	Barium	9540	10000	95	90 - 110	P	08/15/2025	15:55	LB136851
	Beryllium	229	250	92	90 - 110	P	08/15/2025	15:55	LB136851
	Cadmium	2390	2500	96	90 - 110	P	08/15/2025	15:55	LB136851
	Calcium	23800	25000	95	90 - 110	P	08/15/2025	15:55	LB136851
	Chromium	980	1000	98	90 - 110	P	08/15/2025	15:55	LB136851
	Cobalt	2390	2500	96	90 - 110	P	08/15/2025	15:55	LB136851
	Copper	1240	1250	99	90 - 110	P	08/15/2025	15:55	LB136851
	Iron	5040	5000	101	90 - 110	P	08/15/2025	15:55	LB136851
	Lead	4800	5000	96	90 - 110	P	08/15/2025	15:55	LB136851
	Magnesium	23700	25000	95	90 - 110	P	08/15/2025	15:55	LB136851
	Manganese	2350	2500	94	90 - 110	P	08/15/2025	15:55	LB136851
	Nickel	2410	2500	96	90 - 110	P	08/15/2025	15:55	LB136851
	Potassium	25400	25000	102	90 - 110	P	08/15/2025	15:55	LB136851
	Selenium	5240	5000	105	90 - 110	P	08/15/2025	15:55	LB136851
	Silver	1230	1250	99	90 - 110	P	08/15/2025	15:55	LB136851
	Sodium	24800	25000	99	90 - 110	P	08/15/2025	15:55	LB136851
	Thallium	4540	5000	91	90 - 110	P	08/15/2025	15:55	LB136851
	Vanadium	2440	2500	98	90 - 110	P	08/15/2025	15:55	LB136851
	Zinc	2530	2500	101	90 - 110	P	08/15/2025	15:55	LB136851
CCV05	Aluminum	9680	10000	97	90 - 110	P	08/15/2025	16:38	LB136851
	Antimony	5190	5000	104	90 - 110	P	08/15/2025	16:38	LB136851
	Arsenic	5110	5000	102	90 - 110	P	08/15/2025	16:38	LB136851
	Barium	9690	10000	97	90 - 110	P	08/15/2025	16:38	LB136851
	Beryllium	230	250	92	90 - 110	P	08/15/2025	16:38	LB136851
	Cadmium	2400	2500	96	90 - 110	P	08/15/2025	16:38	LB136851
	Calcium	23700	25000	95	90 - 110	P	08/15/2025	16:38	LB136851
	Chromium	985	1000	98	90 - 110	P	08/15/2025	16:38	LB136851
	Cobalt	2410	2500	96	90 - 110	P	08/15/2025	16:38	LB136851
	Copper	1250	1250	100	90 - 110	P	08/15/2025	16:38	LB136851
	Iron	5050	5000	101	90 - 110	P	08/15/2025	16:38	LB136851
	Lead	4830	5000	97	90 - 110	P	08/15/2025	16:38	LB136851
	Magnesium	23500	25000	94	90 - 110	P	08/15/2025	16:38	LB136851
	Manganese	2350	2500	94	90 - 110	P	08/15/2025	16:38	LB136851

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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
CCV05	Nickel	2430	2500	97	90 - 110	P	08/15/2025	16:38	LB136851
	Potassium	25600	25000	102	90 - 110	P	08/15/2025	16:38	LB136851
	Selenium	5240	5000	105	90 - 110	P	08/15/2025	16:38	LB136851
	Silver	1250	1250	100	90 - 110	P	08/15/2025	16:38	LB136851
	Sodium	24600	25000	99	90 - 110	P	08/15/2025	16:38	LB136851
	Thallium	4920	5000	98	90 - 110	P	08/15/2025	16:38	LB136851
	Vanadium	2430	2500	97	90 - 110	P	08/15/2025	16:38	LB136851
	Zinc	2560	2500	102	90 - 110	P	08/15/2025	16:38	LB136851

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Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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	0.21	0.2	104	70 - 130	CV	08/11/2025	11:11	LB136768
CRI01	Aluminum	89.1	100	89	65 - 135	P	08/11/2025	11:41	LB136778
	Antimony	46.6	50.0	93	65 - 135	P	08/11/2025	11:41	LB136778
	Arsenic	18.6	20.0	93	65 - 135	P	08/11/2025	11:41	LB136778
	Barium	92.3	100	92	65 - 135	P	08/11/2025	11:41	LB136778
	Beryllium	5.86	6.0	98	65 - 135	P	08/11/2025	11:41	LB136778
	Cadmium	5.33	6.0	89	65 - 135	P	08/11/2025	11:41	LB136778
	Calcium	1950	2000	97	65 - 135	P	08/11/2025	11:41	LB136778
	Chromium	9.43	10.0	94	65 - 135	P	08/11/2025	11:41	LB136778
	Cobalt	27.6	30.0	92	65 - 135	P	08/11/2025	11:41	LB136778
	Copper	20.1	20.0	101	65 - 135	P	08/11/2025	11:41	LB136778
	Iron	85.5	100	86	65 - 135	P	08/11/2025	11:41	LB136778
	Lead	12.1	12.0	101	65 - 135	P	08/11/2025	11:41	LB136778
	Magnesium	2050	2000	103	65 - 135	P	08/11/2025	11:41	LB136778
	Manganese	20.1	20.0	100	65 - 135	P	08/11/2025	11:41	LB136778
	Nickel	37.4	40.0	94	65 - 135	P	08/11/2025	11:41	LB136778
	Potassium	1770	2000	88	65 - 135	P	08/11/2025	11:41	LB136778
	Selenium	19.0	20.0	95	65 - 135	P	08/11/2025	11:41	LB136778
	Silver	9.70	10.0	97	65 - 135	P	08/11/2025	11:41	LB136778
	Sodium	1770	2000	89	65 - 135	P	08/11/2025	11:41	LB136778
	Thallium	39.2	40.0	98	65 - 135	P	08/11/2025	11:41	LB136778
	Vanadium	41.4	40.0	104	65 - 135	P	08/11/2025	11:41	LB136778
	Zinc	37.4	40.0	94	65 - 135	P	08/11/2025	11:41	LB136778
CRI01	Aluminum	110	100	110	65 - 135	P	08/15/2025	12:04	LB136851
	Antimony	51.4	50.0	103	65 - 135	P	08/15/2025	12:04	LB136851
	Arsenic	20.3	20.0	101	65 - 135	P	08/15/2025	12:04	LB136851
	Barium	92.9	100	93	65 - 135	P	08/15/2025	12:04	LB136851
	Beryllium	6.29	6.0	105	65 - 135	P	08/15/2025	12:04	LB136851
	Cadmium	5.82	6.0	97	65 - 135	P	08/15/2025	12:04	LB136851
	Calcium	2050	2000	103	65 - 135	P	08/15/2025	12:04	LB136851
	Chromium	10.3	10.0	103	65 - 135	P	08/15/2025	12:04	LB136851
	Cobalt	29.6	30.0	99	65 - 135	P	08/15/2025	12:04	LB136851
	Copper	22.0	20.0	110	65 - 135	P	08/15/2025	12:04	LB136851
	Iron	103	100	103	65 - 135	P	08/15/2025	12:04	LB136851
	Lead	12.6	12.0	105	65 - 135	P	08/15/2025	12:04	LB136851

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Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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	2160	2000	108	65 - 135	P	08/15/2025	12:04	LB136851
	Manganese	21.7	20.0	108	65 - 135	P	08/15/2025	12:04	LB136851
	Nickel	40.2	40.0	100	65 - 135	P	08/15/2025	12:04	LB136851
	Potassium	1890	2000	95	65 - 135	P	08/15/2025	12:04	LB136851
	Selenium	20.7	20.0	103	65 - 135	P	08/15/2025	12:04	LB136851
	Silver	10.9	10.0	108	65 - 135	P	08/15/2025	12:04	LB136851
	Sodium	1870	2000	94	65 - 135	P	08/15/2025	12:04	LB136851
	Thallium	39.4	40.0	99	65 - 135	P	08/15/2025	12:04	LB136851
	Vanadium	39.3	40.0	98	65 - 135	P	08/15/2025	12:04	LB136851
	Zinc	42.6	40.0	107	65 - 135	P	08/15/2025	12:04	LB136851

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB06	Mercury	0.076	+/-0.2	U	0.20	CV	08/11/2025	10:35	LB136768

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB15	Mercury	0.076	+/-0.2	U	0.20	CV	08/11/2025	11:08	LB136768
CCB16	Mercury	0.076	+/-0.2	U	0.20	CV	08/11/2025	11:55	LB136768
CCB17	Mercury	0.076	+/-0.2	U	0.20	CV	08/11/2025	12:29	LB136768
CCB18	Mercury	0.076	+/-0.2	U	0.20	CV	08/11/2025	13:34	LB136768
CCB19	Mercury	0.076	+/-0.2	U	0.20	CV	08/11/2025	13:59	LB136768

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	11.3	+/-50	U	100	P	08/11/2025	11:37	LB136778
	Antimony	6.76	+/-25	U	50.0	P	08/11/2025	11:37	LB136778
	Arsenic	5.12	+/-10	U	20.0	P	08/11/2025	11:37	LB136778
	Barium	14.6	+/-50	U	100	P	08/11/2025	11:37	LB136778
	Beryllium	0.56	+/-3	U	6.00	P	08/11/2025	11:37	LB136778
	Cadmium	0.50	+/-3	U	6.00	P	08/11/2025	11:37	LB136778
	Calcium	234	+/-1000	U	2000	P	08/11/2025	11:37	LB136778
	Chromium	2.12	+/-5	U	10.0	P	08/11/2025	11:37	LB136778
	Cobalt	2.26	+/-15	U	30.0	P	08/11/2025	11:37	LB136778
	Copper	4.60	+/-10	U	20.0	P	08/11/2025	11:37	LB136778
	Iron	23.4	+/-50	U	100	P	08/11/2025	11:37	LB136778
	Lead	2.30	+/-6	U	12.0	P	08/11/2025	11:37	LB136778
	Magnesium	244	+/-1000	U	2000	P	08/11/2025	11:37	LB136778
	Manganese	5.94	+/-10	U	20.0	P	08/11/2025	11:37	LB136778
	Nickel	3.06	+/-20	U	40.0	P	08/11/2025	11:37	LB136778
	Potassium	918	+/-1000	U	2000	P	08/11/2025	11:37	LB136778
	Selenium	9.64	+/-10	U	20.0	P	08/11/2025	11:37	LB136778
	Silver	1.62	+/-5	U	10.0	P	08/11/2025	11:37	LB136778
	Sodium	868	+/-1000	U	2000	P	08/11/2025	11:37	LB136778
	Thallium	4.38	+/-20	U	40.0	P	08/11/2025	11:37	LB136778
	Vanadium	6.26	+/-20	U	40.0	P	08/11/2025	11:37	LB136778
	Zinc	16.7	+/-20	U	40.0	P	08/11/2025	11:37	LB136778

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	23.2	+/-50	J	100	P	08/11/2025	12:09	LB136778
	Antimony	6.76	+/-25	U	50.0	P	08/11/2025	12:09	LB136778
	Arsenic	5.12	+/-10	U	20.0	P	08/11/2025	12:09	LB136778
	Barium	14.6	+/-50	U	100	P	08/11/2025	12:09	LB136778
	Beryllium	0.56	+/-3	U	6.00	P	08/11/2025	12:09	LB136778
	Cadmium	0.90	+/-3	J	6.00	P	08/11/2025	12:09	LB136778
	Calcium	234	+/-1000	U	2000	P	08/11/2025	12:09	LB136778
	Chromium	2.12	+/-5	U	10.0	P	08/11/2025	12:09	LB136778
	Cobalt	2.26	+/-15	U	30.0	P	08/11/2025	12:09	LB136778
	Copper	4.60	+/-10	U	20.0	P	08/11/2025	12:09	LB136778
	Iron	23.4	+/-50	U	100	P	08/11/2025	12:09	LB136778
	Lead	2.66	+/-6	J	12.0	P	08/11/2025	12:09	LB136778
	Magnesium	244	+/-1000	U	2000	P	08/11/2025	12:09	LB136778
	Manganese	5.94	+/-10	U	20.0	P	08/11/2025	12:09	LB136778
	Nickel	3.06	+/-20	U	40.0	P	08/11/2025	12:09	LB136778
	Potassium	918	+/-1000	U	2000	P	08/11/2025	12:09	LB136778
	Selenium	9.64	+/-10	U	20.0	P	08/11/2025	12:09	LB136778
	Silver	1.62	+/-5	U	10.0	P	08/11/2025	12:09	LB136778
	Sodium	868	+/-1000	U	2000	P	08/11/2025	12:09	LB136778
	Thallium	4.38	+/-20	U	40.0	P	08/11/2025	12:09	LB136778
	Vanadium	6.26	+/-20	U	40.0	P	08/11/2025	12:09	LB136778
	Zinc	16.7	+/-20	U	40.0	P	08/11/2025	12:09	LB136778
CCB02	Aluminum	11.8	+/-50	J	100	P	08/11/2025	13:04	LB136778
	Antimony	6.76	+/-25	U	50.0	P	08/11/2025	13:04	LB136778
	Arsenic	5.12	+/-10	U	20.0	P	08/11/2025	13:04	LB136778
	Barium	14.6	+/-50	U	100	P	08/11/2025	13:04	LB136778
	Beryllium	0.56	+/-3	U	6.00	P	08/11/2025	13:04	LB136778
	Cadmium	0.89	+/-3	J	6.00	P	08/11/2025	13:04	LB136778
	Calcium	234	+/-1000	U	2000	P	08/11/2025	13:04	LB136778
	Chromium	2.12	+/-5	U	10.0	P	08/11/2025	13:04	LB136778
	Cobalt	2.26	+/-15	U	30.0	P	08/11/2025	13:04	LB136778
	Copper	4.60	+/-10	U	20.0	P	08/11/2025	13:04	LB136778
	Iron	27.7	+/-50	J	100	P	08/11/2025	13:04	LB136778
	Lead	2.35	+/-6	J	12.0	P	08/11/2025	13:04	LB136778
	Magnesium	244	+/-1000	U	2000	P	08/11/2025	13:04	LB136778
	Manganese	5.94	+/-10	U	20.0	P	08/11/2025	13:04	LB136778
	Nickel	3.06	+/-20	U	40.0	P	08/11/2025	13:04	LB136778
	Potassium	918	+/-1000	U	2000	P	08/11/2025	13:04	LB136778
	Selenium	9.64	+/-10	U	20.0	P	08/11/2025	13:04	LB136778

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	1.62	+/-5	U	10.0	P	08/11/2025	13:04	LB136778
	Sodium	901	+/-1000	J	2000	P	08/11/2025	13:04	LB136778
	Thallium	4.38	+/-20	U	40.0	P	08/11/2025	13:04	LB136778
	Vanadium	6.26	+/-20	U	40.0	P	08/11/2025	13:04	LB136778
	Zinc	16.7	+/-20	U	40.0	P	08/11/2025	13:04	LB136778
CCB03	Aluminum	11.3	+/-50	U	100	P	08/11/2025	14:58	LB136778
	Antimony	6.76	+/-25	U	50.0	P	08/11/2025	14:58	LB136778
	Arsenic	5.12	+/-10	U	20.0	P	08/11/2025	14:58	LB136778
	Barium	14.6	+/-50	U	100	P	08/11/2025	14:58	LB136778
	Beryllium	0.56	+/-3	U	6.00	P	08/11/2025	14:58	LB136778
	Cadmium	0.50	+/-3	U	6.00	P	08/11/2025	14:58	LB136778
	Calcium	234	+/-1000	U	2000	P	08/11/2025	14:58	LB136778
	Chromium	2.12	+/-5	U	10.0	P	08/11/2025	14:58	LB136778
	Cobalt	2.26	+/-15	U	30.0	P	08/11/2025	14:58	LB136778
	Copper	4.60	+/-10	U	20.0	P	08/11/2025	14:58	LB136778
	Iron	23.4	+/-50	U	100	P	08/11/2025	14:58	LB136778
	Lead	2.30	+/-6	U	12.0	P	08/11/2025	14:58	LB136778
	Magnesium	244	+/-1000	U	2000	P	08/11/2025	14:58	LB136778
	Manganese	5.94	+/-10	U	20.0	P	08/11/2025	14:58	LB136778
	Nickel	3.06	+/-20	U	40.0	P	08/11/2025	14:58	LB136778
	Potassium	918	+/-1000	U	2000	P	08/11/2025	14:58	LB136778
	Selenium	9.64	+/-10	U	20.0	P	08/11/2025	14:58	LB136778
	Silver	1.62	+/-5	U	10.0	P	08/11/2025	14:58	LB136778
	Sodium	868	+/-1000	U	2000	P	08/11/2025	14:58	LB136778
	Thallium	4.38	+/-20	U	40.0	P	08/11/2025	14:58	LB136778
	Vanadium	6.26	+/-20	U	40.0	P	08/11/2025	14:58	LB136778
	Zinc	16.7	+/-20	U	40.0	P	08/11/2025	14:58	LB136778
CCB04	Aluminum	11.3	+/-50	U	100	P	08/11/2025	16:06	LB136778
	Antimony	6.76	+/-25	U	50.0	P	08/11/2025	16:06	LB136778
	Arsenic	5.12	+/-10	U	20.0	P	08/11/2025	16:06	LB136778
	Barium	14.6	+/-50	U	100	P	08/11/2025	16:06	LB136778
	Beryllium	0.56	+/-3	U	6.00	P	08/11/2025	16:06	LB136778
	Cadmium	0.50	+/-3	U	6.00	P	08/11/2025	16:06	LB136778
	Calcium	234	+/-1000	U	2000	P	08/11/2025	16:06	LB136778
	Chromium	2.12	+/-5	U	10.0	P	08/11/2025	16:06	LB136778
	Cobalt	2.26	+/-15	U	30.0	P	08/11/2025	16:06	LB136778
	Copper	4.60	+/-10	U	20.0	P	08/11/2025	16:06	LB136778
	Iron	23.4	+/-50	U	100	P	08/11/2025	16:06	LB136778
	Lead	2.30	+/-6	U	12.0	P	08/11/2025	16:06	LB136778

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB04	Magnesium	244	+/-1000	U	2000	P	08/11/2025	16:06	LB136778
	Manganese	5.94	+/-10	U	20.0	P	08/11/2025	16:06	LB136778
	Nickel	3.06	+/-20	U	40.0	P	08/11/2025	16:06	LB136778
	Potassium	918	+/-1000	U	2000	P	08/11/2025	16:06	LB136778
	Selenium	9.64	+/-10	U	20.0	P	08/11/2025	16:06	LB136778
	Silver	1.62	+/-5	U	10.0	P	08/11/2025	16:06	LB136778
	Sodium	868	+/-1000	U	2000	P	08/11/2025	16:06	LB136778
	Thallium	4.38	+/-20	U	40.0	P	08/11/2025	16:06	LB136778
	Vanadium	6.26	+/-20	U	40.0	P	08/11/2025	16:06	LB136778
	Zinc	16.7	+/-20	U	40.0	P	08/11/2025	16:06	LB136778

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	11.3	+/-50	U	100	P	08/15/2025	12:00	LB136851
	Antimony	6.76	+/-25	U	50.0	P	08/15/2025	12:00	LB136851
	Arsenic	5.12	+/-10	U	20.0	P	08/15/2025	12:00	LB136851
	Barium	14.6	+/-50	U	100	P	08/15/2025	12:00	LB136851
	Beryllium	0.56	+/-3	U	6.00	P	08/15/2025	12:00	LB136851
	Cadmium	0.50	+/-3	U	6.00	P	08/15/2025	12:00	LB136851
	Calcium	234	+/-1000	U	2000	P	08/15/2025	12:00	LB136851
	Chromium	2.12	+/-5	U	10.0	P	08/15/2025	12:00	LB136851
	Cobalt	2.26	+/-15	U	30.0	P	08/15/2025	12:00	LB136851
	Copper	4.60	+/-10	U	20.0	P	08/15/2025	12:00	LB136851
	Iron	23.4	+/-50	U	100	P	08/15/2025	12:00	LB136851
	Lead	2.30	+/-6	U	12.0	P	08/15/2025	12:00	LB136851
	Magnesium	244	+/-1000	U	2000	P	08/15/2025	12:00	LB136851
	Manganese	5.94	+/-10	U	20.0	P	08/15/2025	12:00	LB136851
	Nickel	3.06	+/-20	U	40.0	P	08/15/2025	12:00	LB136851
	Potassium	918	+/-1000	U	2000	P	08/15/2025	12:00	LB136851
	Selenium	9.64	+/-10	U	20.0	P	08/15/2025	12:00	LB136851
	Silver	1.62	+/-5	U	10.0	P	08/15/2025	12:00	LB136851
	Sodium	868	+/-1000	U	2000	P	08/15/2025	12:00	LB136851
	Thallium	4.38	+/-20	U	40.0	P	08/15/2025	12:00	LB136851
	Vanadium	6.26	+/-20	U	40.0	P	08/15/2025	12:00	LB136851
	Zinc	16.7	+/-20	U	40.0	P	08/15/2025	12:00	LB136851

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	11.3	+/-50	U	100	P	08/15/2025	12:30	LB136851
	Antimony	6.76	+/-25	U	50.0	P	08/15/2025	12:30	LB136851
	Arsenic	5.12	+/-10	U	20.0	P	08/15/2025	12:30	LB136851
	Barium	14.6	+/-50	U	100	P	08/15/2025	12:30	LB136851
	Beryllium	0.56	+/-3	U	6.00	P	08/15/2025	12:30	LB136851
	Cadmium	0.50	+/-3	U	6.00	P	08/15/2025	12:30	LB136851
	Calcium	234	+/-1000	U	2000	P	08/15/2025	12:30	LB136851
	Chromium	2.12	+/-5	U	10.0	P	08/15/2025	12:30	LB136851
	Cobalt	2.26	+/-15	U	30.0	P	08/15/2025	12:30	LB136851
	Copper	4.60	+/-10	U	20.0	P	08/15/2025	12:30	LB136851
	Iron	23.4	+/-50	U	100	P	08/15/2025	12:30	LB136851
	Lead	2.30	+/-6	U	12.0	P	08/15/2025	12:30	LB136851
	Magnesium	244	+/-1000	U	2000	P	08/15/2025	12:30	LB136851
	Manganese	5.94	+/-10	U	20.0	P	08/15/2025	12:30	LB136851
	Nickel	3.06	+/-20	U	40.0	P	08/15/2025	12:30	LB136851
	Potassium	918	+/-1000	U	2000	P	08/15/2025	12:30	LB136851
	Selenium	9.64	+/-10	U	20.0	P	08/15/2025	12:30	LB136851
	Silver	1.62	+/-5	U	10.0	P	08/15/2025	12:30	LB136851
	Sodium	868	+/-1000	U	2000	P	08/15/2025	12:30	LB136851
	Thallium	4.38	+/-20	U	40.0	P	08/15/2025	12:30	LB136851
	Vanadium	6.26	+/-20	U	40.0	P	08/15/2025	12:30	LB136851
	Zinc	16.7	+/-20	U	40.0	P	08/15/2025	12:30	LB136851
CCB02	Aluminum	11.3	+/-50	U	100	P	08/15/2025	13:45	LB136851
	Antimony	6.76	+/-25	U	50.0	P	08/15/2025	13:45	LB136851
	Arsenic	5.12	+/-10	U	20.0	P	08/15/2025	13:45	LB136851
	Barium	14.6	+/-50	U	100	P	08/15/2025	13:45	LB136851
	Beryllium	0.56	+/-3	U	6.00	P	08/15/2025	13:45	LB136851
	Cadmium	0.50	+/-3	U	6.00	P	08/15/2025	13:45	LB136851
	Calcium	234	+/-1000	U	2000	P	08/15/2025	13:45	LB136851
	Chromium	2.12	+/-5	U	10.0	P	08/15/2025	13:45	LB136851
	Cobalt	2.26	+/-15	U	30.0	P	08/15/2025	13:45	LB136851
	Copper	4.60	+/-10	U	20.0	P	08/15/2025	13:45	LB136851
	Iron	23.4	+/-50	U	100	P	08/15/2025	13:45	LB136851
	Lead	2.30	+/-6	U	12.0	P	08/15/2025	13:45	LB136851
	Magnesium	244	+/-1000	U	2000	P	08/15/2025	13:45	LB136851
	Manganese	5.94	+/-10	U	20.0	P	08/15/2025	13:45	LB136851
	Nickel	3.06	+/-20	U	40.0	P	08/15/2025	13:45	LB136851
	Potassium	918	+/-1000	U	2000	P	08/15/2025	13:45	LB136851
	Selenium	9.64	+/-10	U	20.0	P	08/15/2025	13:45	LB136851

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	1.62	+/-5	U	10.0	P	08/15/2025	13:45	LB136851
	Sodium	868	+/-1000	U	2000	P	08/15/2025	13:45	LB136851
	Thallium	4.38	+/-20	U	40.0	P	08/15/2025	13:45	LB136851
	Vanadium	6.26	+/-20	U	40.0	P	08/15/2025	13:45	LB136851
	Zinc	16.7	+/-20	U	40.0	P	08/15/2025	13:45	LB136851
CCB03	Aluminum	11.3	+/-50	U	100	P	08/15/2025	15:10	LB136851
	Antimony	6.76	+/-25	U	50.0	P	08/15/2025	15:10	LB136851
	Arsenic	5.12	+/-10	U	20.0	P	08/15/2025	15:10	LB136851
	Barium	14.6	+/-50	U	100	P	08/15/2025	15:10	LB136851
	Beryllium	0.56	+/-3	U	6.00	P	08/15/2025	15:10	LB136851
	Cadmium	0.50	+/-3	U	6.00	P	08/15/2025	15:10	LB136851
	Calcium	234	+/-1000	U	2000	P	08/15/2025	15:10	LB136851
	Chromium	2.12	+/-5	U	10.0	P	08/15/2025	15:10	LB136851
	Cobalt	2.26	+/-15	U	30.0	P	08/15/2025	15:10	LB136851
	Copper	4.60	+/-10	U	20.0	P	08/15/2025	15:10	LB136851
	Iron	23.4	+/-50	U	100	P	08/15/2025	15:10	LB136851
	Lead	2.30	+/-6	U	12.0	P	08/15/2025	15:10	LB136851
	Magnesium	244	+/-1000	U	2000	P	08/15/2025	15:10	LB136851
	Manganese	5.94	+/-10	U	20.0	P	08/15/2025	15:10	LB136851
	Nickel	3.06	+/-20	U	40.0	P	08/15/2025	15:10	LB136851
	Potassium	918	+/-1000	U	2000	P	08/15/2025	15:10	LB136851
	Selenium	9.64	+/-10	U	20.0	P	08/15/2025	15:10	LB136851
	Silver	1.62	+/-5	U	10.0	P	08/15/2025	15:10	LB136851
	Sodium	868	+/-1000	U	2000	P	08/15/2025	15:10	LB136851
	Thallium	4.38	+/-20	U	40.0	P	08/15/2025	15:10	LB136851
	Vanadium	6.26	+/-20	U	40.0	P	08/15/2025	15:10	LB136851
	Zinc	16.7	+/-20	U	40.0	P	08/15/2025	15:10	LB136851
CCB04	Aluminum	11.3	+/-50	U	100	P	08/15/2025	16:01	LB136851
	Antimony	6.76	+/-25	U	50.0	P	08/15/2025	16:01	LB136851
	Arsenic	5.12	+/-10	U	20.0	P	08/15/2025	16:01	LB136851
	Barium	14.6	+/-50	U	100	P	08/15/2025	16:01	LB136851
	Beryllium	0.56	+/-3	U	6.00	P	08/15/2025	16:01	LB136851
	Cadmium	0.50	+/-3	U	6.00	P	08/15/2025	16:01	LB136851
	Calcium	234	+/-1000	U	2000	P	08/15/2025	16:01	LB136851
	Chromium	2.12	+/-5	U	10.0	P	08/15/2025	16:01	LB136851
	Cobalt	2.26	+/-15	U	30.0	P	08/15/2025	16:01	LB136851
	Copper	4.60	+/-10	U	20.0	P	08/15/2025	16:01	LB136851
	Iron	23.4	+/-50	U	100	P	08/15/2025	16:01	LB136851
	Lead	2.30	+/-6	U	12.0	P	08/15/2025	16:01	LB136851

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB04	Magnesium	244	+/-1000	U	2000	P	08/15/2025	16:01	LB136851
	Manganese	5.94	+/-10	U	20.0	P	08/15/2025	16:01	LB136851
	Nickel	3.06	+/-20	U	40.0	P	08/15/2025	16:01	LB136851
	Potassium	918	+/-1000	U	2000	P	08/15/2025	16:01	LB136851
	Selenium	9.64	+/-10	U	20.0	P	08/15/2025	16:01	LB136851
	Silver	1.62	+/-5	U	10.0	P	08/15/2025	16:01	LB136851
	Sodium	868	+/-1000	U	2000	P	08/15/2025	16:01	LB136851
	Thallium	4.38	+/-20	U	40.0	P	08/15/2025	16:01	LB136851
	Vanadium	6.26	+/-20	U	40.0	P	08/15/2025	16:01	LB136851
	Zinc	16.7	+/-20	U	40.0	P	08/15/2025	16:01	LB136851
CCB05	Aluminum	21.2	+/-50	J	100	P	08/15/2025	16:45	LB136851
	Antimony	6.76	+/-25	U	50.0	P	08/15/2025	16:45	LB136851
	Arsenic	5.12	+/-10	U	20.0	P	08/15/2025	16:45	LB136851
	Barium	14.6	+/-50	U	100	P	08/15/2025	16:45	LB136851
	Beryllium	0.56	+/-3	U	6.00	P	08/15/2025	16:45	LB136851
	Cadmium	0.50	+/-3	U	6.00	P	08/15/2025	16:45	LB136851
	Calcium	234	+/-1000	U	2000	P	08/15/2025	16:45	LB136851
	Chromium	2.12	+/-5	U	10.0	P	08/15/2025	16:45	LB136851
	Cobalt	2.26	+/-15	U	30.0	P	08/15/2025	16:45	LB136851
	Copper	4.60	+/-10	U	20.0	P	08/15/2025	16:45	LB136851
	Iron	23.4	+/-50	U	100	P	08/15/2025	16:45	LB136851
	Lead	2.30	+/-6	U	12.0	P	08/15/2025	16:45	LB136851
	Magnesium	244	+/-1000	U	2000	P	08/15/2025	16:45	LB136851
	Manganese	5.94	+/-10	U	20.0	P	08/15/2025	16:45	LB136851
	Nickel	3.06	+/-20	U	40.0	P	08/15/2025	16:45	LB136851
	Potassium	918	+/-1000	U	2000	P	08/15/2025	16:45	LB136851
	Selenium	9.64	+/-10	U	20.0	P	08/15/2025	16:45	LB136851
	Silver	1.62	+/-5	U	10.0	P	08/15/2025	16:45	LB136851
	Sodium	868	+/-1000	U	2000	P	08/15/2025	16:45	LB136851
	Thallium	4.38	+/-20	U	40.0	P	08/15/2025	16:45	LB136851
	Vanadium	6.26	+/-20	U	40.0	P	08/15/2025	16:45	LB136851
	Zinc	16.7	+/-20	U	40.0	P	08/15/2025	16:45	LB136851

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Instrument: CV1

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB169179BL		**SOLID**		**Batch Number:**	**PB169179**		**Prep Date:**	**08/08/2025**	
	Mercury	0.0080	<0.014	U	0.014	CV	08/11/2025	11:27	LB136768

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Instrument: P4

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB169181BL		**SOLID**		**Batch Number:**	**PB169181**		**Prep Date:**	**08/08/2025**	
	Aluminum	0.84	<2.5	U	5.00	P	08/15/2025	14:32	LB136851
	Antimony	0.22	<1.25	U	2.50	P	08/15/2025	14:32	LB136851
	Arsenic	0.19	<0.5	U	1.00	P	08/15/2025	14:32	LB136851
	Barium	0.73	<2.5	U	5.00	P	08/15/2025	14:32	LB136851
	Beryllium	0.025	<0.15	U	0.30	P	08/15/2025	14:32	LB136851
	Cadmium	0.024	<0.15	U	0.30	P	08/15/2025	14:32	LB136851
	Calcium	11.1	<50	U	100	P	08/15/2025	14:32	LB136851
	Chromium	0.047	<0.25	U	0.50	P	08/15/2025	14:32	LB136851
	Cobalt	0.10	<0.75	U	1.50	P	08/15/2025	14:32	LB136851
	Copper	0.22	<0.5	U	1.00	P	08/15/2025	14:32	LB136851
	Iron	3.99	<2.5	U	5.00	P	08/15/2025	14:32	LB136851
	Lead	0.13	<0.3	U	0.60	P	08/15/2025	14:32	LB136851
	Magnesium	12.0	<50	U	100	P	08/15/2025	14:32	LB136851
	Manganese	0.14	<0.5	U	1.00	P	08/15/2025	14:32	LB136851
	Nickel	0.13	<1	U	2.00	P	08/15/2025	14:32	LB136851
	Potassium	27.7	<50	U	100	P	08/15/2025	14:32	LB136851
	Selenium	0.26	<0.5	U	1.00	P	08/15/2025	14:32	LB136851
	Silver	0.12	<0.25	U	0.50	P	08/15/2025	14:32	LB136851
	Sodium	17.8	<50	U	100	P	08/15/2025	14:32	LB136851
	Thallium	0.23	<1	U	2.00	P	08/15/2025	14:32	LB136851
	Vanadium	0.25	<1	U	2.00	P	08/15/2025	14:32	LB136851
	Zinc	0.23	<1	U	2.00	P	08/15/2025	14:32	LB136851

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Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

ICS Source: EPA **Instrument ID:** P4

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	235000	255000	92	216000	294000	08/11/2025	11:48	LB136778
	Antimony	-6.34			-50	50	08/11/2025	11:48	LB136778
	Arsenic	8.68			-20	20	08/11/2025	11:48	LB136778
	Barium	0.44	6.0	7	-94	106	08/11/2025	11:48	LB136778
	Beryllium	1.45			-6	6	08/11/2025	11:48	LB136778
	Cadmium	0.96	1.0	96	-5	7	08/11/2025	11:48	LB136778
	Calcium	225000	245000	92	208000	282000	08/11/2025	11:48	LB136778
	Chromium	56.6	52.0	109	42	62	08/11/2025	11:48	LB136778
	Cobalt	1.57			-30	30	08/11/2025	11:48	LB136778
	Copper	5.59	2.0	280	-18	22	08/11/2025	11:48	LB136778
	Iron	97500	101000	96	85600	116500	08/11/2025	11:48	LB136778
	Lead	-5.21			-12	12	08/11/2025	11:48	LB136778
	Magnesium	236000	255000	92	216000	294000	08/11/2025	11:48	LB136778
	Manganese	8.29	7.0	118	-13	27	08/11/2025	11:48	LB136778
	Nickel	5.21	2.0	260	-38	42	08/11/2025	11:48	LB136778
	Potassium	167			0	0	08/11/2025	11:48	LB136778
	Selenium	2.51			-20	20	08/11/2025	11:48	LB136778
	Silver	1.58			-10	10	08/11/2025	11:48	LB136778
	Sodium	112			0	0	08/11/2025	11:48	LB136778
	Thallium	3.95			-40	40	08/11/2025	11:48	LB136778
	Vanadium	5.51			-40	40	08/11/2025	11:48	LB136778
	Zinc	2.77			-40	40	08/11/2025	11:48	LB136778
ICSAB01	Aluminum	242000	247000	98	209000	285000	08/11/2025	11:52	LB136778
	Antimony	582	618	94	525	711	08/11/2025	11:52	LB136778
	Arsenic	104	104	100	88.4	120	08/11/2025	11:52	LB136778
	Barium	485	537	90	437	637	08/11/2025	11:52	LB136778
	Beryllium	489	495	99	420	570	08/11/2025	11:52	LB136778
	Cadmium	933	972	96	826	1120	08/11/2025	11:52	LB136778
	Calcium	232000	235000	99	199000	271000	08/11/2025	11:52	LB136778
	Chromium	530	542	98	460	624	08/11/2025	11:52	LB136778
	Cobalt	472	476	99	404	548	08/11/2025	11:52	LB136778
	Copper	466	511	91	434	588	08/11/2025	11:52	LB136778
	Iron	96100	99300	97	84400	114500	08/11/2025	11:52	LB136778
	Lead	39.0	49.0	80	37	61	08/11/2025	11:52	LB136778
	Magnesium	243000	248000	98	210000	286000	08/11/2025	11:52	LB136778
	Manganese	481	507	95	430	584	08/11/2025	11:52	LB136778
	Nickel	939	954	98	810	1100	08/11/2025	11:52	LB136778
	Potassium	94.0			0	0	08/11/2025	11:52	LB136778
	Selenium	47.3	46.0	103	26	66	08/11/2025	11:52	LB136778
	Silver	209	201	104	170	232	08/11/2025	11:52	LB136778
	Sodium	74.9			0	0	08/11/2025	11:52	LB136778
	Thallium	104	108	96	68	148	08/11/2025	11:52	LB136778

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

ICS Source: EPA **Instrument ID:** P4

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	480	491	98	417	565	08/11/2025	11:52	LB136778
	Zinc	990	952	104	809	1095	08/11/2025	11:52	LB136778
ICSA01	Aluminum	247000	255000	97	216000	294000	08/15/2025	12:09	LB136851
	Antimony	-1.96			-50	50	08/15/2025	12:09	LB136851
	Arsenic	5.72			-20	20	08/15/2025	12:09	LB136851
	Barium	-2.11	6.0	35	-94	106	08/15/2025	12:09	LB136851
	Beryllium	1.33			-6	6	08/15/2025	12:09	LB136851
	Cadmium	3.29	1.0	329	-5	7	08/15/2025	12:09	LB136851
	Calcium	234000	245000	96	208000	282000	08/15/2025	12:09	LB136851
	Chromium	61.2	52.0	118	42	62	08/15/2025	12:09	LB136851
	Cobalt	1.72			-30	30	08/15/2025	12:09	LB136851
	Copper	-6.62	2.0	331	-18	22	08/15/2025	12:09	LB136851
	Iron	102000	101000	101	85600	116500	08/15/2025	12:09	LB136851
	Lead	-4.50			-12	12	08/15/2025	12:09	LB136851
	Magnesium	247000	255000	97	216000	294000	08/15/2025	12:09	LB136851
	Manganese	9.69	7.0	138	-13	27	08/15/2025	12:09	LB136851
	Nickel	6.38	2.0	319	-38	42	08/15/2025	12:09	LB136851
	Potassium	123			0	0	08/15/2025	12:09	LB136851
	Selenium	-2.54			-20	20	08/15/2025	12:09	LB136851
	Silver	2.16			-10	10	08/15/2025	12:09	LB136851
	Sodium	88.5			0	0	08/15/2025	12:09	LB136851
	Thallium	-5.83			-40	40	08/15/2025	12:09	LB136851
	Vanadium	4.25			-40	40	08/15/2025	12:09	LB136851
	Zinc	3.82			-40	40	08/15/2025	12:09	LB136851
ICSAB01	Aluminum	252000	247000	102	209000	285000	08/15/2025	12:13	LB136851
	Antimony	613	618	99	525	711	08/15/2025	12:13	LB136851
	Arsenic	111	104	107	88.4	120	08/15/2025	12:13	LB136851
	Barium	490	537	91	437	637	08/15/2025	12:13	LB136851
	Beryllium	485	495	98	420	570	08/15/2025	12:13	LB136851
	Cadmium	995	972	102	826	1120	08/15/2025	12:13	LB136851
	Calcium	237000	235000	101	199000	271000	08/15/2025	12:13	LB136851
	Chromium	559	542	103	460	624	08/15/2025	12:13	LB136851
	Cobalt	500	476	105	404	548	08/15/2025	12:13	LB136851
	Copper	483	511	94	434	588	08/15/2025	12:13	LB136851
	Iron	102000	99300	103	84400	114500	08/15/2025	12:13	LB136851
	Lead	42.4	49.0	86	37	61	08/15/2025	12:13	LB136851
	Magnesium	250000	248000	101	210000	286000	08/15/2025	12:13	LB136851
	Manganese	494	507	97	430	584	08/15/2025	12:13	LB136851
	Nickel	997	954	104	810	1100	08/15/2025	12:13	LB136851
	Potassium	-30.5			0	0	08/15/2025	12:13	LB136851
	Selenium	50.7	46.0	110	26	66	08/15/2025	12:13	LB136851
	Silver	219	201	109	170	232	08/15/2025	12:13	LB136851

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

ICS Source: EPA **Instrument ID:** P4

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	26.3			0	0	08/15/2025	12:13	LB136851
	Thallium	94.9	108	88	68	148	08/15/2025	12:13	LB136851
	Vanadium	479	491	98	417	565	08/15/2025	12:13	LB136851
	Zinc	1060	952	111	809	1095	08/15/2025	12:13	LB136851

METAL QC DATA

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metals
- 5a -
MATRIX SPIKE SUMMARY

client: Kleinfelder **level:** low **sdg no.:** Q2795

contract: POWE02 **lab code:** ACE

matrix: Solid **sample id:** Q2793-01 **client id:** VNJ-231MS

Percent Solids for Sample: 92.7 **Spiked ID:** Q2793-01MS **Percent Solids for Spike Sample:** 92.7

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	5770		5530		93.4	254		P
Antimony	mg/Kg	75 - 125	21.3		2.38	U	37.4	57	N	P
Arsenic	mg/Kg	75 - 125	31.4		3.57		37.4	74	N	P
Barium	mg/Kg	75 - 125	63.4		55.0		9.3	90		P
Beryllium	mg/Kg	75 - 125	6.57		0.47		9.3	66	N	P
Cadmium	mg/Kg	75 - 125	8.00		0.32		9.3	83		P
Calcium	mg/Kg	75 - 125	1390		1440		46.7	-110		P
Chromium	mg/Kg	75 - 125	21.1		10.1		18.7	59	N	P
Cobalt	mg/Kg	75 - 125	12.3		4.83		9.3	81		P
Copper	mg/Kg	75 - 125	26.6		16.6		14.0	71	N	P
Iron	mg/Kg	75 - 125	9580		10700		140	-806		P
Lead	mg/Kg	75 - 125	82.5		42.2		46.7	86		P
Magnesium	mg/Kg	75 - 125	1510		1480		93.4	42		P
Manganese	mg/Kg	75 - 125	280		302		9.3	-242		P
Nickel	mg/Kg	75 - 125	28.7		9.50		23.3	82		P
Potassium	mg/Kg	75 - 125	943		561		470	81		P
Selenium	mg/Kg	75 - 125	64.0		0.95	U	93.4	68	N	P
Silver	mg/Kg	75 - 125	2.91		0.37	J	3.5	72	N	P
Sodium	mg/Kg	75 - 125	317		235		140	58	N	P
Thallium	mg/Kg	75 - 125	81.7		1.90	U	93.4	88		P
Vanadium	mg/Kg	75 - 125	24.2		14.8		14.0	67	N	P
Zinc	mg/Kg	75 - 125	54.9		48.8		9.3	65		P

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metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Kleinfelder **level:** low **sdg no.:** Q2795

contract: POWE02 **lab code:** ACE

matrix: Solid **sample id:** Q2793-01 **client id:** VNJ-231MSD

Percent Solids for Sample: 92.7 **Spiked ID:** Q2793-01MSD **Percent Solids for Spike Sample:** 92.7

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	5350		5530		93.0	-202		P
Antimony	mg/Kg	75 - 125	20.9		2.38	U	37.2	56	N	P
Arsenic	mg/Kg	75 - 125	29.4		3.57		37.2	69	N	P
Barium	mg/Kg	75 - 125	61.3		55.0		9.3	67		P
Beryllium	mg/Kg	75 - 125	6.44		0.47		9.3	64	N	P
Cadmium	mg/Kg	75 - 125	7.86		0.32		9.3	81		P
Calcium	mg/Kg	75 - 125	1360		1440		46.5	-168		P
Chromium	mg/Kg	75 - 125	20.5		10.1		18.6	56	N	P
Cobalt	mg/Kg	75 - 125	12.1		4.83		9.3	78		P
Copper	mg/Kg	75 - 125	26.5		16.6		13.9	71	N	P
Iron	mg/Kg	75 - 125	8260		10700		140	-1746		P
Lead	mg/Kg	75 - 125	77.4		42.2		46.5	76		P
Magnesium	mg/Kg	75 - 125	1410		1480		93.0	-71		P
Manganese	mg/Kg	75 - 125	294		302		9.3	-84		P
Nickel	mg/Kg	75 - 125	27.7		9.50		23.2	78		P
Potassium	mg/Kg	75 - 125	852		561		460	63	N	P
Selenium	mg/Kg	75 - 125	62.7		0.95	U	93.0	67	N	P
Silver	mg/Kg	75 - 125	2.87		0.37	J	3.5	71	N	P
Sodium	mg/Kg	75 - 125	303		235		140	48	N	P
Thallium	mg/Kg	75 - 125	80.7		1.90	U	93.0	87		P
Vanadium	mg/Kg	75 - 125	21.6		14.8		13.9	49	N	P
Zinc	mg/Kg	75 - 125	56.1		48.8		9.3	79		P

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metals
- 5a -
MATRIX SPIKE SUMMARY

client: Kleinfelder **level:** low **sdg no.:** Q2795

contract: POWE02 **lab code:** ACE

matrix: Solid **sample id:** Q2807-03 **client id:** COMP-6MS

Percent Solids for Sample: 83.6 **Spiked ID:** Q2807-03MS **Percent Solids for Spike Sample:** 83.6

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	2.00	D	2.26	D	0.32	-80		CV

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: Kleinfelder **level:** low **sdg no.:** Q2795

contract: POWE02 **lab code:** ACE

matrix: Solid **sample id:** Q2807-03 **client id:** COMP-6MSD

Percent Solids for Sample: 83.6 **Spiked ID:** Q2807-03MSD **Percent Solids for Spike Sample:** 83.6

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	1.61	D	2.26	D	0.29	-222		CV

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Metals
- 5b -
POST DIGEST SPIKE SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Matrix: Solid **Level:** LOW **Client ID:** VNJ-231A

Sample ID: Q2793-01 **Spiked ID:** Q2793-01A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	mg/Kg	75 - 125	26.4		2.38	U	38.0	70	N	P
Arsenic	mg/Kg	75 - 125	29.8		3.57		38.0	69	N	P
Beryllium	mg/Kg	75 - 125	6.64		0.47		9.50	65	N	P
Chromium	mg/Kg	75 - 125	21.9		10.1		19.0	62	N	P
Copper	mg/Kg	75 - 125	25.4		16.6		14.3	61	N	P
Potassium	mg/Kg	75 - 125	849		561		480	60	N	P
Selenium	mg/Kg	75 - 125	66.9		0.95	U	95.0	70	N	P
Silver	mg/Kg	75 - 125	2.86		0.37	J	3.60	69	N	P
Sodium	mg/Kg	75 - 125	298		235		140	45	N	P
Vanadium	mg/Kg	75 - 125	23.9		14.8		14.3	63	N	P

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Kleinfelder **Level:** LOW **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Matrix: Solid **Sample ID:** Q2793-01 **Client ID:** VNJ-231DUP

Percent Solids for Sample: 92.7 **Duplicate ID** Q2793-01DUP **Percent Solids for Spike Sample:** 92.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	5530		5320		4		P
Antimony	mg/Kg	20	2.38	U	2.36	U			P
Arsenic	mg/Kg	20	3.57		3.19		11		P
Barium	mg/Kg	20	55.0		56.3		2		P
Beryllium	mg/Kg	20	0.47		0.46		4		P
Cadmium	mg/Kg	20	0.32		0.33		4		P
Calcium	mg/Kg	20	1440		1390		4		P
Chromium	mg/Kg	20	10.1		8.58		16		P
Cobalt	mg/Kg	20	4.83		4.65		4		P
Copper	mg/Kg	20	16.6		18.5		11		P
Iron	mg/Kg	20	10700		9500		12		P
Lead	mg/Kg	20	42.2		45.6		8		P
Magnesium	mg/Kg	20	1480		1430		3		P
Manganese	mg/Kg	20	302		303		0		P
Nickel	mg/Kg	20	9.50		9.22		3		P
Potassium	mg/Kg	20	561		552		2		P
Selenium	mg/Kg	20	0.95	U	0.94	U			P
Silver	mg/Kg	20	0.37	J	0.31	J	18		P
Sodium	mg/Kg	20	235		222		6		P
Thallium	mg/Kg	20	1.90	U	1.88	U			P
Vanadium	mg/Kg	20	14.8		13.5		9		P
Zinc	mg/Kg	20	48.8		47.6		2		P

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

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DUPLICATE SAMPLE SUMMARY

Client: Kleinfelder **Level:** LOW **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Matrix: Solid **Sample ID:** Q2793-01MS **Client ID:** VNJ-231MSD

Percent Solids for Sample: 92.7 **Duplicate ID** Q2793-01MSD **Percent Solids for Spike Sample:** 92.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	5770		5350		8		P
Antimony	mg/Kg	20	21.3		20.9		2		P
Arsenic	mg/Kg	20	31.4		29.4		7		P
Barium	mg/Kg	20	63.4		61.3		3		P
Beryllium	mg/Kg	20	6.57		6.44		2		P
Cadmium	mg/Kg	20	8.00		7.86		2		P
Calcium	mg/Kg	20	1390		1360		2		P
Chromium	mg/Kg	20	21.1		20.5		3		P
Cobalt	mg/Kg	20	12.3		12.1		2		P
Copper	mg/Kg	20	26.6		26.5		0		P
Iron	mg/Kg	20	9580		8260		15		P
Lead	mg/Kg	20	82.5		77.4		6		P
Magnesium	mg/Kg	20	1510		1410		7		P
Manganese	mg/Kg	20	280		294		5		P
Nickel	mg/Kg	20	28.7		27.7		4		P
Potassium	mg/Kg	20	943		852		10		P
Selenium	mg/Kg	20	64.0		62.7		2		P
Silver	mg/Kg	20	2.91		2.87		1		P
Sodium	mg/Kg	20	317		303		5		P
Thallium	mg/Kg	20	81.7		80.7		1		P
Vanadium	mg/Kg	20	24.2		21.6		11		P
Zinc	mg/Kg	20	54.9		56.1		2		P

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

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DUPLICATE SAMPLE SUMMARY

Client: Kleinfelder **Level:** LOW **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Matrix: Solid **Sample ID:** Q2807-03 **Client ID:** COMP-6DUP

Percent Solids for Sample: 83.6 **Duplicate ID** Q2807-03DUP **Percent Solids for Spike Sample:** 83.6

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	2.26	D	1.77	D	24	*	CV

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

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DUPLICATE SAMPLE SUMMARY

Client: Kleinfelder **Level:** LOW **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Matrix: Solid **Sample ID:** Q2807-03MS **Client ID:** COMP-6MSD

Percent Solids for Sample: 83.6 **Duplicate ID** Q2807-03MSD **Percent Solids for Spike Sample:** 83.6

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	2.00	D	1.61	D	22	*	CV

"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: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169179BS							
Mercury	mg/Kg	0.28	0.26		94	80 - 120	CV

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169181BS							
Aluminum	mg/Kg	100	98.7		99	80 - 120	P
Antimony	mg/Kg	40.0	42.0		105	80 - 120	P
Arsenic	mg/Kg	40.0	39.7		99	80 - 120	P
Barium	mg/Kg	10.0	9.19		92	80 - 120	P
Beryllium	mg/Kg	10.0	9.20		92	80 - 120	P
Cadmium	mg/Kg	10.0	9.07		91	80 - 120	P
Calcium	mg/Kg	50.0	56.8	J	114	80 - 120	P
Chromium	mg/Kg	20.0	20.3		102	80 - 120	P
Cobalt	mg/Kg	10.0	9.39		94	80 - 120	P
Copper	mg/Kg	15.0	15.1		101	80 - 120	P
Iron	mg/Kg	150	152		101	80 - 120	P
Lead	mg/Kg	50.0	45.5		91	80 - 120	P
Magnesium	mg/Kg	100	98.2	J	98	80 - 120	P
Manganese	mg/Kg	10.0	9.89		99	80 - 120	P
Nickel	mg/Kg	25.0	23.7		95	80 - 120	P
Potassium	mg/Kg	500	479		96	80 - 120	P
Selenium	mg/Kg	100	99.8		100	80 - 120	P
Silver	mg/Kg	3.8	3.63		96	80 - 120	P
Sodium	mg/Kg	150	142		95	80 - 120	P
Thallium	mg/Kg	100	88.3		88	80 - 120	P
Vanadium	mg/Kg	15.0	14.9		99	80 - 120	P
Zinc	mg/Kg	10.0	10.6		106	80 - 120	P

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ICP SERIAL DILUTIONS

SAMPLE NO.

VNJ-231L

Lab Name: Alliance **Contract:** POWE02

Lab Code: ACE **Lb No.:** lb136778 **Lab Sample ID :** Q2793-01L **SDG No.:** Q2795

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	5530		6090		10		P
Antimony	2.38	U	11.9	U			P
Arsenic	3.57		3.46	J	3		P
Barium	55.0		57.3		4		P
Beryllium	0.47		0.54	J	14		P
Cadmium	0.32		0.16	J	51		P
Calcium	1440		1610		12		P
Chromium	10.1		11.0		10		P
Cobalt	4.83		4.61	J	5		P
Copper	16.6		19.8		19		P
Iron	10700		11500		8		P
Lead	42.2		42.3		0		P
Magnesium	1480		1640		11		P
Manganese	302		334		11		P
Nickel	9.50		9.45	J	1		P
Potassium	561		604		8		P
Selenium	0.95	U	4.75	U			P
Silver	0.37	J	2.38	U	100.0		P
Sodium	235		236	J	0		P
Thallium	1.90	U	9.50	U			P
Vanadium	14.8		16.3		10		P
Zinc	48.8		53.1		9		P

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ICP SERIAL DILUTIONS

SAMPLE NO.

COMP-6L

Lab Name: Alliance **Contract:** POWE02

Lab Code: ACE **Lb No.:** lb136768 **Lab Sample ID :** Q2807-03L **SDG No.:** Q2795

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	1.27	OR	0.42		67		CV

METAL PREPARATION & INSTRUMENT DATA

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ICP INTERELEMENT CORRECTION FACTORS

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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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ICP INTERELEMENT CORRECTION FACTORS

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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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SAMPLE PREPARATION SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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:	**PB169179**						
PB169179BL	PB169179BL	MB	SOLID	08/08/2025	0.50	35.0	100.00
PB169179BS	PB169179BS	LCS	SOLID	08/08/2025	0.50	35.0	100.00
Q2795-01	COMP-1	SAM	SOLID	08/08/2025	0.58	35.0	82.50
Q2795-02	COMP-2	SAM	SOLID	08/08/2025	0.59	35.0	80.80
Q2795-03	COMP-3	SAM	SOLID	08/08/2025	0.56	35.0	82.00
Q2807-03DUP	COMP-6DUP	DUP	SOLID	08/08/2025	0.57	35.0	83.60
Q2807-03MS	COMP-6MS	MS	SOLID	08/08/2025	0.53	35.0	83.60
Q2807-03MSD	COMP-6MSD	MSD	SOLID	08/08/2025	0.57	35.0	83.60

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SAMPLE PREPARATION SUMMARY

Client: Kleinfelder **SDG No.:** Q2795

Contract: POWE02 **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:	**PB169181**						
PB169181BL	PB169181BL	MB	SOLID	08/08/2025	2.00	100.0	100.00
PB169181BS	PB169181BS	LCS	SOLID	08/08/2025	2.00	100.0	100.00
Q2793-01DUP	VNJ-231DUP	DUP	SOLID	08/08/2025	2.29	100.0	92.70
Q2793-01MS	VNJ-231MS	MS	SOLID	08/08/2025	2.31	100.0	92.70
Q2793-01MSD	VNJ-231MSD	MSD	SOLID	08/08/2025	2.32	100.0	92.70
Q2795-01	COMP-1	SAM	SOLID	08/08/2025	2.16	100.0	82.50
Q2795-02	COMP-2	SAM	SOLID	08/08/2025	2.27	100.0	80.80
Q2795-03	COMP-3	SAM	SOLID	08/08/2025	2.45	100.0	82.00

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ANALYSIS RUN LOG

Client: Kleinfelder **Contract:** POWE02

Lab code: ACE **Sdg no.:** Q2795

Instrument id number: **Method:** **Run number:** LB136768

Start date: 08/11/2025 **End date:** 08/11/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	0958	HG
S0.2	S0.2	1	1010	HG
S2.5	S2.5	1	1019	HG
S5	S5	1	1025	HG
S7.5	S7.5	1	1027	HG
S10	S10	1	1030	HG
ICV06	ICV06	1	1033	HG
ICB06	ICB06	1	1035	HG
CCV15	CCV15	1	1106	HG
CCB15	CCB15	1	1108	HG
CRA	CRA	1	1111	HG
PB169179BL	PB169179BL	1	1127	HG
PB169179BS	PB169179BS	1	1129	HG
CCV16	CCV16	1	1153	HG
CCB16	CCB16	1	1155	HG
CCV17	CCV17	1	1226	HG
CCB17	CCB17	1	1229	HG
Q2807-03L	COMP-6L	5	1241	HG
Q2795-01	COMP-1	10	1317	HG
Q2795-02	COMP-2	10	1320	HG
Q2795-03	COMP-3	10	1322	HG
CCV18	CCV18	1	1332	HG
CCB18	CCB18	1	1334	HG
Q2807-03DUP	COMP-6DUP	10	1341	HG
Q2807-03MSD	COMP-6MSD	10	1344	HG
Q2807-03MS	COMP-6MS	10	1354	HG
CCV19	CCV19	1	1356	HG
CCB19	CCB19	1	1359	HG

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

metals
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ANALYSIS RUN LOG

Client: Kleinfelder **Contract:** POWE02

Lab code: ACE **Sdg no.:** Q2795

Instrument id number: **Method:** **Run number:** LB136778

Start date: 08/11/2025 **End date:** 08/11/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1043	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	1048	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	1052	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	1056	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	1100	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	1104	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	1109	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	1133	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	1137	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	1141	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	1148	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	1152	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	1205	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	1209	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	1300	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	1304	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	1454	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	1458	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2793-01DUP	VNJ-231DUP	1	1503	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2793-01L	VNJ-231L	5	1507	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2793-01MS	VNJ-231MS	1	1511	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2793-01MSD	VNJ-231MSD	1	1515	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2793-01A	VNJ-231A	1	1519	Ag,As,Be,Cr,Cu,K,Na,Sb,Se,V
Q2795-01	COMP-1	1	1523	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2795-02	COMP-2	1	1527	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2795-03	COMP-3	1	1531	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	1602	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	1606	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: Kleinfelder **Contract:** POWE02

Lab code: ACE **Sdg no.:** Q2795

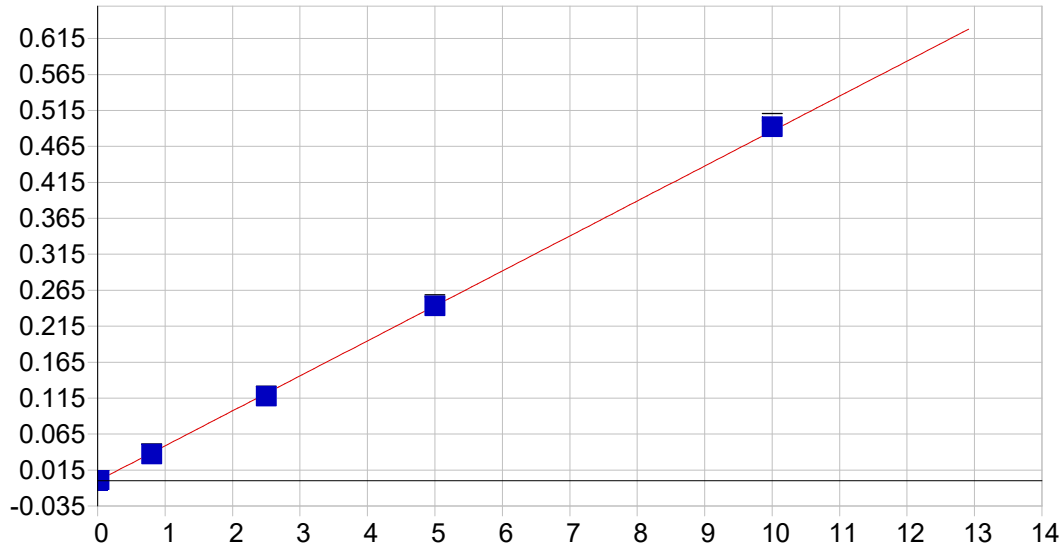
Instrument id number: **Method:** **Run number:** LB136851

Start date: 08/15/2025 **End date:** 08/15/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1125	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	1129	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	1133	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	1137	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	1141	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	1146	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	1150	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	1156	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	1200	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	1204	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	1209	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	1213	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	1226	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	1230	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	1340	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	1345	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB169181BL	PB169181BL	1	1432	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB169181BS	PB169181BS	1	1451	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	1504	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	1510	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	1555	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	1601	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	1638	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	1645	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

METAL
RAW DATA

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



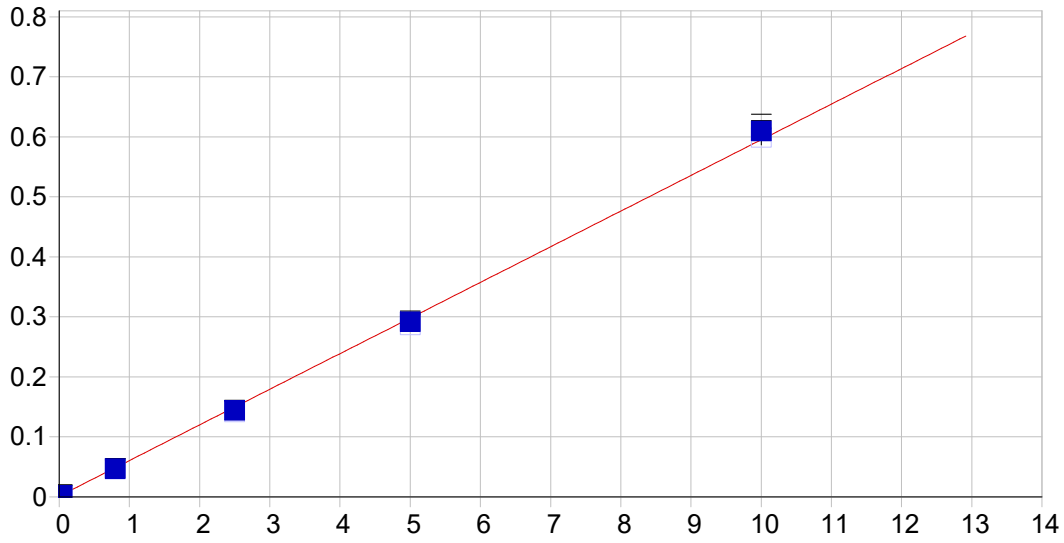
As 189.042 {479}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000007	Re-Slope:	1.000000
A1 (Gain):	0.048634	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999835	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	0.002347		
Predicted MQL:	0.007822		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00001	.000	1
S1	.02000	.01856	-.001	-7.20	.00089	.000	1
S3	2.5000	2.4179	-.082	-3.28	.11745	.000	1
S4	5.0000	5.0024	.002	.048	.24302	.001	1
S5	10.000	10.119	.119	1.19	.49160	.005	1
S2	.80000	.76200	-.038	-4.75	.03701	.000	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



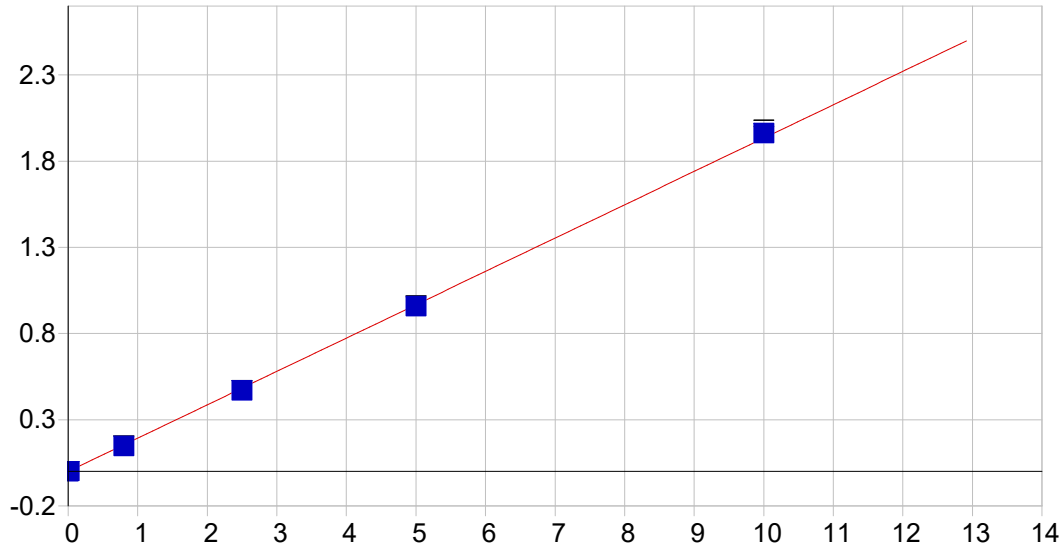
Tl 190.856 {477}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001237	Re-Slope:	1.000000
A1 (Gain):	0.059380	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999610	Status:	OK.
Std Error of Est:	0.000054		
Predicted MDL:	0.002047		
Predicted MQL:	0.006823		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00124	.000	1
S1	.04000	.03646	-.004	-8.84	.00325	.000	1
S3	2.5000	2.4039	-.096	-3.84	.14127	.001	1
S4	5.0000	4.8907	-.109	-2.19	.28623	.001	1
S5	10.000	10.243	.243	2.43	.59866	.012	1
S2	.80000	.76552	-.034	-4.31	.04583	.001	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



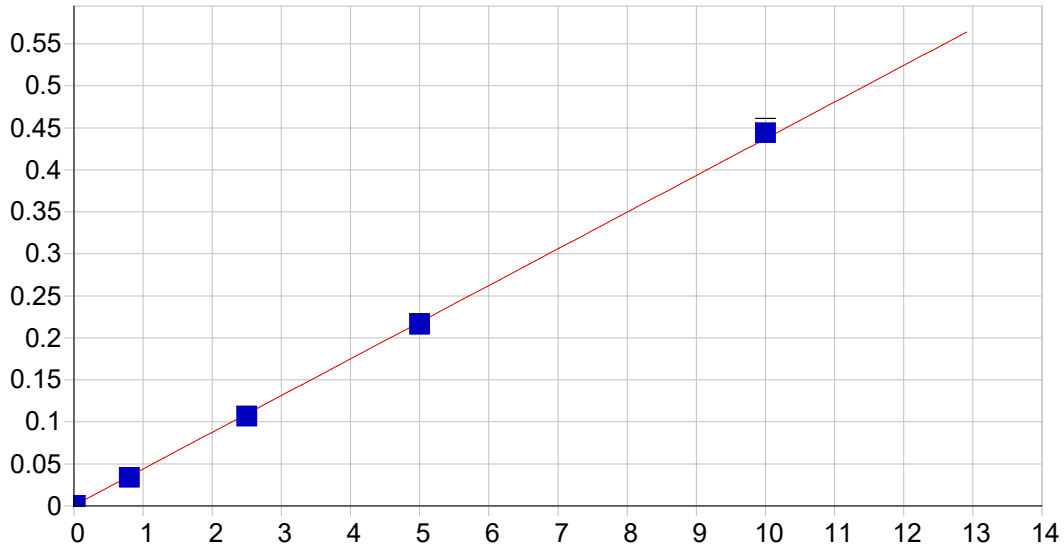
Pb 220.353 {453}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000075	Re-Slope:	1.000000
A1 (Gain):	0.193396	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999822	Status:	OK.
Std Error of Est:	0.000066		
Predicted MDL:	0.001421		
Predicted MQL:	0.004737		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00007	.000	1
S1	.01200	.01250	.000	4.13	.00245	.000	1
S3	2.5000	2.4267	-.073	-2.93	.46889	.001	1
S4	5.0000	4.9582	-.042	-.835	.95798	.004	1
S5	10.000	10.151	.151	1.51	1.9613	.019	1
S2	.80000	.76308	-.037	-4.62	.14749	.001	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



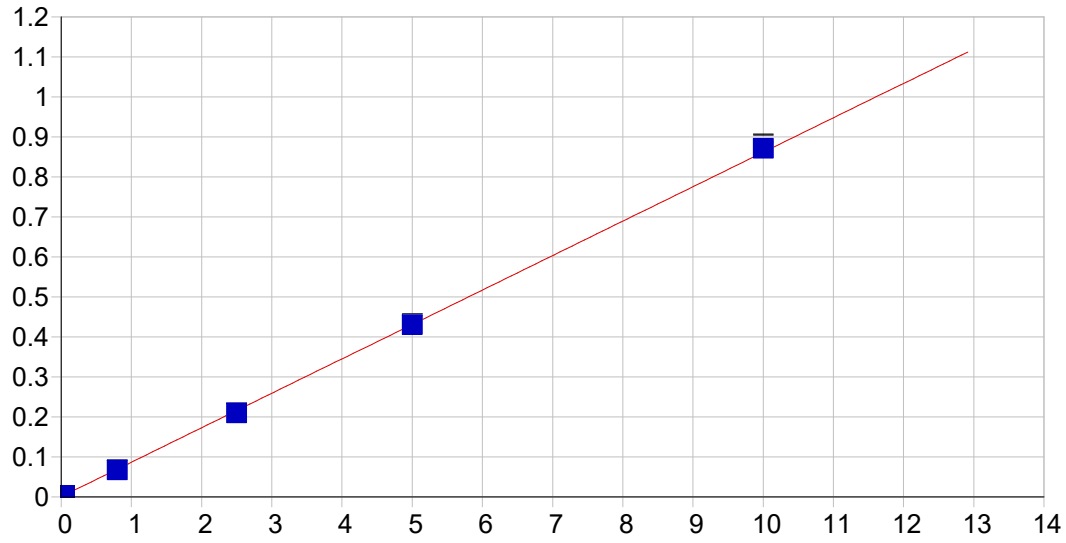
Se 196.090 {472}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000383	Re-Slope:	1.000000
A1 (Gain):	0.043660	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999809	Status:	OK.
Std Error of Est:	0.000020		
Predicted MDL:	0.003312		
Predicted MQL:	0.011042		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00038	.000	1
S1	.02000	.01928	-.001	-3.58	.00123	.000	1
S3	2.5000	2.4326	-.067	-2.70	.10656	.000	1
S4	5.0000	4.9380	-.062	-1.24	.21592	.001	1
S5	10.000	10.166	.166	1.66	.44411	.005	1
S2	.80000	.76408	-.036	-4.49	.03373	.000	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



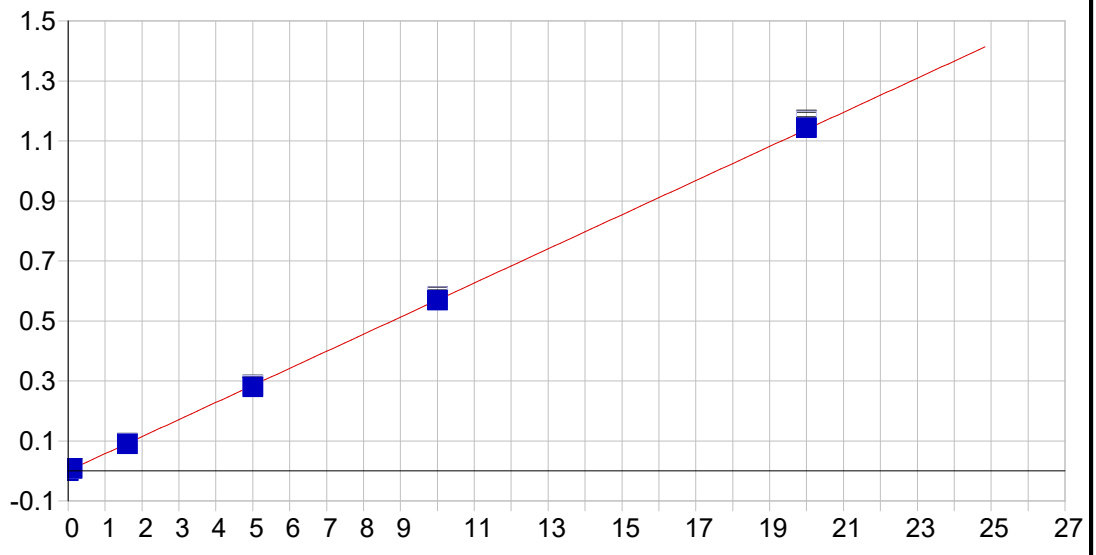
Sb 206.833 {463}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000680	Re-Slope:	1.000000
A1 (Gain):	0.086087	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999881	Status:	OK.
Std Error of Est:	0.000049		
Predicted MDL:	0.002129		
Predicted MQL:	0.007097		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00068	.000	1
S1	.05000	.04921	-.001	-1.57	.00493	.000	1
S3	2.5000	2.4301	-.070	-2.79	.21047	.001	1
S4	5.0000	4.9931	-.007	-.138	.43169	.002	1
S5	10.000	10.109	.109	1.09	.87327	.009	1
S2	.80000	.76861	-.031	-3.92	.06703	.000	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



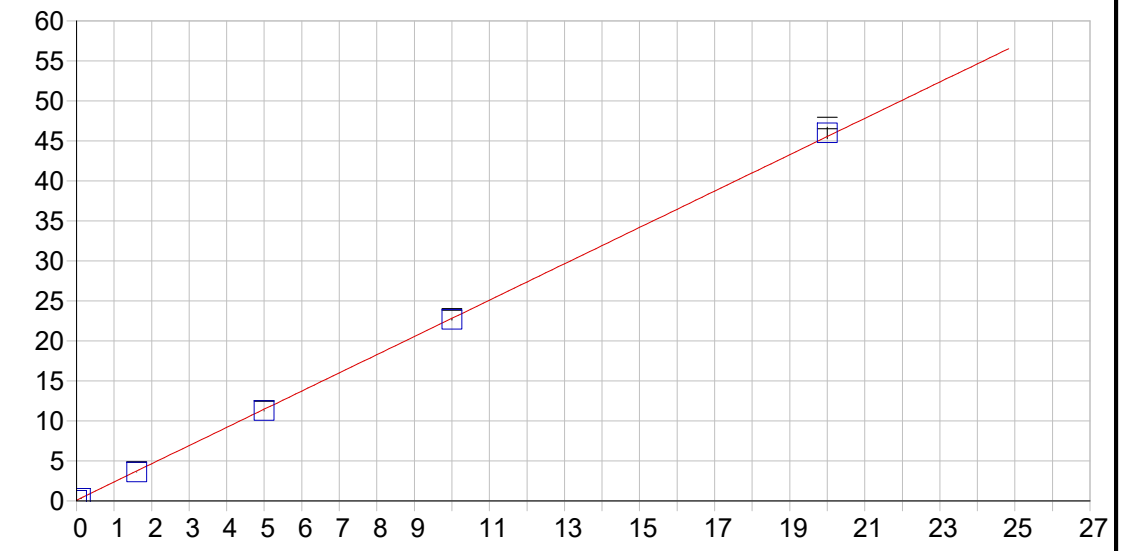
Al 396.152 { 85}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000483	Re-Slope:	1.000000
A1 (Gain):	0.056896	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999914	Status:	OK.
Std Error of Est:	0.000056		
Predicted MDL:	0.014208		
Predicted MQL:	0.047361		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00048	.001	1
S1	.10000	.11977	.020	19.8	.00774	.000	1
S3	5.0000	4.9058	-.094	-1.88	.28512	.001	1
S4	10.000	9.9967	-.003	-.033	.58030	.001	1
S5	20.000	20.101	.101	.505	1.1662	.003	1
S2	1.6000	1.5756	-.024	-1.53	.09189	.000	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



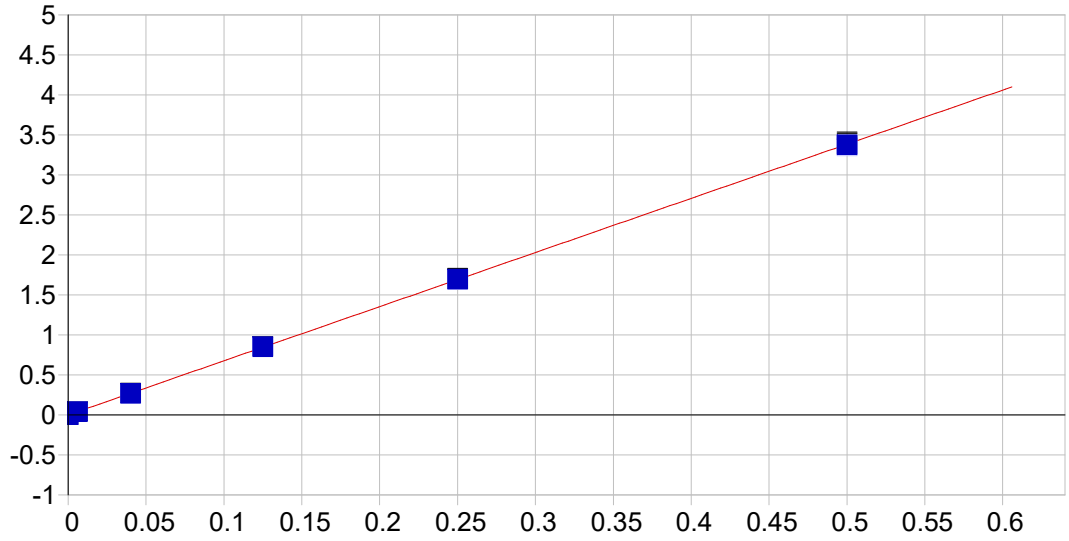
Ba 493.409 { 68}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.099278	Re-Slope:	1.000000
A1 (Gain):	2.272321	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999927	Status:	OK.
Std Error of Est:	0.002038		
Predicted MDL:	0.001068		
Predicted MQL:	0.003559		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.09929	.002	1
S1	.10000	.10057	.001	.566	.32780	.003	1
S3	5.0000	4.9148	-.085	-1.70	11.267	.014	1
S4	10.000	9.9405	-.059	-.595	22.687	.098	1
S5	20.000	20.195	.195	.977	45.990	.716	1
S2	1.6000	1.5486	-.051	-3.21	3.6182	.024	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



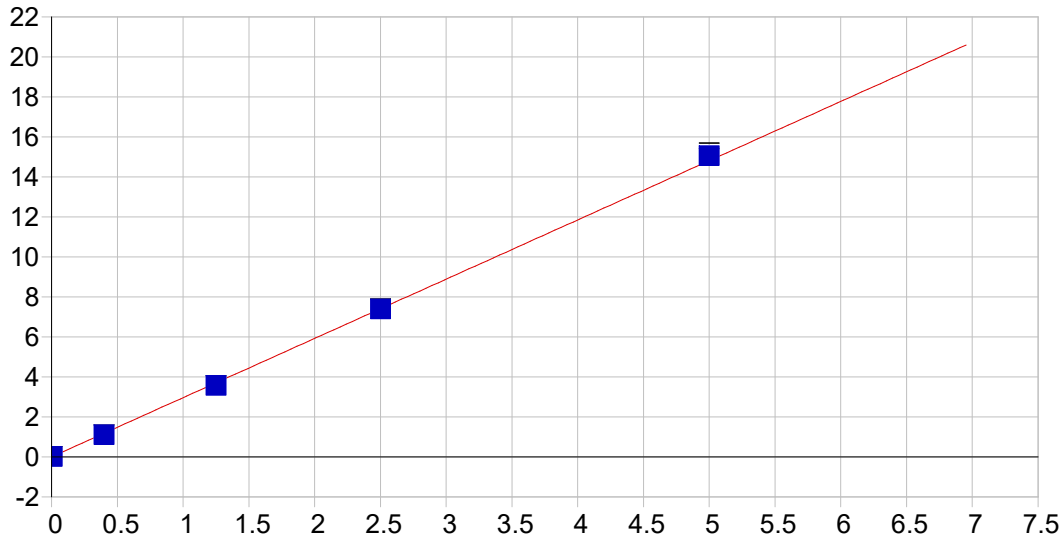
Be 234.861 {144}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000380	Re-Slope:	1.000000
A1 (Gain):	6.767643	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999993	Status:	OK.
Std Error of Est:	0.000071		
Predicted MDL:	0.000072		
Predicted MQL:	0.000240		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00038	.000	1
S1	.00600	.00599	-.000	-.153	.03986	.000	1
S3	.12500	.12589	.001	.711	.84780	.003	1
S4	.25000	.25062	.001	.248	1.6881	.013	1
S5	.50000	.49866	-.001	-.267	3.3592	.038	1
S2	.04000	.03984	-.000	-.407	.26801	.001	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



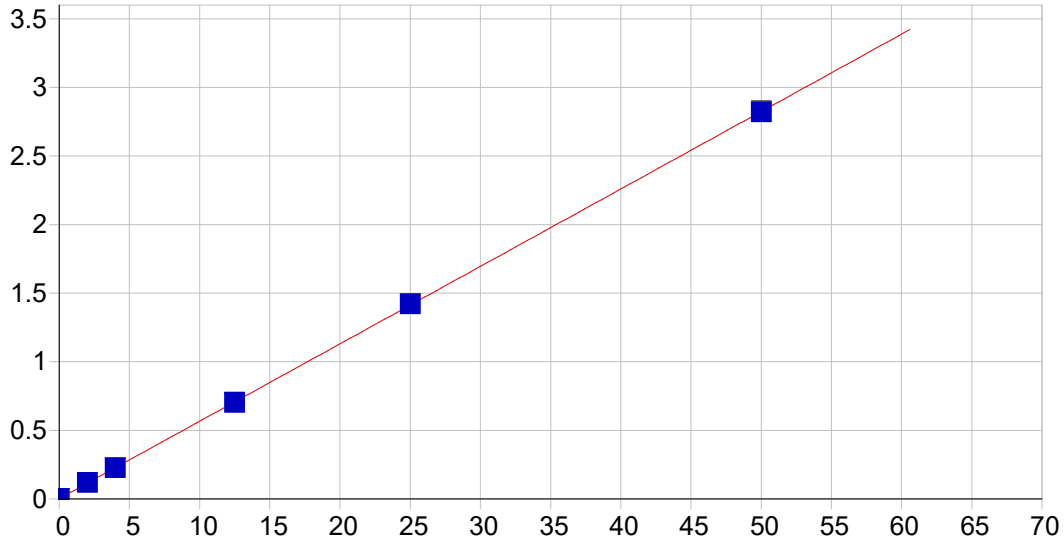
Cd 226.502 {449}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000046	Re-Slope:	1.000000
A1 (Gain):	2.962441	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999724	Status:	OK.
Std Error of Est:	0.000633		
Predicted MDL:	0.000079		
Predicted MQL:	0.000264		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00004	.000	1
S1	.00600	.00555	-.000	-7.47	.01646	.000	1
S3	1.2500	1.2028	-.047	-3.78	3.5656	.009	1
S4	2.5000	2.4934	-.007	-.265	7.3913	.030	1
S5	5.0000	5.0818	.082	1.64	15.064	.143	1
S2	.40000	.37244	-.028	-6.89	1.1041	.006	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



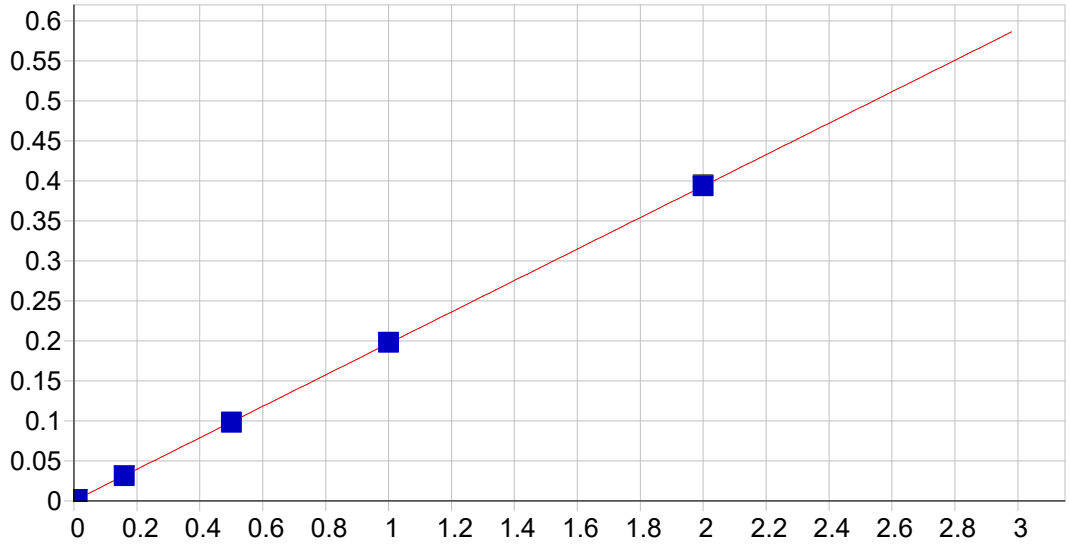
Ca 373.690 { 90}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002072	Re-Slope:	1.000000
A1 (Gain):	0.056441	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999979	Status:	OK.
Std Error of Est:	0.000194		
Predicted MDL:	0.011856		
Predicted MQL:	0.039520		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00004	-.000	.000	.00207	.000	1
S2	4.0000	3.9612	-.039	-.969	.22565	.002	1
S3	12.500	12.412	-.088	-.704	.70261	.001	1
S4	25.000	25.120	.120	.478	1.4198	.004	1
S5	50.000	49.940	-.060	-.121	2.8207	.008	1
S1	2.0000	2.0676	.068	3.38	.11877	.001	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



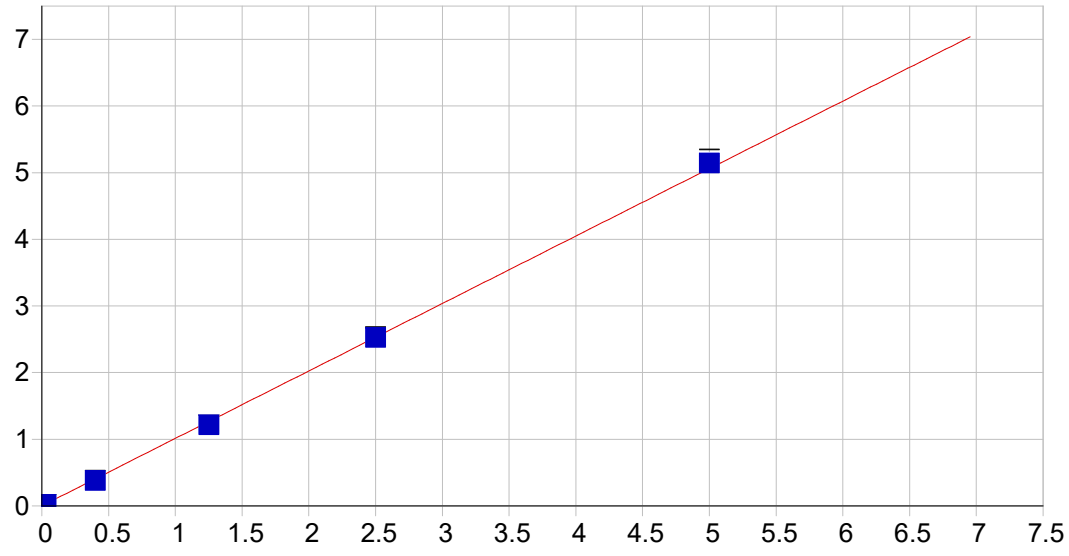
Cr 267.716 {126}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000226	Re-Slope:	1.000000
A1 (Gain):	0.196644	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999988	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.000354		
Predicted MQL:	0.001179		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00023	.000	1
S1	.01000	.01003	.000	.293	.00220	.000	1
S3	.50000	.49718	-.003	-.564	.09803	.000	1
S4	1.0000	1.0055	.006	.554	.19804	.000	1
S5	2.0000	1.9997	-.000	-.014	.39362	.001	1
S2	.16000	.15752	-.002	-1.55	.03121	.000	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



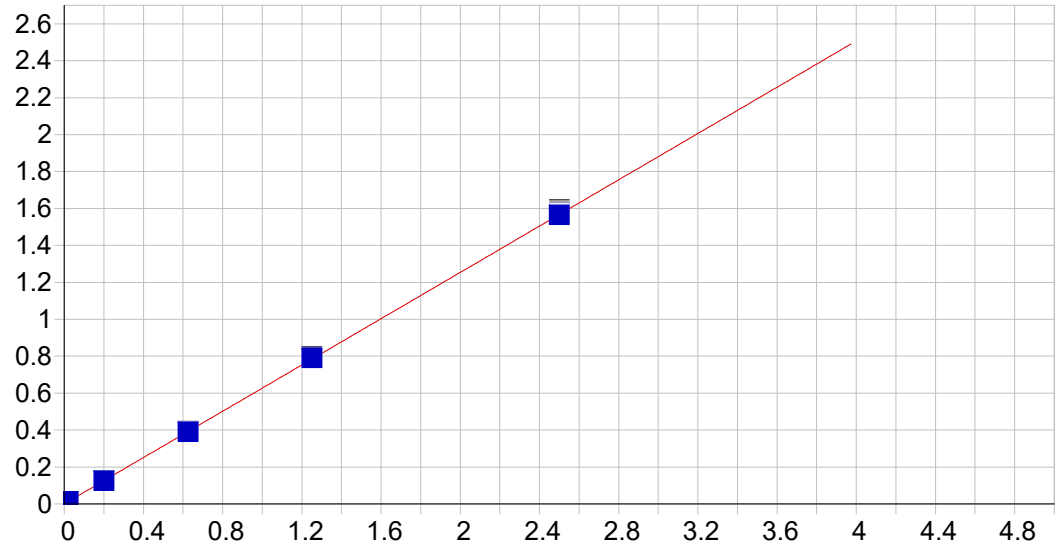
Co 228.616 {448}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000460	Re-Slope:	1.000000
A1 (Gain):	1.012246	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999736	Status:	OK.
Std Error of Est:	0.000473		
Predicted MDL:	0.000206		
Predicted MQL:	0.000686		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00046	.000	1
S1	.03000	.02872	-.001	-4.28	.02940	.000	1
S3	1.2500	1.2009	-.049	-3.92	1.2183	.002	1
S4	2.5000	2.4928	-.007	-.286	2.5281	.010	1
S5	5.0000	5.0821	.082	1.64	5.1534	.050	1
S2	.40000	.37540	-.025	-6.15	.38115	.002	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



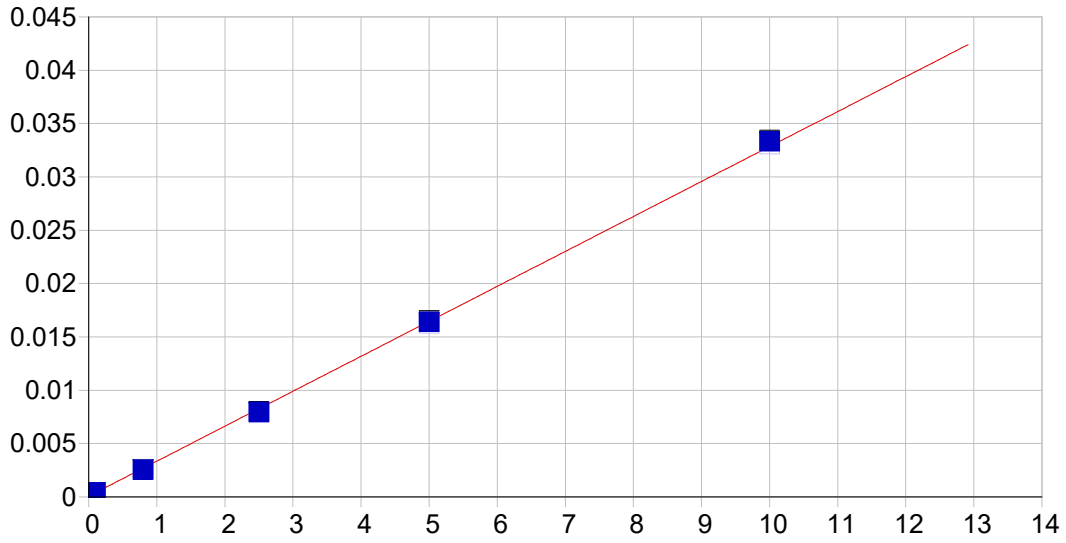
Cu 224.700 {450}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000396	Re-Slope:	1.000000
A1 (Gain):	0.626751	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999978	Status:	OK.
Std Error of Est:	0.000050		
Predicted MDL:	0.000445		
Predicted MQL:	0.001482		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00039	.000	1
S1	.02000	.02142	.001	7.11	.01396	.000	1
S3	.62500	.62094	-.004	-.650	.39283	.000	1
S4	1.2500	1.2589	.009	.709	.79591	.004	1
S5	2.5000	2.4952	-.005	-.193	1.5773	.016	1
S2	.20000	.19859	-.001	-.705	.12591	.001	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



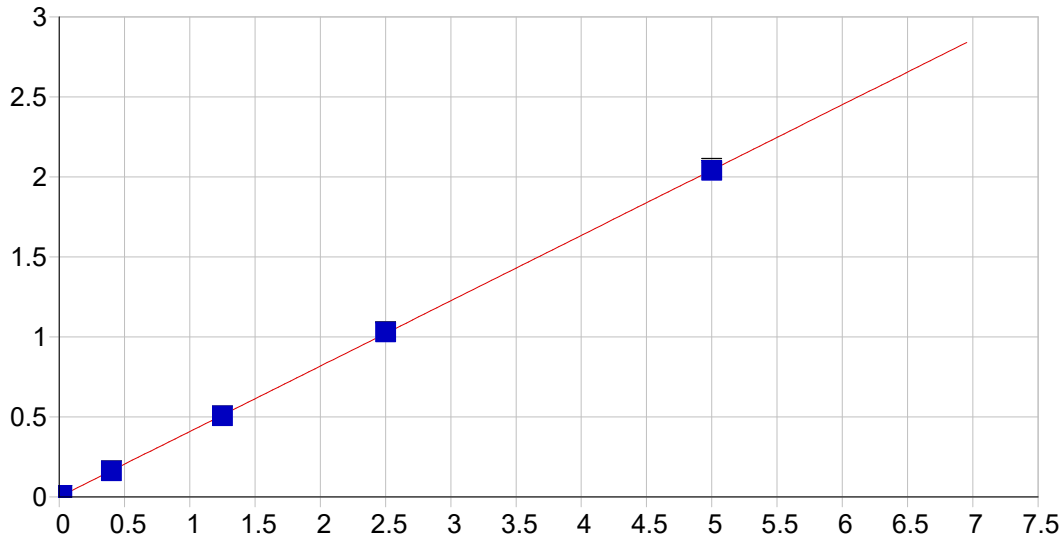
Fe 240.488 {140}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000072	Re-Slope:	1.000000
A1 (Gain):	0.003277	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999784	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.006750		
Predicted MQL:	0.022500		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00007	.000	1
S1	.10000	.10264	.003	2.64	.00040	.000	1
S3	2.5000	2.4065	-.093	-3.74	.00789	.000	1
S4	5.0000	4.9831	-.017	-.338	.01626	.000	1
S5	10.000	10.148	.148	1.48	.03305	.000	1
S2	.80000	.75982	-.040	-5.02	.00254	.000	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



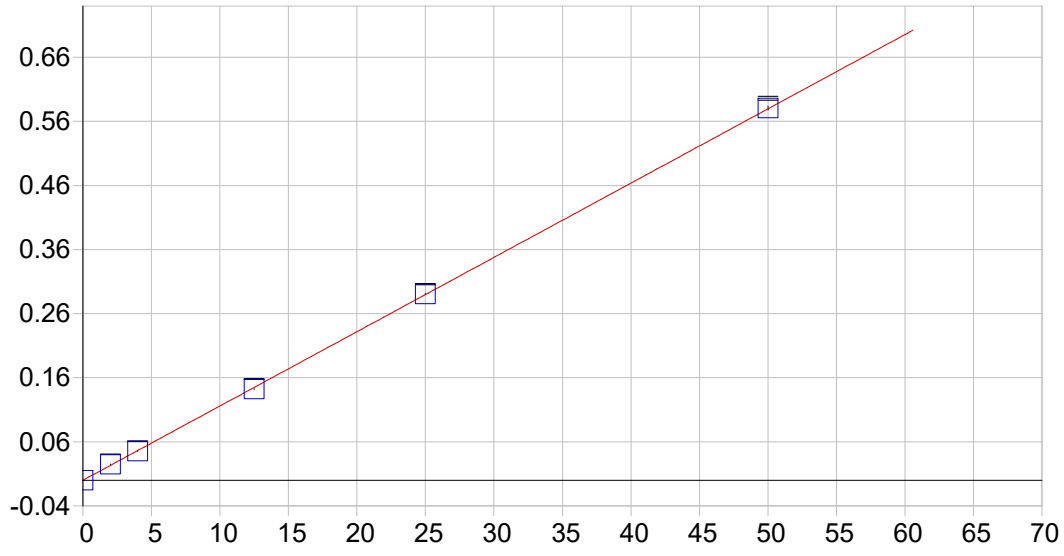
Mn 257.610 {131}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000302	Re-Slope:	1.000000
A1 (Gain):	0.408488	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999920	Status:	OK.
Std Error of Est:	0.000086		
Predicted MDL:	0.000593		
Predicted MQL:	0.001977		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00030	.000	1
S1	.02000	.02478	.005	23.9	.01043	.000	1
S3	1.2500	1.2374	-.013	-1.01	.50586	.001	1
S4	2.5000	2.5185	.018	.739	1.0293	.005	1
S5	5.0000	4.9938	-.006	-.124	2.0406	.012	1
S2	.40000	.39556	-.004	-1.11	.16192	.001	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



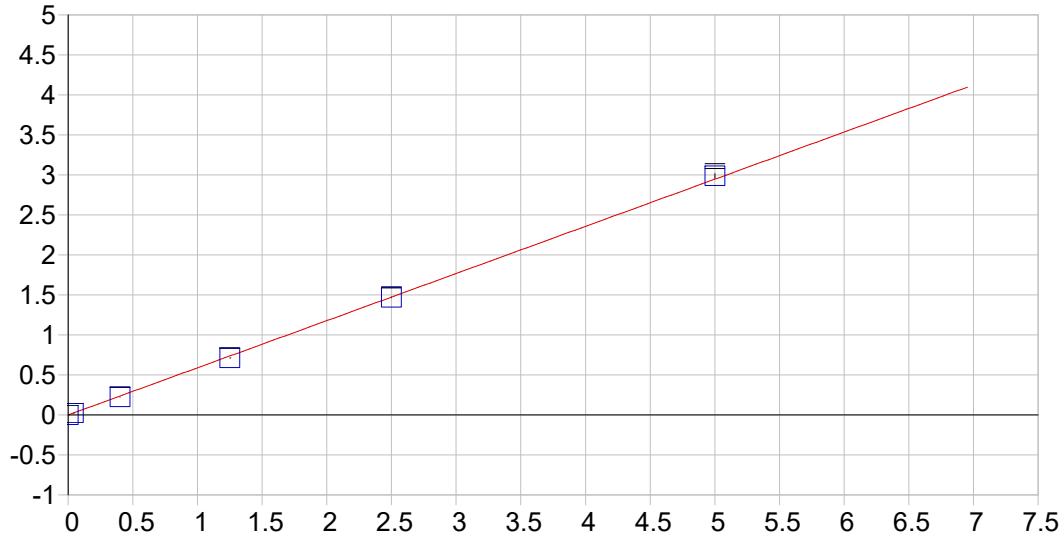
Mg 279.079 {121}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000013	Re-Slope:	1.000000
A1 (Gain):	0.011593	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999917	Status:	OK.
Std Error of Est:	0.000079		
Predicted MDL:	0.027132		
Predicted MQL:	0.090442		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00007	-.000	.000	.00001	.000	1
S2	4.0000	3.9137	-.086	-2.16	.04538	.000	1
S3	12.500	12.290	-.210	-1.68	.14249	.001	1
S4	25.000	25.066	.066	.265	.29059	.001	1
S5	50.000	50.091	.091	.181	.58069	.003	1
S1	2.0000	2.1394	.139	6.97	.02481	.000	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



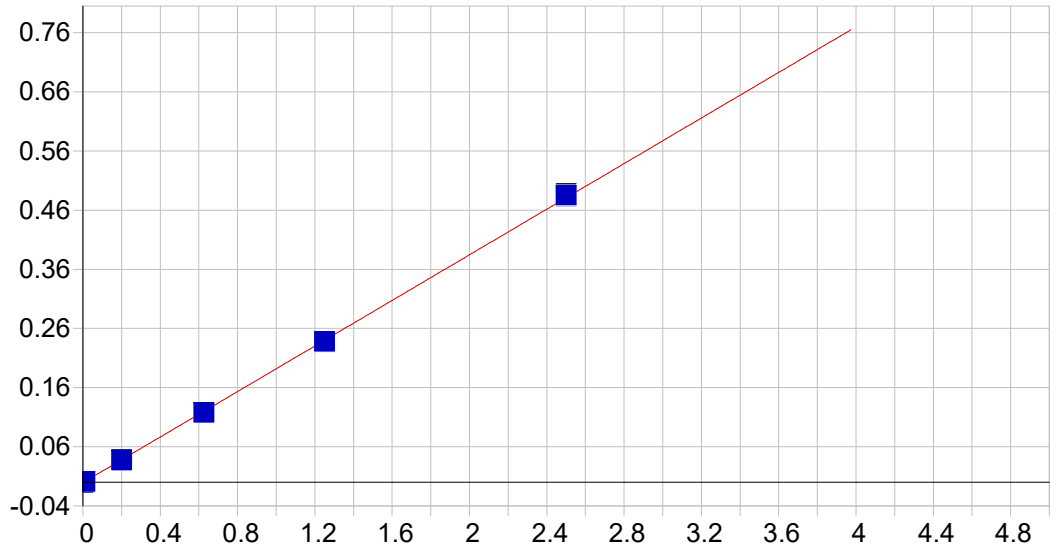
Ni 231.604 {446}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000444	Re-Slope:	1.000000
A1 (Gain):	0.589313	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999814	Status:	OK.
Std Error of Est:	0.000267		
Predicted MDL:	0.000376		
Predicted MQL:	0.001254		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00044	.000	1
S1	.04000	.04006	.000	.141	.02316	.000	1
S3	1.2500	1.2082	-.042	-3.34	.71159	.001	1
S4	2.5000	2.4942	-.006	-.232	1.4694	.007	1
S5	5.0000	5.0683	.068	1.37	2.9863	.028	1
S2	.40000	.37924	-.021	-5.19	.22305	.001	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



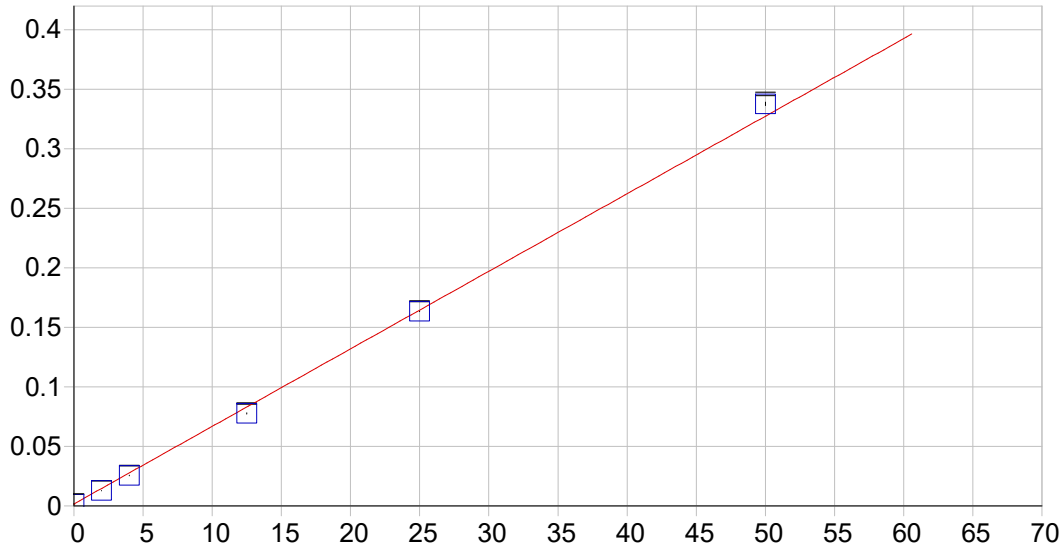
Ag 328.068 {103}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000742	Re-Slope:	1.000000
A1 (Gain):	0.192658	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999950	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.000564		
Predicted MQL:	0.001881		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00074	.000	1
S1	.01000	.01004	.000	.363	.00117	.000	1
S3	.62500	.61554	-.009	-1.51	.11726	.000	1
S4	1.2500	1.2400	-.010	-.797	.23699	.000	1
S5	2.5000	2.5221	.022	.886	.48283	.003	1
S2	.20000	.19725	-.003	-1.37	.03707	.000	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



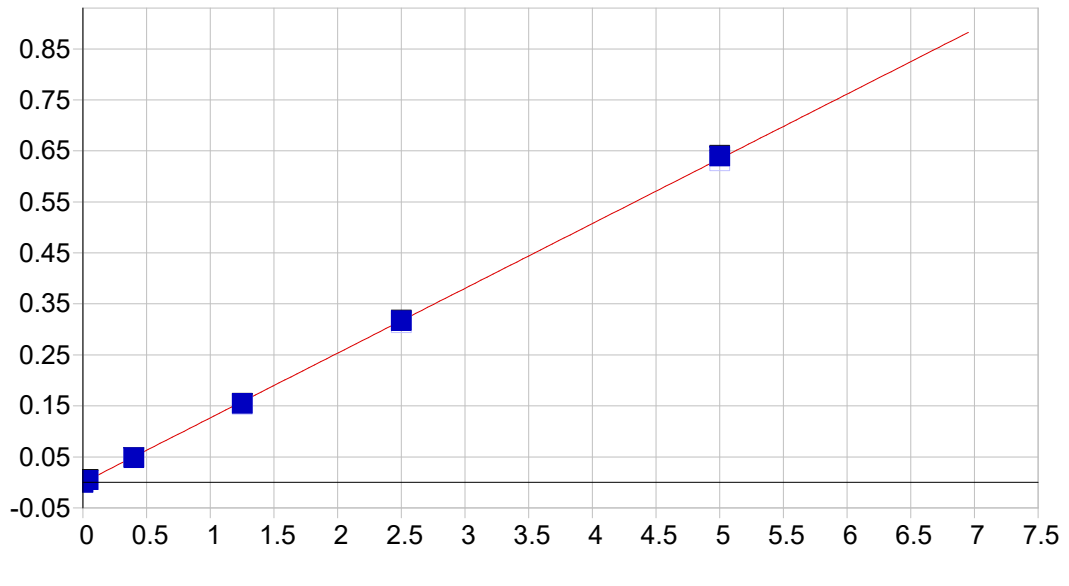
Na 589.592 { 57}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001647	Re-Slope:	1.000000
A1 (Gain):	0.006516	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999068	Status:	OK.
Std Error of Est:	0.000149		
Predicted MDL:	0.023213		
Predicted MQL:	0.077377		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00053	.001	.000	.00165	.000	1
S2	4.0000	3.6742	-.326	-8.14	.02559	.000	1
S3	12.500	11.677	-.823	-6.59	.07774	.000	1
S4	25.000	24.848	-.152	-.607	.16356	.000	1
S5	50.000	51.590	1.59	3.18	.33782	.001	1
S1	2.0000	1.7102	-.290	-14.5	.01279	.000	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



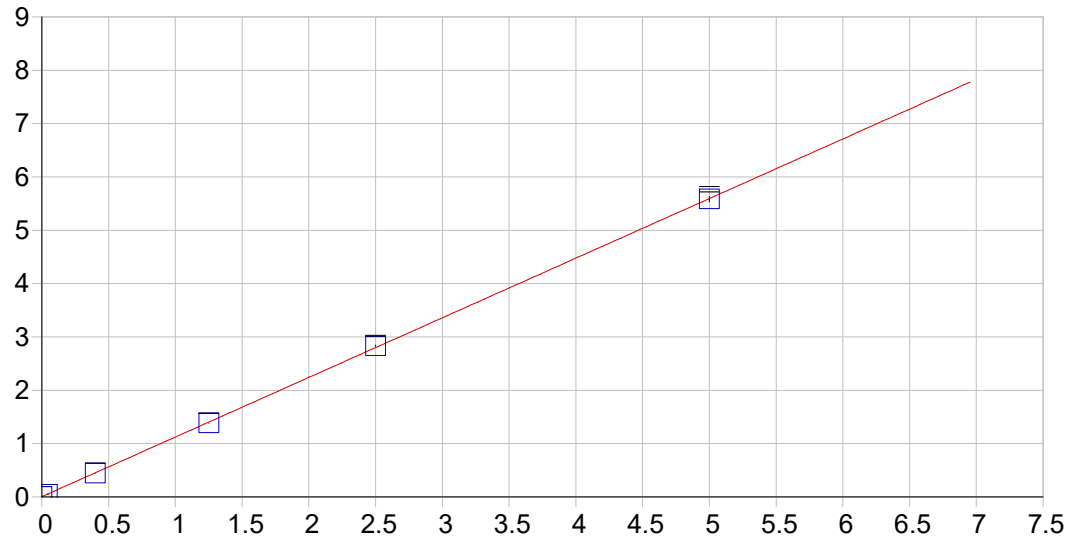
V 292.402 {115}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000516	Re-Slope:	1.000000
A1 (Gain):	0.126991	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999919	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.002924		
Predicted MQL:	0.009746		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00052	.000	1
S1	.04000	.04126	.001	3.14	.00453	.000	1
S3	1.2500	1.2220	-.028	-2.24	.15235	.000	1
S4	2.5000	2.5021	.002	.083	.31259	.001	1
S5	5.0000	5.0386	.039	.772	.63008	.002	1
S2	.40000	.38614	-.014	-3.47	.04778	.000	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



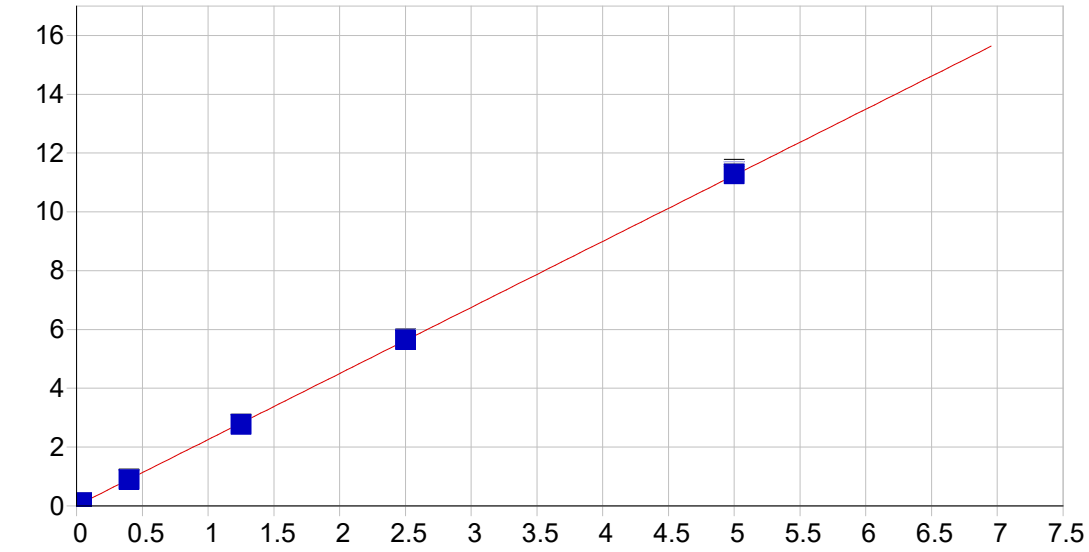
Zn 206.200 {464}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004303	Re-Slope:	1.000000
A1 (Gain):	1.118032	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999958	Status:	OK.
Std Error of Est:	0.000241		
Predicted MDL:	0.000150		
Predicted MQL:	0.000499		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00430	.000	1
S1	.04000	.04280	.003	7.01	.05216	.000	1
S3	1.2500	1.2350	-.015	-1.20	1.3850	.002	1
S4	2.5000	2.5274	.027	1.10	2.8300	.011	1
S5	5.0000	4.9903	-.010	-.194	5.5836	.052	1
S2	.40000	.39449	-.006	-1.38	.44536	.003	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



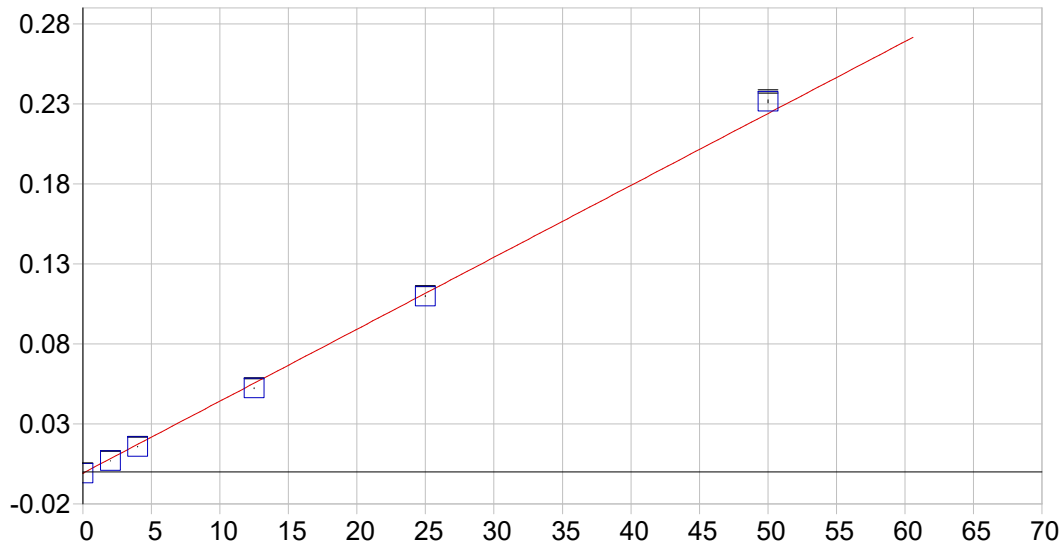
Zn 213.856 {158}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008158	Re-Slope:	1.000000
A1 (Gain):	2.247277	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999949	Status:	OK.
Std Error of Est:	0.000535		
Predicted MDL:	0.000261		
Predicted MQL:	0.000869		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00815	.000	1
S1	.04000	.04304	.003	7.60	.10551	.001	1
S3	1.2500	1.2253	-.025	-1.97	2.7814	.006	1
S4	2.5000	2.5077	.008	.307	5.6827	.004	1
S5	5.0000	5.0208	.021	.417	11.370	.080	1
S2	.40000	.39310	-.007	-1.72	.89782	.012	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



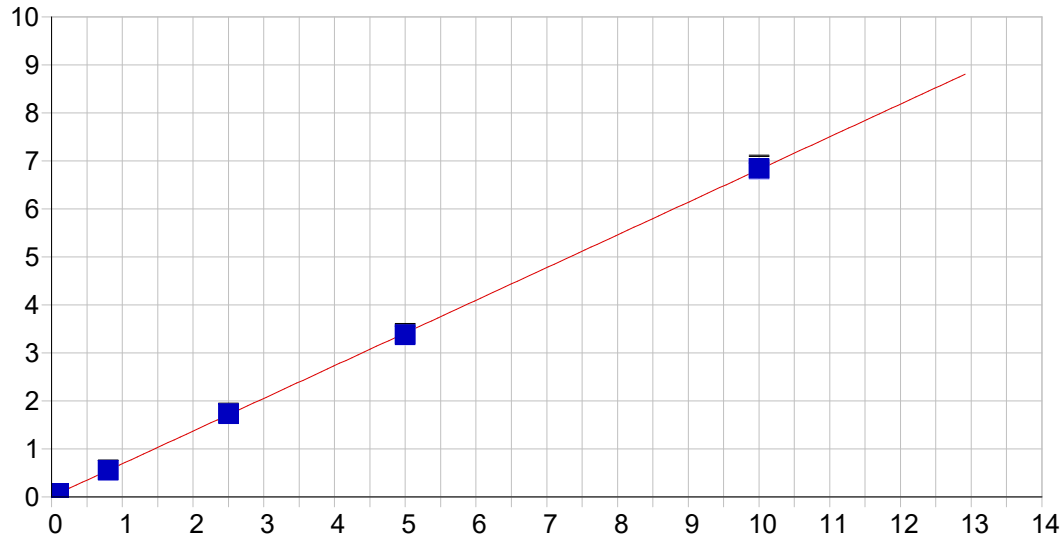
K 766.490 { 44}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000732	Re-Slope:	1.000000
A1 (Gain):	0.004495	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999099	Status:	OK.
Std Error of Est:	0.000101		
Predicted MDL:	0.042316		
Predicted MQL:	0.141054		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00052	.001	.000	-.00073	.000	1
S2	4.0000	3.6885	-.312	-7.79	.01585	.000	1
S3	12.500	11.801	-.699	-5.59	.05231	.000	1
S4	25.000	24.607	-.393	-1.57	.10987	.000	1
S5	50.000	51.692	1.69	3.38	.23161	.001	1
S1	2.0000	1.7110	-.289	-14.5	.00696	.000	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



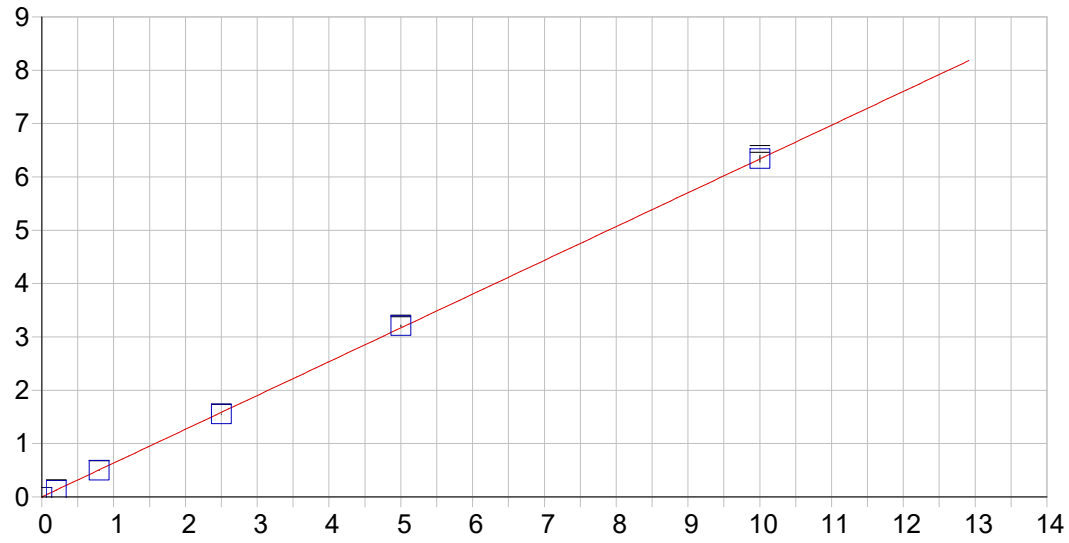
B 249.678 {135}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008995	Re-Slope:	1.000000
A1 (Gain):	0.681189	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999959	Status:	OK.
Std Error of Est:	0.000323		
Predicted MDL:	0.000784		
Predicted MQL:	0.002613		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00900	.000	1
S1	.10000	.09265	-.007	-7.35	.07170	.001	1
S3	2.5000	2.5309	.031	1.24	1.7269	.012	1
S4	5.0000	4.9496	-.050	-1.01	3.3683	.024	1
S5	10.000	10.024	.024	.242	6.8128	.074	1
S2	.80000	.80262	.003	.328	.55377	.003	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



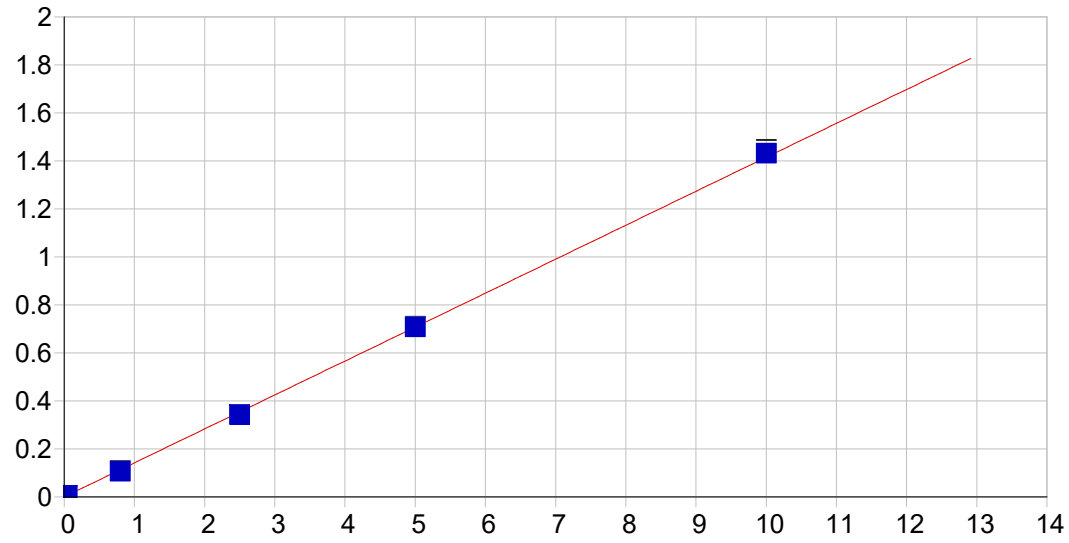
Mo 202.030 {467}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000994	Re-Slope:	1.000000
A1 (Gain):	0.633506	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999938	Status:	OK.
Std Error of Est:	0.000525		
Predicted MDL:	0.000277		
Predicted MQL:	0.000923		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00100	.000	1
S1	.20000	.20175	.002	.874	.12880	.000	1
S3	2.5000	2.4496	-.050	-2.01	1.5528	.002	1
S4	5.0000	5.0619	.062	1.24	3.2078	.014	1
S5	10.000	10.006	.006	.065	6.3402	.064	1
S2	.80000	.78020	-.020	-2.48	.49525	.002	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



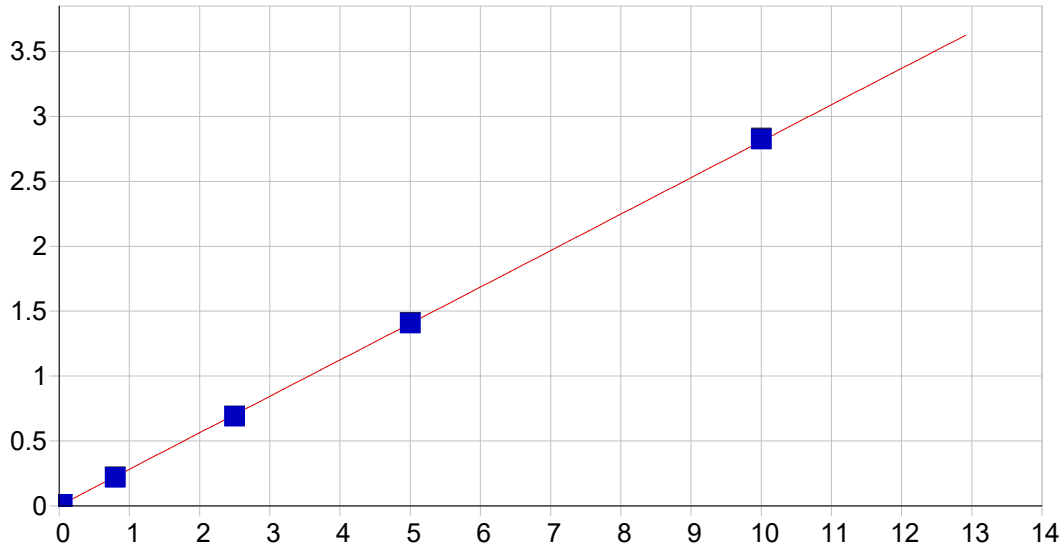
Sn 189.989 {478}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000305	Re-Slope:	1.000000
A1 (Gain):	0.141445	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999808	Status:	OK.
Std Error of Est:	0.000092		
Predicted MDL:	0.000691		
Predicted MQL:	0.002303		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00031	.000	1
S1	.04000	.03650	-.004	-8.76	.00546	.000	1
S3	2.5000	2.4195	-.080	-3.22	.34218	.001	1
S4	5.0000	5.0059	.006	.118	.70764	.003	1
S5	10.000	10.124	.124	1.24	1.4308	.014	1
S2	.80000	.75445	-.046	-5.69	.10690	.001	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



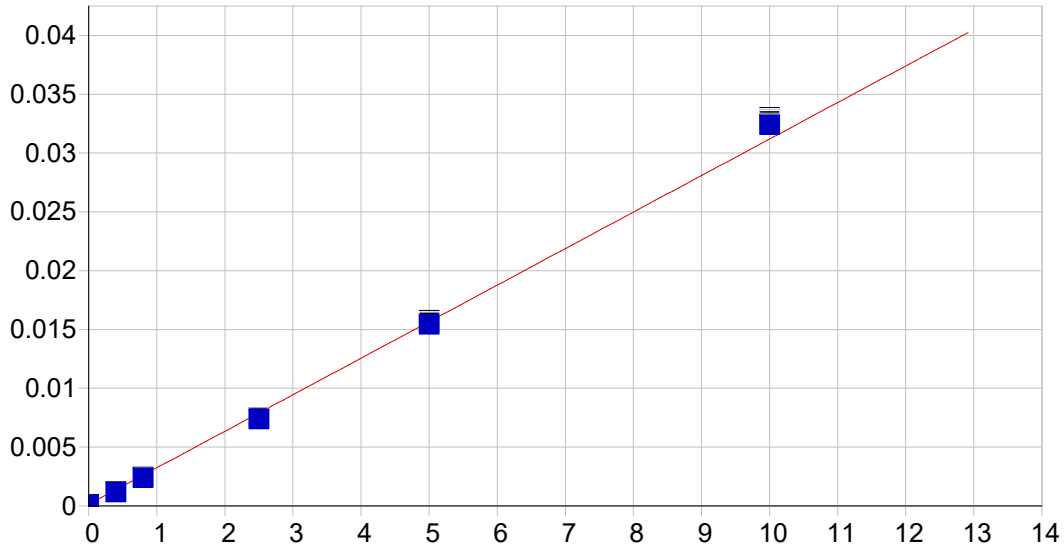
Ti 336.121 {100}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001632	Re-Slope:	1.000000
A1 (Gain):	0.280687	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999949	Status:	OK.
Std Error of Est:	0.000094		
Predicted MDL:	0.001703		
Predicted MQL:	0.005678		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00163	.000	1
S1	.04000	.03817	-.002	-4.59	.01234	.000	1
S3	2.5000	2.4549	-.045	-1.80	.69043	.000	1
S4	5.0000	5.0102	.010	.205	1.4074	.004	1
S5	10.000	10.059	.059	.588	2.8240	.008	1
S2	.80000	.77793	-.022	-2.76	.21990	.002	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



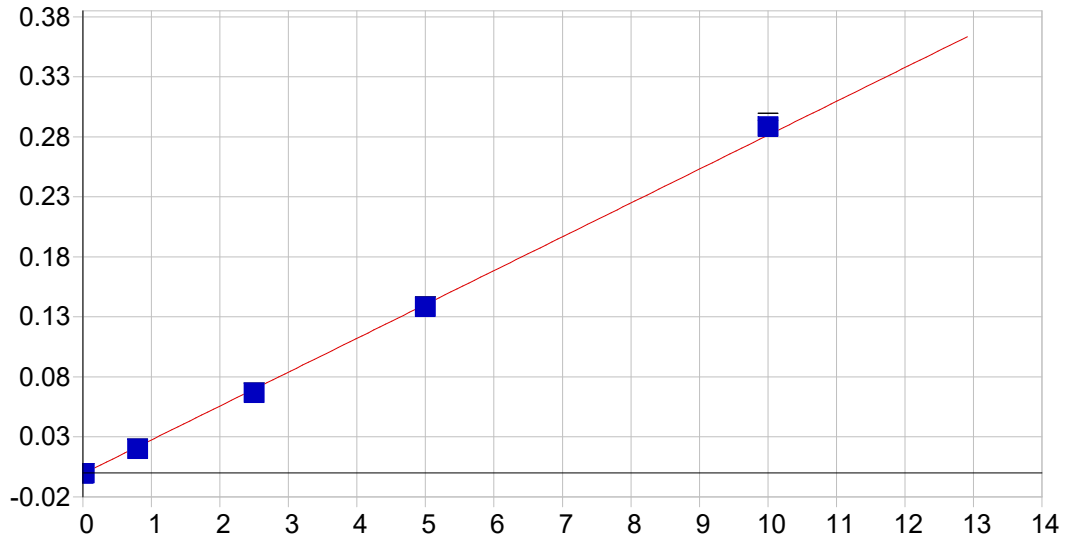
Si 288.158 {117}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000135	Re-Slope:	1.000000
A1 (Gain):	0.003106	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998827	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.013016		
Predicted MQL:	0.043386		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00012	.000	.000	.00014	.000	1
S1	.40000	.33348	-.067	-16.6	.00117	.000	1
S3	2.5000	2.3341	-.166	-6.64	.00750	.000	1
S4	5.0000	4.9192	-.081	-1.62	.01565	.000	1
S5	10.000	10.387	.387	3.87	.03286	.000	1
S2	.80000	.72576	-.074	-9.28	.00243	.000	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



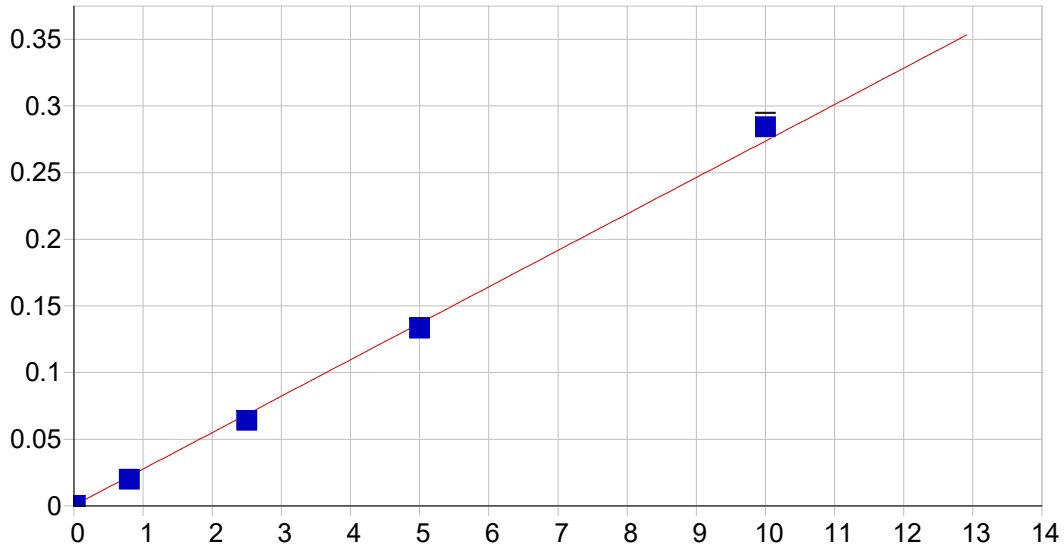
P 177.495 {490}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000697	Re-Slope:	1.000000
A1 (Gain):	0.028204	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999491	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	0.002595		
Predicted MQL:	0.008651		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00070	.000	1
S1	.02000	.01777	-.002	-11.1	-.00019	.000	1
S3	2.5000	2.3886	-.111	-4.46	.06666	.000	1
S4	5.0000	4.9267	-.073	-1.47	.13823	.000	1
S5	10.000	10.255	.255	2.55	.28850	.003	1
S2	.80000	.73164	-.068	-8.55	.01993	.000	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



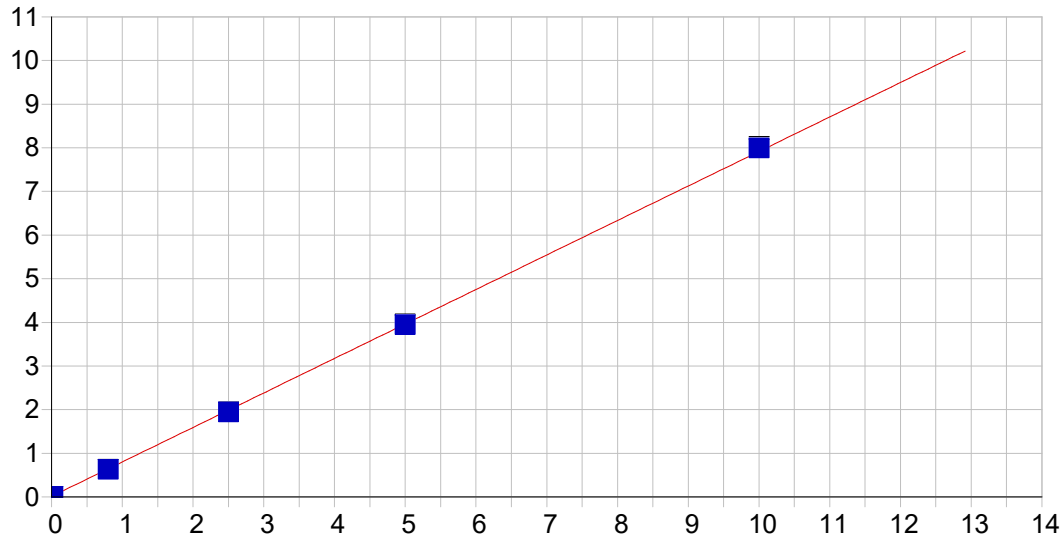
S 182.034 {485}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000331	Re-Slope:	1.000000
A1 (Gain):	0.027338	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998870	Status:	OK.
Std Error of Est:	0.000030		
Predicted MDL:	0.003212		
Predicted MQL:	0.010706		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00033	.000	1
S1	.02000	.01680	-.003	-16.0	.00077	.000	1
S3	2.5000	2.3288	-.171	-6.85	.06382	.000	1
S4	5.0000	4.8631	-.137	-2.74	.13292	.001	1
S5	10.000	10.398	.398	3.98	.28388	.003	1
S2	.80000	.71320	-.087	-10.8	.01977	.000	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



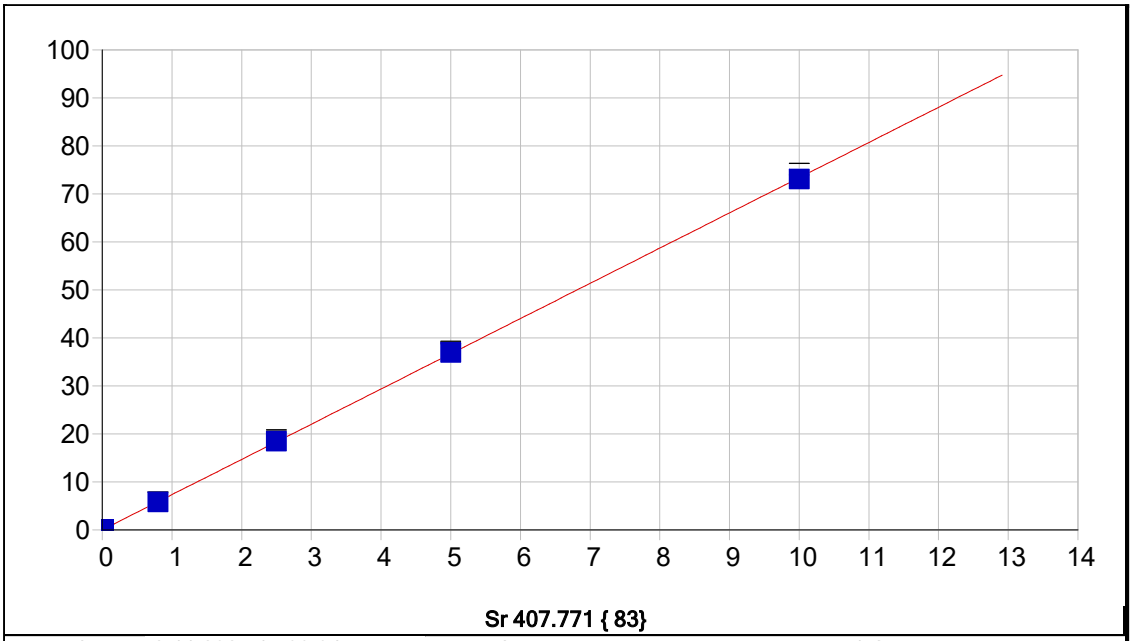
Li 670.784 { 50}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.011264	Re-Slope:	1.000000
A1 (Gain):	0.790429	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999808	Status:	OK.
Std Error of Est:	0.000364		
Predicted MDL:	0.002009		
Predicted MQL:	0.006697		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.01127	.000	1
S5	10.000	10.100	.100	1.00	8.0011	.031	1
S4	5.0000	4.9791	-.021	-.418	3.9500	.010	1
S3	2.5000	2.4473	-.053	-2.11	1.9472	.004	1
S1	.02000	.01052	-.009	-47.4	.01986	.001	1
S2	.80000	.78303	-.017	-2.12	.63070	.003	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778



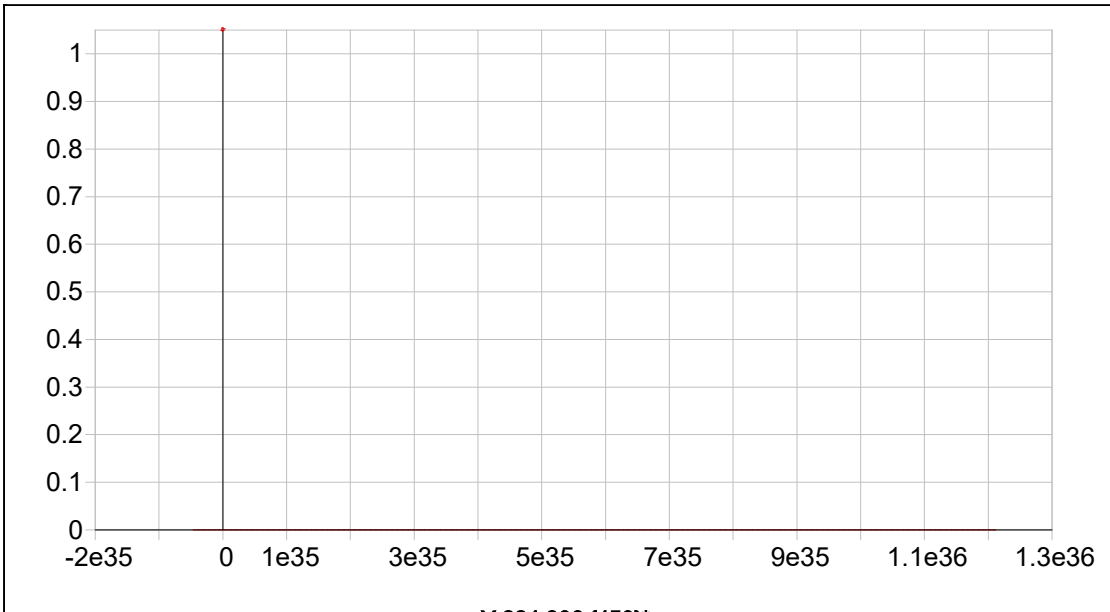
Sr 407.771 { 83}

Date of Fit:	8/11/2025 15:00:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003076	Re-Slope:	1.000000
A1 (Gain):	7.337270	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999982	Status:	OK.
Std Error of Est:	0.001045		
Predicted MDL:	0.000112		
Predicted MQL:	0.000373		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00307	.000	1
S1	.02000	.02113	.001	5.63	.15878	.001	1
S3	2.5000	2.5139	.014	.555	18.466	.308	1
S4	5.0000	5.0360	.036	.721	36.989	.271	1
S5	10.000	9.9579	-.042	-.421	73.137	1.20	1
S2	.80000	.79106	-.009	-1.12	5.8129	.043	1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

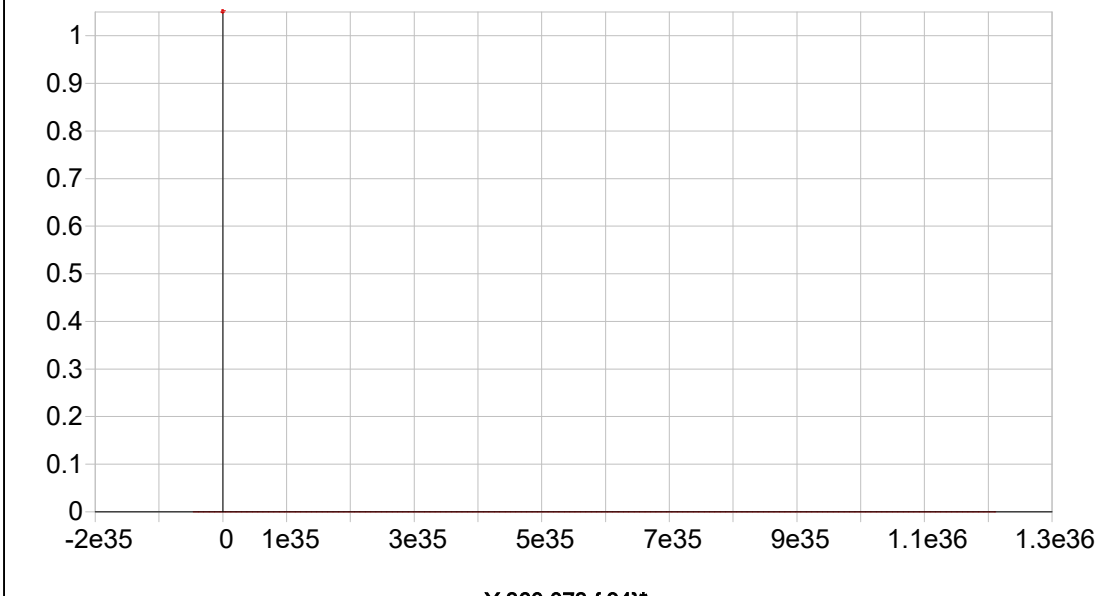


Y 224.306 {450}*

Date of Fit:	8/11/2025 15:00:04	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}*

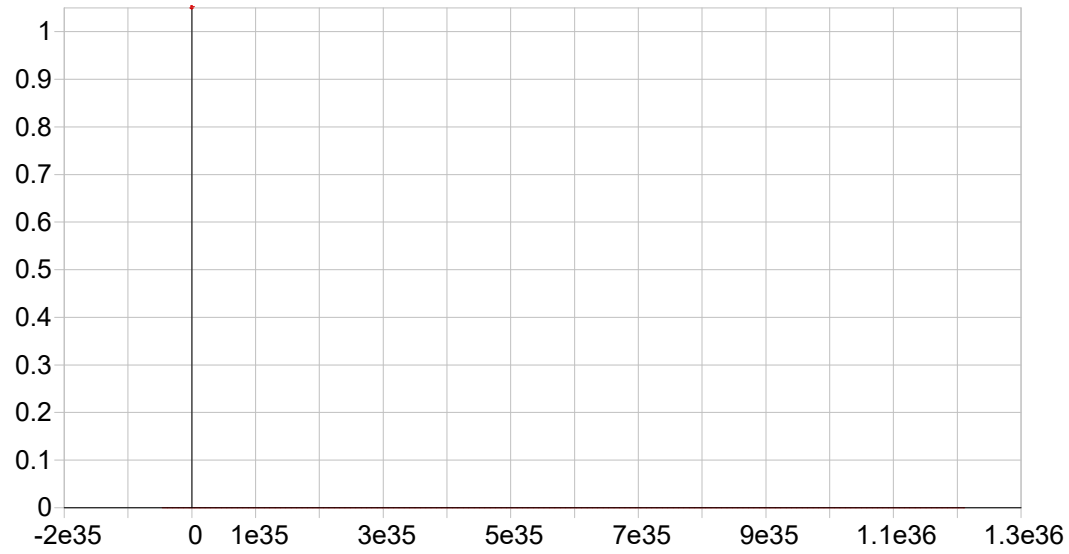
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

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



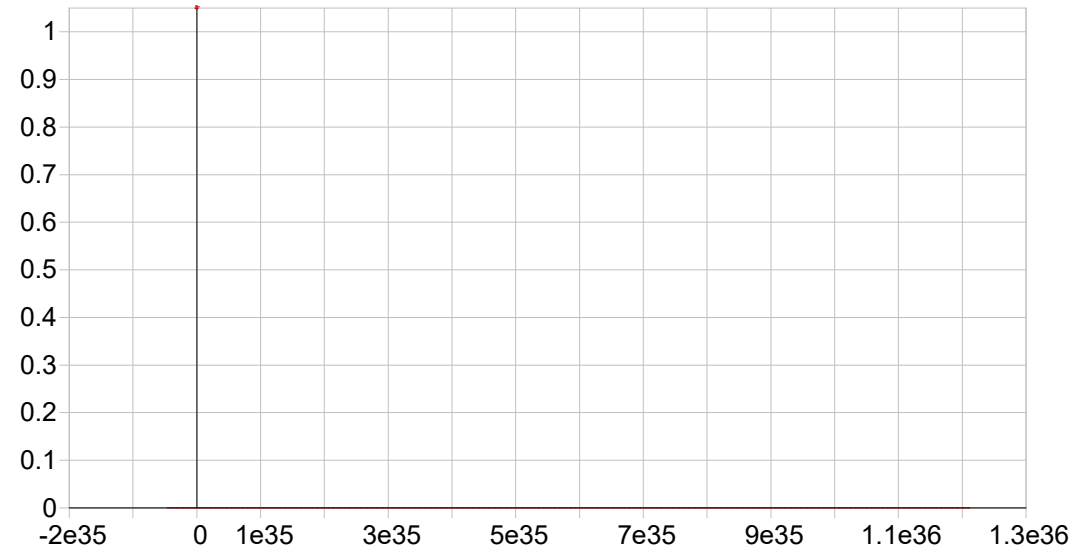
Y 371.030 { 91}*

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

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

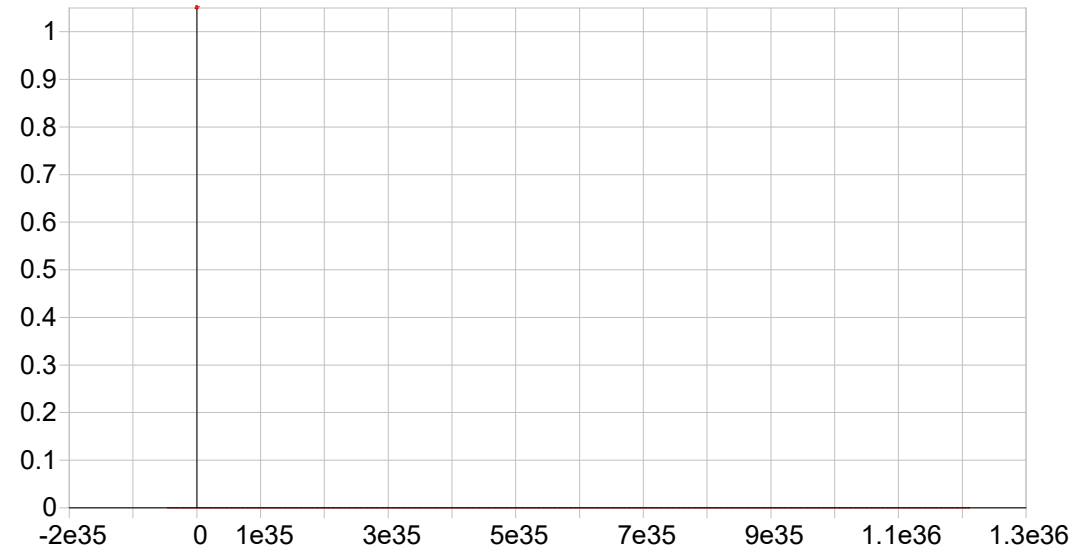


Y 224.306 {150}*

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:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

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

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: S0 Acquired: 8/11/2025 10:43:54 Type: Cal
Method: 6010-200.7 NEW(v90) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**-.00001**	**.00124**	**.00007**	**.00038**	**.00068**	**.00048**	**.09929**	**-.00038**
Stddev	.00005	.00010	.00016	.00002	.00007	.00062	.00236	.00038
%RSD	666.07	7.8133	210.69	6.1972	10.456	127.77	2.3734	99.855
#1	.00004	.00123	-.00011	.00040	.00060	.00069	.09671	-.00080
#2	-.00006	.00134	.00017	.00039	.00073	-.00021	.10133	-.00006
#3	-.00000	.00115	.00016	.00036	.00071	.00097	.09983	-.00029

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00004**	**.00207**	**.00023**	**.00046**	**.00039**	**.00007**	**.00030**	**.00001**
Stddev	.00031	.00018	.00003	.00014	.00016	.00001	.00020	.00003
%RSD	717.39	8.5418	12.647	29.497	41.389	18.682	65.812	264.55
#1	-.00040	.00226	.00026	.00059	.00021	.00009	.00049	.00003
#2	.00015	.00192	.00022	.00048	.00050	.00006	.00010	-.00002
#3	.00012	.00203	.00020	.00032	.00048	.00007	.00031	.00003

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00044**	**-.00074**	**.00165**	**-.00052**	**.00815**	**-.00073**	**.00900**	**.00100**
Stddev	.00014	.00013	.00020	.00016	.00041	.00011	.00022	.00018
%RSD	31.364	17.234	11.981	31.829	4.9895	15.111	2.4382	18.528
#1	-.00060	-.00068	.00179	-.00039	.00862	-.00071	.00916	.00119
#2	-.00033	-.00089	.00174	-.00046	.00796	-.00063	.00875	.00082
#3	-.00040	-.00066	.00142	-.00070	.00788	-.00085	.00909	.00098

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00031**	**.00163**	**.00014**	**-.00070**	**.00033**	**.01127**	**.00307**
Stddev	.00004	.00033	.00001	.00005	.00002	.00046	.00038
%RSD	13.621	20.178	8.7332	7.3256	5.4079	4.0867	12.500
#1	.00035	.00145	.00015	-.00074	.00033	.01157	.00309
#2	.00028	.00144	.00013	-.00064	.00035	.01151	.00344
#3	.00029	.00201	.00013	-.00071	.00031	.01074	.00268

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: S0 Acquired: 8/11/2025 10:43:54 Type: Cal
Method: 6010-200.7 NEW(v90) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	5993.7	102510.	10318.	4690.7	7321.7
Stddev	8.0	357.	65.	44.9	22.8
%RSD	.13405	.34857	.63230	.95707	.31192
#1	5995.2	102140.	10344.	4649.9	7336.9
#2	5985.0	102550.	10244.	4683.6	7295.5
#3	6000.8	102850.	10367.	4738.8	7332.8

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: S1 Acquired: 8/11/2025 10:48:18 Type: Cal
Method: 6010-200.7 NEW(v90) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**.00089**	**.00325**	**.00245**	**.00123**	**.00493**	**.00774**	**.32780**	**.03986**
Stddev	.00011	.00008	.00024	.00002	.00022	.00035	.00333	.00018
%RSD	12.211	2.4424	9.6459	1.5459	4.3771	4.5266	1.0172	.44789
#1	.00077	.00334	.00271	.00124	.00475	.00737	.32981	.03967
#2	.00093	.00319	.00237	.00120	.00486	.00779	.32964	.03990
#3	.00098	.00322	.00226	.00123	.00517	.00806	.32395	.04001

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.01646**	**.11877**	**.00220**	**.02940**	**.01396**	**.00040**	**.01043**	**.02481**
Stddev	.00013	.00066	.00012	.00018	.00014	.00001	.00014	.00042
%RSD	.81682	.55768	5.4939	.62842	1.0121	2.4987	1.3055	1.6919
#1	.01660	.11907	.00211	.02942	.01380	.00040	.01042	.02475
#2	.01646	.11922	.00215	.02920	.01405	.00040	.01057	.02443
#3	.01633	.11801	.00234	.02957	.01404	.00042	.01030	.02526

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.02316**	**.00117**	**.01279**	**.00453**	**.10551**	**.00696**	**.07170**	**.12880**
Stddev	.00015	.00005	.00020	.00044	.00088	.00014	.00054	.00033
%RSD	.65315	4.3613	1.5971	9.6347	.83521	1.9488	.75427	.25378
#1	.02325	.00123	.01282	.00476	.10649	.00711	.07231	.12906
#2	.02325	.00113	.01298	.00403	.10478	.00693	.07152	.12844
#3	.02299	.00117	.01258	.00481	.10525	.00684	.07128	.12891

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00546**	**.01234**	**.00117**	**-.00019**	**.00077**	**.01986**	**.15878**
Stddev	.00001	.00037	.00003	.00006	.00004	.00096	.00078
%RSD	.16644	2.9675	2.6289	31.566	4.9388	4.8112	.49306
#1	.00546	.01228	.00117	-.00027	.00080	.02084	.15895
#2	.00547	.01273	.00114	-.00015	.00078	.01893	.15947
#3	.00545	.01200	.00121	-.00017	.00072	.01980	.15793

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: S1 Acquired: 8/11/2025 10:48:18 Type: Cal
Method: 6010-200.7 NEW(v90) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	6419.6	107770.	10588.	4849.5	8123.4
Stddev	6.9	535.	35.	42.8	7.0
%RSD	.10782	.49643	.33381	.88331	.08593
#1	6411.8	108260.	10576.	4890.4	8121.3
#2	6425.1	107860.	10560.	4853.1	8131.2
#3	6421.8	107200.	10627.	4804.9	8117.7

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: S2 Acquired: 8/11/2025 10:52:36 Type: Cal
Method: 6010-200.7 NEW(v90) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**.03701**	**.04583**	**.14749**	**.03373**	**.06703**	**.09189**	**3.6182**	**.26801**
Stddev	.00030	.00094	.00071	.00022	.00031	.00017	.0244	.00093
%RSD	.81354	2.0462	.47969	.65889	.46815	.18755	.67339	.34754
#1	.03685	.04656	.14723	.03395	.06701	.09184	3.6084	.26765
#2	.03736	.04477	.14829	.03374	.06736	.09176	3.6003	.26731
#3	.03682	.04615	.14696	.03351	.06673	.09209	3.6460	.26907

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.1041**	**.22565**	**.03121**	**.38115**	**.12591**	**.00254**	**.16192**	**.04538**
Stddev	.0065	.00159	.00041	.00210	.00074	.00002	.00132	.00031
%RSD	.58425	.70533	1.3237	.55205	.58791	.80204	.81269	.68017
#1	1.1052	.22535	.03169	.38110	.12572	.00256	.16114	.04533
#2	1.1099	.22422	.03099	.38327	.12672	.00252	.16118	.04510
#3	1.0971	.22737	.03096	.37907	.12528	.00254	.16344	.04571

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.22305**	**.03707**	**.02559**	**.04778**	**.89782**	**.01585**	**.55377**	**.49525**
Stddev	.00137	.00044	.00027	.00008	.01197	.00022	.00268	.00178
%RSD	.61592	1.1809	1.0573	.16955	1.3333	1.3589	.48419	.35865
#1	.22271	.03758	.02590	.04786	.91124	.01609	.55181	.49505
#2	.22456	.03680	.02542	.04770	.89401	.01570	.55267	.49712
#3	.22187	.03684	.02544	.04779	.88823	.01574	.55682	.49359

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.10690**	**.21990**	**.00243**	**.01993**	**.01977**	**.63070**	**5.8129**
Stddev	.00082	.00177	.00002	.00008	.00008	.00303	.0430
%RSD	.76555	.80461	.76246	.41448	.38952	.48008	.74031
#1	.10701	.21940	.00243	.01995	.01986	.62830	5.7946
#2	.10766	.21844	.00241	.02000	.01974	.62969	5.7820
#3	.10603	.22187	.00244	.01984	.01972	.63410	5.8621

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: S2 Acquired: 8/11/2025 10:52:36 Type: Cal
Method: 6010-200.7 NEW(v90) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	6139.6	102520.	10359.	4673.3	7472.0
Stddev	34.7	1107.	21.	52.8	42.8
%RSD	.56542	1.0800	.20745	1.1304	.57253
#1	6146.8	101250.	10381.	4615.1	7473.3
#2	6101.8	103110.	10358.	4686.5	7428.6
#3	6170.1	103210.	10338.	4718.3	7514.2

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: S3 Acquired: 8/11/2025 10:56:40 Type: Cal
Method: 6010-200.7 NEW(v90) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**.11745**	**.14127**	**.46889**	**.10656**	**.21047**	**.28512**	**11.267**	**.84780**
Stddev	.00007	.00079	.00123	.00002	.00074	.00056	.014	.00293
%RSD	.05573	.56159	.26162	.01639	.34966	.19655	.12197	.34511
#1	.11742	.14044	.46814	.10656	.20963	.28521	11.274	.84586
#2	.11753	.14136	.47031	.10654	.21075	.28452	11.252	.85116
#3	.11741	.14202	.46823	.10657	.21102	.28563	11.277	.84637

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.5656**	**.70261**	**.09803**	**1.2183**	**.39283**	**.00789**	**.50586**	**.14249**
Stddev	.0087	.00088	.00025	.0019	.00042	.00004	.00084	.00055
%RSD	.24459	.12526	.25183	.15803	.10671	.46266	.16539	.38438
#1	3.5643	.70255	.09803	1.2180	.39238	.00787	.50627	.14212
#2	3.5750	.70177	.09779	1.2203	.39320	.00787	.50490	.14223
#3	3.5577	.70352	.09828	1.2164	.39292	.00793	.50641	.14312

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.71159**	**.11726**	**.07774**	**.15235**	**2.7814**	**.05231**	**1.7269**	**1.5528**
Stddev	.00081	.00011	.00047	.00034	.0061	.00032	.0121	.0024
%RSD	.11369	.09595	.60111	.22181	.21813	.62085	.70280	.15254
#1	.71194	.11721	.07804	.15207	2.7861	.05221	1.7172	1.5502
#2	.71216	.11739	.07720	.15226	2.7745	.05205	1.7405	1.5547
#3	.71067	.11719	.07797	.15272	2.7834	.05268	1.7230	1.5536

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.34218**	**.69043**	**.00750**	**.06666**	**.06382**	**1.9472**	**18.466**
Stddev	.00077	.00048	.00002	.00010	.00020	.0041	.308
%RSD	.22479	.06947	.28770	.14874	.30570	.20962	1.6694
#1	.34255	.69084	.00748	.06670	.06363	1.9425	18.820
#2	.34269	.68990	.00753	.06673	.06381	1.9497	18.256
#3	.34129	.69056	.00750	.06655	.06402	1.9495	18.322

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: S3 Acquired: 8/11/2025 10:56:40 Type: Cal
Method: 6010-200.7 NEW(v90) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	5980.5	99324.	10142.	4561.7	7105.3
Stddev	13.2	294.	15.	22.9	15.1
%RSD	.22105	.29633	.15234	.50142	.21253
#1	5993.1	99292.	10160.	4545.4	7114.8
#2	5966.7	99633.	10132.	4587.8	7087.8
#3	5981.7	99047.	10135.	4551.9	7113.1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: S4 Acquired: 8/11/2025 11:00:44 Type: Cal
Method: 6010-200.7 NEW(v90) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	.24302	.28623	.95798	.21592	.43169	.58030	22.687	1.6881
Stddev	.00138	.00146	.00376	.00091	.00175	.00054	.098	.0128
%RSD	.56583	.51005	.39200	.42340	.40424	.09247	.43205	.75606
#1	.24384	.28477	.96095	.21607	.43194	.58088	22.689	1.6860
#2	.24143	.28623	.95376	.21493	.42983	.58020	22.785	1.7018
#3	.24378	.28769	.95925	.21674	.43330	.57982	22.589	1.6766

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7.3913	1.4198	.19804	2.5281	.79591	.01626	1.0293	.29059
Stddev	.0299	.0037	.00016	.0101	.00379	.00011	.0054	.00086
%RSD	.40506	.26114	.08169	.40064	.47676	.69866	.52185	.29441
#1	7.4164	1.4158	.19788	2.5365	.79757	.01616	1.0264	.29019
#2	7.3582	1.4231	.19820	2.5169	.79157	.01625	1.0355	.29158
#3	7.3992	1.4206	.19804	2.5310	.79860	.01638	1.0259	.29001

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.4694	.23699	.16356	.31259	5.6827	.10987	3.3683	3.2078
Stddev	.0065	.00007	.00038	.00084	.0035	.00034	.0242	.0140
%RSD	.44512	.02967	.22930	.26784	.06199	.30856	.71720	.43552
#1	1.4748	.23692	.16338	.31179	5.6855	.10972	3.3611	3.2151
#2	1.4621	.23699	.16331	.31253	5.6787	.10964	3.3953	3.1917
#3	1.4714	.23707	.16399	.31346	5.6838	.11026	3.3486	3.2166

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.70764	1.4074	.01565	.13823	.13292	3.9500	36.989
Stddev	.00281	.0041	.00014	.00046	.00053	.0099	.271
%RSD	.39680	.28887	.89941	.33117	.39974	.25076	.73227
#1	.70990	1.4071	.01559	.13875	.13332	3.9511	36.743
#2	.70450	1.4117	.01554	.13789	.13232	3.9594	37.279
#3	.70853	1.4035	.01581	.13805	.13313	3.9396	36.945

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: S4 Acquired: 8/11/2025 11:00:44 Type: Cal
Method: 6010-200.7 NEW(v90) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	6044.3	101400.	10400.	4629.3	7060.9
Stddev	23.0	77.	70.	19.8	26.4
%RSD	.38040	.07594	.67290	.42848	.37410
#1	6034.2	101310.	10381.	4615.0	7042.4
#2	6070.6	101420.	10342.	4651.9	7091.1
#3	6028.2	101460.	10478.	4620.9	7049.1

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: S5 Acquired: 8/11/2025 11:04:56 Type: Cal
Method: 6010-200.7 NEW(v90) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	.49160	.59866	1.9613	.44411	.87327	1.1662	45.990	3.3592
Stddev	.00518	.01193	.0191	.00522	.00927	.0028	.716	.0378
%RSD	1.0546	1.9920	.97312	1.1746	1.0615	.24123	1.5576	1.1241
#1	.48658	.58506	1.9426	.43855	.86342	1.1668	46.814	3.3613
#2	.49128	.60732	1.9606	.44488	.87456	1.1687	45.641	3.3959
#3	.49694	.60359	1.9808	.44890	.88182	1.1632	45.515	3.3205

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	15.064	2.8207	.39362	5.1534	1.5773	.03305	2.0406	.58069
Stddev	.143	.0080	.00134	.0503	.0157	.00012	.0124	.00308
%RSD	.94696	.28198	.34050	.97681	.99791	.37591	.61025	.53056
#1	14.923	2.8217	.39506	5.1022	1.5621	.03306	2.0304	.58233
#2	15.062	2.8281	.39337	5.1550	1.5763	.03292	2.0545	.58260
#3	15.208	2.8123	.39242	5.2028	1.5935	.03317	2.0369	.57714

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.9863	.48283	.33782	.63008	11.370	.23161	6.8128	6.3402
Stddev	.0285	.00269	.00146	.00197	.080	.00102	.0742	.0636
%RSD	.95268	.55734	.43167	.31294	.70168	.44212	1.0886	1.0029
#1	2.9576	.48448	.33654	.62994	11.441	.23175	6.8137	6.2743
#2	2.9870	.48429	.33751	.63212	11.383	.23053	6.8865	6.3449
#3	3.0145	.47973	.33941	.62818	11.284	.23256	6.7382	6.4012

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.4308	2.8240	.03286	.28850	.28388	8.0011	73.137
Stddev	.0144	.0080	.00018	.00292	.00322	.0314	1.198
%RSD	1.0067	.28360	.53476	1.0135	1.1358	.39289	1.6376
#1	1.4165	2.8187	.03302	.28529	.28047	7.9653	73.263
#2	1.4305	2.8332	.03267	.28917	.28430	8.0239	74.267
#3	1.4453	2.8201	.03289	.29102	.28688	8.0143	71.882

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: S5 Acquired: 8/11/2025 11:04:56 Type: Cal
Method: 6010-200.7 NEW(v90) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**5942.3**	**98965.**	**10459.**	**4492.4**	**6748.8**
Stddev	37.7	495.	98.	35.3	42.8
%RSD	.63407	.50023	.94026	.78564	.63353
#1	5979.3	98418.	10432.	4454.2	6790.7
#2	5943.6	99096.	10377.	4499.2	6750.5
#3	5904.0	99382.	10568.	4523.7	6705.3

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: ICV01 Acquired: 8/11/2025 11:09:07 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.703710**	**3.826857**	**3.838271**	**3.724680**	**3.856451**	**7.496178**
Stddev	.033228	.072244	.033572	.032106	.035205	.126583
%RSD	.8971663	1.887819	.8746530	.8619729	.9128754	1.688632
#1	3.665471	3.899716	3.799832	3.688408	3.815973	7.620620
#2	3.720093	3.825613	3.853147	3.749451	3.873450	7.367558
#3	3.725565	3.755243	3.861834	3.736181	3.879930	7.500357

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.502316**	**.1902715**	**1.843463**	**18.78171**	**.7554262**	**1.876364**
Stddev	.113046	.0029095	.017349	.31393	.0044887	.017658
%RSD	1.506818	1.529123	.9410834	1.671483	.5941963	.9410671
#1	7.621565	.1933512	1.823476	19.11702	.7590517	1.856026
#2	7.396711	.1875690	1.852286	18.49476	.7504056	1.885282
#3	7.488671	.1898943	1.854627	18.73336	.7568214	1.887784

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9618908**	**3.714232**	**1.881977**	**18.80690**	**1.869059**	**.9396982**
Stddev	.0100282	.031786	.037279	.35143	.016181	.0046108
%RSD	1.042551	.8557764	1.980825	1.868611	.8657379	.4906655
#1	.9503148	3.750924	1.924597	19.16877	1.850410	.9450044
#2	.9674312	3.696651	1.855438	18.46694	1.877379	.9374224
#3	.9679264	3.695120	1.865896	18.78499	1.879387	.9366677

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**18.27446**	**1.913388**	**1.855189**	**18.40783**	F **.0078851**	F **.0003375**
Stddev	.18264	.030921	.007285	.10197	.0005692	.0005468
%RSD	.9994252	1.616046	.3926986	.5539496	7.219287	161.9913
#1	18.47732	1.945642	1.863355	18.52527	.0083843	.0008085
#2	18.22295	1.883999	1.849355	18.35636	.0080059	.0004662
#3	18.12311	1.910523	1.852858	18.34184	.0072652	-.000262

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: ICV01 Acquired: 8/11/2025 11:09:07 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0006739	F -.004777	F -.031488	F .0042360	F .0112268	F .0003679
Stddev	.0005775	.000451	.010599	.0020723	.0011598	.0013688
%RSD	85.69908	9.436131	33.66057	48.92144	10.33026	372.0543
#1	.0012443	-.004944	-.021971	.0019554	.0113119	-.000002
#2	.0006878	-.004267	-.042911	.0060037	.0123417	-.000778
#3	.0000895	-.005120	-.029583	.0047489	.0100268	.001884

Elem	Sr4077
Units	ppm
Avg	F -.003415
Stddev	.000050
%RSD	1.475819
#1	-.003371
#2	-.003405
#3	-.003470

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6190.545	103850.7	10762.23	4730.266	7323.531
Stddev	52.350	346.5	144.36	13.608	55.351
%RSD	.8456506	.3336144	1.341374	.2876892	.7558022
#1	6248.839	103539.4	10607.62	4714.679	7385.386
#2	6147.544	104224.0	10893.51	4739.788	7278.668
#3	6175.251	103788.6	10785.56	4736.330	7306.539

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: LLICV01 Acquired: 8/11/2025 11:33:24 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0191624**	**.0372607**	**.0123583**	**.0215621**	**.0484242**	**.1188708**
Stddev	.0014319	.0016585	.0008124	.0006657	.0009499	.0093450
%RSD	7.472499	4.451164	6.573372	3.087206	1.961704	7.861511
#1	.0175335	.0375853	.0127180	.0213417	.0495046	.1208168
#2	.0197311	.0354638	.0129288	.0223100	.0480481	.1270897
#3	.0202227	.0387329	.0114282	.0210346	.0477198	.1087060

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0972932**	**.0058008**	**.0058116**	**2.022339**	**.0099433**	**.0280867**
Stddev	.0013181	.0000583	.0000588	.012762	.0005077	.0001125
%RSD	1.354799	1.004538	1.011360	.6310267	5.105921	.4003936
#1	.0982648	.0058658	.0058532	2.036793	.0098162	.0281719
#2	.0978220	.0057833	.0057443	2.017591	.0105024	.0281289
#3	.0957928	.0057533	.0058373	2.012631	.0095112	.0279592

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0206863**	**.0984201**	**.0238412**	**2.058116**	**.0384917**	**.0101529**
Stddev	.0002031	.0042130	.0005843	.023080	.0001448	.0003006
%RSD	.9819888	4.280665	2.450592	1.121402	.3761201	2.960269
#1	.0208642	.0977746	.0242258	2.081045	.0383703	.0101099
#2	.0204650	.1029186	.0241290	2.034888	.0384529	.0104725
#3	.0207297	.0945671	.0231689	2.058415	.0386519	.0098761

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.658880**	**.0419713**	**.0414765**	**1.671131**	**.0883155**	**.1983565**
Stddev	.021588	.0011839	.0008182	.052785	.0004857	.0004294
%RSD	1.301389	2.820674	1.972783	3.158628	.5500079	.2164941
#1	1.650507	.0432778	.0412226	1.663176	.0884823	.1988396
#2	1.683401	.0409697	.0423916	1.727441	.0877683	.1982119
#3	1.642733	.0416665	.0408154	1.622775	.0886958	.1980181

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: LLICV01 Acquired: 8/11/2025 11:33:24 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0364512	.0383076	F .3194050	.0196501	.0191691	F .0111126
Stddev	.0001780	.0011806	.0156636	.0024318	.0021873	.0010542
%RSD	.4883942	3.081974	4.903991	12.37534	11.41027	9.486753
#1	.0366109	.0376032	.3257847	.0197601	.0216794	.0111632
#2	.0364835	.0376490	.3308719	.0220250	.0176732	.0100340
#3	.0362593	.0396706	.3015583	.0171652	.0181548	.0121406

Elem	Sr4077
Units	ppm
Avg	.0213067
Stddev	.0001777
%RSD	.8338507
#1	.0215112
#2	.0211899
#3	.0212191

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6574.384	110554.0	10976.49	4931.702	8316.233
Stddev	21.200	1894.5	42.78	73.739	26.258
%RSD	.3224643	1.713599	.3897851	1.495202	.3157496
#1	6567.112	110718.4	10945.39	4959.886	8304.808
#2	6598.263	108582.7	11025.28	4848.028	8346.268
#3	6557.777	112360.9	10958.79	4987.191	8297.622

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: ICB01 Acquired: 8/11/2025 11:37:41 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	**-.000859**	**-.001015**	**.0007450**	**-.002143**	**-.000577**	**.0098056**	**-.002928**
Stddev	.000261	.002300	.0004953	.000643	.001562	.0049697	.001207
%RSD	30.37608	226.6849	66.48760	30.02368	270.5752	50.68272	41.23373
#1	-.000739	-.000169	.0003302	-.001418	.001119	.0075260	-.002436
#2	-.001158	-.003618	.0006114	-.002647	-.000896	.0063845	-.002045
#3	-.000680	.000743	.0012934	-.002364	-.001956	.0155061	-.004304

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000218**	**.0000838**	**.0073645**	**.0003693**	**-.000153**	**-.000009**	**-.010506**
Stddev	.0000100	.0000193	.0094506	.0001586	.000134	.000322	.009377
%RSD	45.91539	23.04531	128.3268	42.96219	87.63238	3743.484	89.25710
#1	.0000111	.0000861	.0064006	.0004660	-.000308	.000031	-.019481
#2	.0000234	.0001019	-.001567	.0004556	-.000076	.000292	-.011264
#3	.0000309	.0000635	.017260	.0001862	-.000075	-.000348	-.000773

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007200**	**-.009378**	**.0001445**	**.0002595**	**-.005269**	**.0046458**	**-.000555**
Stddev	.0002704	.015647	.0002798	.0005851	.003435	.0030621	.000255
%RSD	37.55437	166.8418	193.5963	225.4488	65.18663	65.91128	45.89312
#1	.0006123	-.022459	-.000178	-.000401	-.001325	.0065591	-.000791
#2	.0010276	-.013631	.000320	.000465	-.007603	.0011141	-.000588
#3	.0005200	.007955	.000292	.000714	-.006879	.0062642	-.000285

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0347219**	**-.005942**	**-.000331**	**.0004493**	**-.000841**	**.0095883**	**.0023386**
Stddev	.0177728	.000252	.000262	.0002169	.001071	.0029030	.0009306
%RSD	51.18619	4.241205	78.98514	48.28795	127.4059	30.27627	39.79394
#1	.0175928	-.006232	-.000547	.0006256	-.000999	.0071037	.0031528
#2	.0334978	-.005817	-.000407	.0005152	.000301	.0088820	.0025389
#3	.0530752	-.005777	-.000040	.0002070	-.001824	.0127793	.0013242

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: ICB01 Acquired: 8/11/2025 11:37:41 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0003207	-.003125	.0000540
Stddev	.0013444	.001067	.0000340
%RSD	419.2489	34.14245	63.02483
#1	.0018604	-.003283	.0000602
#2	-.000620	-.004105	.0000173
#3	-.000278	-.001988	.0000845

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6305.986	108241.0	11127.55	4880.328	7840.798
Stddev	28.034	1500.7	247.30	43.208	26.759
%RSD	.4445553	1.386479	2.222400	.8853494	.3412823
#1	6338.342	106663.2	10978.75	4835.269	7871.552
#2	6290.648	109650.5	10990.88	4921.410	7822.826
#3	6288.968	108409.3	11413.02	4884.304	7828.018

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CRI01 Acquired: 8/11/2025 11:41:59 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	.0186210	.0391713	.0120737	.0190165	.0466080	.0890548	.0923093
Stddev	.0010238	.0009304	.0002002	.0015288	.0012126	.0064499	.0006215
%RSD	5.498116	2.375179	1.657741	8.039545	2.601704	7.242573	.6732968
#1	.0174516	.0389128	.0122191	.0172626	.0453266	.0861181	.0921428
#2	.0193554	.0383975	.0121566	.0197197	.0477376	.0964504	.0929971
#3	.0190562	.0402036	.0118454	.0200673	.0467596	.0845958	.0917880

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058623	.0053304	1.947123	.0094305	.0275844	.0201411	.0855028
Stddev	.0000893	.0000852	.004079	.0001418	.0001180	.0004381	.0044490
%RSD	1.522780	1.599398	.2094986	1.503637	.4277843	2.175127	5.203338
#1	.0057851	.0052336	1.944272	.0092717	.0274507	.0197094	.0806926
#2	.0059600	.0053631	1.951796	.0094753	.0276743	.0201286	.0894700
#3	.0058417	.0053945	1.945302	.0095444	.0276280	.0205853	.0863458

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0200881	2.053550	.0374041	.0096998	1.771066	.0414284	.0374307
Stddev	.0002377	.014366	.0004624	.0000911	.018985	.0007628	.0005106
%RSD	1.183279	.6995626	1.236263	.9386435	1.071929	1.841355	1.364155
#1	.0199237	2.054807	.0369190	.0097278	1.781149	.0414859	.0379787
#2	.0203607	2.038596	.0374532	.0097734	1.782881	.0421608	.0373450
#3	.0199799	2.067245	.0378399	.0095980	1.749167	.0406384	.0369683

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.770271	.0902278	.1926604	.0370013	.0374651	.3298719	.0191628
Stddev	.045823	.0005806	.0020644	.0005561	.0007856	.0053344	.0006297
%RSD	2.588487	.6434975	1.071513	1.502959	2.096931	1.617107	3.285907
#1	1.823178	.0906877	.1902858	.0364946	.0365831	.3355224	.0184393
#2	1.744425	.0904203	.1936675	.0369129	.0380898	.3291703	.0195872
#3	1.743209	.0895754	.1940280	.0375963	.0377225	.3249230	.0194620

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CRI01 Acquired: 8/11/2025 11:41:59 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0141480	.0163512	.0188177
Stddev	.0018432	.0018940	.0001259
%RSD	13.02807	11.58322	.6691043
#1	.0145139	.0179627	.0189038
#2	.0121492	.0168259	.0188762
#3	.0157808	.0142650	.0186732

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6336.023	107682.0	10840.01	4864.936	7828.331
Stddev	45.003	682.6	73.66	27.782	52.290
%RSD	.7102643	.6339435	.6795282	.5710614	.6679582
#1	6387.911	106942.9	10875.64	4835.287	7888.287
#2	6307.630	107814.3	10755.31	4890.369	7792.175
#3	6312.529	108288.8	10889.08	4869.150	7804.530

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: ICSA01 Acquired: 8/11/2025 11:48:28 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086833	.0039518	-.005208	.0025134	-.006340	235.4451
Stddev	.0018511	.0031259	.002365	.0042920	.000699	4.4182
%RSD	21.31786	79.10107	45.40823	170.7631	11.02102	1.876520
#1	.0065824	.0056092	-.002587	-.002338	-.006643	238.2343
#2	.0100749	.0003462	-.005855	.005816	-.006837	237.7498
#3	.0093925	.0059000	-.007181	.004063	-.005541	230.3511

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004404	.0014538	.0009567	225.4617	.0566117	.0015741
Stddev	.0012653	.0000675	.0001943	4.3513	.0003892	.0001770
%RSD	287.3364	4.641238	20.31292	1.929970	.6874518	11.24360
#1	.0014516	.0015153	.0010225	228.1608	.0569248	.0017692
#2	.0008479	.0014646	.0007380	227.7824	.0561760	.0015294
#3	-.000978	.0013816	.0011095	220.4420	.0567343	.0014238

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055895	97.52555	.0082858	236.0467	.0052092	.0015790
Stddev	.0006911	.28504	.0003319	4.6787	.0001020	.0005969
%RSD	12.36425	.2922705	4.005941	1.982091	1.958573	37.79975
#1	.0060911	97.79999	.0086182	239.0431	.0051870	.0021826
#2	.0048012	97.23098	.0082849	238.4415	.0051201	.0015653
#3	.0058762	97.54568	.0079544	230.6554	.0053205	.0009891

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1117752	.0055118	.0027655	.1668830	.0382523	.0000836
Stddev	.0191224	.0010524	.0002348	.0307327	.0062676	.0001079
%RSD	17.10792	19.09364	8.488871	18.41571	16.38484	129.0644
#1	.1338552	.0064238	.0026504	.1892697	.0355721	-.000037
#2	.1005911	.0043603	.0026106	.1318438	.0337705	.000172
#3	.1008793	.0057513	.0030357	.1795356	.0454144	.000116

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: ICSA01 Acquired: 8/11/2025 11:48:28 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003163	-.006540	.0169863	.0067388	-.008961	F -.027519
Stddev	.000552	.001389	.0104501	.0025689	.003132	.001872
%RSD	17.44455	21.23939	61.52054	38.12083	34.94600	6.803191
#1	-.003363	-.008141	.0055023	.0062423	-.012001	-.029019
#2	-.002539	-.005826	.0195201	.0095197	-.005746	-.025421
#3	-.003587	-.005654	.0259365	.0044544	-.009136	-.028116

Elem	Sr4077
Units	ppm
Avg	.0004146
Stddev	.0016863
%RSD	406.7195
#1	.0009866
#2	.0017405
#3	-.001483

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5775.361	94130.40	10753.03	4332.812	6525.065
Stddev	47.740	238.77	232.89	18.977	52.860
%RSD	.8266171	.2536640	2.165773	.4379722	.8101067
#1	5750.114	93875.49	10615.75	4310.917	6499.559
#2	5830.423	94348.85	10621.41	4344.503	6585.842
#3	5745.545	94166.84	11021.92	4343.017	6489.795

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: ICSAB01 Acquired: 8/11/2025 11:52:38 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1038234**	**.1037578**	**.0389540**	**.0473289**	**.5822557**	**242.0071**
Stddev	.0015770	.0044308	.0021700	.0071657	.0027255	.1713
%RSD	1.518924	4.270363	5.570606	15.14017	.4680972	.0707789
#1	.1054830	.0988493	.0409618	.0541302	.5852450	241.8728
#2	.1036425	.1049624	.0366519	.0398474	.5816133	242.2000
#3	.1023446	.1074619	.0392483	.0480090	.5799087	241.9486

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4853022**	**.4887344**	**.9330525**	**231.5244**	**.5298708**	**.4720535**
Stddev	.0030181	.0019407	.0025949	.4892	.0111536	.0014201
%RSD	.6219085	.3970935	.2781038	.2112841	2.104962	.3008334
#1	.4829748	.4874180	.9342873	230.9949	.5376310	.4731950
#2	.4842196	.4878221	.9347994	231.6188	.5170892	.4725024
#3	.4887124	.4909632	.9300708	231.9595	.5348923	.4704633

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4663878**	**96.09541**	**.4812301**	**243.0652**	**.9385123**	**.2086518**
Stddev	.0030495	1.72402	.0030722	.6394	.0027463	.0036196
%RSD	.6538590	1.794071	.6384051	.2630404	.2926187	1.734754
#1	.4675611	96.86211	.4779233	242.4422	.9413175	.2105092
#2	.4686765	94.12103	.4817714	243.7198	.9383903	.2044806
#3	.4629259	97.30309	.4839957	243.0336	.9358290	.2109656

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0748585**	**.4799159**	**.9896781**	**.0940495**	F **.0235864**	F **-.000018**
Stddev	.0102969	.0034490	.0180461	.0151730	.0057827	.000218
%RSD	13.75519	.7186581	1.823426	16.13297	24.51711	1187.507
#1	.0727541	.4759858	.9984668	.0784956	.0261178	-.000256
#2	.0860450	.4813235	.9689213	.0948424	.0169696	.000028
#3	.0657763	.4824386	1.001646	.1088104	.0276717	.000173

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: ICSAB01 Acquired: 8/11/2025 11:52:38 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.002549	F -.007765	F .0098869	F .0102850	F -.004405	F -.032918
Stddev	.000289	.000974	.0131904	.0023084	.006771	.001109
%RSD	11.33338	12.54585	133.4131	22.44423	153.7067	3.368363
#1	-.002532	-.007363	-.005037	.0089561	-.002993	-.032050
#2	-.002269	-.008875	.019983	.0129505	-.011771	-.032538
#3	-.002846	-.007055	.014715	.0089484	.001548	-.034167

Elem	Sr4077
Units	ppm
Avg	F .0041780
Stddev	.0018166
%RSD	43.47983
#1	.0028930
#2	.0062564
#3	.0033848

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5754.285	94739.82	10388.23	4376.071	6502.565
Stddev	27.904	1611.13	36.07	78.733	22.717
%RSD	.4849341	1.700584	.3472013	1.799162	.3493579
#1	5735.723	93489.87	10419.74	4328.975	6491.788
#2	5740.756	96558.09	10348.89	4466.963	6487.242
#3	5786.375	94171.50	10396.05	4332.274	6528.665

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: ICSADLX20 Acquired: 8/11/2025 11:56:43 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	**-.000267**	**-.000142**	**-.000396**	**.0031638**	**-.000469**	**11.85947**	**-.002371**
Stddev	.002567	.000532	.000201	.0024068	.000568	.04902	.000624
%RSD	960.6153	374.5362	50.70933	76.07159	121.0794	.4133465	26.29409
#1	-.002955	-.000633	-.000164	.0050206	-.000936	11.89552	-.001679
#2	-.000004	-.000218	-.000518	.0004447	.000163	11.87925	-.002889
#3	.002158	.000424	-.000506	.0040263	-.000634	11.80365	-.002546

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000719**	**-.000050**	**11.80475**	**.0028202**	**-.000091**	**.0011194**	**4.571838**
Stddev	.0000184	.000027	.07035	.0002414	.000138	.0002821	.023523
%RSD	25.54021	53.10838	.5959351	8.559295	152.8196	25.20332	.5145090
#1	.0000894	-.000028	11.83910	.0025556	-.000251	.0013436	4.581309
#2	.0000528	-.000080	11.85133	.0028766	-.000011	.0012121	4.589149
#3	.0000736	-.000043	11.72383	.0030283	-.000011	.0008026	4.545056

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008997**	**12.22573**	**.0005812**	**.0001625**	**-.036271**	**.0033756**	**-.000430**
Stddev	.0005135	.07732	.0003911	.0005310	.008846	.0023599	.000143
%RSD	57.07867	.6324216	67.28621	326.8214	24.38897	69.91072	33.22635
#1	.0011754	12.24989	.0002271	.0004796	-.029896	.0029389	-.000313
#2	.0012166	12.28807	.0010010	.0004583	-.032546	.0012645	-.000388
#3	.0003072	12.13921	.0005156	-.000451	-.046370	.0059233	-.000589

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.076806**	**-.008185**	**-.001032**	**-.000997**	**-.000490**	**.0025846**	**.0018597**
Stddev	.038995	.000665	.000196	.000283	.000303	.0022796	.0005271
%RSD	50.77162	8.126180	18.95811	28.41451	61.83070	88.19818	28.34086
#1	-.098431	-.007437	-.000825	-.001303	-.000817	.0017215	.0018853
#2	-.100197	-.008712	-.001057	-.000743	-.000218	.0051697	.0013204
#3	-.031789	-.008405	-.001213	-.000947	-.000435	.0008626	.0023736

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: ICSADLX20 Acquired: 8/11/2025 11:56:43 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0000875	-.006513	.0001117
Stddev	.0012852	.000832	.0000169
%RSD	1469.290	12.77765	15.11593
#1	.0014668	-.005739	.0001060
#2	-.000128	-.007393	.0001307
#3	-.001076	-.006406	.0000984

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6223.271	105185.9	10697.39	4801.683	7548.187
Stddev	31.246	556.2	114.44	39.704	40.233
%RSD	.5020777	.5287972	1.069816	.8268797	.5330167
#1	6187.391	104840.8	10686.56	4782.086	7503.383
#2	6244.489	104889.3	10588.75	4775.587	7581.226
#3	6237.934	105827.5	10816.86	4847.375	7559.953

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: ICSABDLX20 Acquired: 8/11/2025 12:00:58 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	.0038740	.0046707	.0030692	.0029672	.0263850	11.52422	.0187199
Stddev	.0007316	.0007117	.0010235	.0031615	.0024974	.16710	.0007423
%RSD	18.88491	15.23769	33.34844	106.5488	9.465319	1.449998	3.965442
#1	.0045937	.0054924	.0042343	.0065384	.0256130	11.33132	.0191980
#2	.0038971	.0042741	.0026586	.0018369	.0243647	11.61679	.0190968
#3	.0031311	.0042457	.0023148	.0005262	.0291772	11.62455	.0178647

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0239303	.0450059	11.51062	.0261690	.0225814	.0244127	4.581722
Stddev	.0003315	.0000466	.12271	.0004078	.0000306	.0001816	.042494
%RSD	1.385439	.1034388	1.066055	1.558275	.1353935	.7437872	.9274730
#1	.0235575	.0449963	11.37086	.0257552	.0225893	.0243011	4.629758
#2	.0241920	.0449649	11.60068	.0265705	.0226072	.0243148	4.566375
#3	.0240414	.0450565	11.56032	.0261814	.0225476	.0246222	4.549034

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0245884	11.90939	.0458980	.0100632	-.025908	.0250883	.0483618
Stddev	.0008134	.17070	.0003008	.0004111	.008390	.0021815	.0002475
%RSD	3.308087	1.433353	.6552648	4.085124	32.38311	8.695113	.5117161
#1	.0237002	11.71738	.0461828	.0095964	-.016409	.0229144	.0485892
#2	.0247680	12.04398	.0455835	.0102221	-.032304	.0272772	.0480982
#3	.0252970	11.96681	.0459277	.0103712	-.029013	.0250733	.0483979

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.087214	-.008231	-.000717	-.000671	-.000555	.0060276	.0018369
Stddev	.028538	.000537	.000276	.000351	.001445	.0044225	.0017957
%RSD	32.72163	6.528525	38.55348	52.31170	260.2243	73.37090	97.75693
#1	-.080579	-.007793	-.000474	-.000441	.000242	.0076859	.0011631
#2	-.062578	-.008070	-.000659	-.001075	-.002224	.0010156	.0004755
#3	-.118485	-.008831	-.001017	-.000497	.000316	.0093813	.0038719

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: ICSABDLX20 Acquired: 8/11/2025 12:00:58 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.000771**	**-.005854**	**.0000024**
Stddev	.002753	.001358	.0000264
%RSD	357.3569	23.19819	1095.858
#1	-.003655	-.006944	-.000027
#2	.001830	-.004333	.000012
#3	-.000487	-.006287	.000023

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6259.504**	**105805.7**	**10957.28**	**4852.402**	**7626.359**
Stddev	17.962	289.1	139.77	23.687	24.652
%RSD	.2869602	.2732809	1.275557	.4881419	.3232450
#1	6252.350	105632.3	11110.55	4835.219	7602.673
#2	6279.941	105645.3	10836.88	4842.566	7651.874
#3	6246.221	106139.5	10924.41	4879.422	7624.529

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCV01 Acquired: 8/11/2025 12:05:10 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	**4.928158**	**4.757056**	**4.834878**	**4.892434**	**4.993287**	**9.901355**	**10.01640**
Stddev	.046281	.182801	.049922	.042534	.059618	.019798	.16490
%RSD	.9391158	3.842744	1.032531	.8693753	1.193960	.1999543	1.646347
#1	4.891944	4.585105	4.797271	4.852457	4.942692	9.921316	10.08485
#2	4.912231	4.949055	4.815847	4.887715	4.978157	9.901023	9.82829
#3	4.980300	4.737007	4.891516	4.937131	5.059012	9.881724	10.13606

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2476869**	**2.418513**	**24.85438**	**.9849599**	**2.437336**	**1.234742**	**4.977107**
Stddev	.0016489	.022739	.06084	.0036859	.023173	.010694	.011787
%RSD	.6657274	.9402104	.2447669	.3742207	.9507312	.8660716	.2368337
#1	.2494900	2.400873	24.90943	.9884079	2.420395	1.228005	4.963916
#2	.2462557	2.410490	24.86464	.9810750	2.427870	1.229150	4.980798
#3	.2473151	2.444176	24.78907	.9853969	2.463743	1.247073	4.986607

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.500016**	**24.74657**	**2.434531**	**1.241729**	**24.91216**	**2.480315**	**2.488981**
Stddev	.002983	.06847	.025106	.004938	.05601	.004752	.007775
%RSD	.1193377	.2766925	1.031263	.3977058	.2248490	.1915953	.3123951
#1	2.503271	24.81495	2.416542	1.247334	24.85671	2.483439	2.497913
#2	2.497411	24.67801	2.423837	1.238016	24.96872	2.482660	2.483724
#3	2.499366	24.74673	2.463214	1.239837	24.91104	2.474846	2.485305

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.48090**	**4.942209**	**5.029275**	**4.886589**	**4.987667**	**4.859764**	**4.828301**
Stddev	.06923	.038612	.046828	.042041	.006226	.007906	.039494
%RSD	.2828100	.7812721	.9311137	.8603385	.1248373	.1626792	.8179646
#1	24.40183	4.984251	4.992744	4.852432	4.994004	4.851408	4.798949
#2	24.53065	4.908332	5.013015	4.873794	4.987441	4.860761	4.812751
#3	24.51021	4.934045	5.082066	4.933541	4.981557	4.867125	4.873203

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCV01 Acquired: 8/11/2025 12:05:10 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.744619**	**4.962636**	**4.980104**
Stddev	.038973	.002410	.084177
%RSD	.8214078	.0485625	1.690266
#1	4.700963	4.965187	4.966254
#2	4.756990	4.960397	4.903710
#3	4.775905	4.962324	5.070347

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6170.588**	**103180.8**	**10672.75**	**4699.998**	**7268.504**
Stddev	50.576	515.0	93.53	19.844	63.551
%RSD	.8196357	.4990842	.8763636	.4222052	.8743334
#1	6191.231	102894.3	10611.85	4698.673	7303.258
#2	6207.577	103775.3	10780.44	4720.471	7307.099
#3	6112.955	102872.8	10625.96	4680.850	7195.155

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCB01 Acquired: 8/11/2025 12:09:19 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018401**	**.0002625**	**.0026605**	**.0010134**	**.0005709**	**.0232367**	**.0023921**
Stddev	.0003712	.0017876	.0003735	.0032908	.0007503	.0065899	.0007302
%RSD	20.17348	681.1087	14.04010	324.7395	131.4087	28.35976	30.52736
#1	.0022633	.0008329	.0028291	.0030790	-.000188	.0260606	.0030325
#2	.0016874	-.001741	.0029200	-.002782	.001313	.0157055	.0025469
#3	.0015695	.001695	.0022324	.002743	.000588	.0279441	.0015968

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001023**	**.0009023**	**.0098801**	**.0003408**	**.0008506**	**.0003692**	**-.004574**
Stddev	.0000299	.0000681	.0062194	.0001332	.0001192	.0000289	.007063
%RSD	29.25649	7.552420	62.94916	39.08727	14.01194	7.819610	154.4290
#1	.0000702	.0008493	.0161423	.0004937	.0007448	.0003569	-.012558
#2	.0001071	.0008783	.0097938	.0002505	.0009797	.0003484	.000858
#3	.0001295	.0009792	.0037043	.0002780	.0008272	.0004021	-.002021

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011876**	**.0279049**	**.0011353**	**.0007425**	**-.049521**	**.0031372**	**.0005832**
Stddev	.0004570	.0063551	.0001719	.0001541	.014447	.0012544	.0002275
%RSD	38.47914	22.77401	15.14530	20.74580	29.17259	39.98484	39.01199
#1	.0016630	.0224834	.0013095	.0007170	-.044812	.0042624	.0003231
#2	.0007516	.0263328	.0011307	.0006029	-.065735	.0033646	.0007452
#3	.0011482	.0348984	.0009657	.0009078	-.038017	.0017847	.0006812

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.062188**	**-.002400**	**.0022617**	**.0022623**	**.0019088**	**-.007105**	**.0063986**
Stddev	.036005	.001112	.0002106	.0001126	.0011535	.005108	.0005071
%RSD	57.89778	46.34994	9.310505	4.976769	60.42887	71.88944	7.925363
#1	-.023200	-.001126	.0024670	.0022822	.0018118	-.002462	.0065291
#2	-.094186	-.003178	.0020462	.0021410	.0031077	-.006277	.0058390
#3	-.069178	-.002895	.0022719	.0023635	.0008069	-.012576	.0068277

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCB01 Acquired: 8/11/2025 12:09:19 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0022960	-.003839	.0019340
Stddev	.0010234	.002108	.0001108
%RSD	44.57397	54.91356	5.728034
#1	.0014452	-.002877	.0019802
#2	.0034317	-.002383	.0020143
#3	.0020111	-.006257	.0018076

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6404.927	107739.3	10923.20	4898.650	8113.453
Stddev	59.151	424.5	47.87	20.049	78.925
%RSD	.9235303	.3940508	.4382041	.4092761	.9727664
#1	6434.585	107364.7	10873.61	4876.097	8151.572
#2	6443.382	107652.7	10969.13	4905.400	8166.082
#3	6336.814	108200.4	10926.88	4914.453	8022.704

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2788-01 Acquired: 8/11/2025 12:13:38 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0772125	-.011944	.5255704	-.000817	-.009715	114.9447	.5393058
Stddev	.0008135	.001828	.0040135	.000929	.000514	.1482	.0009362
%RSD	1.053641	15.30600	.7636424	113.7155	5.289093	.1288985	.1735864
#1	.0780588	-.010351	.5290776	-.001589	-.009815	114.8814	.5396028
#2	.0771425	-.013940	.5211933	.000214	-.009159	115.1140	.5400574
#3	.0764362	-.011541	.5264403	-.001074	-.010172	114.8387	.5382571

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080867	.0086850	164.3552	.1921783	.1187264	.2827773	229.1339
Stddev	.0000299	.0000253	.1362	.0007139	.0009686	.0018867	.6247
%RSD	.3696853	.2909623	.0828670	.3714959	.8158362	.6672139	.2726362
#1	.0080547	.0086563	164.2516	.1928444	.1197518	.2841116	229.8531
#2	.0080915	.0087040	164.5094	.1922659	.1178268	.2806187	228.7258
#3	.0081139	.0086947	164.3044	.1914246	.1186007	.2836016	228.8229

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.520169	76.06095	.2177717	.0042232	10.02290	.3071293	.9117741
Stddev	.007542	.12672	.0013079	.0001142	.03471	.0030557	.0023417
%RSD	.2142649	.1666006	.6005731	2.704277	.3462591	.9949351	.2568304
#1	3.513463	75.98592	.2192252	.0043121	10.06167	.3090131	.9127871
#2	3.528335	76.20726	.2166900	.0042632	9.99474	.3036036	.9090964
#3	3.518710	75.98968	.2173999	.0040944	10.01228	.3087711	.9134387

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.66962	.1000885	.0044181	.0258841	6.300166	8.461004	8.476946
Stddev	.06392	.0072115	.0002580	.0003726	.018289	.029556	.070237
%RSD	.2591005	7.205099	5.840507	1.439458	.2902980	.3493259	.8285705
#1	24.74326	.1070508	.0047143	.0260220	6.299212	8.480803	8.527849
#2	24.62847	.0926513	.0042423	.0254622	6.318913	8.427030	8.396814
#3	24.63713	.1005634	.0042976	.0261681	6.282372	8.475180	8.506176

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2788-01 Acquired: 8/11/2025 12:13:38 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	9.242133	.2287965	.1049517
Stddev	.055147	.0003875	.0008370
%RSD	.5966882	.1693661	.7975126
#1	9.301368	.2292438	.1042846
#2	9.192277	.2285650	.1058909
#3	9.232755	.2285805	.1046797

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7094.957	118583.4	13058.64	5433.019	6545.233
Stddev	27.318	129.9	57.10	25.156	31.008
%RSD	.3850345	.1095651	.4372396	.4630152	.4737537
#1	7077.753	118492.7	13100.97	5405.747	6515.629
#2	7126.457	118525.1	12993.70	5455.315	6577.477
#3	7080.662	118732.2	13081.25	5437.994	6542.592

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2783-03 Acquired: 8/11/2025 12:17:41 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002341**	**-.000166**	**.0898738**	**.0025649**	**-.001104**	**.2657106**	**.1260808**
Stddev	.001756	.000786	.0014724	.0010262	.000325	.0091696	.0003453
%RSD	74.99558	473.6163	1.638268	40.00770	29.46330	3.450984	.2738557
#1	-.002378	.000669	.0896029	.0020122	-.001403	.2750241	.1264780
#2	-.004079	-.000275	.0885556	.0037490	-.000757	.2566920	.1258517
#3	-.000567	-.000891	.0914628	.0019337	-.001151	.2654156	.1259129

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000071**	**.0005955**	**72.49549**	**.0018505**	**.0531745**	**.0233210**	**.5147615**
Stddev	.000022	.0001094	.32100	.0001758	.0006725	.0004420	.0074259
%RSD	30.76866	18.37215	.4427848	9.498141	1.264806	1.895390	1.442589
#1	-.000094	.0006892	72.85303	.0018601	.0533706	.0228832	.5068882
#2	-.000068	.0004753	72.40137	.0020213	.0524258	.0233127	.5157567
#3	-.000051	.0006221	72.23207	.0016701	.0537273	.0237672	.5216397

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.061736**	**2.083118**	**.0733434**	**.0001184**	**584.0420**	**.0021941**	**.1441291**
Stddev	.004277	.017701	.0012672	.0001533	8.4688	.0016032	.0019429
%RSD	.4028513	.8497320	1.727693	129.4782	1.450039	73.06724	1.348027
#1	1.065936	2.079240	.0730232	.0002543	576.3936	.0006862	.1421413
#2	1.061886	2.102436	.0722671	.0001488	582.5889	.0020181	.1442222
#3	1.057386	2.067677	.0747399	-.000048	593.1433	.0038781	.1460237

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.627042**	**.0140011**	**.0000310**	**-.001895**	**-.002719**	**1.396022**	**.0180536**
Stddev	.141414	.0009698	.0003242	.000423	.001314	.027708	.0025996
%RSD	1.854107	6.926673	1045.895	22.34474	48.34376	1.984807	14.39947
#1	7.481573	.0128819	-.000135	-.001692	-.001820	1.381446	.0204711
#2	7.635535	.0145296	-.000177	-.002382	-.002109	1.378644	.0153038
#3	7.764017	.0145920	.000405	-.001611	-.004227	1.427976	.0183861

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2783-03 Acquired: 8/11/2025 12:17:41 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**14.81049**	**-.021581**	**.0854636**
Stddev	.16661	.001412	.0003665
%RSD	1.124936	6.541076	.4287964
#1	14.78125	-.023102	.0858250
#2	14.66043	-.020313	.0854737
#3	14.98978	-.021329	.0850922

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5852.317**	**97224.54**	**10979.45**	**4478.241**	**6630.555**
Stddev	69.160	1032.53	97.45	40.215	75.716
%RSD	1.181747	1.062003	.8875249	.8980162	1.141930
#1	5863.646	98262.04	10903.42	4516.502	6641.267
#2	5915.113	97214.51	10945.61	4481.900	6700.345
#3	5778.193	96197.06	11089.30	4436.321	6550.053

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: PB169178BL Acquired: 8/11/2025 12:22:00 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001723**	**-.001796**	**-.000403**	**-.000755**	**-.001852**	**.0094256**
Stddev	.002435	.001240	.001100	.001638	.001577	.0081787
%RSD	141.2972	69.06514	273.0408	216.8129	85.14380	86.77133
#1	-.003663	-.003190	.000177	.000939	-.002744	.0188268
#2	-.002516	-.001385	-.001671	-.000874	-.000031	.0055016
#3	.001009	-.000813	.000286	-.002330	-.002782	.0039483

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002410**	**-.000047**	**-.000105**	**-.010326**	**.0002755**	**-.000269**
Stddev	.001014	.000028	.000031	.007448	.0001628	.000047
%RSD	42.08003	59.73821	29.20005	72.13247	59.08528	17.37275
#1	-.002602	-.000067	-.000072	-.018923	.0004572	-.000269
#2	-.003314	-.000015	-.000109	-.005816	.0001429	-.000222
#3	-.001314	-.000058	-.000133	-.006238	.0002264	-.000316

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000888**	**-.013340**	**.0000746**	**.0049245**	**.0000415**	**.0004670**
Stddev	.0000478	.001562	.0002110	.0077242	.0001701	.0003391
%RSD	53.90941	11.70863	282.8507	156.8532	409.9179	72.61021
#1	.0000859	-.011972	-.000133	.0000717	.0000628	.0007041
#2	.0001379	-.013006	.000068	.0008700	-.000138	.0006182
#3	.0000424	-.015041	.000289	.0138317	.000200	.0000786

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4561682**	**.0019344**	**-.001442**	**.4184479**	**-.007784**	**-.000723**
Stddev	.0435193	.0008656	.000050	.0181734	.000206	.000031
%RSD	9.540190	44.74759	3.433922	4.343040	2.649234	4.275452
#1	.4778466	.0016111	-.001474	.4242639	-.007571	-.000718
#2	.4845905	.0029150	-.001466	.4330014	-.007983	-.000695
#3	.4060675	.0012769	-.001385	.3980785	-.007798	-.000756

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: PB169178BL Acquired: 8/11/2025 12:22:00 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003474	-.000373	-.001988	.0004155	-.000218	F .0207894
Stddev	.0007986	.000484	.001079	.0008356	.003270	.0012068
%RSD	229.8995	129.7552	54.29649	201.1115	1500.635	5.805000
#1	.0012095	-.000927	-.003190	.0013181	-.000005	.0214029
#2	-.000367	-.000158	-.001670	-.000331	-.003590	.0215662
#3	.000200	-.000034	-.001103	.000260	.002941	.0193991

Elem	Sr4077
Units	ppm
Avg	-.000198
Stddev	.000019
%RSD	9.574176
#1	-.000203
#2	-.000214
#3	-.000177

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6348.711	107806.7	10819.76	4809.672	8062.639
Stddev	101.520	346.0	248.80	18.249	126.808
%RSD	1.599064	.3209588	2.299470	.3794163	1.572780
#1	6231.577	107420.6	11002.65	4794.882	7916.214
#2	6411.275	107910.6	10920.18	4804.068	8136.044
#3	6403.281	108088.8	10536.45	4830.065	8135.659

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: PB168178BS Acquired: 8/11/2025 12:26:19 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7736904**	**1.816035**	**.9520514**	**1.940830**	**.7880700**	**1.937404**
Stddev	.0072053	.087945	.0087229	.021064	.0060070	.016816
%RSD	.9312922	4.842684	.9162186	1.085284	.7622383	.8679574
#1	.7707614	1.861775	.9485693	1.941748	.7821619	1.948671
#2	.7684109	1.714647	.9456074	1.919323	.7878770	1.945467
#3	.7818990	1.871684	.9619775	1.961420	.7941712	1.918076

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1899481**	**.1998241**	**.1910762**	**1.008730**	**.3954323**	**.1951180**
Stddev	.0017243	.0013733	.0016950	.009799	.0051264	.0017377
%RSD	.9077602	.6872407	.8870870	.9713857	1.296400	.8906124
#1	.1906480	.1989960	.1903976	1.019799	.3926898	.1941995
#2	.1912124	.2014093	.1898256	1.001165	.3922606	.1940323
#3	.1879840	.1990671	.1930053	1.005226	.4013466	.1971223

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3059362**	**2.899528**	**.1999450**	**1.978005**	**.4917400**	**.0740424**
Stddev	.0028423	.031753	.0024138	.016023	.0039201	.0016606
%RSD	.9290379	1.095093	1.207235	.8100426	.7971860	2.242736
#1	.3043816	2.887879	.2003689	1.961148	.4897188	.0735782
#2	.3042104	2.875246	.2021188	1.993038	.4892431	.0726634
#3	.3092167	2.935460	.1973473	1.979830	.4962582	.0758858

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.892541**	**.2943599**	**.1992904**	**9.374801**	**.2887187**	**.3963205**
Stddev	.026018	.0014063	.0031141	.158270	.0016987	.0034013
%RSD	.8994947	.4777482	1.562575	1.688247	.5883609	.8582169
#1	2.878367	.2927389	.1989004	9.391935	.2879723	.3961346
#2	2.876688	.2952538	.1963898	9.208661	.2906628	.3930160
#3	2.922569	.2950870	.2025811	9.523807	.2875210	.3998110

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: PB168178BS Acquired: 8/11/2025 12:26:19 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6723338	.1916843	.8245238	5.731233	F -.000334	.2070092
Stddev	.0083961	.0007384	.0138882	.049568	.001127	.0012536
%RSD	1.248796	.3852212	1.684386	.8648817	337.5351	.6055862
#1	.6707716	.1925323	.8132254	5.705737	.000833	.2060676
#2	.6648286	.1911832	.8203168	5.699602	-.001417	.2084321
#3	.6814013	.1913374	.8400290	5.788359	-.000417	.2065278

Elem	Sr4077
Units	ppm
Avg	.1919356
Stddev	.0011221
%RSD	.5846125
#1	.1924616
#2	.1926980
#3	.1906471

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6200.830	106175.5	10865.51	4856.195	7501.764
Stddev	29.372	1176.9	63.97	65.168	34.550
%RSD	.4736829	1.108479	.5887660	1.341951	.4605642
#1	6206.681	106430.8	10854.19	4863.691	7518.240
#2	6226.836	107203.8	10807.96	4917.291	7524.993
#3	6168.972	104891.8	10934.39	4787.604	7462.060

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: PB169181BS Acquired: 8/11/2025 12:34:38 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7453643**	**1.834684**	**.9243988**	**1.878900**	**.7757527**	**1.917954**
Stddev	.0092875	.042892	.0094689	.023985	.0124597	.044720
%RSD	1.246034	2.337854	1.024332	1.276555	1.606149	2.331668
#1	.7434320	1.872647	.9211319	1.872064	.7697612	1.897473
#2	.7371950	1.788155	.9169959	1.859075	.7674204	1.969247
#3	.7554660	1.843251	.9350686	1.905561	.7900763	1.887142

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1872358**	**.1967741**	**.1842730**	**.9782091**	**.3839863**	**.1891077**
Stddev	.0046985	.0061470	.0021757	.0280683	.0060573	.0020166
%RSD	2.509382	3.123903	1.180674	2.869359	1.577465	1.066396
#1	.1850959	.1928031	.1835043	.9663609	.3852251	.1881836
#2	.1926233	.2038546	.1825861	1.010259	.3893285	.1877186
#3	.1839882	.1936645	.1867287	.958008	.3774055	.1914208

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2968744**	**2.819891**	**.1977369**	**1.942900**	**.4752181**	**.0720850**
Stddev	.0039766	.035985	.0050955	.049749	.0063421	.0007143
%RSD	1.339481	1.276108	2.576909	2.560555	1.334556	.9908434
#1	.2947548	2.841279	.1949115	1.926055	.4723713	.0717764
#2	.2944067	2.840049	.2036191	1.998884	.4707982	.0729017
#3	.3014618	2.778346	.1946800	1.903760	.4824847	.0715770

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.712035**	**.2922918**	**.1943137**	**9.036736**	**.2858239**	**.3927167**
Stddev	.021864	.0060039	.0016585	.053877	.0091979	.0053535
%RSD	.8061710	2.054077	.8535313	.5961973	3.218032	1.363196
#1	2.717578	.2877356	.1942705	9.078777	.2796741	.3905410
#2	2.730593	.2990951	.1959934	9.055428	.2963979	.3887936
#3	2.687933	.2900448	.1926772	8.976002	.2813997	.3988155

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: PB169181BS Acquired: 8/11/2025 12:34:38 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6584724**	**.1901097**	**.8076616**	**5.520806**	F **-.002028**	**.1962689**
Stddev	.0091956	.0046894	.0111606	.067101	.001819	.0040475
%RSD	1.396510	2.466668	1.381836	1.215413	89.68468	2.062235
#1	.6553945	.1865586	.8204970	5.504258	-.002783	.1961342
#2	.6512105	.1954254	.8022425	5.463527	-.003347	.2003820
#3	.6688121	.1883451	.8002453	5.594632	.000047	.1922904

Elem	Sr4077
Units	ppm
Avg	**.1890389**
Stddev	.0039629
%RSD	2.096345
#1	.1870063
#2	.1936057
#3	.1865048

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6374.200**	**107905.8**	**10864.40**	**4896.577**	**7796.947**
Stddev	51.916	1260.7	279.57	58.518	61.539
%RSD	.8144643	1.168348	2.573302	1.195070	.7892726
#1	6404.328	107361.9	11036.25	4858.786	7826.644
#2	6404.020	107008.3	10541.81	4866.962	7838.006
#3	6314.254	109347.1	11015.14	4963.982	7726.191

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: PB169181BL Acquired: 8/11/2025 12:38:38 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004217	.0001556	.0014358	.0006255	.0009593	.0154192	-.000354
Stddev	.0019863	.0013788	.0012052	.0004857	.0003977	.0064049	.001187
%RSD	471.0387	886.0580	83.94589	77.64409	41.45287	41.53873	335.5390
#1	-.001831	.0017470	.0018637	.0007351	.0013749	.0108965	-.001652
#2	.001172	-.000598	.0023687	.0000944	.0005823	.0227483	-.000085
#3	.001923	-.000682	.0000749	.0010470	.0009208	.0126127	.000676

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000287	.0003148	.0092447	.0002551	.0001714	.0002130	-.006093
Stddev	.0000669	.0000344	.0035419	.0001813	.0000659	.0002512	.001072
%RSD	233.3399	10.93758	38.31338	71.05613	38.44939	117.9232	17.59162
#1	-.000002	.0003538	.0129372	.0000881	.0001999	.0003376	-.006424
#2	.000105	.0002884	.0089215	.0004479	.0002183	.0003776	-.004895
#3	-.000017	.0003023	.0058754	.0002294	.0000961	-.000076	-.006961

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007659	.0251313	.0007316	.0010516	-.010897	.0033587	-.000312
Stddev	.0004654	.0122094	.0002801	.0002846	.015515	.0017442	.000058
%RSD	60.77304	48.58236	38.29023	27.06843	142.3750	51.93271	18.55341
#1	.0003551	.0368486	.0007766	.0007230	-.000616	.0036204	-.000300
#2	.0006710	.0124831	.0009864	.0012225	-.003332	.0014984	-.000261
#3	.0012714	.0260622	.0004317	.0012093	-.028743	.0049573	-.000375

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.058417	-.007521	.0001517	.0011340	.0006571	-.005299	.0009042
Stddev	.026463	.000262	.0001065	.0002084	.0014772	.004087	.0012508
%RSD	45.30028	3.486884	70.22489	18.37369	224.8114	77.13583	138.3305
#1	-.027861	-.007307	.0000287	.0009508	.0000150	-.009675	-.000440
#2	-.073525	-.007814	.0002104	.0013607	.0023466	-.001581	.001119
#3	-.073865	-.007442	.0002160	.0010906	-.000390	-.004640	.002033

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: PB169181BL Acquired: 8/11/2025 12:38:38 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0002132	-.002989	.0007381
Stddev	.0017640	.001223	.0000981
%RSD	827.5571	40.93616	13.28888
#1	-.000667	-.004360	.0007900
#2	.002244	-.002008	.0007994
#3	-.000937	-.002598	.0006250

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6197.790	107476.9	10698.07	4881.771	7592.283
Stddev	7.566	367.6	73.44	12.559	1.653
%RSD	.1220807	.3420195	.6865118	.2572589	.0217770
#1	6189.053	107499.1	10768.33	4868.657	7593.323
#2	6202.183	107832.8	10621.81	4893.689	7593.149
#3	6202.133	107098.7	10704.08	4882.968	7590.377

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: PB169149TB Acquired: 8/11/2025 12:42:57 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002354**	**-.001486**	**.0002314**	**.0017527**	**.0003171**	**.0061815**	**-.002520**
Stddev	.002327	.000898	.0008958	.0011397	.0005506	.0081494	.000744
%RSD	98.84919	60.38937	387.1773	65.02603	173.6589	131.8360	29.51217
#1	-.004098	-.002117	.0000679	.0030502	.0008843	.0012294	-.002960
#2	.000288	-.001883	-.000571	.0009131	.0002822	.0017278	-.001661
#3	-.003254	-.000459	.001198	.0012950	-.000215	.0155872	-.002937

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000168**	**-.000151**	**.1391298**	**.0011271**	**-.000289**	**.0004816**	**.0166606**
Stddev	.000030	.000068	.0043964	.0003411	.000063	.0003002	.0001558
%RSD	17.79672	44.97249	3.159914	30.26066	21.72358	62.33123	.9349487
#1	-.000137	-.000193	.1340610	.0013013	-.000288	.0008251	.0166419
#2	-.000197	-.000188	.1419055	.0007341	-.000227	.0002694	.0165150
#3	-.000169	-.000073	.1414230	.0013459	-.000352	.0003504	.0168248

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0140592**	**-.010848**	**.0016376**	**.0000657**	**595.5273**	**.0013461**	**.0022175**
Stddev	.0007885	.007804	.0000589	.0005716	5.8014	.0004450	.0002526
%RSD	5.608219	71.93598	3.596125	870.1420	.9741599	33.05800	11.39118
#1	.0131566	-.002907	.0016536	-.000493	601.6355	.0018535	.0022891
#2	.0144072	-.018507	.0016868	.000040	594.8552	.0011625	.0024265
#3	.0146138	-.011129	.0015724	.000650	590.0913	.0010222	.0019368

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0818154**	**-.009958**	**-.000508**	**.0012657**	**-.000020**	**.0202663**	**.0061735**
Stddev	.0067491	.000585	.000013	.0007422	.001187	.0118975	.0028484
%RSD	8.249199	5.873650	2.584798	58.63573	6018.330	58.70607	46.13914
#1	.0823293	-.009347	-.000521	.0005119	.001298	.0065286	.0085298
#2	.0748240	-.010513	-.000495	.0012895	-.000353	.0272289	.0030081
#3	.0882929	-.010014	-.000508	.0019957	-.001004	.0270414	.0069825

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: PB169149TB Acquired: 8/11/2025 12:42:57 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2186094	-.010381	.0002376
Stddev	.0047572	.001081	.0000678
%RSD	2.176135	10.41751	28.53974
#1	.2180868	-.011134	.0002085
#2	.2141350	-.010867	.0003151
#3	.2236064	-.009141	.0001892

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5975.268	96003.50	10621.56	4443.013	6848.527
Stddev	101.741	1155.01	207.83	40.768	112.243
%RSD	1.702700	1.203092	1.956723	.9175813	1.638930
#1	5945.876	94680.54	10753.33	4400.143	6816.947
#2	6088.470	96518.78	10381.98	4447.606	6973.176
#3	5891.459	96811.18	10729.39	4481.290	6755.457

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2779-04 Acquired: 8/11/2025 12:47:24 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000049**	**-.002438**	**.9119426**	**-.000003**	**-.000141**	**.0742892**	**.5891501**
Stddev	.002565	.001832	.0171145	.000585	.000816	.0061785	.0057744
%RSD	5194.857	75.15898	1.876711	22359.80	577.1900	8.316786	.9801176
#1	-.002440	-.000344	.8945181	-.000349	-.000695	.0686032	.5957073
#2	.002660	-.003223	.9125805	-.000332	-.000525	.0734004	.5869179
#3	-.000368	-.003747	.9287293	.000673	.000796	.0808639	.5848250

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001023**	**.0006475**	**206.6709**	**.0013882**	**.0107447**	**.0034894**	**17.58624**
Stddev	.0000430	.0000497	2.4874	.0003796	.0003435	.0005656	.17351
%RSD	42.03068	7.670974	1.203553	27.34913	3.196454	16.20924	.9866364
#1	.0001519	.0006157	209.5068	.0009554	.0103634	.0030029	17.48055
#2	.0000750	.0006221	205.6468	.0016653	.0108406	.0033554	17.78649
#3	.0000800	.0007047	204.8590	.0015437	.0110299	.0041100	17.49168

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.470326**	**6.873485**	**.0875201**	**.0010111**	**626.1919**	**.0034992**	**.7412857**
Stddev	.015973	.090092	.0021123	.0000851	10.1717	.0003683	.0092557
%RSD	1.086380	1.310718	2.413531	8.420881	1.624369	10.52572	1.248595
#1	1.488572	6.968632	.0854033	.0010549	618.3404	.0032739	.7387632
#2	1.463540	6.862336	.0875292	.0009130	637.6826	.0032995	.7515411
#3	1.458866	6.789486	.0896279	.0010654	622.5529	.0039243	.7335528

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.530921**	**.0473013**	**.0002742**	**-.002514**	**-.006638**	**1.038796**	**.0152851**
Stddev	.001810	.0008645	.0000819	.000348	.001765	.014024	.0015032
%RSD	.0714987	1.827584	29.87270	13.85522	26.58738	1.350068	9.834226
#1	2.530368	.0476220	.0003440	-.002261	-.006305	1.030249	.0139306
#2	2.532942	.0479596	.0002945	-.002369	-.008545	1.054982	.0169024
#3	2.529452	.0463223	.0001840	-.002911	-.005063	1.031158	.0150224

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2779-04 Acquired: 8/11/2025 12:47:24 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.733106	-.039157	.6935800
Stddev	.064766	.001096	.0058563
%RSD	2.369668	2.799132	.8443595
#1	2.675949	-.040302	.7003356
#2	2.719921	-.039050	.6899421
#3	2.803450	-.038118	.6904623

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5747.914	96706.76	11100.84	4362.402	6479.977
Stddev	90.480	948.57	191.77	43.727	101.082
%RSD	1.574141	.9808702	1.727536	1.002368	1.559909
#1	5824.834	96737.56	10889.22	4354.329	6568.873
#2	5770.684	95743.17	11150.15	4323.275	6501.032
#3	5648.224	97639.56	11263.13	4409.604	6370.026

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2779-08 Acquired: 8/11/2025 12:51:43 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001599**	**.0004230**	**.2015059**	**.0002889**	**.0061048**	**.1157089**	**.5178514**
Stddev	.001328	.0007232	.0011444	.0006672	.0021421	.0052221	.0024840
%RSD	83.06343	170.9533	.5679325	230.9496	35.08853	4.513156	.4796765
#1	-.000326	.0000244	.2028112	.0008636	.0040217	.1175304	.5191587
#2	-.002976	-.000013	.2010320	.0004458	.0083014	.1197763	.5149867
#3	-.001495	.001258	.2006746	-.000443	.0059913	.1098200	.5194088

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000207**	**.0013065**	**204.5790**	**.0002161**	**.0063107**	**.0067317**	**.1067627**
Stddev	.000019	.0000834	1.2575	.0000776	.0001320	.0004662	.0087677
%RSD	9.379213	6.384159	.6146809	35.92116	2.090858	6.925248	8.212368
#1	-.000186	.0013174	204.8163	.0002393	.0062615	.0072697	.1047081
#2	-.000211	.0012182	203.2197	.0001295	.0062103	.0064801	.0992047
#3	-.000224	.0013839	205.7009	.0002795	.0064601	.0064454	.1163753

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.508590**	**5.963094**	**.0137279**	**-.000310**	**570.4494**	**.0017896**	**.5641805**
Stddev	.006062	.033559	.0003627	.000308	14.5792	.0020507	.0134804
%RSD	.4018549	.5627746	2.642013	99.50571	2.555748	114.5942	2.389370
#1	1.514554	5.967131	.0136086	-.000378	554.8213	-.000412	.5504997
#2	1.502434	5.927699	.0134400	-.000578	583.6834	.003645	.5774510
#3	1.508783	5.994451	.0141353	.000027	572.8436	.002136	.5645909

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.131885**	**.0356145**	**.0005563**	**-.001228**	**-.007472**	**1.494573**	**.0152095**
Stddev	.074728	.0002697	.0002152	.000295	.000713	.017929	.0025482
%RSD	1.218675	.7574005	38.68886	24.06198	9.536530	1.199635	16.75385
#1	6.063145	.0358411	.0005546	-.001437	-.007809	1.477326	.0163092
#2	6.211425	.0353161	.0007724	-.001356	-.007954	1.513114	.0170232
#3	6.121085	.0356862	.0003419	-.000890	-.006653	1.493278	.0122962

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2779-08 Acquired: 8/11/2025 12:51:43 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.305636**	**-.035890**	**.7500630**
Stddev	.015326	.000298	.0030847
%RSD	.6647225	.8304517	.4112619
#1	2.319275	-.036196	.7529313
#2	2.289050	-.035876	.7467999
#3	2.308582	-.035600	.7504577

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5820.081**	**98921.38**	**11283.92**	**4458.253**	**6590.178**
Stddev	55.575	2137.35	42.52	91.931	55.151
%RSD	.9548901	2.160659	.3768384	2.062035	.8368662
#1	5757.039	101071.5	11329.69	4548.944	6527.079
#2	5841.211	96797.0	11276.41	4365.130	6614.276
#3	5861.992	98895.7	11245.65	4460.684	6629.179

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2791-01 Acquired: 8/11/2025 12:56:05 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002889**	**-.003672**	**.0189297**	**.0051595**	**.0029292**	**.5437805**	**.1601140**
Stddev	.002063	.000442	.0011653	.0010603	.0010054	.0127351	.0032221
%RSD	71.43050	12.03972	6.156043	20.55113	34.32365	2.341951	2.012399
#1	-.005267	-.004160	.0178617	.0063817	.0017687	.5290802	.1581339
#2	-.001574	-.003298	.0201726	.0046112	.0035358	.5508009	.1583761
#3	-.001826	-.003559	.0187549	.0044856	.0034831	.5514604	.1638320

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000009**	**.0002633**	**10.61960**	**.0026701**	**.0026631**	**.0135234**	**9.887130**
Stddev	.000028	.0000127	.05283	.0001013	.0000955	.0001269	.197792
%RSD	319.9258	4.810920	.4974526	3.793190	3.584024	.9382344	2.000497
#1	.000012	.0002524	10.56871	.0026547	.0025793	.0135341	10.03011
#2	-.000040	.0002772	10.61593	.0025773	.0026429	.0136447	9.66140
#3	.000002	.0002603	10.67417	.0027781	.0027670	.0133916	9.96987

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1483444**	**.5921573**	**.0183312**	**.0010137**	**311.5387**	**.0029416**	**.9578801**
Stddev	.0016708	.0134218	.0001919	.0004202	7.7779	.0019530	.0237320
%RSD	1.126293	2.266591	1.046897	41.45058	2.496598	66.39182	2.477553
#1	.1474196	.5975314	.0181097	.0013043	316.0206	.0016528	.9747542
#2	.1473405	.5768812	.0184380	.0005319	302.5576	.0051885	.9307440
#3	.1502731	.6020593	.0184459	.0012050	316.0380	.0019834	.9681421

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6161770**	**.0333720**	**.0004541**	**.0003484**	**.0014395**	**1.003314**	**1.895716**
Stddev	.0235938	.0012498	.0007141	.0004989	.0003849	.006594	.004027
%RSD	3.829054	3.745060	157.2568	143.1991	26.74027	.6572524	.2124153
#1	.6298136	.0331339	.0001624	.0006382	.0013351	1.010385	1.892783
#2	.5889332	.0322583	.0012679	-.000228	.0011175	.997333	1.900307
#3	.6297841	.0347237	-.000068	.000635	.0018658	1.002223	1.894057

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2791-01 Acquired: 8/11/2025 12:56:05 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.574947	-.010794	.0447702
Stddev	.007480	.000660	.0004537
%RSD	.4749499	6.112669	1.013430
#1	1.566959	-.010836	.0443172
#2	1.581786	-.011432	.0447688
#3	1.576097	-.010115	.0452246

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6209.574	106061.4	11883.02	4752.723	7281.214
Stddev	38.040	1898.9	30.22	90.789	38.089
%RSD	.6125988	1.790413	.2543307	1.910248	.5231178
#1	6248.740	104315.9	11881.01	4665.670	7320.111
#2	6172.771	108083.5	11914.19	4846.835	7243.987
#3	6207.211	105784.7	11853.85	4745.663	7279.544

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCV02 Acquired: 8/11/2025 13:00:27 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	**4.888747**	**4.640480**	**4.679610**	**4.890903**	**4.962140**	**9.660675**	**9.688420**
Stddev	.011412	.106996	.022264	.013882	.028082	.052722	.022845
%RSD	.2334264	2.305700	.4757717	.2838316	.5659319	.5457362	.2357982
#1	4.894237	4.719193	4.680190	4.902988	4.967673	9.619325	9.713249
#2	4.875628	4.683594	4.657062	4.875741	4.931703	9.720044	9.683723
#3	4.896376	4.518654	4.701579	4.893981	4.987043	9.642657	9.668289

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2309878**	**2.342731**	**24.10387**	**.9608509**	**2.367190**	**1.208119**	**5.028487**
Stddev	.0021756	.010392	.16077	.0110232	.010928	.006418	.043639
%RSD	.9418679	.4435706	.6669741	1.147228	.4616494	.5312578	.8678435
#1	.2310531	2.339489	23.94370	.9702912	2.363818	1.208075	5.069237
#2	.2331301	2.334347	24.26523	.9635247	2.358345	1.201723	5.033784
#3	.2287804	2.354357	24.10266	.9487368	2.379407	1.214560	4.982442

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.416985**	**23.72897**	**2.364871**	**1.216422**	**25.16943**	**2.429214**	**2.462285**
Stddev	.015022	.21041	.010951	.012144	.18173	.006208	.029026
%RSD	.6215013	.8867291	.4630509	.9983447	.7220451	.2555446	1.178823
#1	2.405641	23.53634	2.362693	1.228773	25.36946	2.424860	2.490387
#2	2.434021	23.95351	2.355173	1.215996	25.12433	2.436322	2.464051
#3	2.411294	23.69707	2.376746	1.204496	25.01448	2.426459	2.432416

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.38435**	**4.594485**	**4.953706**	**4.751109**	**4.873164**	**4.969848**	**4.609438**
Stddev	.14161	.039914	.024109	.016023	.026167	.017298	.031101
%RSD	.5578721	.8687314	.4866867	.3372545	.5369659	.3480595	.6747149
#1	25.53128	4.586785	4.965946	4.757436	4.849219	4.985241	4.612037
#2	25.37302	4.637688	4.925932	4.732888	4.901096	4.951128	4.577119
#3	25.24874	4.558982	4.969240	4.763002	4.869176	4.973175	4.639157

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCV02 Acquired: 8/11/2025 13:00:27 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.663063**	**4.862207**	**4.948578**
Stddev	.008529	.026247	.033809
%RSD	.1829042	.5398118	.6832060
#1	4.660792	4.839754	4.924682
#2	4.655899	4.891063	4.987261
#3	4.672498	4.855804	4.933790

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6274.866**	**106409.3**	**11544.83**	**4759.580**	**7426.997**
Stddev	30.711	850.4	111.03	50.254	25.154
%RSD	.4894221	.7991891	.9617087	1.055849	.3386838
#1	6249.904	105752.4	11598.72	4714.604	7411.974
#2	6309.160	106105.6	11417.14	4750.313	7456.037
#3	6265.534	107369.9	11618.63	4813.822	7412.982

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCB02 Acquired: 8/11/2025 13:04:37 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019436**	**-.000821**	**.0023513**	**.0043587**	**.0008108**	**.0117663**
Stddev	.0015011	.001032	.0017064	.0016775	.0004995	.0095739
%RSD	77.23435	125.6712	72.57526	38.48684	61.61202	81.36703
#1	.0007302	-.000071	.0004105	.0026975	.0011070	.0007467
#2	.0014783	-.001998	.0036166	.0043265	.0010914	.0165111
#3	.0036223	-.000394	.0030266	.0060520	.0002340	.0180411

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000865**	**.0000924**	**.0008928**	**.0135940**	**.0002545**	**.0007164**
Stddev	.001006	.0000491	.0000543	.0155889	.0002160	.0001654
%RSD	116.3433	53.14297	6.080284	114.6749	84.90012	23.08811
#1	-.002019	.0000409	.0008336	.0196448	.0002000	.0005804
#2	-.000407	.0000975	.0009402	-.004113	.0000709	.0009005
#3	-.000169	.0001387	.0009047	.025250	.0004925	.0006683

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005595**	**.0277326**	**.0032394**	**.0254840**	**.0011425**	**.0010710**
Stddev	.0001513	.0098088	.0003842	.0072308	.0000347	.0001440
%RSD	27.04721	35.36914	11.86111	28.37398	3.034816	13.44535
#1	.0005583	.0168721	.0036801	.0243462	.0011430	.0009086
#2	.0007115	.0303793	.0029749	.0332163	.0011769	.0011833
#3	.0004088	.0359466	.0030631	.0188895	.0011075	.0011209

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9006996**	**.0030420**	**.0003084**	**.8820683**	**-.003547**	**.0025031**
Stddev	.0235759	.0009922	.0002268	.0345675	.000507	.0003316
%RSD	2.617511	32.61683	73.54599	3.918919	14.29276	13.24548
#1	.9040993	.0040600	.0005702	.8910594	-.003647	.0027993
#2	.9223912	.0020777	.0001728	.9112518	-.002997	.0025651
#3	.8756085	.0029884	.0001821	.8438935	-.003996	.0021450

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCB02 Acquired: 8/11/2025 13:04:37 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019428	.0020489	.0048524	.0050577	.0019471	F .0250682
Stddev	.0000810	.0015961	.0056378	.0013935	.0037474	.0015764
%RSD	4.166884	77.89758	116.1845	27.55118	192.4598	6.288453
#1	.0020231	.0038299	.0113485	.0035075	.0018970	.0268761
#2	.0019440	.0007478	.0012370	.0054595	.0057192	.0243480
#3	.0018612	.0015691	.0019717	.0062062	-.001775	.0239805

Elem	Sr4077
Units	ppm
Avg	.0020466
Stddev	.0000639
%RSD	3.120683
#1	.0021170
#2	.0019923
#3	.0020305

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6468.798	110403.5	11438.12	4894.879	8158.104
Stddev	41.545	747.3	53.11	37.499	58.159
%RSD	.6422434	.6768743	.4643046	.7660828	.7129018
#1	6468.332	109584.4	11428.12	4855.770	8159.766
#2	6510.574	110577.8	11390.73	4898.341	8215.415
#3	6427.487	111048.2	11495.52	4930.527	8099.132

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2798-04 Acquired: 8/11/2025 13:08:55 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000168**	**-.002086**	**.0117949**	**.0011973**	**-.003686**	**.1601498**	**.5384073**
Stddev	.0012583	.000903	.0012082	.0016024	.001087	.0046875	.0046767
%RSD	7474.496	43.28358	10.24365	133.8334	29.47878	2.926958	.8686199
#1	-.001064	-.001414	.0113807	.0021814	-.002705	.1571406	.5402347
#2	.001398	-.001732	.0108483	.0020622	-.003499	.1577580	.5418944
#3	-.000283	-.003112	.0131558	-.000652	-.004854	.1655507	.5330928

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000149**	**.0003006**	**88.61029**	**.0022022**	**.0157644**	**.0070658**	**19.12517**
Stddev	.000043	.0000287	.51611	.0003378	.0001786	.0002272	.26005
%RSD	28.70463	9.540472	.5824537	15.34081	1.133151	3.215984	1.359720
#1	-.000177	.0003332	88.99651	.0018363	.0157497	.0071107	18.86146
#2	-.000100	.0002894	88.81024	.0022682	.0155936	.0068195	19.13264
#3	-.000169	.0002793	88.02411	.0025022	.0159500	.0072672	19.38140

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.591489**	**6.653927**	**.0146220**	**.0014704**	**529.1911**	**.0004455**	**.1320596**
Stddev	.045599	.057177	.0005767	.0004884	4.8057	.0033927	.0015747
%RSD	.5307416	.8592932	3.944338	33.21617	.9081185	761.5399	1.192424
#1	8.617566	6.714662	.0142686	.0020165	526.7390	-.002129	.1302754
#2	8.618064	6.645980	.0143099	.0013190	526.1061	.004290	.1332552
#3	8.538837	6.601140	.0152875	.0010756	534.7282	-.000825	.1326484

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.913253**	**.0468417**	**-.000559**	**-.001879**	**-.002505**	**1.589171**	**.0147869**
Stddev	.043975	.0008608	.000036	.000500	.000934	.026036	.0024009
%RSD	2.298434	1.837612	6.483508	26.62142	37.28044	1.638335	16.23670
#1	1.864241	.0460923	-.000522	-.001636	-.001459	1.571071	.0171891
#2	1.926264	.0466509	-.000561	-.001547	-.002800	1.577433	.0147841
#3	1.949255	.0477819	-.000594	-.002455	-.003255	1.619009	.0123873

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2798-04 Acquired: 8/11/2025 13:08:55 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.158858	-.022284	.2186251
Stddev	.023246	.000434	.0015278
%RSD	2.005964	1.949767	.6988226
#1	1.156506	-.021826	.2196950
#2	1.136877	-.022691	.2193049
#3	1.183191	-.022335	.2168753

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5979.603	101064.0	11559.26	4580.825	6697.634
Stddev	88.402	999.5	109.98	45.182	114.896
%RSD	1.478392	.9889652	.9514635	.9863204	1.715465
#1	5959.761	102127.3	11475.17	4630.511	6669.399
#2	6076.240	100921.1	11518.88	4569.762	6824.015
#3	5902.809	100143.7	11683.72	4542.203	6599.488

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2800-02 Acquired: 8/11/2025 13:13:17 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001952**	**-.001267**	**.0062025**	**.0020668**	**-.000010**	**.0959443**	**.2974954**
Stddev	.000904	.001062	.0011272	.0007260	.000762	.0075232	.0059631
%RSD	46.31929	83.84403	18.17317	35.12620	7414.802	7.841173	2.004441
#1	-.002908	-.000421	.0065124	.0027167	.000583	.0902771	.2953188
#2	-.001835	-.000921	.0071423	.0012833	-.000869	.1044796	.3042411
#3	-.001112	-.002459	.0049528	.0022004	.000255	.0930761	.2929264

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000308**	**.0004679**	**21.62371**	**.0003474**	**-.000228**	**.0116038**	**.0460078**
Stddev	.0000312	.0000536	.36171	.0000953	.000289	.0003441	.0043768
%RSD	101.2642	11.46281	1.672757	27.42594	126.6594	2.965771	9.513169
#1	.0000454	.0004234	21.51301	.0004574	-.000284	.0118523	.0411513
#2	.0000522	.0004528	22.02784	.0002926	-.000484	.0112110	.0496472
#3	-.000005	.0005274	21.33029	.0002921	.000085	.0117480	.0472249

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1238501**	**1.617521**	**.0025088**	**.0003467**	**279.2261**	**.0032254**	**.1669780**
Stddev	.0023534	.021962	.0001570	.0004809	3.3332	.0011047	.0006603
%RSD	1.900202	1.357785	6.256340	138.6897	1.193733	34.24854	.3954267
#1	.1241180	1.600479	.0023861	-.000178	276.8259	.0041530	.1662963
#2	.1260580	1.642307	.0024545	.000450	283.0318	.0020034	.1670232
#3	.1213741	1.609779	.0026856	.000767	277.8205	.0035199	.1676145

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6810304**	**.0257499**	**-.000500**	**-.001646**	**-.000959**	**1.227358**	**.0219704**
Stddev	.0144882	.0005538	.000088	.000267	.000345	.009610	.0021071
%RSD	2.127388	2.150681	17.59493	16.20583	36.02224	.7830219	9.590452
#1	.6942413	.0257836	-.000442	-.001338	-.000871	1.216648	.0234372
#2	.6655361	.0262861	-.000457	-.001790	-.000666	1.230196	.0195559
#3	.6833139	.0251800	-.000601	-.001810	-.001339	1.235230	.0229180

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2800-02 Acquired: 8/11/2025 13:13:17 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6292260	-.014823	.1106858
Stddev	.0127425	.000576	.0021850
%RSD	2.025103	3.885642	1.974045
#1	.6176070	-.014435	.1099194
#2	.6272177	-.015485	.1131507
#3	.6428534	-.014550	.1089872

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6229.941	105209.4	11776.48	4761.817	7259.379
Stddev	70.971	356.2	208.97	22.006	79.103
%RSD	1.139196	.3385730	1.774434	.4621350	1.089668
#1	6307.113	105620.7	11789.03	4787.222	7344.367
#2	6215.237	104999.7	11561.52	4748.654	7245.867
#3	6167.475	105007.9	11978.88	4749.575	7187.901

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2800-02DUP Acquired: 8/11/2025 13:17:41 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001330**	**.0000763**	**.0101689**	**.0032677**	**-.000203**	**.1681817**	**.5317026**
Stddev	.002611	.0006739	.0014992	.0007708	.000754	.0049572	.0153312
%RSD	196.2175	883.5972	14.74271	23.58743	372.2655	2.947526	2.883407
#1	-.003517	-.000232	.0106809	.0028207	-.001065	.1644443	.5298732
#2	-.002035	-.000388	.0084808	.0028246	.000126	.1662957	.5173682
#3	.001560	.000849	.0113450	.0041576	.000331	.1738051	.5478663

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001656**	**.0008842**	**37.65914**	**.0009845**	**-.000138**	**.0203113**	**.0561447**
Stddev	.0000058	.0000668	.85199	.0001971	.000141	.0005064	.0032307
%RSD	3.468661	7.552826	2.262368	20.02501	102.7042	2.493156	5.754211
#1	.0001664	.0009578	37.46931	.0010136	-.000178	.0207728	.0527156
#2	.0001710	.0008274	36.91808	.0007744	.000020	.0197696	.0591314
#3	.0001596	.0008673	38.59004	.0011654	-.000254	.0203916	.0565871

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1950321**	**2.753561**	**.0040327**	**.0004287**	**497.4153**	**.0029515**	**.2886651**
Stddev	.0053002	.055204	.0001072	.0004999	4.0466	.0024375	.0026997
%RSD	2.717617	2.004820	2.657777	116.6110	.8135300	82.58233	.9352454
#1	.1934024	2.736473	.0041242	.0004346	501.8819	.0036251	.2907127
#2	.1907380	2.708922	.0040592	.0009257	496.3704	.0049814	.2856056
#3	.2009558	2.815289	.0039148	-.000074	493.9936	.0002481	.2896770

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.460129**	**.0501669**	**-.000465**	**-.001862**	**-.001055**	**2.176104**	**.0354015**
Stddev	.007518	.0016875	.000071	.000565	.000848	.029924	.0029229
%RSD	.5148779	3.363813	15.17783	30.33282	80.41095	1.375113	8.256369
#1	1.453043	.0510593	-.000528	-.001929	-.000350	2.145164	.0348793
#2	1.459328	.0482206	-.000389	-.002389	-.000819	2.178251	.0327749
#3	1.468015	.0512208	-.000480	-.001266	-.001997	2.204896	.0385503

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2800-02DUP Acquired: 8/11/2025 13:17:41 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**1.130497**	**-.017769**	**.1944880**
Stddev	.003874	.001551	.0053093
%RSD	.3427126	8.730380	2.729906
#1	1.134533	-.018507	.1936031
#2	1.130149	-.015986	.1896767
#3	1.126808	-.018813	.2001842

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5972.344**	**101742.5**	**11609.70**	**4620.736**	**6811.009**
Stddev	21.733	542.4	242.89	23.970	14.990
%RSD	.3638883	.5331174	2.092142	.5187404	.2200918
#1	5985.133	101712.5	11538.96	4599.445	6821.965
#2	5984.648	102299.3	11880.11	4646.697	6817.136
#3	5947.251	101215.7	11410.03	4616.065	6793.926

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2800-02LX5 Acquired: 8/11/2025 13:22:05 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002003**	**-.000988**	**.0024733**	**-.000058**	**-.002145**	**.0137340**	**.0638242**
Stddev	.002557	.001160	.0014991	.002450	.001598	.0046994	.0029870
%RSD	127.6820	117.4171	60.61330	4213.153	74.49718	34.21731	4.680081
#1	-.004854	-.001560	.0026695	.002191	-.003860	.0083730	.0625419
#2	.000086	-.001750	.0038647	.000304	-.001880	.0156868	.0616924
#3	-.001240	.000347	.0008857	-.002670	-.000696	.0171421	.0672383

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000016**	**-.000019**	**4.973460**	**.0001236**	**-.000296**	**.0027914**	**-.002481**
Stddev	.000036	.000017	.133211	.0002465	.000024	.0001039	.003951
%RSD	224.4167	93.58355	2.678437	199.4602	8.055574	3.723756	159.2609
#1	.000003	-.000037	4.923204	-.000160	-.000314	.0026935	-.003064
#2	.000007	-.000017	4.872688	.000243	-.000307	.0029005	.001729
#3	-.000058	-.000002	5.124488	.000287	-.000269	.0027801	-.006107

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0301754**	**.3550039**	**.0005876**	**.0002432**	**55.88281**	**.0016194**	**.0341444**
Stddev	.0004114	.0143618	.0001311	.0004352	.29457	.0015726	.0003270
%RSD	1.363431	4.045535	22.30757	178.9490	.5271182	97.11066	.9577672
#1	.0304114	.3402647	.0007343	-.000239	55.67323	.0004721	.0337815
#2	.0297003	.3689559	.0005466	.000607	55.75559	.0034119	.0344162
#3	.0304145	.3557911	.0004820	.000362	56.21961	.0009741	.0342356

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.806103**	**-.001037**	**-.000845**	**-.000044**	**-.001248**	**.2623435**	**.0065641**
Stddev	.038644	.000771	.000108	.000656	.001705	.0039939	.0019380
%RSD	2.139657	74.35389	12.72311	1502.320	136.6682	1.522407	29.52381
#1	1.805200	-.000149	-.000873	-.000663	-.001605	.2669331	.0044933
#2	1.845191	-.001537	-.000726	-.000112	.000608	.2596578	.0068652
#3	1.767918	-.001424	-.000936	.000643	-.002746	.2604395	.0083340

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2800-02LX5 Acquired: 8/11/2025 13:22:05 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1304780	.0493337	.0252231
Stddev	.0057467	.0025170	.0005909
%RSD	4.404355	5.102034	2.342685
#1	.1312817	.0520214	.0248444
#2	.1243718	.0489479	.0249209
#3	.1357806	.0470319	.0259040

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6382.025	108558.9	11573.11	4876.205	7685.393
Stddev	46.656	314.2	246.46	27.324	62.329
%RSD	.7310459	.2894244	2.129610	.5603461	.8110068
#1	6369.438	108921.6	11685.30	4902.403	7662.119
#2	6433.683	108386.6	11743.51	4878.331	7756.009
#3	6342.955	108368.6	11290.51	4847.880	7638.049

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2800-02MS Acquired: 8/11/2025 13:26:23 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8088641**	**1.651889**	**.9186770**	**2.061940**	**.7943225**	**1.995752**	**.6277285**
Stddev	.0104297	.056856	.0083176	.030839	.0098268	.051435	.0185821
%RSD	1.289420	3.441877	.9053907	1.495619	1.237125	2.577199	2.960220
#1	.8011759	1.628568	.9151337	2.032609	.7840481	2.031062	.6407115
#2	.8046803	1.610402	.9127177	2.059120	.7952892	1.936740	.6064425
#3	.8207360	1.716698	.9281795	2.094092	.8036301	2.019455	.6360316

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1790426**	**.1932927**	**32.40260**	**.3776186**	**.1939876**	**.3042932**	**3.053704**
Stddev	.0040441	.0021832	.87755	.0049074	.0022389	.0037079	.051872
%RSD	2.258714	1.129455	2.708274	1.299569	1.154163	1.218533	1.698655
#1	.1823079	.1917889	32.97780	.3820257	.1924522	.3013339	3.076669
#2	.1745190	.1922925	31.39254	.3723302	.1929539	.3030930	2.994313
#3	.1803011	.1957968	32.83747	.3784998	.1965566	.3084525	3.090128

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3504963**	**4.109445**	**.4888125**	**.0715961**	**419.0941**	**.2875626**	**.4375905**
Stddev	.0094295	.088872	.0053474	.0009283	10.3126	.0062005	.0080414
%RSD	2.690323	2.162630	1.093949	1.296587	2.460684	2.156215	1.837645
#1	.3568093	4.167516	.4856180	.0721341	430.6568	.2902976	.4436167
#2	.3396570	4.007135	.4858337	.0705242	410.8476	.2804649	.4284596
#3	.3550226	4.153684	.4949859	.0721301	415.7780	.2919254	.4406952

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.64650**	**.2866032**	**.4050826**	**.6765456**	**.1856222**	**2.652701**	**5.916502**
Stddev	.21365	.0073823	.0057188	.0094334	.0053722	.047870	.076334
%RSD	1.834493	2.575790	1.411754	1.394350	2.894160	1.804574	1.290194
#1	11.78695	.2924722	.4008241	.6701599	.1899193	2.673389	5.857345
#2	11.40063	.2783148	.4028412	.6720961	.1795991	2.597966	5.889493
#3	11.75193	.2890226	.4115826	.6873809	.1873481	2.686748	6.002669

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2800-02MS Acquired: 8/11/2025 13:26:23 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9879912	.1810465	.3445216
Stddev	.0126540	.0055014	.0097940
%RSD	1.280778	3.038698	2.842775
#1	.9796546	.1856296	.3516659
#2	.9817672	.1749454	.3333573
#3	1.002552	.1825644	.3485417

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6017.981	105115.9	11780.96	4798.715	6872.125
Stddev	59.121	1230.4	249.25	77.078	62.551
%RSD	.9824138	1.170540	2.115678	1.606221	.9102082
#1	6069.727	104138.2	11564.56	4731.379	6914.869
#2	6030.671	106497.5	12053.49	4882.786	6901.174
#3	5953.545	104711.9	11724.84	4781.979	6800.332

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2800-02MSD Acquired: 8/11/2025 13:30:31 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8286022	1.856808	.9361290	2.120810	.8131546	2.005993	.6064380
Stddev	.0110544	.064138	.0085670	.023141	.0116187	.015741	.0028646
%RSD	1.334108	3.454228	.9151530	1.091151	1.428845	.7847127	.4723595
#1	.8215284	1.885306	.9319230	2.106639	.8060983	1.998982	.6033020
#2	.8229374	1.901760	.9304780	2.108276	.8068009	1.994976	.6070950
#3	.8413408	1.783360	.9459861	2.147514	.8265646	2.024022	.6089170

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1805383	.1972093	30.87013	.3998810	.1975769	.3089374	3.242003
Stddev	.0017859	.0015009	.20873	.0050541	.0018274	.0030855	.016411
%RSD	.9892072	.7610783	.6761679	1.263902	.9249187	.9987446	.5062116
#1	.1813098	.1961278	30.76331	.4055571	.1964431	.3080233	3.247303
#2	.1784963	.1965772	30.73643	.3958680	.1966026	.3064122	3.255110
#3	.1818087	.1989229	31.11066	.3982178	.1996850	.3123766	3.223597

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3462993	4.021648	.4981819	.0504542	410.4374	.2919113	.4431365
Stddev	.0024884	.033962	.0039781	.0004492	5.4503	.0043690	.0063985
%RSD	.7185703	.8444775	.7985264	.8902703	1.327917	1.496675	1.443918
#1	.3440134	4.018079	.4961447	.0508596	411.6487	.2869704	.4505166
#2	.3459345	3.989611	.4956350	.0499713	415.1801	.2934992	.4397503
#3	.3489500	4.057253	.5027660	.0505318	404.4834	.2952642	.4391427

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.13088	.2841652	.4178970	.6961274	.1896549	2.692331	6.024574
Stddev	.04945	.0025058	.0040738	.0051276	.0019510	.020885	.026731
%RSD	.4076063	.8818053	.9748304	.7365945	1.028688	.7757402	.4436980
#1	12.18147	.2853256	.4159956	.6943225	.1874741	2.712762	6.012777
#2	12.12852	.2812895	.4151216	.6921462	.1912344	2.693212	6.005770
#3	12.08266	.2858804	.4225739	.7019134	.1902563	2.671018	6.055173

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2800-02MSD Acquired: 8/11/2025 13:30:31 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9597894	.1808920	.3383113
Stddev	.0051461	.0008897	.0021046
%RSD	.5361644	.4918589	.6220755
#1	.9549312	.1798978	.3359773
#2	.9592553	.1811648	.3388921
#3	.9651816	.1816134	.3400645

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6047.645	101842.0	11921.37	4659.217	6915.506
Stddev	49.218	1028.1	86.24	59.261	43.276
%RSD	.8138313	1.009463	.7233723	1.271900	.6257879
#1	6060.094	100657.6	11912.64	4593.623	6929.789
#2	6089.442	102503.5	12011.64	4675.136	6949.836
#3	5993.398	102365.0	11839.83	4708.893	6866.894

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2800-02A Acquired: 8/11/2025 13:34:39 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7432353	1.641814	.8449026	1.907880	.7377444	1.864197	.5902740
Stddev	.0106235	.042352	.0139878	.031698	.0108820	.031460	.0134885
%RSD	1.429360	2.579559	1.655547	1.661427	1.475037	1.687612	2.285118
#1	.7500828	1.674232	.8558584	1.931724	.7451945	1.889366	.6044478
#2	.7309972	1.593896	.8291468	1.871909	.7252564	1.828927	.5775955
#3	.7486259	1.657313	.8497027	1.920006	.7427824	1.874298	.5887786

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1665487	.1776367	30.73081	.3510408	.1777359	.2787910	2.837938
Stddev	.0035192	.0028930	.68875	.0046402	.0030437	.0041710	.035292
%RSD	2.112998	1.628614	2.241251	1.321852	1.712496	1.496119	1.243576
#1	.1704287	.1797303	31.43939	.3490083	.1799058	.2819347	2.822551
#2	.1635628	.1743355	30.06376	.3477636	.1742566	.2740592	2.812953
#3	.1656546	.1788442	30.68927	.3563505	.1790452	.2803790	2.878311

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3322927	3.871765	.4502626	.0599156	388.2818	.2692156	.4123862
Stddev	.0085253	.116510	.0071859	.0005996	7.1473	.0039267	.0049845
%RSD	2.565602	3.009222	1.595941	1.000822	1.840742	1.458578	1.208706
#1	.3410549	3.990403	.4560596	.0594364	385.0615	.2735697	.4102319
#2	.3240259	3.757507	.4422227	.0597223	383.3112	.2659430	.4088412
#3	.3317972	3.867383	.4525053	.0605880	396.4726	.2681339	.4180856

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.82708	.2669319	.3789000	.6258599	.1713684	2.524247	5.386671
Stddev	.20872	.0077928	.0064937	.0092590	.0042595	.044205	.098009
%RSD	1.927753	2.919404	1.713829	1.479404	2.485604	1.751209	1.819473
#1	10.77574	.2754398	.3837196	.6314351	.1762717	2.493650	5.468145
#2	10.64883	.2601403	.3715156	.6151719	.1685828	2.504163	5.277910
#3	11.05668	.2652156	.3814649	.6309728	.1692506	2.574928	5.413960

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2800-02A Acquired: 8/11/2025 13:34:39 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.8892776	.1674941	.3236301
Stddev	.0153863	.0041762	.0073854
%RSD	1.730202	2.493341	2.282039
#1	.9022021	.1721776	.3311849
#2	.8722581	.1641577	.3164267
#3	.8933726	.1661471	.3232788

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6217.625	106155.0	11875.82	4801.734	7141.680
Stddev	83.887	1364.5	277.87	41.841	95.057
%RSD	1.349177	1.285387	2.339834	.8713715	1.331013
#1	6156.261	106567.8	11576.44	4812.037	7074.515
#2	6313.214	107265.4	12125.48	4837.461	7250.445
#3	6183.401	104631.7	11925.55	4755.704	7100.080

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2779-01 Acquired: 8/11/2025 13:38:47 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1691007	-.109161	8.296094	-.000254	-.034596	70.17167
Stddev	.0046445	.003998	.081899	.005053	.001704	1.01781
%RSD	2.746609	3.662223	.9872020	1987.252	4.925341	1.450460
#1	.1734073	-.113656	8.307926	-.005488	-.036536	69.07242
#2	.1641795	-.106002	8.208922	.000129	-.033340	70.36116
#3	.1697155	-.107825	8.371433	.004596	-.033913	71.08141

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.879839	.0119765	.0361881	164.7261	.3891366	.1597179
Stddev	.074477	.0000251	.0017579	2.2028	.0084212	.0018419
%RSD	1.526225	.2093074	4.857622	1.337263	2.164068	1.153248
#1	4.806799	.0119475	.0360336	162.3405	.3963081	.1597467
#2	4.877044	.0119898	.0345126	165.1548	.3912380	.1578618
#3	4.955675	.0119920	.0380182	166.6831	.3798637	.1615453

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.003121	665.6407	4.610860	55.68234	.8629241	.0218314
Stddev	.042547	12.1929	.063516	.77385	.0080206	.0007318
%RSD	1.416773	1.831754	1.377538	1.389766	.9294625	3.351939
#1	3.000013	676.2430	4.544560	54.80556	.8644411	.0210378
#2	2.962212	668.3621	4.616853	55.97145	.8542534	.0224794
#3	3.047136	652.3171	4.671168	56.27002	.8700779	.0219771

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.403711	.2917040	6.174186	15.19723	^ *****	.0478196
Stddev	.219193	.0044918	.132415	.25511	-----	.0024861
%RSD	2.608292	1.539851	2.144649	1.678650	-----	5.198811
#1	8.615549	.2873224	6.290191	15.39292	^ -----	.0462935
#2	8.417747	.2914911	6.202442	15.29005	^ -----	.0464770
#3	8.177837	.2962984	6.029923	14.90870	^ -----	.0506883

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2779-01 Acquired: 8/11/2025 13:38:47 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.512035	4.659575	12.25690	5.991845	F 43.92026	.1843920
Stddev	.012814	.066305	.23277	.054985	.57172	.0022289
%RSD	.8474445	1.422980	1.899117	.9176612	1.301733	1.208801
#1	1.518967	4.591718	12.41611	6.010162	44.45459	.1857406
#2	1.497249	4.662796	12.36484	5.930039	43.31733	.1856161
#3	1.519890	4.724211	11.98975	6.035333	43.98886	.1818192

Elem	Sr4077
Units	ppm
Avg	.0255034
Stddev	.0217510
%RSD	85.28660
#1	.0050435
#2	.0231179
#3	.0483488

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6319.219	110571.1	12707.97	4868.135	6996.583
Stddev	55.862	2063.1	165.06	107.624	55.631
%RSD	.8839976	1.865816	1.298831	2.210779	.7951162
#1	6296.242	108988.0	12874.95	4785.340	6967.821
#2	6382.905	109820.9	12704.06	4829.273	7060.707
#3	6278.510	112904.2	12544.91	4989.792	6961.220

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2779-05 Acquired: 8/11/2025 13:42:56 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1263480	-.025778	6.124429	.0048744	.0156044	125.9083
Stddev	.0025937	.000810	.065156	.0011553	.0021265	1.8297
%RSD	2.052811	3.141323	1.063869	23.70062	13.62764	1.453233
#1	.1254277	-.026657	6.079116	.0061585	.0151537	128.0069
#2	.1243399	-.025062	6.095074	.0045455	.0179202	124.6475
#3	.1292763	-.025614	6.199099	.0039193	.0137394	125.0703

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.571266	.0123845	.0142265	204.8720	.3235630	.1772270
Stddev	.035807	.0000920	.0007728	2.9376	.0022428	.0026506
%RSD	1.392571	.7427181	5.432162	1.433882	.6931728	1.495604
#1	2.612522	.0123950	.0133839	208.2577	.3222919	.1751410
#2	2.548280	.0124707	.0143932	202.9997	.3222444	.1763304
#3	2.552996	.0122876	.0149023	203.3585	.3261526	.1802097

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.563573	345.8216	6.591661	70.32814	.4836075	.0163402
Stddev	.018020	3.4412	.086039	.97497	.0056074	.0016241
%RSD	1.152514	.9950875	1.305272	1.386321	1.159499	9.939337
#1	1.549988	348.9520	6.690959	71.44325	.4794179	.0182100
#2	1.556715	342.1369	6.539236	69.63653	.4814269	.0152803
#3	1.584015	346.3758	6.544788	69.90464	.4899777	.0155302

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.76608	.4131468	4.952660	48.33318	.2005886	.0086765
Stddev	.11548	.0060794	.031528	.52387	.0083706	.0003850
%RSD	.9814280	1.471484	.6365836	1.083871	4.172998	4.437516
#1	11.84740	.4200482	4.918441	48.70418	.2102538	.0088995
#2	11.63391	.4085838	4.959010	47.73391	.1956900	.0082320
#3	11.81695	.4108084	4.980530	48.56146	.1958220	.0088982

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2779-05 Acquired: 8/11/2025 13:42:56 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3685297	7.522339	F 16.43963	8.750802	10.26111	.3180240
Stddev	.0047538	.104099	.12989	.109268	.19746	.0030440
%RSD	1.289922	1.383869	.7901321	1.248663	1.924370	.9571436
#1	.3657020	7.642481	16.36563	8.662787	10.05980	.3215383
#2	.3658692	7.458929	16.36364	8.716518	10.26904	.3163219
#3	.3740180	7.465608	16.58961	8.873101	10.45448	.3162119

Elem	Sr4077
Units	ppm
Avg	.5014390
Stddev	.0087036
%RSD	1.735730
#1	.5114524
#2	.4971749
#3	.4956896

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6851.303	117086.1	13183.57	5225.724	6965.638
Stddev	49.936	787.0	15.62	27.926	52.743
%RSD	.7288584	.6721397	.1184695	.5343955	.7571937
#1	6881.540	117609.7	13177.41	5257.906	6997.922
#2	6878.704	117467.6	13171.96	5211.398	6994.219
#3	6793.664	116181.1	13201.32	5207.868	6904.773

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2793-01 Acquired: 8/11/2025 13:46:56 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0752104	-.021340	.8883702	.0045777	-.012061	116.4711	1.158253
Stddev	.0027774	.003133	.0088914	.0026287	.001420	2.0452	.025926
%RSD	3.692803	14.68349	1.000868	57.42346	11.77280	1.755956	2.238366
#1	.0735767	-.017985	.8843399	.0075030	-.013013	116.7391	1.158892
#2	.0736372	-.024191	.8822076	.0038165	-.012741	118.3692	1.183854
#3	.0784172	-.021843	.8985630	.0024137	-.010429	114.3052	1.132014

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0099840	.0066325	30.30498	.2119863	.1016894	.3503074	225.2231
Stddev	.0001840	.0007478	.52612	.0032809	.0008933	.0057055	5.4059
%RSD	1.843253	11.27506	1.736101	1.547706	.8784394	1.628714	2.400253
#1	.0099950	.0064086	30.31161	.2129583	.1017057	.3474715	227.8715
#2	.0101623	.0060221	30.82776	.2146715	.1007881	.3465755	228.7941
#3	.0097947	.0074666	29.77557	.2083292	.1025745	.3568752	219.0036

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.359465	31.04139	.1999836	.0077919	4.951699	.3115037	1.026490
Stddev	.122105	.46069	.0019837	.0007878	.132658	.0054044	.019915
%RSD	1.920047	1.484130	.9919302	10.11013	2.679049	1.734940	1.940069
#1	6.370064	31.09381	.1991235	.0078026	4.993599	.3106739	1.031649
#2	6.475925	31.47363	.1985751	.0085742	5.058348	.3172750	1.043316
#3	6.232407	30.55672	.2022522	.0069988	4.803149	.3065622	1.004503

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.79635	.1036776	.0040414	.0379560	2.103549	9.476525	7.307975
Stddev	.24305	.0133397	.0002011	.0002885	.038144	.193516	.057532
%RSD	2.060350	12.86654	4.975362	.7600646	1.813296	2.042057	.7872532
#1	11.88754	.1141749	.0042265	.0379187	2.104704	9.566902	7.301637
#2	11.98060	.1081914	.0038274	.0376879	2.141101	9.608318	7.253875
#3	11.52089	.0886666	.0040703	.0382613	2.064840	9.254355	7.368415

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2793-01 Acquired: 8/11/2025 13:46:56 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.481135	.1665387	-.048182
Stddev	.016585	.0045109	.002207
%RSD	1.119771	2.708589	4.580615
#1	1.484772	.1673540	-.050256
#2	1.463033	.1705862	-.048428
#3	1.495600	.1616758	-.045862

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7642.395	129277.9	14380.79	5771.019	7577.133
Stddev	31.951	1924.5	156.38	87.485	45.292
%RSD	.4180773	1.488642	1.087442	1.515940	.5977512
#1	7659.034	128280.9	14421.07	5727.715	7592.218
#2	7662.593	128056.6	14208.21	5713.633	7612.958
#3	7605.558	131496.4	14513.09	5871.711	7526.223

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCV03 Acquired: 8/11/2025 14:54:32 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.844542**	**5.166842**	**4.621066**	**4.953323**	**4.875111**	**9.140817**
Stddev	.179588	.224668	.170856	.192249	.200583	.147786
%RSD	3.707009	4.348262	3.697329	3.881207	4.114427	1.616774
#1	4.672635	4.930479	4.465005	4.767128	4.691143	9.048047
#2	4.830058	5.192422	4.594572	4.941738	4.845234	9.063162
#3	5.030933	5.377624	4.803622	5.151102	5.088957	9.311243

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.088503**	**.2693997**	**2.319390**	**22.80615**	**.9129488**	**2.321735**
Stddev	.036673	.0041502	.083853	.32207	.0196479	.085534
%RSD	.4035103	1.540546	3.615323	1.412217	2.152136	3.684073
#1	9.097255	.2654904	2.242562	22.60765	.8927686	2.242428
#2	9.120008	.2689539	2.306770	22.63304	.9140608	2.310409
#3	9.048245	.2737548	2.408838	23.17776	.9320171	2.412368

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.182778**	**4.743445**	**2.271272**	**22.54066**	**2.327412**	**1.172397**
Stddev	.044148	.101108	.034895	.40015	.085125	.026112
%RSD	3.732604	2.131540	1.536383	1.775229	3.657483	2.227259
#1	1.141628	4.658214	2.251900	22.23298	2.249928	1.145774
#2	1.177292	4.716963	2.250360	22.39599	2.313777	1.173451
#3	1.229412	4.855159	2.311556	22.99303	2.418531	1.197967

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.19056**	**2.302572**	**2.349323**	**23.81014**	**4.523790**	**4.823556**
Stddev	.40214	.036635	.044911	.45688	.073267	.182107
%RSD	1.734052	1.591038	1.911642	1.918844	1.619591	3.775366
#1	22.83164	2.279456	2.305941	23.39441	4.453775	4.652600
#2	23.11487	2.283449	2.346408	23.73672	4.517670	4.802998
#3	23.62516	2.344812	2.395621	24.29928	4.599925	5.015069

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCV03 Acquired: 8/11/2025 14:54:32 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.671113**	**4.611556**	**4.791376**	F **4.435202**	**4.735240**	F **4.489847**
Stddev	.166878	.069421	.123438	.153604	.178631	.060035
%RSD	3.572548	1.505365	2.576245	3.463282	3.772370	1.337125
#1	4.515947	4.574563	4.679010	4.291801	4.569306	4.450507
#2	4.649749	4.568466	4.771616	4.416507	4.712100	4.460085
#3	4.847645	4.691639	4.923502	4.597297	4.924313	4.558948

Elem	Sr4077
Units	ppm
Avg	**4.616514**
Stddev	.103297
%RSD	2.237564
#1	4.506414
#2	4.711300
#3	4.631827

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6656.227**	**115131.0**	**12609.01**	**5087.336**	**7815.243**
Stddev	197.057	2238.8	155.46	81.085	225.972
%RSD	2.960492	1.944573	1.232902	1.593853	2.891432
#1	6845.859	117471.5	12758.65	5157.867	8029.697
#2	6670.321	114911.4	12620.04	5105.399	7836.743
#3	6452.501	113010.1	12448.33	4998.744	7579.289

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCB03 Acquired: 8/11/2025 14:58:42 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	.0003854	-.003730	-.000195	-.002488	-.002264	-.010127	-.009049
Stddev	.0014079	.001194	.000369	.001681	.001708	.005980	.000987
%RSD	365.2776	32.01243	188.6607	67.54784	75.42972	59.04522	10.90507
#1	-.000633	-.005029	-.000567	-.000600	-.001606	-.016856	-.009527
#2	.001992	-.003483	.000170	-.003820	-.000984	-.005422	-.009706
#3	-.000202	-.002679	-.000189	-.003045	-.004204	-.008103	-.007914

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000029	-.000065	-.008115	.0000050	-.000289	.0000838	-.014783
Stddev	.000063	.000066	.006964	.0001122	.000125	.0002236	.005313
%RSD	216.2497	100.3122	85.80867	2240.677	43.39974	266.7769	35.94240
#1	-.000094	-.000056	-.009266	-.000004	-.000401	.0000199	-.008770
#2	-.000027	-.000005	-.000648	-.000103	-.000153	.0003325	-.018844
#3	.000033	-.000135	-.014432	.000121	-.000313	-.000101	-.016734

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001491	.0057804	.0000027	.0005115	.1238433	.0009583	-.001546
Stddev	.0003688	.0165489	.0002013	.0003141	.0188207	.0019710	.000169
%RSD	247.3254	286.2913	7600.919	61.40008	15.19714	205.6877	10.92646
#1	-.000144	.0072509	.0001328	.0007664	.1176771	-.000102	-.001352
#2	.000563	-.011455	.0001043	.0006074	.1088793	-.000256	-.001664
#3	.000028	.021545	-.000229	.0001607	.1449736	.003233	-.001622

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2424281	.0019813	.0004105	.0009783	-.000301	.0085429	.0017656
Stddev	.0177049	.0003414	.0000874	.0002342	.000462	.0066198	.0004451
%RSD	7.303147	17.22904	21.29406	23.93883	153.3071	77.48956	25.21055
#1	.2346438	.0020395	.0005077	.0007908	.000218	.0030354	.0022741
#2	.2299490	.0022898	.0003383	.0009033	-.000454	.0067060	.0014465
#3	.2626914	.0016146	.0003855	.0012408	-.000668	.0158871	.0015763

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCB03 Acquired: 8/11/2025 14:58:42 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.005698**	**-.002405**	**-.000192**
Stddev	.000958	.001259	.000077
%RSD	16.81000	52.33045	39.82568
#1	-.005298	-.002189	-.000227
#2	-.006791	-.003758	-.000245
#3	-.005006	-.001269	-.000104

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6935.019**	**119498.0**	**12491.68**	**5194.147**	**8848.481**
Stddev	113.433	1106.1	147.82	34.194	145.307
%RSD	1.635656	.9255823	1.183381	.6583108	1.642170
#1	7021.489	118439.7	12645.83	5162.354	8953.442
#2	6976.984	119408.1	12478.07	5189.768	8909.365
#3	6806.583	120646.3	12351.13	5230.319	8682.636

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2793-01DUP Acquired: 8/11/2025 15:03:08 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0676579	-.018498	.9674787	.0030994	-.009376	113.0169	1.195511
Stddev	.0010424	.002813	.0247374	.0019096	.001425	1.1609	.014281
%RSD	1.540679	15.20639	2.556892	61.61270	15.19352	1.027199	1.194553
#1	.0665850	-.017968	.9499923	.0009623	-.008809	114.2592	1.207195
#2	.0686668	-.021539	.9566615	.0036974	-.008322	112.8320	1.199748
#3	.0677218	-.015988	.9957822	.0046385	-.010997	111.9595	1.179591

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0096933	.0069552	29.45127	.1820555	.0987917	.3929381	201.6518
Stddev	.0001193	.0009938	.31092	.0022723	.0029397	.0124607	2.8615
%RSD	1.231187	14.28851	1.055706	1.248140	2.975665	3.171169	1.419015
#1	.0096758	.0064741	29.78271	.1822317	.0970097	.3849817	201.2368
#2	.0098205	.0062935	29.40506	.1842345	.0971806	.3865340	204.6982
#3	.0095838	.0080980	29.16605	.1797002	.1021847	.4072986	199.0206

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.435914	30.33700	.1956643	.0065740	4.720638	.2869894	1.010466
Stddev	.067648	.30510	.0052571	.0004541	.067183	.0023664	.012189
%RSD	1.051099	1.005689	2.686781	6.907102	1.423182	.8245489	1.206247
#1	6.502790	30.66821	.1917671	.0062585	4.707181	.2896746	1.013214
#2	6.437433	30.27535	.1935824	.0070944	4.793531	.2860849	1.021047
#3	6.367520	30.06743	.2016435	.0063691	4.661202	.2852087	.997138

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.70946	.0924562	.0036270	.0281403	2.101317	11.63217	6.993772
Stddev	.13049	.0060849	.0001082	.0007072	.020320	.14218	.206715
%RSD	1.114391	6.581427	2.982510	2.513211	.9670025	1.222288	2.955707
#1	11.69490	.0904327	.0037510	.0276269	2.120860	11.63058	6.865716
#2	11.84662	.0992951	.0035521	.0278470	2.102790	11.77514	6.883350
#3	11.58686	.0876408	.0035780	.0289470	2.080301	11.49080	7.232249

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2793-01DUP Acquired: 8/11/2025 15:03:08 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.318164	.1482274	-.018405
Stddev	.041638	.0009861	.002677
%RSD	3.158758	.6652557	14.54717
#1	1.286139	.1488234	-.015931
#2	1.303121	.1487696	-.021248
#3	1.365233	.1470892	-.018038

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7937.147	135911.1	15106.98	6008.004	7838.868
Stddev	134.761	1377.5	152.71	87.637	165.561
%RSD	1.697849	1.013537	1.010851	1.458666	2.112046
#1	8034.593	135962.5	14935.34	5991.177	7952.868
#2	7993.488	134508.6	15157.79	5930.001	7914.772
#3	7783.359	137262.1	15227.81	6102.834	7648.965

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2793-01LX5 Acquired: 8/11/2025 15:07:12 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0145592	-.008611	.1779234	-.004390	-.005415	25.61676	.2410218
Stddev	.0028072	.000771	.0055629	.002618	.002063	.79385	.0070874
%RSD	19.28156	8.948253	3.126578	59.63305	38.10039	3.098946	2.940565
#1	.0117244	-.008975	.1734671	-.001482	-.006790	25.91692	.2453977
#2	.0146152	-.007726	.1761450	-.005132	-.003042	24.71660	.2328447
#3	.0173380	-.009133	.1841580	-.006558	-.006411	26.21676	.2448230

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022796	.0006550	6.760703	.0464623	.0193879	.0831667	48.48221
Stddev	.0000249	.0003418	.207689	.0031817	.0005851	.0053336	3.15643
%RSD	1.093179	52.19204	3.072002	6.847902	3.017722	6.413177	6.510489
#1	.0023034	.0002999	6.873097	.0500330	.0190152	.0781430	52.02687
#2	.0022537	.0006832	6.521038	.0454259	.0190862	.0825932	47.44445
#3	.0022819	.0009818	6.887974	.0439280	.0200622	.0887639	45.97532

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.407651	6.913790	.0397544	.0015248	.9940535	.0686259	.2234351
Stddev	.037309	.229339	.0011077	.0002431	.0734404	.0023032	.0153277
%RSD	2.650414	3.317120	2.786373	15.94544	7.387976	3.356165	6.860008
#1	1.427583	7.026640	.0390190	.0016493	1.073836	.0710492	.2402855
#2	1.364609	6.649892	.0392157	.0012447	.979053	.0664654	.2196990
#3	1.430759	7.064837	.0410284	.0016805	.929271	.0683632	.2103210

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.542156	.0149946	.0002921	.0064406	.4611691	1.963734	1.382023
Stddev	.182715	.0091622	.0003284	.0003051	.0129621	.137314	.044902
%RSD	7.187388	61.10335	112.4059	4.737258	2.810713	6.992475	3.248984
#1	2.743910	.0238760	.0005973	.0067601	.4689015	2.121245	1.346934
#2	2.494719	.0155326	-.000055	.0061523	.4462045	1.900721	1.366511
#3	2.387837	.0055753	.000335	.0064093	.4684014	1.869237	1.432624

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2793-01LX5 Acquired: 8/11/2025 15:07:12 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2856499	.0278860	-.009866
Stddev	.0109369	.0014185	.002880
%RSD	3.828787	5.086759	29.18645
#1	.2771161	.0294580	-.012700
#2	.2818547	.0267014	-.009955
#3	.2979789	.0274988	-.006943

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7044.904	123286.9	13265.55	5529.049	8219.726
Stddev	177.114	6993.2	353.08	315.344	199.636
%RSD	2.514069	5.672314	2.661619	5.703399	2.428747
#1	7181.738	115485.5	13181.84	5186.817	8364.358
#2	7108.116	125382.5	13652.96	5592.462	8302.865
#3	6844.856	128992.8	12961.85	5807.867	7991.956

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2793-01MS Acquired: 8/11/2025 15:11:20 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6717841	1.750533	1.766702	1.370430	.4564301	123.6083
Stddev	.0159704	.028672	.051880	.034209	.0131535	.6743
%RSD	2.377312	1.637926	2.936526	2.496212	2.881821	.5455008
#1	.6589159	1.722972	1.722970	1.342915	.4431812	122.9022
#2	.6667787	1.748426	1.753112	1.359643	.4566228	123.6773
#3	.6896576	1.780201	1.824024	1.408732	.4694861	124.2455

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.358621	.1407789	.1712834	29.73438	.4524002	.2642459
Stddev	.008435	.0012395	.0058736	.16368	.0119549	.0084011
%RSD	.6208478	.8804765	3.429179	.5504753	2.642544	3.179270
#1	1.349225	.1393859	.1666380	29.55992	.4505108	.2571215
#2	1.365540	.1411907	.1693266	29.75863	.4651872	.2621063
#3	1.361099	.1417601	.1778856	29.88458	.4415024	.2735099

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5703525	205.0377	5.989526	32.43661	.6139857	.0622109
Stddev	.0201795	5.7336	.023629	.16196	.0177763	.0017832
%RSD	3.538073	2.796360	.3945060	.4992989	2.895234	2.866308
#1	.5554050	204.8930	5.962327	32.28454	.5987199	.0623584
#2	.5623458	210.8423	6.004993	32.41839	.6097352	.0639158
#3	.5933066	199.3779	6.001258	32.60691	.6335020	.0603586

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.782281	.5185810	1.174964	20.18274	.2822158	.2941519
Stddev	.202293	.0027277	.035912	.59224	.0167026	.0079656
%RSD	2.982675	.5259875	3.056417	2.934367	5.918377	2.708005
#1	6.745083	.5154913	1.167954	20.16152	.2885780	.2875107
#2	7.000591	.5195959	1.213864	20.78530	.2948024	.2919614
#3	6.601168	.5206557	1.143074	19.60140	.2632671	.3029836

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2793-01MS Acquired: 8/11/2025 15:11:20 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5938581**	**2.170598**	F **15.93102**	**12.47499**	**1.352957**	**.2934807**
Stddev	.0189954	.010620	.41902	.34658	.044143	.0027474
%RSD	3.198643	.4892554	2.630230	2.778214	3.262712	.9361543
#1	.5770615	2.158632	15.94552	12.19619	1.318116	.2904960
#2	.5900404	2.174262	16.34261	12.36574	1.338157	.2959042
#3	.6144724	2.178901	15.50494	12.86303	1.402598	.2940419

Elem	Sr4077
Units	ppm
Avg	**.1074039**
Stddev	.0054087
%RSD	5.035859
#1	.1057524
#2	.1030135
#3	.1134459

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7791.326**	**136117.4**	**15384.70**	**6069.644**	**7595.802**
Stddev	149.127	3089.7	116.39	150.546	182.510
%RSD	1.914017	2.269871	.7565014	2.480315	2.402771
#1	7918.838	136291.6	15472.65	6056.681	7752.613
#2	7827.792	132944.3	15428.72	5925.997	7639.328
#3	7627.348	139116.4	15252.73	6226.252	7395.464

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2793-01MSD Acquired: 8/11/2025 15:15:17 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6325972	1.734592	1.665668	1.348453	.4505017	115.0021
Stddev	.0162991	.098242	.052332	.045820	.0148462	5.1071
%RSD	2.576537	5.663687	3.141811	3.397976	3.295487	4.440837
#1	.6149067	1.622498	1.609989	1.298524	.4350152	109.1083
#2	.6358798	1.775551	1.673172	1.358258	.4518781	118.1206
#3	.6470052	1.805728	1.713843	1.388577	.4646118	117.7774

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.317345	.1384496	.1690554	29.29378	.4398703	.2607958
Stddev	.057696	.0030084	.0061365	1.23118	.0080770	.0083412
%RSD	4.379713	2.172939	3.629900	4.202882	1.836222	3.198361
#1	1.250942	.1350178	.1625358	27.87630	.4462278	.2520394
#2	1.355210	.1406320	.1699113	30.09671	.4426013	.2616999
#3	1.345883	.1396991	.1747190	29.90834	.4307818	.2686481

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5698643	177.6267	6.331219	30.31229	.5957136	.0616215
Stddev	.0178422	2.7380	.254506	1.28251	.0194637	.0007039
%RSD	3.130947	1.541414	4.019856	4.230979	3.267294	1.142274
#1	.5518211	175.8429	6.037774	28.83479	.5751328	.0609927
#2	.5702734	180.7792	6.491747	31.13803	.5981834	.0623819
#3	.5874984	176.2582	6.464136	30.96406	.6138245	.0614900

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.511044	.4635958	1.207013	18.31572	.2621616	.2964878
Stddev	.122144	.0195658	.021141	.32618	.0074738	.0087677
%RSD	1.875949	4.220445	1.751510	1.780864	2.850851	2.957205
#1	6.445685	.4410296	1.221135	18.10782	.2646770	.2872368
#2	6.651961	.4758257	1.217196	18.69166	.2680532	.2975512
#3	6.435486	.4739321	1.182708	18.14769	.2537545	.3046753

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2793-01MSD Acquired: 8/11/2025 15:15:17 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5703937	1.927259	F 16.31667	11.52282	1.386166	.2850646
Stddev	.0201727	.084489	.27071	.37535	.059612	.0132286
%RSD	3.536634	4.383914	1.659103	3.257459	4.300473	4.640552
#1	.5486581	1.830017	16.13980	11.11853	1.321883	.2699956
#2	.5740082	1.982702	16.62831	11.58969	1.396993	.2947649
#3	.5885149	1.969057	16.18190	11.86024	1.439622	.2904331

Elem	Sr4077
Units	ppm
Avg	.1395897
Stddev	.0116434
%RSD	8.341148
#1	.1262225
#2	.1450257
#3	.1475209

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7982.444	135726.9	15449.62	5977.241	7942.876
Stddev	163.445	2019.4	410.09	88.154	207.404
%RSD	2.047556	1.487841	2.654373	1.474823	2.611189
#1	8160.042	134748.6	15920.72	5926.946	8167.362
#2	7948.947	134383.1	15172.59	5925.747	7902.886
#3	7838.342	138049.2	15255.54	6079.029	7758.379

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2793-01A Acquired: 8/11/2025 15:19:14 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6266094	1.608457	1.585504	1.407614	.5555000	111.7383	1.223569
Stddev	.0135308	.016573	.030709	.033618	.0105312	.9953	.008875
%RSD	2.159369	1.030374	1.936855	2.388329	1.895805	.8907024	.7252982
#1	.6196361	1.595383	1.568163	1.387441	.5503693	112.5804	1.230399
#2	.6179877	1.602890	1.567387	1.388978	.5485175	111.9946	1.226770
#3	.6422044	1.627096	1.620960	1.446423	.5676133	110.6400	1.213538

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1396823	.1642690	29.18438	.4611804	.2563512	.5346194	209.4971
Stddev	.0030080	.0045529	.26253	.0097628	.0060933	.0142679	4.5757
%RSD	2.153424	2.771609	.8995725	2.116911	2.376922	2.668804	2.184125
#1	.1426355	.1622068	29.39823	.4602025	.2529074	.5292070	206.1494
#2	.1397890	.1611121	29.26354	.4713953	.2527596	.5238496	214.7110
#3	.1366224	.1694881	28.89138	.4519434	.2633866	.5508017	207.6310

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.084777	30.64443	.5892613	.0602274	6.270219	.5025378	1.066988
Stddev	.049185	.26896	.0142980	.0008355	.119665	.0042135	.026101
%RSD	.8083345	.8776667	2.426420	1.387208	1.908468	.8384365	2.446226
#1	6.120416	30.89912	.5819071	.0596109	6.176547	.5059280	1.068296
#2	6.105255	30.67098	.5801374	.0611783	6.405026	.5038649	1.092410
#3	6.028662	30.36318	.6057396	.0598931	6.229083	.4978206	1.040257

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.86470	.2719181	.2938615	.5867253	2.124676	9.432272	11.00352
Stddev	.31662	.0157303	.0060146	.0137463	.019631	.201721	.25325
%RSD	1.772327	5.784922	2.046748	2.342892	.9239675	2.138623	2.301535
#1	17.63579	.2548113	.2905041	.5786412	2.138661	9.301198	10.87096
#2	18.22603	.2857591	.2902750	.5789375	2.133134	9.664560	10.84407
#3	17.73228	.2751838	.3008053	.6025973	2.102234	9.331058	11.29554

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2793-01A Acquired: 8/11/2025 15:19:14 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.396825	.2855727	.0950345
Stddev	.036911	.0014478	.0048519
%RSD	2.642487	.5069691	5.105461
#1	1.377403	.2863904	.1000219
#2	1.373679	.2864266	.0903304
#3	1.439391	.2839011	.0947512

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7927.141	138283.5	15111.29	6138.969	7941.001
Stddev	120.954	2302.6	172.73	96.179	139.986
%RSD	1.525821	1.665124	1.143078	1.566701	1.762821
#1	7983.437	139447.2	14920.36	6156.207	8004.420
#2	8009.687	135631.3	15156.76	6035.336	8038.053
#3	7788.300	139772.0	15256.73	6225.364	7780.530

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2795-01 Acquired: 8/11/2025 15:23:10 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0786976**	**-.013179**	**2.647142**	**-.003797**	**-.004460**	**105.3870**
Stddev	.0037915	.001895	.072813	.003368	.001264	1.1095
%RSD	4.817835	14.37845	2.750644	88.71274	28.32968	1.052817
#1	.0746992	-.011574	2.599966	-.004890	-.004561	104.4753
#2	.0791525	-.012694	2.610459	-.006483	-.005670	106.6224
#3	.0822412	-.015270	2.731001	-.000018	-.003149	105.0633

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.493443**	**.0118629**	**.0089338**	**92.64999**	**.1905124**	**.1090893**
Stddev	.009985	.0000970	.0008820	.84607	.0014267	.0033533
%RSD	.6685969	.8173053	9.873120	.9131917	.7488507	3.073909
#1	1.489030	.0117609	.0084299	91.90686	.1892238	.1066413
#2	1.504875	.0119539	.0084191	93.57079	.1920455	.1077153
#3	1.486426	.0118739	.0099522	92.47232	.1902678	.1129114

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3291384**	**184.8823**	**5.959594**	**31.43679**	**.1469053**	**.0084680**
Stddev	.0091222	1.1130	.034819	.37267	.0043455	.0002727
%RSD	2.771532	.6020307	.5842439	1.185445	2.958035	3.220707
#1	.3232796	183.8090	5.929559	31.08152	.1440450	.0082360
#2	.3244870	186.0312	5.997758	31.82471	.1447651	.0083998
#3	.3396487	184.8067	5.951465	31.40413	.1519058	.0087684

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.496191**	**.2748342**	**.7871952**	**9.130716**	**.0735659**	**.0096904**
Stddev	.010314	.0021446	.0066602	.072674	.0030159	.0002462
%RSD	.6893553	.7803255	.8460644	.7959318	4.099544	2.540514
#1	1.499627	.2725394	.7830784	9.093536	.0705579	.0096227
#2	1.504349	.2767876	.7948792	9.214458	.0735502	.0094851
#3	1.484598	.2751756	.7836281	9.084155	.0765895	.0099633

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2795-01 Acquired: 8/11/2025 15:23:10 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1446338	2.093642	F 14.23378	F 20.67037	2.374515	.0838195
Stddev	.0042572	.016246	.10233	.58331	.085505	.0004335
%RSD	2.943440	.7759568	.7189061	2.821942	3.600933	.5172456
#1	.1413104	2.084151	14.13606	20.28957	2.316748	.0840467
#2	.1431587	2.112401	14.34016	20.37963	2.334057	.0840922
#3	.1494324	2.084375	14.22510	21.34190	2.472740	.0833195

Elem	Sr4077
Units	ppm
Avg	.2578358
Stddev	.0020585
%RSD	.7983624
#1	.2574243
#2	.2600689
#3	.2560142

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	9013.541	156124.0	17491.90	6878.709	7614.369
Stddev	129.879	1109.9	136.66	61.339	165.556
%RSD	1.440929	.7108999	.7812526	.8917176	2.174256
#1	9096.469	157345.5	17638.77	6946.301	7723.298
#2	9080.292	155177.4	17368.49	6826.586	7695.954
#3	8863.861	155849.2	17468.46	6863.238	7423.855

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2795-02 Acquired: 8/11/2025 15:27:12 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1099390**	**-.030438**	**1.673154**	**-.002463**	**-.013745**	**121.0165**	**1.287705**
Stddev	.0023284	.001949	.046695	.000343	.001328	1.0766	.014303
%RSD	2.117878	6.404439	2.790860	13.92600	9.658748	.8895943	1.110720
#1	.1088607	-.030949	1.647141	-.002747	-.015278	122.2549	1.304186
#2	.1083452	-.032082	1.645258	-.002082	-.012955	120.4903	1.278544
#3	.1126110	-.028285	1.727062	-.002560	-.013003	120.3042	1.280385

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0113351**	**.0108048**	**152.2037**	**.2371642**	**.1350148**	**.4175000**	**287.3335**
Stddev	.0001259	.0012210	1.4245	.0018302	.0048002	.0158688	3.7282
%RSD	1.110330	11.30036	.9358847	.7716995	3.555301	3.800899	1.297508
#1	.0113730	.0098058	153.8478	.2389181	.1319281	.4049839	290.9421
#2	.0114378	.0104428	151.4241	.2352662	.1325712	.4121680	283.4963
#3	.0111947	.0121659	151.3393	.2373084	.1405451	.4353480	287.5622

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.108716**	**93.12931**	**.1647500**	**.0108890**	**3.366249**	**.4018432**	**1.182678**
Stddev	.059625	.68468	.0046321	.0005896	.051777	.0032127	.011749
%RSD	1.167117	.7351947	2.811563	5.415027	1.538113	.7994919	.9934219
#1	5.177300	93.91229	.1620020	.0110171	3.411245	.4055193	1.195081
#2	5.069198	92.83265	.1621501	.0102458	3.309658	.4004367	1.171716
#3	5.079651	92.64298	.1700980	.0114040	3.377845	.3995736	1.181237

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.63902**	**.1239588**	**.0076154**	**.2490722**	**5.044296**	**7.409349**	**14.01148**
Stddev	.24202	.0072757	.0003828	.0067186	.053263	.080110	.44316
%RSD	1.069054	5.869473	5.026239	2.697463	1.055908	1.081206	3.162838
#1	22.84915	.1283720	.0072627	.2441545	5.105789	7.493909	13.72826
#2	22.37440	.1155611	.0075611	.2463346	5.012572	7.334590	13.78399
#3	22.69351	.1279431	.0080224	.2567274	5.014528	7.399547	14.52218

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2795-02 Acquired: 8/11/2025 15:27:12 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9570778	.1058576	.0450571
Stddev	.0402104	.0017775	.0019731
%RSD	4.201370	1.679112	4.379051
#1	.9338684	.1078497	.0458452
#2	.9338563	.1052894	.0465144
#3	1.003509	.1044336	.0428118

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7955.246	137987.6	15788.55	6061.789	7339.571
Stddev	162.590	846.3	87.38	53.803	186.525
%RSD	2.043811	.6133138	.5534109	.8875741	2.541354
#1	8040.731	137270.0	15700.69	6007.932	7438.329
#2	8057.260	138920.8	15789.53	6115.538	7455.952
#3	7767.745	137772.0	15875.43	6061.898	7124.431

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2795-03 Acquired: 8/11/2025 15:31:15 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1278805	-.036900	2.420994	.0026542	.0061631	146.0596
Stddev	.0039351	.000855	.078640	.0019742	.0007014	3.5149
%RSD	3.077190	2.317210	3.248269	74.37969	11.38039	2.406488
#1	.1266702	-.037804	2.348058	.0023237	.0069245	148.6723
#2	.1246926	-.036104	2.410615	.0008661	.0060214	142.0635
#3	.1322786	-.036791	2.504308	.0047728	.0055434	147.4429

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.532521	.0131622	.0110367	90.16352	.2819434	.1400837
Stddev	.043043	.0002047	.0017220	2.14169	.0043406	.0047457
%RSD	2.808614	1.555233	15.60245	2.375338	1.539527	3.387787
#1	1.563198	.0133311	.0090928	91.78928	.2850144	.1354263
#2	1.483317	.0129346	.0116465	87.73679	.2769775	.1399116
#3	1.551048	.0132211	.0123708	90.96448	.2838383	.1449131

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.434995	337.9357	5.004763	38.86943	.1942838	.0150340
Stddev	.043079	7.4538	.135416	.88616	.0065831	.0001890
%RSD	3.002043	2.205688	2.705733	2.279845	3.388409	1.256888
#1	1.393508	343.2082	5.104135	39.53019	.1880133	.0149616
#2	1.431971	329.4080	4.850524	37.86242	.1936976	.0148919
#3	1.479507	341.1910	5.059630	39.21567	.2011404	.0152484

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.320468	.4414451	1.620929	20.13365	.1688592	.0160399
Stddev	.040010	.0118111	.029379	.41526	.0114799	.0001334
%RSD	3.029981	2.675554	1.812477	2.062524	6.798497	.8319485
#1	1.336634	.4523734	1.648027	20.40005	.1765504	.0160687
#2	1.274904	.4289147	1.589705	19.65518	.1556636	.0158944
#3	1.349865	.4430471	1.625056	20.34573	.1743635	.0161565

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2795-03 Acquired: 8/11/2025 15:31:15 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5042337	5.014928	6.008919	F 19.83699	1.301440	.1246846
Stddev	.0158618	.124652	.117253	.66405	.048793	.0020973
%RSD	3.145720	2.485623	1.951311	3.347519	3.749157	1.682120
#1	.4900490	5.110198	6.097821	19.23051	1.251537	.1255828
#2	.5012914	4.873854	5.876034	19.73392	1.303741	.1222877
#3	.5213606	5.060733	6.052901	20.54655	1.349042	.1261832

Elem	Sr4077
Units	ppm
Avg	.0330502
Stddev	.0021175
%RSD	6.406835
#1	.0346281
#2	.0306437
#3	.0338786

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	8223.648	140941.5	16303.32	6237.238	7611.952
Stddev	153.437	2091.0	290.33	95.465	188.131
%RSD	1.865801	1.483614	1.780781	1.530571	2.471523
#1	8360.706	139962.6	16149.85	6181.352	7788.503
#2	8252.350	143342.4	16638.17	6347.469	7633.292
#3	8057.886	139519.4	16121.93	6182.895	7414.061

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2759-04 Acquired: 8/11/2025 15:35:17 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064227	-.003463	2.204813	.0029500	.0057375	2.274996
Stddev	.0015504	.000615	.042359	.0029158	.0009178	.014982
%RSD	24.13926	17.76079	1.921206	98.84187	15.99724	.6585434
#1	.0079881	-.004103	2.200345	.0063147	.0067155	2.291392
#2	.0063922	-.003411	2.164866	.0013736	.0048948	2.262019
#3	.0048878	-.002876	2.249229	.0011617	.0056021	2.271578

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.433517	.0002158	.0059104	46.30912	.0386676	.0144046
Stddev	.017019	.0000594	.0001723	.31776	.0009329	.0003133
%RSD	.4956619	27.52289	2.915565	.6861775	2.412605	2.174870
#1	3.443708	.0001472	.0059362	46.65233	.0387659	.0144094
#2	3.442972	.0002485	.0057266	46.24989	.0376894	.0140889
#3	3.413870	.0002516	.0060683	46.02514	.0395474	.0147155

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2590990	13.84950	.2797904	7.932951	.0120667	.0018173
Stddev	.0052268	.10153	.0020911	.065530	.0001588	.0000864
%RSD	2.017316	.7331197	.7473748	.8260471	1.315685	4.752802
#1	.2588490	13.84791	.2815210	8.003002	.0119617	.0017189
#2	.2540016	13.74876	.2803833	7.922702	.0119891	.0018807
#3	.2644463	13.95181	.2774668	7.873151	.0122493	.0018522

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	105.1602	.0235278	4.527772	10.79281	.0818924	.0064194
Stddev	.8161	.0002933	.095813	.09433	.0008565	.0002660
%RSD	.7760452	1.246601	2.116123	.8740186	1.045913	4.144486
#1	105.1345	.0235203	4.583607	10.77478	.0828571	.0064578
#2	104.3573	.0232383	4.417138	10.70879	.0812211	.0061363
#3	105.9889	.0238247	4.582571	10.89485	.0815991	.0066642

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2759-04 Acquired: 8/11/2025 15:35:17 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048617	.0992375	F 23.60212	1.180010	F 39.75101	.0138798
Stddev	.0003651	.0014316	.29215	.020223	.90624	.0010870
%RSD	7.509754	1.442596	1.237796	1.713765	2.279781	7.831806
#1	.0044637	.0993285	23.73322	1.180257	39.37658	.0129269
#2	.0051811	.1006214	23.26739	1.159665	39.09198	.0150638
#3	.0049403	.0977626	23.80576	1.200108	40.78446	.0136486

Elem	Sr4077
Units	ppm
Avg	.2791192
Stddev	.0018074
%RSD	.6475554
#1	.2807409
#2	.2794461
#3	.2771706

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7017.583	120809.8	13629.49	5314.071	8337.517
Stddev	110.129	1860.9	115.01	69.288	126.044
%RSD	1.569326	1.540374	.8438657	1.303852	1.511771
#1	7015.346	120103.3	13500.24	5297.350	8339.383
#2	7128.814	122920.5	13720.56	5390.189	8462.619
#3	6908.590	119405.5	13667.68	5254.674	8210.551

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2800-01 Acquired: 8/11/2025 15:39:24 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0408871	-.018581	.3886899	-.004599	-.008846	66.61767	.7717758
Stddev	.0017698	.000523	.0261827	.000510	.001000	1.28151	.0156899
%RSD	4.328484	2.813686	6.736133	11.09017	11.30727	1.923685	2.032954
#1	.0396568	-.018048	.3657240	-.004036	-.008438	67.50829	.7835587
#2	.0400892	-.018601	.3831448	-.005030	-.009986	67.19578	.7778026
#3	.0429154	-.019093	.4172010	-.004730	-.008114	65.14895	.7539662

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065911	.0044645	19.99125	.1428969	.0649781	.3743522	137.8243
Stddev	.0000859	.0011402	.37242	.0024107	.0049365	.0286801	1.9681
%RSD	1.303067	25.54020	1.862927	1.687021	7.597121	7.661264	1.427975
#1	.0066129	.0035736	20.27277	.1406658	.0607567	.3494603	136.1214
#2	.0066639	.0040704	20.13201	.1425709	.0637716	.3678814	137.3725
#3	.0064964	.0057495	19.56896	.1454541	.0704059	.4057149	139.9790

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.595455	21.44192	.1363933	.0010983	2.615372	.1966691	.7927913
Stddev	.052178	.45031	.0094836	.0001136	.057304	.0040585	.0122839
%RSD	2.010358	2.100121	6.953141	10.34529	2.191047	2.063622	1.549453
#1	2.630475	21.73648	.1280833	.0012139	2.578963	.1997838	.7832870
#2	2.620404	21.66572	.1343720	.0009867	2.585727	.1981441	.7884250
#3	2.535486	20.92356	.1467246	.0010942	2.681426	.1920794	.8066619

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.998234	.0256965	.0013244	.0090431	1.528826	3.550838	3.571124
Stddev	.105471	.0144459	.0001204	.0004428	.029254	.044847	.266729
%RSD	1.758368	56.21723	9.089348	4.897009	1.913474	1.263009	7.469044
#1	5.914270	.0150138	.0013001	.0087584	1.551611	3.518430	3.350207
#2	5.963817	.0199431	.0012180	.0088175	1.539029	3.532063	3.495730
#3	6.116614	.0421325	.0014551	.0095533	1.495837	3.602022	3.867435

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: Q2800-01 Acquired: 8/11/2025 15:39:24 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.8120183	.1020508	-.011909
Stddev	.0618995	.0003262	.004034
%RSD	7.622914	.3196218	33.87812
#1	.7608734	.1024185	-.008488
#2	.7943508	.1019375	-.010880
#3	.8808307	.1017963	-.016358

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	8782.218	149223.1	15839.99	6652.052	9341.147
Stddev	387.240	1568.4	416.67	84.717	469.520
%RSD	4.409361	1.051071	2.630472	1.273547	5.026369
#1	9139.664	150943.5	15611.74	6734.242	9771.621
#2	8836.152	148853.3	15587.32	6656.899	9411.337
#3	8370.839	147872.7	16320.91	6565.016	8840.483

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCV04 Acquired: 8/11/2025 16:02:38 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.985460**	**5.405016**	**4.735508**	**5.090470**	**5.025835**	**9.266936**
Stddev	.293768	.385938	.233354	.308527	.301544	.097360
%RSD	5.892503	7.140377	4.927746	6.060872	5.999887	1.050620
#1	4.810715	5.064652	4.589739	4.891846	4.837871	9.345175
#2	4.821044	5.326072	4.612134	4.933657	4.865983	9.157902
#3	5.324622	5.824322	5.004652	5.445907	5.373649	9.297732

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.103344**	**.2265268**	**2.371201**	**23.01169**	**.9214009**	**2.377228**
Stddev	.202207	.0049128	.115240	.25867	.0092001	.123056
%RSD	2.221236	2.168758	4.859987	1.124069	.9984872	5.176429
#1	9.303247	.2316786	2.298656	23.18646	.9273100	2.300883
#2	9.107876	.2218942	2.310866	22.71454	.9108008	2.311616
#3	8.898910	.2260076	2.504082	23.13406	.9260918	2.519185

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.207509**	**4.767328**	**2.298471**	**22.94663**	**2.385251**	**1.179186**
Stddev	.064225	.073500	.029768	.27013	.120619	.014027
%RSD	5.318799	1.541738	1.295107	1.177228	5.056871	1.189578
#1	1.168160	4.704083	2.315792	23.12433	2.311485	1.185473
#2	1.172745	4.749938	2.264098	22.63577	2.319822	1.163115
#3	1.281622	4.847963	2.315521	23.07980	2.524447	1.188970

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.98329**	**2.345226**	**2.366505**	**23.68847**	**4.615125**	**4.972971**
Stddev	.32148	.026553	.028313	.28267	.096325	.275271
%RSD	1.398765	1.132213	1.196390	1.193265	2.087160	5.535339
#1	22.87374	2.361005	2.382168	23.54194	4.713979	4.802063
#2	22.73091	2.314570	2.333822	23.50915	4.521545	4.826332
#3	23.34523	2.360104	2.383525	24.01431	4.609852	5.290517

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCV04 Acquired: 8/11/2025 16:02:38 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.791623**	**4.669322**	**4.892110**	**4.594951**	**4.864787**	F **4.455573**
Stddev	.239792	.057207	.090378	.235708	.282980	.058889
%RSD	5.004404	1.225175	1.847420	5.129712	5.816910	1.321704
#1	4.637335	4.700027	4.838114	4.445748	4.681657	4.498655
#2	4.669651	4.603318	4.841767	4.472417	4.721991	4.388470
#3	5.067881	4.704622	4.996448	4.866687	5.190714	4.479595

Elem	Sr4077
Units	ppm
Avg	**4.615634**
Stddev	.137564
%RSD	2.980391
#1	4.735795
#2	4.645525
#3	4.465582

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7464.589**	**129771.7**	**14043.80**	**5727.287**	**8762.230**
Stddev	302.483	544.7	184.09	45.788	336.593
%RSD	4.052244	.4197746	1.310805	.7994784	3.841409
#1	7641.179	129847.8	13833.39	5730.094	8962.639
#2	7637.271	130274.5	14175.18	5771.608	8950.423
#3	7115.319	129193.0	14122.82	5680.160	8373.630

Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCB04 Acquired: 8/11/2025 16:06:50 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000724**	**-.005080**	**-.000338**	**-.000813**	**-.001807**	**-.006470**	**-.013565**
Stddev	.000581	.000518	.001794	.002468	.000825	.003400	.001130
%RSD	80.29462	10.19485	531.2954	303.7609	45.64588	52.55778	8.329278
#1	-.000479	-.004806	.000541	.001889	-.002355	-.004404	-.012460
#2	-.001388	-.005677	-.002401	-.002949	-.000858	-.010394	-.013518
#3	-.000305	-.004757	.000847	-.001377	-.002207	-.004611	-.014718

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000011**	**.0000031**	**-.007964**	**-.000224**	**-.000228**	**-.000112**	**-.012399**
Stddev	.000058	.0000387	.003634	.000162	.000203	.000221	.004362
%RSD	545.6267	1245.831	45.62669	72.59013	88.86390	197.0647	35.18362
#1	-.000052	.0000102	-.006433	-.000141	-.000128	-.000310	-.015167
#2	-.000035	.0000377	-.005346	-.000411	-.000095	.000127	-.014659
#3	.000055	-.000039	-.012113	-.000119	-.000461	-.000155	-.007370

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000124**	**.0024178**	**.0001863**	**.0007187**	**.0237618**	**.0025707**	**.0010926**
Stddev	.0006709	.0078259	.0001638	.0004510	.0189428	.0009209	.0003028
%RSD	5429.522	323.6836	87.94700	62.75712	79.71979	35.82170	27.71811
#1	.0007380	.0039616	.0001494	.0011506	.0069390	.0027887	.0013358
#2	-.000585	-.006065	.0003654	.0007546	.0200663	.0015604	.0007534
#3	-.000116	.009357	.0000441	.0002507	.0442800	.0033630	.0011886

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1920001**	**-.000761**	**.0006597**	**.0005489**	**-.000598**	**.0011098**	**.0010843**
Stddev	.0220973	.000271	.0001574	.0003899	.000426	.0067074	.0010270
%RSD	11.50901	35.66082	23.86128	71.03035	71.25556	604.3698	94.71274
#1	.1683961	-.000451	.0008372	.0009935	-.000157	.0065215	.0022698
#2	.2121944	-.000873	.0006050	.0003877	-.001008	.0032024	.0004635
#3	.1954097	-.000958	.0005370	.0002654	-.000629	-.006394	.0005198

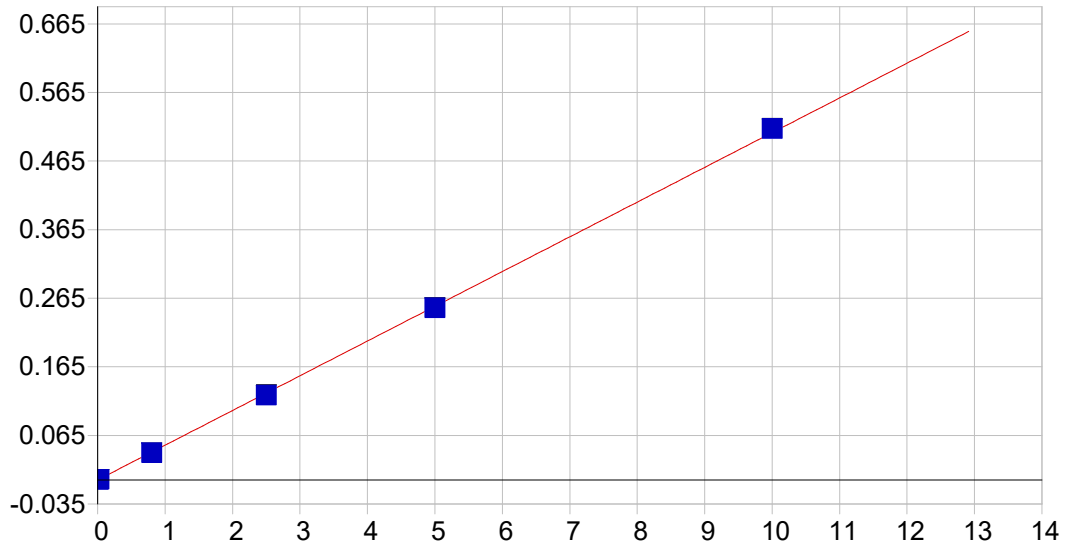
Reviewed By:jaswal
On:8/13/2025 4:04:51 PM
Inst Id :P4
LB :LB136778

Sample Name: CCB04 Acquired: 8/11/2025 16:06:50 Type: Unk
Method: 6010-200.7 NEW(v90) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002921	-.005138	-.000065
Stddev	.000534	.000932	.000091
%RSD	18.28474	18.13606	140.4500
#1	-.002432	-.006120	.000040
#2	-.002840	-.005028	-.000109
#3	-.003491	-.004266	-.000125

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7553.660	136218.3	14316.05	5930.128	9415.795
Stddev	269.902	3481.3	283.10	139.353	314.018
%RSD	3.573132	2.555650	1.977512	2.349918	3.335013
#1	7645.695	132774.8	14047.08	5797.589	9519.534
#2	7765.507	139736.1	14289.63	6075.419	9664.816
#3	7249.777	136144.1	14611.43	5917.377	9063.033

Reviewed By:
On:
Inst Id :P4
LB :LB136851



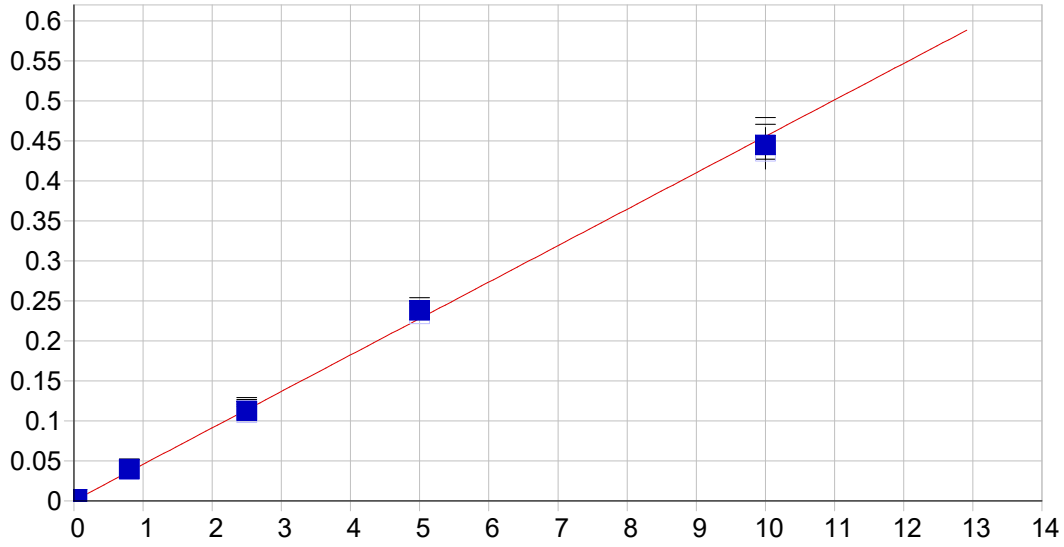
As 189.042 {479}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000029	Re-Slope:	1.000000
A1 (Gain):	0.050635	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999912	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.002075		
Predicted MQL:	0.006915		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00003	.000	1
S1	.02000	.01973	-.000	-1.34	.00102	.000	1
S3	2.5000	2.4454	-.055	-2.18	.12372	.000	1
S4	5.0000	4.9555	-.044	-.890	.25068	.000	1
S5	10.000	10.115	.115	1.15	.51166	.000	1
S2	.80000	.78427	-.016	-1.97	.03970	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



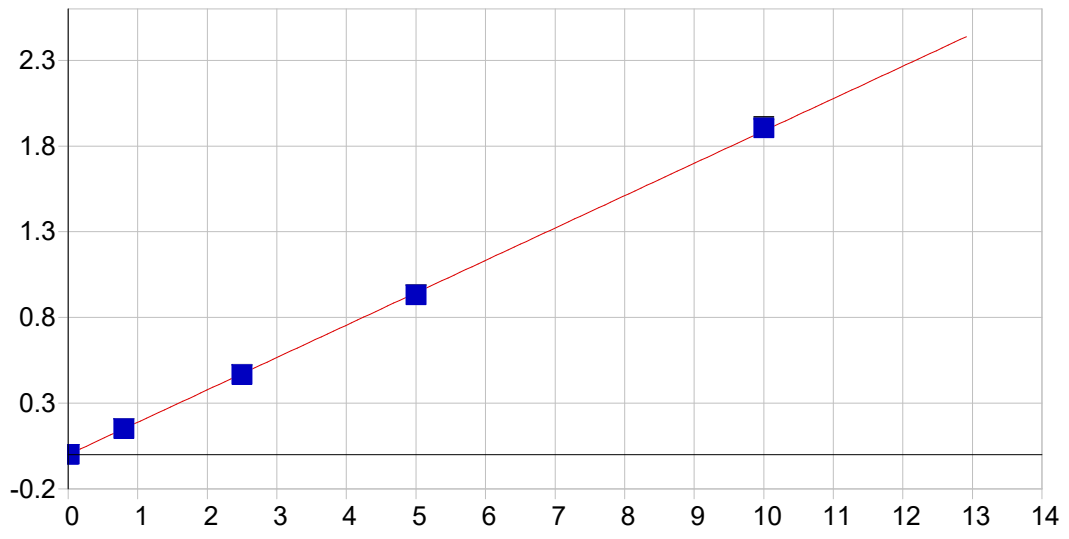
Tl 190.856 {477}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000228	Re-Slope:	1.000000
A1 (Gain):	0.045548	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999425	Status:	OK.
Std Error of Est:	0.000050		
Predicted MDL:	0.001963		
Predicted MQL:	0.006543		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00023	.000	1
S1	.04000	.04021	.000	.530	.00194	.000	1
S3	2.5000	2.4587	-.041	-1.65	.11014	.004	1
S4	5.0000	5.2180	.218	4.36	.23374	.004	1
S5	10.000	9.7629	-.237	-2.37	.43660	.022	1
S2	.80000	.86019	.060	7.52	.03874	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



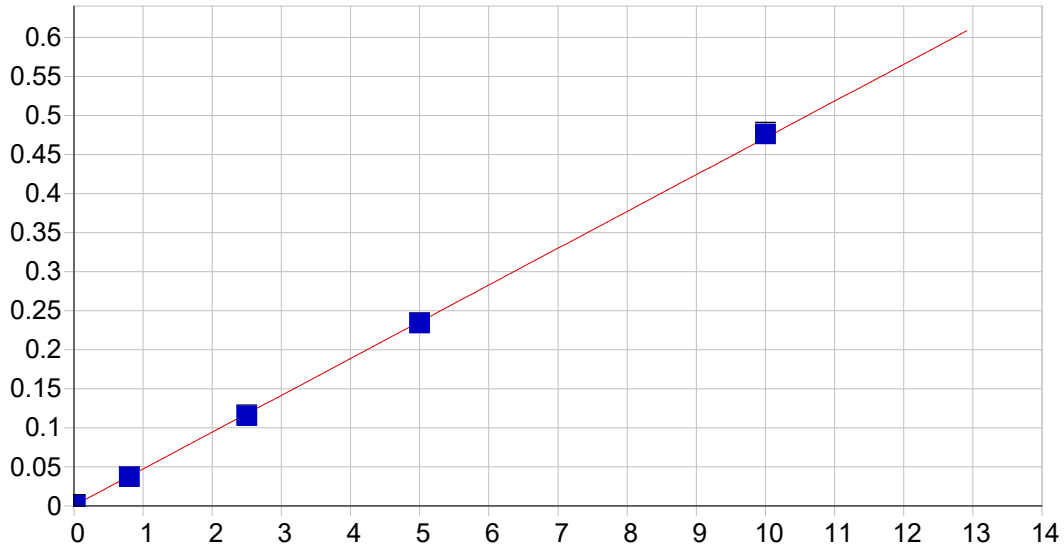
Pb 220.353 {453}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000060	Re-Slope:	1.000000
A1 (Gain):	0.188802	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999943	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.001249		
Predicted MQL:	0.004165		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00006	.000	1
S1	.01200	.01266	.001	5.50	.00241	.000	1
S3	2.5000	2.4703	-.030	-1.19	.46596	.001	1
S4	5.0000	4.9361	-.064	-1.28	.93103	.000	1
S5	10.000	10.094	.094	.936	1.9038	.008	1
S2	.80000	.79944	-.001	-.070	.15084	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



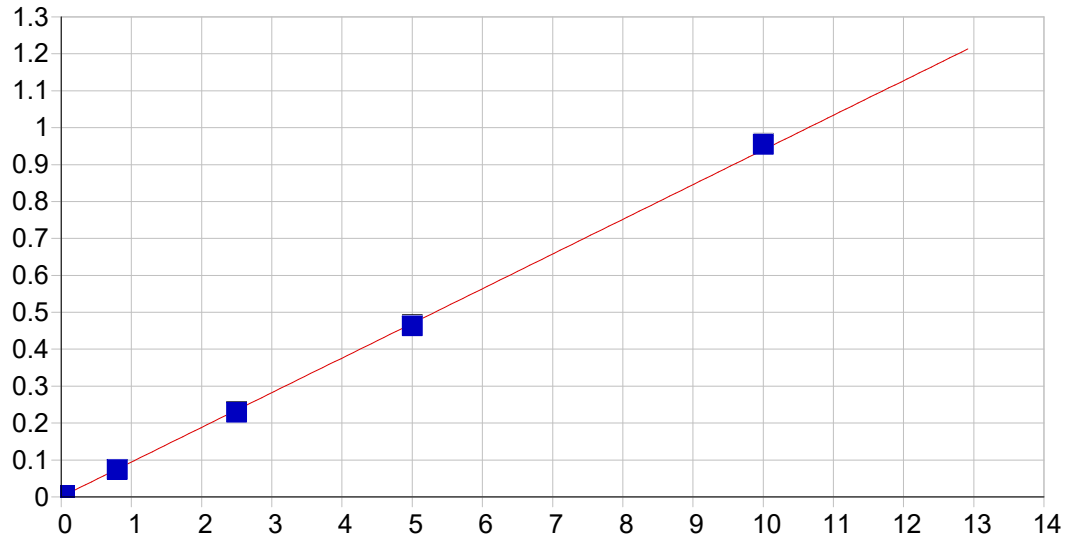
Se 196.090 {472}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000336	Re-Slope:	1.000000
A1 (Gain):	0.047083	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999923	Status:	OK.
Std Error of Est:	0.000014		
Predicted MDL:	0.002797		
Predicted MQL:	0.009322		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00034	.000	1
S1	.02000	.02072	.001	3.62	.00131	.000	1
S3	2.5000	2.4469	-.053	-2.12	.11551	.001	1
S4	5.0000	4.9610	-.039	-.780	.23385	.001	1
S5	10.000	10.105	.105	1.05	.47600	.002	1
S2	.80000	.78584	-.014	-1.77	.03732	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



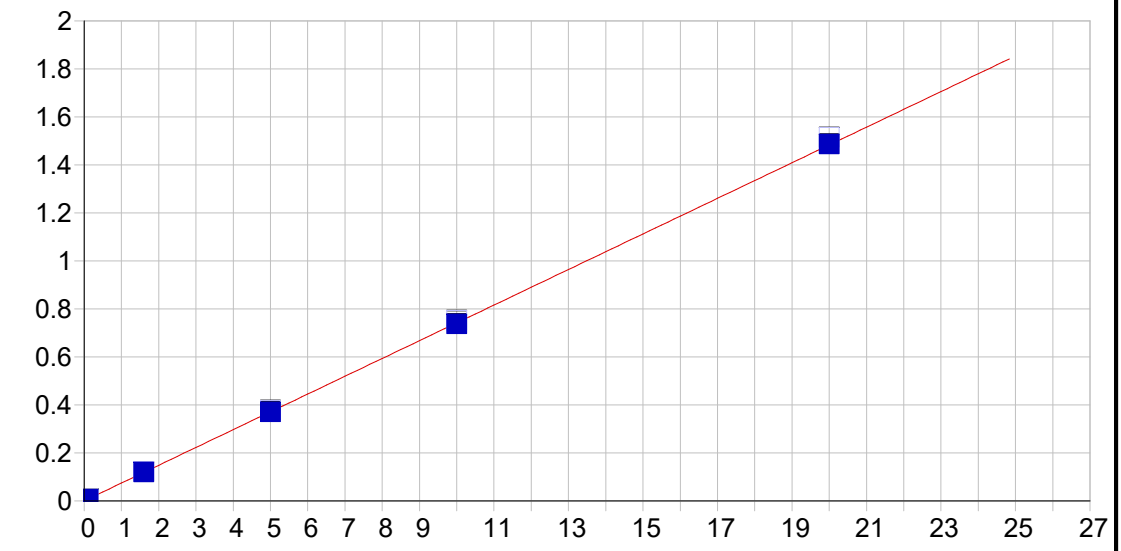
Sb 206.833 {463}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000433	Re-Slope:	1.000000
A1 (Gain):	0.093912	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999848	Status:	OK.
Std Error of Est:	0.000061		
Predicted MDL:	0.001777		
Predicted MQL:	0.005922		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00043	.000	1
S1	.05000	.05023	.000	.466	.00516	.000	1
S3	2.5000	2.4363	-.064	-2.55	.22987	.001	1
S4	5.0000	4.9238	-.076	-1.52	.46411	.002	1
S5	10.000	10.157	.157	1.57	.95682	.001	1
S2	.80000	.78295	-.017	-2.13	.07417	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



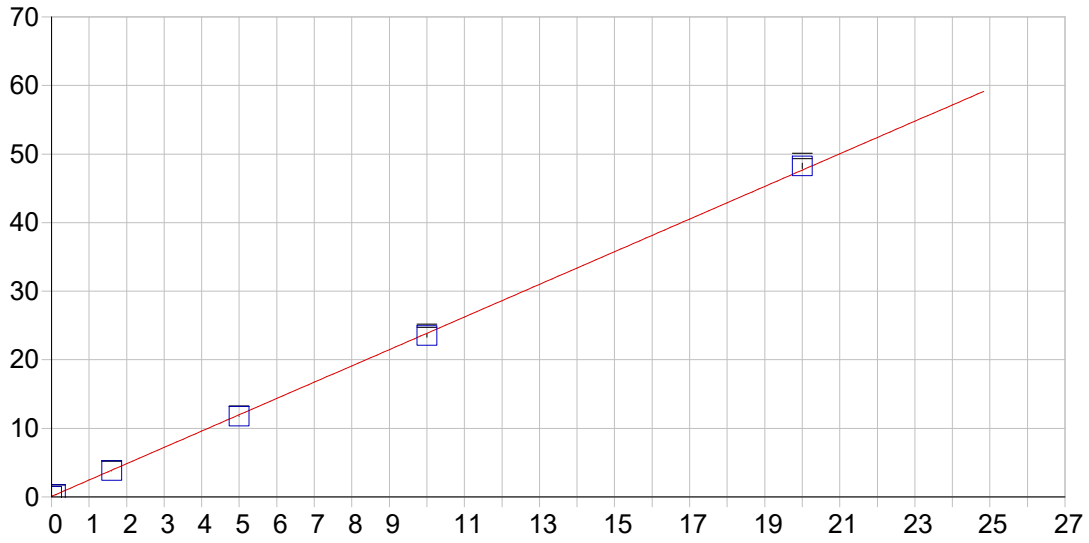
Al 396.152 { 85}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000389	Re-Slope:	1.000000
A1 (Gain):	0.074138	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999979	Status:	OK.
Std Error of Est:	0.000036		
Predicted MDL:	0.009997		
Predicted MQL:	0.033325		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00039	.000	1
S1	.10000	.10993	.010	9.93	.00911	.001	1
S3	5.0000	4.9904	-.010	-.192	.37756	.002	1
S4	10.000	9.9396	-.060	-.604	.75167	.001	1
S5	20.000	20.046	.046	.230	1.5153	.001	1
S2	1.6000	1.6134	.013	.840	.12231	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



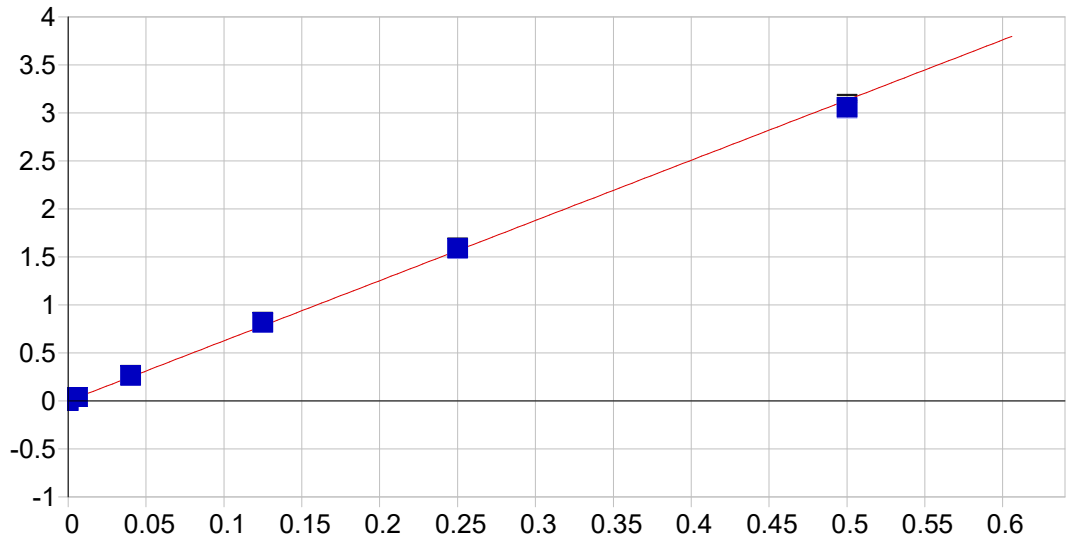
Ba 493.409 { 68}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.081003	Re-Slope:	1.000000
A1 (Gain):	2.378534	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999896	Status:	OK.
Std Error of Est:	0.002540		
Predicted MDL:	0.000931		
Predicted MQL:	0.003105		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.08101	.002	1
S1	.10000	.09903	-.001	-.971	.31655	.000	1
S3	5.0000	4.9177	-.082	-1.65	11.778	.021	1
S4	10.000	9.8554	-.145	-1.45	23.522	.214	1
S5	20.000	20.262	.262	1.31	48.275	.377	1
S2	1.6000	1.5659	-.034	-2.13	3.8056	.004	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



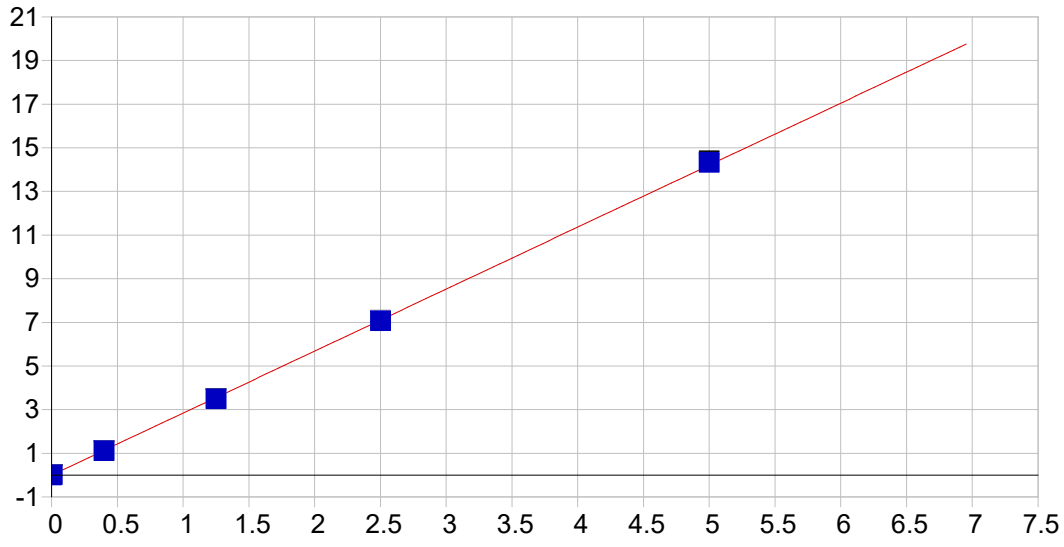
Be 234.861 {144}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001220	Re-Slope:	1.000000
A1 (Gain):	6.269439	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999576	Status:	OK.
Std Error of Est:	0.000523		
Predicted MDL:	0.000067		
Predicted MQL:	0.000224		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00123	.000	1
S1	.00600	.00666	.001	10.9	.04023	.000	1
S3	.12500	.13031	.005	4.25	.81227	.005	1
S4	.25000	.25380	.004	1.52	1.5829	.003	1
S5	.50000	.48797	-.012	-2.41	3.0440	.033	1
S2	.04000	.04227	.002	5.67	.26264	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



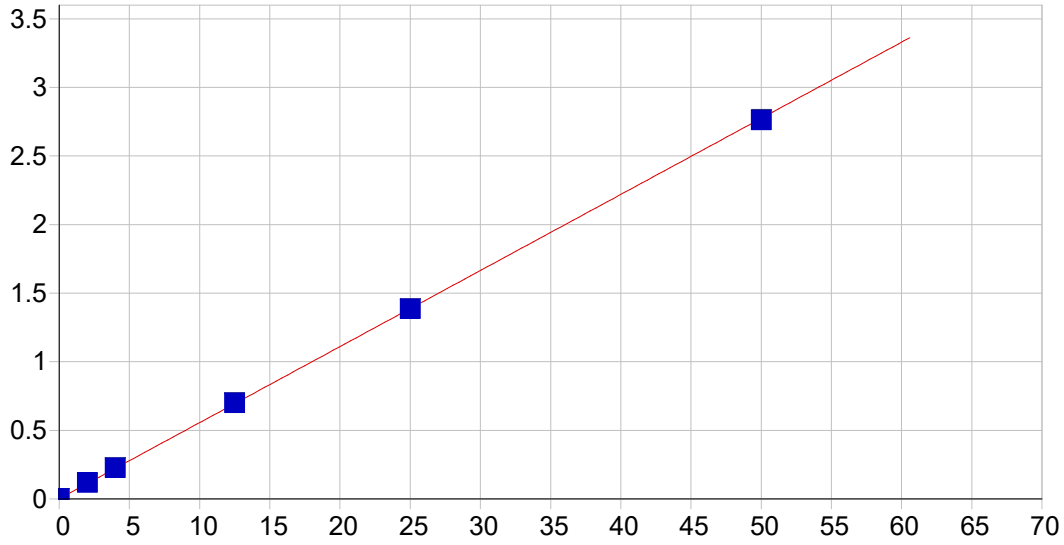
Cd 226.502 {449}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000626	Re-Slope:	1.000000
A1 (Gain):	2.841481	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999949	Status:	OK.
Std Error of Est:	0.000259		
Predicted MDL:	0.000071		
Predicted MQL:	0.000236		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00062	.000	1
S1	.00600	.00596	-.000	-.737	.01635	.000	1
S3	1.2500	1.2292	-.021	-1.66	3.4946	.010	1
S4	2.5000	2.4884	-.012	-.463	7.0748	.015	1
S5	5.0000	5.0411	.041	.822	14.333	.061	1
S2	.40000	.39128	-.009	-2.18	1.1119	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



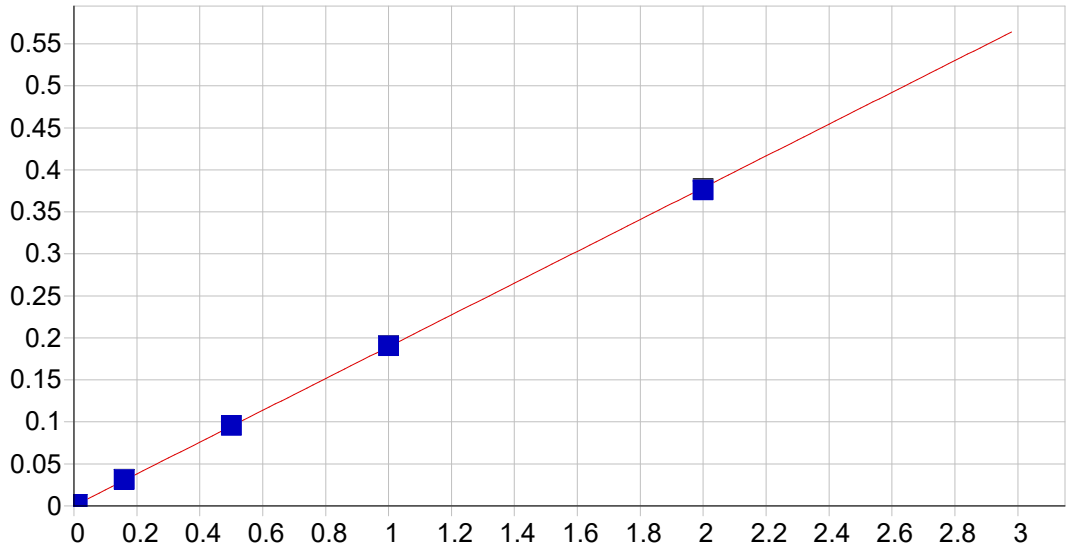
Ca 373.690 { 90}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001537	Re-Slope:	1.000000
A1 (Gain):	0.055467	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999958	Status:	OK.
Std Error of Est:	0.000268		
Predicted MDL:	0.010470		
Predicted MQL:	0.034899		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00014	-.000	.000	.00153	.000	1
S2	4.0000	4.0708	.071	1.77	.22733	.000	1
S3	12.500	12.592	.092	.738	.70000	.002	1
S4	25.000	24.964	-.036	-.144	1.3862	.001	1
S5	50.000	49.775	-.225	-.450	2.7624	.004	1
S1	2.0000	2.0978	.098	4.89	.11789	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



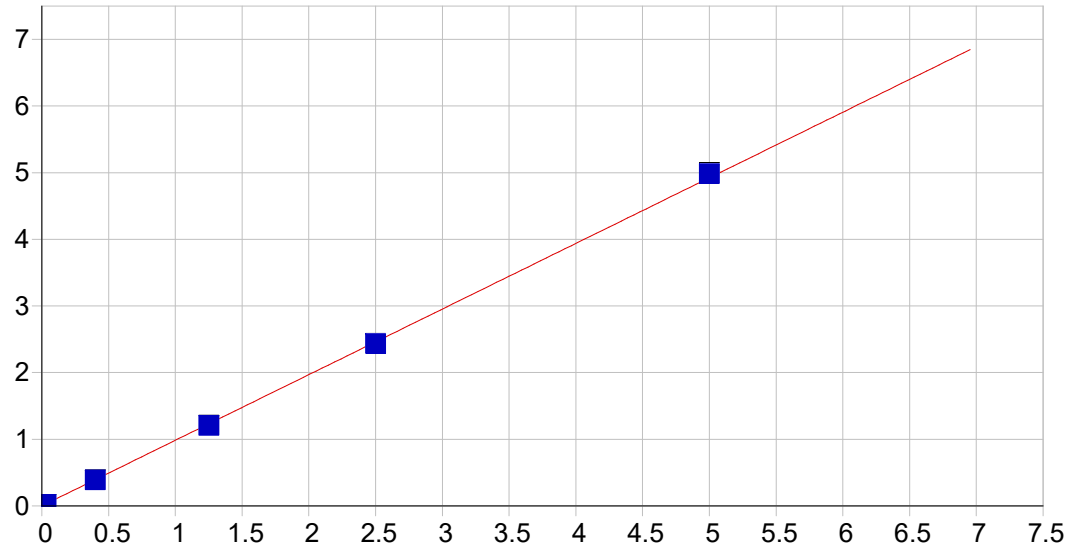
Cr 267.716 {126}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000198	Re-Slope:	1.000000
A1 (Gain):	0.189259	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:	0.000318		
Predicted MQL:	0.001061		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00020	.000	1
S1	.01000	.01025	.000	2.49	.00214	.000	1
S3	.50000	.50433	.004	.866	.09568	.000	1
S4	1.0000	1.0057	.006	.574	.19062	.000	1
S5	2.0000	1.9851	-.015	-.747	.37604	.001	1
S2	.16000	.16462	.005	2.89	.03137	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



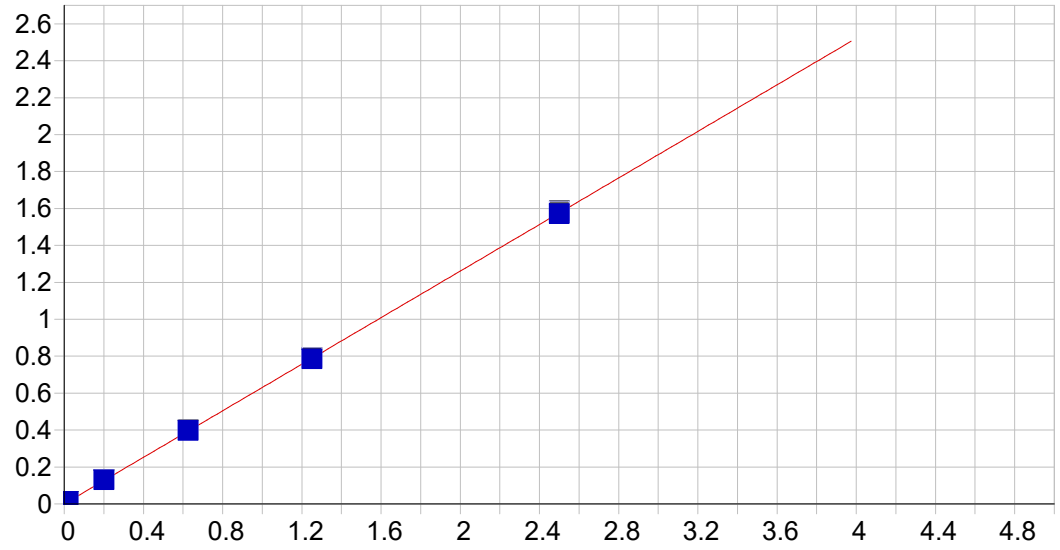
Co 228.616 {448}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000208	Re-Slope:	1.000000
A1 (Gain):	0.984566	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999912	Status:	OK.
Std Error of Est:	0.000266		
Predicted MDL:	0.000182		
Predicted MQL:	0.000605		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00021	.000	1
S1	.03000	.02989	-.000	-.358	.02951	.000	1
S3	1.2500	1.2252	-.025	-1.98	1.2086	.002	1
S4	2.5000	2.4723	-.028	-1.11	2.4385	.002	1
S5	5.0000	5.0595	.059	1.19	4.9899	.015	1
S2	.40000	.39313	-.007	-1.72	.38794	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



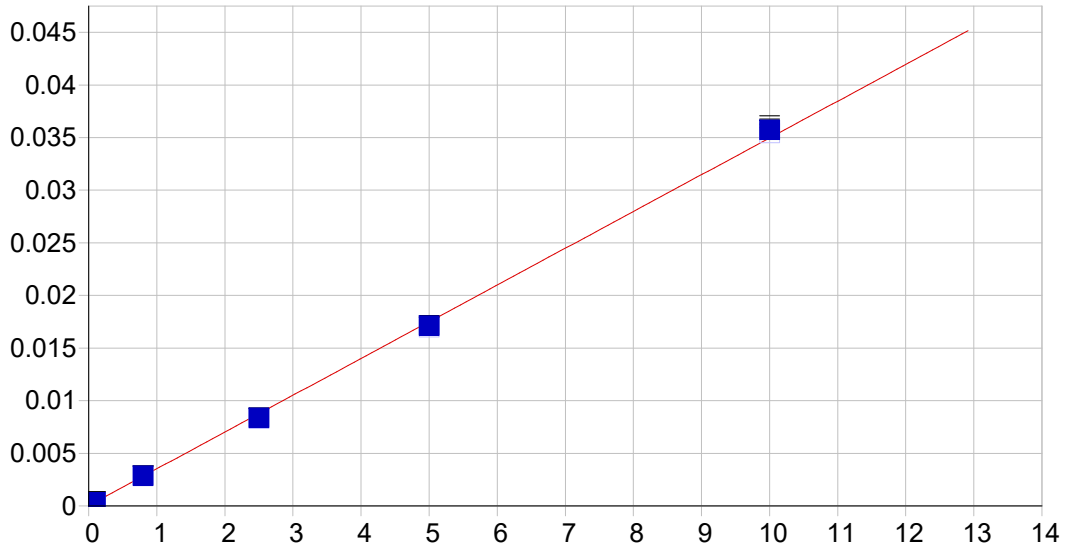
Cu 224.700 {450}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000182	Re-Slope:	1.000000
A1 (Gain):	0.630424	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999955	Status:	OK.
Std Error of Est:	0.000070		
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	.00018	.000	1
S1	.02000	.02188	.002	9.42	.01412	.000	1
S3	.62500	.62947	.004	.715	.40030	.000	1
S4	1.2500	1.2445	-.005	-.438	.79132	.001	1
S5	2.5000	2.4934	-.007	-.265	1.5852	.003	1
S2	.20000	.20575	.006	2.87	.13094	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



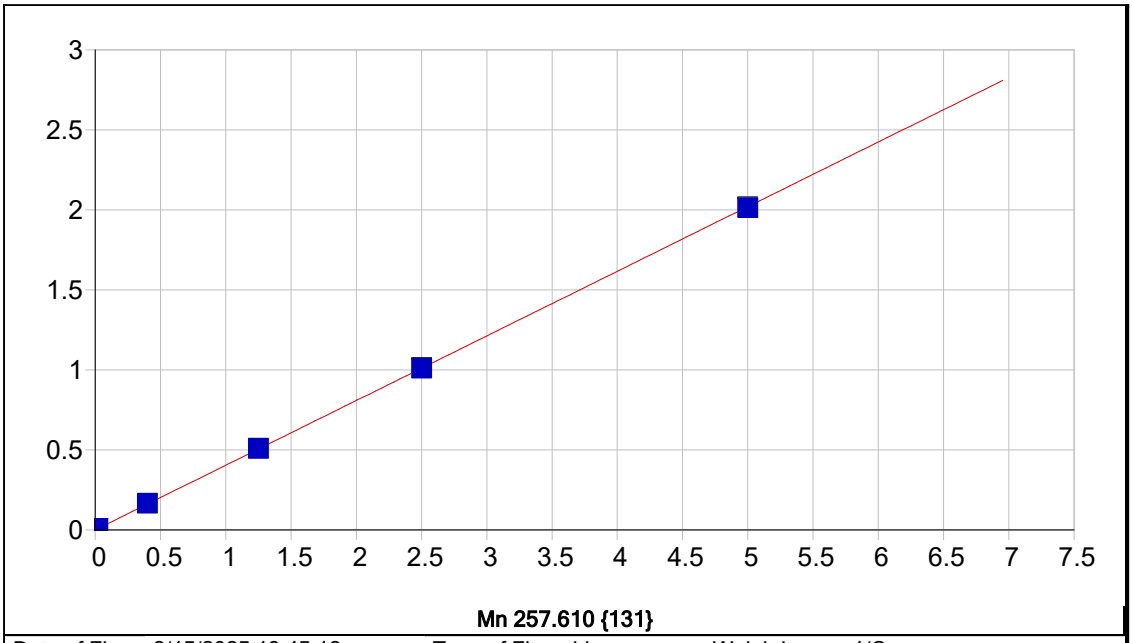
Fe 240.488 {140}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000034	Re-Slope:	1.000000
A1 (Gain):	0.003493	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999652	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	0.005702		
Predicted MQL:	0.019006		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00003	.000	1
S1	.10000	.09914	-.001	-.861	.00038	.000	1
S3	2.5000	2.3816	-.118	-4.73	.00828	.000	1
S4	5.0000	4.8945	-.105	-2.11	.01698	.000	1
S5	10.000	10.215	.215	2.15	.03542	.000	1
S2	.80000	.80937	.009	1.17	.00284	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



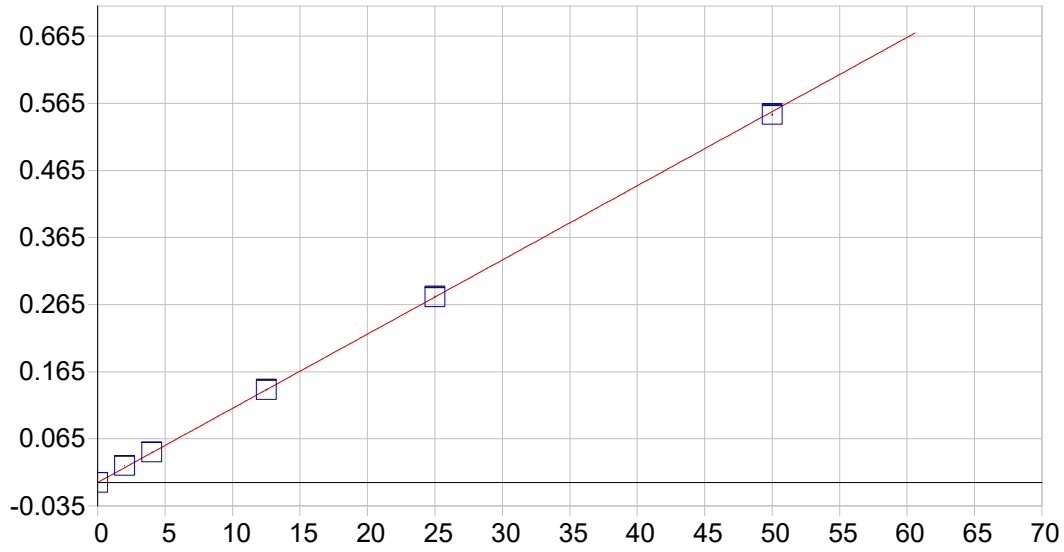
Mn 257.610 {131}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000335	Re-Slope:	1.000000
A1 (Gain):	0.404011	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999980	Status:	OK.
Std Error of Est:	0.000043		
Predicted MDL:	0.000524		
Predicted MQL:	0.001748		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00033	.000	1
S1	.02000	.02159	.002	7.97	.00906	.000	1
S3	1.2500	1.2560	.006	.481	.50788	.002	1
S4	2.5000	2.4988	-.001	-.049	1.0101	.003	1
S5	5.0000	4.9854	-.015	-.292	2.0149	.004	1
S2	.40000	.40824	.008	2.06	.16530	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



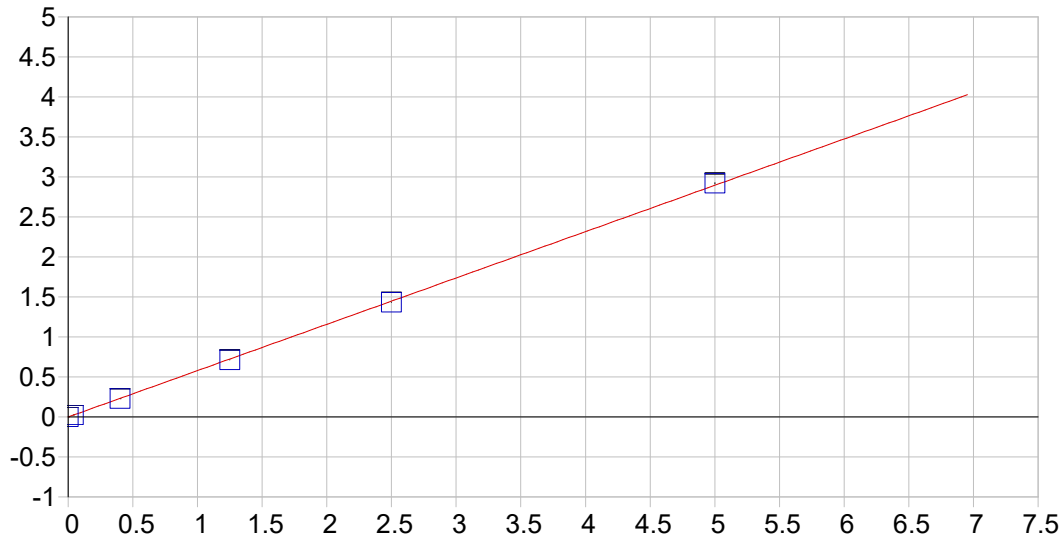
Mg 279.079 {121}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000080	Re-Slope:	1.000000
A1 (Gain):	0.011057	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999789	Status:	OK.
Std Error of Est:	0.000120		
Predicted MDL:	0.024738		
Predicted MQL:	0.082459		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00029	-.000	.000	-.00008	.000	1
S2	4.0000	4.0879	.088	2.20	.04512	.000	1
S3	12.500	12.512	.012	.098	.13827	.001	1
S4	25.000	25.030	.030	.121	.27668	.001	1
S5	50.000	49.608	-.392	-.785	.54842	.001	1
S1	2.0000	2.2618	.262	13.1	.02493	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



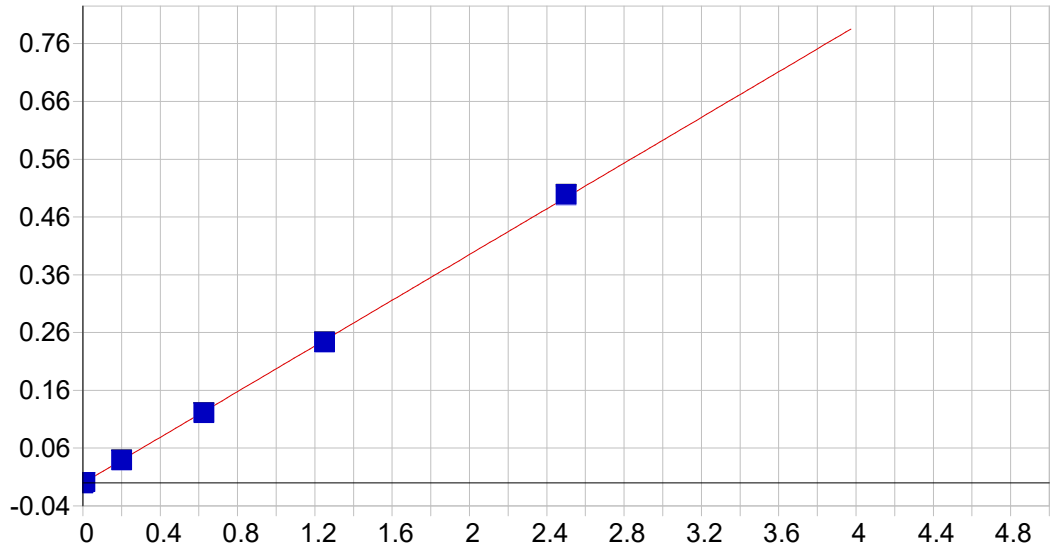
Ni 231.604 {446}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000433	Re-Slope:	1.000000
A1 (Gain):	0.579081	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999948	Status:	OK.
Std Error of Est:	0.000139		
Predicted MDL:	0.000329		
Predicted MQL:	0.001097		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00043	.000	1
S1	.04000	.04075	.001	1.87	.02316	.000	1
S3	1.2500	1.2322	-.018	-1.42	.71312	.001	1
S4	2.5000	2.4757	-.024	-.972	1.4332	.002	1
S5	5.0000	5.0455	.045	.910	2.9213	.008	1
S2	.40000	.39585	-.004	-1.04	.22880	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



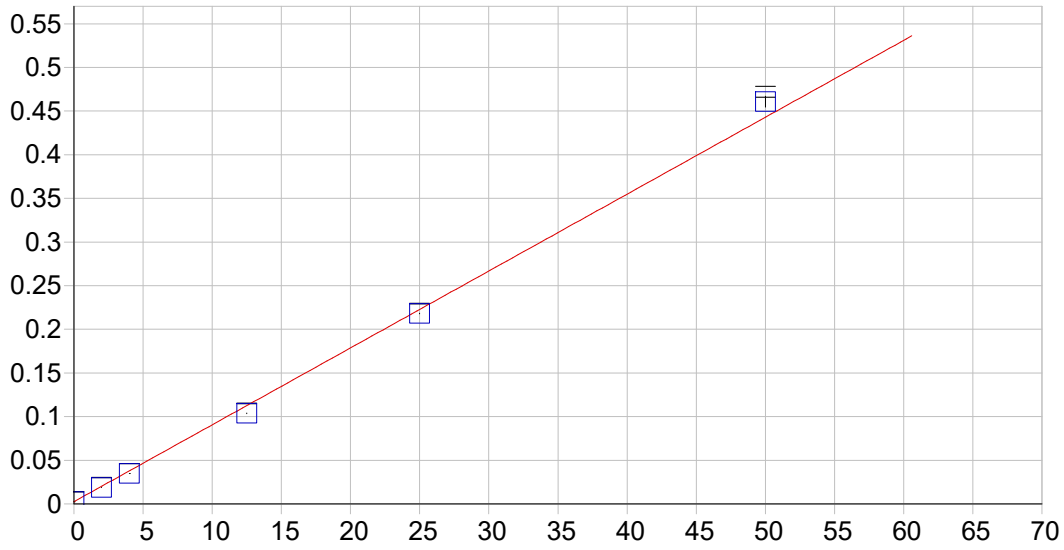
Ag 328.068 {103}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000456	Re-Slope:	1.000000
A1 (Gain):	0.197734	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999933	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	0.000475		
Predicted MQL:	0.001583		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00046	.000	1
S1	.01000	.01017	.000	1.73	.00154	.000	1
S3	.62500	.61556	-.009	-1.51	.12066	.000	1
S4	1.2500	1.2337	-.016	-1.31	.24228	.000	1
S5	2.5000	2.5248	.025	.991	.49638	.001	1
S2	.20000	.20081	.001	.405	.03906	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



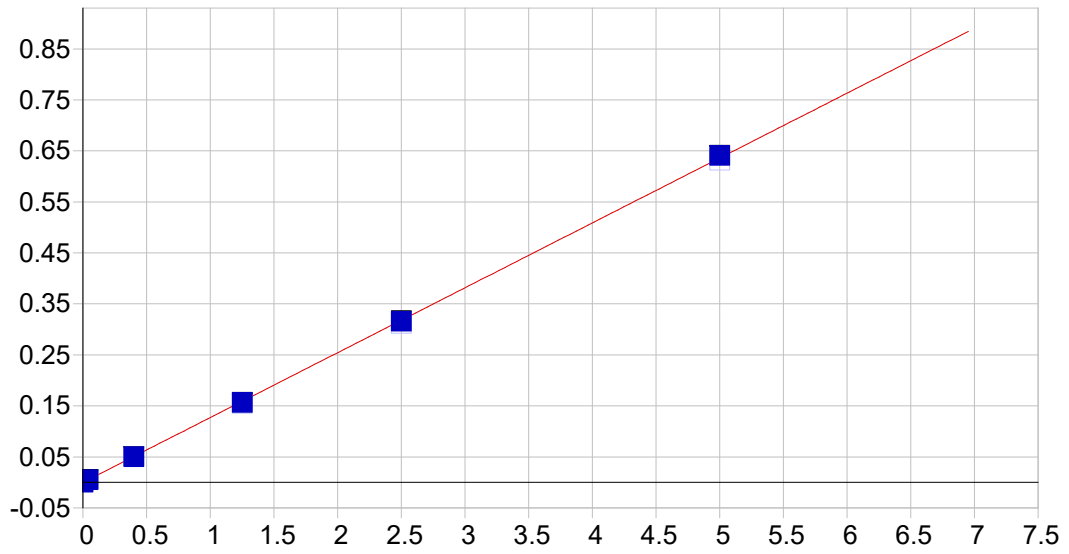
Na 589.592 { 57}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002561	Re-Slope:	1.000000
A1 (Gain):	0.008807	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998847	Status:	OK.
Std Error of Est:	0.000224		
Predicted MDL:	0.016034		
Predicted MQL:	0.053448		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00045	.000	.000	.00256	.000	1
S2	4.0000	3.6612	-.339	-8.47	.03480	.000	1
S3	12.500	11.493	-1.01	-8.06	.10378	.000	1
S4	25.000	24.470	-.530	-2.12	.21807	.000	1
S5	50.000	52.032	2.03	4.06	.46080	.006	1
S1	2.0000	1.8439	-.156	-7.81	.01880	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



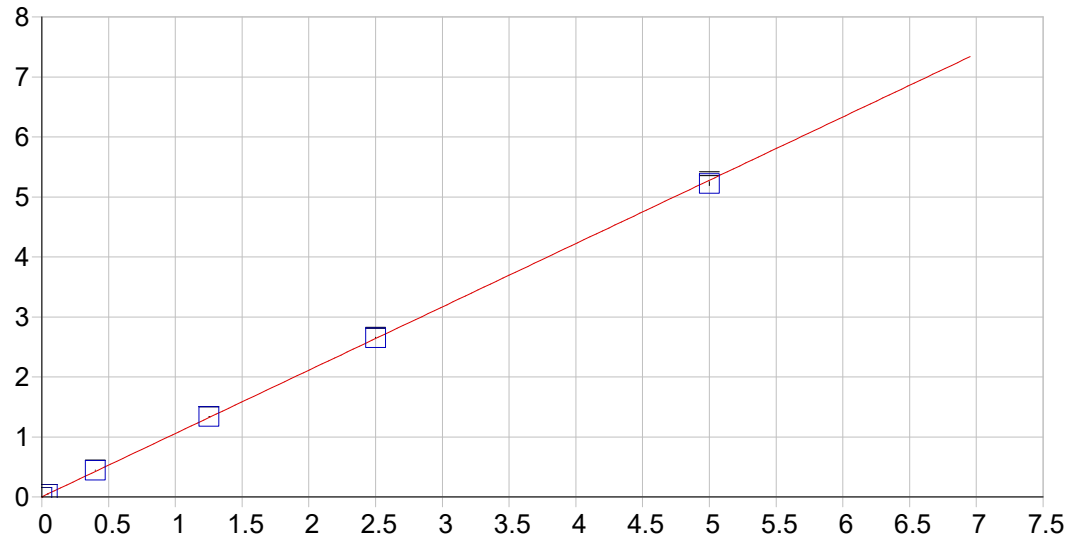
V 292.402 {115}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000061	Re-Slope:	1.000000
A1 (Gain):	0.127206	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999963	Status:	OK.
Std Error of Est:	0.000025		
Predicted MDL:	0.002521		
Predicted MQL:	0.008404		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00006	.000	1
S1	.04000	.03917	-.001	-2.08	.00473	.000	1
S3	1.2500	1.2322	-.018	-1.43	.15436	.001	1
S4	2.5000	2.4844	-.016	-.622	.31134	.001	1
S5	5.0000	5.0371	.037	.743	.63142	.001	1
S2	.40000	.39707	-.003	-.732	.04971	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



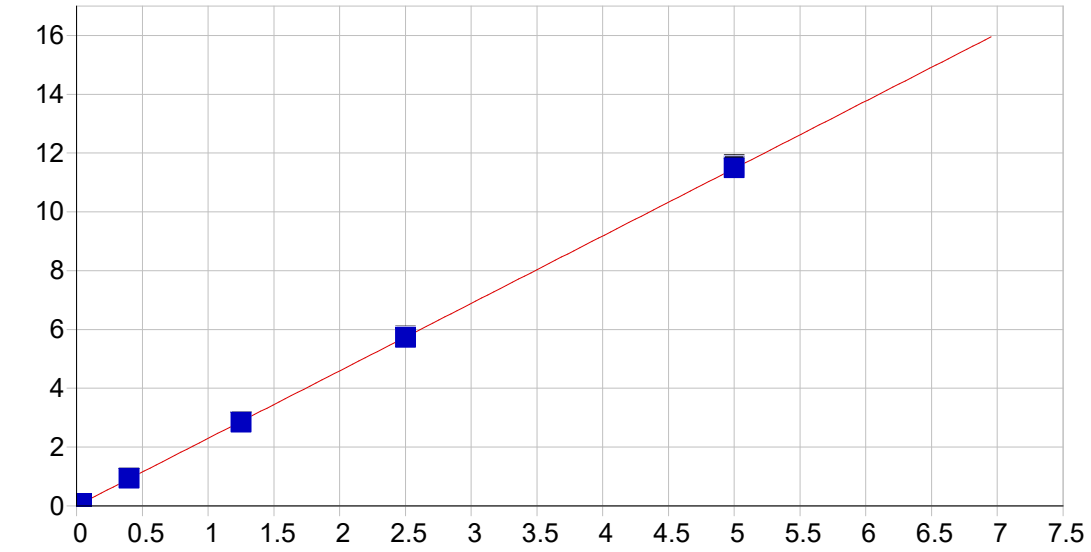
Zn 206.200 {464}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001537	Re-Slope:	1.000000
A1 (Gain):	1.055167	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999884	Status:	OK.
Std Error of Est:	0.000377		
Predicted MDL:	0.000144		
Predicted MQL:	0.000481		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00153	.000	1
S1	.04000	.04286	.003	7.15	.04676	.000	1
S3	1.2500	1.2682	.018	1.46	1.3397	.001	1
S4	2.5000	2.5113	.011	.452	2.6514	.008	1
S5	5.0000	4.9471	-.053	-1.06	5.2216	.030	1
S2	.40000	.42047	.020	5.12	.44520	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



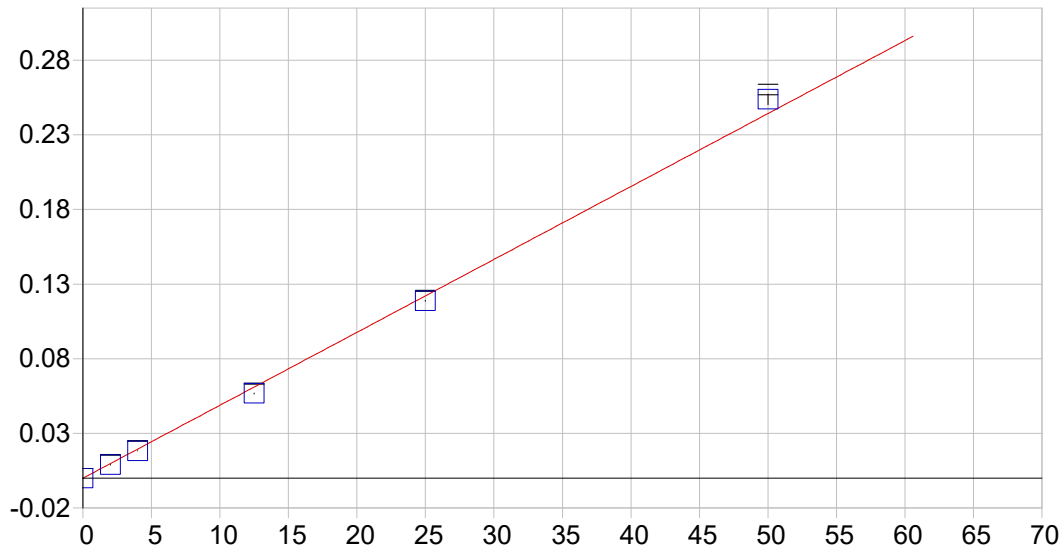
Zn 213.856 {158}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004361	Re-Slope:	1.000000
A1 (Gain):	2.294118	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999981	Status:	OK.
Std Error of Est:	0.000333		
Predicted MDL:	0.000233		
Predicted MQL:	0.000775		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00436	.000	1
S1	.04000	.04211	.002	5.27	.10160	.001	1
S3	1.2500	1.2382	-.012	-.945	2.8649	.008	1
S4	2.5000	2.4955	-.005	-.181	5.7692	.009	1
S5	5.0000	5.0076	.008	.152	11.572	.026	1
S2	.40000	.40660	.007	1.65	.94353	.003	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



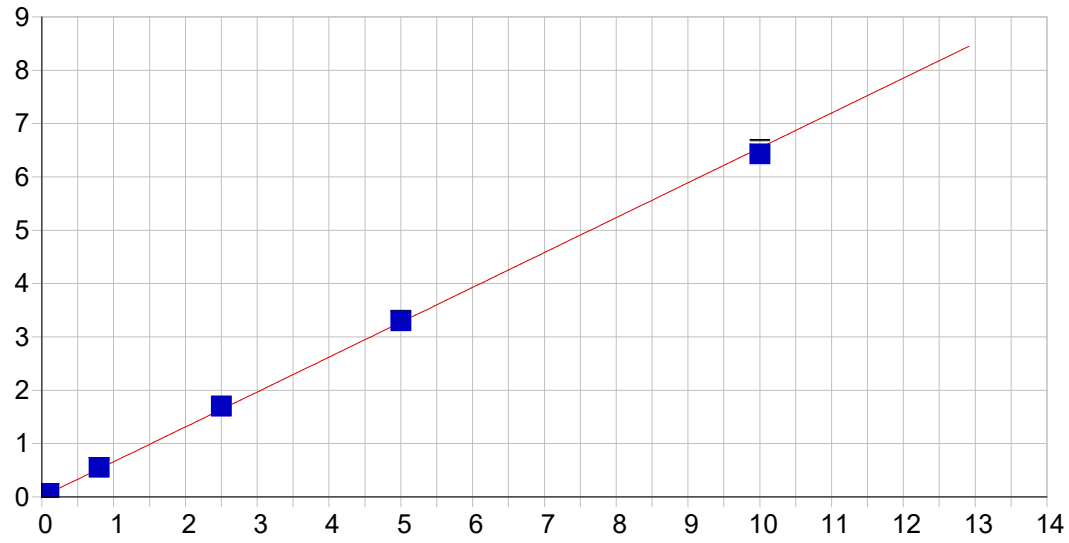
K 766.490 { 44}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000099	Re-Slope:	1.000000
A1 (Gain):	0.004888	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999029	Status:	OK.
Std Error of Est:	0.000114		
Predicted MDL:	0.034449		
Predicted MQL:	0.114831		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00039	.000	.000	-.00010	.000	1
S2	4.0000	3.7484	-.252	-6.29	.01822	.000	1
S3	12.500	11.627	-.873	-6.99	.05673	.000	1
S4	25.000	24.337	-.663	-2.65	.11886	.000	1
S5	50.000	51.942	1.94	3.88	.25380	.003	1
S1	2.0000	1.8462	-.154	-7.69	.00893	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



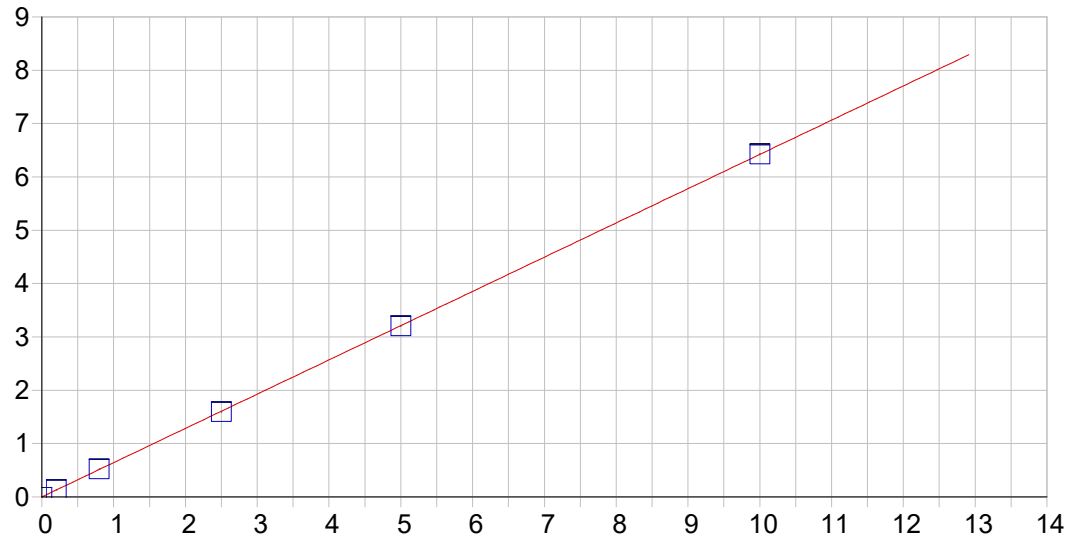
B 249.678 {135}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004746	Re-Slope:	1.000000
A1 (Gain):	0.653946	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999775	Status:	OK.
Std Error of Est:	0.000725		
Predicted MDL:	0.000695		
Predicted MQL:	0.002316		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00474	.001	1
S1	.10000	.10533	.005	5.33	.07324	.001	1
S3	2.5000	2.5862	.086	3.45	1.6901	.008	1
S4	5.0000	5.0386	.039	.772	3.2879	.010	1
S5	10.000	9.8317	-.168	-1.68	6.4106	.081	1
S2	.80000	.83818	.038	4.77	.55099	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



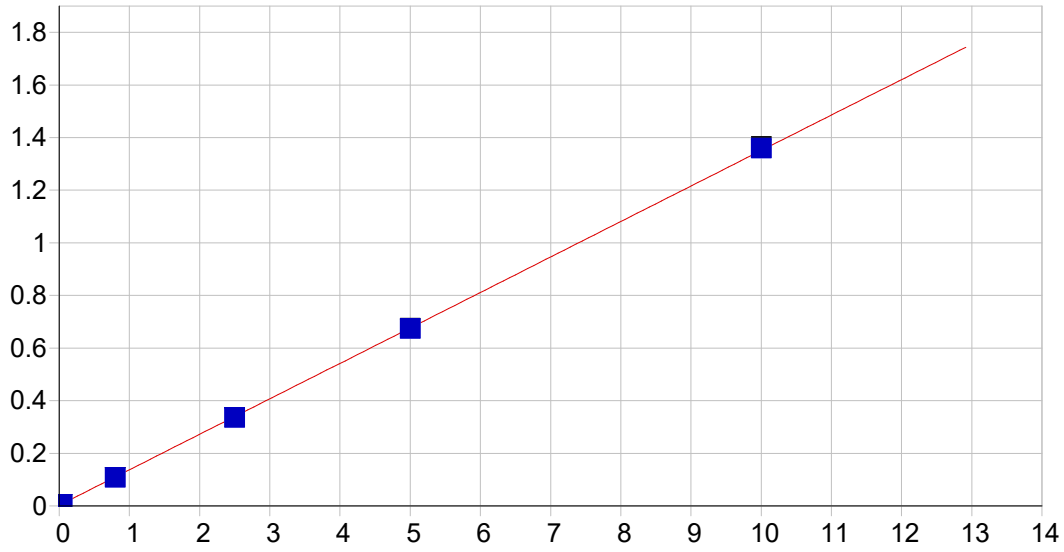
Mo 202.030 {467}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000496	Re-Slope:	1.000000
A1 (Gain):	0.642103	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999987	Status:	OK.
Std Error of Est:	0.000246		
Predicted MDL:	0.000248		
Predicted MQL:	0.000827		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00049	.000	1
S1	.20000	.20559	.006	2.80	.13251	.000	1
S3	2.5000	2.4836	-.016	-.655	1.5952	.003	1
S4	5.0000	4.9906	-.009	-.188	3.2050	.005	1
S5	10.000	10.007	.007	.074	6.4263	.013	1
S2	.80000	.81274	.013	1.59	.52236	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



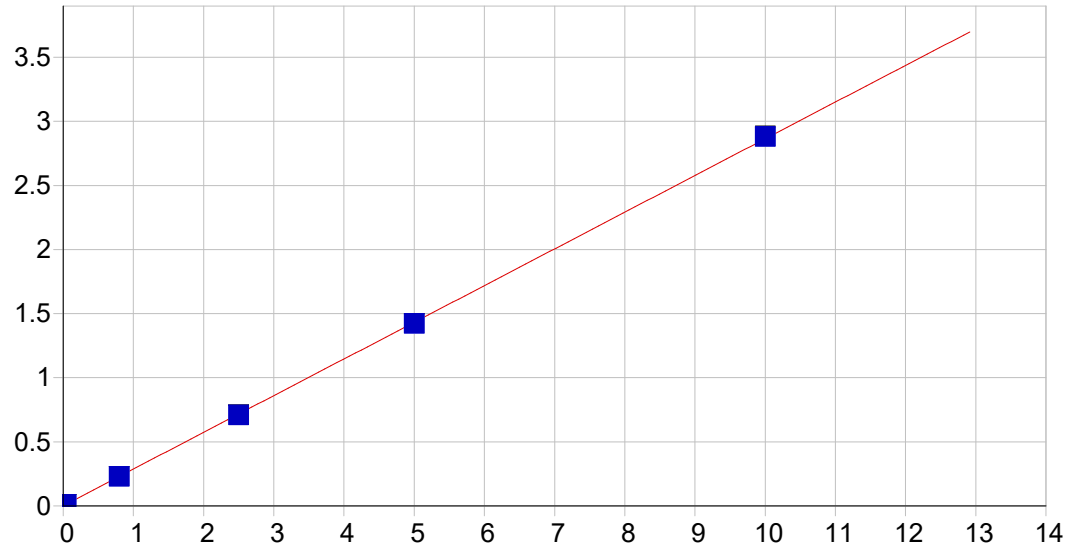
Sn 189.989 {478}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002426	Re-Slope:	1.000000
A1 (Gain):	0.134829	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999959	Status:	OK.
Std Error of Est:	0.000040		
Predicted MDL:	0.000629		
Predicted MQL:	0.002096		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00243	.000	1
S1	.04000	.03877	-.001	-3.08	.00765	.000	1
S3	2.5000	2.4679	-.032	-1.28	.33483	.001	1
S4	5.0000	4.9809	-.019	-.383	.67330	.002	1
S5	10.000	10.072	.072	.717	1.3590	.005	1
S2	.80000	.78072	-.019	-2.41	.10758	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



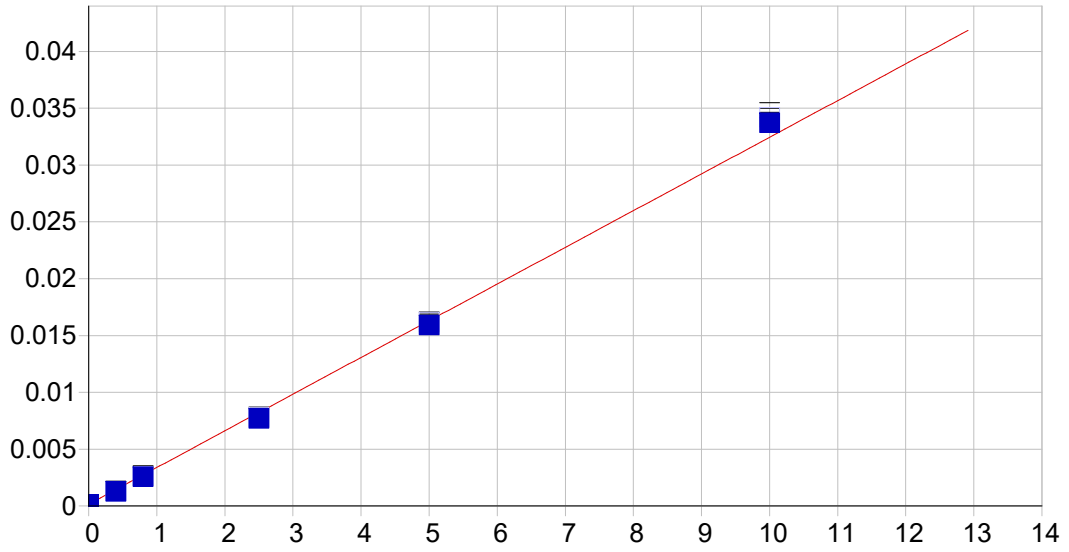
Ti 336.121 {100}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001307	Re-Slope:	1.000000
A1 (Gain):	0.286299	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999976	Status:	OK.
Std Error of Est:	0.000066		
Predicted MDL:	0.001456		
Predicted MQL:	0.004855		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00131	.000	1
S1	.04000	.03988	-.000	-.288	.01272	.000	1
S3	2.5000	2.4765	-.023	-.940	.71007	.002	1
S4	5.0000	4.9636	-.036	-.728	1.4219	.002	1
S5	10.000	10.063	.063	.627	2.8812	.004	1
S2	.80000	.79729	-.003	-.339	.22949	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



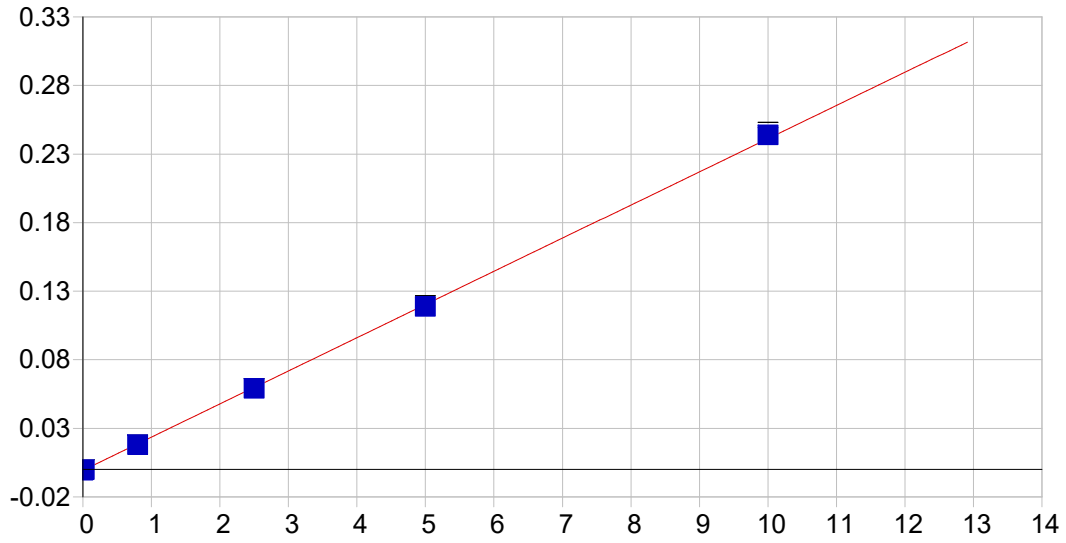
Si 288.158 {117}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000148	Re-Slope:	1.000000
A1 (Gain):	0.003230	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998988	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.011055		
Predicted MQL:	0.036851		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00010	.000	.000	.00015	.000	1
S1	.40000	.35077	-.049	-12.3	.00128	.000	1
S3	2.5000	2.3340	-.166	-6.64	.00781	.000	1
S4	5.0000	4.8819	-.118	-2.36	.01616	.000	1
S5	10.000	10.389	.389	3.89	.03419	.000	1
S2	.80000	.74360	-.056	-7.05	.00259	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



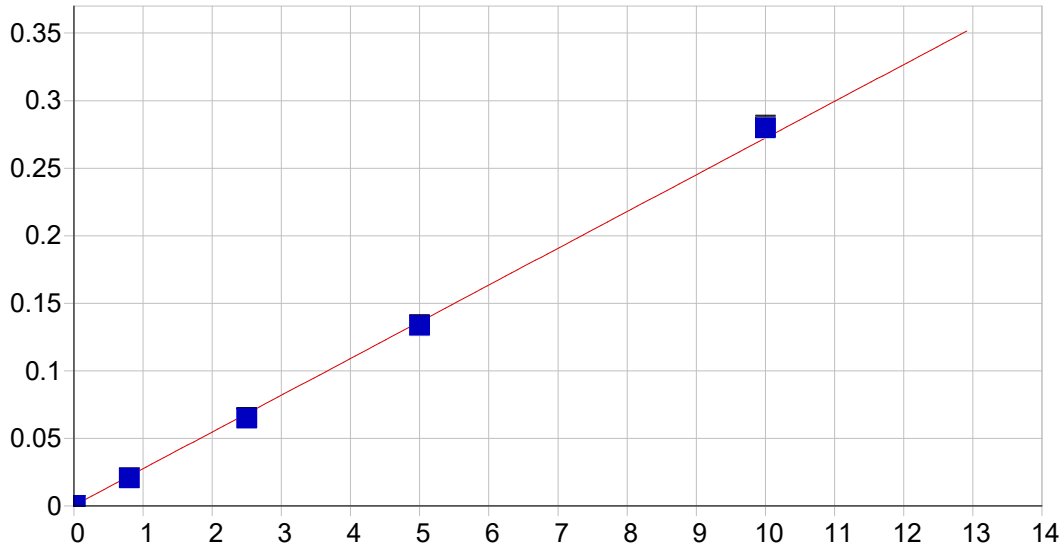
P 177.495 {490}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000633	Re-Slope:	1.000000
A1 (Gain):	0.024184	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999913	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.002630		
Predicted MQL:	0.008767		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00063	.000	1
S1	.02000	.01951	-.000	-2.44	-.00016	.000	1
S3	2.5000	2.4683	-.032	-1.27	.05905	.000	1
S4	5.0000	4.9438	-.056	-1.12	.11891	.001	1
S5	10.000	10.114	.114	1.14	.24393	.002	1
S2	.80000	.77418	-.026	-3.23	.01809	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



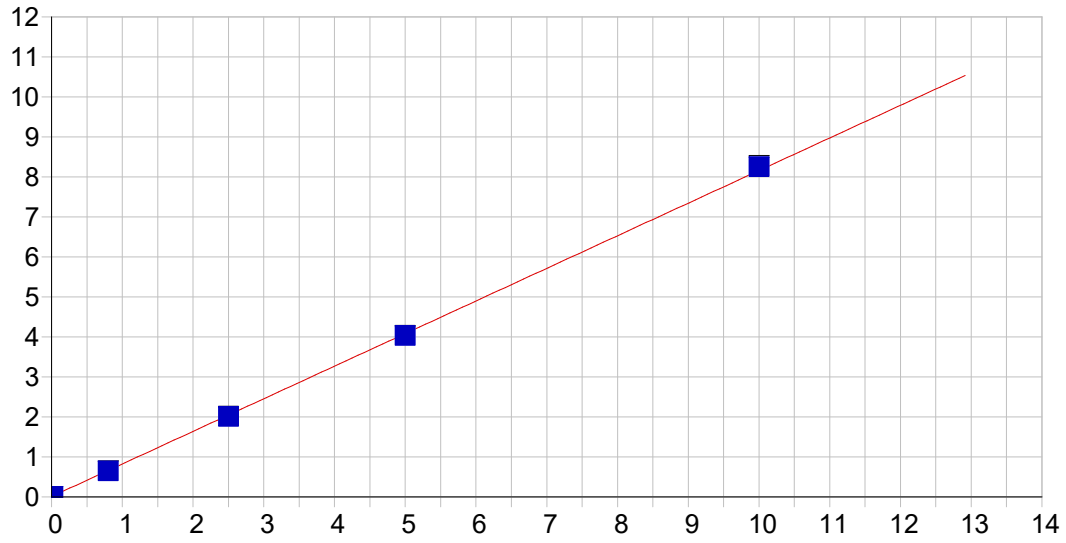
S 182.034 {485}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000357	Re-Slope:	1.000000
A1 (Gain):	0.027190	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999421	Status:	OK.
Std Error of Est:	0.000022		
Predicted MDL:	0.002826		
Predicted MQL:	0.009420		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00036	.000	1
S1	.02000	.01641	-.004	-18.0	.00078	.000	1
S3	2.5000	2.3726	-.127	-5.10	.06469	.000	1
S4	5.0000	4.8991	-.101	-2.02	.13321	.001	1
S5	10.000	10.286	.286	2.86	.27934	.002	1
S2	.80000	.74529	-.055	-6.84	.02056	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



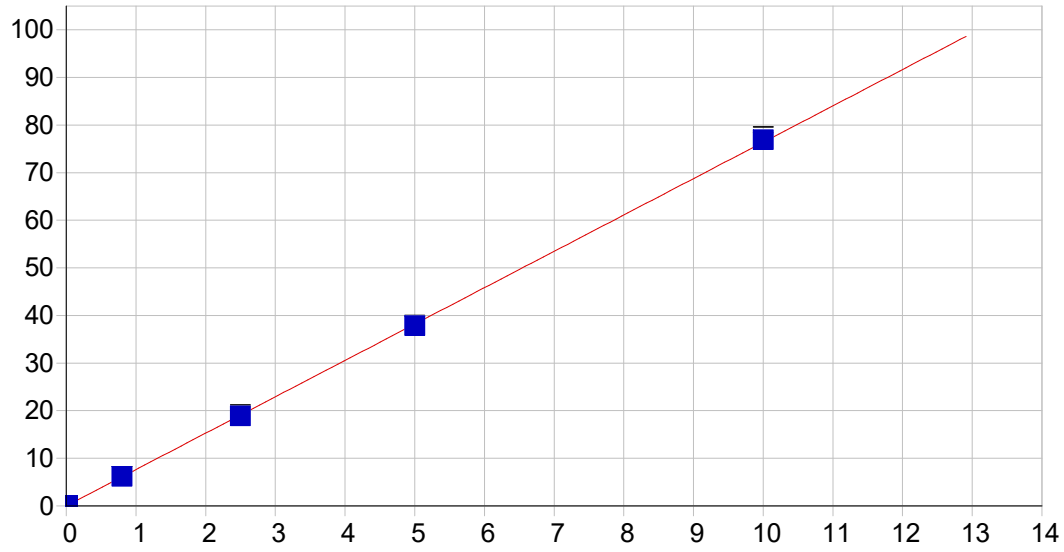
Li 670.784 { 50}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008192	Re-Slope:	1.000000
A1 (Gain):	0.815049	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999908	Status:	OK.
Std Error of Est:	0.000259		
Predicted MDL:	0.001698		
Predicted MQL:	0.005660		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00819	.001	1
S5	10.000	10.123	.123	1.23	8.2655	.020	1
S4	5.0000	4.9320	-.068	-1.36	4.0313	.006	1
S3	2.5000	2.4567	-.043	-1.73	2.0122	.006	1
S1	.02000	.01936	-.001	-3.19	.02426	.001	1
S2	.80000	.78882	-.011	-1.40	.65164	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851



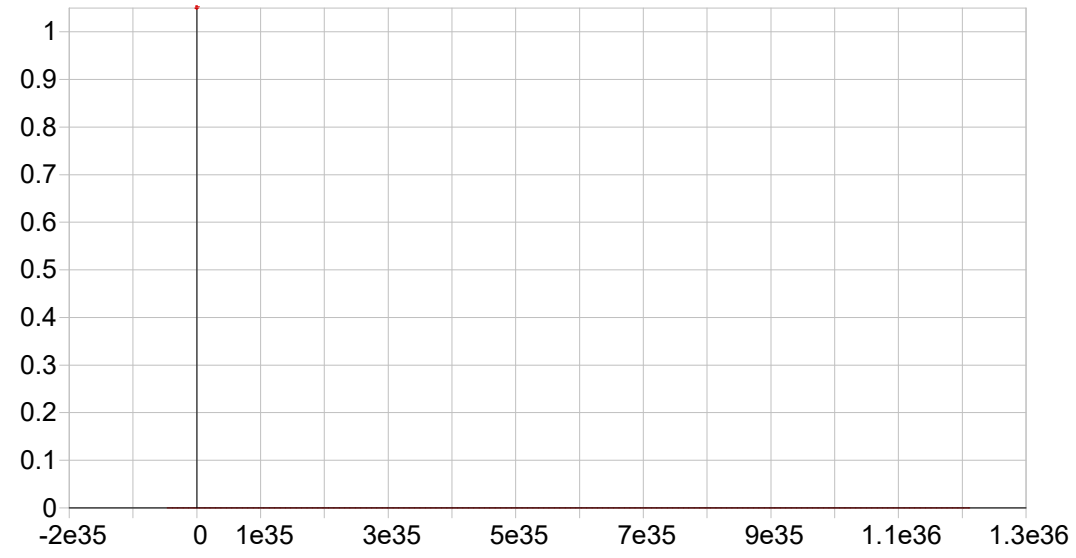
Sr 407.771 { 83}

Date of Fit:	8/15/2025 13:45:18	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000918	Re-Slope:	1.000000
A1 (Gain):	7.639067	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999965	Status:	OK.
Std Error of Est:	0.001497		
Predicted MDL:	0.000093		
Predicted MQL:	0.000311		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00092	.000	1
S1	.02000	.02032	.000	1.62	.15691	.000	1
S3	2.5000	2.4737	-.026	-1.05	18.916	.219	1
S4	5.0000	4.9512	-.049	-.977	37.860	.108	1
S5	10.000	10.068	.068	.676	76.982	.604	1
S2	.80000	.80720	.007	.900	6.1730	.006	1

Reviewed By:
On:
Inst Id :P4
LB :LB136851

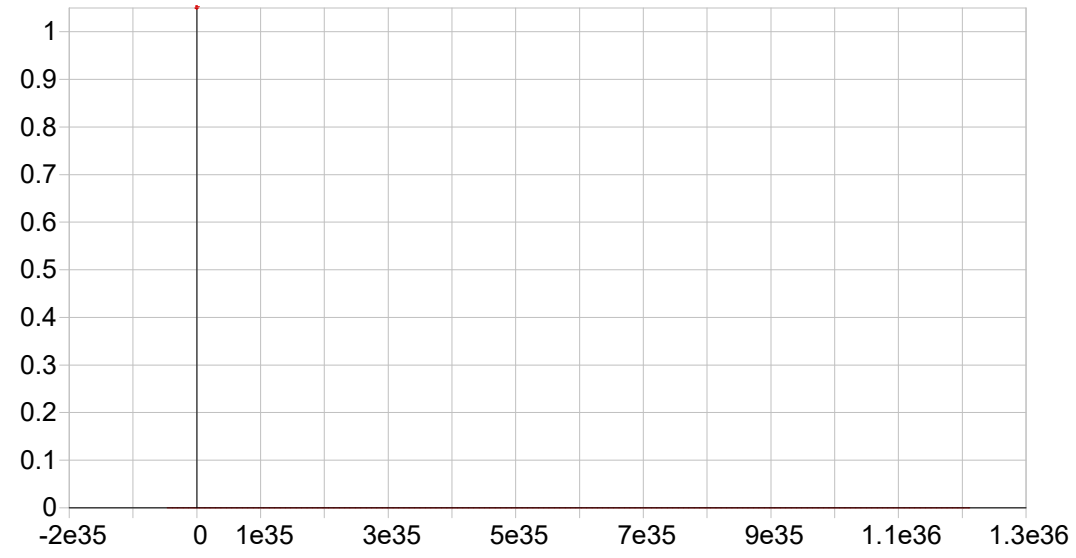


Y 224.306 {450}*

Date of Fit:	8/15/2025 13:45:18	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}*

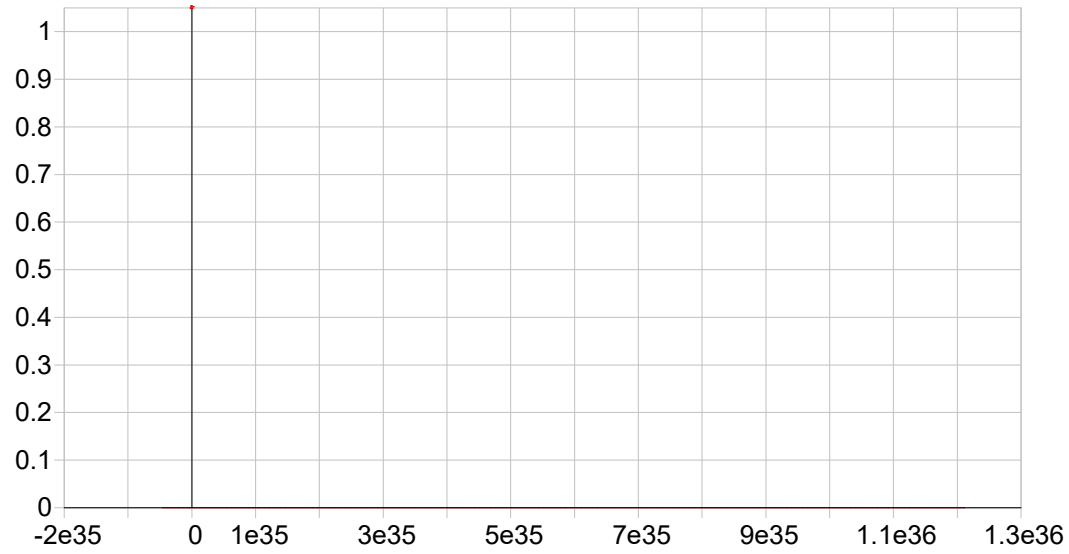
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:
On:
Inst Id :P4
LB :LB136851

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

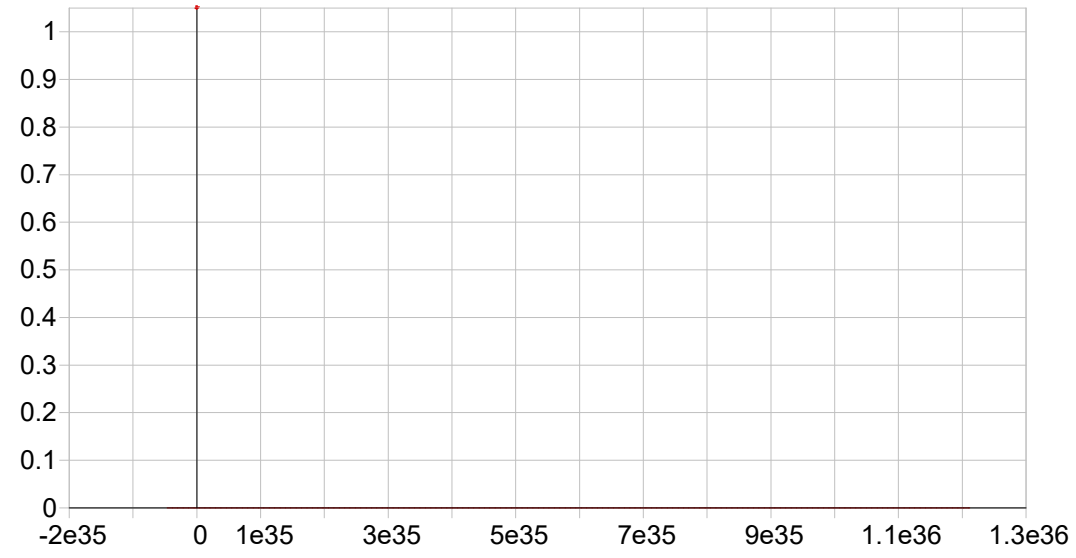


Y 371.030 { 91}*

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

Reviewed By:
On:
Inst Id :P4
LB :LB136851

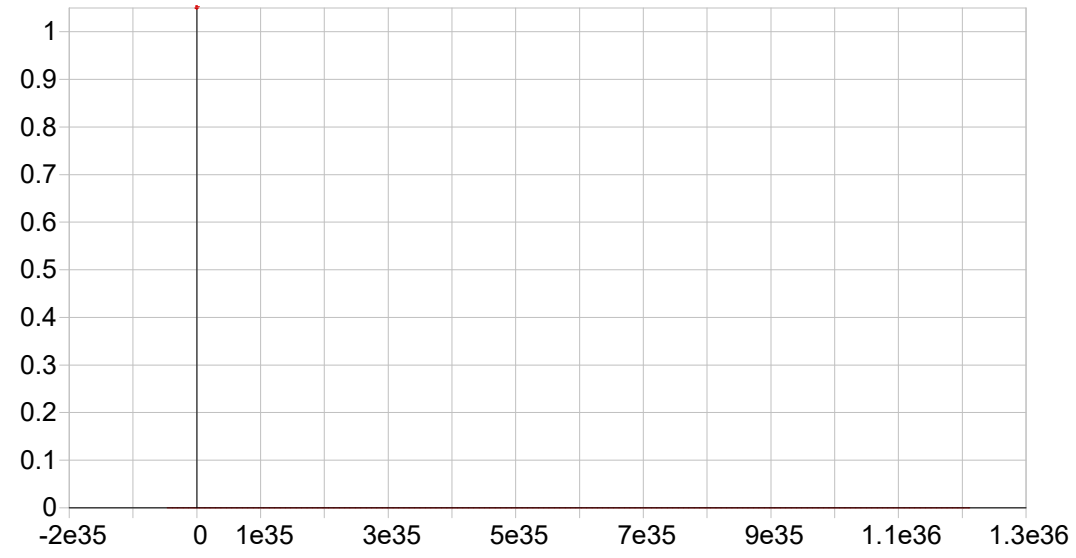


Y 224.306 {150}*

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:
On:
Inst Id :P4
LB :LB136851

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**

Reviewed By:jaswal
On:8/12/2025 4:00:23 PM
Inst Id :CV1
LB :LB136768

LB136768 INSTRUMENT ID:CV1

Method: 7471B Operator: Admin Date of Analysis: 11 Aug 2025 09:48:30

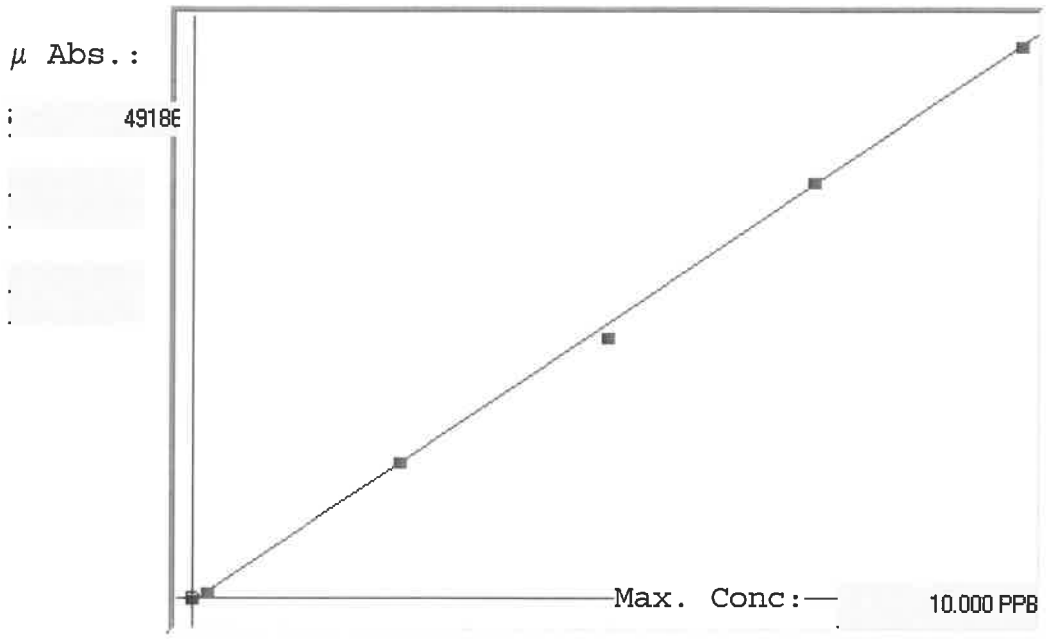
Type	Sample ID	Extended ID	Conc.	µ Abs.	Units	Type	Stnd Conc	Method	Date
S	0.0 - 1	S0.0	-	-23	PPB	Std	0.00000	7471B	11 Aug 2025 09:58:05
S	0.2 - 1	S0.2	-	514	PPB	Std	0.20000	7471B	11 Aug 2025 10:10:37
S	2.5 - 1	S2.5	-	12153	PPB	Std	2.50000	7471B	11 Aug 2025 10:19:34
S	5.0 - 1	S5.0	-	23326	PPB	Std	5.00000	7471B	11 Aug 2025 10:25:28
S	7.5 - 1	S7.5	-	37047	PPB	Std	7.50000	7471B	11 Aug 2025 10:27:44
S	10.0 - 1	S10.0	-	49186	PPB	Std	10.00000	7471B	11 Aug 2025 10:30:04
U	ICV06 - 1	ICV06	3.6938	17865	PPB	SMPL		7471B	11 Aug 2025 10:33:10
U	ICB06 - 1	ICB06	0.0045	-371	PPB	SMPL		7471B	11 Aug 2025 10:35:28
U	CCV15 - 1	CCV15	5.1611	25118	PPB	SMPL		7471B	11 Aug 2025 11:06:26
U	CCB15 - 1	CCB15	-0.0035	-411	PPB	SMPL		7471B	11 Aug 2025 11:08:43
U	CRA - 1	CRA	0.2073	631	PPB	SMPL		7471B	11 Aug 2025 11:11:02
U	HighStd - 1	HighStd	10.1378	49718	PPB	SMPL		7471B	11 Aug 2025 11:16:27
U	ChkStd - 1	ChkStd	7.4047	36208	PPB	SMPL		7471B	11 Aug 2025 11:25:06
U	PB169179BL - 1	PB169179BL	-0.0222	-503	PPB	SMPL		7471B	11 Aug 2025 11:27:22
U	PB169179BS - 1	PB169179BS	3.7656	18220	PPB	SMPL		7471B	11 Aug 2025 11:29:44
U	Q2779-01 - 1	TP-4	3.1931	15390	PPB	SMPL		7471B	11 Aug 2025 11:32:01
U	Q2779-05 - 1	TP-5	48.2140	237929	PPB	SMPL		7471B	11 Aug 2025 11:34:21
U	Q2788-01 - 1	OK-01-08062025	0.4680	1920	PPB	SMPL		7471B	11 Aug 2025 11:36:41
U	Q2793-01 - 1	VNJ-231	1.1648	5364	PPB	SMPL		7471B	11 Aug 2025 11:39:40
U	Q2795-01 - 1	COMP-1	32.0247	157905	PPB	SMPL		7471B	11 Aug 2025 11:41:57
U	CCV16 - 1	CCV16	5.2702	25657	PPB	SMPL		7471B	11 Aug 2025 11:53:19
U	CCB16 - 1	CCB16	-0.0070	-428	PPB	SMPL		7471B	11 Aug 2025 11:55:37
U	Q2795-02 - 1	COMP-2	33.9834	167587	PPB	SMPL		7471B	11 Aug 2025 11:57:56
U	Q2795-03 - 1	COMP-3	22.4306	110481	PPB	SMPL		7471B	11 Aug 2025 12:00:11
U	Q2798-01 - 1	TP-6	0.5443	2297	PPB	SMPL		7471B	11 Aug 2025 12:03:06
U	Q2800-01 - 1	VNJ-222	1.5763	7398	PPB	SMPL		7471B	11 Aug 2025 12:05:51
U	Q2801-01 - 1	TR-04-080725	0.4593	1877	PPB	SMPL		7471B	11 Aug 2025 12:08:08
U	Q2807-01 - 1	COMP-4	10.7757	52871	PPB	SMPL		7471B	11 Aug 2025 12:10:27
U	Q2807-02 - 1	COMP-5	13.9734	68677	PPB	SMPL		7471B	11 Aug 2025 12:12:46
U	Q2807-03 - 1	COMP-6	16.1380	79377	PPB	SMPL		7471B	11 Aug 2025 12:15:19
U	Q2807-03DUP - 1	COMP-6DUP	11.5538	56717	PPB	SMPL		7471B	11 Aug 2025 12:17:55
U	Q2807-03MS - 1	COMP-6MS	15.9104	78252	PPB	SMPL		7471B	11 Aug 2025 12:24:29
U	CCV17 - 1	CCV17	4.8967	23811	PPB	SMPL		7471B	11 Aug 2025 12:26:46
U	CCB17 - 1	CCB17	-0.0112	-449	PPB	SMPL		7471B	11 Aug 2025 12:29:22
U	Q2807-03MSD - 1	COMP-6MSD	16.2050	79708	PPB	SMPL		7471B	11 Aug 2025 12:39:34
U	Q2807-03LX5 - 1		1.0745	4918	PPB	SMPL		7471B	11 Aug 2025 12:41:49
U	Q2807-03A - 1		3.7980	18380	PPB	SMPL		7471B	11 Aug 2025 12:44:22
U	PB169125BL - 1	PB169125BL	0.0810	7	PPB	SMPL		7471B	11 Aug 2025 13:02:06
U	PB169125BS - 1	PB169125BS	4.2012	20373	PPB	SMPL		7471B	11 Aug 2025 13:04:22
U	Q2779-05DXL50 - 1		17.7781	87484	PPB	SMPL		7471B	11 Aug 2025 13:14:18
U	Q2795-01DXL10 - 1		7.1724	35060	PPB	SMPL		7471B	11 Aug 2025 13:17:40
U	Q2795-02DXL10 - 1		6.3669	31078	PPB	SMPL		7471B	11 Aug 2025 13:20:04
U	Q2795-03DXL10 - 1		3.8152	18465	PPB	SMPL		7471B	11 Aug 2025 13:22:52
U	Q2807-01DXL10 - 1		4.7438	23055	PPB	SMPL		7471B	11 Aug 2025 13:25:28
U	CCV18 - 1	CCV18	5.0683	24659	PPB	SMPL		7471B	11 Aug 2025 13:32:34
U	CCB18 - 1	CCB18	-0.0094	-440	PPB	SMPL		7471B	11 Aug 2025 13:34:49
U	Q2807-02DXL10 - 1		1.8997	8997	PPB	SMPL		7471B	11 Aug 2025 13:37:09
U	Q2807-03DXL10 - 1		2.8585	13736	PPB	SMPL		7471B	11 Aug 2025 13:39:25
U	Q2807-03DUPDXL10 - 1		2.4146	11542	PPB	SMPL		7471B	11 Aug 2025 13:41:43
U	Q2807-03MSDDXL10 - 1		2.1963	10463	PPB	SMPL		7471B	11 Aug 2025 13:44:01
U	Q2779-05DXL50DXL10 - 1		2.6552	12731	PPB	SMPL		7471B	11 Aug 2025 13:46:21
U	Q2807-03DXL10 - 1		2.5344	12134	PPB	SMPL		7471B	11 Aug 2025 13:54:34
U	CCV19 - 1	CCV19	5.0296	24468	PPB	SMPL		7471B	11 Aug 2025 13:56:50
U	CCB19 - 1	CCB19	-0.0068	-427	PPB	SMPL		7471B	11 Aug 2025 13:59:10

LB136768
INSTRUMENT ID: CV1

Reviewed By:jaswal
On:8/12/2025 4:00:23 PM
Inst Id :CV1
LB :LB136768

7471B

Linear



A= 0.0000e+000
B= 2.0231e-004
C= 7.9603e-002
Rho= 0.9996672
Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	%D
0.0	0.000	0.075	0.075	-23	0.000	-23					-8
0.2	0.200	0.184	-0.016	514	0.0 %	514					2
2.5	2.500	2.538	0.038	12153	0.0 %	12153					-4
5.0	5.000	4.799	-0.201	23326	0.0 %	23326					1
7.5	7.500	7.574	0.074	37047	0.0 %	37047					0
10.0	10.000	10.030	0.030	49186	0.0 %	49186					

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB169181

SOP ID : M3050B-Digestion-20

SDG No : N/A

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

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

Start Digest Date: 08/08/2025 **Time :** 13:15 **Temp :** 97 °C

End Digest Date: 08/08/2025 **Time :** 15:25 **Temp :** 98 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #5

Dig Technician Signature: SLG.

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	1.00	M6180
LFS-2	1.00	M6181
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	MP86404
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#5 CELL#35 97C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
08/08/25 16:25	SLG. met dig	SG (Metals Lab)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB169181

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
PB169181BL	PBS181	N/A	1.62	100	Colorless	Colorless	Fine	N/A	N/A	1
PB169181BS	LCS181	N/A	1.54	100	Colorless	Colorless	Fine	N/A	M6180,M6181	2
Q2779-01	TP-4	N/A	2.20	100	Dark Brown	Yellow	Medium	N/A	N/A	3
Q2779-05	TP-5	N/A	2.37	100	Dark Brown	Yellow	Medium	N/A	N/A	4
Q2788-01	OK-01-08062025	N/A	2.26	100	Grey	Yellow	Medium	N/A	N/A	5
Q2793-01	VNJ-231	N/A	2.27	100	Light Brown	Yellow	Medium	N/A	N/A	6
Q2793-01DUP	VNJ-231DUP	N/A	2.29	100	Light Brown	Yellow	Medium	N/A	N/A	7
Q2793-01MS	VNJ-231MS	N/A	2.31	100	Light Brown	Yellow	Medium	N/A	M6180,M6181	8
Q2793-01MSD	VNJ-231MSD	N/A	2.32	100	Brown	Yellow	Medium	N/A	M6180,M6181	9
Q2795-01	COMP-1	N/A	2.16	100	Brown	Yellow	Medium	N/A	N/A	10
Q2795-02	COMP-2	N/A	2.27	100	Brown	Yellow	Medium	N/A	N/A	11
Q2795-03	COMP-3	N/A	2.45	100	Brown	Yellow	Medium	N/A	N/A	12
Q2798-01	TP-6	N/A	2.44	100	Brown	Yellow	Medium	N/A	N/A	13
Q2800-01	VNJ-222	N/A	2.33	100	Light Brown	Yellow	Medium	N/A	N/A	14
Q2801-01	TR-04-080725	N/A	2.46	100	Brown	Yellow	Medium	N/A	N/A	15
Q2807-01	COMP-4	N/A	2.26	100	Brown	Yellow	Medium	N/A	N/A	16
Q2807-02	COMP-5	N/A	2.42	100	Brown	Yellow	Medium	N/A	N/A	17
Q2807-03	COMP-6	N/A	2.37	100	Brown	Yellow	Medium	N/A	N/A	18

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB169181 **WorkList ID :** 191179 **Department :** Digestion **Date :** 08-08-2025 12:44:00

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2779-01	TP-4	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	I63	08/06/2025	6010D
Q2779-05	TP-5	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	I63	08/06/2025	6010D
Q2788-01	OK-01-08062025	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG05	D31	08/06/2025	6010D
Q2793-01	VNJ-231	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	D31	08/07/2025	6010D
Q2795-01	COMP-1	Solid	Metals ICP-Group1	Cool 4 deg C	POWE02	D31	08/06/2025	6010D
Q2795-02	COMP-2	Solid	Metals ICP-Group1	Cool 4 deg C	POWE02	D31	08/06/2025	6010D
Q2795-03	COMP-3	Solid	Metals ICP-Group1	Cool 4 deg C	POWE02	D31	08/06/2025	6010D
Q2798-01	TP-6	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	D21	08/07/2025	6010D
Q2800-01	VNJ-222	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	D31	08/07/2025	6010D
Q2801-01	TR-04-080725	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG05	D21	08/07/2025	6010D
Q2807-01	COMP-4	Solid	Metals ICP-Group1	Cool 4 deg C	POWE02	J12	08/07/2025	6010D
Q2807-02	COMP-5	Solid	Metals ICP-Group1	Cool 4 deg C	POWE02	J12	08/07/2025	6010D
Q2807-03	COMP-6	Solid	Metals ICP-Group1	Cool 4 deg C	POWE02	J12	08/07/2025	6010D

Date/Time 8/8/25 12:55

Raw Sample Received by: jepp (Metdiq)

Raw Sample Relinquished by: CP Cerny

Date/Time 8/8/25 14:00

Raw Sample Received by: CP Cerny

Raw Sample Relinquished by: jepp (Metdiq)

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB169179

SOP ID : M7471B-Mercury-19

SDG No : N/A

Matrix : SOIL

Pippete ID: HG A

Balance ID : M SC-3

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #1

Block ID: 1. HG HOT BLOCK#3 2. N/A

Start Digest Date: 08/08/2025 **Time :** 11:35 **Temp :** 95 °C

End Digest Date: 08/08/2025 **Time :** 11:40 **Temp :** 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: SPB.

Supervisor Signature:

Temp : 1. 95°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP86697
CCV	30mL	MP86699
CRA	30mL	MP86701
Blank Spike	0.48mL	MP86690
Matrix Spike	0.48mL	MP86690

Chemical Used	ML/SAMPLE USED	Lot Number
AQUA REGIA	2.5mL	MP86686
KMnO4 (5%)	4.5mL	M85893
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	MP86690
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP86692
2.5 ppb	S2.5	30mL	MP86693
5.0 ppb	S5.0	30mL	MP86694
7.5 ppb	S7.5	30mL	MP86695
10.0 ppb	S10.0	30mL	MP86696
ICV	ICV	30mL	MP86697
ICB	ICB	30mL	MP86698
CCV	CCV	30mL	MP86699
CCB	CCB	30mL	MP86700
CRI	CRI	30mL	MP866701
CHK STD	CHK STD	30mL	MP866702

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
08/08/25 12:40	SDS met dig	met lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB169179

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Comment	Prep Pos
PB169179BL	PBS179	0.50	35	N/A	N/A	1-1
PB169179BS	LCS179	0.50	35	N/A	MP86690	2
Q2779-01	TP-4	0.54	35	N/A	N/A	3
Q2779-05	TP-5	0.51	35	N/A	N/A	4
Q2788-01	OK-01-08062025	0.55	35	N/A	N/A	5
Q2793-01	VNJ-231	0.53	35	N/A	N/A	6
Q2795-01	COMP-1	0.58	35	N/A	N/A	7
Q2795-02	COMP-2	0.59	35	N/A	N/A	8
Q2795-03	COMP-3	0.56	35	N/A	N/A	9
Q2798-01	TP-6	0.53	35	N/A	N/A	10
Q2800-01	VNJ-222	0.56	35	N/A	N/A	11
Q2801-01	TR-04-080725	0.56	35	N/A	N/A	12
Q2807-01	COMP-4	0.57	35	N/A	N/A	13
Q2807-02	COMP-5	0.58	35	N/A	N/A	14
Q2807-03	COMP-6	0.53	35	N/A	N/A	15
Q2807-03MS	COMP-6MS	0.53	35	N/A	MP86690	17
Q2807-03MSD	COMP-6MSD	0.57	35	N/A	MP86690	18
Q2807-03DUP	COMP-6DUP	0.57	35	N/A	N/A	16

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB169179 **WorkList ID :** 191178 **Department :** Digestion **Date :** 08-08-2025 12:23:58

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2779-01	TP-4	Solid	Mercury	Cool 4 deg C	PSEG03	I63	08/06/2025	7471B
Q2779-05	TP-5	Solid	Mercury	Cool 4 deg C	PSEG03	I63	08/06/2025	7471B
Q2788-01	OK-01-08062025	Solid	Mercury	Cool 4 deg C	PSEG05	D31	08/06/2025	7471B
Q2793-01	VNJ-231	Solid	Mercury	Cool 4 deg C	PSEG03	D31	08/07/2025	7471B
Q2795-01	COMP-1	Solid	Mercury	Cool 4 deg C	POWE02	D31	08/06/2025	7471B
Q2795-02	COMP-2	Solid	Mercury	Cool 4 deg C	POWE02	D31	08/06/2025	7471B
Q2795-03	COMP-3	Solid	Mercury	Cool 4 deg C	POWE02	D31	08/06/2025	7471B
Q2798-01	TP-6	Solid	Mercury	Cool 4 deg C	PSEG03	D21	08/07/2025	7471B
Q2800-01	VNJ-222	Solid	Mercury	Cool 4 deg C	PSEG03	D31	08/07/2025	7471B
Q2801-01	TR-04-080725	Solid	Mercury	Cool 4 deg C	PSEG05	D21	08/07/2025	7471B
Q2807-01	COMP-4	Solid	Mercury	Cool 4 deg C	POWE02	J12	08/07/2025	7471B
Q2807-02	COMP-5	Solid	Mercury	Cool 4 deg C	POWE02	J12	08/07/2025	7471B
Q2807-03	COMP-6	Solid	Mercury	Cool 4 deg C	POWE02	J12	08/07/2025	7471B

Date/Time 08/08/25 12:40
Raw Sample Received by: SK metdig
Raw Sample Relinquished by: CP Cem

Date/Time 08/08/25 13:40
Raw Sample Received by: CP Cem
Raw Sample Relinquished by: SK metdig

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 8/8/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:10
In Date: 08/07/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 104
Time OUT: 08:17
Out Date: 08/08/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID-OVEN

QC: LB136742

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
Q2793-01	VNJ-231	1	1.15	10.43	11.58	10.82	92.7	
Q2793-02	VNJ-231	2	1.19	10.40	11.59	11.12	95.5	
Q2795-01	COMP-1	3	1.15	10.60	11.75	9.9	82.5	
Q2795-02	COMP-2	4	1.19	10.17	11.36	9.41	80.8	
Q2795-03	COMP-3	5	1.13	10.86	11.99	10.03	82.0	
Q2798-01	TP-6	6	1.18	10.17	11.35	10.25	89.2	
Q2798-02	TP-6-EPH	7	1.18	10.51	11.69	10.04	84.3	
Q2798-03	TP-6-VOC	8	1.18	10.21	11.39	10.06	87.0	
Q2800-01	VNJ-222	12	1.16	10.57	11.73	10.99	93.0	
Q2801-01	TR-04-080725	13	1.17	10.36	11.53	11.05	95.4	
Q2801-02	TR-04-080725-E2	14	1.14	10.41	11.55	10.71	91.9	
Q2802-01	S-1A	9	1.15	10.84	11.99	10.96	90.5	
Q2802-02	S-1B	10	1.16	10.20	11.36	9.04	77.3	
Q2802-03	S-2	11	1.15	10.84	11.99	10.4	85.3	

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

WORKLIST(Hardcopy Internal Chain)

WB 136742

WorkList Name : %1-080725 **WorkList ID :** 191140 **Department :** Wet-Chemistry **Date :** 08-07-2025 07:55:24

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2793-01	VNJ-231	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	08/07/2025	Chemtech -SO
Q2793-02	VNJ-231	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	08/07/2025	Chemtech -SO
Q2795-01	COMP-1	Solid	Percent Solids	Cool 4 deg C	POWE02	D31	08/06/2025	Chemtech -SO
Q2795-02	COMP-2	Solid	Percent Solids	Cool 4 deg C	POWE02	D31	08/06/2025	Chemtech -SO
Q2795-03	COMP-3	Solid	Percent Solids	Cool 4 deg C	POWE02	D31	08/06/2025	Chemtech -SO
Q2798-01	TP-6	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/07/2025	Chemtech -SO
Q2798-02	TP-6-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/07/2025	Chemtech -SO
Q2798-03	TP-6-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/07/2025	Chemtech -SO
Q2800-01	VNJ-222	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	08/07/2025	Chemtech -SO
Q2801-01	TR-04-080725	Solid	Percent Solids	Cool 4 deg C	PSEG05	D21	08/07/2025	Chemtech -SO
Q2801-02	TR-04-080725-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	D21	08/07/2025	Chemtech -SO
Q2802-01	S-1A	Solid	Percent Solids	Cool 4 deg C	EARTH03	J13	08/07/2025	Chemtech -SO
Q2802-02	S-1B	Solid	Percent Solids	Cool 4 deg C	EARTH03	J13	08/07/2025	Chemtech -SO
Q2802-03	S-2	Solid	Percent Solids	Cool 4 deg C	EARTH03	J13	08/07/2025	Chemtech -SO

08/07/25

Date/Time 08/07/25 15:30

Raw Sample Received by:

Raw Sample Relinquished by: SR

Date/Time 08/07/25 15:30

Raw Sample Received by: SR

Raw Sample Relinquished by:

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 # LB136768

Review By	sagar	Review On	8/12/2025 10:29:03 AM
Supervise By	jaswal	Supervise On	8/12/2025 4:00:23 PM

STD. NAME	STD REF.#
ICAL Standard	MP86690,MP86691,MP86692,MP86692,MP86693,MP86694,MP86695,MP86696
ICV Standard	MP86697
CCV Standard	MP86699
ICSA Standard	
CRI Standard	MP86701
LCS Standard	
Chk Standard	MP86698,MP86700,MP86702,MP86705

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	08/11/25 09:58		MOHAN	OK
2	S0.2	S0.2	CAL2	08/11/25 10:10		MOHAN	OK
3	S2.5	S2.5	CAL3	08/11/25 10:19		MOHAN	OK
4	S5	S5	CAL4	08/11/25 10:25		MOHAN	OK
5	S7.5	S7.5	CAL5	08/11/25 10:27		MOHAN	OK
6	S10	S10	CAL6	08/11/25 10:30		MOHAN	OK
7	ICV06	ICV06	ICV	08/11/25 10:33		MOHAN	OK
8	ICB06	ICB06	ICB	08/11/25 10:35		MOHAN	OK
9	CCV15	CCV15	CCV	08/11/25 11:06		MOHAN	OK
10	CCB15	CCB15	CCB	08/11/25 11:08		MOHAN	OK
11	CRA	CRA	CRDL	08/11/25 11:11		MOHAN	OK
12	HighStd	HighStd	HIGH STD	08/11/25 11:16		MOHAN	OK
13	ChkStd	ChkStd	SAM	08/11/25 11:25		MOHAN	OK
14	PB169179BL	PB169179BL	MB	08/11/25 11:27		MOHAN	OK
15	PB169179BS	PB169179BS	LCS	08/11/25 11:29		MOHAN	OK
16	Q2779-01	TP-4	SAM	08/11/25 11:32		MOHAN	OK
17	Q2779-05	TP-5	SAM	08/11/25 11:34	High	MOHAN	Dilution
18	Q2788-01	OK-01-08062025	SAM	08/11/25 11:36		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 # LB136768

Review By	sagar	Review On	8/12/2025 10:29:03 AM
Supervise By	jaswal	Supervise On	8/12/2025 4:00:23 PM

STD. NAME	STD REF.#
ICAL Standard	MP86690,MP86691,MP86692,MP86692,MP86693,MP86694,MP86695,MP86696
ICV Standard	MP86697
CCV Standard	MP86699
ICSA Standard	
CRI Standard	MP86701
LCS Standard	
Chk Standard	MP86698,MP86700,MP86702,MP86705

19	Q2793-01	VNJ-231	SAM	08/11/25 11:39		MOHAN	OK
20	Q2795-01	COMP-1	SAM	08/11/25 11:41	High	MOHAN	Dilution
21	CCV16	CCV16	CCV	08/11/25 11:53		MOHAN	OK
22	CCB16	CCB16	CCB	08/11/25 11:55		MOHAN	OK
23	Q2795-02	COMP-2	SAM	08/11/25 11:57	High	MOHAN	Dilution
24	Q2795-03	COMP-3	SAM	08/11/25 12:00	High	MOHAN	Dilution
25	Q2798-01	TP-6	SAM	08/11/25 12:03		MOHAN	OK
26	Q2800-01	VNJ-222	SAM	08/11/25 12:05		MOHAN	OK
27	Q2801-01	TR-04-080725	SAM	08/11/25 12:08		MOHAN	OK
28	Q2807-01	COMP-4	SAM	08/11/25 12:10	High	MOHAN	Dilution
29	Q2807-02	COMP-5	SAM	08/11/25 12:12	High	MOHAN	Dilution
30	Q2807-03	COMP-6	SAM	08/11/25 12:15	High	MOHAN	Dilution
31	Q2807-03DUP	COMP-6DUP	DUP	08/11/25 12:17	High	MOHAN	Dilution
32	Q2807-03MS	COMP-6MS	MS	08/11/25 12:24	High	MOHAN	Dilution
33	CCV17	CCV17	CCV	08/11/25 12:26		MOHAN	OK
34	CCB17	CCB17	CCB	08/11/25 12:29		MOHAN	OK
35	Q2807-03MSD	COMP-6MSD	MSD	08/11/25 12:39	High	MOHAN	Dilution
36	Q2807-03L	COMP-6L	SD	08/11/25 12:41		MOHAN	OK
37	Q2807-03A	COMP-6A	PS	08/11/25 12:44		MOHAN	OK
38	PB169125BL	PB169125BL	MB	08/11/25 13:02		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 # LB136768

Review By	sagar	Review On	8/12/2025 10:29:03 AM
Supervise By	jaswal	Supervise On	8/12/2025 4:00:23 PM

STD. NAME	STD REF.#
ICAL Standard	MP86690,MP86691,MP86692,MP86692,MP86693,MP86694,MP86695,MP86696
ICV Standard	MP86697
CCV Standard	MP86699
ICSA Standard	
CRI Standard	MP86701
LCS Standard	
Chk Standard	MP86698,MP86700,MP86702,MP86705

39	PB169125BS	PB169125BS	LCS	08/11/25 13:04		MOHAN	OK
40	Q2779-05DL	TP-5DL	SAM	08/11/25 13:14	Report 50X,Still high	MOHAN	Dilution
41	Q2795-01DL	COMP-1DL	SAM	08/11/25 13:17	Report 10X	MOHAN	Confirms
42	Q2795-02DL	COMP-2DL	SAM	08/11/25 13:20	Report 10X	MOHAN	Confirms
43	Q2795-03DL	COMP-3DL	SAM	08/11/25 13:22	Report 10X	MOHAN	Confirms
44	Q2807-01DL	COMP-4DL	SAM	08/11/25 13:25	Report 10X	MOHAN	Confirms
45	CCV18	CCV18	CCV	08/11/25 13:32		MOHAN	OK
46	CCB18	CCB18	CCB	08/11/25 13:34		MOHAN	OK
47	Q2807-02DL	COMP-5DL	SAM	08/11/25 13:37	Report 10X	MOHAN	Confirms
48	Q2807-03DL	COMP-6DL	SAM	08/11/25 13:39	Report 10X	MOHAN	Confirms
49	Q2807-03DUPDL	COMP-6DUPDL	DUP	08/11/25 13:41	Report 10X	MOHAN	Confirms
50	Q2807-03MSDDL	COMP-6MSDDL	MSD	08/11/25 13:44	Report 10X	MOHAN	Confirms
51	Q2779-05DL2	TP-5DL2	SAM	08/11/25 13:46	Report 500X	MOHAN	Confirms
52	Q2807-03MSDL	COMP-6MSDL	MS	08/11/25 13:54	Report 10X	MOHAN	Confirms
53	CCV19	CCV19	CCV	08/11/25 13:56		MOHAN	OK
54	CCB19	CCB19	CCB	08/11/25 13:59		MOHAN	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136778

Review By	Janvi	Review On	8/12/2025 7:03:55 PM
Supervise By	jaswal	Supervise On	8/13/2025 4:04:51 PM

STD. NAME	STD REF.#
ICAL Standard	MP86640,MP86656,MP86653,MP86643,MP86642,MP86641
ICV Standard	MP86645,MP86656
CCV Standard	MP86646
ICSA Standard	MP86651,MP86652
CRI Standard	MP86656
LCS Standard	
Chk Standard	MP86647,MP86648

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	08/11/25 10:43		Jaswal	OK
2	S1	S1	CAL2	08/11/25 10:48		Jaswal	OK
3	S2	S2	CAL3	08/11/25 10:52		Jaswal	OK
4	S3	S3	CAL4	08/11/25 10:56		Jaswal	OK
5	S4	S4	CAL5	08/11/25 11:00		Jaswal	OK
6	S5	S5	CAL6	08/11/25 11:04		Jaswal	OK
7	ICV01	ICV01	ICV	08/11/25 11:09	ICV fail for B,Mo	Jaswal	OK
8	LLICV01	LLICV01	LLICV	08/11/25 11:33		Jaswal	OK
9	ICB01	ICB01	ICB	08/11/25 11:37		Jaswal	OK
10	CRI01	CRI01	CRDL	08/11/25 11:41		Jaswal	OK
11	ICSA01	ICSA01	ICSA	08/11/25 11:48		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	08/11/25 11:52	ICSAB fail for B,Mo	Jaswal	OK
13	ICSADL	ICSADL	ICSA	08/11/25 11:56		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	08/11/25 12:00		Jaswal	OK
15	CCV01	CCV01	CCV	08/11/25 12:05		Jaswal	OK
16	CCB01	CCB01	CCB	08/11/25 12:09		Jaswal	OK
17	Q2788-01	OK-01-08062025	SAM	08/11/25 12:13		Jaswal	OK
18	Q2783-03	RT5414	SAM	08/11/25 12:17		Jaswal	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136778

Review By	Janvi	Review On	8/12/2025 7:03:55 PM
Supervise By	jaswal	Supervise On	8/13/2025 4:04:51 PM

STD. NAME	STD REF.#
ICAL Standard	MP86640,MP86656,MP86653,MP86643,MP86642,MP86641
ICV Standard	MP86645,MP86656
CCV Standard	MP86646
ICSA Standard	MP86651,MP86652
CRI Standard	MP86656
LCS Standard	
Chk Standard	MP86647,MP86648

19	PB169178BL	PB169178BL	MB	08/11/25 12:22		Jaswal	OK
20	PB169178BS	PB169178BS	LCS	08/11/25 12:26		Jaswal	OK
21	PB169149TB	PB169149TB	MB	08/11/25 12:42		Jaswal	OK
22	Q2779-04	TP-4	SAM	08/11/25 12:47		Jaswal	OK
23	Q2779-08	TP-5	SAM	08/11/25 12:51		Jaswal	OK
24	Q2791-01	SLUDGE	SAM	08/11/25 12:56		Jaswal	OK
25	CCV02	CCV02	CCV	08/11/25 13:00		Jaswal	OK
26	CCB02	CCB02	CCB	08/11/25 13:04		Jaswal	OK
27	Q2798-04	TP-6	SAM	08/11/25 13:08		Jaswal	OK
28	Q2800-02	VNJ-222	SAM	08/11/25 13:13		Jaswal	OK
29	Q2800-02DUP	VNJ-222DUP	DUP	08/11/25 13:17		Jaswal	OK
30	Q2800-02L	VNJ-222L	SD	08/11/25 13:22		Jaswal	OK
31	Q2800-02MS	VNJ-222MS	MS	08/11/25 13:26		Jaswal	OK
32	Q2800-02MSD	VNJ-222MSD	MSD	08/11/25 13:30		Jaswal	OK
33	Q2800-02A	VNJ-222A	PS	08/11/25 13:34	0.1 ml of each M6004,M6017	Jaswal	OK
34	Q2779-01	TP-4	SAM	08/11/25 13:38		Jaswal	OK
35	Q2779-05	TP-5	SAM	08/11/25 13:42		Jaswal	OK
36	Q2793-01	VNJ-231	SAM	08/11/25 13:46		Jaswal	OK
37	CCV03	CCV03	CCV	08/11/25 14:54		Jaswal	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136778

Review By	Janvi	Review On	8/12/2025 7:03:55 PM
Supervise By	jaswal	Supervise On	8/13/2025 4:04:51 PM

STD. NAME	STD REF.#
ICAL Standard	MP86640,MP86656,MP86653,MP86643,MP86642,MP86641
ICV Standard	MP86645,MP86656
CCV Standard	MP86646
ICSA Standard	MP86651,MP86652
CRI Standard	MP86656
LCS Standard	
Chk Standard	MP86647,MP86648

38	CCB03	CCB03	CCB	08/11/25 14:58		Jaswal	OK
39	Q2793-01DUP	VNJ-231DUP	DUP	08/11/25 15:03		Jaswal	OK
40	Q2793-01L	VNJ-231L	SD	08/11/25 15:07		Jaswal	OK
41	Q2793-01MS	VNJ-231MS	MS	08/11/25 15:11		Jaswal	OK
42	Q2793-01MSD	VNJ-231MSD	MSD	08/11/25 15:15		Jaswal	OK
43	Q2793-01A	VNJ-231A	PS	08/11/25 15:19	0.1 ml of each M6004,M6017	Jaswal	OK
44	Q2795-01	COMP-1	SAM	08/11/25 15:23		Jaswal	OK
45	Q2795-02	COMP-2	SAM	08/11/25 15:27		Jaswal	OK
46	Q2795-03	COMP-3	SAM	08/11/25 15:31		Jaswal	OK
47	Q2759-04	LIQUID-DRUM	SAM	08/11/25 15:35		Jaswal	OK
48	Q2800-01	VNJ-222	SAM	08/11/25 15:39		Jaswal	OK
49	CCV04	CCV04	CCV	08/11/25 16:02		Jaswal	OK
50	CCB04	CCB04	CCB	08/11/25 16:06		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136851

Review By	Janvi	Review On	8/18/2025 9:22:39 AM
Supervise By		Supervise On	

STD. NAME	STD REF.#
ICAL Standard	MP86640,MP86656,MP86653,MP86643,MP86642,MP86641
ICV Standard	MP86752,MP86656
CCV Standard	MP86646
ICSA Standard	MP86651,MP86753
CRI Standard	MP86656
LCS Standard	
Chk Standard	MP86647,MP86648

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	08/15/25 11:25		Jaswal	OK
2	S1	S1	CAL2	08/15/25 11:29		Jaswal	OK
3	S2	S2	CAL3	08/15/25 11:33		Jaswal	OK
4	S3	S3	CAL4	08/15/25 11:37		Jaswal	OK
5	S4	S4	CAL5	08/15/25 11:41		Jaswal	OK
6	S5	S5	CAL6	08/15/25 11:46		Jaswal	OK
7	ICV01	ICV01	ICV	08/15/25 11:50		Jaswal	OK
8	LLICV01	LLICV01	LLICV	08/15/25 11:56		Jaswal	OK
9	ICB01	ICB01	ICB	08/15/25 12:00		Jaswal	OK
10	CRI01	CRI01	CRDL	08/15/25 12:04		Jaswal	OK
11	ICSA01	ICSA01	ICSA	08/15/25 12:09		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	08/15/25 12:13		Jaswal	OK
13	ICSADL	ICSADL	ICSA	08/15/25 12:17		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	08/15/25 12:21		Jaswal	OK
15	CCV01	CCV01	CCV	08/15/25 12:26		Jaswal	OK
16	CCB01	CCB01	CCB	08/15/25 12:30		Jaswal	OK
17	PB169247BL	PB169247BL	MB	08/15/25 12:49		Jaswal	OK
18	PB169247BS	PB169247BS	LCS	08/15/25 12:53		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136851

Review By	Janvi	Review On	8/18/2025 9:22:39 AM
Supervise By		Supervise On	

STD. NAME	STD REF.#
ICAL Standard	MP86640,MP86656,MP86653,MP86643,MP86642,MP86641
ICV Standard	MP86752,MP86656
CCV Standard	MP86646
ICSA Standard	MP86651,MP86753
CRI Standard	MP86656
LCS Standard	
Chk Standard	MP86647,MP86648

19	Q2838-01	TP-11	SAM	08/15/25 12:57		Jaswal	OK
20	Q2838-05	TP-10	SAM	08/15/25 13:01		Jaswal	OK
21	Q2844-01	PAD-081325	SAM	08/15/25 13:05		Jaswal	OK
22	Q2844-06	MOO-25-0223	SAM	08/15/25 13:09		Jaswal	OK
23	Q2853-01	Tr-5-081325	SAM	08/15/25 13:14		Jaswal	OK
24	Q2855-01	#454	SAM	08/15/25 13:18		Jaswal	OK
25	Q2857-03	72-12002	SAM	08/15/25 13:22		Jaswal	OK
26	CCV02	CCV02	CCV	08/15/25 13:40		Jaswal	OK
27	CCB02	CCB02	CCB	08/15/25 13:45		Jaswal	OK
28	PB169181BL	PB169181BL	MB	08/15/25 14:32		Jaswal	OK
29	PB169181BS	PB169181BS	LCS	08/15/25 14:51		Jaswal	OK
30	CCV03	CCV03	CCV	08/15/25 15:04		Jaswal	OK
31	CCB03	CCB03	CCB	08/15/25 15:10		Jaswal	OK
32	Q2845-01	001 willets Pt Blvd(july	SAM	08/15/25 15:14		Jaswal	OK
33	Q2845-04	002 35th Ave (july)	SAM	08/15/25 15:18		Jaswal	OK
34	Q2845-04DUP	002 35th Ave (july)DU	DUP	08/15/25 15:23		Jaswal	OK
35	Q2845-04L	002 35th Ave (july)L	SD	08/15/25 15:27		Jaswal	OK
36	Q2845-04MS	002 35th Ave (july)MS	MS	08/15/25 15:31		Jaswal	OK
37	Q2845-04MSD	002 35th Ave (july)MS	MSD	08/15/25 15:35		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136851

Review By	Janvi	Review On	8/18/2025 9:22:39 AM
Supervise By		Supervise On	

STD. NAME	STD REF.#
ICAL Standard	MP86640,MP86656,MP86653,MP86643,MP86642,MP86641
ICV Standard	MP86752,MP86656
CCV Standard	MP86646
ICSA Standard	MP86651,MP86753
CRI Standard	MP86656
LCS Standard	
Chk Standard	MP86647,MP86648

38	Q2845-04A	002 35th Ave (july)A	PS	08/15/25 15:39	0.1ml of each M6004 and M6017 is 10ml sample.	Jaswal	OK
39	PB169267BL	PB169267BL	MB	08/15/25 15:43		Jaswal	OK
40	PB169267BS	PB169267BS	LCS	08/15/25 15:47		Jaswal	OK
41	PB169268BL	PB169268BL	MB	08/15/25 15:51		Jaswal	OK
42	CCV04	CCV04	CCV	08/15/25 15:55		Jaswal	OK
43	CCB04	CCB04	CCB	08/15/25 16:01		Jaswal	OK
44	PB169268BS	PB169268BS	LCS	08/15/25 16:05		Jaswal	OK
45	Q2857-01	4023	SAM	08/15/25 16:09		Jaswal	OK
46	Q2857-02	3919	SAM	08/15/25 16:13		Jaswal	OK
47	Q2857-02DUP	3919DUP	DUP	08/15/25 16:17		Jaswal	OK
48	Q2857-02L	3919L	SD	08/15/25 16:22		Jaswal	OK
49	Q2857-02MS	3919MS	MS	08/15/25 16:26		Jaswal	OK
50	Q2857-02MSD	3919MSD	MSD	08/15/25 16:30		Jaswal	OK
51	Q2857-02A	3919A	PS	08/15/25 16:34	0.1ml of each M6004 and M6017 is 10ml sample.	Jaswal	OK
52	CCV05	CCV05	CCV	08/15/25 16:38		Jaswal	OK
53	CCB05	CCB05	CCB	08/15/25 16:45		Jaswal	OK

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Prep Standard - Chemical Standard Summary

Order ID : Q2795

Test : Mercury,Metals ICP-Group1

Prepbatch ID : PB169179,PB169181,

Sequence ID/Qc Batch ID: LB136768,LB136778,LB136778,LB136851,

Standard ID :
MP85895,MP86404,MP86640,MP86641,MP86642,MP86643,MP86645,MP86646,MP86647,MP86648,MP86651,MP86652,MP86653,MP86655,MP86656,MP86686,MP86690,MP86691,MP86692,MP86693,MP86694,MP86695,MP86696,MP86697,MP86698,MP86699,MP86700,MP86701,MP86702,MP86705,MP86752,MP86753,

Chemical ID :
M4371,M5062,M5467,M5581,M5582,M5658,M5697,M5748,M5798,M5799,M5800,M5801,M5805,M5814,M5816,M5820,M5884,M5962,M5969,M5970,M5979,M5985,M5998,M6021,M6023,M6027,M6028,M6030,M6032,M6058,M6076,M6077,M6086,M6128,M6137,M6140,M6142,M6144,M6145,M6146,M6151,M6158,M6159,M6162,M6163,M6164,M6165,M6170,M6171,M6174,M6176,M6177,M6178,M6179,M6180,M6181,M6182,M6184,M85893,W3112,

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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	08/15/2025	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
169	1:1HNO3	MP86404	07/17/2025	11/16/2025	Sagar Kanani	METALS_SCALE_2 (M SC-2)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/17/2025

FROM 1250.00000ml of M6162 + 1250.00000ml of W3112 = 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
902	ICP AES CAL BLK (SO/ICB/CCB)	MP86640	08/06/2025	08/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 125.00000ml of M6151 + 2350.00000ml of W3112 + 25.00000ml of M6162 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP86641	08/06/2025	08/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 5.00000ml of M5467 + 5.00000ml of M5820 + 5.00000ml of M5969 + 5.00000ml of M5970 + 5.00000ml of M5998 + 5.00000ml of M6077 + 5.00000ml of M6146 + 5.00000ml of M6174 + 5.00000ml of M6176 + 455.00000ml of MP86640 = 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
910	ICP AES STD S4	MP86642	08/06/2025	08/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 50.00000ml of MP86640 + 50.00000ml of MP86641 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP86643	08/06/2025	08/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 25.00000ml of MP86641 + 75.00000ml of MP86640 = 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	MP86645	08/06/2025	08/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 0.40000ml of M6163 + 0.40000ml of M6164 + 0.40000ml of M6165 + 48.80000ml of MP86640 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP86646	08/06/2025	08/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 50.00000ml of MP86640 + 50.00000ml of MP86641 = 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	MP86647	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 1.00000ml of M6179 + 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	MP86648	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

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
904	ICP AES ICSA SOLN	MP86651	08/06/2025	08/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 5.00000ml of M6182 + 45.00000ml of MP86640 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP86652	08/06/2025	08/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 5.00000ml of M6182 + 5.00000ml of M6184 + 40.00000ml of MP86640 = Final Quantity: 50.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP86653	08/06/2025	08/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 4.00000ml of MP86641 + 46.00000ml of MP86640 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP86655	08/06/2025	08/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 0.00000ml of M5748 + 0.00000ml of M5805 + 0.03000ml of M5798 + 0.03000ml of M6028 + 0.05000ml of M5658 + 0.05000ml of M6030 + 0.05000ml of M6140 + 0.05000ml of M6159 + 0.06000ml of M6177 + 0.10000ml of M5697 + 0.10000ml of M5801 + 0.10000ml of M5816 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5970 + 0.10000ml of M6128 + 0.10000ml of M6176 + 0.15000ml of M5800 + 0.20000ml of M5799 + 0.20000ml of M5979 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.20000ml of M6027 + 0.20000ml of M6145 + 0.25000ml of M5467 + 0.25000ml of M6146 + 0.50000ml of M5814 + 0.50000ml of M6032 + 1.00000ml of M6086 + 1.00000ml of M6142 + 1.00000ml of M6144 + 1.00000ml of M6171 + 1.00000ml of M6178 + 2.00000ml of M6137 + 89.03000ml of MP86640 = 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
2951	ICP AES S1/CRI WORK STD	MP86656	08/06/2025	08/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 1.00000ml of MP86655 + 49.00000ml of MP86640 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
887	AQUA REGIA FOR HG ON 7471A	MP86686	08/07/2025	08/08/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/11/2025

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
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP86690	08/08/2025	08/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/11/2025

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	MP86691	08/08/2025	08/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/11/2025

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	MP86692	08/08/2025	08/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/11/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP86690 = 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	MP86693	08/08/2025	08/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/11/2025

FROM 2.50000ml of M6162 + 245.00000ml of W3112 + 2.50000ml of MP86690 = 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	MP86694	08/08/2025	08/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/11/2025

FROM 2.50000ml of M6162 + 242.50000ml of W3112 + 5.00000ml of MP86690 = 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	MP86695	08/08/2025	08/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/11/2025

FROM 2.50000ml of M6162 + 240.00000ml of W3112 + 7.50000ml of MP86690 = 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	MP86696	08/08/2025	08/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/11/2025

FROM 2.50000ml of M6162 + 237.50000ml of W3112 + 10.00000ml of MP86690 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP86697	08/08/2025	08/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/11/2025

FROM 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)	MP86698	08/08/2025	08/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/11/2025

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)	MP86699	08/08/2025	08/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/11/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6162 + 10.00000ml of MP86690 = 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)	MP86700	08/08/2025	08/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/11/2025

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)	MP86701	08/08/2025	08/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/11/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP86690 = 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)	MP86702	08/08/2025	08/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/11/2025

FROM 2.50000ml of M6162 + 240.50000ml of W3112 + 7.00000ml of MP86690 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
104	5% RINSING HCL	MP86705	08/08/2025	08/17/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/11/2025

FROM 100.00000ml of M6151 + 1900.00000ml 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
4163	NEW ICV-060925	MP86752	08/06/2025	08/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025

FROM 0.20000ml of M6058 + 0.40000ml of M6163 + 0.40000ml of M6164 + 0.40000ml of M6165 + 48.60000ml of MP86640 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP86753	08/06/2025	08/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025

FROM 0.05000ml of M6076 + 5.00000ml of M6182 + 5.00000ml of M6184 + 39.95000ml of MP86640 = Final Quantity: 100.000 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 #
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 #
PCI Scientific Supply, Inc.	26397-103 / PTFE BOILING STONES	W126678	03/20/2026	03/20/2025 /	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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

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

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	122223	12/22/2026	04/17/2025 / Janvi	01/03/2024 / jaswal	M5805

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-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 #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

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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	03/31/2026	03/31/2025 / kareem	06/11/2024 / Jaswal	M5969

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	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	08/05/2026	08/06/2025 / Janvi	02/22/2024 / Jaswal	M5979

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-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB727800	07/30/2026	07/30/2025 / Janvi	02/22/2024 / kareem	M5998

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

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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.	57028 / Ni, 1000 PPM, 125 ml	062024	06/20/2027	06/04/2025 / Janvi	08/05/2024 / Jaswal	M6027

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	V2-MEB746173	01/29/2026	01/29/2025 / JANVI	08/22/2024 / Jaswal	M6058

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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 #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	09/06/2029	01/23/2025 / kareem	09/19/2024 / kareem	M6077

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Calcium, 500 ml, 10000 PPM	082324	08/23/2027	03/06/2025 / JANVI	10/14/2024 / jaswal	M6086

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

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	011025	01/10/2028	06/25/2025 / Janvi	01/13/2025 / Jaswal	M6140

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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 /	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	02/17/2026	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 #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	09/09/2025	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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 #
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	06/08/2026	06/09/2025 / jaswal	06/06/2025 / jaswal	M6163

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	06/08/2026	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	06/08/2026	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 /	05/20/2025 / Sagar	M6170

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	011525	01/15/2028	07/15/2025 /	02/13/2025 / Janvi	M6171

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	V2-MEB742428	07/31/2026	07/31/2025 / Janvi	05/05/2025 / Janvi	M6174

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	092724	09/27/2027	08/06/2025 / Janvi	08/06/2025 / Janvi	M6176

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Lead (Pb) 1000PPM	031525	03/15/2028	08/06/2025 / Janvi	08/06/2025 / Janvi	M6177

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57042 / Mo, 1000 PPM, 125 ml	080528	08/05/2028	08/06/2025 / Janvi	08/06/2025 / Janvi	M6178

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	08/05/2026	08/06/2025 / Janvi	06/02/2024 / Janvi	M6179

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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	WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml	W2-MEB752149	02/05/2026	08/06/2025 / Janvi	07/22/2025 / Janvi	M6180

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	V2-MEB7433480	02/05/2026	08/06/2025 / Janvi	07/22/2025 / Janvi	M6181

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	02/05/2026	08/06/2025 / Janvi	03/06/2024 / Janvi	M6182

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	02/05/2026	08/06/2025 / Janvi	03/06/2024 / Janvi	M6184

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6032

R: 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**010924**	**Solvent:**	24002546	Nitric Acid	
Description:	**Barium (Ba)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	010927				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

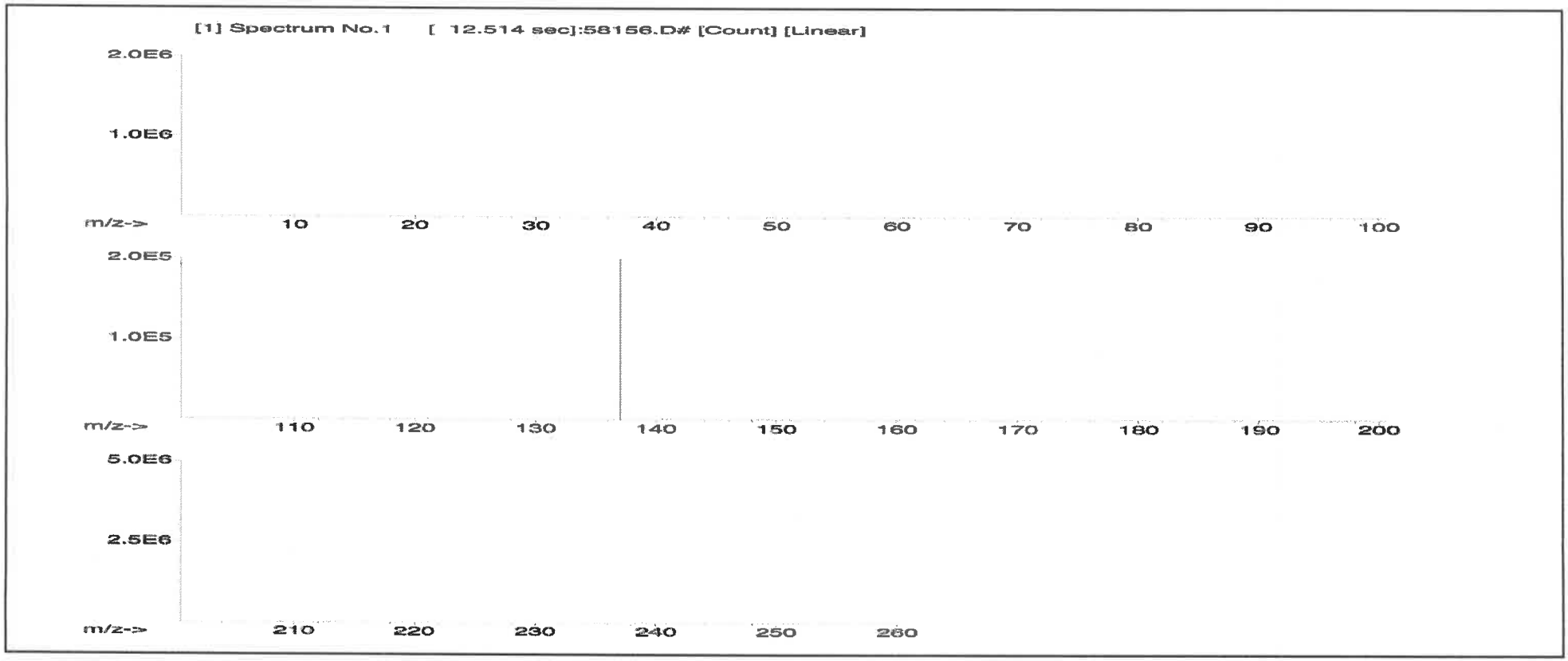
Giovanni Esposito

Formulated By:	Giovanni Esposito	010924

Pedro Rentas

Reviewed By:	Pedro L. Rentas	010924

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	**1000.1**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M5804, M5805

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 122223
Description: Calcium (Ca)

Expiration Date: 122226
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 4000.0 0.06 Flask Uncertainty

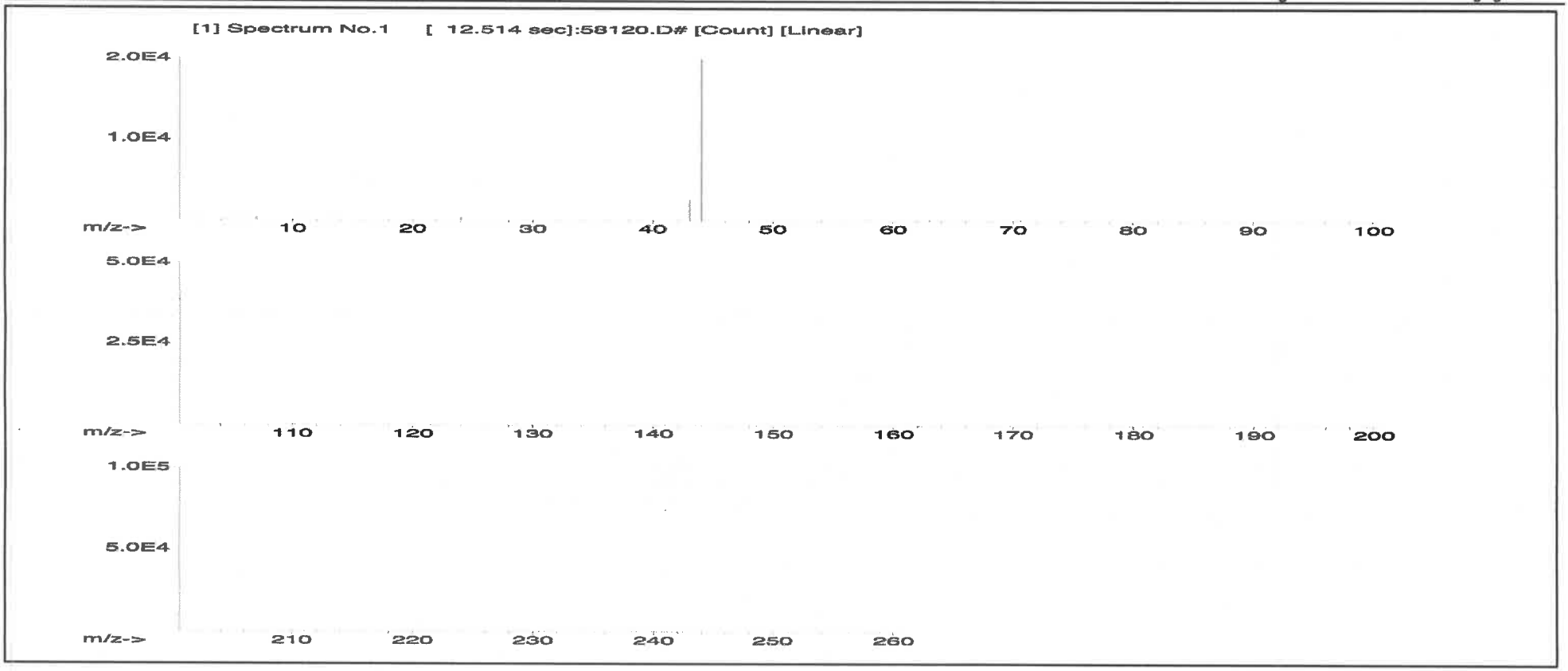
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	122223
Reviewed By:	Pedro L. Rentas	122223

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD03202383	10000	99.999	0.10	39.9	100.2525	100.2670	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	30	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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Certified Reference Material CRM

ANAB ISO 17034 Accredited
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Revd 10/14/2024 M6085/M6086/M6087

CERTIFIED WEIGHT REPORT:

Part Number:	**58120**		**Solvent:**	24002546	Nitric Acid
Lot Number:	**082324**				
Description:	**Calcium (Ca)**		2%	80.0 (mL)	Nitric Acid
Expiration Date:	082327				
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			

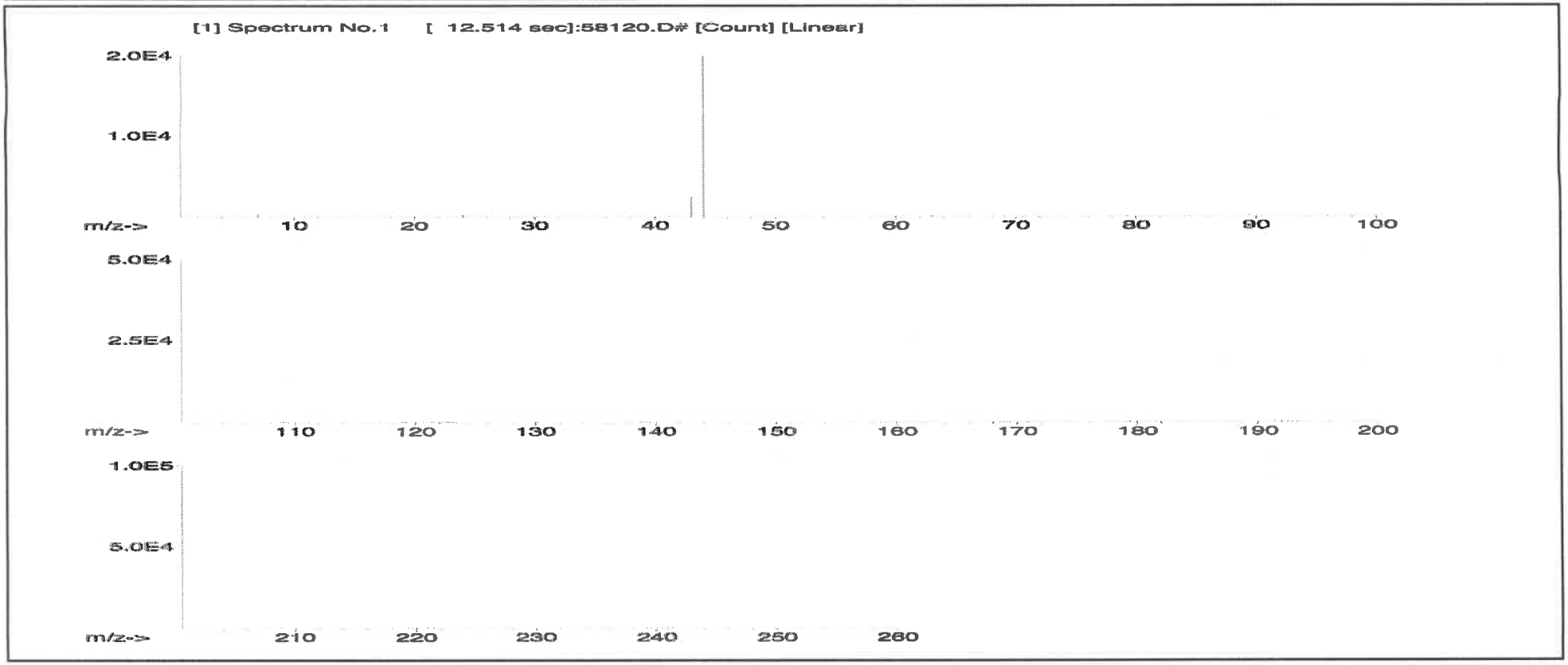
Giovanni Esposito

Formulated By:	Giovanni Esposito	082324

Pedro Rentas

Reviewed By:	Pedro L. Rentas	082324

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD03203B3	10000	99.999	0.10	39.9	100.2537	100.2656	**10001.2**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	30	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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Certified Reference Material CRM

M6028

R 8/5/24

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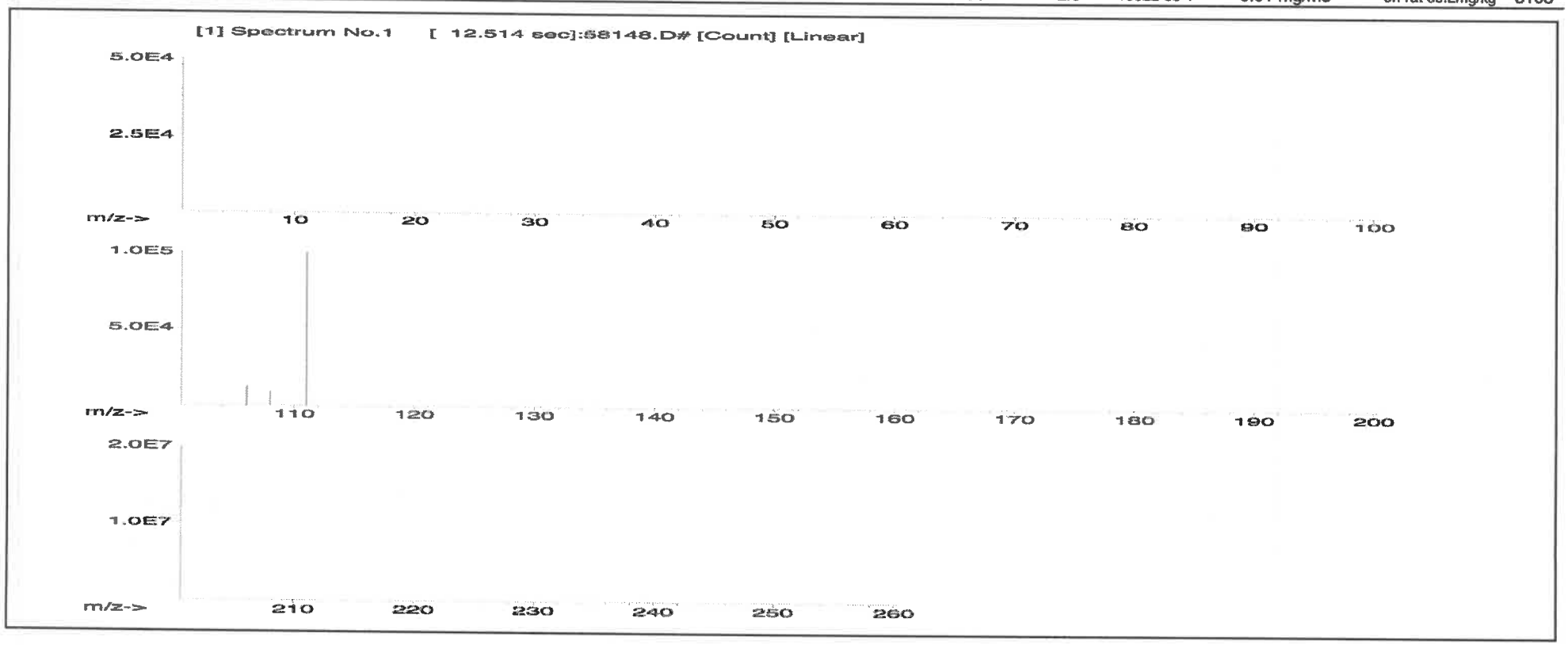
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
Lot Number:	**070124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Cadmium (Cd)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Aleah O'Brady		
Formulated By:	Aleah O'Brady	070124
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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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

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M4371

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(hydroxylammonium chloride)

Rec – 06.07.19

J.T.Baker® | avantor™

Material No.: 2196-01
Batch No.: 0000215387
Manufactured Date: 2018/06/27
Retest Date: 2025/06/25
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($NH_2OH \cdot HCl$) (by $KMnO_4$ titrn)	>= 96.0 %	99.1
Clarity of Alcohol Solution	Passes Test	PT
Residue after Ignition	<= 0.050 %	0.017
Titrable Free Acid (meq/g)	<= 0.25	0.19
Ammonium (NH_4)	Passes Test	PT
Sulfur Compounds (as SO_4)	<= 0.005 %	< 0.003
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	4
Trace Impurities - Iron (Fe)	<= 5 ppm	< 3
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	< 0.005

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2015, FSSC22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Gliwice, Poland 9001:2015, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2015, 17025:2005
Panoli, India 9001:2015

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

M5062
M5063
M3

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	S2-HG709270
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO_3. 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% HNO_3 / LDPE container, stable in 10% HNO_3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO_3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO_3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxide (Soluble in HNO_3); 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

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

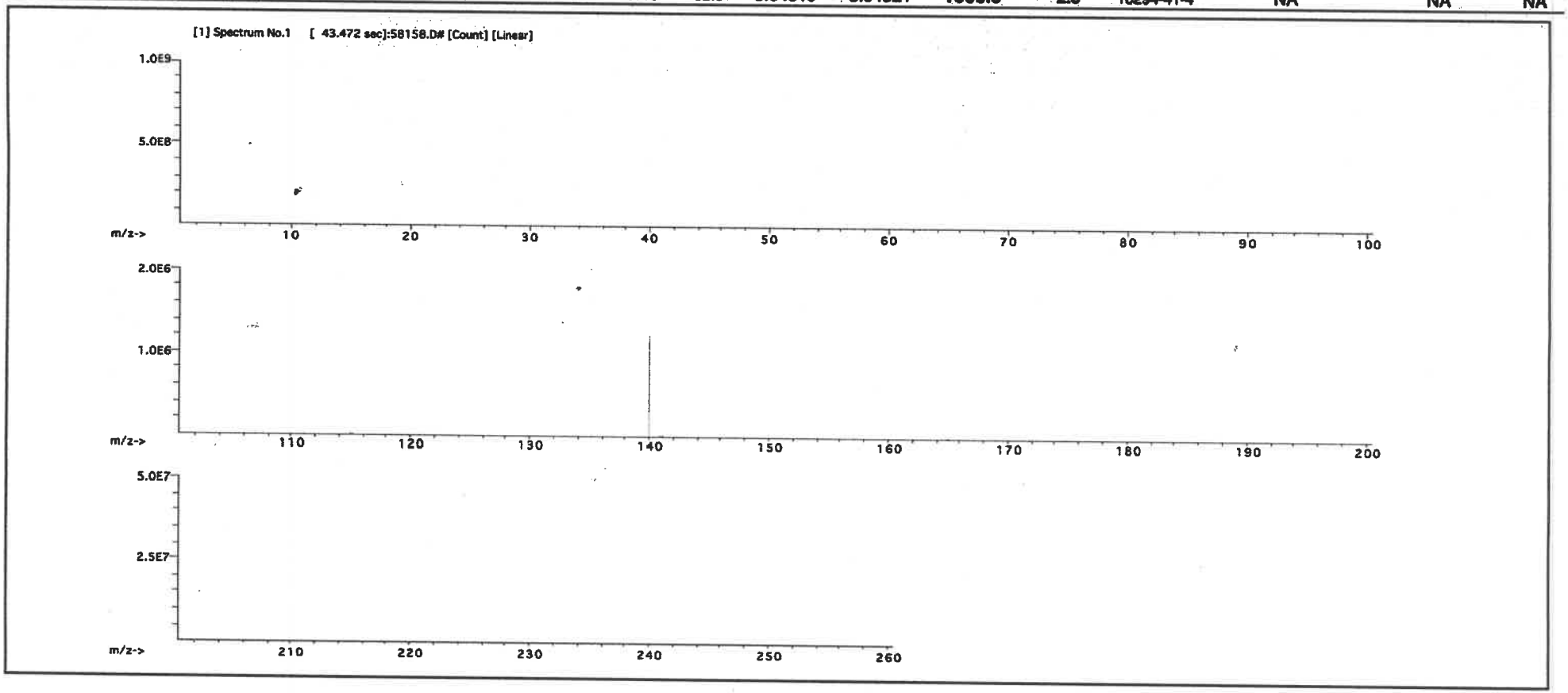
Weight shown below was diluted to (mL): 1000.12 0.058 Flask Uncertainty

		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



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.
* 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).

RD: 06/12/2023, M5581, M5582, M5583, M5584, M5585

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-68118-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

RD: 06/12/2023, M5581, M5582, M5583, M5584, M5585

JENSEN INERT PRODUCTS

MATERIAL CERTIFICATE OF COMPLIANCE

DATE: JUNE 12, 2023

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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

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Certified Reference Material CRM

M5658 R! 8/25/23

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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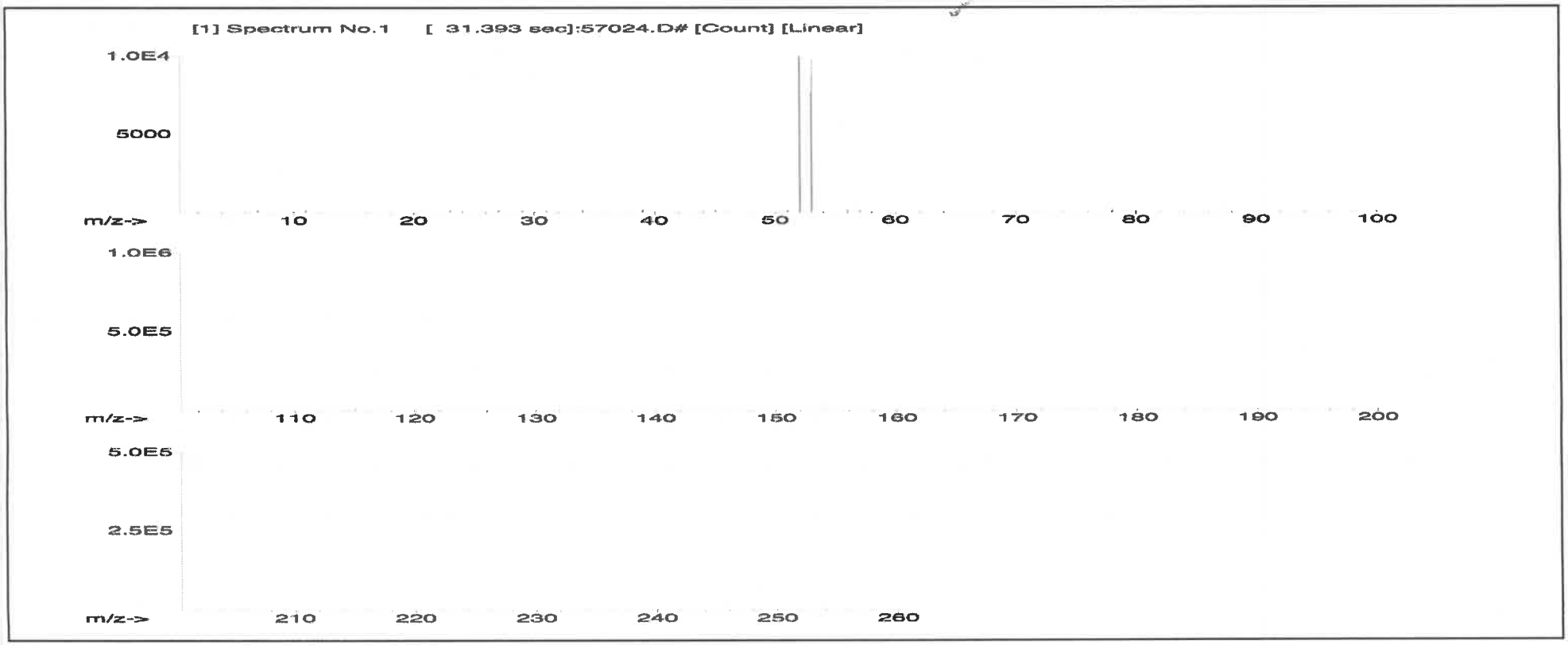
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5697 R: 10/27/23

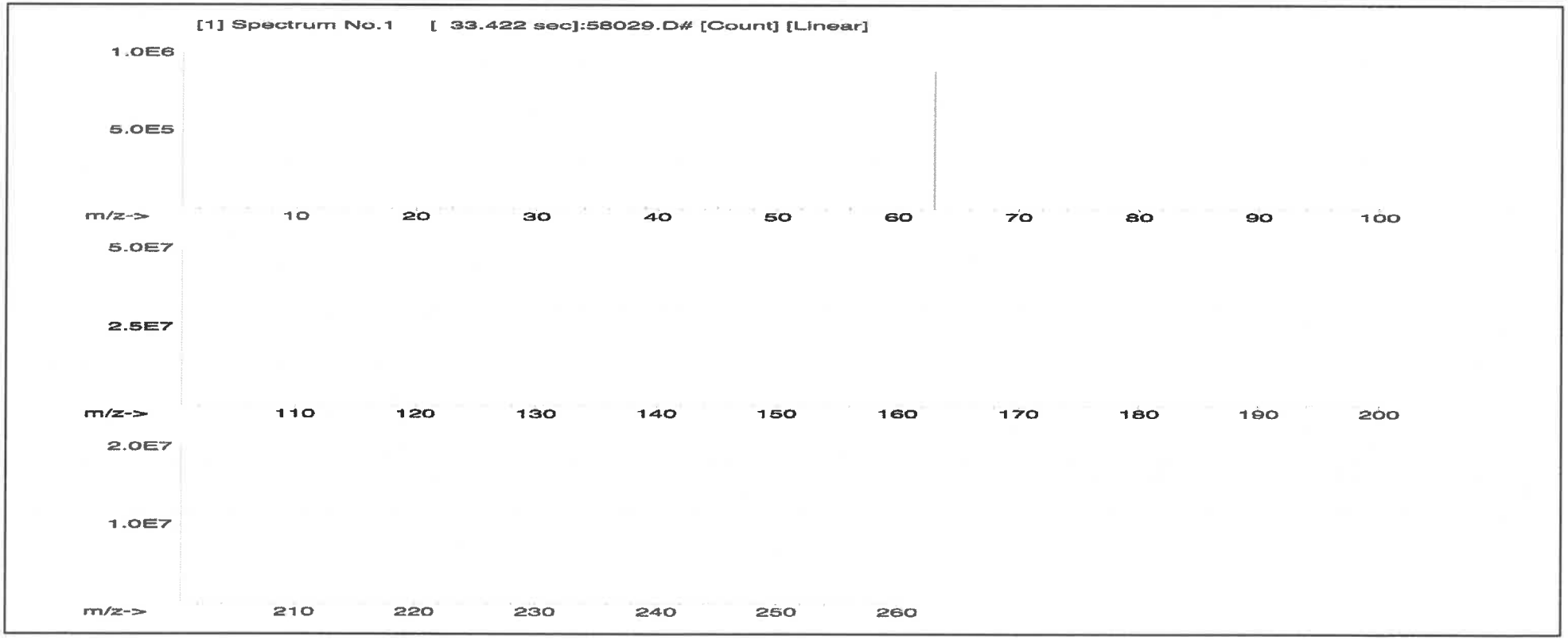
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Copper (Cu)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	100223	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* 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: 12/20/23 M5748

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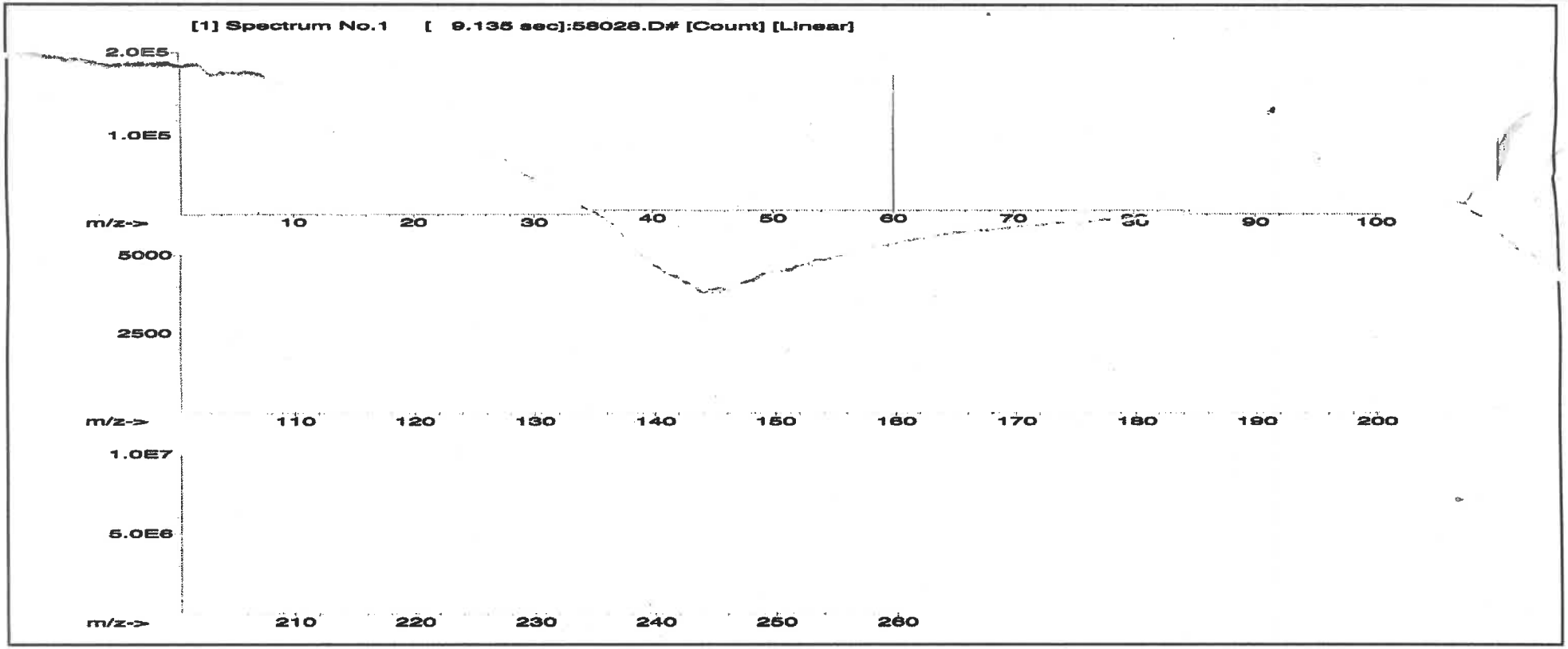
CERTIFIED WEIGHT REPORT:

		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



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	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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Certified Reference Material CRM

R: 02/09/24 M5798

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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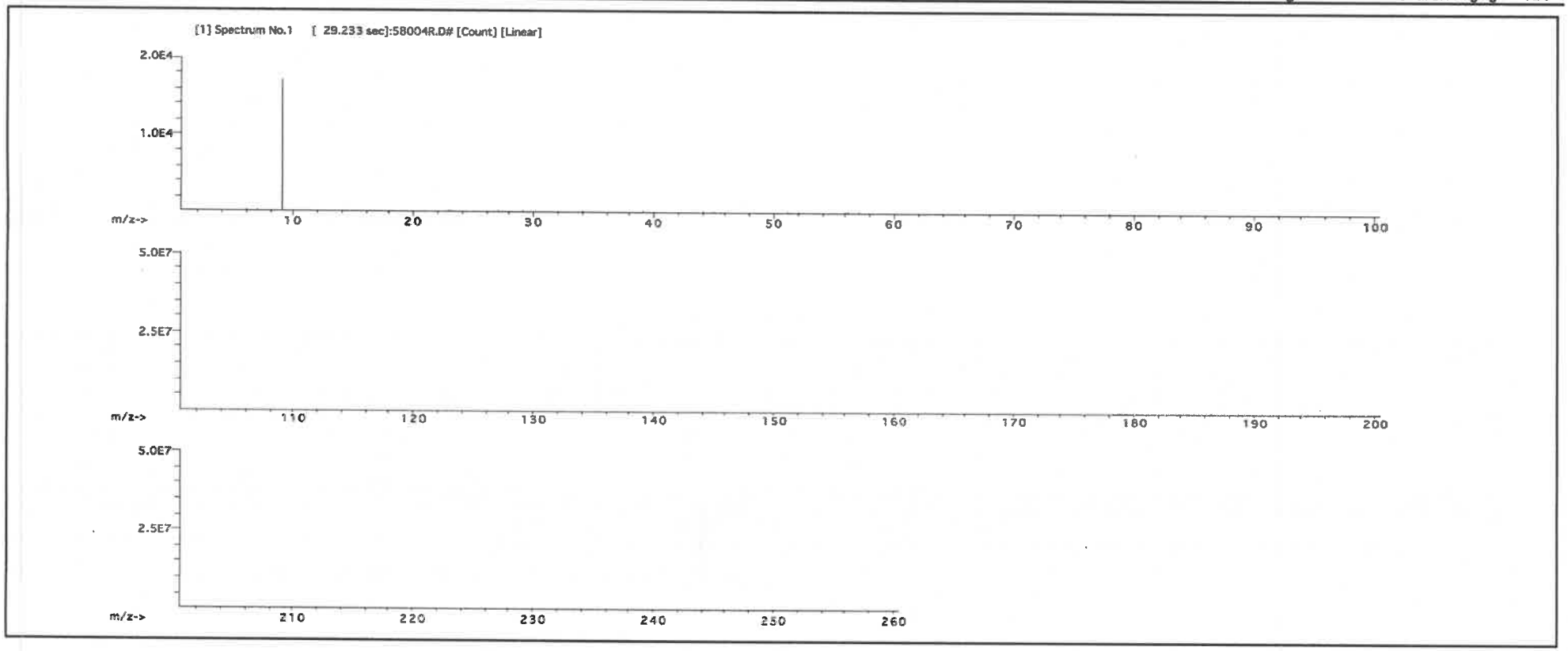
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
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As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<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

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Certified Reference Material CRM

R? 02/09/24 IV15799

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

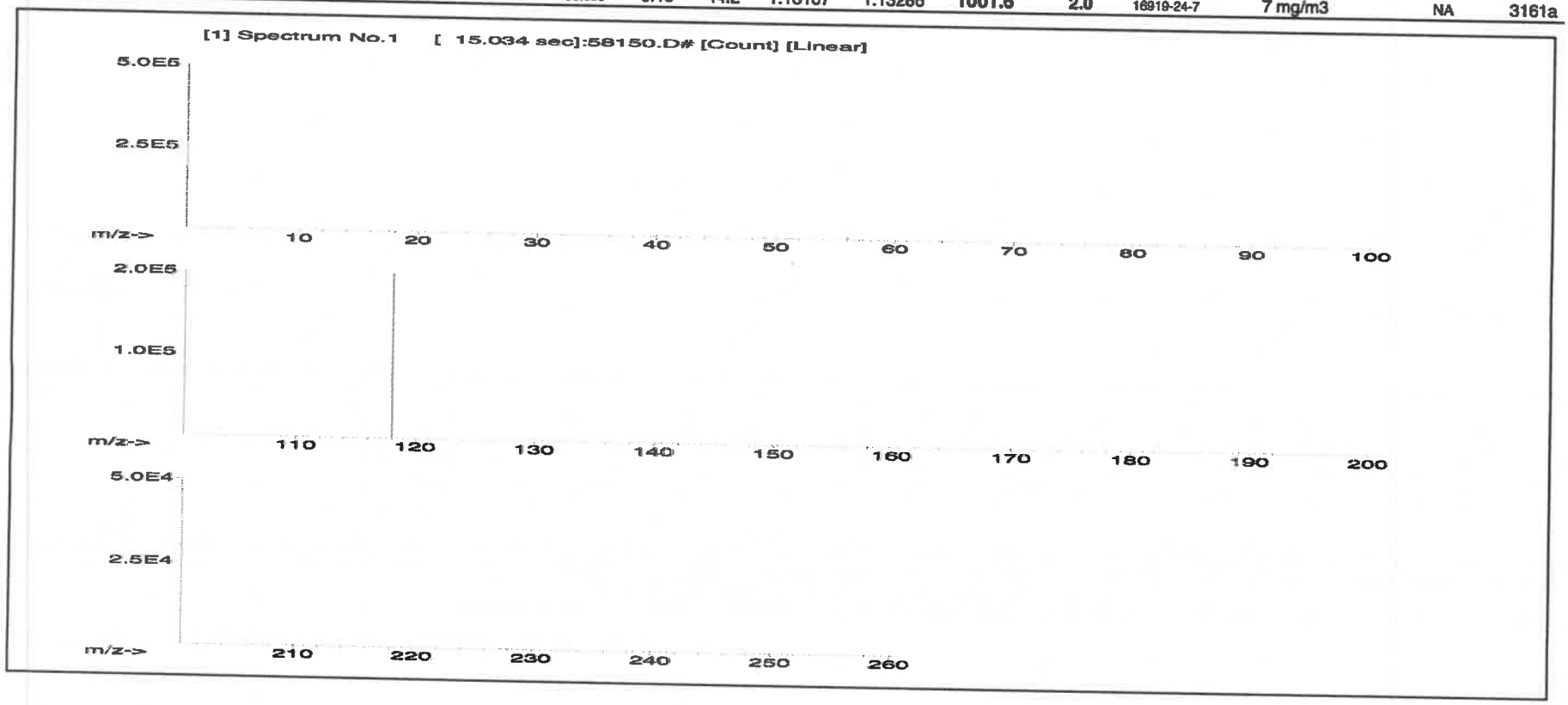
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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



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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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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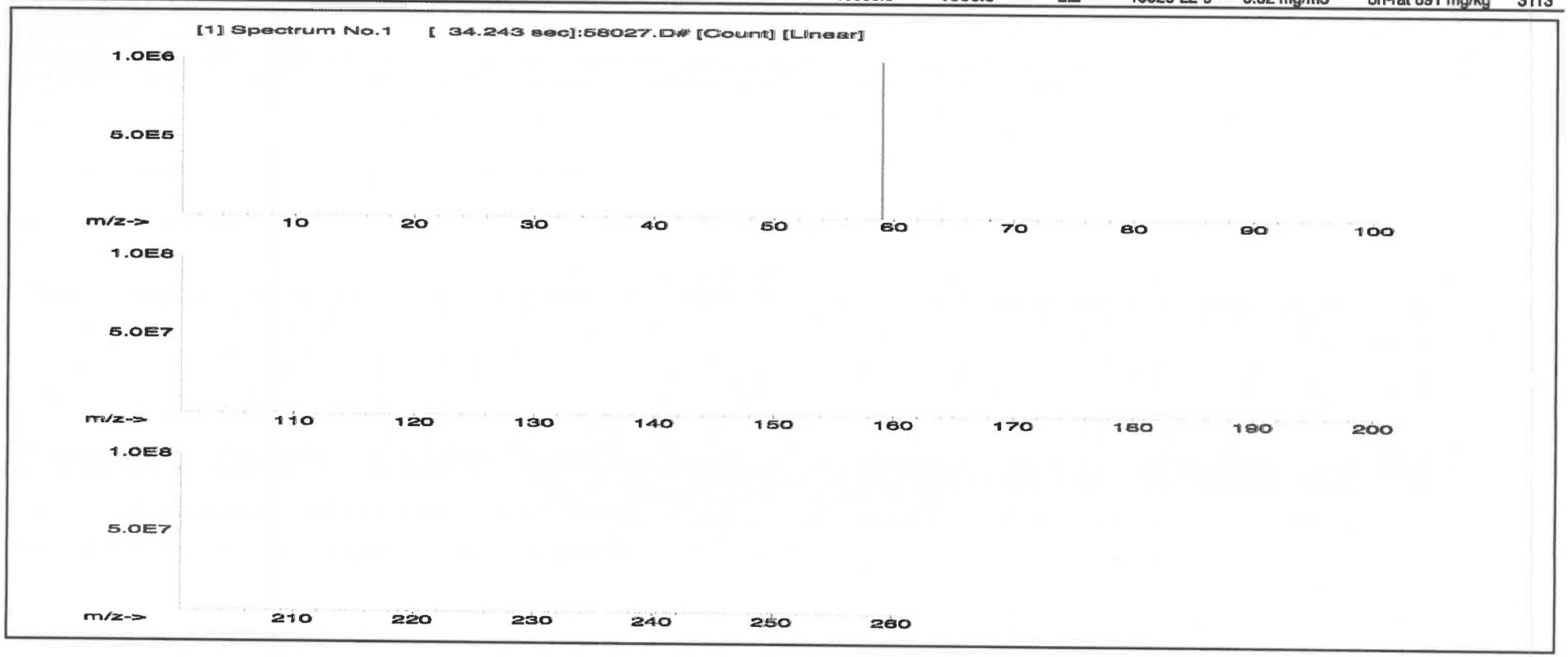
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**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



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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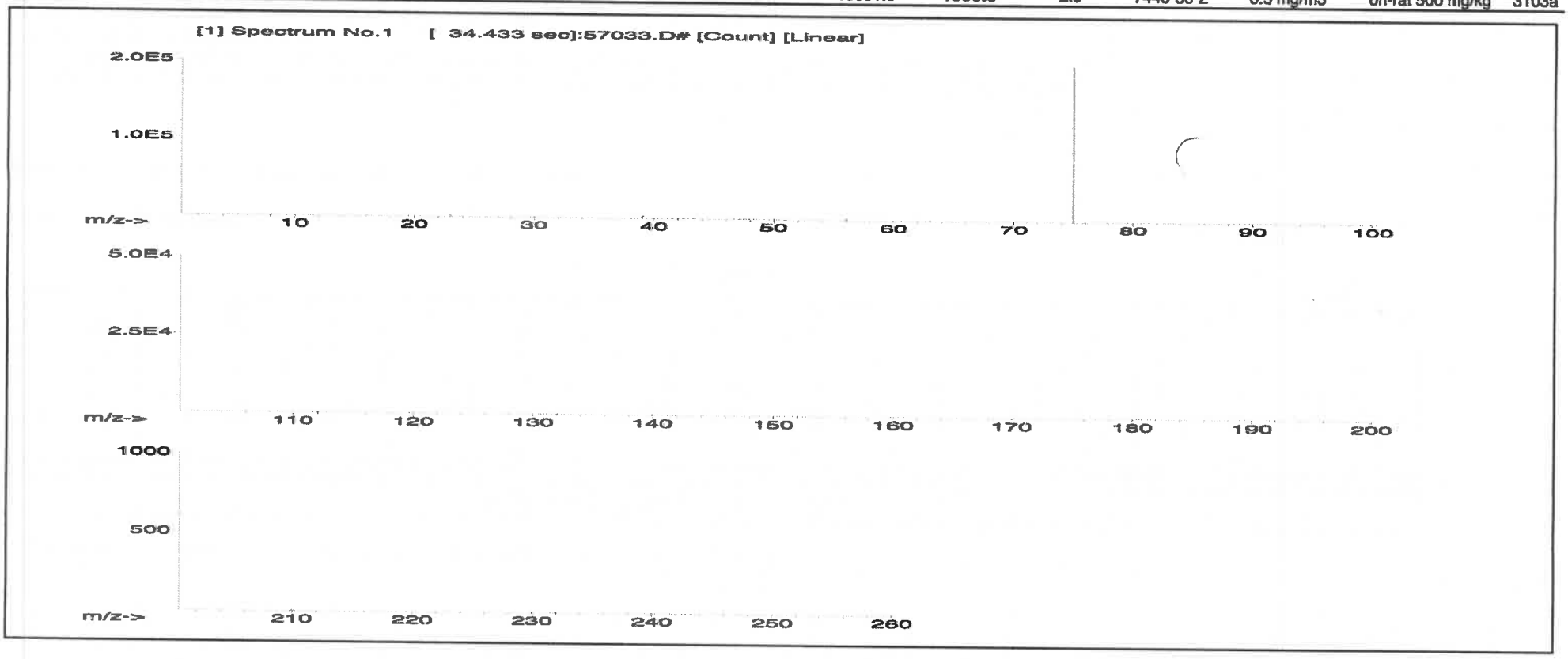
CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	24002546	Nitric Acid		
Lot Number:	**111323**				
Description:	**Arsenic (As)**	2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	**2.0**	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



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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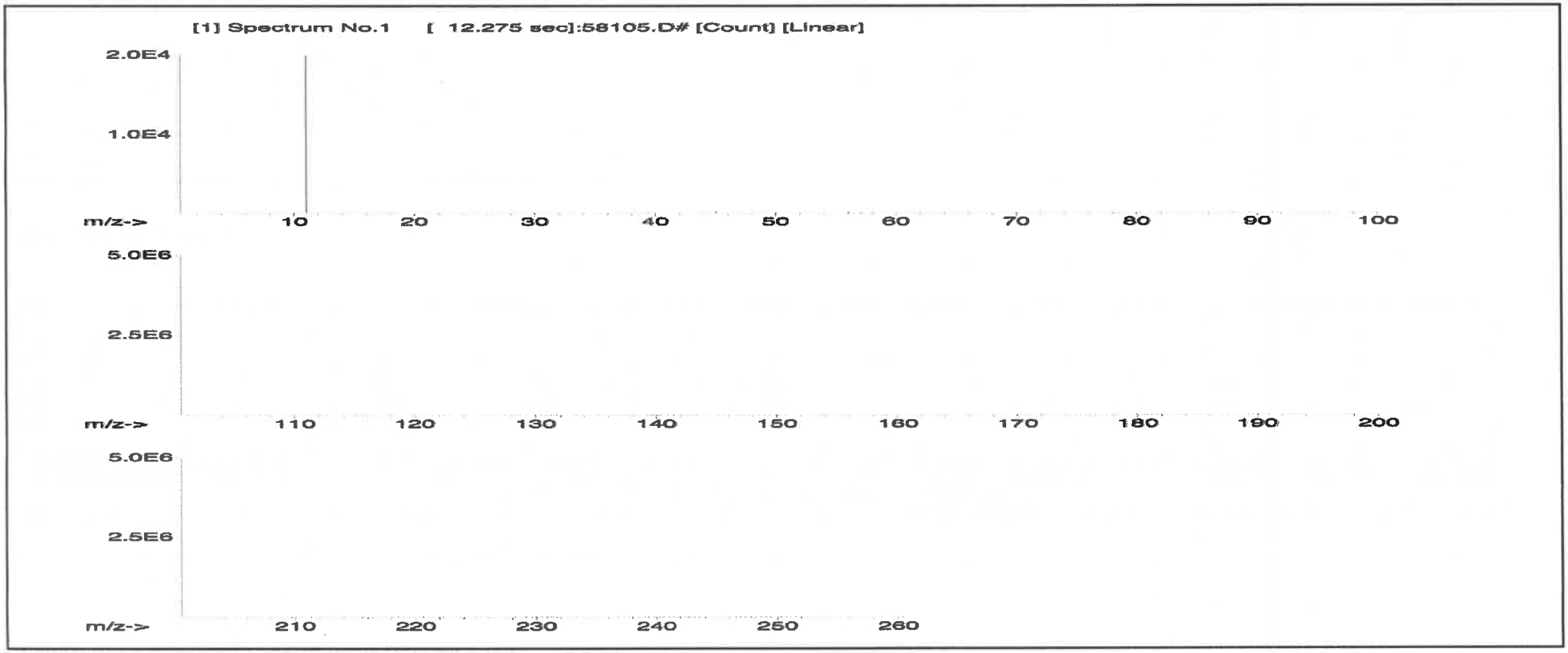
CERTIFIED WEIGHT REPORT:

Part Number:	**57005**		**Solvent:**	MKBQ8597V	Ammonium hydroxide
Lot Number:	**071123**				
Description:	**Boron (B)**		2.0%	40.0 (mL)	Ammonium hydroxide
Expiration Date:	071126				
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):	1999.48	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. 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



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:

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Certified by:

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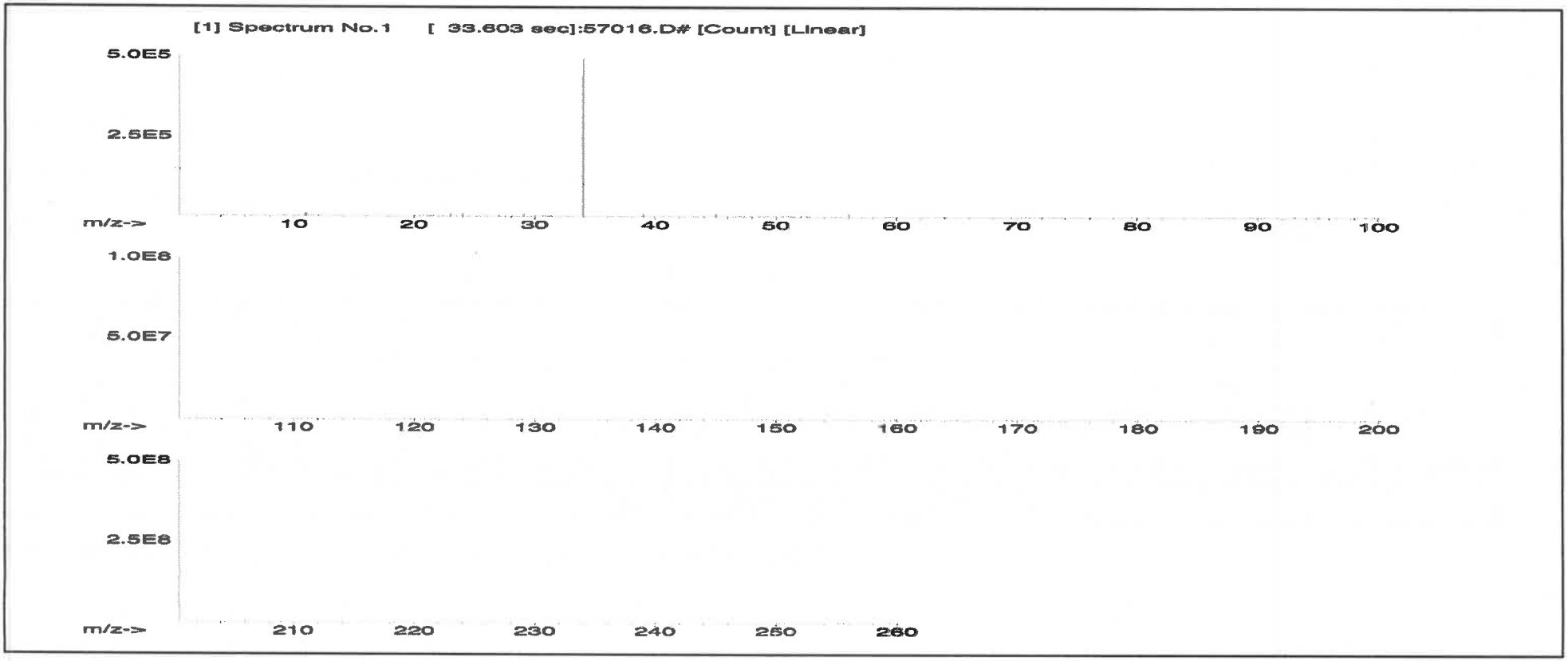
CERTIFIED WEIGHT REPORT:

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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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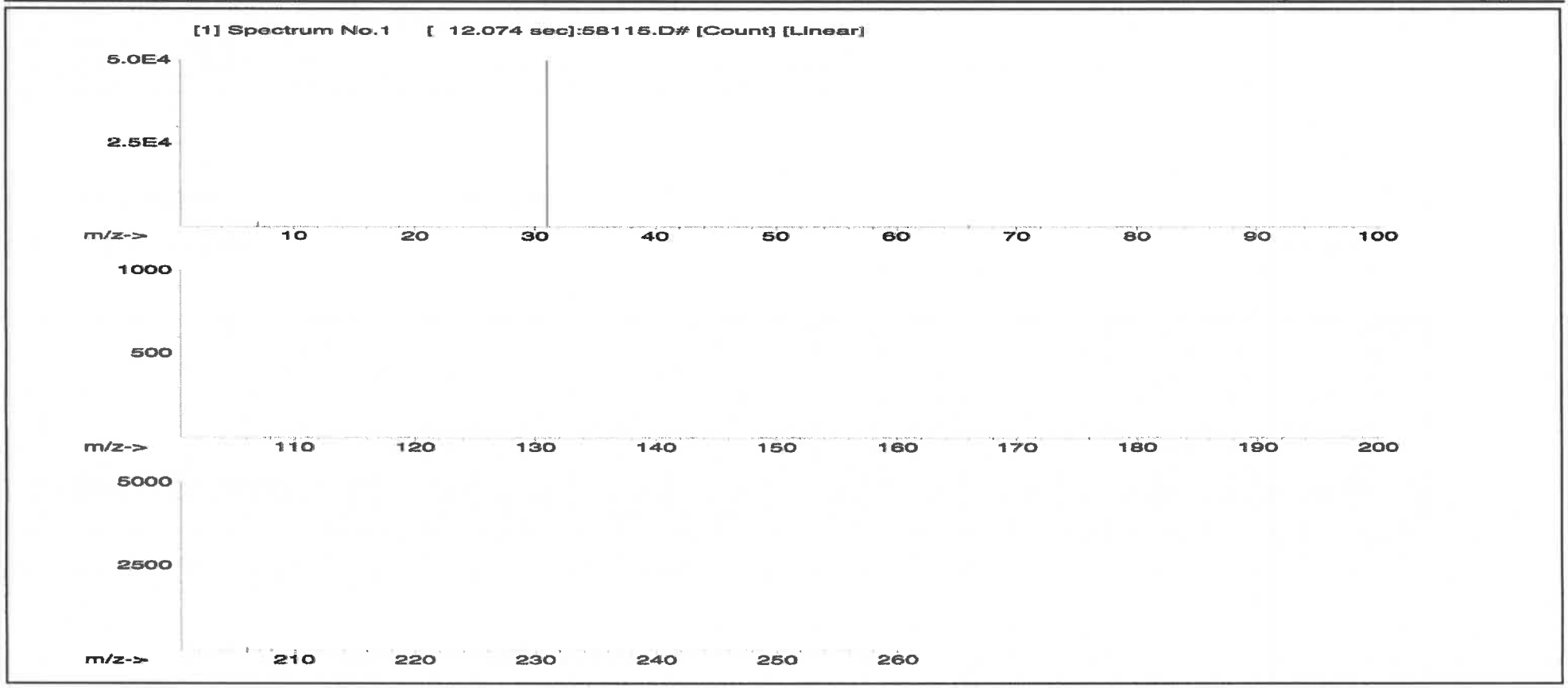
CERTIFIED WEIGHT REPORT:

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



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:

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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

MT884
MB

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 1

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Sulfate (SO_4)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory,Research,or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Mansford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

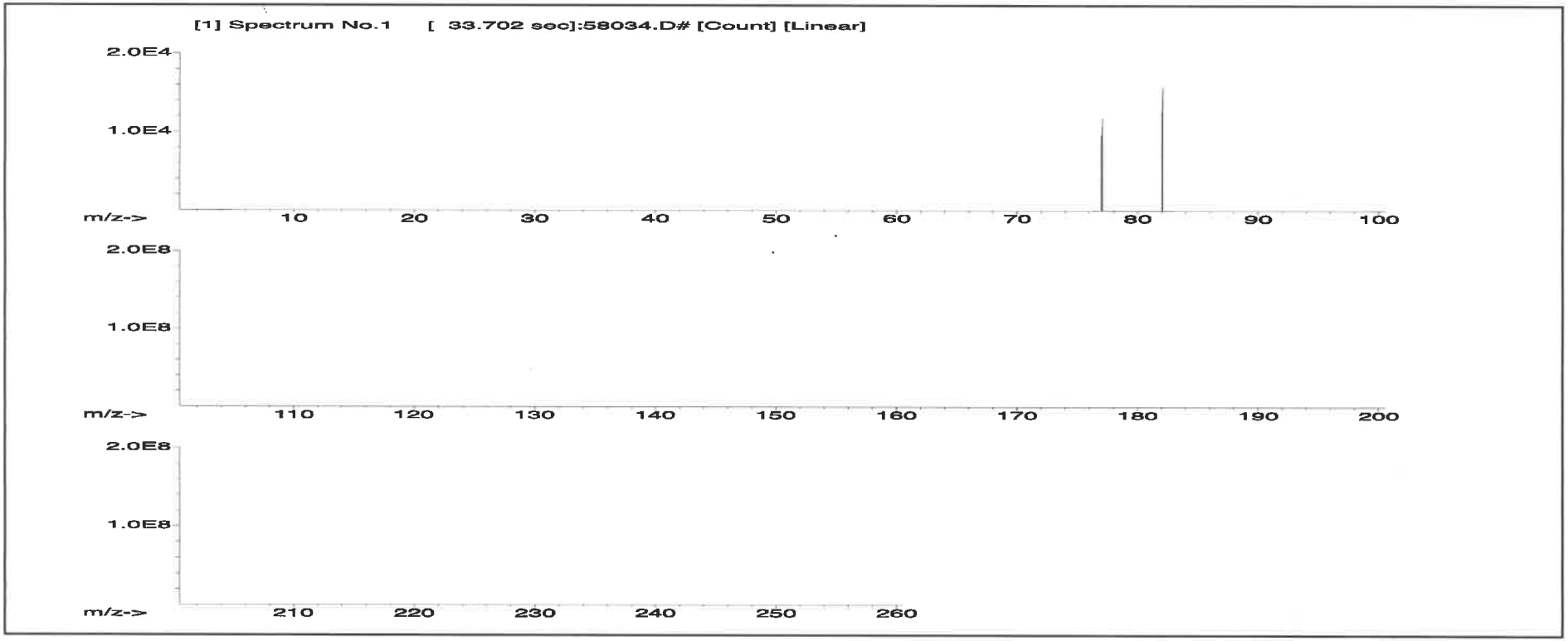
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



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.
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Certified Reference Material CRM

M5969 R: 06/11/24

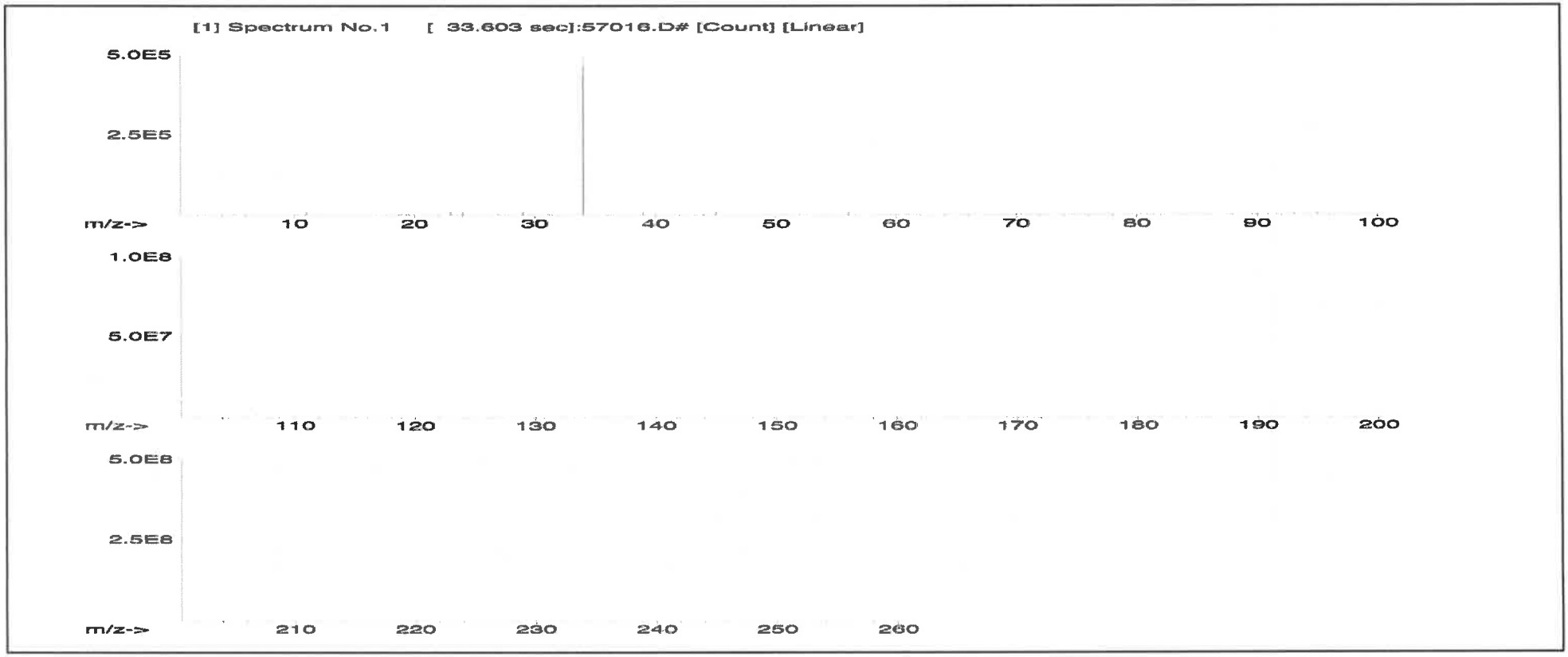
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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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www.absolutestandards.com

Certified Reference Material CRM

M5970, M5971 R: 7/01/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

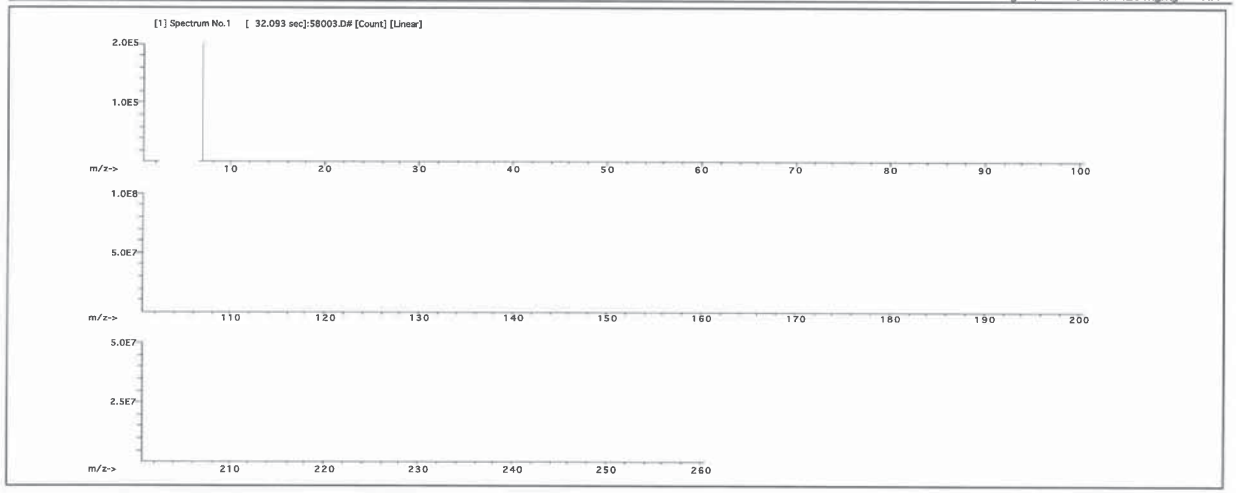
		Lot #	Solvent:
Part Number:	**57003**	24002546	Nitric Acid
Lot Number:	**062124**		
Description:	**Lithium (Li)**		
		2.0%	5.0 (mL) Nitric Acid
Expiration Date:	062127		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05 Balance Uncertainty	
Volume shown below was diluted to (mL):	250.11	0.016 Flask Uncertainty	

Giovanni Esposito

Formulated By: Giovanni Esposito 062124

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



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.
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M5978, M5979

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO_3 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:

$X_{CRM/RM} = \Sigma(w_i)(\bar{x}_i)$

$\bar{x}_i$ = 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:

$X_{CRM/RM} = (\bar{x}_a)\ (u_{char\ a})$

$\bar{x}_a$ = 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	<	0.000536	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

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inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

MS985
R: 6/14/24

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 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

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 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-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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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-MEB746172
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: 1.032 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 (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

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.

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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

August 12, 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

- August 12, 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

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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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

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)

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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

September 06, 2024

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- Sealed TCT Bag Open Date: _____

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12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

M6074
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ANALYTE	METHOD	NIST SRM#	SRM LOT#
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B	Calculated		See Sec. 4.2
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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:

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- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

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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

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- 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

September 06, 2024

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- September 06, 2029

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12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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->1/13/28

M6128

Part Number:	**58025**	**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**101124**			
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	

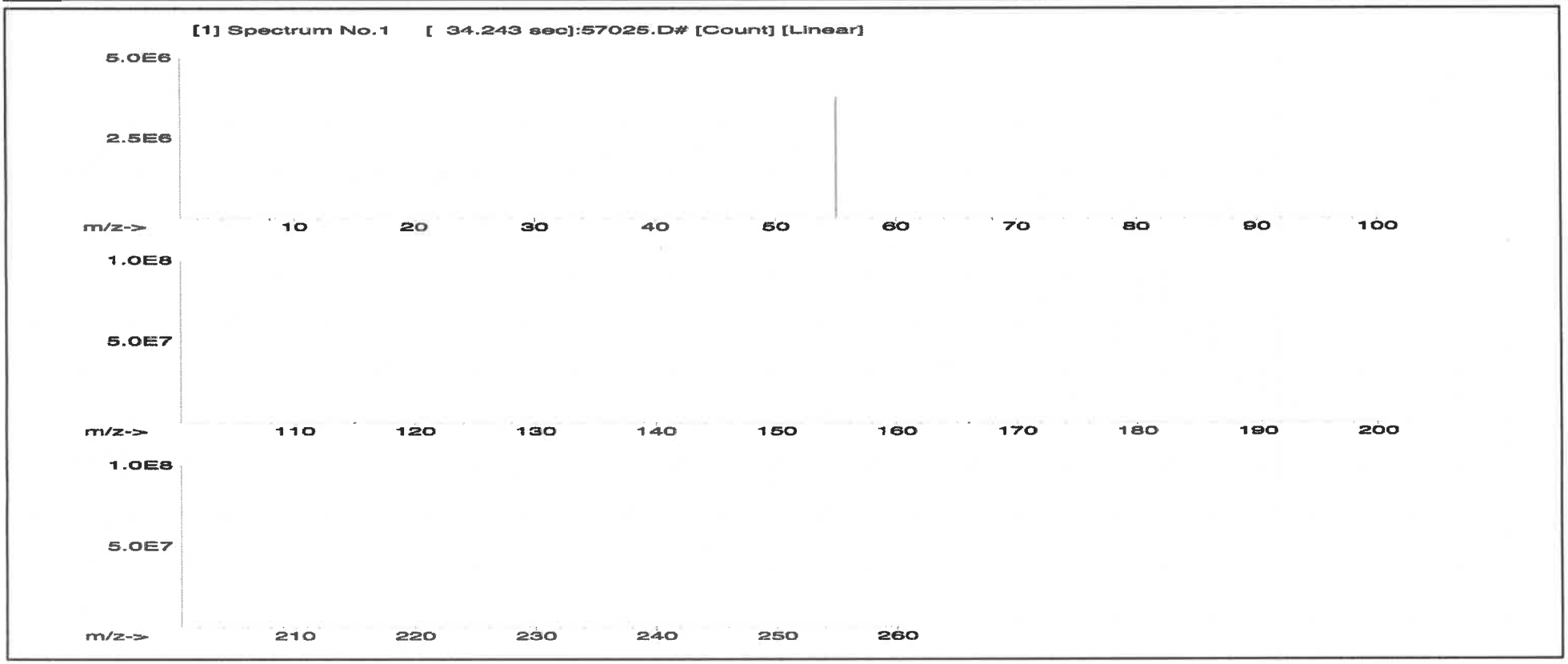
Giovanni Esposito

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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the 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
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Certificate of Analysis

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M6137 R→10/3/24

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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.

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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

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CERTIFIED WEIGHT REPORT:

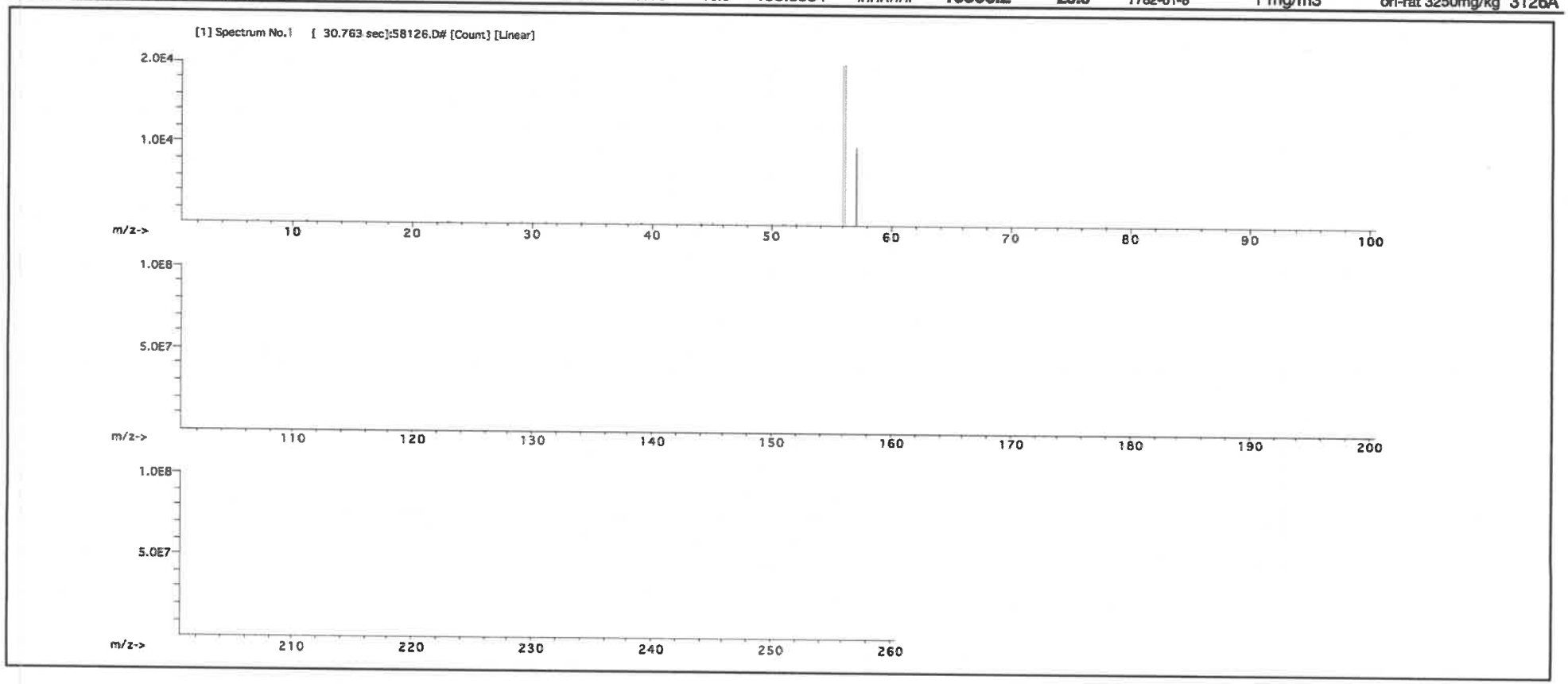
Part Number: 58126 R->1|B|2S
Lot Number: 011025
Description: Iron (Fe) M6140
Expiration Date: 011028
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	Lot #		
Solvent:	24012496	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.100 Flask Uncertainty

Formulated By:	Benson Chan	011025
Reviewed By:	Pedro L. Rentas	011025

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron(III) nitrate nonahydrate (Fe)	IN028	FED082023A1	10000	99.999	0.10	13.0	153.8534	######	**10000.2**	**20.0**	7782-61-8	1 mg/m3	orl-rat 3250mg/kg	3126A



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	T	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 WEIGHT REPORT:

R-> 1/13/25

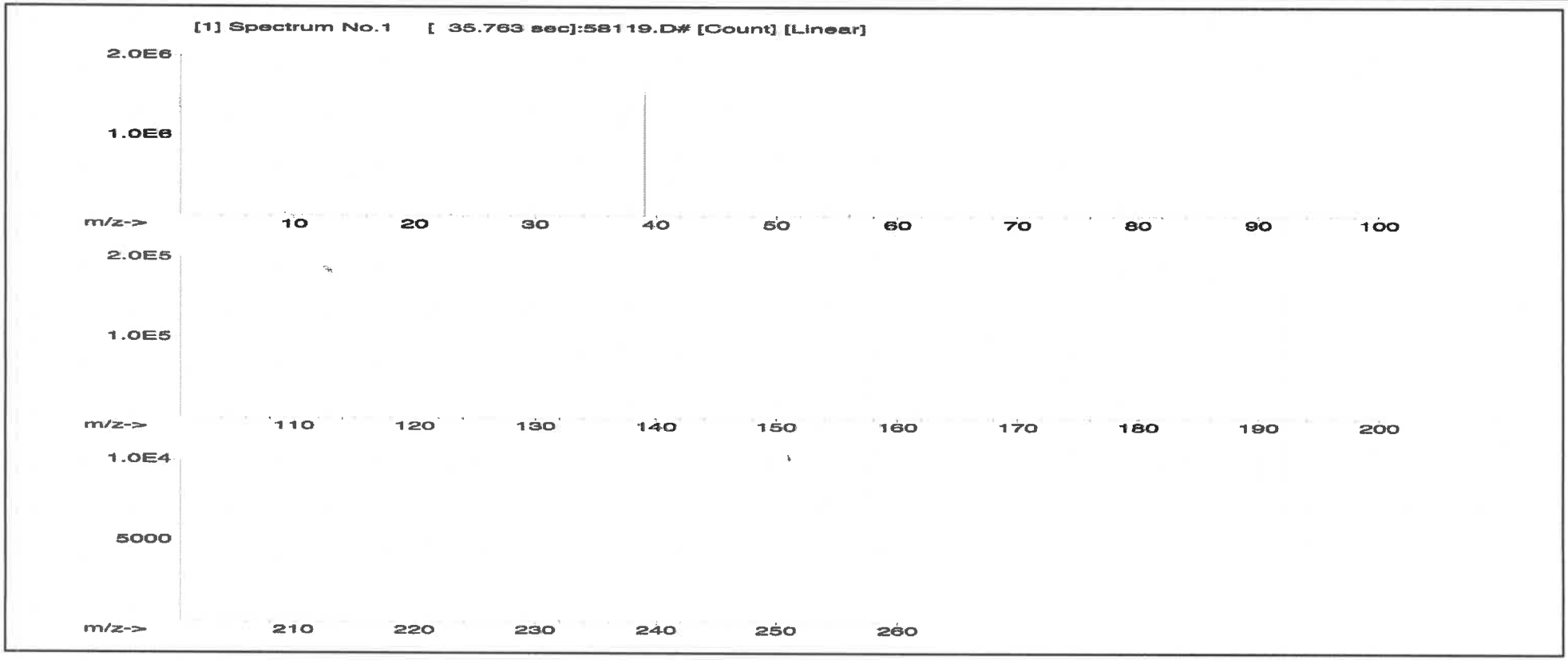
Part Number:	**57119**		**Lot #**		
Lot Number:	**103024**	**Solvent:**	24002546	Nitric Acid	
Description:	**Potassium (K)**	2%	80.0 (mL)	Nitric Acid	
Expiration Date:	103027				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance 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



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.
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CERTIFIED WEIGHT REPORT:

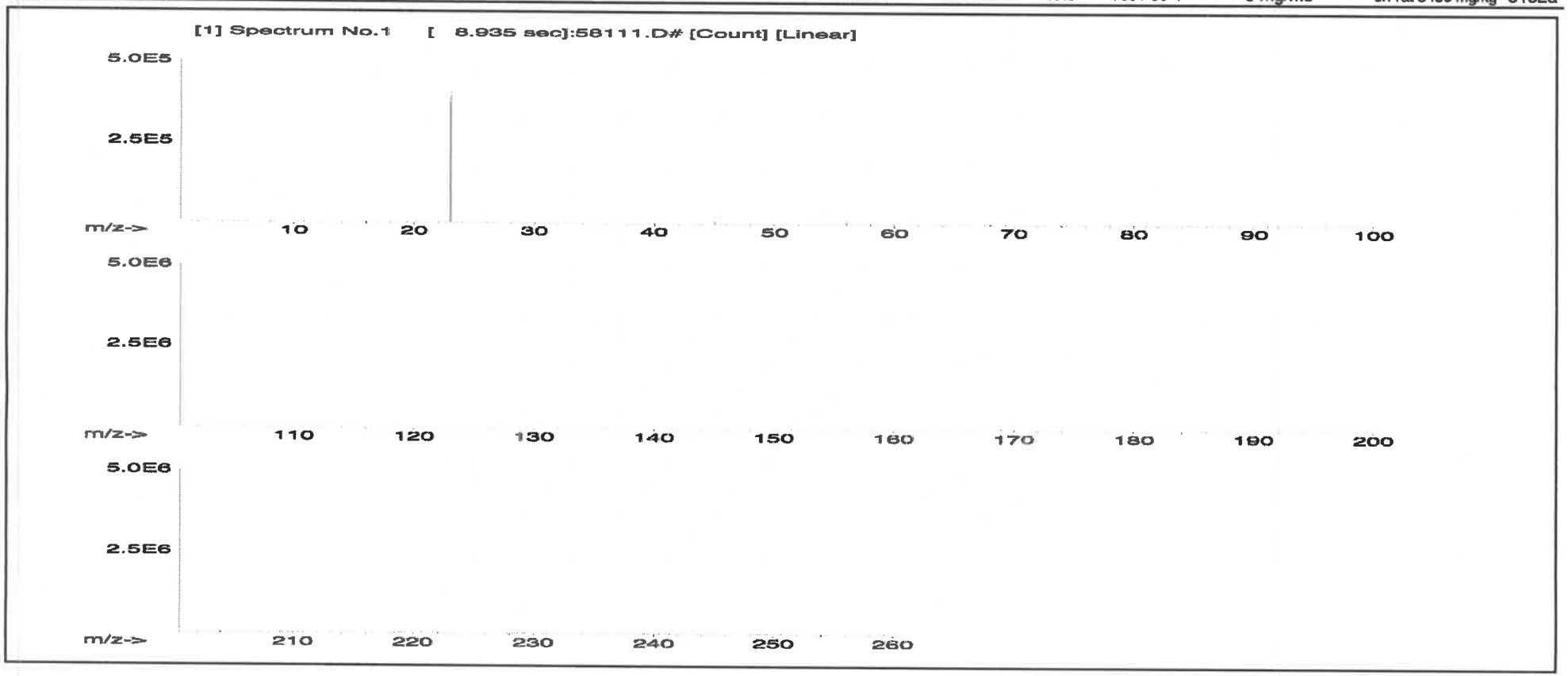
R->1/13/25

M6144

			Lot #	
Part Number:	**58111**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**072424**			
Description:	**Sodium (Na)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	072427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

Formulated By:	Benson Chan	072424
Reviewed By:	Pedro L. Rentas	072424

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	148.7096	######	**10000.0**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 121724
Description: Zinc (Zn)

R → 1/13/25

M6145

Expiration Date: 121727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

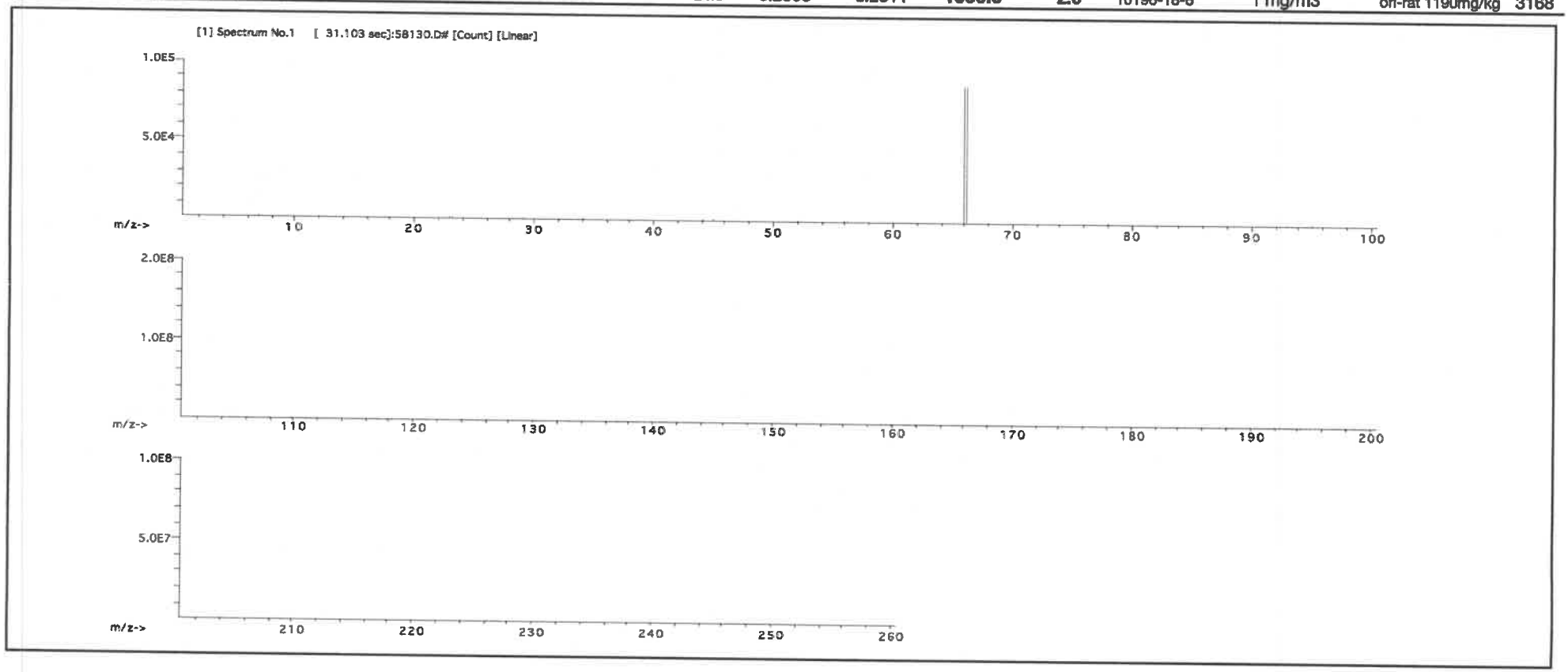
		Lot #	
Solvent:	24012496	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 2000.1 0.10 Flask Uncertainty

Aleah O'Brady

Formulated By:	Aleah O'Brady	121724
Reviewed By:	Pedro L. Rentas	121724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	8.2308	8.2311	**1000.0**	**2.0**	10196-18-6	1 mg/m3	ori-rat 1190mg/kg	3168



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

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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:

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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

avantor™ | J.T.Baker®

R-02102/2025

M-6158

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 >>>

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

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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.

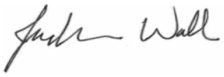
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor

Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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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

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 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

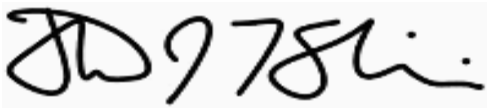
- Sealed TCT Bag Open Date: _____

- 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

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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.

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- 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.

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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.

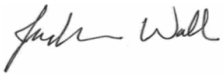
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

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 >>>

R -> 2/13/25

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:

M 6171

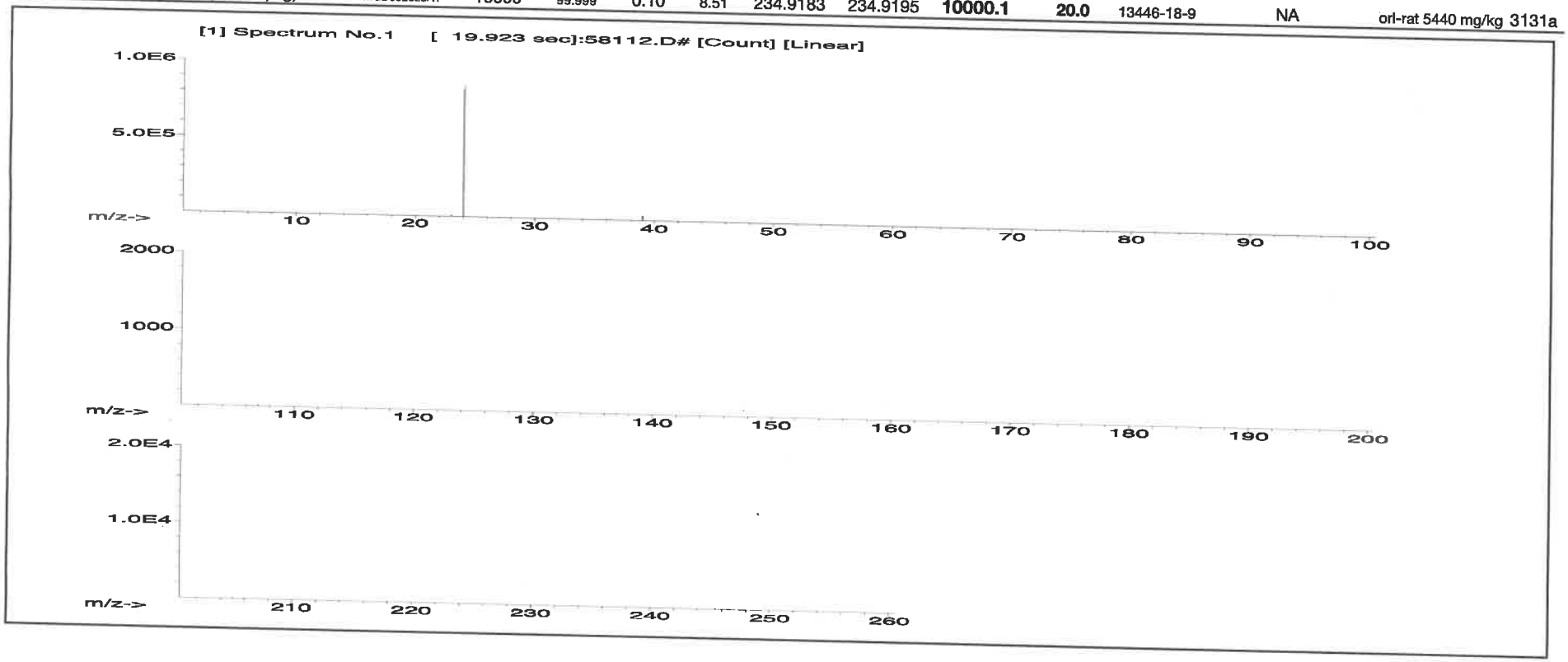
Part Number: 58112
Lot Number: 011525
Description: Magnesium (Mg)

Expiration Date: 011528
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	Lot #		
Solvent:	24012496	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid
	5E-05	Balance Uncertainty	
	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	011525
Reviewed By:	Pedro L. Rentas	011525

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	234.9195	**10000.1**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

M6174
R-> 5/5/24

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:	CLPP-CAL-1
Lot Number:	V2-MEB742428
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	50.03 ± 0.30 µg/mL	Calcium, Ca	5 000 ± 16 µg/mL
Chromium, Cr	200.0 ± 1.1 µg/mL	Cobalt, Co	500.0 ± 2.3 µg/mL
Copper, Cu	250.0 ± 1.1 µg/mL	Iron, Fe	1 000 ± 4 µg/mL
Magnesium, Mg	5 000 ± 22 µg/mL	Manganese, Mn	499.9 ± 2.2 µg/mL
Nickel, Ni	500.1 ± 2.3 µg/mL	Potassium, K	5 000 ± 22 µg/mL
Silver, Ag	250.0 ± 1.1 µg/mL	Sodium, Na	5 000 ± 22 µg/mL
Vanadium, V	500.0 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.117 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
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.

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$X_{CRM/RM} = \Sigma(w_i)(X_i)$

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

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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

March 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

- March 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:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Jodie Wall
Stock VSM Coordinator

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certified Reference Material CRM

ANAB ISO 17034 Accredited
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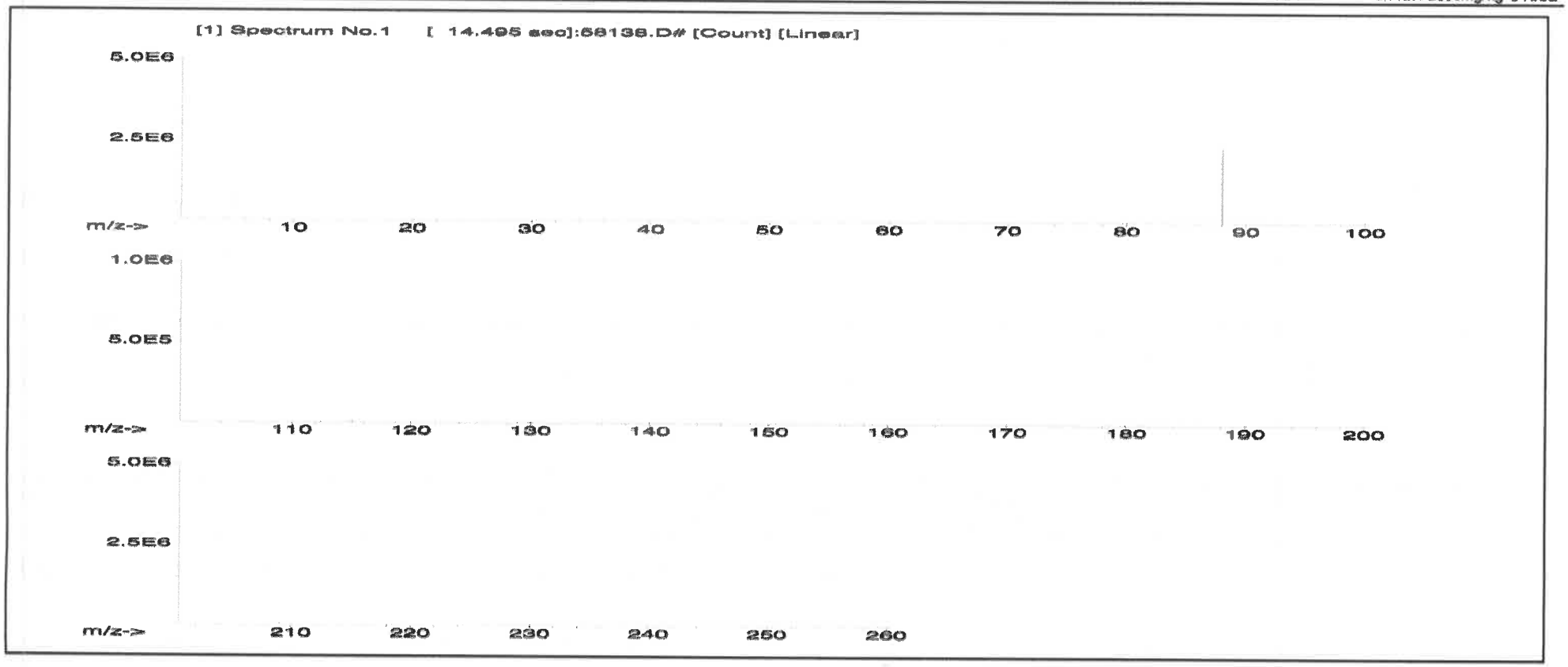
CERTIFIED WEIGHT REPORT:

R->8/6/29

Part Number:	57038		**Solvent:**	Lot # 24002546	Nitric Acid
Lot Number:	092724				
Description:	Strontium (Sr)		2%	40.0 (mL)	Nitric Acid
Expiration Date:	092727	M6176			
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		

Formulated By:	Benson Chan	092724
Reviewed By:	Pedro L. Rentas	092724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	1000	99.997	0.10	41.2	4.85470	4.85481	**1000.0**	**2.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

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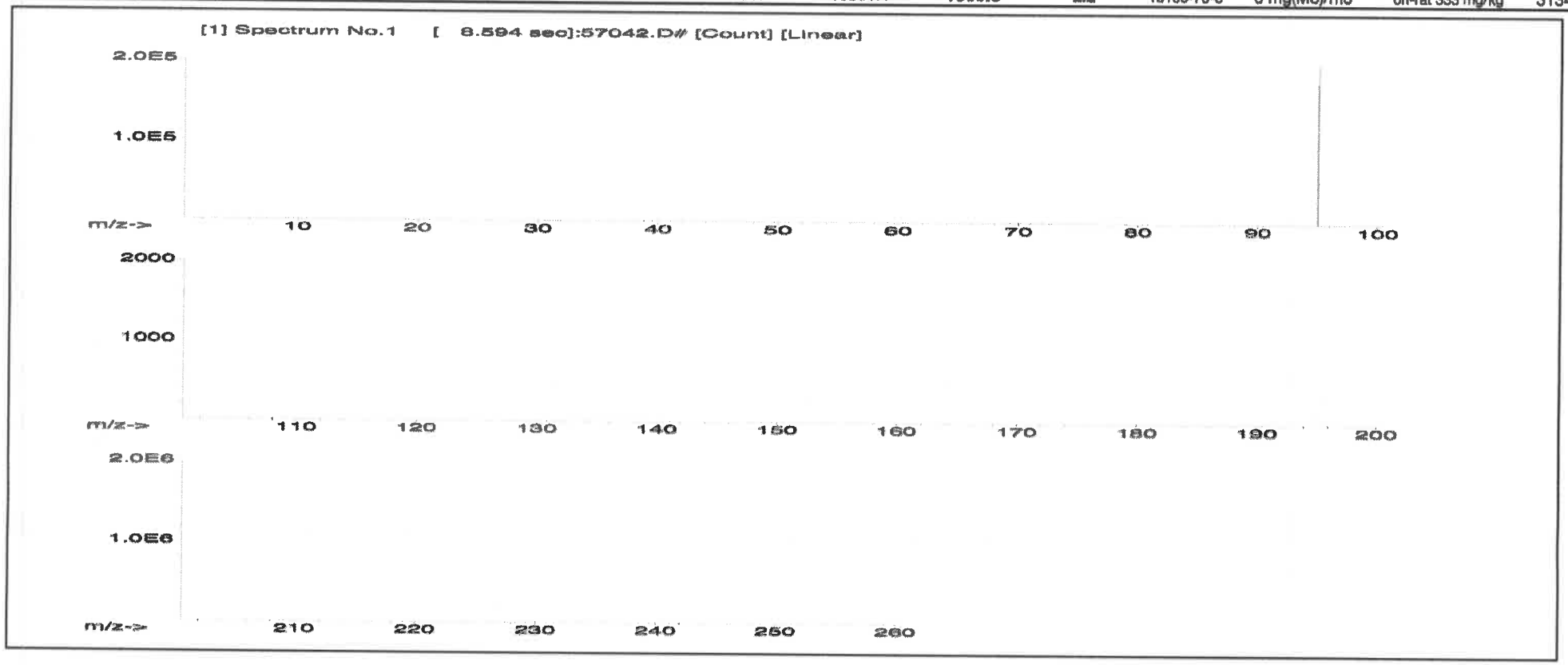
CERTIFIED WEIGHT REPORT:

R→ 8/6/25
M6177

		Lot #	Solvent:		
Part Number:	57042	MKBQ8597V	Ammonium hydroxide		
Lot Number:	080525	080525	ASTM Type 1 Water		
Description:	Molybdenum (Mo)	0.5%	10.0 (mL)	Ammonium hydroxide	
Expiration Date:	080528				
Recommended Storage:	Ambient (15 - 30 °C)				
Nominal Concentration (µg/mL):	1000				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	1999.41	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	080525
Reviewed By:	Pedro L. Rentas	080525

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium molybdate (Mo)	58142	112322	0.1000	200.0	0.084	1000	10001.4	**1000.5**	**2.2**	13106-76-8	5 mg(Mo)/m3	orl-rat 333 mg/kg	3134



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	T	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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 by an ISO17025 certified organization with weights traceable through NIST to the SI kilogram (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).
Rev 1.0, 2/25/2025

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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

R>8/6/28
M6178

Part Number:	57082		**Solvent:**	Lot # 24014457	Nitric Acid
Lot Number:	031525				
Description:	Lead (Pb)		2%	40.0 (mL)	Nitric Acid
Expiration Date:	031528				
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	0.10 Flask Uncertainty			

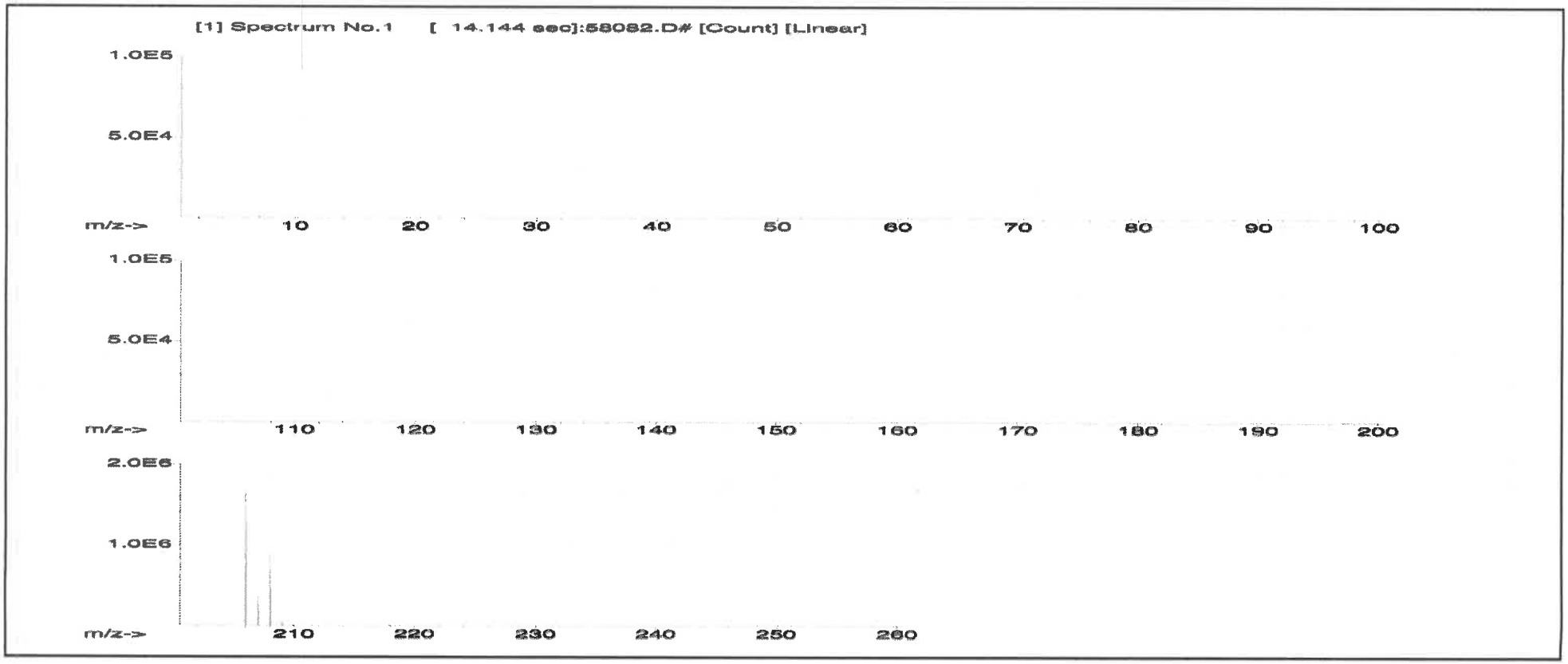
Giovanni Esposito

Formulated By:	Giovanni Esposito	031525

Pedro Rentas

Reviewed By:	Pedro L. Rentas	031525

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	3.20015	3.20067	**1000.2**	**2.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	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	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

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info@inorganicventures.com

M6179
R -> 6/2/24

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:	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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Certificate of Analysis

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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:	W2-MEB752149
Matrix:	5% (v/v) HNO3

M6180
R-7/22/23

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,	Aluminum,
	Cerium,	Selenium,
	Thallium,	
	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,	Boron,
	Vanadium,	
	20 µg/mL ea:	
	Zinc,	Strontium,
	Barium,	Beryllium,
	Cadmium,	Cobalt,
	Manganese,	Lithium,
	7.5 µg/mL ea:	
	Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.2 ± 0.7 µg/mL	Arsenic, As	80.1 ± 0.5 µg/mL
Barium, Ba	20.02 ± 0.12 µg/mL	Beryllium, Be	20.02 ± 0.11 µg/mL
Boron, B	30.02 ± 0.15 µg/mL	Cadmium, Cd	20.04 ± 0.09 µg/mL
Calcium, Ca	100.1 ± 0.3 µg/mL	Cerium, Ce	200.2 ± 1.0 µg/mL
Chromium, Cr	40.02 ± 0.26 µg/mL	Cobalt, Co	20.03 ± 0.09 µg/mL
Copper, Cu	30.03 ± 0.13 µg/mL	Iron, Fe	300.3 ± 1.3 µg/mL
Lead, Pb	100.1 ± 0.5 µg/mL	Lithium, Li	20.03 ± 0.09 µg/mL
Magnesium, Mg	200.2 ± 0.9 µg/mL	Manganese, Mn	19.99 ± 0.09 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.05 ± 0.22 µg/mL
Phosphorus, P	600.5 ± 2.9 µg/mL	Potassium, K	1 001 ± 4 µg/mL
Selenium, Se	200.2 ± 1.1 µg/mL	Silver, Ag	7.52 ± 0.03 µg/mL
Sodium, Na	300.3 ± 1.3 µg/mL	Strontium, Sr	20.02 ± 0.10 µg/mL
Thallium, Tl	200.2 ± 1.0 µg/mL	Vanadium, V	30.02 ± 0.13 µg/mL
Zinc, Zn	20.05 ± 0.09 µg/mL		

Density: 1.037 g/mL (measured at 20 ± 5 °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
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
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	160830
Ce	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
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	3152a	200413
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	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° - 25° C to minimize the effects of transpiration. Use at 20° ± 5° 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

April 08, 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

- April 08, 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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M6181
R -> 7/22/28

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-2
Lot Number:	V2-MEB743480
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 ± 0.5 µg/mL	Molybdenum, Mo	40.05 ± 0.22 µg/mL
Silica, SiO2	200.3 ± 1.4 µg/mL	Tin, Sn	70.1 ± 0.4 µg/mL
Titanium, Ti	20.03 ± 0.12 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
Sb	ICP Assay	3102a	140911
SiO2	Calculated		See Sec. 4.2
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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 07, 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 07, 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:

Thomas Kozikowski
Stock VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

R→03/06/24

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

APTIM

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.

M6182

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.

R→03/06/24

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.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

M6184

(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,

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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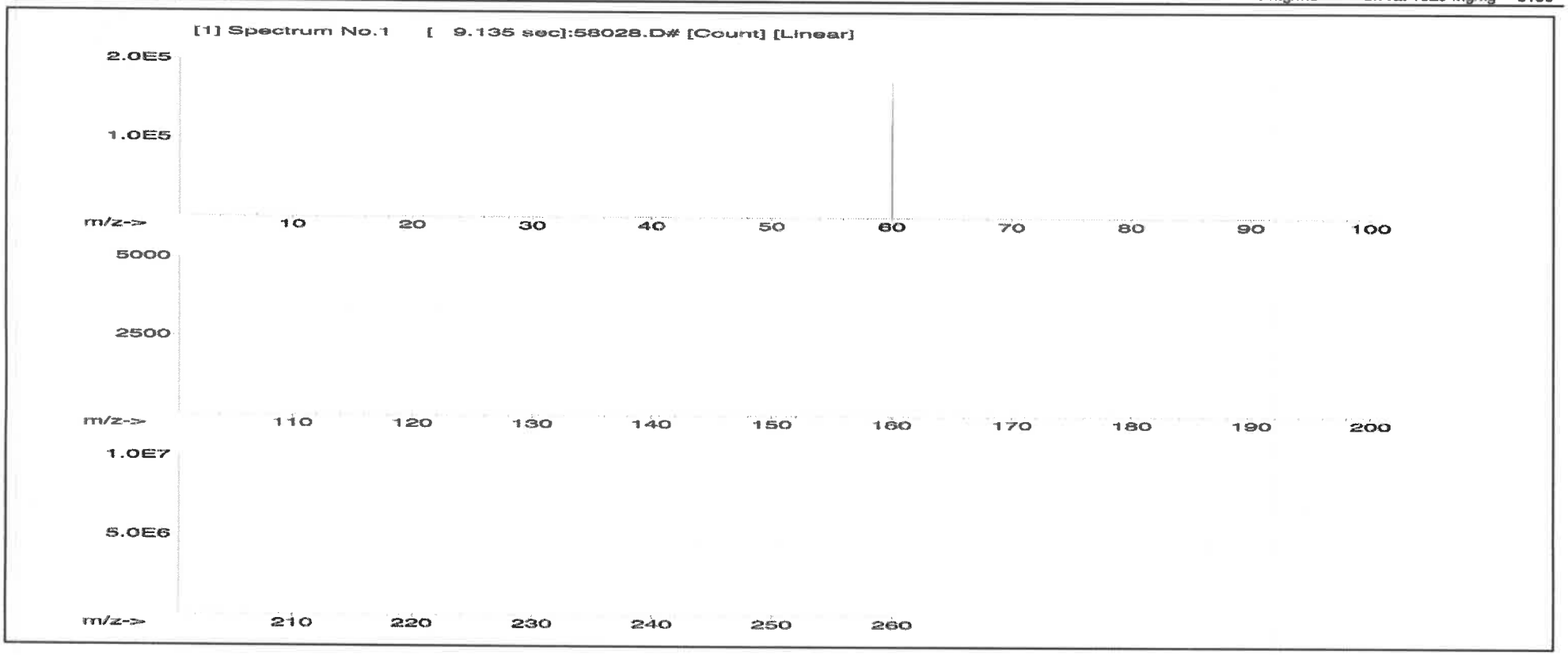
R 8/05/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**062024**			
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062027			
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	062024
Reviewed By:	Pedro L. Rentas	062024

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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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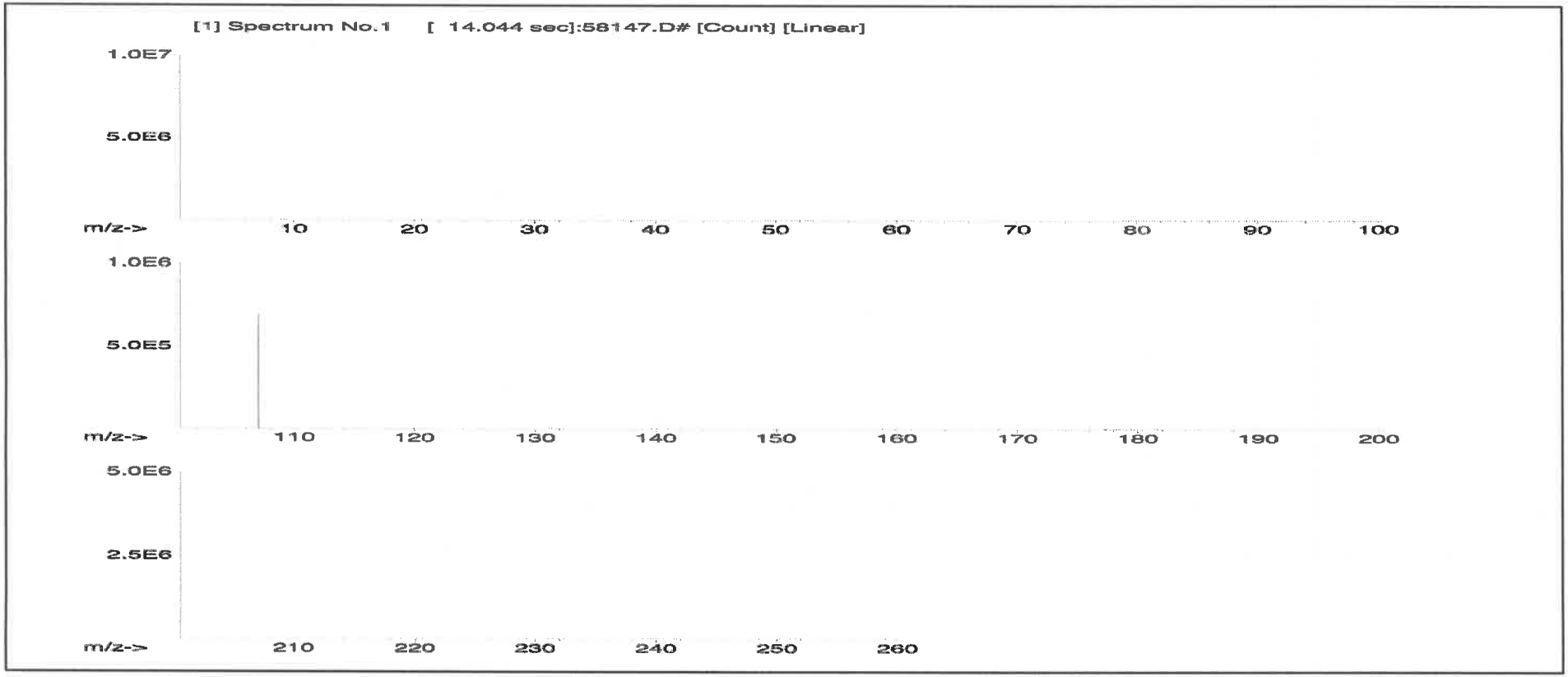
CERTIFIED WEIGHT REPORT:

Part Number:	**57047**			**Lot #**	
Lot Number:	**122823**	**Solvent:**	24002546	Nitric Acid	
Description:	**Silver (Ag)**				
		2%	80.0 (mL)	Nitric Acid	
Expiration Date:	122826				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.30	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



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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CERTIFIED WEIGHT REPORT:

MG146

		Lot #	Solvent:		
Part Number:	**57051**	24002546	Nitric Acid		
Lot Number:	**071724**				
Description:	**Antimony (Sb)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	071727				
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):	2000.26	0.058	Flask Uncertainty		

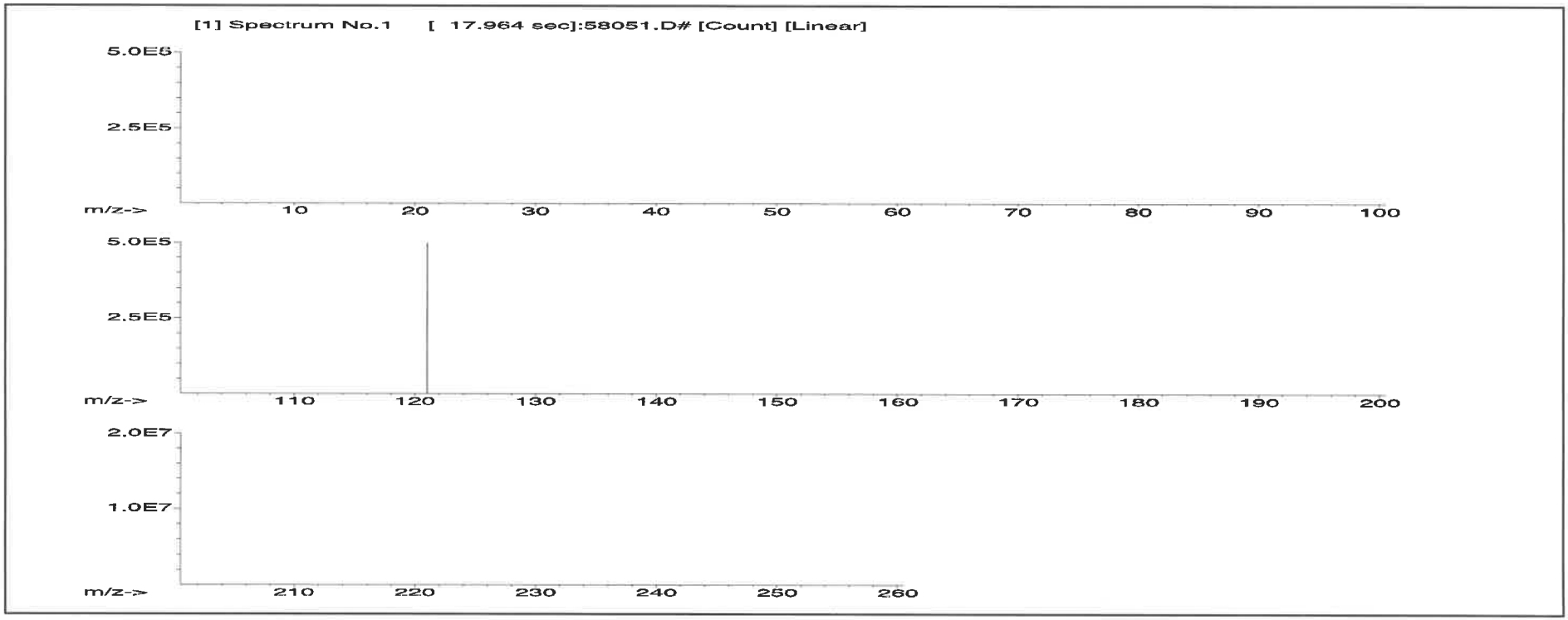
Giovanni Esposito

Formulated By:	Giovanni Esposito	071724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	071724

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	060324	0.1000	200.0	0.084	1000	10001.4	**1000.0**	**2.2**	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



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.
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CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

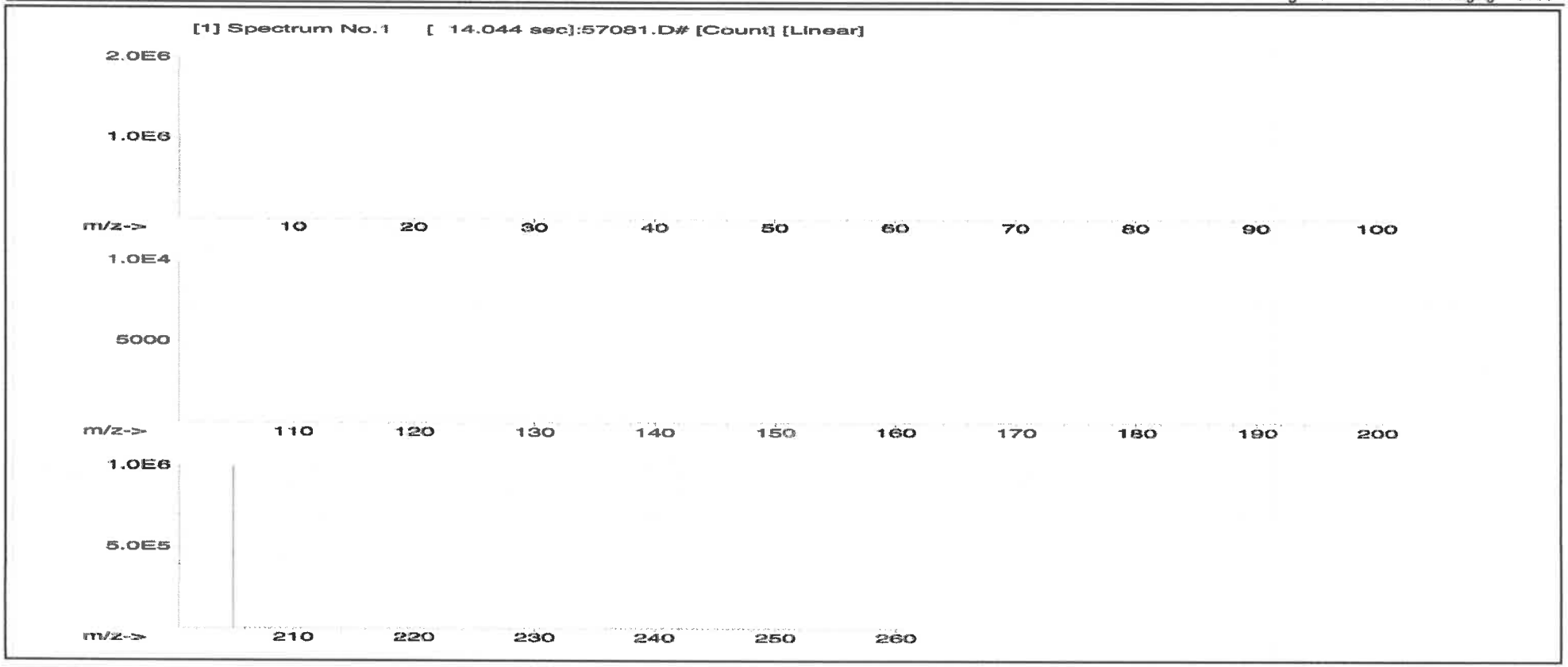
Aleah O'Brady

Formulated By:	Aleah O'Brady	062724

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



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).

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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**			
Lot Number:	**062424**			
Description:	**Vanadium (V)**	24002546	Nitric Acid	
		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	

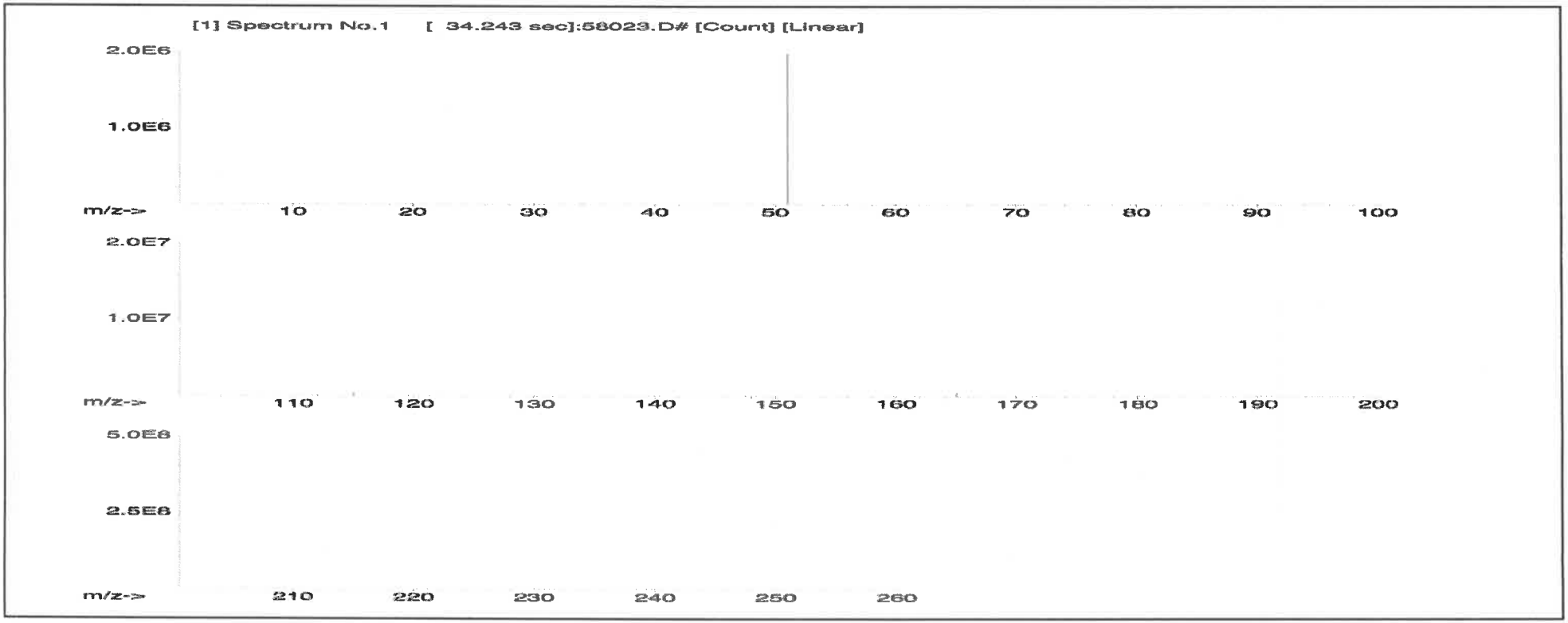
Aleah O'Brady

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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

ALLIANCE PROJECT NO.
QUOTE NO. Q2795
COC Number 2045308

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Kleinfelder
ADDRESS: 180 Sheree Blvd. Suite 3800
CITY Exton STATE: PA ZIP: 19341
ATTENTION: Mark Warchol
PHONE: 484-883-3892 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Girard School
PROJECT NO.: 20001558.001A LOCATION: Philadelphia
PROJECT MANAGER: Mark Warchol
e-mail: mwarchol@kleinfelder.com
PHONE: 484-883-3892 FAX:

CLIENT BILLING INFORMATION

BILL TO: Same PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) 5 DAYS*
HARDCOPY (DATA PACKAGE): 5 DAYS*
EDD: 5 DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☑ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ EDD FORMAT
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced ☐ US EPA CLP
- ☐ NYS ASP A ☐ NYS ASP B
- ☐ Other

ANALYSIS

PADEP Historic Clean Fill Parameters Hold

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1.	COMP-1	Soil	✓		8/6/25	10:20	4	✓									
2.	COMP-2		↓			11:25	↓	↓									
3.	COMP-3		↓			12:20	↓	↓									
4.	SB-1			✓		9:40	1		✓								
5.	SB-2			↓		9:50	1		↓								
6.	SB-3			↓		10:00	1										
7.	SB-4			↓		10:15	1										
8.	SB-5			↓		10:35	1										
9.	SB-6			↓		10:50	1		✓								
10.	SB-7	↓		↓	↓	11:00	↓		↓								

E E

Specify Preservatives: A-HCl B-HN03 C-H2SO4 D-NaOH E-ICE F-OTHER

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1.	8/6/25	1.
2.	8/7/25 1128	2.
3.		3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 2.8°C
Comments: Hold grab samples SB-1 thru SB-12
IR Gun #1

Page 1 of 2

CLIENT: ☐ Hand Delivered ☑ Other FedEx

Shipment Complete ☐ YES ☐ NO

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Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

ALLIANCE PROJECT NO.
QUOTE NO. Q2795
COC Number 2045309

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Kleinfelder
ADDRESS: 180 Sheree Blvd. Suite 3800
CITY Exton STATE: PA ZIP: 19341
ATTENTION: Mark Warchol
PHONE: 484-883-3892 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Girard School
PROJECT NO.: 20160558.001A LOCATION: Philadelphia
PROJECT MANAGER: Mark Warchol
e-mail: mwarchol@kleinfelder.com
PHONE: 484-883-3892 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS: Same
CITY STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) 5 DAYS*
HARDCOPY (DATA PACKAGE): 5 DAYS*
EDD: 5 DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☑ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced ☐ US EPA CLP
- ☐ NYS ASP A ☐ NYS ASP B
- ☐ Other
- ☐ EDD FORMAT

ANALYSIS

JC
Hold

PRESERVATIVES: 1 | 2 (E) | 3 | 4 | 5 | 6 | 7 | 8 | 9

COMMENTS — ← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
1.	SB-8	Soil		✓	8/6/25	11:20	1		✓								
2.	SB-9					11:50											
3.	SB-10					12:00											
4.	SB-11					12:10											
5.	SB-12					12:15											
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1.	8/6/25	1.
2.	8/7/25 1128	2.
3.		3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 2.8 °C
Comments: Thanks!

Page 2 of 2

CLIENT: ☐ Hand Delivered ☑ Other FedEx

Shipment Complete ☐ YES ☐ NO

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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

QA Control Code: A2070148

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

LOGIN REPORT/SAMPLE TRANSFER

YG 08/12/2025

Order ID : Q2795 POWE02
Client Name : Kleinfelder
Client Contact : Mark Warchol
Invoice Name : Kleinfelder
Invoice Contact : Mark Warchol

Order Date : 8/7/2025 11:57:00 AM
Project Name : ~~Girad School~~ Girard School-PA
Receive DateTime : 8/7/2025 11:28:00 AM
Purchase Order :

Project Mgr :
Report Type : Results+QC
EDD Type : EXCEL NOCLEANUP
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2795-01	COMP-1	Solid	08/06/2025	10:20					
					VOCMS Group1		8260D		5 Bus. Days
Q2795-02	COMP-2	Solid	08/06/2025	11:25					
					VOCMS Group1		8260D		5 Bus. Days
Q2795-03	COMP-3	Solid	08/06/2025	12:20					
					VOCMS Group1		8260D		5 Bus. Days

Relinguished By :
Date / Time : 8/7/25 1240

Received By : Sam
Date / Time : 8/7/25 12:40

Storage Area : VOA Refridgerator Room

NH 6
F 22