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

METALS

PROJECT NAME : RFP 918

WESTON SOLUTIONS, INC.

1090 King Georges Post Road

Suite 201

Edison, NJ - 08837-3703

Phone No: 732-585-4410

ORDER ID : Q3321

ATTENTION : Smita Sumbaly

Laboratory Certification ID # 20012

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Cover Page

Order ID : Q3321

Project ID : RFP 918

Client : Weston Solutions, Inc.

Lab Sample Number	Client Sample Number
Q3321-01	P001-DS-01
Q3321-02	P001-DS-01

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 : APPROVED
By Nimisha Pandya, QA/QC Supervisor at 10:11 am, Oct 24, 2025

Date: 10/17/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Weston Solutions, Inc.
Project Name: RFP 918
Project # N/A
Order ID # Q3321
Test Name: TCLP ICP Metals,TCLP Mercury

A. Number of Samples and Date of Receipt:
2 Solid samples were received on 10/09/2025.

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

C. Analytical Techniques:
The analysis of TCLP ICP Metals was based on method 6010D, digestion based on method 3010 (waters). The analysis and digestion of TCLP Mercury was based on method 7470A and TCLP extraction method was 1311.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all compounds.
The Duplicate analysis met criteria for all compounds.
The Matrix Spike analysis met criteria for all compounds.
The Matrix Spike Duplicate analysis met criteria for all compounds.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met the acceptable requirements.

E. Additional Comments:

Calculation for TCLP Sample:

$$\text{Concentration or Result } (\mu g/L) = C \times \frac{Vf}{Vi} \times DF \times 1000$$

Where,
C = Instrument value in ppm (The average of all replicate exposures)
Vf = Final digestion volume (mL)
Vi = Initial aliquot amount (mL) (Sample amount taken in prep)
DF = Dilution Factor

Calculation for TCLP HG:

Concentration or Result (µg/L) = $C \times \frac{Vf}{Vi} \times DF$

Where,

C = Instrument value in ppb
Vf = Final digestion volume (mL)
Vi = Initial aliquot amount (mL) (Sample amount taken in prep)
DF = Dilution Factor

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

Signature___ APPROVED
By Nimisha Pandya, QA/QC Supervisor at 10:11 am, Oct 24, 2025

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Tel. 908-789-8900 Fax: 908-789-8922

DATA REPORTING QUALIFIERS- INORGANIC

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

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

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

ORDER ID: Q3321 MATRIX: TCLP

METHOD: 6010D,7470A,1311

		NA	NO	YES
1.	Calibration Summary met criteria.			✓
2.	ICP Interference Check Sample Results Summary Submitted.			✓
3.	Serial Dilution Summary (if applicable) Submitted.			✓
4.	Laboratory Control Sample Summary (if applicable) Submitted.			✓
5.	Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
6.	Matrix Spike/Matrix Spike Duplicate Recoveries Met Criteria			✓
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			
7.	Sample Duplicate Analysis Met QC Criteria			✓
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			
8.	Digestion Holding Time Met			✓
	If not met, list number of days exceeded for each sample:			
9.	Analysis Holding Time Met			✓
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			

ADDITIONAL COMMENTS:

QA REVIEW

REVIEWED
By Sohil Jodhani, QA/QC Director at 9:34 am, Oct 24, 2025

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q3321

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

QA Review Signature: SOHIL JODHANI **Date:** 10/17/2025

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LAB CHRONICLE

OrderID:	Q3321	**OrderDate:**	10/9/2025 10:30:00 AM
Client:	Weston Solutions, Inc.	**Project:**	RFP 918
Contact:	Smita Sumbaly	**Location:**	D41,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3321-01	**P001-DS-01**	**SOIL**			**10/08/25**			**10/09/25**
			Mercury	7471B		10/13/25	10/13/25	
			Metals ICP-TAL	6010D		10/10/25	10/10/25	
Q3321-02	**P001-DS-01**	**TCLP**			**10/08/25**			**10/09/25**
			TCLP ICP Metals	6010D		10/13/25	10/13/25	
			TCLP Mercury	7470A		10/13/25	10/14/25	

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Hit Summary Sheet
SW-846

SDG No.: Q3321 **Order ID:** Q3321

Client: Weston Solutions, Inc. **Project ID:** RFP 918

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : P001-DS-01								
Q3321-02	P001-DS-01	TCLP	Barium	1970		72.8	500	ug/L
Q3321-02	P001-DS-01	TCLP	Cadmium	580		2.50	30.0	ug/L
Q3321-02	P001-DS-01	TCLP	Chromium	21.7	J	10.6	50.0	ug/L
Q3321-02	P001-DS-01	TCLP	Lead	257		11.5	60.0	ug/L

SAMPLE DATA

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	10/08/25
Project:	RFP 918	Date Received:	10/09/25
Client Sample ID:	P001-DS-01	SDG No.:	Q3321
Lab Sample ID:	Q3321-02	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-38-2	Arsenic	25.6	U	1	25.6	100	ug/L	10/13/25 12:30	10/13/25 17:24	6010D	SW3010A
7440-39-3	Barium	1970		1	72.8	500	ug/L	10/13/25 12:30	10/13/25 17:24	6010D	SW3010A
7440-43-9	Cadmium	580		1	2.50	30.0	ug/L	10/13/25 12:30	10/13/25 17:24	6010D	SW3010A
7440-47-3	Chromium	21.7	J	1	10.6	50.0	ug/L	10/13/25 12:30	10/13/25 17:24	6010D	SW3010A
7439-92-1	Lead	257		1	11.5	60.0	ug/L	10/13/25 12:30	10/13/25 17:24	6010D	SW3010A
7439-97-6	Mercury	0.76	U	1	0.76	2.00	ug/L	10/13/25 15:10	10/14/25 11:41	7470A	7470A
7782-49-2	Selenium	48.2	U	1	48.2	100	ug/L	10/13/25 12:30	10/13/25 17:24	6010D	SW3010A
7440-22-4	Silver	8.10	U	1	8.10	50.0	ug/L	10/13/25 12:30	10/13/25 17:24	6010D	SW3010A

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

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

METAL CALIBRATION DATA

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **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
ICV70	Mercury	4.34	4.0	108	90 - 110	CV	10/14/2025	11:07	LB137514

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **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
CCV26	Mercury	4.92	5.0	98	90 - 110	CV	10/14/2025	11:17	LB137514
CCV27	Mercury	4.71	5.0	94	90 - 110	CV	10/14/2025	11:53	LB137514
CCV28	Mercury	5.11	5.0	102	90 - 110	CV	10/14/2025	12:22	LB137514
CCV29	Mercury	5.05	5.0	101	90 - 110	CV	10/14/2025	12:38	LB137514

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **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	Arsenic	4000	4000	100	90 - 110	P	10/13/2025	12:46	LB137518
	Barium	7730	8000	97	90 - 110	P	10/13/2025	12:46	LB137518
	Cadmium	1990	2000	99	90 - 110	P	10/13/2025	12:46	LB137518
	Chromium	816	800	102	90 - 110	P	10/13/2025	12:46	LB137518
	Lead	3900	4000	98	90 - 110	P	10/13/2025	12:46	LB137518
	Selenium	4040	4000	101	90 - 110	P	10/13/2025	12:46	LB137518
	Silver	957	1000	96	90 - 110	P	10/13/2025	12:46	LB137518

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **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	Arsenic	20.8	20.0	104	80 - 120	P	10/13/2025	12:51	LB137518
	Barium	107	100	107	80 - 120	P	10/13/2025	12:51	LB137518
	Cadmium	6.16	6.0	103	80 - 120	P	10/13/2025	12:51	LB137518
	Chromium	10.8	10.0	108	80 - 120	P	10/13/2025	12:51	LB137518
	Lead	12.1	12.0	101	80 - 120	P	10/13/2025	12:51	LB137518
	Selenium	21.8	20.0	109	80 - 120	P	10/13/2025	12:51	LB137518
	Silver	10.8	10.0	108	80 - 120	P	10/13/2025	12:51	LB137518

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **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	Arsenic	5020	5000	100	90 - 110	P	10/13/2025	13:21	LB137518
	Barium	9880	10000	99	90 - 110	P	10/13/2025	13:21	LB137518
	Cadmium	2480	2500	99	90 - 110	P	10/13/2025	13:21	LB137518
	Chromium	1000	1000	100	90 - 110	P	10/13/2025	13:21	LB137518
	Lead	4920	5000	98	90 - 110	P	10/13/2025	13:21	LB137518
	Selenium	5050	5000	101	90 - 110	P	10/13/2025	13:21	LB137518
	Silver	1230	1250	99	90 - 110	P	10/13/2025	13:21	LB137518
CCV02	Arsenic	5070	5000	102	90 - 110	P	10/13/2025	14:18	LB137518
	Barium	9900	10000	99	90 - 110	P	10/13/2025	14:18	LB137518
	Cadmium	2510	2500	100	90 - 110	P	10/13/2025	14:18	LB137518
	Chromium	1030	1000	103	90 - 110	P	10/13/2025	14:18	LB137518
	Lead	4980	5000	100	90 - 110	P	10/13/2025	14:18	LB137518
	Selenium	5080	5000	102	90 - 110	P	10/13/2025	14:18	LB137518
	Silver	1270	1250	102	90 - 110	P	10/13/2025	14:18	LB137518
CCV03	Arsenic	5040	5000	101	90 - 110	P	10/13/2025	16:04	LB137518
	Barium	9870	10000	99	90 - 110	P	10/13/2025	16:04	LB137518
	Cadmium	2540	2500	102	90 - 110	P	10/13/2025	16:04	LB137518
	Chromium	1050	1000	105	90 - 110	P	10/13/2025	16:04	LB137518
	Lead	5010	5000	100	90 - 110	P	10/13/2025	16:04	LB137518
	Selenium	5030	5000	100	90 - 110	P	10/13/2025	16:04	LB137518
	Silver	1280	1250	102	90 - 110	P	10/13/2025	16:04	LB137518
CCV04	Arsenic	5020	5000	100	90 - 110	P	10/13/2025	17:02	LB137518
	Barium	9520	10000	95	90 - 110	P	10/13/2025	17:02	LB137518
	Cadmium	2520	2500	101	90 - 110	P	10/13/2025	17:02	LB137518
	Chromium	1040	1000	104	90 - 110	P	10/13/2025	17:02	LB137518
	Lead	4970	5000	99	90 - 110	P	10/13/2025	17:02	LB137518
	Selenium	5010	5000	100	90 - 110	P	10/13/2025	17:02	LB137518
	Silver	1270	1250	101	90 - 110	P	10/13/2025	17:02	LB137518
CCV05	Arsenic	4820	5000	96	90 - 110	P	10/13/2025	18:11	LB137518
	Barium	9440	10000	94	90 - 110	P	10/13/2025	18:11	LB137518
	Cadmium	2440	2500	97	90 - 110	P	10/13/2025	18:11	LB137518
	Chromium	1000	1000	100	90 - 110	P	10/13/2025	18:11	LB137518
	Lead	4810	5000	96	90 - 110	P	10/13/2025	18:11	LB137518
	Selenium	4810	5000	96	90 - 110	P	10/13/2025	18:11	LB137518

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **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	Silver	1210	1250	97	90 - 110	P	10/13/2025	18:11	LB137518
CCV06	Arsenic	5150	5000	103	90 - 110	P	10/13/2025	18:56	LB137518
	Barium	10100	10000	101	90 - 110	P	10/13/2025	18:56	LB137518
	Cadmium	2540	2500	102	90 - 110	P	10/13/2025	18:56	LB137518
	Chromium	1060	1000	106	90 - 110	P	10/13/2025	18:56	LB137518
	Lead	5040	5000	101	90 - 110	P	10/13/2025	18:56	LB137518
	Selenium	5170	5000	103	90 - 110	P	10/13/2025	18:56	LB137518
	Silver	1290	1250	104	90 - 110	P	10/13/2025	18:56	LB137518
CCV07	Arsenic	4860	5000	97	90 - 110	P	10/13/2025	19:46	LB137518
	Barium	9600	10000	96	90 - 110	P	10/13/2025	19:46	LB137518
	Cadmium	2460	2500	98	90 - 110	P	10/13/2025	19:46	LB137518
	Chromium	1010	1000	101	90 - 110	P	10/13/2025	19:46	LB137518
	Lead	4850	5000	97	90 - 110	P	10/13/2025	19:46	LB137518
	Selenium	4860	5000	97	90 - 110	P	10/13/2025	19:46	LB137518
	Silver	1230	1250	99	90 - 110	P	10/13/2025	19:46	LB137518

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Metals

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CRDL STANDARD FOR AA & ICP

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **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	Arsenic	21.4	20.0	107	65 - 135	P	10/13/2025	13:00	LB137518
	Barium	107	100	107	65 - 135	P	10/13/2025	13:00	LB137518
	Cadmium	6.08	6.0	101	65 - 135	P	10/13/2025	13:00	LB137518
	Chromium	10.6	10.0	106	65 - 135	P	10/13/2025	13:00	LB137518
	Lead	12.6	12.0	105	65 - 135	P	10/13/2025	13:00	LB137518
	Selenium	22.6	20.0	113	65 - 135	P	10/13/2025	13:00	LB137518
	Silver	10.7	10.0	107	65 - 135	P	10/13/2025	13:00	LB137518
CRA	Mercury	0.17	0.2	87	70 - 130	CV	10/14/2025	11:24	LB137514

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB70	Mercury	0.076	+/-0.2	U	0.20	CV	10/14/2025	11:12	LB137514

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB26	Mercury	0.076	+/-0.2	U	0.20	CV	10/14/2025	11:22	LB137514
CCB27	Mercury	0.076	+/-0.2	U	0.20	CV	10/14/2025	11:55	LB137514
CCB28	Mercury	0.076	+/-0.2	U	0.20	CV	10/14/2025	12:25	LB137514
CCB29	Mercury	0.076	+/-0.2	U	0.20	CV	10/14/2025	12:41	LB137514

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Arsenic	5.12	+/-10	U	20.0	P	10/13/2025	12:55	LB137518
	Barium	14.6	+/-50	U	100	P	10/13/2025	12:55	LB137518
	Cadmium	0.50	+/-3	U	6.00	P	10/13/2025	12:55	LB137518
	Chromium	2.12	+/-5	U	10.0	P	10/13/2025	12:55	LB137518
	Lead	2.30	+/-6	U	12.0	P	10/13/2025	12:55	LB137518
	Selenium	9.64	+/-10	U	20.0	P	10/13/2025	12:55	LB137518
	Silver	1.62	+/-5	U	10.0	P	10/13/2025	12:55	LB137518

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Arsenic	5.12	+/-10	U	20.0	P	10/13/2025	13:25	LB137518
	Barium	14.6	+/-50	U	100	P	10/13/2025	13:25	LB137518
	Cadmium	0.50	+/-3	U	6.00	P	10/13/2025	13:25	LB137518
	Chromium	2.12	+/-5	U	10.0	P	10/13/2025	13:25	LB137518
	Lead	2.30	+/-6	U	12.0	P	10/13/2025	13:25	LB137518
	Selenium	9.64	+/-10	U	20.0	P	10/13/2025	13:25	LB137518
	Silver	1.62	+/-5	U	10.0	P	10/13/2025	13:25	LB137518
CCB02	Arsenic	5.12	+/-10	U	20.0	P	10/13/2025	14:22	LB137518
	Barium	14.6	+/-50	U	100	P	10/13/2025	14:22	LB137518
	Cadmium	0.50	+/-3	U	6.00	P	10/13/2025	14:22	LB137518
	Chromium	2.12	+/-5	U	10.0	P	10/13/2025	14:22	LB137518
	Lead	2.30	+/-6	U	12.0	P	10/13/2025	14:22	LB137518
	Selenium	9.64	+/-10	U	20.0	P	10/13/2025	14:22	LB137518
	Silver	1.62	+/-5	U	10.0	P	10/13/2025	14:22	LB137518
CCB03	Arsenic	5.12	+/-10	U	20.0	P	10/13/2025	16:08	LB137518
	Barium	14.6	+/-50	U	100	P	10/13/2025	16:08	LB137518
	Cadmium	0.50	+/-3	U	6.00	P	10/13/2025	16:08	LB137518
	Chromium	2.12	+/-5	U	10.0	P	10/13/2025	16:08	LB137518
	Lead	2.30	+/-6	U	12.0	P	10/13/2025	16:08	LB137518
	Selenium	9.64	+/-10	U	20.0	P	10/13/2025	16:08	LB137518
	Silver	1.62	+/-5	U	10.0	P	10/13/2025	16:08	LB137518
CCB04	Arsenic	5.12	+/-10	U	20.0	P	10/13/2025	17:06	LB137518
	Barium	14.6	+/-50	U	100	P	10/13/2025	17:06	LB137518
	Cadmium	0.50	+/-3	U	6.00	P	10/13/2025	17:06	LB137518
	Chromium	2.12	+/-5	U	10.0	P	10/13/2025	17:06	LB137518
	Lead	2.30	+/-6	U	12.0	P	10/13/2025	17:06	LB137518
	Selenium	9.64	+/-10	U	20.0	P	10/13/2025	17:06	LB137518
	Silver	1.62	+/-5	U	10.0	P	10/13/2025	17:06	LB137518
CCB05	Arsenic	5.12	+/-10	U	20.0	P	10/13/2025	18:15	LB137518
	Barium	14.6	+/-50	U	100	P	10/13/2025	18:15	LB137518
	Cadmium	0.50	+/-3	U	6.00	P	10/13/2025	18:15	LB137518
	Chromium	2.12	+/-5	U	10.0	P	10/13/2025	18:15	LB137518
	Lead	2.30	+/-6	U	12.0	P	10/13/2025	18:15	LB137518
	Selenium	9.64	+/-10	U	20.0	P	10/13/2025	18:15	LB137518
	Silver	1.62	+/-5	U	10.0	P	10/13/2025	18:15	LB137518
CCB06	Arsenic	5.12	+/-10	U	20.0	P	10/13/2025	19:01	LB137518
	Barium	14.6	+/-50	U	100	P	10/13/2025	19:01	LB137518
	Cadmium	0.50	+/-3	U	6.00	P	10/13/2025	19:01	LB137518
	Chromium	2.12	+/-5	U	10.0	P	10/13/2025	19:01	LB137518

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Lead	2.30	+/-6	U	12.0	P	10/13/2025	19:01	LB137518
	Selenium	9.64	+/-10	U	20.0	P	10/13/2025	19:01	LB137518
	Silver	1.62	+/-5	U	10.0	P	10/13/2025	19:01	LB137518
CCB07	Arsenic	5.12	+/-10	U	20.0	P	10/13/2025	19:50	LB137518
	Barium	14.6	+/-50	U	100	P	10/13/2025	19:50	LB137518
	Cadmium	0.50	+/-3	U	6.00	P	10/13/2025	19:50	LB137518
	Chromium	2.12	+/-5	U	10.0	P	10/13/2025	19:50	LB137518
	Lead	2.30	+/-6	U	12.0	P	10/13/2025	19:50	LB137518
	Selenium	9.64	+/-10	U	20.0	P	10/13/2025	19:50	LB137518
	Silver	1.62	+/-5	U	10.0	P	10/13/2025	19:50	LB137518

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Metals
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PREPARATION BLANK SUMMARY

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB170062TB		**WATER**		**Batch Number:**	**PB170073**		**Prep Date:**	**10/13/2025**	
	Mercury	0.76	<2	U	2.00	CV	10/14/2025	12:27	LB137514

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB170073BL		**WATER**		**Batch Number:**	**PB170073**		**Prep Date:**	**10/13/2025**	
	Mercury	0.076	<0.2	U	0.20	CV	10/14/2025	11:37	LB137514

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Metals
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PREPARATION BLANK SUMMARY

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB170062TB		**WATER**		**Batch Number:**	**PB170074**		**Prep Date:**	**10/13/2025**	
	Arsenic	25.6	<50	U	100	P	10/13/2025	17:20	LB137518
	Barium	72.8	<250	U	500	P	10/13/2025	17:20	LB137518
	Cadmium	2.50	<15	U	30.0	P	10/13/2025	17:20	LB137518
	Chromium	10.6	<25	U	50.0	P	10/13/2025	17:20	LB137518
	Lead	11.5	<30	U	60.0	P	10/13/2025	17:20	LB137518
	Selenium	48.2	<50	U	100	P	10/13/2025	17:20	LB137518
	Silver	8.10	<25	U	50.0	P	10/13/2025	17:20	LB137518

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB170074BL		**WATER**		**Batch Number:**	**PB170074**		**Prep Date:**	**10/13/2025**	
	Arsenic	25.6	<50	U	100	P	10/13/2025	16:54	LB137518
	Barium	72.8	<250	U	500	P	10/13/2025	16:54	LB137518
	Cadmium	2.50	<15	U	30.0	P	10/13/2025	16:54	LB137518
	Chromium	10.6	<25	U	50.0	P	10/13/2025	16:54	LB137518
	Lead	11.5	<30	U	60.0	P	10/13/2025	16:54	LB137518
	Selenium	48.2	<50	U	100	P	10/13/2025	16:54	LB137518
	Silver	8.10	<25	U	50.0	P	10/13/2025	16:54	LB137518

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **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	Arsenic	12.5			-20	20	10/13/2025	13:04	LB137518
	Barium	6.08	6.0	101	-94	106	10/13/2025	13:04	LB137518
	Cadmium	1.68	1.0	168	-5	7	10/13/2025	13:04	LB137518
	Chromium	47.3	52.0	91	42	62	10/13/2025	13:04	LB137518
	Lead	-2.87			-12	12	10/13/2025	13:04	LB137518
	Selenium	13.3			-20	20	10/13/2025	13:04	LB137518
	Silver	-1.68			-10	10	10/13/2025	13:04	LB137518
ICSAB01	Arsenic	115	104	111	88.4	120	10/13/2025	13:08	LB137518
	Barium	495	537	92	437	637	10/13/2025	13:08	LB137518
	Cadmium	1000	972	103	826	1120	10/13/2025	13:08	LB137518
	Chromium	558	542	103	460	624	10/13/2025	13:08	LB137518
	Lead	45.6	49.0	93	37	61	10/13/2025	13:08	LB137518
	Selenium	59.2	46.0	129	26	66	10/13/2025	13:08	LB137518
	Silver	211	201	105	170	232	10/13/2025	13:08	LB137518

METAL QC DATA

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metals
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MATRIX SPIKE SUMMARY

client: Weston Solutions, Inc. **level:** low **sdg no.:** Q3321

contract: ROYF02 **lab code:** ACE

matrix: Water **sample id:** Q3327-02 **client id:** HADLEY-ROAD-TPMS

Percent Solids for Sample: NA **Spiked ID:** Q3327-02MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	3980		100	U	4000	100		P
Barium	ug/L	75 - 125	2320		1300		1000	103		P
Cadmium	ug/L	75 - 125	981		30.0	U	1000	98		P
Chromium	ug/L	75 - 125	2090		50.0	U	2000	104		P
Lead	ug/L	75 - 125	4710		45.2	J	5000	93		P
Mercury	ug/L	75 - 125	47.4		2.00	U	40.0	118		CV
Selenium	ug/L	75 - 125	10100		100	U	10000	101		P
Silver	ug/L	75 - 125	348		50.0	U	380	92		P

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: Weston Solutions, Inc. **level:** low **sdg no.:** Q3321

contract: ROYF02 **lab code:** ACE

matrix: Water **sample id:** Q3327-02 **client id:** HADLEY-ROAD-TPMSD

Percent Solids for Sample: NA **Spiked ID:** Q3327-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	3950		100	U	4000	99		P
Barium	ug/L	75 - 125	2250		1300		1000	95		P
Cadmium	ug/L	75 - 125	973		30.0	U	1000	97		P
Chromium	ug/L	75 - 125	2080		50.0	U	2000	104		P
Lead	ug/L	75 - 125	4670		45.2	J	5000	93		P
Mercury	ug/L	75 - 125	38.6		2.00	U	40.0	96		CV
Selenium	ug/L	75 - 125	9920		100	U	10000	99		P
Silver	ug/L	75 - 125	352		50.0	U	380	93		P

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Metals
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Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **Lab Code:** ACE

Matrix: **Level:** LOW **Client ID:**

Sample ID: **Spiked ID:**

Analyte	Units	Acceptance Limit %R	C	Sample Result	C	Spike Added	% Recovery	Qual	M

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Weston Solutions, Inc. **Level:** LOW **SDG No.:** Q3321

Contract: ROYF02 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q3327-02 **Client ID:** HADLEY-ROAD-TPDUP

Percent Solids for Sample: NA **Duplicate ID** Q3327-02DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	100	U	100	U			P
Barium	ug/L	20	1300		1200		8		P
Cadmium	ug/L	20	30.0	U	30.0	U			P
Chromium	ug/L	20	50.0	U	50.0	U			P
Lead	ug/L	20	45.2	J	43.3	J	4		P
Mercury	ug/L	20	2.00	U	2.00	U			CV
Selenium	ug/L	20	100	U	100	U			P
Silver	ug/L	20	50.0	U	50.0	U			P

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Weston Solutions, Inc. **Level:** LOW **SDG No.:** Q3321

Contract: ROYF02 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q3327-02MS **Client ID:** HADLEY-ROAD-TPMSD

Percent Solids for Sample: NA **Duplicate ID** Q3327-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	3980		3950		1		P
Barium	ug/L	20	2320		2250		3		P
Cadmium	ug/L	20	981		973		1		P
Chromium	ug/L	20	2090		2080		0		P
Lead	ug/L	20	4710		4670		1		P
Mercury	ug/L	20	47.4		38.6		20		CV
Selenium	ug/L	20	10100		9920		2		P
Silver	ug/L	20	348		352		1		P

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

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB170073BS							
Mercury	ug/L	4.0	4.20		105	80 - 120	CV

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB170074BS							
Arsenic	ug/L	4000	3840		96	80 - 120	P
Barium	ug/L	1000	966		97	80 - 120	P
Cadmium	ug/L	1000	947		95	80 - 120	P
Chromium	ug/L	2000	2070		104	80 - 120	P
Lead	ug/L	5000	4660		93	80 - 120	P
Selenium	ug/L	10000	9660		97	80 - 120	P
Silver	ug/L	380	366		96	80 - 120	P

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

HADLEY-ROAD-TPL

Lab Name: Alliance **Contract:** ROYF02

Lab Code: ACE **Lb No.:** lb137518 **Lab Sample ID :** Q3327-02L **SDG No.:** Q3321

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	100	U	500	U			P
Barium	1300		1370	J	5		P
Cadmium	30.0	U	150	U			P
Chromium	50.0	U	250	U			P
Lead	45.2	J	59.8	J	32		P
Mercury	2.00	U	10.0	U			CV
Selenium	100	U	500	U			P
Silver	50.0	U	250	U			P

METAL PREPARATION & INSTRUMENT DATA

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **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
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
Cadmium	226.502	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	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

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **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
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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0002870
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0003170	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

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ICP INTERELEMENT CORRECTION FACTORS

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **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
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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000070	0.0002200	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600
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

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **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
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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290
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

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **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
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
Cadmium	226.502	0.0000000	0.0000630	0.0001280	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0001110	0.0000000
Lead	220.353	0.0000000	-0.0003610	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

METAL PREPARATION & ANALYICAL SUMMARY

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Metals
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SAMPLE PREPARATION SUMMARY

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **Lab Code:** ACE **Method:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB170073**						
PB170062TB	PB170062TB	MB	WATER	10/13/2025	3.0	30.0	
PB170073BL	PB170073BL	MB	WATER	10/13/2025	30.0	30.0	
PB170073BS	PB170073BS	LCS	WATER	10/13/2025	30.0	30.0	
Q3321-02	P001-DS-01	SAM	WATER	10/13/2025	3.0	30.0	
Q3327-02DUP	HADLEY-ROAD-TPDUP	DUP	WATER	10/13/2025	3.0	30.0	
Q3327-02MS	HADLEY-ROAD-TPMS	MS	WATER	10/13/2025	3.0	30.0	
Q3327-02MSD	HADLEY-ROAD-TPMSD	MSD	WATER	10/13/2025	3.0	30.0	

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Metals
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SAMPLE PREPARATION SUMMARY

Client: Weston Solutions, Inc. **SDG No.:** Q3321

Contract: ROYF02 **Lab Code:** ACE **Method:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB170074**						
PB170062TB	PB170062TB	MB	WATER	10/13/2025	5.0	25.0	
PB170074BL	PB170074BL	MB	WATER	10/13/2025	5.0	25.0	
PB170074BS	PB170074BS	LCS	WATER	10/13/2025	5.0	25.0	
Q3321-02	P001-DS-01	SAM	WATER	10/13/2025	5.0	25.0	
Q3327-02DUP	HADLEY-ROAD-TPDUP	DUP	WATER	10/13/2025	5.0	25.0	
Q3327-02MS	HADLEY-ROAD-TPMS	MS	WATER	10/13/2025	5.0	25.0	
Q3327-02MSD	HADLEY-ROAD-TPMSD	MSD	WATER	10/13/2025	5.0	25.0	

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metals
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ANALYSIS RUN LOG

Client: Weston Solutions, Inc. **Contract:** ROYF02

Lab code: ACE **Sdg no.:** Q3321

Instrument id number: **Method:** **Run number:** LB137514

Start date: 10/14/2025 **End date:** 10/14/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1042	HG
S0.2	S0.2	1	1049	HG
S2.5	S2.5	1	1051	HG
S5	S5	1	1054	HG
S7.5	S7.5	1	1056	HG
S10	S10	1	1058	HG
ICV70	ICV70	1	1107	HG
ICB70	ICB70	1	1112	HG
CCV26	CCV26	1	1117	HG
CCB26	CCB26	1	1122	HG
CRA	CRA	1	1124	HG
PB170073BL	PB170073BL	1	1137	HG
PB170073BS	PB170073BS	1	1139	HG
Q3321-02	P001-DS-01	1	1141	HG
Q3327-02DUP	HADLEY-ROAD-TPDUP	1	1151	HG
CCV27	CCV27	1	1153	HG
CCB27	CCB27	1	1155	HG
Q3327-02MS	HADLEY-ROAD-TPMS	1	1157	HG
Q3327-02MSD	HADLEY-ROAD-TPMSD	1	1200	HG
CCV28	CCV28	1	1222	HG
CCB28	CCB28	1	1225	HG
PB170062TB	PB170062TB	1	1227	HG
Q3327-02L	HADLEY-ROAD-TPL	5	1229	HG
CCV29	CCV29	1	1238	HG
CCB29	CCB29	1	1241	HG

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metals
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ANALYSIS RUN LOG

Client: Weston Solutions, Inc. **Contract:** ROYF02

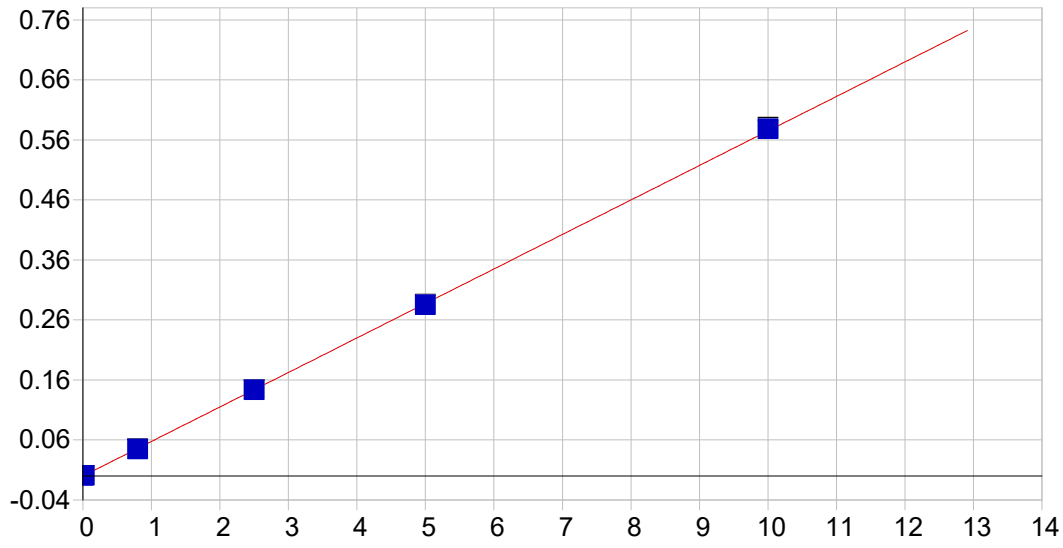
Lab code: ACE **Sdg no.:** Q3321

Instrument id number: **Method:** **Run number:** LB137518

Start date: 10/13/2025 **End date:** 10/13/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1212	Ag,As,Ba,Cd,Cr,Pb,Se
S1	S1	1	1217	Ag,As,Ba,Cd,Cr,Pb,Se
S2	S2	1	1221	Ag,As,Ba,Cd,Cr,Pb,Se
S3	S3	1	1225	Ag,As,Ba,Cd,Cr,Pb,Se
S4	S4	1	1229	Ag,As,Ba,Cd,Cr,Pb,Se
S5	S5	1	1233	Ag,As,Ba,Cd,Cr,Pb,Se
ICV01	ICV01	1	1246	Ag,As,Ba,Cd,Cr,Pb,Se
LLICV01	LLICV01	1	1251	Ag,As,Ba,Cd,Cr,Pb,Se
ICB01	ICB01	1	1255	Ag,As,Ba,Cd,Cr,Pb,Se
CRI01	CRI01	1	1300	Ag,As,Ba,Cd,Cr,Pb,Se
ICSA01	ICSA01	1	1304	Ag,As,Ba,Cd,Cr,Pb,Se
ICSAB01	ICSAB01	1	1308	Ag,As,Ba,Cd,Cr,Pb,Se
CCV01	CCV01	1	1321	Ag,As,Ba,Cd,Cr,Pb,Se
CCB01	CCB01	1	1325	Ag,As,Ba,Cd,Cr,Pb,Se
CCV02	CCV02	1	1418	Ag,As,Ba,Cd,Cr,Pb,Se
CCB02	CCB02	1	1422	Ag,As,Ba,Cd,Cr,Pb,Se
CCV03	CCV03	1	1604	Ag,As,Ba,Cd,Cr,Pb,Se
CCB03	CCB03	1	1608	Ag,As,Ba,Cd,Cr,Pb,Se
PB170074BL	PB170074BL	1	1654	Ag,As,Ba,Cd,Cr,Pb,Se
PB170074BS	PB170074BS	1	1658	Ag,As,Ba,Cd,Cr,Pb,Se
CCV04	CCV04	1	1702	Ag,As,Ba,Cd,Cr,Pb,Se
CCB04	CCB04	1	1706	Ag,As,Ba,Cd,Cr,Pb,Se
PB170062TB	PB170062TB	1	1720	Ag,As,Ba,Cd,Cr,Pb,Se
Q3321-02	P001-DS-01	1	1724	Ag,As,Ba,Cd,Cr,Pb,Se
Q3327-02DUP	HADLEY-ROAD-TPDUP	1	1742	Ag,As,Ba,Cd,Cr,Pb,Se
Q3327-02L	HADLEY-ROAD-TPL	5	1746	Ag,As,Ba,Cd,Cr,Pb,Se
Q3327-02MS	HADLEY-ROAD-TPMS	1	1751	Ag,As,Ba,Cd,Cr,Pb,Se
Q3327-02MSD	HADLEY-ROAD-TPMSD	1	1755	Ag,As,Ba,Cd,Cr,Pb,Se
CCV05	CCV05	1	1811	Ag,As,Ba,Cd,Cr,Pb,Se
CCB05	CCB05	1	1815	Ag,As,Ba,Cd,Cr,Pb,Se
CCV06	CCV06	1	1856	Ag,As,Ba,Cd,Cr,Pb,Se
CCB06	CCB06	1	1901	Ag,As,Ba,Cd,Cr,Pb,Se
CCV07	CCV07	1	1946	Ag,As,Ba,Cd,Cr,Pb,Se
CCB07	CCB07	1	1950	Ag,As,Ba,Cd,Cr,Pb,Se

METAL
RAW DATA

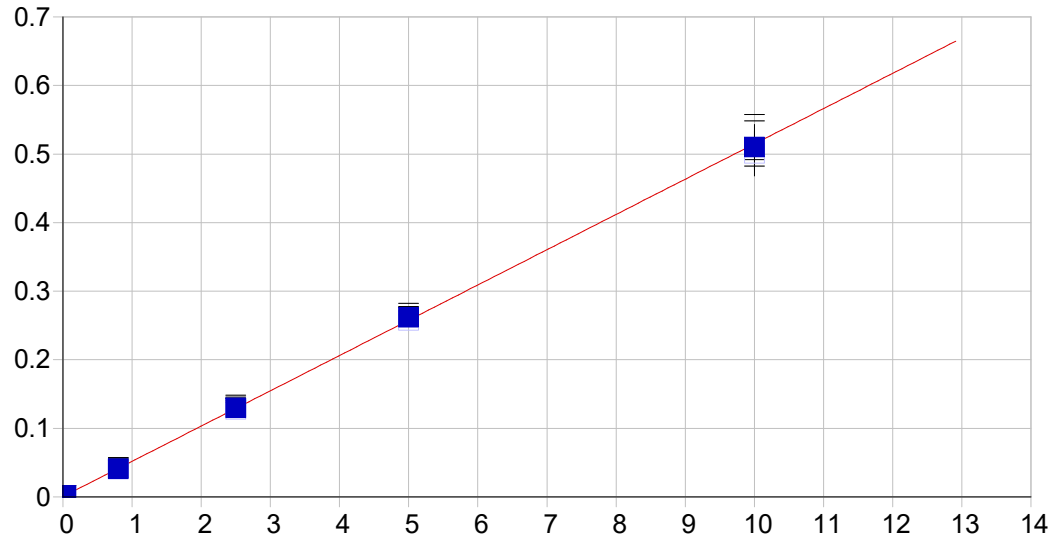


As 189.042 {479}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000009	Re-Slope:	1.000000
A1 (Gain):	0.057484	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999962	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	0.002363		
Predicted MQL:	0.007875		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00001	.000	1
S1	.02000	.02123	.001	6.13	.00122	.000	1
S3	2.5000	2.4951	-.005	-.197	.14329	.001	1
S4	5.0000	4.9646	-.035	-.708	.28510	.001	1
S5	10.000	10.062	.062	.622	.57783	.003	1
S2	.80000	.77695	-.023	-2.88	.04462	.000	1

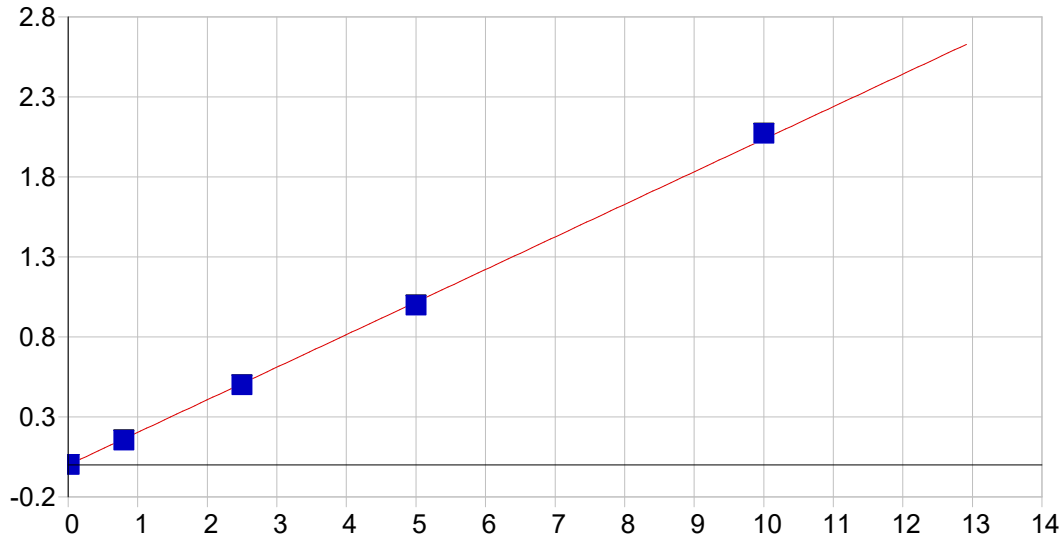


Tl 190.856 {477}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000434	Re-Slope:	1.000000
A1 (Gain):	0.051438	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999928	Status:	OK.
Std Error of Est:	0.000020		
Predicted MDL:	0.002900		
Predicted MQL:	0.009667		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00043	.000	1
S1	.04000	.04338	.003	8.45	.00253	.000	1
S3	2.5000	2.5163	.016	.651	.12752	.004	1
S4	5.0000	5.0788	.079	1.58	.25699	.006	1
S5	10.000	9.9119	-.088	-.881	.50090	.033	1
S2	.80000	.78981	-.010	-1.27	.04031	.002	1

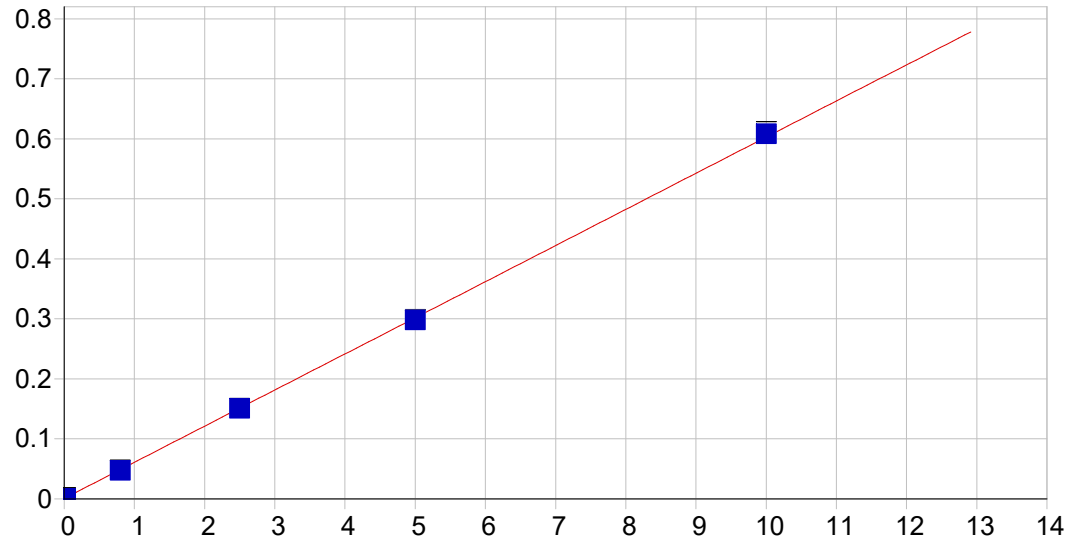


Pb 220.353 {453}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000129	Re-Slope:	1.000000
A1 (Gain):	0.203551	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999777	Status:	OK.
Std Error of Est:	0.000078		
Predicted MDL:	0.001257		
Predicted MQL:	0.004191		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00013	.000	1
S1	.01200	.01165	-.000	-2.88	.00219	.000	1
S3	2.5000	2.4536	-.046	-1.86	.49873	.001	1
S4	5.0000	4.9027	-.097	-1.95	.99670	.002	1
S5	10.000	10.184	.184	1.84	2.0706	.002	1
S2	.80000	.75988	-.040	-5.01	.15437	.001	1

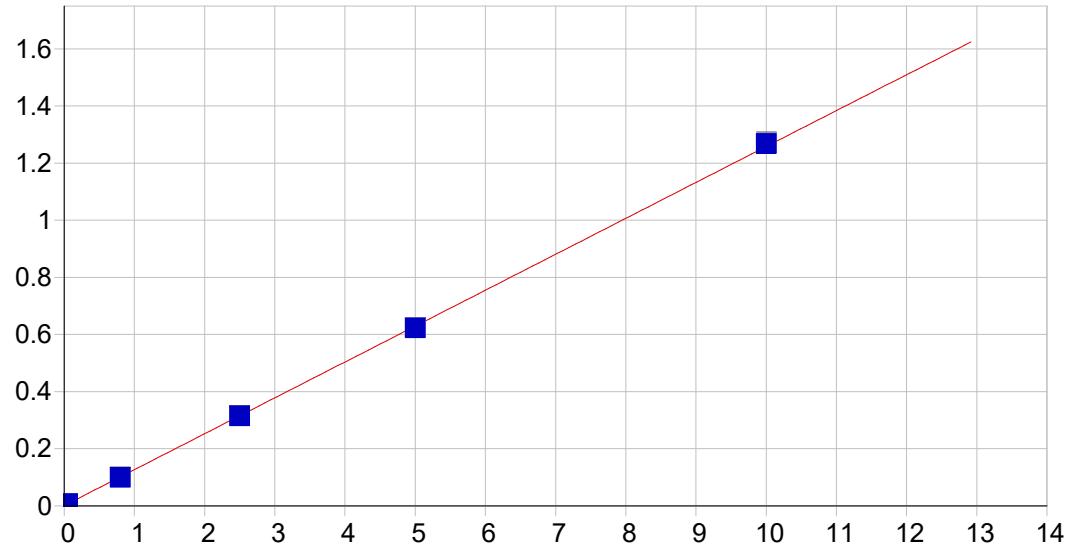


Se 196.090 {472}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000728	Re-Slope:	1.000000
A1 (Gain):	0.060201	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999941	Status:	OK.
Std Error of Est:	0.000015		
Predicted MDL:	0.002882		
Predicted MQL:	0.009606		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00073	.000	1
S1	.02000	.01831	-.002	-8.43	.00183	.000	1
S3	2.5000	2.4900	-.010	-.400	.15059	.000	1
S4	5.0000	4.9419	-.058	-1.16	.29815	.001	1
S5	10.000	10.090	.090	.900	.60798	.004	1
S2	.80000	.77984	-.020	-2.52	.04766	.000	1

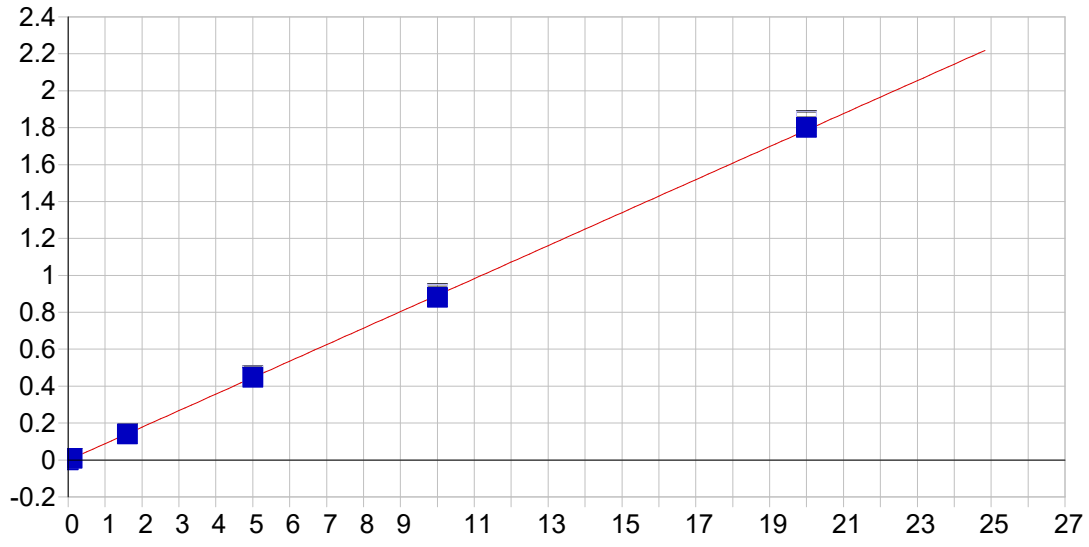


Sb 206.833 {463}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001100	Re-Slope:	1.000000
A1 (Gain):	0.125698	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999956	Status:	OK.
Std Error of Est:	0.000044		
Predicted MDL:	0.001761		
Predicted MQL:	0.005870		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00110	.000	1
S1	.05000	.05132	.001	2.63	.00756	.000	1
S3	2.5000	2.4930	-.007	-.280	.31532	.000	1
S4	5.0000	4.9429	-.057	-1.14	.62413	.000	1
S5	10.000	10.078	.078	.783	1.2713	.003	1
S2	.80000	.78451	-.015	-1.94	.09999	.001	1

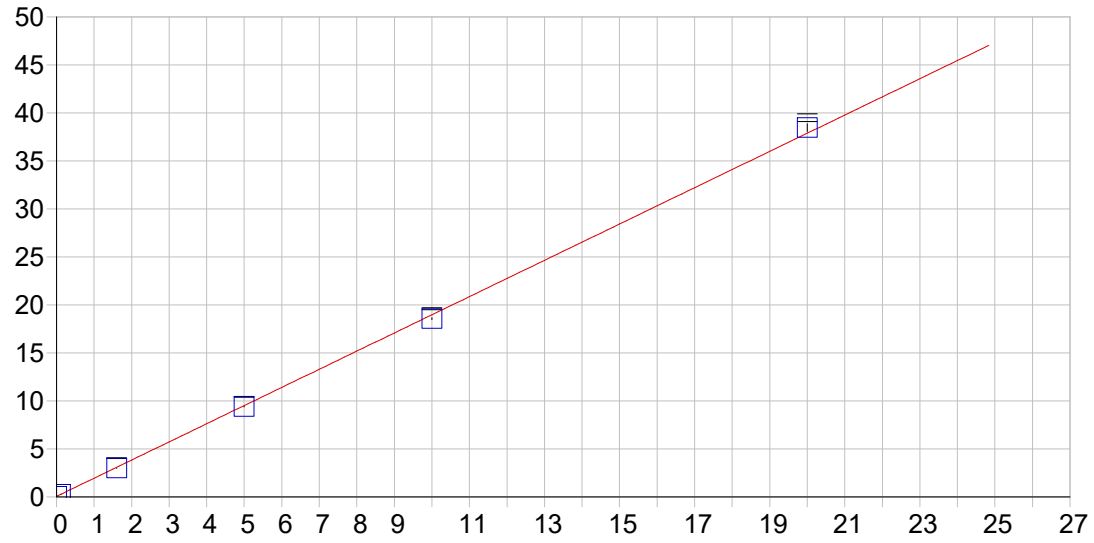


Al 396.152 { 85}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000896	Re-Slope:	1.000000
A1 (Gain):	0.089381	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999943	Status:	OK.
Std Error of Est:	0.000072		
Predicted MDL:	0.010944		
Predicted MQL:	0.036481		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00090	.001	1
S1	.10000	.10572	.006	5.72	.00925	.001	1
S3	5.0000	5.0119	.012	.237	.45574	.001	1
S4	10.000	9.8570	-.143	-1.43	.89747	.003	1
S5	20.000	20.158	.158	.792	1.8356	.004	1
S2	1.6000	1.5667	-.033	-2.08	.14191	.002	1

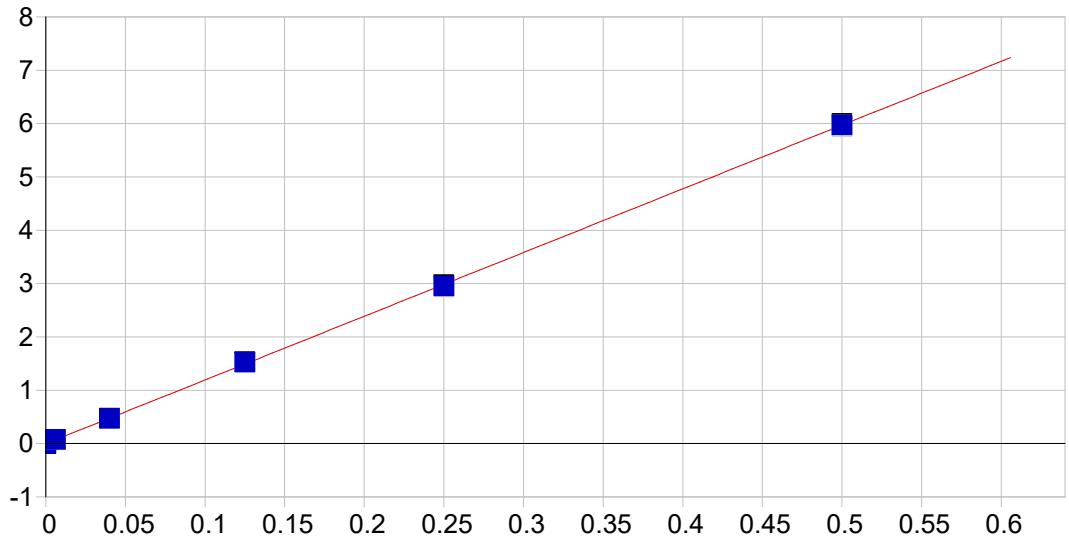


Ba 493.409 { 68}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.056929	Re-Slope:	1.000000
A1 (Gain):	1.891427	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999847	Status:	OK.
Std Error of Est:	0.002455		
Predicted MDL:	0.001380		
Predicted MQL:	0.004598		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.05693	.003	1
S1	.10000	.10477	.005	4.77	.25509	.002	1
S3	5.0000	4.9467	-.053	-1.07	9.4132	.034	1
S4	10.000	9.7888	-.211	-2.11	18.572	.094	1
S5	20.000	20.306	.306	1.53	38.464	.395	1
S2	1.6000	1.5541	-.046	-2.87	2.9965	.021	1

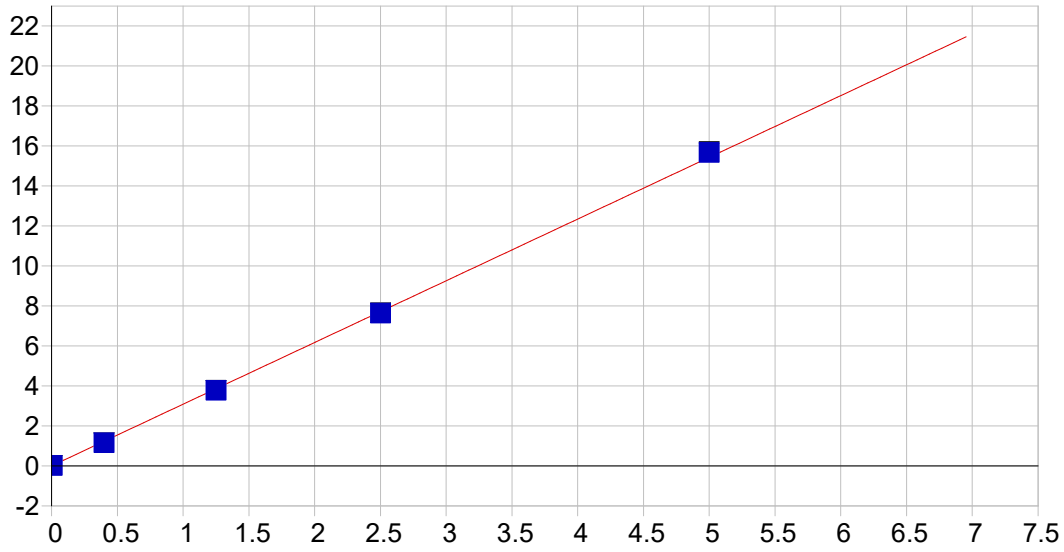


Be 234.861 {144}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002658	Re-Slope:	1.000000
A1 (Gain):	11.948727	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999936	Status:	OK.
Std Error of Est:	0.000388		
Predicted MDL:	0.000052		
Predicted MQL:	0.000172		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00266	.000	1
S1	.00600	.00638	.000	6.25	.07298	.000	1
S3	.12500	.12775	.003	2.20	1.5171	.010	1
S4	.25000	.24720	-.003	-1.12	2.9377	.027	1
S5	.50000	.49995	-.000	-.009	5.9444	.033	1
S2	.04000	.03972	-.000	-.702	.46979	.002	1

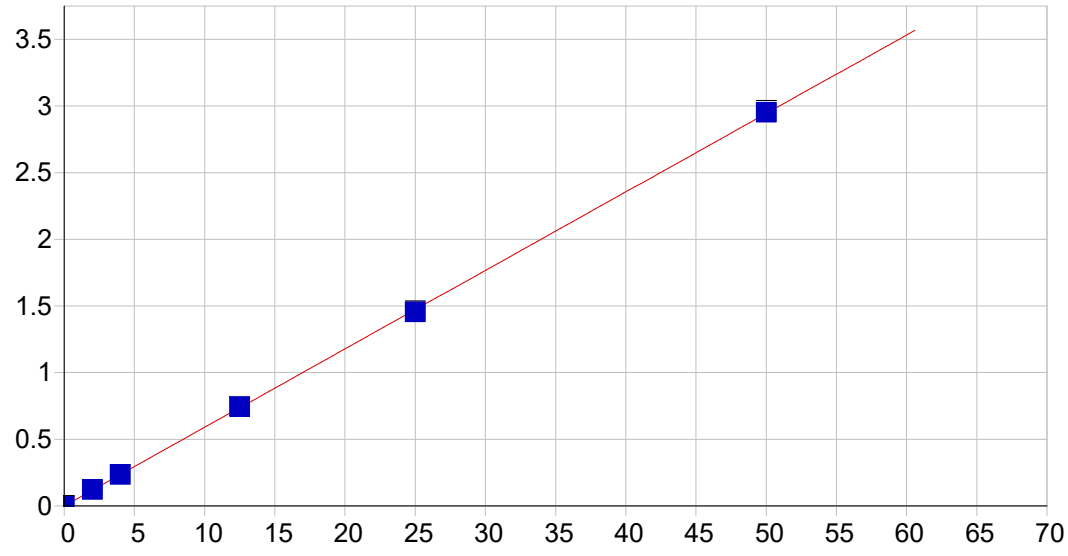


Cd 226.502 {449}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000286	Re-Slope:	1.000000
A1 (Gain):	3.087493	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999807	Status:	OK.
Std Error of Est:	0.000550		
Predicted MDL:	0.000070		
Predicted MQL:	0.000233		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00028	.000	1
S1	.00600	.00580	-.000	-3.26	.01770	.000	1
S3	1.2500	1.2234	-.027	-2.13	3.7796	.003	1
S4	2.5000	2.4744	-.026	-1.02	7.6445	.020	1
S5	5.0000	5.0770	.077	1.54	15.685	.025	1
S2	.40000	.37537	-.025	-6.16	1.1595	.002	1

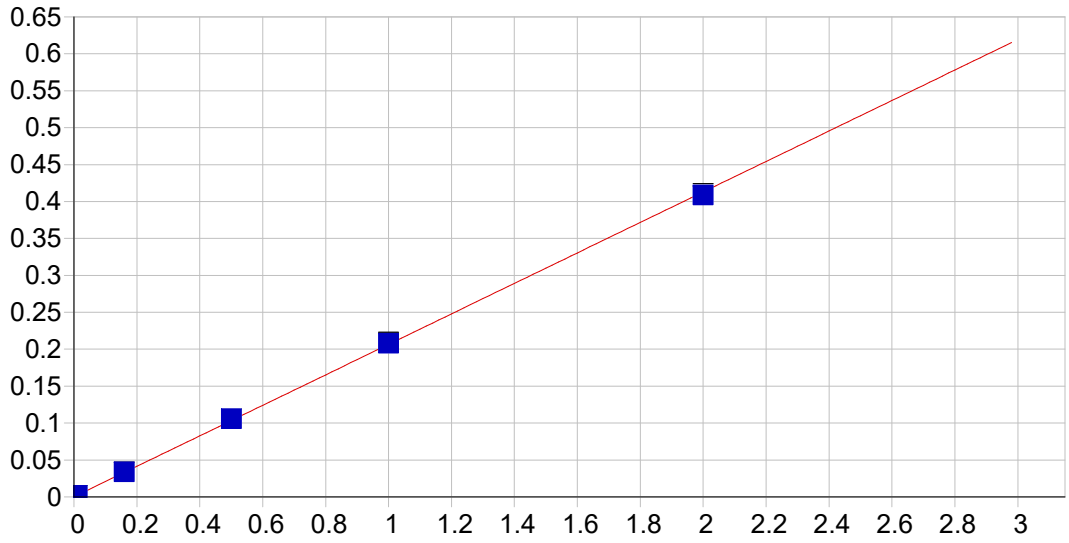


Ca 373.690 { 90}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000976	Re-Slope:	1.000000
A1 (Gain):	0.058865	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999955	Status:	OK.
Std Error of Est:	0.000294		
Predicted MDL:	0.013040		
Predicted MQL:	0.043468		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00006	-.000	.000	.00097	.001	1
S2	4.0000	3.9631	-.037	-.922	.23427	.001	1
S3	12.500	12.621	.121	.969	.74392	.003	1
S4	25.000	24.708	-.292	-1.17	1.4554	.006	1
S5	50.000	50.129	.129	.258	2.9518	.016	1
S1	2.0000	2.0787	.079	3.93	.12334	.000	1

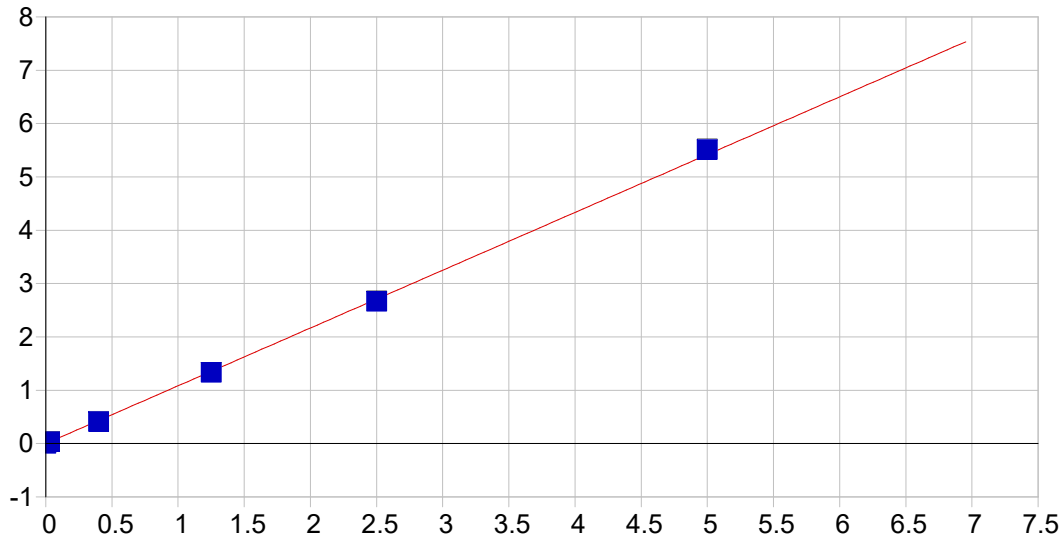


Cr 267.716 {126}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000173	Re-Slope:	1.000000
A1 (Gain):	0.206395	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999920	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	0.000415		
Predicted MQL:	0.001383		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00017	.000	1
S1	.01000	.01020	.000	1.98	.00228	.000	1
S3	.50000	.51235	.012	2.47	.10600	.000	1
S4	1.0000	1.0063	.006	.634	.20804	.002	1
S5	2.0000	1.9792	-.021	-1.04	.40901	.002	1
S2	.16000	.16188	.002	1.18	.03361	.000	1

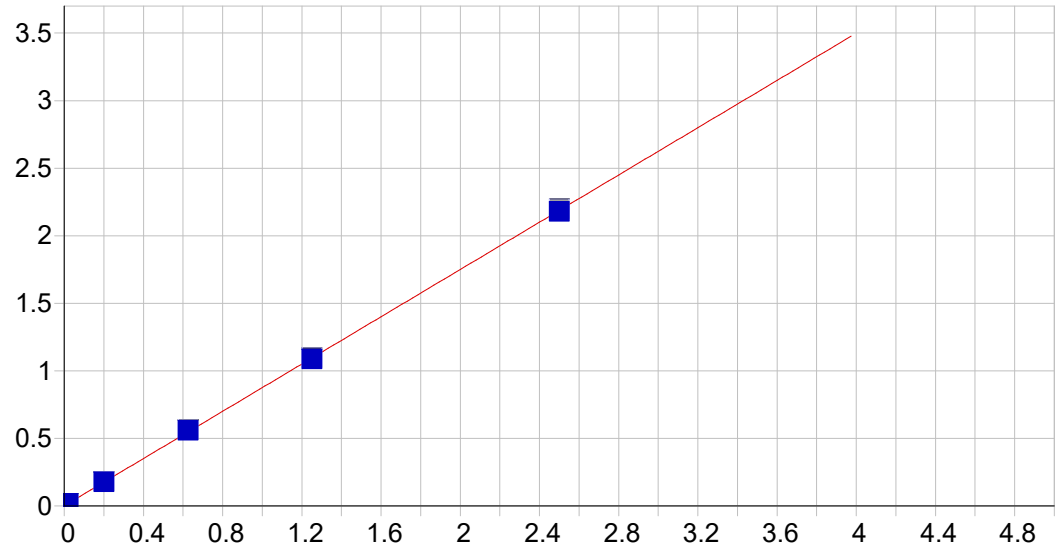


Co 228.616 {448}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000128	Re-Slope:	1.000000
A1 (Gain):	1.083586	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999813	Status:	OK.
Std Error of Est:	0.000426		
Predicted MDL:	0.000177		
Predicted MQL:	0.000591		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00013	.000	1
S1	.03000	.02968	-.000	-1.06	.03190	.000	1
S3	1.2500	1.2286	-.021	-1.71	1.3335	.002	1
S4	2.5000	2.4579	-.042	-1.68	2.6678	.005	1
S5	5.0000	5.0835	.084	1.67	5.5175	.005	1
S2	.40000	.38028	-.020	-4.93	.41267	.001	1

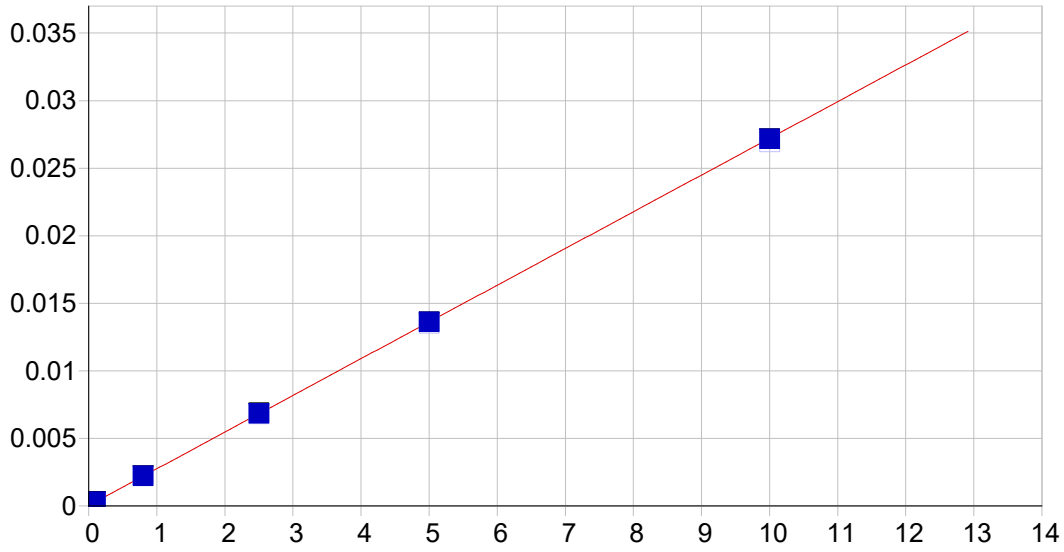


Cu 224.700 {450}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000878	Re-Slope:	1.000000
A1 (Gain):	0.874703	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999935	Status:	OK.
Std Error of Est:	0.000118		
Predicted MDL:	0.000382		
Predicted MQL:	0.001274		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00088	.000	1
S1	.02000	.02188	.002	9.38	.02021	.000	1
S3	.62500	.63895	.014	2.23	.56432	.001	1
S4	1.2500	1.2418	-.008	-.656	1.0962	.002	1
S5	2.5000	2.4902	-.010	-.391	2.1973	.003	1
S2	.20000	.20214	.002	1.07	.17915	.000	1

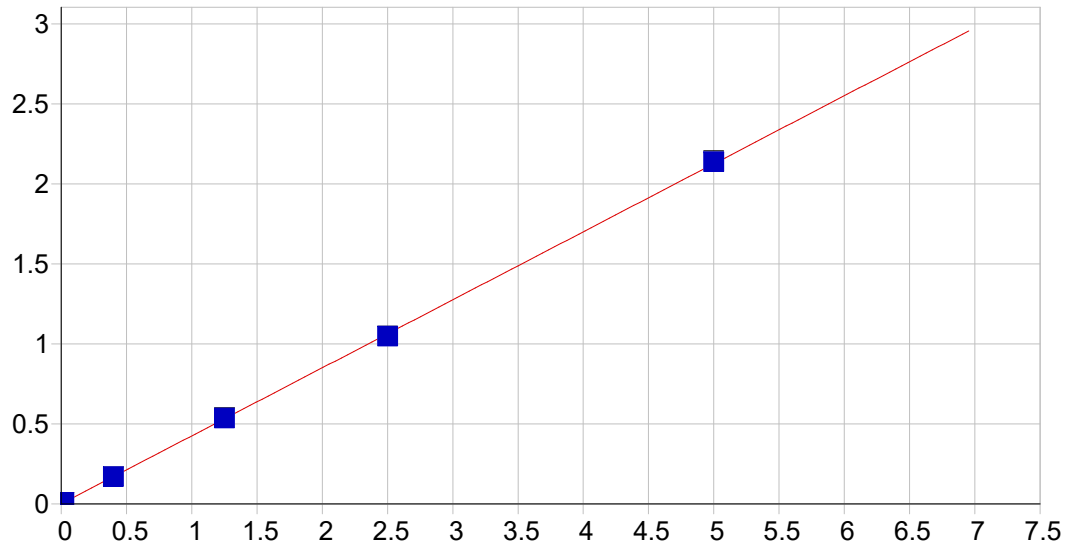


Fe 240.488 {140}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000028	Re-Slope:	1.000000
A1 (Gain):	0.002718	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999994	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.009959		
Predicted MQL:	0.033198		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00003	.000	1
S1	.10000	.09897	-.001	-1.03	.00029	.000	1
S3	2.5000	2.5126	.013	.506	.00680	.000	1
S4	5.0000	4.9970	-.003	-.060	.01349	.000	1
S5	10.000	9.9815	-.019	-.185	.02693	.000	1
S2	.80000	.80991	.010	1.24	.00221	.000	1

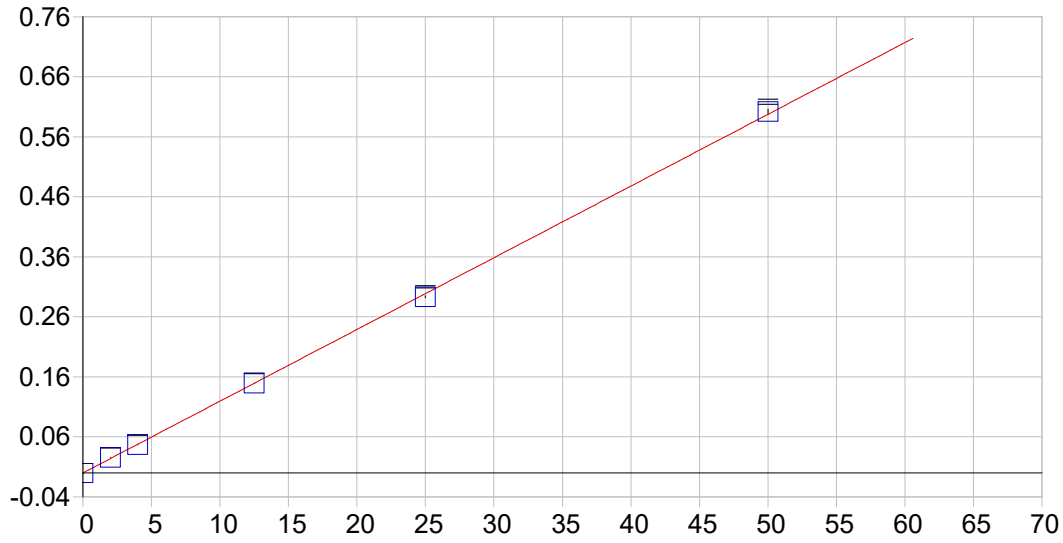


Mn 257.610 {131}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000258	Re-Slope:	1.000000
A1 (Gain):	0.424978	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999950	Status:	OK.
Std Error of Est:	0.000071		
Predicted MDL:	0.000653		
Predicted MQL:	0.002176		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00026	.000	1
S1	.02000	.02153	.002	7.63	.00941	.000	1
S3	1.2500	1.2600	.010	.804	.53586	.003	1
S4	2.5000	2.4624	-.038	-1.50	1.0469	.002	1
S5	5.0000	5.0277	.028	.554	2.1374	.005	1
S2	.40000	.39832	-.002	-.421	.16957	.001	1

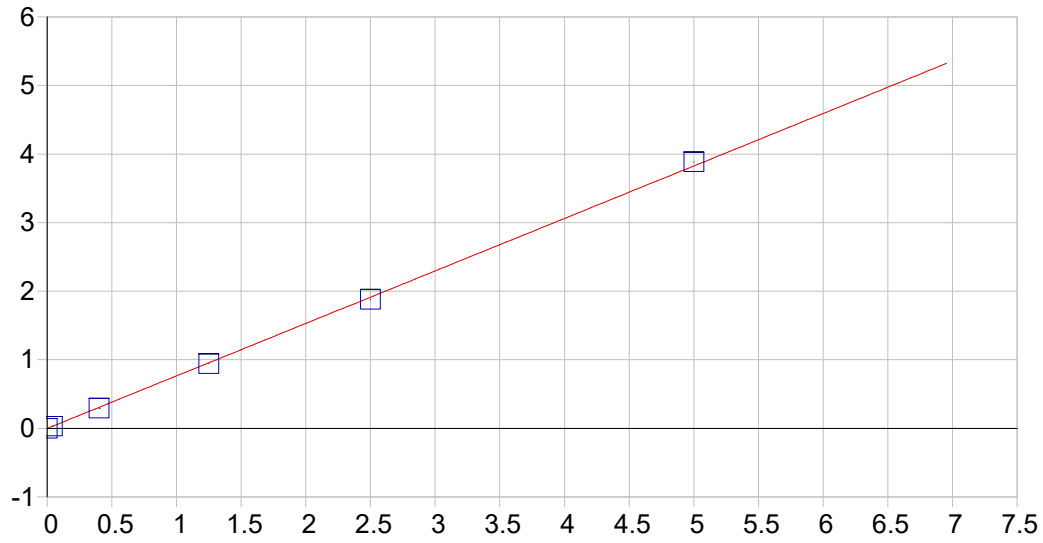


Mg 279.079 {121}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000065	Re-Slope:	1.000000
A1 (Gain):	0.011951	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999891	Status:	OK.
Std Error of Est:	0.000093		
Predicted MDL:	0.029757		
Predicted MQL:	0.099190		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00007	-.000	.000	-.00007	.000	1
S2	4.0000	3.9260	-.074	-1.85	.04686	.000	1
S3	12.500	12.508	.008	.066	.14942	.001	1
S4	25.000	24.554	-.446	-1.78	.29338	.002	1
S5	50.000	50.385	.385	.770	.60209	.004	1
S1	2.0000	2.1272	.127	6.36	.02536	.000	1

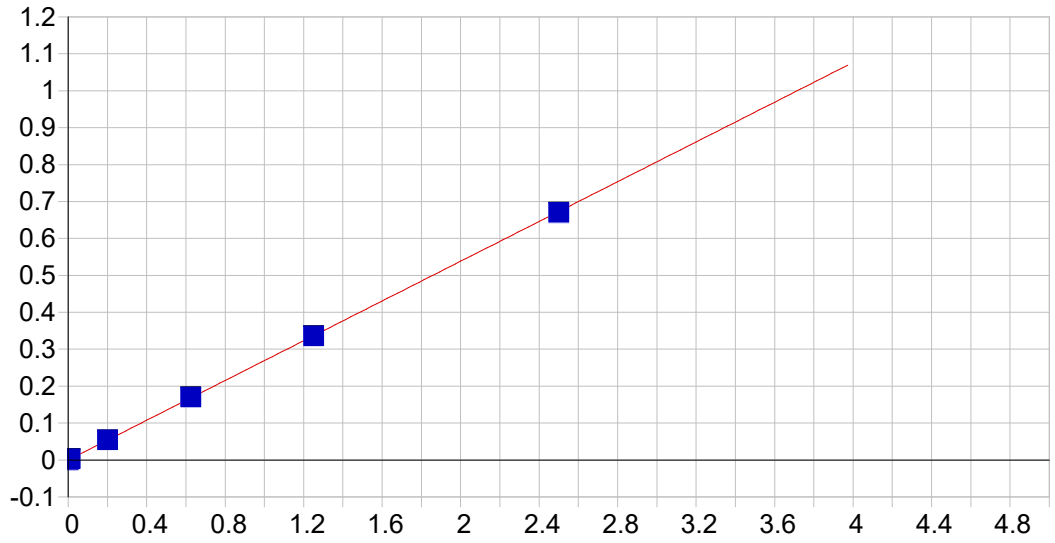


Ni 231.604 {446}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000685	Re-Slope:	1.000000
A1 (Gain):	0.765370	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999845	Status:	OK.
Std Error of Est:	0.000317		
Predicted MDL:	0.000282		
Predicted MQL:	0.000941		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00068	.000	1
S1	.04000	.03960	-.000	-1.00	.02962	.000	1
S3	1.2500	1.2331	-.017	-1.35	.94308	.002	1
S4	2.5000	2.4586	-.041	-1.66	1.8811	.003	1
S5	5.0000	5.0763	.076	1.53	3.8846	.003	1
S2	.40000	.38240	-.018	-4.40	.29199	.000	1

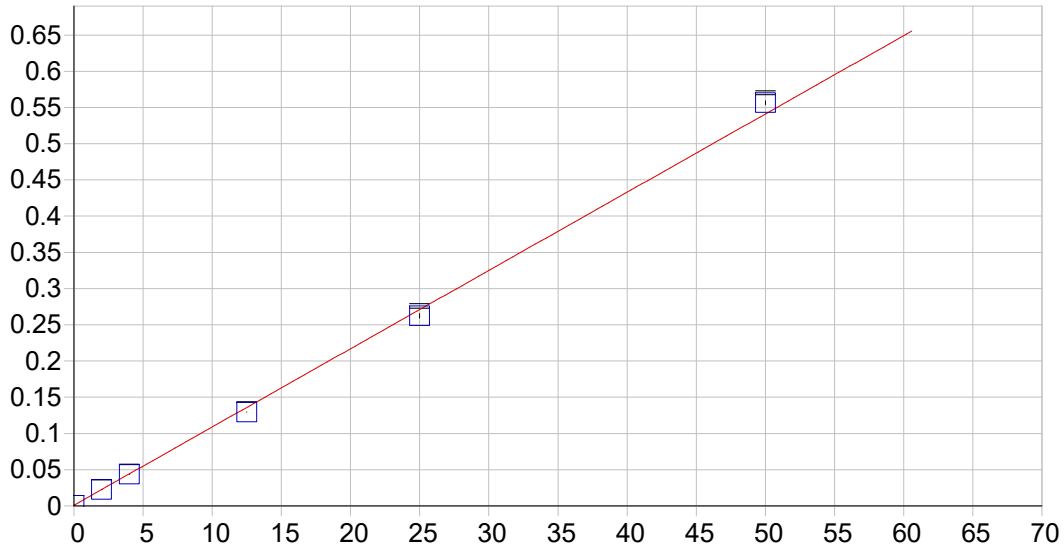


Ag 328.068 {103}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000045	Re-Slope:	1.000000
A1 (Gain):	0.269181	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999980	Status:	OK.
Std Error of Est:	0.000014		
Predicted MDL:	0.000519		
Predicted MQL:	0.001729		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00005	.000	1
S1	.01000	.01025	.000	2.54	.00270	.000	1
S3	.62500	.63325	.008	1.32	.16973	.000	1
S4	1.2500	1.2492	-.001	-.066	.33485	.001	1
S5	2.5000	2.4900	-.010	-.400	.66749	.001	1
S2	.20000	.20232	.002	1.16	.05420	.000	1

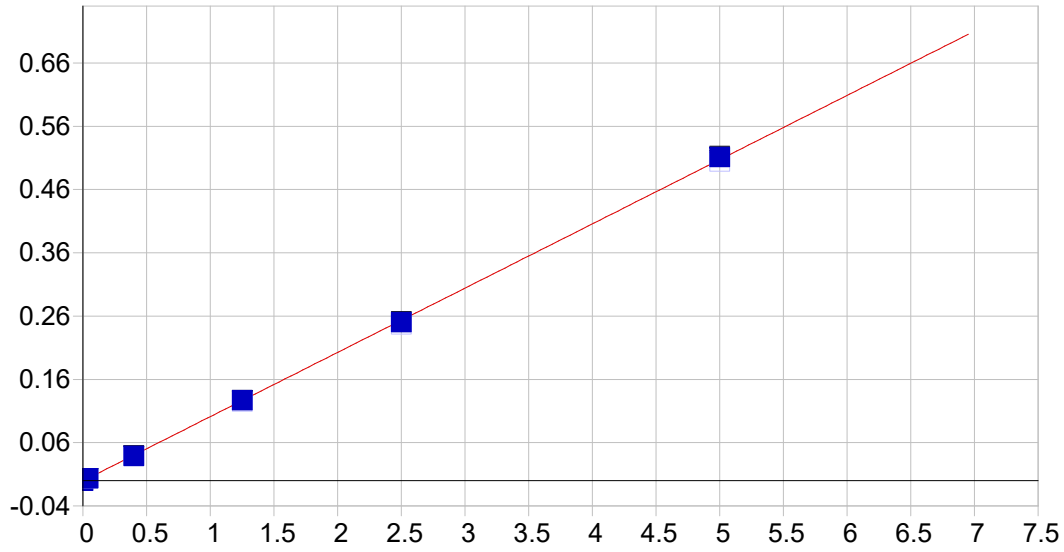


Na 589.592 { 57}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000940	Re-Slope:	1.000000
A1 (Gain):	0.010802	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999493	Status:	OK.
Std Error of Est:	0.000182		
Predicted MDL:	0.018867		
Predicted MQL:	0.062890		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00013	.000	.000	.00094	.000	1
S2	4.0000	3.9454	-.055	-1.37	.04356	.000	1
S3	12.500	11.912	-.588	-4.71	.12962	.000	1
S4	25.000	24.210	-.790	-3.16	.26247	.003	1
S5	50.000	51.441	1.44	2.88	.55663	.003	1
S1	2.0000	1.9921	-.008	-.397	.02246	.000	1

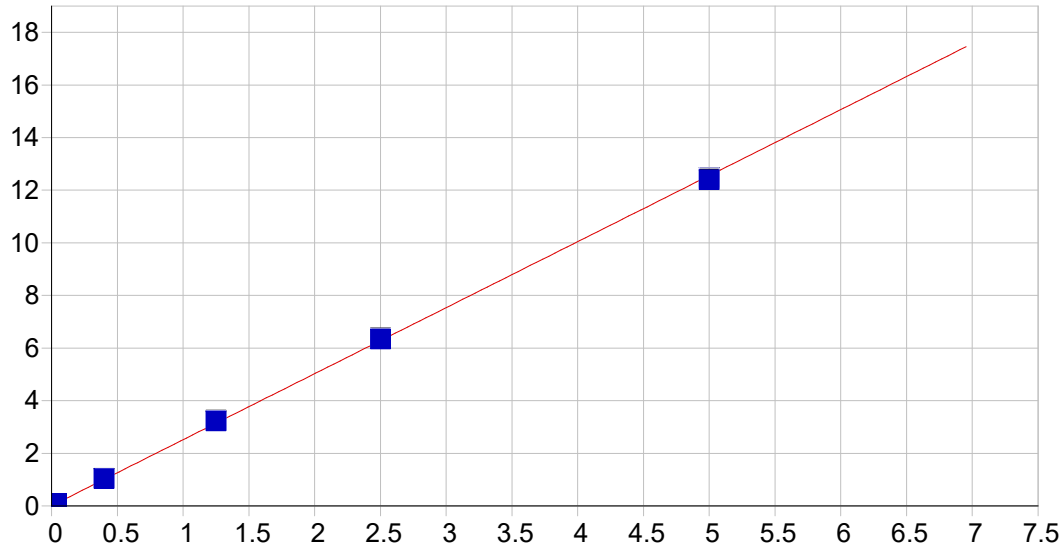


V 292.402 {115}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000444	Re-Slope:	1.000000
A1 (Gain):	0.101540	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999938	Status:	OK.
Std Error of Est:	0.000026		
Predicted MDL:	0.003926		
Predicted MQL:	0.013085		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00044	.000	1
S1	.04000	.03912	-.001	-2.19	.00338	.000	1
S3	1.2500	1.2530	.003	.243	.12494	.000	1
S4	2.5000	2.4693	-.031	-1.23	.24659	.001	1
S5	5.0000	5.0407	.041	.815	.50399	.001	1
S2	.40000	.38775	-.012	-3.06	.03834	.001	1

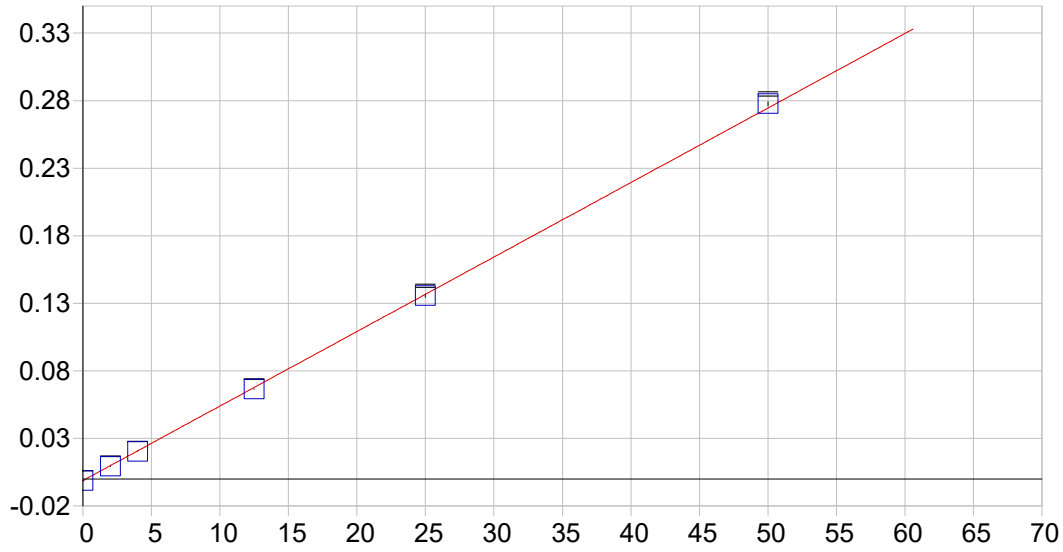


Zn 213.856 {158}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005979	Re-Slope:	1.000000
A1 (Gain):	2.509806	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999883	Status:	OK.
Std Error of Est:	0.000906		
Predicted MDL:	0.000232		
Predicted MQL:	0.000773		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00597	.000	1
S1	.04000	.04204	.002	5.09	.11218	.001	1
S3	1.2500	1.2810	.031	2.48	3.2430	.018	1
S4	2.5000	2.5207	.021	.830	6.3762	.015	1
S5	5.0000	4.9354	-.065	-1.29	12.480	.001	1
S2	.40000	.41081	.011	2.70	1.0440	.002	1

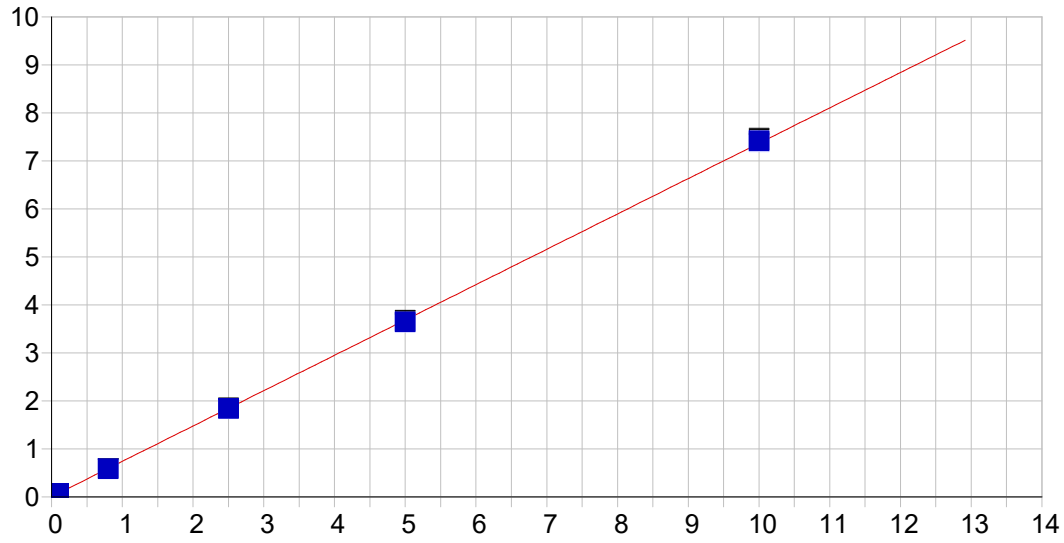


K 766.490 { 44}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001244	Re-Slope:	1.000000
A1 (Gain):	0.005516	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999904	Status:	OK.
Std Error of Est:	0.000040		
Predicted MDL:	0.044137		
Predicted MQL:	0.147122		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00016	.000	.000	-.00124	.000	1
S2	4.0000	3.9122	-.088	-2.20	.02033	.000	1
S3	12.500	12.275	-.225	-1.80	.06646	.000	1
S4	25.000	24.819	-.181	-.724	.13565	.001	1
S5	50.000	50.582	.582	1.16	.27775	.002	1
S1	2.0000	1.9123	-.088	-4.38	.00930	.000	1

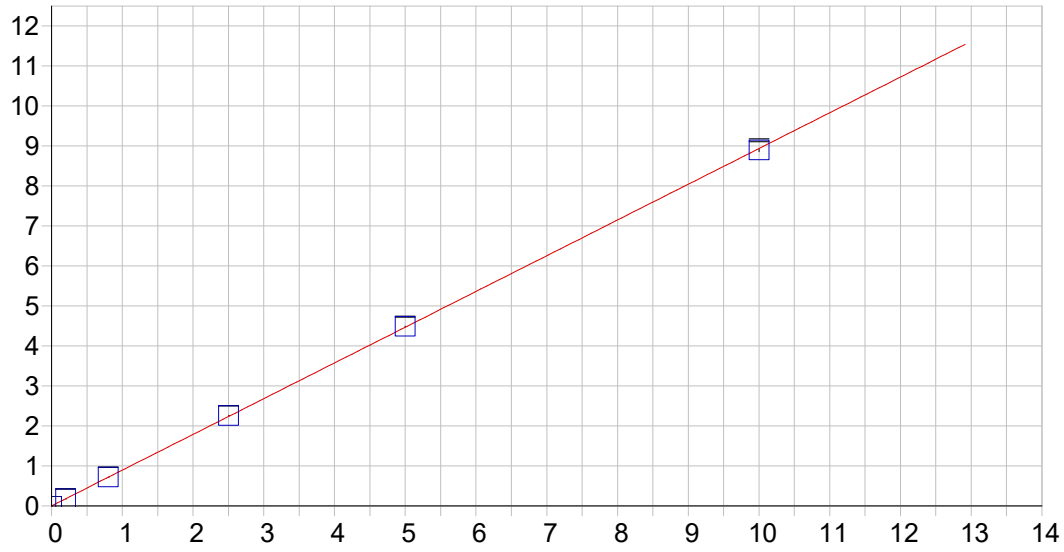


B 249.678 {135}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004218	Re-Slope:	1.000000
A1 (Gain):	0.736384	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999966	Status:	OK.
Std Error of Est:	0.000315		
Predicted MDL:	0.000810		
Predicted MQL:	0.002701		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00422	.000	1
S1	.10000	.10184	.002	1.84	.07877	.000	1
S3	2.5000	2.4915	-.009	-.340	1.8323	.013	1
S4	5.0000	4.9503	-.050	-.993	3.6363	.034	1
S5	10.000	10.069	.069	.688	7.3922	.053	1
S2	.80000	.78752	-.012	-1.56	.58201	.004	1

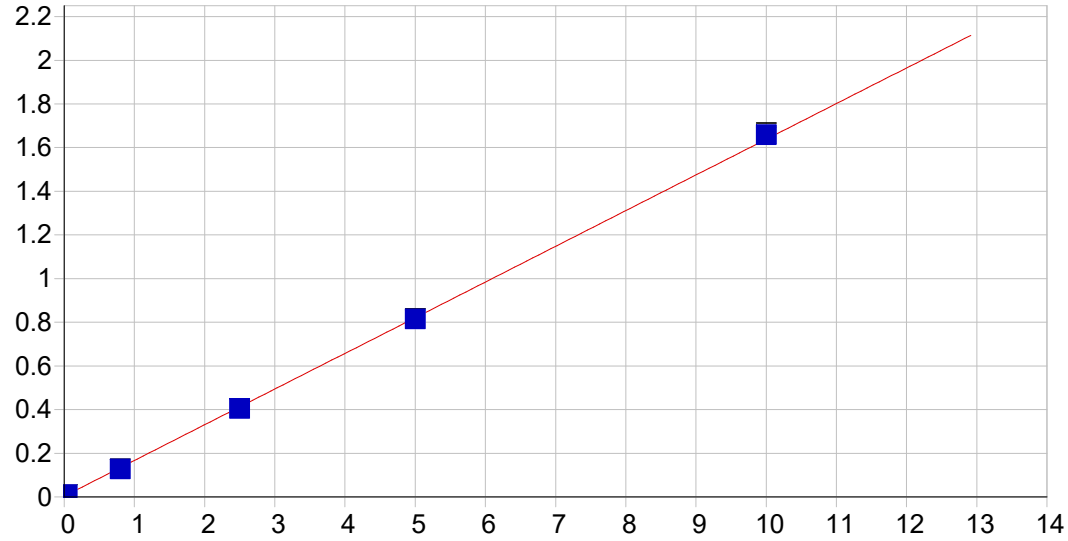


Mo 202.030 {467}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000659	Re-Slope:	1.000000
A1 (Gain):	0.893716	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000348		
Predicted MDL:	0.000237		
Predicted MQL:	0.000790		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00066	.000	1
S1	.20000	.19929	-.001	-.354	.17877	.000	1
S3	2.5000	2.5224	.022	.896	2.2550	.001	1
S4	5.0000	5.0197	.020	.394	4.4869	.012	1
S5	10.000	9.9546	-.045	-.454	8.8973	.036	1
S2	.80000	.80394	.004	.493	.71916	.002	1

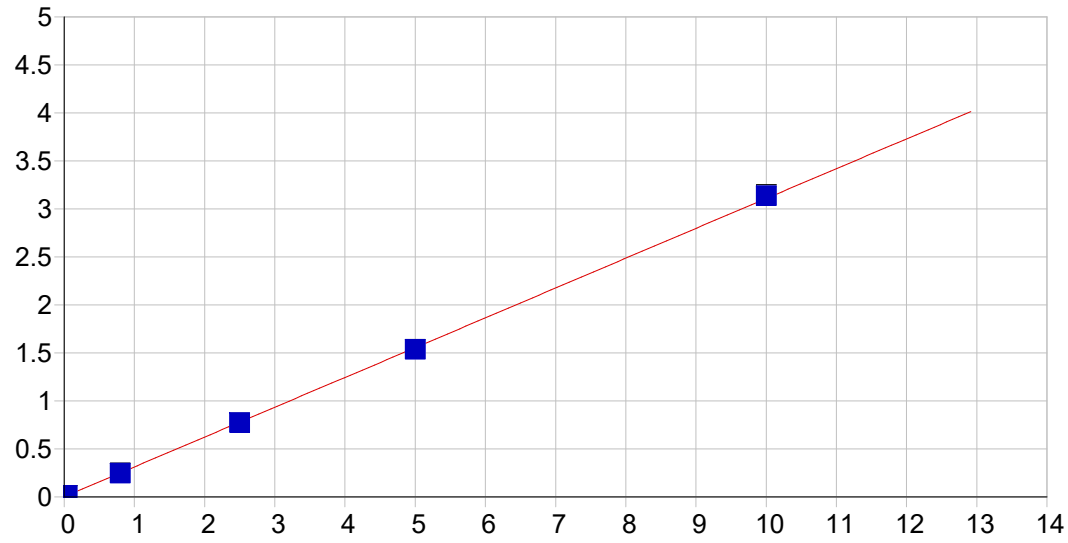


Sn 189.989 {478}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003409	Re-Slope:	1.000000
A1 (Gain):	0.163467	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999863	Status:	OK.
Std Error of Est:	0.000090		
Predicted MDL:	0.000571		
Predicted MQL:	0.001903		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00341	.000	1
S1	.04000	.03886	-.001	-2.86	.00975	.000	1
S3	2.5000	2.4528	-.047	-1.89	.40394	.000	1
S4	5.0000	4.9617	-.038	-.767	.81364	.003	1
S5	10.000	10.128	.128	1.28	1.6574	.010	1
S2	.80000	.75835	-.042	-5.21	.12724	.000	1

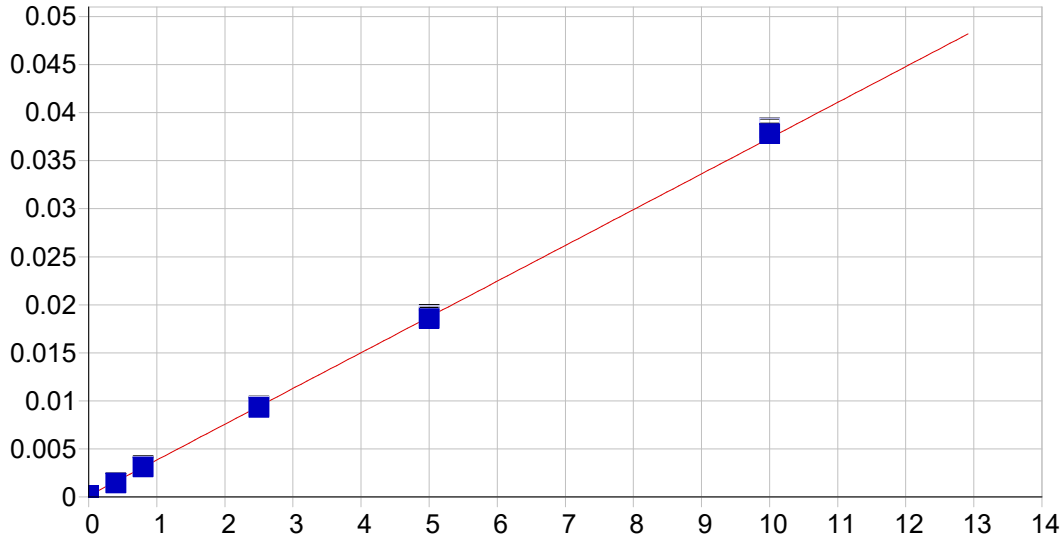


Ti 336.121 {100}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001879	Re-Slope:	1.000000
A1 (Gain):	0.310600	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999944	Status:	OK.
Std Error of Est:	0.000109		
Predicted MDL:	0.001778		
Predicted MQL:	0.005927		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00188	.001	1
S1	.04000	.03813	-.002	-4.69	.01371	.000	1
S3	2.5000	2.4820	-.018	-.720	.77251	.001	1
S4	5.0000	4.9389	-.061	-1.22	1.5353	.002	1
S5	10.000	10.094	.094	.942	3.1360	.010	1
S2	.80000	.78686	-.013	-1.64	.24619	.001	1

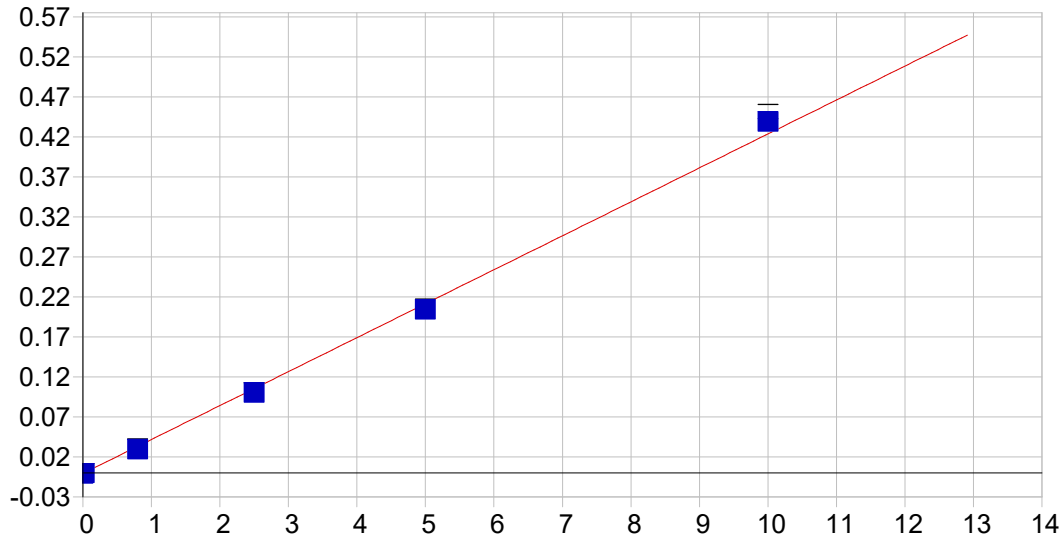


Si 288.158 {117}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000117	Re-Slope:	1.000000
A1 (Gain):	0.003723	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999791	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	0.013684		
Predicted MQL:	0.045614		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00005	.000	.000	.00012	.000	1
S1	.40000	.35243	-.048	-11.9	.00143	.000	1
S3	2.5000	2.4646	-.035	-1.42	.00943	.000	1
S4	5.0000	4.9561	-.044	-.878	.01885	.000	1
S5	10.000	10.122	.122	1.22	.03836	.000	1
S2	.80000	.80460	.005	.575	.00316	.000	1

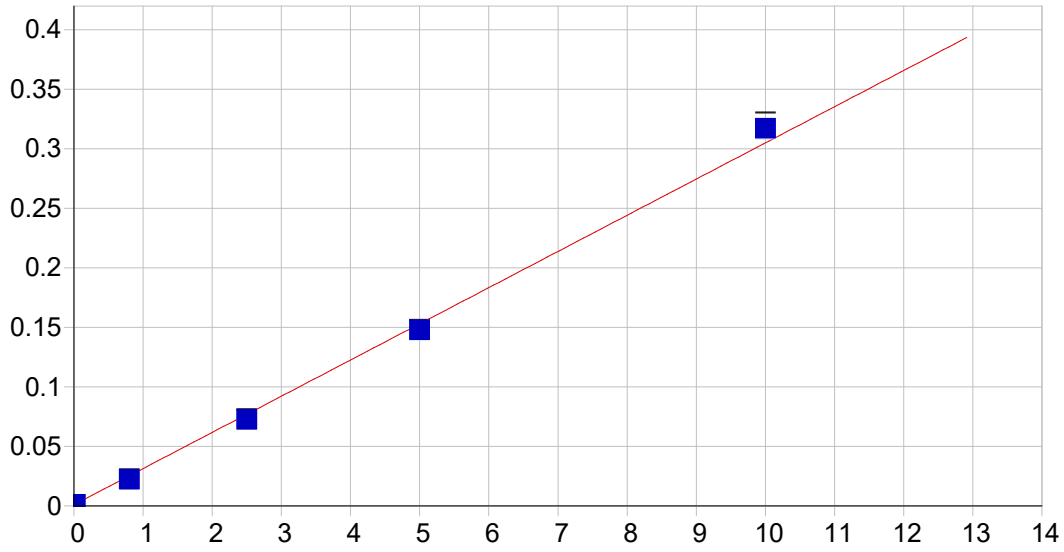


P 177.495 {490}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000734	Re-Slope:	1.000000
A1 (Gain):	0.042429	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999085	Status:	OK.
Std Error of Est:	0.000043		
Predicted MDL:	0.001705		
Predicted MQL:	0.005684		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00073	.000	1
S1	.02000	.01801	-.002	-9.96	.00003	.000	1
S3	2.5000	2.3818	-.118	-4.73	.10031	.000	1
S4	5.0000	4.8332	-.167	-3.34	.20430	.000	1
S5	10.000	10.370	.370	3.70	.43918	.009	1
S2	.80000	.71736	-.083	-10.3	.02970	.000	1

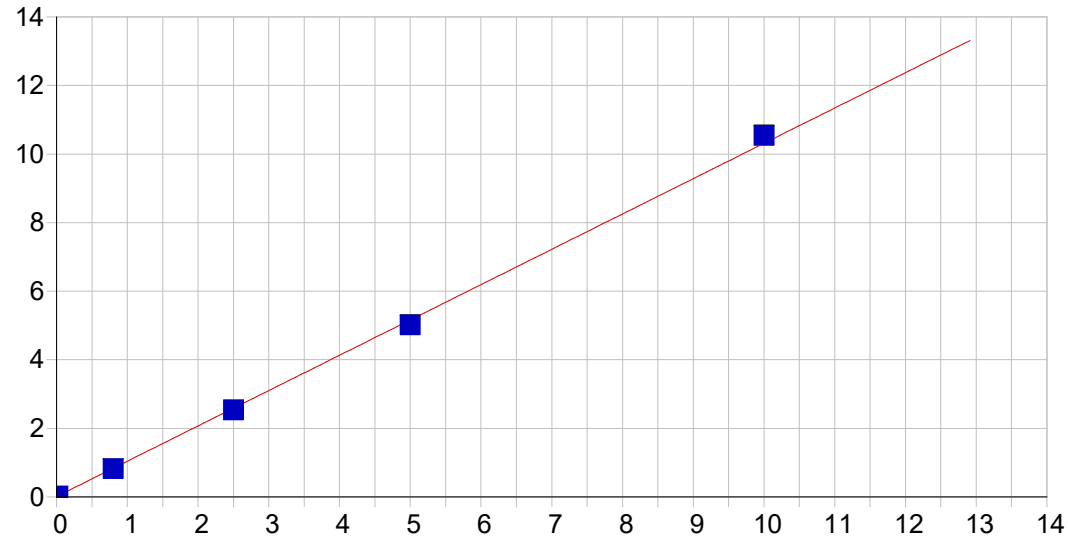


S 182.034 {485}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000946	Re-Slope:	1.000000
A1 (Gain):	0.030408	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998876	Status:	OK.
Std Error of Est:	0.000034		
Predicted MDL:	0.002715		
Predicted MQL:	0.009052		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00095	.000	1
S1	.02000	.01709	-.003	-14.5	.00144	.000	1
S3	2.5000	2.3601	-.140	-5.59	.07251	.000	1
S4	5.0000	4.8341	-.166	-3.32	.14754	.001	1
S5	10.000	10.403	.403	4.03	.31648	.005	1
S2	.80000	.70595	-.094	-11.8	.02235	.000	1

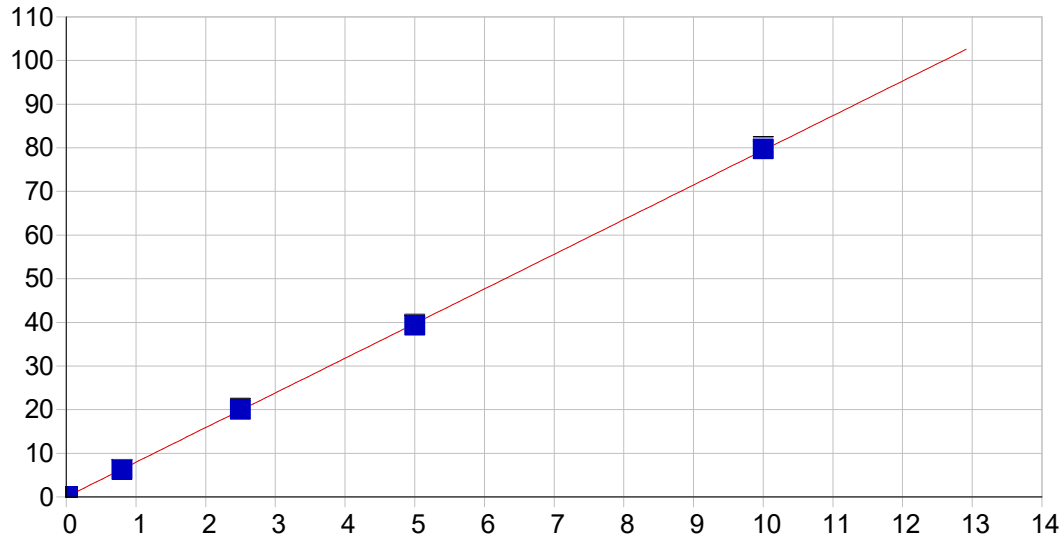


Li 670.784 { 50}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.010863	Re-Slope:	1.000000
A1 (Gain):	1.030173	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999717	Status:	OK.
Std Error of Est:	0.000575		
Predicted MDL:	0.001756		
Predicted MQL:	0.005853		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.01086	.001	1
S5	10.000	10.215	.215	2.15	10.542	.010	1
S4	5.0000	4.8530	-.147	-2.94	5.0144	.013	1
S3	2.5000	2.4482	-.052	-2.07	2.5350	.002	1
S1	.02000	.02092	.001	4.59	.03277	.001	1
S2	.80000	.78332	-.017	-2.09	.81848	.006	1

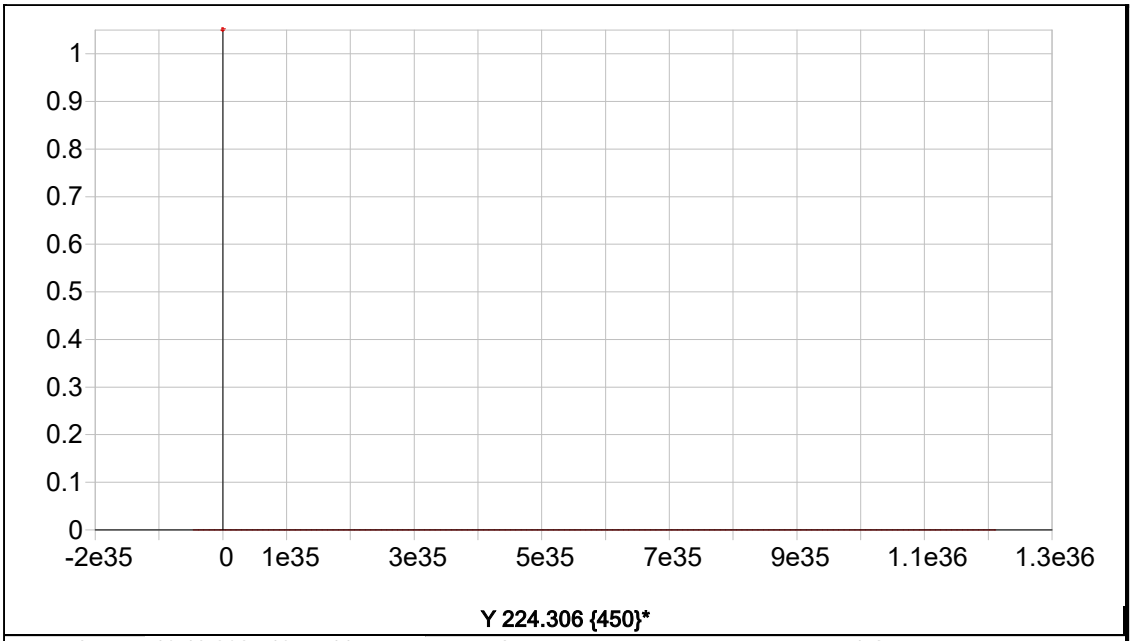


Sr 407.771 { 83}

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002354	Re-Slope:	1.000000
A1 (Gain):	7.942134	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999971	Status:	OK.
Std Error of Est:	0.001424		
Predicted MDL:	0.000120		
Predicted MQL:	0.000398		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00234	.001	1
S1	.02000	.02143	.001	7.16	.17334	.001	1
S3	2.5000	2.5249	.025	.996	20.075	.252	1
S4	5.0000	4.9524	-.048	-.953	39.373	.209	1
S5	10.000	10.033	.033	.326	79.759	.509	1
S2	.80000	.78864	-.011	-1.42	6.2720	.043	1

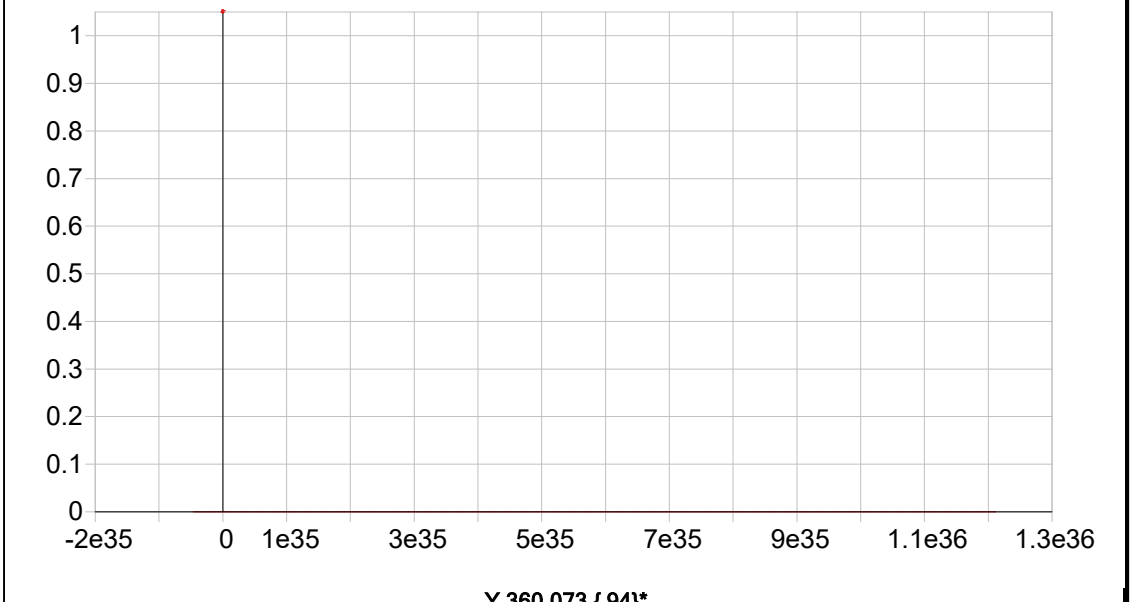


Y 224.306 {450}*

Date of Fit:	10/13/2025 19:55:11	Type of Fit:	Linear	Weighting:	1/Conc

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

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



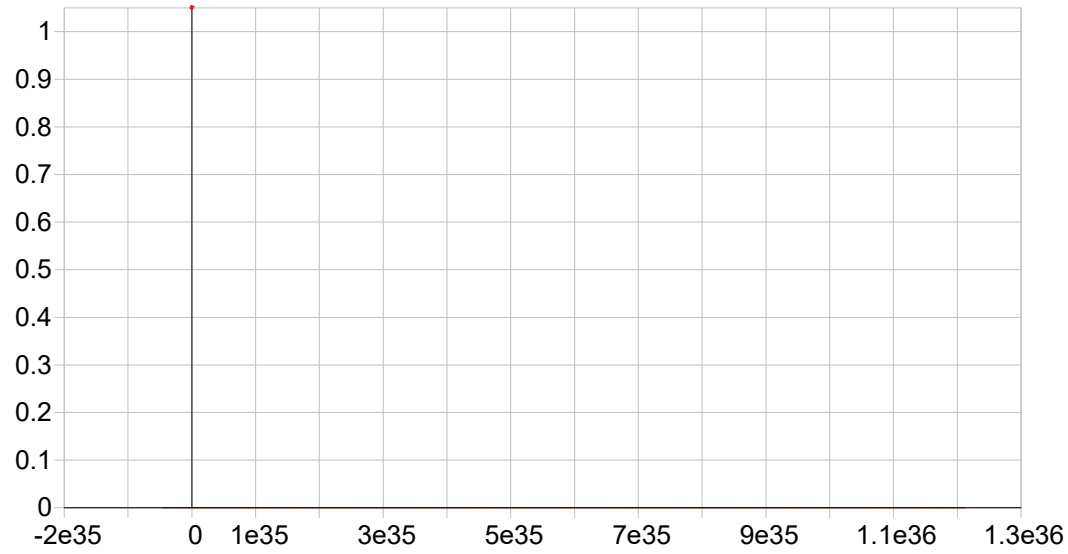
Y 360.073 { 94}*

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

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

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

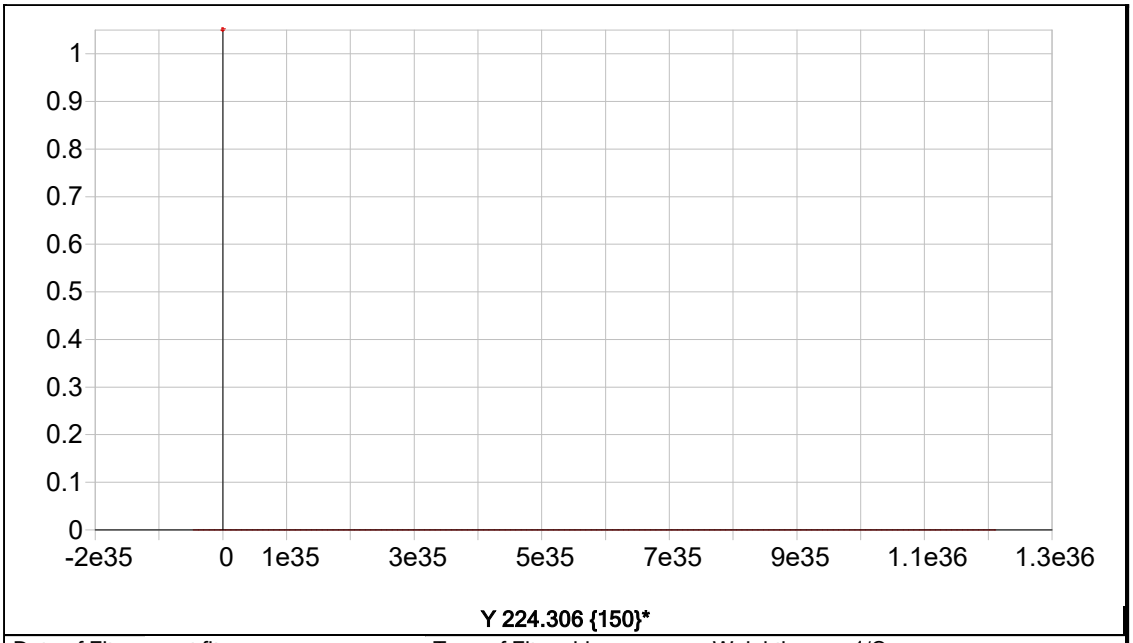
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 371.030 { 91}*

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

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

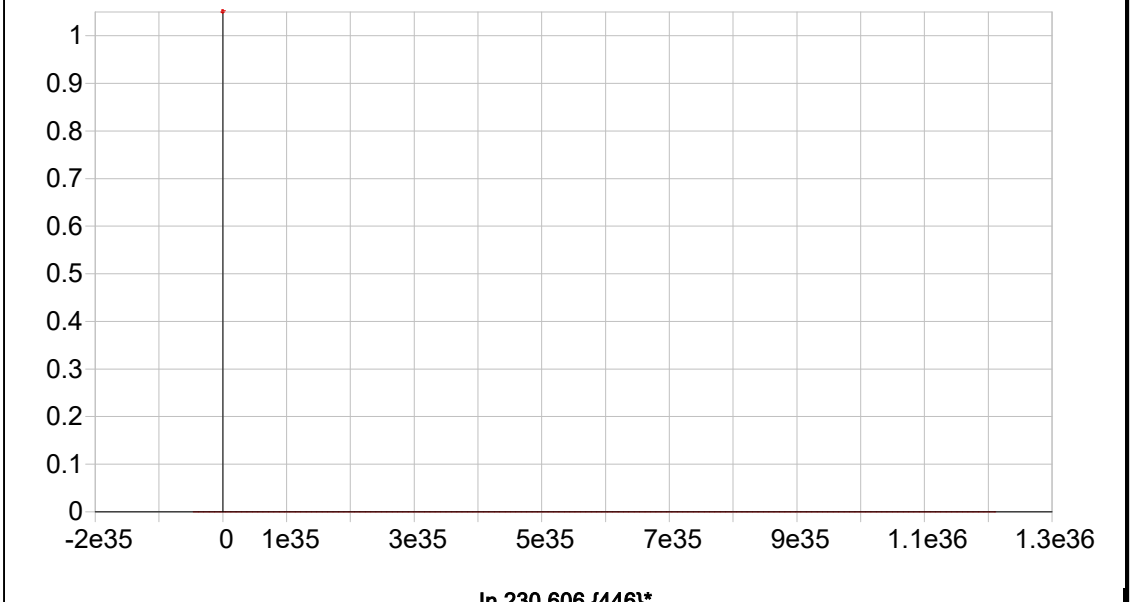


Y 224.306 {150}*

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

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

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



In 230.606 {446}*

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

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

A2 (Curvature):		0.000000					
n (Exponent):		1.000000					
Correlation:		0.000000		Status:	Warning	Zero Gain	
Std Error of Est:		0.000000					
Predicted MDL:		n/a					
Predicted MQL:		n/a					
Std. Name	**Stated Conc.**	**Found Conc.**	**Difference**	**% Diff.**	**(S)IR**	**Std Dev**	**Emphasis**

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: S0 Acquired: 10/13/2025 12:12:56 Type: Cal
Method: 6010-200.7 NEW(v283) 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**	**.00043**	**-.00013**	**.00073**	**.00110**	**-.00090**	**.05693**	**-.00266**
Stddev	.00006	.00004	.00005	.00012	.00006	.00131	.00269	.00035
%RSD	719.57	10.017	41.832	16.195	5.6721	146.19	4.7174	13.279
#1	.00007	.00048	-.00019	.00086	.00105	-.00112	.05508	-.00242
#2	.00000	.00040	-.00010	.00063	.00117	-.00208	.05569	-.00250
#3	-.00005	.00042	-.00010	.00069	.00108	.00051	.06001	-.00307

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	**-.00028**	**.00097**	**.00017**	**-.00013**	**.00088**	**.00003**	**.00026**	**-.00007**
Stddev	.00008	.00092	.00009	.00008	.00029	.00002	.00009	.00026
%RSD	27.173	94.355	50.109	66.506	32.925	77.144	33.356	391.66
#1	-.00020	.00183	.00027	-.00021	.00091	.00000	.00035	.00016
#2	-.00029	.00000	.00016	-.00005	.00114	.00004	.00018	-.00035
#3	-.00036	.00109	.00010	-.00012	.00057	.00005	.00024	-.00001

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	**-.00068**	**-.00005**	**.00094**	**-.00044**	**.00597**	**-.00124**	**.00422**	**.00066**
Stddev	.00004	.00003	.00011	.00043	.00017	.00007	.00003	.00020
%RSD	5.2693	69.191	11.664	96.457	2.9173	5.9868	.73672	31.096
#1	-.00066	-.00002	.00101	-.00080	.00588	-.00121	.00420	.00067
#2	-.00072	-.00003	.00100	-.00057	.00586	-.00119	.00420	.00044
#3	-.00066	-.00008	.00081	.00003	.00617	-.00133	.00425	.00085

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	**.00341**	**.00188**	**.00012**	**-.00073**	**.00095**	**.01086**	**.00234**
Stddev	.00010	.00077	.00003	.00004	.00007	.00102	.00117
%RSD	2.9378	41.164	24.927	5.2898	7.2990	9.3707	49.929
#1	.00337	.00196	.00013	-.00073	.00092	.01125	.00234
#2	.00334	.00261	.00014	-.00077	.00090	.00971	.00352
#3	.00352	.00107	.00008	-.00070	.00102	.01163	.00118

Sample Name: S0 Acquired: 10/13/2025 12:12:56 Type: Cal
Method: 6010-200.7 NEW(v283) 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	**4523.7**	**70244.**	**7901.2**	**4490.1**	**7351.8**
Stddev	5.6	149.	28.2	13.1	10.4
%RSD	.12422	.21233	.35701	.29090	.14160
#1	4517.8	70241.	7933.2	4477.5	7348.5
#2	4529.0	70395.	7890.4	4489.0	7363.5
#3	4524.4	70096.	7880.0	4503.6	7343.5

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: S1 Acquired: 10/13/2025 12:17:18 Type: Cal
Method: 6010-200.7 NEW(v283) 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	**.00122**	**.00253**	**.00219**	**.00183**	**.00756**	**.00925**	**.25509**	**.07298**
Stddev	.00020	.00007	.00013	.00012	.00014	.00102	.00206	.00030
%RSD	16.172	2.7295	5.9667	6.7254	1.8614	11.055	.80862	.41168
#1	.00115	.00254	.00205	.00177	.00753	.00963	.25696	.07295
#2	.00107	.00260	.00222	.00197	.00744	.00809	.25543	.07270
#3	.00145	.00246	.00231	.00175	.00772	.01002	.25288	.07330

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	**.01770**	**.12334**	**.00228**	**.03190**	**.02021**	**.00029**	**.00941**	**.02536**
Stddev	.00016	.00012	.00004	.00015	.00025	.00004	.00005	.00029
%RSD	.91103	.10026	1.9647	.45493	1.2353	12.840	.56780	1.1457
#1	.01782	.12323	.00223	.03173	.02016	.00026	.00947	.02565
#2	.01775	.12348	.00232	.03197	.02048	.00034	.00936	.02507
#3	.01752	.12331	.00229	.03200	.01999	.00028	.00940	.02535

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	**.02962**	**.00270**	**.02246**	**.00338**	**.11218**	**.00930**	**.07877**	**.17877**
Stddev	.00003	.00002	.00015	.00033	.00053	.00019	.00041	.00027
%RSD	.09296	.74893	.65552	9.7930	.47685	2.0312	.51628	.15014
#1	.02960	.00271	.02242	.00357	.11207	.00949	.07917	.17848
#2	.02965	.00271	.02262	.00357	.11277	.00911	.07835	.17902
#3	.02961	.00267	.02234	.00300	.11172	.00931	.07880	.17881

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	**.00975**	**.01371**	**.00143**	**.00003**	**.00144**	**.03277**	**.17334**
Stddev	.00009	.00039	.00001	.00003	.00008	.00144	.00058
%RSD	.90506	2.8485	.98236	86.181	5.2704	4.4080	.33199
#1	.00972	.01413	.00142	.00002	.00136	.03198	.17397
#2	.00969	.01364	.00145	.00002	.00152	.03190	.17321
#3	.00985	.01336	.00142	.00006	.00144	.03444	.17284

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: S1 Acquired: 10/13/2025 12:17:18 Type: Cal
Method: 6010-200.7 NEW(v283) 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	**4376.8**	**69942.**	**7552.6**	**4488.2**	**7022.5**
Stddev	2.1	187.	37.5	7.8	1.5
%RSD	.04743	.26665	.49706	.17310	.02088
#1	4374.4	69877.	7511.1	4479.3	7020.8
#2	4378.4	69796.	7584.2	4493.8	7023.1
#3	4377.6	70152.	7562.6	4491.3	7023.5

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: S2 Acquired: 10/13/2025 12:21:36 Type: Cal
Method: 6010-200.7 NEW(v283) 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	**.04462**	**.04031**	**.15437**	**.04766**	**.09999**	**.14191**	**2.9965**	**.46979**
Stddev	.00006	.00183	.00068	.00041	.00052	.00195	.0215	.00186
%RSD	.13923	4.5483	.43900	.85828	.52425	1.3767	.71596	.39551
#1	.04465	.03905	.15371	.04740	.09993	.13975	3.0209	.46958
#2	.04455	.03947	.15433	.04746	.09949	.14354	2.9877	.47175
#3	.04467	.04241	.15506	.04813	.10054	.14245	2.9808	.46805

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	**1.1595**	**.23427**	**.03361**	**.41267**	**.17915**	**.00221**	**.16957**	**.04686**
Stddev	.0016	.00075	.00015	.00054	.00010	.00002	.00091	.00027
%RSD	.13736	.32193	.45844	.13116	.05690	.93577	.53897	.57413
#1	1.1585	.23503	.03378	.41259	.17920	.00219	.17061	.04696
#2	1.1586	.23425	.03349	.41218	.17903	.00221	.16917	.04706
#3	1.1613	.23352	.03356	.41325	.17922	.00223	.16892	.04655

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	**.29199**	**.05420**	**.04356**	**.03834**	**1.0440**	**.02033**	**.58201**	**.71916**
Stddev	.00039	.00014	.00031	.00062	.0016	.00011	.00406	.00184
%RSD	.13287	.24947	.70386	1.6114	.15624	.55393	.69734	.25635
#1	.29160	.05410	.04377	.03898	1.0443	.02046	.58402	.71778
#2	.29200	.05435	.04321	.03827	1.0423	.02024	.58467	.71844
#3	.29238	.05414	.04370	.03775	1.0455	.02030	.57734	.72125

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	**.12724**	**.24619**	**.00316**	**.02970**	**.02235**	**.81848**	**6.2720**
Stddev	.00035	.00109	.00009	.00020	.00015	.00581	.0426
%RSD	.27490	.44349	2.8392	.65976	.64940	.70967	.67914
#1	.12723	.24718	.00321	.02988	.02242	.82515	6.3194
#2	.12690	.24637	.00305	.02949	.02218	.81569	6.2594
#3	.12759	.24502	.00321	.02972	.02244	.81459	6.2371

Sample Name: S2 Acquired: 10/13/2025 12:21:36 Type: Cal
Method: 6010-200.7 NEW(v283) 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	4220.1	63734.	7379.7	4050.8	6645.1
Stddev	8.8	182.	41.9	6.7	15.3
%RSD	.20807	.28497	.56737	.16570	.23027
#1	4213.8	63575.	7361.6	4043.1	6634.2
#2	4216.3	63932.	7349.9	4054.7	6638.6
#3	4230.1	63696.	7427.6	4054.7	6662.6

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: S3 Acquired: 10/13/2025 12:25:38 Type: Cal
Method: 6010-200.7 NEW(v283) 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	**.14329**	**.12752**	**.49873**	**.15059**	**.31532**	**.45574**	**9.4132**	**1.5171**
Stddev	.00059	.00384	.00069	.00018	.00038	.00147	.0336	.0101
%RSD	.40853	3.0114	.13929	.12233	.12041	.32305	.35719	.66915
#1	.14313	.12588	.49838	.15039	.31501	.45463	9.3998	1.5083
#2	.14394	.13191	.49827	.15062	.31520	.45517	9.4514	1.5282
#3	.14280	.12478	.49953	.15075	.31574	.45741	9.3883	1.5147

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	**3.7796**	**.74392**	**.10600**	**1.3335**	**.56432**	**.00680**	**.53586**	**.14942**
Stddev	.0035	.00325	.00036	.0019	.00099	.00004	.00259	.00051
%RSD	.09184	.43697	.33908	.14095	.17530	.56740	.48288	.33876
#1	3.7757	.74063	.10594	1.3321	.56399	.00683	.53441	.14884
#2	3.7804	.74713	.10568	1.3328	.56354	.00676	.53884	.14966
#3	3.7825	.74400	.10639	1.3356	.56544	.00681	.53432	.14977

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	**.94308**	**.16973**	**.12962**	**.12494**	**3.2430**	**.06646**	**1.8323**	**2.2550**
Stddev	.00161	.00031	.00040	.00028	.0181	.00019	.0127	.0005
%RSD	.17040	.18315	.31164	.22802	.55897	.28750	.69053	.02368
#1	.94220	.16946	.13005	.12495	3.2452	.06653	1.8218	2.2555
#2	.94210	.16966	.12925	.12522	3.2238	.06625	1.8463	2.2544
#3	.94493	.17007	.12955	.12465	3.2598	.06661	1.8287	2.2550

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	**.40394**	**.77251**	**.00943**	**.10031**	**.07251**	**2.5350**	**20.075**
Stddev	.00010	.00132	.00004	.00020	.00032	.0019	.252
%RSD	.02447	.17025	.40664	.19863	.44321	.07620	1.2531
#1	.40394	.77365	.00941	.10050	.07263	2.5349	19.808
#2	.40404	.77281	.00941	.10032	.07276	2.5370	20.308
#3	.40385	.77107	.00948	.10010	.07215	2.5331	20.108

Sample Name: S3 Acquired: 10/13/2025 12:25:38 Type: Cal
Method: 6010-200.7 NEW(v283) 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	**4245.2**	**65923.**	**7422.9**	**4132.8**	**6485.8**
Stddev	3.1	152.	44.8	25.6	3.4
%RSD	.07311	.23103	.60307	.61934	.05294
#1	4243.0	65983.	7469.2	4133.5	6484.8
#2	4243.8	66037.	7379.9	4158.0	6483.0
#3	4248.7	65750.	7419.6	4106.8	6489.6

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: S4 Acquired: 10/13/2025 12:29:42 Type: Cal
Method: 6010-200.7 NEW(v283) 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	**.28510**	**.25699**	**.99670**	**.29815**	**.62413**	**.89747**	**18.572**	**2.9377**
Stddev	.00067	.00615	.00217	.00078	.00045	.00281	.094	.0266
%RSD	.23395	2.3928	.21742	.26060	.07146	.31361	.50708	.90650
#1	.28455	.26351	.99468	.29834	.62361	.89567	18.644	2.9400
#2	.28490	.25129	.99643	.29729	.62443	.89602	18.606	2.9100
#3	.28584	.25616	.99899	.29881	.62434	.90071	18.465	2.9631

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	**7.6445**	**1.4554**	**.20804**	**2.6678**	**1.0962**	**.01349**	**1.0469**	**.29338**
Stddev	.0197	.0060	.00156	.0053	.0024	.00002	.0017	.00192
%RSD	.25746	.41586	.74799	.19729	.21807	.11828	.16463	.65603
#1	7.6315	1.4556	.20832	2.6628	1.0948	.01348	1.0470	.29339
#2	7.6349	1.4493	.20636	2.6674	1.0948	.01351	1.0452	.29145
#3	7.6672	1.4614	.20943	2.6733	1.0990	.01349	1.0486	.29530

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	**1.8811**	**.33485**	**.26247**	**.24659**	**6.3762**	**.13565**	**3.6363**	**4.4869**
Stddev	.0032	.00055	.00318	.00082	.0145	.00123	.0336	.0122
%RSD	.16752	.16559	1.2097	.33336	.22803	.90992	.92502	.27221
#1	1.8781	.33529	.26421	.24604	6.3828	.13592	3.6369	4.4877
#2	1.8807	.33422	.26440	.24620	6.3595	.13673	3.6024	4.4742
#3	1.8844	.33502	.25881	.24753	6.3863	.13430	3.6696	4.4986

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	**.81364**	**1.5353**	**.01885**	**.20430**	**.14754**	**5.0144**	**39.373**
Stddev	.00259	.0017	.00015	.00037	.00057	.0132	.209
%RSD	.31891	.11294	.77659	.18201	.38571	.26385	.53041
#1	.81254	1.5372	.01873	.20454	.14804	5.0252	39.132
#2	.81178	1.5338	.01901	.20387	.14692	5.0183	39.476
#3	.81661	1.5349	.01880	.20448	.14767	4.9996	39.510

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: S4 Acquired: 10/13/2025 12:29:42 Type: Cal
Method: 6010-200.7 NEW(v283) 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	4195.7	64605.	7381.9	4057.1	6248.4
Stddev	5.6	248.	64.1	27.3	5.7
%RSD	.13399	.38439	.86826	.67196	.09073
#1	4198.5	64854.	7415.5	4088.2	6254.8
#2	4199.4	64601.	7422.2	4045.8	6246.2
#3	4189.2	64358.	7308.0	4037.3	6244.1

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: S5 Acquired: 10/13/2025 12:33:45 Type: Cal
Method: 6010-200.7 NEW(v283) 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	**.57783**	**.50090**	**2.0706**	**.60798**	**1.2713**	**1.8356**	**38.464**	**5.9444**
Stddev	.00273	.03274	.0017	.00403	.0026	.0035	.395	.0328
%RSD	.47246	6.5368	.08397	.66346	.20566	.19179	1.0273	.55100
#1	.57502	.47870	2.0687	.60427	1.2685	1.8324	38.030	5.9076
#2	.57801	.48551	2.0710	.60740	1.2737	1.8394	38.556	5.9552
#3	.58047	.53851	2.0721	.61228	1.2718	1.8349	38.804	5.9704

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	**15.685**	**2.9518**	**.40901**	**5.5175**	**2.1973**	**.02693**	**2.1374**	**.60209**
Stddev	.025	.0160	.00173	.0050	.0027	.00002	.0052	.00414
%RSD	.16092	.54188	.42257	.08967	.12217	.08266	.24192	.68842
#1	15.667	2.9340	.41079	5.5120	2.1957	.02693	2.1316	.59815
#2	15.674	2.9649	.40734	5.5189	2.1958	.02695	2.1417	.60642
#3	15.714	2.9566	.40889	5.5215	2.2004	.02690	2.1388	.60171

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	**3.8846**	**.66749**	**.55663**	**.50399**	**12.480**	**.27775**	**7.3922**	**8.8973**
Stddev	.0027	.00079	.00281	.00150	.001	.00154	.0527	.0364
%RSD	.06987	.11852	.50444	.29747	.01034	.55343	.71345	.40956
#1	3.8820	.66687	.55975	.50279	12.479	.27950	7.3325	8.8670
#2	3.8843	.66838	.55580	.50567	12.480	.27663	7.4324	8.8871
#3	3.8874	.66722	.55432	.50351	12.481	.27712	7.4117	8.9377

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	**1.6574**	**3.1360**	**.03836**	**.43918**	**.31648**	**10.542**	**79.759**
Stddev	.0097	.0096	.00006	.00881	.00547	.010	.509
%RSD	.58588	.30549	.16511	2.0063	1.7286	.09300	.63819
#1	1.6489	3.1282	.03834	.42916	.31102	10.534	79.853
#2	1.6553	3.1467	.03843	.44263	.31645	10.553	79.210
#3	1.6680	3.1331	.03831	.44573	.32196	10.539	80.215

Sample Name: S5 Acquired: 10/13/2025 12:33:45 Type: Cal
Method: 6010-200.7 NEW(v283) 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	**4008.3**	**63841.**	**7144.3**	**4017.3**	**5778.5**
Stddev	6.5	13.	46.3	20.0	12.2
%RSD	.16222	.02016	.64782	.49840	.21178
#1	4012.6	63855.	7197.7	3998.2	5790.3
#2	4011.4	63829.	7119.3	4038.2	5779.2
#3	4000.8	63840.	7115.9	4015.5	5765.9

Sample Name: ICV01 Acquired: 10/13/2025 12:46:14 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**4.004660**	**3.768126**	**3.904269**	**4.044233**	**4.151593**	**7.853015**
Stddev	.002343	.057440	.002911	.006021	.004044	.007104
%RSD	.0585123	1.524370	.0745567	.1488704	.0974104	.0904667
#1	4.002595	3.833492	3.906368	4.047886	4.147757	7.848039
#2	4.007207	3.745179	3.900946	4.047530	4.155817	7.861151
#3	4.004178	3.725706	3.905494	4.037285	4.151204	7.849855

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.733315**	**.2036044**	**1.988671**	**19.63518**	**.8162622**	**1.949209**
Stddev	.025272	.0007365	.002030	.05016	.0019762	.000519
%RSD	.3267942	.3617101	.1020590	.2554385	.2421006	.0266433
#1	7.741505	.2029098	1.990619	19.59166	.8181369	1.948793
#2	7.753477	.2043766	1.986569	19.69003	.8141982	1.949042
#3	7.704964	.2035268	1.988824	19.62383	.8164514	1.949791

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.005127**	**4.009564**	**1.951751**	**19.72840**	**1.954057**	**.9568012**
Stddev	.001366	.011592	.004263	.05186	.001996	.0016674
%RSD	.1358849	.2891025	.2184012	.2628480	.1021516	.1742697
#1	1.003862	3.996509	1.946830	19.72866	1.956217	.9583112
#2	1.004943	4.018650	1.954308	19.67642	1.952280	.9550117
#3	1.006575	4.013533	1.954115	19.78013	1.953676	.9570806

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.36671**	**2.018156**	**2.054937**	**19.68933**	F **.0103719**	F **.0022832**
Stddev	.07697	.007745	.001073	.00209	.0007530	.0001397
%RSD	.3974582	.3837856	.0522315	.0106185	7.260351	6.120041
#1	19.44451	2.015293	2.056124	19.69145	.0108101	.0021837
#2	19.29059	2.026925	2.054653	19.68927	.0095024	.0022228
#3	19.36502	2.012249	2.054035	19.68727	.0108033	.0024429

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: ICV01 Acquired: 10/13/2025 12:46:14 Type: Unk
Method: 6010-200.7 NEW(v283) 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 .0041674	F -.002887	F -.040694	F .0045288	F .0098230	F -.004797
Stddev	.0005980	.000537	.008378	.0008009	.0034788	.000871
%RSD	14.34827	18.60440	20.58837	17.68358	35.41450	18.16234
#1	.0034923	-.002274	-.041611	.0051499	.0100847	-.003792
#2	.0046301	-.003116	-.048576	.0036249	.0131637	-.005341
#3	.0043800	-.003272	-.031895	.0048116	.0062209	-.005259

Elem	Sr4077
Units	ppm
Avg	F -.003508
Stddev	.000095
%RSD	2.703671
#1	-.003613
#2	-.003485
#3	-.003428

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4263.982	64971.46	7518.105	4072.536	6459.597
Stddev	6.325	246.63	15.344	21.678	9.354
%RSD	.1483362	.3796033	.2040992	.5322995	.1448140
#1	4266.872	64839.44	7533.091	4065.751	6462.571
#2	4268.346	65256.00	7518.797	4096.795	6467.103
#3	4256.728	64818.93	7502.426	4055.062	6449.117

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: LLICV01 Acquired: 10/13/2025 12:51:29 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0208306**	**.0438685**	**.0120754**	**.0218231**	**.0549385**	**.1072607**	**.1073428**
Stddev	.0019128	.0005709	.0003556	.0015438	.0003155	.0036208	.0013268
%RSD	9.182702	1.301454	2.945169	7.074266	.5743575	3.375668	1.236005
#1	.0224554	.0434075	.0116729	.0234776	.0552990	.1074732	.1058520
#2	.0213140	.0445071	.0123470	.0215707	.0547123	.1035384	.1077829
#3	.0187225	.0436907	.0122064	.0204210	.0548043	.1107706	.1083937

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0065977**	**.0061575**	**2.126017**	**.0107780**	**.0309953**	**.0227828**	**.1079071**
Stddev	.0000583	.0000703	.011994	.0002785	.0000183	.0003863	.0020177
%RSD	.8835029	1.142252	.5641534	2.583535	.0591525	1.695543	1.869852
#1	.0066308	.0061441	2.114354	.0108176	.0309747	.0230562	.1067282
#2	.0065304	.0060948	2.125381	.0110345	.0310098	.0229513	.1102369
#3	.0066320	.0062335	2.138317	.0104818	.0310015	.0223409	.1067562

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0215205**	**2.230908**	**.0416817**	**.0107575**	**1.928148**	**.0399088**	**.0456073**
Stddev	.0001953	.023975	.0003614	.0003881	.019902	.0024370	.0006373
%RSD	.9076173	1.074696	.8671267	3.608112	1.032201	6.106316	1.397368
#1	.0216950	2.204444	.0413347	.0103383	1.910300	.0383537	.0463257
#2	.0215571	2.251180	.0416544	.0108295	1.924535	.0386554	.0453866
#3	.0213095	2.237099	.0420560	.0111045	1.949610	.0427174	.0451098

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.929784**	**.1089499**	**.2107468**	**.0420991**	**.0392469**	**.3673791**	**.0178358**
Stddev	.018279	.0009218	.0003348	.0004769	.0008693	.0089503	.0005302
%RSD	.9472226	.8460338	.1588495	1.132750	2.215025	2.436269	2.972786
#1	1.913216	.1092621	.2106311	.0423909	.0391036	.3749774	.0182753
#2	1.926743	.1079126	.2104852	.0415488	.0384582	.3575130	.0172469
#3	1.949393	.1096750	.2111241	.0423576	.0401790	.3696469	.0179853

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: LLICV01 Acquired: 10/13/2025 12:51:29 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0216052	.0178732	.0213128
Stddev	.0012848	.0007670	.0002102
%RSD	5.946782	4.291103	.9863083
#1	.0215446	.0171397	.0210938
#2	.0229192	.0186697	.0213318
#3	.0203517	.0178103	.0215129

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4275.279	67726.97	7468.408	4215.855	6869.242
Stddev	9.645	79.28	30.625	23.443	16.069
%RSD	.2256025	.1170652	.4100672	.5560768	.2339308
#1	4273.793	67684.40	7439.578	4190.274	6864.089
#2	4285.581	67678.06	7500.559	4236.315	6887.255
#3	4266.463	67818.44	7465.088	4220.976	6856.381

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: ICB01 Acquired: 10/13/2025 12:55:45 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.000289**	**.0027944**	**-.000738**	**.0016590**	**.0010198**	**.0096965**	**.0036150**
Stddev	.002383	.0015461	.000424	.0028219	.0003096	.0079300	.0017620
%RSD	825.5135	55.32918	57.39806	170.1007	30.35652	81.78152	48.74052
#1	.002461	.0015734	-.000360	-.001541	.0009068	.0061856	.0055563
#2	-.001588	.0045328	-.000658	.002729	.0007825	.0187759	.0021171
#3	-.001739	.0022769	-.001197	.003789	.0013700	.0041281	.0031715

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000006**	**.0000103**	**-.006826**	**-.000151**	**.0000567**	**-.000350**	**-.000119**
Stddev	.000030	.0001221	.014573	.000412	.0001393	.000469	.006046
%RSD	485.7182	1192.008	213.5012	273.0865	245.4445	134.0465	5069.113
#1	-.000029	.0000244	.009815	.000142	.0001551	-.000310	-.005248
#2	.000028	.0001247	-.017313	-.000622	-.000103	.000098	-.001657
#3	-.000017	-.000118	-.012978	.000027	.000118	-.000838	.006547

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000545**	**.0027014**	**.0000076**	**.0001961**	**-.037803**	**.0046776**	**-.000207**
Stddev	.000600	.0147373	.0002036	.0004398	.011673	.0023117	.000278
%RSD	110.0392	545.5399	2671.603	224.2499	30.87955	49.42104	133.9162
#1	-.000199	-.000821	-.000223	.0003172	-.036951	.0069659	-.000486
#2	-.000198	-.009955	.000162	.0005627	-.049879	.0023431	-.000206
#3	-.001237	.018881	.000084	-.000292	-.026579	.0047238	.000069

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.075102**	**.0036762**	**.0000545**	**.0014626**	**-.000295**	**.0147598**	**.0001118**
Stddev	.029459	.0008646	.0001807	.0006351	.001467	.0094947	.0019381
%RSD	39.22590	23.51754	331.7688	43.42077	498.0024	64.32810	1733.429
#1	-.071330	.0038568	.0002310	.0021776	.001369	.0172975	-.001718
#2	-.106265	.0027356	.0000625	.0009640	-.000847	.0227277	-.000089
#3	-.047710	.0044362	-.000130	.0012462	-.001406	.0042541	.002143

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: ICB01 Acquired: 10/13/2025 12:55:45 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.002772**	**-.003824**	**-.000069**
Stddev	.003274	.002256	.000107
%RSD	118.1074	58.99112	155.2595
#1	-.001524	-.004638	-.000025
#2	-.000305	-.005559	.000009
#3	-.006487	-.001274	-.000190

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4304.137**	**63141.77**	**7462.728**	**3973.157**	**6969.390**
Stddev	12.677	266.22	138.451	24.470	17.349
%RSD	.2945379	.4216222	1.855227	.6158843	.2489313
#1	4291.150	63146.14	7329.713	3962.645	6949.591
#2	4316.480	63405.78	7606.039	4001.127	6976.651
#3	4304.783	62873.40	7452.432	3955.700	6981.929

Sample Name: CRI01 Acquired: 10/13/2025 13:00:04 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.0213754**	**.0440381**	**.0126343**	**.0225572**	**.0508165**	**.1142763**	**.1074477**
Stddev	.0004961	.0019755	.0014641	.0011244	.0018139	.0077560	.0038560
%RSD	2.320961	4.485803	11.58826	4.984537	3.569577	6.787106	3.588699
#1	.0214995	.0459305	.0119863	.0223935	.0489764	.1215294	.1100666
#2	.0208290	.0419889	.0143106	.0215237	.0508700	.1151996	.1092568
#3	.0217976	.0441948	.0116060	.0237545	.0526031	.1060999	.1030199

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0065833**	**.0060774**	**2.159860**	**.0105516**	**.0304903**	**.0221899**	**.1118795**
Stddev	.0001337	.0000431	.042698	.0004755	.0002091	.0001493	.0135123
%RSD	2.030160	.7083451	1.976897	4.506284	.6857749	.6726255	12.07756
#1	.0066571	.0060304	2.183239	.0100407	.0306872	.0223620	.1050196
#2	.0066638	.0060867	2.185763	.0109813	.0305128	.0220953	.1274458
#3	.0064290	.0061150	2.110578	.0106328	.0302708	.0221126	.1031733

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0215116**	**2.238814**	**.0408381**	**.0106579**	**2.085446**	**.0448499**	**.0461125**
Stddev	.0003394	.020694	.0004945	.0001693	.007480	.0032470	.0001002
%RSD	1.577615	.9243255	1.210819	1.588777	.3586610	7.239752	.2172087
#1	.0218995	2.254451	.0413886	.0105073	2.078881	.0421704	.0462279
#2	.0212690	2.246643	.0404316	.0106252	2.093589	.0484608	.0460604
#3	.0213665	2.215347	.0406942	.0108412	2.083868	.0439185	.0460491

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.059079**	**.1077717**	**.2064094**	**.0402664**	**.0389855**	**.3990423**	**.0193482**
Stddev	.039852	.0018684	.0006560	.0007093	.0017338	.0055862	.0008974
%RSD	1.935405	1.733649	.3178251	1.761616	4.447216	1.399896	4.638168
#1	2.013078	.1097985	.2068974	.0400213	.0387165	.3976781	.0199679
#2	2.081049	.1073982	.2066672	.0410657	.0408380	.4051842	.0197576
#3	2.083110	.1061182	.2056636	.0397120	.0374019	.3942646	.0183191

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CRI01 Acquired: 10/13/2025 13:00:04 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0180741	.0203765	.0217518
Stddev	.0031336	.0008632	.0004616
%RSD	17.33774	4.236376	2.121884
#1	.0215390	.0213676	.0220495
#2	.0154386	.0199734	.0219856
#3	.0172447	.0197886	.0212201

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4346.085	63509.74	7423.755	4052.747	6952.332
Stddev	10.468	294.57	132.394	9.739	8.654
%RSD	.2408530	.4638111	1.783386	.2403151	.1244751
#1	4355.080	63717.39	7299.404	4042.544	6955.779
#2	4334.595	63639.22	7408.919	4061.945	6942.486
#3	4348.579	63172.61	7562.943	4053.751	6958.731

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: ICSA01 Acquired: 10/13/2025 13:04:19 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.0125477**	**.0255104**	**-.002866**	**.0133274**	**.0011165**	**258.4873**
Stddev	.0016498	.0006848	.001260	.0032117	.0022926	.2384
%RSD	13.14813	2.684368	43.95405	24.09867	205.3342	.0922382
#1	.0126591	.0261974	-.003644	.0103484	.0025833	258.7581
#2	.0108450	.0255061	-.003542	.0167299	.0022915	258.3090
#3	.0141390	.0248278	-.001413	.0129041	-.001525	258.3948

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0060794**	**.0009931**	**.0016761**	**244.7298**	**.0472982**	**.0021456**
Stddev	.0019176	.0000504	.0000674	.5381	.0006098	.0003102
%RSD	31.54228	5.074034	4.023785	.2198817	1.289255	14.45745
#1	.0081165	.0010469	.0017246	245.2654	.0476476	.0024589
#2	.0058124	.0009855	.0017047	244.1892	.0465941	.0021395
#3	.0043093	.0009470	.0015991	244.7348	.0476529	.0018386

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0156347**	**100.1643**	**.0078684**	**260.7679**	**.0033386**	**-.001675**
Stddev	.0005047	.0789	.0007075	.6669	.0002339	.000914
%RSD	3.228190	.0787689	8.991270	.2557312	7.005930	54.55699
#1	.0150630	100.0863	.0078373	261.4560	.0033836	-.002639
#2	.0158228	100.2440	.0085908	260.1245	.0030854	-.000822
#3	.0160184	100.1626	.0071769	260.7231	.0035467	-.001563

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0333718**	**.0070794**	**.0031786**	**-.050059**	**.0516082**	**.0006998**
Stddev	.0152310	.0011098	.0001743	.027619	.0009815	.0002332
%RSD	45.64034	15.67589	5.482791	55.17292	1.901876	33.32486
#1	.0354741	.0058112	.0033798	-.052226	.0519050	.0005228
#2	.0474424	.0078726	.0030762	-.076531	.0524071	.0006126
#3	.0171988	.0075543	.0030798	-.021421	.0505126	.0009641

Sample Name: ICSA01 Acquired: 10/13/2025 13:04:19 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0017686	-.006036	.0178630	.0028284	.0013634	F -.032030
Stddev	.0013921	.000991	.0033394	.0009134	.0048249	.001143
%RSD	78.71245	16.41466	18.69459	32.29547	353.8786	3.569795
#1	.0001663	-.006142	.0195015	.0035821	.0030259	-.030736
#2	.0024583	-.004996	.0140208	.0018125	-.004073	-.032901
#3	.0026813	-.006969	.0200667	.0030905	.005137	-.032455

Elem	Sr4077
Units	ppm
Avg	.0072327
Stddev	.0003452
%RSD	4.773104
#1	.0074070
#2	.0068351
#3	.0074561

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3804.899	60617.69	6997.061	3881.371	5348.049
Stddev	3.646	125.81	31.149	17.782	3.953
%RSD	.0958184	.2075511	.4451682	.4581464	.0739115
#1	3809.007	60701.18	6964.978	3878.201	5344.087
#2	3803.641	60678.91	7027.183	3900.525	5351.992
#3	3802.047	60472.99	6999.023	3865.387	5348.069

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: ICSAB01 Acquired: 10/13/2025 13:08:31 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.1148119**	**.1326891**	**.0456276**	**.0591952**	**.5990278**	**251.4522**
Stddev	.0057588	.0039247	.0011923	.0007611	.0008781	.2029
%RSD	5.015877	2.957828	2.613046	1.285738	.1465788	.0806881
#1	.1104477	.1365556	.0455480	.0585715	.6000370	251.5970
#2	.1213390	.1328030	.0468576	.0589710	.5986075	251.2203
#3	.1126490	.1287087	.0444771	.0600433	.5984389	251.5393

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4945506**	**.5178128**	**1.000771**	**237.4582**	**.5575119**	**.5052435**
Stddev	.0017640	.0048026	.001513	.7597	.0014843	.0000383
%RSD	.3566838	.9274684	.1511818	.3199158	.2662301	.0075863
#1	.4965458	.5204075	1.002484	238.3353	.5565220	.5052750
#2	.4931979	.5122710	1.000209	237.0339	.5592185	.5052008
#3	.4939081	.5207598	.999619	237.0056	.5567952	.5052546

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4909519**	**100.7447**	**.4972015**	**253.6918**	**1.002351**	**.2110416**
Stddev	.0003662	.6747	.0032517	.8208	.002206	.0011598
%RSD	.0745931	.6697435	.6540051	.3235512	.2200565	.5495531
#1	.4910439	100.8358	.5005239	254.5589	1.004658	.2113073
#2	.4905484	101.3692	.4940254	252.9268	1.002132	.2120455
#3	.4912633	100.0290	.4970553	253.5898	1.000263	.2097720

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0355932**	**.4917838**	**1.071602**	**-.050121**	**1.016775**	**.9927088**
Stddev	.0109672	.0011418	.004719	.056401	.005332	.0022267
%RSD	30.81262	.2321772	.4403430	112.5294	.5244102	.2243032
#1	.0270527	.4930869	1.074502	-.113717	1.022470	.9952571
#2	.0479612	.4913054	1.074147	-.030477	1.011901	.9911387
#3	.0317656	.4909589	1.066157	-.006169	1.015954	.9917306

Sample Name: ICSAB01 Acquired: 10/13/2025 13:08:31 Type: Unk
Method: 6010-200.7 NEW(v283) 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	1.010063	.9749585	1.023341	F .0077467	F .0010461	F -.033558
Stddev	.004310	.0027108	.002454	.0019656	.0015377	.002140
%RSD	.4267379	.2780404	.2398157	25.37346	146.9930	6.376896
#1	1.015039	.9758243	1.025789	.0060897	.0020770	-.033267
#2	1.007596	.9771305	1.023354	.0072320	.0017828	-.031578
#3	1.007552	.9719205	1.020881	.0099185	-.000721	-.035828

Elem	Sr4077
Units	ppm
Avg	F .0025091
Stddev	.0006488
%RSD	25.85924
#1	.0024016
#2	.0019208
#3	.0032051

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3960.255	59759.62	7247.595	3792.168	5565.644
Stddev	5.660	217.76	58.100	8.912	8.498
%RSD	.1429233	.3644013	.8016422	.2350054	.1526870
#1	3956.198	59727.81	7211.341	3802.290	5556.148
#2	3966.721	59559.51	7314.608	3788.709	5572.533
#3	3957.846	59991.54	7216.837	3785.503	5568.250

Sample Name: ICSA01DLX20 Acquired: 10/13/2025 13:12:32 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.000120**	**.0029152**	**-.000746**	**.0033039**	**.0004426**	**12.03450**	**.0045217**
Stddev	.003627	.0026911	.001658	.0019998	.0026956	.00351	.0014828
%RSD	3014.661	92.31443	222.1516	60.52855	609.0063	.0291636	32.79248
#1	-.004079	-.000135	.001115	.0043583	-.000786	12.03077	.0061584
#2	.003044	.003925	-.002064	.0045557	-.001420	12.03774	.0032682
#3	.000674	.004956	-.001290	.0009975	.003534	12.03499	.0041383

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000848**	**-.000059**	**11.83609**	**.0020135**	**.0001529**	**.0009521**	**4.661570**
Stddev	.0000193	.000063	.01661	.0002613	.0000688	.0003937	.022351
%RSD	22.72955	107.5434	.1403653	12.97513	45.02473	41.35617	.4794645
#1	.0000819	-.000132	11.84110	.0019697	.0002297	.0005515	4.640321
#2	.0000671	-.000020	11.81754	.0022939	.0000969	.0013386	4.659509
#3	.0001053	-.000025	11.84962	.0017769	.0001320	.0009662	4.684880

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003570**	**12.38438**	**-.000085**	**.0002278**	**-.028333**	**.0038934**	**-.000123**
Stddev	.0008858	.05892	.000456	.0003422	.013452	.0023291	.000159
%RSD	248.1388	.4757563	536.3581	150.2294	47.47979	59.82346	129.5977
#1	-.000177	12.45109	.000145	.0000932	-.014533	.0040037	-.000124
#2	-.000131	12.36261	-.000611	-.000027	-.029057	.0015110	.000037
#3	.001379	12.33944	.000211	.000617	-.041409	.0061654	-.000281

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.060007**	**.0035446**	**.0001489**	**.0011957**	**-.000717**	**.0124471**	**.0002647**
Stddev	.029677	.0008695	.0000851	.0007212	.001606	.0125780	.0015446
%RSD	49.45650	24.52978	57.11719	60.31187	223.9818	101.0516	583.4649
#1	-.069649	.0025407	.0001642	.0003767	-.001600	-.002076	-.000149
#2	-.026707	.0040609	.0002253	.0017354	.001137	.019623	.001974
#3	-.083663	.0040322	.0000573	.0014752	-.001689	.019795	-.001031

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: ICSA01DLX20 Acquired: 10/13/2025 13:12:32 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0004732	-.004939	.0002919
Stddev	.0005622	.001532	.0001730
%RSD	118.7977	31.01565	59.27333
#1	.0007056	-.004664	.0003690
#2	.0008820	-.006591	.0004131
#3	-.000168	-.003564	.0000938

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4186.720	66359.16	7391.515	4141.986	6550.195
Stddev	5.906	211.97	38.384	31.652	17.840
%RSD	.1410762	.3194249	.5192953	.7641800	.2723609
#1	4183.921	66596.16	7350.973	4159.914	6549.354
#2	4193.506	66293.60	7396.275	4160.605	6568.441
#3	4182.734	66187.71	7427.296	4105.440	6532.790

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: ICSAB01DLX20 Acquired: 10/13/2025 13:16:48 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0045116	.0095834	.0023527	.0045883	.0304883	12.00580	.0276885
Stddev	.0014459	.0022051	.0005098	.0019419	.0016082	.01026	.0006719
%RSD	32.04756	23.00918	21.67065	42.32353	5.274893	.0854749	2.426757
#1	.0030143	.0103120	.0017649	.0066854	.0318635	11.99406	.0277523
#2	.0058998	.0113319	.0026751	.0042273	.0287200	12.01028	.0269870
#3	.0046208	.0071062	.0026181	.0028522	.0308816	12.01306	.0283263

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0252356	.0471999	11.88359	.0273284	.0239328	.0258079	4.754861
Stddev	.0001840	.0000359	.02272	.0003696	.0002100	.0002105	.022399
%RSD	.7290459	.0759963	.1912100	1.352362	.8772338	.8157569	.4710813
#1	.0254478	.0471587	11.86290	.0274213	.0237444	.0256218	4.739732
#2	.0251196	.0472166	11.87995	.0269212	.0238949	.0257654	4.744258
#3	.0251395	.0472244	11.90791	.0276426	.0241591	.0260364	4.780593

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0247607	12.37637	.0478064	.0097398	-.040418	.0250539	.0516093
Stddev	.0008358	.03604	.0002143	.0002684	.017740	.0039641	.0003960
%RSD	3.375411	.2911645	.4482176	2.755450	43.89048	15.82223	.7672673
#1	.0250182	12.38467	.0478812	.0100386	-.030234	.0205857	.0511954
#2	.0238264	12.33691	.0475647	.0096619	-.030118	.0281484	.0516480
#3	.0254374	12.40753	.0479732	.0095190	-.060902	.0264278	.0519845

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.080054	.0504206	.0497167	.0479821	.0472832	.0379300	-.001169
Stddev	.033274	.0003404	.0000524	.0001090	.0003118	.0044307	.000992
%RSD	41.56487	.6751797	.1053383	.2271429	.6593301	11.68127	84.89690
#1	-.042078	.0501631	.0497413	.0481053	.0470157	.0334007	-.000034
#2	-.093986	.0508065	.0497524	.0478981	.0476256	.0422551	-.001600
#3	-.104098	.0502920	.0496566	.0479429	.0472083	.0381341	-.001873

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: ICSAB01DLX20 Acquired: 10/13/2025 13:16:48 Type: Unk
Method: 6010-200.7 NEW(v283) 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	-.000361	-.007802	.0002122
Stddev	.001554	.001919	.0000494
%RSD	430.4799	24.59174	23.29845
#1	-.001526	-.005600	.0002325
#2	-.000959	-.009112	.0002482
#3	.001403	-.008695	.0001558

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4303.436	66664.51	7522.203	4197.539	6723.244
Stddev	2.962	154.57	33.490	2.333	8.424
%RSD	.0688250	.2318644	.4452131	.0555831	.1253021
#1	4300.196	66763.06	7488.067	4197.211	6731.069
#2	4304.107	66744.10	7555.007	4200.018	6724.338
#3	4306.005	66486.36	7523.534	4195.386	6714.327

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCV01 Acquired: 10/13/2025 13:21:00 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**5.017359**	**5.280103**	**4.923416**	**5.049288**	**4.984710**	**9.971400**	**9.879979**
Stddev	.014466	.174537	.002098	.018274	.016301	.023627	.005851
%RSD	.2883201	3.305567	.0426076	.3619086	.3270116	.2369478	.0592217
#1	5.026989	5.364589	4.925017	5.061138	5.003524	9.953285	9.883560
#2	5.024363	5.396321	4.921041	5.058483	4.975789	9.962790	9.873227
#3	5.000724	5.079399	4.924189	5.028243	4.974817	9.998124	9.883150

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2500593**	**2.484228**	**24.93201**	**1.000256**	**2.473298**	**1.250099**	**4.907404**
Stddev	.0012302	.000621	.08338	.003131	.000595	.001484	.029357
%RSD	.4919457	.0250027	.3344112	.3130270	.0240413	.1187167	.5982165
#1	.2491111	2.484089	24.83616	.997799	2.473130	1.251801	4.887962
#2	.2496175	2.483688	24.97214	.999189	2.472806	1.249417	4.941174
#3	.2514494	2.484907	24.98774	1.003782	2.473959	1.249078	4.893077

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.496939**	**25.01878**	**2.478417**	**1.232609**	**24.05723**	**2.495071**	**2.515472**
Stddev	.004802	.08106	.001981	.002994	.04404	.010140	.003513
%RSD	.1923035	.3239789	.0799325	.2428851	.1830513	.4064102	.1396636
#1	2.491564	24.97501	2.479689	1.231147	24.08855	2.498364	2.511441
#2	2.500804	25.11231	2.476134	1.230627	24.07626	2.483693	2.517087
#3	2.498451	24.96903	2.479427	1.236053	24.00688	2.503154	2.517886

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.28424**	**4.984762**	**5.028391**	**4.998401**	**4.985602**	**4.861664**	**5.190124**
Stddev	.06431	.028889	.009678	.003757	.005289	.024184	.017801
%RSD	.2648235	.5795431	.1924593	.0751616	.1060761	.4974454	.3429831
#1	24.34613	4.961653	5.037374	4.999021	4.984944	4.886970	5.181489
#2	24.28884	4.975483	5.029654	5.001810	4.980672	4.859237	5.210595
#3	24.21775	5.017150	5.018143	4.994373	4.991188	4.838785	5.178286

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCV01 Acquired: 10/13/2025 13:21:00 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**5.025040**	**4.932611**	**4.952851**
Stddev	.021261	.003012	.065256
%RSD	.4231048	.0610699	1.317549
#1	5.035722	4.929159	4.961263
#2	5.038842	4.934709	4.883797
#3	5.000556	4.933965	5.013494

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4098.914**	**65178.51**	**7217.298**	**4112.860**	**6076.033**
Stddev	12.839	186.22	35.387	20.248	9.707
%RSD	.3132406	.2857095	.4903012	.4923179	.1597641
#1	4084.103	65390.98	7257.391	4130.739	6064.838
#2	4105.734	65043.61	7204.079	4090.873	6081.139
#3	4106.904	65100.95	7190.425	4116.969	6082.122

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCB01 Acquired: 10/13/2025 13:25:02 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.000214**	**.0027451**	**.0005262**	**.0006065**	**-.000199**	**-.003431**	**.0065551**
Stddev	.002295	.0031587	.0007041	.0014413	.000410	.003219	.0012100
%RSD	1072.944	115.0650	133.8210	237.6485	206.6478	93.81862	18.45925
#1	-.002821	.0004383	-.000271	.0014787	-.000531	-.005683	.0068144
#2	.000677	.0063452	.001065	-.001057	-.000325	.000256	.0076145
#3	.001502	.0014518	.000785	.001398	.000260	-.004864	.0052365

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000029**	**.0000701**	**-.016665**	**-.000061**	**.0000525**	**.0000329**	**-.010142**
Stddev	.000032	.0000333	.006899	.000292	.0001128	.0002837	.006244
%RSD	108.6847	47.47379	41.39885	476.2596	214.7655	861.3583	61.56683
#1	.000007	.0001058	-.010338	.000221	.0001556	.0003591	-.012696
#2	-.000042	.0000398	-.024021	-.000362	.0000699	-.000156	-.003026
#3	-.000053	.0000648	-.015636	-.000043	-.000068	-.000105	-.014705

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000458**	**-.003832**	**-.000212**	**.0000349**	**-.039341**	**.0031195**	**.0001685**
Stddev	.000497	.022425	.000223	.0004878	.009837	.0042627	.0000612
%RSD	108.5331	585.2821	105.1119	1396.926	25.00357	136.6454	36.29444
#1	-.000085	.015176	-.000398	-.000072	-.044694	.0021281	.0001050
#2	-.001023	.001894	-.000274	-.000391	-.045341	.0077906	.0001736
#3	-.000267	-.028565	.000035	.000567	-.027989	-.000560	.0002270

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.128984**	**.0060940**	**.0001896**	**.0025271**	**-.000163**	**.0085114**	**-.001528**
Stddev	.034102	.0013711	.0002026	.0001376	.001676	.0061608	.001022
%RSD	26.43922	22.49900	106.8939	5.445703	1025.712	72.38307	66.88771
#1	-.155194	.0046208	.0000763	.0025010	-.002014	.0041831	-.000363
#2	-.090428	.0073327	.0000689	.0026759	.000271	.0057863	-.002276
#3	-.141330	.0063284	.0004235	.0024044	.001253	.0155649	-.001944

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCB01 Acquired: 10/13/2025 13:25:02 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.000735**	**-.003905**	**-.000053**
Stddev	.001359	.001140	.000045
%RSD	184.8355	29.20346	84.35596
#1	-.002259	-.004196	-.000039
#2	.000349	-.004872	-.000104
#3	-.000295	-.002647	-.000018

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4140.168**	**64089.12**	**7063.899**	**4033.323**	**6727.676**
Stddev	1.557	145.26	5.856	16.315	3.240
%RSD	.0376137	.2266517	.0828954	.4045101	.0481591
#1	4138.746	64012.77	7070.309	4028.363	6726.646
#2	4141.832	64256.64	7062.556	4051.543	6731.305
#3	4139.925	63997.97	7058.831	4020.064	6725.075

Sample Name: PB170057BL Acquired: 10/13/2025 13:29:21 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.001061**	**.0050688**	**-.000297**	**-.000137**	**.0003184**	**.0077844**	**.0087668**
Stddev	.002573	.0009676	.000496	.003417	.0011188	.0022448	.0004464
%RSD	242.5384	19.08972	167.1633	2489.449	351.3251	28.83722	5.092168
#1	-.000283	.0039528	.000193	-.002254	.0014467	.0086302	.0083766
#2	.001033	.0055809	-.000284	-.001963	.0002991	.0094835	.0092537
#3	-.003932	.0056728	-.000799	.003805	-.000791	.0052396	.0086701

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000019**	**-.000033**	**-.000900**	**-.000275**	**.0001517**	**-.000038**	**.0088763**
Stddev	.000013	.000041	.002614	.000295	.0000916	.000279	.0051340
%RSD	65.09113	123.3142	290.5629	107.3261	60.39255	731.1550	57.83932
#1	-.000015	-.000022	.000984	-.000012	.0002180	-.000243	.0044406
#2	-.000009	-.000078	-.003884	-.000594	.0001898	-.000150	.0076880
#3	-.000034	.000001	.000201	-.000220	.0000472	.000279	.0145002

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000274**	**.0014377**	**-.000317**	**-.000046**	**-.037035**	**.0001501**	**-.000114**
Stddev	.000346	.0364008	.000061	.000077	.009790	.0038660	.000443
%RSD	126.2192	2531.920	19.25534	167.2763	26.43495	2575.581	386.9699
#1	-.000558	-.036550	-.000374	-.000129	-.046736	.0041009	-.000329
#2	-.000376	.004851	-.000326	.000021	-.037213	-.000026	-.000410
#3	.000111	.036012	-.000252	-.000029	-.027157	-.003625	.000395

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.149573**	**.0037000**	**-.000011**	**.0025324**	**-.000549**	**.0082188**	**-.000820**
Stddev	.027647	.0009440	.000312	.0005112	.001526	.0060995	.000686
%RSD	18.48373	25.51214	2919.756	20.18810	277.7179	74.21419	83.70155
#1	-.161548	.0046915	.000204	.0025887	.000930	.0050362	-.001520
#2	-.169214	.0035966	.000132	.0030132	-.002118	.0043688	-.000149
#3	-.117958	.0028121	-.000368	.0019954	-.000461	.0152513	-.000790

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: PB170057BL Acquired: 10/13/2025 13:29:21 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.000464**	**-.003787**	**-.000079**
Stddev	.001767	.002703	.000093
%RSD	381.0603	71.36861	116.9258
#1	-.001676	-.004912	-.000096
#2	-.001279	-.005746	-.000163
#3	.001564	-.000704	.000021

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4166.322**	**63570.17**	**7112.696**	**3973.323**	**6761.578**
Stddev	4.885	139.01	7.316	9.679	3.396
%RSD	.1172547	.2186772	.1028560	.2435938	.0502312
#1	4169.654	63576.33	7119.722	3972.729	6760.781
#2	4168.598	63705.99	7105.121	3983.286	6765.303
#3	4160.715	63428.17	7113.246	3963.956	6758.652

Sample Name: PB170057BS Acquired: 10/13/2025 13:33:42 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.7918107**	**1.806547**	**.9538668**	**1.994437**	**.8031159**	**2.000206**
Stddev	.0049110	.157451	.0008927	.019236	.0031218	.006014
%RSD	.6202290	8.715579	.0935916	.9644916	.3887089	.3006611
#1	.7968782	1.978476	.9548605	2.011491	.8008933	1.995145
#2	.7870727	1.669386	.9536075	1.973585	.8066849	2.006854
#3	.7914811	1.771779	.9531325	1.998236	.8017694	1.998619

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2025643**	**.2086676**	**.1936571**	**1.003874**	**.4100923**	**.1970967**
Stddev	.0002643	.0008598	.0002867	.014095	.0013188	.0005039
%RSD	.1304867	.4120606	.1480595	1.404090	.3215766	.2556762
#1	.2025653	.2077805	.1934733	1.008988	.4092113	.1968094
#2	.2022995	.2094973	.1935105	1.014698	.4116085	.1968022
#3	.2028281	.2087252	.1939875	.987936	.4094573	.1976786

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3133317**	**2.902200**	**.2029093**	**2.031179**	**.4959102**	**.0706872**
Stddev	.0007797	.006862	.0002561	.018686	.0007918	.0003070
%RSD	.2488461	.2364547	.1262002	.9199509	.1596594	.4343526
#1	.3124468	2.895312	.2031724	2.010201	.4956226	.0709568
#2	.3136306	2.902253	.2026609	2.037298	.4953025	.0703530
#3	.3139178	2.909036	.2028947	2.046039	.4968056	.0707519

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.747088**	**.3059027**	**.2089505**	**9.256907**	**.3045325**	**.4086294**
Stddev	.003379	.0060899	.0012137	.059941	.0009421	.0011086
%RSD	.1230204	1.990802	.5808654	.6475276	.3093651	.2712876
#1	2.746790	.3117972	.2084599	9.234015	.3040353	.4098684
#2	2.743867	.2996345	.2080588	9.211785	.3056190	.4077313
#3	2.750607	.3062763	.2103327	9.324920	.3039431	.4082884

Sample Name: PB170057BS Acquired: 10/13/2025 13:33:42 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.6801904**	**.1938542**	**.8561838**	**5.801444**	F **-.003995**	**.1971572**
Stddev	.0046534	.0025002	.0158679	.077078	.000880	.0019347
%RSD	.6841311	1.289716	1.853330	1.328596	22.03425	.9813123
#1	.6828783	.1939299	.8744637	5.813826	-.004410	.1953063
#2	.6748171	.1913170	.8481270	5.718925	-.002984	.1969993
#3	.6828757	.1963156	.8459607	5.871581	-.004590	.1991661

Elem	Sr4077
Units	ppm
Avg	**.1948152**
Stddev	.0003150
%RSD	.1616906
#1	.1945257
#2	.1951507
#3	.1947692

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4186.335**	**66767.99**	**7183.352**	**4178.599**	**6598.228**
Stddev	7.143	46.09	11.504	11.218	6.243
%RSD	.1706242	.0690275	.1601441	.2684742	.0946221
#1	4192.895	66803.63	7194.663	4179.345	6602.265
#2	4178.726	66784.41	7171.665	4189.426	6591.037
#3	4187.385	66715.95	7183.730	4167.026	6601.382

Sample Name: Q3318-04 Acquired: 10/13/2025 13:37:43 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.0114751**	**.0061981**	**3.243323**	**.0071300**	**.0220504**	**2.194211**
Stddev	.0008959	.0032091	.022164	.0004040	.0020270	.009109
%RSD	7.807598	51.77517	.6833655	5.665969	9.192391	.4151388
#1	.0109689	.0030306	3.224900	.0075848	.0243411	2.183931
#2	.0109468	.0094472	3.237151	.0069924	.0204891	2.201278
#3	.0125095	.0061164	3.267919	.0068128	.0213209	2.197425

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1202667**	**.0004768**	**.0086024**	**73.91248**	**.0902215**	**.0140601**
Stddev	.0005495	.0000371	.0000647	.07103	.0004336	.0001567
%RSD	.4569331	7.784261	.7516133	.0960935	.4805895	1.114523
#1	.1208763	.0004589	.0086626	73.83164	.0900354	.0141296
#2	.1201145	.0004521	.0085341	73.96484	.0907171	.0138806
#3	.1198093	.0005195	.0086106	73.94098	.0899121	.0141700

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7981966**	**26.63449**	**.9046116**	**14.23523**	**.0652821**	**.0023165**
Stddev	.0034228	.04469	.0015647	.05108	.0004370	.0004589
%RSD	.4288191	.1678080	.1729677	.3588300	.6694332	19.80892
#1	.7960298	26.66500	.9033122	14.17896	.0651109	.0026111
#2	.7964173	26.65528	.9063485	14.24802	.0649566	.0025507
#3	.8021426	26.58318	.9041743	14.27869	.0657788	.0017878

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**137.2758**	**.0104216**	**5.783505**	**20.34043**	**.1093434**	**.0212158**
Stddev	.3847	.0021144	.007033	.01644	.0013368	.0003013
%RSD	.2802641	20.28840	.1215969	.0808039	1.222610	1.420130
#1	137.3606	.0103521	5.778535	20.35253	.1091320	.0212651
#2	137.6111	.0125699	5.791551	20.34706	.1081250	.0208930
#3	136.8557	.0083428	5.780427	20.32172	.1107734	.0214895

Sample Name: Q3318-04 Acquired: 10/13/2025 13:37:43 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0146875	.0854940	F 11.14128	1.470621	F 26.01477	-.007260
Stddev	.0005911	.0016059	.06463	.014161	.33197	.000454
%RSD	4.024508	1.878409	.5800942	.9629561	1.276077	6.255389
#1	.0149436	.0837644	11.09056	1.480448	26.28496	-.006895
#2	.0140115	.0857798	11.11923	1.454388	25.64419	-.007768
#3	.0151074	.0869379	11.21405	1.477026	26.11515	-.007115

Elem	Sr4077
Units	ppm
Avg	.3137867
Stddev	.0006036
%RSD	.1923678
#1	.3135839
#2	.3133106
#3	.3144656

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4025.093	61983.46	7452.724	3818.025	6126.020
Stddev	16.554	99.93	30.548	9.620	33.454
%RSD	.4112662	.1612259	.4098859	.2519503	.5460950
#1	4032.386	61904.89	7440.886	3818.094	6149.280
#2	4036.748	62095.94	7487.419	3808.372	6141.098
#3	4006.145	61949.56	7429.867	3827.610	6087.681

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3318-04DUP Acquired: 10/13/2025 13:41:49 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.0083424**	**.0028896**	**3.139381**	**.0043703**	**.0178182**	**2.026458**
Stddev	.0028513	.0032777	.004768	.0010210	.0008546	.047416
%RSD	34.17896	113.4320	.1518767	23.36110	4.796440	2.339850
#1	.0107019	.0038464	3.134565	.0048176	.0187504	2.045899
#2	.0051740	.0055824	3.144100	.0050913	.0170717	1.972412
#3	.0091514	-.000760	3.139477	.0032021	.0176324	2.061064

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1078483**	**.0002345**	**.0077314**	**70.41833**	**.0848128**	**.0120990**
Stddev	.0034016	.0000097	.0000637	1.38137	.0002018	.0000477
%RSD	3.154019	4.140419	.8234426	1.961659	.2379225	.3944577
#1	.1085815	.0002404	.0077522	70.88200	.0846530	.0120460
#2	.1041399	.0002397	.0076600	68.86478	.0850395	.0121387
#3	.1108235	.0002233	.0077821	71.50821	.0847458	.0121121

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7653450**	**26.76151**	**.8631458**	**13.60219**	**.0585642**	**.0014093**
Stddev	.0004651	.07456	.0207511	.21659	.0001528	.0001961
%RSD	.0607659	.2786128	2.404118	1.592316	.2608341	13.91690
#1	.7649119	26.74660	.8671596	13.60921	.0583885	.0015977
#2	.7658365	26.84239	.8406812	13.38218	.0586381	.0014241
#3	.7652865	26.69552	.8815969	13.81519	.0586659	.0012063

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**136.6081**	**.0130741**	**5.698703**	**20.30614**	**.1072331**	**.0166885**
Stddev	.1498	.0018190	.016538	.02757	.0009501	.0002229
%RSD	.1096392	13.91325	.2902099	.1357909	.8859824	1.335446
#1	136.7790	.0123278	5.705689	20.28292	.1077049	.0164320
#2	136.5451	.0117469	5.679818	20.33662	.1061395	.0167989
#3	136.5000	.0151476	5.710603	20.29886	.1078549	.0168346

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3318-04DUP Acquired: 10/13/2025 13:41:49 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0027851	.0787716	F 11.07639	1.437679	F 25.00296	-.007661
Stddev	.0003393	.0017030	.06301	.015279	.32685	.001176
%RSD	12.18385	2.161952	.5688334	1.062727	1.307231	15.35131
#1	.0026123	.0794912	11.07373	1.442906	25.10559	-.006458
#2	.0025670	.0768269	11.14068	1.420473	24.63711	-.008808
#3	.0031761	.0799967	11.01475	1.449658	25.26617	-.007718

Elem	Sr4077
Units	ppm
Avg	.3010287
Stddev	.0079633
%RSD	2.645379
#1	.3036509
#2	.2920850
#3	.3073503

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4137.756	60989.95	7644.622	3821.428	6294.233
Stddev	10.338	128.40	178.570	11.548	6.397
%RSD	.2498540	.2105186	2.335893	.3021927	.1016293
#1	4125.881	60927.12	7589.553	3817.436	6288.119
#2	4142.640	60905.07	7844.241	3834.442	6293.702
#3	4144.749	61137.66	7500.073	3812.406	6300.879

Sample Name: Q3318-04LX5 Acquired: 10/13/2025 13:45:55 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.0000971**	**.0021889**	**.5810305**	**.0036019**	**.0038384**	**.3966709**	**.0241192**
Stddev	.0004538	.0007031	.0137335	.0017144	.0004162	.0258624	.0025259
%RSD	467.3286	32.12066	2.363649	47.59687	10.84414	6.519867	10.47262
#1	.0002617	.0027442	.5968315	.0053903	.0034945	.4082200	.0255299
#2	-.000416	.0024242	.5719654	.0034428	.0043011	.4147464	.0256245
#3	.000446	.0013984	.5742945	.0019726	.0037196	.3670462	.0212030

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000264**	**.0014132**	**14.11082**	**.0157706**	**.0023361**	**.1455115**	**4.756726**
Stddev	.0000405	.0001072	.90105	.0005184	.0000536	.0031589	.032506
%RSD	153.2760	7.586551	6.385530	3.286966	2.292573	2.170887	.6833607
#1	.0000661	.0014757	14.86134	.0154638	.0023839	.1491571	4.740165
#2	-.000015	.0014745	14.35960	.0163691	.0023461	.1437927	4.794176
#3	.000028	.0012894	13.11151	.0154789	.0022782	.1435847	4.735835

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1731331**	**2.698664**	**.0109167**	**.0002163**	**23.68709**	**.0049390**	**1.061963**
Stddev	.0108236	.163770	.0000370	.0004170	.14297	.0041405	.010703
%RSD	6.251597	6.068539	.3385840	192.8258	.6035941	83.83208	1.007893
#1	.1824074	2.830712	.0108979	.0000826	23.69661	.0001990	1.049695
#2	.1757513	2.749871	.0109592	-.000118	23.82507	.0078501	1.066803
#3	.1612405	2.515410	.0108928	.000684	23.53960	.0067679	1.069393

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.488834**	**.0206854**	**.0031772**	**.0006698**	**.0141824**	**1.937407**	**.2626948**
Stddev	.032297	.0006764	.0001792	.0007929	.0014940	.016211	.0067758
%RSD	.9257150	3.270031	5.641585	118.3835	10.53430	.8367237	2.579349
#1	3.487199	.0202092	.0031896	.0015297	.0157095	1.954397	.2699682
#2	3.521917	.0214597	.0033500	.0005119	.0141139	1.935719	.2615552
#3	3.457386	.0203874	.0029921	-.000032	.0127238	1.922107	.2565611

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3318-04LX5 Acquired: 10/13/2025 13:45:55 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**4.653179**	**-.002324**	**.0609259**
Stddev	.140131	.001991	.0044458
%RSD	3.011521	85.66609	7.297021
#1	4.810773	-.000718	.0647756
#2	4.606160	-.001703	.0619420
#3	4.542603	-.004552	.0560600

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4402.445**	**67069.42**	**7518.081**	**4217.444**	**6925.781**
Stddev	107.622	762.21	386.334	37.866	175.520
%RSD	2.444585	1.136453	5.138726	.8978447	2.534295
#1	4278.179	67921.66	7188.295	4261.164	6723.187
#2	4463.758	66833.64	7422.812	4195.063	7031.967
#3	4465.400	66452.95	7943.136	4196.104	7022.188

Sample Name: Q3318-04MS Acquired: 10/13/2025 13:50:08 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.7648461**	**1.458960**	**3.837491**	**1.876558**	**.7929939**	**4.059306**
Stddev	.0020007	.050539	.006485	.003386	.0034135	.092629
%RSD	.2615791	3.464074	.1689814	.1804336	.4304528	2.281897
#1	.7671310	1.419543	3.843925	1.877377	.7900285	4.017954
#2	.7634084	1.515937	3.830957	1.872837	.7967253	4.165409
#3	.7639989	1.441399	3.837592	1.879459	.7922278	3.994555

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3013633**	**.1934288**	**.1870378**	**72.19820**	**.4597183**	**.1961209**
Stddev	.0038350	.0025497	.0004153	1.08225	.0043221	.0001925
%RSD	1.272538	1.318182	.2220554	1.499000	.9401588	.0981704
#1	.3029260	.1924927	.1875144	72.25416	.4547606	.1962081
#2	.3041702	.1963142	.1868451	73.25139	.4626937	.1962544
#3	.2969937	.1914793	.1867537	71.08906	.4617006	.1959002

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9984128**	**26.38498**	**1.062834**	**15.73143**	**.5151143**	**.0670449**
Stddev	.0007056	.16421	.014291	.29460	.0016265	.0007334
%RSD	.0706680	.6223788	1.344637	1.872715	.3157479	1.093845
#1	.9990997	26.20008	1.065932	15.68513	.5169231	.0662548
#2	.9976899	26.51382	1.075322	16.04645	.5137722	.0677038
#3	.9984488	26.44105	1.047248	15.46272	.5146476	.0671761

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**124.6256**	**.3069078**	**5.297316**	**27.56913**	**.3643988**	**.4176072**
Stddev	.4483	.0065194	.045489	.16966	.0034359	.0010180
%RSD	.3597541	2.124210	.8587228	.6154111	.9428861	.2437734
#1	124.2652	.3071999	5.244926	27.39446	.3643912	.4164546
#2	124.4838	.3132761	5.320229	27.57961	.3678385	.4179839
#3	125.1277	.3002472	5.326792	27.73330	.3609667	.4183832

Sample Name: Q3318-04MS Acquired: 10/13/2025 13:50:08 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.6500271	.2700104	F 10.94435	6.979486	F 23.82047	.1910936
Stddev	.0012484	.0027954	.08853	.004186	.07473	.0029530
%RSD	.1920477	1.035290	.8089005	.0599760	.3137056	1.545339
#1	.6514428	.2691839	10.84212	6.977355	23.83091	.1926311
#2	.6490843	.2731259	10.99545	6.976794	23.88943	.1929606
#3	.6495541	.2677214	10.99547	6.984309	23.74107	.1876890

Elem	Sr4077
Units	ppm
Avg	.4970317
Stddev	.0064004
%RSD	1.287729
#1	.4987339
#2	.5024089
#3	.4899522

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4227.287	66549.82	7290.969	4155.558	6406.036
Stddev	2.668	557.63	99.895	25.003	12.068
%RSD	.0631100	.8379203	1.370118	.6016650	.1883808
#1	4230.128	67193.10	7309.526	4184.258	6392.540
#2	4226.897	66203.77	7183.096	4138.491	6415.787
#3	4224.835	66252.57	7380.283	4143.926	6409.781

Sample Name: Q3318-04MSD Acquired: 10/13/2025 13:54:06 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.7838687**	**1.516320**	**3.898865**	**1.924602**	**.8049982**	**3.921310**
Stddev	.0062463	.023106	.034026	.018635	.0074597	.065842
%RSD	.7968500	1.523806	.8727052	.9682407	.9266729	1.679080
#1	.7840293	1.540556	3.916360	1.925727	.8046990	3.914207
#2	.7775437	1.494541	3.859652	1.905430	.7976926	3.859307
#3	.7900332	1.513863	3.920584	1.942649	.8126030	3.990415

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2906566**	**.1874113**	**.1905264**	**70.46462**	**.4679290**	**.1995161**
Stddev	.0041514	.0023592	.0016686	1.05918	.0015478	.0021524
%RSD	1.428276	1.258836	.8757836	1.503135	.3307857	1.078802
#1	.2903488	.1859897	.1916644	70.14988	.4686927	.2001959
#2	.2866677	.1861097	.1886109	69.59849	.4661477	.1971059
#3	.2949533	.1901346	.1913038	71.64550	.4689466	.2012466

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.016533**	**27.19253**	**1.038463**	**15.27767**	**.5235791**	**.0676748**
Stddev	.006152	.21112	.016037	.16057	.0051597	.0004035
%RSD	.6051891	.7763894	1.544305	1.051039	.9854711	.5961872
#1	1.019335	27.28015	1.033664	15.22135	.5262921	.0681381
#2	1.009479	26.95171	1.025373	15.15284	.5176289	.0674006
#3	1.020785	27.34573	1.056352	15.45881	.5268164	.0674856

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**127.3363**	**.2989565**	**5.445044**	**28.39114**	**.3570507**	**.4277943**
Stddev	1.0451	.0071161	.010100	.20395	.0042386	.0032923
%RSD	.8207286	2.380309	.1854959	.7183745	1.187125	.7696108
#1	128.0971	.2999705	5.448733	28.55235	.3534548	.4276293
#2	126.1446	.2913878	5.433618	28.16185	.3559733	.4245875
#3	127.7670	.3055112	5.452781	28.45922	.3617241	.4311660

Sample Name: Q3318-04MSD Acquired: 10/13/2025 13:54:06 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.6633455	.2634231	F 11.28069	7.048170	F 24.08974	.1866367
Stddev	.0084069	.0058495	.08922	.087829	.33969	.0024397
%RSD	1.267346	2.220553	.7908850	1.246125	1.410107	1.307187
#1	.6676134	.2612261	11.32095	7.041921	24.10627	.1864500
#2	.6536608	.2589902	11.17843	6.963633	23.74209	.1842957
#3	.6687625	.2700529	11.34267	7.138957	24.42087	.1891644

Elem	Sr4077
Units	ppm
Avg	.4852912
Stddev	.0082628
%RSD	1.702646
#1	.4840012
#2	.4777492
#3	.4941231

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4230.354	67068.42	7758.189	4138.247	6434.974
Stddev	20.047	121.49	95.302	18.508	48.932
%RSD	.4738918	.1811406	1.228401	.4472506	.7604116
#1	4221.462	66968.61	7814.564	4138.226	6406.722
#2	4253.309	67203.69	7811.847	4156.765	6491.476
#3	4216.290	67032.96	7648.155	4119.748	6406.723

Sample Name: Q3318-04A Acquired: 10/13/2025 13:58:03 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.7818510**	**1.516494**	**3.870656**	**1.925051**	**.8039324**	**3.966471**
Stddev	.0040664	.029597	.007503	.003846	.0005052	.064470
%RSD	.5200965	1.951643	.1938494	.1997704	.0628408	1.625377
#1	.7838804	1.505079	3.865251	1.925972	.8043566	3.927417
#2	.7845032	1.550099	3.867495	1.928353	.8040671	4.040884
#3	.7771693	1.494305	3.879223	1.920828	.8033735	3.931112

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2957384**	**.1887985**	**.1896387**	**71.28064**	**.4728645**	**.1990882**
Stddev	.0057667	.0029353	.0002745	1.13425	.0082083	.0001166
%RSD	1.949935	1.554722	.1447327	1.591249	1.735867	.0585880
#1	.2926009	.1872475	.1893317	70.59698	.4822080	.1989868
#2	.3023936	.1921839	.1898603	72.58993	.4695713	.1990623
#3	.2922206	.1869641	.1897241	70.65500	.4668141	.1992157

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.012605**	**27.49011**	**1.049762**	**15.46704**	**.5227546**	**.0685620**
Stddev	.000427	.42402	.016783	.20670	.0004835	.0019032
%RSD	.0421248	1.542432	1.598787	1.336361	.0924883	2.775855
#1	1.012161	27.97916	1.039268	15.30625	.5225787	.0707479
#2	1.012643	27.26590	1.069119	15.70019	.5233014	.0676648
#3	1.013011	27.22527	1.040900	15.39470	.5223838	.0672733

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**129.2645**	**.3077242**	**5.503220**	**28.76876**	**.3623089**	**.4291593**
Stddev	2.3459	.0058800	.104095	.56454	.0039035	.0003126
%RSD	1.814798	1.910810	1.891521	1.962337	1.077382	.0728301
#1	131.8418	.3009351	5.616891	29.40069	.3622191	.4292344
#2	128.6980	.3111950	5.480219	28.59136	.3662564	.4294275
#3	127.2537	.3110425	5.412550	28.31422	.3584510	.4288161

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3318-04A Acquired: 10/13/2025 13:58:03 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.6643896**	**.2677865**	F **11.43570**	**6.983669**	F **24.07492**	**.1890463**
Stddev	.0016134	.0045214	.15138	.067122	.10443	.0029067
%RSD	.2428409	1.688439	1.323787	.9611269	.4337875	1.537551
#1	.6636904	.2668598	11.56602	7.035592	24.07251	.1864477
#2	.6662347	.2726994	11.47143	7.007541	24.18054	.1921853
#3	.6632437	.2638002	11.26964	6.907874	23.97171	.1885059

Elem	Sr4077
Units	ppm
Avg	**.4900833**
Stddev	.0077483
%RSD	1.581015
#1	.4859893
#2	.4990198
#3	.4852407

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4262.096**	**66301.54**	**7704.802**	**4120.652**	**6483.882**
Stddev	6.483	938.66	111.029	54.713	4.576
%RSD	.1521020	1.415739	1.441031	1.327783	.0705826
#1	4254.648	65223.74	7787.145	4061.439	6478.606
#2	4265.170	66741.25	7578.530	4131.180	6486.775
#3	4266.470	66939.63	7748.730	4169.336	6486.266

Sample Name: Q3297-10 Acquired: 10/13/2025 14:03:31 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CONFIRMATION Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002824**	**-.000220**	**.0002294**	**.0074117**	**.0036230**	**.1768975**	**.1853385**
Stddev	.000680	.002228	.0015152	.0018255	.0014237	.0023068	.0015122
%RSD	24.08020	1011.020	660.5022	24.63027	39.29662	1.304009	.8159216
#1	-.003601	.000739	.0004778	.0053365	.0052144	.1794131	.1854050
#2	-.002334	-.002768	.0016051	.0081292	.0031848	.1748815	.1837941
#3	-.002538	.001367	-.001395	.0087695	.0024699	.1763979	.1868164

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000058**	**.0000167**	**8.248613**	**.0007289**	**.0002359**	**.0005819**	**.0262088**
Stddev	.000056	.0000064	.038529	.0001842	.0001364	.0003401	.0029603
%RSD	97.78453	38.06077	.4670939	25.27519	57.81201	58.45006	11.29493
#1	-.000088	.0000120	8.228684	.0006132	.0003138	.0003622	.0266323
#2	.000007	.0000240	8.224130	.0009414	.0000784	.0004098	.0289346
#3	-.000092	.0000142	8.293024	.0006321	.0003155	.0009737	.0230596

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0535544**	**1.231249**	**.0008487**	**.0000458**	**293.1131**	**.0007778**	**.1379309**
Stddev	.0005531	.035240	.0002123	.0004974	2.2177	.0022766	.0003658
%RSD	1.032856	2.862152	25.01657	1086.612	.7566067	292.6813	.2651684
#1	.0531401	1.271361	.0006044	.0006195	293.0461	-.001828	.1382812
#2	.0533407	1.205268	.0009529	-.000216	290.9296	.001780	.1375514
#3	.0541826	1.217117	.0009889	-.000266	295.3635	.002381	.1379600

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.316469**	**.0551806**	**.0007904**	**-.015450**	**-.000188**	**.6238211**	**.0060476**
Stddev	.025749	.0012959	.0002682	.000140	.000433	.0109359	.0007298
%RSD	1.955918	2.348490	33.93787	.9048036	229.9332	1.753044	12.06771
#1	1.286943	.0537231	.0009756	-.015377	-.000597	.6322492	.0057225
#2	1.334259	.0562029	.0009128	-.015361	-.000234	.6114634	.0055370
#3	1.328205	.0556160	.0004828	-.015611	.000266	.6277507	.0068835

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3297-10 Acquired: 10/13/2025 14:03:31 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CONFIRMATION Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**1.679818**	**-.008849**	**.0403824**
Stddev	.035903	.000584	.0002668
%RSD	2.137295	6.601167	.6606715
#1	1.715532	-.009231	.0402734
#2	1.680192	-.009139	.0401874
#3	1.643730	-.008176	.0406865

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4180.571**	**66477.78**	**7722.292**	**4184.679**	**6316.803**
Stddev	9.187	220.12	44.497	20.074	16.183
%RSD	.2197514	.3311198	.5762111	.4797006	.2561840
#1	4174.201	66469.37	7686.335	4197.532	6302.816
#2	4191.102	66701.99	7772.056	4194.958	6334.527
#3	4176.409	66261.98	7708.486	4161.548	6313.065

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3297-20 Acquired: 10/13/2025 14:07:55 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CONFIRMATION Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002119**	**.0019653**	**.0026832**	**.0102248**	**.0025171**	**.3706708**	**.1543867**
Stddev	.001470	.0013458	.0012394	.0032630	.0007943	.0073556	.0005476
%RSD	69.37285	68.47669	46.19276	31.91228	31.55775	1.984411	.3546901
#1	-.003307	.0006015	.0041085	.0081625	.0030890	.3639783	.1544701
#2	-.002576	.0020022	.0020821	.0139868	.0016101	.3785462	.1538022
#3	-.000475	.0032923	.0018589	.0085252	.0028523	.3694879	.1548878

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000071**	**-.000114**	**9.046889**	**.0015363**	**-.000045**	**.0007094**	**.0187129**
Stddev	.000013	.000057	.033385	.0002302	.000151	.0001857	.0022597
%RSD	18.53723	49.65597	.3690265	14.98219	336.8302	26.18227	12.07577
#1	-.000069	-.000049	9.013160	.0014920	-.000016	.0007721	.0196449
#2	-.000085	-.000153	9.047589	.0017854	-.000208	.0005004	.0203576
#3	-.000059	-.000141	9.079919	.0013315	.000090	.0008557	.0161363

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0105085**	**4.260092**	**.0009105**	**-.000377**	**294.8410**	**.0006954**	**.1264748**
Stddev	.0000894	.041875	.0001481	.000148	2.7424	.0017103	.0004779
%RSD	.8506588	.9829492	16.26880	39.40205	.9301418	245.9403	.3778506
#1	.0105109	4.229317	.0009458	-.000525	298.0049	.0002268	.1259529
#2	.0105966	4.307778	.0010377	-.000228	293.3746	.0025912	.1268909
#3	.0104179	4.243182	.0007479	-.000378	293.1435	-.000732	.1265807

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6031689**	**.0529481**	**.0005995**	**-.014713**	**-.002183**	**.3955409**	**.0076220**
Stddev	.0087050	.0006633	.0001419	.000573	.000123	.0152335	.0004955
%RSD	1.443205	1.252694	23.66996	3.895898	5.641825	3.851318	6.500978
#1	.6058621	.0528897	.0007610	-.014291	-.002048	.3882476	.0081880
#2	.6102089	.0523160	.0005431	-.014483	-.002213	.3853252	.0074117
#3	.5934356	.0536386	.0004945	-.015366	-.002288	.4130500	.0072663

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3297-20 Acquired: 10/13/2025 14:07:55 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CONFIRMATION Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.934551	-.010184	.0130672
Stddev	.038476	.000768	.0002188
%RSD	1.988911	7.537753	1.674459
#1	1.892748	-.011061	.0129215
#2	1.942421	-.009634	.0129613
#3	1.968484	-.009857	.0133188

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4156.312	65952.31	7478.887	4235.282	6093.064
Stddev	5.042	217.94	64.090	4.041	16.625
%RSD	.1213155	.3304483	.8569496	.0954244	.2728552
#1	4161.778	66010.79	7550.522	4236.741	6111.115
#2	4155.316	66135.04	7459.156	4230.714	6089.697
#3	4151.842	65711.10	7426.981	4238.392	6078.380

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCV02 Acquired: 10/13/2025 14:18:21 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**5.074515**	**5.296481**	**4.980167**	**5.082922**	**5.033267**	**10.03735**	**9.897653**
Stddev	.008029	.151561	.002655	.015585	.001629	.02446	.057717
%RSD	.1582193	2.861543	.0533058	.3066100	.0323570	.2437239	.5831422
#1	5.075260	5.128828	4.979363	5.076684	5.034585	10.01085	9.843478
#2	5.082145	5.423783	4.978007	5.100660	5.033770	10.04214	9.958357
#3	5.066139	5.336832	4.983130	5.071423	5.031446	10.05907	9.891123

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2549653**	**2.513209**	**25.14642**	**1.032643**	**2.497437**	**1.264669**	**5.069805**
Stddev	.0002369	.002577	.07818	.001117	.000411	.001381	.042604
%RSD	.0928979	.1025497	.3109066	.1081917	.0164612	.1091946	.8403382
#1	.2549034	2.511031	25.05851	1.031604	2.497002	1.265261	5.021137
#2	.2552270	2.512542	25.17257	1.032500	2.497819	1.265655	5.100356
#3	.2547656	2.516055	25.20817	1.033825	2.497490	1.263091	5.087921

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.492923**	**25.33774**	**2.506837**	**1.270711**	**25.17952**	**2.507324**	**2.597200**
Stddev	.009442	.09047	.001247	.003390	.14767	.015158	.009290
%RSD	.3787521	.3570501	.0497416	.2667940	.5864783	.6045554	.3576918
#1	2.488216	25.24102	2.507105	1.272713	25.01900	2.489871	2.597367
#2	2.503794	25.42028	2.507928	1.272624	25.30961	2.517198	2.606406
#3	2.486760	25.35192	2.505478	1.266797	25.20996	2.514903	2.587829

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.58570**	**5.034715**	**5.058213**	**5.033696**	**5.012489**	**5.133466**	**5.319448**
Stddev	.20691	.001886	.008163	.009078	.012944	.021404	.013977
%RSD	.8087098	.0374549	.1613896	.1803525	.2582440	.4169460	.2627614
#1	25.35053	5.036467	5.053403	5.023245	4.998403	5.120347	5.304953
#2	25.73984	5.034959	5.067639	5.039627	5.023862	5.158165	5.332843
#3	25.66673	5.032719	5.053598	5.038216	5.015201	5.121886	5.320548

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCV02 Acquired: 10/13/2025 14:18:21 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**4.969551**	**4.938301**	**4.923749**
Stddev	.024342	.015162	.049912
%RSD	.4898186	.3070222	1.013706
#1	4.955520	4.923988	4.971749
#2	4.997659	4.954188	4.872123
#3	4.955475	4.936728	4.927376

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4063.566**	**62671.86**	**7207.573**	**3952.737**	**6044.855**
Stddev	5.171	279.42	29.582	10.768	12.580
%RSD	.1272645	.4458425	.4104316	.2724294	.2081127
#1	4065.774	62864.65	7213.535	3950.041	6046.735
#2	4067.267	62799.52	7233.720	3943.574	6056.389
#3	4057.657	62351.42	7175.464	3964.598	6031.441

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCB02 Acquired: 10/13/2025 14:22:24 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000486**	**.0031205**	**-.000785**	**.0022733**	**.0014997**	**.0099441**	**.0072069**
Stddev	.001650	.0034976	.001500	.0021560	.0018408	.0053153	.0030309
%RSD	339.4254	112.0843	190.9247	94.84117	122.7464	53.45144	42.05592
#1	-.001552	.0016136	-.001606	.0032235	.0017976	.0069496	.0055995
#2	.001414	.0071189	-.001695	.0037909	-.000472	.0160811	.0053183
#3	-.001319	.0006289	.000945	-.000195	.003173	.0068017	.0107029

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000007**	**.0000298**	**-.005696**	**-.000060**	**.0000609**	**.0001323**	**-.002504**
Stddev	.000054	.0000080	.003205	.000128	.0000104	.0002828	.008071
%RSD	757.9741	26.75204	56.26509	214.4957	17.14018	213.7046	322.2622
#1	-.000041	.0000356	-.004918	.000062	.0000717	.0004488	-.008408
#2	.000055	.0000207	-.002951	-.000048	.0000509	-.000096	-.005797
#3	-.000035	.0000330	-.009217	-.000194	.0000601	.000044	.006692

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001042**	**-.003410**	**-.000072**	**.0001629**	**.0539935**	**.0030247**	**-.000064**
Stddev	.0005096	.020117	.000138	.0002878	.0214123	.0007715	.000251
%RSD	489.3178	589.9791	193.0055	176.7057	39.65725	25.50756	394.5686
#1	-.000415	-.023927	-.000213	.0004540	.0696478	.0027408	-.000350
#2	.000124	-.002584	-.000065	.0001563	.0295924	.0038980	.000118
#3	.000604	.016281	.000063	-.000122	.0627403	.0024354	.000041

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0638409**	**.0077697**	**.0002950**	**.0024223**	**.0004727**	**.0089610**	**-.002763**
Stddev	.0201625	.0013517	.0000547	.0004611	.0015882	.0016978	.000806
%RSD	31.58241	17.39749	18.53212	19.03652	335.9879	18.94678	29.17774
#1	.0818316	.0089960	.0003368	.0028739	-.001055	.0108389	-.003015
#2	.0420480	.0079929	.0002332	.0024409	.000358	.0085093	-.003414
#3	.0676430	.0063203	.0003152	.0019522	.002115	.0075346	-.001861

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCB02 Acquired: 10/13/2025 14:22:24 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0040292	-.001883	-.000024
Stddev	.0011166	.000536	.000093
%RSD	27.71197	28.48213	393.5742
#1	.0036492	-.001404	.000082
#2	.0052861	-.001782	-.000089
#3	.0031522	-.002462	-.000064

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4290.112	67657.01	7501.310	4276.520	6928.715
Stddev	20.419	72.30	150.679	2.017	23.695
%RSD	.4759531	.1068690	2.008709	.0471585	.3419851
#1	4277.685	67740.21	7615.738	4274.225	6919.528
#2	4278.973	67609.45	7557.604	4277.328	6910.990
#3	4313.678	67621.36	7330.588	4278.009	6955.628

Sample Name: PB170069BL Acquired: 10/13/2025 15:07:45 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.0008059**	**.0028762**	**.0003805**	**.0013145**	**-.000258**	**.0063873**
Stddev	.0006409	.0014276	.0008736	.0006878	.000165	.0141003
%RSD	79.52911	49.63541	229.5939	52.32182	64.07153	220.7556
#1	.0009518	.0036497	.0013853	.0008505	-.000436	.0111131
#2	.0013612	.0012287	-.000044	.0009883	-.000110	-.009469
#3	.0001046	.0037500	-.000200	.0021047	-.000228	.017518

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0040106**	**-.000034**	**-.000019**	**-.010858**	**-.000189**	**.0000135**
Stddev	.0006795	.000055	.000070	.002813	.000035	.0001849
%RSD	16.94322	162.3139	375.8345	25.90473	18.33111	1372.273
#1	.0045863	-.000077	.000011	-.011565	-.000174	-.000192
#2	.0032610	.000029	-.000099	-.007760	-.000229	.000067
#3	.0041846	-.000054	.000032	-.013251	-.000164	.000165

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000176**	**-.000778**	**.0001585**	**-.007182**	**.0001342**	**.0000764**
Stddev	.000167	.007208	.0001486	.015842	.0001406	.0005647
%RSD	95.14329	925.8381	93.76140	220.5803	104.7307	738.9134
#1	-.000003	.000443	.0000545	.010149	-.000028	-.000483
#2	-.000188	-.008519	.0000923	-.010780	.000217	.000646
#3	-.000337	.005740	.0003286	-.020915	.000214	.000067

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0164671**	**.0016871**	**-.000094**	**.0156522**	**-.001420**	**.0000738**
Stddev	.0069114	.0023671	.000156	.0099038	.000342	.0002699
%RSD	41.97117	140.3075	166.2922	63.27418	24.08147	365.8568
#1	.0203324	-.000032	-.000154	.0114260	-.001067	.0000254
#2	.0084877	.004387	.000083	.0269680	-.001441	-.000169
#3	.0205810	.000706	-.000212	.0085626	-.001750	.000365

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: PB170069BL Acquired: 10/13/2025 15:07:45 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0012669	-.000096	-.001314	-.001623	F .0129093	-.002256
Stddev	.0002709	.000598	.007655	.000644	.0012624	.001284
%RSD	21.38250	625.6494	582.7001	39.63746	9.778748	56.91194
#1	.0015294	.000044	-.000652	-.002329	.0143033	-.003735
#2	.0009883	-.000752	.005989	-.001474	.0125813	-.001431
#3	.0012832	.000420	-.009278	-.001068	.0118433	-.001602

Elem	Sr4077
Units	ppm
Avg	-.000040
Stddev	.000069
%RSD	170.4004
#1	-.000113
#2	-.000030
#3	.000023

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4403.456	68629.79	7515.190	4384.637	7148.397
Stddev	11.862	162.11	33.201	17.556	23.139
%RSD	.2693713	.2362146	.4417851	.4004063	.3236894
#1	4394.243	68665.60	7529.623	4388.729	7133.028
#2	4399.287	68452.76	7477.215	4365.396	7137.153
#3	4416.840	68771.00	7538.732	4399.786	7175.008

Sample Name: PB170069BS Acquired: 10/13/2025 15:18:33 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.7951410**	**2.343164**	**.9560751**	**2.002811**	**.8077948**	**2.006796**
Stddev	.0015648	.029933	.0015343	.004272	.0060703	.003188
%RSD	.1967985	1.277467	.1604773	.2132786	.7514615	.1588851
#1	.7941940	2.363171	.9572705	2.007636	.8111275	2.004926
#2	.7942817	2.357569	.9543451	1.999513	.8007882	2.004984
#3	.7969472	2.308752	.9566098	2.001284	.8114687	2.010478

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1988624**	**.2078647**	**.1936541**	**1.020137**	**.4176175**	**.1968827**
Stddev	.0015430	.0016805	.0005065	.013263	.0008037	.0004126
%RSD	.7759341	.8084476	.2615316	1.300101	.1924421	.2095780
#1	.2003513	.2073339	.1938299	1.018543	.4176132	.1972033
#2	.1972704	.2065137	.1940493	1.034125	.4168159	.1970275
#3	.1989654	.2097465	.1930832	1.007743	.4184233	.1964172

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3135047**	**3.014276**	**.2017167**	**2.009116**	**.4952762**	**.0729815**
Stddev	.0010069	.039604	.0020530	.009936	.0013757	.0002528
%RSD	.3211870	1.313890	1.017756	.4945227	.2777700	.3464442
#1	.3143862	3.047113	.2040144	2.013025	.4965829	.0732726
#2	.3124073	3.025422	.2010733	1.997820	.4954053	.0728166
#3	.3137205	2.970293	.2000625	2.016502	.4938405	.0728553

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.822077**	**.3024311**	**.2161742**	**9.678915**	**.3015800**	**.4163267**
Stddev	.043014	.0053917	.0007366	.145161	.0027799	.0007260
%RSD	1.524198	1.782794	.3407520	1.499761	.9217845	.1743841
#1	2.861790	.2984146	.2169366	9.781303	.3039258	.4170000
#2	2.828054	.3003197	.2154664	9.742651	.2985095	.4155575
#3	2.776387	.3085590	.2161197	9.512790	.3023047	.4164226

Sample Name: PB170069BS Acquired: 10/13/2025 15:18:33 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.6863198**	**.1939115**	**.8872180**	**5.927381**	F **.0069199**	**.1952385**
Stddev	.0010428	.0021606	.0254806	.032868	.0024875	.0021757
%RSD	.1519440	1.114213	2.871967	.5545117	35.94715	1.114397
#1	.6874296	.1964053	.9108865	5.946744	.0050228	.1960739
#2	.6861696	.1927264	.8905204	5.945969	.0097362	.1968728
#3	.6853603	.1926027	.8602473	5.889431	.0060008	.1927689

Elem	Sr4077
Units	ppm
Avg	**.1938794**
Stddev	.0020858
%RSD	1.075832
#1	.1961920
#2	.1933058
#3	.1921403

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4262.696**	**64944.23**	**7282.691**	**4082.003**	**6756.327**
Stddev	5.450	219.63	41.715	26.571	9.378
%RSD	.1278631	.3381807	.5727955	.6509225	.1388078
#1	4259.173	64945.39	7299.170	4111.969	6750.976
#2	4268.974	64724.02	7313.650	4061.317	6750.850
#3	4259.940	65163.28	7235.254	4072.723	6767.156

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3323-01 Acquired: 10/13/2025 15:22:34 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.3527768**	**-.012333**	**12.69527**	**.0348803**	**-.034994**	**117.3103**
Stddev	.0028808	.004534	.05205	.0028787	.000837	1.2594
%RSD	.8165958	36.76235	.4100239	8.253093	2.392878	1.073593
#1	.3518857	-.007136	12.75507	.0321939	-.034765	115.8634
#2	.3559979	-.014385	12.66013	.0345282	-.035921	118.1607
#3	.3504470	-.015478	12.67061	.0379189	-.034294	117.9067

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.928842**	**.0703999**	**.0259764**	**104.6530**	**.9653970**	**.2357736**
Stddev	.033297	.0004256	.0006758	1.1168	.0020271	.0006797
%RSD	1.136858	.6045999	2.601796	1.067193	.2099728	.2882685
#1	2.897876	.0699098	.0267170	103.3662	.9675715	.2364940
#2	2.964061	.0706136	.0258193	105.3702	.9650599	.2351438
#3	2.924589	.0706764	.0253930	105.2225	.9635596	.2356829

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.322617**	**461.0440**	**4.228175**	**87.94188**	**1.210789**	**.0260626**
Stddev	.028923	2.3644	.043307	.78492	.004805	.0009536
%RSD	.3949805	.5128320	1.024237	.8925418	.3968402	3.658795
#1	7.355573	458.3311	4.181311	87.04017	1.216224	.0250405
#2	7.310828	462.6653	4.266717	88.31351	1.209035	.0269284
#3	7.301451	462.1358	4.236497	88.47198	1.207107	.0262187

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**90.86656**	**.3345758**	**21.85767**	**26.40110**	**1.665976**	**.1480753**
Stddev	.54095	.0013400	.15300	.04318	.008343	.0004861
%RSD	.5953209	.4004976	.6999659	.1635699	.5007578	.3282791
#1	90.45810	.3331029	21.88762	26.37324	1.656860	.1486124
#2	91.48005	.3357227	21.69191	26.45085	1.667839	.1476656
#3	90.66153	.3349018	21.99347	26.37922	1.673230	.1479478

Sample Name: Q3323-01 Acquired: 10/13/2025 15:22:34 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**3.861197**	**3.206049**	**8.949142**	**8.927689**	F **200.5970**	**.2647944**
Stddev	.029334	.033557	.091842	.137874	3.5526	.0032729
%RSD	.7597185	1.046671	1.026261	1.544337	1.771008	1.236024
#1	3.892213	3.168679	8.949824	9.081195	204.3238	.2611419
#2	3.857479	3.233605	8.856961	8.887488	200.2183	.2674612
#3	3.833899	3.215861	9.040641	8.814384	197.2490	.2657801

Elem	Sr4077
Units	ppm
Avg	**.2248162**
Stddev	.0058449
%RSD	2.599865
#1	.2189283
#2	.2306171
#3	.2249033

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4626.565**	**70508.92**	**8673.944**	**4323.662**	**5757.887**
Stddev	10.549	201.55	66.705	14.809	18.237
%RSD	.2280185	.2858479	.7690279	.3425023	.3167311
#1	4614.625	70729.07	8750.436	4306.586	5736.835
#2	4630.446	70464.20	8627.873	4331.421	5767.971
#3	4634.624	70333.49	8643.521	4332.980	5768.855

Sample Name: Q3323-02 Acquired: 10/13/2025 15:26:42 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.5176550**	**-.044362**	**25.67586**	**.0255592**	**-.147181**	**209.2177**
Stddev	.0006198	.007758	.03065	.0014770	.005148	.7114
%RSD	.1197369	17.48711	.1193749	5.778693	3.497911	.3400081
#1	.5181698	-.035518	25.65170	.0239642	-.151591	209.1785
#2	.5169670	-.047549	25.66554	.0268797	-.141523	208.5268
#3	.5178283	-.050018	25.71033	.0258336	-.148428	209.9479

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.703163**	**.4482538**	**.0475066**	**309.9749**	**1.197504**	**1.125037**
Stddev	.012708	.0027617	.0008882	.8993	.000888	.000990
%RSD	.3431606	.6160948	1.869575	.2901336	.0741369	.0879797
#1	3.713634	.4484085	.0467383	309.6250	1.198288	1.124076
#2	3.689025	.4454180	.0473024	309.3032	1.197684	1.124983
#3	3.706831	.4509349	.0484791	310.9967	1.196540	1.126053

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**38.74714**	**1196.134**	**14.33009**	**125.0168**	**6.593013**	**-.014150**
Stddev	.07304	6.953	.02316	.4620	.001868	.001698
%RSD	.1885061	.5813069	.1615870	.3695507	.0283303	12.00315
#1	38.70603	1198.625	14.32741	124.6448	6.590863	-.014037
#2	38.70391	1201.498	14.30839	124.8717	6.593935	-.012511
#3	38.83147	1188.278	14.35447	125.5340	6.594241	-.015903

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**86.91624**	**.5083170**	F **35.78452**	**26.86802**	**8.898960**	**.9029888**
Stddev	.49814	.0023600	.01736	.20046	.023872	.0004233
%RSD	.5731274	.4642848	.0485109	.7460845	.2682576	.0468773
#1	87.07082	.5058119	35.79981	26.94811	8.902533	.9034016
#2	87.31876	.5086405	35.78811	27.01606	8.873503	.9025557
#3	86.35913	.5104986	35.76565	26.63990	8.920845	.9030091

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3323-02 Acquired: 10/13/2025 15:26:42 Type: Unk
Method: 6010-200.7 NEW(v283) 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	F 17.58660	7.893983	4.831344	F 28.44920	F 152.1930	.3231689
Stddev	.00483	.017476	.043826	.06254	.2629	.0004071
%RSD	.0274712	.2213784	.9071227	.2198435	.1727135	.1259786
#1	17.59146	7.901008	4.824444	28.39811	151.9605	.3227249
#2	17.58653	7.874088	4.878211	28.43056	152.4782	.3232569
#3	17.58180	7.906852	4.791378	28.51895	152.1403	.3235248

Elem	Sr4077
Units	ppm
Avg	.4939561
Stddev	.0079451
%RSD	1.608465
#1	.4942852
#2	.4858516
#3	.5017316

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4108.445	67789.91	8060.760	4084.166	4915.719
Stddev	6.952	181.16	38.321	3.954	4.730
%RSD	.1692040	.2672373	.4754077	.0968145	.0962124
#1	4106.435	67815.17	8067.397	4080.124	4914.135
#2	4116.180	67597.44	8095.328	4088.026	4921.037
#3	4102.720	67957.11	8019.553	4084.349	4911.985

Sample Name: Q3323-03 Acquired: 10/13/2025 15:31:05 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.2831388**	**-.025611**	**7.437348**	**.0156672**	**-.042953**	**113.6749**
Stddev	.0042727	.000679	.019349	.0049892	.000516	4.8099
%RSD	1.509030	2.652067	.2601637	31.84457	1.200512	4.231316
#1	.2851500	-.026189	7.458446	.0133467	-.043421	112.4599
#2	.2782317	-.025782	7.420431	.0213940	-.043039	118.9759
#3	.2860346	-.024863	7.433167	.0122609	-.042400	109.5890

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.342723**	**.0870050**	**.0170026**	**223.3359**	**.4573262**	**.2785628**
Stddev	.060227	.0029766	.0007712	9.4410	.0026488	.0005816
%RSD	4.485466	3.421219	4.535656	4.227280	.5791853	.2087798
#1	1.329062	.0863033	.0173019	221.0773	.4542828	.2784680
#2	1.408607	.0902698	.0161266	233.7014	.4585849	.2780345
#3	1.290499	.0844420	.0175793	215.2291	.4591109	.2791860

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.238884**	**602.3882**	**5.190094**	**85.19091**	**1.641807**	**-.004168**
Stddev	.014478	6.4849	.229523	3.38979	.003960	.000935
%RSD	.2000099	1.076534	4.422334	3.979055	.2412247	22.42136
#1	7.251416	598.8196	5.139983	84.23184	1.646086	-.003727
#2	7.223035	609.8736	5.440533	88.95691	1.638270	-.003536
#3	7.242202	598.4713	4.989767	82.38399	1.641066	-.005242

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.85551**	**.8685085**	**20.89206**	**24.94542**	**1.946115**	**.1518363**
Stddev	.47370	.0350352	.23687	.27120	.028378	.0008858
%RSD	.8635363	4.033955	1.133771	1.087172	1.458181	.5834031
#1	54.64403	.8585426	20.69816	24.84369	1.930783	.1527354
#2	55.39810	.9074469	20.82197	25.25278	1.978861	.1518090
#3	54.52438	.8395358	21.15607	24.73980	1.928700	.1509644

Sample Name: Q3323-03 Acquired: 10/13/2025 15:31:05 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**3.448800**	**4.197735**	F **10.50750**	F **11.39892**	F **109.0645**	**.2020954**
Stddev	.015046	.178650	.12248	.07871	.6112	.0065801
%RSD	.4362550	4.255874	1.165644	.6904842	.5604011	3.255954
#1	3.465136	4.154894	10.54711	11.45965	109.7336	.2007892
#2	3.445752	4.393911	10.60526	11.42710	108.9241	.2092306
#3	3.435511	4.044400	10.37011	11.31000	108.5357	.1962663

Elem	Sr4077
Units	ppm
Avg	**.6807792**
Stddev	.0478355
%RSD	7.026585
#1	.6739835
#2	.7316491
#3	.6367049

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4939.236**	**75463.73**	**8754.626**	**4704.787**	**5586.738**
Stddev	4.882	467.19	292.739	25.249	13.175
%RSD	.0988441	.6190960	3.343824	.5366670	.2358227
#1	4935.618	76003.20	8851.586	4733.193	5578.244
#2	4944.789	75193.23	8425.709	4696.270	5601.915
#3	4937.300	75194.76	8986.584	4684.898	5580.054

Sample Name: Q3323-04 Acquired: 10/13/2025 15:35:11 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.4378283**	**-.011739**	**6.837163**	**.0193860**	**-.025755**	**87.25189**
Stddev	.0138765	.004900	.177454	.0027506	.001463	.21078
%RSD	3.169384	41.73886	2.595434	14.18832	5.678887	.2415729
#1	.4471698	-.013092	6.981839	.0176831	-.024622	87.00954
#2	.4444319	-.006305	6.890489	.0225592	-.027407	87.39247
#3	.4218833	-.015819	6.639160	.0179157	-.025237	87.35367

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.423170**	**.0180537**	**.0235947**	**533.4473**	**.3629129**	**.1719466**
Stddev	.004013	.0002623	.0018663	6.3522	.0019375	.0048240
%RSD	.2819441	1.452860	7.909742	1.190781	.5338854	2.805515
#1	1.425149	.0177508	.0245939	540.6319	.3610791	.1751512
#2	1.425808	.0182013	.0247486	528.5757	.3649397	.1742900
#3	1.418552	.0182089	.0214415	531.1343	.3627199	.1663986

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.299311**	**631.2440**	**26.22821**	**1041.063**	**.6055065**	**-.012072**
Stddev	.059322	1.6731	.04155	3.712	.0153765	.000678
%RSD	2.579971	.2650485	.1584074	.3565735	2.539451	5.617091
#1	2.346219	633.1755	26.27484	1038.909	.6165778	-.012055
#2	2.319086	630.2456	26.19513	1038.931	.6119921	-.011403
#3	2.232628	630.3107	26.21465	1045.350	.5879498	-.012759

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**86.81029**	**.4221702**	**10.47530**	**29.56061**	**1.351312**	**.0541171**
Stddev	.58073	.0061734	.03965	.14704	.008433	.0009719
%RSD	.6689643	1.462313	.3785398	.4974131	.6240378	1.795950
#1	87.31319	.4280931	10.43035	29.63903	1.360976	.0549026
#2	86.94298	.4226440	10.50533	29.65182	1.345449	.0544186
#3	86.17470	.4157735	10.49023	29.39099	1.347511	.0530302

Sample Name: Q3323-04 Acquired: 10/13/2025 15:35:11 Type: Unk
Method: 6010-200.7 NEW(v283) 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	1.082353	3.927732	9.708839	F 19.63045	F 284.0569	.1519389
Stddev	.023610	.005501	.234193	.43665	5.1176	.0008697
%RSD	2.181384	.1400675	2.412167	2.224346	1.801613	.5724312
#1	1.101634	3.930453	9.978713	19.93368	287.8734	.1509423
#2	1.089404	3.931344	9.558986	19.82770	286.0557	.1523301
#3	1.056020	3.921401	9.588817	19.12998	278.2415	.1525444

Elem	Sr4077
Units	ppm
Avg	3.289277
Stddev	.050062
%RSD	1.521966
#1	3.231949
#2	3.311511
#3	3.324370

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4047.085	62012.46	7613.455	3852.306	4933.253
Stddev	74.825	126.76	28.152	14.584	112.652
%RSD	1.848851	.2044139	.3697672	.3785750	2.283515
#1	3987.033	62133.86	7645.962	3863.401	4843.456
#2	4023.314	61880.94	7597.105	3835.787	4896.649
#3	4130.907	62022.57	7597.298	3857.729	5059.655

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3323-05 Acquired: 10/13/2025 15:39:27 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.4407201**	**-.066693**	**2.329787**	**.0130263**	**-.053588**	**63.75711**
Stddev	.0031150	.001090	.030239	.0066558	.003034	.50372
%RSD	.7068013	1.633683	1.297931	51.09493	5.662288	.7900550
#1	.4437109	-.067618	2.331762	.0188329	-.054224	63.17650
#2	.4409551	-.065492	2.358989	.0057627	-.056253	64.07743
#3	.4374942	-.066968	2.298608	.0144831	-.050285	64.01740

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6433266**	**.0211673**	**.1089678**	**198.6865**	**.2008727**	**.1579597**
Stddev	.0044182	.0003467	.0033784	1.4128	.0013691	.0027813
%RSD	.6867784	1.638023	3.100371	.7110473	.6815894	1.760749
#1	.6385467	.0207802	.1096143	197.0832	.1994203	.1592142
#2	.6472610	.0214493	.1119762	199.7491	.2021396	.1598926
#3	.6441720	.0212725	.1053128	199.2270	.2010582	.1547721

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.463006**	**1055.926**	**4.903638**	**167.3756**	**.8479195**	**-.031256**
Stddev	.030272	6.991	.030213	1.4757	.0139894	.000336
%RSD	2.069141	.6620484	.6161341	.8816858	1.649849	1.075516
#1	1.465458	1053.941	4.872845	165.7148	.8497015	-.030870
#2	1.491977	1050.142	4.933235	168.5363	.8609326	-.031411
#3	1.431583	1063.695	4.904835	167.8757	.8331245	-.031486

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**62.82592**	**1.162467**	**20.45104**	**20.01914**	^ *****	**.0369456**
Stddev	.12175	.011559	.02607	.05985	-----	.0004678
%RSD	.1937931	.9943925	.1274639	.2989579	-----	1.266282
#1	62.96202	1.149470	20.45225	20.01465	^ -----	.0374166
#2	62.78837	1.171596	20.47648	19.96166	^ -----	.0364809
#3	62.72736	1.166335	20.42438	20.08111	^ -----	.0369392

Sample Name: Q3323-05 Acquired: 10/13/2025 15:39:27 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.4482893	4.222247	8.282448	7.765636	F 80.26046	.1960544
Stddev	.0061807	.022800	.179408	.123986	1.38294	.0012246
%RSD	1.378726	.5400021	2.166124	1.596604	1.723067	.6245964
#1	.4499412	4.197030	8.079803	7.768151	80.19937	.1946714
#2	.4534762	4.241408	8.421034	7.888346	81.67293	.1970010
#3	.4414505	4.228303	8.346507	7.640412	78.90907	.1964907

Elem	Sr4077
Units	ppm
Avg	-.181936
Stddev	.008721
%RSD	4.793479
#1	-.186317
#2	-.171893
#3	-.187598

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4164.118	64692.17	7857.253	3910.960	5353.783
Stddev	48.984	296.72	89.754	14.006	79.849
%RSD	1.176326	.4586624	1.142306	.3581100	1.491459
#1	4153.286	65022.76	7960.134	3905.353	5334.054
#2	4121.458	64604.82	7794.976	3926.901	5285.647
#3	4217.611	64448.94	7816.650	3900.627	5441.647

Sample Name: Q3323-06 Acquired: 10/13/2025 15:43:43 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.5693385	-.122425	1.900668	.0003257	-.150035	90.75267
Stddev	.0025085	.006281	.004505	.0082348	.003061	.77843
%RSD	.4405968	5.130269	.2370158	2528.544	2.040398	.8577467
#1	.5694585	-.124232	1.904255	-.005194	-.153563	91.64902
#2	.5667722	-.115439	1.895612	-.003620	-.148453	90.24644
#3	.5717848	-.127604	1.902138	.009791	-.148088	90.36255

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8952128	.0362713	.0800063	92.21812	.2761345	.2545469
Stddev	.0066330	.0004245	.0020081	.96271	.0004626	.0003045
%RSD	.7409409	1.170291	2.509962	1.043945	.1675397	.1196064
#1	.9027153	.0367530	.0817716	93.32841	.2764854	.2544770
#2	.8901267	.0359521	.0804257	91.61573	.2756102	.2542835
#3	.8927966	.0361087	.0778216	91.71021	.2763079	.2548802

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.992230	2140.196	11.86911	99.71329	1.114840	^ *****
Stddev	.016331	26.383	.10313	1.13215	.003177	-----
%RSD	.8197584	1.232757	.8688816	1.135409	.2849306	-----
#1	1.993505	2135.314	11.98788	101.0205	1.114495	^ -----
#2	2.007886	2116.595	11.81710	99.0441	1.111850	^ -----
#3	1.975298	2168.680	11.80233	99.0753	1.118175	^ -----

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.22102	4.398565	13.25628	35.62834	^ *****	.0471803
Stddev	.32608	.033972	.07696	.34440	-----	.0007426
%RSD	.7544478	.7723516	.5805190	.9666393	-----	1.574044
#1	42.97736	4.437752	13.22685	35.35161	^ -----	.0477178
#2	43.09424	4.380520	13.19838	35.51936	^ -----	.0463329
#3	43.59145	4.377423	13.34360	36.01404	^ -----	.0474903

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3323-06 Acquired: 10/13/2025 15:43:43 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.4259862	5.598956	8.392498	F 13.16337	F 46.31125	.4770982
Stddev	.0024174	.050080	.050996	.08814	.36728	.0035070
%RSD	.5674768	.8944511	.6076362	.6695779	.7930658	.7350755
#1	.4284211	5.656622	8.334686	13.26318	46.68889	.4766136
#2	.4235868	5.566389	8.411711	13.09623	45.95530	.4738587
#3	.4259507	5.573856	8.431096	13.13070	46.28955	.4808224

Elem	Sr4077
Units	ppm
Avg	F -1.22257
Stddev	.02504
%RSD	2.048340
#1	-1.21306
#2	-1.20368
#3	-1.25097

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3971.730	64882.82	7815.632	3850.036	4763.099
Stddev	4.920	438.09	87.933	42.681	6.624
%RSD	.1238830	.6752095	1.125088	1.108591	.1390633
#1	3966.179	64943.23	7714.114	3837.393	4755.454
#2	3973.457	65287.57	7864.746	3897.610	4767.114
#3	3975.554	64417.65	7868.037	3815.104	4766.730

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3323-07 Acquired: 10/13/2025 15:47:50 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**1.004397**	**-.130365**	**82.98121**	**-.022942**	**7.939731**	**75.49186**
Stddev	.011708	.006299	.40171	.011113	.036048	.44689
%RSD	1.165658	4.831964	.4840920	48.44057	.4540177	.5919718
#1	1.015634	-.129456	83.44397	-.019494	7.974830	74.97767
#2	1.005286	-.124570	82.72226	-.013961	7.902804	75.78659
#3	.992269	-.137070	82.77740	-.035371	7.941559	75.71133

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6373538**	**.0250037**	**.0706855**	**96.42455**	**.6384337**	**.4587164**
Stddev	.0032612	.0003187	.0054832	.49430	.0241615	.0018284
%RSD	.5116734	1.274568	7.757237	.5126239	3.784496	.3985900
#1	.6335937	.0248846	.0674688	95.87102	.6492433	.4607499
#2	.6390564	.0253648	.0675710	96.82188	.6553031	.4572081
#3	.6394112	.0247617	.0770167	96.58074	.6107546	.4581911

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **57.16497**	**1880.384**	**13.67708**	**105.8606**	**3.794688**	**-.085280**
Stddev	.26996	68.145	.06523	.7591	.016938	.005335
%RSD	.4722431	3.623984	.4769421	.7170687	.4463592	6.255781
#1	57.39054	1935.394	13.60181	105.0199	3.814001	-.083294
#2	56.86587	1901.605	13.71233	106.4957	3.782360	-.091324
#3	57.23851	1804.154	13.71712	106.0662	3.787702	-.081224

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**59.38695**	F **7.103480**	**11.76839**	**19.03392**	^ *****	**.1014524**
Stddev	1.66721	.022402	.50387	.49440	-----	.0005494
%RSD	2.807365	.3153675	4.281519	2.597449	-----	.5415351
#1	60.61236	7.077698	12.05438	19.38015	^ -----	.1017491
#2	60.06006	7.114551	12.06419	19.25389	^ -----	.1017896
#3	57.48841	7.118192	11.18661	18.46771	^ -----	.1008184

Sample Name: Q3323-07 Acquired: 10/13/2025 15:47:50 Type: Unk
Method: 6010-200.7 NEW(v283) 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	F 43.56584	3.619260	6.992542	F 11.97676	F 29.55958	.3246770
Stddev	.16242	.025113	.268569	.06025	.22959	.0053084
%RSD	.3728183	.6938720	3.840788	.5030763	.7766937	1.634986
#1	43.72465	3.593886	7.105703	11.98240	29.43644	.3296438
#2	43.57283	3.619790	7.186012	12.03400	29.82447	.3253045
#3	43.40004	3.644104	6.685911	11.91389	29.41784	.3190827

Elem	Sr4077
Units	ppm
Avg	F -1.17512
Stddev	.06845
%RSD	5.824853
#1	-1.23257
#2	-1.19339
#3	-1.09939

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3903.374	66563.74	7653.494	3967.184	4954.393
Stddev	14.646	2252.38	75.041	150.182	19.130
%RSD	.3752188	3.383794	.9804865	3.785604	.3861155
#1	3886.776	65342.06	7712.299	3868.281	4933.309
#2	3914.484	65186.15	7568.976	3893.273	4959.231
#3	3908.862	69163.01	7679.206	4139.997	4970.639

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3326-01 Acquired: 10/13/2025 15:51:54 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.0319769**	**-.000134**	**.2709481**	**.0070355**	**-.015629**	**140.6419**
Stddev	.0022447	.005201	.0005679	.0018026	.000449	.1749
%RSD	7.019781	3892.626	.2096049	25.62201	2.871189	.1243734
#1	.0341891	-.006138	.2705323	.0067598	-.016071	140.4436
#2	.0320404	.002909	.2715952	.0053866	-.015644	140.7074
#3	.0297010	.002829	.2707169	.0089601	-.015174	140.7745

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.017748**	**.0120376**	**.0045910**	**12.32774**	**.2018601**	**.1504579**
Stddev	.005283	.0002370	.0001038	.02279	.0004368	.0003088
%RSD	.5191337	1.969108	2.259997	.1849014	.2163670	.2052233
#1	1.015359	.0120614	.0047107	12.35323	.2016711	.1501216
#2	1.014080	.0117897	.0045269	12.30930	.2023595	.1507286
#3	1.023804	.0122619	.0045355	12.32069	.2015496	.1505236

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2760527**	**309.5954**	**7.403369**	**63.71704**	**.3183186**	**-.006204**
Stddev	.0016387	.9795	.025299	.13271	.0002522	.000305
%RSD	.5936226	.3163934	.3417256	.2082816	.0792240	4.912008
#1	.2770428	308.8892	7.386112	63.63377	.3184196	-.005992
#2	.2741611	310.7137	7.391585	63.87009	.3180315	-.006066
#3	.2769540	309.1834	7.432411	63.64727	.3185046	-.006553

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.912962**	**.2904021**	**.6874440**	**17.89507**	**.2524838**	**.0012386**
Stddev	.039584	.0012761	.0047057	.00575	.0037362	.0002128
%RSD	.5002441	.4394257	.6845235	.0321580	1.479769	17.18309
#1	7.935345	.2889815	.6827604	17.90144	.2519499	.0010347
#2	7.867258	.2907734	.6921715	17.89351	.2564582	.0012217
#3	7.936284	.2914513	.6874000	17.89026	.2490433	.0014594

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3326-01 Acquired: 10/13/2025 15:51:54 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0461494	2.627417	F 11.01769	4.710916	.3538757	.3500403
Stddev	.0004041	.011725	.03302	.038661	.0072417	.0019626
%RSD	.8756711	.4462411	.2996790	.8206788	2.046387	.5606627
#1	.0463236	2.635926	11.03644	4.668444	.3455267	.3480801
#2	.0456874	2.614043	11.03707	4.720245	.3584534	.3500357
#3	.0464372	2.632282	10.97957	4.744060	.3576471	.3520052

Elem	Sr4077
Units	ppm
Avg	-.179918
Stddev	.001136
%RSD	.6312411
#1	-.179323
#2	-.181228
#3	-.179204

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5153.646	79815.31	8933.512	5123.574	6240.840
Stddev	8.688	144.56	22.463	15.029	3.980
%RSD	.1685845	.1811175	.2514508	.2933393	.0637701
#1	5143.624	79866.31	8946.575	5139.582	6243.544
#2	5158.265	79652.16	8946.388	5121.372	6236.270
#3	5159.050	79927.46	8907.574	5109.766	6242.706

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCV03 Acquired: 10/13/2025 16:04:17 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.043362**	**5.312449**	**5.008871**	**5.026675**	**5.002682**	**10.16979**	**9.872608**
Stddev	.006021	.103046	.003302	.019233	.009436	.03745	.028975
%RSD	.1193856	1.939708	.0659241	.3826130	.1886215	.3682900	.2934846
#1	5.046042	5.362143	5.009014	5.043525	5.008238	10.13274	9.894924
#2	5.047577	5.381230	5.012100	5.030779	4.991787	10.16898	9.839862
#3	5.036466	5.193973	5.005501	5.005722	5.008021	10.20764	9.883037

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2638763**	**2.542410**	**25.38394**	**1.048208**	**2.517320**	**1.266364**	**5.062080**
Stddev	.0010139	.003040	.01036	.003635	.002004	.001608	.026320
%RSD	.3842165	.1195726	.0408221	.3468270	.0795894	.1270048	.5199506
#1	.2649032	2.542366	25.39411	1.048761	2.518198	1.265637	5.031806
#2	.2628760	2.545471	25.37340	1.051536	2.518734	1.265248	5.079534
#3	.2638498	2.539392	25.38430	1.044328	2.515027	1.268208	5.074900

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.520405**	**25.78062**	**2.526263**	**1.280418**	**24.04757**	**2.540387**	**2.519031**
Stddev	.007499	.04707	.002517	.001505	.07293	.006611	.002836
%RSD	.2975125	.1825731	.0996317	.1175547	.3032808	.2602488	.1125822
#1	2.529057	25.80910	2.527465	1.279818	24.03838	2.533077	2.516714
#2	2.515774	25.72629	2.527954	1.282131	24.12466	2.545949	2.522194
#3	2.516385	25.80646	2.523371	1.279305	23.97967	2.542133	2.518185

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.03317**	**5.195554**	**5.173184**	**5.105775**	**5.031720**	**5.119884**	**5.246777**
Stddev	.09938	.017757	.005804	.011700	.011117	.051357	.023297
%RSD	.3969759	.3417819	.1121974	.2291616	.2209338	1.003096	.4440200
#1	25.01238	5.207055	5.179555	5.110231	5.029995	5.062669	5.264051
#2	25.14130	5.175102	5.171800	5.114593	5.021567	5.161999	5.256000
#3	24.94584	5.204504	5.168197	5.092501	5.043599	5.134983	5.220281

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCV03 Acquired: 10/13/2025 16:04:17 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.913365**	**4.870519**	**5.005252**
Stddev	.028405	.015116	.090298
%RSD	.5781146	.3103469	1.804074
#1	4.938062	4.883600	4.930200
#2	4.919710	4.853972	5.105461
#3	4.882325	4.873985	4.980094

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4160.536**	**62315.61**	**6998.889**	**3912.612**	**6189.898**
Stddev	6.195	240.22	11.946	8.232	2.101
%RSD	.1489048	.3854818	.1706901	.2103857	.0339461
#1	4164.089	62379.30	6986.132	3907.255	6188.510
#2	4164.136	62049.96	7009.813	3908.491	6188.868
#3	4153.382	62517.55	7000.722	3922.090	6192.315

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCB03 Acquired: 10/13/2025 16:08:19 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.001118**	**.0033344**	**-.000339**	**.0007610**	**.0020888**	**.0055942**	**.0019761**
Stddev	.001239	.0027721	.001821	.0016936	.0008713	.0068957	.0021414
%RSD	110.7970	83.13698	537.5250	222.5421	41.71074	123.2652	108.3612
#1	-.000554	.0065018	.001296	.0024938	.0025605	-.001935	.0018546
#2	-.000262	.0021506	-.000012	-.000891	.0026226	.011603	.0041757
#3	-.002539	.0013507	-.002301	.000680	.0010834	.007114	-.000102

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000060**	**.0000073**	**-.010234**	**-.000219**	**.0000742**	**-.000146**	**.0050623**
Stddev	.000018	.0000106	.007128	.000266	.0001446	.000346	.0115419
%RSD	29.98936	144.0887	69.65382	121.5168	194.8825	237.1645	227.9999
#1	-.000046	.0000084	-.003814	-.000192	.0001295	.000038	.0033647
#2	-.000054	-.000004	-.017905	.000033	.0001831	.000069	.0173590
#3	-.000081	.000017	-.008982	-.000497	-.000090	-.000545	-.005537

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002069**	**-.014701**	**-.000095**	**.0007082**	**-.033827**	**.0022871**	**.0001245**
Stddev	.0000794	.003488	.000111	.0003289	.009200	.0019188	.0001561
%RSD	38.37780	23.72729	116.4739	46.44461	27.19880	83.89423	125.4243
#1	.0002557	-.018665	-.000056	.0004897	-.042718	.0042796	.0000714
#2	.0001153	-.013338	-.000009	.0005484	-.034417	.0004517	.0000018
#3	.0002497	-.012101	-.000221	.0010865	-.024346	.0021302	.0003002

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1452969**	**.0098205**	**.0007061**	**-.001995**	**-.000121**	**.0057650**	**-.001165**
Stddev	.0109156	.0009542	.0001488	.000321	.002200	.0091071	.000634
%RSD	7.512610	9.716798	21.06943	16.08430	1822.059	157.9727	54.44771
#1	.1383003	.0099807	.0008362	-.001854	.001944	.0161725	-.001440
#2	.1397158	.0106845	.0005439	-.001769	.000128	.0018661	-.001615
#3	.1578746	.0087963	.0007382	-.002362	-.002434	-.000744	-.000440

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCB03 Acquired: 10/13/2025 16:08:19 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0081628	.0002559	.0000142
Stddev	.0017144	.0023875	.0000310
%RSD	21.00297	932.9701	218.5815
#1	.0068081	-.000798	-.000020
#2	.0100903	-.001423	.000022
#3	.0075899	.002989	.000041

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4313.750	66116.73	7260.143	4221.293	6992.152
Stddev	15.225	902.16	32.042	73.525	20.701
%RSD	.3529374	1.364492	.4413380	1.741759	.2960663
#1	4297.754	65108.83	7283.615	4136.400	6975.961
#2	4315.432	66392.65	7223.639	4264.574	6985.017
#3	4328.064	66848.71	7273.176	4262.907	7015.477

Sample Name: Q3326-05 Acquired: 10/13/2025 16:12:39 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.0703259**	**.0028668**	**.2667322**	**.0158063**	**-.018247**	**201.7314**
Stddev	.0029208	.0049998	.0020881	.0006703	.001081	.2635
%RSD	4.153198	174.4029	.7828278	4.240426	5.925414	.1306299
#1	.0725475	.0010523	.2679492	.0157456	-.019476	201.5778
#2	.0714127	.0085206	.2679263	.0151685	-.017441	201.5807
#3	.0670175	-.000972	.2643212	.0165049	-.017825	202.0357

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6567559**	**.0096130**	**.0008601**	**16.35051**	**.2157578**	**.1121636**
Stddev	.0036343	.0000900	.0003095	.04441	.0012981	.0012387
%RSD	.5533663	.9361248	35.98764	.2715923	.6016335	1.104398
#1	.6570673	.0095091	.0008113	16.34732	.2163053	.1130616
#2	.6529760	.0096633	.0011911	16.30778	.2166925	.1126786
#3	.6602245	.0096665	.0005778	16.39643	.2142757	.1107504

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3467524**	**302.2007**	**4.824144**	**35.63606**	**.2249327**	**-.005152**
Stddev	.0047777	1.7610	.025979	.10231	.0021860	.000573
%RSD	1.377835	.5827268	.5385232	.2870992	.9718402	11.11731
#1	.3491868	302.4463	4.830412	35.62724	.2261906	-.005246
#2	.3498226	300.3297	4.795604	35.53844	.2261990	-.005672
#3	.3412479	303.8260	4.846415	35.74249	.2224085	-.004538

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.882660**	**.3758183**	**.5595996**	**11.89283**	**.2482297**	**.0042859**
Stddev	.037786	.0023646	.0016883	.06208	.0095884	.0003133
%RSD	.7738745	.6291878	.3016912	.5219816	3.862703	7.310258
#1	4.895110	.3750732	.5579194	11.88741	.2571824	.0042174
#2	4.840220	.3784656	.5612958	11.83364	.2381121	.0046278
#3	4.912649	.3739159	.5595836	11.95744	.2493945	.0040125

Sample Name: Q3326-05 Acquired: 10/13/2025 16:12:39 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0213944	3.881046	F 15.01116	3.951444	.6968444	.1949291
Stddev	.0008492	.020745	.05057	.034272	.0091371	.0008666
%RSD	3.969188	.5345302	.3369072	.8673343	1.311216	.4445905
#1	.0212588	3.894211	15.00293	3.966999	.7009703	.1951479
#2	.0223033	3.891795	14.96520	3.975180	.7031909	.1956653
#3	.0206212	3.857132	15.06534	3.912152	.6863719	.1939740

Elem	Sr4077
Units	ppm
Avg	-.116877
Stddev	.001184
%RSD	1.013041
#1	-.116813
#2	-.115727
#3	-.118092

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4845.917	68332.71	8173.479	4479.101	6130.296
Stddev	38.960	66.40	13.108	17.782	55.593
%RSD	.8039823	.0971713	.1603692	.3970095	.9068556
#1	4825.343	68397.38	8174.696	4477.001	6102.254
#2	4821.556	68264.71	8159.806	4462.461	6094.309
#3	4890.851	68336.04	8185.936	4497.840	6194.325

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3327-01 Acquired: 10/13/2025 16:16:42 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.0799136**	**.0050470**	**.5613890**	**.0109900**	**-.037854**	**262.7179**
Stddev	.0026723	.0057425	.0016578	.0023732	.000308	5.9188
%RSD	3.344006	113.7803	.2953066	21.59360	.8149382	2.252898
#1	.0780672	.0033780	.5631164	.0108135	-.037954	256.2443
#2	.0829779	.0114392	.5612395	.0134466	-.037508	264.0569
#3	.0786956	.0003239	.5598109	.0087101	-.038101	267.8524

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.852259**	**.0217788**	**.0290597**	**37.30692**	**.4507182**	**.5708929**
Stddev	.027694	.0005265	.0005216	.34631	.0002882	.0007805
%RSD	1.495140	2.417348	1.794844	.9282721	.0639469	.1367251
#1	1.822850	.0211720	.0285975	36.94576	.4510186	.5715582
#2	1.877839	.0221134	.0296252	37.63618	.4506922	.5710868
#3	1.856088	.0220511	.0289564	37.33882	.4504439	.5700337

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5155188**	**662.8075**	**17.83531**	**125.8311**	**.8838851**	**-.018735**
Stddev	.0012293	4.6791	.21489	1.0397	.0009781	.000913
%RSD	.2384521	.7059575	1.204860	.8262345	.1106536	4.872279
#1	.5154495	667.7509	17.60483	124.7219	.8845250	-.017787
#2	.5167813	658.4474	18.03016	126.7834	.8843710	-.018808
#3	.5143257	662.2241	17.87095	125.9880	.8827592	-.019608

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.66209**	**.6301974**	**1.428387**	**46.77353**	**^ *****	**.0128474**
Stddev	.12668	.0082683	.004067	.21774	-----	.0001863
%RSD	.5589926	1.312021	.2847487	.4655238	-----	1.450042
#1	22.67189	.6216480	1.432998	46.79921	^ -----	.0127040
#2	22.78359	.6381526	1.425307	46.97730	^ -----	.0130580
#3	22.53080	.6307916	1.426858	46.54409	^ -----	.0127803

Sample Name: Q3327-01 Acquired: 10/13/2025 16:16:42 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0423398	F 10.10794	8.395028	8.004535	2.084782	1.023006
Stddev	.0008244	.09281	.077281	.026483	.005502	.013528
%RSD	1.947086	.9181818	.9205524	.3308463	.2638891	1.322396
#1	.0432318	10.02495	8.473082	8.026982	2.091083	1.008505
#2	.0416059	10.20815	8.393458	7.975327	2.082329	1.035287
#3	.0421816	10.09071	8.318545	8.011295	2.080933	1.025225

Elem	Sr4077
Units	ppm
Avg	-.437009
Stddev	.007172
%RSD	1.641252
#1	-.444394
#2	-.430070
#3	-.436562

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5896.279	87819.01	10650.92	5574.817	5430.284
Stddev	6.072	236.44	123.48	18.915	4.138
%RSD	.1029784	.2692326	1.159337	.3392867	.0762071
#1	5889.452	87546.69	10793.22	5555.001	5425.554
#2	5901.076	87938.39	10572.06	5592.679	5433.240
#3	5898.308	87971.96	10587.47	5576.772	5432.057

Sample Name: Q3327-01DUP Acquired: 10/13/2025 16:20:59 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.0809897**	**.0095017**	**.5565374**	**.0112370**	**-.037656**	**264.8424**
Stddev	.0026218	.0049718	.0002178	.0007007	.001035	1.5030
%RSD	3.237149	52.32479	.0391382	6.235802	2.748444	.5674937
#1	.0817591	.0131980	.5567501	.0104281	-.037335	263.1936
#2	.0831406	.0114578	.5565473	.0116280	-.036819	266.1358
#3	.0780693	.0038494	.5563148	.0116550	-.038813	265.1979

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.788588**	**.0216543**	**.0309835**	**36.76525**	**.4489060**	**.5624249**
Stddev	.004581	.0000628	.0008436	.06929	.0019256	.0005675
%RSD	.2561083	.2899562	2.722751	.1884531	.4289549	.1009038
#1	1.792713	.0215825	.0305211	36.71278	.4511295	.5624687
#2	1.783658	.0216987	.0304721	36.73919	.4478022	.5618368
#3	1.789393	.0216818	.0319572	36.84379	.4477864	.5629692

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5307088**	**631.1700**	**17.28081**	**125.7417**	**.8739343**	**-.020654**
Stddev	.0017005	3.0640	.07080	.3441	.0006503	.000388
%RSD	.3204122	.4854478	.4096866	.2736514	.0744114	1.880703
#1	.5288382	633.1841	17.23357	125.3474	.8731993	-.020475
#2	.5311274	632.6819	17.24665	125.8963	.8744348	-.020388
#3	.5321609	627.6439	17.36221	125.9813	.8741690	-.021100

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.84447**	**.6271929**	**1.361227**	**44.36114**	**^ *****	**.0125107**
Stddev	.10304	.0022139	.002544	.12380	-----	.0002238
%RSD	.4943129	.3529829	.1868942	.2790738	-----	1.788928
#1	20.93034	.6273587	1.364109	44.47159	^ -----	.0122877
#2	20.73022	.6249008	1.359290	44.22732	^ -----	.0125089
#3	20.87285	.6293193	1.360284	44.38451	^ -----	.0127353

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3327-01DUP Acquired: 10/13/2025 16:20:59 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0416150	F 10.00866	9.597462	7.826136	1.895386	.9886959
Stddev	.0012251	.00817	.161622	.025652	.003954	.0016184
%RSD	2.943763	.0816051	1.684011	.3277765	.2085948	.1636925
#1	.0403998	10.00970	9.658872	7.798240	1.891329	.9872720
#2	.0428496	10.00002	9.719380	7.831461	1.895601	.9883597
#3	.0415957	10.01626	9.414136	7.848708	1.899227	.9904560

Elem	Sr4077
Units	ppm
Avg	-.412719
Stddev	.003679
%RSD	.8914295
#1	-.415144
#2	-.414528
#3	-.408486

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5950.400	91603.44	10783.95	5647.703	5529.193
Stddev	11.853	358.17	52.05	16.228	5.944
%RSD	.1991929	.3909971	.4826700	.2873345	.1074957
#1	5945.030	91639.50	10821.99	5641.884	5526.292
#2	5963.987	91942.22	10805.23	5666.037	5536.030
#3	5942.182	91228.62	10724.63	5635.186	5525.257

Sample Name: Q3327-01LX5 Acquired: 10/13/2025 16:25:16 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.0181415**	**.0016350**	**.1055398**	**.0046891**	**-.012308**	**66.88530**	**.4479453**
Stddev	.0013036	.0032606	.0016282	.0004456	.002630	.02142	.0013668
%RSD	7.185787	199.4294	1.542698	9.503033	21.37203	.0320243	.3051284
#1	.0171831	.0012006	.1073631	.0047233	-.014206	66.86181	.4495013
#2	.0176155	-.001387	.1050251	.0042274	-.009305	66.90375	.4469389
#3	.0196260	.005091	.1042312	.0051167	-.013413	66.89034	.4473956

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0058308**	**.0010368**	**9.812819**	**.1246804**	**.1022673**	**.1482287**	**164.0782**
Stddev	.0001044	.0003366	.044743	.0033422	.0006321	.0032321	3.2344
%RSD	1.790174	32.46928	.4559679	2.680611	.6180676	2.180481	1.971281
#1	.0057152	.0011881	9.864177	.1224036	.1029965	.1507146	162.8987
#2	.0058589	.0012712	9.782268	.1231203	.1018771	.1493964	161.5990
#3	.0059181	.0006510	9.792011	.1285174	.1019282	.1445750	167.7368

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.525917**	**33.05403**	**.1646584**	**-.005230**	**4.748431**	**.1648843**	**.3545264**
Stddev	.024620	.07669	.0010021	.000425	.088715	.0008865	.0086322
%RSD	.5439884	.2320201	.6085846	8.133412	1.868302	.5376762	2.434865
#1	4.550628	33.06425	.1658127	-.005721	4.717409	.1641005	.3493754
#2	4.525735	32.97274	.1641519	-.005003	4.679392	.1647060	.3497115
#3	4.501388	33.12510	.1640108	-.004966	4.848491	.1658465	.3644922

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.39096**	**.2359971**	**.0031457**	**.0097441**	**2.569069**	**1.999983**	**1.398442**
Stddev	.20874	.0101634	.0001368	.0004718	.005900	.066739	.016179
%RSD	2.008879	4.306565	4.348136	4.841409	.2296646	3.336963	1.156961
#1	10.30372	.2364196	.0033033	.0092524	2.573557	1.928636	1.417002
#2	10.23998	.2256290	.0030583	.0101930	2.571264	2.010431	1.387310
#3	10.62916	.2459426	.0030754	.0097867	2.562386	2.060881	1.391015

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3327-01LX5 Acquired: 10/13/2025 16:25:16 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.3541898	.2402152	-.108246
Stddev	.0060950	.0007233	.003351
%RSD	1.720841	.3011169	3.095975
#1	.3596654	.2398690	-.107006
#2	.3552813	.2397301	-.105691
#3	.3476228	.2410466	-.112041

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4671.302	69727.18	7753.844	4399.402	6369.610
Stddev	21.032	1526.13	24.481	78.622	37.679
%RSD	.4502325	2.188721	.3157280	1.787100	.5915480
#1	4647.226	70609.32	7755.249	4428.304	6327.050
#2	4686.093	70607.26	7728.691	4459.482	6398.714
#3	4680.588	67964.95	7777.592	4310.420	6383.066

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3327-01MS Acquired: 10/13/2025 16:29:20 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.6056507**	**1.726220**	**1.503950**	**1.320600**	**.5057927**	**260.9237**
Stddev	.0020503	.035428	.004129	.001668	.0011516	2.4110
%RSD	.3385239	2.052339	.2745164	.1263421	.2276863	.9240139
#1	.6049044	1.748895	1.499986	1.322184	.5046464	263.6371
#2	.6040781	1.744369	1.503638	1.320758	.5057821	259.0275
#3	.6079696	1.685395	1.508226	1.318858	.5069495	260.1066

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.912515**	**.1609670**	**.2200186**	**36.90673**	**.7100654**	**.6974119**
Stddev	.020989	.0013580	.0003303	.46747	.0014404	.0014950
%RSD	1.097436	.8436703	.1501452	1.266626	.2028552	.2143677
#1	1.936577	.1624722	.2196404	37.44054	.7110447	.6964092
#2	1.902996	.1605950	.2201643	36.70920	.7107399	.6966963
#3	1.897973	.1598336	.2202510	36.57045	.7084114	.6991302

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7123156**	**630.5757**	**16.71387**	**125.5217**	**1.296705**	**.0357395**
Stddev	.0034449	3.6001	.18876	1.2317	.001131	.0006614
%RSD	.4836138	.5709159	1.129342	.9812709	.0872294	1.850734
#1	.7102439	634.6612	16.92231	126.9217	1.295878	.0353431
#2	.7104107	629.1974	16.66482	125.0391	1.296243	.0365031
#3	.7162922	627.8684	16.55448	124.6044	1.297994	.0353723

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.58385**	**.8307695**	**1.461440**	**50.65386**	**^ *****	**.2835936**
Stddev	.13299	.0098242	.001809	.27599	-----	.0000731
%RSD	.5638994	1.182537	.1238108	.5448450	-----	.0257782
#1	23.73498	.8418144	1.463397	50.97062	^ -----	.2836776
#2	23.53187	.8230060	1.459828	50.46523	^ -----	.2835443
#3	23.48470	.8274882	1.461095	50.52573	^ -----	.2835589

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3327-01MS Acquired: 10/13/2025 16:29:20 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.7233234	F 10.10728	7.727291	F 13.56583	1.911997	1.132234
Stddev	.0031193	.10748	.046086	.03864	.004812	.013089
%RSD	.4312434	1.063413	.5964034	.2848110	.2516915	1.156023
#1	.7228835	10.23122	7.702313	13.54236	1.909594	1.147101
#2	.7204475	10.05109	7.699086	13.54470	1.908859	1.127152
#3	.7266393	10.03955	7.780474	13.61042	1.917537	1.122448

Elem	Sr4077
Units	ppm
Avg	-.273931
Stddev	.000233
%RSD	.0852361
#1	-.273796
#2	-.274201
#3	-.273797

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5785.659	87619.85	10244.21	5489.003	5547.685
Stddev	10.919	27.37	64.71	14.886	13.012
%RSD	.1887237	.0312423	.6316434	.2711995	.2345454
#1	5782.633	87648.64	10172.40	5472.793	5550.433
#2	5797.772	87594.15	10262.24	5492.157	5559.104
#3	5776.573	87616.78	10297.99	5502.060	5533.519

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3327-01MSD Acquired: 10/13/2025 16:33:32 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.6181426**	**1.723182**	**1.527121**	**1.351913**	**.5236095**	**241.0589**
Stddev	.0036256	.081632	.006276	.004520	.0019191	3.0440
%RSD	.5865305	4.737282	.4109857	.3343449	.3665224	1.262763
#1	.6189122	1.795529	1.534223	1.352493	.5257463	243.0873
#2	.6213216	1.739335	1.524817	1.356116	.5220324	242.5308
#3	.6141940	1.634681	1.522322	1.347132	.5230499	237.5588

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.843288**	**.1626544**	**.2112963**	**35.20979**	**.7190463**	**.6342993**
Stddev	.005200	.0010322	.0011355	.09740	.0026242	.0013049
%RSD	.2821265	.6345986	.5374175	.2766379	.3649607	.2057300
#1	1.847698	.1614915	.2122645	35.10850	.7196746	.6349282
#2	1.837553	.1630095	.2115781	35.21809	.7212994	.6351707
#3	1.844613	.1634622	.2100464	35.30277	.7161650	.6327990

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7173898**	**633.4146**	**15.24854**	**118.3245**	**1.236794**	**.0409650**
Stddev	.0038061	5.2163	.04836	.5544	.002178	.0015060
%RSD	.5305508	.8235196	.3171256	.4685242	.1761309	3.676387
#1	.7211536	628.7127	15.21004	117.6848	1.239296	.0392261
#2	.7174731	632.5054	15.23276	118.6251	1.235314	.0418569
#3	.7135427	639.0257	15.30281	118.6637	1.235773	.0418119

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.88572**	**.8068452**	**1.450801**	**50.99800**	**^ *****	**.2928141**
Stddev	.11858	.0031775	.001849	.20578	-----	.0006087
%RSD	.4964297	.3938136	.1274722	.4035105	-----	.2078730
#1	24.02260	.8063915	1.450345	51.22605	^ -----	.2935169
#2	23.81441	.8039190	1.449222	50.94177	^ -----	.2924632
#3	23.82015	.8102251	1.452835	50.82618	^ -----	.2924621

Sample Name: Q3327-01MSD Acquired: 10/13/2025 16:33:32 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.7163902	9.623851	5.922675	F 13.27385	1.883830	1.082714
Stddev	.0012581	.022881	.049544	.04852	.018642	.002289
%RSD	.1756210	.2377497	.8365104	.3655233	.9895956	.2114289
#1	.7152419	9.617843	5.974154	13.32869	1.901563	1.082002
#2	.7177350	9.604573	5.875325	13.25632	1.885531	1.080866
#3	.7161936	9.649136	5.918544	13.23653	1.864395	1.085275

Elem	Sr4077
Units	ppm
Avg	-.276791
Stddev	.004775
%RSD	1.725063
#1	-.272002
#2	-.276822
#3	-.281551

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5661.550	82223.50	10033.67	5259.121	5635.834
Stddev	8.694	389.63	74.51	24.143	13.254
%RSD	.1535687	.4738675	.7425795	.4590669	.2351707
#1	5652.866	82512.80	10116.93	5267.810	5621.557
#2	5670.255	81780.46	9973.28	5277.716	5647.747
#3	5661.528	82377.25	10010.78	5231.836	5638.199

Sample Name: Q3327-01A Acquired: 10/13/2025 16:37:45 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.6191811**	**1.797001**	**1.538498**	**1.337944**	**.5177540**	**263.2158**
Stddev	.0031690	.043478	.002787	.004008	.0030783	1.1555
%RSD	.5117983	2.419475	.1811346	.2995353	.5945463	.4389966
#1	.6158753	1.842752	1.541549	1.339836	.5143775	263.3254
#2	.6194754	1.756224	1.536087	1.333340	.5204042	264.3127
#3	.6221927	1.792027	1.537859	1.340654	.5184803	262.0094

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.914173**	**.1617059**	**.2327755**	**37.40692**	**.7157321**	**.7393708**
Stddev	.001853	.0004074	.0003821	.09602	.0012588	.0008875
%RSD	.0968208	.2519219	.1641731	.2566924	.1758803	.1200302
#1	1.915620	.1621700	.2330252	37.33663	.7143533	.7403813
#2	1.914816	.1615405	.2329656	37.51632	.7160231	.7387181
#3	1.912084	.1614073	.2323356	37.36780	.7168200	.7390131

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7426483**	**623.2789**	**17.07791**	**127.1908**	**1.357427**	**.0338040**
Stddev	.0014453	3.8042	.04362	.4271	.000448	.0011379
%RSD	.1946169	.6103502	.2553938	.3357775	.0329719	3.366109
#1	.7410687	625.1991	17.11567	126.9841	1.357181	.0328179
#2	.7439046	618.8973	17.08790	127.6819	1.357944	.0335451
#3	.7429716	625.7402	17.03017	126.9065	1.357157	.0350490

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.31089**	**.8296620**	**1.471918**	**49.44344**	^ *****	**.2882436**
Stddev	.03455	.0014416	.004498	.12845	-----	.0001846
%RSD	.1548752	.1737521	.3055932	.2597918	-----	.0640581
#1	22.35022	.8299721	1.473485	49.31022	^ -----	.2884543
#2	22.28539	.8309233	1.466846	49.56652	^ -----	.2881103
#3	22.29706	.8280907	1.475423	49.45357	^ -----	.2881661

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3327-01A Acquired: 10/13/2025 16:37:45 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.7506822**	F **10.15218**	**8.241662**	F **14.32429**	**2.001038**	**1.117223**
Stddev	.0029948	.02824	.081520	.07469	.003988	.000730
%RSD	.3989433	.2781541	.9891199	.5214547	.1992825	.0653785
#1	.7535461	10.17302	8.329272	14.40824	2.004533	1.116508
#2	.7475718	10.16348	8.168043	14.29945	2.001888	1.117968
#3	.7509286	10.12004	8.227670	14.26518	1.996694	1.117193

Elem	Sr4077
Units	ppm
Avg	**-.268114**
Stddev	.004237
%RSD	1.580372
#1	-.269579
#2	-.263338
#3	-.271424

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5637.349**	**89609.87**	**10179.82**	**5566.893**	**5300.451**
Stddev	4.728	172.84	19.90	9.805	8.702
%RSD	.0838709	.1928848	.1955270	.1761262	.1641787
#1	5634.871	89808.73	10170.61	5561.045	5291.043
#2	5642.801	89495.69	10166.18	5578.212	5308.212
#3	5634.375	89525.20	10202.66	5561.421	5302.099

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3323-02DLX5 Acquired: 10/13/2025 16:42:24 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.1072563**	**-.004437**	**4.625994**	**.0061864**	**-.029913**	**41.57930**
Stddev	.0039046	.000396	.098521	.0025727	.001686	.05950
%RSD	3.640441	8.923533	2.129735	41.58709	5.634875	.1431051
#1	.1100980	-.004286	4.736765	.0075810	-.030482	41.58534
#2	.1088670	-.004886	4.593055	.0077607	-.031241	41.51701
#3	.1028041	-.004139	4.548162	.0032175	-.028017	41.63555

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7083198**	**.0962614**	**.0029187**	**64.93798**	**.2566367**	**.1998249**
Stddev	.0035351	.0006364	.0009475	.12879	.0136866	.0043410
%RSD	.4990761	.6610731	32.46340	.1983278	5.333045	2.172389
#1	.7057191	.0967819	.0028736	65.03934	.2660861	.2046225
#2	.7123449	.0964503	.0019945	64.98154	.2628826	.1986835
#3	.7068956	.0955520	.0038879	64.79306	.2409414	.1961687

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.290519**	**252.1288**	**2.983684**	**26.67136**	**1.184984**	**-.000405**
Stddev	.168157	12.7109	.015006	.05696	.026441	.000831
%RSD	2.028303	5.041437	.5029347	.2135695	2.231381	205.2217
#1	8.477280	259.8850	2.987341	26.73575	1.214396	-.001314
#2	8.243149	259.0419	2.996524	26.62753	1.177374	-.000219
#3	8.151128	237.4596	2.967188	26.65079	1.163181	.000317

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.69911**	**.1089998**	**24.39699**	**4.919020**	**2.040116**	**.1770702**
Stddev	.78151	.0018173	1.03525	.240225	.041068	.0033589
%RSD	5.316748	1.667273	4.243339	4.883596	2.013024	1.896949
#1	15.09603	.1074842	24.92747	5.047566	2.064740	.1808623
#2	15.20251	.1110145	25.05948	5.067620	2.062902	.1758794
#3	13.79879	.1085007	23.20402	4.641874	1.992707	.1744688

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3323-02DLX5 Acquired: 10/13/2025 16:42:24 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**3.219003**	**1.611760**	**.9323048**	**5.051357**	F **26.55715**	**.0610543**
Stddev	.070878	.004214	.0433216	.109126	.44945	.0014954
%RSD	2.201863	.2614350	4.646715	2.160330	1.692378	2.449263
#1	3.298731	1.612105	.9537484	5.176478	27.07605	.0619541
#2	3.195150	1.615790	.9607223	5.001716	26.28993	.0618808
#3	3.163129	1.607384	.8824437	4.975876	26.30548	.0593281

Elem	Sr4077
Units	ppm
Avg	**.0781147**
Stddev	.0116345
%RSD	14.89411
#1	.0700202
#2	.0728764
#3	.0914475

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4467.902**	**69859.93**	**7830.714**	**4337.996**	**6451.186**
Stddev	81.896	3261.70	30.975	214.853	129.674
%RSD	1.832994	4.668920	.3955547	4.952825	2.010084
#1	4378.186	67681.48	7817.677	4197.958	6307.642
#2	4486.870	68288.43	7866.076	4230.662	6486.057
#3	4538.650	73609.89	7808.389	4585.368	6559.860

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: PB1700074BL Acquired: 10/13/2025 16:54:11 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.000394**	**.0036571**	**.0007687**	**.0022091**	**-.001018**	**.0080766**
Stddev	.001605	.0013606	.0004289	.0016334	.001538	.0030927
%RSD	407.8223	37.20480	55.79190	73.93769	151.1389	38.29237
#1	-.001320	.0048816	.0003193	.0040716	-.002053	.0071820
#2	.001460	.0021924	.0011736	.0015354	.000750	.0115181
#3	-.001320	.0038972	.0008133	.0010204	-.001750	.0055299

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0032501**	**-.000048**	**-.000041**	**-.012236**	**.0002811**	**.0000725**
Stddev	.0002043	.000041	.000032	.012186	.0002622	.0000906
%RSD	6.284316	86.75003	80.02711	99.59362	93.28055	124.9970
#1	.0031187	-.000001	-.000005	-.004834	.0005553	-.000006
#2	.0034854	-.000081	-.000069	-.005573	.0000328	.000052
#3	.0031461	-.000061	-.000047	-.026300	.0002552	.000172

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000004**	**.0007413**	**-.000348**	**-.013122**	**-.000024**	**-.000108**
Stddev	.000282	.0043065	.000305	.022454	.000165	.000214
%RSD	7005.387	580.9608	87.84985	171.1175	675.5268	197.4268
#1	.000017	.0029963	-.000277	-.033365	.000078	-.000348
#2	-.000296	-.004225	-.000084	-.017032	-.000215	.000064
#3	.000267	.003452	-.000682	.011030	.000064	-.000041

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.021309**	**.0030948**	**-.000102**	**.0942702**	**.0019056**	**.0000611**
Stddev	.025942	.0014859	.000118	.0188584	.0004835	.0000568
%RSD	121.7393	48.01295	115.9232	20.00463	25.37356	92.93860
#1	-.026690	.0028232	.000024	.0730673	.0020892	.0000343
#2	.006901	.0046977	-.000119	.1091689	.0022704	.0001264
#3	-.044139	.0017634	-.000210	.1005744	.0013572	.0000227

Sample Name: PB1700074BL Acquired: 10/13/2025 16:54:11 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0016871	-.001057	-.003645	-.002722	F .0132651	.0007856
Stddev	.0007168	.002273	.010340	.000902	.0021917	.0003386
%RSD	42.48483	215.1551	283.6555	33.15161	16.52238	43.10332
#1	.0021105	-.003403	-.010871	-.003165	.0128639	.0005580
#2	.0008595	-.000902	.008199	-.003318	.0113017	.0006240
#3	.0020912	.001135	-.008263	-.001684	.0156297	.0011747

Elem	Sr4077
Units	ppm
Avg	-.000097
Stddev	.000090
%RSD	92.63614
#1	-.000118
#2	.000002
#3	-.000174

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4325.262	67087.21	7091.864	4302.059	7023.466
Stddev	56.092	196.17	29.649	35.262	93.292
%RSD	1.296850	.2924045	.4180728	.8196555	1.328285
#1	4262.409	67232.63	7110.024	4319.949	6919.824
#2	4370.234	66864.10	7057.649	4261.438	7100.726
#3	4343.141	67164.90	7107.918	4324.790	7049.847

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: PB1700074BS Acquired: 10/13/2025 16:58:31 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.7685480**	**2.268680**	**.9319260**	**1.932519**	**.7767152**	**1.959116**
Stddev	.0047059	.063786	.0008932	.004586	.0013702	.007482
%RSD	.6123073	2.811582	.0958397	.2373246	.1764084	.3818829
#1	.7664156	2.320164	.9313071	1.933037	.7751872	1.953160
#2	.7652858	2.197324	.9315210	1.927696	.7771238	1.967513
#3	.7739426	2.288553	.9329499	1.936824	.7778347	1.956674

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1932351**	**.2092362**	**.1893339**	**.9945804**	**.4142664**	**.1915830**
Stddev	.0018525	.0019628	.0006729	.0071565	.0012681	.0002454
%RSD	.9586696	.9380641	.3554122	.7195527	.3061124	.1280738
#1	.1944968	.2107417	.1889652	.9971201	.4149239	.1917947
#2	.1941002	.2099505	.1889259	1.000121	.4150707	.1913141
#3	.1911083	.2070163	.1901106	.986500	.4128045	.1916402

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3035400**	**3.032614**	**.1984398**	**2.048791**	**.4830974**	**.0732652**
Stddev	.0006499	.025469	.0011089	.020547	.0010228	.0001969
%RSD	.2141069	.8398390	.5587938	1.002897	.2117148	.2687130
#1	.3028779	3.027926	.1994837	2.065409	.4824495	.0731516
#2	.3035652	3.009815	.1972758	2.055147	.4825662	.0731514
#3	.3041770	3.060101	.1985600	2.025817	.4842765	.0734925

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.804221**	**.2966767**	**.2099186**	**9.602574**	**.3025534**	**.4048948**
Stddev	.009502	.0048563	.0001700	.083028	.0018079	.0008943
%RSD	.3388368	1.636897	.0809619	.8646444	.5975574	.2208645
#1	2.794554	.2987605	.2097289	9.646942	.3025267	.4046983
#2	2.804561	.2911263	.2099699	9.506788	.3043746	.4041152
#3	2.813549	.3001434	.2100570	9.653993	.3007590	.4058710

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: PB1700074BS Acquired: 10/13/2025 16:58:31 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.6702887	.1896064	.8994522	5.759756	F .0103394	.1906791
Stddev	.0025629	.0014189	.0185746	.027161	.0003737	.0017632
%RSD	.3823624	.7483530	2.065101	.4715638	3.614479	.9246675
#1	.6691457	.1909354	.8901384	5.764752	.0107702	.1924905
#2	.6684962	.1881120	.8873772	5.730444	.0101024	.1905784
#3	.6732243	.1897719	.9208410	5.784072	.0101455	.1889685

Elem	Sr4077
Units	ppm
Avg	.1877273
Stddev	.0005405
%RSD	.2879151
#1	.1883464
#2	.1873494
#3	.1874860

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4391.780	63471.72	7257.850	4029.657	6931.334
Stddev	4.332	123.72	47.760	12.848	5.711
%RSD	.0986493	.1949142	.6580440	.3188316	.0823997
#1	4392.726	63597.23	7215.552	4024.065	6926.393
#2	4387.053	63468.05	7248.354	4044.353	6930.021
#3	4395.561	63349.88	7309.645	4020.552	6937.587

Sample Name: CCV04 Acquired: 10/13/2025 17:02:32 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.024508**	**5.274378**	**4.969015**	**5.010750**	**4.971218**	**9.982913**	**9.520050**
Stddev	.010504	.037792	.006096	.008376	.004666	.031475	.105248
%RSD	.2090477	.7165183	.1226748	.1671612	.0938616	.3152864	1.105540
#1	5.012430	5.247687	4.962254	5.001150	4.965937	9.952182	9.406013
#2	5.031506	5.257825	4.974091	5.014535	4.974785	9.981476	9.540686
#3	5.029588	5.317622	4.970699	5.016565	4.972931	10.01508	9.613452

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2611701**	**2.520465**	**24.92034**	**1.043207**	**2.494632**	**1.254431**	**4.971331**
Stddev	.0020387	.002133	.13313	.002469	.002859	.000995	.024164
%RSD	.7806064	.0846452	.5342227	.2366605	.1145926	.0793144	.4860657
#1	.2588526	2.518293	24.76670	1.043174	2.491842	1.253575	4.955099
#2	.2619705	2.522558	24.99299	1.045692	2.494499	1.254196	4.999101
#3	.2626872	2.520543	25.00135	1.040755	2.497555	1.255523	4.959793

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.454670**	**25.36405**	**2.502195**	**1.267078**	**22.96851**	**2.504883**	**2.551390**
Stddev	.027302	.13308	.001525	.002198	.11191	.007568	.008343
%RSD	1.112249	.5246711	.0609608	.1734961	.4872195	.3021332	.3270062
#1	2.427334	25.21108	2.500434	1.267030	22.84498	2.503320	2.558692
#2	2.454739	25.45320	2.503049	1.269301	22.99742	2.498218	2.553182
#3	2.481938	25.42787	2.503102	1.264905	23.06312	2.513110	2.542297

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.19261**	**5.104663**	**5.144988**	**5.065409**	**4.909762**	**5.038933**	**5.219761**
Stddev	.03981	.047314	.000825	.007251	.036784	.017201	.003919
%RSD	.1645546	.9268837	.0160392	.1431503	.7491949	.3413636	.0750752
#1	24.16935	5.054884	5.145201	5.057197	4.871023	5.048367	5.221740
#2	24.16990	5.110057	5.145685	5.070929	4.914047	5.049354	5.215248
#3	24.23857	5.149050	5.144076	5.068101	4.944215	5.019079	5.222297

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCV04 Acquired: 10/13/2025 17:02:32 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.868783**	**4.658092**	**4.868972**
Stddev	.019776	.048609	.086964
%RSD	.4061814	1.043536	1.786092
#1	4.855161	4.605834	4.789676
#2	4.859721	4.666481	4.855264
#3	4.891466	4.701960	4.961977

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4194.596**	**62317.63**	**7050.411**	**3911.785**	**6248.459**
Stddev	7.479	65.59	60.493	28.422	6.142
%RSD	.1782983	.1052539	.8580109	.7265803	.0982894
#1	4189.977	62389.15	7116.453	3888.251	6245.432
#2	4190.586	62303.44	7037.095	3903.743	6244.418
#3	4203.225	62260.29	6997.685	3943.362	6255.526

Sample Name: CCB04 Acquired: 10/13/2025 17:06:35 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000123**	**.0026361**	**.0004199**	**.0024554**	**.0006112**	**.0086676**
Stddev	.001041	.0022824	.0005318	.0006943	.0004316	.0049168
%RSD	848.3697	86.58139	126.6330	28.27700	70.61688	56.72627
#1	.000877	.0000429	.0002295	.0023311	.0001313	.0130961
#2	-.001200	.0035255	.0010207	.0032035	.0007348	.0095303
#3	-.000045	.0043400	.0000096	.0018316	.0009676	.0033766

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0049757**	**-.000036**	**.0000573**	**.0042980**	**.0000980**	**.0001130**
Stddev	.0005414	.000036	.0000682	.0115585	.0002622	.0002420
%RSD	10.88092	99.61182	118.8585	268.9249	267.4964	214.1842
#1	.0050375	-.000002	.0000830	.0154952	-.000127	-.000127
#2	.0044060	-.000074	.0001090	.0049896	.000035	.000109
#3	.0054835	-.000032	-.000020	-.007591	.000386	.000357

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004564**	**.0031264**	**.0004937**	**.0066026**	**-.000048**	**-.000142**
Stddev	.0004014	.0062245	.0002678	.0433301	.000088	.000207
%RSD	87.94524	199.0965	54.25309	656.2584	184.3689	145.7471
#1	.0004553	-.003765	.0005938	-.037579	-.000113	.000097
#2	.0008583	.008341	.0006971	.008359	.000052	-.000266
#3	.0000556	.004803	.0001902	.049028	-.000083	-.000257

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.013857**	**.0010351**	**.0000395**	**.0371808**	**.0068125**	**.0002751**
Stddev	.007326	.0028217	.0001577	.0409211	.0006418	.0002705
%RSD	52.86677	272.6118	399.1786	110.0597	9.420889	98.32042
#1	-.005425	.0037715	.0002147	.0732221	.0071838	.0003427
#2	-.018661	-.001865	-.000091	.0456236	.0060714	.0005054
#3	-.017485	.001199	-.000005	-.007303	.0071822	-.000023

Sample Name: CCB04 Acquired: 10/13/2025 17:06:35 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001863	-.001809	.0025724	-.002483	F .0132131	-.001222
Stddev	.0002205	.000949	.0093464	.000310	.0026967	.000722
%RSD	118.3769	52.43632	363.3356	12.48754	20.40931	59.10908
#1	.0000630	-.000715	.0124060	-.002760	.0126698	-.001931
#2	.0000550	-.002306	-.006196	-.002148	.0161401	-.000487
#3	.0004409	-.002406	.001507	-.002540	.0108294	-.001246

Elem	Sr4077
Units	ppm
Avg	.0000097
Stddev	.0000241
%RSD	249.9795
#1	.0000166
#2	-.000017
#3	.000030

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4226.381	63421.88	7199.766	4028.131	6855.001
Stddev	6.250	1635.42	76.888	76.999	5.799
%RSD	.1478828	2.578641	1.067919	1.911532	.0845988
#1	4219.214	64843.55	7288.091	4095.695	6849.597
#2	4230.703	61634.59	7163.404	3944.297	6854.280
#3	4229.224	63787.49	7147.805	4044.400	6861.128

Sample Name: PB170062TB Acquired: 10/13/2025 17:20:25 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.000158**	**.0072123**	**.0005437**	**.0005947**	**.0029105**	**.0064269**	**.0070302**
Stddev	.001090	.0043695	.0001877	.0019688	.0010367	.0056185	.0011910
%RSD	689.2502	60.58406	34.51744	331.0560	35.61964	87.42224	16.94098
#1	.001099	.0121226	.0003437	-.001612	.0040066	.0119365	.0077795
#2	-.000847	.0057615	.0007160	.001226	.0027793	.0007054	.0076542
#3	-.000727	.0037527	.0005713	.002171	.0019457	.0066389	.0056568

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000250**	**.0001088**	**.0396081**	**.0019140**	**.0002357**	**.0002087**	**.0263739**
Stddev	.0000467	.0000375	.0095549	.0002899	.0001078	.0001528	.0104057
%RSD	187.0835	34.46985	24.12357	15.14603	45.72221	73.19557	39.45462
#1	.0000748	.0000687	.0447345	.0015807	.0001213	.0003728	.0264342
#2	.0000179	.0001430	.0285840	.0021080	.0003352	.0001825	.0159381
#3	-.000018	.0001147	.0455057	.0020532	.0002506	.0000707	.0367493

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000259**	**.6365779**	**.0007636**	**.0003254**	**313.7203**	**.0014231**	**.0060709**
Stddev	.000536	.0136883	.0002250	.0004069	5.9168	.0029922	.0002856
%RSD	206.9490	2.150301	29.46544	125.0525	1.886014	210.2614	4.704730
#1	-.000391	.6225433	.0009436	-.000005	320.5366	.0047040	.0061295
#2	.000331	.6498914	.0005114	.000201	309.9100	.0007208	.0057605
#3	-.000717	.6372991	.0008357	.000780	310.7143	-.001156	.0063226

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5864194**	**.0019823**	**.0007878**	**.0038350**	**.0003866**	**.0085093**	**-.003967**
Stddev	.1235700	.0006509	.0000566	.0001390	.0009179	.0050993	.001812
%RSD	21.07195	32.83767	7.179072	3.625309	237.4008	59.92631	45.66368
#1	.4516073	.0014404	.0007229	.0038136	-.000595	.0036925	-.003102
#2	.6133432	.0027044	.0008146	.0037079	.000531	.0138506	-.002750
#3	.6943078	.0018022	.0008260	.0039834	.001224	.0079847	-.006049

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: PB170062TB Acquired: 10/13/2025 17:20:25 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0270644	.0090097	.0000314
Stddev	.0046906	.0018522	.0000889
%RSD	17.33120	20.55758	283.2185
#1	.0322218	.0070235	-.000039
#2	.0259182	.0093159	.000131
#3	.0230531	.0106898	.000002

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4070.472	59900.19	7001.572	3857.868	5988.599
Stddev	8.974	157.03	38.697	19.964	12.299
%RSD	.2204585	.2621561	.5526956	.5174870	.2053749
#1	4074.149	59747.86	7031.529	3854.654	5994.932
#2	4060.244	59891.16	7015.306	3879.244	5974.423
#3	4077.023	60061.54	6957.881	3839.707	5996.440

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3321-02 Acquired: 10/13/2025 17:24:53 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.006476**	**.0042272**	**.0513601**	**.0018014**	**.0073158**	**.0570867**	**.3931234**
Stddev	.003469	.0014997	.0004251	.0014425	.0031775	.0120252	.0021445
%RSD	53.57243	35.47822	.8276114	80.07860	43.43308	21.06480	.5455160
#1	-.005762	.0037502	.0510884	.0002184	.0070932	.0570131	.3935445
#2	-.010246	.0030240	.0511420	.0030419	.0042554	.0450985	.3950262
#3	-.003419	.0059074	.0518500	.0021439	.0105986	.0691486	.3907996

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000280**	**.1160205**	**166.5017**	**.0043407**	**.0102462**	**.7261782**	**.0764812**
Stddev	.000058	.0001999	.1963	.0004260	.0001460	.0005061	.0086385
%RSD	20.62619	.1723098	.1179103	9.814178	1.425030	.0696912	11.29489
#1	-.000273	.1158646	166.4834	.0038496	.0101197	.7257872	.0671879
#2	-.000227	.1162459	166.7065	.0045613	.0102129	.7259976	.0842662
#3	-.000342	.1159510	166.3151	.0046111	.0104060	.7267498	.0779895

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.246530**	**9.234971**	**.2834558**	**.0002670**	**291.2049**	**.0035035**	**2.297971**
Stddev	.005220	.029628	.0006947	.0001328	1.5861	.0023964	.006593
%RSD	.4187230	.3208237	.2450979	49.73299	.5446818	68.40180	.2869049
#1	1.243160	9.206549	.2836589	.0004148	293.0074	.0062705	2.302625
#2	1.252542	9.232693	.2826821	.0001578	290.5846	.0021445	2.300862
#3	1.243888	9.265673	.2840263	.0002283	290.0226	.0020954	2.290427

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.485567**	**.0449641**	**.0026324**	**-.019431**	**-.008270**	**1.639110**	**.0203458**
Stddev	.038591	.0009796	.0000985	.000702	.001721	.011904	.0008105
%RSD	1.552590	2.178618	3.743469	3.614252	20.81035	.7262732	3.983426
#1	2.442210	.0440571	.0027352	-.019398	-.008639	1.647372	.0197209
#2	2.498339	.0448324	.0025388	-.020149	-.009776	1.625465	.0200550
#3	2.516153	.0460029	.0026231	-.018746	-.006394	1.644493	.0212616

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3321-02 Acquired: 10/13/2025 17:24:53 Type: Unk
Method: 6010-200.7 NEW(v283) 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	1.140356	-.029945	.2881384
Stddev	.016370	.000778	.0001890
%RSD	1.435546	2.597234	.0655860
#1	1.139728	-.029289	.2880350
#2	1.157030	-.029743	.2883565
#3	1.124308	-.030804	.2880237

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3974.337	61219.37	6970.029	3894.314	5894.549
Stddev	5.677	218.05	32.479	32.769	3.991
%RSD	.1428374	.3561838	.4659747	.8414542	.0677025
#1	3973.362	61005.24	6935.691	3860.262	5891.241
#2	3980.437	61211.72	6974.140	3897.051	5898.981
#3	3969.210	61441.15	7000.257	3925.628	5893.426

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3326-04 Acquired: 10/13/2025 17:29:12 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.001407**	**.0022946**	**.0073577**	**.0037073**	**.0008125**	**.1448184**	**.2493053**
Stddev	.000820	.0005797	.0015666	.0027323	.0019613	.0123369	.0015586
%RSD	58.27640	25.26611	21.29152	73.69882	241.3937	8.518874	.6251895
#1	-.001155	.0027854	.0075026	.0061401	.0005319	.1340459	.2479079
#2	-.000743	.0024434	.0088468	.0007512	.0028989	.1582770	.2490217
#3	-.002323	.0016549	.0057237	.0042307	-.000993	.1421322	.2509863

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001134**	**.0001757**	**5.277521**	**.0007671**	**-.000140**	**.0122116**	**.0490928**
Stddev	.0000259	.0000203	.008301	.0006874	.000098	.0001618	.0051583
%RSD	22.84828	11.57694	.1572949	89.61092	69.91789	1.325287	10.50735
#1	.0001410	.0001901	5.275912	.0000458	-.000036	.0122797	.0460830
#2	.0000896	.0001846	5.286510	.0008408	-.000153	.0123283	.0550490
#3	.0001097	.0001524	5.270143	.0014148	-.000230	.0120269	.0461463

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0296360**	**.4170788**	**.0008180**	**-.000260**	**350.2115**	**-.000239**	**.0439172**
Stddev	.0005115	.0325849	.0001583	.000418	2.1239	.003523	.0003135
%RSD	1.725867	7.812654	19.34606	161.0280	.6064627	1472.383	.7137482
#1	.0299096	.3797199	.0007798	-.000721	352.2189	.003762	.0435556
#2	.0299525	.4318839	.0006823	-.000151	350.4281	-.002871	.0441110
#3	.0290459	.4396326	.0009918	.000093	347.9877	-.001609	.0440851

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5503610**	**.0159452**	**.0004115**	**-.015969**	**.0003951**	**.2173703**	**.0271293**
Stddev	.0528264	.0006361	.0000453	.000254	.0011167	.0260837	.0026308
%RSD	9.598496	3.989011	11.00278	1.589892	282.5997	11.99967	9.697139
#1	.5865158	.0159214	.0003748	-.015786	-.000894	.1983667	.0301239
#2	.5748306	.0165928	.0004621	-.016259	.001002	.2066358	.0260743
#3	.4897365	.0153213	.0003975	-.015862	.001077	.2471084	.0251899

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3326-04 Acquired: 10/13/2025 17:29:12 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.1858282	-.005517	.0441898
Stddev	.0025779	.001978	.0001953
%RSD	1.387257	35.85122	.4419444
#1	.1880574	-.004205	.0440223
#2	.1830052	-.007792	.0444043
#3	.1864219	-.004554	.0441427

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4195.737	61910.03	7002.782	4027.301	6215.580
Stddev	4.660	210.54	26.692	17.376	6.827
%RSD	.1110596	.3400763	.3811590	.4314575	.1098372
#1	4200.746	61760.75	7005.692	4015.799	6223.023
#2	4194.931	61818.50	6974.755	4018.815	6214.110
#3	4191.532	62150.85	7027.900	4047.289	6209.608

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3326-08 Acquired: 10/13/2025 17:33:38 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.003042**	**.0008074**	**.0117167**	**.0064574**	**.0032681**	**.0785039**	**.2421120**
Stddev	.003694	.0028937	.0003191	.0028870	.0004510	.0080894	.0018987
%RSD	121.4542	358.4141	2.723240	44.70827	13.79924	10.30449	.7842052
#1	.000021	.0017125	.0117498	.0038792	.0037882	.0766872	.2429150
#2	-.002002	.0031404	.0120179	.0059163	.0029864	.0714774	.2399438
#3	-.007145	-.002431	.0113824	.0095766	.0030296	.0873473	.2434773

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000096**	**.0000613**	**10.41314**	**.0013608**	**-.000165**	**.0123700**	**.0566505**
Stddev	.000054	.0000305	.07502	.0001056	.000109	.0004084	.0085010
%RSD	55.97913	49.72149	.7204584	7.757118	65.74125	3.301279	15.00610
#1	-.000153	.0000639	10.41954	.0014820	-.000052	.0121550	.0527639
#2	-.000046	.0000296	10.33512	.0012892	-.000268	.0128410	.0507875
#3	-.000089	.0000904	10.48476	.0013111	-.000175	.0121141	.0664001

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0195196**	**.6946749**	**.0006091**	**-.000066**	**269.6103**	**-.000597**	**.0630988**
Stddev	.0005089	.0418196	.0002710	.000383	1.6068	.002178	.0015620
%RSD	2.607013	6.020023	44.48745	577.9162	.5959694	365.1171	2.475436
#1	.0189368	.6464129	.0009216	.000101	271.3119	-.001384	.0623714
#2	.0198757	.7202056	.0004666	-.000505	268.1190	.001866	.0648918
#3	.0197464	.7174063	.0004391	.000204	269.3998	-.002272	.0620332

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.157429**	**.0274304**	**.0008736**	**-.006958**	**.0001132**	**.5241499**	**.0136499**
Stddev	.027144	.0018287	.0001012	.000224	.0018268	.0071064	.0010707
%RSD	2.345206	6.666541	11.58327	3.215328	1613.419	1.355786	7.844224
#1	1.126480	.0264931	.0007573	-.007194	.0003184	.5304995	.0147193
#2	1.168611	.0295377	.0009419	-.006749	.0018288	.5164737	.0136525
#3	1.177196	.0262606	.0009216	-.006932	-.001808	.5254764	.0125778

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3326-08 Acquired: 10/13/2025 17:33:38 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.3322162	-.007306	.0911359
Stddev	.0045192	.000183	.0008012
%RSD	1.360332	2.510455	.8791154
#1	.3329188	-.007449	.0908930
#2	.3363430	-.007099	.0904843
#3	.3273868	-.007370	.0920305

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4041.735	61746.52	6952.408	3977.640	6095.727
Stddev	10.579	290.25	17.315	13.421	16.765
%RSD	.2617364	.4700713	.2490442	.3374156	.2750332
#1	4045.419	61457.96	6932.808	3966.940	6099.670
#2	4029.807	61743.16	6958.788	3973.281	6077.342
#3	4049.980	62038.43	6965.627	3992.699	6110.170

Sample Name: Q3327-02 Acquired: 10/13/2025 17:38:05 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.002052**	**.0031729**	**.0090499**	**.0076232**	**.0023218**	**.1238560**	**.2596475**
Stddev	.001304	.0033327	.0007894	.0008941	.0019613	.0005590	.0009481
%RSD	63.52426	105.0381	8.722791	11.72831	84.47171	.4513184	.3651339
#1	-.003203	.0062652	.0091613	.0073883	.0041679	.1233721	.2586475
#2	-.000636	-.000357	.0082107	.0086113	.0002627	.1237280	.2605333
#3	-.002317	.003610	.0097776	.0068701	.0025350	.1244679	.2597617

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000707**	**.0002415**	**15.21823**	**.0011053**	**.0029139**	**.0119105**	**.0677817**
Stddev	.0000439	.0000848	.03377	.0006331	.0001330	.0003534	.0054313
%RSD	62.06238	35.09963	.2218858	57.27825	4.563150	2.967480	8.013010
#1	.0001006	.0001918	15.19802	.0011089	.0027661	.0122870	.0699884
#2	.0000203	.0001934	15.25721	.0004705	.0029519	.0118587	.0615943
#3	.0000913	.0003394	15.19946	.0017367	.0030238	.0115859	.0717624

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.052153**	**2.366351**	**.0034715**	**.0002843**	**326.3670**	**.0022878**	**.0628585**
Stddev	.006030	.033003	.0003642	.0001760	1.0487	.0016943	.0001465
%RSD	.5731388	1.394662	10.49083	61.90161	.3213391	74.05913	.2331225
#1	1.046591	2.336245	.0033804	.0003567	325.1963	.0015448	.0629822
#2	1.051306	2.361170	.0031616	.0000837	326.6841	.0010919	.0626967
#3	1.058562	2.401638	.0038726	.0004126	327.2205	.0042267	.0628965

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9002126**	**.1237440**	**.0008585**	**-.018794**	**.0001463**	**.9288871**	**.0250761**
Stddev	.0087548	.0012233	.0002083	.000487	.0021240	.0151182	.0014217
%RSD	.9725308	.9885613	24.26089	2.592208	1451.668	1.627562	5.669335
#1	.9066805	.1223884	.0009633	-.018486	-.001436	.9121723	.0234369
#2	.8902502	.1247657	.0006186	-.019356	-.000686	.9328833	.0259711
#3	.9037070	.1240778	.0009936	-.018541	.002560	.9416058	.0258205

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3327-02 Acquired: 10/13/2025 17:38:05 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.2960860	-.006884	.0532919
Stddev	.0062166	.001204	.0001283
%RSD	2.099594	17.48923	.2407921
#1	.2915222	-.007826	.0531551
#2	.2935696	-.007298	.0534096
#3	.3031663	-.005527	.0533110

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4092.383	62396.54	7025.736	4004.046	6113.860
Stddev	4.622	34.09	60.899	21.740	8.912
%RSD	.1129536	.0546300	.8668055	.5429471	.1457710
#1	4092.008	62380.09	7096.053	4007.851	6121.761
#2	4097.181	62435.73	6989.993	4023.633	6115.618
#3	4087.959	62373.79	6991.162	3980.655	6104.199

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3327-02DUP Acquired: 10/13/2025 17:42:28 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.001186**	**.0016520**	**.0086676**	**.0073250**	**.0028790**	**.1053609**	**.2404057**
Stddev	.002623	.0023003	.0007610	.0003676	.0012525	.0035130	.0003085
%RSD	221.2295	139.2459	8.779524	5.017828	43.50631	3.334284	.1283412
#1	-.003316	-.000885	.0092685	.0069102	.0031712	.1051066	.2406921
#2	.001744	.003603	.0089224	.0076099	.0039596	.1089942	.2404459
#3	-.001986	.002238	.0078119	.0074550	.0015062	.1019819	.2400790

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001163**	**.0002523**	**14.43526**	**.0011811**	**.0027671**	**.0112477**	**.0666519**
Stddev	.0000217	.0000623	.02863	.0001718	.0001873	.0003556	.0146605
%RSD	18.65085	24.70351	.1983206	14.54423	6.768202	3.161196	21.99559
#1	.0001301	.0001823	14.44316	.0009872	.0029667	.0108371	.0599292
#2	.0000913	.0003018	14.40350	.0012419	.0027394	.0114528	.0565585
#3	.0001274	.0002727	14.45910	.0013141	.0025953	.0114532	.0834682

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9875032**	**2.232335**	**.0032474**	**.0001676**	**298.2210**	**.0036870**	**.0603106**
Stddev	.0049623	.019892	.0004164	.0004399	.2966	.0031237	.0001207
%RSD	.5025119	.8911024	12.82345	262.4765	.0994498	84.72117	.2000597
#1	.9888949	2.248198	.0036993	.0005388	297.8816	.0059233	.0604300
#2	.9819936	2.238790	.0028792	.0002823	298.4306	.0050197	.0603129
#3	.9916211	2.210017	.0031635	-.000318	298.3506	.0001180	.0601888

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8729978**	**.1186609**	**.0008065**	**-.018499**	**-.000130**	**.8932845**	**.0256903**
Stddev	.0128036	.0000820	.0001294	.000777	.000608	.0235944	.0009284
%RSD	1.466626	.0690601	16.03796	4.201111	466.9715	2.641308	3.613828
#1	.8859304	.1185663	.0007164	-.017604	-.000445	.9042552	.0257760
#2	.8727359	.1187078	.0009548	-.018886	.000571	.8662022	.0265728
#3	.8603272	.1187086	.0007484	-.019007	-.000516	.9093961	.0247220

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3327-02DUP Acquired: 10/13/2025 17:42:28 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.2921442	-.007053	.0500996
Stddev	.0031012	.000535	.0002704
%RSD	1.061532	7.588493	.5396465
#1	.2955614	-.007288	.0502798
#2	.2913627	-.006441	.0497887
#3	.2895084	-.007431	.0502302

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4166.561	64726.13	7308.226	4124.353	6210.978
Stddev	10.029	260.60	24.249	12.201	15.942
%RSD	.2407038	.4026167	.3318108	.2958204	.2566749
#1	4156.332	65026.33	7335.334	4137.792	6196.316
#2	4176.377	64593.97	7300.745	4121.294	6227.949
#3	4166.974	64558.10	7288.598	4113.973	6208.670

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3327-02LX5 Acquired: 10/13/2025 17:46:52 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.000744**	**.0041431**	**.0023938**	**.0014337**	**.0004483**	**.0569626**	**.0546586**
Stddev	.001468	.0010388	.0004784	.0033737	.0013135	.0088782	.0002704
%RSD	197.2259	25.07265	19.98264	235.3042	292.9795	15.58606	.4947124
#1	-.000505	.0052956	.0021580	.0050084	.0004877	.0502141	.0543470
#2	-.002317	.0038549	.0020792	.0009872	-.000884	.0536537	.0547977
#3	.000589	.0032789	.0029443	-.001694	.001742	.0670201	.0548311

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000055**	**-.000025**	**2.908346**	**.0004055**	**.0005842**	**.0020697**	**.0071204**
Stddev	.000037	.000044	.007082	.0001511	.0002299	.0007292	.0050273
%RSD	67.23738	176.6180	.2435210	37.27368	39.36105	35.23394	70.60415
#1	-.000089	-.000050	2.902381	.0002783	.0008366	.0024747	.0025453
#2	-.000015	.000026	2.916174	.0005726	.0003866	.0012278	.0125022
#3	-.000062	-.000050	2.906483	.0003657	.0005294	.0025065	.0063135

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1988668**	**.4287693**	**.0006357**	**.0000016**	**60.44729**	**.0052358**	**.0119311**
Stddev	.0009130	.0015069	.0000722	.0001849	.16409	.0009519	.0000504
%RSD	.4590843	.3514551	11.35972	11323.73	.2714570	18.18122	.4222336
#1	.1994722	.4270296	.0005664	-.000142	60.25890	.0041431	.0118742
#2	.1978167	.4296710	.0006301	-.000064	60.52395	.0058857	.0119697
#3	.1993115	.4296073	.0007105	.000210	60.55902	.0056785	.0119495

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.536720**	**.0253035**	**.0002519**	**-.000814**	**-.000597**	**.1754530**	**.0016727**
Stddev	.069491	.0009766	.0002238	.000298	.000942	.0092755	.0008862
%RSD	4.522054	3.859655	88.85443	36.63581	157.7509	5.286612	52.98141
#1	1.616497	.0259732	.0003972	-.000621	-.001539	.1719662	.0006506
#2	1.489367	.0241829	.0003644	-.001158	-.000599	.1859666	.0021414
#3	1.504296	.0257544	-.000006	-.000664	.000346	.1684261	.0022262

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3327-02LX5 Acquired: 10/13/2025 17:46:52 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0755886	.0266815	.0101277
Stddev	.0010085	.0038558	.0000187
%RSD	1.334233	14.45112	.1850869
#1	.0757720	.0298254	.0101092
#2	.0764929	.0278397	.0101271
#3	.0745010	.0223793	.0101467

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4320.101	65640.35	7268.550	4176.281	6658.771
Stddev	3.143	130.21	53.401	25.345	11.700
%RSD	.0727530	.1983698	.7346892	.6068832	.1757155
#1	4316.472	65615.97	7216.776	4156.481	6647.948
#2	4321.946	65524.06	7323.442	4204.845	6657.180
#3	4321.886	65781.03	7265.433	4167.516	6671.186

Sample Name: Q3327-02MS Acquired: 10/13/2025 17:51:08 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.7960908**	**1.799200**	**.9412485**	**2.012943**	**.8001793**	**2.124147**	**.4648005**
Stddev	.0038429	.013270	.0020509	.006263	.0022140	.014266	.0036536
%RSD	.4827164	.7375496	.2178907	.3111495	.2766844	.6715957	.7860660
#1	.7979759	1.797611	.9415981	2.018509	.8022857	2.122418	.4636940
#2	.7986271	1.813193	.9431022	2.014161	.7978716	2.110824	.4618280
#3	.7916694	1.786796	.9390454	2.006161	.8003807	2.139198	.4688795

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2069918**	**.1961055**	**16.40448**	**.4184545**	**.2001243**	**.2995292**	**3.132537**
Stddev	.0013398	.0003486	.13933	.0102916	.0003302	.0005605	.042750
%RSD	.6472537	.1777541	.8493207	2.459427	.1649781	.1871395	1.364707
#1	.2077571	.1958976	16.30556	.4302909	.1997517	.2992724	3.180882
#2	.2054448	.1965079	16.34406	.4134532	.2003804	.2991431	3.099727
#3	.2077734	.1959110	16.56382	.4116193	.2002409	.3001721	3.117002

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.290549**	**4.447959**	**.4960444**	**.0696971**	**334.8322**	**.3115225**	**.2751866**
Stddev	.016860	.038676	.0003827	.0017802	10.2689	.0012073	.0079228
%RSD	1.306404	.8695197	.0771490	2.554256	3.066885	.3875363	2.879060
#1	1.283887	4.420288	.4957473	.0716713	346.1277	.3109141	.2842052
#2	1.278037	4.431437	.4964763	.0692065	326.0603	.3107405	.2720075
#3	1.309721	4.492152	.4959096	.0682137	332.3088	.3129129	.2693472

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.16949**	**.4076671**	**.4253482**	**.6897136**	**.2009360**	**1.832746**	**6.328081**
Stddev	.18461	.0029524	.0006731	.0019065	.0015328	.036896	.007761
%RSD	1.652847	.7242252	.1582462	.2764243	.7628266	2.013178	.1226359
#1	11.38046	.4095055	.4257267	.6877348	.1991871	1.868053	6.337041
#2	11.09048	.4042615	.4257469	.6898675	.2020458	1.835742	6.323463
#3	11.03753	.4092343	.4245711	.6915386	.2015753	1.794442	6.323740

Sample Name: Q3327-02MS Acquired: 10/13/2025 17:51:08 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.2922204	.1943408	.2494069
Stddev	.0033914	.0029990	.0023455
%RSD	1.160557	1.543153	.9404418
#1	.2900854	.1930431	.2482654
#2	.2961309	.1922092	.2478507
#3	.2904448	.1977701	.2521047

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4094.254	62499.40	6919.329	4030.392	6052.536
Stddev	13.231	1221.02	55.378	98.687	15.924
%RSD	.3231640	1.953645	.8003419	2.448560	.2630991
#1	4097.002	61093.78	6922.671	3916.757	6062.404
#2	4079.865	63107.08	6972.961	4079.830	6034.165
#3	4105.896	63297.35	6862.355	4094.588	6061.038

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3327-02MSD Acquired: 10/13/2025 17:55:17 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.7909160**	**1.776555**	**.9345822**	**1.984885**	**.7859896**	**2.065990**	**.4493266**
Stddev	.0010757	.055356	.0040404	.007035	.0026458	.006282	.0034591
%RSD	.1360018	3.115937	.4323252	.3544473	.3366263	.3040911	.7698411
#1	.7897894	1.829674	.9323095	1.984650	.7853596	2.072694	.4468594
#2	.7910265	1.719204	.9321899	1.977969	.7837155	2.065038	.4532805
#3	.7919322	1.780785	.9392472	1.992034	.7888935	2.060238	.4478398

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2059035**	**.1946825**	**15.98935**	**.4158767**	**.1982176**	**.2975067**	**3.175044**
Stddev	.0005082	.0005949	.10869	.0028854	.0004425	.0007910	.035937
%RSD	.2468144	.3055864	.6797804	.6938226	.2232618	.2658725	1.131864
#1	.2064620	.1945299	15.99909	.4176902	.1985176	.2969856	3.155876
#2	.2057804	.1941788	16.09285	.4173906	.1977093	.2971177	3.216502
#3	.2054682	.1953389	15.87612	.4125494	.1984259	.2984169	3.152754

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.251187**	**4.321927**	**.4915442**	**.0703030**	**332.9071**	**.3031952**	**.2797125**
Stddev	.009337	.048167	.0010149	.0005981	7.5109	.0027768	.0010267
%RSD	.7462245	1.114488	.2064818	.8508200	2.256142	.9158467	.3670654
#1	1.242195	4.353114	.4909547	.0696394	331.6254	.3024842	.2796448
#2	1.260834	4.346217	.4909618	.0708007	340.9763	.3062584	.2807713
#3	1.250531	4.266451	.4927162	.0704687	326.1196	.3008431	.2787212

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.16708**	**.4044369**	**.4245059**	**.6862427**	**.1942834**	**1.864707**	**6.229316**
Stddev	.08431	.0005501	.0007122	.0021012	.0022632	.002931	.025145
%RSD	.7549585	.1360057	.1677648	.3061885	1.164913	.1571716	.4036637
#1	11.10188	.4045478	.4243488	.6874940	.1916736	1.866969	6.248453
#2	11.26228	.4049230	.4238853	.6838168	.1954702	1.861396	6.200837
#3	11.13707	.4038398	.4252835	.6874172	.1957063	1.865756	6.238660

Sample Name: Q3327-02MSD Acquired: 10/13/2025 17:55:17 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.2830451	.1871026	.2408363
Stddev	.0010006	.0028708	.0016182
%RSD	.3535203	1.534370	.6719000
#1	.2821206	.1850280	.2391612
#2	.2829072	.1859008	.2423908
#3	.2841075	.1903791	.2409569

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4132.206	59734.72	6864.778	3856.709	6130.943
Stddev	5.516	517.16	25.525	24.106	10.432
%RSD	.1334965	.8657683	.3718301	.6250297	.1701487
#1	4125.932	59606.49	6853.229	3871.844	6118.907
#2	4134.391	59293.73	6847.068	3828.911	6137.377
#3	4136.296	60303.93	6894.036	3869.373	6136.546

Sample Name: Q3327-02A Acquired: 10/13/2025 17:59:26 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.7927070**	**1.774973**	**.9374995**	**1.988060**	**.8133780**	**2.010602**	**.4253605**
Stddev	.0010978	.034274	.0031789	.009097	.0007957	.009612	.0024750
%RSD	.1384840	1.930979	.3390869	.4575757	.0978248	.4780883	.5818645
#1	.7915710	1.786878	.9341342	1.980391	.8128001	1.999805	.4227706
#2	.7937621	1.801707	.9404517	1.998111	.8142856	2.013773	.4277020
#3	.7927878	1.736334	.9379127	1.985679	.8130485	2.018229	.4256089

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2036696**	**.1949572**	**15.43124**	**.4160218**	**.1982755**	**.2963547**	**3.000674**
Stddev	.0020313	.0003514	.09806	.0024512	.0003935	.0007198	.017313
%RSD	.9973467	.1802404	.6354484	.5892100	.1984770	.2428891	.5769576
#1	.2018459	.1949566	15.31802	.4153283	.1978739	.2961529	3.018869
#2	.2058588	.1953088	15.48757	.4139920	.1986605	.2971539	2.984405
#3	.2033041	.1946060	15.48815	.4187451	.1982922	.2957573	2.998747

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.189989**	**4.189812**	**.4918537**	**.0681628**	**304.9840**	**.2986452**	**.2732457**
Stddev	.006627	.058807	.0008674	.0002030	5.3028	.0012923	.0011860
%RSD	.5569096	1.403567	.1763560	.2978449	1.738714	.4327154	.4340499
#1	1.185424	4.122704	.4922417	.0680941	310.8602	.2976262	.2726563
#2	1.197590	4.214383	.4924593	.0680031	303.5366	.3000987	.2724699
#3	1.186953	4.232348	.4908600	.0683913	300.5552	.2982105	.2746110

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.67314**	**.3976998**	**.4369835**	**.7126627**	**.1933516**	**1.811750**	**6.193005**
Stddev	.09623	.0032156	.0005081	.0026765	.0012723	.006278	.023326
%RSD	.9015979	.8085488	.1162860	.3755661	.6580159	.3465406	.3766436
#1	10.76499	.3952527	.4367362	.7127683	.1924724	1.818509	6.171773
#2	10.57306	.4013418	.4375680	.7152848	.1948105	1.810640	6.217973
#3	10.68135	.3965050	.4366463	.7099349	.1927718	1.806100	6.189270

Sample Name: Q3327-02A Acquired: 10/13/2025 17:59:26 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.2828898	.1765304	.2304192
Stddev	.0036006	.0013625	.0007643
%RSD	1.272807	.7718021	.3317078
#1	.2789385	.1764515	.2300484
#2	.2859858	.1779307	.2312982
#3	.2837450	.1752092	.2299111

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4167.292	61940.73	7011.940	3964.627	6167.595
Stddev	2.292	249.86	54.007	21.920	8.759
%RSD	.0549944	.4033872	.7702105	.5528865	.1420125
#1	4164.693	61652.68	7055.550	3939.385	6162.639
#2	4168.158	62098.92	6951.530	3978.868	6162.438
#3	4169.023	62070.58	7028.740	3975.627	6177.708

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCV05 Acquired: 10/13/2025 18:11:55 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.824172**	**4.988264**	**4.808276**	**4.814150**	**4.777757**	**9.675468**	**9.443143**
Stddev	.016661	.040072	.012183	.016441	.016405	.023922	.046162
%RSD	.3453676	.8033313	.2533737	.3415143	.3433567	.2472431	.4888371
#1	4.837712	5.023745	4.817711	4.832118	4.793706	9.667437	9.496446
#2	4.805566	4.944802	4.794522	4.799858	4.760931	9.656595	9.416298
#3	4.829238	4.996245	4.812596	4.810475	4.778634	9.702372	9.416686

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2562729**	**2.435368**	**24.32142**	**.9999863**	**2.406602**	**1.208172**	**4.742013**
Stddev	.0013155	.007225	.09595	.0038469	.008422	.003946	.029948
%RSD	.5133299	.2966727	.3945280	.3846968	.3499422	.3265765	.6315407
#1	.2577756	2.442106	24.41859	1.004371	2.415032	1.210933	4.755600
#2	.2553288	2.427739	24.22673	.998412	2.398188	1.203653	4.707680
#3	.2557144	2.436260	24.31893	.997176	2.406586	1.209931	4.762758

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.436837**	**24.72889**	**2.408859**	**1.213658**	**24.29709**	**2.444522**	**2.451319**
Stddev	.013851	.13430	.008870	.002037	.02456	.014999	.003409
%RSD	.5684090	.5430772	.3682100	.1678438	.1011010	.6135811	.1390510
#1	2.452323	24.77776	2.416852	1.212029	24.32399	2.460429	2.447568
#2	2.425632	24.57700	2.399316	1.213003	24.29144	2.430636	2.452163
#3	2.432555	24.83191	2.410408	1.215942	24.27584	2.442502	2.454226

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.41987**	**5.048259**	**4.940863**	**4.896443**	**4.837156**	**4.719694**	**5.091347**
Stddev	.06228	.024455	.015778	.017290	.016426	.018510	.024213
%RSD	.2659435	.4844281	.3193399	.3531218	.3395818	.3921922	.4755679
#1	23.36026	5.073963	4.953774	4.913853	4.854783	4.699089	5.119124
#2	23.41482	5.025282	4.923275	4.879275	4.822277	4.725077	5.074701
#3	23.48452	5.045530	4.945540	4.896200	4.834408	4.734916	5.080216

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCV05 Acquired: 10/13/2025 18:11:55 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.741843**	**4.589531**	**4.724396**
Stddev	.035853	.013266	.023641
%RSD	.7560904	.2890591	.5004038
#1	4.775287	4.604830	4.714514
#2	4.703989	4.581195	4.707300
#3	4.746253	4.582570	4.751375

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4322.123**	**65696.98**	**7119.601**	**4207.997**	**6411.620**
Stddev	13.495	64.14	27.694	5.612	16.165
%RSD	.3122290	.0976254	.3889793	.1333566	.2521154
#1	4325.330	65746.95	7088.614	4214.401	6410.869
#2	4333.725	65719.33	7141.937	4205.650	6428.147
#3	4307.313	65624.66	7128.252	4203.940	6395.844

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCB05 Acquired: 10/13/2025 18:15:58 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001767**	**.0051217**	**-.000163**	**.0041625**	**.0012592**	**.0017697**	**.0044141**
Stddev	.001753	.0018006	.000410	.0017114	.0008964	.0072726	.0004039
%RSD	99.20965	35.15582	251.4412	41.11371	71.19018	410.9562	9.150756
#1	.000077	.0057788	-.000298	.0022906	.0008145	.0097625	.0047578
#2	-.003411	.0030849	-.000488	.0045501	.0006721	-.004458	.0039692
#3	-.001966	.0065014	.000298	.0056468	.0022910	.000004	.0045153

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000099**	**-.000020**	**-.002402**	**.0003491**	**.0000319**	**.0002845**	**-.000974**
Stddev	.000051	.000044	.009383	.0002748	.0000440	.0002455	.007339
%RSD	51.29689	219.8205	390.6561	78.72547	138.0355	86.27187	753.4850
#1	-.000075	-.000071	.007155	.0001580	-.000018	.0000018	.003219
#2	-.000157	.000006	-.002759	.0002252	.000065	.0004089	.003307
#3	-.000064	.000004	-.011602	.0006640	.000049	.0004430	-.009448

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000456**	**-.007080**	**-.000111**	**.0001928**	**-.025348**	**.0009835**	**-.000044**
Stddev	.0002845	.045410	.000232	.0000688	.013377	.0028215	.000054
%RSD	624.6155	641.4021	209.3480	35.66663	52.77282	286.8786	122.4113
#1	-.000133	-.058598	-.000186	.0001154	-.013778	.0035601	.000011
#2	-.000104	.027133	-.000297	.0002162	-.039996	-.002032	-.000098
#3	.000374	.010225	.000150	.0002468	-.022271	.001422	-.000047

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.030728**	**.0078471**	**.0006441**	**-.012834**	**-.000521**	**-.005082**	**-.001720**
Stddev	.047075	.0007576	.0002329	.000218	.000930	.006829	.001405
%RSD	153.1979	9.655022	36.16002	1.697567	178.7424	134.3595	81.69452
#1	.011156	.0079488	.0003852	-.013053	-.000424	-.000636	-.000354
#2	-.081675	.0085487	.0008367	-.012831	-.001495	-.012945	-.001645
#3	-.021664	.0070437	.0007104	-.012617	.000358	-.001666	-.003162

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCB05 Acquired: 10/13/2025 18:15:58 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0027721	-.004376	-.000041
Stddev	.0019517	.003031	.000128
%RSD	70.40237	69.25682	312.5361
#1	.0036019	-.006194	.000077
#2	.0041719	-.000877	-.000022
#3	.0005427	-.006057	-.000178

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4367.184	69679.04	7313.789	4414.125	7118.917
Stddev	.338	72.61	108.593	10.851	2.105
%RSD	.0077487	.1042097	1.484775	.2458211	.0295636
#1	4367.121	69619.00	7296.724	4403.094	7118.449
#2	4366.882	69658.38	7214.739	4424.787	7117.085
#3	4367.550	69759.75	7429.905	4414.495	7121.216

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: PB170070BL Acquired: 10/13/2025 18:20:16 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**-.001776**	**.0054782**	**.0000136**	**.0032826**	**.0009066**	**-.002738**
Stddev	.000743	.0032007	.0001269	.0011060	.0013560	.003508
%RSD	41.84712	58.42516	936.4774	33.69238	149.5778	128.1405
#1	-.002531	.0017959	.0001365	.0044874	-.000564	-.000775
#2	-.001046	.0070464	.0000211	.0023135	.002107	-.000650
#3	-.001751	.0075924	-.000117	.0030467	.001177	-.006787

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0049178**	**-.000024**	**-.000116**	**-.006155**	**-.000091**	**.0001074**
Stddev	.0010345	.000042	.000013	.007116	.000142	.0001864
%RSD	21.03539	176.4693	10.99688	115.6085	156.4902	173.5558
#1	.0048294	-.000071	-.000110	-.004244	.000047	.0003114
#2	.0039303	.000008	-.000107	-.000190	-.000237	-.000054
#3	.0059936	-.000008	-.000131	-.014031	-.000083	.000065

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000265**	**-.001524**	**-.000209**	**.0008540**	**-.000391**	**-.000067**
Stddev	.000150	.007364	.000637	.0065988	.000178	.000213
%RSD	56.38420	483.2993	305.4242	772.7437	45.43408	318.8068
#1	-.000268	.003629	.000479	-.002886	-.000562	-.000306
#2	-.000414	-.009958	-.000778	.008473	-.000207	.000007
#3	-.000115	.001759	-.000327	-.003025	-.000404	.000099

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1052515**	**.0037990**	**-.000269**	**.3347486**	**.0055271**	**.0003921**
Stddev	.0174675	.0024701	.000175	.0283186	.0008774	.0002027
%RSD	16.59598	65.01860	65.34970	8.459673	15.87376	51.69718
#1	.1230986	.0050624	-.000410	.3340841	.0053250	.0003169
#2	.1044656	.0009528	-.000324	.3633936	.0064878	.0006216
#3	.0881901	.0053818	-.000072	.3067680	.0047684	.0002377

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: PB170070BL Acquired: 10/13/2025 18:20:16 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0015218	.0003216	.0010109	-.002309	F .0180144	.0016545
Stddev	.0002851	.0012871	.0044289	.000257	.0019671	.0009804
%RSD	18.73566	400.1687	438.0952	11.10672	10.91970	59.25573
#1	.0016089	.0011694	.0007117	-.002385	.0195713	.0025488
#2	.0017533	.0009548	-.003261	-.002520	.0158036	.0018085
#3	.0012033	-.001159	.005582	-.002024	.0186682	.0006063

Elem	Sr4077
Units	ppm
Avg	-.000034
Stddev	.000061
%RSD	178.2028
#1	-.000102
#2	.000014
#3	-.000014

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4098.672	66318.85	6941.735	4192.849	6615.236
Stddev	.975	351.98	75.707	22.716	5.477
%RSD	.0237915	.5307344	1.090600	.5417746	.0827974
#1	4098.144	66722.52	7028.983	4219.059	6620.960
#2	4099.797	66076.10	6893.388	4180.642	6610.045
#3	4098.074	66157.91	6902.833	4178.847	6614.704

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: PB170070BS Acquired: 10/13/2025 18:24:35 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.7911685**	**2.071392**	**.9603634**	**1.988299**	**.7970967**	**2.003782**
Stddev	.0043853	.004497	.0011709	.008576	.0027306	.005448
%RSD	.5542869	.2171124	.1219174	.4313088	.3425639	.2718886
#1	.7940913	2.067063	.9614587	1.996447	.7987581	1.998742
#2	.7932882	2.071073	.9591293	1.989100	.7939453	2.009562
#3	.7861261	2.076040	.9605021	1.979351	.7985867	2.003041

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1978877**	**.2154254**	**.1953815**	**1.020635**	**.4316470**	**.1972320**
Stddev	.0010376	.0001781	.0003027	.012540	.0013161	.0002520
%RSD	.5243537	.0826754	.1549365	1.228606	.3049081	.1277780
#1	.1987567	.2155609	.1956061	1.025473	.4330318	.1972495
#2	.1981677	.2152237	.1955013	1.006398	.4314966	.1974748
#3	.1967388	.2154917	.1950373	1.030035	.4304125	.1969717

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3115944**	**3.159031**	**.2038533**	**2.101860**	**.4962397**	**.0748505**
Stddev	.0004130	.018432	.0007570	.009450	.0009669	.0009979
%RSD	.1325382	.5834591	.3713603	.4496090	.1948352	1.333205
#1	.3115368	3.179419	.2040808	2.091910	.4973558	.0749154
#2	.3120332	3.154125	.2030086	2.110714	.4956599	.0738217
#3	.3112133	3.143548	.2044706	2.102956	.4957034	.0758144

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.941211**	**.3053751**	**.2208317**	**10.15517**	**.3142069**	**.4150276**
Stddev	.027154	.0016244	.0007661	.06188	.0007409	.0001215
%RSD	.9232420	.5319328	.3468939	.6093351	.2357961	.0292658
#1	2.964964	.3067751	.2216818	10.13434	.3147524	.4151398
#2	2.911608	.3057560	.2206187	10.10639	.3133634	.4150444
#3	2.947061	.3035941	.2201948	10.22478	.3145049	.4148987

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: PB170070BS Acquired: 10/13/2025 18:24:35 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.6898865	.1932339	.9327932	5.932353	F .0138969	.1950323
Stddev	.0018873	.0016798	.0210693	.056668	.0027737	.0022999
%RSD	.2735722	.8693159	2.258733	.9552282	19.95898	1.179241
#1	.6903951	.1951322	.9359843	5.989803	.0163082	.1972197
#2	.6914674	.1919396	.9103104	5.930754	.0145166	.1952430
#3	.6877970	.1926300	.9520849	5.876502	.0108657	.1926344

Elem	Sr4077
Units	ppm
Avg	.1915101
Stddev	.0002568
%RSD	.1341160
#1	.1917365
#2	.1912310
#3	.1915628

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4304.594	61109.71	7078.108	3884.041	6779.236
Stddev	7.767	59.77	4.357	14.847	13.447
%RSD	.1804368	.0978060	.0615496	.3822531	.1983622
#1	4297.858	61055.32	7076.214	3870.086	6763.713
#2	4302.834	61173.69	7083.091	3899.642	6786.670
#3	4313.090	61100.10	7075.020	3882.394	6787.326

Sample Name: Q3331-04 Acquired: 10/13/2025 18:31:42 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.0306523**	**-.010548**	**.4589368**	**.0164711**	**.0120594**	**1.717068**
Stddev	.0012215	.003118	.0020057	.0010642	.0022258	.028641
%RSD	3.984962	29.56088	.4370348	6.461214	18.45690	1.668016
#1	.0302379	-.011117	.4597019	.0162594	.0104451	1.712245
#2	.0320271	-.007184	.4604474	.0155286	.0145986	1.747814
#3	.0296920	-.013342	.4566612	.0176252	.0111347	1.691145

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1108735**	**.0004514**	**-.000123**	**323.2503**	**.0073767**	**.1494300**
Stddev	.0002526	.0000453	.000075	1.9213	.0000662	.0008077
%RSD	.2278662	10.02828	60.92867	.5943639	.8978679	.5405430
#1	.1110347	.0004013	-.000047	323.7160	.0073379	.1495518
#2	.1110034	.0004636	-.000127	324.8959	.0074532	.1501699
#3	.1105823	.0004893	-.000197	321.1390	.0073390	.1485683

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1992077**	**85.35073**	**3.185232**	**43.61282**	**.3795047**	**-.000314**
Stddev	.0008562	.30650	.020748	.21216	.0015761	.000590
%RSD	.4298185	.3591055	.6513728	.4864523	.4153100	187.7966
#1	.1995654	85.70366	3.190948	43.49477	.3796892	-.000687
#2	.1998271	85.15142	3.202522	43.85774	.3809804	.000366
#3	.1982306	85.19712	3.162225	43.48595	.3778444	-.000622

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**283.1398**	**.0442271**	**5.833888**	**58.80716**	**5.003827**	**.2077225**
Stddev	.9238	.0041497	.020181	.24793	.029546	.0009215
%RSD	.3262672	9.382780	.3459345	.4216067	.5904639	.4436291
#1	282.3484	.0484510	5.832468	58.99141	5.011212	.2087570
#2	284.1549	.0440747	5.814453	58.52527	5.028980	.2074209
#3	282.9161	.0401557	5.854741	58.90481	4.971289	.2069895

Sample Name: Q3331-04 Acquired: 10/13/2025 18:31:42 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0195123	.0451764	F 43.23737	F 19.61023	F 62.97848	-.014899
Stddev	.0003621	.0029152	.15935	.16579	.46779	.000856
%RSD	1.855753	6.452889	.3685563	.8454007	.7427727	5.748065
#1	.0191907	.0419605	43.25409	19.80165	63.51577	-.014053
#2	.0194416	.0476455	43.07032	19.51679	62.75798	-.014880
#3	.0199045	.0459233	43.38770	19.51226	62.66170	-.015765

Elem	Sr4077
Units	ppm
Avg	.9342531
Stddev	.0053994
%RSD	.5779399
#1	.9361125
#2	.9384771
#3	.9281697

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3875.681	57600.10	6935.348	3557.496	5839.307
Stddev	6.407	161.86	26.189	18.977	8.268
%RSD	.1653215	.2810070	.3776209	.5334464	.1415906
#1	3869.200	57613.32	6941.762	3564.784	5834.596
#2	3875.833	57754.94	6906.548	3571.748	5834.471
#3	3882.012	57432.03	6957.735	3535.954	5848.854

Sample Name: Q3331-04DUP Acquired: 10/13/2025 18:35:53 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0325768	-.007797	.4463962	.0158474	.0107560	1.643095
Stddev	.0039027	.000431	.0023164	.0015909	.0020286	.012433
%RSD	11.98008	5.530092	.5189199	10.03900	18.85989	.7566522
#1	.0289041	-.008101	.4490641	.0150481	.0125243	1.631493
#2	.0321516	-.007304	.4448964	.0148145	.0085415	1.656218
#3	.0366747	-.007987	.4452280	.0176794	.0112024	1.641575

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1067428	.0005040	.0003675	312.2368	.0076882	.1456053
Stddev	.0016903	.0000644	.0000790	1.8452	.0004975	.0002734
%RSD	1.583516	12.76969	21.50409	.5909480	6.470957	.1877883
#1	.1049773	.0004337	.0004535	310.1756	.0074318	.1457941
#2	.1069049	.0005601	.0002981	312.8004	.0073713	.1452917
#3	.1083462	.0005181	.0003508	313.7344	.0082616	.1457300

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1974989	78.00023	3.095288	42.12925	.3703858	-.000374
Stddev	.0004970	.24402	.012654	.29952	.0011624	.000383
%RSD	.2516298	.3128480	.4088122	.7109525	.3138228	102.3629
#1	.1977418	77.99802	3.081946	41.79958	.3711865	-.000647
#2	.1969272	78.24534	3.096800	42.20353	.3690526	-.000538
#3	.1978277	77.75731	3.107118	42.38464	.3709183	.000063

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	262.0449	.0438115	5.421141	53.57084	4.824311	.2009553
Stddev	2.8028	.0014382	.012883	.25791	.024863	.0001333
%RSD	1.069596	3.282679	.2376437	.4814300	.5153729	.0663238
#1	264.8306	.0424997	5.406271	53.66025	4.797626	.2009229
#2	262.0788	.0435856	5.428955	53.77213	4.828483	.2011018
#3	259.2253	.0453493	5.428196	53.28012	4.846825	.2008412

Sample Name: Q3331-04DUP Acquired: 10/13/2025 18:35:53 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0178686	.0435864	F 39.26291	F 19.49275	F 61.69901	-.015504
Stddev	.0003266	.0029598	.30162	.11993	.46107	.001713
%RSD	1.827616	6.790690	.7682073	.6152672	.7472931	11.04796
#1	.0180495	.0436924	39.04997	19.37577	61.25270	-.015506
#2	.0174916	.0464919	39.60806	19.48704	61.67078	-.013790
#3	.0180646	.0405751	39.13071	19.61544	62.17354	-.017216

Elem	Sr4077
Units	ppm
Avg	.9119192
Stddev	.0025096
%RSD	.2751959
#1	.9109692
#2	.9100233
#3	.9147651

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3955.914	63020.67	7127.156	3915.325	5933.743
Stddev	16.975	348.20	57.097	18.644	24.351
%RSD	.4290959	.5525200	.8011213	.4761877	.4103900
#1	3937.816	63330.76	7191.156	3933.839	5906.179
#2	3958.444	62643.98	7108.871	3896.553	5942.715
#3	3971.481	63087.27	7081.441	3915.583	5952.336

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3331-04LX5 Acquired: 10/13/2025 18:40:05 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.0021436**	**.0008628**	**.0927382**	**.0077569**	**.0042680**	**.3320800**
Stddev	.0012063	.0019208	.0009924	.0011375	.0008925	.0029623
%RSD	56.27624	222.6379	1.070168	14.66413	20.91033	.8920446
#1	.0022960	-.001007	.0919837	.0079426	.0049196	.3349361
#2	.0008683	.000764	.0938625	.0065380	.0046336	.3290218
#3	.0032666	.002831	.0923685	.0087901	.0032508	.3322821

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0227634**	**.0000377**	**.0000063**	**62.19832**	**.0015872**	**.0288399**
Stddev	.0011526	.0000259	.0000452	.09378	.0002243	.0000866
%RSD	5.063409	68.62730	723.1006	.1507711	14.13174	.3001253
#1	.0223600	.0000674	.0000429	62.19854	.0017986	.0288590
#2	.0218668	.0000199	.0000201	62.10443	.0016111	.0289153
#3	.0240635	.0000258	-.000044	62.29199	.0013520	.0287454

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0404478**	**16.10888**	**.6289822**	**8.454578**	**.0729965**	**.0001019**
Stddev	.0002138	.06149	.0010290	.040653	.0002675	.0000715
%RSD	.5287052	.3816955	.1636015	.4808356	.3664858	70.09631
#1	.0406298	16.15527	.6301556	8.408764	.0728318	.0000197
#2	.0405013	16.13223	.6282336	8.486343	.0728526	.0001369
#3	.0402122	16.03914	.6285575	8.468627	.0733052	.0001492

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**53.20892**	**.0105683**	**1.113919**	**11.27071**	**1.071574**	**.0381908**
Stddev	.25070	.0011536	.003228	.07908	.001135	.0001919
%RSD	.4711563	10.91577	.2897440	.7016557	.1059328	.5024812
#1	53.46946	.0110276	1.115315	11.30439	1.071651	.0382782
#2	53.18791	.0114214	1.116214	11.32738	1.070403	.0383233
#3	52.96939	.0092557	1.110229	11.18037	1.072669	.0379707

Sample Name: Q3331-04LX5 Acquired: 10/13/2025 18:40:05 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0032550	.0104804	7.784902	3.835521	F 12.66986	.0161964
Stddev	.0007206	.0037413	.015713	.011600	.02876	.0016071
%RSD	22.13876	35.69808	.2018443	.3024354	.2270187	9.922552
#1	.0039281	.0064527	7.786644	3.835189	12.63879	.0176120
#2	.0033421	.0111414	7.799672	3.847283	12.69557	.0165277
#3	.0024948	.0138472	7.768391	3.824090	12.67522	.0144494

Elem	Sr4077
Units	ppm
Avg	.1790692
Stddev	.0004344
%RSD	.2426092
#1	.1795581
#2	.1789220
#3	.1787275

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4130.591	62622.40	7161.720	3968.673	6414.180
Stddev	2.288	116.10	16.720	11.176	8.157
%RSD	.0553931	.1853943	.2334690	.2815993	.1271716
#1	4128.253	62497.06	7156.167	3956.338	6407.148
#2	4130.695	62643.88	7180.510	3971.555	6423.123
#3	4132.825	62726.26	7148.482	3978.125	6412.269

Sample Name: Q3331-04MS Acquired: 10/13/2025 18:44:13 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.8567015**	**1.660888**	**1.285207**	**2.274418**	**.8015307**	**3.526374**
Stddev	.0052550	.053319	.002079	.011378	.0025323	.008581
%RSD	.6133967	3.210292	.1617784	.5002674	.3159281	.2433381
#1	.8555899	1.677810	1.286291	2.264402	.8006302	3.517015
#2	.8624234	1.703692	1.282810	2.286789	.8043901	3.528236
#3	.8520913	1.601161	1.286520	2.272062	.7995717	3.533871

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2872992**	**.1945801**	**.1821842**	**306.4561**	**.3947316**	**.3272431**
Stddev	.0012417	.0003492	.0002242	.7180	.0030855	.0003420
%RSD	.4321892	.1794639	.1230331	.2342852	.7816723	.1045146
#1	.2875400	.1944341	.1821734	305.7760	.3911692	.3273729
#2	.2884028	.1949787	.1819657	307.2068	.3965565	.3268552
#3	.2859547	.1943277	.1824136	306.3854	.3964693	.3275013

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4672883**	**78.36127**	**3.221727**	**43.17842**	**.8164795**	**.0674348**
Stddev	.0005667	1.07151	.016276	.09176	.0007503	.0008905
%RSD	.1212823	1.367398	.5051831	.2125194	.0918894	1.320585
#1	.4666383	77.20087	3.208851	43.10315	.8170118	.0664480
#2	.4675475	79.31327	3.240020	43.15146	.8156214	.0681787
#3	.4676791	78.56968	3.216309	43.28064	.8168054	.0676776

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**259.6146**	**.3408109**	**5.431801**	**61.62993**	**4.960430**	**.6137410**
Stddev	5.9262	.0028516	.057240	.59434	.009163	.0012888
%RSD	2.282706	.8367031	1.053786	.9643682	.1847273	.2099852
#1	262.6987	.3387261	5.366843	60.99116	4.957827	.6124484
#2	252.7823	.3440605	5.474853	62.16661	4.970613	.6150259
#3	263.3628	.3396461	5.453706	61.73203	4.952850	.6137486

Sample Name: Q3331-04MS Acquired: 10/13/2025 18:44:13 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.6693451	.2361399	F 39.13320	F 24.86315	F 60.20463	.1820621
Stddev	.0011855	.0086595	.47188	.05788	.33635	.0017589
%RSD	.1771167	3.667109	1.205840	.2327760	.5586741	.9660771
#1	.6707017	.2324566	38.58832	24.90721	60.33038	.1800967
#2	.6685079	.2299310	39.40704	24.88463	60.45999	.1834881
#3	.6688257	.2460322	39.40425	24.79761	59.82353	.1826014

Elem	Sr4077
Units	ppm
Avg	1.078822
Stddev	.004871
%RSD	.4515068
#1	1.077078
#2	1.084325
#3	1.075063

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3934.569	63195.21	7084.719	3911.014	5924.803
Stddev	7.189	474.60	12.257	27.106	4.966
%RSD	.1827015	.7510011	.1730066	.6930568	.0838214
#1	3942.711	63734.36	7073.617	3942.104	5928.791
#2	3929.098	63010.66	7097.872	3898.597	5926.377
#3	3931.899	62840.61	7082.667	3892.341	5919.240

Sample Name: Q3331-04MSD Acquired: 10/13/2025 18:48:20 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.9144479**	**1.753945**	**1.370462**	**2.443972**	**.8540933**	**3.741526**
Stddev	.0013732	.016590	.004045	.004225	.0015852	.019709
%RSD	.1501636	.9458855	.2951778	.1728823	.1855985	.5267515
#1	.9159111	1.769159	1.368090	2.447774	.8535643	3.756099
#2	.9131873	1.756421	1.375133	2.439423	.8558753	3.749377
#3	.9142453	1.736256	1.368162	2.444717	.8528402	3.719102

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3051140**	**.2064376**	**.1944820**	**323.7326**	**.4198577**	**.3494535**
Stddev	.0004842	.0004174	.0002893	.9459	.0012297	.0004675
%RSD	.1586996	.2021731	.1487273	.2921986	.2928785	.1337774
#1	.3056731	.2066237	.1945238	324.8103	.4212729	.3496699
#2	.3048290	.2059595	.1941742	323.0395	.4190498	.3489170
#3	.3048400	.2067295	.1947481	323.3481	.4192504	.3497736

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4982592**	**82.36495**	**3.388988**	**45.60538**	**.8717654**	**.0715320**
Stddev	.0011035	.21218	.002362	.19136	.0013748	.0006641
%RSD	.2214672	.2576152	.0696939	.4195895	.1576986	.9283837
#1	.4970006	82.12204	3.386985	45.80493	.8705949	.0709010
#2	.4987165	82.45866	3.391593	45.58778	.8732793	.0714702
#3	.4990605	82.51414	3.388387	45.42343	.8714219	.0722249

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**268.7050**	**.3586063**	**5.777442**	**64.78883**	**5.263882**	**.6494005**
Stddev	1.5561	.0034771	.001229	.08460	.002862	.0004707
%RSD	.5791287	.9696261	.0212656	.1305781	.0543624	.0724907
#1	267.4212	.3545928	5.778259	64.84420	5.261374	.6490196
#2	270.4357	.3607106	5.778037	64.69145	5.263274	.6499268
#3	268.2580	.3605155	5.776029	64.83084	5.266999	.6492550

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3331-04MSD Acquired: 10/13/2025 18:48:20 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.7131814	.2436530	F 41.28272	F 26.45315	F 64.49257	.1893544
Stddev	.0030768	.0025470	.08156	.05709	.06529	.0009301
%RSD	.4314265	1.045335	.1975640	.2157975	.1012365	.4911983
#1	.7148134	.2447745	41.34371	26.39623	64.46488	.1898915
#2	.7096324	.2407377	41.19008	26.45281	64.44568	.1898912
#3	.7150985	.2454468	41.31438	26.51040	64.56714	.1882804

Elem	Sr4077
Units	ppm
Avg	1.138090
Stddev	.001039
%RSD	.0913027
#1	1.138886
#2	1.138470
#3	1.136915

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3706.728	60290.29	6749.355	3710.739	5558.616
Stddev	7.793	106.67	11.597	11.130	9.878
%RSD	.2102305	.1769314	.1718223	.2999384	.1776990
#1	3715.268	60393.71	6752.284	3697.967	5569.091
#2	3700.003	60180.64	6736.574	3718.362	5549.470
#3	3704.912	60296.53	6759.207	3715.888	5557.287

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3331-04A Acquired: 10/13/2025 18:52:25 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.8965729**	**1.668963**	**1.350976**	**2.379312**	**.8388919**	**3.827150**
Stddev	.0044929	.082950	.001266	.015054	.0032454	.185159
%RSD	.5011147	4.970170	.0937066	.6326933	.3868660	4.838037
#1	.9009810	1.706724	1.351938	2.371122	.8419615	3.732272
#2	.8919999	1.573850	1.349542	2.370129	.8354955	4.040518
#3	.8967378	1.726315	1.351448	2.396685	.8392186	3.708659

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3038403**	**.2098874**	**.1906838**	**331.1091**	**.4243114**	**.3439331**
Stddev	.0163174	.0085928	.0004309	16.2901	.0016113	.0002323
%RSD	5.370396	4.094020	.2259729	4.919864	.3797534	.0675385
#1	.2958103	.2048442	.1904963	322.7241	.4227554	.3441951
#2	.3226167	.2198091	.1903785	349.8837	.4259729	.3438519
#3	.2930939	.2050090	.1911767	320.7196	.4242061	.3437523

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4884025**	**86.33248**	**3.413133**	**46.72185**	**.8585977**	**.0730028**
Stddev	.0014220	.95690	.169761	2.26748	.0003961	.0007959
%RSD	.2911568	1.108394	4.973771	4.853151	.0461367	1.090207
#1	.4888226	86.03041	3.328653	45.33671	.8581978	.0734380
#2	.4868178	87.40396	3.608560	49.33861	.8586053	.0734862
#3	.4895671	85.56306	3.302185	45.49023	.8589899	.0720842

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**277.8285**	**.3585677**	**6.010591**	**67.61950**	**5.354417**	**.6500756**
Stddev	1.4172	.0181535	.008727	.58429	.217525	.0013691
%RSD	.5101124	5.062771	.1451878	.8640874	4.062530	.2106131
#1	276.2484	.3492433	6.004245	67.59790	5.221814	.6513114
#2	278.2496	.3794884	6.020542	68.21428	5.605460	.6486038
#3	278.9874	.3469713	6.006985	67.04630	5.235977	.6503116

Sample Name: Q3331-04A Acquired: 10/13/2025 18:52:25 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.7050877	.2470487	F 43.55674	F 25.35208	F 61.92144	.1909265
Stddev	.0027640	.0118952	.45368	.13894	.48934	.0082020
%RSD	.3920016	4.814928	1.041587	.5480515	.7902652	4.295901
#1	.7026767	.2446050	43.46189	25.42574	61.96637	.1836212
#2	.7044823	.2599760	44.05035	25.19182	61.41118	.1997990
#3	.7081042	.2365650	43.15798	25.43869	62.38677	.1893593

Elem	Sr4077
Units	ppm
Avg	1.146984
Stddev	.058387
%RSD	5.090516
#1	1.119963
#2	1.213987
#3	1.107001

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3794.286	57181.48	6636.424	3460.982	5725.462
Stddev	6.809	220.27	277.172	10.912	5.327
%RSD	.1794485	.3852129	4.176524	.3152910	.0930365
#1	3787.234	57258.74	6791.149	3462.553	5722.476
#2	3794.802	56932.99	6316.431	3449.370	5722.298
#3	3800.823	57352.71	6801.692	3471.024	5731.612

Sample Name: CCV06 Acquired: 10/13/2025 18:56:32 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.152072**	**5.041729**	**5.044661**	**5.169104**	**5.141829**	**10.39578**	**10.05769**
Stddev	.014976	.071679	.006862	.018606	.022119	.05858	.02412
%RSD	.2906718	1.421716	.1360190	.3599439	.4301866	.5635254	.2398612
#1	5.169032	5.050853	5.046905	5.185228	5.159842	10.44760	10.06582
#2	5.146514	4.965925	5.050119	5.148746	5.148504	10.40752	10.03055
#3	5.140670	5.108409	5.036958	5.173339	5.117141	10.33221	10.07670

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2668315**	**2.544045**	**25.91776**	**1.056405**	**2.536244**	**1.280583**	**5.136059**
Stddev	.0051453	.001510	.11274	.001262	.002408	.001729	.079247
%RSD	1.928314	.0593592	.4349898	.1194653	.0949384	.1349974	1.542962
#1	.2727601	2.545786	26.04332	1.056708	2.538964	1.282508	5.044606
#2	.2635313	2.543261	25.88475	1.055020	2.535384	1.279164	5.179085
#3	.2642030	2.543089	25.82522	1.057489	2.534384	1.280076	5.184488

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.572109**	**26.15978**	**2.535303**	**1.293443**	**27.12228**	**2.613299**	**2.615988**
Stddev	.006878	.12616	.002661	.005036	.34349	.008524	.012644
%RSD	.2674105	.4822829	.1049605	.3893379	1.266434	.3261882	.4833408
#1	2.574255	26.28879	2.538075	1.298496	26.75816	2.620923	2.626057
#2	2.564414	26.15388	2.535064	1.293409	27.16814	2.614878	2.620109
#3	2.577658	26.03667	2.532769	1.288424	27.44052	2.604095	2.601797

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.32881**	**5.260807**	**5.243667**	**5.130572**	**5.161633**	**5.239229**	**5.328370**
Stddev	.36035	.088788	.017153	.013359	.004806	.058145	.012611
%RSD	1.368667	1.687721	.3271276	.2603851	.0931051	1.109803	.2366677
#1	25.94028	5.363235	5.263358	5.145823	5.167182	5.172104	5.342227
#2	26.39410	5.213425	5.231963	5.120940	5.158801	5.271569	5.325317
#3	26.65206	5.205762	5.235681	5.124954	5.158915	5.274014	5.317566

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCV06 Acquired: 10/13/2025 18:56:32 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.068434**	**4.979609**	**5.074149**
Stddev	.022777	.012501	.116543
%RSD	.4493975	.2510418	2.296808
#1	5.092389	4.980616	5.144839
#2	5.047052	4.966635	4.939634
#3	5.065861	4.991576	5.137973

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4124.639**	**62886.30**	**7010.982**	**3904.404**	**6162.421**
Stddev	9.930	130.66	100.821	14.011	6.195
%RSD	.2407580	.2077671	1.438041	.3588499	.1005338
#1	4113.174	63013.88	6895.024	3888.258	6155.282
#2	4130.213	62892.26	7077.915	3911.599	6165.589
#3	4130.531	62752.77	7060.007	3913.356	6166.391

Sample Name: CCB06 Acquired: 10/13/2025 19:01:25 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002744**	**.0020070**	**-.000228**	**.0038980**	**.0017869**	**.0005552**
Stddev	.001718	.0013446	.000321	.0002647	.0021425	.0080068
%RSD	62.61670	66.99897	140.6847	6.791804	119.9011	1442.219
#1	-.003865	.0024040	-.000494	.0039334	.0039174	.0094012
#2	-.003602	.0031084	-.000321	.0041433	.0018106	-.006196
#3	-.000766	.0005085	.000129	.0036174	-.000367	-.001540

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024129**	**-.000105**	**.0000200**	**.0094871**	**.0002562**	**.0001332**
Stddev	.0004262	.000042	.0000120	.0098150	.0001040	.0002274
%RSD	17.66466	40.09984	59.96240	103.4563	40.59555	170.8122
#1	.0027424	-.000057	.0000308	.0128714	.0001539	.0001901
#2	.0019315	-.000123	.0000222	.0171622	.0003617	.0003267
#3	.0025646	-.000136	.0000071	-.001572	.0002529	-.000117

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000267**	**.0132423**	**.0000202**	**.0123524**	**.0000248**	**-.000028**
Stddev	.000478	.0019607	.0006145	.0414020	.0000130	.000299
%RSD	178.9013	14.80645	3037.249	335.1735	52.27883	1055.601
#1	-.000817	.0138032	.0001510	-.001752	.0000396	-.000335
#2	-.000024	.0110623	.0005588	-.020154	.0000154	-.000013
#3	.000040	.0148615	-.000649	.058964	.0000195	.000263

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0820870**	**.0022966**	**.0005713**	**.1140494**	**.0137838**	**.0006385**
Stddev	.0096488	.0019327	.0001617	.0302213	.0004836	.0001660
%RSD	11.75436	84.15550	28.29537	26.49842	3.508357	25.99111
#1	.0932157	.0004157	.0005685	.0891488	.0142645	.0006292
#2	.0769853	.0042773	.0007343	.1053268	.0137893	.0008089
#3	.0760600	.0021968	.0004110	.1476727	.0132974	.0004774

Sample Name: CCB06 Acquired: 10/13/2025 19:01:25 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.007705	-.000644	.0067534	-.001917	F .0232644	-.001016
Stddev	.001289	.000763	.0131686	.000535	.0030949	.000077
%RSD	16.72799	118.4421	194.9924	27.89405	13.30333	7.583393
#1	-.009008	-.000516	-.007483	-.002302	.0196945	-.001091
#2	-.007674	-.001462	.009244	-.001306	.0251925	-.001021
#3	-.006431	.000047	.018499	-.002142	.0249062	-.000937

Elem	Sr4077
Units	ppm
Avg	.0001680
Stddev	.0000359
%RSD	21.37187
#1	.0001313
#2	.0001697
#3	.0002031

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4224.238	66613.16	7054.843	4181.362	6896.643
Stddev	6.520	162.16	69.102	27.580	9.518
%RSD	.1543381	.2434391	.9795042	.6596050	.1380120
#1	4216.711	66460.34	6975.062	4179.539	6899.311
#2	4227.892	66783.28	7093.530	4209.809	6886.075
#3	4228.111	66595.87	7095.936	4154.738	6904.542

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3323-06DLX5 Acquired: 10/13/2025 19:05:44 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.1213286**	**-.020305**	**.3688030**	**.0127488**	**-.034296**	**19.39356**	**.1944396**
Stddev	.0027970	.003133	.0018930	.0029334	.001918	.25596	.0039185
%RSD	2.305310	15.42955	.5132718	23.00924	5.593026	1.319842	2.015294
#1	.1188737	-.023638	.3698357	.0156785	-.032203	19.68473	.1983410
#2	.1243736	-.017420	.3666182	.0098117	-.034714	19.29193	.1944734
#3	.1207386	-.019857	.3699550	.0127563	-.035971	19.20401	.1905042

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0084488**	**-.001207**	**21.15318**	**.0610197**	**.0457566**	**.4289291**	**533.3243**
Stddev	.0001868	.000226	.32582	.0007364	.0000748	.0026922	2.2014
%RSD	2.210352	18.72840	1.540292	1.206854	.1635193	.6276592	.4127696
#1	.0086173	-.001191	21.51242	.0610190	.0457640	.4266925	533.4881
#2	.0084811	-.000989	21.07034	.0617564	.0456784	.4319172	531.0455
#3	.0082480	-.001441	20.87677	.0602836	.0458275	.4281775	535.4392

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.730276**	**22.72560**	**.2177007**	**-.008543**	**8.729582**	**.9815793**	**3.437329**
Stddev	.048541	.30504	.0004801	.000828	.032342	.0131013	.016598
%RSD	1.777871	1.342267	.2205302	9.689473	.3704823	1.334716	.4828822
#1	2.783737	23.06561	.2182510	-.007652	8.764054	.9966559	3.419198
#2	2.718127	22.63527	.2173670	-.009289	8.699906	.9729614	3.451774
#3	2.688964	22.47594	.2174843	-.008689	8.724787	.9751206	3.441017

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.722108**	**.3888939**	**.0099271**	**.0803950**	**1.242580**	**1.404542**	**2.444586**
Stddev	.020125	.0229309	.0004140	.0003620	.024758	.020204	.005129
%RSD	.2606184	5.896444	4.170047	.4503351	1.992448	1.438478	.2098067
#1	7.718109	.3689405	.0095865	.0807961	1.271011	1.425995	2.449153
#2	7.743933	.3837967	.0103879	.0800923	1.230949	1.401754	2.445568
#3	7.704283	.4139446	.0098070	.0802966	1.225779	1.385876	2.439037

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3323-06DLX5 Acquired: 10/13/2025 19:05:44 Type: Unk
Method: 6010-200.7 NEW(v283) 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	8.429365	.1077339	-.331519
Stddev	.020764	.0018529	.004750
%RSD	.2463317	1.719913	1.432889
#1	8.414723	.1096476	-.327526
#2	8.420242	.1059484	-.330257
#3	8.453128	.1076056	-.336772

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4200.350	63291.30	7368.524	3955.531	6171.302
Stddev	11.998	295.76	94.181	36.522	11.230
%RSD	.2856515	.4673000	1.278151	.9233130	.1819791
#1	4198.875	63632.31	7283.802	3995.612	6162.140
#2	4189.157	63104.71	7351.837	3946.847	6167.935
#3	4213.018	63136.89	7469.933	3924.134	6183.830

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3323-07DLX5 Acquired: 10/13/2025 19:09:59 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.2141075**	**-.017735**	**16.98926**	**.0029961**	**1.651555**	**16.53098**	**.1399079**
Stddev	.0020013	.002438	.03049	.0082151	.002702	.04647	.0006935
%RSD	.9347063	13.74808	.1794477	274.1902	.1636028	.2811142	.4957003
#1	.2123622	-.017082	16.98780	-.006437	1.648876	16.52887	.1399103
#2	.2136685	-.015690	16.95952	.008578	1.654279	16.57848	.1406002
#3	.2162918	-.020434	17.02045	.006848	1.651510	16.48561	.1392131

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0060566**	**.0026481**	**22.31695**	**.1564490**	**.0893232**	**13.31618**	**460.5177**
Stddev	.0001760	.0000965	.08382	.0019525	.0002048	.00608	3.3017
%RSD	2.906412	3.642133	.3755906	1.247988	.2293066	.0456801	.7169506
#1	.0060541	.0027418	22.26907	.1565316	.0893646	13.31691	462.1078
#2	.0058819	.0025492	22.41373	.1544565	.0895042	13.30977	462.7234
#3	.0062339	.0026534	22.26804	.1583588	.0891008	13.32187	456.7218

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.101986**	**24.68281**	**.7709389**	**-.007000**	**11.73388**	**1.600767**	**3.016698**
Stddev	.029051	.07094	.0014567	.000893	.13925	.007646	.004988
%RSD	.9365203	.2874143	.1889473	12.75098	1.186767	.4776504	.1653332
#1	3.099989	24.67469	.7698810	-.007488	11.78784	1.595704	3.015487
#2	3.131984	24.75746	.7703354	-.005970	11.83809	1.609563	3.022180
#3	3.073986	24.61628	.7726004	-.007542	11.57573	1.597035	3.012428

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.340789**	**.2351217**	**.0218308**	**9.000431**	**.7993765**	**1.341197**	**2.283069**
Stddev	.005316	.0174192	.0004688	.007913	.0099223	.035551	.014649
%RSD	.1224633	7.408597	2.147619	.0879214	1.241261	2.650673	.6416186
#1	4.335622	.2443590	.0217575	9.003668	.7978980	1.372443	2.284759
#2	4.346242	.2459766	.0223320	8.991412	.8099552	1.348631	2.267649
#3	4.340501	.2150294	.0214030	9.006213	.7902764	1.302517	2.296799

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: Q3323-07DLX5 Acquired: 10/13/2025 19:09:59 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**5.544570**	**.0762007**	**-.306837**
Stddev	.035342	.0016234	.002193
%RSD	.6374137	2.130457	.7148427
#1	5.585146	.0755809	-.308167
#2	5.528058	.0780427	-.308039
#3	5.520507	.0749785	-.304306

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4097.274**	**63297.58**	**7140.472**	**3901.707**	**6075.733**
Stddev	2.659	281.13	10.438	17.353	11.433
%RSD	.0649005	.4441418	.1461811	.4447432	.1881716
#1	4097.241	62990.40	7128.481	3895.142	6072.840
#2	4099.950	63542.08	7145.412	3888.595	6088.334
#3	4094.632	63360.27	7147.522	3921.384	6066.024

Sample Name: LR-1 Acquired: 10/13/2025 19:13:58 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.0011393**	**.0164809**	**-.006445**	**-.009674**	**.0185679**	**.3748707**	**.0148083**
Stddev	.0023734	.0059284	.003321	.003853	.0031659	.0069911	.0022646
%RSD	208.3272	35.97130	51.52305	39.83155	17.05026	1.864932	15.29267
#1	.0033625	.0097212	-.007072	-.010185	.0153819	.3710427	.0122107
#2	.0014155	.0207967	-.002856	-.013247	.0217132	.3706296	.0163672
#3	-.001360	.0189248	-.009408	-.005591	.0186086	.3829398	.0158471

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006354**	**-.000038**	**2094.597**	**.0268888**	**.0052420**	**.0068581**	**.6534389**
Stddev	.0000510	.000046	8.822	.0004938	.0005888	.0005671	.0205074
%RSD	8.021662	120.4705	.4211658	1.836597	11.23201	8.269106	3.138383
#1	.0006337	-.000065	2091.451	.0265740	.0053419	.0074671	.6347778
#2	.0006872	.000015	2087.780	.0274580	.0046096	.0063451	.6501450
#3	.0005853	-.000063	2104.561	.0266345	.0057744	.0067620	.6753939

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0242498**	**2420.603**	**.0206690**	**-.001135**	**2514.358**	**.0137043**	**.0348448**
Stddev	.0009356	3.356	.0003639	.000460	41.896	.0048987	.0005351
%RSD	3.858027	.1386338	1.760735	40.54496	1.666253	35.74588	1.535661
#1	.0250421	2421.621	.0210390	-.001549	2562.625	.0115191	.0353991
#2	.0244896	2416.856	.0206566	-.000640	2493.049	.0102785	.0343313
#3	.0232176	2423.332	.0203115	-.001215	2487.400	.0193153	.0348040

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.471781**	**.0159832**	**.0062150**	**-.013559**	**-.096370**	**-.032882**	**.0072692**
Stddev	.881777	.0002835	.0005756	.000498	.000881	.005473	.0003257
%RSD	10.40841	1.774052	9.262096	3.673779	.9137499	16.64547	4.480171
#1	7.630143	.0157891	.0056327	-.013675	-.096665	-.035121	.0074353
#2	8.396349	.0163086	.0062285	-.013990	-.097065	-.036880	.0068940
#3	9.388852	.0158518	.0067838	-.013014	-.095379	-.026644	.0074783

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: LR-1 Acquired: 10/13/2025 19:13:58 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.2485339	-.289521	.0600055
Stddev	.0032880	.002305	.0001840
%RSD	1.322974	.7960809	.3066450
#1	.2516614	-.290761	.0598903
#2	.2451060	-.286862	.0599084
#3	.2488343	-.290941	.0602177

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2850.086	45085.74	6300.363	2733.749	3919.004
Stddev	7.528	112.37	19.039	17.152	3.920
%RSD	.2641298	.2492405	.3021893	.6274000	.1000287
#1	2855.459	45187.95	6297.079	2715.141	3920.682
#2	2853.317	44965.41	6283.180	2748.925	3921.805
#3	2841.482	45103.87	6320.830	2737.181	3914.524

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: LR-2 Acquired: 10/13/2025 19:18:27 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.1180917**	**.0018528**	**.0533638**	**.1185057**	**-.137130**	**1871.308**	**.0220509**
Stddev	.0054501	.0065303	.0045998	.0117919	.004045	15.206	.0019367
%RSD	4.615114	352.4686	8.619645	9.950500	2.949489	.8125629	8.783014
#1	.1222724	.0042781	.0556261	.1093223	-.141442	1859.291	.0239533
#2	.1119278	-.005543	.0480710	.1143912	-.133420	1888.402	.0221177
#3	.1200751	.006823	.0563944	.1318036	-.136529	1866.231	.0200816

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0251163**	**.0373067**	**9.031993**	**-.316938**	**.0755947**	**.2098771**	**2690.319**
Stddev	.0000961	.0026513	.017774	.000894	.0001853	.0110000	17.472
%RSD	.3826859	7.106901	.1967840	.2819479	.2451529	5.241168	.6494334
#1	.0250640	.0391678	9.046472	-.316328	.0757383	.2161772	2683.913
#2	.0252273	.0342709	9.012157	-.317963	.0753855	.1971755	2710.089
#3	.0250578	.0384813	9.037349	-.316521	.0756603	.2162786	2676.954

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.217444**	**1.103696**	**.0423088**	**-.108154**	**4.538513**	**.0489169**	**.0736925**
Stddev	.001709	.019090	.0012944	.001167	.117613	.0027937	.0027491
%RSD	.7859863	1.729679	3.059444	1.079201	2.591437	5.711048	3.730541
#1	-.218979	1.114694	.0431237	-.106821	4.665489	.0494784	.0768580
#2	-.217749	1.114741	.0408163	-.108647	4.516748	.0513872	.0719031
#3	-.215602	1.081652	.0429865	-.108994	4.433304	.0458851	.0723165

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1830.430**	**^ *****	**-.016564**	**.0310283**	**.0024060**	**.5092688**	**.0899334**
Stddev	17.223	-----	.000549	.0021431	.0006766	.0090303	.0067878
%RSD	.9409230	-----	3.312379	6.907082	28.12064	1.773187	7.547536
#1	1850.287	^ -----	-.016058	.0329044	.0021516	.5195150	.0855589
#2	1819.559	^ -----	-.017147	.0314879	.0031729	.5024702	.0864884
#3	1821.443	^ -----	-.016487	.0286927	.0018935	.5058213	.0977528

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: LR-2 Acquired: 10/13/2025 19:18:27 Type: Unk
Method: 6010-200.7 NEW(v283) 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	-.395357	.2840378	-2.57955
Stddev	.018692	.0007402	.01671
%RSD	4.727896	.2606055	.6479284
#1	-.409206	.2845366	-2.57350
#2	-.402771	.2831873	-2.59845
#3	-.374096	.2843895	-2.56671

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3743.915	51750.72	6979.764	3300.838	4253.798
Stddev	5.947	78.87	29.439	14.226	6.530
%RSD	.1588419	.1524118	.4217810	.4309936	.1535189
#1	3745.854	51829.59	6955.618	3298.023	4259.497
#2	3737.241	51671.84	6971.114	3288.229	4255.225
#3	3748.651	51750.74	7012.559	3316.261	4246.672

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: LR-3 Acquired: 10/13/2025 19:37:10 Type: Unk
Method: 6010-200.7 NEW(v283) 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	**.1220040**	**.0353199**	**211.1430**	**.0039317**	**.1318439**	**.0617633**	**.0040582**
Stddev	.0015818	.0029999	.6167	.0028169	.0011776	.0013639	.0007311
%RSD	1.296487	8.493539	.2920615	71.64520	.8931559	2.208332	18.01506
#1	.1237503	.0341711	211.7585	.0060652	.1323708	.0608665	.0032296
#2	.1206675	.0330642	211.1453	.0049911	.1304949	.0633329	.0043324
#3	.1215941	.0387245	210.5251	.0007387	.1326661	.0610904	.0046125

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.004053**	**-.001218**	**.2052305**	**23.54956**	**.0058857**	**52.96699**	**.0856424**
Stddev	.000021	.000035	.0080373	.14332	.0001746	.12460	.0003060
%RSD	.5071273	2.834970	3.916214	.6085825	2.965799	.2352487	.3573152
#1	-.004071	-.001258	.2142798	23.71370	.0059647	53.05279	.0853890
#2	-.004031	-.001203	.1989226	23.44926	.0056856	53.02410	.0855557
#3	-.004058	-.001194	.2024892	23.48572	.0060068	52.82406	.0859824

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**46.69948**	**-.175731**	**22.90437**	**.0014924**	**.1756825**	**-.037545**	**27.02461**
Stddev	.20061	.026612	.06000	.0003077	.0041887	.003898	.38986
%RSD	.4295773	15.14376	.2619720	20.61594	2.384268	10.38301	1.442622
#1	46.93000	-.203858	22.96924	.0017328	.1722141	-.041193	27.44135
#2	46.60406	-.172384	22.89300	.0015988	.1803361	-.033437	26.96368
#3	46.56440	-.150950	22.85086	.0011457	.1744972	-.038004	26.66879

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4962446**	**.0026966**	**-.013886**	**-.005147**	**-.038850**	**-.085177**	**.1829117**
Stddev	.0433376	.0011163	.000087	.000494	.001463	.008883	.0024633
%RSD	8.733124	41.39719	.6257782	9.602128	3.766880	10.42843	1.346711
#1	.4486248	.0017023	-.013789	-.005711	-.037696	-.093947	.1857074
#2	.5067344	.0024834	-.013912	-.004791	-.040496	-.076186	.1819679
#3	.5333744	.0039042	-.013956	-.004939	-.038358	-.085399	.1810599

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: LR-3 Acquired: 10/13/2025 19:37:10 Type: Unk
Method: 6010-200.7 NEW(v283) 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	.0732918	.0000965	.0004128
Stddev	.0012607	.0007182	.0000857
%RSD	1.720049	744.0089	20.75356
#1	.0746572	-.000283	.0004002
#2	.0721720	-.000353	.0005041
#3	.0730461	.000925	.0003342

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3996.849	69934.78	7481.383	4195.047	6866.599
Stddev	21.136	222.26	40.069	25.360	36.597
%RSD	.5288225	.3178059	.5355766	.6045284	.5329686
#1	3974.246	69691.27	7527.263	4202.464	6824.715
#2	4000.180	70126.71	7453.272	4215.873	6882.678
#3	4016.123	69986.35	7463.614	4166.806	6892.403

Sample Name: CCV07 Acquired: 10/13/2025 19:46:19 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.860379**	**4.765273**	**4.851669**	**4.856301**	**4.840761**	**9.807277**	**9.604454**
Stddev	.024133	.058827	.004138	.016212	.013447	.045045	.017865
%RSD	.4965243	1.234486	.0852973	.3338365	.2777958	.4592984	.1860042
#1	4.861462	4.729699	4.847720	4.859453	4.852702	9.829622	9.606033
#2	4.883952	4.833174	4.855973	4.870706	4.843385	9.755428	9.585852
#3	4.835723	4.732946	4.851313	4.838745	4.826194	9.836781	9.621477

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2574411**	**2.458591**	**24.62373**	**1.007355**	**2.429890**	**1.220822**	**4.863872**
Stddev	.0023035	.003770	.02462	.004952	.002779	.001386	.050121
%RSD	.8947838	.1533237	.0999656	.4915458	.1143748	.1134968	1.030472
#1	.2572901	2.455388	24.59935	1.003669	2.429793	1.221754	4.859463
#2	.2598165	2.462745	24.62327	1.005413	2.432716	1.221483	4.816101
#3	.2552168	2.457639	24.64858	1.012984	2.427160	1.219230	4.916051

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.475685**	**25.05142**	**2.428603**	**1.232016**	**24.73519**	**2.479441**	**2.419738**
Stddev	.004142	.11850	.002660	.002061	.31796	.007796	.005201
%RSD	.1672970	.4730127	.1095245	.1672614	1.285463	.3144114	.2149388
#1	2.478358	25.17042	2.428278	1.229836	24.68470	2.476595	2.418482
#2	2.470914	25.05040	2.431411	1.233932	24.44549	2.473469	2.415280
#3	2.477783	24.93343	2.426121	1.232281	25.07537	2.488260	2.425452

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.77470**	**5.085878**	**4.998458**	**4.931916**	**4.913430**	**4.853979**	**5.081830**
Stddev	.33792	.059282	.015642	.015716	.007079	.054195	.017755
%RSD	1.421347	1.165621	.3129420	.3186587	.1440776	1.116509	.3493813
#1	23.64814	5.081699	5.007578	4.927302	4.919291	4.811951	5.074694
#2	23.51834	5.147139	5.007399	4.949423	4.915433	4.834838	5.102043
#3	24.15764	5.028795	4.980396	4.919024	4.905564	4.915147	5.068753

Reviewed By:jaswal
On:10/16/2025 5:03:11 AM
Inst Id :P4
LB :LB137518

Sample Name: CCV07 Acquired: 10/13/2025 19:46:19 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.726227**	**4.613316**	**4.887420**
Stddev	.031738	.010979	.055996
%RSD	.6715203	.2379940	1.145724
#1	4.729637	4.610576	4.947450
#2	4.756122	4.603967	4.878212
#3	4.692922	4.625407	4.836599

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4296.315**	**64870.08**	**7133.605**	**4161.258**	**6382.536**
Stddev	5.903	331.42	62.894	23.053	8.779
%RSD	.1374048	.5108967	.8816617	.5540025	.1375432
#1	4290.227	65176.23	7154.128	4161.856	6379.078
#2	4302.015	64915.87	7063.013	4184.006	6392.517
#3	4296.703	64518.15	7183.674	4137.911	6376.012

Sample Name: CCB07 Acquired: 10/13/2025 19:50:21 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001382**	**.0036285**	**-.000276**	**.0015540**	**-.000354**	**.0126006**
Stddev	.000663	.0006101	.000539	.0024958	.001361	.0030101
%RSD	47.95813	16.81333	195.4376	160.6017	384.7087	23.88841
#1	-.002144	.0041050	.000331	.0020054	.001218	.0108383
#2	-.000940	.0038397	-.000459	-.001137	-.001152	.0160763
#3	-.001062	.0029409	-.000699	.003793	-.001128	.0108874

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0064442**	**-.000082**	**.0000459**	**-.000256**	**.0003106**	**.0001911**
Stddev	.0006758	.000058	.0000438	.005258	.0003314	.0002103
%RSD	10.48696	70.50134	95.38171	2054.573	106.7006	110.0547
#1	.0060027	-.000051	-.000002	-.001546	.0005597	.0003096
#2	.0072222	-.000047	.000084	.005527	.0004375	.0003153
#3	.0061077	-.000150	.000056	-.004748	-.000066	-.000052

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000049**	**-.004769**	**-.000364**	**-.005756**	**-.000111**	**.0004441**
Stddev	.000034	.016706	.000410	.007044	.000195	.0001782
%RSD	69.53986	350.3180	112.4219	122.3912	176.6488	40.13619
#1	-.000086	-.005958	-.000782	-.003394	-.000324	.0004335
#2	-.000019	-.020849	-.000349	-.000196	.000059	.0002714
#3	-.000041	.012500	.000037	-.013677	-.000067	.0006274

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0331469**	**.0002331**	**-.000088**	**.1370387**	**.0059678**	**.0005189**
Stddev	.0229067	.0033269	.000261	.0300335	.0008205	.0000521
%RSD	69.10656	1427.139	297.7289	21.91608	13.74877	10.03977
#1	.0067785	-.003498	.000055	.1116609	.0067606	.0005126
#2	.0445296	.002889	-.000389	.1292583	.0051221	.0004702
#3	.0481326	.001309	.000071	.1701968	.0060208	.0005738

Sample Name: CCB07 Acquired: 10/13/2025 19:50:21 Type: Unk
Method: 6010-200.7 NEW(v283) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004883	.0005871	.0033241	-.004059	F .0120830	-.003005
Stddev	.000780	.0003745	.0093319	.000535	.0015337	.002301
%RSD	15.96524	63.78435	280.7344	13.17670	12.69273	76.54959
#1	-.004109	.0004148	.0112643	-.004467	.0138109	-.001095
#2	-.004870	.0003298	.0056627	-.004257	.0115550	-.005559
#3	-.005668	.0010168	-.006955	-.003454	.0108831	-.002362

Elem	Sr4077
Units	ppm
Avg	.0000483
Stddev	.0000570
%RSD	118.0194
#1	.0000513
#2	.0001038
#3	-.000010

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4331.924	66592.99	7076.994	4255.326	7045.470
Stddev	2.929	456.64	38.155	26.873	5.491
%RSD	.0676100	.6857150	.5391478	.6315176	.0779317
#1	4328.680	66104.06	7084.300	4224.486	7039.455
#2	4332.720	67008.42	7035.714	4273.715	7046.741
#3	4334.373	66666.49	7110.969	4267.779	7050.213

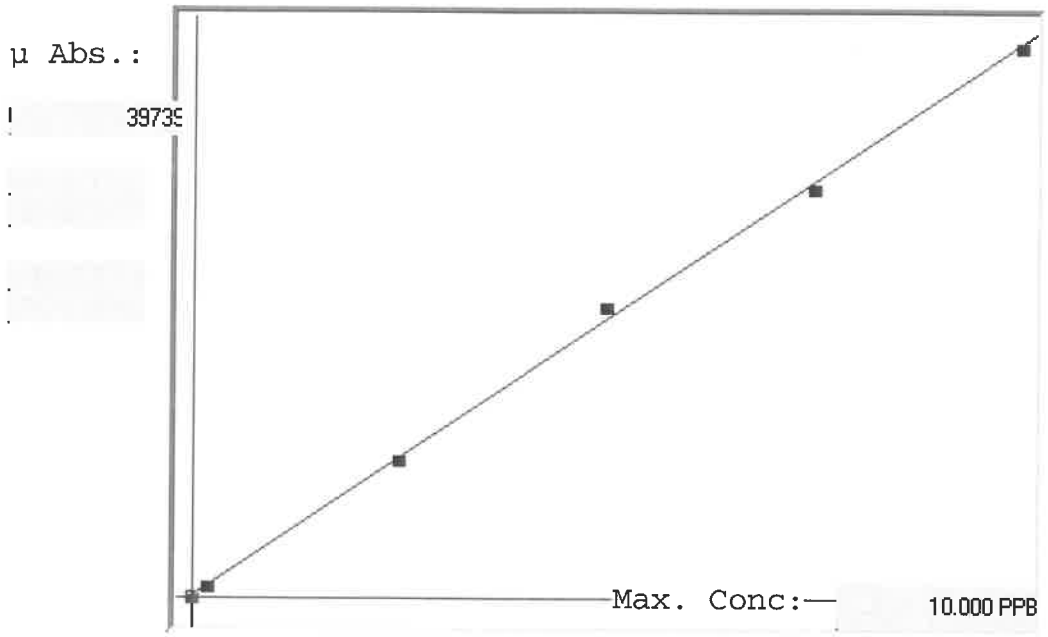
Reviewed By:Janvi
On:10/16/2025 5:07:36 AM
Inst Id :CV1
LB :LB137514

LB137514

7470A

INSTRUMENT ID : CV1

Linear



A= 0.0000e+000

B= 2.5162e-004

C= -3.7999e-002

Rho= 0.9995115

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0.0	0.000	-0.053	-0.053	-60	0.000	-60	0			
0.2	0.200	0.176	-0.024	851	0.0 %	851	0			
2.5	2.500	2.488	-0.012	10038	0.0 %	10038	0			
5.0	5.000	5.246	0.246	21002	0.0 %	21002				
7.5	7.500	7.382	-0.118	29488	0.0 %	29488				
10.0	10.000	9.961	-0.039	39739	0.0 %	39739				

Reviewed By:Janvi
On:10/16/2025 5:07:36 AM
Inst Id :CV1
LB :LB137514

lb137514 instrument id : cv1

Method: 7470A Operator: Admin Date of Analysis: 14 Oct 2025 10:32:29

Type	Sample ID	Extended ID	Conc.	µ Abs.	Units	Type	Stnd Conc	Method	Date
S	0.0 - 1	S0	-	-60	PPB	Std	0.0000	7470A	14 Oct 2025 10:42:16
S	0.2 - 1	S0.2	-	851	PPB	Std	0.2000	7470A	14 Oct 2025 10:49:32
S	2.5 - 1	S2.5	-	10038	PPB	Std	2.5000	7470A	14 Oct 2025 10:51:48
S	5.0 - 1	S5	-	21002	PPB	Std	5.0000	7470A	14 Oct 2025 10:54:05
S	7.5 - 1	S7.5	-	29488	PPB	Std	7.5000	7470A	14 Oct 2025 10:56:24
S	10.0 - 1	S10	-	39739	PPB	Std	10.0000	7470A	14 Oct 2025 10:58:45
U	ICV70 - 1	ICV70	4.3412	17404	PPB	SMPL		7470A	14 Oct 2025 11:07:06
U	ICB70 - 1	ICB70	-0.0315	26	PPB	SMPL		7470A	14 Oct 2025 11:12:09
U	CCV26 - 1	CCV26	4.9216	19711	PPB	SMPL		7470A	14 Oct 2025 11:17:26
U	CCB26 - 1	CCB26	-0.0272	43	PPB	SMPL		7470A	14 Oct 2025 11:22:38
U	CRA - 1	CRA	0.1744	844	PPB	SMPL		7470A	14 Oct 2025 11:24:52
U	HIGH Std - 1	HIGH Std	9.6498	38502	PPB	SMPL		7470A	14 Oct 2025 11:27:07
U	CHK Std - 1	CHK Std	6.9046	27592	PPB	SMPL		7470A	14 Oct 2025 11:32:16
U	PB170073BL - 1	PBW	-0.0342	15	PPB	SMPL		7470A	14 Oct 2025 11:37:21
U	PB170073BS - 1	LCSW	4.1995	16841	PPB	SMPL		7470A	14 Oct 2025 11:39:37
U	Q332102 - 1	P001-05-01	-0.0722	-136	PPB	SMPL		7470A	14 Oct 2025 11:41:53
U	Q3326-04 - 1	TP-1	-0.0317	25	PPB	SMPL		7470A	14 Oct 2025 11:44:15
U	Q3326-08 - 1	TP-2	-0.0307	29	PPB	SMPL		7470A	14 Oct 2025 11:46:32
U	Q3327-02 - 1	HADLEY ROAD	-0.0239	56	PPB	SMPL		7470A	14 Oct 2025 11:48:49
U	Q3327-02DUP - 1	HADLEY ROADDUP	-0.0337	17	PPB	SMPL		7470A	14 Oct 2025 11:51:05
U	CCV27 - 1	CCV27	4.7098	18869	PPB	SMPL		7470A	14 Oct 2025 11:53:20
U	CCB27 - 1	CCB27	-0.0984	-240	PPB	SMPL		7470A	14 Oct 2025 11:55:35
U	Q3327-02MS - 1	HADLEY ROADMS	4.7382	18982	PPB	SMPL		7470A	14 Oct 2025 11:57:54
U	Q3327-02MSD - 1	HADLEY ROADMSD	3.8643	15509	PPB	SMPL		7470A	14 Oct 2025 12:00:10
U	PB170084BL - 1	PBW	-0.0893	-204	PPB	SMPL		7470A	14 Oct 2025 12:02:31
U	PB170084BS - 1	LCSW	4.1602	16685	PPB	SMPL		7470A	14 Oct 2025 12:04:50
U	Q3331-04 - 1	RINGWOOD	-0.0093	114	PPB	SMPL		7470A	14 Oct 2025 12:07:06
U	Q3331-04DUP - 1	RINGWOODDUP	-0.0138	96	PPB	SMPL		7470A	14 Oct 2025 12:09:26
U	Q3331-04MS - 1	RINGWOODMS	3.7803	15175	PPB	SMPL		7470A	14 Oct 2025 12:11:43
U	Q3331-04MSD - 1	RINGWOODMSD	3.8080	15285	PPB	SMPL		7470A	14 Oct 2025 12:18:24
U	Q3332-02 - 1	100725-B	-0.0805	-169	PPB	SMPL		7470A	14 Oct 2025 12:20:41
U	CCV28 - 1	CCV28	5.1081	20452	PPB	SMPL		7470A	14 Oct 2025 12:22:59
U	CCB28 - 1	CCB28	-0.1012	-251	PPB	SMPL		7470A	14 Oct 2025 12:25:15
U	PB170062TB - 1	PB170062TB	-0.0327	21	PPB	SMPL		7470A	14 Oct 2025 12:27:35
U	Q3327-02LX5 - 1		-0.0279	40	PPB	SMPL		7470A	14 Oct 2025 12:29:51
U	Q3327-02A - 1		4.2272	16951	PPB	SMPL		7470A	14 Oct 2025 12:32:06
U	Q3331-04LX5 - 1		-0.0823	-176	PPB	SMPL		7470A	14 Oct 2025 12:34:22
U	Q3331-04A - 1		4.4544	17854	PPB	SMPL		7470A	14 Oct 2025 12:36:41
U	CCV29 - 1	CCV29	5.0535	20235	PPB	SMPL		7470A	14 Oct 2025 12:38:57
U	CCB29 - 1	CCB29	-0.1125	-296	PPB	SMPL		7470A	14 Oct 2025 12:41:17

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB170074

SOP ID : M3010A-Digestion-17

SDG No : N/A

Matrix : WATER

Pippete ID: ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

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

Start Digest Date: 10/13/2025 **Time :** 12:30 **Temp :** 96 °C

End Digest Date: 10/13/2025 **Time :** 15:32 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: SDG.

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	0.25	M6180
LFS-2	0.25	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	3.00	M6158
1:1 HCL	5.00	MP87148
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
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#1 CELL#50 96C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/13/25 16:32	SDG met dig	metals lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB170074

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB170062TB	PB170062TB	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	15
PB170074BL	PBW074	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	16
PB170074BS	LCS074	<2	5	25	Colorless	Colorless	Clear	Clear	M6180,M6181	17
Q3321-02	P001-DS-01	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	18
Q3326-04	TP-1	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	19
Q3326-08	TP-2	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	20
Q3327-02	HADLEY-ROAD-TP	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	21
Q3327-02MS	HADLEY-ROAD-TPMS	<2	5	25	Colorless	Colorless	Clear	Clear	M6180,M6181	23
Q3327-02MSD	HADLEY-ROAD-TPMSD	<2	5	25	Colorless	Colorless	Clear	Clear	M6180,M6181	24
Q3327-02DUP	HADLEY-ROAD-TPDUP	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	22

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB170062

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Po
PB170062TB	LEB062	05	N/A	2000	N/A	N/A	N/A	4.93	1.5	T-1
Q3321-02	P001-DS-01	01	100.02	2000	N/A	N/A	N/A	5.8	1.0	T-1
Q3326-04	TP-1	02	100.03	2000	N/A	N/A	N/A	5.0	1.0	T-1
Q3326-08	TP-2	03	100.02	2000	N/A	N/A	N/A	5.5	1.5	T-1
Q3327-02	HADLEY-ROAD	04	100.03	2000	N/A	N/A	N/A	5.0	1.0	T-1

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB170073

SOP ID : M7470A-Mercury-20

SDG No : NA

Start Digest Date: 10/13/2025 **Time :** 15:10 **Temp :** 95 °C

Matrix : WATER

End Digest Date: 10/13/2025 **Time :** 17:10 **Temp :** 95 °C

Pippete ID: HG A

Digestion tube ID: M5595

Balance ID : N/A

Block thermometer ID: HG-DIG#3

Filter paper ID : NA

Dig Technician Signature:

pH Strip ID : M6069

Supervisor Signature:

Hood ID : #1

Temp : **1.** 95°C **2.** N/A

Block ID: **1.** HG HOT BLOCK#3 **2.** N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP87536
CCV	30mL	MP87538
CRA	30mL	MP87540
Blank Spike	0.48mL	MP87528
Matrix Spike	0.48mL	MP87528

Chemical Used	ML/SAMPLE USED	Lot Number
HNO3/H2SO4(1:2)	2.25mL	MP87071
KMnO4 (5%)	4.5mL	MP87072
K2S2O8 (5%)	2.4mL	MP87073
Hydroxylamine HCL (12%)	1.8mL	MP87149
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	MP87529
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP87530
2.5 ppb	S2.5	30mL	MP87531
5.0 ppb	S5.0	30mL	MP87533
7.5 ppb	S7.5	30mL	MP87534
10.0 ppb	S10.0	30mL	MP87535
ICV	ICV	30mL	MP87536
ICB	ICB	30mL	MP87537
CCV	CCV	30mL	MP87538
CCB	CCB	30mL	MP87539
CRI	CRI	30mL	MP87540
CHK STD	CHK STD	30mL	MP87541

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/13/25 @ 17:40	MB-HG Lab	MB Metals Lab
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB170073

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
PB170062TB	PB170062TB	3	30	<2	N/A	3-1
PB170073BL	PBW073	30	30	<2	N/A	2
PB170073BS	LCS073	30	30	<2	MP87528	3
Q3321-02	P001-DS-01	3	30	<2	N/A	4
Q3326-04	TP-1	3	30	<2	N/A	5
Q3326-08	TP-2	3	30	<2	N/A	6
Q3327-02	HADLEY-ROAD-TP	3	30	<2	N/A	7
Q3327-02DUP	HADLEY-ROAD-TPDUP	3	30	<2	N/A	8
Q3327-02MS	HADLEY-ROAD-TPMS	3	30	<2	MP87528	9
Q3327-02MSD	HADLEY-ROAD-TPMSD	3	30	<2	MP87528	10

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB170062

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB170062TB	LEB062	05	N/A	2000	N/A	N/A	N/A	4.93	1.5	T-1
Q3321-02	P001-DS-01	01	100.02	2000	N/A	N/A	N/A	5.8	1.0	T-1
Q3326-04	TP-1	02	100.03	2000	N/A	N/A	N/A	5.0	1.0	T-1
Q3326-08	TP-2	03	100.02	2000	N/A	N/A	N/A	5.5	1.5	T-1
Q3327-02	HADLEY-ROAD	04	100.03	2000	N/A	N/A	N/A	5.0	1.0	T-1

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 # LB137514

Review By	jaswal	Review On	10/16/2025 5:05:53 AM
Supervise By	Janvi	Supervise On	10/16/2025 5:07:36 AM

STD. NAME	STD REF.#
ICAL Standard	MP87529,MP87530,MP87531,MP87533,MP87534,MP87535
ICV Standard	MP87536
CCV Standard	MP87538
ICSA Standard	
CRI Standard	MP87540
LCS Standard	MP87528
Chk Standard	MP87537,MP87539,MP87541,

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	10/14/25 10:42		mohan	OK
2	S0.2	S0.2	CAL2	10/14/25 10:49		mohan	OK
3	S2.5	S2.5	CAL3	10/14/25 10:51		mohan	OK
4	S5	S5	CAL4	10/14/25 10:54		mohan	OK
5	S7.5	S7.5	CAL5	10/14/25 10:56		mohan	OK
6	S10	S10	CAL6	10/14/25 10:58		mohan	OK
7	ICV70	ICV70	ICV	10/14/25 11:07		mohan	OK
8	ICB70	ICB70	ICB	10/14/25 11:12		mohan	OK
9	CCV26	CCV26	CCV	10/14/25 11:17		mohan	OK
10	CCB26	CCB26	CCB	10/14/25 11:22		mohan	OK
11	CRA	CRA	CRDL	10/14/25 11:24		mohan	OK
12	HIGH Std	HIGH Std	SAM	10/14/25 11:27		mohan	OK
13	CHK Std	CHK Std	SAM	10/14/25 11:32		mohan	OK
14	PB170073BL	PB170073BL	MB	10/14/25 11:37		mohan	OK
15	PB170073BS	PB170073BS	LCS	10/14/25 11:39		mohan	OK
16	Q3321-02	P001-DS-01	SAM	10/14/25 11:41		mohan	OK
17	Q3326-04	TP-1	SAM	10/14/25 11:44		mohan	OK
18	Q3326-08	TP-2	SAM	10/14/25 11:46		mohan	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB137514

Review By	jaswal	Review On	10/16/2025 5:05:53 AM
Supervise By	Janvi	Supervise On	10/16/2025 5:07:36 AM

STD. NAME	STD REF.#
ICAL Standard	MP87529,MP87530,MP87531,MP87533,MP87534,MP87535
ICV Standard	MP87536
CCV Standard	MP87538
ICSA Standard	
CRI Standard	MP87540
LCS Standard	MP87528
Chk Standard	MP87537,MP87539,MP87541,

19	Q3327-02	HADLEY-ROAD-TP	SAM	10/14/25 11:48		mohan	OK
20	Q3327-02DUP	HADLEY-ROAD-TPDU	DUP	10/14/25 11:51		mohan	OK
21	CCV27	CCV27	CCV	10/14/25 11:53		mohan	OK
22	CCB27	CCB27	CCB	10/14/25 11:55		mohan	OK
23	Q3327-02MS	HADLEY-ROAD-TPM	MS	10/14/25 11:57		mohan	OK
24	Q3327-02MSD	HADLEY-ROAD-TPM	MSD	10/14/25 12:00		mohan	OK
25	PB170084BL	PB170084BL	MB	10/14/25 12:02		mohan	OK
26	PB170084BS	PB170084BS	LCS	10/14/25 12:04		mohan	OK
27	Q3331-04	RINGWOOD	SAM	10/14/25 12:07		mohan	OK
28	Q3331-04DUP	RINGWOODDUP	DUP	10/14/25 12:09		mohan	OK
29	Q3331-04MS	RINGWOODMS	MS	10/14/25 12:11		mohan	OK
30	Q3331-04MSD	RINGWOODMSD	MSD	10/14/25 12:18		mohan	OK
31	Q3332-02	100725-B	SAM	10/14/25 12:20		mohan	OK
32	CCV28	CCV28	CCV	10/14/25 12:22		mohan	OK
33	CCB28	CCB28	CCB	10/14/25 12:25		mohan	OK
34	PB170062TB	PB170062TB	MB	10/14/25 12:27		mohan	OK
35	Q3327-02L	HADLEY-ROAD-TPL	SD	10/14/25 12:29		mohan	OK
36	Q3327-02A	HADLEY-ROAD-TPA	PS	10/14/25 12:32		mohan	OK
37	Q3331-04L	RINGWOODL	SD	10/14/25 12:34		mohan	OK
38	Q3331-04A	RINGWOODA	PS	10/14/25 12:36		mohan	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB137514

Review By	jaswal	Review On	10/16/2025 5:05:53 AM
Supervise By	Janvi	Supervise On	10/16/2025 5:07:36 AM

STD. NAME	STD REF.#
ICAL Standard	MP87529,MP87530,MP87531,MP87533,MP87534,MP87535
ICV Standard	MP87536
CCV Standard	MP87538
ICSA Standard	
CRI Standard	MP87540
LCS Standard	MP87528
Chk Standard	MP87537,MP87539,MP87541,

39	CCV29	CCV29	CCV	10/14/25 12:38		mohan	OK
40	CCB29	CCB29	CCB	10/14/25 12:41		mohan	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB137518

Review By	Janvi	Review On	10/15/2025 12:22:11 PM
Supervise By	jaswal	Supervise On	10/16/2025 5:03:11 AM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87039,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87041
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	10/13/25 12:12		Jaswal	OK
2	S1	S1	CAL2	10/13/25 12:17		Jaswal	OK
3	S2	S2	CAL3	10/13/25 12:21		Jaswal	OK
4	S3	S3	CAL4	10/13/25 12:25		Jaswal	OK
5	S4	S4	CAL5	10/13/25 12:29		Jaswal	OK
6	S5	S5	CAL6	10/13/25 12:33		Jaswal	OK
7	ICV01	ICV01	ICV	10/13/25 12:46		Jaswal	OK
8	LLICV01	LLICV01	LLICV	10/13/25 12:51		Jaswal	OK
9	ICB01	ICB01	ICB	10/13/25 12:55		Jaswal	OK
10	CRI01	CRI01	CRDL	10/13/25 13:00		Jaswal	OK
11	ICSA01	ICSA01	ICSA	10/13/25 13:04		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	10/13/25 13:08		Jaswal	OK
13	ICSA01DL	ICSA01DL	ICSA	10/13/25 13:12		Jaswal	OK
14	ICSAB01DL	ICSAB01DL	ICSAB	10/13/25 13:16		Jaswal	OK
15	CCV01	CCV01	CCV	10/13/25 13:21		Jaswal	OK
16	CCB01	CCB01	CCB	10/13/25 13:25		Jaswal	OK
17	PB170057BL	PB170057BL	MB	10/13/25 13:29		Jaswal	OK
18	PB170057BS	PB170057BS	LCS	10/13/25 13:33		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB137518

Review By	Janvi	Review On	10/15/2025 12:22:11 PM
Supervise By	jaswal	Supervise On	10/16/2025 5:03:11 AM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87039,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87041
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

19	Q3318-04	3436	SAM	10/13/25 13:37		Jaswal	OK
20	Q3318-04DUP	3436DUP	DUP	10/13/25 13:41		Jaswal	OK
21	Q3318-04L	3436L	SD	10/13/25 13:45		Jaswal	OK
22	Q3318-04MS	3436MS	MS	10/13/25 13:50		Jaswal	OK
23	Q3318-04MSD	3436MSD	MSD	10/13/25 13:54		Jaswal	OK
24	Q3318-04A	3436A	PS	10/13/25 13:58	0.1ML OF EACH M6008 AND M6017 IN10ML SAMPLE.	Jaswal	OK
25	Q3297-10	TP1	SAM	10/13/25 14:03		Jaswal	OK
26	Q3297-20	TP2	SAM	10/13/25 14:07		Jaswal	OK
27	CCV02	CCV02	CCV	10/13/25 14:18		Jaswal	OK
28	CCB02	CCB02	CCB	10/13/25 14:22		Jaswal	OK
29	PB170069BL	PB170069BL	MB	10/13/25 15:07		Jaswal	OK
30	PB170069BS	PB170069BS	LCS	10/13/25 15:18		Jaswal	OK
31	Q3323-01	SED-01-0-2	SAM	10/13/25 15:22		Jaswal	OK
32	Q3323-02	SED-02-0-2	SAM	10/13/25 15:26	Zn high	Jaswal	Dilution
33	Q3323-03	SED-03-0-2	SAM	10/13/25 15:31		Jaswal	OK
34	Q3323-04	SED-04-0-2	SAM	10/13/25 15:35		Jaswal	OK
35	Q3323-05	SED-05-0-2	SAM	10/13/25 15:39		Jaswal	OK
36	Q3323-06	SED-06-0-2	SAM	10/13/25 15:43	Ag is oversaturated and Fe high	Jaswal	Dilution
37	Q3323-07	SED-07-0-2	SAM	10/13/25 15:47	Fe high	Jaswal	Dilution

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB137518

Review By	Janvi	Review On	10/15/2025 12:22:11 PM
Supervise By	jaswal	Supervise On	10/16/2025 5:03:11 AM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87039,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87041
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

38	Q3326-01	TP-1	SAM	10/13/25 15:51		Jaswal	OK
39	CCV03	CCV03	CCV	10/13/25 16:04		Jaswal	OK
40	CCB03	CCB03	CCB	10/13/25 16:08		Jaswal	OK
41	Q3326-05	TP-2	SAM	10/13/25 16:12		Jaswal	OK
42	Q3327-01	HADLEY-ROAD-TP	SAM	10/13/25 16:16		Jaswal	OK
43	Q3327-01DUP	HADLEY-ROAD-TPDU	DUP	10/13/25 16:20		Jaswal	OK
44	Q3327-01L	HADLEY-ROAD-TPL	SD	10/13/25 16:25		Jaswal	OK
45	Q3327-01MS	HADLEY-ROAD-TPM	MS	10/13/25 16:29		Jaswal	OK
46	Q3327-01MSD	HADLEY-ROAD-TPM	MSD	10/13/25 16:33		Jaswal	OK
47	Q3327-01A	HADLEY-ROAD-TPA	PS	10/13/25 16:37	0.1ML OF EACH M6008 AND M6017 IN10ML SAMPLE.	Jaswal	OK
48	Q3323-02DL	SED-02-0-2DL	SAM	10/13/25 16:42	5X For Zn	Jaswal	Confirms
49	PB170074BL	PB170074BL	MB	10/13/25 16:54		Jaswal	OK
50	PB170074BS	PB170074BS	LCS	10/13/25 16:58		Jaswal	OK
51	CCV04	CCV04	CCV	10/13/25 17:02		Jaswal	OK
52	CCB04	CCB04	CCB	10/13/25 17:06		Jaswal	OK
53	PB170062TB	PB170062TB	MB	10/13/25 17:20		Jaswal	OK
54	Q3321-02	P001-DS-01	SAM	10/13/25 17:24		Jaswal	OK
55	Q3326-04	TP-1	SAM	10/13/25 17:29		Jaswal	OK
56	Q3326-08	TP-2	SAM	10/13/25 17:33		Jaswal	OK

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Supervise By	jaswal	Supervise On	10/16/2025 5:03:11 AM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87039,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87041
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

57	Q3327-02	HADLEY-ROAD-TP	SAM	10/13/25 17:38		Jaswal	OK
58	Q3327-02DUP	HADLEY-ROAD-TPDU	DUP	10/13/25 17:42		Jaswal	OK
59	Q3327-02L	HADLEY-ROAD-TPL	SD	10/13/25 17:46		Jaswal	OK
60	Q3327-02MS	HADLEY-ROAD-TPM	MS	10/13/25 17:51		Jaswal	OK
61	Q3327-02MSD	HADLEY-ROAD-TPM	MSD	10/13/25 17:55		Jaswal	OK
62	Q3327-02A	HADLEY-ROAD-TPA	PS	10/13/25 17:59	0.1ML OF EACH M6008 AND M6017 IN10ML SAMPLE.	Jaswal	OK
63	CCV05	CCV05	CCV	10/13/25 18:11		Jaswal	OK
64	CCB05	CCB05	CCB	10/13/25 18:15		Jaswal	OK
65	PB170070BL	PB170070BL	MB	10/13/25 18:20		Jaswal	OK
66	PB170070BS	PB170070BS	LCS	10/13/25 18:24		Jaswal	OK
67	Q3331-04	RINGWOOD	SAM	10/13/25 18:31		Jaswal	OK
68	Q3331-04DUP	RINGWOODDUP	DUP	10/13/25 18:35		Jaswal	OK
69	Q3331-04L	RINGWOODL	SD	10/13/25 18:40		Jaswal	OK
70	Q3331-04MS	RINGWOODMS	MS	10/13/25 18:44		Jaswal	OK
71	Q3331-04MSD	RINGWOODMSD	MSD	10/13/25 18:48		Jaswal	OK
72	Q3331-04A	RINGWOODA	PS	10/13/25 18:52	0.1ML OF EACH M6008 AND M6017 IN10ML SAMPLE.	Jaswal	OK
73	CCV06	CCV06	CCV	10/13/25 18:56		Jaswal	OK
74	CCB06	CCB06	CCB	10/13/25 19:01		Jaswal	OK

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Supervise By	jaswal	Supervise On	10/16/2025 5:03:11 AM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87039,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87041
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

75	Q3323-06DL	SED-06-0-2DL	SAM	10/13/25 19:05	5X For Ag, Fe	Jaswal	Confirms
76	Q3323-07DL	SED-07-0-2DL	SAM	10/13/25 19:09	5X For Fe	Jaswal	Confirms
77	LR-1	LR-1	HIGH STD	10/13/25 19:13		Jaswal	OK
78	LR-2	LR-2	HIGH STD	10/13/25 19:18		Jaswal	OK
79	LR-3	LR-3	HIGH STD	10/13/25 19:37		Jaswal	OK
80	CCV07	CCV07	CCV	10/13/25 19:46		Jaswal	OK
81	CCB07	CCB07	CCB	10/13/25 19:50		Jaswal	OK

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB170062

SOP ID : M1311-TCLP-16

SDG No : N/A

Weigh By : JP

Balance ID : WC SC-7

pH Meter ID : WC PH METER-1

Extraction By : JP

Filter By : JP

Pippete ID : WC

Tumbler ID : T-1

TCLP Filter ID : 40718710

Start Prep Date : 10/10/2025 **Time :** 17:00

End Prep Date : 10/11/2025 **Time :** 11:20

Combination Ratio : 20

ZHE Cleaning Batch : ~~N/A~~ 10

Initial Room Temperature: 23 °C

Final Room Temperature: 22 °C

TCLP Technician Signature : JP

Supervisor By : JP

Standared Name	MLS USED	STD REF. # FROM LOG
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

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP114525
HCL-TCLP,1N	N/A	WP114527
HNO3-TCLP,1N	N/A	WP114528
pH Strips	N/A	W1931,W1934,W3171,W3172
pH Strips	W1940,W1941,W1942	W3166,W1938,W1939,
1 Liter Amber	N/A	90924-08
120ml Plastic bottle	N/A	2738
1:1 HNO3	N/A	MP86978

Extraction Conformance/Non-Conformance Comments:

Matrix spikes are added after fiftration and before preservation. TUMBLER T-1 checked,30 rpm. q3327-02 is used for MS-MSD.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/13/25 11:00	JP / RUCM	SLB. / RJ / EKT
	Preparation Group	Analysis Group METALS

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB170062

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB170062TB	LEB062	05	N/A	2000	N/A	N/A	N/A	4.93	1.5	T-1
Q3321-02	P001-DS-01	01	100.02	2000	N/A	N/A	N/A	5.8	1.0	T-1
Q3326-04	TP-1	02	100.03	2000	N/A	N/A	N/A	5.0	1.0	T-1
Q3326-08	TP-2	03	100.02	2000	N/A	N/A	N/A	5.5	1.5	T-1
Q3327-02	HADLEY-ROAD	04	100.03	2000	N/A	N/A	N/A	5.0	1.0	T-1

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
PB170062TB	LEB062	N/A	N/A	N/A	N/A	N/A	N/A
Q3321-02	P001-DS-01	N/A	N/A	N/A	N/A	100	N/A
Q3326-04	TP-1	N/A	N/A	N/A	N/A	100	N/A
Q3326-08	TP-2	N/A	N/A	N/A	N/A	100	N/A
Q3327-02	HADLEY-ROAD	N/A	N/A	N/A	N/A	100	N/A

Alliance TECHNICAL GROUP

TCLP Fluid Determination

PB170062

Hot Block ID : WC S-1 / WC S-2

Thermometer ID : FLASHPOINT

SampleID	ClientID	Sample Weight (g)	Volume DI Water (mL)	PH after 5 min stir	PH after 10 min stir	Extraction Fluid 1 or 2	pH Extraction Fluid
PB170062TB	LEB062	N/A	N/A	N/A	N/A	#1	4.93
Q3321-02	P001-DS-01	5.02	96.5	8.0	3.5	#1	4.93
Q3326-04	TP-1	5.01	96.5	6.0	2.0	#1	4.93
Q3326-08	TP-2	5.02	96.5	7.0	2.5	#1	4.93
Q3327-02	HADLEY-ROAD	5.03	96.5	6.2	2.0	#1	4.93

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Prep Standard - Chemical Standard Summary

Order ID : Q3321

Test : TCLP ICP Metals,TCLP Mercury

Prepbatch ID : PB170073,PB170074,

Sequence ID/Qc Batch ID: LB137514,LB137518,LB137518,

Standard ID :
MP87031,MP87032,MP87033,MP87034,MP87035,MP87036,MP87038,MP87039,MP87040,MP87041,MP87042,MP87043,MP87044,MP87045,MP87046,MP87049,MP87071,MP87072,MP87073,MP87148,MP87149,MP87528,MP87529,MP87530,MP87531,MP87533,MP87534,MP87535,MP87536,MP87537,MP87538,MP87539,MP87540,MP87541,

Chemical ID :
M4397,M4916,M5062,M5467,M5658,M5748,M5751,M5798,M5799,M5800,M5801,M5814,M5820,M5884,M5962,M5969,M5971,M5979,M5985,M5998,M6021,M6023,M6026,M6027,M6028,M6030,M6032,M6077,M6128,M6137,M6138,M6140,M6142,M6144,M6145,M6151,M6157,M6158,M6159,M6160,M6161,M6163,M6164,M6165,M6171,M6174,M6176,M6177,M6178,M6179,M6180,M6181,M6182,M6184,M6187,M6196,W3112,

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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)	MP87031	09/02/2025	10/17/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 125.00000ml of M6151 + 2350.00000ml of W3112 + 25.00000ml of M6187 = 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)	MP87032	09/02/2025	10/17/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 5.00000ml of M5467 + 5.00000ml of M5820 + 5.00000ml of M5969 + 5.00000ml of M5971 + 5.00000ml of M5998 + 5.00000ml of M6077 + 5.00000ml of M6160 + 5.00000ml of M6174 + 5.00000ml of M6176 + 455.00000ml of MP87031 = 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	MP87033	09/02/2025	10/17/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 50.00000ml of MP87031 + 50.00000ml of MP87032 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP87034	09/02/2025	10/17/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 25.00000ml of MP87032 + 75.00000ml of MP87031 = 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
3913	ICP AES STD S2	MP87035	09/02/2025	10/17/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 16.00000ml of MP87032 + 184.00000ml of MP87031 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP87036	09/02/2025	10/17/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 0.04000ml of M6137 + 0.05000ml of M5658 + 0.05000ml of M6030 + 0.05000ml of M6140 + 0.05000ml of M6159 + 0.06000ml of M6177 + 0.10000ml of M5751 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5971 + 0.10000ml of M6128 + 0.10000ml of M6176 + 0.15000ml of M5800 + 0.20000ml of M5799 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.20000ml of M6027 + 0.20000ml of M6145 + 0.25000ml of M5467 + 0.25000ml of M6160 + 0.50000ml of M5814 + 0.50000ml of M6032 + 1.00000ml of M5979 + 1.00000ml of M6138 + 1.00000ml of M6142 + 1.00000ml of M6144 + 1.00000ml of M6171 + 1.00000ml of M6178 + 2.00000ml of M5969 + 98.00000ml of MP87031 = 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	MP87038	09/02/2025	10/17/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 2.00000ml of MP87036 + 98.00000ml of MP87031 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4163	NEW ICV-060925	MP87039	09/02/2025	10/17/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 0.40000ml of M6163 + 0.40000ml of M6164 + 0.40000ml of M6165 + 48.80000ml of MP87031 = 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
904	ICP AES ICSA SOLN	MP87040	09/02/2025	10/17/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 25.00000ml of M6182 + 225.00000ml of MP87031 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP87041	09/02/2025	10/17/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 10.00000ml of M6182 + 10.00000ml of M6184 + 80.00000ml of MP87031 = 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
911	ICP AES CCV SOLN	MP87042	09/02/2025	10/17/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 50.00000ml of MP87031 + 50.00000ml of MP87032 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP87043	09/02/2025	10/17/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 1.00000ml of M6179 + 10.00000ml of M5985 + 200.00000ml of M6187 + 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
903	ICP AES RINSE SOLN	MP87044	09/02/2025	10/17/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 200.00000ml of M6187 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4225	LR-1	MP87045	09/02/2025	10/17/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 11.50000ml of M6138 + 11.50000ml of M6144 + 11.50000ml of M6171 + 15.50000ml of MP87031 = 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
4226	LR-2	MP87046	09/02/2025	10/17/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 13.50000ml of M6140 + 9.00000ml of M6142 + 9.50000ml of M6159 + 18.00000ml of MP87031 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4227	LR-3	MP87049	09/02/2025	10/17/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 1.15000ml of M6026 + 1.25000ml of M5658 + 1.25000ml of M5748 + 1.50000ml of M6145 + 2.50000ml of M5751 + 2.50000ml of M6128 + 39.85000ml of MP87031 = 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
3965	2:1 H2SO4 : HNO3	MP87071	09/04/2025	11/07/2025	Mohan Bera	None	None	Sarabjit Jaswal 09/04/2025

FROM 1600.00000ml of M6157 + 800.00000ml of M6187 = Final Quantity: 3200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP87072	09/04/2025	03/04/2026	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 09/04/2025

FROM 100.00000gram of M4916 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
66	POTASSIUM PERSULFATE SOLUTION 5 %	MP87073	09/04/2025	03/05/2026	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 09/04/2025

FROM 100.00000ml of M4397 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
170	1:1HCL	MP87148	09/09/2025	02/17/2026	Sagar Kanani	None	None	Sarabjit Jaswal 09/10/2025

FROM 1250.00000ml of M6151 + 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
67	SODIUM CHLORIDE - HYDROXYL- CHLORIDE SOLUTION	MP87149	09/09/2025	02/03/2026	Mohan Bera	METALS_SCALE_2 (M SC-2)	None	Sarabjit Jaswal 09/10/2025

FROM 2000.00000ml of W3112 + 240.00000gram of M5884 + 240.00000ml of M6196 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP87528	10/13/2025	10/14/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/16/2025

FROM 1.00000ml of M6187 + 2.50000ml of M5062 + 96.50000ml of W3112 = 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
1340	Hg 0.00 PPB STD	MP87529	10/13/2025	10/14/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/16/2025

FROM 2.50000ml of M6187 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1341	Hg 0.2 PPB STD	MP87530	10/13/2025	10/14/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/16/2025

FROM 2.50000ml of M6187 + 247.30000ml of W3112 + 0.20000ml of MP87528 = 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
1342	Hg 2.5 PPB STD	MP87531	10/13/2025	10/14/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/16/2025

FROM 2.50000ml of M6187 + 245.00000ml of W3112 + 2.50000ml of MP87528 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP87533	10/13/2025	10/14/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/16/2025

FROM 2.50000ml of M6187 + 242.50000ml of W3112 + 5.00000ml of MP87528 = 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
1344	Hg 7.5 PPB STD	MP87534	10/13/2025	10/14/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/16/2025

FROM 2.50000ml of M6187 + 7.50000ml of MP87528 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP87535	10/13/2025	10/14/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/16/2025

FROM 2.50000ml of M6187 + 237.50000ml of W3112 + 10.00000ml of MP87528 = 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
1346	Hg ICV SOLUTION	MP87536	10/13/2025	10/14/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/16/2025

FROM 2.50000ml of M6161 + 2.50000ml of M6187 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP87537	10/13/2025	10/14/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/16/2025

FROM 2.50000ml of M6187 + 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
1358	CCV (Hg 5.0 PPB SOLUTION)	MP87538	10/13/2025	10/14/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/16/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6187 + 10.00000ml of MP87528 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP87539	10/13/2025	10/14/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/16/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6187 = 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
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP87540	10/13/2025	10/14/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/16/2025

FROM 2.50000ml of M6187 + 247.30000ml of W3112 + 0.20000ml of MP87528 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP87541	10/13/2025	10/14/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/16/2025

FROM 2.50000ml of M6187 + 240.50000ml of W3112 + 7.00000ml of MP87528 = Final Quantity: 250.000 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-3238-05 / Potassium Persulfate (2.5kg)	0000227540	09/24/2025	08/16/2019 / RICHARD	07/17/2019 / RICHARD	M4397

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3227-05 / Potassium Permanganate (2.5kg)	210800	03/31/2026	11/30/2022 / mohan	07/28/2021 / mohan	M4916

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCl 125mL 10ug/mL	S2-HG709270	09/22/2026	05/28/2022 / mohan	01/27/2022 / mohan	M5062

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57058 / Cerium, 1000PPM, 100ML	020623	02/06/2026	03/06/2023 / bin	03/01/2023 / bin	M5467

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Nickel (Ni) 1000PPM	091223	09/12/2026	01/02/2024 / bin	12/20/2023 / jaswal	M5748

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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	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57005 / B, 1000 PPM, 125 ml	071123	07/11/2026	03/26/2024 / Sohil	01/03/2024 / jaswal	M5814

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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

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	06/06/2025 / Janvi	07/01/2024 / Jaswal	M5971

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

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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	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

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.	57182 / Pb, 10000 PPM, 125 ml	110923	11/09/2026	12/05/2024 / janvi	08/05/2024 / Jaswal	M6026

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

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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	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.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	V2-SI744713	07/10/2029	01/14/2025 / Jaswal	10/03/2024 / Jaswal	M6137

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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	121824	12/18/2027	04/17/2025 / Janvi	01/13/2025 / Jaswal	M6138

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58119 / K, 10000 PPM, 500 ml	103024	10/30/2027	05/06/2025 / JANVI	01/13/2025 / Jaswal	M6142

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	072424	07/24/2027	01/23/2025 / kareem	01/13/2025 / Jaswal	M6144

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	121724	12/17/2027	02/04/2025 / Jaswal	01/13/2025 / Jaswal	M6145

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

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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-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	24i1262013	11/07/2025	05/07/2025 / RUPESH	02/18/2025 / Mohan	M6157

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	10/30/2025	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011325	03/18/2026	03/18/2025 / kareem	02/09/2025 / kareem	M6159

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	071724	07/17/2027	03/24/2025 / kareem	10/18/2024 / kareem	M6160

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV 5 0415	12/31/2025	05/01/2025 / mohan	03/30/2024 / mohan	M6161

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-2-125ML / EPA CLP ICP Verification Standard2	U2-MEB733713	06/08/2026	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 #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	011525	01/15/2028	07/15/2025 / Janvi	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

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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.	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

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

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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-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24H0162012	01/28/2026	08/29/2025 / Sagar	08/08/2025 / Sagar	M6187

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	H330-500 / HYDROXYLAMINE HYDROCHLORIDE ACS 500G	243373	02/03/2026	09/04/2025 / mohan	08/04/2025 / mohan	M6196

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		

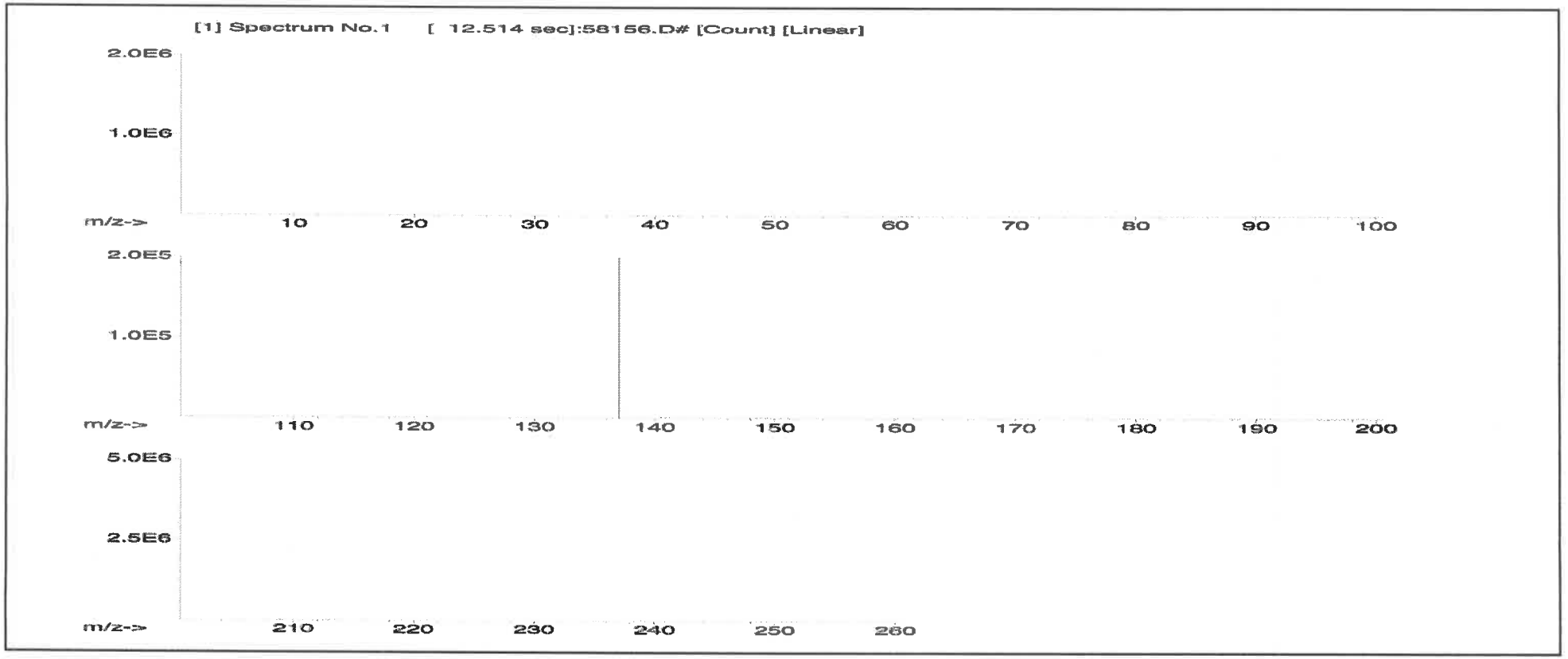
Giovanni Esposito

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M6028

R: 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57048
Lot Number: 070124
Description: Cadmium (Cd)

Expiration Date: 070127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.07 ± 0.100 Flask Uncertainty

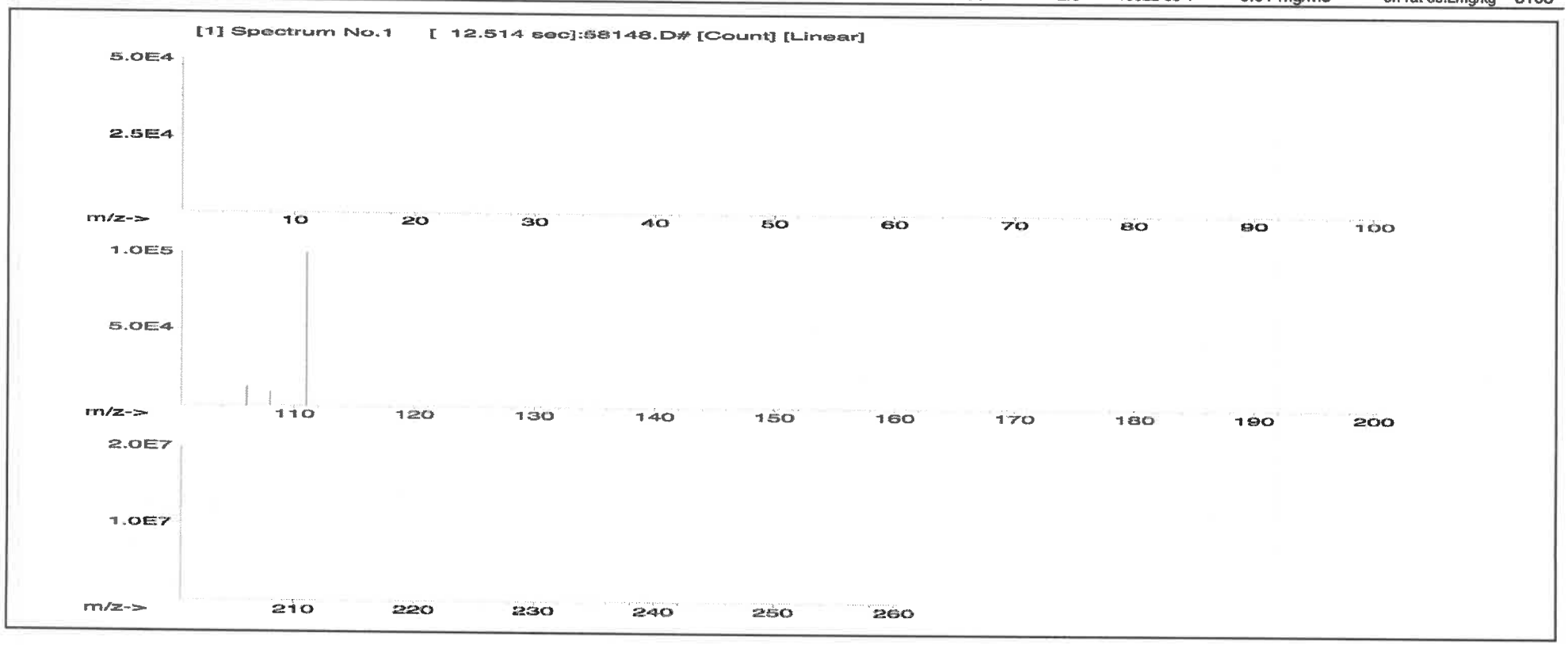
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Aleah O'Brady
Formulated By: Aleah O'Brady 070124

Pedro Rentas
Reviewed By: Pedro L. Rentas 070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M6026

R: 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

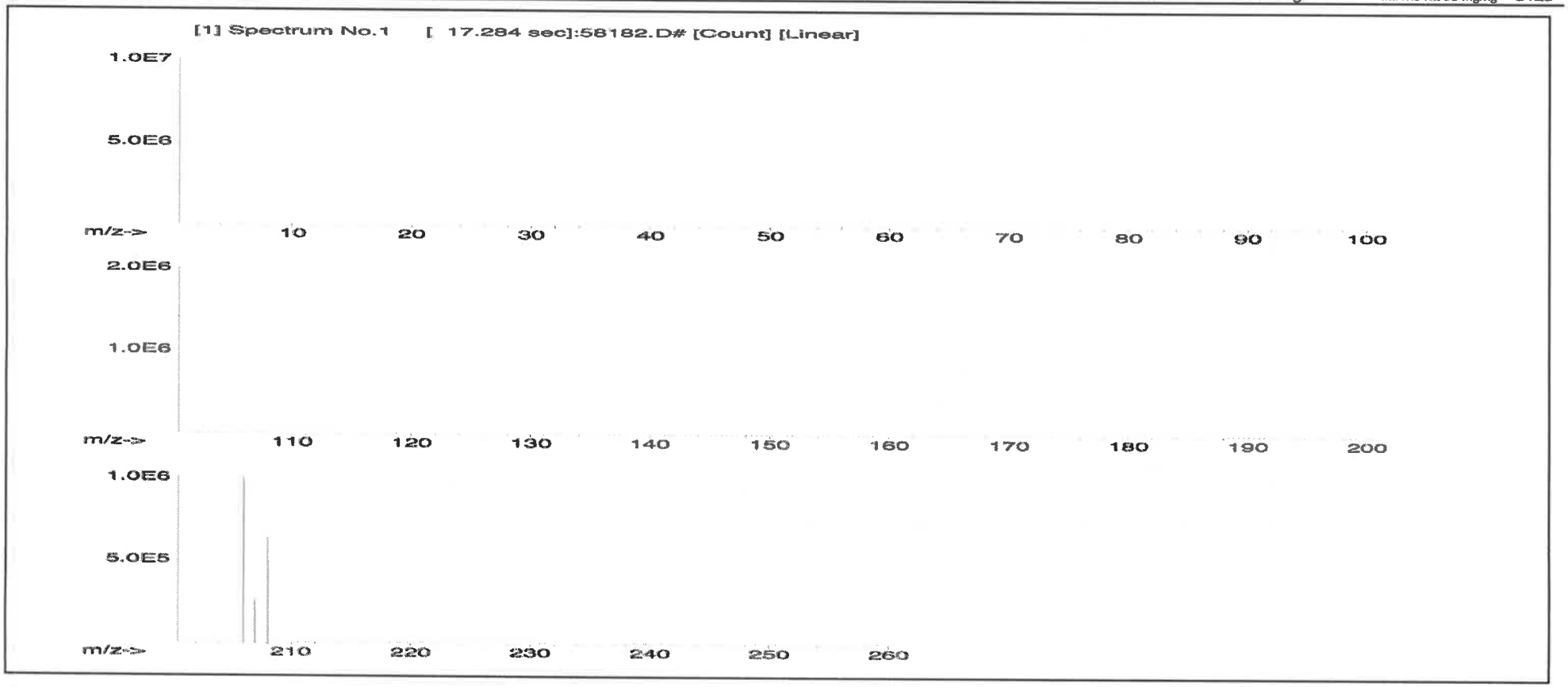
Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By:	Lawence Barry	110923
Reviewed By:	Pedro L. Rentas	110923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0040	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

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Potassium Permanganate
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination

avantor™ | J.T.Baker®

M4397
Supplied – 07.17.19
Opened – 08.16.19
exp – 09.24.25

Material No.: 3227-05
Batch No.: 0000227540
Manufactured Date: 2018/09/26
Retest Date: 2025/09/24
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
ACS - Assay ($KMnO_4$)	>= 99.0 %	99.0
ACS - Insoluble Matter	<= 0.2 %	< 0.1
ACS - Chloride and Chlorate (as Cl)	<= 0.005 %	0.005
ACS - Sulfate (SO_4)	<= 0.02 %	0.02
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	0.004

For Laboratory, Research or Manufacturing Use

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

RS
08.16.19

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

M4913-16
MB

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	P279	Quality Test / Release Date	01/12/2021
Lot Number	210306		
Description	POTASSIUM PERMANGANATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Jan/2026

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Dark purple to purple green crystals
ASSAY	%	>= 99	99.3
CHLORIDE & CHLORATE	%	<= 0.005	<0.005
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
INSOLUBLE MATTER	%	<= 0.2	<0.2
MERCURY (Hg)	ppm	<= 0.05	<0.004
SULFATE (SO4)	%	<= 0.02	<0.02

Julian Burton

Julian Burton - Quality Control Manager – Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

M5062
M5063
M3

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	S2-HG709270
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 22, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certified Reference Material CRM

M5467 R: 03/01/23 (LA)

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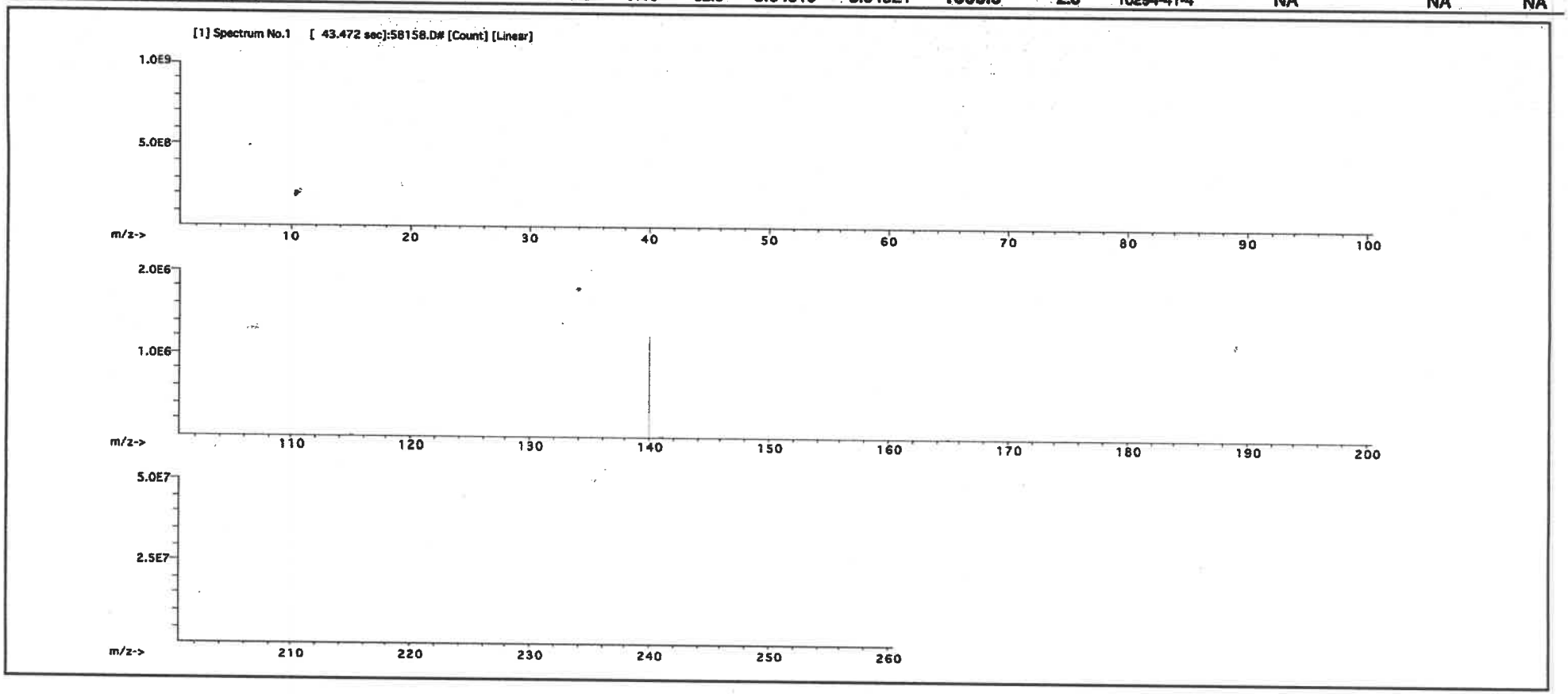
CERTIFIED WEIGHT REPORT:

Part Number:	57058		**Lot #**	
Lot Number:	020623	**Solvent:**	21110221	Nitric Acid
Description:	Cerium (Ce)	2%	20.0 (mL)	Nitric Acid
Expiration Date:	020626			
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):	1000.12	0.058	Flask 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.
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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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M5658 R ! 8/25/23

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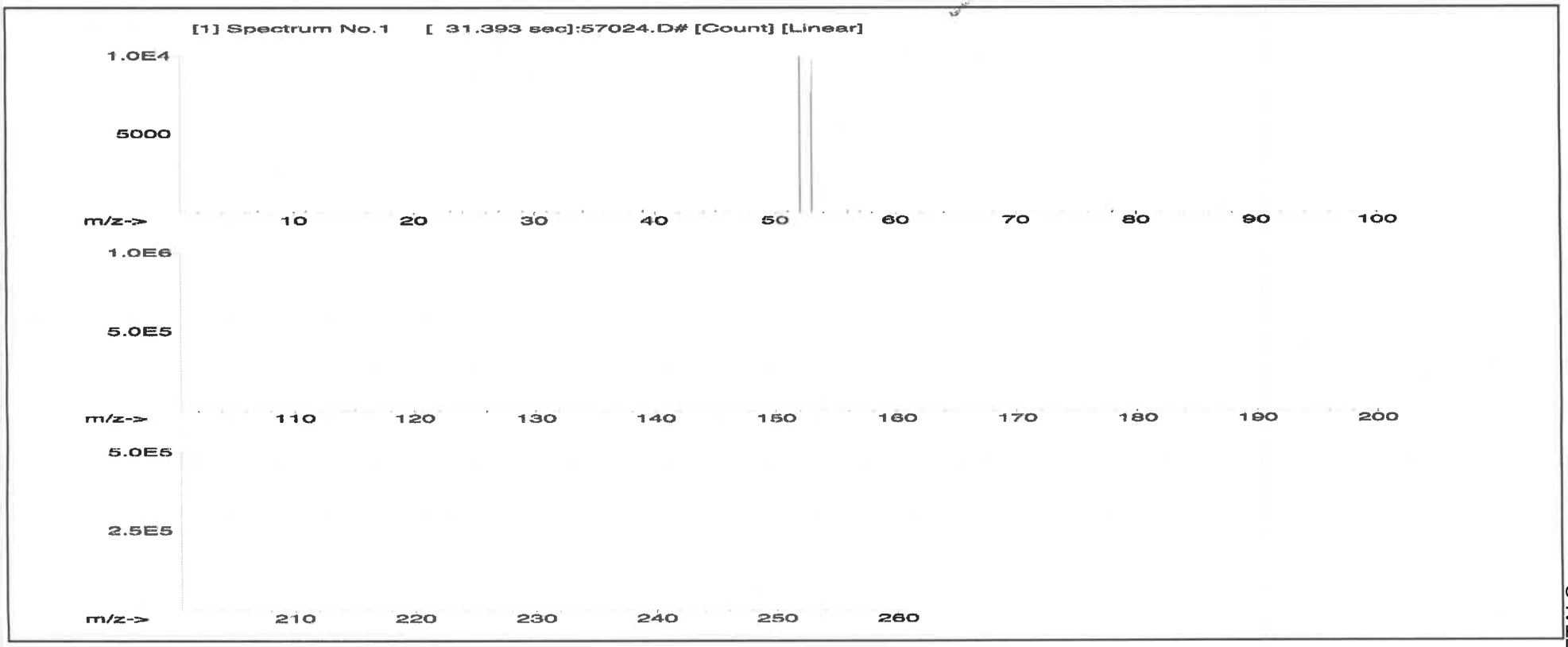
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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R: 12/20/23 M5748

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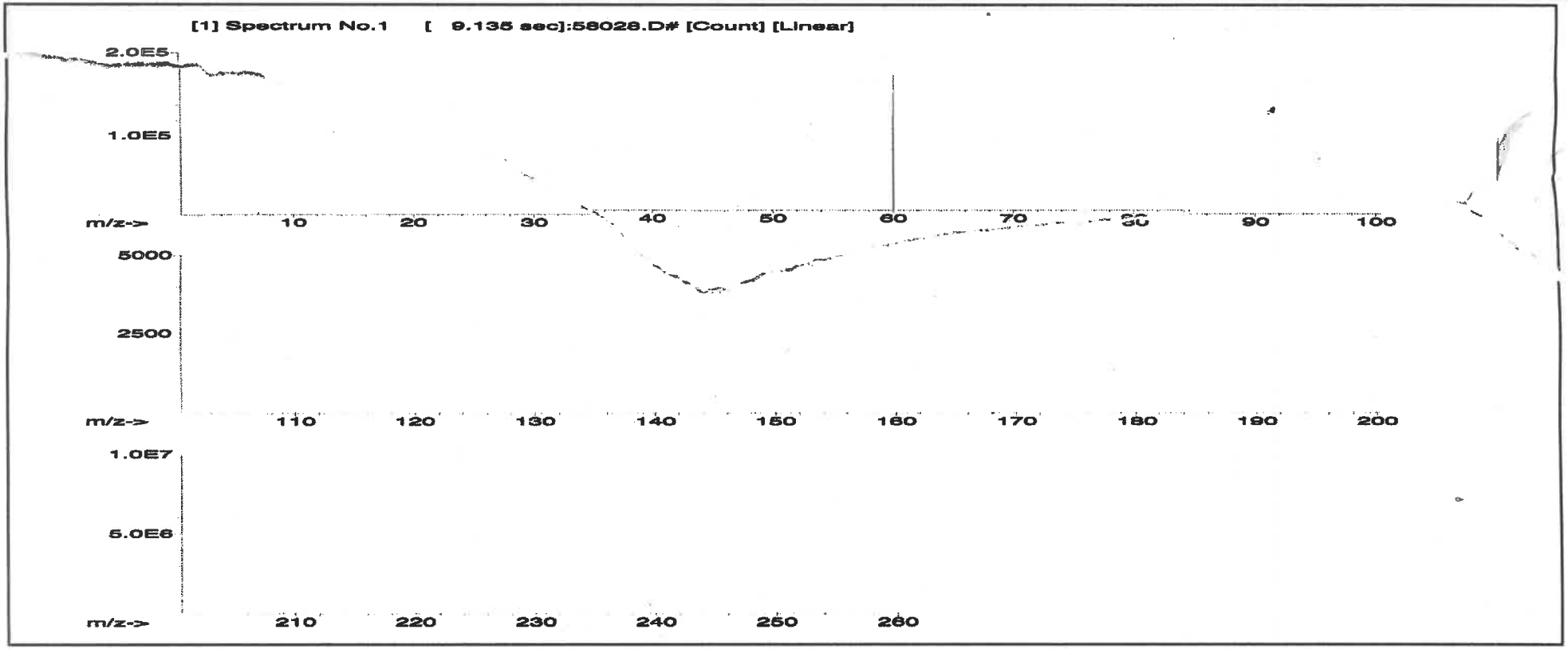
CERTIFIED WEIGHT REPORT:

		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



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AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	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: 8/25/23 M5751

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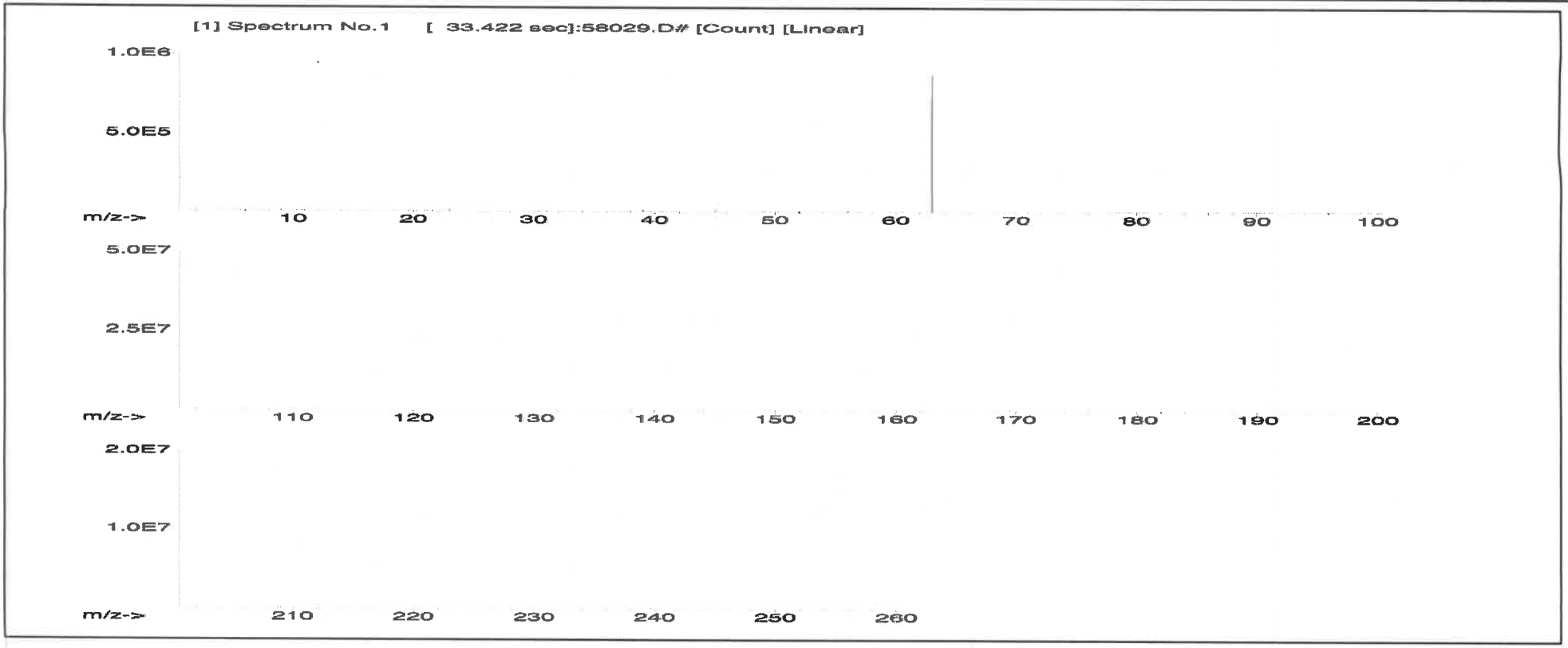
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	21110221	Nitric Acid	
Lot Number:	**071723**			
Description:	**Copper (Cu)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Rentas	071723

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	022723	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



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AR-1539 Certificate Number
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R: 02/09/24 M5798

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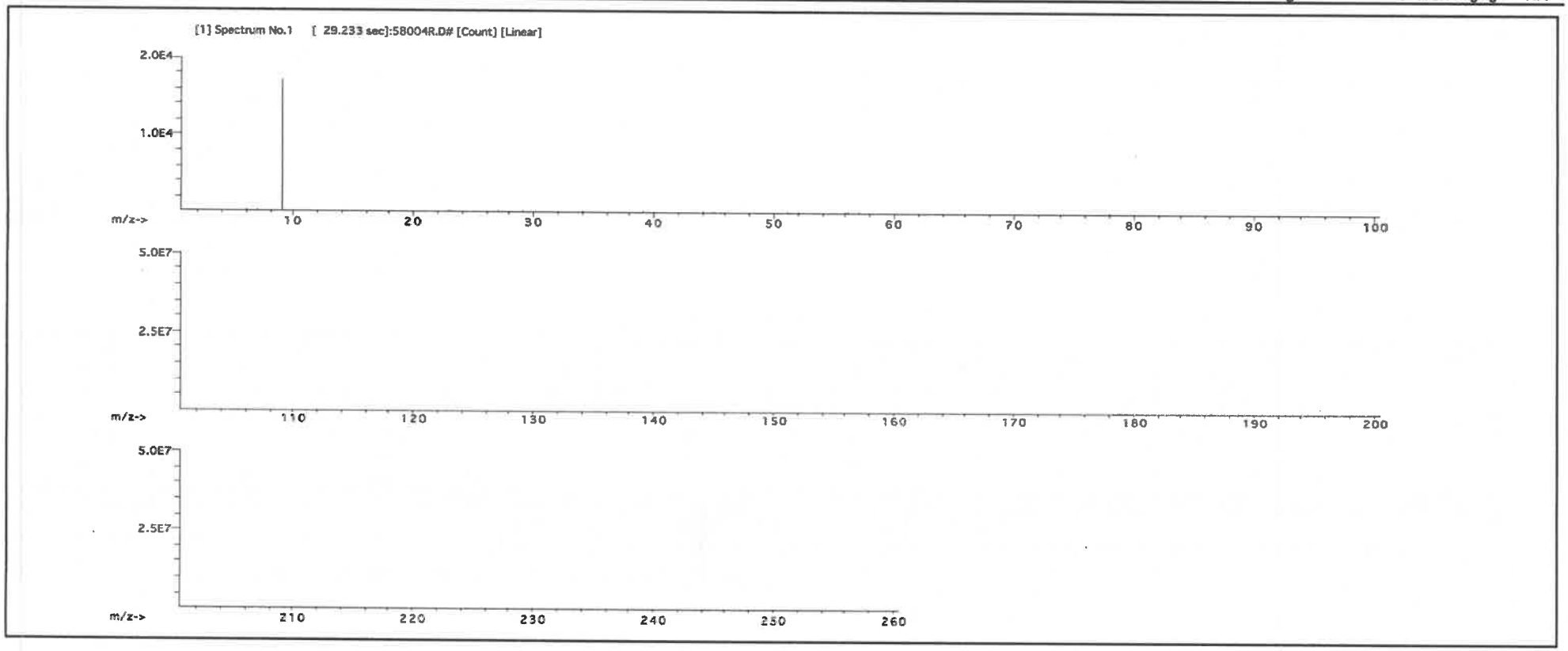
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**			
Lot Number:	**102523**	24002546	Nitric Acid	
Description:	**Beryllium (Be)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
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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	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

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R? 02/09/24 IV15799

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

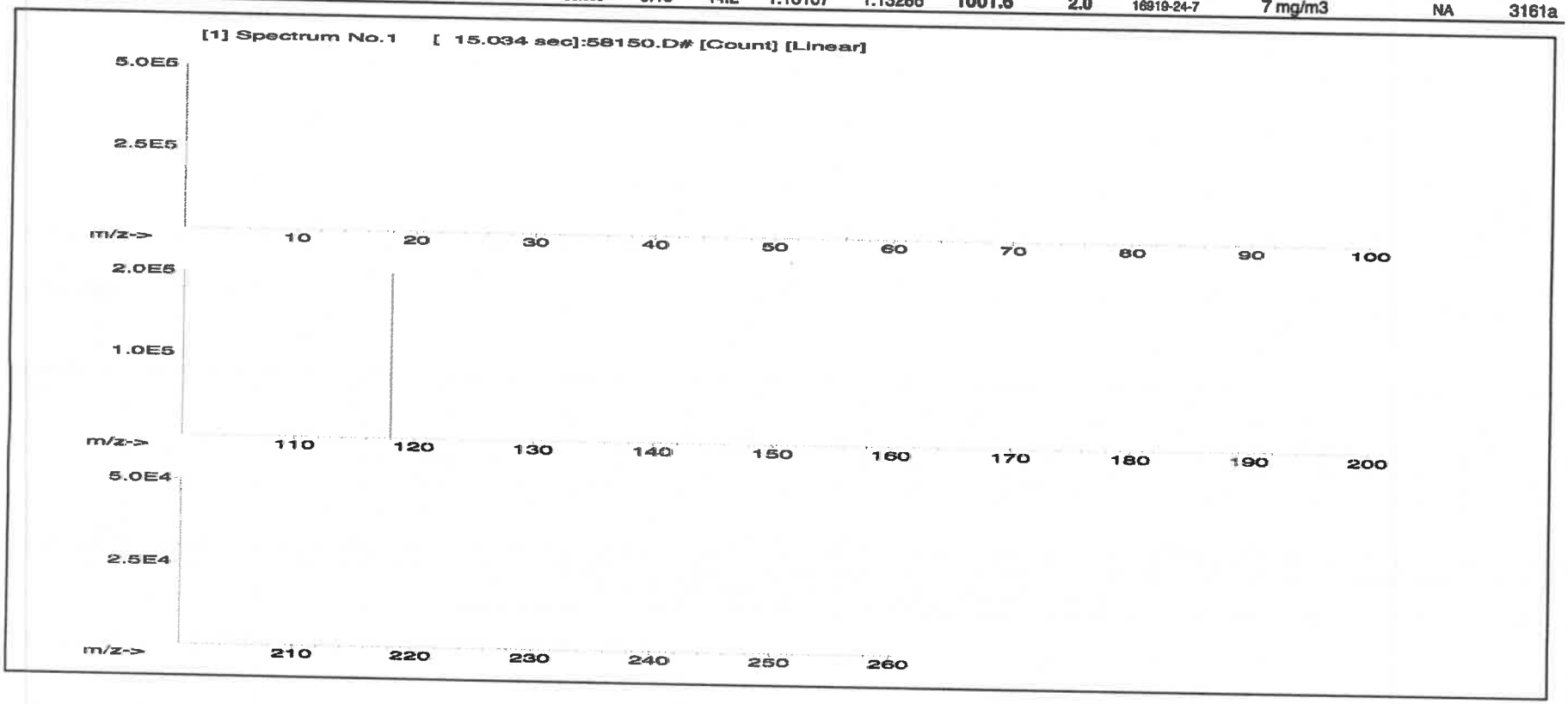
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 02/09/24 IM5800 BH

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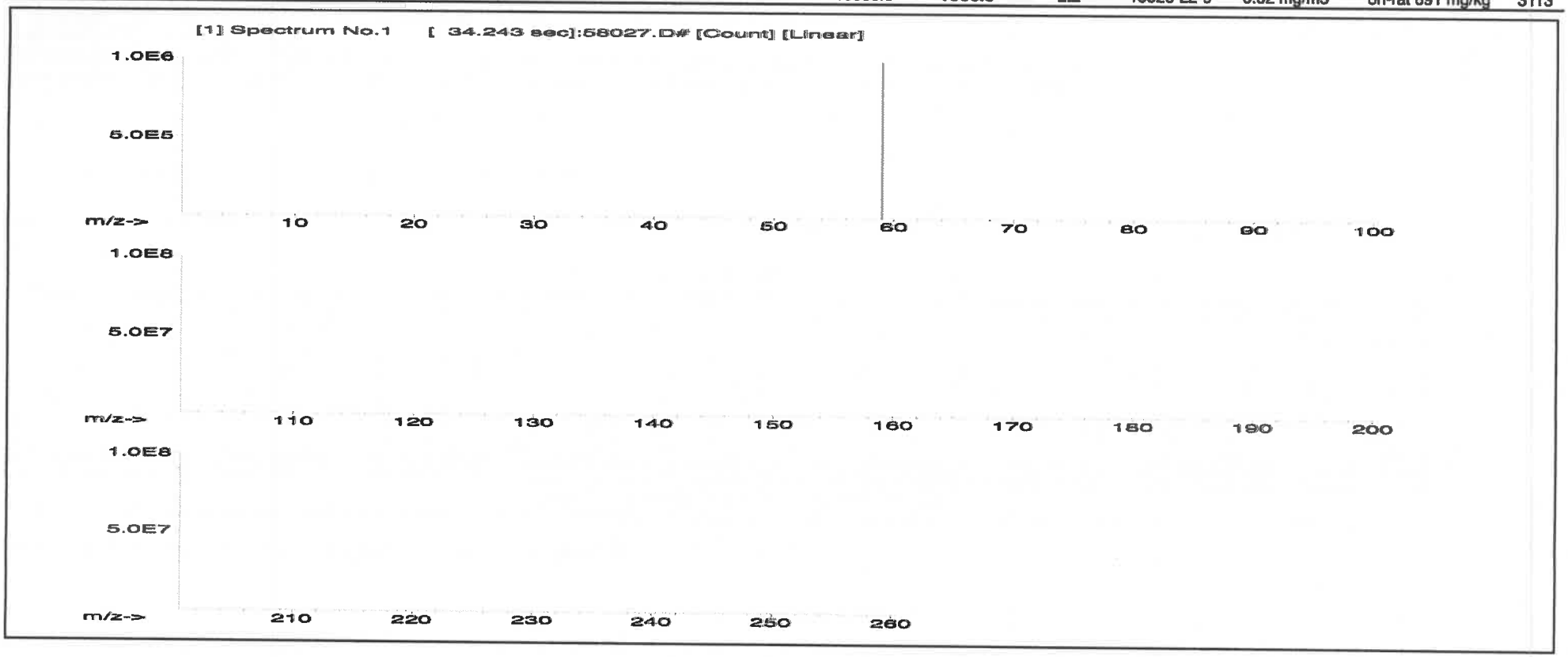
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By: Lawrence Barry 091923

Reviewed By: Pedro L. Rentas 091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R: 02/09/24 M5801 BH

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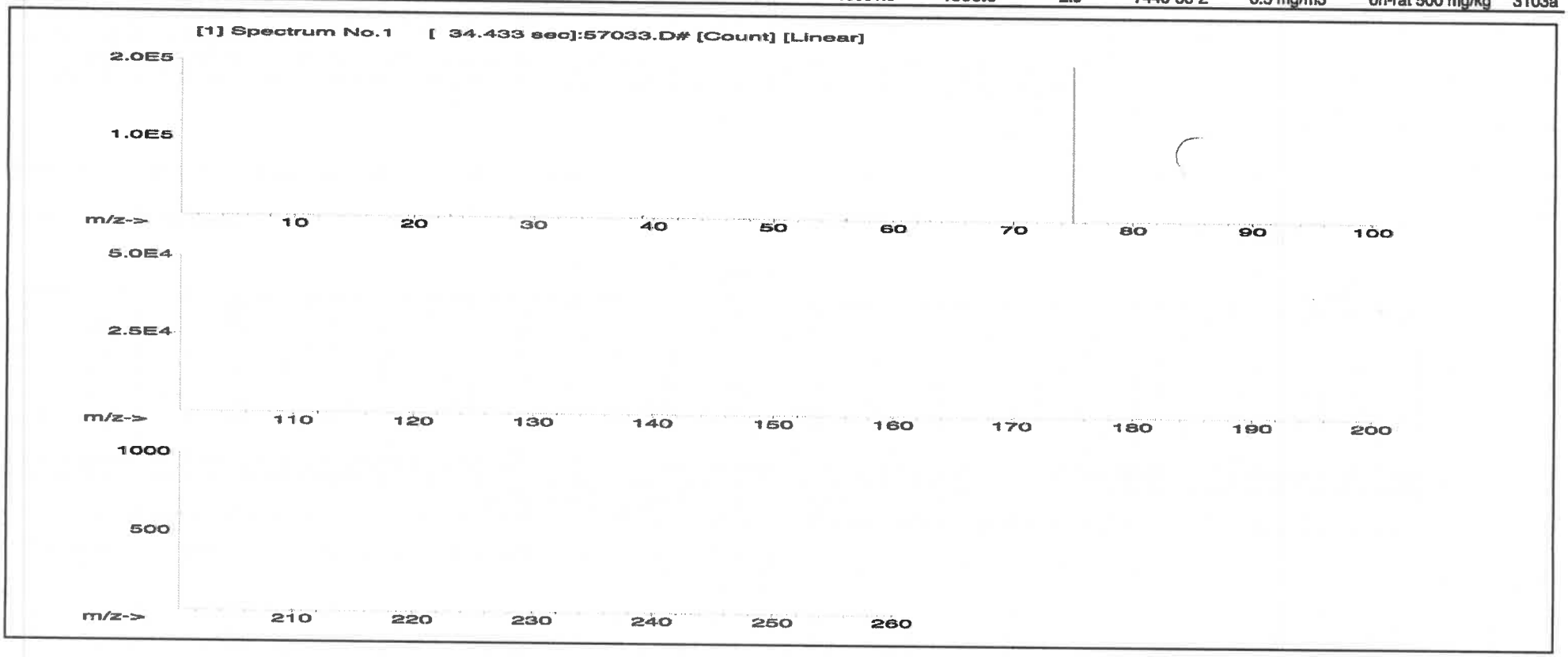
CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

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A: 02/09/24 M.5814

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CERTIFIED WEIGHT REPORT:

Part Number: 57005
Lot Number: 071123
Description: Boron (B)

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

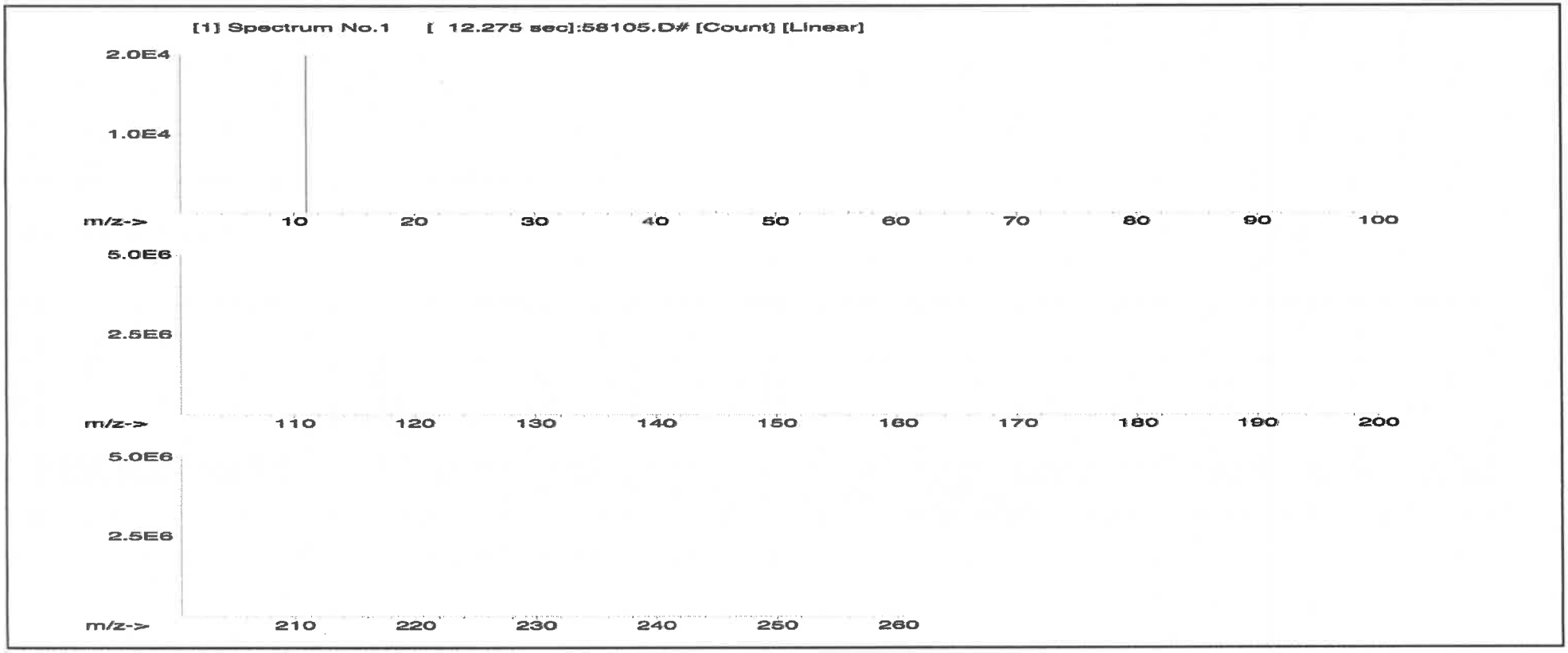
Weight shown below was diluted to (mL): 1999.48 0.058 Flask Uncertainty

	Lot #			
Solvent:	MKBQ8597V	Ammonium hydroxide		
		2.0%	40.0 (mL)	Ammonium hydroxide

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Boric acid (B)	IN018	BV092016A1	1000	99.9999	0.10	17.3	11.55772	11.56201	**1000.4**	**2.0**	10043-35-3	2 mg/m3	orl-rat 2660 mg/kg	3107



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	T	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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Certified by:

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R: 02/09/24 M5820

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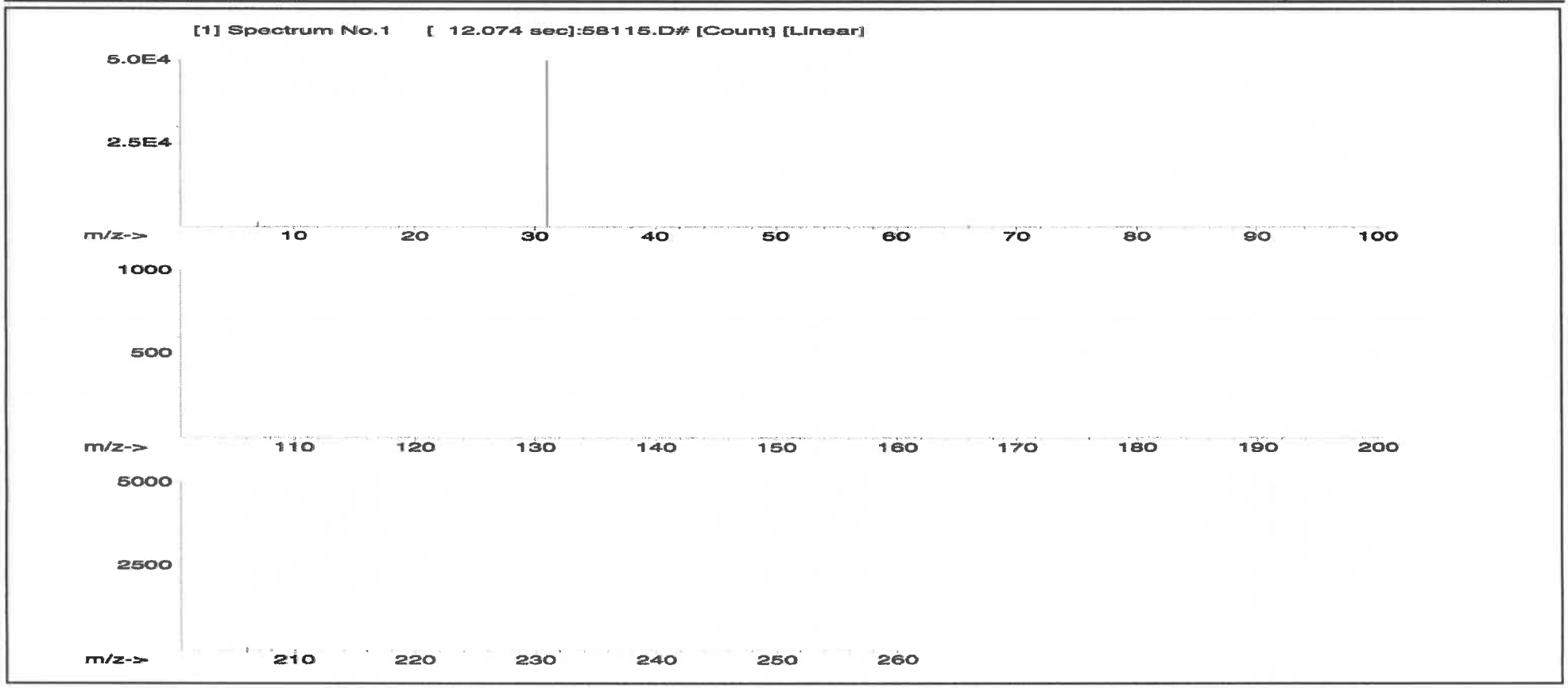
CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



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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:

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Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

MF884
MB

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 1

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Sulfate (SO_4)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory,Research,or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

James T Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
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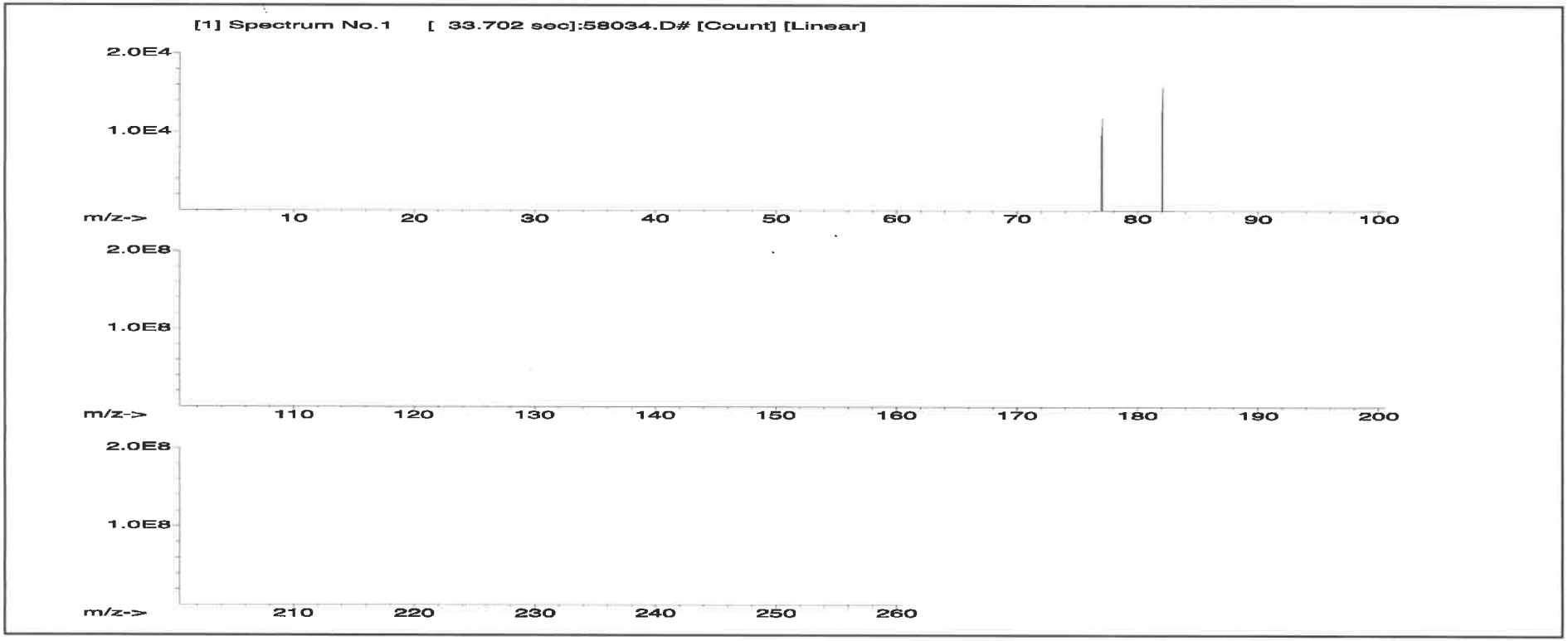
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



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https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5969 R: 06/11/24

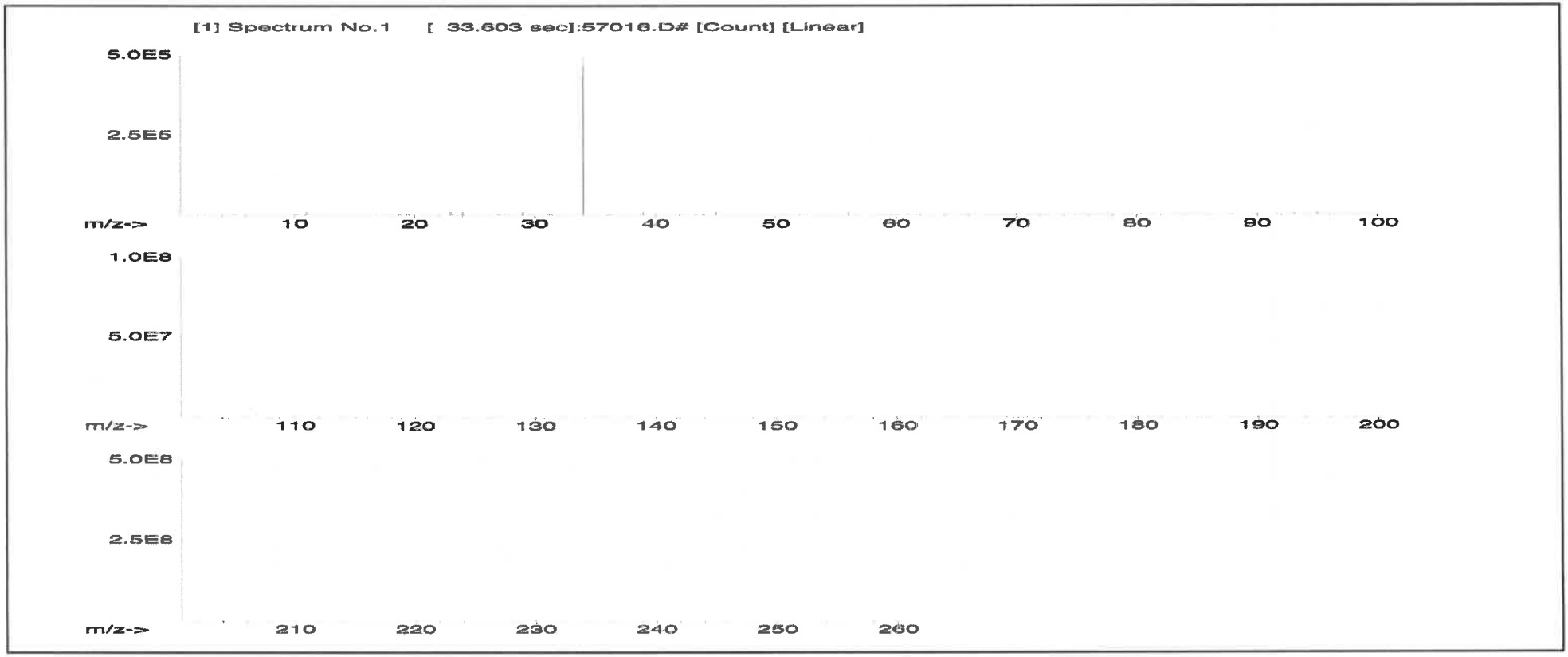
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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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800-368-1131
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:

Part Number: 57003
Lot Number: 062124
Description: Lithium (Li)
Expiration Date: 062127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 250.11

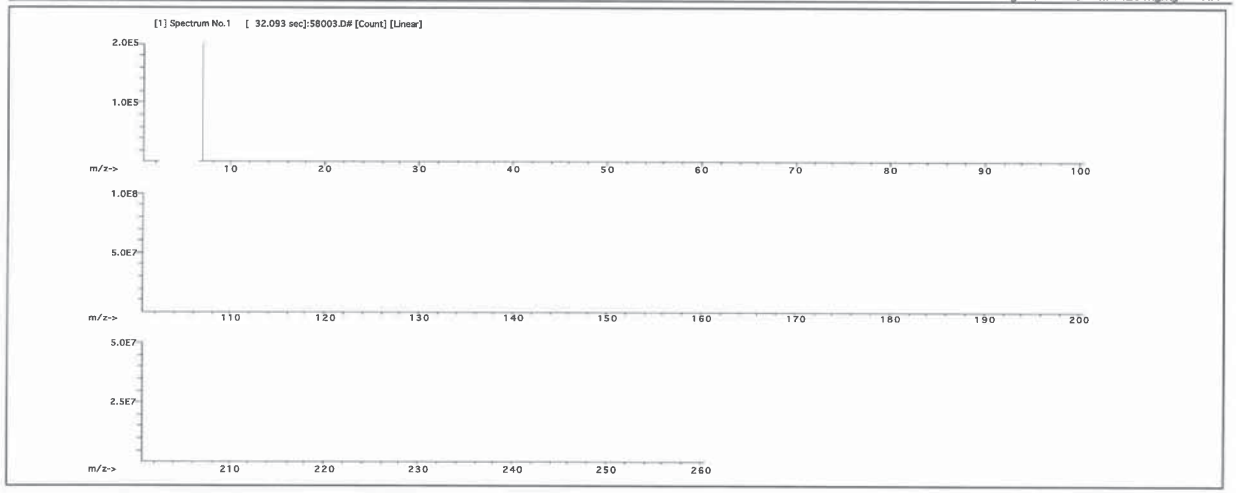
Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	5.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.016 Flask Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 062124

Pedro Rentas
Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

MS978, MS979

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Certificate of Analysis

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R: 2/22/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 865.01

ACCREDITED Reference Material Producer Certificate 865.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGT11
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	TI Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**

ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/MM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \Sigma(w_i)\,(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{Char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance

$$w_i = (1/u_{Char\ i})^2 \,/\, (\Sigma(1/u_{Char\ i})^2)$$

CRM/RM Expanded Uncertainty ($\pm$) = $U_{CRM/RM} = k\,(u^2_{Char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{Char} = [\Sigma((w_i)^2\,(u_{Char\ i})^2)]^{½}$ where $u_{Char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)\,(u_{Char\ a})$$

X_a = mean of Assay Method A with

$u_{Char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty ($\pm$) = $U_{CRM/RM} = k\,(u^2_{Char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{Char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

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	Tl	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form In Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 for months in 1% 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.5798; 540.585.3030; Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozlkowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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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

INORGANIC VENTURES
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Certificate of Analysis

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R: 2/22/24
MS-997

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB727800
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	1 000 ± 7 µg/mL	Cadmium, Cd	500.0 ± 2.2 µg/mL
Lead, Pb	1 000 ± 4 µg/mL	Selenium, Se	1 000 ± 6 µg/mL
Thallium, Tl	1 000 ± 7 µg/mL		

Density: 1.042 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/(u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i}^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 21, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 21, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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EXP.: 9/6/2029

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746762
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 5 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 6 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 06, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

R->1/13/25
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	

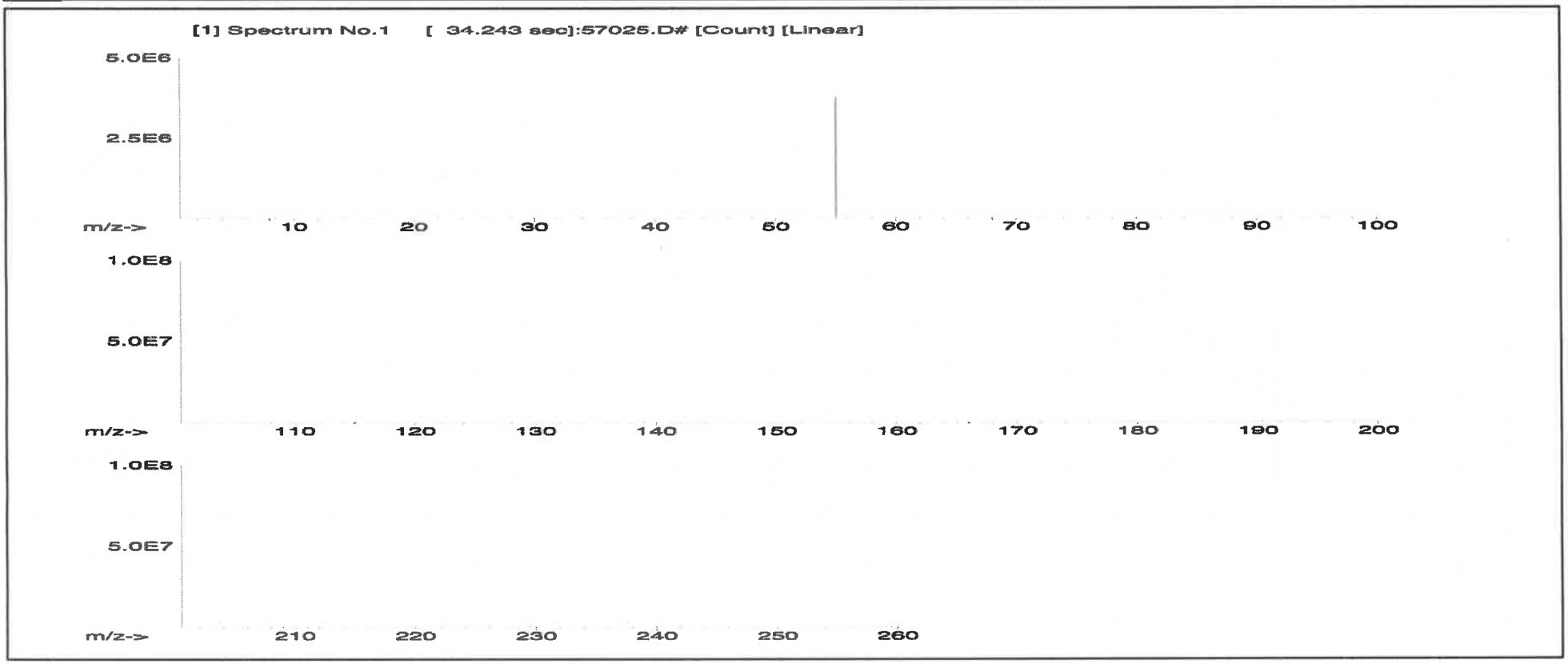
Giovanni Esposito

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

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Christiansburg, VA 24073 USA
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info@inorganicventures.com

M6137 R→10/3/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI1
Lot Number:	V2-SI744713
Matrix:	tr. HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon
Starting Material:	Silica
Starting Material Lot#:	1771
Starting Material Purity:	99.9981%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 6 µg/mL

Density: 1.003 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **999 ± 5 µg/mL**
ICP Assay NIST SRM Traceable to 3150 Lot Number: S2-SI702546

Assay Method #2 **1000 ± 7 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	O	Na		0.001656	M	Se	<	0.022000	M	Zn	<	0.002500
M	Al		0.010787	M	Fe	<	0.027000	M	Nb	<	0.001300	s	Si	<		O	Zr	<	0.001900
M	As	<	0.001900	M	Ga	<	0.001300	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	M	Ni	<	0.005500	M	Sn		0.000096				
M	B		0.016180	M	Ge	<	0.001900	M	Os	<	0.000610	O	Sr		0.000092				
M	Ba		0.000096	M	Hf		0.000423	i	P	<		M	Ta		0.002542				
O	Be	<	0.000570	M	Hg	<	0.000610	M	Pb	<	0.000310	M	Tb	<	0.000310				
M	Bi	<	0.000310	M	Ho	<	0.000610	M	Pd	<	0.000610	M	Te	<	0.000910				
O	Ca		0.011557	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.001900				
M	Cd	<	0.000310	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.001078				
M	Ce	<	0.000610	O	K		0.000577	M	Rb	<	0.009100	M	Tl	<	0.000310				
M	Co	<	0.001600	M	La	<	0.000310	M	Re	<	0.000310	M	Tm	<	0.000310				
M	Cr	<	0.010000	O	Li	<	0.000460	M	Rh	<	0.000310	M	U	<	0.000310				
M	Cs	<	0.000310	M	Lu	<	0.000310	M	Ru	<	0.000310	O	V	<	0.001300				
M	Cu	<	0.002500	O	Mg		0.001348	O	S	<	0.570000	M	W	<	0.001900				
M	Dy	<	0.000310	M	Mn	<	0.002500	M	Sb	<	0.000310	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000310	O	Sc	<	0.000590	M	Yb	<	0.000310				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphic (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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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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M6138
R->1/13/25

CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 121824
Description: Calcium (Ca)

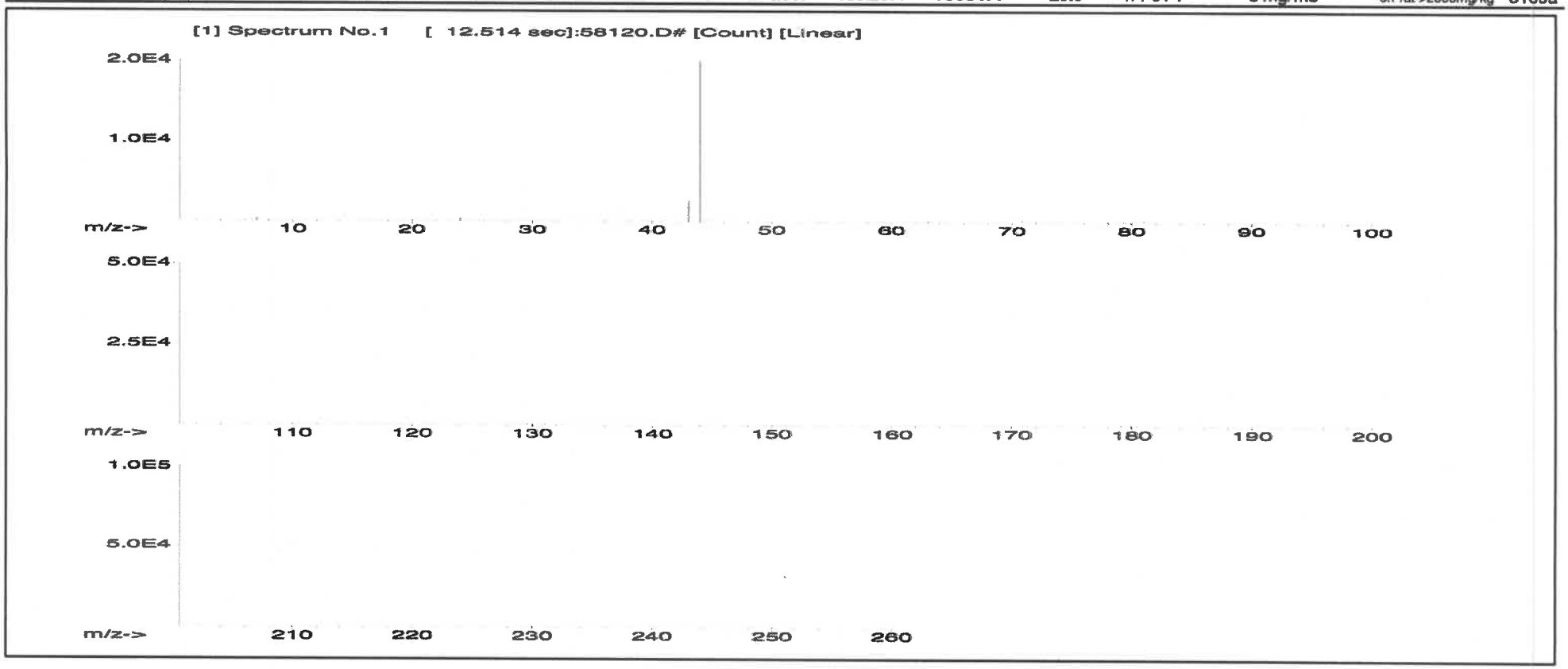
Expiration Date: 121827
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.1 0.15 Flask Uncertainty

		Lot #		
Solvent:	24012496	Nitric Acid		
2%	80.0 (mL)	Nitric Acid		
		5E-05	Balance Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	121824
Reviewed By:	Pedro L. Rentas	121824

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	100.2677	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	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.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Part # **58120** Lot # **121824**

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CERTIFIED WEIGHT REPORT:

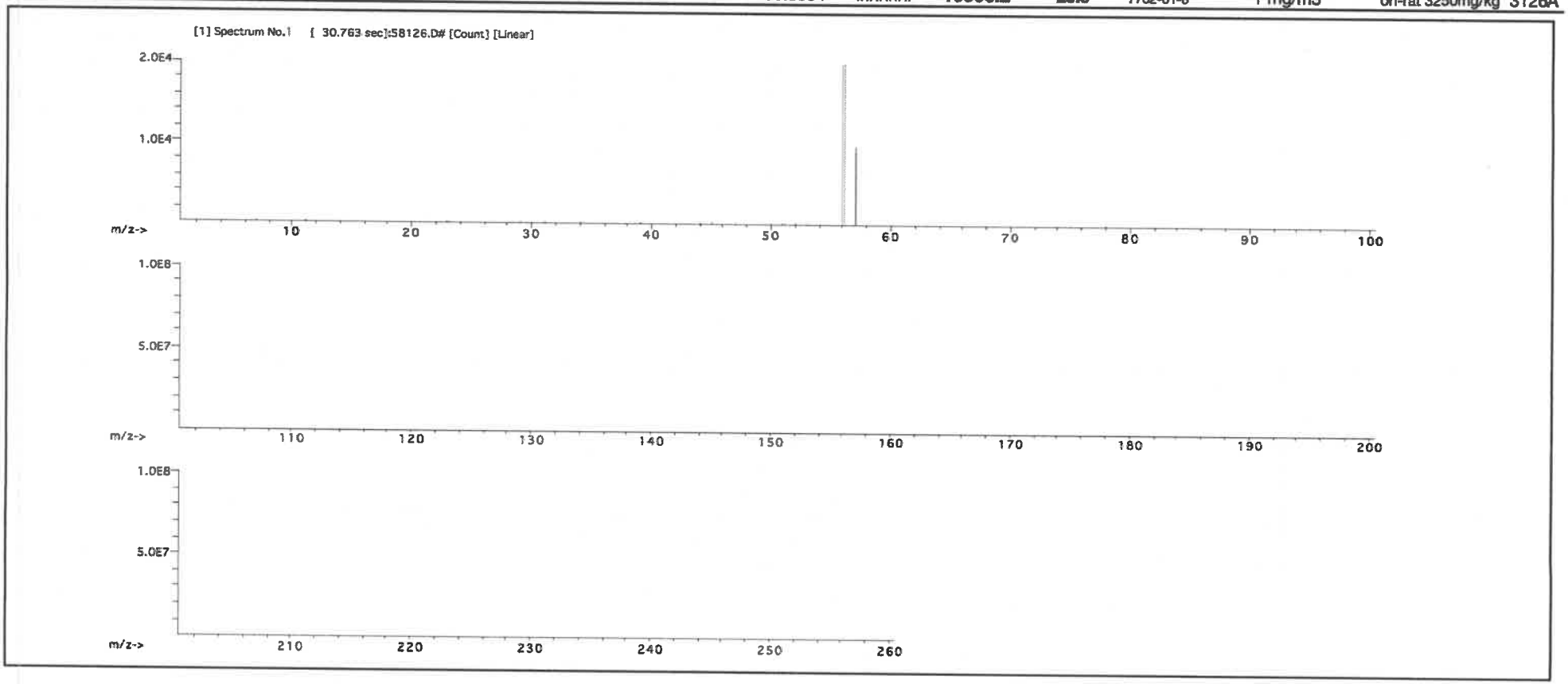
R->1|8|25

M6140

			Lot #	
Part Number:	**58126**	**Solvent:**	24012496	Nitric Acid
Lot Number:	**011025**			
Description:	**Iron (Fe)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	011028			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	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:

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:

R-> 1/13/25

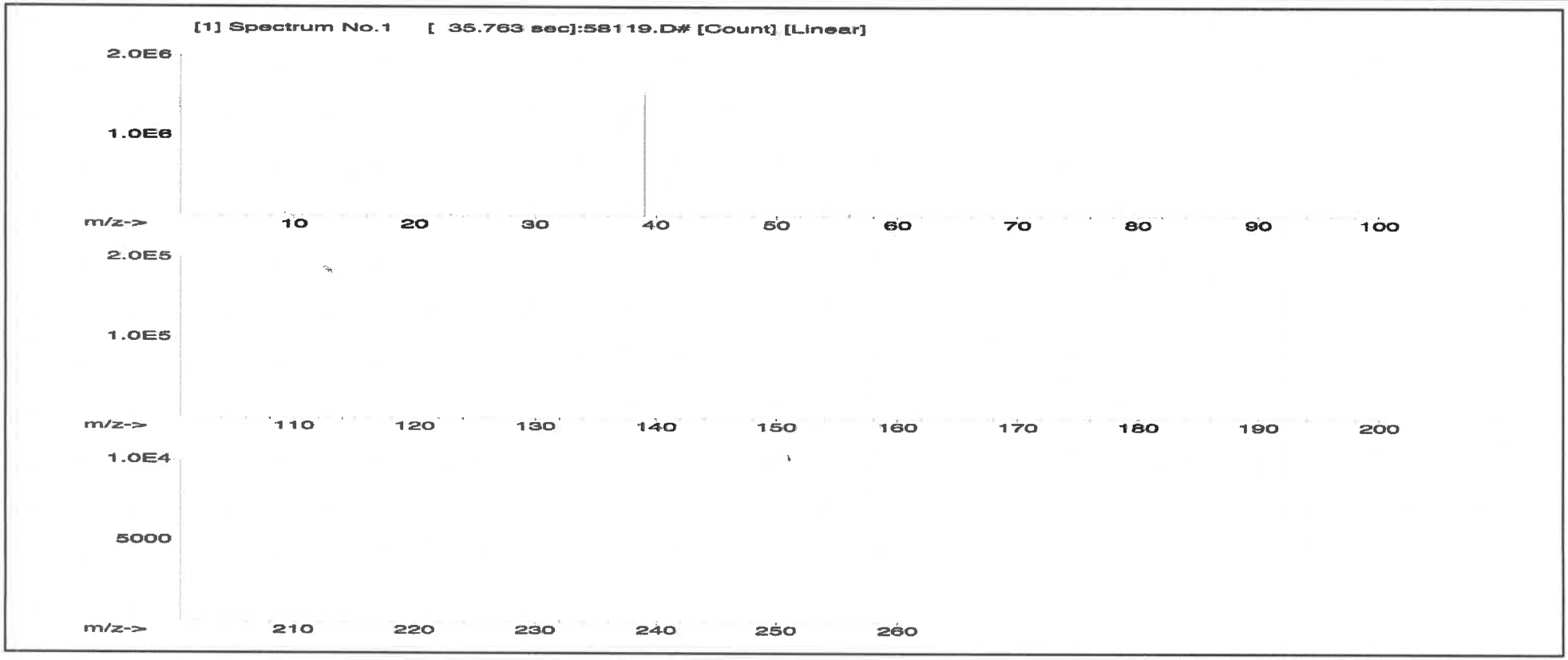
Part Number:	**57119**		**Lot #**		
Lot Number:	**103024**	**Solvent:**	24002546	Nitric Acid	
Description:	**Potassium (K)**				
		2%	80.0 (mL)	Nitric Acid	
Expiration Date:	103027				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.1	0.15	Flask Uncertainty		

M6141
M6142
M6143

Giovanni Esposito

Formulated By:	Giovanni Esposito	103024
Reviewed By:	Pedro L. Rentas	103024

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD062022A1	10000	99.999	0.10	37.7	106.1040	######	**10001.1**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3750 mg/kg	3141a



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Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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AR-1539 Certificate Number
https://Absolutestandards.com

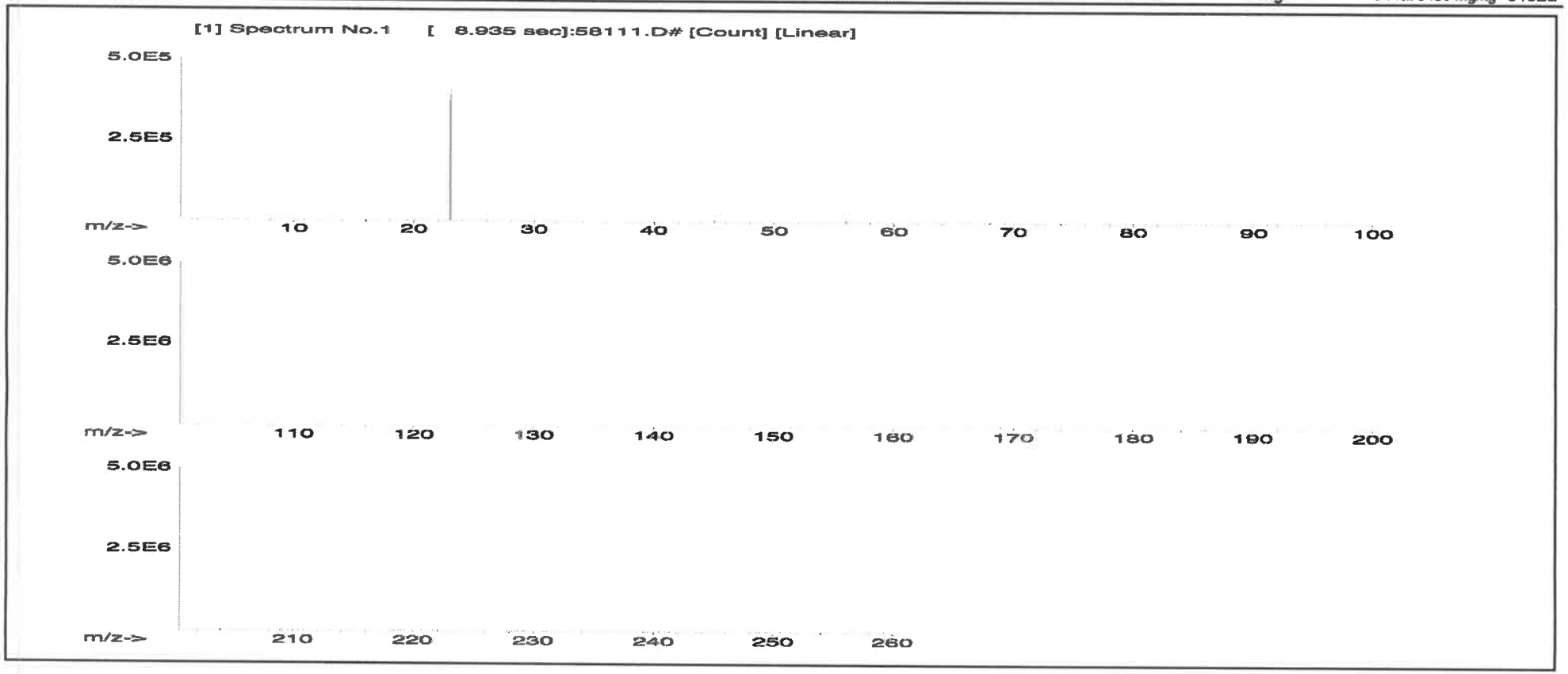
CERTIFIED WEIGHT REPORT:

R->1/13/25

Part Number:	**58111**			**Lot #**	
Lot Number:	**072424**	**Solvent:**	24002546	Nitric Acid	
Description:	**Sodium (Na)**				
		MG144 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



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https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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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

ANAB ISO 17034 Accredited
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https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 121724
Description: Zinc (Zn)

R → 1/13/25

M6145

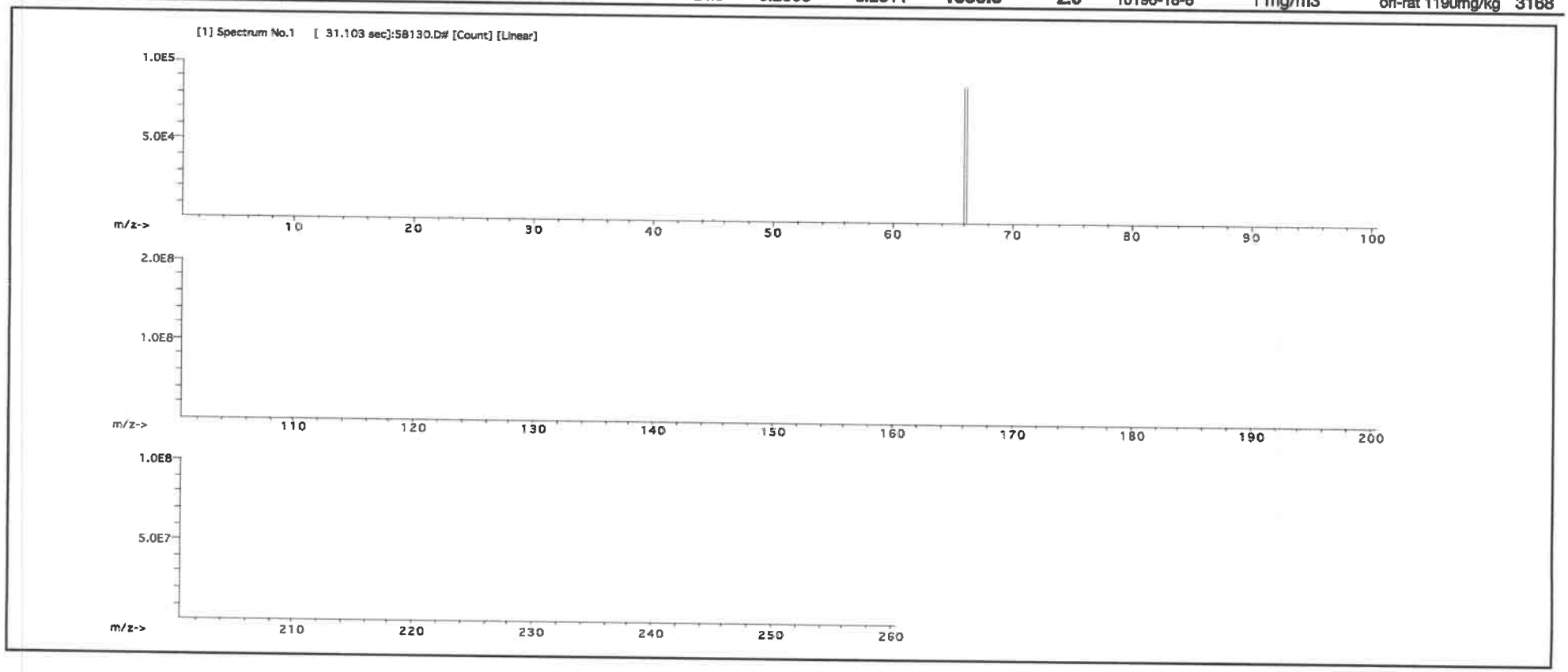
Expiration Date: 121727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

		Lot #	
Solvent:	24012496	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 2000.1 0.10 Flask Uncertainty

Aleah O'Brady
Formulated By: Aleah O'Brady 121724
Reviewed By: Pedro L. Rentas 121724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	8.2308	8.2311	**1000.0**	**2.0**	10196-18-6	1 mg/m3	ori-rat 1190mg/kg	3168



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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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

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M615 MB

avantor | J.T.Baker

Material No.: 9673-33
Batch No.: 24I1262013
Manufactured Date: 2024-08-07
Retest Date:2029-08-06
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H_2SO_4)	95.0 – 98.0 %	96.2 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	<= 10	5
ACS – Residue after Ignition	<= 3 ppm	<1 ppm
ACS – Substances Reducing Permanganate(as SO2)	<= 2 ppm	<2 ppm
Ammonium (NH_4)	<= 1 ppm	<1 ppm
Chloride (Cl)	<= 0.1 ppm	<0.1 ppm
Nitrate (NO_3)	<= 0.2 ppm	0.1 ppm
Phosphate (PO_4)	<= 0.5 ppm	<0.1 ppm
Trace Impurities – Aluminum (Al)	<= 30.0 ppb	<5.0 ppb
Arsenic & Antimony (as As)	<= 4.0 ppb	<2.0 ppb
Trace Impurities – Boron (B)	<= 10.0 ppb	<5.0 ppb
Trace Impurities – Cadmium (Cd)	<= 2.0 ppb	<1.0 ppb
Trace Impurities – Chromium (Cr)	<= 6.0 ppb	<1.0 ppb
Trace Impurities – Cobalt (Co)	<= 0.5 ppb	<0.3 ppb
Trace Impurities – Copper (Cu)	<= 1.0 ppb	<1.0 ppb
Trace Impurities – Gold (Au)	<= 10.0 ppb	<5.0 ppb
Heavy Metals (as Pb)	<= 500.0 ppb	<100.0 ppb
Trace Impurities – Iron (Fe)	<= 50.0 ppb	<1.0 ppb
Trace Impurities – Lead (Pb)	<= 0.5 ppb	<0.5 ppb
Trace Impurities – Magnesium (Mg)	<= 7.0 ppb	<1.0 ppb
Trace Impurities – Manganese (Mn)	<= 1.0 ppb	<1.0 ppb
Trace Impurities – Mercury (Hg)	<= 0.5 ppb	<0.1 ppb
Trace Impurities – Nickel (Ni)	<= 2.0 ppb	<0.3 ppb
Trace Impurities – Potassium (K)	<= 500.0 ppb	<10.0 ppb
Trace Impurities – Selenium (Se)	<= 50.0 ppb	7.2 ppb
Trace Impurities – Silicon (Si)	<= 100.0 ppb	12.8 ppb
Trace Impurities – Silver (Ag)	<= 1.0 ppb	<1.0 ppb

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

avantor™ | J.T.Baker

Material No.: 9673-33
Batch No.: 24I1262013

Test	Specification	Result
Trace Impurities - Sodium (Na)	<= 500.0 ppb	<5.0 ppb
Trace Impurities - Strontium (Sr)	<= 5.0 ppb	<1.0 ppb
Trace Impurities - Tin (Sn)	<= 5.0 ppb	1.1 ppb
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	<1.0 ppb

For Laboratory,Research,or Manufacturing Use

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

J Croak

Jamie Croak
Director Quality Operations, Bioscience Production

Nitric Acid 69%
CMOS

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

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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

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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

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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

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Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

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X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

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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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 22, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 22, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

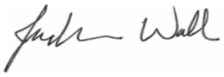
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor

Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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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-2
Lot Number:	U2-MEB733713
Matrix:	3% (w/v) Tartaric acid 1% (v/v) HNO3
Value / Analyte(s):	500 µg/mL ea: Antimony

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**500.0 ± 2.8 µg/mL**		

Density: 1.017 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Sb	ICP Assay	3102a	140911

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$
w_i = the weighting factors for each method calculated using the inverse square of the variance:
$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2
$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method
u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with
$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2
$u_{char\ a}$ = the errors from characterization
u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 01, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 01, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

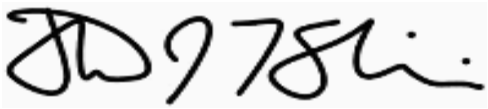
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-CICV-3
Lot Number:	V2-MEB749572
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	500 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 250 µg/mL ea: Cadmium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**500.0 ± 3.1 µg/mL**	**Cadmium, Cd**	**250.1 ± 1.1 µg/mL**
Lead, Pb	**500.0 ± 2.3 µg/mL**	**Selenium, Se**	**500.0 ± 3.2 µg/mL**
Thallium, Tl	**500.0 ± 3.0 µg/mL**		

Density: 1.040 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

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- 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.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 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.

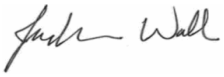
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor

Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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)

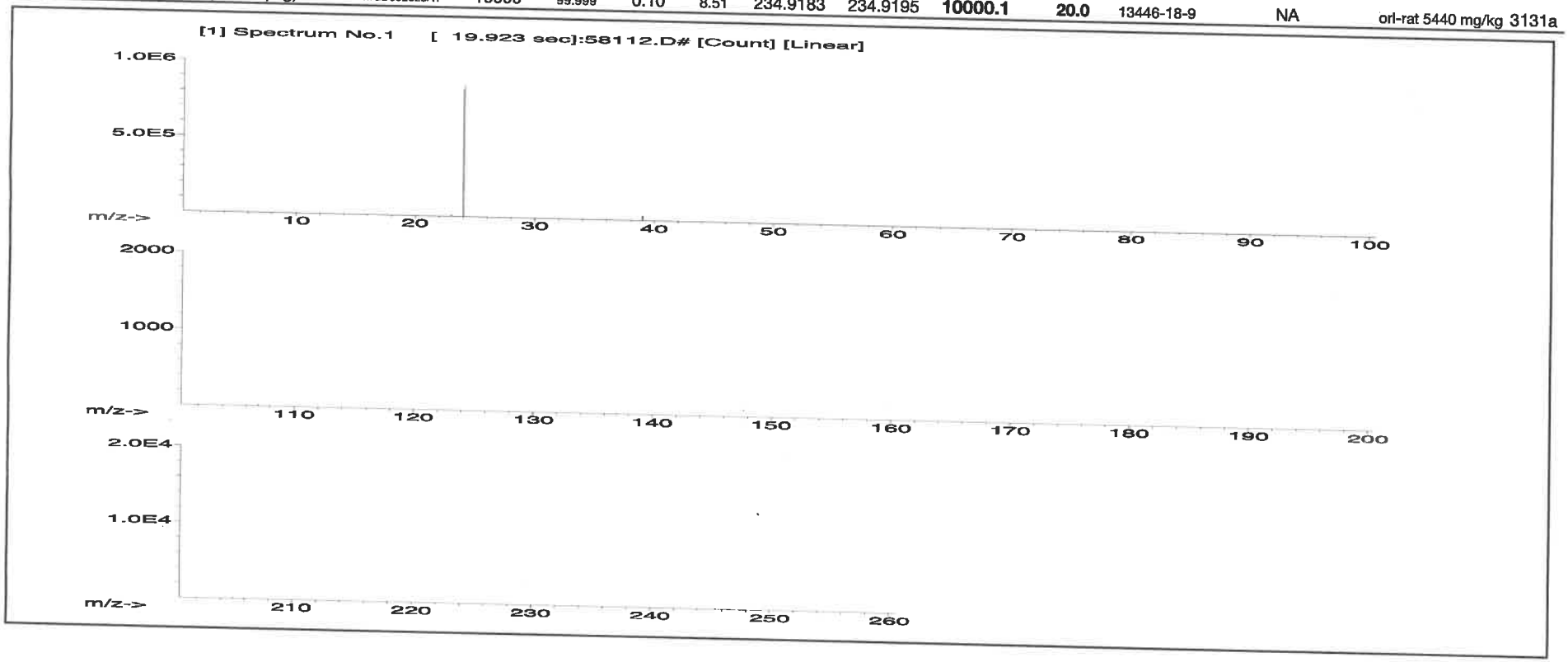
Expiration Date: 011528
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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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Certificate of Analysis

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Christiansburg, VA 24073 USA
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info@inorganicventures.com

M6174
R-> 5/5/24

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:	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.

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

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 WEIGHT REPORT:

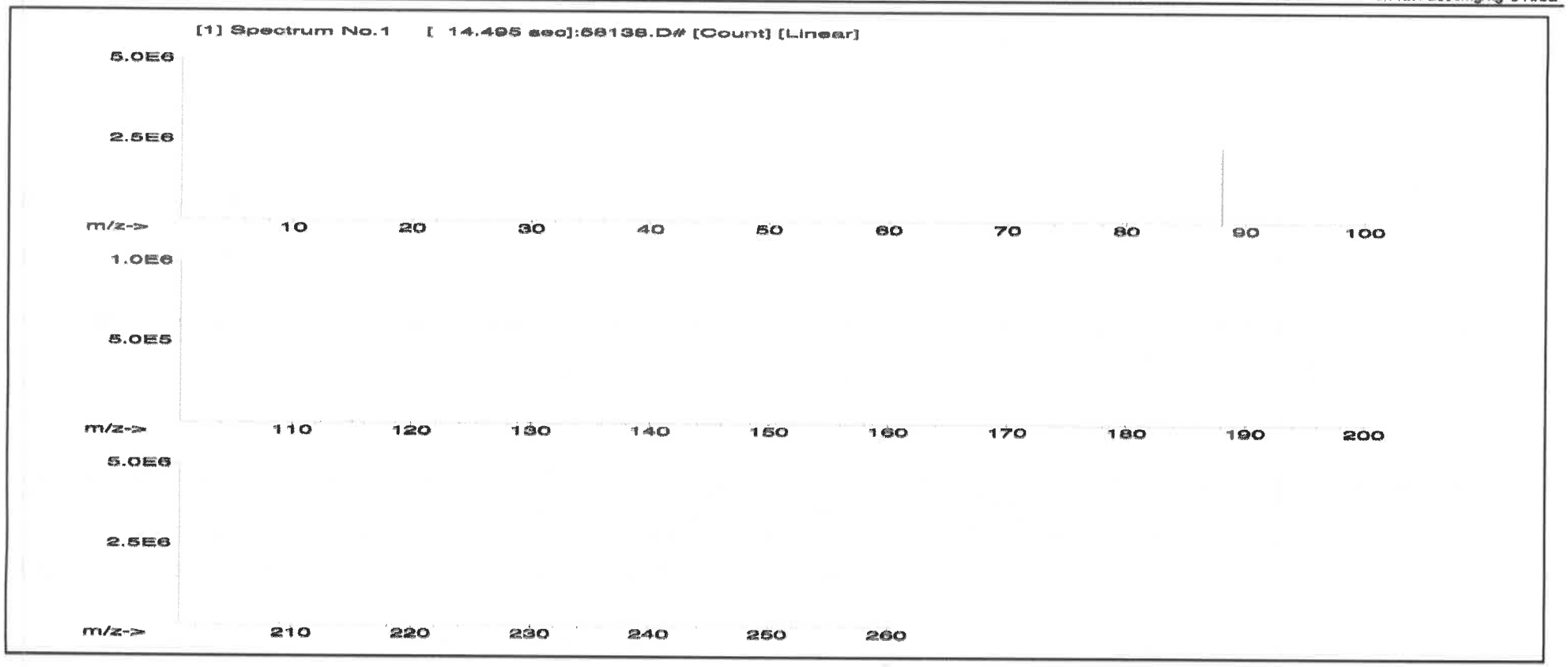
R->8/6/25

M6176

Part Number:	**57038**			**Lot #**	
Lot Number:	**092724**		**Solvent:**	24002546	Nitric Acid
Description:	**Strontium (Sr)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	092727				
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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* 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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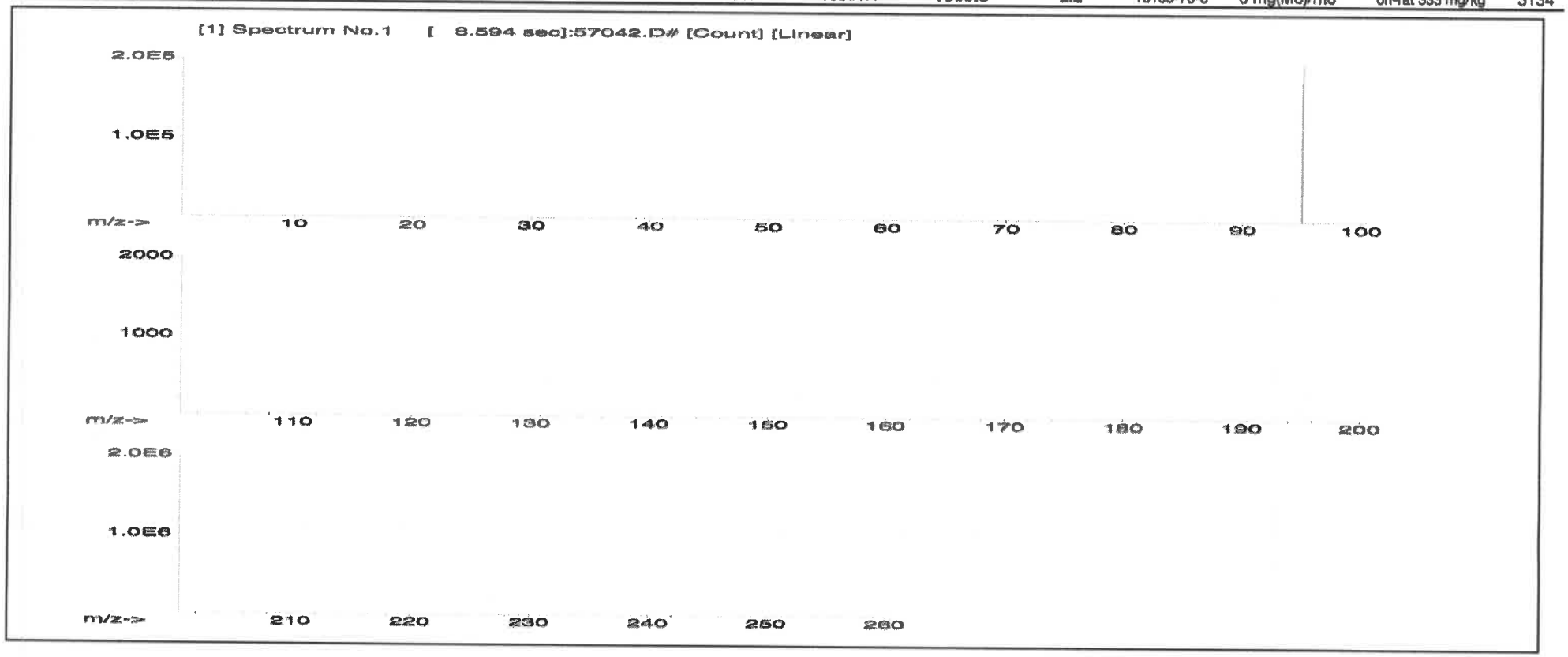
CERTIFIED WEIGHT REPORT:

R→ 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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	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:

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* 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 WEIGHT REPORT:

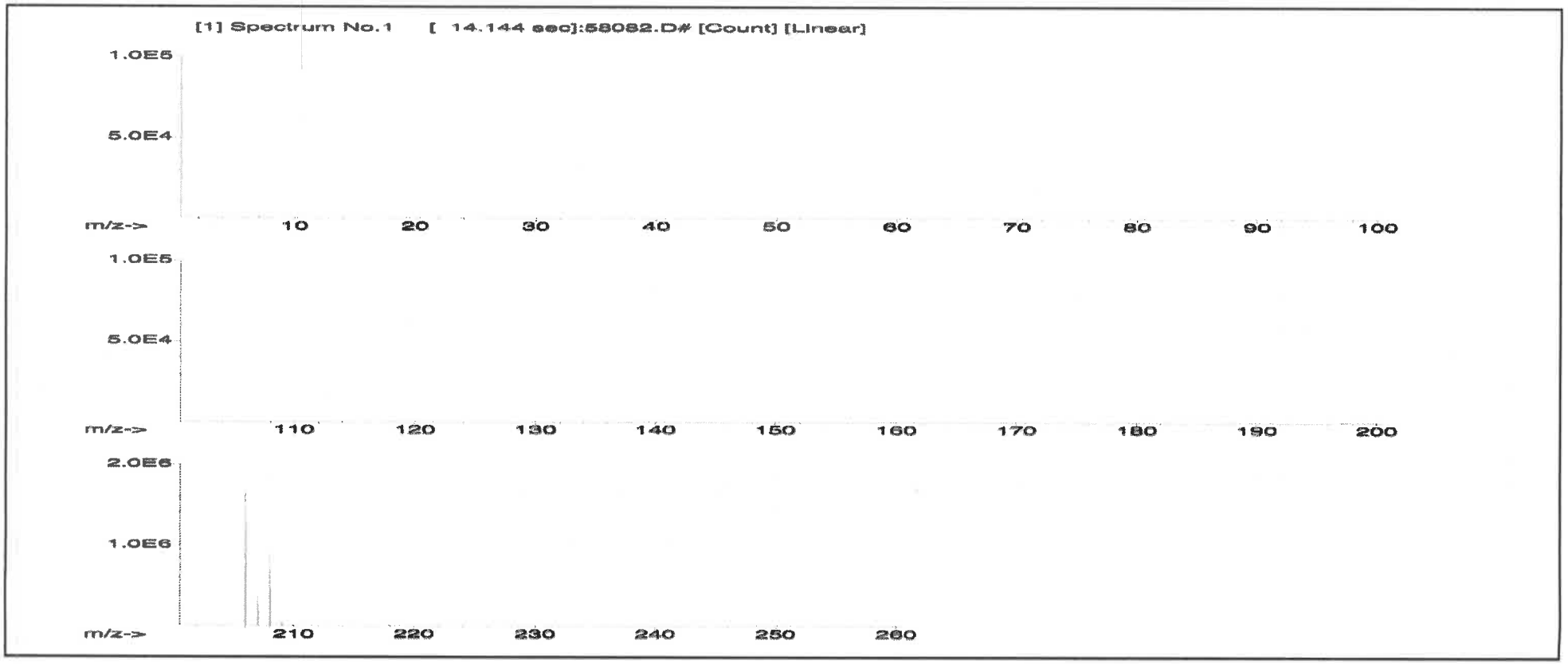
R>8/6/28
M6178

Part Number:	**57082**		**Lot #**		
Lot Number:	**031525**	**Solvent:**	24014457	Nitric Acid	
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
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



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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	<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

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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).

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 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-7/22/25

Value / Analyte(s):	1 000 µg/mL ea: Potassium,	
	600 µg/mL ea: Phosphorus,	
	300 µg/mL ea: Sodium,	Iron,
	200 µg/mL ea: Magnesium, Cerium, Thallium,	Aluminum, Selenium,
	100 µg/mL ea: Lead,	Calcium,
	80 µg/mL ea: Arsenic,	
	70 µg/mL ea: Mercury,	
	50 µg/mL ea: Nickel,	
	40 µg/mL ea: Chromium,	
	30 µg/mL ea: Copper, Vanadium,	Boron,
	20 µg/mL ea: Zinc, Barium, Cadmium, Manganese,	Strontium, Beryllium, Cobalt, Lithium,
	7.5 µg/mL ea: Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.2 ± 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
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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:	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

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 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

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,

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.

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
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(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
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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.

Nitric Acid 69%
CMOS

M6187
R.D :- 08/08/25

avantor™ | J.T.Baker®

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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6027

R1 8/05/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

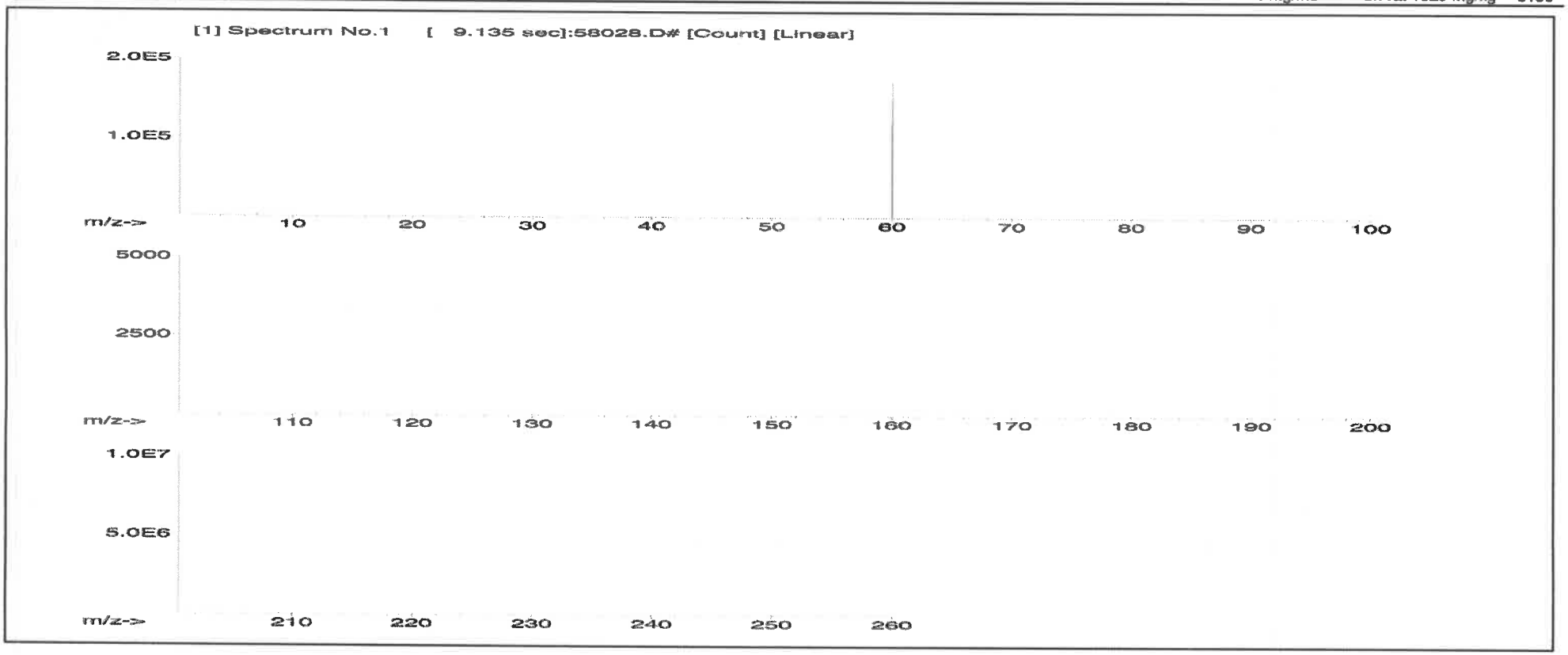
CERTIFIED WEIGHT REPORT:

Part Number:	**57028**
Lot Number:	**062024**
Description:	**Nickel (Ni)**
Expiration Date:	062027
Recommended Storage:	Ambient (20 °C)
Nominal Concentration (µg/mL):	**1000**
NIST Test Number:	6UTB
Volume shown below was diluted to (mL):	2000.07

Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	40.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.100	Flask Uncertainty		

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



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6030

R: 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57047
Lot Number: 122823
Description: Silver (Ag)

Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

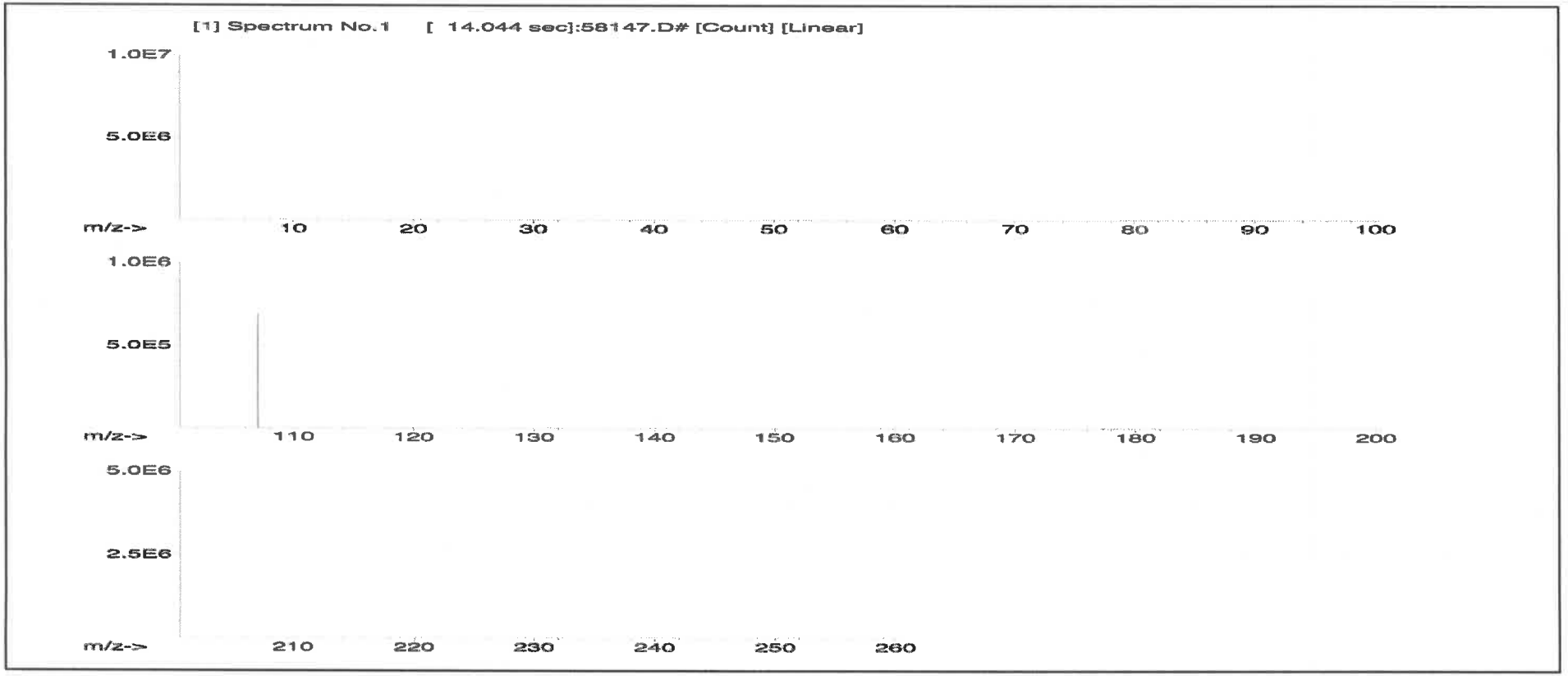
Weight shown below was diluted to (mL): 4000.30 0.058 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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opened : 3/24/25

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CERTIFIED WEIGHT REPORT:

M6160

Part Number: 57051
Lot Number: 071724
Description: Antimony (Sb)

Expiration Date: 071727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.26 ± 0.058 Flask Uncertainty

Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

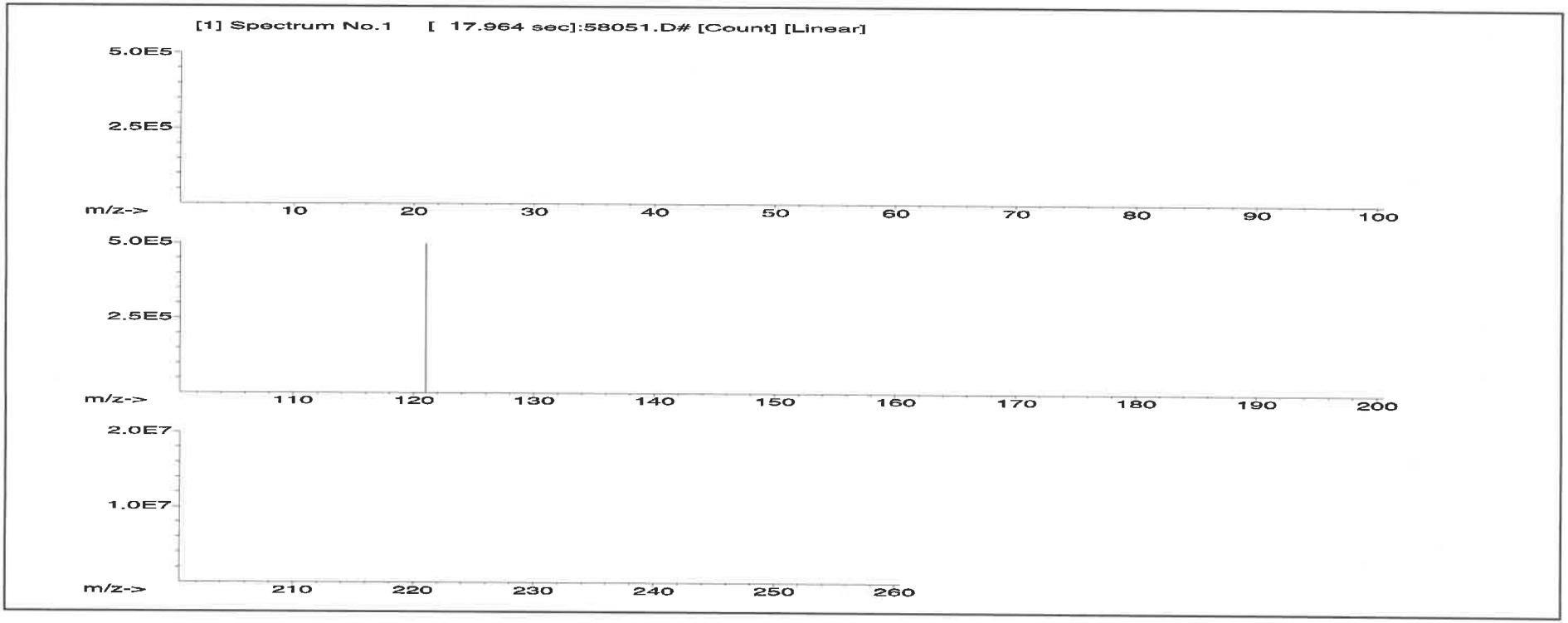
Giovanni Esposito

Formulated By:	Giovanni Esposito	071724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	071724

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	060324	0.1000	200.0	0.084	1000	10001.4	**1000.0**	**2.2**	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



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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.
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Certified Reference Material CRM

M6023

R ! 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number: 57081
Lot Number: 062724
Description: Thallium (Tl)

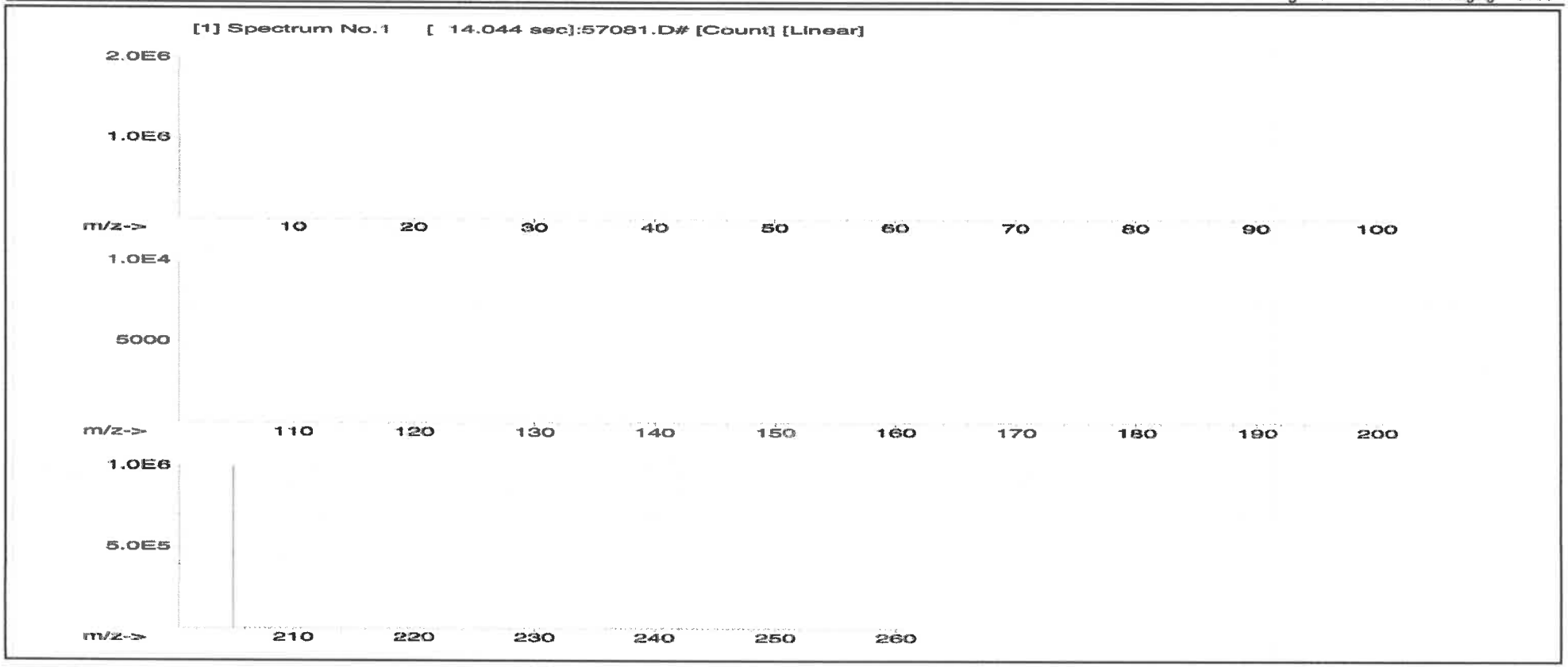
Expiration Date: 062727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.1

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.10	Flask Uncertainty	

Aleah O'Brady
Formulated By: Aleah O'Brady 062724

Pedro Rentas
Reviewed By: Pedro L. Rentas 062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



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AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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Certified by:

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M6021

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Rc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**	24002546	Nitric Acid	
Description:	**Vanadium (V)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

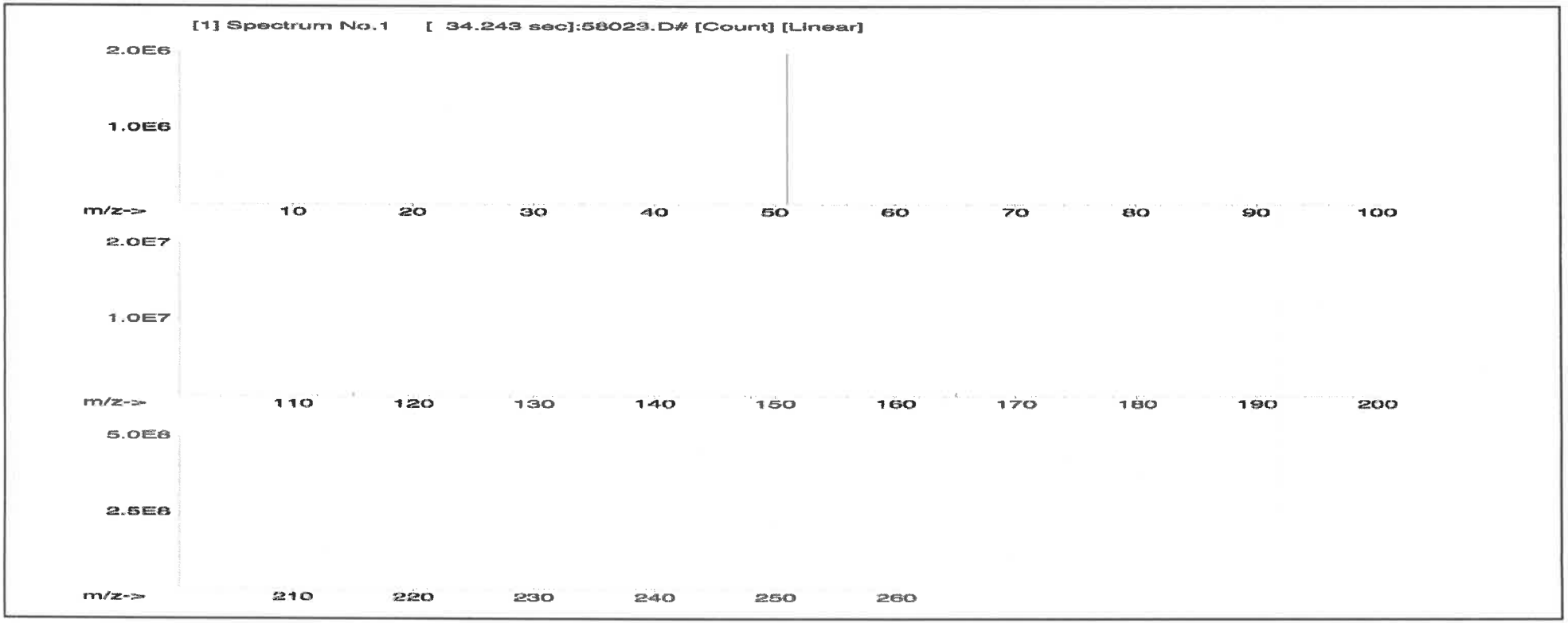
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



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https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

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SHIPPING DOCUMENTS

Q3321

USEPA
DateShipped: 10/8/2025
CarrierName: FedEx
AirbillNo: 8850 1194 6759

CHAIN OF CUSTODY RECORD
Case #: 918
Contact Name: Peter Lisichenko
Contact Phone: 347-276-6251

No: 2-100825-0004-0122-01
Cooler #: 1
Lab: Alliance Technical Group, LLC
Lab Phone: 805-526-7161

Lab #	Sample #	Location	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Preservative	Lab QC
	P001-DS-01	P001	TAL VOCs	Soil	10/8/2025	14:15	3	5-g Encore sampler	4 C	
	P001-DS-01	P001	TAL SVOCs	Soil	10/8/2025	14:15	1	8 oz glass jar w/Teflon cap	4 C	
	P001-DS-01	P001	TAL PCBs	Soil	10/8/2025	14:15	1	8 oz glass jar w/Teflon cap	4 C	
	P001-DS-01	P001	TAL Pesticides	Soil	10/8/2025	14:15	1	8 oz glass cl jar w/Teflon cap	4 C	
	P001-DS-01	P001	TAL Metals+Hg&CN	Soil	10/8/2025	14:15	1	8 oz glass jar w/Teflon cap	4 C	
	P001-DS-01	P001	TCLP VOCs	Soil	10/8/2025	14:15	1	8 oz glass jar w/Teflon cap	4 C	
	P001-DS-01	P001	TCLP Metals+Hg	Soil	10/8/2025	14:15	1	8 oz glass jar w/Teflon cap	4 C	
	P001-DS-01	P001	TAL Pesticides	Soil	10/8/2025	14:15	1	8 oz glass jar w/Teflon cap	4 C	
	P001-DS-01	P001	TCLP SVOCs	Soil	10/8/2025	14:15	1	8 oz glass jar w/Teflon cap	4 C	
	P001-DS-01	P001	TCLP Herbicides	Soil	10/8/2025	14:15	1	8 oz glass jar w/Teflon cap	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
ALL SAMPLES ALL ANALYSIS	USEPA	10/8/25 1600hrs		10/9/25 10:00	IR Gun #1 3.4 °C

Q3321

USEPA
DateShipped: 10/8/2025
CarrierName: FedEx
AirbillNo: 8850 1194 6759

CHAIN OF CUSTODY RECORD
Case #: 918
Contact Name: Peter Lisichenko
Contact Phone: 347-276-6251

No: 2-100825-0004-0122-01
Cooler #: 1
Lab: Alliance Technical Group, LLC
Lab Phone: 805-526-7161

Lab #	Sample #	Location	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Preservative	Lab QC
	P001-DS-01	P001	Percent Moisture	Soil	10/8/2025	14:15	1	4 oz glass jar	4 C	

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
ALL SAMPLES ALL ANALYSIS	USEPA	10/8/25 1600 hrs		1000 10/9/25	IR Gun #1 3.4 C

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

Laboratory Certification

Certified By	License No.
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255425
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	TX-C25-00189
Virginia	460312

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q3321 ROYF02
Client Name : Weston Solutions, Inc.
Client Contact : Smita Sumbaly
Invoice Name : Weston Solutions, Inc.
Invoice Contact : Smita Sumbaly

Order Date : 10/9/2025 10:30:00 AM
Project Name : RFP ~~905~~ 918
Receive DateTime : 10/9/2025 ~~12:00:00 AM~~ 10:00
Purchase Order :

Project Mgr :
Report Type : Level 4
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
Q3321-01	P001-DS-01	Solid	10/08/2025	14:15					
					VOC-TCLVOA-10		8260D		~~10 Bus~~. Days 5 Bus Days

Relinguished By :
Date / Time : 10/9/25 10:00

Received By :
Date / Time : 10/09/25

Storage Area : **VOA Refridgerator Room**