DATA OF KNOWN QUALITY CONFORMANCE/NON-CONFORMANCE SUMMARY QUESTIONNAIRE

Laboratory Name : Alliance Technical Group LLC Client : Portal Partners Tri-Venture

Project Location : Kearny, NJ Project Number : 950000878

Laboratory Sample ID(s) : Q2177 Sampling Date(s) : 5/31/2025

List DKQP Methods Used (e.g., 8260,8270, et Cetra) **,1030,1311,1311 ZHE, 6010D, 7196A, 7470A, 7471B, 8081B, 8082A, 8151A, 8260-Low, 8260D, 8270E, 9012B, 9034, 9045D, NJEPH,SOP**

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the NJDEP Data of Known Quality performance standards?	☑ Yes ☐ No
1A	Were the method specified handling, preservation, and holding time requirements met?	☐ Yes ☑ No
1B	EPH Method: Was the EPH method conducted without significant modifications (see Section 11.3 of respective DKQ methods)	☑ Yes ☐ No ☐ N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	☑ Yes ☐ No
3	Were samples received at an appropriate temperature (4±2° C)?	☑ Yes ☐ No ☐ N/A
4	Were all QA/QC performance criteria specified in the NJDEP DKQP standards achieved?	☐ Yes ☑ No
5	a)Were reporting limits specified or referenced on the chain-of-custody or communicated to the laboratory prior to sample receipt? b)Were these reporting limits met?	☑ Yes ☐ No ☑ Yes ☐ No ☐ N/A
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the DKQP documents and/or site-specific QAPP?	☑ Yes ☐ No
7	Are project-specific matrix spikes and/or laboratory duplicates included in this data set?	☐ Yes ☑ No

Notes: For all questions to which the response was “No” (with the exception of question #7), additional information should be provided in an attached narrative. If the answer to question #1, #1A, or #1B is “No”, the data package does not meet the requirements for “Data of Known Quality.”

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Cover Page

Order ID : Q2177

Project ID : Amtrak Sawtooth Bridges 2025

Client : Portal Partners Tri-Venture

Lab Sample Number	Client Sample Number
Q2177-01	B-187-SB00
Q2177-02	B-187-SB01
Q2177-03	B-187-SB01
Q2177-04	B-187-SB02
Q2177-05	B-187-SB02
Q2177-06	B-202-SB01
Q2177-07	B-202-SB01
Q2177-08	EB05312025
Q2177-09	TB05312025

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

Signature : _____

Date: 6/16/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Portal Partners Tri-Venture
Project Name: Amtrak Sawtooth Bridges 2025
Project # N/A
Order ID # Q2177
Test Name: TCLP ICP Metals,TCLP Mercury

A. Number of Samples and Date of Receipt:
7 Solid samples were received on 06/02/2025.
2 Water samples were received on 06/02/2025.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Corrosivity, EPH, EPH, Hexavalent Chromium, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, PCB, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL, Trivalent Chromium, VOC-TCLVOA-10 and VOC-TCLVOA-10. 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 samples.
The Duplicate (TP01-MHB-WCDUP) analysis met criteria for all elements except for Barium due to sample matrix interference.
The Matrix Spike (TP01-MHA-WCMS) analysis met criteria for all elements except for Barium due to Chemical Interference during Digestion Process.
The Matrix Spike Duplicate (TP01-MHA-WCMSD) analysis met criteria for all elements except for Barium due to Chemical Interference during Digestion Process.
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:
The Post Digest Spike (TP01-MHA-WCA) analysis met criteria for all samples except for Barium due to unknown chemical interference of matrix with the addition of spike amount after digestion and before analysis, matrix has suppression effect during addition of spike.

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

Signature_____

Alliance TECHNICAL GROUP

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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

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: **Q2177**

	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:** **06/16/2025**

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LAB CHRONICLE

OrderID:	Q2177	**OrderDate:**	6/2/2025 11:19:00 AM
Client:	Portal Partners Tri-Venture	**Project:**	Amtrak Sawtooth Bridges 2025
Contact:	Joseph Krupansky	**Location:**	L41,VOA Ref. #2 Soil,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2177-02	**B-187-SB01**	**SOIL**			**05/31/25**			**06/02/25**
			Mercury	7471B		06/02/25	06/03/25	
			Metals ICP-TAL	6010D		06/02/25	06/10/25	
Q2177-03	**B-187-SB01**	**TCLP**			**05/31/25**			**06/02/25**
			TCLP ICP Metals	6010D		06/03/25	06/04/25	
			TCLP Mercury	7470A		06/03/25	06/04/25	
Q2177-04	**B-187-SB02**	**SOIL**			**05/31/25**			**06/02/25**
			Mercury	7471B		06/02/25	06/03/25	
			Metals ICP-TAL	6010D		06/02/25	06/10/25	
Q2177-05	**B-187-SB02**	**TCLP**			**05/31/25**			**06/02/25**
			TCLP ICP Metals	6010D		06/03/25	06/04/25	
			TCLP Mercury	7470A		06/03/25	06/04/25	
Q2177-06	**B-202-SB01**	**SOIL**			**05/31/25**			**06/02/25**
			Mercury	7471B		06/02/25	06/03/25	
			Metals ICP-TAL	6010D		06/02/25	06/10/25	
Q2177-07	**B-202-SB01**	**TCLP**			**05/31/25**			**06/02/25**
			TCLP ICP Metals	6010D		06/03/25	06/04/25	
			TCLP Mercury	7470A		06/03/25	06/04/25	
Q2177-08	**EB05312025**	**Water**			**05/31/25**			**06/02/25**
			Mercury	7470A		06/02/25	06/03/25	
			Metals ICP-TAL	6010D		06/03/25	06/04/25	

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Hit Summary Sheet
SW-846

SDG No.: Q2177 **Order ID:** Q2177

Client: Portal Partners Tri-Venture **Project ID:** Amtrak Sawtooth Bridges 2025

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : B-187-SB01								
Q2177-03	B-187-SB01	TCLP	Barium	985		72.8	500	ug/L
Q2177-03	B-187-SB01	TCLP	Chromium	17.7	J	10.6	50.0	ug/L
Q2177-03	B-187-SB01	TCLP	Lead	581		11.5	60.0	ug/L
Client ID : B-187-SB02								
Q2177-05	B-187-SB02	TCLP	Barium	1000		72.8	500	ug/L
Q2177-05	B-187-SB02	TCLP	Lead	29.5	J	11.5	60.0	ug/L
Client ID : B-202-SB01								
Q2177-07	B-202-SB01	TCLP	Barium	804		72.8	500	ug/L
Q2177-07	B-202-SB01	TCLP	Lead	201		11.5	60.0	ug/L

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SAMPLE DATA

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Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	05/31/25
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	06/02/25
Client Sample ID:	B-187-SB01	SDG No.:	Q2177
Lab Sample ID:	Q2177-03	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	06/03/25 12:30	06/04/25 18:23	6010D	SW3050
7440-39-3	Barium	985	N*	1	72.8	500	ug/L	06/03/25 12:30	06/04/25 18:23	6010D	SW3050
7440-43-9	Cadmium	2.50	U	1	2.50	30.0	ug/L	06/03/25 12:30	06/04/25 18:23	6010D	SW3050
7440-47-3	Chromium	17.7	J	1	10.6	50.0	ug/L	06/03/25 12:30	06/04/25 18:23	6010D	SW3050
7439-92-1	Lead	581		1	11.5	60.0	ug/L	06/03/25 12:30	06/04/25 18:23	6010D	SW3050
7439-97-6	Mercury	0.76	U	1	0.76	2.00	ug/L	06/03/25 13:30	06/04/25 11:18	7470A	
7782-49-2	Selenium	48.2	U	1	48.2	100	ug/L	06/03/25 12:30	06/04/25 18:23	6010D	SW3050
7440-22-4	Silver	8.10	U	1	8.10	50.0	ug/L	06/03/25 12:30	06/04/25 18:23	6010D	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	TCLP-FULL				

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

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

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Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	05/31/25
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	06/02/25
Client Sample ID:	B-187-SB02	SDG No.:	Q2177
Lab Sample ID:	Q2177-05	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	06/03/25 12:30	06/04/25 18:47	6010D	SW3050
7440-39-3	Barium	1000	N*	1	72.8	500	ug/L	06/03/25 12:30	06/04/25 18:47	6010D	SW3050
7440-43-9	Cadmium	2.50	U	1	2.50	30.0	ug/L	06/03/25 12:30	06/04/25 18:47	6010D	SW3050
7440-47-3	Chromium	10.6	U	1	10.6	50.0	ug/L	06/03/25 12:30	06/04/25 18:47	6010D	SW3050
7439-92-1	Lead	29.5	J	1	11.5	60.0	ug/L	06/03/25 12:30	06/04/25 18:47	6010D	SW3050
7439-97-6	Mercury	0.76	U	1	0.76	2.00	ug/L	06/03/25 13:30	06/04/25 11:20	7470A	
7782-49-2	Selenium	48.2	U	1	48.2	100	ug/L	06/03/25 12:30	06/04/25 18:47	6010D	SW3050
7440-22-4	Silver	8.10	U	1	8.10	50.0	ug/L	06/03/25 12:30	06/04/25 18:47	6010D	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	TCLP-FULL				

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
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Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	05/31/25
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	06/02/25
Client Sample ID:	B-202-SB01	SDG No.:	Q2177
Lab Sample ID:	Q2177-07	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	06/03/25 12:30	06/04/25 18:51	6010D	SW3050
7440-39-3	Barium	804	N*	1	72.8	500	ug/L	06/03/25 12:30	06/04/25 18:51	6010D	SW3050
7440-43-9	Cadmium	2.50	U	1	2.50	30.0	ug/L	06/03/25 12:30	06/04/25 18:51	6010D	SW3050
7440-47-3	Chromium	10.6	U	1	10.6	50.0	ug/L	06/03/25 12:30	06/04/25 18:51	6010D	SW3050
7439-92-1	Lead	201		1	11.5	60.0	ug/L	06/03/25 12:30	06/04/25 18:51	6010D	SW3050
7439-97-6	Mercury	0.76	U	1	0.76	2.00	ug/L	06/03/25 13:30	06/04/25 11:22	7470A	
7782-49-2	Selenium	48.2	U	1	48.2	100	ug/L	06/03/25 12:30	06/04/25 18:51	6010D	SW3050
7440-22-4	Silver	8.10	U	1	8.10	50.0	ug/L	06/03/25 12:30	06/04/25 18:51	6010D	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	TCLP-FULL				

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: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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
ICV26	Mercury	3.93	4.0	98	90 - 110	CV	06/04/2025	10:25	LB135995

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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
CCV95	Mercury	4.86	5.0	97	90 - 110	CV	06/04/2025	10:32	LB135995
CCV96	Mercury	4.82	5.0	96	90 - 110	CV	06/04/2025	11:02	LB135995
CCV97	Mercury	4.75	5.0	95	90 - 110	CV	06/04/2025	11:29	LB135995
CCV98	Mercury	4.66	5.0	93	90 - 110	CV	06/04/2025	11:53	LB135995

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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	1000	1000	100	90 - 110	P	06/04/2025	15:49	LB136011
	Barium	552	520	106	90 - 110	P	06/04/2025	15:49	LB136011
	Cadmium	500	510	98	90 - 110	P	06/04/2025	15:49	LB136011
	Chromium	518	520	100	90 - 110	P	06/04/2025	15:49	LB136011
	Lead	976	1000	98	90 - 110	P	06/04/2025	15:49	LB136011
	Selenium	1000	1000	100	90 - 110	P	06/04/2025	15:49	LB136011
	Silver	234	250	94	90 - 110	P	06/04/2025	15:49	LB136011

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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	18.1	20.0	90	80 - 120	P	06/04/2025	16:06	LB136011
	Barium	88.2	100	88	80 - 120	P	06/04/2025	16:06	LB136011
	Cadmium	5.84	6.0	97	80 - 120	P	06/04/2025	16:06	LB136011
	Chromium	10.2	10.0	102	80 - 120	P	06/04/2025	16:06	LB136011
	Lead	11.3	12.0	94	80 - 120	P	06/04/2025	16:06	LB136011
	Selenium	23.1	20.0	115	80 - 120	P	06/04/2025	16:06	LB136011
	Silver	9.80	10.0	98	80 - 120	P	06/04/2025	16:06	LB136011

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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	5030	5000	101	90 - 110	P	06/04/2025	16:45	LB136011
	Barium	9780	10000	98	90 - 110	P	06/04/2025	16:45	LB136011
	Cadmium	2510	2500	100	90 - 110	P	06/04/2025	16:45	LB136011
	Chromium	993	1000	99	90 - 110	P	06/04/2025	16:45	LB136011
	Lead	5010	5000	100	90 - 110	P	06/04/2025	16:45	LB136011
	Selenium	5070	5000	101	90 - 110	P	06/04/2025	16:45	LB136011
	Silver	1230	1250	99	90 - 110	P	06/04/2025	16:45	LB136011
CCV02	Arsenic	4960	5000	99	90 - 110	P	06/04/2025	17:35	LB136011
	Barium	9200	10000	92	90 - 110	P	06/04/2025	17:35	LB136011
	Cadmium	2460	2500	98	90 - 110	P	06/04/2025	17:35	LB136011
	Chromium	985	1000	98	90 - 110	P	06/04/2025	17:35	LB136011
	Lead	4910	5000	98	90 - 110	P	06/04/2025	17:35	LB136011
	Selenium	5060	5000	101	90 - 110	P	06/04/2025	17:35	LB136011
	Silver	1230	1250	98	90 - 110	P	06/04/2025	17:35	LB136011
CCV03	Arsenic	4790	5000	96	90 - 110	P	06/04/2025	18:37	LB136011
	Barium	9130	10000	91	90 - 110	P	06/04/2025	18:37	LB136011
	Cadmium	2390	2500	95	90 - 110	P	06/04/2025	18:37	LB136011
	Chromium	953	1000	95	90 - 110	P	06/04/2025	18:37	LB136011
	Lead	4750	5000	95	90 - 110	P	06/04/2025	18:37	LB136011
	Selenium	4850	5000	97	90 - 110	P	06/04/2025	18:37	LB136011
	Silver	1190	1250	96	90 - 110	P	06/04/2025	18:37	LB136011
CCV04	Arsenic	4700	5000	94	90 - 110	P	06/04/2025	19:26	LB136011
	Barium	9070	10000	91	90 - 110	P	06/04/2025	19:26	LB136011
	Cadmium	2360	2500	94	90 - 110	P	06/04/2025	19:26	LB136011
	Chromium	944	1000	94	90 - 110	P	06/04/2025	19:26	LB136011
	Lead	4700	5000	94	90 - 110	P	06/04/2025	19:26	LB136011
	Selenium	4750	5000	95	90 - 110	P	06/04/2025	19:26	LB136011
	Silver	1170	1250	94	90 - 110	P	06/04/2025	19:26	LB136011
CCV05	Arsenic	4700	5000	94	90 - 110	P	06/04/2025	20:12	LB136011
	Barium	9550	10000	96	90 - 110	P	06/04/2025	20:12	LB136011
	Cadmium	2350	2500	94	90 - 110	P	06/04/2025	20:12	LB136011
	Chromium	942	1000	94	90 - 110	P	06/04/2025	20:12	LB136011
	Lead	4720	5000	94	90 - 110	P	06/04/2025	20:12	LB136011
	Selenium	4730	5000	94	90 - 110	P	06/04/2025	20:12	LB136011

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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	1190	1250	95	90 - 110	P	06/04/2025	20:12	LB136011
CCV06	Arsenic	4620	5000	92	90 - 110	P	06/04/2025	20:58	LB136011
	Barium	9410	10000	94	90 - 110	P	06/04/2025	20:58	LB136011
	Cadmium	2320	2500	93	90 - 110	P	06/04/2025	20:58	LB136011
	Chromium	930	1000	93	90 - 110	P	06/04/2025	20:58	LB136011
	Lead	4650	5000	93	90 - 110	P	06/04/2025	20:58	LB136011
	Selenium	4630	5000	92	90 - 110	P	06/04/2025	20:58	LB136011
	Silver	1160	1250	93	90 - 110	P	06/04/2025	20:58	LB136011
CCV07	Arsenic	4710	5000	94	90 - 110	P	06/04/2025	21:41	LB136011
	Barium	9600	10000	96	90 - 110	P	06/04/2025	21:41	LB136011
	Cadmium	2370	2500	95	90 - 110	P	06/04/2025	21:41	LB136011
	Chromium	945	1000	94	90 - 110	P	06/04/2025	21:41	LB136011
	Lead	4730	5000	95	90 - 110	P	06/04/2025	21:41	LB136011
	Selenium	4690	5000	94	90 - 110	P	06/04/2025	21:41	LB136011
	Silver	1190	1250	95	90 - 110	P	06/04/2025	21:41	LB136011
CCV08	Arsenic	4620	5000	92	90 - 110	P	06/04/2025	22:06	LB136011
	Barium	9210	10000	92	90 - 110	P	06/04/2025	22:06	LB136011
	Cadmium	2330	2500	93	90 - 110	P	06/04/2025	22:06	LB136011
	Chromium	937	1000	94	90 - 110	P	06/04/2025	22:06	LB136011
	Lead	4670	5000	93	90 - 110	P	06/04/2025	22:06	LB136011
	Selenium	4580	5000	92	90 - 110	P	06/04/2025	22:06	LB136011
	Silver	1170	1250	94	90 - 110	P	06/04/2025	22:06	LB136011

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Metals

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CRDL STANDARD FOR AA & ICP

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

Initial Calibration Source:

Continuing Calibration Source:

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRA	Mercury	0.22	0.2	111	70 - 130	CV	06/04/2025	10:36	LB135995
CRI01	Arsenic	18.7	20.0	93	65 - 135	P	06/04/2025	16:15	LB136011
	Barium	86.6	100	87	65 - 135	P	06/04/2025	16:15	LB136011
	Cadmium	5.99	6.0	100	65 - 135	P	06/04/2025	16:15	LB136011
	Chromium	10.8	10.0	108	65 - 135	P	06/04/2025	16:15	LB136011
	Lead	11.2	12.0	93	65 - 135	P	06/04/2025	16:15	LB136011
	Selenium	20.9	20.0	105	65 - 135	P	06/04/2025	16:15	LB136011
	Silver	10.0	10.0	100	65 - 135	P	06/04/2025	16:15	LB136011

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB26	Mercury	0.076	+/-0.2	U	0.20	CV	06/04/2025	10:30	LB135995

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB95	Mercury	0.076	+/-0.2	U	0.20	CV	06/04/2025	10:34	LB135995
CCB96	Mercury	0.076	+/-0.2	U	0.20	CV	06/04/2025	11:04	LB135995
CCB97	Mercury	0.076	+/-0.2	U	0.20	CV	06/04/2025	11:31	LB135995
CCB98	Mercury	0.076	+/-0.2	U	0.20	CV	06/04/2025	11:55	LB135995

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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	06/04/2025	16:10	LB136011
	Barium	14.6	+/-50	U	100	P	06/04/2025	16:10	LB136011
	Cadmium	0.50	+/-3	U	6.00	P	06/04/2025	16:10	LB136011
	Chromium	2.12	+/-5	U	10.0	P	06/04/2025	16:10	LB136011
	Lead	2.30	+/-6	U	12.0	P	06/04/2025	16:10	LB136011
	Selenium	9.64	+/-10	U	20.0	P	06/04/2025	16:10	LB136011
	Silver	1.62	+/-5	U	10.0	P	06/04/2025	16:10	LB136011

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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	06/04/2025	16:52	LB136011
	Barium	14.6	+/-50	U	100	P	06/04/2025	16:52	LB136011
	Cadmium	0.50	+/-3	U	6.00	P	06/04/2025	16:52	LB136011
	Chromium	2.12	+/-5	U	10.0	P	06/04/2025	16:52	LB136011
	Lead	2.30	+/-6	U	12.0	P	06/04/2025	16:52	LB136011
	Selenium	9.64	+/-10	U	20.0	P	06/04/2025	16:52	LB136011
	Silver	1.62	+/-5	U	10.0	P	06/04/2025	16:52	LB136011
CCB02	Arsenic	5.12	+/-10	U	20.0	P	06/04/2025	17:39	LB136011
	Barium	14.6	+/-50	U	100	P	06/04/2025	17:39	LB136011
	Cadmium	0.50	+/-3	U	6.00	P	06/04/2025	17:39	LB136011
	Chromium	2.12	+/-5	U	10.0	P	06/04/2025	17:39	LB136011
	Lead	2.30	+/-6	U	12.0	P	06/04/2025	17:39	LB136011
	Selenium	9.64	+/-10	U	20.0	P	06/04/2025	17:39	LB136011
	Silver	1.62	+/-5	U	10.0	P	06/04/2025	17:39	LB136011
CCB03	Arsenic	5.12	+/-10	U	20.0	P	06/04/2025	18:42	LB136011
	Barium	14.6	+/-50	U	100	P	06/04/2025	18:42	LB136011
	Cadmium	0.50	+/-3	U	6.00	P	06/04/2025	18:42	LB136011
	Chromium	2.12	+/-5	U	10.0	P	06/04/2025	18:42	LB136011
	Lead	2.30	+/-6	U	12.0	P	06/04/2025	18:42	LB136011
	Selenium	9.64	+/-10	U	20.0	P	06/04/2025	18:42	LB136011
	Silver	1.62	+/-5	U	10.0	P	06/04/2025	18:42	LB136011
CCB04	Arsenic	5.12	+/-10	U	20.0	P	06/04/2025	19:30	LB136011
	Barium	14.6	+/-50	U	100	P	06/04/2025	19:30	LB136011
	Cadmium	0.50	+/-3	U	6.00	P	06/04/2025	19:30	LB136011
	Chromium	2.12	+/-5	U	10.0	P	06/04/2025	19:30	LB136011
	Lead	2.30	+/-6	U	12.0	P	06/04/2025	19:30	LB136011
	Selenium	9.64	+/-10	U	20.0	P	06/04/2025	19:30	LB136011
	Silver	1.62	+/-5	U	10.0	P	06/04/2025	19:30	LB136011
CCB05	Arsenic	5.12	+/-10	U	20.0	P	06/04/2025	20:16	LB136011
	Barium	14.6	+/-50	U	100	P	06/04/2025	20:16	LB136011
	Cadmium	0.50	+/-3	U	6.00	P	06/04/2025	20:16	LB136011
	Chromium	2.12	+/-5	U	10.0	P	06/04/2025	20:16	LB136011
	Lead	2.30	+/-6	U	12.0	P	06/04/2025	20:16	LB136011
	Selenium	9.64	+/-10	U	20.0	P	06/04/2025	20:16	LB136011
	Silver	1.62	+/-5	U	10.0	P	06/04/2025	20:16	LB136011
CCB06	Arsenic	5.12	+/-10	U	20.0	P	06/04/2025	21:02	LB136011
	Barium	14.6	+/-50	U	100	P	06/04/2025	21:02	LB136011
	Cadmium	0.50	+/-3	U	6.00	P	06/04/2025	21:02	LB136011
	Chromium	2.12	+/-5	U	10.0	P	06/04/2025	21:02	LB136011

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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	06/04/2025	21:02	LB136011
	Selenium	9.64	+/-10	U	20.0	P	06/04/2025	21:02	LB136011
	Silver	1.62	+/-5	U	10.0	P	06/04/2025	21:02	LB136011
CCB07	Arsenic	5.12	+/-10	U	20.0	P	06/04/2025	21:45	LB136011
	Barium	14.6	+/-50	U	100	P	06/04/2025	21:45	LB136011
	Cadmium	0.50	+/-3	U	6.00	P	06/04/2025	21:45	LB136011
	Chromium	2.12	+/-5	U	10.0	P	06/04/2025	21:45	LB136011
	Lead	2.30	+/-6	U	12.0	P	06/04/2025	21:45	LB136011
	Selenium	9.64	+/-10	U	20.0	P	06/04/2025	21:45	LB136011
	Silver	1.62	+/-5	U	10.0	P	06/04/2025	21:45	LB136011
CCB08	Arsenic	5.12	+/-10	U	20.0	P	06/04/2025	22:10	LB136011
	Barium	14.6	+/-50	U	100	P	06/04/2025	22:10	LB136011
	Cadmium	0.50	+/-3	U	6.00	P	06/04/2025	22:10	LB136011
	Chromium	2.12	+/-5	U	10.0	P	06/04/2025	22:10	LB136011
	Lead	2.30	+/-6	U	12.0	P	06/04/2025	22:10	LB136011
	Selenium	9.64	+/-10	U	20.0	P	06/04/2025	22:10	LB136011
	Silver	1.62	+/-5	U	10.0	P	06/04/2025	22:10	LB136011

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Metals
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PREPARATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB168224TB		**WATER**		**Batch Number:**	**PB168262**		**Prep Date:**	**06/03/2025**	
	Mercury	0.76	<2	U	2.00	CV	06/04/2025	11:43	LB135995

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB168262BL		**WATER**		**Batch Number:**	**PB168262**		**Prep Date:**	**06/03/2025**	
	Mercury	0.076	<0.2	U	0.20	CV	06/04/2025	10:43	LB135995

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Metals
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PREPARATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB168224TB		**WATER**		**Batch Number:**	**PB168256**		**Prep Date:**	**06/03/2025**	
	Arsenic	25.6	<50	U	100	P	06/04/2025	18:05	LB136011
	Barium	72.8	<250	U	500	P	06/04/2025	18:05	LB136011
	Cadmium	2.50	<15	U	30.0	P	06/04/2025	18:05	LB136011
	Chromium	10.6	<25	U	50.0	P	06/04/2025	18:05	LB136011
	Lead	11.5	<30	U	60.0	P	06/04/2025	18:05	LB136011
	Selenium	48.2	<50	U	100	P	06/04/2025	18:05	LB136011
	Silver	8.10	<25	U	50.0	P	06/04/2025	18:05	LB136011

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB168256BL		**WATER**		**Batch Number:**	**PB168256**		**Prep Date:**	**06/03/2025**	
	Arsenic	25.6	<50	U	100	P	06/04/2025	19:34	LB136011
	Barium	72.8	<250	U	500	P	06/04/2025	19:34	LB136011
	Cadmium	2.50	<15	U	30.0	P	06/04/2025	19:34	LB136011
	Chromium	10.6	<25	U	50.0	P	06/04/2025	19:34	LB136011
	Lead	11.5	<30	U	60.0	P	06/04/2025	19:34	LB136011
	Selenium	48.2	<50	U	100	P	06/04/2025	19:34	LB136011
	Silver	8.10	<25	U	50.0	P	06/04/2025	19:34	LB136011

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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	1.52			-20	20	06/04/2025	16:26	LB136011
	Barium	0.52	6.0	9	-94	106	06/04/2025	16:26	LB136011
	Cadmium	0.92	1.0	92	-5	7	06/04/2025	16:26	LB136011
	Chromium	46.0	52.0	88	42	62	06/04/2025	16:26	LB136011
	Lead	-0.74			-12	12	06/04/2025	16:26	LB136011
	Selenium	1.80			-20	20	06/04/2025	16:26	LB136011
	Silver	4.01			-10	10	06/04/2025	16:26	LB136011
ICSAB01	Arsenic	106	104	102	88.4	120	06/04/2025	16:32	LB136011
	Barium	469	537	87	437	637	06/04/2025	16:32	LB136011
	Cadmium	1000	972	103	826	1120	06/04/2025	16:32	LB136011
	Chromium	556	542	103	460	624	06/04/2025	16:32	LB136011
	Lead	47.6	49.0	97	37	61	06/04/2025	16:32	LB136011
	Selenium	56.4	46.0	123	26	66	06/04/2025	16:32	LB136011
	Silver	219	201	109	170	232	06/04/2025	16:32	LB136011

METAL QC DATA

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metals
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MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q2177

contract: PORT06 **lab code:** CHEM **case no.:** Q2177 **sas no.:** Q2177

matrix: Water **sample id:** Q2185-08 **client id:** TP01-MHA-WCMS

Percent Solids for Sample: NA **Spiked ID:** Q2185-08MS **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	3810		100	U	4000	95		P
Barium	ug/L	75 - 125	3220		2770		1000	45	N	P
Cadmium	ug/L	75 - 125	955		30.0	U	1000	96		P
Chromium	ug/L	75 - 125	1930		50.0	U	2000	96		P
Lead	ug/L	75 - 125	4550		25.1	J	5000	90		P
Mercury	ug/L	75 - 125	41.3		2.00	U	40.0	103		CV
Selenium	ug/L	75 - 125	9550		100	U	10000	96		P
Silver	ug/L	75 - 125	349		50.0	U	380	92		P

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MATRIX SPIKE DUPLICATE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q2177

contract: PORT06 **lab code:** CHEM **case no.:** Q2177 **sas no.:** Q2177

matrix: Water **sample id:** Q2185-08 **client id:** TP01-MHA-WCMSD

Percent Solids for Sample: NA **Spiked ID:** Q2185-08MSD **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	3530		100	U	4000	88		P
Barium	ug/L	75 - 125	3000		2770		1000	24	N	P
Cadmium	ug/L	75 - 125	887		30.0	U	1000	89		P
Chromium	ug/L	75 - 125	1800		50.0	U	2000	90		P
Lead	ug/L	75 - 125	4250		25.1	J	5000	85		P
Mercury	ug/L	75 - 125	40.0		2.00	U	40.0	100		CV
Selenium	ug/L	75 - 125	8820		100	U	10000	88		P
Silver	ug/L	75 - 125	323		50.0	U	380	85		P

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Metals
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POST DIGEST SPIKE SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

Matrix: Water **Level:** LOW **Client ID:** TP01-MHB-WCA

Sample ID: Q2185-08 **Spiked ID:** Q2185-08A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Barium	ug/L	75 - 125	3090		2770		1000	32	N	P

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Portal Partners Tri-Venture **Level:** LOW **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

Matrix: Water **Sample ID:** Q2185-08 **Client ID:** TP01-MHB-WCDUP

Percent Solids for Sample: NA **Duplicate ID** Q2185-08DUP **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	2770		1890		38	*	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	25.1	J	60.0	U	200.0		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: Portal Partners Tri-Venture **Level:** LOW **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

Matrix: Water **Sample ID:** Q2185-08MS **Client ID:** TP01-MHA-WCMSD

Percent Solids for Sample: NA **Duplicate ID** Q2185-08MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	3810		3530		8		P
Barium	ug/L	20	3220		3000		7		P
Cadmium	ug/L	20	955		887		7		P
Chromium	ug/L	20	1930		1800		7		P
Lead	ug/L	20	4550		4250		7		P
Mercury	ug/L	20	41.3		40.0		3		CV
Selenium	ug/L	20	9550		8820		8		P
Silver	ug/L	20	349		323		8		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: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB168256BS							
Arsenic	ug/L	4000	3770		94	80 - 120	P
Barium	ug/L	1000	882		88	80 - 120	P
Cadmium	ug/L	1000	949		95	80 - 120	P
Chromium	ug/L	2000	1910		96	80 - 120	P
Lead	ug/L	5000	4640		93	80 - 120	P
Selenium	ug/L	10000	9700		97	80 - 120	P
Silver	ug/L	380	342		90	80 - 120	P

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB168262BS							
Mercury	ug/L	4.0	3.58		90	80 - 120	CV

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

TP01-MHB-WCL

Lab Name: Chemtech Consulting Group **Contract:** PORT06

Lab Code: CHEM **Lb No.:** lb136011 **Lab Sample ID :** Q2185-08L **SDG No.:** Q2177

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	2770		2750		0		P
Cadmium	30.0	U	150	U			P
Chromium	50.0	U	250	U			P
Lead	25.1	J	300	U	100.0		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: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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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ICP INTERELEMENT CORRECTION FACTORS

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q2177 **SAS No.:** Q2177

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: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Method:**

Case No.: Q2177 **SAS No.:** Q2177

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB168256**						
PB168224TB	PB168224TB	MB	WATER	06/03/2025	5.0	25.0	
PB168256BL	PB168256BL	MB	WATER	06/03/2025	5.0	25.0	
PB168256BS	PB168256BS	LCS	WATER	06/03/2025	5.0	25.0	
Q2177-03	B-187-SB01	SAM	WATER	06/03/2025	5.0	25.0	
Q2177-05	B-187-SB02	SAM	WATER	06/03/2025	5.0	25.0	
Q2177-07	B-202-SB01	SAM	WATER	06/03/2025	5.0	25.0	
Q2185-08DUP	TP01-MHB-WCDUP	DUP	WATER	06/03/2025	5.0	25.0	
Q2185-08MS	TP01-MHA-WCMS	MS	WATER	06/03/2025	5.0	25.0	
Q2185-08MSD	TP01-MHA-WCMSD	MSD	WATER	06/03/2025	5.0	25.0	

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Metals
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SAMPLE PREPARATION SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q2177

Contract: PORT06 **Lab Code:** CHEM **Method:**

Case No.: Q2177 **SAS No.:** Q2177

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB168262**						
PB168224TB	PB168224TB	MB	WATER	06/03/2025	3.0	30.0	
PB168262BL	PB168262BL	MB	WATER	06/03/2025	30.0	30.0	
PB168262BS	PB168262BS	LCS	WATER	06/03/2025	30.0	30.0	
Q2177-03	B-187-SB01	SAM	WATER	06/03/2025	3.0	30.0	
Q2177-05	B-187-SB02	SAM	WATER	06/03/2025	3.0	30.0	
Q2177-07	B-202-SB01	SAM	WATER	06/03/2025	3.0	30.0	
Q2185-08DUP	TP01-MHB-WCDUP	DUP	WATER	06/03/2025	3.0	30.0	
Q2185-08MS	TP01-MHA-WCMS	MS	WATER	06/03/2025	3.0	30.0	
Q2185-08MSD	TP01-MHA-WCMSD	MSD	WATER	06/03/2025	3.0	30.0	

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ANALYSIS RUN LOG

Client: Portal Partners Tri-Venture **Contract:** PORT06

Lab code: CHEM **Case no.:** Q2177 **Sas no.:** Q2177 **Sdg no.:** Q2177

Instrument id number: **Method:** **Run number:** LB135995

Start date: 06/04/2025 **End date:** 06/04/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1002	HG
S0.2	S0.2	1	1004	HG
S2.5	S2.5	1	1006	HG
S5	S5	1	1008	HG
S7.5	S7.5	1	1011	HG
S10	S10	1	1013	HG
ICV26	ICV26	1	1025	HG
ICB26	ICB26	1	1030	HG
CCV95	CCV95	1	1032	HG
CCB95	CCB95	1	1034	HG
CRA	CRA	1	1036	HG
PB168262BL	PB168262BL	1	1043	HG
PB168262BS	PB168262BS	1	1048	HG
CCV96	CCV96	1	1102	HG
CCB96	CCB96	1	1104	HG
Q2177-03	B-187-SB01	1	1118	HG
Q2177-05	B-187-SB02	1	1120	HG
Q2177-07	B-202-SB01	1	1122	HG
CCV97	CCV97	1	1129	HG
CCB97	CCB97	1	1131	HG
Q2185-08DUP	TP01-MHB-WCDUP	1	1134	HG
Q2185-08MS	TP01-MHA-WCMS	1	1138	HG
Q2185-08MSD	TP01-MHA-WCMSD	1	1141	HG
PB168224TB	PB168224TB	1	1143	HG
Q2185-08L	TP01-MHB-WCL	5	1145	HG
CCV98	CCV98	1	1153	HG
CCB98	CCB98	1	1155	HG

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metals
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ANALYSIS RUN LOG

Client: Portal Partners Tri-Venture **Contract:** PORT06

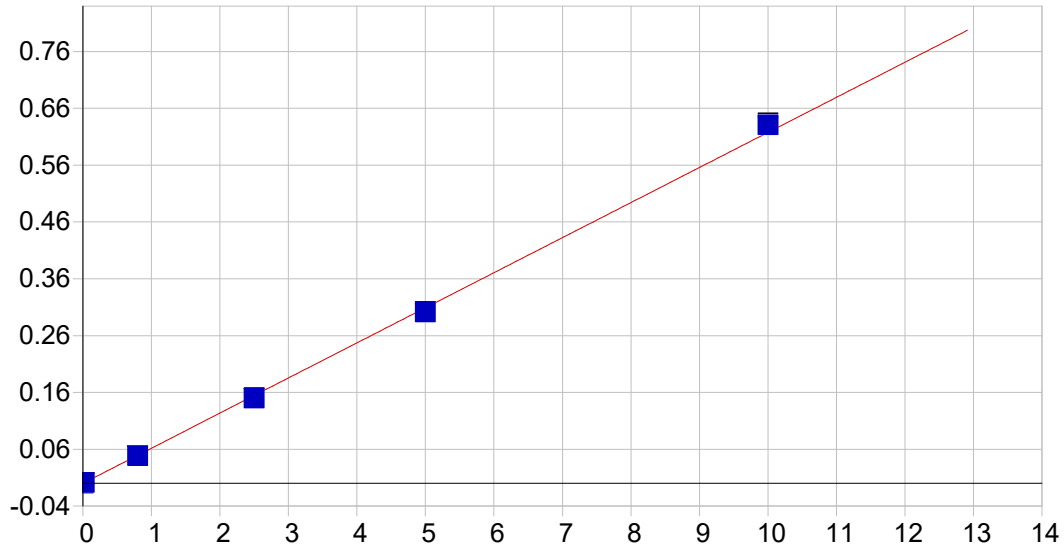
Lab code: CHEM **Case no.:** Q2177 **Sas no.:** Q2177 **Sdg no.:** Q2177

Instrument id number: **Method:** **Run number:** LB136011

Start date: 06/04/2025 **End date:** 06/04/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1418	Ag,As,Ba,Cd,Cr,Pb,Se
S1	S1	1	1423	Ag,As,Ba,Cd,Cr,Pb,Se
S2	S2	1	1427	Ag,As,Ba,Cd,Cr,Pb,Se
S3	S3	1	1431	Ag,As,Ba,Cd,Cr,Pb,Se
S4	S4	1	1435	Ag,As,Ba,Cd,Cr,Pb,Se
S5	S5	1	1439	Ag,As,Ba,Cd,Cr,Pb,Se
ICV01	ICV01	1	1549	Ag,As,Ba,Cd,Cr,Pb,Se
LLICV01	LLICV01	1	1606	Ag,As,Ba,Cd,Cr,Pb,Se
ICB01	ICB01	1	1610	Ag,As,Ba,Cd,Cr,Pb,Se
CRI01	CRI01	1	1615	Ag,As,Ba,Cd,Cr,Pb,Se
ICSA01	ICSA01	1	1626	Ag,As,Ba,Cd,Cr,Pb,Se
ICSAB01	ICSAB01	1	1632	Ag,As,Ba,Cd,Cr,Pb,Se
CCV01	CCV01	1	1645	Ag,As,Ba,Cd,Cr,Pb,Se
CCB01	CCB01	1	1652	Ag,As,Ba,Cd,Cr,Pb,Se
CCV02	CCV02	1	1735	Ag,As,Ba,Cd,Cr,Pb,Se
CCB02	CCB02	1	1739	Ag,As,Ba,Cd,Cr,Pb,Se
PB168224TB	PB168224TB	1	1805	Ag,As,Ba,Cd,Cr,Pb,Se
Q2177-03	B-187-SB01	1	1823	Ag,As,Ba,Cd,Cr,Pb,Se
CCV03	CCV03	1	1837	Ag,As,Ba,Cd,Cr,Pb,Se
CCB03	CCB03	1	1842	Ag,As,Ba,Cd,Cr,Pb,Se
Q2177-05	B-187-SB02	1	1847	Ag,As,Ba,Cd,Cr,Pb,Se
Q2177-07	B-202-SB01	1	1851	Ag,As,Ba,Cd,Cr,Pb,Se
Q2185-08DUP	TP01-MHB-WCDUP	1	1904	Ag,As,Ba,Cd,Cr,Pb,Se
Q2185-08L	TP01-MHB-WCL	5	1909	Ag,As,Ba,Cd,Cr,Pb,Se
Q2185-08MS	TP01-MHA-WCMS	1	1913	Ag,As,Ba,Cd,Cr,Pb,Se
Q2185-08MSD	TP01-MHA-WCMSD	1	1917	Ag,As,Ba,Cd,Cr,Pb,Se
Q2185-08A	TP01-MHB-WCA	1	1922	Ba
CCV04	CCV04	1	1926	Ag,As,Ba,Cd,Cr,Pb,Se
CCB04	CCB04	1	1930	Ag,As,Ba,Cd,Cr,Pb,Se
PB168256BL	PB168256BL	1	1934	Ag,As,Ba,Cd,Cr,Pb,Se
PB168256BS	PB168256BS	1	1939	Ag,As,Ba,Cd,Cr,Pb,Se
CCV05	CCV05	1	2012	Ag,As,Ba,Cd,Cr,Pb,Se
CCB05	CCB05	1	2016	Ag,As,Ba,Cd,Cr,Pb,Se
CCV06	CCV06	1	2058	Ag,As,Ba,Cd,Cr,Pb,Se
CCB06	CCB06	1	2102	Ag,As,Ba,Cd,Cr,Pb,Se
CCV07	CCV07	1	2141	Ag,As,Ba,Cd,Cr,Pb,Se
CCB07	CCB07	1	2145	Ag,As,Ba,Cd,Cr,Pb,Se
CCV08	CCV08	1	2206	Ag,As,Ba,Cd,Cr,Pb,Se
CCB08	CCB08	1	2210	Ag,As,Ba,Cd,Cr,Pb,Se

METAL
RAW DATA



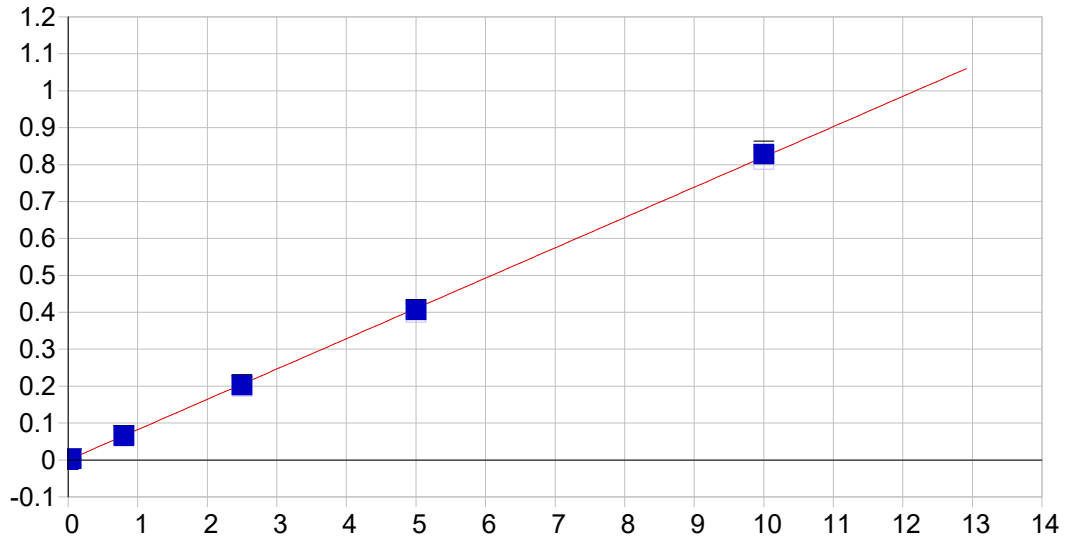
As 189.042 {479}

Date of Fit:	6/4/2025 14:43:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000034	Re-Slope:	1.000000
A1 (Gain):	0.061776	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999716	Status:	OK.
Std Error of Est:	0.000034		
Predicted MDL:	0.002438		
Predicted MQL:	0.008126		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00003	.000	1
S1	.02000	.01915	-.001	-4.26	.00114	.000	1
S3	2.5000	2.4228	-.077	-3.09	.14947	.001	1
S4	5.0000	4.8774	-.123	-2.45	.30094	.001	1
S5	10.000	10.216	.216	2.16	.63040	.003	1
S2	.80000	.78471	-.015	-1.91	.04839	.000	1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

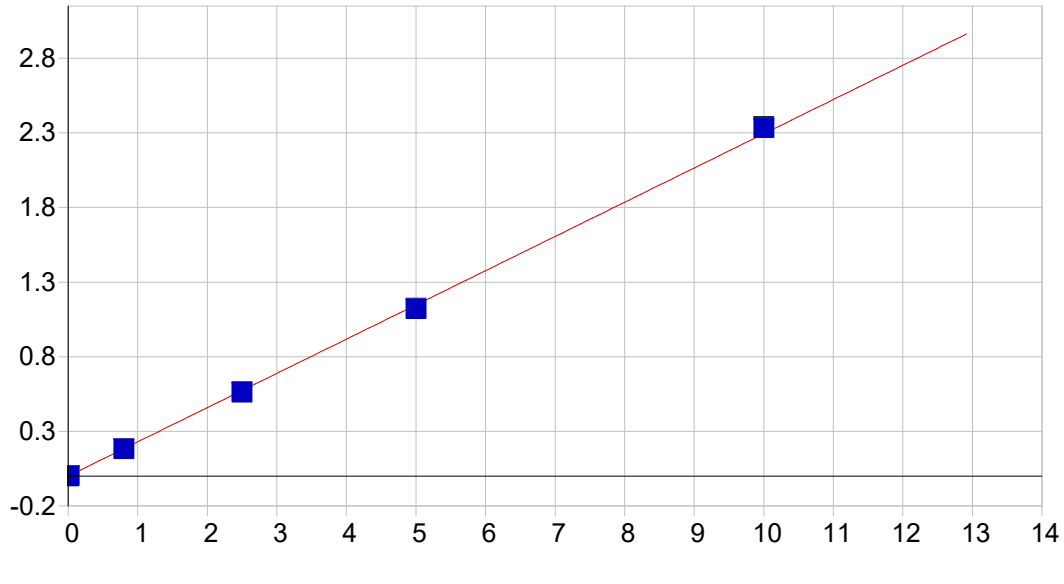


Tl 190.856 {477}

Date of Fit:	6/4/2025 14:43:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000175	Re-Slope:	1.000000
A1 (Gain):	0.082053	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999946	Status:	OK.
Std Error of Est:	0.000028		
Predicted MDL:	0.001805		
Predicted MQL:	0.006016		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00018	.000	1
S1	.04000	.03883	-.001	-2.93	.00315	.000	1
S3	2.5000	2.4648	-.035	-1.41	.19865	.002	1
S4	5.0000	4.9502	-.050	-.996	.39882	.001	1
S5	10.000	10.091	.091	.915	.81314	.008	1
S2	.80000	.79459	-.005	-.676	.06417	.000	1

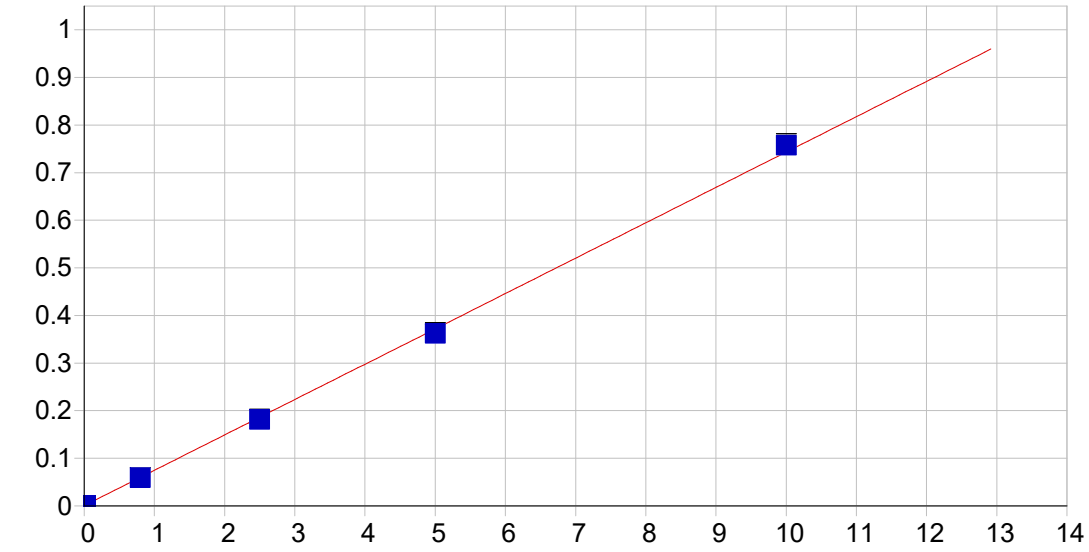


Pb 220.353 {453}

Date of Fit:	6/4/2025 14:43:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.229416	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999814	Status:	OK.
Std Error of Est:	0.000080		
Predicted MDL:	0.001545		
Predicted MQL:	0.005149		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00000	.000	1
S1	.01200	.01159	-.000	-3.38	.00261	.000	1
S3	2.5000	2.4435	-.056	-2.26	.55999	.002	1
S4	5.0000	4.8915	-.109	-2.17	1.1210	.003	1
S5	10.000	10.175	.175	1.75	2.3319	.008	1
S2	.80000	.79060	-.009	-1.17	.18119	.001	1

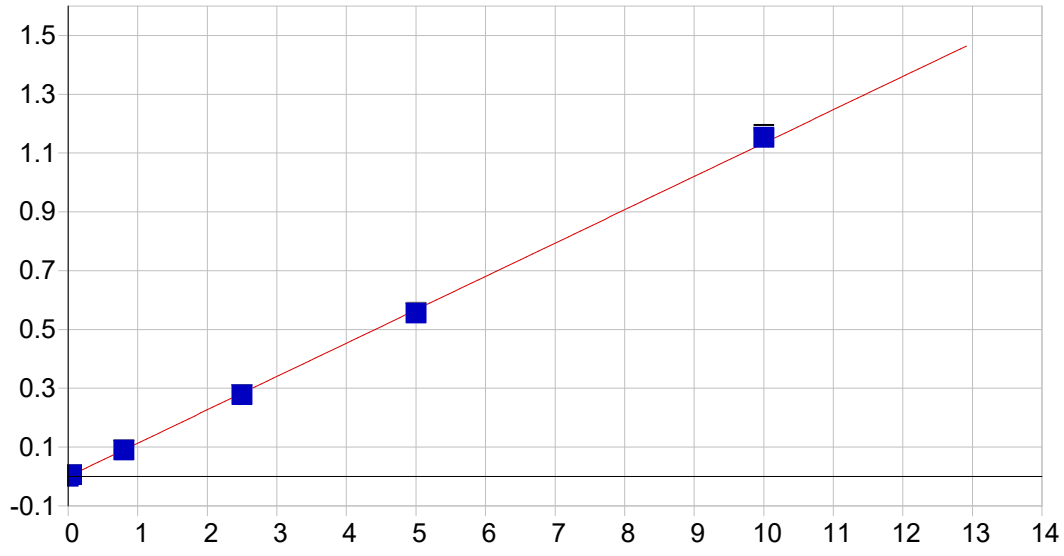


Se 196.090 {472}

Date of Fit:	6/4/2025 14:43:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000530	Re-Slope:	1.000000
A1 (Gain):	0.074273	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999772	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.003918		
Predicted MQL:	0.013060		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00053	.000	1
S1	.02000	.02020	.000	.989	.00203	.000	1
S3	2.5000	2.4404	-.060	-2.38	.18172	.000	1
S4	5.0000	4.8746	-.125	-2.51	.36244	.002	1
S5	10.000	10.192	.192	1.92	.75727	.003	1
S2	.80000	.79230	-.008	-.963	.05935	.000	1



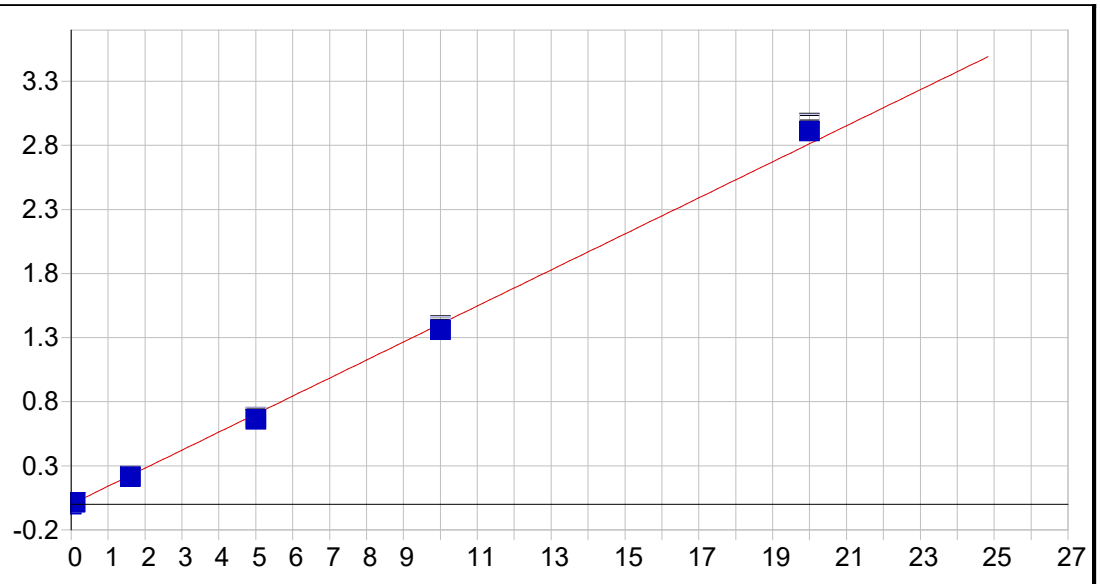
Sb 206.833 {463}

Date of Fit:	6/4/2025 14:43:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000013	Re-Slope:	1.000000
A1 (Gain):	0.113390	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999828	Status:	OK.
Std Error of Est:	0.000078		
Predicted MDL:	0.002334		
Predicted MQL:	0.007779		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00001	.000	1
S1	.05000	.05169	.002	3.37	.00586	.000	1
S3	2.5000	2.4452	-.055	-2.19	.27802	.001	1
S4	5.0000	4.8951	-.105	-2.10	.55658	.002	1
S5	10.000	10.167	.167	1.67	1.1559	.007	1
S2	.80000	.79105	-.009	-1.12	.08993	.001	1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

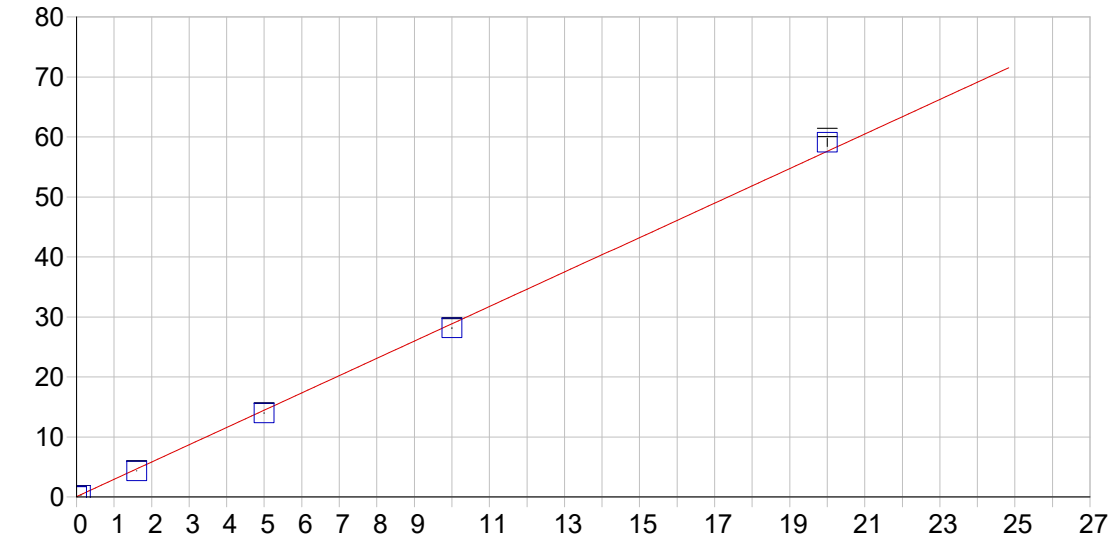


Al 396.152 { 85}

Date of Fit:	6/4/2025 14:43:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000401	Re-Slope:	1.000000
A1 (Gain):	0.140613	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999267	Status:	OK.
Std Error of Est:	0.000407		
Predicted MDL:	0.006375		
Predicted MQL:	0.021249		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00040	.000	1
S1	.10000	.09604	-.004	-3.96	.01500	.000	1
S3	5.0000	4.7077	-.292	-5.85	.67601	.002	1
S4	10.000	9.6783	-.322	-3.22	1.3886	.003	1
S5	20.000	20.699	.699	3.49	2.9654	.009	1
S2	1.6000	1.5197	-.080	-5.02	.21845	.002	1



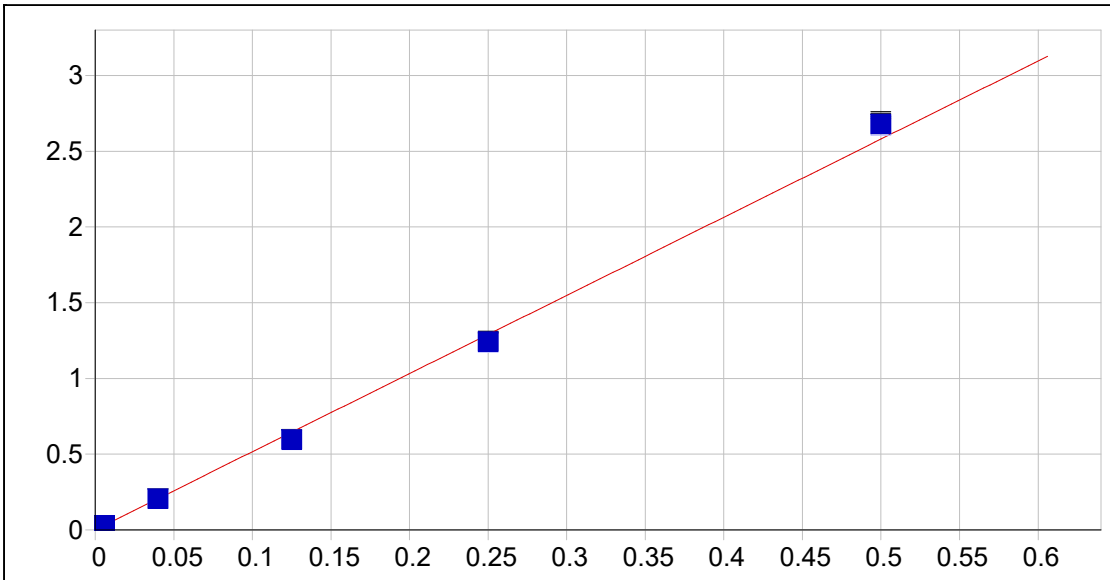
Ba 493.409 { 68}

Date of Fit:	6/4/2025 14:43:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.054705	Re-Slope:	1.000000
A1 (Gain):	2.878021	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999561	Status:	OK.
Std Error of Est:	0.006328		
Predicted MDL:	0.000916		
Predicted MQL:	0.003054		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.05475	.001	1
S1	.10000	.09381	-.006	-6.19	.32470	.006	1
S3	5.0000	4.8383	-.162	-3.23	13.979	.041	1
S4	10.000	9.7598	-.240	-2.40	28.144	.081	1
S5	20.000	20.518	.518	2.59	59.105	.702	1
S2	1.6000	1.4905	-.109	-6.84	4.3445	.020	1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

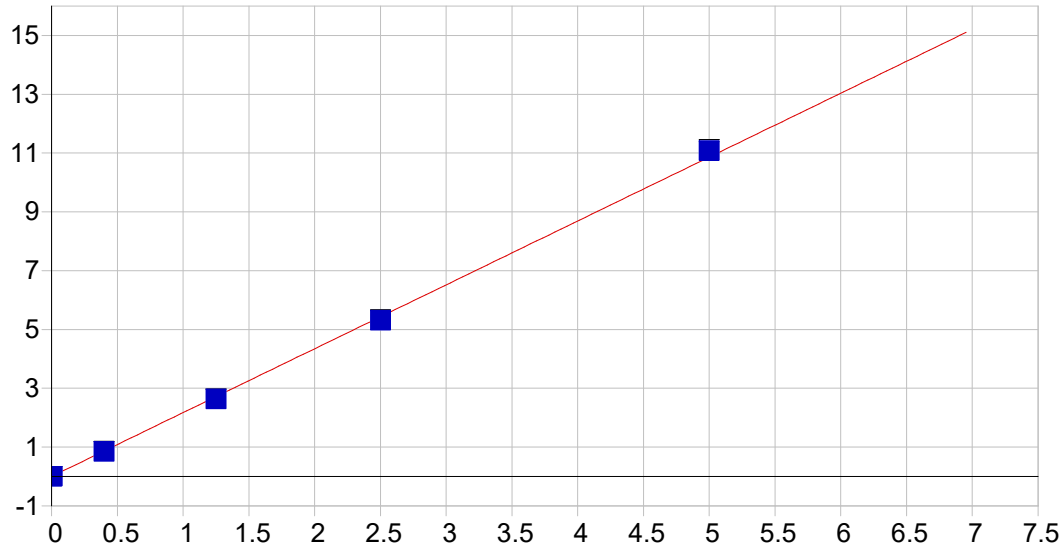


Be 234.861 {144}

Date of Fit:	6/4/2025 14:43:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000236	Re-Slope:	1.000000
A1 (Gain):	5.159413	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999007	Status:	OK.
Std Error of Est:	0.000659		
Predicted MDL:	0.000053		
Predicted MQL:	0.000177		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00024	.000	1
S1	.00600	.00594	-.000	-1.05	.03064	.001	1
S3	.12500	.11548	-.010	-7.62	.59314	.002	1
S4	.25000	.24061	-.009	-3.76	1.2358	.004	1
S5	.50000	.51917	.019	3.83	2.6673	.018	1
S2	.04000	.03981	-.000	-.473	.20471	.001	1



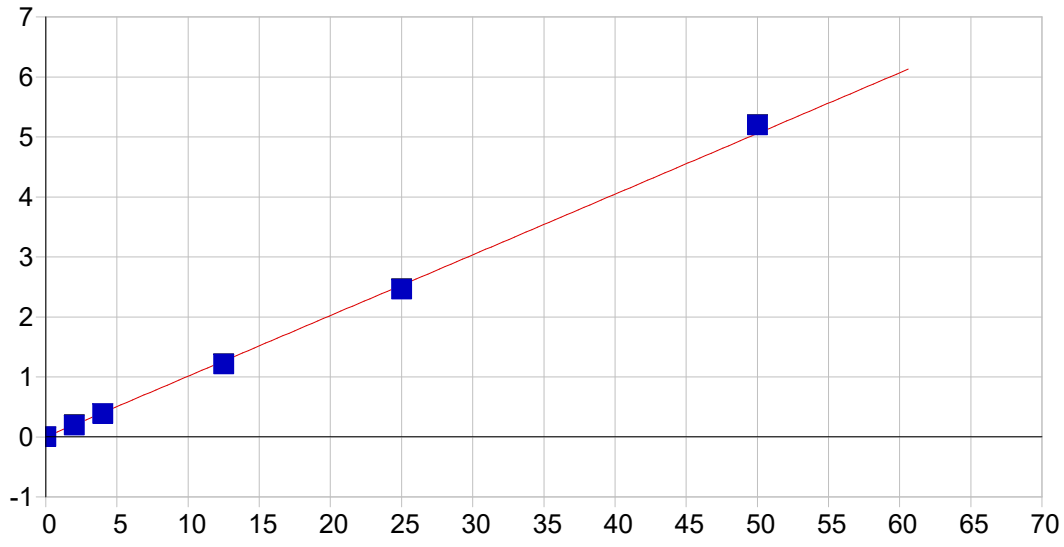
Cd 226.502 {449}

Date of Fit:	6/4/2025 14:43:52	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000097	Re-Slope:	1.000000
A1 (Gain):	2.172638	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999751	Status:	OK.
Std Error of Est:	0.000440		
Predicted MDL:	0.000104		
Predicted MQL:	0.000346		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00010	.000	1
S1	.00600	.00612	.000	1.97	.01345	.000	1
S3	1.2500	1.2122	-.038	-3.02	2.6359	.008	1
S4	2.5000	2.4435	-.057	-2.26	5.3132	.018	1
S5	5.0000	5.1009	.101	2.02	11.091	.037	1
S2	.40000	.39326	-.007	-1.69	.85519	.001	1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

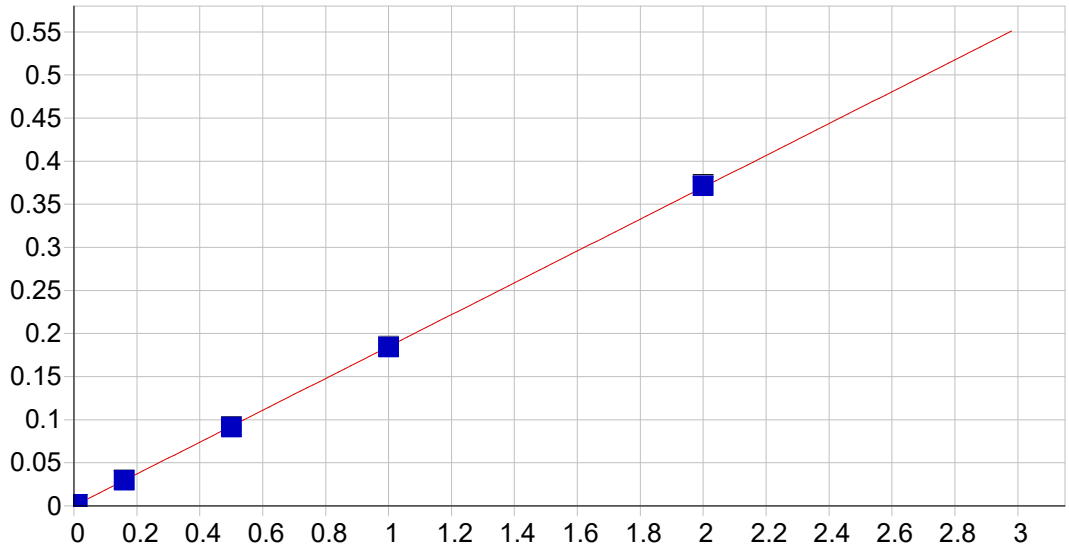


Ca 373.690 { 90}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000022	Re-Slope:	1.000000
A1 (Gain):	0.101139	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999536	Status:	OK.
Std Error of Est:	0.001630		
Predicted MDL:	0.006870		
Predicted MQL:	0.022900		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00022	.000	.000	.00000	.000	1
S2	4.0000	3.8293	-.171	-4.27	.38728	.001	1
S3	12.500	12.004	-.496	-3.97	1.2141	.001	1
S4	25.000	24.317	-.683	-2.73	2.4594	.007	1
S5	50.000	51.405	1.41	2.81	5.1991	.003	1
S1	2.0000	1.9438	-.056	-2.81	.19657	.003	1



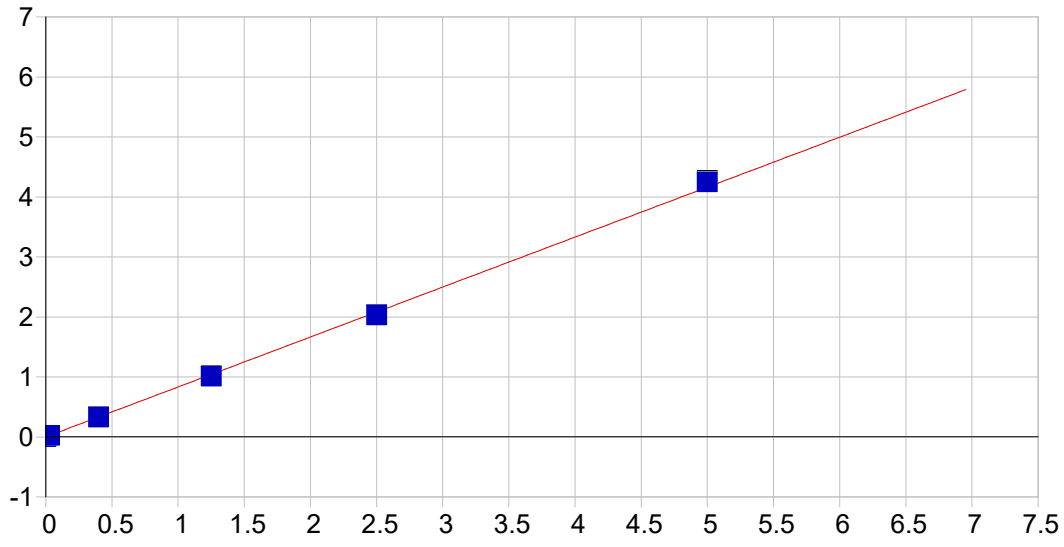
Cr 267.716 {126}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000071	Re-Slope:	1.000000
A1 (Gain):	0.184832	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999983	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	0.000438		
Predicted MQL:	0.001461		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00007	.000	1
S1	.01000	.01019	.000	1.88	.00196	.000	1
S3	.50000	.49415	-.006	-1.17	.09148	.000	1
S4	1.0000	.99649	-.004	-.351	.18440	.001	1
S5	2.0000	2.0086	.009	.431	.37162	.001	1
S2	.16000	.16055	.001	.346	.02977	.000	1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011



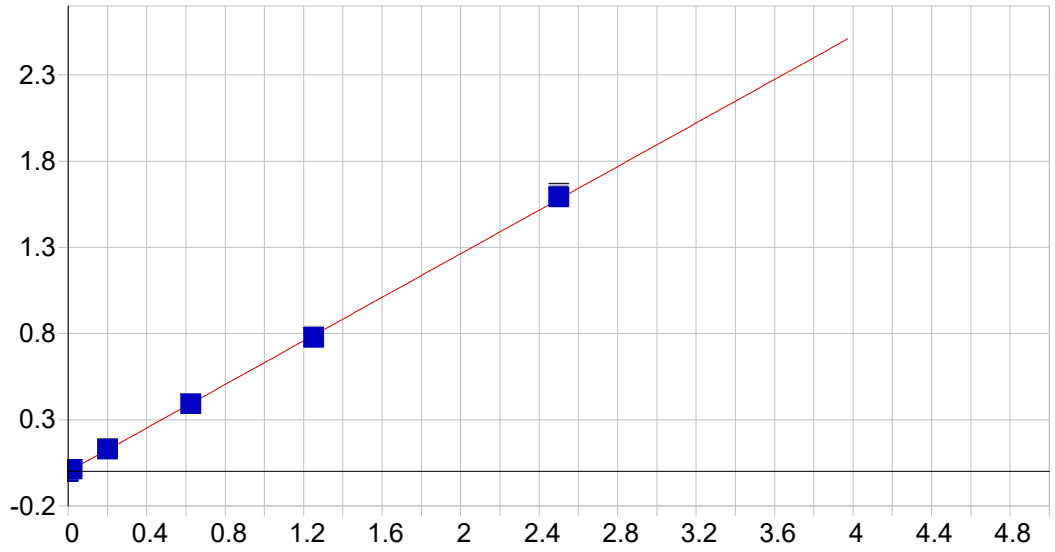
Co 228.616 {448}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000079	Re-Slope:	1.000000
A1 (Gain):	0.832452	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999737	Status:	OK.
Std Error of Est:	0.000389		
Predicted MDL:	0.000296		
Predicted MQL:	0.000986		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00008	.000	1
S1	.03000	.02963	-.000	-1.22	.02464	.000	1
S3	1.2500	1.2135	-.037	-2.92	1.0120	.002	1
S4	2.5000	2.4395	-.061	-2.42	2.0343	.008	1
S5	5.0000	5.1046	.105	2.09	4.2565	.017	1
S2	.40000	.39283	-.007	-1.79	.32765	.000	1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011



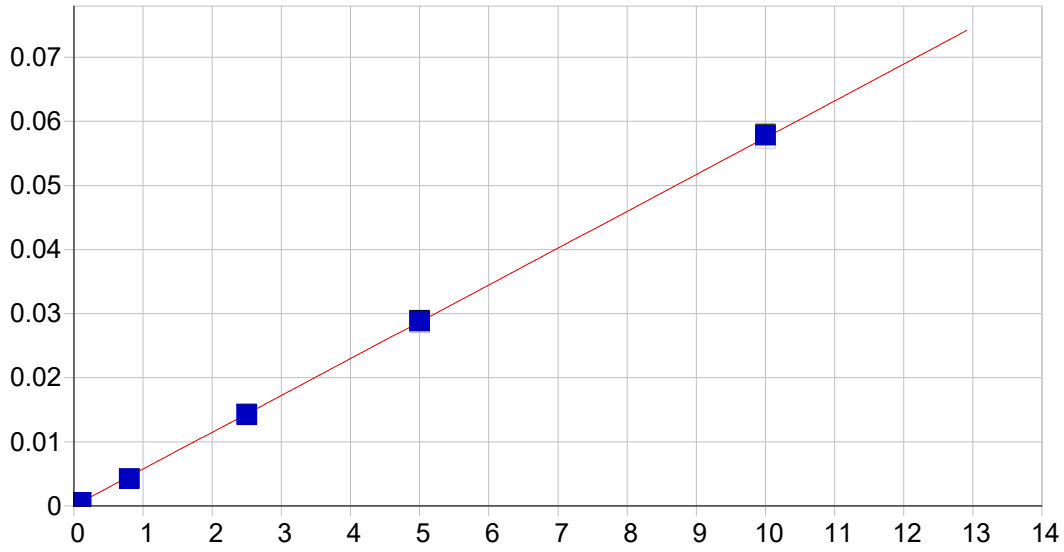
Cu 224.700 {450}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000697	Re-Slope:	1.000000
A1 (Gain):	0.631941	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999917	Status:	OK.
Std Error of Est:	0.000096		
Predicted MDL:	0.000475		
Predicted MQL:	0.001582		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00070	.000	1
S1	.02000	.02160	.002	8.01	.01308	.000	1
S3	.62500	.62043	-.005	-.731	.39426	.000	1
S4	1.2500	1.2287	-.021	-1.71	.78150	.003	1
S5	2.5000	2.5201	.020	.804	1.6034	.010	1
S2	.20000	.20420	.004	2.10	.12927	.001	1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011



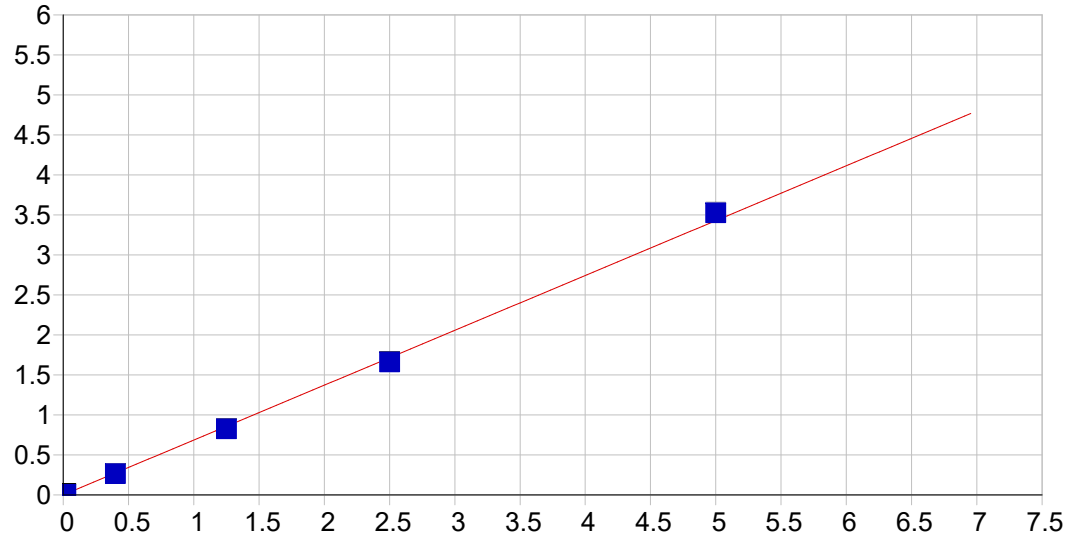
Fe 240.488 {140}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000009	Re-Slope:	1.000000
A1 (Gain):	0.005744	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999861	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	0.004846		
Predicted MQL:	0.016153		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00001	.000	1
S1	.10000	.10266	.003	2.66	.00059	.000	1
S3	2.5000	2.4804	-.020	-.786	.01413	.000	1
S4	5.0000	5.0128	.013	.257	.02856	.000	1
S5	10.000	10.063	.063	.633	.05732	.000	1
S2	.80000	.74085	-.059	-7.39	.00423	.000	1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011



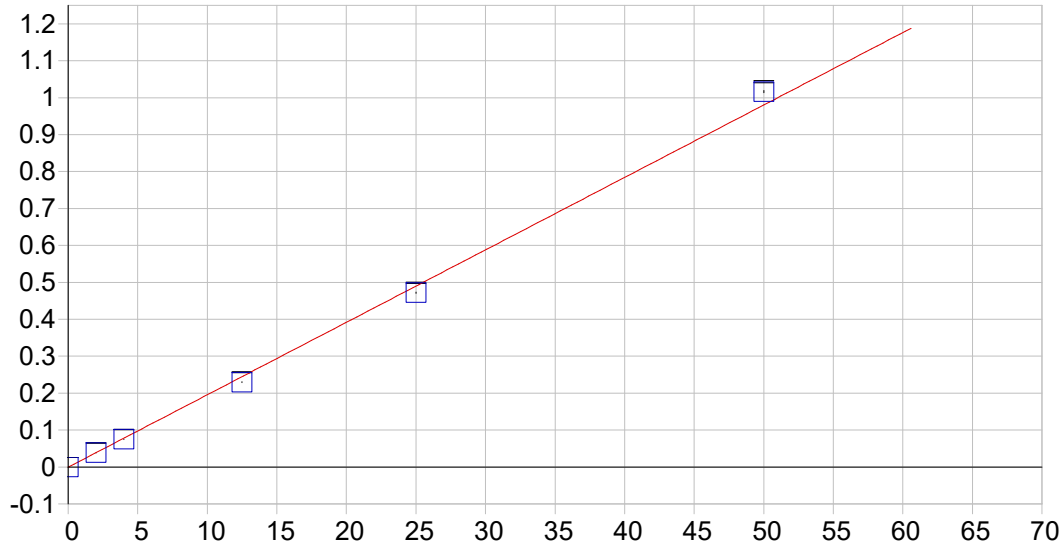
Mn 257.610 {131}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000409	Re-Slope:	1.000000
A1 (Gain):	0.685740	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999520	Status:	OK.
Std Error of Est:	0.000352		
Predicted MDL:	0.000339		
Predicted MQL:	0.001131		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00041	.000	1
S1	.02000	.01971	-.000	-1.45	.01393	.001	1
S3	1.2500	1.2016	-.048	-3.87	.82457	.001	1
S4	2.5000	2.4218	-.078	-3.13	1.6615	.005	1
S5	5.0000	5.1410	.141	2.82	3.5265	.007	1
S2	.40000	.38585	-.014	-3.54	.26506	.002	1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011



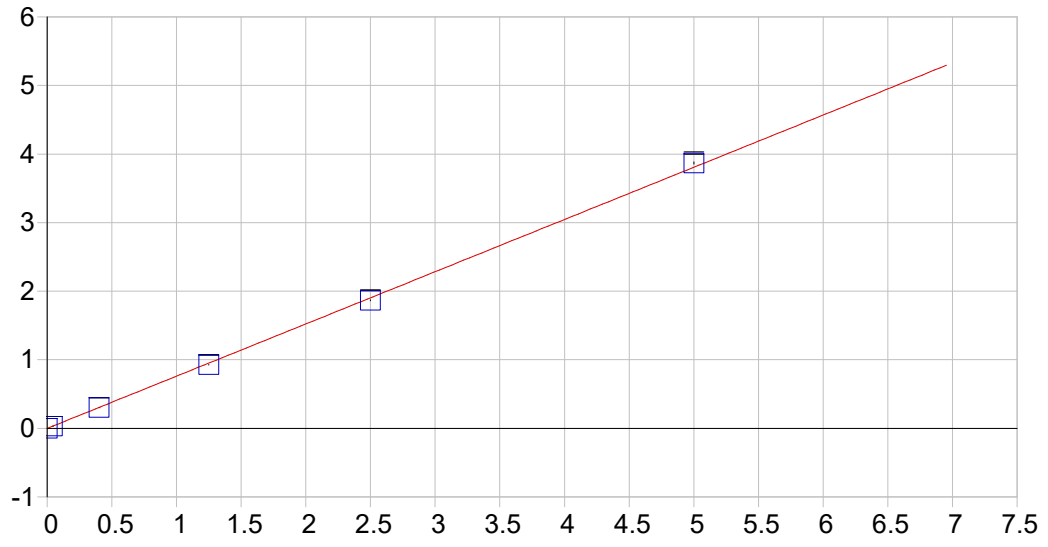
Mg 279.079 {121}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000618	Re-Slope:	1.000000
A1 (Gain):	0.019616	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999173	Status:	OK.
Std Error of Est:	0.000422		
Predicted MDL:	0.016104		
Predicted MQL:	0.053681		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00022	.000	.000	-.00061	.000	1
S2	4.0000	3.8348	-.165	-4.13	.07461	.000	1
S3	12.500	11.740	-.760	-6.08	.22967	.001	1
S4	25.000	24.090	-.910	-3.64	.47194	.002	1
S5	50.000	51.849	1.85	3.70	1.0165	.003	1
S1	2.0000	1.9861	-.014	-.697	.03834	.001	1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

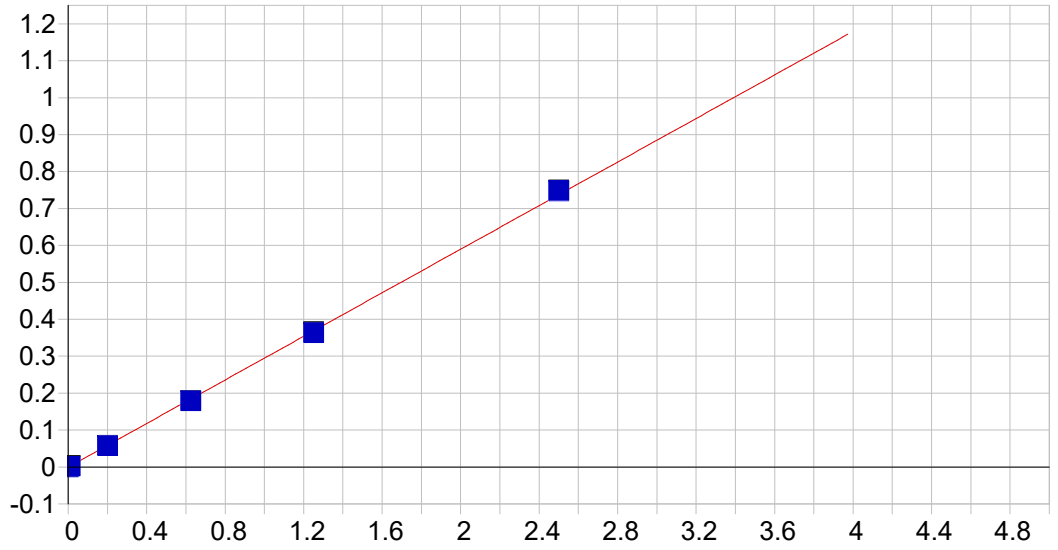


Ni 231.604 {446}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000528	Re-Slope:	1.000000
A1 (Gain):	0.761530	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999833	Status:	OK.
Std Error of Est:	0.000326		
Predicted MDL:	0.000318		
Predicted MQL:	0.001059		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00053	.000	1
S1	.04000	.04070	.001	1.75	.03047	.000	1
S3	1.2500	1.2188	-.031	-2.49	.92765	.004	1
S4	2.5000	2.4518	-.048	-1.93	1.8666	.007	1
S5	5.0000	5.0814	.081	1.63	3.8691	.015	1
S2	.40000	.39728	-.003	-.679	.30202	.001	1

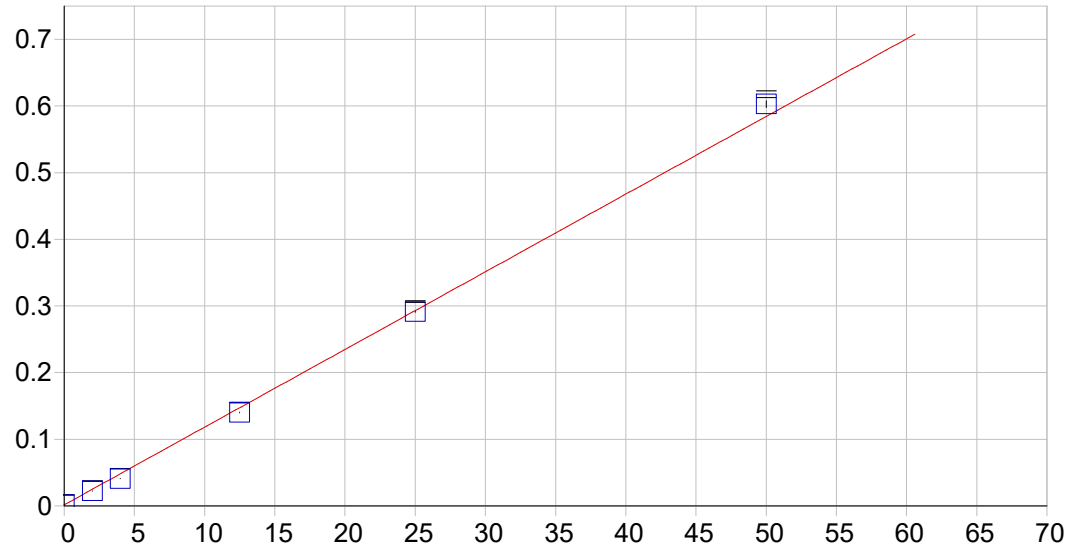


Ag 328.068 {103}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000255	Re-Slope:	1.000000
A1 (Gain):	0.294958	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999854	Status:	OK.
Std Error of Est:	0.000042		
Predicted MDL:	0.000446		
Predicted MQL:	0.001485		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00026	.000	1
S1	.01000	.00979	-.000	-2.11	.00261	.000	1
S3	.62500	.60631	-.019	-2.99	.17776	.000	1
S4	1.2500	1.2347	-.015	-1.22	.36230	.002	1
S5	2.5000	2.5368	.037	1.47	.74472	.002	1
S2	.20000	.19733	-.003	-1.34	.05769	.000	1

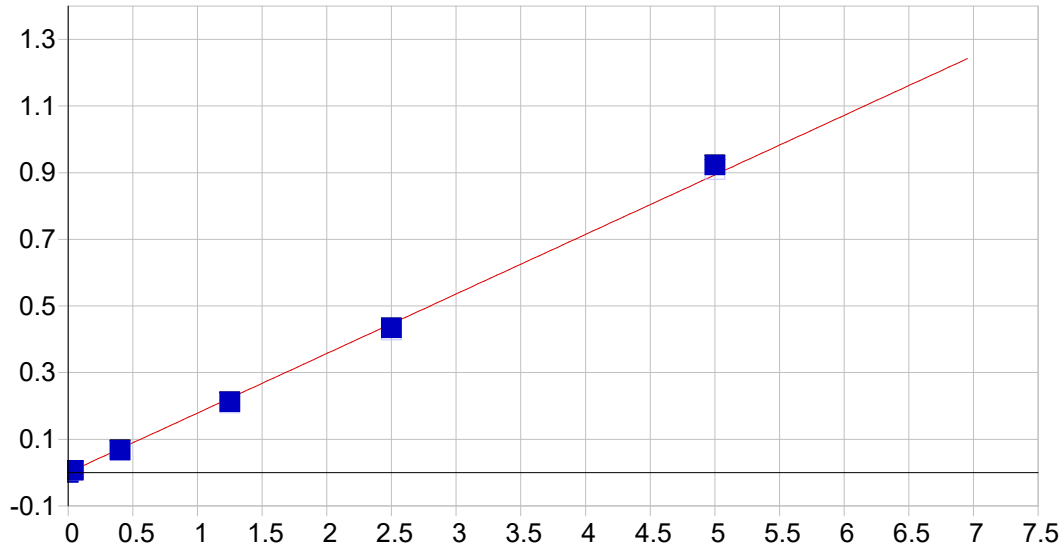


Na 589.592 { 57}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001696	Re-Slope:	1.000000
A1 (Gain):	0.011653	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998898	Status:	OK.
Std Error of Est:	0.000290		
Predicted MDL:	0.020469		
Predicted MQL:	0.068230		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00058	.001	.000	.00170	.000	1
S2	4.0000	3.3732	-.627	-15.7	.04100	.000	1
S3	12.500	11.878	-.622	-4.97	.14011	.001	1
S4	25.000	24.879	-.121	-.485	.29161	.001	1
S5	50.000	51.595	1.60	3.19	.60293	.005	1
S1	2.0000	1.7743	-.226	-11.3	.02237	.000	1



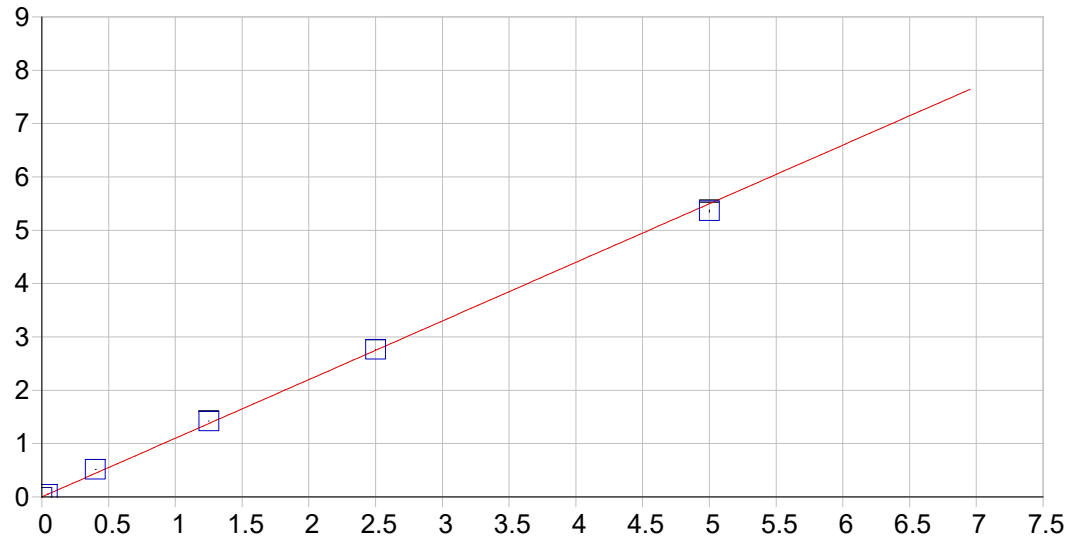
V 292.402 {115}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000030	Re-Slope:	1.000000
A1 (Gain):	0.178664	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999300	Status:	OK.
Std Error of Est:	0.000155		
Predicted MDL:	0.001936		
Predicted MQL:	0.006453		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00003	.000	1
S1	.04000	.03860	-.001	-3.51	.00666	.000	1
S3	1.2500	1.1844	-.066	-5.25	.20838	.001	1
S4	2.5000	2.4259	-.074	-2.96	.42694	.001	1
S5	5.0000	5.1647	.165	3.29	.90974	.000	1
S2	.40000	.37644	-.024	-5.89	.06624	.000	1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

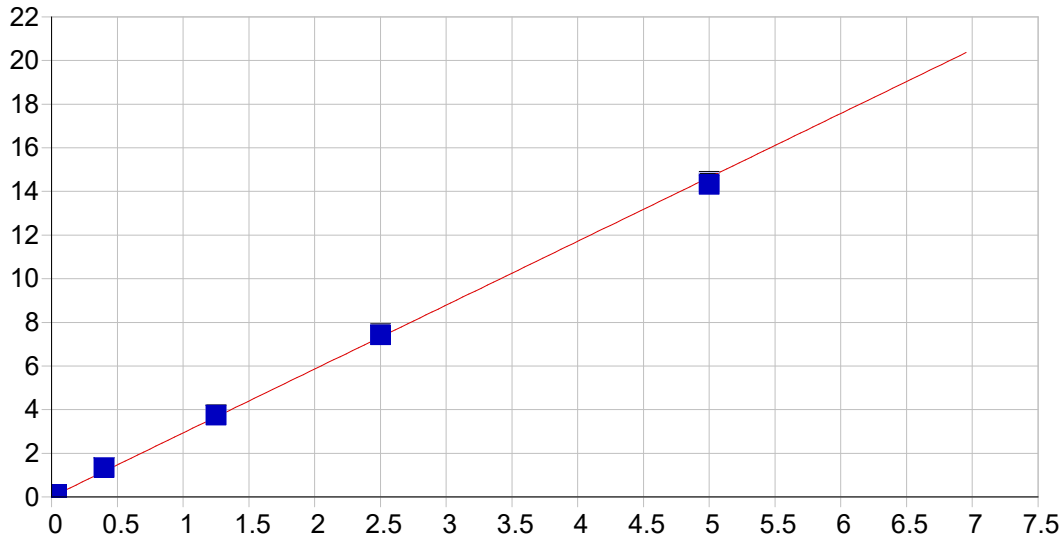


Zn 206.200 {464}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000960	Re-Slope:	1.000000
A1 (Gain):	1.099200	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999130	Status:	OK.
Std Error of Est:	0.001077		
Predicted MDL:	0.000186		
Predicted MQL:	0.000622		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00095	.000	1
S1	.04000	.04173	.002	4.32	.04683	.000	1
S3	1.2500	1.2915	.041	3.32	1.4206	.004	1
S4	2.5000	2.5129	.013	.514	2.7631	.004	1
S5	5.0000	4.8763	-.124	-2.47	5.3610	.019	1
S2	.40000	.46761	.068	16.9	.51496	.001	1



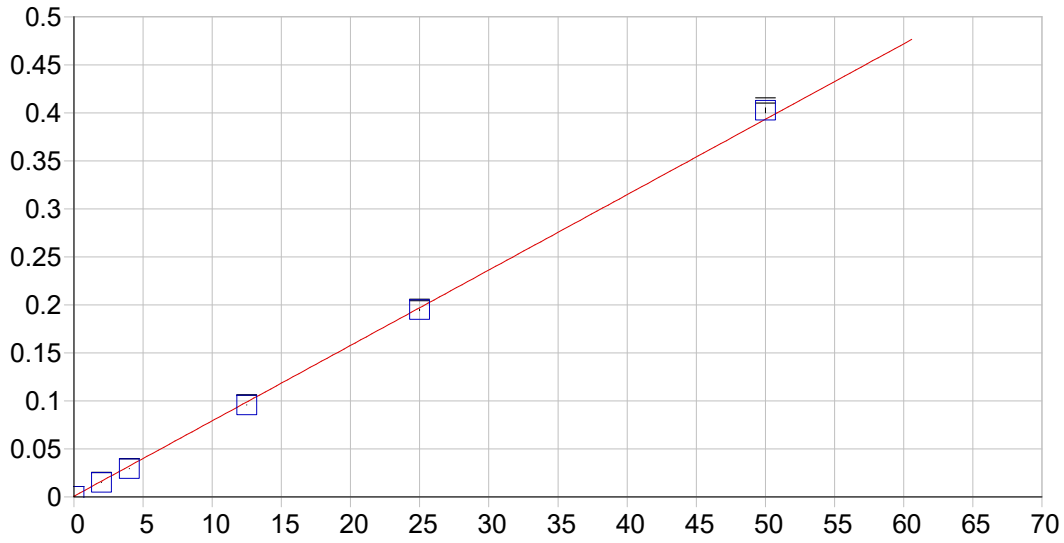
Zn 213.856 {158}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003234	Re-Slope:	1.000000
A1 (Gain):	2.928441	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999414	Status:	OK.
Std Error of Est:	0.002370		
Predicted MDL:	0.000315		
Predicted MQL:	0.001052		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00321	.000	1
S1	.04000	.04073	.001	1.83	.12333	.000	1
S3	1.2500	1.2747	.025	1.98	3.7617	.011	1
S4	2.5000	2.5307	.031	1.23	7.4653	.034	1
S5	5.0000	4.8887	-.111	-2.23	14.421	.039	1
S2	.40000	.45505	.055	13.8	1.3440	.004	1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

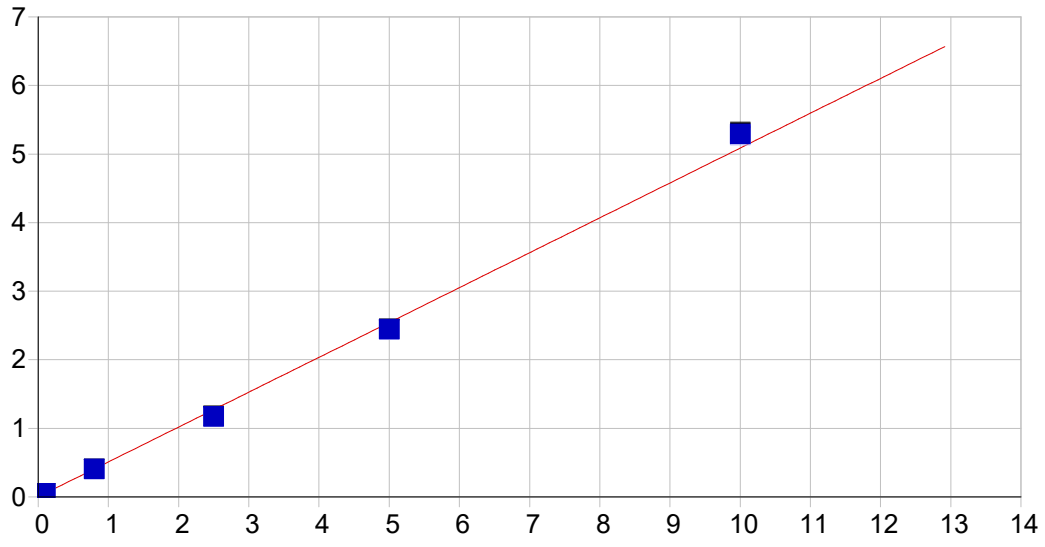


K 766.490 { 44}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000727	Re-Slope:	1.000000
A1 (Gain):	0.007852	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999534	Status:	OK.
Std Error of Est:	0.000127		
Predicted MDL:	0.038698		
Predicted MQL:	0.128995		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00037	.000	.000	.00073	.000	1
S2	4.0000	3.6557	-.344	-8.61	.02943	.000	1
S3	12.500	12.098	-.402	-3.22	.09572	.000	1
S4	25.000	24.724	-.276	-1.10	.19486	.001	1
S5	50.000	51.186	1.19	2.37	.40264	.003	1
S1	2.0000	1.8362	-.164	-8.19	.01514	.000	1



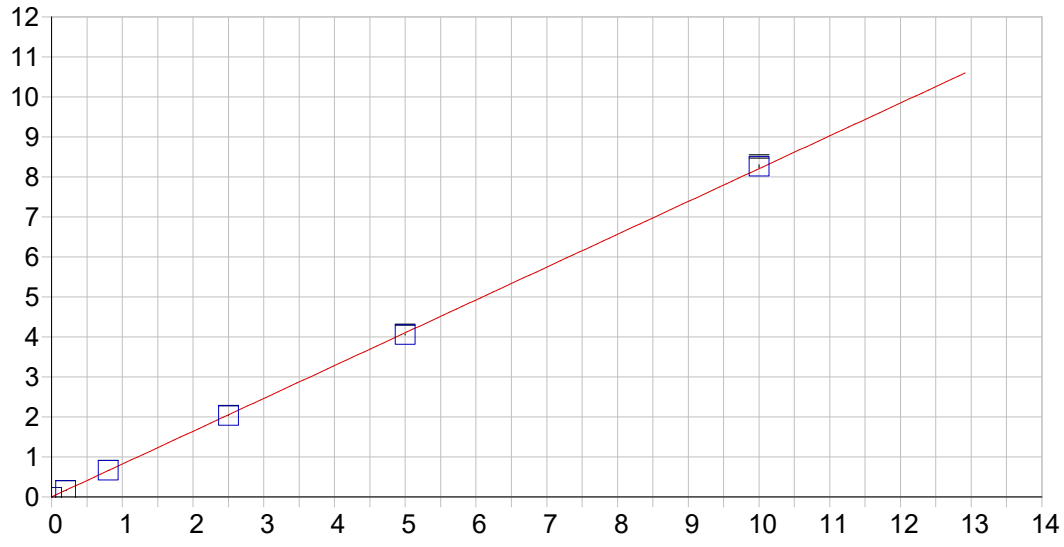
B 249.678 {135}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001369	Re-Slope:	1.000000
A1 (Gain):	0.508497	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998915	Status:	OK.
Std Error of Est:	0.001240		
Predicted MDL:	0.000742		
Predicted MQL:	0.002473		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00138	.000	1
S1	.10000	.09574	-.004	-4.26	.04975	.001	1
S3	2.5000	2.3039	-.196	-7.85	1.1683	.006	1
S4	5.0000	4.8021	-.198	-3.96	2.4341	.009	1
S5	10.000	10.403	.403	4.03	5.2730	.030	1
S2	.80000	.79503	-.005	-.621	.40418	.003	1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

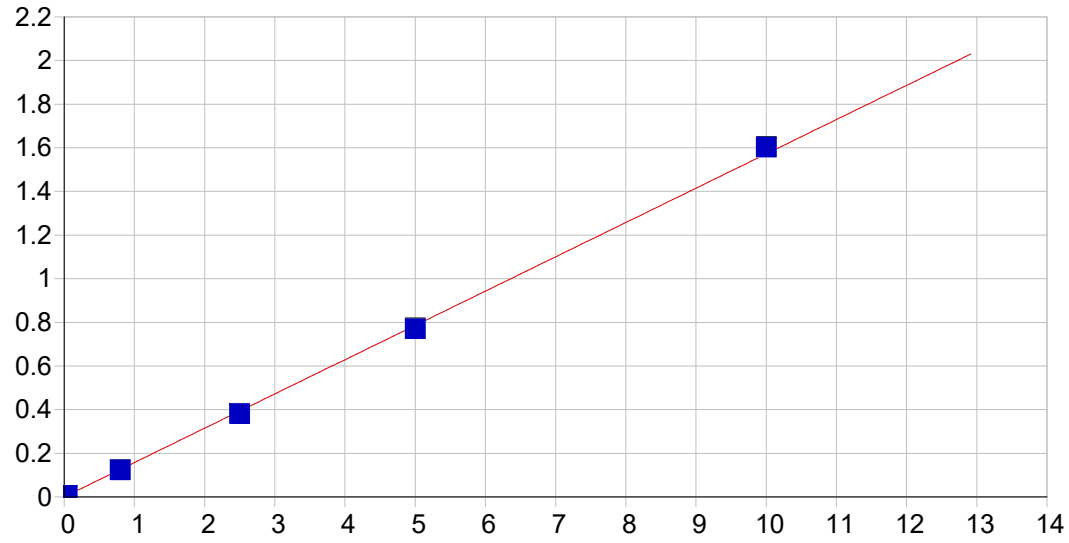


Mo 202.030 {467}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000281	Re-Slope:	1.000000
A1 (Gain):	0.820593	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999958	Status:	OK.
Std Error of Est:	0.000557		
Predicted MDL:	0.000264		
Predicted MQL:	0.000879		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00029	.000	1
S1	.20000	.19451	-.005	-2.75	.15989	.001	1
S3	2.5000	2.4799	-.020	-.803	2.0353	.005	1
S4	5.0000	4.9446	-.055	-1.11	4.0578	.012	1
S5	10.000	10.073	.073	.726	8.2658	.042	1
S2	.80000	.80834	.008	1.04	.66360	.001	1

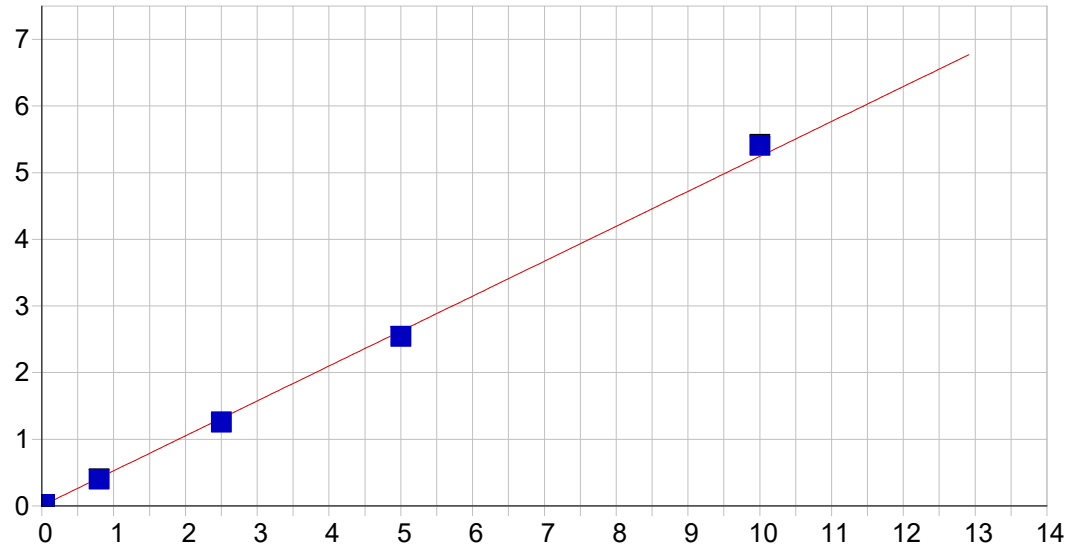


Sn 189.989 {478}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000467	Re-Slope:	1.000000
A1 (Gain):	0.157149	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999771	Status:	OK.
Std Error of Est:	0.000111		
Predicted MDL:	0.000736		
Predicted MQL:	0.002452		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00047	.000	1
S1	.04000	.03883	-.001	-2.92	.00656	.000	1
S3	2.5000	2.4259	-.074	-2.96	.38129	.001	1
S4	5.0000	4.9006	-.099	-1.99	.76979	.003	1
S5	10.000	10.193	.193	1.93	1.6007	.003	1
S2	.80000	.78128	-.019	-2.34	.12312	.000	1

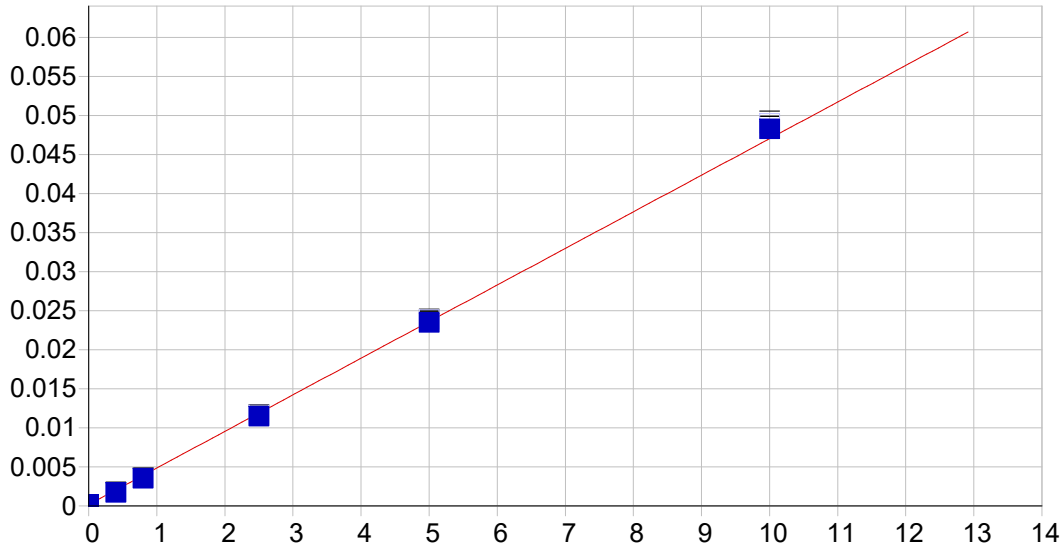


Ti 336.121 {100}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002774	Re-Slope:	1.000000
A1 (Gain):	0.524137	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999403	Status:	OK.
Std Error of Est:	0.000600		
Predicted MDL:	0.000748		
Predicted MQL:	0.002492		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00278	.000	1
S1	.04000	.03706	-.003	-7.34	.02219	.001	1
S3	2.5000	2.3894	-.111	-4.42	1.2547	.002	1
S4	5.0000	4.8433	-.157	-3.13	2.5404	.006	1
S5	10.000	10.312	.312	3.12	5.4057	.017	1
S2	.80000	.75845	-.042	-5.19	.40015	.002	1

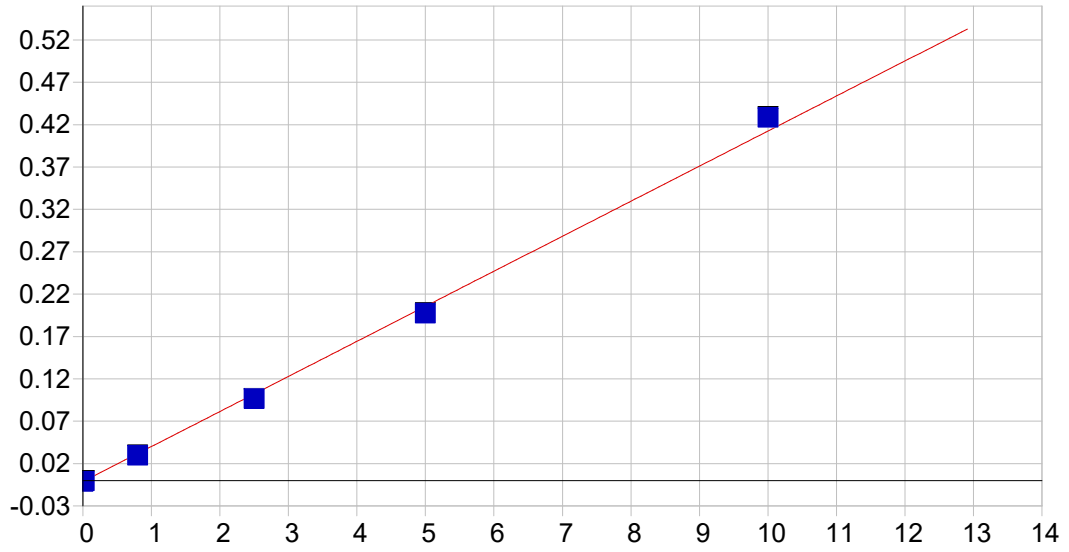


Si 288.158 {117}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000168	Re-Slope:	1.000000
A1 (Gain):	0.004686	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999197	Status:	OK.
Std Error of Est:	0.000020		
Predicted MDL:	0.010079		
Predicted MQL:	0.033596		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00012	.000	.000	.00017	.000	1
S1	.40000	.32992	-.070	-17.5	.00172	.000	1
S3	2.5000	2.4142	-.086	-3.43	.01166	.000	1
S4	5.0000	4.9762	-.024	-.475	.02384	.000	1
S5	10.000	10.262	.262	2.62	.04896	.000	1
S2	.80000	.71662	-.083	-10.4	.00358	.000	1

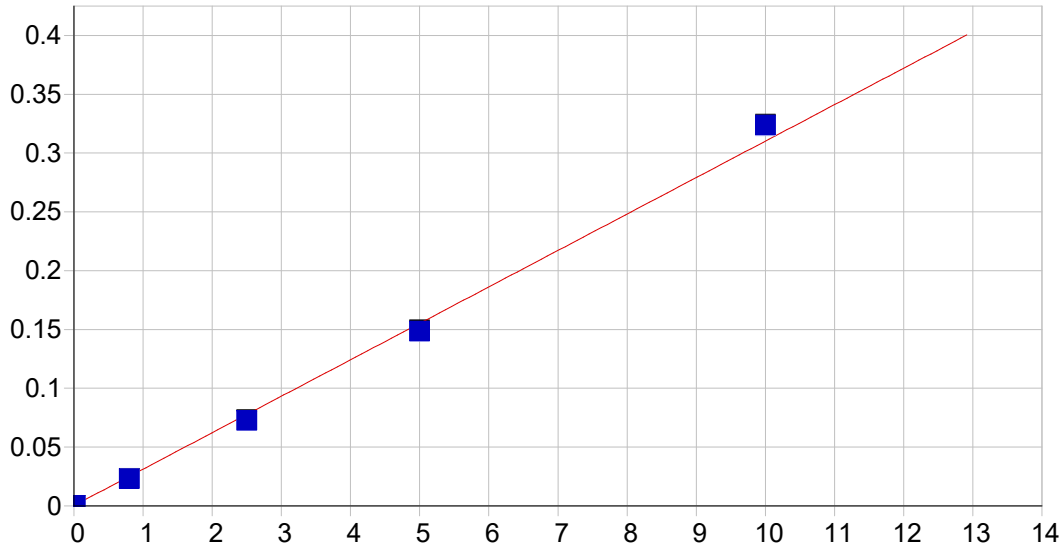


P 177.495 {490}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001260	Re-Slope:	1.000000
A1 (Gain):	0.041370	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999073	Status:	OK.
Std Error of Est:	0.000042		
Predicted MDL:	0.002748		
Predicted MQL:	0.009161		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00126	.000	1
S1	.02000	.01941	-.001	-2.96	-.00046	.000	1
S3	2.5000	2.3614	-.139	-5.54	.09642	.000	1
S4	5.0000	4.8019	-.198	-3.96	.19736	.001	1
S5	10.000	10.389	.389	3.89	.42847	.001	1
S2	.80000	.74834	-.052	-6.46	.02969	.000	1



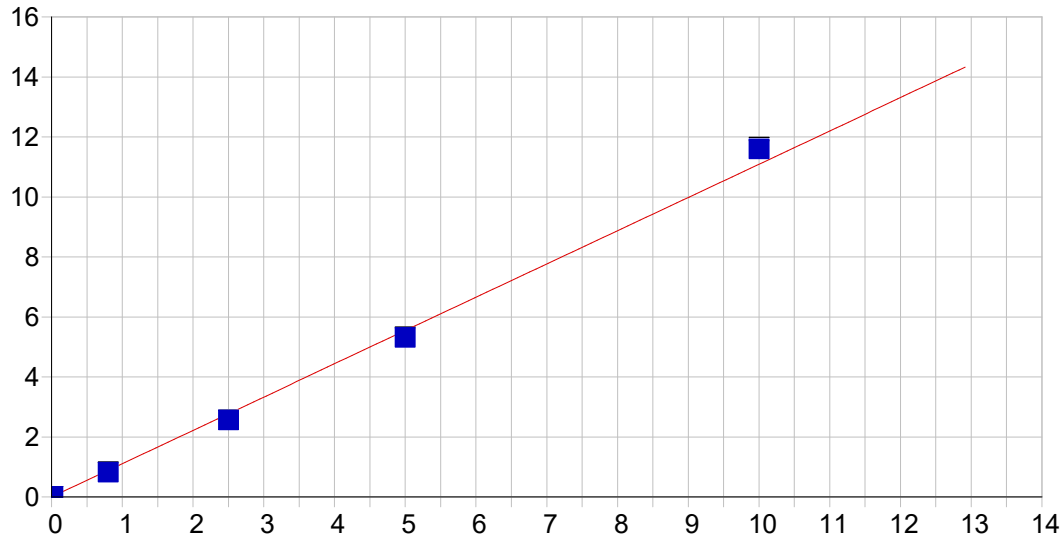
S 182.034 {485}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000287	Re-Slope:	1.000000
A1 (Gain):	0.030987	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998807	Status:	OK.
Std Error of Est:	0.000035		
Predicted MDL:	0.003338		
Predicted MQL:	0.011128		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00029	.000	1
S1	.02000	.01751	-.002	-12.5	.00080	.000	1
S3	2.5000	2.3377	-.162	-6.49	.07252	.000	1
S4	5.0000	4.7892	-.211	-4.22	.14829	.001	1
S5	10.000	10.437	.437	4.37	.32289	.001	1
S2	.80000	.73852	-.061	-7.69	.02311	.000	1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

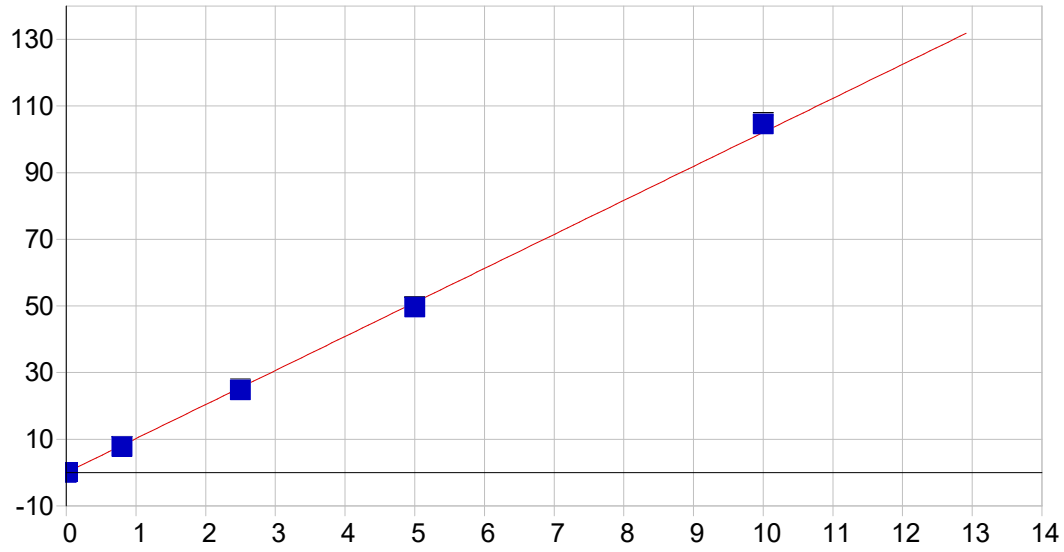


Li 670.784 { 50}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000904	Re-Slope:	1.000000
A1 (Gain):	1.108993	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998705	Status:	OK.
Std Error of Est:	0.001325		
Predicted MDL:	0.001104		
Predicted MQL:	0.003679		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00091	.001	1
S5	10.000	10.454	.454	4.54	11.600	.056	1
S4	5.0000	4.7919	-.208	-4.16	5.3178	.018	1
S3	2.5000	2.3117	-.188	-7.53	2.5659	.009	1
S1	.02000	.01893	-.001	-5.34	.02225	.001	1
S2	.80000	.74312	-.057	-7.11	.82546	.003	1

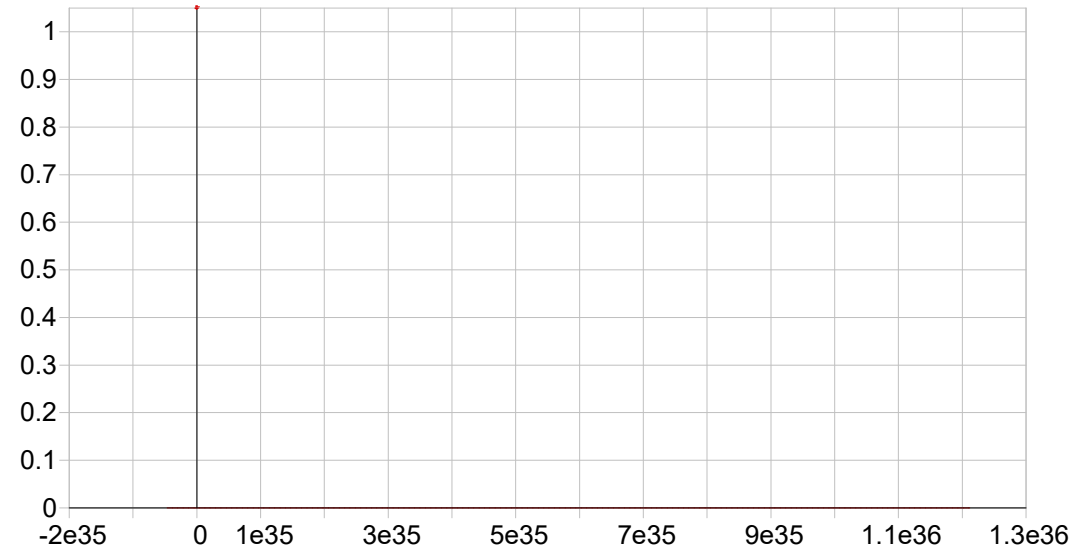


Sr 407.771 { 83}

Date of Fit:	6/4/2025 14:43:53	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000912	Re-Slope:	1.000000
A1 (Gain):	10.209315	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999630	Status:	OK.
Std Error of Est:	0.006519		
Predicted MDL:	0.000077		
Predicted MQL:	0.000255		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00090	.000	1
S1	.02000	.01987	-.000	-.660	.20291	.005	1
S3	2.5000	2.4299	-.070	-2.80	24.831	.241	1
S4	5.0000	4.8610	-.139	-2.78	49.676	.127	1
S5	10.000	10.246	.246	2.46	104.70	.310	1
S2	.80000	.76299	-.037	-4.63	7.7966	.039	1

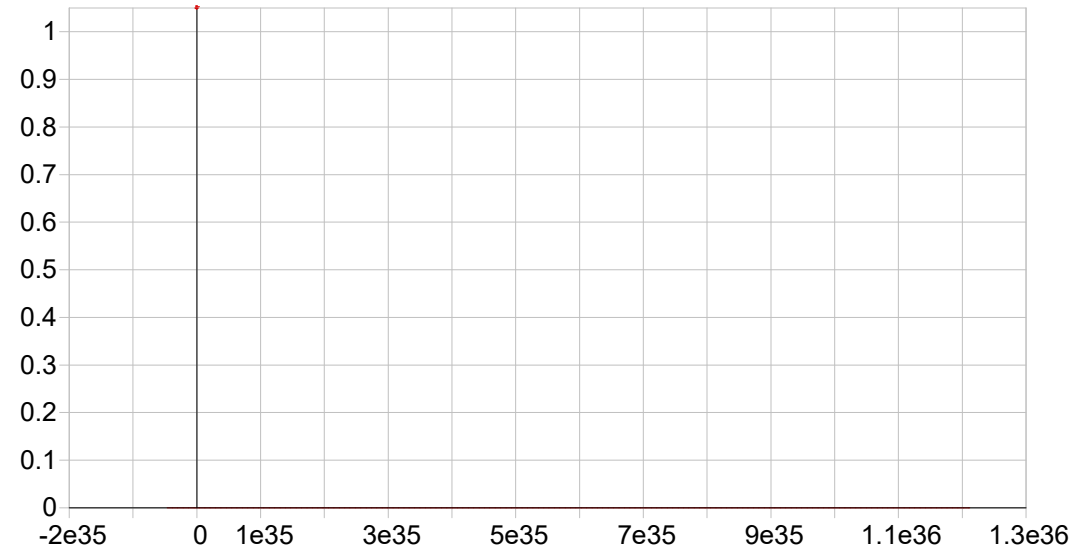


Y 224.306 {450}*

Date of Fit:	6/4/2025 14:09:28	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



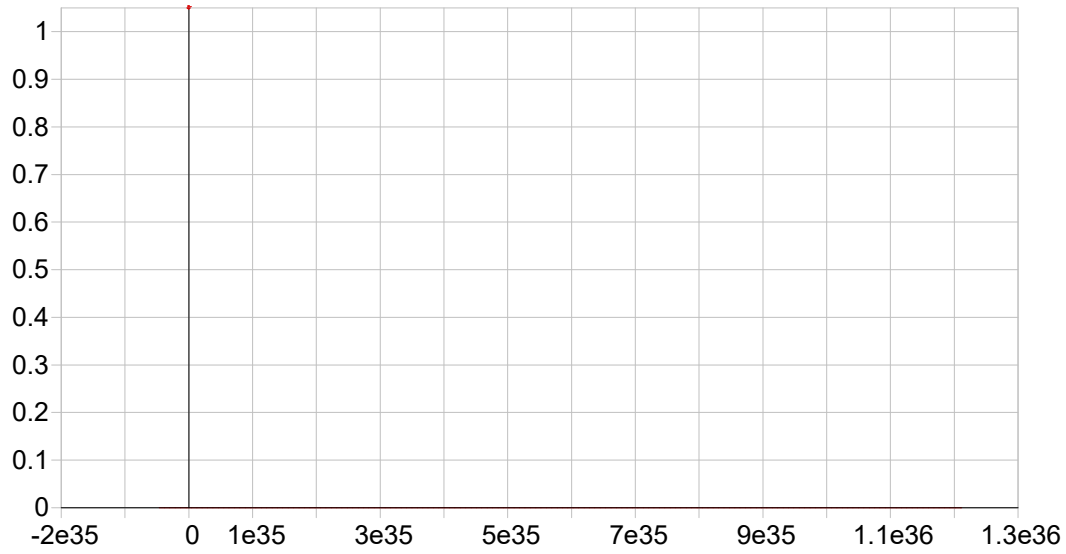
Y 360.073 { 94}*

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

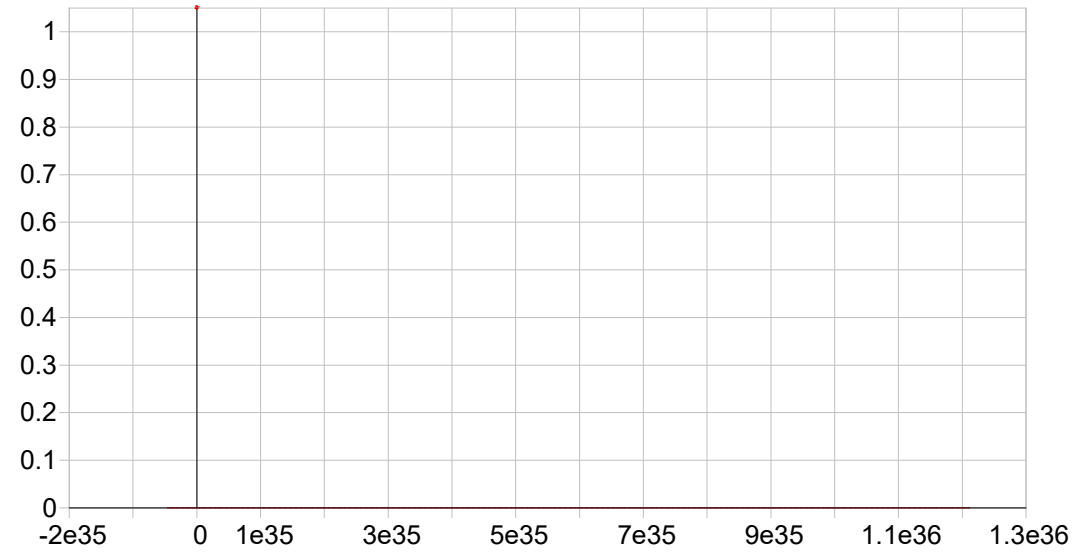


Y 371.030 { 91}*

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

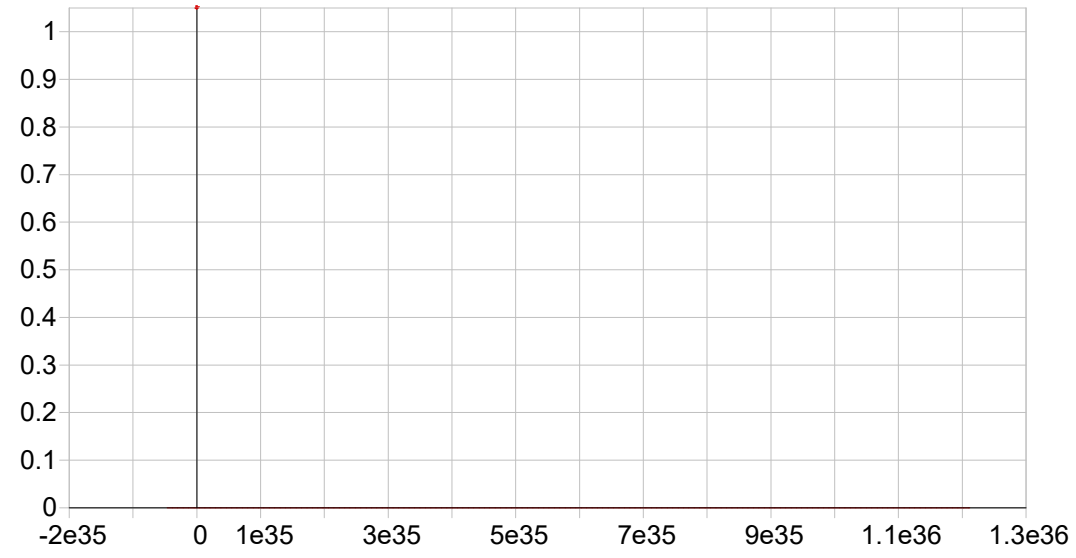


Y 224.306 {150}*

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:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: S0 Acquired: 6/4/2025 14:18:37 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.00003**	**.00018**	**.00000**	**.00053**	**-.00001**	**.00040**	**.05475**	**.00024**
Stddev	.00007	.00018	.00016	.00006	.00001	.00047	.00136	.00006
%RSD	194.10	101.80	5638.5	12.084	60.677	116.85	2.4830	24.844
#1	.00002	.00025	.00006	.00046	-.00002	.00087	.05611	.00017
#2	-.00002	-.00003	-.00018	.00056	-.00001	-.00007	.05476	.00028
#3	-.00011	.00031	.00013	.00057	-.00000	.00041	.05339	.00026

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	**.00010**	**.00000**	**.00007**	**.00008**	**-.00070**	**.00001**	**.00041**	**-.00061**
Stddev	.00024	.00003	.00002	.00012	.00012	.00001	.00008	.00027
%RSD	246.65	7423.7	31.957	145.87	17.902	79.635	19.879	43.644
#1	.00036	.00004	.00004	.00022	-.00083	.00000	.00039	-.00073
#2	-.00012	-.00002	.00009	.00000	-.00058	.00001	.00050	-.00080
#3	.00005	-.00001	.00008	.00002	-.00068	.00001	.00034	-.00031

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	**-.00053**	**-.00026**	**.00170**	**.00003**	**.00321**	**.00073**	**.00138**	**.00029**
Stddev	.00012	.00005	.00006	.00047	.00020	.00009	.00033	.00004
%RSD	23.577	19.919	3.6839	1496.7	6.0829	12.202	24.205	14.764
#1	-.00067	-.00031	.00168	.00041	.00339	.00074	.00143	.00033
#2	-.00043	-.00021	.00177	-.00049	.00325	.00064	.00168	.00028
#3	-.00048	-.00024	.00165	.00018	.00300	.00082	.00102	.00025

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	**.00047**	**.00278**	**.00017**	**-.00126**	**.00029**	**.00091**	**-.00090**
Stddev	.00003	.00027	.00003	.00007	.00007	.00074	.00026
%RSD	6.6342	9.8142	16.998	5.6079	24.805	81.219	28.641
#1	.00048	.00309	.00020	-.00124	.00035	.00174	-.00105
#2	.00043	.00263	.00014	-.00134	.00031	.00034	-.00104
#3	.00049	.00261	.00016	-.00120	.00021	.00064	-.00060

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: S0 Acquired: 6/4/2025 14:18:37 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**2973.8**	**61435.**	**10001.**	**2093.5**	**4133.2**
Stddev	13.3	312.	70.	8.1	16.6
%RSD	.44581	.50822	.69504	.38643	.40072
#1	2979.5	61731.	9933.2	2099.1	4143.6
#2	2983.2	61109.	9996.6	2084.2	4141.9
#3	2958.6	61464.	10072.	2097.2	4114.1

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: S1 Acquired: 6/4/2025 14:23:01 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.00114**	**.00315**	**.00261**	**.00203**	**.00586**	**.01500**	**.32470**	**.03064**
Stddev	.00017	.00013	.00011	.00014	.00005	.00030	.00559	.00063
%RSD	15.097	4.1211	4.3566	6.7302	.89995	1.9701	1.7227	2.0550
#1	.00129	.00305	.00267	.00217	.00581	.01466	.33116	.03128
#2	.00095	.00310	.00268	.00190	.00592	.01521	.32128	.03061
#3	.00119	.00330	.00248	.00202	.00585	.01512	.32167	.03002

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	**.01345**	**.19657**	**.00196**	**.02464**	**.01308**	**.00059**	**.01393**	**.03834**
Stddev	.00010	.00347	.00003	.00049	.00036	.00002	.00060	.00069
%RSD	.75119	1.7666	1.4587	1.9824	2.7733	2.8543	4.3095	1.7910
#1	.01334	.20055	.00197	.02408	.01287	.00060	.01462	.03913
#2	.01345	.19498	.00192	.02486	.01350	.00057	.01360	.03802
#3	.01354	.19418	.00198	.02498	.01287	.00061	.01357	.03787

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	**.03047**	**.00261**	**.02237**	**.00666**	**.12333**	**.01514**	**.04975**	**.15989**
Stddev	.00032	.00013	.00014	.00040	.00032	.00023	.00108	.00085
%RSD	1.0571	4.9799	.64744	6.0789	.25732	1.5327	2.1625	.53222
#1	.03011	.00246	.02235	.00687	.12302	.01532	.05095	.15926
#2	.03054	.00272	.02224	.00691	.12332	.01488	.04946	.15956
#3	.03074	.00265	.02253	.00619	.12366	.01523	.04886	.16086

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	**.00656**	**.02219**	**.00172**	**-.00046**	**.00080**	**.02225**	**.20291**
Stddev	.00010	.00056	.00004	.00013	.00007	.00093	.00458
%RSD	1.5878	2.5116	2.0764	29.012	8.9028	4.2011	2.2554
#1	.00650	.02237	.00172	-.00038	.00072	.02135	.20801
#2	.00651	.02262	.00168	-.00038	.00086	.02220	.20155
#3	.00668	.02156	.00175	-.00061	.00083	.02321	.19916

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: S1 Acquired: 6/4/2025 14:23:01 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v85) 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	2943.6	62721.	9448.8	2114.4	4067.7
Stddev	5.2	307.	156.1	7.0	7.4
%RSD	.17673	.48900	1.6520	.33226	.18307
#1	2949.5	62697.	9268.6	2108.4	4076.2
#2	2941.8	63038.	9536.2	2122.1	4062.3
#3	2939.6	62426.	9541.6	2112.6	4064.7

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: S2 Acquired: 6/4/2025 14:27:21 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.04839**	**.06417**	**.18119**	**.05935**	**.08993**	**.21845**	**4.3445**	**.20471**
Stddev	.00020	.00022	.00054	.00032	.00056	.00201	.0200	.00137
%RSD	.41859	.33610	.29599	.53201	.62160	.91996	.45990	.66881
#1	.04858	.06396	.18178	.05953	.09046	.21720	4.3227	.20435
#2	.04841	.06416	.18106	.05899	.08998	.22077	4.3620	.20623
#3	.04818	.06439	.18073	.05954	.08935	.21738	4.3486	.20356

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	**.85519**	**.38728**	**.02977**	**.32765**	**.12927**	**.00423**	**.26506**	**.07461**
Stddev	.00107	.00140	.00003	.00012	.00052	.00000	.00167	.00016
%RSD	.12461	.36086	.09627	.03803	.40406	.07916	.62987	.21994
#1	.85642	.38646	.02975	.32765	.12937	.00423	.26362	.07447
#2	.85460	.38889	.02980	.32753	.12973	.00422	.26689	.07479
#3	.85454	.38648	.02976	.32778	.12870	.00422	.26466	.07456

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	**.30202**	**.05769**	**.04100**	**.06624**	**1.3440**	**.02943**	**.40418**	**.66360**
Stddev	.00072	.00029	.00019	.00040	.0038	.00021	.00252	.00134
%RSD	.23901	.49898	.46197	.60435	.28252	.72716	.62228	.20158
#1	.30266	.05784	.04089	.06646	1.3466	.02959	.40246	.66513
#2	.30123	.05786	.04090	.06649	1.3396	.02919	.40706	.66302
#3	.30215	.05735	.04122	.06578	1.3457	.02951	.40301	.66265

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	**.12312**	**.40015**	**.00358**	**.02969**	**.02311**	**.82546**	**7.7966**
Stddev	.00021	.00229	.00002	.00020	.00012	.00266	.0392
%RSD	.16678	.57172	.53213	.68511	.52869	.32257	.50298
#1	.12291	.39764	.00358	.02978	.02322	.82367	7.7615
#2	.12332	.40211	.00360	.02946	.02298	.82852	7.8389
#3	.12311	.40072	.00357	.02984	.02313	.82420	7.7893

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: S2 Acquired: 6/4/2025 14:27:21 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**2968.0**	**63658.**	**9124.4**	**2122.9**	**4104.9**
Stddev	8.3	132.	41.2	3.0	5.4
%RSD	.27970	.20738	.45117	.14283	.13095
#1	2958.4	63525.	9128.3	2119.4	4098.7
#2	2972.7	63659.	9081.5	2124.7	4107.8
#3	2972.8	63789.	9163.5	2124.6	4108.2

Sample Name: S3 Acquired: 6/4/2025 14:31:24 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.14947	.19865	.55999	.18172	.27802	.67601	13.979	.59314
Stddev	.00059	.00159	.00247	.00047	.00074	.00197	.041	.00219
%RSD	.39637	.79994	.44149	.26070	.26557	.29155	.29600	.36881
#1	.14899	.19760	.55834	.18152	.27719	.67616	14.020	.59079
#2	.14929	.19787	.55880	.18138	.27827	.67790	13.982	.59512
#3	.15013	.20048	.56284	.18226	.27860	.67397	13.937	.59351

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	2.6359	1.2141	.09148	1.0120	.39426	.01413	.82457	.22967
Stddev	.0084	.0014	.00012	.0024	.00042	.00007	.00098	.00090
%RSD	.31866	.11823	.12648	.24003	.10556	.49253	.11832	.39045
#1	2.6299	1.2126	.09148	1.0100	.39397	.01416	.82357	.22865
#2	2.6324	1.2155	.09159	1.0113	.39408	.01405	.82552	.23006
#3	2.6455	1.2140	.09136	1.0147	.39474	.01418	.82461	.23031

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	.92765	.17776	.14011	.20838	3.7617	.09572	1.1683	2.0353
Stddev	.00435	.00035	.00057	.00066	.0108	.00019	.0057	.0053
%RSD	.46916	.19599	.40977	.31540	.28705	.19624	.49243	.26157
#1	.92404	.17736	.14072	.20905	3.7495	.09564	1.1617	2.0319
#2	.92642	.17801	.14005	.20835	3.7702	.09594	1.1716	2.0326
#3	.93248	.17790	.13958	.20773	3.7653	.09559	1.1717	2.0414

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	.38129	1.2547	.01166	.09642	.07252	2.5659	24.831
Stddev	.00132	.0016	.00002	.00032	.00044	.0091	.241
%RSD	.34690	.12699	.19234	.32895	.60835	.35436	.97225
#1	.38039	1.2549	.01167	.09651	.07214	2.5754	24.783
#2	.38067	1.2561	.01167	.09606	.07242	2.5651	25.093
#3	.38281	1.2530	.01163	.09667	.07301	2.5573	24.617

Sample Name: S3 Acquired: 6/4/2025 14:31:24 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v85) 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	2937.2	62216.	9635.6	2071.9	4002.3
Stddev	5.4	166.	48.6	11.8	12.4
%RSD	.18445	.26675	.50394	.56886	.31104
#1	2942.5	62378.	9680.2	2083.7	4013.2
#2	2937.4	62046.	9583.8	2060.2	4005.1
#3	2931.7	62226.	9642.8	2071.9	3988.7

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: S4 Acquired: 6/4/2025 14:35:30 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.30094	.39882	1.1210	.36244	.55658	1.3886	28.144	1.2358
Stddev	.00076	.00149	.0033	.00164	.00178	.0032	.081	.0043
%RSD	.25117	.37252	.29743	.45231	.31989	.23338	.28942	.34621
#1	.30046	.40052	1.1174	.36089	.55521	1.3881	28.100	1.2327
#2	.30055	.39778	1.1216	.36227	.55594	1.3920	28.238	1.2407
#3	.30181	.39815	1.1240	.36416	.55860	1.3856	28.094	1.2341

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	5.3132	2.4594	.18440	2.0343	.78150	.02856	1.6615	.47194
Stddev	.0181	.0068	.00071	.0080	.00278	.00018	.0045	.00207
%RSD	.34072	.27482	.38559	.39538	.35560	.62799	.27218	.43818
#1	5.2957	2.4535	.18395	2.0264	.77862	.02839	1.6573	.46956
#2	5.3119	2.4668	.18522	2.0340	.78173	.02875	1.6663	.47326
#3	5.3319	2.4580	.18404	2.0425	.78417	.02853	1.6608	.47299

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	1.8666	.36230	.29161	.42694	7.4653	.19486	2.4341	4.0578
Stddev	.0066	.00181	.00113	.00065	.0336	.00080	.0087	.0122
%RSD	.35483	.49938	.38614	.15134	.44997	.41193	.35904	.30145
#1	1.8599	.36045	.29202	.42623	7.4358	.19471	2.4241	4.0483
#2	1.8667	.36407	.29247	.42750	7.5018	.19573	2.4405	4.0535
#3	1.8731	.36238	.29033	.42709	7.4582	.19414	2.4376	4.0716

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	.76979	2.5404	.02384	.19736	.14829	5.3178	49.676
Stddev	.00322	.0059	.00010	.00075	.00097	.0176	.127
%RSD	.41839	.23016	.44046	.37941	.65559	.33188	.25524
#1	.76711	2.5360	.02374	.19703	.14782	5.3249	49.612
#2	.76890	2.5470	.02395	.19684	.14764	5.3308	49.822
#3	.77336	2.5381	.02383	.19822	.14941	5.2977	49.594

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: S4 Acquired: 6/4/2025 14:35:30 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**2885.5**	**59395.**	**9181.3**	**2005.2**	**3870.1**
Stddev	6.2	298.	32.7	7.3	10.4
%RSD	.21618	.50139	.35596	.36504	.26754
#1	2890.1	59644.	9212.3	2010.5	3878.8
#2	2887.9	59065.	9147.2	1996.9	3872.9
#3	2878.4	59475.	9184.5	2008.4	3858.7

Sample Name: S5 Acquired: 6/4/2025 14:39:41 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.63040**	**.81314**	**2.3319**	**.75727**	**1.1559**	**2.9654**	**59.105**	**2.6673**
Stddev	.00337	.00825	.0082	.00344	.0074	.0089	.702	.0176
%RSD	.53412	1.0151	.35157	.45397	.64140	.30038	1.1876	.66177
#1	.62872	.81225	2.3285	.75424	1.1498	2.9721	59.203	2.6748
#2	.62821	.82180	2.3260	.75657	1.1537	2.9689	58.359	2.6799
#3	.63428	.80537	2.3413	.76101	1.1642	2.9553	59.752	2.6471

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	**11.091**	**5.1991**	**.37162**	**4.2565**	**1.6034**	**.05732**	**3.5265**	**1.0165**
Stddev	.037	.0027	.00128	.0170	.0101	.00019	.0070	.0032
%RSD	.33360	.05292	.34471	.39967	.63276	.33646	.19723	.31242
#1	11.071	5.1993	.37292	4.2442	1.5971	.05737	3.5299	1.0151
#2	11.068	5.2017	.37036	4.2493	1.5980	.05711	3.5311	1.0201
#3	11.134	5.1962	.37159	4.2759	1.6151	.05749	3.5185	1.0142

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	**3.8691**	**.74472**	**.60293**	**.90974**	**14.421**	**.40264**	**5.2730**	**8.2658**
Stddev	.0150	.00200	.00517	.00041	.039	.00258	.0303	.0421
%RSD	.38767	.26846	.85783	.04503	.26991	.64149	.57378	.50881
#1	3.8598	.74657	.60655	.91006	14.419	.40422	5.2878	8.2394
#2	3.8611	.74260	.59700	.90989	14.384	.39966	5.2931	8.2437
#3	3.8864	.74500	.60523	.90928	14.462	.40403	5.2382	8.3143

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	**1.6007**	**5.4057**	**.04896**	**.42847**	**.32289**	**11.600**	**104.70**
Stddev	.0029	.0171	.00033	.00107	.00079	.056	.31
%RSD	.17856	.31635	.66952	.24865	.24575	.48250	.29583
#1	1.5991	5.4222	.04880	.42744	.32227	11.661	104.81
#2	1.5991	5.4068	.04874	.42957	.32262	11.589	104.95
#3	1.6040	5.3880	.04934	.42839	.32379	11.551	104.36

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: S5 Acquired: 6/4/2025 14:39:41 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**2745.2**	**57581.**	**8445.0**	**1938.2**	**3592.8**
Stddev	17.7	208.	31.2	9.1	17.1
%RSD	.64561	.36056	.36944	.47048	.47456
#1	2756.6	57494.	8433.6	1941.8	3604.8
#2	2754.4	57818.	8421.1	1945.0	3600.3
#3	2724.8	57432.	8480.3	1927.9	3573.3

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: ICV01 Acquired: 6/4/2025 15:49:05 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**1.002667**	**1.004249**	**.9759463**	**1.000720**	**1.022481**	**2.466661**
Stddev	.005057	.006041	.0059139	.010122	.005060	.008478
%RSD	.5043218	.6015767	.6059619	1.011445	.4948858	.3436975
#1	1.000422	1.003283	.9744313	1.007960	1.020567	2.465441
#2	.999121	.998748	.9709372	.989154	1.018656	2.475683
#3	1.008457	1.010715	.9824702	1.005047	1.028219	2.458859

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5515456**	**.4716938**	**.4998867**	**9.521771**	**.5180359**	**.5210369**
Stddev	.0033207	.0034791	.0029522	.053060	.0010385	.0033592
%RSD	.6020772	.7375734	.5905640	.5572495	.2004742	.6447210
#1	.5538031	.4724109	.4995583	9.519775	.5170025	.5204768
#2	.5531009	.4747585	.4971125	9.575801	.5180256	.5179929
#3	.5477326	.4679121	.5029894	9.469737	.5190795	.5246410

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5273067**	**10.05478**	**.4995387**	**5.936393**	**.5320803**	**.2342937**
Stddev	.0030816	.03361	.0017241	.058535	.0030143	.0003011
%RSD	.5844035	.3342851	.3451443	.9860343	.5665062	.1285188
#1	.5273622	10.08276	.4998423	5.961853	.5306373	.2339776
#2	.5241977	10.01750	.5010908	5.977886	.5300588	.2345771
#3	.5303601	10.06408	.4976829	5.869439	.5355448	.2343264

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.39405**	**.4689098**	**.9713858**	**10.54545**	F **.0227048**	F **.0000020**
Stddev	.02768	.0027954	.0026594	.02954	.0002668	.0002111
%RSD	.2663204	.5961512	.2737790	.2801146	1.175025	10646.18
#1	10.42212	.4681177	.9692671	10.54167	.0225587	-.000215
#2	10.36678	.4720157	.9743703	10.51799	.0230127	.000015
#3	10.39325	.4665958	.9705201	10.57671	.0225430	.000207

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: ICV01 Acquired: 6/4/2025 15:49:05 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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 -.000782	F -.001225	F .0143169	F -.000727	F .0277837	F .0005573
Stddev	.000477	.000497	.0024040	.003467	.0026050	.0007007
%RSD	61.02275	40.54703	16.79130	476.8789	9.375926	125.7274
#1	-.000505	-.001135	.0170163	.002915	.0253763	.0005730
#2	-.001333	-.000779	.0124068	-.001110	.0274255	-.000151
#3	-.000508	-.001760	.0135276	-.003987	.0305492	.001250

Elem	Sr4077
Units	ppm
Avg	F -.009427
Stddev	.000058
%RSD	.6144923
#1	-.009479
#2	-.009364
#3	-.009437

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2902.358	62907.60	9963.082	2061.900	4032.810
Stddev	11.846	66.48	60.339	5.652	17.267
%RSD	.4081672	.1056801	.6056249	.2741108	.4281676
#1	2904.354	62833.59	9943.818	2067.006	4035.970
#2	2913.080	62926.94	9914.727	2055.827	4048.280
#3	2889.640	62962.26	10030.70	2062.867	4014.182

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: LLICV01 Acquired: 6/4/2025 16:06:28 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.0180973**	**.0397918**	**.0113197**	**.0230845**	**.0524374**	**.1028550**	**.0882437**
Stddev	.0008889	.0021114	.0007014	.0025367	.0003462	.0035318	.0004252
%RSD	4.911869	5.306055	6.196669	10.98856	.6601746	3.433748	.4818193
#1	.0171646	.0373706	.0107258	.0204900	.0528370	.1009372	.0886643
#2	.0181925	.0407545	.0111396	.0255590	.0522273	.1006969	.0882525
#3	.0189347	.0412502	.0120936	.0232046	.0522480	.1069307	.0878141

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0055120**	**.0058353**	**1.881195**	**.0102094**	**.0291672**	**.0215357**	**.1085710**
Stddev	.0000314	.0000870	.006216	.0003290	.0001214	.0000344	.0033428
%RSD	.5694668	1.490499	.3304159	3.222500	.4162201	.1595304	3.078883
#1	.0055407	.0059346	1.878890	.0105104	.0292391	.0215619	.1086871
#2	.0054785	.0057982	1.876460	.0102595	.0290271	.0214968	.1051717
#3	.0055169	.0057730	1.888234	.0098581	.0292355	.0215484	.1118543

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0187347**	**1.891153**	**.0399104**	**.0097983**	**1.770523**	**.0375099**	**.0419785**
Stddev	.0003529	.011186	.0001820	.0002846	.018158	.0014550	.0001631
%RSD	1.883655	.5915040	.4560557	2.904598	1.025550	3.878828	.3884495
#1	.0189118	1.896042	.0399453	.0095249	1.771725	.0385210	.0418710
#2	.0183284	1.899062	.0397135	.0097771	1.751795	.0358424	.0421661
#3	.0189640	1.878354	.0400725	.0100929	1.788050	.0381664	.0418984

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.870503**	**.0879789**	**.1942798**	**.0377434**	**.0346369**	**.3291991**	**.0175598**
Stddev	.023221	.0004250	.0009438	.0006248	.0004387	.0085634	.0021696
%RSD	1.241447	.4830334	.4857684	1.655425	1.266514	2.601296	12.35566
#1	1.853329	.0874885	.1934203	.0371156	.0344873	.3389460	.0150906
#2	1.861258	.0882081	.1941293	.0377495	.0342926	.3257684	.0184278
#3	1.896923	.0882400	.1952897	.0383652	.0351308	.3228830	.0191611

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: LLICV01 Acquired: 6/4/2025 16:06:28 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0168585	.0167040	.0191739
Stddev	.0016790	.0002434	.0000470
%RSD	9.959073	1.457225	.2449432
#1	.0182488	.0166153	.0191384
#2	.0173334	.0165174	.0191562
#3	.0149932	.0169793	.0192272

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2941.212	61725.02	10073.39	2042.348	4158.556
Stddev	8.661	291.83	14.16	2.358	12.160
%RSD	.2944715	.4727898	.1405864	.1154363	.2924140
#1	2945.625	61470.54	10064.93	2043.930	4156.013
#2	2946.778	61660.96	10065.49	2039.638	4171.787
#3	2931.233	62043.55	10089.74	2043.476	4147.869

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: ICB01 Acquired: 6/4/2025 16:10:47 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.002653**	**-.000683**	**.0000092**	**.0029336**	**.0006030**	**.0053123**	**-.003282**
Stddev	.000834	.000608	.0009219	.0029120	.0018667	.0045678	.000567
%RSD	31.43615	89.03342	10061.90	99.26582	309.5584	85.98542	17.28084
#1	-.003232	.000015	.0009149	.0031945	-.000045	.0001223	-.002740
#2	-.003030	-.001095	.0000405	-.000100	-.000854	.0087214	-.003872
#3	-.001697	-.000970	-.000928	.005706	.002707	.0070930	-.003234

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000077**	**.0000685**	**.0068389**	**.0008244**	**-.000283**	**.0003698**	**.0055110**
Stddev	.000031	.0000549	.0028808	.0000687	.000259	.0002601	.0022256
%RSD	39.74371	80.16437	42.12406	8.332077	91.35859	70.33136	40.38520
#1	-.000054	.0001016	.0085148	.0008573	-.000521	.0000850	.0065346
#2	-.000112	.0000051	.0035124	.0008705	-.000321	.0005947	.0070407
#3	-.000066	.0000989	.0084895	.0007455	-.000008	.0004299	.0029577

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000052**	**.0236130**	**.0004852**	**.0003614**	**-.092254**	**.0005253**	**.0009482**
Stddev	.000191	.0128916	.0002850	.0003211	.009623	.0012237	.0002955
%RSD	370.3265	54.59511	58.73515	88.84220	10.43138	232.9466	31.15933
#1	.000119	.0283239	.0004532	.0004855	-.083639	.0009240	.0012482
#2	-.000016	.0334865	.0007847	.0006020	-.090483	.0014999	.0006575
#3	-.000258	.0090286	.0002175	-.000003	-.102640	-.000848	.0009389

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0189223**	**-.000553**	**.0001206**	**.0010519**	**-.000157**	**.0029472**	**-.001320**
Stddev	.0525713	.000291	.0001714	.0003633	.000568	.0067827	.001837
%RSD	277.8272	52.63094	142.0865	34.53556	361.6977	230.1391	139.1449
#1	.0211203	-.000806	.0001313	.0006346	-.000659	.0034711	-.003346
#2	-.034714	-.000619	-.000056	.0012978	-.000272	-.004082	-.000853
#3	.070360	-.000235	.000286	.0012232	.000459	.009453	.000238

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: ICB01 Acquired: 6/4/2025 16:10:47 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.001275**	**-.002036**	**.0001070**
Stddev	.002515	.001121	.0000394
%RSD	197.2294	55.02672	36.79921
#1	.000375	-.003313	.0000907
#2	-.000030	-.001215	.0000784
#3	-.004169	-.001582	.0001519

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2902.164**	**60472.21**	**9783.844**	**2023.825**	**4080.956**
Stddev	9.301	36.20	34.079	5.868	6.978
%RSD	.3204812	.0598665	.3483171	.2899436	.1709954
#1	2903.048	60456.11	9800.819	2017.766	4081.923
#2	2910.992	60513.67	9806.102	2029.481	4087.400
#3	2892.453	60446.85	9744.612	2024.230	4073.544

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CRI01 Acquired: 6/4/2025 16:15:06 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0186851	.0385115	.0111562	.0209284	.0503999	.0983106	.0865730
Stddev	.0013920	.0002091	.0007482	.0013305	.0025611	.0010631	.0004639
%RSD	7.449501	.5428462	6.706560	6.357230	5.081552	1.081396	.5358004
#1	.0182016	.0385545	.0118414	.0196049	.0511130	.0971684	.0864173
#2	.0202544	.0382844	.0103579	.0222657	.0475578	.0984922	.0862070
#3	.0175995	.0386958	.0112694	.0209147	.0525288	.0992712	.0870946

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058275	.0059937	1.876721	.0108023	.0294204	.0219648	.1021829
Stddev	.0000571	.0000366	.008260	.0002074	.0002573	.0003673	.0013877
%RSD	.9804563	.6100930	.4401417	1.919503	.8744827	1.672025	1.358011
#1	.0058335	.0060353	1.885917	.0110353	.0294446	.0215747	.1032433
#2	.0057676	.0059667	1.874315	.0107334	.0296647	.0220156	.1026931
#3	.0058813	.0059792	1.869931	.0106382	.0291519	.0223039	.1006124

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0187965	1.925044	.0406085	.0100427	1.720450	.0374354	.0424721
Stddev	.0000476	.007625	.0002303	.0002997	.024382	.0011313	.0004589
%RSD	.2531576	.3961084	.5670762	2.983844	1.417202	3.021941	1.080430
#1	.0188512	1.927482	.0404381	.0096971	1.729726	.0361382	.0426966
#2	.0187734	1.931152	.0405168	.0102310	1.738833	.0382172	.0427755
#3	.0187648	1.916498	.0408705	.0101999	1.692791	.0379508	.0419442

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.843052	.0926211	.1940488	.0385941	.0351297	.3291392	.0173662
Stddev	.017677	.0004165	.0009310	.0004654	.0007268	.0115993	.0009501
%RSD	.9591338	.4496524	.4797520	1.205792	2.069015	3.524118	5.471128
#1	1.857658	.0927136	.1932521	.0388401	.0359268	.3349715	.0183613
#2	1.823401	.0921661	.1938220	.0380574	.0345035	.3366649	.0172688
#3	1.848098	.0929835	.1950721	.0388849	.0349589	.3157813	.0164685

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CRI01 Acquired: 6/4/2025 16:15:06 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0190465	.0173336	.0191653
Stddev	.0019358	.0008046	.0001091
%RSD	10.16325	4.641583	.5691017
#1	.0192148	.0169540	.0190394
#2	.0170321	.0182578	.0192310
#3	.0208926	.0167891	.0192255

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2903.020	60540.60	9547.517	2030.673	4080.381
Stddev	9.047	685.88	26.030	17.383	13.838
%RSD	.3116439	1.132931	.2726408	.8560251	.3391432
#1	2911.063	60370.09	9573.917	2022.565	4081.685
#2	2904.771	59956.06	9521.873	2018.826	4093.522
#3	2893.225	61295.66	9546.763	2050.629	4065.937

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: ICSA01 Acquired: 6/4/2025 16:26:52 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.0015158**	**-.000727**	**-.000741**	**.0017965**	**-.001169**	**241.0212**
Stddev	.0016537	.003938	.000754	.0053600	.002115	.6220
%RSD	109.0938	542.0098	101.7511	298.3640	181.0004	.2580803
#1	.0005926	-.003839	-.000381	.0007692	-.003486	241.4391
#2	.0005299	-.002042	-.000234	.0075958	-.000679	241.3182
#3	.0034250	.003701	-.001607	-.002976	.000659	240.3064

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005200**	**.0010784**	**.0009153**	**226.3960**	**.0459537**	**.0008685**
Stddev	.0011305	.0000444	.0001373	.3651	.0001056	.0004535
%RSD	217.4159	4.113971	14.99870	.1612632	.2297016	52.22065
#1	-.000343	.0010367	.0009313	225.9794	.0460565	.0004053
#2	.000103	.0010733	.0007707	226.5485	.0458456	.0008885
#3	.001800	.0011250	.0010439	226.6602	.0459589	.0013117

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022560**	**103.0839**	**.0042888**	**241.3548**	**.0025874**	**.0040085**
Stddev	.0008202	.1838	.0001365	.6259	.0005031	.0005480
%RSD	36.35563	.1783228	3.183445	.2593303	19.44597	13.66983
#1	.0031745	102.9366	.0041388	240.8037	.0031585	.0033763
#2	.0019966	103.0252	.0043217	241.2255	.0022096	.0043019
#3	.0015969	103.2899	.0044058	242.0353	.0023940	.0043473

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.067429**	**.0044287**	**.0033912**	**.0264781**	F **.2215714**	**.0003567**
Stddev	.019373	.0009883	.0001400	.0249253	.0011671	.0002425
%RSD	28.73160	22.31523	4.127915	94.13565	.5267219	67.99336
#1	-.072410	.0054468	.0034207	.0156067	.2210773	.0003607
#2	-.046051	.0034732	.0032388	.0088350	.2207328	.0001121
#3	-.083825	.0043662	.0035140	.0549926	.2229043	.0005971

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: ICSA01 Acquired: 6/4/2025 16:26:52 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.001769**	**-.002714**	**.0096571**	**.0029766**	**-.013971**	**.0036877**
Stddev	.000760	.001096	.0053577	.0043186	.005041	.0011332
%RSD	42.98806	40.40377	55.47964	145.0815	36.07948	30.72805
#1	-.002645	-.003009	.0125908	.0074940	-.014573	.0049872
#2	-.001380	-.001500	.0034732	-.001111	-.008656	.0029055
#3	-.001281	-.003632	.0129073	.002547	-.018683	.0031705

Elem	Sr4077
Units	ppm
Avg	**-.004873**
Stddev	.000187
%RSD	3.841422
#1	-.004762
#2	-.004768
#3	-.005089

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2564.488**	**55377.86**	**9794.531**	**1828.099**	**3382.534**
Stddev	3.629	159.84	24.257	6.727	4.884
%RSD	.1415118	.2886326	.2476553	.3679624	.1443773
#1	2560.361	55545.73	9821.568	1835.173	3382.544
#2	2567.182	55360.36	9787.350	1821.784	3387.412
#3	2565.919	55227.49	9774.676	1827.339	3377.645

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: ICSAB01 Acquired: 6/4/2025 16:32:34 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.1056332	.0952849	.0476391	.0563808	.6454641	246.5005
Stddev	.0056403	.0030171	.0025996	.0127170	.0028529	.6024
%RSD	5.339474	3.166380	5.456793	22.55552	.4419945	.2443988
#1	.1119977	.0940913	.0450132	.0696355	.6423577	245.8050
#2	.1036474	.0987161	.0502116	.0442802	.6479669	246.8351
#3	.1012543	.0930471	.0476924	.0552266	.6460676	246.8613

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4687165	.4843942	1.004534	228.3147	.5560557	.5103680
Stddev	.0009940	.0034141	.002266	.7828	.0011096	.0006573
%RSD	.2120649	.7048198	.2255885	.3428660	.1995529	.1287898
#1	.4675787	.4811367	1.005405	227.4130	.5549138	.5102158
#2	.4691553	.4879459	1.001961	228.7101	.5561233	.5098002
#3	.4694156	.4840999	1.006235	228.8209	.5571300	.5110881

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5075172	101.2792	.4684607	246.0674	1.014748	.2187090
Stddev	.0008543	.7877	.0012961	1.0838	.002366	.0010001
%RSD	.1683213	.7777784	.2766703	.4404438	.2331680	.4572710
#1	.5075482	101.0049	.4680890	244.8337	1.015679	.2175542
#2	.5066479	100.6654	.4673911	246.8661	1.012058	.2192871
#3	.5083556	102.1674	.4699020	246.5024	1.016506	.2192857

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.064066	.4614539	1.054144	.0225790	F .2107637	F -.000018
Stddev	.021002	.0007121	.000492	.0204753	.0027924	.000335
%RSD	32.78090	.1543071	.0466970	90.68303	1.324917	1840.165
#1	-.053202	.4618019	1.053690	.0269466	.2112697	.000136
#2	-.088275	.4606348	1.054076	.0405181	.2077529	-.000403
#3	-.050723	.4619250	1.054667	.0002723	.2132686	.000213

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: ICSAB01 Acquired: 6/4/2025 16:32:34 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.003003	F -.003549	F -.003724	F .0057055	F -.011488	F .0014695
Stddev	.000848	.000248	.008689	.0032066	.006020	.0008420
%RSD	28.22868	6.995747	233.2893	56.20231	52.40484	57.29925
#1	-.003685	-.003710	-.001782	.0070033	-.004990	.0013363
#2	-.003271	-.003675	-.013220	.0020534	-.016875	.0007020
#3	-.002054	-.003263	.003829	.0080599	-.012599	.0023702

Elem	Sr4077
Units	ppm
Avg	F -.002794
Stddev	.000481
%RSD	17.22412
#1	-.002803
#2	-.002308
#3	-.003271

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2573.356	53890.62	9222.424	1802.527	3400.298
Stddev	4.183	207.65	52.191	6.213	4.646
%RSD	.1625460	.3853258	.5659152	.3447066	.1366344
#1	2574.470	54097.87	9272.625	1808.990	3397.503
#2	2576.870	53891.43	9168.448	1801.993	3405.662
#3	2568.729	53682.56	9226.200	1796.597	3397.731

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: ICSADLX20 Acquired: 6/4/2025 16:36:42 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.004447**	**.0016147**	**.0721349**	**.0008036**	**.0036055**	**11.66708**	**-.002997**
Stddev	.001550	.0012729	.0002679	.0043292	.0013755	.04278	.000735
%RSD	34.86604	78.83421	.3713403	538.7069	38.14963	.3667113	24.52644
#1	-.003289	.0006762	.0718893	-.002587	.0051763	11.66266	-.002527
#2	-.006208	.0011043	.0724205	.005680	.0026165	11.71190	-.003844
#3	-.003843	.0030636	.0720948	-.000682	.0030237	11.62667	-.002620

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000917**	**.0001526**	**11.33864**	**.0047873**	**.0001126**	**.0029483**	**4.876060**
Stddev	.0000272	.0000587	.02879	.0005374	.0001042	.0004609	.016472
%RSD	29.62144	38.45272	.2539124	11.22652	92.47374	15.63187	.3378125
#1	.0001124	.0002178	11.35219	.0054065	.0000262	.0034800	4.859820
#2	.0000610	.0001042	11.35816	.0044417	.0000835	.0026643	4.892754
#3	.0001018	.0001357	11.30558	.0045137	.0002282	.0027005	4.875606

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018584**	**11.60855**	**.0499154**	**.0001368**	**-.100205**	**-.000192**	**1.274668**
Stddev	.0003563	.04207	.0003695	.0000839	.011647	.000210	.006566
%RSD	19.17373	.3624376	.7401609	61.29505	11.62297	109.4042	.5151473
#1	.0019835	11.60293	.0498170	.0002266	-.113165	-.000172	1.268465
#2	.0014564	11.65315	.0496051	.0000604	-.096834	.000008	1.273994
#3	.0021353	11.56957	.0503241	.0001235	-.090615	-.000411	1.281546

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1339711**	**.0110848**	**.0002252**	**-.000044**	**-.000238**	**.0065236**	**.0009215**
Stddev	.0275973	.0001271	.0001890	.000482	.000484	.0030508	.0029291
%RSD	20.59945	1.146623	83.95451	1102.506	203.3096	46.76567	317.8626
#1	.1158722	.0109524	.0002989	.000472	-.000549	.0045686	.0002930
#2	.1657347	.0110963	.0000104	-.000482	-.000485	.0049632	-.001642
#3	.1203064	.0112058	.0003662	-.000121	.000320	.0100389	.004114

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: ICSADLX20 Acquired: 6/4/2025 16:36:42 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0293348	-.003815	.0001980
Stddev	.0024068	.000372	.0000854
%RSD	8.204525	9.752518	43.13665
#1	.0267379	-.003386	.0000995
#2	.0297761	-.004052	.0002518
#3	.0314904	-.004007	.0002426

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2831.541	59366.89	9550.637	2004.063	3925.922
Stddev	9.794	103.13	16.928	3.386	8.105
%RSD	.3458972	.1737246	.1772398	.1689570	.2064385
#1	2832.938	59450.21	9556.907	2007.867	3926.901
#2	2840.562	59251.54	9563.534	2002.945	3933.492
#3	2821.124	59398.91	9531.468	2001.378	3917.372

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: ICSABDLX20 Acquired: 6/4/2025 16:40:56 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0047678	.0060275	.0015921	.0030579	.0323215	12.05357	.0216339
Stddev	.0010087	.0008785	.0009635	.0011687	.0010088	.01324	.0006220
%RSD	21.15613	14.57515	60.51730	38.22022	3.120994	.1098028	2.875133
#1	.0039520	.0053999	.0026629	.0028639	.0333099	12.06237	.0214551
#2	.0058957	.0056511	.0013181	.0043114	.0323610	12.03835	.0211209
#3	.0044559	.0070315	.0007953	.0019983	.0312936	12.06000	.0223257

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0239149	.0506645	11.76764	.0285124	.0251489	.0269527	5.019910
Stddev	.0001319	.0002799	.00629	.0001106	.0002709	.0006585	.000921
%RSD	.5515331	.5524733	.0534571	.3877351	1.077227	2.443213	.0183513
#1	.0239766	.0506774	11.77321	.0283875	.0248718	.0271410	5.020832
#2	.0237635	.0503783	11.76082	.0285978	.0251618	.0262206	5.018990
#3	.0240047	.0509377	11.76888	.0285517	.0254131	.0274966	5.019907

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0244596	12.04359	.0517229	.0104088	-.112177	.0246873	.0549893
Stddev	.0002759	.03975	.0001207	.0001638	.005066	.0004585	.0003671
%RSD	1.128055	.3300420	.2333877	1.574062	4.516383	1.857127	.6675763
#1	.0247276	12.04466	.0516017	.0105969	-.112320	.0243688	.0554089
#2	.0244746	12.00333	.0518431	.0102970	-.107040	.0252128	.0548315
#3	.0241764	12.08280	.0517239	.0103325	-.117169	.0244804	.0547275

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.037227	.0092210	.0001400	-.000423	-.000704	-.003216	-.005291
Stddev	.030992	.0002395	.0001490	.000620	.001120	.010414	.002273
%RSD	83.25302	2.597745	106.4392	146.5742	158.9865	323.8181	42.95761
#1	-.029908	.0092417	-.000023	.000072	-.001921	-.012867	-.003096
#2	-.071223	.0089718	.000270	-.000223	-.000475	-.004602	-.005143
#3	-.010549	.0094495	.000173	-.001118	.000283	.007822	-.007634

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: ICSABDLX20 Acquired: 6/4/2025 16:40:56 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0083870	-.003620	.0000505
Stddev	.0031293	.000881	.0000554
%RSD	37.31116	24.32864	109.7058
#1	.0068712	-.003804	.0000975
#2	.0063043	-.004394	.0000644
#3	.0119855	-.002662	-.000011

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2863.459	61983.07	9881.950	2042.744	3985.731
Stddev	11.406	81.34	58.160	5.507	21.032
%RSD	.3983354	.1312300	.5885447	.2696063	.5276922
#1	2867.288	61904.42	9863.192	2037.090	3995.015
#2	2872.459	62066.86	9947.174	2048.092	4000.524
#3	2850.631	61977.91	9835.484	2043.050	3961.654

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCV01 Acquired: 6/4/2025 16:45:11 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**5.031976**	**4.793616**	**5.009952**	**5.071216**	**5.073184**	**9.951779**	**9.776560**
Stddev	.021782	.037777	.018428	.018016	.008681	.017106	.092657
%RSD	.4328686	.7880655	.3678200	.3552540	.1711228	.1718899	.9477484
#1	5.018628	4.754050	4.993891	5.069931	5.066926	9.970269	9.861814
#2	5.020188	4.797493	5.005896	5.053878	5.069532	9.948551	9.677949
#3	5.057111	4.829305	5.030070	5.089840	5.083095	9.936517	9.789917

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2468239**	**2.510075**	**24.34747**	**.9927620**	**2.508632**	**1.276029**	**4.785316**
Stddev	.0003430	.008562	.04030	.0015368	.007571	.003226	.006935
%RSD	.1389723	.3411170	.1655117	.1547981	.3018156	.2527928	.1449286
#1	.2472084	2.502204	24.35357	.9929465	2.501456	1.273405	4.778275
#2	.2465495	2.508829	24.30447	.9911412	2.507894	1.275052	4.785532
#3	.2467137	2.519192	24.38437	.9941981	2.516545	1.279631	4.792141

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.443879**	**24.33499**	**2.525560**	**1.233920**	**24.54294**	**2.420733**	**2.450344**
Stddev	.004677	.03205	.006883	.002598	.08175	.008828	.004693
%RSD	.1913695	.1317201	.2725210	.2105100	.3331014	.3646831	.1915418
#1	2.445688	24.35143	2.521936	1.231669	24.45606	2.413555	2.444997
#2	2.438568	24.29805	2.521248	1.236762	24.55442	2.418054	2.453782
#3	2.447382	24.35548	2.533498	1.233327	24.61835	2.430590	2.452253

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.19177**	**4.933285**	**5.019684**	**4.933093**	**4.905354**	**4.841144**	**4.980032**
Stddev	.06459	.003695	.014408	.018094	.001848	.004508	.031477
%RSD	.2669761	.0748930	.2870200	.3667805	.0376658	.0931176	.6320723
#1	24.15066	4.930390	5.015391	4.918116	4.906111	4.838322	4.950207
#2	24.26621	4.937446	5.007911	4.927966	4.903248	4.846343	4.976955
#3	24.15844	4.932019	5.035750	4.953197	4.906702	4.838768	5.012935

Sample Name: CCV01 Acquired: 6/4/2025 16:45:11 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.832931**	**4.998888**	**4.909848**
Stddev	.016019	.004812	.038277
%RSD	.3314582	.0962674	.7796027
#1	4.821013	4.993618	4.916162
#2	4.826638	4.999997	4.868807
#3	4.851141	5.003049	4.944577

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2808.288**	**60566.63**	**9003.397**	**1991.787**	**3790.884**
Stddev	5.253	57.74	17.055	3.082	7.837
%RSD	.1870448	.0953270	.1894307	.1547235	.2067392
#1	2808.551	60557.35	8984.241	1988.229	3796.746
#2	2813.405	60514.09	9016.933	1993.626	3793.923
#3	2802.909	60628.44	9009.016	1993.506	3781.982

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB01 Acquired: 6/4/2025 16:52:47 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.000881**	**.0000262**	**.0001744**	**.0026445**	**.0015151**	**-.001675**	**-.002911**
Stddev	.001453	.0012993	.0004185	.0025926	.0010653	.004465	.000521
%RSD	164.8763	4951.541	239.9398	98.03472	70.31308	266.5377	17.89522
#1	-.002560	-.001236	.0006386	.0033757	.0006587	-.005055	-.003496
#2	-.000041	.001360	.0000586	-.000235	.0011786	.003386	-.002500
#3	-.000044	-.000045	-.000174	.004793	.0027081	-.003357	-.002736

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000055**	**.0000512**	**.0013184**	**.0009094**	**-.000005**	**.0006431**	**.0042725**
Stddev	.000008	.0000838	.0064108	.0002981	.000103	.0002468	.0025583
%RSD	13.86745	163.6124	486.2619	32.77632	1886.702	38.37099	59.87938
#1	-.000063	.0001149	.0073931	.0012535	.000111	.0009279	.0059088
#2	-.000048	.0000825	-.005383	.0007305	-.000081	.0005071	.0055844
#3	-.000054	-.000044	.001945	.0007443	-.000046	.0004943	.0013243

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000390**	**.0175556**	**.0001848**	**.0002805**	**-.113473**	**.0002914**	**.0009262**
Stddev	.000045	.0155950	.0001184	.0001355	.015062	.0016332	.0000842
%RSD	11.63632	88.83201	64.05805	48.29113	13.27332	560.5241	9.093471
#1	-.000355	.0294367	.0001068	.0002424	-.096222	.0021683	.0009014
#2	-.000441	.0233340	.0001265	.0001682	-.124008	-.000487	.0008572
#3	-.000373	-.000104	.0003210	.0004309	-.120189	-.000807	.0010200

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.036872**	**.0065934**	**.0002923**	**.0005754**	**-.000011**	**-.001024**	**-.002620**
Stddev	.027979	.0006111	.0000962	.0004196	.000272	.003118	.000468
%RSD	75.88054	9.267687	32.91620	72.91482	2376.816	304.5105	17.85190
#1	-.057899	.0070362	.0003045	.0000975	.000237	-.003956	-.002183
#2	-.005117	.0058962	.0003817	.0007455	-.000303	-.001367	-.002564
#3	-.047600	.0068477	.0001905	.0008833	.000031	.002251	-.003114

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB01 Acquired: 6/4/2025 16:52:47 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0009075	-.003271	.0000907
Stddev	.0025359	.000712	.0000834
%RSD	279.4353	21.76660	91.95002
#1	.0006660	-.003264	.0000061
#2	-.001499	-.003987	.0001729
#3	.003555	-.002563	.0000932

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2857.299	60811.08	10190.58	2041.991	3989.729
Stddev	34.871	220.00	6.65	11.344	46.206
%RSD	1.220421	.3617690	.0652394	.5555294	1.158133
#1	2885.395	60578.91	10198.24	2032.045	4024.854
#2	2818.272	60837.90	10186.26	2039.581	3937.386
#3	2868.230	61016.44	10187.24	2054.346	4006.949

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2160-05 Acquired: 6/4/2025 16:57:07 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0306666	-.029905	.1587654	-.001673	.0006714	116.2751	.8007980
Stddev	.0017283	.003319	.0024678	.003269	.0009678	.2845	.0021689
%RSD	5.635857	11.09911	1.554352	195.4282	144.1425	.2447127	.2708377
#1	.0289868	-.026248	.1578541	-.000647	.0001678	116.5135	.8021399
#2	.0305732	-.032727	.1615592	.000961	.0017871	115.9601	.7982958
#3	.0324397	-.030739	.1568829	-.005332	.0000593	116.3517	.8019583

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0107966	.0094086	13.68909	.1903055	.1545177	.2191587	308.3777
Stddev	.0000162	.0002529	.05941	.0009999	.0003948	.0022929	.8519
%RSD	.1505548	2.687640	.4339760	.5254389	.2554995	1.046244	.2762627
#1	.0107959	.0092786	13.69209	.1914546	.1540797	.2174715	308.2245
#2	.0107807	.0092473	13.62824	.1898290	.1548460	.2182352	309.2958
#3	.0108132	.0097001	13.74694	.1896329	.1546275	.2217694	307.6127

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.140641	55.97841	.3147494	.0127217	5.523960	.2954219	.6249420
Stddev	.031436	.29660	.0000788	.0004166	.061962	.0030912	.0024159
%RSD	.4402396	.5298502	.0250469	3.274731	1.121702	1.046356	.3865858
#1	7.139254	55.81122	.3146695	.0124829	5.546116	.2956353	.6270844
#2	7.109922	55.80316	.3147514	.0132027	5.571798	.2922295	.6254182
#3	7.172748	56.32087	.3148272	.0124795	5.453965	.2984008	.6223235

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.94051	.7978689	.0037761	.0129059	4.365451	12.85754	5.213559
Stddev	.17102	.0028351	.0002581	.0011444	.015647	.33147	.014451
%RSD	.8166780	.3553300	6.833912	8.867307	.3584325	2.578010	.2771826
#1	21.05196	.7967871	.0034787	.0121033	4.365889	13.05525	5.198958
#2	21.02595	.8010856	.0039412	.0142164	4.349589	13.04251	5.213863
#3	20.74361	.7957340	.0039083	.0123981	4.380875	12.47487	5.227856

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2160-05 Acquired: 6/4/2025 16:57:07 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.4330425	.4706934	-.182188
Stddev	.0126757	.0004488	.001098
%RSD	2.927128	.0953599	.6028962
#1	.4196758	.4705504	-.181664
#2	.4448904	.4711963	-.183450
#3	.4345612	.4703335	-.181449

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3245.796	69640.11	11814.07	2327.201	3632.170
Stddev	1.702	251.85	59.78	7.530	1.182
%RSD	.0524240	.3616434	.5059878	.3235793	.0325531
#1	3246.419	69563.20	11807.84	2321.340	3630.891
#2	3247.099	69435.69	11876.73	2324.570	3633.224
#3	3243.871	69921.45	11757.66	2335.694	3632.395

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2159-04 Acquired: 6/4/2025 17:01:12 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.004033**	**-.003312**	**.0002194**	**.0042577**	**.0019283**	**.2553989**	**.2753372**
Stddev	.001809	.000786	.0003069	.0008013	.0016848	.0028510	.0009889
%RSD	44.85251	23.73501	139.8514	18.82000	87.37145	1.116309	.3591728
#1	-.005616	-.002929	-.000076	.0051782	.0009572	.2582744	.2744363
#2	-.002061	-.004216	.000198	.0038788	.0009539	.2525729	.2763953
#3	-.004422	-.002791	.000536	.0037162	.0038738	.2553493	.2751801

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001877**	**-.000013**	**3.292288**	**.0003112**	**.0083971**	**.0092520**	**.0058965**
Stddev	.0000036	.000006	.007452	.0001886	.0000637	.0003893	.0032263
%RSD	1.917260	41.45323	.2263586	60.59981	.7591048	4.208197	54.71540
#1	.0001887	-.000017	3.288297	.0002629	.0084174	.0088351	.0026172
#2	.0001908	-.000007	3.300886	.0001515	.0084483	.0096062	.0090671
#3	.0001838	-.000016	3.287681	.0005193	.0083257	.0093148	.0060053

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1230519**	**2.156573**	**.0043897**	**-.000017**	**293.2870**	**.0009063**	**.1118534**
Stddev	.0004989	.016282	.0003257	.000256	2.5714	.0007677	.0004425
%RSD	.4054356	.7549798	7.420897	1506.516	.8767563	84.70759	.3955760
#1	.1231965	2.141753	.0046919	.000274	291.1453	.0010958	.1115594
#2	.1234626	2.174002	.0044326	-.000206	296.1388	.0015614	.1123623
#3	.1224967	2.153964	.0040446	-.000119	292.5768	.0000616	.1116385

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7840145**	**.0583049**	**.0002970**	**-.001643**	**.0001370**	**.4008719**	**.0077301**
Stddev	.0170161	.0007948	.0001009	.000768	.0004315	.0106532	.0013640
%RSD	2.170377	1.363111	33.97828	46.73976	314.8834	2.657510	17.64470
#1	.7746360	.0586908	.0002684	-.002527	-.000220	.4122010	.0064278
#2	.7737512	.0573909	.0002135	-.001147	.000617	.3993583	.0091483
#3	.8036564	.0588330	.0004091	-.001255	.000014	.3910565	.0076142

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2159-04 Acquired: 6/4/2025 17:01:12 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.8559505**	**-.004443**	**.0347145**
Stddev	.0016564	.001173	.0001155
%RSD	.1935154	26.41037	.3326286
#1	.8557345	-.004900	.0346672
#2	.8577043	-.003110	.0348461
#3	.8544128	-.005320	.0346302

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2808.438**	**62235.38**	**9697.333**	**2007.833**	**3710.610**
Stddev	6.906	25.79	25.723	4.273	7.087
%RSD	.2458913	.0414407	.2652547	.2128121	.1910006
#1	2814.148	62206.26	9712.370	2003.606	3713.600
#2	2810.403	62244.51	9667.632	2012.150	3715.712
#3	2800.762	62255.36	9711.997	2007.743	3702.517

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2178-01 Acquired: 6/4/2025 17:05:38 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.0226742**	**-.011615**	**4.361198**	**-.009952**	**.0100666**	**85.87959**	**.6201971**
Stddev	.0026073	.002404	.009849	.002071	.0046034	.05273	.0026714
%RSD	11.49888	20.69886	.2258284	20.80915	45.72900	.0613948	.4307342
#1	.0250835	-.012063	4.370156	-.011922	.0068932	85.93958	.6221893
#2	.0199061	-.009019	4.350652	-.007793	.0079603	85.84060	.6171615
#3	.0230330	-.013764	4.362787	-.010141	.0153463	85.85860	.6212406

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046402**	**.0028435**	**817.2500**	**.1384077**	**.0588197**	**.2134940**	**94.17148**
Stddev	.0000643	.0001200	6.5165	.0001511	.0001770	.0001638	.26047
%RSD	1.385083	4.221191	.7973722	.1091562	.3009297	.0766991	.2765908
#1	.0045667	.0029298	824.6623	.1383528	.0589410	.2134148	94.47222
#2	.0046861	.0027064	814.6655	.1385785	.0586166	.2133848	94.01771
#3	.0046677	.0028942	812.4221	.1382917	.0589016	.2136823	94.02451

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.185067**	**33.88332**	**.1722882**	**.0064252**	**7.047989**	**.1927224**	**.1358490**
Stddev	.006960	.05831	.0004051	.0000875	.047366	.0040545	.0008217
%RSD	.3185391	.1720955	.2351138	1.362296	.6720561	2.103816	.6048685
#1	2.192849	33.89999	.1726648	.0065055	7.079091	.1935038	.1363857
#2	2.179437	33.93148	.1718597	.0063319	6.993476	.1963294	.1349030
#3	2.182913	33.81849	.1723401	.0064382	7.071401	.1883341	.1362582

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.28429**	**.3335464**	**.0122658**	**3.586132**	**4.678928**	**8.870611**	**5.799855**
Stddev	.05421	.0014042	.0007381	.013375	.010198	.043789	.009418
%RSD	.3329044	.4209971	6.017768	.3729687	.2179662	.4936456	.1623849
#1	16.32699	.3348522	.0122588	3.600221	4.690517	8.900901	5.809760
#2	16.22330	.3320610	.0130074	3.573608	4.674939	8.820403	5.791014
#3	16.30257	.3337261	.0115312	3.584566	4.671326	8.890528	5.798791

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2178-01 Acquired: 6/4/2025 17:05:38 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	19.93441	.0151149	4.903724
Stddev	.06068	.0012267	.033743
%RSD	.3043922	8.115793	.6881063
#1	20.00435	.0138804	4.937635
#2	19.90310	.0151307	4.870152
#3	19.89578	.0163337	4.903386

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2753.040	59711.02	10164.85	1945.372	3347.527
Stddev	1.712	119.14	25.08	8.296	7.318
%RSD	.0622003	.1995356	.2467298	.4264704	.2186184
#1	2754.170	59612.48	10158.69	1937.361	3339.267
#2	2753.880	59677.16	10143.42	1953.927	3353.200
#3	2751.070	59843.44	10192.43	1944.827	3350.115

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2182-01 Acquired: 6/4/2025 17:10:00 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.0431703**	**-.018988**	**.4378942**	**.0033521**	**.0022537**	**88.97099**	**.9630080**
Stddev	.0021869	.001601	.0016940	.0062400	.0017056	.09923	.0024406
%RSD	5.065713	8.431087	.3868555	186.1507	75.68037	.1115333	.2534352
#1	.0416599	-.020772	.4370094	-.003000	.0002848	89.05928	.9641717
#2	.0456781	-.017677	.4368258	.009474	.0031979	88.99009	.9646490
#3	.0421729	-.018514	.4398474	.003582	.0032784	88.86359	.9602034

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0061200**	**.0033271**	**49.28553**	**.1482405**	**.0867692**	**.1960987**	**201.9112**
Stddev	.0000388	.0003969	.16121	.0023274	.0001076	.0031161	3.2090
%RSD	.6346066	11.92864	.3270840	1.570018	.1240190	1.589045	1.589321
#1	.0061169	.0029164	49.37822	.1504969	.0867900	.1929157	205.3500
#2	.0061603	.0033564	49.37899	.1483766	.0868649	.1962373	201.3870
#3	.0060828	.0037085	49.09939	.1458481	.0866528	.1991432	198.9965

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.825292**	**30.68629**	**.1543601**	**.0093505**	**7.888329**	**.3067981**	**.3990878**
Stddev	.007440	.10004	.0006020	.0003795	.123084	.0016303	.0069437
%RSD	.2633436	.3259948	.3900009	4.058209	1.560337	.5313930	1.739894
#1	2.827203	30.72352	.1548642	.0097561	8.028760	.3058814	.4058202
#2	2.831589	30.76237	.1545225	.0090041	7.837064	.3086804	.3994927
#3	2.817082	30.57298	.1536935	.0092913	7.799163	.3058325	.3919505

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.934541**	**.5002414**	**.0024429**	**.0211971**	**2.823167**	**6.616108**	**6.491815**
Stddev	.150304	.0082974	.0002004	.0003742	.008443	.113735	.012800
%RSD	1.682283	1.658679	8.203837	1.765518	.2990555	1.719066	.1971738
#1	9.096757	.5094057	.0023588	.0213554	2.826038	6.740253	6.501421
#2	8.906874	.4980797	.0022982	.0214661	2.829800	6.591139	6.477284
#3	8.799993	.4932388	.0026716	.0207697	2.813663	6.516932	6.496740

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2182-01 Acquired: 6/4/2025 17:10:00 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	3.458227	.1682363	-.010521
Stddev	.004312	.0011348	.002839
%RSD	.1247002	.6745060	26.98269
#1	3.462718	.1692977	-.013682
#2	3.457844	.1683711	-.009692
#3	3.454118	.1670402	-.008189

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3267.914	67261.68	12000.57	2241.750	3772.096
Stddev	8.366	953.85	44.53	31.232	6.173
%RSD	.2560091	1.418115	.3710777	1.393216	.1636584
#1	3268.047	66302.74	12017.24	2212.784	3772.212
#2	3276.213	67271.96	11950.11	2237.626	3778.210
#3	3259.483	68210.35	12034.37	2274.840	3765.865

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2172-04 Acquired: 6/4/2025 17:14:04 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.003098**	**-.003107**	**.0001171**	**.0004491**	**.0008670**	**.2334936**	**.1530519**
Stddev	.001332	.000691	.0007160	.0016704	.0005161	.0015708	.0004161
%RSD	42.99570	22.24451	611.4625	371.9190	59.53120	.6727498	.2718387
#1	-.001614	-.003851	.0001431	.0023634	.0003870	.2321772	.1526039
#2	-.004189	-.002983	-.000612	-.000303	.0008011	.2330713	.1534262
#3	-.003490	-.002486	.000820	-.000713	.0014129	.2352325	.1531256

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000022**	**-.000057**	**.9526756**	**.0000930**	**.0051445**	**.0048324**	**.0181385**
Stddev	.000031	.000042	.0045306	.0001142	.0000986	.0004568	.0030276
%RSD	140.6540	74.57599	.4755643	122.7862	1.916100	9.451773	16.69161
#1	-.000025	-.000008	.9573547	.0001263	.0050601	.0053296	.0213042
#2	.000010	-.000075	.9483098	.0001867	.0052528	.0044314	.0152711
#3	-.000052	-.000087	.9523624	-.000034	.0051207	.0047361	.0178401

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1071421**	**.9979434**	**.0019738**	**-.000604**	**306.0459**	**-.000418**	**.0372657**
Stddev	.0002898	.0073383	.0001820	.000360	3.0407	.001023	.0001223
%RSD	.2704571	.7353401	9.222350	59.59582	.9935482	244.7383	.3281241
#1	.1074609	1.006358	.0021433	-.000789	309.4011	-.001229	.0373649
#2	.1068948	.992872	.0017814	-.000189	305.2643	.000731	.0373031
#3	.1070704	.994600	.0019967	-.000833	303.4723	-.000755	.0371291

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6160998**	**.0201977**	**.0000442**	**-.001070**	**.0000743**	**.5827898**	**.0046215**
Stddev	.0197499	.0006545	.0000780	.000569	.0003529	.0121473	.0003318
%RSD	3.205632	3.240396	176.5798	53.14973	474.8912	2.084341	7.179334
#1	.6355466	.0200083	.0000790	-.000420	.0001799	.5868592	.0046106
#2	.5960601	.0196588	.0000987	-.001477	.0003623	.5923799	.0042952
#3	.6166926	.0209260	-.000045	-.001312	-.000319	.5691302	.0049585

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2172-04 Acquired: 6/4/2025 17:14:04 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**1.187245**	**-.004008**	**.0090493**
Stddev	.020140	.000475	.0000161
%RSD	1.696391	11.84350	.1781723
#1	1.196596	-.004477	.0090356
#2	1.164129	-.004021	.0090671
#3	1.201009	-.003528	.0090452

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3136.283**	**67056.98**	**11350.98**	**2170.164**	**3841.790**
Stddev	40.506	260.08	56.11	10.679	54.243
%RSD	1.291541	.3878482	.4943220	.4920700	1.411926
#1	3112.730	66936.45	11415.26	2160.976	3813.753
#2	3183.055	66879.04	11311.78	2167.636	3904.314
#3	3113.064	67355.46	11325.92	2181.880	3807.304

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2178-02 Acquired: 6/4/2025 17:18:30 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.006053**	**-.003498**	**-.001016**	**.0033003**	**.0028483**	**.2000838**	**.2556853**
Stddev	.000698	.002165	.001088	.0023814	.0010747	.0044756	.0013801
%RSD	11.53161	61.87607	107.1219	72.15687	37.73055	2.236844	.5397691
#1	-.006820	-.002806	-.001012	.0057068	.0025403	.2047149	.2571827
#2	-.005881	-.001764	-.002106	.0009448	.0040433	.1997545	.2554089
#3	-.005456	-.005924	.000071	.0032493	.0019612	.1957820	.2544643

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000165**	**-.000047**	**199.8335**	**.0042865**	**-.000793**	**.0006685**	**.0480967**
Stddev	.000020	.000049	.5136	.0001810	.000194	.0004386	.0014926
%RSD	12.02311	105.6007	.2570141	4.221954	24.43754	65.61535	3.103223
#1	-.000158	.000003	200.2096	.0043561	-.000632	.0005468	.0497758
#2	-.000187	-.000047	200.0427	.0044222	-.000740	.0011551	.0469206
#3	-.000149	-.000096	199.2484	.0040810	-.001008	.0003035	.0475937

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0055249**	**.0289355**	**.0000170**	**-.000071**	**346.2756**	**.0011187**	**.0078644**
Stddev	.0001605	.0123411	.0003751	.000109	1.5875	.0003989	.0003978
%RSD	2.904557	42.65029	2206.723	154.0418	.4584575	35.65955	5.058591
#1	.0055544	.0203304	-.000416	-.000004	345.9085	.0007423	.0083099
#2	.0053517	.0430751	.000245	-.000197	348.0145	.0015369	.0077389
#3	.0056686	.0234011	.000222	-.000012	344.9037	.0010770	.0075445

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.56417**	**.0068589**	**.0015692**	**-.004245**	**-.005552**	**.3927542**	**.0024446**
Stddev	.02932	.0001718	.0002576	.000747	.000300	.0034188	.0013202
%RSD	.2535725	2.504660	16.41385	17.59443	5.397137	.8704608	54.00634
#1	11.59771	.0067138	.0017163	-.004257	-.005897	.3964370	.0021424
#2	11.54340	.0070486	.0017194	-.003493	-.005357	.3921439	.0013017
#3	11.55140	.0068143	.0012718	-.004986	-.005401	.3896816	.0038898

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2178-02 Acquired: 6/4/2025 17:18:30 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.9756621	-.021281	1.437411
Stddev	.0045693	.000016	.006575
%RSD	.4683297	.0742263	.4574264
#1	.9724108	-.021263	1.430780
#2	.9736890	-.021291	1.443929
#3	.9808864	-.021289	1.437524

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2689.660	57738.90	10105.65	1871.606	3562.543
Stddev	10.716	146.18	33.03	6.444	13.483
%RSD	.3984189	.2531728	.3268911	.3443108	.3784550
#1	2700.155	57868.44	10118.90	1878.983	3574.481
#2	2690.089	57580.41	10068.05	1867.071	3565.229
#3	2678.736	57767.84	10130.01	1868.764	3547.920

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-01 Acquired: 6/4/2025 17:23:06 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0383499	-.022710	.1776909	.0015531	.0000984	103.8992	1.490156
Stddev	.0016504	.002205	.0009978	.0016528	.0012786	1.2564	.017511
%RSD	4.303674	9.710726	.5615295	106.4206	1299.587	1.209209	1.175098
#1	.0384197	-.021993	.1771404	.0032966	.0002352	105.3499	1.510296
#2	.0399643	-.025184	.1788427	.0000090	-.001243	103.1711	1.478530
#3	.0366656	-.020952	.1770897	.0013537	.001303	103.1766	1.481643

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103098	.0076234	90.32384	.1877681	.1842089	.2580942	269.6282
Stddev	.0002232	.0000745	1.23892	.0014377	.0002097	.0004270	.5742
%RSD	2.164810	.9771762	1.371640	.7656576	.1138092	.1654448	.2129529
#1	.0105609	.0076125	91.75180	.1864625	.1843765	.2585544	269.4499
#2	.0102348	.0075549	89.53482	.1875330	.1839738	.2577109	269.1644
#3	.0101339	.0077027	89.68492	.1893088	.1842764	.2580171	270.2704

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.241143	60.02636	.3156534	.0097561	1.495352	.2784365	.6777875
Stddev	.112105	.84571	.0010779	.0007077	.000863	.0033643	.0004553
%RSD	1.360312	1.408899	.3414795	7.254013	.0577206	1.208271	.0671778
#1	8.369715	61.00215	.3156619	.0103230	1.494404	.2823032	.6783092
#2	8.163834	59.50526	.3145713	.0089629	1.495559	.2768268	.6775833
#3	8.189881	59.57167	.3167271	.0099823	1.496092	.2761796	.6774701

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.87004	.6108270	.0034557	.0084006	2.061298	2.383391	5.960588
Stddev	.09398	.0020415	.0001871	.0018433	.025055	.019110	.022244
%RSD	.5258953	.3342259	5.415113	21.94192	1.215508	.8017961	.3731800
#1	17.78827	.6090760	.0036074	.0073229	2.089325	2.403191	5.958115
#2	17.84914	.6103356	.0032466	.0073500	2.041069	2.381925	5.939685
#3	17.97271	.6130694	.0035132	.0105290	2.053500	2.365056	5.983965

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-01 Acquired: 6/4/2025 17:23:06 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.6458814	.4434622	-.025782
Stddev	.0033781	.0042128	.002839
%RSD	.5230276	.9499767	11.01199
#1	.6475528	.4474010	-.022507
#2	.6480980	.4390206	-.027553
#3	.6419934	.4439650	-.027286

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3253.895	68016.43	11670.56	2248.076	3684.129
Stddev	6.516	163.28	154.01	1.863	10.606
%RSD	.2002508	.2400536	1.319688	.0828743	.2878859
#1	3248.121	68159.63	11493.33	2250.167	3676.974
#2	3260.960	68051.03	11771.93	2246.591	3696.314
#3	3252.604	67838.62	11746.41	2247.471	3679.097

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-05 Acquired: 6/4/2025 17:27:11 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0330361	-.030373	.1798513	-.003319	.0009051	115.7690	1.258951
Stddev	.0006817	.002087	.0033862	.006914	.0002142	3.7033	.039891
%RSD	2.063516	6.870017	1.882790	208.3126	23.66395	3.198838	3.168597
#1	.0329678	-.030090	.1766831	.004301	.0006663	113.2485	1.231824
#2	.0337494	-.032587	.1794508	-.005064	.0010802	114.0377	1.240275
#3	.0323911	-.028442	.1834199	-.009194	.0009689	120.0208	1.304754

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0121635	.0147805	44.59684	.2256052	.1843627	.2495212	313.4311
Stddev	.0003149	.0001762	1.36384	.0013156	.0003492	.0026932	2.2215
%RSD	2.588996	1.192009	3.058152	.5831254	.1893993	1.079357	.7087585
#1	.0119202	.0147918	43.56661	.2263981	.1847377	.2471237	314.9141
#2	.0120510	.0149508	44.08044	.2240866	.1840469	.2524353	310.8770
#3	.0125192	.0145990	46.14348	.2263308	.1843034	.2490045	314.5022

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.308467	70.13828	.3884610	.0085055	1.648814	.3135669	.7468978
Stddev	.283504	2.10452	.0007489	.0008485	.021216	.0091307	.0024379
%RSD	3.045660	3.000532	.1927969	9.975406	1.286744	2.911868	.3263966
#1	9.106246	68.50481	.3880300	.0089493	1.664724	.3071231	.7486559
#2	9.186632	69.39687	.3893258	.0075272	1.624726	.3095620	.7441148
#3	9.632523	72.51317	.3880272	.0090400	1.656991	.3240156	.7479226

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.38112	.7012055	.0042227	.0087557	3.437612	2.307135	7.974225
Stddev	.18341	.0084522	.0002405	.0015579	.105294	.018683	.022972
%RSD	.7844509	1.205383	5.696497	17.79334	3.063012	.8097919	.2880829
#1	23.46467	.7107536	.0044200	.0074325	3.366618	2.323413	7.998991
#2	23.17081	.6946808	.0042935	.0083617	3.387630	2.286735	7.953613
#3	23.50788	.6981821	.0039548	.0104727	3.558589	2.311257	7.970070

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-05 Acquired: 6/4/2025 17:27:11 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.2358234	.5435070	-.136623
Stddev	.0049261	.0138444	.004816
%RSD	2.088878	2.547243	3.525188
#1	.2408988	.5345996	-.141397
#2	.2310616	.5364646	-.136707
#3	.2355099	.5594569	-.131766

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3357.483	72527.92	11572.48	2386.366	3644.058
Stddev	.844	239.90	301.09	5.757	2.676
%RSD	.0251257	.3307716	2.601735	.2412606	.0734335
#1	3358.456	72259.42	11828.15	2384.848	3641.286
#2	3357.024	72721.20	11648.67	2392.730	3646.626
#3	3356.968	72603.13	11240.62	2381.519	3644.263

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2178-01DUP Acquired: 6/4/2025 17:31:17 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0214917	-.013225	2.987478	-.013827	.0118076	102.1941
Stddev	.0036010	.002668	.032705	.005543	.0011971	.4103
%RSD	16.75544	20.17378	1.094733	40.08991	10.13815	.4014867
#1	.0204101	-.015941	3.023961	-.013113	.0128863	101.7671
#2	.0185554	-.013126	2.977683	-.019692	.0120167	102.2300
#3	.0255095	-.010608	2.960790	-.008675	.0105197	102.5853

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6308416	.0053533	.0038639	1049.031	.1473993	.0576004
Stddev	.0009874	.0000850	.0002776	15.387	.0008567	.0005277
%RSD	.1565176	1.588247	7.185098	1.466803	.5811867	.9161298
#1	.6298287	.0052563	.0039996	1036.712	.1464808	.0572133
#2	.6308948	.0053881	.0035446	1044.103	.1481766	.0573865
#3	.6318013	.0054153	.0040476	1066.279	.1475403	.0582015

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1814769	104.7732	2.786421	43.64091	.1599108	.0057110
Stddev	.0006246	.5126	.014140	.26075	.0001581	.0001219
%RSD	.3441612	.4892311	.5074685	.5975001	.0988829	2.134757
#1	.1818080	104.6752	2.771368	43.34744	.1597283	.0057954
#2	.1807565	105.3278	2.788470	43.72930	.1600080	.0055712
#3	.1818663	104.3168	2.799425	43.84597	.1599960	.0057663

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.674577	.1818225	.1957469	19.10630	.3942376	.0093174
Stddev	.064487	.0012175	.0016899	.11564	.0003266	.0004807
%RSD	.7434069	.6696298	.8633279	.6052573	.0828361	5.158657
#1	8.616493	.1820574	.1942879	18.98934	.3939084	.0088714
#2	8.743972	.1805046	.1975986	19.22058	.3945615	.0098265
#3	8.663266	.1829055	.1953541	19.10899	.3942429	.0092542

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2178-01DUP Acquired: 6/4/2025 17:31:17 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**2.405379**	**4.977512**	**8.272067**	**7.345038**	F **25.93470**	**-.007910**
Stddev	.006921	.009397	.088826	.030848	.17683	.002649
%RSD	.2877380	.1887841	1.073808	.4199825	.6818220	33.48431
#1	2.412949	4.966668	8.350679	7.321467	25.78478	-.005769
#2	2.399376	4.982598	8.289816	7.333695	25.88961	-.007089
#3	2.403811	4.983269	8.175707	7.379951	26.12971	-.010872

Elem	Sr4077
Units	ppm
Avg	**6.853544**
Stddev	.062187
%RSD	.9073635
#1	6.785276
#2	6.868396
#3	6.906959

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2666.655**	**56969.30**	**9930.736**	**1885.239**	**3191.767**
Stddev	3.252	124.95	41.730	6.347	7.120
%RSD	.1219470	.2193264	.4202112	.3366688	.2230783
#1	2668.648	57007.70	9962.495	1886.262	3193.836
#2	2668.414	56829.65	9946.239	1878.443	3197.624
#3	2662.902	57070.54	9883.473	1891.013	3183.841

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCV02 Acquired: 6/4/2025 17:35:39 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.961670**	**5.115362**	**4.905415**	**5.056648**	**4.988699**	**9.623676**	**9.197371**
Stddev	.029545	.043850	.029811	.030708	.036225	.024133	.042146
%RSD	.5954725	.8572142	.6077082	.6072795	.7261380	.2507717	.4582354
#1	4.930087	5.074532	4.879622	5.024225	4.950862	9.646711	9.221034
#2	4.988633	5.161709	4.938053	5.085291	5.023062	9.598577	9.222368
#3	4.966291	5.109845	4.898571	5.060429	4.992173	9.625740	9.148712

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2441436**	**2.462027**	**23.49899**	**.9849231**	**2.456567**	**1.253951**	**4.743809**
Stddev	.0019552	.016183	.09937	.0024220	.016498	.007868	.013450
%RSD	.8008441	.6573053	.4228701	.2459122	.6715959	.6274497	.2835321
#1	.2458482	2.446975	23.58849	.9875868	2.441259	1.246957	4.729074
#2	.2420093	2.479143	23.39206	.9828530	2.474041	1.262469	4.746925
#3	.2445734	2.459963	23.51643	.9843295	2.454401	1.252427	4.755427

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.332443**	**23.59237**	**2.481170**	**1.228130**	**23.66926**	**2.343973**	**2.481721**
Stddev	.010820	.16805	.018538	.001243	.09608	.004344	.002861
%RSD	.4638850	.7123035	.7471414	.1011749	.4059374	.1853434	.1152651
#1	2.342190	23.76110	2.463763	1.227244	23.55836	2.347295	2.481319
#2	2.320801	23.42501	2.500663	1.229550	23.72730	2.339056	2.479082
#3	2.334338	23.59102	2.479083	1.227594	23.72214	2.345567	2.484761

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.76248**	**4.829286**	**4.969209**	**4.867027**	**4.668137**	**4.844333**	**4.854716**
Stddev	.11495	.030334	.034078	.035585	.012778	.031047	.038685
%RSD	.4837403	.6281232	.6857761	.7311497	.2737191	.6408923	.7968608
#1	23.63524	4.855971	4.934975	4.832365	4.673637	4.811941	4.816436
#2	23.85881	4.796295	5.003129	4.903469	4.653530	4.873832	4.893795
#3	23.79340	4.835590	4.969524	4.865247	4.677243	4.847225	4.853919

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCV02 Acquired: 6/4/2025 17:35:39 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**4.792344**	**4.770349**	**4.675259**
Stddev	.041841	.012231	.032466
%RSD	.8730803	.2563860	.6944287
#1	4.755895	4.769636	4.687980
#2	4.838032	4.758491	4.638358
#3	4.783105	4.782921	4.699438

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2826.675**	**59236.29**	**9042.896**	**1962.013**	**3824.079**
Stddev	16.516	137.23	55.448	2.151	21.882
%RSD	.5842853	.2316620	.6131674	.1096311	.5722081
#1	2843.339	59202.90	8982.054	1964.296	3845.784
#2	2810.311	59118.84	9090.584	1961.719	3802.025
#3	2826.375	59387.13	9056.050	1960.024	3824.427

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB02 Acquired: 6/4/2025 17:39:50 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.000755**	**.0011054**	**-.000735**	**.0028662**	**.0012447**	**.0067370**	**-.004670**
Stddev	.000900	.0009503	.001116	.0006352	.0014605	.0042996	.000369
%RSD	119.2203	85.96651	151.8223	22.16257	117.3342	63.82101	7.900906
#1	-.000481	.0003553	-.000068	.0021842	-.000337	.0059346	-.004322
#2	-.001760	.0021740	-.002023	.0034410	.002542	.0113812	-.005057
#3	-.000023	.0007869	-.000113	.0029735	.001530	.0028951	-.004631

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000055**	**.0001695**	**.0123981**	**.0008798**	**-.000028**	**.0003744**	**.0047376**
Stddev	.000099	.0000618	.0069365	.0003085	.000354	.0002685	.0015788
%RSD	179.8531	36.49190	55.94858	35.06957	1261.417	71.71056	33.32621
#1	-.000165	.0001808	.0087784	.0005336	-.000405	.0005808	.0045464
#2	-.000024	.0002249	.0080201	.0009799	.000297	.0004716	.0064033
#3	.000025	.0001028	.0203957	.0011258	.000024	.0000709	.0032630

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004222**	**.0056629**	**.0005939**	**.0003793**	**-.094509**	**.0009773**	**.0029578**
Stddev	.0002925	.0097845	.0000033	.0004928	.028457	.0009680	.0002952
%RSD	69.26491	172.7804	.5486078	129.9142	30.11068	99.04808	9.979930
#1	.0005336	.0119689	.0005939	-.000085	-.124782	.0001182	.0031800
#2	.0000905	-.005609	.0005905	.000896	-.090440	.0020261	.0026229
#3	.0006427	.010629	.0005971	.000327	-.068305	.0007876	.0030706

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.008013**	**.0101014**	**.0010018**	**.0030690**	**.0003822**	**-.000111**	**-.001336**
Stddev	.008930	.0004926	.0001197	.0006217	.0001976	.009826	.002058
%RSD	111.4451	4.876094	11.94465	20.25722	51.70450	8870.166	153.9915
#1	-.003416	.0106463	.0009850	.0030240	.0001861	.010570	-.003638
#2	-.002318	.0096879	.0008915	.0024710	.0005812	-.002135	-.000698
#3	-.018305	.0099700	.0011290	.0037119	.0003792	-.008767	.000326

Sample Name: CCB02 Acquired: 6/4/2025 17:39:50 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	-.000156	-.000547	.0002676
Stddev	.001832	.000873	.0000358
%RSD	1177.064	159.7278	13.37080
#1	-.002263	-.001495	.0002282
#2	.001057	-.000368	.0002980
#3	.000740	.000224	.0002768

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2909.614	60949.62	9602.924	2027.532	4087.062
Stddev	12.764	94.84	11.110	.762	17.744
%RSD	.4386913	.1556019	.1156928	.0375672	.4341486
#1	2920.318	60840.44	9590.116	2027.409	4102.421
#2	2913.036	60996.81	9608.703	2026.840	4091.126
#3	2895.487	61011.61	9609.953	2028.348	4067.639

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2178-01LX5 Acquired: 6/4/2025 17:48:49 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0033296	-.000965	.9120135	-.004558	.0005762	17.66708	.1234195
Stddev	.0015749	.001147	.0047002	.003009	.0004373	.67824	.0057791
%RSD	47.29942	118.8426	.5153636	66.02753	75.88826	3.839028	4.682452
#1	.0036813	-.001274	.9166943	-.006353	.0001563	18.21522	.1283772
#2	.0016086	-.001925	.9072942	-.006237	.0005433	16.90858	.1170724
#3	.0046988	.000305	.9120519	-.001083	.0010290	17.87743	.1248088

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009085	.0001364	173.6589	.0310807	.0119439	.0597030	20.62229
Stddev	.0000244	.0000202	6.9744	.0002787	.0001299	.0007649	.21489
%RSD	2.681787	14.79582	4.016159	.8965778	1.087980	1.281116	1.042034
#1	.0009117	.0001589	179.2109	.0313652	.0120722	.0601649	20.84428
#2	.0008827	.0001304	165.8308	.0308082	.0119473	.0588201	20.41528
#3	.0009311	.0001199	175.9352	.0310687	.0118123	.0601239	20.60732

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4706454	7.219038	.0360035	.0015275	1.327592	.0411048	.0294381
Stddev	.0177777	.296820	.0001486	.0000855	.001863	.0034756	.0002642
%RSD	3.777303	4.111635	.4126627	5.596575	.1402973	8.455391	.8973446
#1	.4847839	7.450406	.0359946	.0015898	1.329742	.0432225	.0292975
#2	.4506872	6.884370	.0358595	.0014300	1.326467	.0370937	.0292740
#3	.4764649	7.322338	.0361563	.0015626	1.326568	.0429983	.0297428

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.203258	.0768422	.0029733	.7274426	.9913585	1.858882	1.153151
Stddev	.009122	.0020630	.0004385	.0048948	.0378146	.012179	.005040
%RSD	.2847852	2.684743	14.74748	.6728804	3.814425	.6551971	.4370633
#1	3.210937	.0786792	.0028310	.7330838	1.019689	1.872914	1.157326
#2	3.193174	.0746102	.0034652	.7243188	.948419	1.852677	1.147552
#3	3.205662	.0772372	.0026236	.7249251	1.005968	1.851055	1.154574

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2178-01LX5 Acquired: 6/4/2025 17:48:49 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	3.926125	-.000011	1.035952
Stddev	.027857	.000636	.051146
%RSD	.7095261	5600.237	4.937071
#1	3.957944	-.000701	1.065323
#2	3.914301	.000115	.976894
#3	3.906131	.000552	1.065638

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2735.354	58832.81	10131.39	1947.033	3656.599
Stddev	9.297	179.80	360.22	1.229	10.997
%RSD	.3398739	.3056033	3.555526	.0631411	.3007384
#1	2726.747	58625.40	9872.98	1948.039	3648.117
#2	2745.213	58928.65	10542.87	1945.663	3669.023
#3	2734.102	58944.38	9978.33	1947.398	3652.656

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2178-01MS Acquired: 6/4/2025 17:53:08 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.7290000**	**1.654043**	**.9079828**	**1.694751**	**.2441197**	**153.0814**
Stddev	.0081230	.002109	.0064988	.006961	.0026313	1.1728
%RSD	1.114259	.1275100	.7157354	.4107131	1.077877	.7661460
#1	.7243520	1.655326	.9094058	1.687101	.2436564	154.2790
#2	.7242686	1.655194	.9008905	1.696443	.2417508	153.0303
#3	.7383794	1.651608	.9136522	1.700710	.2469519	151.9350

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9404456**	**.1613514**	**.1844208**	**1733.411**	**.4837642**	**.2483905**
Stddev	.0084613	.0009596	.0011589	20.692	.0003008	.0021760
%RSD	.8997089	.5946999	.6283972	1.193724	.0621859	.8760295
#1	.9478459	.1624563	.1837995	1756.762	.4840824	.2468246
#2	.9422700	.1607262	.1837050	1717.355	.4837258	.2474718
#3	.9312210	.1608719	.1857578	1726.114	.4834844	.2508752

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4562881**	**145.2059**	**4.807807**	**72.55053**	**.6021180**	**.0692254**
Stddev	.0034209	.8687	.034178	.57043	.0025747	.0013641
%RSD	.7497168	.5982746	.7108796	.7862528	.4276095	1.970582
#1	.4556443	144.9608	4.840243	73.18655	.6008735	.0692712
#2	.4532348	146.1708	4.811059	72.38084	.6004019	.0705661
#3	.4599851	144.4860	4.772120	72.08419	.6050785	.0678389

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.50918**	**.4047085**	**.5321081**	**38.72959**	**.7881235**	**.3262748**
Stddev	.17459	.0017299	.0024865	.27034	.0024304	.0025636
%RSD	.9971506	.4274474	.4672851	.6980150	.3083829	.7857269
#1	17.45128	.4065673	.5300993	38.63243	.7891852	.3257516
#2	17.70537	.4031457	.5348890	39.03508	.7898424	.3240131
#3	17.37089	.4044124	.5313360	38.52126	.7853428	.3290597

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2178-01MS Acquired: 6/4/2025 17:53:08 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.6089490	7.023063	4.227048	17.63391	F 40.71006	.1173437
Stddev	.0025546	.059783	.018810	.05065	.18239	.0051489
%RSD	.4195134	.8512312	.4449987	.2872424	.4480242	4.387915
#1	.6065061	7.079039	4.209165	17.59513	40.61178	.1146657
#2	.6116024	7.030062	4.246665	17.61540	40.59789	.1232797
#3	.6087386	6.960090	4.225314	17.69122	40.92051	.1140856

Elem	Sr4077
Units	ppm
Avg	12.51650
Stddev	.08509
%RSD	.6798264
#1	12.56644
#2	12.56481
#3	12.41825

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2601.360	56947.76	9987.766	1844.681	2970.692
Stddev	11.001	157.96	53.828	7.325	10.830
%RSD	.4228954	.2773810	.5389384	.3970699	.3645601
#1	2610.783	57089.42	9925.665	1852.007	2980.740
#2	2604.025	56777.42	10021.05	1837.358	2972.116
#3	2589.271	56976.43	10016.59	1844.678	2959.221

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2178-01MSD Acquired: 6/4/2025 17:57:23 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.7922719	1.734598	.9765223	1.828400	.2665880	172.6696
Stddev	.0012541	.010661	.0080290	.007536	.0041204	.7656
%RSD	.1582892	.6146367	.8221985	.4121613	1.545600	.4433751
#1	.7908297	1.735869	.9688890	1.822841	.2710216	173.5528
#2	.7928793	1.723358	.9757823	1.836977	.2658664	172.1960
#3	.7931065	1.744566	.9848957	1.825380	.2628761	172.2599

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.024772	.1760567	.1976814	1955.020	.5440139	.2647130
Stddev	.005825	.0005612	.0006077	7.434	.0029777	.0006829
%RSD	.5683791	.3187486	.3074340	.3802410	.5473640	.2579625
#1	1.031344	.1754088	.1969974	1963.477	.5421043	.2639481
#2	1.020248	.1763684	.1978875	1949.520	.5474450	.2652613
#3	1.022723	.1763928	.1981592	1952.064	.5424924	.2649294

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4835002	155.0346	5.187975	81.07261	.6538573	.0771238
Stddev	.0029232	.2457	.014108	.11725	.0021311	.0004851
%RSD	.6045900	.1585114	.2719457	.1446256	.3259317	.6289360
#1	.4801720	155.1161	5.203659	81.18582	.6514123	.0770835
#2	.4846771	155.2292	5.176318	81.08030	.6553211	.0776278
#3	.4856515	154.7584	5.183948	80.95170	.6548385	.0766602

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.12864	.4371218	.5842142	42.93908	.8681623	.3445809
Stddev	.12791	.0002613	.0020220	.21433	.0020255	.0017272
%RSD	.6354524	.0597864	.3460992	.4991578	.2333087	.5012331
#1	20.27395	.4369200	.5846847	43.14266	.8675880	.3430988
#2	20.07893	.4370283	.5859595	42.95918	.8704129	.3441664
#3	20.03306	.4374170	.5819985	42.71541	.8664860	.3464776

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2178-01MSD Acquired: 6/4/2025 17:57:23 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.6532825**	**7.807066**	**4.900727**	F **18.88573**	F **45.87588**	**.1150606**
Stddev	.0019154	.039989	.013825	.04904	.05394	.0010157
%RSD	.2931973	.5122216	.2820938	.2596575	.1175788	.8827642
#1	.6511993	7.852991	4.911631	18.83791	45.84412	.1143193
#2	.6536810	7.779940	4.905372	18.88338	45.84536	.1162184
#3	.6549674	7.788268	4.885178	18.93591	45.93816	.1146443

Elem	Sr4077
Units	ppm
Avg	**14.01471**
Stddev	.15745
%RSD	1.123473
#1	14.19585
#2	13.91062
#3	13.93768

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2570.543**	**55239.75**	**9880.780**	**1809.116**	**2910.708**
Stddev	14.536	181.27	17.601	2.984	16.630
%RSD	.5655030	.3281431	.1781375	.1649642	.5713412
#1	2586.275	55398.50	9899.965	1807.655	2929.280
#2	2567.748	55042.24	9876.999	1807.143	2905.646
#3	2557.607	55278.51	9865.377	1812.549	2897.196

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2178-01A Acquired: 6/4/2025 18:01:39 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.7957209	1.812546	2.601532	1.895321	.7879228	119.3526
Stddev	.0001970	.015778	.003544	.011983	.0018586	.0283
%RSD	.0247621	.8705109	.1362169	.6322565	.2358798	.0237025
#1	.7954943	1.800200	2.597441	1.881775	.7881182	119.3240
#2	.7958523	1.807116	2.603477	1.904539	.7859743	119.3531
#3	.7958159	1.830323	2.603677	1.899650	.7896760	119.3806

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8185812	.1769221	.1963041	1290.787	.4916782	.2497290
Stddev	.0016330	.0013227	.0001898	11.714	.0104978	.0002752
%RSD	.1994881	.7476090	.0967047	.9074968	2.135103	.1101871
#1	.8197213	.1753948	.1965137	1293.319	.4796032	.2496242
#2	.8167105	.1776924	.1962546	1278.014	.4986378	.2500412
#3	.8193119	.1776792	.1961439	1301.027	.4967935	.2495216

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4846097	114.4143	3.552950	54.71255	.6283436	.0753031
Stddev	.0001867	2.3676	.006228	.21440	.0002502	.0019335
%RSD	.0385167	2.069316	.1753003	.3918673	.0398196	2.567590
#1	.4844709	111.6807	3.546326	54.54337	.6281630	.0731114
#2	.4845363	115.7491	3.558688	54.95367	.6282386	.0767673
#3	.4848219	115.8131	3.553836	54.64061	.6286292	.0760307

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.71170	.4173604	.4432074	32.68958	.6851404	.3698999
Stddev	.23624	.0018435	.0107308	.53411	.0093356	.0002948
%RSD	1.722887	.4417048	2.421169	1.633874	1.362579	.0797085
#1	13.44595	.4191778	.4308169	32.07878	.6745036	.3699849
#2	13.79131	.4154919	.4494870	32.92106	.6919745	.3695718
#3	13.89785	.4174115	.4493183	33.06890	.6889431	.3701428

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2178-01A Acquired: 6/4/2025 18:01:39 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**2.036230**	**5.459462**	**7.888268**	**14.92140**	F **30.76443**	**.1612135**
Stddev	.003055	.005540	.156028	.01137	.05075	.0017658
%RSD	.1500122	.1014828	1.977979	.0761987	.1649492	1.095285
#1	2.033405	5.455576	7.708181	14.90959	30.73303	.1602019
#2	2.035813	5.465806	7.982919	14.92234	30.73729	.1632524
#3	2.039471	5.457003	7.973705	14.93228	30.82298	.1601863

Elem	Sr4077
Units	ppm
Avg	**9.058006**
Stddev	.070029
%RSD	.7731204
#1	8.985189
#2	9.124867
#3	9.063964

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2593.509**	**56672.10**	**9801.384**	**1854.429**	**3081.190**
Stddev	4.594	1115.31	21.638	36.425	2.713
%RSD	.1771256	1.968008	.2207611	1.964229	.0880474
#1	2598.805	57959.40	9822.438	1896.466	3084.301
#2	2590.605	56061.03	9779.207	1832.184	3079.317
#3	2591.116	55995.88	9802.507	1834.638	3079.952

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168224TB Acquired: 6/4/2025 18:05:52 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.003625**	**-.002199**	**-.001539**	**.0017111**	**.0019976**	**.0119426**	**-.006642**
Stddev	.001714	.000519	.000447	.0025051	.0018905	.0023168	.000706
%RSD	47.27844	23.61182	29.06775	146.4033	94.63636	19.39923	10.63537
#1	-.001770	-.001835	-.001037	.0026803	.0012294	.0095948	-.006020
#2	-.005150	-.002793	-.001897	.0035867	.0041512	.0142270	-.006496
#3	-.003955	-.001968	-.001682	-.001134	.0006122	.0120060	-.007410

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000176**	**-.000076**	**.0045220**	**.0007447**	**-.000418**	**.0013566**	**.0273839**
Stddev	.000066	.000102	.0031566	.0002096	.000199	.0004638	.0023347
%RSD	37.48578	133.1169	69.80377	28.14772	47.43672	34.19223	8.525901
#1	-.000244	.000027	.0008772	.0009762	-.000190	.0013161	.0272943
#2	-.000173	-.000079	.0063455	.0006899	-.000546	.0009143	.0297621
#3	-.000112	-.000177	.0063434	.0005679	-.000519	.0018393	.0250952

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002601**	**.0227077**	**.0008928**	**.0004197**	**348.9641**	**.0002467**	**.0030194**
Stddev	.0002081	.0075039	.0002261	.0000391	25.0235	.0012584	.0003679
%RSD	80.00576	33.04571	25.32176	9.303001	7.170784	510.0632	12.18550
#1	.0001477	.0219817	.0009270	.0004640	337.1076	-.000330	.0027871
#2	.0001324	.0155932	.0010998	.0003901	377.7121	.001690	.0034436
#3	.0005002	.0305483	.0006516	.0004051	332.0726	-.000620	.0028274

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0668063**	**.0012669**	**.0003304**	**-.000037**	**.0000792**	**.0081803**	**.0022442**
Stddev	.0294312	.0002804	.0001936	.000519	.0005511	.0143118	.0041796
%RSD	44.05463	22.13504	58.58790	1406.041	695.8364	174.9559	186.2411
#1	.0913849	.0009537	.0001751	-.000571	-.000481	.0048642	.0065963
#2	.0748422	.0014947	.0005473	.000466	.000621	.0238591	-.001738
#3	.0341917	.0013524	.0002688	-.000006	.000098	-.004182	.001875

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168224TB Acquired: 6/4/2025 18:05:52 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0115714	-.004780	.0001064
Stddev	.0020460	.000976	.0000262
%RSD	17.68184	20.41992	24.63790
#1	.0123161	-.005501	.0000875
#2	.0131408	-.005170	.0001363
#3	.0092573	-.003669	.0000954

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2744.282	56991.64	10166.42	1854.178	3688.736
Stddev	9.326	3536.22	13.33	111.311	9.428
%RSD	.3398294	6.204802	.1311346	6.003257	.2555891
#1	2752.237	58880.41	10162.87	1924.055	3690.779
#2	2746.590	52912.09	10181.16	1725.815	3696.975
#3	2734.019	59182.42	10155.22	1912.663	3678.454

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2168-02 Acquired: 6/4/2025 18:10:20 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0223639	-.009451	.0225984	.0049379	.0058446	.1269874	.4847216
Stddev	.0013272	.000992	.0014566	.0026910	.0011227	.0048263	.0021341
%RSD	5.934677	10.49779	6.445584	54.49729	19.20907	3.800605	.4402642
#1	.0212949	-.010596	.0219799	.0018307	.0046457	.1272699	.4839400
#2	.0219475	-.008860	.0215532	.0065167	.0060171	.1220261	.4830886
#3	.0238494	-.008896	.0242622	.0064662	.0068711	.1316663	.4871363

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010086	-.000359	2.130880	-.000418	.0174645	.0632966	97.75951
Stddev	.0000417	.000179	.002949	.000372	.0000700	.0003319	1.30151
%RSD	4.136139	49.75027	.1383992	88.88177	.4009681	.5242975	1.331342
#1	.0010535	-.000257	2.134268	.000010	.0174556	.0636481	96.79685
#2	.0010015	-.000565	2.128889	-.000612	.0173994	.0629887	99.24029
#3	.0009710	-.000255	2.129483	-.000654	.0175386	.0632529	97.24140

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4029093	.8232899	.0579542	.0051108	378.1571	.0036178	1.098351
Stddev	.0009874	.0231719	.0001456	.0003824	4.2275	.0013785	.017290
%RSD	.2450608	2.814545	.2512880	7.482757	1.117932	38.10353	1.574200
#1	.4021703	.8201367	.0578453	.0051543	376.1529	.0051344	1.086110
#2	.4040307	.8478769	.0581196	.0047084	383.0140	.0032777	1.118130
#3	.4025271	.8018561	.0578976	.0054695	375.3044	.0024411	1.090812

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.371369	.3164779	.0409083	-.001273	.0004959	5.965269	.0453193
Stddev	.010673	.0029224	.0001907	.000712	.0004108	.092458	.0021734
%RSD	.7783075	.9233970	.4661462	55.96951	82.83972	1.549940	4.795630
#1	1.359733	.3149919	.0406956	-.001862	.0007072	5.914016	.0441259
#2	1.380704	.3198446	.0410640	-.000481	.0007582	6.072003	.0440042
#3	1.373670	.3145971	.0409654	-.001476	.0000225	5.909789	.0478279

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2168-02 Acquired: 6/4/2025 18:10:20 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	1.236479	.0356682	-.078969
Stddev	.003657	.0003479	.001332
%RSD	.2957933	.9755179	1.686395
#1	1.232503	.0360146	-.078056
#2	1.239699	.0353187	-.080497
#3	1.237236	.0356712	-.078355

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2730.293	57411.75	9997.828	1877.487	3663.769
Stddev	11.964	735.66	12.056	22.555	12.523
%RSD	.4381876	1.281374	.1205821	1.201316	.3418098
#1	2736.622	57804.91	9984.737	1893.280	3670.900
#2	2737.764	56563.04	10000.27	1851.656	3671.098
#3	2716.495	57867.29	10008.47	1887.524	3649.309

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2168-06 Acquired: 6/4/2025 18:14:41 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0226747	-.008177	.0131400	.0052490	.0054982	.0824049	.4013419
Stddev	.0004465	.000697	.0012520	.0025099	.0030948	.0043597	.0006644
%RSD	1.969044	8.529012	9.527891	47.81589	56.28791	5.290630	.1655386
#1	.0222861	-.008892	.0142262	.0065582	.0019860	.0874291	.4021084
#2	.0231624	-.007499	.0134230	.0023552	.0078253	.0796187	.4009327
#3	.0225755	-.008139	.0117707	.0068335	.0066833	.0801668	.4009845

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010257	.0001582	2.339847	-.000113	.0213007	.0625302	85.82996
Stddev	.0000424	.0005516	.008892	.000171	.0001472	.0012745	4.29137
%RSD	4.130420	348.7429	.3800209	151.3540	.6908729	2.038232	4.999848
#1	.0009785	-.000207	2.346511	-.000133	.0211331	.0617892	88.50202
#2	.0010382	.000793	2.329750	-.000273	.0213605	.0640019	80.87995
#3	.0010604	-.000111	2.343279	.000067	.0214085	.0617996	88.10793

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3472739	1.012222	.0407945	.0036812	282.1206	.0046087	1.049505
Stddev	.0012234	.005777	.0004336	.0002949	15.4939	.0015414	.064385
%RSD	.3522719	.5707203	1.062780	8.010284	5.491954	33.44622	6.134793
#1	.3484898	1.014577	.0412222	.0039415	289.9297	.0028481	1.084935
#2	.3472886	1.016449	.0403553	.0037411	264.2760	.0057152	.975186
#3	.3460433	1.005639	.0408059	.0033609	292.1561	.0052629	1.088393

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.152613	.2618451	.0550862	-.001015	.0003743	6.568047	.0461313
Stddev	.056949	.0126390	.0004485	.000249	.0006322	.334373	.0013600
%RSD	4.940841	4.826887	.8141262	24.55960	168.9230	5.090911	2.948129
#1	1.159058	.2697560	.0554483	-.001293	-.000313	6.759744	.0456719
#2	1.092716	.2472686	.0545846	-.000944	.000932	6.181949	.0450604
#3	1.206065	.2685107	.0552258	-.000809	.000504	6.762448	.0476615

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2168-06 Acquired: 6/4/2025 18:14:41 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.9962913	.0308510	-.065468
Stddev	.0034821	.0023094	.004130
%RSD	.3495031	7.485612	6.308964
#1	.9972661	.0313128	-.068045
#2	.9924257	.0283456	-.060704
#3	.9991821	.0328946	-.067655

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2725.507	61545.95	9779.399	1995.394	3667.564
Stddev	21.307	3126.91	21.454	106.127	26.703
%RSD	.7817778	5.080607	.2193801	5.318598	.7280920
#1	2703.928	59745.78	9761.568	1942.778	3639.447
#2	2746.531	65156.59	9803.208	2117.549	3692.584
#3	2726.062	59735.48	9773.420	1925.855	3670.661

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2168-10 Acquired: 6/4/2025 18:19:03 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0603632	-.010940	.0423242	.0053484	.0094926	.2664542	.6815877
Stddev	.0020247	.001479	.0011719	.0045949	.0007845	.0029185	.0014750
%RSD	3.354179	13.52193	2.768764	85.91133	8.264628	1.095305	.2164120
#1	.0587202	-.012402	.0436392	.0000431	.0089985	.2656512	.6830032
#2	.0626251	-.010973	.0419431	.0080579	.0090821	.2696901	.6800596
#3	.0597444	-.009444	.0413904	.0079443	.0103972	.2640212	.6817003

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010963	-.000728	5.702338	.0034228	.0398048	.0639961	104.5888
Stddev	.0000476	.000154	.020192	.0000843	.0001787	.0007080	.4391
%RSD	4.345127	21.14859	.3541020	2.461958	.4489681	1.106351	.4197942
#1	.0011431	-.000864	5.719980	.0033318	.0398152	.0633836	105.0004
#2	.0010979	-.000561	5.680315	.0034982	.0396210	.0638332	104.1266
#3	.0010479	-.000758	5.706719	.0034384	.0399780	.0647713	104.6394

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8390688	1.574140	.1331261	.0063928	444.4028	.0034577	2.585978
Stddev	.0041920	.010088	.0006428	.0004863	.9508	.0014928	.008438
%RSD	.4995971	.6408630	.4828442	7.606787	.2139456	43.17260	.3263024
#1	.8431029	1.573988	.1329206	.0066256	445.4981	.0020880	2.579304
#2	.8347350	1.564128	.1326111	.0058338	443.7897	.0050488	2.583166
#3	.8393684	1.584303	.1338465	.0067189	443.9207	.0032363	2.595463

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.852215	.4668000	.0726934	-.001372	.0041499	10.62753	.0344232
Stddev	.049068	.0021337	.0005805	.000528	.0003032	.05125	.0031393
%RSD	1.720355	.4570888	.7985950	38.49398	7.305156	.4822793	9.119802
#1	2.905351	.4667170	.0722580	-.000934	.0042403	10.68583	.0316493
#2	2.808614	.4647090	.0724698	-.001224	.0043975	10.58955	.0378311
#3	2.842681	.4689740	.0733525	-.001959	.0038118	10.60721	.0337891

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2168-10 Acquired: 6/4/2025 18:19:03 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.970304**	**.0384275**	**-.068187**
Stddev	.012173	.0006862	.000311
%RSD	.4098291	1.785707	.4553634
#1	2.956580	.0391810	-.068484
#2	2.974538	.0382630	-.067864
#3	2.979795	.0378385	-.068213

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2678.015**	**57429.34**	**10340.33**	**1901.154**	**3575.948**
Stddev	12.394	221.62	31.70	1.152	18.220
%RSD	.4628085	.3859054	.3065855	.0606047	.5095250
#1	2682.903	57317.39	10326.20	1900.682	3585.910
#2	2687.219	57684.61	10376.64	1902.467	3587.016
#3	2663.922	57286.02	10318.15	1900.312	3554.919

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2177-03 Acquired: 6/4/2025 18:23:23 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.006851**	**-.002332**	**.1161845**	**.0044288**	**.0015948**	**.1390918**	**.1969971**
Stddev	.000212	.001665	.0003124	.0031430	.0015776	.0007722	.0008026
%RSD	3.098941	71.38560	.2688692	70.96876	98.92200	.5551845	.4074289
#1	-.006696	-.000776	.1158244	.0014864	.0006651	.1393231	.1970256
#2	-.006764	-.004087	.1163835	.0040600	.0007030	.1382304	.1961806
#3	-.007093	-.002132	.1163454	.0077399	.0034162	.1397220	.1977851

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000018**	**.0001647**	**42.03845**	**.0035455**	**.0099377**	**.0220652**	**1.392098**
Stddev	.000035	.0000373	.14974	.0001930	.0001387	.0002247	.007991
%RSD	192.0021	22.62675	.3562073	5.443280	1.396022	1.018506	.5740330
#1	-.000003	.0001509	42.00530	.0033318	.0097838	.0222525	1.385847
#2	-.000058	.0001363	41.90807	.0035977	.0099763	.0221272	1.401101
#3	.000007	.0002069	42.20200	.0037070	.0100530	.0218160	1.389345

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5783836**	**1.866693**	**.0076695**	**.0000257**	**385.5718**	**.0012059**	**.0910799**
Stddev	.0021059	.005260	.0001851	.0003547	1.9161	.0013024	.0008371
%RSD	.3641044	.2817934	2.413657	1380.506	.4969551	108.0047	.9190925
#1	.5772502	1.861314	.0077526	-.000240	385.1211	.0020301	.0905289
#2	.5770871	1.866938	.0077985	-.000111	387.6731	.0018832	.0920432
#3	.5808135	1.871826	.0074574	.000428	383.9212	-.000296	.0906675

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.684728**	**.0214575**	**.0005663**	**-.002765**	**-.001188**	**.7009978**	**.0044888**
Stddev	.039801	.0007255	.0003040	.001179	.000751	.0079710	.0009681
%RSD	.7001386	3.381060	53.67901	42.64108	63.17773	1.137087	21.56636
#1	5.678670	.0206842	.0002433	-.001456	-.001145	.7095673	.0054313
#2	5.727210	.0215652	.0008468	-.003744	-.001960	.6996214	.0034971
#3	5.648303	.0221232	.0006089	-.003095	-.000460	.6938046	.0045380

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2177-03 Acquired: 6/4/2025 18:23:23 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.8440788	-.005067	.1274204
Stddev	.0059196	.000970	.0003710
%RSD	.7013099	19.14378	.2911281
#1	.8372438	-.006163	.1275207
#2	.8474375	-.004718	.1270096
#3	.8475551	-.004319	.1277309

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2696.644	57403.82	9737.636	1894.426	3571.883
Stddev	6.553	97.07	45.774	6.078	6.738
%RSD	.2429880	.1690993	.4700701	.3208440	.1886382
#1	2699.160	57473.86	9750.474	1901.201	3578.494
#2	2701.566	57444.58	9775.620	1889.450	3572.129
#3	2689.206	57293.01	9686.814	1892.628	3565.025

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCV03 Acquired: 6/4/2025 18:37:43 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**4.794633**	**4.608650**	**4.750279**	**4.853966**	**4.834111**	**9.254938**	**9.127914**
Stddev	.031294	.042373	.026190	.025149	.035061	.039210	.066441
%RSD	.6526783	.9194181	.5513461	.5181029	.7252891	.4236620	.7278835
#1	4.780992	4.612048	4.725284	4.833829	4.813279	9.249201	9.123877
#2	4.772476	4.649221	4.748033	4.845915	4.814464	9.296701	9.196282
#3	4.830432	4.564680	4.777520	4.882155	4.874591	9.218913	9.063585

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2314587**	**2.385127**	**22.85943**	**.9529012**	**2.382516**	**1.217945**	**4.730251**
Stddev	.0001826	.014224	.08633	.0006010	.014620	.008639	.037545
%RSD	.0789081	.5963577	.3776713	.0630657	.6136269	.7093423	.7937108
#1	.2315692	2.376109	22.81183	.9523311	2.372638	1.213482	4.695520
#2	.2312479	2.377747	22.95909	.9528437	2.375600	1.212451	4.770087
#3	.2315590	2.401523	22.80738	.9535289	2.399311	1.227904	4.725146

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.294272**	**22.84656**	**2.403510**	**1.193904**	**23.90454**	**2.284838**	**2.365768**
Stddev	.007013	.10975	.015328	.003932	.11417	.010947	.006270
%RSD	.3056548	.4803869	.6377232	.3293490	.4776155	.4791094	.2650468
#1	2.287970	22.80611	2.393216	1.192246	23.86930	2.278903	2.370091
#2	2.301826	22.97080	2.396188	1.198393	24.03218	2.297470	2.368636
#3	2.293020	22.76277	2.421125	1.191072	23.81215	2.278140	2.358576

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.64697**	**4.588243**	**4.770490**	**4.670712**	**4.581809**	**4.828302**	**4.740295**
Stddev	.11563	.002967	.025601	.022575	.021798	.015458	.027213
%RSD	.4889683	.0646638	.5366430	.4833272	.4757579	.3201539	.5740820
#1	23.58962	4.589067	4.754966	4.651705	4.572437	4.828408	4.713461
#2	23.78006	4.584951	4.756467	4.664768	4.606726	4.843706	4.739551
#3	23.57123	4.590711	4.800039	4.695665	4.566264	4.812790	4.767872

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCV03 Acquired: 6/4/2025 18:37:43 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**4.586315**	**4.633319**	**4.639444**
Stddev	.026652	.009183	.020043
%RSD	.5811201	.1981892	.4320086
#1	4.569541	4.630455	4.632233
#2	4.572358	4.643592	4.624005
#3	4.617047	4.625910	4.662095

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2825.000**	**59324.39**	**9268.282**	**1980.818**	**3824.831**
Stddev	14.639	312.45	21.504	13.194	18.212
%RSD	.5182041	.5266802	.2320213	.6661133	.4761628
#1	2833.799	59508.15	9285.864	1983.826	3837.684
#2	2833.101	58963.63	9244.306	1966.379	3832.819
#3	2808.101	59501.40	9274.676	1992.249	3803.989

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB03 Acquired: 6/4/2025 18:42:54 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.002674**	**.0008948**	**-.000315**	**.0017358**	**.0008365**	**.0036915**	**-.004716**
Stddev	.002446	.0025594	.000955	.0011141	.0012297	.0046862	.000583
%RSD	91.49554	286.0136	303.1761	64.18539	147.0044	126.9462	12.35820
#1	-.000806	.0007007	-.001310	.0029395	.0021622	.0018984	-.004958
#2	-.001772	-.001562	.000595	.0015271	-.000267	.0090094	-.005138
#3	-.005443	.003546	-.000230	.0007408	.000614	.0001666	-.004051

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000022**	**.0000518**	**.0092120**	**.0001796**	**-.000058**	**.0006878**	**.0135597**
Stddev	.000027	.0000397	.0025645	.0004201	.000284	.0006138	.0030035
%RSD	121.8394	76.61202	27.83880	233.9597	493.1893	89.23573	22.14994
#1	-.000016	.0000937	.0101179	.0002089	-.000298	.0002343	.0167856
#2	-.000052	.0000468	.0112007	-.000254	.000255	.0013863	.0130494
#3	.000001	.0000149	.0063175	.000584	-.000129	.0004429	.0108441

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000050**	**.0095770**	**.0003872**	**.0003091**	**-.045801**	**-.000257**	**.0027795**
Stddev	.000142	.0183950	.0001672	.0004999	.025870	.000912	.0000623
%RSD	285.7381	192.0757	43.17836	161.7000	56.48243	355.6372	2.242796
#1	-.000051	.0033706	.0002093	-.000087	-.067485	.000270	.0027552
#2	.000093	-.004912	.0005410	.000871	-.052752	-.001310	.0027330
#3	-.000191	.030272	.0004112	.000144	-.017166	.000270	.0028504

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0063088**	**.0090231**	**.0006019**	**.0016942**	**.0005240**	**.0027309**	**-.003485**
Stddev	.0149895	.0004413	.0001280	.0005829	.0004844	.0077966	.001660
%RSD	237.5986	4.890651	21.26470	34.40779	92.44491	285.4914	47.62912
#1	.0096621	.0088986	.0006333	.0010568	.0006710	-.002511	-.005342
#2	-.010073	.0095132	.0007112	.0022003	-.000017	.011691	-.002967
#3	.019338	.0086574	.0004611	.0018253	.000918	-.000987	-.002146

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB03 Acquired: 6/4/2025 18:42:54 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0018499	-.001955	.0001763
Stddev	.0001619	.000427	.0000297
%RSD	8.753003	21.86582	16.86218
#1	.0020144	-.002407	.0001590
#2	.0016907	-.001557	.0001592
#3	.0018448	-.001901	.0002106

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2960.065	63912.19	10007.84	2104.982	4186.783
Stddev	15.707	91.34	13.62	5.341	19.491
%RSD	.5306162	.1429126	.1360434	.2537116	.4655445
#1	2965.455	63995.10	9992.20	2110.981	4194.760
#2	2972.366	63927.20	10017.07	2103.218	4201.020
#3	2942.372	63814.28	10014.25	2100.746	4164.568

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2177-05 Acquired: 6/4/2025 18:47:13 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.004492**	**-.003220**	**.0059066**	**.0051648**	**.0024487**	**.0985711**	**.2003784**
Stddev	.001440	.000566	.0011875	.0006106	.0013948	.0053405	.0012821
%RSD	32.05660	17.57301	20.10511	11.82218	56.96067	5.417950	.6398454
#1	-.003589	-.003833	.0065997	.0050966	.0033960	.0996332	.2018526
#2	-.006153	-.003108	.0045354	.0045912	.0031031	.0927793	.1995238
#3	-.003734	-.002718	.0065848	.0058066	.0008470	.1033008	.1997587

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000162**	**-.000083**	**8.283017**	**.0005830**	**.0003625**	**.0062842**	**.1121775**
Stddev	.000017	.000029	.035764	.0005032	.0001286	.0003742	.0045321
%RSD	10.46958	35.06364	.4317751	86.30708	35.48440	5.954046	4.040069
#1	-.000146	-.000081	8.300439	.0000664	.0004781	.0066412	.1069988
#2	-.000180	-.000055	8.241880	.0006111	.0002239	.0058950	.1154188
#3	-.000162	-.000113	8.306730	.0010716	.0003855	.0063163	.1141149

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0659915**	**2.859958**	**.0015413**	**.0001795**	**340.1850**	**.0021578**	**.1193502**
Stddev	.0006260	.007511	.0002169	.0002058	18.0656	.0023658	.0081493
%RSD	.9486569	.2626200	14.07240	114.6184	5.310508	109.6381	6.828066
#1	.0655804	2.868309	.0014215	.0002757	319.3641	-.000186	.1099565
#2	.0656822	2.853755	.0014108	.0003196	351.7049	.004545	.1235668
#3	.0667120	2.857812	.0017917	-.000057	349.4861	.002115	.1245273

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.831483**	**.0707459**	**.0004852**	**-.000984**	**.0013170**	**.3936586**	**.0122663**
Stddev	.106515	.0004096	.0000810	.000727	.0003449	.0186723	.0016991
%RSD	5.815804	.5789706	16.68679	73.84668	26.18686	4.743277	13.85157
#1	1.708594	.0703922	.0005738	-.001508	.0016721	.3720981	.0107931
#2	1.888546	.0706508	.0004150	-.001290	.0009833	.4045583	.0141250
#3	1.897310	.0711947	.0004667	-.000155	.0012957	.4043194	.0118807

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2177-05 Acquired: 6/4/2025 18:47:13 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	1.334578	-.003833	.0631100
Stddev	.005978	.000473	.0001300
%RSD	.4479354	12.34938	.2059564
#1	1.333911	-.003568	.0630500
#2	1.328962	-.003551	.0630209
#3	1.340862	-.004380	.0632592

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2727.011	60724.15	9899.307	1999.039	3665.974
Stddev	4.457	3726.00	21.862	120.468	3.527
%RSD	.1634414	6.135947	.2208393	6.026319	.0961970
#1	2722.195	65021.56	9883.431	2137.826	3662.111
#2	2730.992	58755.12	9924.242	1937.776	3666.792
#3	2727.846	58395.76	9890.247	1921.514	3669.021

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2177-07 Acquired: 6/4/2025 18:51:40 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.004516**	**-.004032**	**.0401960**	**.0054023**	**.0030418**	**.1183446**	**.1608559**
Stddev	.001209	.001158	.0014651	.0049407	.0008313	.0032436	.0004938
%RSD	26.76680	28.73212	3.644845	91.45527	27.32843	2.740793	.3069755
#1	-.003366	-.004503	.0418382	.0105303	.0020875	.1146336	.1613573
#2	-.004405	-.002712	.0397269	.0006732	.0034294	.1206385	.1608403
#3	-.005776	-.004880	.0390229	.0050033	.0036084	.1197616	.1603701

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000101**	**.0000039**	**33.59423**	**.0016796**	**.0021496**	**.0044516**	**.4797762**
Stddev	.000026	.0000894	.08014	.0003283	.0003448	.0002208	.0015172
%RSD	25.76882	2278.620	.2385494	19.54756	16.04001	4.960397	.3162263
#1	-.000080	-.000011	33.68668	.0020128	.0018606	.0046776	.4790215
#2	-.000130	.000100	33.54444	.0013564	.0020569	.0042364	.4815227
#3	-.000092	-.000077	33.55158	.0016697	.0025313	.0044406	.4787844

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4899337**	**3.023395**	**.0040289**	**.0000798**	**350.9132**	**.0012604**	**.1146014**
Stddev	.0013812	.005058	.0001364	.0002657	5.8784	.0009721	.0010995
%RSD	.2819139	.1673064	3.385126	333.0796	1.675183	77.12284	.9594136
#1	.4913138	3.028877	.0041128	-.000009	346.8691	.0017497	.1143314
#2	.4885514	3.018909	.0041023	-.000130	348.2140	.0018907	.1136620
#3	.4899361	3.022397	.0038715	.000378	357.6564	.0001409	.1158107

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.540257**	**.0297508**	**.0009404**	**-.002541**	**-.000967**	**.6560211**	**.0066815**
Stddev	.067137	.0010940	.0001589	.000732	.000227	.0044549	.0007384
%RSD	2.642937	3.677172	16.89236	28.80180	23.44378	.6790741	11.05056
#1	2.515283	.0297008	.0010386	-.003259	-.000826	.6604811	.0060583
#2	2.489186	.0308689	.0010255	-.001796	-.001229	.6515714	.0064893
#3	2.616303	.0286826	.0007571	-.002568	-.000847	.6560108	.0074970

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2177-07 Acquired: 6/4/2025 18:51:40 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.8542022	-.007471	.1043485
Stddev	.0094561	.000481	.0002460
%RSD	1.107007	6.434042	.2357371
#1	.8564560	-.007960	.1046316
#2	.8438228	-.007452	.1042265
#3	.8623277	-.007000	.1041874

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2749.915	58444.84	10144.35	1914.869	3663.675
Stddev	6.616	719.21	32.27	21.527	9.556
%RSD	.2405743	1.230587	.3181498	1.124206	.2608335
#1	2754.410	58994.18	10107.83	1922.330	3666.989
#2	2753.016	58709.56	10169.03	1931.673	3671.133
#3	2742.318	57630.78	10156.21	1890.604	3652.903

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-04 Acquired: 6/4/2025 18:56:07 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.006217**	**-.003628**	**.0007931**	**.0047163**	**-.000371**	**.1481055**	**.4655174**
Stddev	.000714	.001351	.0005615	.0048242	.001157	.0079800	.0013844
%RSD	11.48860	37.22039	70.80456	102.2886	312.0688	5.388048	.2973948
#1	-.007027	-.004929	.0001573	-.000854	-.001495	.1530410	.4651035
#2	-.005947	-.003723	.0010007	.007529	.000816	.1523764	.4670616
#3	-.005678	-.002233	.0012212	.007474	-.000433	.1388989	.4643872

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000362**	**.0000259**	**25.05654**	**.0005772**	**-.000043**	**.0070152**	**.0312351**
Stddev	.0000260	.0000485	.10821	.0003262	.000406	.0001778	.0028823
%RSD	71.88461	187.5119	.4318610	56.50957	944.6949	2.533868	9.227704
#1	.0000434	-.000027	25.09161	.0002654	.000326	.0070001	.0316405
#2	.0000073	.000068	25.14286	.0005501	-.000478	.0072001	.0338931
#3	.0000579	.000037	24.93514	.0009161	.000023	.0068455	.0281715

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3182737**	**3.946099**	**.0057343**	**-.000063**	**301.8200**	**.0008922**	**.2061454**
Stddev	.0017950	.025053	.0004412	.000317	1.3495	.0007390	.0021208
%RSD	.5639907	.6348734	7.693161	499.8404	.4471076	82.83036	1.028769
#1	.3166810	3.962839	.0052532	.000294	302.8126	.0000438	.2071007
#2	.3202188	3.958161	.0061198	-.000312	302.3639	.0012369	.2076205
#3	.3179211	3.917297	.0058299	-.000173	300.2834	.0013958	.2037150

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6784073**	**.1062628**	**.0000919**	**-.002144**	**-.001302**	**.4362736**	**.0054989**
Stddev	.0248878	.0009454	.0001534	.000616	.000828	.0086142	.0034495
%RSD	3.668564	.8897214	166.8030	28.74107	63.61159	1.974499	62.73009
#1	.6514547	.1061257	.0002477	-.001890	-.002252	.4458991	.0091695
#2	.7005190	.1072693	.0000871	-.001696	-.000923	.4336327	.0050031
#3	.6832483	.1053934	-.000059	-.002847	-.000731	.4292890	.0023242

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-04 Acquired: 6/4/2025 18:56:07 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.7588915	-.007312	.0744197
Stddev	.0104016	.000746	.0002027
%RSD	1.370632	10.20862	.2723295
#1	.7615550	-.006550	.0743222
#2	.7474171	-.008042	.0746527
#3	.7677023	-.007345	.0742842

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2769.771	59112.00	10065.51	1952.205	3673.810
Stddev	6.330	410.07	53.21	16.842	3.702
%RSD	.2285496	.6937089	.5286066	.8627197	.1007573
#1	2772.522	58801.00	10038.70	1937.647	3673.424
#2	2774.260	58958.28	10031.05	1948.317	3677.690
#3	2762.531	59576.71	10126.79	1970.651	3670.317

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-08 Acquired: 6/4/2025 19:00:32 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.005948**	**-.004033**	**.0050185**	**.0068473**	**.0006092**	**.0740724**	**.5534110**
Stddev	.002016	.002163	.0015092	.0019536	.0013382	.0065085	.0009310
%RSD	33.89470	53.63258	30.07345	28.53004	219.6739	8.786729	.1682309
#1	-.008143	-.006297	.0049614	.0068299	.0005166	.0673357	.5537820
#2	-.004178	-.003814	.0035386	.0049026	-.000680	.0745558	.5540993
#3	-.005523	-.001988	.0065555	.0088095	.001991	.0803258	.5523517

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000755**	**-.000044**	**18.37119**	**.0005064**	**-.000400**	**.0084812**	**.0126048**
Stddev	.0000218	.000045	.00828	.0003499	.000208	.0002429	.0016351
%RSD	28.83930	102.8857	.0450575	69.09428	52.01983	2.863535	12.97162
#1	.0000976	-.000026	18.37969	.0001335	-.000472	.0082904	.0142993
#2	.0000540	-.000096	18.36315	.0005582	-.000562	.0083987	.0110365
#3	.0000751	-.000011	18.37073	.0008275	-.000165	.0087546	.0124788

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0135109**	**3.462949**	**.0045715**	**.0001501**	**397.9452**	**-.000694**	**.2020966**
Stddev	.0000492	.020822	.0000702	.0001952	13.2401	.000612	.0087009
%RSD	.3638694	.6012691	1.535882	130.0300	3.327128	88.19496	4.305320
#1	.0134890	3.477736	.0046511	.0002721	398.5015	-.000462	.2026882
#2	.0135672	3.439138	.0045451	.0002533	384.4357	-.001389	.1931150
#3	.0134765	3.471973	.0045184	-.000075	410.8984	-.000232	.2104866

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9736334**	**.1110059**	**.0002376**	**-.002391**	**-.000733**	**.8424990**	**.2189039**
Stddev	.0088285	.0015862	.0002747	.000207	.000398	.0353388	.0028414
%RSD	.9067584	1.428929	115.6195	8.663389	54.29617	4.194527	1.297996
#1	.9686489	.1122200	.0001465	-.002528	-.001181	.8424463	.2179410
#2	.9684245	.1092112	.0005462	-.002152	-.000599	.8071865	.2166691
#3	.9838269	.1115865	.0000200	-.002492	-.000420	.8778642	.2221016

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-08 Acquired: 6/4/2025 19:00:32 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.5561206	-.003208	.0561260
Stddev	.0022985	.000307	.0002545
%RSD	.4133045	9.573230	.4534252
#1	.5585507	-.003161	.0561413
#2	.5539815	-.003536	.0563724
#3	.5558296	-.002927	.0558641

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2766.450	60561.06	10125.70	2014.643	3688.592
Stddev	8.710	2169.87	22.05	80.904	11.638
%RSD	.3148355	3.582946	.2177235	4.015806	.3155147
#1	2771.314	60291.95	10115.49	2017.543	3698.735
#2	2771.641	62852.93	10151.00	2094.059	3691.156
#3	2756.395	58538.29	10110.61	1932.328	3675.886

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-08DUP Acquired: 6/4/2025 19:04:57 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.006215**	**-.004372**	**.0022842**	**.0021490**	**.0016868**	**.0617432**	**.3786719**
Stddev	.002544	.000427	.0002180	.0031313	.0019928	.0039863	.0027222
%RSD	40.92731	9.773695	9.541945	145.7070	118.1348	6.456173	.7188912
#1	-.007124	-.004336	.0020641	.0041248	-.000550	.0583486	.3755286
#2	-.008180	-.003964	.0024999	.0037837	.002340	.0661327	.3802253
#3	-.003342	-.004817	.0022886	-.001461	.003271	.0607483	.3802619

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000040**	**.0000041**	**13.03673**	**.0003749**	**-.000610**	**.0061303**	**.0134142**
Stddev	.000019	.0001022	.06124	.0001225	.000180	.0003531	.0024634
%RSD	47.43235	2489.301	.4697772	32.68067	29.43517	5.759396	18.36436
#1	-.000056	-.000109	12.98109	.0005083	-.000443	.0057236	.0160347
#2	-.000019	.000031	13.10235	.0003491	-.000800	.0063087	.0130624
#3	-.000044	.000090	13.02676	.0002674	-.000588	.0063585	.0111456

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0093840**	**2.515121**	**.0029754**	**.0001207**	**268.2294**	**.0009233**	**.1498369**
Stddev	.0002128	.018934	.0000635	.0003609	2.9437	.0017241	.0016423
%RSD	2.268075	.7528224	2.133835	299.0138	1.097450	186.7351	1.096069
#1	.0091837	2.494844	.0030196	-.000283	265.7282	-.000916	.1482303
#2	.0093607	2.518181	.0030039	.000234	271.4733	.002502	.1515127
#3	.0096074	2.532340	.0029026	.000411	267.4869	.001184	.1497678

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6260844**	**.0856176**	**.0003283**	**-.001303**	**-.000778**	**.5834016**	**.1550559**
Stddev	.0143036	.0005532	.0001870	.000458	.000467	.0100666	.0025265
%RSD	2.284607	.6460987	56.96111	35.14702	59.97850	1.725508	1.629429
#1	.6096422	.0854428	.0002750	-.001312	-.000911	.5720295	.1549370
#2	.6356589	.0851730	.0005362	-.000841	-.001164	.5870032	.1525910
#3	.6329522	.0862371	.0001738	-.001756	-.000259	.5911720	.1576398

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-08DUP Acquired: 6/4/2025 19:04:57 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.4074595	-.003325	.0393426
Stddev	.0066957	.000449	.0003278
%RSD	1.643277	13.50176	.8332312
#1	.4021839	-.003690	.0390655
#2	.4149920	-.003461	.0397044
#3	.4052026	-.002824	.0392578

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2773.037	59595.71	9549.290	1970.536	3729.421
Stddev	19.239	248.48	26.038	9.927	27.781
%RSD	.6937918	.4169395	.2726706	.5037884	.7449084
#1	2783.948	59882.03	9578.019	1981.306	3747.173
#2	2750.822	59468.49	9527.246	1968.552	3697.405
#3	2784.340	59436.60	9542.605	1961.751	3743.683

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-08LX5 Acquired: 6/4/2025 19:09:23 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.002821**	**-.000580**	**.0007542**	**.0002681**	**.0011669**	**.0215074**	**.1101968**
Stddev	.001957	.000940	.0017028	.0020128	.0008070	.0042601	.0009373
%RSD	69.36165	162.1289	225.7659	750.7959	69.16210	19.80774	.8505615
#1	-.004828	-.001666	.0018129	.0001093	.0009557	.0193650	.1096625
#2	-.002715	-.000038	-.001210	.0023556	.0020585	.0187436	.1096488
#3	-.000919	-.000036	.001660	-.001661	.0004864	.0264134	.1112791

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000045**	**-.000006**	**3.919418**	**.0000654**	**-.000035**	**.0015479**	**.0058487**
Stddev	.000012	.000034	.020812	.0004399	.000355	.0003668	.0022111
%RSD	26.44209	578.6917	.5310076	672.2911	999.1350	23.69915	37.80461
#1	-.000031	-.000032	3.941729	-.000076	.000096	.0011257	.0050696
#2	-.000053	-.000019	3.915996	-.000286	-.000437	.0017293	.0083439
#3	-.000051	.000033	3.900528	.000559	.000234	.0017887	.0041326

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024644**	**.7621092**	**.0012009**	**-.000087**	**77.91472**	**.0002405**	**.0440654**
Stddev	.0001860	.0066278	.0003584	.000164	.35430	.0010600	.0007156
%RSD	7.548433	.8696619	29.84785	188.3487	.4547231	440.8123	1.623976
#1	.0025952	.7696125	.0011666	-.000014	78.11339	.0003003	.0447868
#2	.0022514	.7570526	.0008608	-.000276	78.12511	-.000848	.0440537
#3	.0025466	.7596626	.0015752	.000028	77.50567	.001269	.0433557

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2102599**	**.0270866**	**-.000062**	**-.000347**	**-.000470**	**.1657374**	**.0414653**
Stddev	.0233413	.0003652	.000019	.000284	.000352	.0027238	.0028063
%RSD	11.10115	1.348175	31.45083	81.93956	74.89445	1.643431	6.767776
#1	.2109929	.0273061	-.000070	-.000131	-.000427	.1639281	.0384514
#2	.1865607	.0266650	-.000039	-.000241	-.000842	.1688700	.0440031
#3	.2332259	.0272885	-.000075	-.000669	-.000142	.1644139	.0419414

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-08LX5 Acquired: 6/4/2025 19:09:23 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.1135534	.0025310	.0118775
Stddev	.0049417	.0011798	.0000587
%RSD	4.351861	46.61321	.4943573
#1	.1136067	.0012317	.0119054
#2	.1085852	.0028261	.0118100
#3	.1184681	.0035353	.0119170

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2896.691	62641.51	9727.851	2065.862	3965.167
Stddev	18.069	179.50	46.082	8.404	29.185
%RSD	.6237889	.2865442	.4737128	.4068009	.7360444
#1	2906.700	62478.74	9675.921	2057.564	3981.117
#2	2875.832	62611.76	9743.766	2065.655	3931.482
#3	2907.540	62834.01	9763.867	2074.368	3982.901

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-08MS Acquired: 6/4/2025 19:13:42 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.7615828	1.835301	.9099167	1.909615	.7757697	1.877211	.6439564
Stddev	.0058419	.021712	.0042812	.011754	.0035437	.011941	.0023370
%RSD	.7670772	1.183040	.4705038	.6155074	.4567972	.6361052	.3629150
#1	.7599213	1.857229	.9071435	1.903330	.7718252	1.874189	.6465228
#2	.7567515	1.813811	.9077593	1.902340	.7767991	1.890373	.6433955
#3	.7680755	1.834864	.9148474	1.923175	.7786847	1.867072	.6419508

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1800274	.1909849	16.57765	.3856653	.1928418	.2904726	2.911704
Stddev	.0003139	.0005825	.07016	.0014955	.0004809	.0017402	.011135
%RSD	.1743554	.3049834	.4232190	.3877692	.2493490	.5990894	.3824050
#1	.1802541	.1908600	16.65848	.3863739	.1926117	.2894870	2.922211
#2	.1796692	.1904750	16.53250	.3839472	.1925193	.2894490	2.912867
#3	.1801590	.1916196	16.54196	.3866748	.1933945	.2924819	2.900034

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1931078	4.750118	.4864166	.0697884	328.7247	.2730890	.3686403
Stddev	.0004414	.008618	.0020541	.0001715	5.3103	.0013127	.0006281
%RSD	.2285839	.1814226	.4222920	.2457126	1.615433	.4806742	.1703896
#1	.1929803	4.760069	.4858608	.0698715	324.5551	.2740794	.3680996
#2	.1935990	4.745178	.4846975	.0695912	334.7031	.2716001	.3684919
#3	.1927442	4.745107	.4886914	.0699025	326.9157	.2735874	.3693293

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.14339	.3527412	.4044029	.6611380	.1828902	1.536510	6.031575
Stddev	.03018	.0012049	.0023886	.0027517	.0014938	.008019	.007853
%RSD	.2708637	.3415742	.5906482	.4162116	.8167561	.5218714	.1302054
#1	11.17395	.3520545	.4030833	.6593734	.1841739	1.527471	6.038971
#2	11.11360	.3520368	.4029652	.6597319	.1812506	1.542765	6.023333
#3	11.14261	.3541325	.4071602	.6643087	.1832460	1.539295	6.032420

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-08MS Acquired: 6/4/2025 19:13:42 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.4537103	.1938487	.2254822
Stddev	.0018279	.0009020	.0009998
%RSD	.4028822	.4652917	.4433959
#1	.4552380	.1936452	.2263617
#2	.4516851	.1948351	.2256900
#3	.4542078	.1930659	.2243948

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2786.325	58805.38	9472.921	1948.982	3731.753
Stddev	10.185	61.63	7.526	2.642	12.901
%RSD	.3655434	.1048090	.0794430	.1355819	.3457104
#1	2790.921	58817.01	9476.392	1947.838	3736.910
#2	2793.402	58738.76	9478.083	1947.105	3741.278
#3	2774.651	58860.37	9464.286	1952.004	3717.071

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-08MSD Acquired: 6/4/2025 19:17:52 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.7068452**	**1.719626**	**.8501528**	**1.763599**	**.7277785**	**1.754526**	**.6007587**
Stddev	.0080566	.006385	.0030990	.012110	.0045166	.004162	.0019470
%RSD	1.139802	.3713125	.3645250	.6866370	.6206078	.2372168	.3240838
#1	.6981021	1.724425	.8490042	1.754447	.7231703	1.759149	.5992468
#2	.7084640	1.712379	.8477921	1.759019	.7279676	1.753349	.6029556
#3	.7139695	1.722075	.8536622	1.777330	.7321976	1.751079	.6000738

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1610629**	**.1773244**	**15.09310**	**.3604418**	**.1802994**	**.2696460**	**2.844807**
Stddev	.0003998	.0005881	.03968	.0001470	.0004414	.0014137	.007193
%RSD	.2482301	.3316725	.2629337	.0407849	.2447854	.5242889	.2528510
#1	.1614807	.1769455	15.09438	.3602787	.1799881	.2686212	2.841159
#2	.1610240	.1770258	15.13213	.3605640	.1801055	.2690580	2.840168
#3	.1606839	.1780020	15.05279	.3604828	.1808045	.2712589	2.853093

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1827659**	**4.313191**	**.4524413**	**.0646078**	**310.7994**	**.2590328**	**.3336555**
Stddev	.0006490	.006238	.0008919	.0003195	.6522	.0014347	.0011968
%RSD	.3551084	.1446305	.1971377	.4945809	.2098303	.5538663	.3586964
#1	.1823466	4.315657	.4526065	.0647846	311.2822	.2593716	.3335564
#2	.1824376	4.306096	.4514783	.0647998	311.0586	.2574591	.3325114
#3	.1835134	4.317818	.4532390	.0642389	310.0575	.2602679	.3348988

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.67597**	**.3144151**	**.3804610**	**.6166813**	**.1727422**	**1.455920**	**5.562890**
Stddev	.07137	.0015427	.0014708	.0031020	.0015238	.006937	.019835
%RSD	.6685563	.4906585	.3865947	.5030159	.8821008	.4764596	.3565527
#1	10.59361	.3161777	.3790784	.6145658	.1742443	1.461211	5.574141
#2	10.71987	.3137570	.3802981	.6152359	.1711977	1.448067	5.539988
#3	10.71442	.3133105	.3820065	.6202422	.1727845	1.458484	5.574541

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-08MSD Acquired: 6/4/2025 19:17:52 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.3952640	.1789765	.2127757
Stddev	.0022404	.0015982	.0002131
%RSD	.5668153	.8929838	.1001498
#1	.3932214	.1771774	.2126641
#2	.3949105	.1802320	.2130214
#3	.3976602	.1795201	.2126416

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2853.567	60078.22	9966.413	1998.203	3836.636
Stddev	9.296	61.78	36.100	3.132	12.253
%RSD	.3257667	.1028331	.3622202	.1567568	.3193686
#1	2859.242	60125.93	9931.112	1998.336	3838.086
#2	2858.620	60008.44	9964.863	2001.266	3848.100
#3	2842.839	60100.30	10003.26	1995.006	3823.723

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-08A Acquired: 6/4/2025 19:22:02 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.8048048**	**1.912661**	**.9560195**	**2.014811**	**.8166285**	**1.920936**	**.6180980**
Stddev	.0032859	.032554	.0008491	.007072	.0037251	.027925	.0103538
%RSD	.4082809	1.702044	.0888134	.3509998	.4561590	1.453722	1.675106
#1	.8026601	1.880628	.9553940	2.008979	.8172226	1.937205	.6232400
#2	.8031666	1.911641	.9569861	2.012777	.8126420	1.888691	.6061798
#3	.8085877	1.945713	.9556784	2.022677	.8200208	1.936912	.6248742

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1869506**	**.2003785**	**15.84363**	**.4003685**	**.2015963**	**.3040096**	**2.967769**
Stddev	.0030727	.0005508	.22638	.0073448	.0002673	.0009699	.030560
%RSD	1.643572	.2748568	1.428857	1.834509	.1325849	.3190445	1.029741
#1	.1876908	.2001457	15.97345	.3974801	.2013205	.3030089	2.968456
#2	.1835755	.1999823	15.58223	.3949069	.2016145	.3040743	2.936870
#3	.1895856	.2010074	15.97522	.4087184	.2018541	.3049455	2.997979

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1971278**	**4.672800**	**.5105473**	**.0718929**	**313.9272**	**.2787573**	**.3704477**
Stddev	.0027892	.090642	.0017291	.0011202	5.3453	.0032250	.0078531
%RSD	1.414910	1.939778	.3386671	1.558165	1.702708	1.156905	2.119905
#1	.1973861	4.728520	.5091192	.0715814	310.4636	.2820376	.3688574
#2	.1942185	4.568211	.5100530	.0709614	311.2348	.2755907	.3635115
#3	.1997789	4.721670	.5124697	.0731359	320.0833	.2786437	.3789743

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.34604**	**.3610008**	**.4199944**	**.6992180**	**.1860840**	**1.546678**	**6.403050**
Stddev	.17637	.0054771	.0020910	.0021509	.0033999	.015164	.040118
%RSD	1.554478	1.517194	.4978697	.3076179	1.827102	.9803976	.6265419
#1	11.33229	.3621275	.4188240	.6994737	.1880847	1.545859	6.364447
#2	11.17695	.3550480	.4187506	.6969507	.1821583	1.531940	6.400175
#3	11.52889	.3658269	.4224085	.7012297	.1880089	1.562234	6.444528

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2185-08A Acquired: 6/4/2025 19:22:02 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.4583625	.1961254	.2252534
Stddev	.0030207	.0022644	.0036775
%RSD	.6590229	1.154587	1.632625
#1	.4580376	.1983743	.2277243
#2	.4555174	.1938458	.2210271
#3	.4615326	.1961561	.2270088

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2758.682	58965.05	9511.687	1966.809	3674.081
Stddev	7.710	855.46	127.948	33.562	4.500
%RSD	.2794864	1.450786	1.345164	1.706444	.1224777
#1	2759.193	59264.79	9457.477	1982.231	3676.726
#2	2766.124	59630.30	9657.816	1989.888	3676.632
#3	2750.729	58000.06	9419.769	1928.307	3668.885

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCV04 Acquired: 6/4/2025 19:26:11 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.696793**	**4.827804**	**4.698987**	**4.747324**	**4.744923**	**9.168156**
Stddev	.055951	.042733	.046400	.053813	.049352	.025940
%RSD	1.191270	.8851350	.9874429	1.133550	1.040103	.2829369
#1	4.656670	4.783063	4.669222	4.711960	4.717291	9.190587
#2	4.673001	4.832152	4.675290	4.720757	4.715577	9.139750
#3	4.760709	4.868196	4.752451	4.809254	4.801901	9.174131

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.070925**	**.2270166**	**2.357057**	**22.78291**	**.9437933**	**2.355028**
Stddev	.047410	.0005749	.021677	.04504	.0006946	.023513
%RSD	.5226555	.2532481	.9196442	.1977125	.0735989	.9983988
#1	9.042892	.2271679	2.341033	22.82288	.9433423	2.339418
#2	9.044220	.2263812	2.348416	22.73410	.9434445	2.343596
#3	9.125664	.2275008	2.381721	22.79175	.9445933	2.382071

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.194966**	**4.672565**	**2.281214**	**22.69286**	**2.370285**	**1.169973**
Stddev	.013917	.002563	.006044	.07592	.023329	.005409
%RSD	1.164667	.0548431	.2649605	.3345707	.9842272	.4623375
#1	1.185461	4.672135	2.287291	22.66785	2.355815	1.170223
#2	1.188496	4.670245	2.275203	22.63259	2.357842	1.164443
#3	1.210940	4.675316	2.281148	22.77813	2.397197	1.175253

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.57498**	**2.277016**	**2.310987**	**23.18963**	**4.500409**	**4.749127**
Stddev	.06118	.007369	.009506	.09311	.014848	.049453
%RSD	.2595250	.3236072	.4113280	.4015254	.3299357	1.041314
#1	23.61720	2.284661	2.317622	23.21326	4.508765	4.716646
#2	23.50481	2.269959	2.300097	23.08697	4.483266	4.724694
#3	23.60292	2.276429	2.315242	23.26864	4.509197	4.806041

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCV04 Acquired: 6/4/2025 19:26:11 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.649190**	**4.562642**	**4.722480**	**4.651536**	F **4.494421**	**4.570203**
Stddev	.039446	.008109	.011348	.044517	.049811	.007253
%RSD	.8484473	.1777262	.2402960	.9570356	1.108295	.1587023
#1	4.621161	4.571329	4.718356	4.620236	4.472682	4.574590
#2	4.632112	4.555272	4.713771	4.631874	4.459174	4.561831
#3	4.694297	4.561326	4.735313	4.702499	4.551407	4.574187

Elem	Sr4077
Units	ppm
Avg	**4.577388**
Stddev	.050390
%RSD	1.100843
#1	4.599685
#2	4.519696
#3	4.612783

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2898.560**	**61191.37**	**9452.138**	**2036.338**	**3920.392**
Stddev	28.106	279.21	28.423	8.985	36.205
%RSD	.9696391	.4562840	.3007022	.4412514	.9235083
#1	2913.002	61195.75	9441.733	2034.905	3939.827
#2	2916.508	61468.37	9484.297	2045.953	3942.729
#3	2866.170	60910.01	9430.384	2028.154	3878.619

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB04 Acquired: 6/4/2025 19:30:23 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001781**	**.0003069**	**.0000674**	**.0004783**	**-.000359**	**.0064154**	**-.003374**
Stddev	.000409	.0008299	.0013458	.0016006	.000988	.0019052	.001208
%RSD	22.95995	270.4610	1995.383	334.6921	274.8655	29.69703	35.81652
#1	-.001561	.0000124	.0014390	.0020988	.000637	.0067836	-.002092
#2	-.002253	.0012439	-.001251	-.001102	-.000376	.0081096	-.003537
#3	-.001529	-.000336	.000014	.000438	-.001339	.0043530	-.004493

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000078**	**.0000299**	**.0058901**	**.0004116**	**.0001048**	**.0008163**	**.0067307**
Stddev	.000024	.0000618	.0058269	.0001903	.0002412	.0002465	.0021080
%RSD	30.53043	206.9182	98.92701	46.23054	230.1217	30.20049	31.31871
#1	-.000051	.0000991	-.000838	.0006049	-.000163	.0010968	.0048220
#2	-.000094	-.000020	.009314	.0004055	.000304	.0006340	.0063769
#3	-.000089	.000010	.009194	.0002245	.000173	.0007180	.0089932

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000407**	**.0000967**	**.0001828**	**-.000137**	**.0311862**	**-.000179**	**.0015452**
Stddev	.000397	.0071847	.0001571	.000350	.0166900	.000433	.0001221
%RSD	97.56684	7427.655	85.94356	256.2025	53.51730	241.9156	7.903583
#1	-.000812	-.007855	.0000153	.000172	.0269463	-.000204	.0014054
#2	-.000390	.006120	.0002061	-.000516	.0170251	-.000600	.0016314
#3	-.000019	.002025	.0003270	-.000066	.0495873	.000266	.0015986

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0275295**	**.0083061**	**.0007372**	**.0018983**	**.0002394**	**.0006342**	**-.002608**
Stddev	.0305696	.0005525	.0000935	.0003054	.0000695	.0018207	.001059
%RSD	111.0431	6.651482	12.68728	16.09042	29.04196	287.0748	40.58548
#1	-.005624	.0084593	.0006787	.0020366	.0001723	.0004498	-.001857
#2	.033612	.0087659	.0008451	.0021101	.0002347	.0025401	-.002148
#3	.054601	.0076932	.0006879	.0015481	.0003112	-.001087	-.003819

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB04 Acquired: 6/4/2025 19:30:23 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001176	.0027799	.0000907
Stddev	.003013	.0009587	.0000325
%RSD	256.1854	34.48649	35.86463
#1	-.002879	.0038718	.0000799
#2	-.002952	.0020758	.0000650
#3	.002303	.0023922	.0001274

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2984.668	62212.36	9404.177	2086.237	4215.364
Stddev	12.209	90.87	9.604	4.708	14.209
%RSD	.4090649	.1460684	.1021221	.2256862	.3370679
#1	2994.973	62288.15	9406.593	2090.931	4224.615
#2	2987.848	62111.62	9412.343	2086.264	4222.472
#3	2971.184	62237.31	9393.596	2081.514	4199.003

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168256BL Acquired: 6/4/2025 19:34:43 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.001721**	**.0006720**	**-.000532**	**.0007480**	**.0011554**	**.0047458**	**-.004114**
Stddev	.000349	.0011973	.000226	.0012086	.0019469	.0032951	.000769
%RSD	20.27798	178.1632	42.41061	161.5819	168.5025	69.43198	18.67912
#1	-.001963	.0020440	-.000791	-.000520	.0028970	.0081582	-.004314
#2	-.001321	-.000161	-.000432	.001886	.0015156	.0015821	-.003266
#3	-.001880	.000133	-.000374	.000878	-.000946	.0044970	-.004763

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000076**	**-.000079**	**.0065536**	**.0010633**	**-.000183**	**.0004966**	**.0013405**
Stddev	.000003	.000052	.0061671	.0002272	.000117	.0007815	.0013922
%RSD	3.737913	65.98020	94.10204	21.36444	63.88472	157.3845	103.8589
#1	-.000074	-.000127	.0085492	.0009802	-.000067	.0008670	.0007293
#2	-.000079	-.000024	-.000364	.0013203	-.000182	.0010240	.0029337
#3	-.000075	-.000087	.011476	.0008894	-.000301	-.000401	.0003584

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000086**	**.0038572**	**.0005850**	**.0002330**	**-.002066**	**.0002625**	**.0006157**
Stddev	.0002215	.0059234	.0001918	.0004033	.005149	.0010332	.0000309
%RSD	2570.679	153.5673	32.77839	173.1095	249.1776	393.5774	5.018596
#1	-.000040	.0052089	.0007199	.0002853	-.007992	-.000928	.0006287
#2	-.000184	-.002625	.0003655	.0006076	.000466	.000797	.0005804
#3	.000251	.008988	.0006695	-.000194	.001326	.000919	.0006380

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.018181**	**.0040147**	**.0002075**	**.0001032**	**-.000397**	**.0006303**	**-.002717**
Stddev	.005616	.0005836	.0001022	.0002001	.000786	.0039055	.001226
%RSD	30.89167	14.53686	49.26863	193.9711	198.0276	619.6353	45.12296
#1	-.020883	.0045158	.0001264	.0001569	-.001293	-.001413	-.003059
#2	-.011724	.0041543	.0001738	.0002710	.000176	-.001830	-.001357
#3	-.021936	.0033739	.0003224	-.000118	-.000073	.005134	-.003737

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168256BL Acquired: 6/4/2025 19:34:43 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0005014	.0006046	.0000721
Stddev	.0037747	.0004015	.0000507
%RSD	752.7643	66.40226	70.24666
#1	.0047956	.0001584	.0001163
#2	-.000999	.0009365	.0000833
#3	-.002293	.0007190	.0000168

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2955.249	63800.49	10151.16	2118.256	4142.775
Stddev	17.843	175.03	35.78	1.061	21.879
%RSD	.6037647	.2743362	.3525135	.0500856	.5281165
#1	2959.525	63742.84	10191.56	2119.398	4150.667
#2	2970.565	63661.56	10138.47	2117.300	4159.612
#3	2935.656	63997.07	10123.45	2118.072	4118.045

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168256BS Acquired: 6/4/2025 19:39:02 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.7532096	1.936298	.9287245	1.939185	.8267255	1.791274
Stddev	.0054027	.017129	.0025452	.008039	.0042910	.008077
%RSD	.7172964	.8846118	.2740514	.4145538	.5190369	.4509105
#1	.7539559	1.931166	.9264885	1.938221	.8240755	1.784108
#2	.7474724	1.922323	.9281907	1.931672	.8244248	1.800027
#3	.7582003	1.955407	.9314942	1.947663	.8316763	1.789687

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1764198	.1808765	.1898162	.9194328	.3813406	.1898388
Stddev	.0005979	.0002428	.0006122	.0046977	.0005622	.0003588
%RSD	.3388889	.1342339	.3225406	.5109381	.1474294	.1890077
#1	.1757357	.1808970	.1894403	.9206852	.3809812	.1897135
#2	.1768423	.1806241	.1894857	.9142357	.3819885	.1895594
#3	.1766814	.1811084	.1905227	.9233773	.3810522	.1902434

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3011983	2.865192	.1865275	1.815310	.4826273	.0684217
Stddev	.0015345	.016751	.0006291	.031819	.0013676	.0001791
%RSD	.5094504	.5846256	.3372516	1.752826	.2833699	.2618011
#1	.3000380	2.864343	.1866953	1.834435	.4815399	.0682371
#2	.3006186	2.882351	.1870557	1.832916	.4821793	.0685949
#3	.3029381	2.848882	.1858315	1.778579	.4841628	.0684331

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.674741	.2713731	.1899585	9.033869	.2710378	.4116932
Stddev	.030817	.0013505	.0009786	.104292	.0008038	.0020802
%RSD	1.152163	.4976633	.5151582	1.154460	.2965794	.5052796
#1	2.647084	.2705984	.1891324	8.976824	.2715160	.4110187
#2	2.707961	.2705884	.1910392	9.154241	.2701097	.4100339
#3	2.669178	.2729325	.1897038	8.970542	.2714876	.4140269

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168256BS Acquired: 6/4/2025 19:39:02 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.6932346**	**.1929002**	**.8316440**	**5.590697**	F **-.008094**	**.1847508**
Stddev	.0026838	.0004726	.0010385	.038115	.002733	.0016713
%RSD	.3871436	.2449809	.1248767	.6817501	33.76626	.9046243
#1	.6931699	.1924166	.8310487	5.587173	-.011188	.1828383
#2	.6905837	.1929232	.8310401	5.554466	-.007089	.1854834
#3	.6959501	.1933609	.8328432	5.630451	-.006006	.1859307

Elem	Sr4077
Units	ppm
Avg	**.1794155**
Stddev	.0003759
%RSD	.2095249
#1	.1792646
#2	.1798435
#3	.1791385

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2953.018**	**63875.17**	**9922.040**	**2130.272**	**4129.593**
Stddev	10.287	207.64	17.005	16.063	13.740
%RSD	.3483653	.3250731	.1713869	.7540432	.3327158
#1	2958.222	63965.31	9907.803	2141.702	4135.153
#2	2959.662	63637.69	9917.447	2111.906	4139.682
#3	2941.168	64022.50	9940.870	2137.208	4113.945

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168261BL Acquired: 6/4/2025 19:43:02 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.001055**	**.0003986**	**-.000040**	**-.001787**	**.0017725**	**.0037759**	**-.003206**
Stddev	.002357	.0003451	.000809	.001090	.0018740	.0034223	.000862
%RSD	223.3528	86.57116	2028.065	60.97132	105.7252	90.63622	26.87396
#1	-.003504	.0002834	.000678	-.002731	.0016476	.0070706	-.003670
#2	-.000861	.0001259	-.000916	-.000595	-.000036	.0002388	-.003735
#3	.001199	.0007866	.000119	-.002036	.003706	.0040183	-.002212

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000065**	**.0000249**	**.0040999**	**.0005949**	**-.000112**	**.0002109**	**.0054784**
Stddev	.000053	.0000469	.0075887	.0003285	.000140	.0004088	.0008182
%RSD	80.52834	188.0603	185.0972	55.21645	124.5981	193.8542	14.93541
#1	-.000120	.0000274	-.002880	.0008458	-.000101	-.000205	.0048325
#2	-.000061	.0000705	.003003	.0002231	-.000258	.000612	.0063985
#3	-.000015	-.000023	.012178	.0007157	.000021	.000226	.0052041

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000353**	**.0186690**	**.0000260**	**-.000203**	**-.053663**	**.0002969**	**.0011856**
Stddev	.000219	.0046409	.0000613	.000160	.013574	.0007047	.0001099
%RSD	62.09322	24.85880	235.5241	78.47592	25.29456	237.3044	9.268323
#1	-.000184	.0240056	-.000044	-.000386	-.061668	.0010073	.0013123
#2	-.000274	.0164232	.000052	-.000095	-.037991	.0002854	.0011174
#3	-.000600	.0155782	.000070	-.000128	-.061331	-.000402	.0011270

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0066743**	**.0031950**	**.0000781**	**.0007390**	**-.000948**	**.0020308**	**-.001145**
Stddev	.0147122	.0006109	.0003113	.0004850	.000647	.0059152	.002703
%RSD	220.4300	19.12182	398.4463	65.62988	68.26420	291.2789	236.1785
#1	-.005938	.0030717	.0000644	.0001938	-.000238	.0047824	-.003583
#2	.022836	.0038581	-.000226	.0009008	-.001102	.0060688	.001762
#3	.003125	.0026550	.000396	.0011224	-.001504	-.004759	-.001613

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168261BL Acquired: 6/4/2025 19:43:02 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	-.000186	-.000908	.0000309
Stddev	.002126	.000689	.0000619
%RSD	1145.108	75.88103	200.0281
#1	.000803	-.000258	.0000754
#2	-.002626	-.001630	.0000572
#3	.001267	-.000835	-.000040

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2977.482	63552.82	9470.620	2117.767	4194.629
Stddev	25.140	63.58	161.259	5.098	30.161
%RSD	.8443399	.1000377	1.702730	.2407487	.7190405
#1	2992.296	63516.07	9368.417	2123.405	4212.933
#2	2991.695	63516.15	9656.519	2116.414	4211.137
#3	2948.455	63626.23	9386.923	2113.481	4159.817

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168261BS Acquired: 6/4/2025 19:47:22 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.7842826**	**2.009282**	**.9689530**	**2.004979**	**.8324123**	**1.881299**
Stddev	.0041076	.017399	.0011272	.005991	.0033850	.006278
%RSD	.5237439	.8659112	.1163318	.2988008	.4066458	.3337137
#1	.7803563	2.029002	.9688130	2.009470	.8352924	1.879941
#2	.7839411	2.002746	.9679024	1.998177	.8286839	1.875810
#3	.7885503	1.996098	.9701437	2.007290	.8332606	1.888144

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1860766**	**.1888049**	**.1974794**	**.9646274**	**.3999155**	**.1983419**
Stddev	.0001628	.0002945	.0003302	.0140524	.0002341	.0005531
%RSD	.0874850	.1559913	.1671914	1.456770	.0585405	.2788493
#1	.1862572	.1890926	.1978574	.9571321	.3996719	.1982856
#2	.1860313	.1885040	.1972477	.9808384	.3999358	.1978192
#3	.1859413	.1888180	.1973331	.9559117	.4001388	.1989210

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3128998**	**3.002003**	**.1957353**	**1.894296**	**.5024945**	**.0716591**
Stddev	.0017075	.017319	.0007168	.010407	.0012112	.0002315
%RSD	.5456887	.5769049	.3661883	.5493929	.2410358	.3230209
#1	.3130739	2.982807	.1954709	1.904107	.5035668	.0715454
#2	.3111120	3.006745	.1951883	1.883381	.5011808	.0715065
#3	.3145136	3.016456	.1965467	1.895399	.5027358	.0719255

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.780206**	**.2867097**	**.2001532**	**9.436141**	**.2814115**	**.4195572**
Stddev	.009411	.0029542	.0005975	.046211	.0012634	.0010211
%RSD	.3384933	1.030390	.2984966	.4897183	.4489450	.2433683
#1	2.769357	.2832991	.2000949	9.384852	.2828041	.4199629
#2	2.785099	.2884743	.2007777	9.474532	.2810918	.4183957
#3	2.786162	.2883556	.1995871	9.449040	.2803388	.4203131

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168261BS Acquired: 6/4/2025 19:47:22 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.7037322**	**.1962578**	**.8478808**	**5.778934**	F **-.009286**	**.1922068**
Stddev	.0023820	.0018798	.0116350	.008770	.000782	.0010629
%RSD	.3384784	.9578395	1.372249	.1517533	8.417983	.5530084
#1	.7064820	.1944316	.8360685	5.789053	-.009415	.1918606
#2	.7024109	.1981871	.8593300	5.773526	-.008448	.1933997
#3	.7023038	.1961547	.8482440	5.774224	-.009996	.1913601

Elem	Sr4077
Units	ppm
Avg	**.1881350**
Stddev	.0004141
%RSD	.2201170
#1	.1876752
#2	.1882511
#3	.1884786

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2991.350**	**64097.53**	**9970.511**	**2136.343**	**4194.948**
Stddev	7.451	50.78	20.042	8.240	6.413
%RSD	.2491003	.0792226	.2010141	.3857005	.1528662
#1	2994.537	64155.86	9948.997	2143.299	4198.306
#2	2996.677	64063.21	9988.655	2127.243	4198.983
#3	2982.835	64073.51	9973.880	2138.487	4187.553

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168255BL Acquired: 6/4/2025 19:51:23 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.001416**	**.0005778**	**-.000919**	**-.000298**	**.0015259**	**.0073161**	**-.003263**
Stddev	.001443	.0016515	.000354	.002681	.0016131	.0011070	.000178
%RSD	101.9374	285.8438	38.53051	898.7331	105.7141	15.13055	5.451019
#1	-.003078	-.000381	-.001091	.001550	-.000303	.0077058	-.003441
#2	-.000684	-.000370	-.000512	.000928	.002133	.0081755	-.003085
#3	-.000485	.002485	-.001154	-.003373	.002747	.0060670	-.003263

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000057**	**.0000366**	**.0060912**	**.0005270**	**-.000142**	**.0002721**	**.0070259**
Stddev	.000034	.0000754	.0025353	.0001868	.000257	.0001411	.0039798
%RSD	58.90800	206.0693	41.62174	35.44175	181.0981	51.85306	56.64456
#1	-.000095	.0000792	.0041377	.0007423	-.000361	.0001434	.0094671
#2	-.000044	-.000050	.0051797	.0004309	-.000205	.0002498	.0024335
#3	-.000032	.000081	.0089562	.0004079	.000141	.0004230	.0091772

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000357**	**.0230863**	**.0004821**	**-.000004**	**-.038206**	**-.000426**	**.0027792**
Stddev	.000204	.0178526	.0003417	.000330	.006493	.000882	.0006044
%RSD	57.27037	77.32957	70.87380	8230.746	16.99525	206.8706	21.74857
#1	-.000578	.0297009	.0001734	-.000218	-.045682	.000515	.0026316
#2	-.000174	.0366876	.0004237	.000376	-.033972	-.000560	.0034438
#3	-.000319	.0028705	.0008492	-.000170	-.034965	-.001234	.0022623

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.009662**	**.0020257**	**.0001433**	**.0004882**	**-.000782**	**-.002269**	**-.003474**
Stddev	.015320	.0001586	.0000157	.0003576	.000573	.006417	.001051
%RSD	158.5597	7.827514	10.93915	73.25985	73.30611	282.8065	30.26229
#1	-.013467	.0020568	.0001519	.0005068	-.000730	-.008910	-.002418
#2	.007202	.0018539	.0001528	.0008362	-.000237	.003896	-.003484
#3	-.022720	.0021664	.0001252	.0001216	-.001380	-.001792	-.004520

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168255BL Acquired: 6/4/2025 19:51:23 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.000864**	**-.001511**	**.0001235**
Stddev	.002858	.000636	.0000307
%RSD	330.6742	42.09804	24.85152
#1	.001605	-.001005	.0000922
#2	-.000203	-.001303	.0001536
#3	-.003995	-.002226	.0001247

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2934.043**	**61890.56**	**10267.10**	**2099.808**	**4077.592**
Stddev	4.257	66.81	35.28	12.104	5.850
%RSD	.1450788	.1079537	.3435796	.5764233	.1434638
#1	2934.544	61880.14	10239.58	2111.678	4072.454
#2	2938.027	61961.98	10254.85	2087.483	4083.959
#3	2929.558	61829.58	10306.86	2100.262	4076.364

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168255BS Acquired: 6/4/2025 19:55:43 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.8538266**	**2.148622**	**1.044341**	**2.176210**	**.8815109**	**1.970600**
Stddev	.0248214	.075085	.028799	.053590	.0224175	.009023
%RSD	2.907076	3.494560	2.757633	2.462542	2.543074	.4578680
#1	.8821459	2.231709	1.077586	2.237646	.9067624	1.962069
#2	.8358438	2.085627	1.027028	2.139079	.8639540	1.980045
#3	.8434902	2.128529	1.028409	2.151906	.8738165	1.969686

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1908088**	**.2040498**	**.2147014**	**1.005125**	**.4225084**	**.2141633**
Stddev	.0008111	.0005355	.0052518	.005294	.0012059	.0055807
%RSD	.4250922	.2624440	2.446086	.5267234	.2854208	2.605838
#1	.1899843	.2036772	.2207461	1.002533	.4232764	.2205568
#2	.1916058	.2038087	.2112573	1.011216	.4231303	.2102686
#3	.1908365	.2046635	.2121009	1.001627	.4211185	.2116645

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3367549**	**3.154261**	**.2021429**	**1.991754**	**.5438552**	**.0766316**
Stddev	.0089460	.012733	.0006653	.020171	.0139816	.0009692
%RSD	2.656535	.4036792	.3291489	1.012730	2.570836	1.264707
#1	.3470805	3.139827	.2015490	1.998302	.5599460	.0772610
#2	.3313327	3.163903	.2028619	1.969123	.5346692	.0755155
#3	.3318516	3.159053	.2020177	2.007838	.5369505	.0771181

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.897927**	**.2958051**	**.2122022**	**9.946497**	**.3008355**	**.4360760**
Stddev	.004527	.0007818	.0006361	.057027	.0010483	.0122080
%RSD	.1562322	.2642947	.2997678	.5733370	.3484726	2.799514
#1	2.898546	.2966681	.2121458	9.924036	.3014165	.4500993
#2	2.893121	.2956029	.2128646	10.01134	.2996253	.4278212
#3	2.902113	.2951442	.2115961	9.90412	.3014646	.4303074

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168255BS Acquired: 6/4/2025 19:55:43 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.7472112	.1981733	.8806000	6.425375	F -.011879	.2008645
Stddev	.0222861	.0008602	.0081489	.169105	.001014	.0015281
%RSD	2.982571	.4340639	.9253820	2.631836	8.532330	.7607362
#1	.7728015	.1980850	.8720095	6.618245	-.012545	.1993735
#2	.7320658	.1973606	.8882205	6.302530	-.012380	.2007929
#3	.7367664	.1990742	.8815701	6.355350	-.010713	.2024271

Elem	Sr4077
Units	ppm
Avg	.1942542
Stddev	.0003933
%RSD	.2024742
#1	.1938025
#2	.1944390
#3	.1945211

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2873.347	61756.93	9701.729	2099.554	3972.088
Stddev	63.545	154.49	44.166	6.466	87.409
%RSD	2.211546	.2501661	.4552345	.3079652	2.200589
#1	2800.196	61927.80	9741.353	2099.091	3871.474
#2	2914.889	61715.90	9709.720	2106.239	4029.330
#3	2904.958	61627.09	9654.113	2093.332	4015.459

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2169-01 Acquired: 6/4/2025 19:59:42 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.0063417**	**-.006053**	**.0787925**	**.0036967**	**.0021901**	**14.46664**
Stddev	.0008314	.001378	.0008605	.0025306	.0011147	.02786
%RSD	13.11065	22.76033	1.092166	68.45548	50.89867	.1925959
#1	.0069388	-.007642	.0793108	.0012540	.0009031	14.48888
#2	.0053921	-.005323	.0777991	.0035292	.0028150	14.43539
#3	.0066943	-.005195	.0792675	.0063069	.0028523	14.47566

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1879716**	**.0007191**	**.0004010**	**101.6319**	**.0667407**	**.0122839**
Stddev	.0005550	.0000394	.0000861	.2386	.0004380	.0001005
%RSD	.2952557	5.483601	21.47193	.2347702	.6563093	.8182957
#1	.1885028	.0006748	.0004351	101.7890	.0666890	.0121974
#2	.1880165	.0007504	.0004648	101.3574	.0663308	.0122601
#3	.1873956	.0007320	.0003031	101.7494	.0672022	.0123942

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1106453**	**38.28394**	**2.732855**	**11.56898**	**.0316212**	**.0015532**
Stddev	.0003870	.09023	.006034	.03585	.0002044	.0002485
%RSD	.3497958	.2356828	.2208085	.3099224	.6462526	15.99843
#1	.1105485	38.33588	2.737153	11.56800	.0313957	.0018292
#2	.1103158	38.33618	2.725956	11.53363	.0317942	.0013471
#3	.1110715	38.17975	2.735455	11.60532	.0316737	.0014835

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**58.35926**	**.0345018**	**.2707464**	**4.851877**	**.1385107**	**.0093702**
Stddev	.20085	.0024760	.0010703	.034081	.0007991	.0001659
%RSD	.3441632	7.176308	.3952970	.7024234	.5769456	1.770231
#1	58.54250	.0342200	.2717754	4.889623	.1377583	.0092199
#2	58.39076	.0371066	.2708246	4.842642	.1384242	.0095482
#3	58.14452	.0321788	.2696391	4.823365	.1393495	.0093425

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2169-01 Acquired: 6/4/2025 19:59:42 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	-.002133	.3893241	F 26.53997	.8512015	3.283894	.0172865
Stddev	.000441	.0018751	.06293	.0028510	.003423	.0009014
%RSD	20.67120	.4816396	.2371032	.3349403	.1042443	5.214475
#1	-.002166	.3914430	26.53305	.8544929	3.286343	.0162465
#2	-.002556	.3878788	26.60607	.8494970	3.279982	.0178437
#3	-.001676	.3886505	26.48079	.8496147	3.285356	.0177692

Elem	Sr4077
Units	ppm
Avg	.3461681
Stddev	.0008568
%RSD	.2475044
#1	.3467139
#2	.3451806
#3	.3466098

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2927.551	60928.35	9753.449	2058.140	3908.929
Stddev	1.867	83.44	40.943	4.230	9.087
%RSD	.0637705	.1369456	.4197813	.2055221	.2324690
#1	2929.186	61024.45	9771.933	2054.414	3914.224
#2	2927.951	60886.36	9781.892	2057.268	3914.127
#3	2925.517	60874.25	9706.523	2062.738	3898.437

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2169-03 Acquired: 6/4/2025 20:03:54 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.0253005**	**-.004504**	**.2047831**	**.0033386**	**-.004299**	**43.74252**
Stddev	.0009509	.001030	.0015266	.0052414	.002092	.04352
%RSD	3.758345	22.85948	.7454811	156.9946	48.67156	.0995024
#1	.0250496	-.004888	.2030324	.0081012	-.001903	43.70690
#2	.0263517	-.003338	.2058370	-.002277	-.005765	43.72962
#3	.0245003	-.005286	.2054799	.004192	-.005229	43.79104

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2859149**	**.0017975**	**.0014852**	**73.88884**	**.1736613**	**.0232505**
Stddev	.0004470	.0000440	.0001094	.10880	.0006402	.0000717
%RSD	.1563339	2.445824	7.366781	.1472509	.3686555	.3085860
#1	.2857271	.0018093	.0015967	73.81320	.1740407	.0231681
#2	.2855924	.0018344	.0013780	73.83978	.1729222	.0232996
#3	.2864251	.0017489	.0014808	74.01353	.1740212	.0232837

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1888663**	**43.07665**	**1.903199**	**19.30856**	**.0601525**	**.0020763**
Stddev	.0016009	.04153	.003160	.03301	.0003540	.0002082
%RSD	.8476405	.0964160	.1660264	.1709360	.5884563	10.02597
#1	.1871687	43.04051	1.906046	19.31016	.0597574	.0021045
#2	.1890813	43.06742	1.899800	19.27478	.0604406	.0022690
#3	.1903488	43.12203	1.903751	19.34073	.0602597	.0018555

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**188.3920**	**.0745916**	**.4328523**	**12.88930**	**.2274487**	**.0350466**
Stddev	.8074	.0006842	.0012051	.02667	.0012800	.0004364
%RSD	.4285797	.9172287	.2784001	.2069283	.5627760	1.245322
#1	188.8938	.0738197	.4339089	12.90582	.2286871	.0348920
#2	187.4606	.0751231	.4331081	12.90354	.2261307	.0355393
#3	188.8215	.0748320	.4315398	12.85853	.2275284	.0347086

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2169-03 Acquired: 6/4/2025 20:03:54 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.3648610	.6945921	F 71.96117	2.189567	F 25.20897	.0569429
Stddev	.0025627	.0028045	.10189	.012459	.14171	.0003241
%RSD	.7023822	.4037555	.1415834	.5690206	.5621346	.5691402
#1	.3629501	.6942740	72.06438	2.177888	25.06836	.0566647
#2	.3638596	.6919602	71.95848	2.188132	25.20680	.0568651
#3	.3677732	.6975420	71.86066	2.202682	25.35175	.0572987

Elem	Sr4077
Units	ppm
Avg	.3067627
Stddev	.0002492
%RSD	.0812396
#1	.3067709
#2	.3065094
#3	.3070077

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3118.071	64107.10	11050.13	2175.485	3837.824
Stddev	7.024	191.86	26.48	10.644	2.089
%RSD	.2252755	.2992814	.2396062	.4892640	.0544346
#1	3112.055	63885.56	11027.83	2167.422	3837.459
#2	3116.369	64219.53	11079.39	2171.483	3840.071
#3	3125.790	64216.20	11043.16	2187.550	3835.941

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2175-06DLX5 Acquired: 6/4/2025 20:08:12 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.005157**	**-.002136**	**.0894067**	**.0028130**	**.0052472**	**.3926325**	**.0060971**
Stddev	.000296	.001924	.0003445	.0013470	.0025837	.0039348	.0005614
%RSD	5.748230	90.04866	.3852883	47.88607	49.23977	1.002148	9.207015
#1	-.004814	-.001490	.0892183	.0012697	.0022801	.3886781	.0067251
#2	-.005329	-.000619	.0898042	.0034164	.0070006	.3926719	.0056440
#3	-.005327	-.004300	.0891974	.0037528	.0064610	.3965473	.0059222

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000080**	**.0006287**	**2.742525**	**.0154165**	**.0003378**	**.0108841**	**.6453572**
Stddev	.000048	.0000481	.038913	.0004089	.0001445	.0000732	.0038347
%RSD	60.83808	7.650050	1.418887	2.652071	42.77135	.6724213	.5942048
#1	-.000119	.0005751	2.764879	.0152165	.0002200	.0108024	.6434224
#2	-.000095	.0006426	2.697592	.0158869	.0002944	.0109438	.6428752
#3	-.000025	.0006683	2.765104	.0151463	.0004989	.0109061	.6497738

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0237882**	**.5894291**	**.0603312**	**.0045769**	**4.441404**	**.0000713**	**1.402927**
Stddev	.0006804	.0019707	.0000699	.0002314	.037103	.0002074	.007465
%RSD	2.860077	.3343321	.1158644	5.056482	.8353955	290.9616	.5321158
#1	.0235009	.5887573	.0603865	.0043390	4.466718	-.000105	1.396382
#2	.0232986	.5878822	.0603544	.0045906	4.458680	.000300	1.411058
#3	.0245651	.5916478	.0602526	.0048012	4.398812	.000019	1.401343

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.470948**	**.0235582**	**.0143424**	**.0041049**	**.0111404**	**.5560623**	**.4375369**
Stddev	.029323	.0006978	.0000944	.0009151	.0002763	.0087229	.0019490
%RSD	1.186694	2.962035	.6578472	22.29350	2.480189	1.568682	.4454421
#1	2.437090	.0233111	.0143327	.0040960	.0114342	.5656988	.4376372
#2	2.488005	.0230176	.0144412	.0050244	.0108858	.5537817	.4355398
#3	2.487750	.0243459	.0142533	.0031942	.0111012	.5487062	.4394339

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2175-06DLX5 Acquired: 6/4/2025 20:08:12 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	1.917561	-.002862	.0093915
Stddev	.007296	.000332	.0002217
%RSD	.3804814	11.59107	2.360665
#1	1.910878	-.002567	.0095050
#2	1.925345	-.002797	.0091360
#3	1.916459	-.003221	.0095335

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2960.502	61163.46	9741.457	2081.780	4201.910
Stddev	2.615	133.63	132.001	5.259	5.635
%RSD	.0883307	.2184835	1.355048	.2526316	.1341023
#1	2963.218	61009.88	9713.313	2084.839	4200.523
#2	2958.002	61253.18	9885.261	2075.707	4197.098
#3	2960.285	61227.31	9625.797	2084.794	4208.109

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCV05 Acquired: 6/4/2025 20:12:29 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**4.702664**	**4.794612**	**4.718130**	**4.727025**	**4.753231**	**9.260273**	**9.553881**
Stddev	.000410	.039204	.010058	.009279	.010075	.024558	.099882
%RSD	.0087250	.8176779	.2131724	.1962975	.2119589	.2651973	1.045462
#1	4.702192	4.804545	4.707612	4.723472	4.751552	9.284498	9.655791
#2	4.702870	4.827894	4.727654	4.737556	4.764040	9.260925	9.549694
#3	4.702931	4.751396	4.719125	4.720049	4.744101	9.235395	9.456158

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2279188**	**2.348529**	**23.06419**	**.9422077**	**2.357004**	**1.197827**	**4.816466**
Stddev	.0011865	.006466	.05916	.0022416	.004165	.001844	.009723
%RSD	.5205972	.2753295	.2564875	.2379135	.1767134	.1539201	.2018777
#1	.2285929	2.341936	23.08198	.9403724	2.352351	1.195708	4.806936
#2	.2286147	2.354861	23.11240	.9447060	2.360384	1.198710	4.816090
#3	.2265487	2.348790	22.99818	.9415446	2.358277	1.199063	4.826372

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.332629**	**22.70891**	**2.364800**	**1.190999**	**24.69624**	**2.309028**	**2.338671**
Stddev	.003290	.00867	.006460	.001380	.10161	.007330	.003889
%RSD	.1410289	.0381575	.2731892	.1158787	.4114316	.3174586	.1662810
#1	2.334867	22.71838	2.358131	1.191369	24.67806	2.311362	2.338896
#2	2.334168	22.70699	2.371029	1.192156	24.60496	2.314906	2.334674
#3	2.328852	22.70137	2.365240	1.189471	24.80572	2.300815	2.342442

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.03182**	**4.537871**	**4.755693**	**4.667947**	**4.662590**	**4.815648**	**4.735353**
Stddev	.02801	.031639	.009594	.012955	.017494	.034664	.029206
%RSD	.1165423	.6972112	.2017382	.2775400	.3751959	.7198174	.6167616
#1	24.03958	4.561703	4.745843	4.657232	4.678393	4.781540	4.718164
#2	24.00074	4.549935	4.765009	4.682345	4.665585	4.814564	4.769075
#3	24.05512	4.501975	4.756227	4.664263	4.643792	4.850842	4.718820

Sample Name: CCV05 Acquired: 6/4/2025 20:12:29 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	4.569399	4.693496	4.699631
Stddev	.006060	.014102	.047894
%RSD	.1326274	.3004678	1.019101
#1	4.572831	4.708563	4.734894
#2	4.572964	4.691310	4.718894
#3	4.562401	4.680614	4.645105

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2910.768	60954.39	9534.582	2049.861	3926.291
Stddev	.716	180.40	30.292	9.438	1.199
%RSD	.0246006	.2959615	.3177046	.4604457	.0305468
#1	2910.635	61162.64	9528.913	2055.931	3927.440
#2	2911.541	60846.13	9507.525	2054.665	3926.386
#3	2910.128	60854.39	9567.308	2038.987	3925.047

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB05 Acquired: 6/4/2025 20:16:39 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.001090**	**.0009283**	**-.000035**	**-.000674**	**.0008436**	**.0034496**	**.0015625**
Stddev	.002749	.0008436	.001600	.000849	.0003663	.0025936	.0037184
%RSD	252.1869	90.87224	4521.420	126.0549	43.41673	75.18599	237.9739
#1	-.004062	.0018986	-.000546	.000200	.0012163	.0053780	-.001561
#2	-.000569	.0005176	.001758	-.000724	.0004841	.0044700	.005676
#3	.001361	.0003687	-.001317	-.001497	.0008305	.0005010	.000573

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000091**	**.0000966**	**.0054191**	**.0006365**	**.0000631**	**.0022128**	**.0022824**
Stddev	.000049	.0000851	.0030806	.0000917	.0000433	.0002784	.0031670
%RSD	54.01073	88.06436	56.84697	14.40179	68.67899	12.58052	138.7574
#1	-.000078	.0000785	.0053689	.0007262	.0000413	.0024673	.0057360
#2	-.000049	.0000221	.0023639	.0006402	.0000350	.0019155	-.000486
#3	-.000145	.0001893	.0085244	.0005430	.0001130	.0022555	.001597

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000079**	**.0180868**	**.0003795**	**.0003625**	**-.077342**	**.0002754**	**.0017856**
Stddev	.000262	.0210758	.0000994	.0000739	.015694	.0012497	.0002498
%RSD	332.7191	116.5257	26.18257	20.39000	20.29209	453.8179	13.98978
#1	-.000278	.0366935	.0004864	.0004438	-.094431	-.001167	.0015903
#2	.000218	.0223677	.0002899	.0003446	-.074023	.001029	.0016993
#3	-.000176	-.004801	.0003623	.0002992	-.063573	.000964	.0020671

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.012771**	**.0072604**	**.0007829**	**.0022822**	**.0000113**	**-.004316**	**-.003970**
Stddev	.015717	.0003001	.0002721	.0002735	.0002765	.003211	.001184
%RSD	123.0725	4.133626	34.75188	11.98592	2452.588	74.39858	29.82265
#1	-.026516	.0073768	.0010845	.0024956	-.000289	-.000761	-.002621
#2	.004365	.0074849	.0005559	.0019738	.000066	-.007007	-.004450
#3	-.016161	.0069195	.0007083	.0023771	.000256	-.005180	-.004838

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB05 Acquired: 6/4/2025 20:16:39 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.000914**	**-.001584**	**.0002642**
Stddev	.001139	.000533	.0000975
%RSD	124.6211	33.63558	36.90642
#1	.000150	-.002045	.0001683
#2	-.002115	-.001706	.0003632
#3	-.000777	-.001001	.0002611

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3298.656**	**69560.33**	**10051.47**	**2356.424**	**4548.331**
Stddev	54.617	878.30	164.84	65.828	49.307
%RSD	1.655750	1.262641	1.639993	2.793555	1.084077
#1	3344.448	69921.44	9966.26	2382.417	4591.927
#2	3238.205	68559.04	9946.68	2281.568	4494.819
#3	3313.315	70200.51	10241.48	2405.288	4558.247

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2177-08 Acquired: 6/4/2025 20:20:59 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.003785**	**-.000706**	**.0014377**	**-.000188**	**.0030845**	**.0156231**	**.0023039**
Stddev	.000578	.000668	.0010046	.001107	.0014054	.0068012	.0006573
%RSD	15.26201	94.56401	69.87534	588.4634	45.56245	43.53325	28.52879
#1	-.004238	-.001210	.0015712	-.001009	.0041244	.0187283	.0028051
#2	-.003984	.000051	.0023689	-.000627	.0014857	.0203175	.0025470
#3	-.003134	-.000961	.0003730	.001071	.0036435	.0078235	.0015598

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000225**	**-.000082**	**.0722934**	**.0001317**	**-.000268**	**.0008623**	**.0136016**
Stddev	.000055	.000031	.0063077	.0002712	.000146	.0001458	.0008497
%RSD	24.46171	37.21955	8.725200	205.9032	54.50592	16.91450	6.246839
#1	-.000176	-.000113	.0661598	.0002871	-.000430	.0006940	.0128951
#2	-.000284	-.000051	.0719583	.0002894	-.000231	.0009395	.0133651
#3	-.000215	-.000084	.0787619	-.000181	-.000144	.0009532	.0145444

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018174**	**.0129358**	**.0017457**	**-.000257**	**-.108182**	**.0009400**	**.0023190**
Stddev	.0000783	.0064862	.0001675	.000331	.013221	.0016697	.0000305
%RSD	4.306266	50.14164	9.593757	128.6620	12.22130	177.6325	1.316415
#1	.0018238	.0077882	.0015527	-.000631	-.093360	.0023060	.0023533
#2	.0018922	.0202210	.0018316	-.000001	-.118761	-.000921	.0023085
#3	.0017361	.0107982	.0018527	-.000139	-.112424	.001435	.0022950

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.014994**	**.0029517**	**.0004533**	**.0017734**	**-.000589**	**.0132590**	**.0030243**
Stddev	.021041	.0005152	.0000892	.0004515	.000552	.0069270	.0012223
%RSD	140.3350	17.45582	19.68029	25.46057	93.75258	52.24404	40.41592
#1	-.033276	.0035197	.0005535	.0022666	-.000691	.0186935	.0020052
#2	-.019712	.0028208	.0004243	.0013806	-.001084	.0054591	.0026882
#3	.008006	.0025144	.0003822	.0016729	.000007	.0156244	.0043795

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2177-08 Acquired: 6/4/2025 20:20:59 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0491125	-.006521	.0002588
Stddev	.0005032	.000487	.0000398
%RSD	1.024598	7.462109	15.36817
#1	.0493418	-.007000	.0002622
#2	.0494603	-.006027	.0002175
#3	.0485355	-.006536	.0002968

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3269.468	67654.82	9831.057	2351.248	4583.092
Stddev	69.559	2385.68	39.213	26.147	65.622
%RSD	2.127544	3.526247	.3988706	1.112033	1.431820
#1	3233.559	65434.04	9836.147	2358.533	4544.423
#2	3349.644	70176.79	9789.547	2372.980	4658.860
#3	3225.203	67353.65	9867.477	2322.232	4545.994

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2169-03DUP Acquired: 6/4/2025 20:25:19 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.0240277**	**-.002970**	**.1813200**	**.0019916**	**-.003034**	**41.62787**
Stddev	.0041387	.000717	.0074742	.0051353	.001020	.06173
%RSD	17.22467	24.13273	4.122079	257.8510	33.62626	.1482914
#1	.0267988	-.002933	.1729113	.0024839	-.004211	41.55661
#2	.0192703	-.003705	.1838414	.0068630	-.002495	41.66490
#3	.0260141	-.002273	.1872075	-.003372	-.002397	41.66210

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2674869**	**.0019757**	**.0014349**	**73.25497**	**.1674817**	**.0209469**
Stddev	.0015832	.0000441	.0003935	1.57285	.0018806	.0007269
%RSD	.5918653	2.229460	27.42041	2.147085	1.122893	3.469979
#1	.2658697	.0019899	.0009859	72.53142	.1695856	.0201343
#2	.2690337	.0019263	.0015995	75.05939	.1659639	.0211714
#3	.2675575	.0020109	.0017194	72.17411	.1668957	.0215350

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1608524**	**37.76185**	**1.888910**	**19.72646**	**.0541225**	**.0010610**
Stddev	.0076822	.60466	.028038	.76015	.0021836	.0004089
%RSD	4.775940	1.601254	1.484372	3.853456	4.034560	38.54022
#1	.1519822	38.29642	1.872137	19.36324	.0516142	.0008441
#2	.1653652	37.88353	1.921278	20.60008	.0551544	.0015326
#3	.1652099	37.10560	1.873313	19.21605	.0555989	.0008062

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**166.7622**	**.0708902**	**.4008463**	**11.37728**	**.2244307**	**.0318041**
Stddev	1.8189	.0001636	.0059402	.27311	.0029198	.0013185
%RSD	1.090709	.2307837	1.481919	2.400485	1.300984	4.145793
#1	168.7198	.0708572	.4076689	11.68521	.2255748	.0302872
#2	166.4424	.0707456	.3968221	11.16437	.2266053	.0324491
#3	165.1244	.0710678	.3980479	11.28227	.2211122	.0326760

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2169-03DUP Acquired: 6/4/2025 20:25:19 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.3497952	.6714175	F 64.69088	2.009243	F 23.34272	.0513046
Stddev	.0115956	.0012997	1.06902	.085577	.97129	.0013108
%RSD	3.314966	.1935759	1.652505	4.259173	4.160991	2.554936
#1	.3369692	.6715798	65.89026	1.910854	22.23387	.0519098
#2	.3528798	.6726284	64.34403	2.050490	23.75139	.0498005
#3	.3595365	.6700442	63.83836	2.066385	24.04289	.0522034

Elem	Sr4077
Units	ppm
Avg	.2927272
Stddev	.0031363
%RSD	1.071396
#1	.2923276
#2	.2898099
#3	.2960441

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3427.186	67461.08	10424.68	2328.911	4191.779
Stddev	194.173	1112.56	102.59	43.648	227.203
%RSD	5.665676	1.649193	.9840794	1.874181	5.420199
#1	3648.791	66176.61	10487.54	2279.850	4453.241
#2	3286.863	68123.32	10306.30	2363.437	4042.363
#3	3345.902	68083.30	10480.21	2343.445	4079.732

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2169-03LX5 Acquired: 6/4/2025 20:29:37 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0030468	.0010600	.0405336	-.000861	.0002227	9.530367
Stddev	.0016114	.0004321	.0007214	.001847	.0017727	.023502
%RSD	52.88792	40.76080	1.779834	214.4197	795.8632	.2466039
#1	.0045223	.0007438	.0412434	-.002177	.0022696	9.545718
#2	.0013273	.0008838	.0398011	-.001657	-.000788	9.542074
#3	.0032909	.0015523	.0405563	.001250	-.000813	9.503311

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0589857	.0003480	.0001249	16.04120	.0373972	.0047726
Stddev	.0003060	.0000703	.0000914	.08896	.0004637	.0001552
%RSD	.5187221	20.21000	73.15846	.5545907	1.239996	3.251418
#1	.0589510	.0003168	.0000826	16.12059	.0378879	.0047080
#2	.0593075	.0002986	.0000623	16.05796	.0373374	.0049497
#3	.0586985	.0004285	.0002298	15.94505	.0369663	.0046603

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0421241	9.274159	.4157188	4.240176	.0122745	.0004361
Stddev	.0004907	.088562	.0020386	.031522	.0004020	.0000566
%RSD	1.165002	.9549376	.4903821	.7434139	3.275181	12.98208
#1	.0423898	9.322923	.4177132	4.276544	.0124530	.0004773
#2	.0424247	9.327622	.4158044	4.223282	.0125563	.0004595
#3	.0415578	9.171932	.4136387	4.220702	.0118141	.0003716

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.87857	.0169352	.0976653	2.531999	.0509898	.0071763
Stddev	.24267	.0016414	.0002401	.025468	.0009705	.0002260
%RSD	.6406618	9.692078	.2458361	1.005846	1.903288	3.148852
#1	37.94587	.0150581	.0979409	2.523651	.0520998	.0070693
#2	38.08048	.0176470	.0975541	2.560593	.0505676	.0074359
#3	37.60934	.0181006	.0975010	2.511753	.0503019	.0070237

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2169-03LX5 Acquired: 6/4/2025 20:29:37 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0717997	.1541501	F 15.23760	.4329652	5.092931	.0109970
Stddev	.0011755	.0021308	.09971	.0042457	.057046	.0005385
%RSD	1.637153	1.382273	.6543632	.9806034	1.120111	4.896808
#1	.0728723	.1561408	15.29918	.4361460	5.146827	.0115919
#2	.0719839	.1544068	15.29105	.4346056	5.098780	.0108563
#3	.0705431	.1519025	15.12256	.4281441	5.033185	.0105429

Elem	Sr4077
Units	ppm
Avg	.0651185
Stddev	.0001346
%RSD	.2066472
#1	.0652139
#2	.0651771
#3	.0649646

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3036.469	63806.73	10606.02	2181.930	4082.697
Stddev	15.782	271.51	17.29	5.796	25.109
%RSD	.5197641	.4255144	.1630193	.2656572	.6150172
#1	3028.871	63686.30	10588.50	2183.530	4068.063
#2	3025.923	63616.27	10606.48	2175.502	4068.339
#3	3054.614	64117.62	10623.08	2186.759	4111.691

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2169-03MS Acquired: 6/4/2025 20:33:51 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.6982507**	**1.756475**	**1.084882**	**1.552389**	**.4397363**	**46.02561**
Stddev	.0034720	.021020	.010165	.008560	.0010571	.00829
%RSD	.4972462	1.196709	.9370122	.5513949	.2403862	.0180138
#1	.7014938	1.741561	1.083405	1.549453	.4401469	46.03072
#2	.6945879	1.747349	1.075535	1.545683	.4405265	46.03006
#3	.6986706	1.780515	1.095705	1.562030	.4385356	46.01604

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4473066**	**.1674953**	**.1904645**	**78.07977**	**.5106585**	**.2125478**
Stddev	.0022742	.0072599	.0022915	2.55436	.0089488	.0015411
%RSD	.5084086	4.334410	1.203092	3.271475	1.752412	.7250722
#1	.4446809	.1756876	.1897069	81.02881	.5208328	.2126636
#2	.4485856	.1618592	.1886477	76.55901	.5040082	.2109520
#3	.4486532	.1649393	.1930388	76.65150	.5071344	.2140277

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4120432**	**40.96146**	**2.139130**	**22.28768**	**.5307948**	**.0400933**
Stddev	.0006019	.33636	.050691	1.62634	.0045728	.0003302
%RSD	.1460707	.8211688	2.369688	7.297022	.8614954	.8236809
#1	.4118777	41.25376	2.197615	24.16546	.5292840	.0402864
#2	.4127106	41.03681	2.107862	21.36943	.5271686	.0397120
#3	.4115415	40.59382	2.111911	21.32815	.5359318	.0402816

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**178.4944**	**.3260407**	**.5561892**	**20.79756**	**.4543256**	**.3708048**
Stddev	2.8946	.0046172	.0022343	.47818	.0144212	.0007110
%RSD	1.621668	1.416147	.4017182	2.299209	3.174203	.1917455
#1	175.1727	.3313085	.5536236	20.26969	.4708563	.3709533
#2	179.8337	.3226951	.5572363	21.20175	.4443217	.3714298
#3	180.4767	.3241186	.5577076	20.92122	.4477988	.3700313

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2169-03MS Acquired: 6/4/2025 20:33:51 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.7458979	.8266339	F 68.94289	7.897853	F 25.35062	.2212242
Stddev	.0088616	.0040820	.62705	.072643	.16383	.0082779
%RSD	1.188039	.4938056	.9095260	.9197826	.6462587	3.741880
#1	.7429950	.8302567	68.52135	7.856335	25.25556	.2117162
#2	.7388518	.8222112	69.66349	7.855491	25.25652	.2251272
#3	.7558468	.8274338	68.64383	7.981732	25.53980	.2268290

Elem	Sr4077
Units	ppm
Avg	.4718899
Stddev	.0076348
%RSD	1.617919
#1	.4631465
#2	.4752844
#3	.4772388

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3328.126	69607.54	10791.37	2408.961	4007.819
Stddev	68.314	957.43	190.65	85.321	57.134
%RSD	2.052622	1.375473	1.766661	3.541814	1.425567
#1	3297.550	70651.31	10573.76	2504.570	3979.712
#2	3280.441	68770.08	10929.00	2340.571	3970.183
#3	3406.387	69401.21	10871.35	2381.740	4073.562

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2169-03MSD Acquired: 6/4/2025 20:37:57 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.7349509**	**1.829993**	**1.140743**	**1.650328**	**.4634136**	**47.60330**
Stddev	.0194152	.058625	.029387	.047842	.0142278	.08044
%RSD	2.641696	3.203570	2.576095	2.898954	3.070216	.1689869
#1	.7572022	1.894343	1.169482	1.704865	.4797092	47.57229
#2	.7214567	1.779619	1.110749	1.615435	.4570746	47.69463
#3	.7261939	1.816017	1.141998	1.630684	.4534571	47.54297

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4440795**	**.1853898**	**.2010108**	**77.36115**	**.5364780**	**.2234054**
Stddev	.0021346	.0049995	.0055140	2.15228	.0098159	.0062324
%RSD	.4806870	2.696741	2.743109	2.782125	1.829688	2.789716
#1	.4418311	.1806875	.2063899	79.82965	.5269851	.2301883
#2	.4460784	.1906411	.1953713	76.37633	.5465878	.2179315
#3	.4443290	.1848408	.2012712	75.87747	.5358612	.2220963

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4311721**	**41.08438**	**2.153619**	**22.67792**	**.5575631**	**.0436564**
Stddev	.0112345	1.75858	.046194	1.28422	.0144829	.0005184
%RSD	2.605580	4.280420	2.144971	5.662864	2.597531	1.187387
#1	.4441427	43.09677	2.206346	24.15334	.5733002	.0441730
#2	.4248818	39.84292	2.134244	22.06893	.5447944	.0431363
#3	.4244919	40.31347	2.120266	21.81149	.5545946	.0436599

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**174.6992**	**.3326645**	**.5808404**	**21.27348**	**.4900514**	**.3906088**
Stddev	4.0897	.0041051	.0020651	.27866	.0036115	.0107771
%RSD	2.340977	1.233996	.3555310	1.309909	.7369597	2.759039
#1	179.1827	.3373984	.5818809	21.55255	.4885122	.4029975
#2	171.1734	.3300878	.5784621	20.99523	.4941775	.3854322
#3	173.7413	.3305071	.5821783	21.27266	.4874646	.3833968

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2169-03MSD Acquired: 6/4/2025 20:37:57 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.7889947	.8455899	F 69.15011	8.317670	F 26.33548	.2330869
Stddev	.0239446	.0047988	2.11187	.241387	.73218	.0066181
%RSD	3.034822	.5675063	3.054034	2.902104	2.780222	2.839308
#1	.8123494	.8502359	71.51893	8.561877	27.13252	.2254463
#2	.7645009	.8458821	67.46421	8.079205	25.69275	.2370303
#3	.7901338	.8406517	68.46719	8.311929	26.18118	.2367840

Elem	Sr4077
Units	ppm
Avg	.4742527
Stddev	.0079275
%RSD	1.671573
#1	.4651381
#2	.4795435
#3	.4780764

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3230.614	66478.48	10182.45	2364.007	3880.844
Stddev	107.427	1074.10	35.65	91.263	116.936
%RSD	3.325271	1.615705	.3501288	3.860518	3.013148
#1	3130.714	65497.56	10141.61	2278.047	3757.988
#2	3216.881	67626.23	10207.31	2459.780	3893.759
#3	3344.247	66311.64	10198.44	2354.195	3990.786

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2169-03A Acquired: 6/4/2025 20:42:03 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.7734891**	**1.958496**	**1.183239**	**1.795136**	**.7356365**	**44.91447**
Stddev	.0020075	.012064	.011518	.005271	.0059899	.03624
%RSD	.2595432	.6159902	.9734501	.2936243	.8142414	.0806831
#1	.7726885	1.946438	1.170494	1.793504	.7405250	44.87866
#2	.7720054	1.970567	1.192906	1.801031	.7289549	44.95112
#3	.7757734	1.958483	1.186316	1.790875	.7374295	44.91362

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4470325**	**.2081779**	**.2098796**	**75.29082**	**.5607684**	**.2318048**
Stddev	.0013443	.0055204	.0024907	1.95495	.0095432	.0020166
%RSD	.3007200	2.651754	1.186717	2.596538	1.701809	.8699451
#1	.4459508	.2082369	.2072206	77.52009	.5590240	.2296580
#2	.4485375	.2136686	.2121582	74.48377	.5710634	.2336593
#3	.4466092	.2026283	.2102599	73.86859	.5522176	.2320971

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4482235**	**39.33436**	**2.103050**	**22.40480**	**.5792639**	**.0664579**
Stddev	.0012742	1.15662	.038478	1.18062	.0043340	.0012626
%RSD	.2842858	2.940484	1.829628	5.269488	.7481916	1.899851
#1	.4492790	40.52180	2.146062	23.75745	.5745991	.0679066
#2	.4468080	38.21124	2.091189	21.87547	.5831659	.0658754
#3	.4485835	39.27004	2.071899	21.58147	.5800266	.0655917

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**159.9409**	**.3501681**	**.5883137**	**20.38603**	**.5116213**	**.4207080**
Stddev	3.7426	.0061009	.0042702	.33367	.0083850	.0021177
%RSD	2.339966	1.742287	.7258322	1.636780	1.638913	.5033640
#1	161.5718	.3559036	.5870250	20.45411	.5157604	.4225514
#2	155.6596	.3437578	.5848362	20.02357	.5171320	.4183949
#3	162.5913	.3508430	.5930797	20.68042	.5019716	.4211776

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2169-03A Acquired: 6/4/2025 20:42:03 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**1.090335**	**.8856649**	F **63.58489**	**8.461534**	F **24.70741**	**.2462259**
Stddev	.012364	.0036942	1.33992	.072639	.12046	.0056750
%RSD	1.133924	.4171147	2.107293	.8584604	.4875460	2.304784
#1	1.078260	.8894446	64.74023	8.383694	24.57460	.2397598
#2	1.102969	.8854877	62.11600	8.527511	24.80963	.2485385
#3	1.089774	.8820625	63.89843	8.473397	24.73799	.2503794

Elem	Sr4077
Units	ppm
Avg	**.4742338**
Stddev	.0060918
%RSD	1.284560
#1	.4672209
#2	.4782150
#3	.4772654

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3303.565**	**66613.88**	**9671.853**	**2352.832**	**3995.290**
Stddev	75.568	1062.96	67.742	86.179	64.368
%RSD	2.287469	1.595704	.7003998	3.662773	1.611094
#1	3238.053	66234.18	9598.011	2327.090	3944.853
#2	3386.237	67814.54	9686.426	2448.949	4067.788
#3	3286.404	65792.90	9731.123	2282.457	3973.229

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168276BL Acquired: 6/4/2025 20:46:07 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.000985**	**.0000782**	**-.000333**	**.0004063**	**.0003640**	**.0027873**	**-.002500**
Stddev	.001293	.0014969	.001102	.0011483	.0015990	.0044849	.000675
%RSD	131.3217	1913.913	331.5230	282.6358	439.2108	160.9038	26.99519
#1	.000353	-.000792	.000927	.0014689	-.000789	-.001968	-.003199
#2	-.002228	-.000780	-.000805	.0005619	-.000309	.006942	-.001852
#3	-.001079	.001807	-.001120	-.000812	.002189	.003388	-.002448

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000077**	**.0000332**	**.0060701**	**.0005556**	**-.000029**	**.0000989**	**.0007811**
Stddev	.000045	.0000539	.0028397	.0006477	.000098	.0002734	.0018569
%RSD	58.47227	162.4315	46.78200	116.5796	332.0208	276.5570	237.7342
#1	-.000086	.0000387	.0082118	.0012989	.000028	.0002568	.0022626
#2	-.000117	.0000841	.0028489	.0002555	.000026	-.000217	.0013826
#3	-.000028	-.000023	.0071496	.0001123	-.000142	.000257	-.001302

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000100**	**.0132523**	**.0002384**	**-.000168**	**-.004480**	**-.000283**	**.0000629**
Stddev	.000070	.0101648	.0002399	.000272	.005917	.000624	.0002328
%RSD	69.96146	76.70208	100.6409	162.0121	132.0805	219.9733	370.0063
#1	-.000074	.0224200	.0000773	-.000119	-.001634	-.000848	.0003227
#2	-.000179	.0150158	.0001237	-.000462	-.000523	.000386	-.000007
#3	-.000047	.0023212	.0005141	.000076	-.011283	-.000389	-.000127

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0048261**	**.0011815**	**.0000716**	**.0024852**	**-.000719**	**.0003304**	**-.004354**
Stddev	.0156905	.0004206	.0002141	.0009873	.000395	.0042431	.001724
%RSD	325.1186	35.60265	298.8332	39.72759	54.89360	1284.241	39.58850
#1	.0093609	.0011959	.0003132	.0034433	-.000914	-.002299	-.005092
#2	.0177497	.0015947	-.000095	.0025413	-.000265	-.001935	-.005585
#3	-.012632	.0007538	-.000004	.0014711	-.000979	.005225	-.002384

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168276BL Acquired: 6/4/2025 20:46:07 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0025333	-.000238	.0000043
Stddev	.0010379	.000799	.0000074
%RSD	40.96998	336.1313	172.5903
#1	.0033621	-.001063	.0000116
#2	.0028686	-.000183	-.000003
#3	.0013692	.000533	.000004

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3123.362	64848.45	10213.65	2230.449	4373.688
Stddev	7.412	262.78	7.51	17.659	6.314
%RSD	.2372998	.4052200	.0735474	.7917082	.1443657
#1	3128.546	64707.33	10222.21	2233.021	4377.416
#2	3126.666	64686.39	10208.15	2211.646	4377.251
#3	3114.872	65151.64	10210.59	2246.681	4366.398

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168276BS Acquired: 6/4/2025 20:50:28 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.7368626	1.854681	.9175931	1.862159	.7737516	1.808750
Stddev	.0053266	.014368	.0014926	.011649	.0025072	.032787
%RSD	.7228698	.7747043	.1626605	.6255703	.3240330	1.812673
#1	.7351204	1.847043	.9159143	1.850334	.7710162	1.845834
#2	.7428421	1.845744	.9187702	1.873624	.7759406	1.783611
#3	.7326253	1.871255	.9180947	1.862520	.7742979	1.796804

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1790497	.1894576	.1866510	.9318263	.3794587	.1902262
Stddev	.0034147	.0026748	.0009010	.0164484	.0006143	.0009668
%RSD	1.907139	1.411817	.4827270	1.765183	.1618766	.5082322
#1	.1823047	.1925455	.1856107	.9507401	.3787578	.1891216
#2	.1793494	.1879717	.1871604	.9238702	.3799034	.1906389
#3	.1754950	.1878557	.1871820	.9208686	.3797149	.1909183

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2953125	2.821846	.1889637	1.850858	.4743358	.0695418
Stddev	.0011029	.010550	.0030177	.028849	.0014608	.0000719
%RSD	.3734757	.3738567	1.596947	1.558681	.3079559	.1033319
#1	.2940506	2.818971	.1923871	1.884162	.4727478	.0695526
#2	.2957946	2.813032	.1878145	1.834852	.4756222	.0694652
#3	.2960923	2.833535	.1866895	1.833561	.4746374	.0696076

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.629397	.2745497	.1907193	8.935125	.2815044	.3913489
Stddev	.020290	.0033806	.0010612	.040631	.0044453	.0011225
%RSD	.7716750	1.231332	.5563956	.4547382	1.579128	.2868172
#1	2.632162	.2784369	.1918183	8.915637	.2866034	.3900529
#2	2.648162	.2729159	.1906389	8.981829	.2784435	.3919864
#3	2.607865	.2722963	.1897006	8.907908	.2794664	.3920075

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: PB168276BS Acquired: 6/4/2025 20:50:28 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.6576315**	**.1867821**	**.7870375**	**5.515214**	F **-.005720**	**.1863127**
Stddev	.0035589	.0036527	.0063642	.016635	.000599	.0033586
%RSD	.5411654	1.955577	.8086328	.3016259	10.46657	1.802689
#1	.6535881	.1909555	.7837745	5.496071	-.005155	.1900539
#2	.6590179	.1841669	.7943715	5.526165	-.005657	.1853272
#3	.6602885	.1852240	.7829666	5.523406	-.006348	.1835571

Elem	Sr4077
Units	ppm
Avg	**.1810760**
Stddev	.0032033
%RSD	1.769037
#1	.1847358
#2	.1797106
#3	.1787817

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3113.563**	**64716.23**	**9747.334**	**2215.506**	**4347.715**
Stddev	8.650	96.56	129.656	9.894	11.994
%RSD	.2778110	.1492035	1.330164	.4465762	.2758771
#1	3121.567	64826.57	9598.205	2204.522	4359.891
#2	3104.387	64647.22	9810.445	2218.280	4335.911
#3	3114.736	64674.89	9833.350	2223.718	4347.345

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2175-09DLX5 Acquired: 6/4/2025 20:54:28 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0595866	-.014024	.0117872	.0329274	.0195855	.0313403	-.007508
Stddev	.0020224	.001545	.0005693	.0027042	.0018690	.0018384	.000715
%RSD	3.394044	11.01733	4.830078	8.212456	9.542781	5.865855	9.523345
#1	.0593002	-.014989	.0117127	.0300955	.0215721	.0321678	-.008332
#2	.0577228	-.012242	.0112588	.0332044	.0178620	.0326196	-.007049
#3	.0617370	-.014841	.0123901	.0354824	.0193223	.0292337	-.007143

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000086	.0001007	.4859668	.0109725	.0026850	1.327921	2.078913
Stddev	.000076	.0000814	.0080240	.0002595	.0000327	.005963	.008461
%RSD	88.46105	80.89122	1.651149	2.365101	1.218261	.4490801	.4069870
#1	-.000173	.0001170	.4885733	.0111958	.0026474	1.334406	2.073062
#2	-.000052	.0000123	.4923636	.0110340	.0027017	1.322674	2.088614
#3	-.000032	.0001727	.4769636	.0106878	.0027061	1.326682	2.075063

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1018173	.0113752	.0227520	.0001631	.6307516	.0032560	1.098485
Stddev	.0016544	.0084485	.0000909	.0004094	.0035545	.0019348	.000868
%RSD	1.624916	74.27079	.3994014	250.9750	.5635294	59.42220	.0789962
#1	.1015420	.0021001	.0227657	.0002723	.6307723	.0046509	1.097965
#2	.1035921	.0186312	.0228353	-.000290	.6271869	.0010472	1.098003
#3	.1003177	.0133943	.0226551	.000507	.6342958	.0040700	1.099487

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3770530	.0281501	.0007593	.0122405	.0032775	.1919430	.6004297
Stddev	.0186873	.0006102	.0003074	.0006138	.0006020	.0025307	.0046437
%RSD	4.956150	2.167780	40.49032	5.014925	18.36747	1.318477	.7733973
#1	.3984991	.0286800	.0004754	.0119141	.0034850	.1899895	.6047430
#2	.3642648	.0282873	.0007166	.0118589	.0025992	.1948019	.5955143
#3	.3683951	.0274829	.0010858	.0129486	.0037484	.1910376	.6010316

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2175-09DLX5 Acquired: 6/4/2025 20:54:28 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**10.62464**	**-.000423**	**.0005123**
Stddev	.07769	.000612	.0000354
%RSD	.7312552	144.7863	6.915682
#1	10.71363	-.001015	.0004788
#2	10.57030	.000208	.0005494
#3	10.59000	-.000461	.0005087

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3040.546**	**66099.71**	**9617.921**	**2172.497**	**4730.432**
Stddev	11.811	136.78	82.176	5.251	16.136
%RSD	.3884360	.2069240	.8544100	.2417166	.3411206
#1	3043.167	66003.13	9649.935	2167.601	4727.017
#2	3050.826	66039.77	9524.556	2178.043	4748.003
#3	3027.645	66256.22	9679.273	2171.847	4716.277

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCV06 Acquired: 6/4/2025 20:58:43 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**4.622372**	**4.691862**	**4.652256**	**4.625610**	**4.661586**	**9.213689**	**9.412952**
Stddev	.005718	.017969	.010153	.015783	.010682	.018056	.073590
%RSD	.1237115	.3829874	.2182343	.3412184	.2291480	.1959667	.7817997
#1	4.620818	4.673623	4.653222	4.617112	4.657900	9.227275	9.472162
#2	4.617591	4.692413	4.641655	4.615897	4.653236	9.220592	9.330563
#3	4.628707	4.709549	4.661891	4.643822	4.673623	9.193200	9.436131

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2314000**	**2.323502**	**23.25344**	**.9303992**	**2.328166**	**1.174180**	**4.687099**
Stddev	.0004262	.006271	.06637	.0008135	.005329	.002540	.005525
%RSD	.1842043	.2698773	.2854102	.0874336	.2288902	.2163264	.1178690
#1	.2313540	2.330445	23.27883	.9311401	2.333978	1.176052	4.691157
#2	.2318474	2.318252	23.30337	.9305287	2.323510	1.171289	4.680807
#3	.2309986	2.321809	23.17813	.9295287	2.327009	1.175200	4.689334

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.345211**	**22.96193**	**2.331282**	**1.164974**	**23.54934**	**2.312990**	**2.289748**
Stddev	.002868	.04667	.006050	.001941	.04516	.004350	.004351
%RSD	.1223069	.2032383	.2595113	.1665800	.1917812	.1880844	.1900361
#1	2.343689	22.93250	2.338066	1.166571	23.50354	2.315323	2.294733
#2	2.348520	23.01574	2.326447	1.162814	23.59384	2.315677	2.286712
#3	2.343425	22.93756	2.329331	1.165538	23.55064	2.307971	2.287798

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.04816**	**4.610763**	**4.689490**	**4.615189**	**4.663084**	**4.631688**	**4.685363**
Stddev	.00813	.002755	.013327	.006102	.010647	.005904	.001047
%RSD	.0352736	.0597489	.2841953	.1322128	.2283242	.1274617	.0223481
#1	23.05591	4.609277	4.682099	4.618503	4.657943	4.626271	4.684532
#2	23.04889	4.613942	4.681496	4.608147	4.675326	4.630811	4.685018
#3	23.03969	4.609071	4.704875	4.618917	4.655982	4.637980	4.686539

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCV06 Acquired: 6/4/2025 20:58:43 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**4.509061**	**4.648801**	**4.706135**
Stddev	.011639	.014894	.021936
%RSD	.2581203	.3203885	.4661250
#1	4.496180	4.641538	4.696313
#2	4.512183	4.665934	4.731266
#3	4.518821	4.638932	4.690826

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3056.353**	**63960.14**	**9584.519**	**2159.267**	**4105.250**
Stddev	1.859	47.06	19.395	4.943	6.008
%RSD	.0608083	.0735836	.2023613	.2289098	.1463467
#1	3057.250	63905.88	9575.299	2154.737	4098.802
#2	3057.592	63989.93	9571.453	2158.526	4106.256
#3	3054.216	63984.60	9606.805	2164.539	4110.691

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB06 Acquired: 6/4/2025 21:02:55 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001073**	**.0003715**	**-.000647**	**.0019466**	**.0022281**	**.0068825**	**-.002418**
Stddev	.001537	.0007060	.000180	.0006293	.0014692	.0058419	.000576
%RSD	143.2825	190.0328	27.83380	32.32957	65.93878	84.88110	23.83966
#1	-.000680	.0009355	-.000798	.0024222	.0038511	.0136276	-.001969
#2	-.002768	.0005993	-.000448	.0012330	.0009891	.0035799	-.002217
#3	.000230	-.000420	-.000696	.0021844	.0018440	.0034398	-.003067

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000082**	**.0000247**	**.0095301**	**.0005642**	**-.000102**	**.0000894**	**.0043275**
Stddev	.000041	.0000606	.0031956	.0002405	.000045	.0004059	.0022075
%RSD	49.70079	244.9086	33.53207	42.63574	44.21310	453.9729	51.00982
#1	-.000100	-.000003	.0119685	.0005616	-.000088	-.000167	.0038116
#2	-.000111	-.000017	.0059124	.0003249	-.000153	-.000122	.0067472
#3	-.000035	.000094	.0107093	.0008060	-.000066	.000557	.0024237

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000101**	**.0075297**	**.0003563**	**.0002986**	**-.080892**	**.0005895**	**.0009006**
Stddev	.0002114	.0087139	.0001954	.0002135	.009366	.0009700	.0003399
%RSD	2098.327	115.7269	54.83462	71.48884	11.57829	164.5284	37.74257
#1	-.000093	.0103379	.0001366	.0005426	-.091579	.0004784	.0011876
#2	-.000130	-.002242	.0005106	.0001458	-.074115	-.000320	.0005253
#3	.000253	.014493	.0004217	.0002076	-.076981	.001610	.0009890

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.007925**	**.0063965**	**.0006714**	**.0003988**	**-.000663**	**-.001305**	**-.000393**
Stddev	.034620	.0006428	.0002695	.0003944	.000425	.007503	.001139
%RSD	436.8620	10.04880	40.14424	98.89360	64.18411	574.8563	289.5700
#1	-.016452	.0061751	.0009572	.0008525	-.000172	-.003403	-.000313
#2	.030162	.0071207	.0006352	.0002071	-.000910	-.007537	-.001571
#3	-.037484	.0058937	.0004218	.0001369	-.000906	.007024	.000704

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB06 Acquired: 6/4/2025 21:02:55 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0016219	-.002016	.0000935
Stddev	.0011620	.000521	.0000140
%RSD	71.64559	25.85867	15.00624
#1	.0026621	-.001518	.0000896
#2	.0003678	-.001972	.0000818
#3	.0018356	-.002558	.0001091

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3135.643	67398.24	10421.07	2254.381	4410.372
Stddev	13.257	318.23	20.97	16.515	20.376
%RSD	.4227803	.4721644	.2012419	.7325935	.4620040
#1	3137.623	67310.26	10408.24	2246.057	4413.847
#2	3147.799	67751.21	10445.27	2273.402	4428.788
#3	3121.508	67133.26	10409.70	2243.683	4388.482

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2198-05DLX5 Acquired: 6/4/2025 21:07:15 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0030705	-.002532	.0315853	-.001487	.0005347	9.224225	.0272269
Stddev	.0017110	.000753	.0008398	.002366	.0009591	.019024	.0004276
%RSD	55.72383	29.72716	2.658911	159.1323	179.3747	.2062351	1.570546
#1	.0011818	-.001668	.0318938	-.000496	.0012045	9.214353	.0268555
#2	.0035128	-.003048	.0306348	-.004187	.0009635	9.246155	.0271309
#3	.0045169	-.002880	.0322272	.000222	-.000564	9.212167	.0276944

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004898	.0000928	13.28923	.0238011	.0026970	.0202159	10.71694
Stddev	.0000296	.0000661	.01705	.0003293	.0001625	.0004375	.08191
%RSD	6.038848	71.25708	.1283353	1.383539	6.025280	2.164303	.7642961
#1	.0004604	.0000536	13.30729	.0236577	.0025272	.0199450	10.72064
#2	.0004893	.0001691	13.28701	.0235678	.0028511	.0199820	10.63324
#3	.0005196	.0000556	13.27339	.0241778	.0027126	.0207207	10.79694

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1417139	14.53828	.0095684	.0003798	146.9323	.0307939	.0596623
Stddev	.0007073	.06244	.0002214	.0001609	1.2574	.0007486	.0001830
%RSD	.4990938	.4294980	2.313562	42.36209	.8557422	2.430999	.3067126
#1	.1415802	14.46855	.0097769	.0005053	146.6758	.0302335	.0595592
#2	.1424784	14.58904	.0095923	.0004358	145.8231	.0316441	.0595542
#3	.1410830	14.55724	.0093361	.0001984	148.2982	.0305042	.0598736

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.16010	.4490333	.0048520	.0007047	.2370660	10.37948	.2765802
Stddev	.12624	.0011374	.0004047	.0003400	.0046879	.11608	.0039209
%RSD	1.038139	.2532918	8.339819	48.25134	1.977489	1.118374	1.417639
#1	12.12687	.4482106	.0046752	.0006177	.2413906	10.38955	.2720636
#2	12.05380	.4485580	.0045658	.0010798	.2377231	10.25870	.2785675
#3	12.29963	.4503312	.0053149	.0004167	.2320841	10.49021	.2791096

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2198-05DLX5 Acquired: 6/4/2025 21:07:15 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**4.005522**	**.0121845**	**.1319770**
Stddev	.004687	.0004097	.0005319
%RSD	.1170155	3.362710	.4030352
#1	4.000540	.0117179	.1320811
#2	4.009845	.0124856	.1324493
#3	4.006180	.0123499	.1314008

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3025.869**	**62660.82**	**9535.178**	**2137.352**	**3990.898**
Stddev	11.873	562.95	11.407	23.511	9.702
%RSD	.3923807	.8984063	.1196288	1.100013	.2430945
#1	3031.485	62856.73	9533.950	2144.840	3996.579
#2	3033.891	63099.65	9524.435	2156.207	3996.418
#3	3012.229	62026.10	9547.150	2111.009	3979.696

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2198-05DUPDLX5 Acquired: 6/4/2025 21:11:27 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.0016219**	**-.000046**	**.0346504**	**-.000385**	**.0002710**	**10.02507**	**.0318841**
Stddev	.0012191	.001766	.0009756	.002761	.0004792	.26872	.0015128
%RSD	75.16313	3832.640	2.815636	717.8633	176.8246	2.680487	4.744813
#1	.0011079	-.002073	.0349045	.002725	-.000176	9.88801	.0310616
#2	.0007440	.000775	.0354738	-.002550	.000211	10.33469	.0336301
#3	.0030138	.001159	.0335729	-.001328	.000777	9.85252	.0309607

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004827**	**-.000157**	**14.66845**	**.0250336**	**.0028318**	**.0211707**	**12.97191**
Stddev	.0000709	.000082	.36599	.0004978	.0001395	.0003455	.10328
%RSD	14.68029	52.33429	2.495111	1.988609	4.926924	1.632080	.7962185
#1	.0004215	-.000062	14.48315	.0255780	.0029533	.0214651	13.08982
#2	.0004662	-.000200	15.09004	.0246016	.0026794	.0207903	12.92846
#3	.0005603	-.000209	14.43216	.0249212	.0028627	.0212568	12.89745

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1575230**	**15.75496**	**.0099717**	**.0006634**	**174.5577**	**.0341998**	**.0563502**
Stddev	.0041064	.36796	.0002799	.0002023	1.6588	.0005288	.0002198
%RSD	2.606883	2.335551	2.806679	30.49040	.9502754	1.546089	.3901135
#1	.1563090	15.53965	.0102530	.0008961	176.4674	.0335933	.0561440
#2	.1620996	16.17983	.0099688	.0005650	173.4760	.0345642	.0565815
#3	.1541605	15.54538	.0096933	.0005292	173.7296	.0344418	.0563249

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.31051**	**.4457228**	**.0051630**	**.0003587**	**.2797430**	**12.35999**	**.2923021**
Stddev	.14571	.0100038	.0002251	.0003910	.0044189	.08794	.0053094
%RSD	1.018223	2.244396	4.359218	109.0201	1.579644	.7115255	1.816396
#1	14.47829	.4390782	.0054147	-.000073	.2756033	12.41946	.2977787
#2	14.23758	.4572281	.0050934	.000688	.2843963	12.40155	.2919502
#3	14.21567	.4408619	.0049811	.000461	.2792296	12.25897	.2871774

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2198-05DUPDLX5 Acquired: 6/4/2025 21:11:27 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**4.180905**	**.0135396**	**.1473989**
Stddev	.044836	.0009968	.0041907
%RSD	1.072388	7.362330	2.843120
#1	4.232637	.0136339	.1454825
#2	4.156781	.0144860	.1522052
#3	4.153295	.0124990	.1445091

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3062.370**	**63513.06**	**10455.81**	**2159.943**	**4036.775**
Stddev	8.990	256.11	255.16	6.207	13.233
%RSD	.2935579	.4032364	2.440356	.2873536	.3278090
#1	3065.218	63248.76	10635.90	2154.943	4039.478
#2	3069.590	63760.11	10163.82	2157.998	4048.448
#3	3052.301	63530.32	10567.70	2166.890	4022.399

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2198-05LDLX25 Acquired: 6/4/2025 21:15:48 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**-.000735**	**-.000684**	**.0057530**	**-.001782**	**.0003523**	**1.862521**	**.0038687**
Stddev	.001291	.001703	.0018299	.000984	.0003385	.007522	.0011843
%RSD	175.6167	248.9586	31.80748	55.23117	96.09351	.4038580	30.61363
#1	-.001980	-.001681	.0064925	-.000704	.0004030	1.853855	.0025049
#2	-.000824	.001282	.0036691	-.002009	.0006626	1.867362	.0044621
#3	.000598	-.001653	.0070974	-.002634	-.000009	1.866346	.0046390

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000303**	**-.000070**	**2.790183**	**.0048846**	**.0005022**	**.0044857**	**2.380585**
Stddev	.0000459	.000082	.009612	.0000678	.0001872	.0001333	.020027
%RSD	151.6520	117.3851	.3444946	1.387816	37.27628	2.971684	.8412688
#1	.0000798	-.000004	2.793775	.0048148	.0003080	.0044901	2.357616
#2	.0000220	-.000044	2.779293	.0048889	.0006815	.0046167	2.389739
#3	-.000011	-.000162	2.797482	.0049502	.0005172	.0043502	2.394399

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0300709**	**2.978799**	**.0022280**	**-.000044**	**31.54480**	**.0053829**	**.0124175**
Stddev	.0002014	.006285	.0001735	.000381	.06954	.0015146	.0001515
%RSD	.6696686	.2109894	7.788509	870.8905	.2204369	28.13716	1.220083
#1	.0299224	2.977871	.0023839	.000046	31.46457	.0044684	.0122487
#2	.0299902	2.973029	.0020410	-.000462	31.58756	.0071312	.0124618
#3	.0303001	2.985496	.0022591	.000285	31.58227	.0045490	.0125419

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.510189**	**.0858669**	**.0009486**	**.0000567**	**.0499204**	**2.192342**	**.0530093**
Stddev	.024383	.0004601	.0001983	.0001221	.0012788	.033007	.0036547
%RSD	.9713701	.5357778	20.90191	215.3584	2.561739	1.505552	6.894423
#1	2.482537	.0860482	.0011690	.0000008	.0484467	2.155679	.0571951
#2	2.519426	.0853438	.0007848	.0001968	.0505755	2.201658	.0504513
#3	2.528604	.0862086	.0008919	-.000027	.0507388	2.219691	.0513817

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2198-05LDLX25 Acquired: 6/4/2025 21:15:48 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.7830570	.0016193	.0283295
Stddev	.0029756	.0005267	.0000962
%RSD	.3800037	32.52434	.3396410
#1	.7800508	.0018688	.0284294
#2	.7860011	.0019748	.0283218
#3	.7831192	.0010142	.0282374

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3109.783	66350.85	10616.43	2262.899	4276.871
Stddev	8.981	216.84	18.69	7.744	12.289
%RSD	.2887982	.3268110	.1760895	.3422199	.2873468
#1	3119.329	66599.13	10612.48	2271.645	4287.805
#2	3101.501	66254.72	10600.03	2260.137	4263.570
#3	3108.519	66198.68	10636.79	2256.914	4279.237

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2198-05MSDLX5 Acquired: 6/4/2025 21:20:07 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.1419343**	**.3767960**	**.2220240**	**.3469805**	**.1123353**	**11.83134**	**.0695492**
Stddev	.0011040	.0011409	.0009564	.0033457	.0006012	.29820	.0021088
%RSD	.7777965	.3027921	.4307459	.9642395	.5352000	2.520414	3.032075
#1	.1431617	.3780724	.2220348	.3464442	.1118710	12.17397	.0719584
#2	.1416187	.3764405	.2229749	.3505620	.1121203	11.63042	.0686507
#3	.1410225	.3758752	.2210623	.3439354	.1130144	11.68964	.0680384

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0394077**	**.0390492**	**14.95366**	**.1016399**	**.0423332**	**.0796922**	**12.73357**
Stddev	.0006463	.0000476	.36160	.0004368	.0001549	.0006507	.11293
%RSD	1.639956	.1219513	2.418107	.4297562	.3659055	.8165218	.8868322
#1	.0401305	.0390867	15.37030	.1021296	.0423560	.0796745	12.85691
#2	.0388855	.0390652	14.72158	.1014994	.0421681	.0790505	12.70852
#3	.0392072	.0389956	14.76912	.1012905	.0424754	.0803515	12.63527

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1961344**	**16.55330**	**.1086709**	**.0143471**	**157.9288**	**.0908895**	**.0956286**
Stddev	.0048252	.34078	.0002607	.0001772	.9352	.0010087	.0007248
%RSD	2.460135	2.058665	.2398642	1.235029	.5921697	1.109848	.7579163
#1	.2016982	16.93558	.1084467	.0144691	159.0085	.0920534	.0964537
#2	.1930974	16.28139	.1089569	.0141438	157.3735	.0903474	.0950947
#3	.1936076	16.44292	.1086089	.0144283	157.4042	.0902677	.0953374

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.98836**	**.5381581**	**.0763476**	**.0924813**	**.3155195**	**12.50928**	**1.514971**
Stddev	.06612	.0102476	.0001519	.0004827	.0119955	.10379	.007106
%RSD	.4411698	1.904192	.1989058	.5219267	3.801811	.8296961	.4690392
#1	15.06421	.5498228	.0761747	.0923262	.3289536	12.59701	1.506768
#2	14.94285	.5306044	.0764085	.0920953	.3058809	12.53612	1.518895
#3	14.95802	.5340471	.0764595	.0930225	.3117241	12.39471	1.519249

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2198-05MSDLX5 Acquired: 6/4/2025 21:20:07 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**4.311592**	**.0567225**	**.1850062**
Stddev	.015347	.0011887	.0039508
%RSD	.3559421	2.095715	2.135493
#1	4.323812	.0580797	.1895426
#2	4.294367	.0558659	.1823202
#3	4.316595	.0562219	.1831559

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3012.514**	**64925.66**	**9534.777**	**2193.180**	**3954.868**
Stddev	17.892	98.75	181.147	4.699	19.413
%RSD	.5939065	.1521022	1.899857	.2142607	.4908602
#1	3030.355	64836.36	9331.762	2188.913	3974.513
#2	3012.616	64908.91	9679.905	2192.411	3954.396
#3	2994.572	65031.72	9592.665	2198.216	3935.696

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2198-05MSDDLX5 Acquired: 6/4/2025 21:24:24 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.1438860**	**.3783436**	**.2273454**	**.3491481**	**.1138631**	**12.06472**
Stddev	.0042251	.0039133	.0010835	.0018963	.0019052	.08653
%RSD	2.936389	1.034334	.4765754	.5431205	1.673206	.7171843
#1	.1421260	.3825075	.2266148	.3511813	.1156289	12.11544
#2	.1408254	.3747417	.2268313	.3488353	.1118440	12.11391
#3	.1487065	.3777815	.2285902	.3474276	.1141163	11.96481

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0702245**	**.0397820**	**.0397687**	**15.06158**	**.1059205**	**.0431880**
Stddev	.0002461	.0001126	.0000634	.09220	.0013987	.0001094
%RSD	.3504259	.2829909	.1593540	.6121349	1.320496	.2533732
#1	.0701973	.0398940	.0397026	15.10513	.1074212	.0432026
#2	.0704831	.0397831	.0398290	15.12394	.1046533	.0430719
#3	.0699932	.0396688	.0397745	14.95568	.1056870	.0432893

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0811427**	**13.59205**	**.1970894**	**16.70877**	**.1107915**	**.0148354**
Stddev	.0006253	.07764	.0011905	.11458	.0004159	.0000663
%RSD	.7706415	.5712087	.6040502	.6857619	.3753999	.4467562
#1	.0817285	13.67069	.1963026	16.72632	.1107023	.0148917
#2	.0804842	13.59000	.1984591	16.81357	.1104274	.0147624
#3	.0812154	13.51546	.1965066	16.58643	.1112448	.0148521

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**165.5520**	**.0920660**	**.0981599**	**15.93811**	**.5457488**	**.0771887**
Stddev	1.1674	.0014608	.0003494	.06053	.0018291	.0003701
%RSD	.7051444	1.586654	.3559860	.3798114	.3351603	.4794293
#1	166.4912	.0936065	.0985182	15.98607	.5455677	.0771610
#2	164.2450	.0918906	.0981413	15.95816	.5476618	.0768332
#3	165.9199	.0907008	.0978200	15.87009	.5440170	.0775718

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2198-05MSDDLX5 Acquired: 6/4/2025 21:24:24 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0954374	.3281079	F 13.57990	1.550740	4.422635	.0577866
Stddev	.0012017	.0026935	.16981	.005255	.023818	.0013792
%RSD	1.259099	.8209274	1.250460	.3388900	.5385463	2.386679
#1	.0967976	.3303439	13.73006	1.555970	4.442714	.0589787
#2	.0945201	.3288621	13.61403	1.550789	4.396319	.0581051
#3	.0949945	.3251176	13.39562	1.545460	4.428871	.0562760

Elem	Sr4077
Units	ppm
Avg	.1859012
Stddev	.0010472
%RSD	.5633116
#1	.1859014
#2	.1869483
#3	.1848538

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3016.383	62824.38	9691.874	2162.387	3949.470
Stddev	17.328	190.29	14.789	10.336	21.300
%RSD	.5744744	.3028903	.1525914	.4780059	.5393236
#1	3031.086	62616.49	9687.076	2150.952	3966.230
#2	3020.783	62989.93	9680.080	2171.066	3956.678
#3	2997.278	62866.74	9708.466	2165.144	3925.500

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2198-05ADLX5 Acquired: 6/4/2025 21:28:41 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.1467243**	**.3560118**	**.2145766**	**.3582922**	**.1482940**	**10.16047**	**.0658049**
Stddev	.0032711	.0026057	.0012398	.0059616	.0037155	.35732	.0028604
%RSD	2.229417	.7319218	.5777662	1.663898	2.505510	3.516758	4.346820
#1	.1445267	.3533381	.2132257	.3529692	.1460905	10.11495	.0665502
#2	.1451626	.3561534	.2148418	.3571734	.1462077	10.53837	.0682189
#3	.1504835	.3585438	.2156623	.3647339	.1525838	9.82810	.0626456

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0374799**	**.0375778**	**13.18986**	**.0981358**	**.0404605**	**.0753055**	**11.96180**
Stddev	.0007745	.0003702	.36598	.0002225	.0004185	.0012281	.05398
%RSD	2.066539	.9851799	2.774734	.2267125	1.034225	1.630814	.4512468
#1	.0375099	.0372713	13.16218	.0982015	.0404194	.0747337	11.95781
#2	.0382389	.0374729	13.56890	.0983181	.0400641	.0744676	12.01766
#3	.0366907	.0379891	12.83850	.0978879	.0408980	.0767152	11.90993

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1760800**	**14.57686**	**.1039194**	**.0140850**	**147.7956**	**.0851895**	**.0900247**
Stddev	.0037625	.41361	.0009694	.0003710	.7410	.0025044	.0002288
%RSD	2.136810	2.837421	.9328433	2.633851	.5013502	2.939830	.2541822
#1	.1767180	14.55163	.1036797	.0137614	147.8230	.0859715	.0897607
#2	.1794828	15.00250	.1030924	.0144899	148.5226	.0872097	.0901661
#3	.1720394	14.17644	.1049862	.0140037	147.0414	.0823874	.0901473

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.20374**	**.4847970**	**.0798354**	**.1314825**	**.3527134**	**12.57400**	**1.442789**
Stddev	.07630	.0097920	.0006428	.0007840	.0124931	.19295	.008210
%RSD	.5372150	2.019811	.8051427	.5962841	3.542003	1.534477	.5690118
#1	14.20649	.4852587	.0795686	.1322762	.3422242	12.47941	1.436896
#2	14.27863	.4943499	.0793690	.1307085	.3665348	12.79598	1.439306
#3	14.12610	.4747823	.0805687	.1314627	.3493813	12.44660	1.452166

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2198-05ADLX5 Acquired: 6/4/2025 21:28:41 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**3.861013**	**.0510895**	**.1655797**
Stddev	.034792	.0018070	.0056291
%RSD	.9011021	3.537013	3.399627
#1	3.851416	.0525350	.1649484
#2	3.832027	.0516700	.1714978
#3	3.899596	.0490636	.1602929

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3099.270**	**63704.53**	**9876.188**	**2207.305**	**4072.325**
Stddev	28.344	136.21	203.942	5.337	29.602
%RSD	.9145223	.2138151	2.064983	.2417775	.7269145
#1	3105.659	63737.48	9895.900	2213.467	4078.620
#2	3123.874	63821.24	9663.106	2204.266	4098.274
#3	3068.278	63554.87	10069.56	2204.182	4040.082

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2172-01 Acquired: 6/4/2025 21:32:51 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.1510293**	**-.057040**	**.1621706**	**-.014962**	**-.011116**	**185.2653**	**.4811446**
Stddev	.0022786	.004279	.0020215	.000583	.002361	3.1397	.0086646
%RSD	1.508696	7.500890	1.246548	3.896865	21.23723	1.694679	1.800831
#1	.1533104	-.052119	.1601848	-.014636	-.013136	187.2593	.4871053
#2	.1510241	-.059879	.1621009	-.015635	-.008521	186.8904	.4851233
#3	.1487533	-.059123	.1642260	-.014615	-.011691	181.6462	.4712053

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0163403**	**.0247470**	**.3435439**	**.2108114**	**.3044014**	**.5513161**	**562.7999**
Stddev	.0003138	.0015243	.0054417	.0010774	.0008342	.0023951	7.1740
%RSD	1.920149	6.159569	1.583974	.5110575	.2740371	.4344407	1.274696
#1	.0164816	.0237432	.3497673	.2106456	.3038465	.5497603	568.7034
#2	.0165586	.0239968	.3396815	.2098266	.3039970	.5501138	564.8808
#3	.0159807	.0265010	.3411828	.2119621	.3053607	.5540743	554.8155

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.804013**	**7.458784**	**.2134808**	**.0089087**	**.8618413**	**.4156203**	**.2995388**
Stddev	.072699	.112997	.0009846	.0017481	.0029945	.0079647	.0006899
%RSD	1.911123	1.514948	.4611977	19.62185	.3474531	1.916336	.2303081
#1	3.849239	7.531587	.2128290	.0104599	.8628400	.4186044	.2988736
#2	3.842647	7.516154	.2130000	.0092517	.8584751	.4216620	.2994918
#3	3.720153	7.328611	.2146134	.0070146	.8642089	.4065945	.3002510

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.127557**	**1.186460**	**.0011137**	**.0173018**	**2.065095**	**8.729716**	**9.201958**
Stddev	.013123	.016531	.0001456	.0023600	.035249	.069561	.052866
%RSD	.3179313	1.393323	13.07247	13.64016	1.706906	.7968255	.5745060
#1	4.140591	1.202886	.0012269	.0200127	2.087276	8.789100	9.148654
#2	4.114347	1.186669	.0011646	.0157058	2.083558	8.746861	9.202846
#3	4.127733	1.169825	.0009495	.0161868	2.024449	8.653185	9.254374

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2172-01 Acquired: 6/4/2025 21:32:51 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	1.715948	.2798727	-.524779
Stddev	.009569	.0041387	.006523
%RSD	.5576219	1.478768	1.243053
#1	1.706000	.2834525	-.530110
#2	1.716760	.2808245	-.526722
#3	1.725086	.2753410	-.517505

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3951.719	82209.21	13175.49	2812.625	4078.299
Stddev	6.770	136.64	182.07	5.028	9.122
%RSD	.1713227	.1662159	1.381849	.1787624	.2236732
#1	3952.281	82271.06	13102.86	2817.108	4082.046
#2	3958.191	82052.57	13040.94	2807.189	4084.950
#3	3944.686	82303.99	13382.65	2813.578	4067.900

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2172-01DUP Acquired: 6/4/2025 21:37:04 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.1530009	-.054944	.1155471	-.018636	-.010442	186.7447	.5007726
Stddev	.0029128	.001354	.0035276	.006886	.001662	3.2414	.0109084
%RSD	1.903797	2.464790	3.052926	36.94883	15.91595	1.735716	2.178311
#1	.1499791	-.053804	.1164580	-.018469	-.008797	184.1011	.4927139
#2	.1557910	-.054587	.1116534	-.011836	-.012121	190.3611	.5131857
#3	.1532325	-.056441	.1185298	-.025604	-.010407	185.7721	.4964184

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0160322	.0242760	-.467808	.2019271	.3054961	.5465018	563.0118
Stddev	.0001622	.0021913	.010479	.0015321	.0023521	.0064515	8.6916
%RSD	1.011888	9.026709	2.240129	.7587388	.7699130	1.180514	1.543761
#1	.0158613	.0244563	-.456642	.2035404	.3056055	.5466696	560.9767
#2	.0161841	.0220001	-.477429	.2017494	.3030913	.5399680	572.5404
#3	.0160512	.0263716	-.469352	.2004917	.3077916	.5528678	555.5184

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.879509	7.105736	.2130641	.0129787	.7849446	.4225574	.2600610
Stddev	.076810	.135989	.0018790	.0023307	.0116097	.0071283	.0018782
%RSD	1.979891	1.913786	.8818772	17.95784	1.479046	1.686953	.7221976
#1	3.822595	6.983715	.2127513	.0110231	.7823692	.4191227	.2616800
#2	3.966876	7.252338	.2113612	.0155577	.7976258	.4307528	.2605010
#3	3.849056	7.081155	.2150798	.0123552	.7748389	.4177967	.2580018

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.986770	1.192331	.0001515	.0158309	2.130924	10.35499	9.234710
Stddev	.056000	.018558	.0002393	.0012662	.040569	.08983	.062238
%RSD	1.404655	1.556462	158.0293	7.998013	1.903844	.8674813	.6739608
#1	4.024370	1.192819	.0003614	.0158131	2.099217	10.38362	9.229571
#2	4.013531	1.210641	.0002021	.0145737	2.176642	10.42700	9.175200
#3	3.922410	1.173534	-.000109	.0171058	2.116914	10.25433	9.299358

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2172-01DUP Acquired: 6/4/2025 21:37:04 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	1.700385	.2800831	-.526203
Stddev	.019408	.0041493	.008147
%RSD	1.141379	1.481448	1.548354
#1	1.691704	.2782181	-.524532
#2	1.686834	.2848377	-.535056
#3	1.722618	.2771936	-.519020

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3918.464	86111.30	13417.61	2905.695	4042.709
Stddev	13.533	545.72	191.47	8.923	23.597
%RSD	.3453631	.6337415	1.427026	.3070893	.5836943
#1	3918.715	85759.97	13590.28	2901.130	4044.623
#2	3931.870	85833.93	13211.69	2899.978	4065.292
#3	3904.807	86740.00	13450.85	2915.976	4018.214

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCV07 Acquired: 6/4/2025 21:41:17 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**4.710531**	**4.701668**	**4.728502**	**4.693137**	**4.726380**	**9.222060**	**9.601886**
Stddev	.007024	.021291	.018807	.015951	.015645	.142320	.081614
%RSD	.1491068	.4528326	.3977416	.3398856	.3310198	1.543260	.8499788
#1	4.718462	4.719567	4.749838	4.711448	4.743808	9.076333	9.561544
#2	4.708034	4.678124	4.714328	4.682253	4.721785	9.229137	9.548299
#3	4.705097	4.707315	4.721340	4.685710	4.713546	9.360709	9.695815

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2297055**	**2.365326**	**23.41117**	**.9448765**	**2.364427**	**1.191259**	**4.925547**
Stddev	.0027349	.008780	.30710	.0024219	.009017	.003779	.030901
%RSD	1.190629	.3711991	1.311778	.2563151	.3813587	.3172181	.6273519
#1	.2265561	2.375006	23.07387	.9422780	2.374303	1.195584	4.932563
#2	.2310779	2.357876	23.48503	.9452807	2.356634	1.189591	4.891742
#3	.2314824	2.363096	23.67460	.9470709	2.362345	1.188601	4.952336

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.366791**	**23.01734**	**2.367071**	**1.189484**	**24.71958**	**2.335286**	**2.337562**
Stddev	.030768	.33382	.009779	.002360	.19514	.032116	.004282
%RSD	1.300000	1.450314	.4131179	.1983652	.7893967	1.375261	.1831901
#1	2.333150	22.66015	2.378156	1.192174	24.76555	2.302684	2.340278
#2	2.373719	23.07044	2.359665	1.187761	24.50556	2.336281	2.332626
#3	2.393505	23.32143	2.363392	1.188518	24.88762	2.366893	2.339784

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.05552**	**4.574670**	**4.734626**	**4.691759**	**4.707424**	**4.824389**	**4.799808**
Stddev	.12085	.050170	.013317	.018922	.071239	.032001	.021534
%RSD	.5023759	1.096692	.2812706	.4033095	1.513325	.6633169	.4486463
#1	24.09591	4.516801	4.748161	4.711574	4.635275	4.796923	4.824038
#2	23.91965	4.605938	4.721538	4.673878	4.709282	4.816715	4.782855
#3	24.15101	4.601270	4.734179	4.689826	4.777716	4.859529	4.792532

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCV07 Acquired: 6/4/2025 21:41:17 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**4.632135**	**4.644650**	**4.763715**
Stddev	.009776	.071068	.104532
%RSD	.2110387	1.530112	2.194330
#1	4.642646	4.576750	4.643112
#2	4.623315	4.638690	4.819774
#3	4.630444	4.718511	4.828259

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3037.606**	**62981.96**	**9796.147**	**2149.384**	**4061.141**
Stddev	11.202	192.12	113.441	8.840	16.652
%RSD	.3687857	.3050412	1.158015	.4112620	.4100427
#1	3027.317	62876.03	9923.108	2142.407	4045.578
#2	3049.540	63203.73	9760.589	2159.324	4078.702
#3	3035.960	62866.12	9704.745	2146.419	4059.141

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB07 Acquired: 6/4/2025 21:45:27 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003399**	**-.000471**	**.0005511**	**-.000239**	**.0015570**	**.0068964**	**-.001174**
Stddev	.000817	.000649	.0017063	.002342	.0010674	.0046263	.000615
%RSD	24.04033	137.9296	309.6392	981.0312	68.55085	67.08256	52.41941
#1	-.002473	.000070	-.000812	.000057	.0003529	.0122373	-.001883
#2	-.003706	-.001191	.000001	.001942	.0023869	.0041329	-.000861
#3	-.004018	-.000292	.002465	-.002715	.0019313	.0043190	-.000778

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000056**	**.0000128**	**.0050077**	**.0007336**	**-.000029**	**.0003518**	**.0079464**
Stddev	.000065	.0000206	.0030955	.0003363	.000118	.0001403	.0045795
%RSD	117.3924	161.3313	61.81545	45.83496	411.7656	39.88607	57.63000
#1	-.000101	.0000294	.0078242	.0004665	.000041	.0004921	.0111299
#2	-.000085	.0000192	.0016935	.0011112	.000038	.0002114	.0026980
#3	.000019	-.000010	.0055053	.0006231	-.000165	.0003521	.0100114

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000121**	**.0168088**	**.0002723**	**.0001145**	**-.083443**	**.0001970**	**.0024802**
Stddev	.000215	.0207324	.0001708	.0003549	.015733	.0014146	.0003172
%RSD	177.4041	123.3427	62.72280	309.8926	18.85438	718.1711	12.78942
#1	.000092	.0098409	.0000866	-.000023	-.075364	-.001435	.0027890
#2	-.000338	.0004579	.0004226	-.000151	-.073392	.000953	.0024962
#3	-.000118	.0401276	.0003077	.000518	-.101574	.001073	.0021553

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0230044**	**.0079002**	**.0006049**	**.0006014**	**.0000195**	**.0016343**	**.0004416**
Stddev	.0186813	.0005622	.0002375	.0005271	.0002787	.0068960	.0010009
%RSD	81.20772	7.116377	39.26312	87.64089	1428.407	421.9648	226.6653
#1	.0443289	.0081055	.0007732	.0011527	-.000008	.0015024	.0014863
#2	.0151601	.0083309	.0007081	.0001025	.000311	-.005195	-.000509
#3	.0095241	.0072642	.0003332	.0005490	-.000244	.008595	.000347

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB07 Acquired: 6/4/2025 21:45:27 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0011005	-.002777	.0001987
Stddev	.0018994	.001046	.0000440
%RSD	172.5886	37.65685	22.14713
#1	.0001978	-.002837	.0001488
#2	-.000179	-.001702	.0002320
#3	.003283	-.003791	.0002154

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3159.618	65247.09	10134.27	2252.611	4422.968
Stddev	33.801	192.19	11.38	12.385	44.923
%RSD	1.069773	.2945500	.1122582	.5497898	1.015685
#1	3197.075	65092.22	10126.99	2238.524	4474.540
#2	3150.390	65186.88	10128.44	2261.787	4402.012
#3	3131.390	65462.17	10147.38	2257.522	4392.351

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2172-01LX5 Acquired: 6/4/2025 21:49:47 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.0361010	-.007711	.0297290	-.002001	-.000443	42.57585	.1100176
Stddev	.0016929	.001849	.0012688	.003787	.001467	.04648	.0008001
%RSD	4.689227	23.98369	4.267950	189.2874	330.7925	.1091656	.7272527
#1	.0369968	-.009761	.0289619	-.004017	-.001304	42.60742	.1108933
#2	.0341484	-.006170	.0290316	-.004353	-.001277	42.52248	.1098347
#3	.0371577	-.007201	.0311936	.002368	.001250	42.59765	.1093248

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037527	-.001022	.2042390	.0492686	.0584028	.1333059	139.5901
Stddev	.0000208	.000157	.0035382	.0001192	.0004130	.0007414	1.0049
%RSD	.5539449	15.33460	1.732386	.2420062	.7071072	.5561935	.7198609
#1	.0037632	-.001203	.2002171	.0492017	.0580894	.1325490	140.7026
#2	.0037662	-.000940	.2056277	.0494063	.0588707	.1340308	138.7484
#3	.0037288	-.000924	.2068721	.0491979	.0582481	.1333378	139.3192

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8985732	1.782660	.0423627	.0043230	.1219156	.0978095	.0694437
Stddev	.0006511	.004454	.0002866	.0003458	.0086049	.0015931	.0009741
%RSD	.0724633	.2498374	.6766185	7.999218	7.058061	1.628773	1.402782
#1	.8993059	1.777888	.0420674	.0046691	.1123069	.0974639	.0697000
#2	.8980607	1.786706	.0423808	.0043223	.1289106	.0964175	.0702641
#3	.8983530	1.783386	.0426399	.0039775	.1245291	.0995470	.0683670

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9082366	.3086760	.0001213	.0022526	.4904714	2.214801	1.810908
Stddev	.0432296	.0023020	.0003092	.0005326	.0035320	.020382	.013987
%RSD	4.759734	.7457553	254.9873	23.64598	.7201245	.9202849	.7723590
#1	.9449999	.3111676	-.000061	.0016933	.4892500	2.231542	1.794799
#2	.9190977	.3066282	.000478	.0027539	.4877123	2.192104	1.817960
#3	.8606120	.3082322	-.000053	.0023106	.4944520	2.220756	1.819965

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2172-01LX5 Acquired: 6/4/2025 21:49:47 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.3330044	.0658633	-.130285
Stddev	.0012150	.0010585	.000976
%RSD	.3648623	1.607110	.7493875
#1	.3337656	.0670836	-.131377
#2	.3316032	.0653143	-.129495
#3	.3336444	.0651922	-.129983

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3282.833	68087.86	11009.91	2364.841	4239.140
Stddev	13.081	262.57	30.06	5.669	11.610
%RSD	.3984671	.3856400	.2730054	.2397022	.2738826
#1	3292.028	67797.32	11024.45	2359.655	4248.800
#2	3288.613	68158.07	10975.34	2363.975	4242.359
#3	3267.857	68308.20	11029.93	2370.892	4226.259

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2172-01MS Acquired: 6/4/2025 21:54:02 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.7326217**	**1.692730**	**9.372991**	**1.536764**	**.6761044**	**88.71619**	**1.038153**
Stddev	.0032959	.010119	.028578	.004075	.0023335	.23883	.004781
%RSD	.4498817	.5977639	.3048948	.2651826	.3451452	.2692033	.4605010
#1	.7292395	1.681128	9.362061	1.535939	.6745405	88.98273	1.043621
#2	.7328017	1.697336	9.351491	1.533164	.6749860	88.52163	1.036075
#3	.7358239	1.699727	9.405421	1.541188	.6787866	88.64421	1.034763

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1574404**	**.2043044**	**109.7874**	**.7216923**	**.3176991**	**1.756566**	**252.4933**
Stddev	.0000581	.0010960	.3572	.0016592	.0001973	.003054	.6790
%RSD	.0368932	.5364671	.3253859	.2299051	.0621043	.1738703	.2689026
#1	.1574529	.2038204	110.1998	.7197906	.3176043	1.755183	253.2772
#2	.1573771	.2035337	109.5912	.7224419	.3175670	1.754448	252.0878
#3	.1574913	.2055591	109.5714	.7228445	.3179259	1.760067	252.1150

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.911471**	**82.24169**	**.8372524**	**.0699572**	**9.062889**	**.6491509**	**3.221970**
Stddev	.016322	.31706	.0031661	.0005048	.011682	.0022415	.010623
%RSD	.4172901	.3855266	.3781505	.7215731	.1289008	.3452980	.3296951
#1	3.930096	82.60750	.8358608	.0704620	9.075041	.6479020	3.221803
#2	3.899662	82.04602	.8350204	.0694524	9.061886	.6517387	3.211432
#3	3.904654	82.07154	.8408759	.0699571	9.051741	.6478121	3.232675

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.09701**	**.7964936**	**.3525790**	**.9778327**	**4.027669**	**2.824814**	**12.38671**
Stddev	.02721	.0029341	.0005091	.0041626	.019755	.016953	.02776
%RSD	.1802249	.3683703	.1444012	.4256946	.4904851	.6001572	.2240916
#1	15.06888	.7998346	.3522857	.9732034	4.049906	2.843928	12.36188
#2	15.12319	.7943364	.3522844	.9790272	4.020954	2.818915	12.38158
#3	15.09897	.7953097	.3531669	.9812674	4.012147	2.811597	12.41668

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2172-01MS Acquired: 6/4/2025 21:54:02 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	3.358397	.3968522	.1431337
Stddev	.007887	.0014570	.0005444
%RSD	.2348576	.3671329	.3803621
#1	3.349494	.3983034	.1437493
#2	3.361187	.3953895	.1429360
#3	3.364510	.3968638	.1427157

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3316.985	71383.29	11527.72	2392.109	3854.936
Stddev	3.703	66.55	28.83	9.464	7.672
%RSD	.1116236	.0932252	.2500707	.3956163	.1990186
#1	3314.605	71310.79	11494.89	2391.098	3858.947
#2	3321.251	71441.60	11548.87	2402.037	3859.770
#3	3315.100	71397.48	11539.41	2383.191	3846.089

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2172-01MSD Acquired: 6/4/2025 21:57:58 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**.7318937**	**1.733675**	**6.907910**	**1.579035**	**.6845704**	**88.64753**	**1.009151**
Stddev	.0085293	.014412	.031708	.005656	.0077091	.13839	.003245
%RSD	1.165370	.8312820	.4590118	.3581844	1.126121	.1561153	.3215509
#1	.7244521	1.720677	6.882269	1.583678	.6860462	88.49385	1.005489
#2	.7300274	1.731175	6.898097	1.572736	.6762301	88.68639	1.011670
#3	.7412016	1.749174	6.943365	1.580693	.6914349	88.76233	1.010293

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1669026**	**.2078055**	**122.3666**	**.6861611**	**.3012101**	**1.656079**	**225.3725**
Stddev	.0008527	.0015946	.2988	.0157761	.0012607	.004479	4.4890
%RSD	.5108989	.7673585	.2441593	2.299190	.4185629	.2704635	1.991828
#1	.1668892	.2060510	122.1323	.7011520	.3001628	1.653549	230.1295
#2	.1660567	.2081990	122.2645	.6697023	.3008581	1.653438	221.2108
#3	.1677619	.2091666	122.7031	.6876289	.3026095	1.661251	224.7771

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.517484**	**89.81183**	**.8186303**	**.0668136**	**8.553095**	**.6138831**	**3.151347**
Stddev	.007521	.22226	.0031355	.0015097	.196895	.0008084	.068865
%RSD	.2138177	.2474723	.3830157	2.259545	2.302028	.1316860	2.185261
#1	3.509592	89.65782	.8166340	.0683706	8.765574	.6138172	3.215565
#2	3.518292	89.71105	.8170127	.0653562	8.376805	.6131097	3.078624
#3	3.524569	90.06663	.8222442	.0667139	8.516907	.6147225	3.159852

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.42298**	**.7457613**	**.3763498**	**.8456052**	**3.759475**	**2.599150**	**12.48805**
Stddev	.27154	.0121843	.0009005	.0038877	.006232	.056631	.07414
%RSD	1.882715	1.633804	.2392718	.4597538	.1657741	2.178844	.5936502
#1	14.70530	.7588869	.3770626	.8418514	3.752553	2.662487	12.43943
#2	14.16368	.7348115	.3753378	.8453499	3.761233	2.553396	12.45135
#3	14.39995	.7435854	.3766490	.8496142	3.764639	2.581567	12.57338

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2172-01MSD Acquired: 6/4/2025 21:57:58 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	**3.474128**	**.3830287**	**.1703701**
Stddev	.014290	.0014128	.0047081
%RSD	.4113157	.3688603	2.763427
#1	3.464625	.3845144	.1652443
#2	3.467199	.3828693	.1745017
#3	3.490561	.3817023	.1713642

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3331.222**	**72088.21**	**11041.93**	**2410.059**	**3849.809**
Stddev	11.083	1384.56	53.05	47.844	19.070
%RSD	.3326962	1.920647	.4804463	1.985176	.4953387
#1	3332.650	70742.38	11091.70	2367.482	3859.819
#2	3341.522	73508.50	11047.96	2461.834	3861.790
#3	3319.495	72013.77	10986.12	2400.860	3827.819

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2172-01A Acquired: 6/4/2025 22:01:56 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	.7275771	1.623937	1.441312	1.350831	.5692356	181.7982	.6548694
Stddev	.0007289	.012063	.003786	.005163	.0040124	3.2990	.0116963
%RSD	.1001855	.7427997	.2626956	.3822315	.7048772	1.814652	1.786051
#1	.7283006	1.637493	1.441683	1.348804	.5658120	185.5953	.6681626
#2	.7275879	1.614388	1.437354	1.346989	.5682440	179.6350	.6461558
#3	.7268429	1.619930	1.444900	1.356700	.5736509	180.1644	.6502899

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1521347	.2030200	7.718209	.5088236	.4790092	.8432799	555.4123
Stddev	.0019170	.0000415	.130137	.0069015	.0013613	.0014223	7.0586
%RSD	1.260070	.0204348	1.686104	1.356363	.2841794	.1686645	1.270879
#1	.1539074	.2029728	7.858360	.5043865	.4789839	.8420374	556.3055
#2	.1501003	.2030365	7.601188	.5053095	.4776608	.8448313	547.9496
#3	.1523964	.2030507	7.695079	.5167750	.4803830	.8429711	561.9819

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.987677	13.21179	.6895279	.0652597	3.541169	.6319428	.6584437
Stddev	.073557	.22446	.0019054	.0016054	.030795	.0121749	.0068261
%RSD	1.844616	1.698954	.2763322	2.459960	.8696156	1.926589	1.036710
#1	4.071317	13.47031	.6902544	.0661980	3.535277	.6454555	.6562687
#2	3.933054	13.06639	.6873662	.0634060	3.513746	.6218274	.6529700
#3	3.958661	13.09867	.6909632	.0661750	3.574484	.6285453	.6660923

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.90374	1.380281	.3014098	.6728695	2.236791	2.870112	14.92499
Stddev	.08206	.018129	.0003836	.0013560	.042877	.021863	.04818
%RSD	.6893827	1.313422	.1272838	.2015177	1.916907	.7617608	.3228056
#1	11.92587	1.380938	.3009668	.6734819	2.285636	2.874062	14.97008
#2	11.81288	1.361833	.3016304	.6738112	2.205363	2.846543	14.87422
#3	11.97246	1.398073	.3016323	.6713153	2.219375	2.889731	14.93067

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: Q2172-01A Acquired: 6/4/2025 22:01:56 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) 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	1.948114	.4291517	-.362845
Stddev	.004953	.0050016	.006684
%RSD	.2542660	1.165459	1.842061
#1	1.942939	.4339558	-.360211
#2	1.948590	.4239736	-.357880
#3	1.952812	.4295257	-.370445

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3741.421	79966.66	12773.70	2747.726	3882.852
Stddev	12.888	636.81	170.71	18.774	11.785
%RSD	.3444699	.7963390	1.336415	.6832676	.3035117
#1	3753.201	80188.20	12581.84	2750.133	3889.148
#2	3743.408	80463.11	12908.81	2765.181	3890.152
#3	3727.655	79248.68	12830.43	2727.865	3869.256

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCV08 Acquired: 6/4/2025 22:06:01 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.619563**	**4.602427**	**4.665462**	**4.584321**	**4.661111**	**9.267982**
Stddev	.008890	.031414	.008701	.015623	.017920	.250446
%RSD	.1924407	.6825562	.1865087	.3407878	.3844573	2.702268
#1	4.612640	4.587880	4.655421	4.573677	4.655206	9.406125
#2	4.616460	4.580924	4.670150	4.577031	4.646889	8.978886
#3	4.629588	4.638478	4.670814	4.602257	4.681238	9.418934

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.206160**	**.2454280**	**2.327779**	**23.08037**	**.9367757**	**2.330813**
Stddev	.225884	.0059288	.003659	.60778	.0040051	.003875
%RSD	2.453623	2.415704	.1572094	2.633338	.4275440	.1662629
#1	9.332338	.2477145	2.323872	23.42533	.9393926	2.326419
#2	8.945377	.2386963	2.331126	22.37860	.9387695	2.332274
#3	9.340765	.2498730	2.328339	23.43719	.9321650	2.333745

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.172751**	F **4.426024**	**2.330930**	**23.15431**	**2.329586**	**1.172395**
Stddev	.003919	.029812	.063999	.62698	.003608	.003780
%RSD	.3341605	.6735713	2.745654	2.707847	.1548735	.3224081
#1	1.170717	4.455432	2.367349	23.50917	2.325538	1.175966
#2	1.170267	4.426817	2.257033	22.43038	2.332462	1.172783
#3	1.177268	4.395823	2.368409	23.52338	2.330758	1.168436

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **21.95470**	**2.299104**	**2.286537**	F **21.77884**	**4.924723**	**4.704675**
Stddev	.16627	.061883	.003448	.15924	.120356	.015633
%RSD	.7573480	2.691598	.1507875	.7311515	2.443922	.3322791
#1	22.14560	2.334821	2.286348	21.96253	4.972619	4.700258
#2	21.87702	2.227648	2.290076	21.68007	4.787792	4.691725
#3	21.84148	2.334843	2.283188	21.69391	5.013758	4.722040

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCV08 Acquired: 6/4/2025 22:06:01 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.628179**	**4.616416**	F **4.384070**	**4.691055**	**4.514527**	**4.654585**
Stddev	.009573	.123449	.024176	.027227	.011316	.128848
%RSD	.2068414	2.674141	.5514610	.5804024	.2506631	2.768186
#1	4.617214	4.686144	4.409186	4.673474	4.512472	4.732611
#2	4.634874	4.473880	4.360958	4.677274	4.526730	4.505865
#3	4.632448	4.689224	4.382065	4.722418	4.504379	4.725279

Elem	Sr4077
Units	ppm
Avg	**4.622463**
Stddev	.081623
%RSD	1.765781
#1	4.661884
#2	4.528613
#3	4.676893

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3068.067**	**63869.88**	**9050.184**	**2181.110**	**4117.279**
Stddev	7.616	265.10	202.059	10.892	5.659
%RSD	.2482298	.4150578	2.232648	.4993998	.1374453
#1	3069.229	63719.60	8955.061	2180.275	4123.036
#2	3075.035	63714.07	9282.249	2170.660	4117.078
#3	3059.937	64175.97	8913.243	2192.396	4111.724

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB08 Acquired: 6/4/2025 22:10:12 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000410**	**.0011302**	**-.000997**	**.0000052**	**.0012601**	**-.001586**	**-.001474**
Stddev	.002636	.0006769	.000795	.0014203	.0006695	.005290	.001130
%RSD	642.7911	59.89539	79.72751	27248.90	53.13342	333.5107	76.64870
#1	-.001157	.0004020	-.000440	-.001445	.0020322	-.007570	-.000335
#2	.002519	.0012482	-.001908	.000067	.0009076	.002468	-.002595
#3	-.002592	.0017404	-.000644	.001393	.0008404	.000343	-.001493

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000097**	**-.000136**	**.0032168**	**.0005963**	**.0000616**	**.0001666**	**.0064963**
Stddev	.000018	.000038	.0019351	.0002649	.0001768	.0004471	.0005011
%RSD	18.35763	27.87340	60.15633	44.42165	286.8684	268.4202	7.713088
#1	-.000112	-.000116	.0045451	.0003309	.0001982	-.000058	.0061076
#2	-.000077	-.000112	.0009966	.0005973	-.000138	-.000124	.0063195
#3	-.000101	-.000179	.0041087	.0008606	.000125	.000681	.0070618

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000280**	**.0209698**	**.0000310**	**.0001961**	**-.107593**	**.0013325**	**.0003079**
Stddev	.000361	.0121800	.0001872	.0000690	.010860	.0018738	.0001500
%RSD	128.9307	58.08362	603.9370	35.17173	10.09403	140.6249	48.71684
#1	-.000383	.0350326	-.000087	.0002648	-.098306	.0005050	.0003720
#2	.000121	.0137574	-.000067	.0001269	-.119535	.0000149	.0004152
#3	-.000579	.0141195	.000247	.0001965	-.104937	.0034776	.0001365

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.036223**	**.0094874**	**.0005429**	**.0004973**	**.0000694**	**.0018462**	**.0009505**
Stddev	.022883	.0006963	.0002688	.0002480	.0001260	.0077149	.0010921
%RSD	63.17103	7.338706	49.51161	49.86532	181.5058	417.8739	114.8939
#1	-.038978	.0101663	.0008532	.0002115	.0001999	.0102040	.0016295
#2	-.012088	.0095210	.0003821	.0006553	-.000052	.0003379	-.000309
#3	-.057604	.0087750	.0003934	.0006251	.000060	-.005003	.001531

Reviewed By:jaswal
On:6/10/2025 4:55:25 PM
Inst Id :P4
LB :LB136011

Sample Name: CCB08 Acquired: 6/4/2025 22:10:12 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v85) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.001790**	**-.003872**	**.0000293**
Stddev	.000887	.000587	.0000483
%RSD	49.55066	15.15889	164.9665
#1	-.002811	-.003371	.0000121
#2	-.001348	-.004518	-.000008
#3	-.001211	-.003728	.000084

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3123.545**	**66647.68**	**9946.228**	**2257.966**	**4377.012**
Stddev	11.213	148.81	37.467	5.725	18.446
%RSD	.3589912	.2232820	.3766913	.2535454	.4214378
#1	3136.492	66541.57	9937.912	2264.454	4397.359
#2	3117.108	66817.79	9987.153	2253.622	4361.384
#3	3117.033	66583.69	9913.617	2255.823	4372.292

Reviewed By:jaswal
On:6/4/2025 5:41:58 PM
Inst Id :CV1
LB :LB135995

LB135995 INSTRUMENT ID : CV1

Method: 7470A Operator: Admin Date of Analysis: 04 Jun 2025 09:44:10

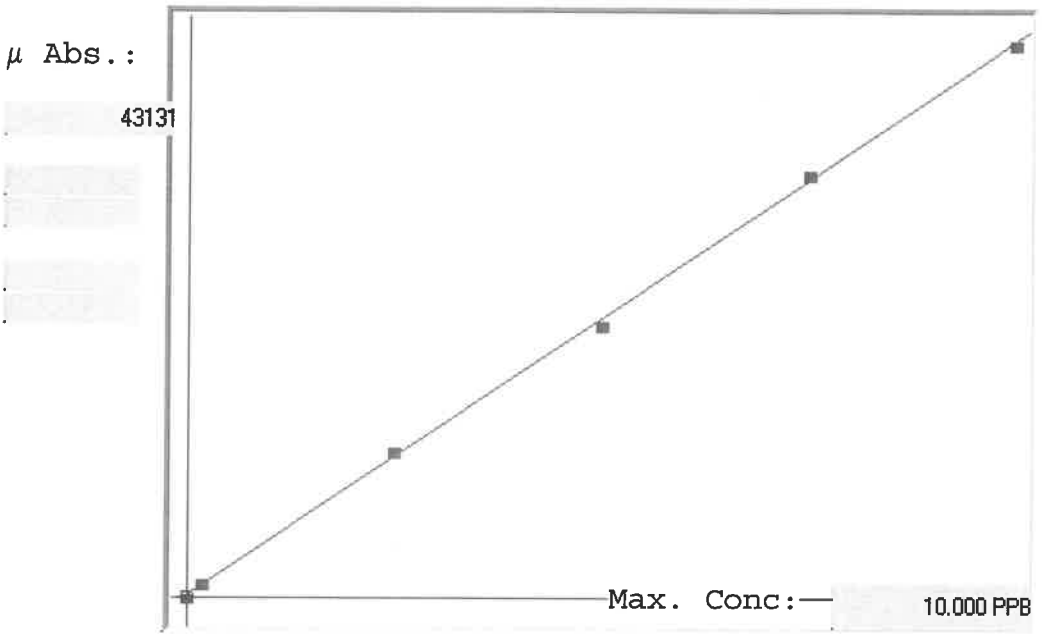
Sample ID	Extended ID	µ Abs	Conc.	Stnd Conc	Method	Units	Date	Type	Type
0.0 - 1	S0	9	-	0.0000	7470A	PPB	04 Jun 2025 10:02:01	S	Std
0.2 - 1	S0.2	1061	-	0.2000	7470A	PPB	04 Jun 2025 10:04:17	S	Std
2.5 - 1	S2.5	11354	-	2.5000	7470A	PPB	04 Jun 2025 10:06:34	S	Std
5.0 - 1	S5	21246	-	5.0000	7470A	PPB	04 Jun 2025 10:08:51	S	Std
7.5 - 1	S7.5	33122	-	7.5000	7470A	PPB	04 Jun 2025 10:11:10	S	Std
10.0 - 1	S10	43131	-	10.0000	7470A	PPB	04 Jun 2025 10:13:30	S	Std
ICV26 - 1	ICV26	17171	3.9340		7470A	PPB	04 Jun 2025 10:25:12	U	SMPL
ICB26 - 1	ICB26	-162	-0.0769		7470A	PPB	04 Jun 2025 10:30:10	U	SMPL
CCV95 - 1	CCV95	21160	4.8571		7470A	PPB	04 Jun 2025 10:32:25	U	SMPL
CCB95 - 1	CCB95	-128	-0.0690		7470A	PPB	04 Jun 2025 10:34:40	U	SMPL
CRA - 1	CRA	1129	0.2218		7470A	PPB	04 Jun 2025 10:36:59	U	SMPL
HighStd - 1	HighStd	41519	9.5682		7470A	PPB	04 Jun 2025 10:39:14	U	SMPL
ChkStd - 1	ChkStd	28374	6.5264		7470A	PPB	04 Jun 2025 10:41:30	U	SMPL
PB168262BL - 1	PBW	20	-0.0348		7470A	PPB	04 Jun 2025 10:43:52	U	SMPL
PB168262BS - 1	LCSW	15662	3.5848		7470A	PPB	04 Jun 2025 10:48:21	U	SMPL
Q2159-04 - 1	TP05-MHO-WC	127	-0.0100		7470A	PPB	04 Jun 2025 10:50:37	U	SMPL
Q2160-04 - 1	TP04-MHG-WC	401	0.0534		7470A	PPB	04 Jun 2025 10:53:06	U	SMPL
Q2160-08 - 1	TP05-MHH-WC	409	0.0552		7470A	PPB	04 Jun 2025 10:55:23	U	SMPL
Q2168-02 - 1	SAN-A1-A3	531	0.0835		7470A	PPB	04 Jun 2025 10:57:40	U	SMPL
Q2168-06 - 1	SAN-B1-B3	530	0.0832		7470A	PPB	04 Jun 2025 10:59:55	U	SMPL
CCV96 - 1	CCV96	21021	4.8249		7470A	PPB	04 Jun 2025 11:02:12	U	SMPL
CCB96 - 1	CCB96	76	-0.0218		7470A	PPB	04 Jun 2025 11:04:27	U	SMPL
Q2168-10 - 1	SAN-C1-C2	796	0.1448		7470A	PPB	04 Jun 2025 11:06:46	U	SMPL
Q2172-04 - 1	TP06-MHQ	553	0.0885		7470A	PPB	04 Jun 2025 11:09:01	U	SMPL
Q2173-06 - 1	OR-400-CF-402B-COMP-23	809	0.1478		7470A	PPB	04 Jun 2025 11:11:18	U	SMPL
Q2173-12 - 1	OR-400-CF-402B-COMP-24	674	0.1165		7470A	PPB	04 Jun 2025 11:13:33	U	SMPL
Q2173-18 - 1	OR-400-CF-402B-COMP-25	592	0.0976		7470A	PPB	04 Jun 2025 11:15:49	U	SMPL
Q2177-03 - 1	B-187-SB01	461	0.0673		7470A	PPB	04 Jun 2025 11:18:05	U	SMPL
Q2177-05 - 1	B-187-SB02	337	0.0386		7470A	PPB	04 Jun 2025 11:20:22	U	SMPL
Q2177-07 - 1	B-202-SB01	308	0.0318		7470A	PPB	04 Jun 2025 11:22:38	U	SMPL
Q2185-04 - 1	TP02-MHB-WC	33	-0.0318		7470A	PPB	04 Jun 2025 11:24:55	U	SMPL
Q2185-08 - 1	TP01-MHB-WC	-37	-0.0480		7470A	PPB	04 Jun 2025 11:27:11	U	SMPL
CCV97 - 1	CCV97	20709	4.7527		7470A	PPB	04 Jun 2025 11:29:27	U	SMPL
CCB97 - 1	CCB97	173	0.0006		7470A	PPB	04 Jun 2025 11:31:42	U	SMPL
Q2185-08DUP - 1	TP01-MHB-WCDUP	393	0.0515		7470A	PPB	04 Jun 2025 11:34:01	U	SMPL
Q2185-08MS - 1	TP01-MHB-WCMS	18021	4.1307		7470A	PPB	04 Jun 2025 11:38:56	U	SMPL
Q2185-08MSD - 1	TP01-MHB-WCMSD	17438	3.9958		7470A	PPB	04 Jun 2025 11:41:13	U	SMPL
PB168224TB - 1		-54	-0.0519		7470A	PPB	04 Jun 2025 11:43:33	U	SMPL
Q2185-08LX5 - 1		38	-0.0306		7470A	PPB	04 Jun 2025 11:45:53	U	SMPL
Q2185-08A - 1		16845	3.8586		7470A	PPB	04 Jun 2025 11:48:10	U	SMPL
CCV98 - 1	CCV98	20300	4.6581		7470A	PPB	04 Jun 2025 11:53:09	U	SMPL
CCB98 - 1	CCB98	42	-0.0297		7470A	PPB	04 Jun 2025 11:55:27	U	SMPL

LB135995

7470A

INSTRUMENT ID: CV1

Linear



A= 0.0000e+000

B= 2.3140e-004

C= -3.9425e-002

Rho= 0.9997343

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	-0.037	-0.037	9	0.000	9	0				1
0.2	0.200	0.206	0.006	1061	0.0 %	1061					3
2.5	2.500	2.588	0.088	11354	0.0 %	11354					4
5.0	5.000	4.877	-0.123	21246	0.0 %	21246					2
7.5	7.500	7.625	0.125	33122	0.0 %	33122					2
10.0	10.000	9.941	-0.059	43131	0.0 %	43131					2.1

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB168256

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: 06/03/2025 **Time :** 12:30 **Temp :** 96 °C

End Digest Date: 06/03/2025 **Time :** 15:32 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: SLG

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	0.25	M6007
LFS-2	0.25	M6016
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	MP84041
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 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
06/03/25 16:32	SLG met dig	SO Metals Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB168256

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB168224TB	PB168224TB	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	1
PB168256BL	PBW256	<2	5	25	Colorless	Colorless	Clear	Clear	M6007,M6016	2
PB168256BS	LCS256	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	3
Q2159-04	TP05-MHO-WC	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	4
Q2160-04	TP04-MHG-WC	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	5
Q2160-08	TP05-MHH-WC	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	6
Q2168-02	SAN-A1-A3	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	7
Q2168-06	SAN-B1-B3	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	8
Q2168-10	SAN-C1-C2	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	9
Q2172-04	TP06-MHQ	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	10
Q2173-06	OR-400-CF-402B-COMP-23	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	11
Q2173-12	OR-400-CF-402B-COMP-24	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	12
Q2173-18	OR-400-CF-402B-COMP-25	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	13
Q2177-03	B-187-SB01	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	14
Q2177-05	B-187-SB02	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	15
Q2177-07	B-202-SB01	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	16
Q2178-02	RT2929	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	17
Q2185-04	TP02-MHB-WC	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	18
Q2185-08	TP01-MHB-WC	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	19
Q2185-08MS	TP01-MHB-WCMS	<2	5	25	Colorless	Colorless	Clear	Clear	M6007,M6016	21
Q2185-08MSD	TP01-MHB-WCMSD	<2	5	25	Colorless	Colorless	Clear	Clear	M6007,M6016	22
Q2185-08DUP	TP01-MHB-WCDUP	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	20

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB168224

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
PB168224TB	LEB224	17	N/A	2000	N/A	N/A	N/A	4.93	1.5	T-2
Q2159-04	TP05-MHO-WC	01	100.02	2000	N/A	N/A	N/A	3.0	1.0	T-1
Q2160-04	TP04-MHG-WC	02	100.03	2000	N/A	N/A	N/A	3.0	1.5	T-1
Q2160-08	TP05-MHH-WC	03	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q2168-02	SAN-A1-A3	04	100.03	2000	N/A	N/A	N/A	4.5	1.5	T-1
Q2168-06	SAN-B1-B3	05	100.02	2000	N/A	N/A	N/A	4.5	1.0	T-1
Q2168-10	SAN-C1-C2	06	100.03	2000	N/A	N/A	N/A	4.0	1.5	T-1
Q2172-04	TP06-MHQ	07	100.01	2000	N/A	N/A	N/A	3.0	1.5	T-1
Q2173-06	OR-400-CF-402B-COMP-23	08	100.02	2000	N/A	N/A	N/A	7.0	1.0	T-1
Q2173-12	OR-400-CF-402B-COMP-24	09	100.03	2000	N/A	N/A	N/A	5.8	1.5	T-1
Q2173-18	OR-400-CF-402B-COMP-25	10	100.04	2000	N/A	N/A	N/A	6.0	1.0	T-1
Q2177-03	B-187-SB01	11	100.02	2000	N/A	N/A	N/A	6.0	1.5	T-2
Q2177-05	B-187-SB02	12	100.03	2000	N/A	N/A	N/A	5.6	1.0	T-2
Q2177-07	B-202-SB01	13	100.02	2000	N/A	N/A	N/A	5.8	1.5	T-2
Q2178-02	RT2929	14	100.03	2000	N/A	N/A	N/A	10.0	1.5	T-2
Q2185-04	TP02-MHB-WC	15	100.02	2000	N/A	N/A	N/A	5.8	1.5	T-2
Q2185-08	TP01-MHB-WC	16	100.03	2000	N/A	N/A	N/A	6.0	1.0	T-2

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB168262

SOP ID : M7470A-Mercury-20

SDG No : NA

Matrix : WATER

Pippete ID: HG A

Balance ID : N/A

Filter paper ID : NA

pH Strip ID : M6069

Hood ID : #1

Block ID: **1.** HG HOT BLOCK#3 **2.** N/A

Start Digest Date: 06/03/2025 **Time :** 13:30 **Temp :** 94 °C

End Digest Date: 06/03/2025 **Time :** 15:30 **Temp :** 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: BB

Supervisor Signature: [signature]

Temp : **1.** 94°C **2.** N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP85859
CCV	30mL	MP85861
CRA	30mL	MP85863
Blank Spike	0.48mL	MP85852
Matrix Spike	0.48mL	MP85852

Chemical Used	ML/SAMPLE USED	Lot Number
HNO3/H2SO4(1:2)	2.25mL	MP85240
KMnO4 (5%)	4.5mL	MP85241
K2S2O8 (5%)	2.4mL	MP85242
Hydroxylamine HCL (12%)	1.8mL	MP85243
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	MP85853
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP85854
2.5 ppb	S2.5	30mL	MP85855
5.0 ppb	S5.0	30mL	MP85856
7.5 ppb	S7.5	30mL	MP85857
10.0 ppb	S10.0	30mL	MP85858
ICV	ICV	30mL	MP85859
ICB	ICB	30mL	MP85860
CCV	CCV	30mL	MP85861
CCB	CCB	30mL	MP85862
CRI	CRI	30mL	MP85863
CHK STD	CHK STD	30mL	MP85864

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
06/03/25 @ 16:30	BB - Digi Lab	BB - Merc Lab
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB168262

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
PB168224TB	PB168224TB	3	30	<2	N/A	3-1
PB168262BL	PBW262	30	30	<2	N/A	2
PB168262BS	LCS262	30	30	<2	MP85852	3
Q2159-04	TP05-MHO-WC	3	30	<2	N/A	4
Q2160-04	TP04-MHG-WC	3	30	<2	N/A	5
Q2160-08	TP05-MHH-WC	3	30	<2	N/A	6
Q2168-02	SAN-A1-A3	3	30	<2	N/A	7
Q2168-06	SAN-B1-B3	3	30	<2	N/A	8
Q2168-10	SAN-C1-C2	3	30	<2	N/A	9
Q2172-04	TP06-MHQ	3	30	<2	N/A	10
Q2173-06	OR-400-CF-402B-COMP-23	3	30	<2	N/A	11
Q2173-12	OR-400-CF-402B-COMP-24	3	30	<2	N/A	12
Q2173-18	OR-400-CF-402B-COMP-25	3	30	<2	N/A	13
Q2177-03	B-187-SB01	3	30	<2	N/A	14
Q2177-05	B-187-SB02	3	30	<2	N/A	15
Q2177-07	B-202-SB01	3	30	<2	N/A	16
Q2185-04	TP02-MHB-WC	3	30	<2	N/A	17
Q2185-08	TP01-MHB-WC	3	30	<2	N/A	18
Q2185-08DUP	TP01-MHB-WCDUP	3	30	<2	N/A	19
Q2185-08MS	TP01-MHB-WCMS	3	30	<2	MP85852	20
Q2185-08MSD	TP01-MHB-WCMSD	3	30	<2	MP85852	21

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB168224

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 / T-2

TCLP Filter ID : 115525

Start Prep Date : 06/02/2025 **Time :** 16:00

End Prep Date : 06/03/2025 **Time :** 09:15

Combination Ratio : 20

ZHE Cleaning Batch : N/A

Initial Room Temperature: 22 °C

Final Room Temperature: 21 °C

TCLP Technician Signature : JP

Supervisor By : SJ

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
		N/A

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP112795
HCL-TCLP,1N	N/A	WP112797
HNO3-TCLP,1N	N/A	WP112799
pH Strips	N/A	W1931,W1934,W3171,W3172
pH Strips	N/A	W3166,W1938,W1939,
1 Liter Amber	N/A	90924-08
120ml Plastic bottle	N/A	2738
1:1 HNO3	N/A	MP84041

Extraction Conformance/Non-Conformance Comments:

Matrix spikes are added after fiftration and before preservation. TUMBLER T-1 /T-2 checked,30 rpm. q2185-08 is used for MS-MSD.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
06/03/25 11:00	JP / TCLP Room	SHS. RS 1Ext
	Preparation Group	Analysis Group

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 # LB135995

Review By	MOHAN	Review On	6/4/2025 5:38:08 PM
Supervise By	jaswal	Supervise On	6/4/2025 5:41:58 PM

STD. NAME	STD REF.#
ICAL Standard	MP85853,MP85854,MP85855,MP85856,MP85857,MP85858
ICV Standard	MP85859
CCV Standard	MP85861
ICSA Standard	
CRI Standard	MP85863
LCS Standard	
Chk Standard	MP85860,MP85862,MP85864,MP85866

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	06/04/25 10:02		MOHAN	OK
2	S0.2	S0.2	CAL2	06/04/25 10:04		MOHAN	OK
3	S2.5	S2.5	CAL3	06/04/25 10:06		MOHAN	OK
4	S5	S5	CAL4	06/04/25 10:08		MOHAN	OK
5	S7.5	S7.5	CAL5	06/04/25 10:11		MOHAN	OK
6	S10	S10	CAL6	06/04/25 10:13		MOHAN	OK
7	ICV26	ICV26	ICV	06/04/25 10:25		MOHAN	OK
8	ICB26	ICB26	ICB	06/04/25 10:30		MOHAN	OK
9	CCV95	CCV95	CCV	06/04/25 10:32		MOHAN	OK
10	CCB95	CCB95	CCB	06/04/25 10:34		MOHAN	OK
11	CRA	CRA	CRDL	06/04/25 10:36		MOHAN	OK
12	HighStd	HighStd	HIGH STD	06/04/25 10:39		MOHAN	OK
13	ChkStd	ChkStd	SAM	06/04/25 10:41		MOHAN	OK
14	PB168262BL	PB168262BL	MB	06/04/25 10:43		MOHAN	OK
15	PB168262BS	PB168262BS	LCS	06/04/25 10:48		MOHAN	OK
16	Q2159-04	TP05-MHO-WC	SAM	06/04/25 10:50		MOHAN	OK
17	Q2160-04	TP04-MHG-WC	SAM	06/04/25 10:53		MOHAN	OK
18	Q2160-08	TP05-MHH-WC	SAM	06/04/25 10:55		MOHAN	OK

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB135995

Review By	MOHAN	Review On	6/4/2025 5:38:08 PM
Supervise By	jaswal	Supervise On	6/4/2025 5:41:58 PM

STD. NAME	STD REF.#
ICAL Standard	MP85853,MP85854,MP85855,MP85856,MP85857,MP85858
ICV Standard	MP85859
CCV Standard	MP85861
ICSA Standard	
CRI Standard	MP85863
LCS Standard	
Chk Standard	MP85860,MP85862,MP85864,MP85866

19	Q2168-02	SAN-A1-A3	SAM	06/04/25 10:57		MOHAN	OK
20	Q2168-06	SAN-B1-B3	SAM	06/04/25 10:59		MOHAN	OK
21	CCV96	CCV96	CCV	06/04/25 11:02		MOHAN	OK
22	CCB96	CCB96	CCB	06/04/25 11:04		MOHAN	OK
23	Q2168-10	SAN-C1-C2	SAM	06/04/25 11:06		MOHAN	OK
24	Q2172-04	TP06-MHQ	SAM	06/04/25 11:09		MOHAN	OK
25	Q2173-06	OR-400-CF-402B-CO	SAM	06/04/25 11:11		MOHAN	OK
26	Q2173-12	OR-400-CF-402B-CO	SAM	06/04/25 11:13		MOHAN	OK
27	Q2173-18	OR-400-CF-402B-CO	SAM	06/04/25 11:15		MOHAN	OK
28	Q2177-03	B-187-SB01	SAM	06/04/25 11:18		MOHAN	OK
29	Q2177-05	B-187-SB02	SAM	06/04/25 11:20		MOHAN	OK
30	Q2177-07	B-202-SB01	SAM	06/04/25 11:22		MOHAN	OK
31	Q2185-04	TP02-MHB-WC	SAM	06/04/25 11:24		MOHAN	OK
32	Q2185-08	TP01-MHA-WC	SAM	06/04/25 11:27		MOHAN	OK
33	CCV97	CCV97	CCV	06/04/25 11:29		MOHAN	OK
34	CCB97	CCB97	CCB	06/04/25 11:31		MOHAN	OK
35	Q2185-08DUP	TP01-MHA-WC	DUP	06/04/25 11:34		MOHAN	OK
36	Q2185-08MS	TP01-MHA-WCMS	MS	06/04/25 11:38		MOHAN	OK
37	Q2185-08MSD	TP01-MHA-WCMSD	MSD	06/04/25 11:41		MOHAN	OK
38	PB168224TB	PB168224TB	MB	06/04/25 11:43		MOHAN	OK

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB135995

Review By	MOHAN	Review On	6/4/2025 5:38:08 PM
Supervise By	jaswal	Supervise On	6/4/2025 5:41:58 PM

STD. NAME	STD REF.#
ICAL Standard	MP85853,MP85854,MP85855,MP85856,MP85857,MP85858
ICV Standard	MP85859
CCV Standard	MP85861
ICSA Standard	
CRI Standard	MP85863
LCS Standard	
Chk Standard	MP85860,MP85862,MP85864,MP85866

39	Q2185-08L	TP01-MHA-WC	SD	06/04/25 11:45		MOHAN	OK
40	Q2185-08A	TP01-MHA-WC	PS	06/04/25 11:48		MOHAN	OK
41	CCV98	CCV98	CCV	06/04/25 11:53		MOHAN	OK
42	CCB98	CCB98	CCB	06/04/25 11:55		MOHAN	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136011

Review By	Janvi	Review On	6/5/2025 3:57:54 PM
Supervise By	jaswal	Supervise On	6/10/2025 4:55:25 PM

STD. NAME	STD REF.#
ICAL Standard	MP85867,MP85897,MP85871,MP85870,MP85869,MP85868
ICV Standard	MP85872
CCV Standard	MP85875
ICSA Standard	MP85873,MP85874
CRI Standard	MP85897
LCS Standard	
Chk Standard	MP85876,MP85877

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	06/04/25 14:18		Jaswal	OK
2	S1	S1	CAL2	06/04/25 14:23		Jaswal	OK
3	S2	S2	CAL3	06/04/25 14:27		Jaswal	OK
4	S3	S3	CAL4	06/04/25 14:31		Jaswal	OK
5	S4	S4	CAL5	06/04/25 14:35		Jaswal	OK
6	S5	S5	CAL6	06/04/25 14:39		Jaswal	OK
7	ICV01	ICV01	ICV	06/04/25 15:49		Jaswal	OK
8	LLICV01	LLICV01	LLICV	06/04/25 16:06		Jaswal	OK
9	ICB01	ICB01	ICB	06/04/25 16:10		Jaswal	OK
10	CRI01	CRI01	CRDL	06/04/25 16:15		Jaswal	OK
11	ICSA01	ICSA01	ICSA	06/04/25 16:26		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	06/04/25 16:32		Jaswal	OK
13	ICSADL	ICSADL	ICSA	06/04/25 16:36		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	06/04/25 16:40		Jaswal	OK
15	CCV01	CCV01	CCV	06/04/25 16:45		Jaswal	OK
16	CCB01	CCB01	CCB	06/04/25 16:52		Jaswal	OK
17	Q2160-05	TP05-MHH-WC	SAM	06/04/25 16:57		Jaswal	OK
18	Q2159-04	TP05-MHO-WC	SAM	06/04/25 17:01		Jaswal	OK

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Instrument ID: P4

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Supervise By	jaswal	Supervise On	6/10/2025 4:55:25 PM

STD. NAME	STD REF.#
ICAL Standard	MP85867,MP85897,MP85871,MP85870,MP85869,MP85868
ICV Standard	MP85872
CCV Standard	MP85875
ICSA Standard	MP85873,MP85874
CRI Standard	MP85897
LCS Standard	
Chk Standard	MP85876,MP85877

19	Q2178-01	RT2929	SAM	06/04/25 17:05		Jaswal	OK
20	Q2182-01	OR-03-06022025	SAM	06/04/25 17:10		Jaswal	OK
21	Q2172-04	TP06-MHQ	SAM	06/04/25 17:14		Jaswal	OK
22	Q2178-02	RT2929	SAM	06/04/25 17:18		Jaswal	OK
23	Q2185-01	TP02-MHB-WC	SAM	06/04/25 17:23		Jaswal	OK
24	Q2185-05	TP01-MHA-WC	SAM	06/04/25 17:27		Jaswal	OK
25	Q2178-01DUP	RT2929DUP	DUP	06/04/25 17:31		Jaswal	OK
26	CCV02	CCV02	CCV	06/04/25 17:35		Jaswal	OK
27	CCB02	CCB02	CCB	06/04/25 17:39		Jaswal	OK
28	Q2178-01L	RT2929L	SD	06/04/25 17:48		Jaswal	OK
29	Q2178-01MS	RT2929MS	MS	06/04/25 17:53		Jaswal	OK
30	Q2178-01MSD	RT2929MSD	MSD	06/04/25 17:57		Jaswal	OK
31	Q2178-01A	RT2929A	PS	06/04/25 18:01		Jaswal	OK
32	PB168224TB	PB168224TB	MB	06/04/25 18:05		Jaswal	OK
33	Q2168-02	SAN-A1-A3	SAM	06/04/25 18:10		Jaswal	OK
34	Q2168-06	SAN-B1-B3	SAM	06/04/25 18:14		Jaswal	OK
35	Q2168-10	SAN-C1-C2	SAM	06/04/25 18:19		Jaswal	OK
36	Q2177-03	B-187-SB01	SAM	06/04/25 18:23		Jaswal	OK
37	CCV03	CCV03	CCV	06/04/25 18:37		Jaswal	OK
38	CCB03	CCB03	CCB	06/04/25 18:42		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136011

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Supervise By	jaswal	Supervise On	6/10/2025 4:55:25 PM

STD. NAME	STD REF.#
ICAL Standard	MP85867,MP85897,MP85871,MP85870,MP85869,MP85868
ICV Standard	MP85872
CCV Standard	MP85875
ICSA Standard	MP85873,MP85874
CRI Standard	MP85897
LCS Standard	
Chk Standard	MP85876,MP85877

39	Q2177-05	B-187-SB02	SAM	06/04/25 18:47		Jaswal	OK
40	Q2177-07	B-202-SB01	SAM	06/04/25 18:51		Jaswal	OK
41	Q2185-04	TP02-MHB-WC	SAM	06/04/25 18:56		Jaswal	OK
42	Q2185-08	TP01-MHA-WC	SAM	06/04/25 19:00		Jaswal	OK
43	Q2185-08DUP	TP01-MHA-WC	DUP	06/04/25 19:04		Jaswal	OK
44	Q2185-08L	TP01-MHA-WC	SD	06/04/25 19:09		Jaswal	OK
45	Q2185-08MS	TP01-MHA-WCMS	MS	06/04/25 19:13		Jaswal	OK
46	Q2185-08MSD	TP01-MHA-WCMSD	MSD	06/04/25 19:17		Jaswal	OK
47	Q2185-08A	TP01-MHA-WC	PS	06/04/25 19:22		Jaswal	OK
48	CCV04	CCV04	CCV	06/04/25 19:26		Jaswal	OK
49	CCB04	CCB04	CCB	06/04/25 19:30		Jaswal	OK
50	PB168256BL	PB168256BL	MB	06/04/25 19:34		Jaswal	OK
51	PB168256BS	PB168256BS	LCS	06/04/25 19:39		Jaswal	OK
52	PB168261BL	PB168261BL	MB	06/04/25 19:43		Jaswal	OK
53	PB168261BS	PB168261BS	LCS	06/04/25 19:47		Jaswal	OK
54	PB168255BL	PB168255BL	MB	06/04/25 19:51		Jaswal	OK
55	PB168255BS	PB168255BS	LCS	06/04/25 19:55		Jaswal	OK
56	Q2169-01	303-PPR-1	SAM	06/04/25 19:59		Jaswal	OK
57	Q2169-03	303-PPR-2	SAM	06/04/25 20:03		Jaswal	OK
58	Q2175-06DL	EGR-LIQUIDDL	SAM	06/04/25 20:08	Straight 5x for all elements	Jaswal	OK

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Review By	Janvi	Review On	6/5/2025 3:57:54 PM
Supervise By	jaswal	Supervise On	6/10/2025 4:55:25 PM

STD. NAME	STD REF.#
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ICV Standard	MP85872
CCV Standard	MP85875
ICSA Standard	MP85873,MP85874
CRI Standard	MP85897
LCS Standard	
Chk Standard	MP85876,MP85877

59	CCV05	CCV05	CCV	06/04/25 20:12		Jaswal	OK
60	CCB05	CCB05	CCB	06/04/25 20:16		Jaswal	OK
61	Q2177-08	EB05312025	SAM	06/04/25 20:20		Jaswal	OK
62	Q2169-03DUP	303-PPR-2DUP	DUP	06/04/25 20:25		Jaswal	OK
63	Q2169-03L	303-PPR-2L	SD	06/04/25 20:29		Jaswal	OK
64	Q2169-03MS	303-PPR-2MS	MS	06/04/25 20:33		Jaswal	OK
65	Q2169-03MSD	303-PPR-2MSD	MSD	06/04/25 20:37		Jaswal	OK
66	Q2169-03A	303-PPR-2A	PS	06/04/25 20:42		Jaswal	OK
67	PB168276BL	PB168276BL	MB	06/04/25 20:46		Jaswal	OK
68	PB168276BS	PB168276BS	LCS	06/04/25 20:50		Jaswal	OK
69	Q2175-09DL	52725DL	SAM	06/04/25 20:54	Straight 5x for all elements	Jaswal	OK
70	CCV06	CCV06	CCV	06/04/25 20:58		Jaswal	OK
71	CCB06	CCB06	CCB	06/04/25 21:02		Jaswal	OK
72	Q2198-05DL	B-202-GW01DL	SAM	06/04/25 21:07	Straight 5x for all elements	Jaswal	OK
73	Q2198-05DUPDL	B-202-GW01DUPDL	DUP	06/04/25 21:11	Straight 5x for all elements	Jaswal	OK
74	Q2198-05LDL	B-202-GW01LDL	SD	06/04/25 21:15	Straight 25x for all elements	Jaswal	OK
75	Q2198-05MSDL	B-202-GW01MSDL	MS	06/04/25 21:20	Straight 5x for all elements	Jaswal	OK
76	Q2198-05MSDDL	B-202-GW01MSDDL	MSD	06/04/25 21:24	Straight 5x for all elements	Jaswal	OK
77	Q2198-05ADL	B-202-GW01ADL	PS	06/04/25 21:28	Straight 5x for all elements	Jaswal	OK

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Supervise By	jaswal	Supervise On	6/10/2025 4:55:25 PM

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ICV Standard	MP85872
CCV Standard	MP85875
ICSA Standard	MP85873,MP85874
CRI Standard	MP85897
LCS Standard	
Chk Standard	MP85876,MP85877

78	Q2172-01	TP06-MHQ	SAM	06/04/25 21:32	CCV fail for Fe,K,Na	Jaswal	Not Ok
79	Q2172-01DUP	TP06-MHQDUP	DUP	06/04/25 21:37	CCV fail for Fe,K,Na	Jaswal	Not Ok
80	CCV07	CCV07	CCV	06/04/25 21:41		Jaswal	OK
81	CCB07	CCB07	CCB	06/04/25 21:45		Jaswal	OK
82	Q2172-01L	TP06-MHQL	SD	06/04/25 21:49	CCV fail for Fe,K,Na	Jaswal	Not Ok
83	Q2172-01MS	TP06-MHQMS	MS	06/04/25 21:54	CCV fail for Fe,K,Na	Jaswal	Not Ok
84	Q2172-01MSD	TP06-MHQMSD	MSD	06/04/25 21:57	CCV fail for Fe,K,Na	Jaswal	Not Ok
85	Q2172-01A	TP06-MHQA	PS	06/04/25 22:01	CCV fail for Fe,K,Na	Jaswal	Not Ok
86	CCV08	CCV08	CCV	06/04/25 22:06	CCV fail for Fe,K,Na	Jaswal	OK
87	CCB08	CCB08	CCB	06/04/25 22:10		Jaswal	OK

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB168224

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 / T-2

TCLP Filter ID : 115525

Start Prep Date : 06/02/2025 **Time :** 16:00

End Prep Date : 06/03/2025 **Time :** 09:15

Combination Ratio : 20

ZHE Cleaning Batch : 10 N/A

Initial Room Temperature: 22 °C

Final Room Temperature: 21 °C

TCLP Technician Signature : JP

Supervisor By : SJ

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	WP112795
HCL-TCLP,1N	N/A	WP112797
HNO3-TCLP,1N	N/A	WP112799
pH Strips	N/A	W1931,W1934,W3171,W3172
pH Strips	N/A	W3166,W1938,W1939,
1 Liter Amber	N/A	90924-08
120ml Plastic bottle	N/A	2738
1:1 HNO3	N/A	MP84041

Extraction Conformance/Non-Conformance Comments:

Matrix spikes are added after fiftration and before preservation. TUMBLER T-1 /T-2 checked,30 rpm. q2185-08 is used for MS-MSD.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
06/03/25 11:00	JP / TCLP Room	SJS. RS 1Ext
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB168224

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
PB168224TB	LEB224	17	N/A	2000	N/A	N/A	N/A	4.93	1.5	T-2
Q2159-04	TP05-MHO-WC	01	100.02	2000	N/A	N/A	N/A	3.0	1.0	T-1
Q2160-04	TP04-MHG-WC	02	100.03	2000	N/A	N/A	N/A	3.0	1.5	T-1
Q2160-08	TP05-MHH-WC	03	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q2168-02	SAN-A1-A3	04	100.03	2000	N/A	N/A	N/A	4.5	1.5	T-1
Q2168-06	SAN-B1-B3	05	100.02	2000	N/A	N/A	N/A	4.5	1.0	T-1
Q2168-10	SAN-C1-C2	06	100.03	2000	N/A	N/A	N/A	4.0	1.5	T-1
Q2172-04	TP06-MHQ	07	100.01	2000	N/A	N/A	N/A	3.0	1.5	T-1
Q2173-06	OR-400-CF-402B-COMP-23	08	100.02	2000	N/A	N/A	N/A	7.0	1.0	T-1
Q2173-12	OR-400-CF-402B-COMP-24	09	100.03	2000	N/A	N/A	N/A	5.8	1.5	T-1
Q2173-18	OR-400-CF-402B-COMP-25	10	100.04	2000	N/A	N/A	N/A	6.0	1.0	T-1
Q2177-03	B-187-SB01	11	100.02	2000	N/A	N/A	N/A	6.0	1.5	T-2
Q2177-05	B-187-SB02	12	100.03	2000	N/A	N/A	N/A	5.6	1.0	T-2
Q2177-07	B-202-SB01	13	100.02	2000	N/A	N/A	N/A	5.8	1.5	T-2
Q2178-02	RT2929	14	100.03	2000	N/A	N/A	N/A	10.0	1.5	T-2
Q2185-04	TP02-MHB-WC	15	100.02	2000	N/A	N/A	N/A	5.8	1.5	T-2
Q2185-08	TP01-MHB-WC	16	100.03	2000	N/A	N/A	N/A	6.0	1.0	T-2

Alliance TECHNICAL GROUP

TCLP Solid Determination

PB168224

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
PB168224TB	LEB224	N/A	N/A	N/A	N/A	N/A	N/A
Q2159-04	TP05-MHO-WC	N/A	N/A	N/A	N/A	100	N/A
Q2160-04	TP04-MHG-WC	N/A	N/A	N/A	N/A	100	N/A
Q2160-08	TP05-MHH-WC	N/A	N/A	N/A	N/A	100	N/A
Q2168-02	SAN-A1-A3	N/A	N/A	N/A	N/A	100	N/A
Q2168-06	SAN-B1-B3	N/A	N/A	N/A	N/A	100	N/A
Q2168-10	SAN-C1-C2	N/A	N/A	N/A	N/A	100	N/A
Q2172-04	TP06-MHQ	N/A	N/A	N/A	N/A	100	N/A
Q2173-06	OR-400-CF-402B-COMP-23	N/A	N/A	N/A	N/A	100	N/A
Q2173-12	OR-400-CF-402B-COMP-24	N/A	N/A	N/A	N/A	100	N/A
Q2173-18	OR-400-CF-402B-COMP-25	N/A	N/A	N/A	N/A	100	N/A
Q2177-03	B-187-SB01	N/A	N/A	N/A	N/A	100	N/A
Q2177-05	B-187-SB02	N/A	N/A	N/A	N/A	100	N/A
Q2177-07	B-202-SB01	N/A	N/A	N/A	N/A	100	N/A
Q2178-02	RT2929	N/A	N/A	N/A	N/A	100	N/A
Q2185-04	TP02-MHB-WC	N/A	N/A	N/A	N/A	100	N/A
Q2185-08	TP01-MHB-WC	N/A	N/A	N/A	N/A	100	N/A

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TCLP Fluid Determination

PB168224

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
PB168224TB	LEB224	N/A	N/A	N/A	N/A	#1	4.93
Q2159-04	TP05-MHO-WC	5.02	96.5	5.6	2.0	#1	4.93
Q2160-04	TP04-MHG-WC	5.01	96.5	5.5	2.0	#1	4.93
Q2160-08	TP05-MHH-WC	5.02	96.5	5.8	2.0	#1	4.93
Q2168-02	SAN-A1-A3	5.01	96.5	6.2	2.5	#1	4.93
Q2168-06	SAN-B1-B3	5.02	96.5	6.0	2.0	#1	4.93
Q2168-10	SAN-C1-C2	5.03	96.5	6.0	2.0	#1	4.93
Q2172-04	TP06-MHQ	5.03	96.5	5.5	1.5	#1	4.93
Q2173-06	OR-400-CF-402B-COMP-23	5.02	96.5	9.0	3.5	#1	4.93
Q2173-12	OR-400-CF-402B-COMP-24	5.03	96.5	7.2	2.5	#1	4.93
Q2173-18	OR-400-CF-402B-COMP-25	5.02	96.5	8.4	3.0	#1	4.93
Q2177-03	B-187-SB01	5.03	96.5	8.2	3.0	#1	4.93
Q2177-05	B-187-SB02	5.02	96.5	7.2	2.5	#1	4.93
Q2177-07	B-202-SB01	5.01	96.5	8.2	3.0	#1	4.93
Q2178-02	RT2929	5.02	96.5	10.5	4.0	#1	4.93
Q2185-04	TP02-MHB-WC	5.02	96.5	8.0	3.0	#1	4.93
Q2185-08	TP01-MHB-WC	5.01	96.5	8.0	3.0	N/A	4.93

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Prep Standard - Chemical Standard Summary

Order ID : Q2177

Test : TCLP ICP Metals,TCLP Mercury

Prepbatch ID : PB168256,PB168262,

Sequence ID/Qc Batch ID: LB135995,LB136011,LB136011,LB136011,

Standard ID :
MP84041,MP85852,MP85853,MP85854,MP85855,MP85856,MP85857,MP85858,MP85859,MP85860,MP85861,MP858
62,MP85863,MP85864,MP85866,MP85867,MP85868,MP85869,MP85870,MP85871,MP85872,MP85873,MP85874,MP
85875,MP85876,MP85877,MP85896,MP85897,

Chemical ID :
M5062,M5466,M5467,M5471,M5658,M5697,M5747,M5748,M5798,M5799,M5800,M5801,M5811,M5814,M5820,M5882,
M5942,M5962,M5969,M5970,M5984,M5985,M5996,M5997,M6007,M6016,M6021,M6023,M6028,M6030,M6032,M6077
,M6126,M6127,M6128,M6137,M6138,M6142,M6144,M6145,M6146,M6150,M6151,M6152,M6155,M6158,M6159,M616
1,M6162,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP84041	01/14/2025	07/14/2025	Eman Mughal	None	None	Sarabjit Jaswal 01/16/2025

FROM 1250.00000ml of M6126 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP85852	06/03/2025	06/04/2025	Mohan Bera	None	None	Sarabjit Jaswal 06/14/2025

FROM 1.00000ml of M6162 + 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	MP85853	06/03/2025	06/04/2025	Mohan Bera	None	None	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1341	Hg 0.2 PPB STD	MP85854	06/03/2025	06/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP85852 = 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	MP85855	06/03/2025	06/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 245.00000ml of W3112 + 2.50000ml of MP85852 = 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	MP85856	06/03/2025	06/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 242.50000ml of W3112 + 5.00000ml of MP85852 = 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	MP85857	06/03/2025	06/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 240.00000ml of W3112 + 7.50000ml of MP85852 = 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	MP85858	06/03/2025	06/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 237.50000ml of W3112 + 10.00000ml of MP85852 = 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	MP85859	06/03/2025	06/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6161 + 2.50000ml of M6162 + 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)	MP85860	06/03/2025	06/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP85861	06/03/2025	06/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6162 + 10.00000ml of MP85852 = 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)	MP85862	06/03/2025	06/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6162 = 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)	MP85863	06/03/2025	06/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP85852 = 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)	MP85864	06/03/2025	06/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 240.50000ml of W3112 + 7.00000ml of MP85852 = 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
68	STANNOUS CHLORIDE SOLUTION	MP85866	06/04/2025	06/05/2025	Mohan Bera	None	None	Sarabjit Jaswal 06/14/2025

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6151 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP85867	06/02/2025	06/23/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/14/2025

FROM 125.00000ml of M6151 + 2350.00000ml of W3112 + 25.00000ml of M6162 = Final Quantity: 2500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP85868	06/02/2025	06/23/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/14/2025

FROM 5.00000ml of M5467 + 5.00000ml of M5471 + 5.00000ml of M5820 + 5.00000ml of M5969 + 5.00000ml of M5970 + 5.00000ml of M5996 + 5.00000ml of M5997 + 5.00000ml of M6077 + 5.00000ml of M6146 + 455.00000ml of MP85867 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP85869	06/02/2025	06/23/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/14/2025

FROM 50.00000ml of MP85867 + 50.00000ml of MP85868 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP85870	06/02/2025	06/23/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/14/2025

FROM 25.00000ml of MP85868 + 75.00000ml of MP85867 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
908	ICP AES S2/CRI MINERALS ONLY STD	MP85871	06/02/2025	06/23/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/14/2025

FROM 8.00000ml of MP85868 + 92.00000ml of MP85867 = 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
912	ICP AES ICV SOLN	MP85872	06/02/2025	06/23/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/14/2025

FROM 10.00000ml of M6150 + 90.00000ml of MP85867 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP85873	06/02/2025	06/23/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/14/2025

FROM 25.00000ml of M6152 + 225.00000ml of MP85867 = 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
3494	ICP AES ICSAB SOLN-1	MP85874	06/02/2025	06/20/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/14/2025

FROM 10.00000ml of M6152 + 10.00000ml of M6155 + 80.00000ml of MP85867 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP85875	06/02/2025	06/23/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/14/2025

FROM 50.00000ml of MP85867 + 50.00000ml of MP85868 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP85876	06/02/2025	06/23/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/14/2025

FROM 1.00000ml of M5984 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6162 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP85877	06/02/2025	06/23/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/14/2025

FROM 200.00000ml of M6162 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP85896	06/02/2025	06/13/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/14/2025

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 0.05000ml of M5658 + 0.05000ml of M5811 + 0.05000ml of M6030 + 0.05000ml of M6159 + 0.06000ml of M5747 + 0.10000ml of M5471 + 0.10000ml of M5697 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5969 + 0.10000ml of M5970 + 0.10000ml of M6128 + 0.15000ml of M5800 + 0.20000ml of M5748 + 0.20000ml of M5799 + 0.20000ml of M5942 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.20000ml of M6145 + 0.25000ml of M5466 + 0.25000ml of M6146 + 0.50000ml of M5814 + 0.50000ml of M6032 + 1.00000ml of M6127 + 1.00000ml of M6138 + 1.00000ml of M6142 + 1.00000ml of M6144 + 2.00000ml of M6137 + 90.03000ml of MP85867 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2951	ICP AES S1/CRI WORK STD	MP85897	06/02/2025	06/23/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/14/2025

FROM 2.00000ml of MP85896 + 90.03000ml of MP85867 = Final Quantity: 100.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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	061322	06/13/2025	03/06/2023 / bin	03/01/2023 / bin	M5466

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57058 / Cerium, 1000PPM, 100ML	020623	02/06/2026	03/06/2023 / bin	03/01/2023 / bin	M5467

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	082922	08/29/2025	04/14/2025 / jaswal	03/16/2023 / jaswal	M5471

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.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

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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.	/ Lead (Pb) 1000PPM	100923	10/09/2026	05/20/2024 / Jaswal	12/20/2023 / jaswal	M5747

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Nickel (Ni) 1000PPM	091223	09/12/2026	01/02/2024 / bin	12/20/2023 / jaswal	M5748

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	051523	05/15/2026	02/06/2025 / kareem	01/03/2024 / jaswal	M5811

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57005 / B, 1000 PPM, 125 ml	071123	07/11/2026	03/26/2024 / Sohil	01/03/2024 / jaswal	M5814

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	232820	08/31/2028	04/30/2024 / mohan	04/25/2024 / mohan	M5882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	06/18/2024 / Jaswal	02/22/2024 / Jaswal	M5942

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	03/31/2026	03/31/2025 / kareem	06/11/2024 / Jaswal	M5969

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	07/01/2024 / Jaswal	07/01/2024 / Jaswal	M5970

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	08/05/2024 / kareem	06/14/2024 / Jaswal	M5984

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGIN10-5 / INDIUM 1 x 500 ml	U2-IN729349	02/21/2028	10/08/2024 / Jaswal	06/14/2024 / Jaswal	M5985

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-1 / CLP CAL SOLUTION #1, 125mL	T2-MEB714417	01/27/2027	05/07/2024 / JANVI	02/22/2024 / kareem	M5996

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB727800	12/21/2027	02/03/2025 / JANVI	02/22/2024 / kareem	M5997

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml	T2-MEB723367	05/27/2026	05/27/2025 / Janvi	05/14/2024 / Jaswal	M6007

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-2 / Laboratory Fortified Stock Solution 2, 125 ml	U2-MEB731108	10/30/2025	04/30/2025 / mohan	05/14/2024 / Jaswal	M6016

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / Tl, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	010924	01/09/2027	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6032

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	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 #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	06/03/2025	12/03/2024 / Janvi	11/12/2024 / Janvi	M6126

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	112124	11/21/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6127

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	V2-SI744713	07/10/2029	01/14/2025 / Jaswal	10/03/2024 / Jaswal	M6137

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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.	58119 / K, 10000 PPM, 500 ml	103024	10/30/2027	05/06/2025 / JANVI	01/13/2025 / Jaswal	M6142

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	072424	07/24/2027	01/23/2025 / kareem	01/13/2025 / Jaswal	M6144

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	121724	12/17/2027	02/04/2025 /	01/13/2025 / Jaswal	M6145

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	071724	07/17/2027	01/31/2025 / kareem	10/18/2024 / kareem	M6146

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV1-1014	07/07/2025	02/07/2025 / JANVI	04/20/2021 / JANVI	M6150

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	08/18/2025	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	08/24/2025	02/24/2025 / kareem	04/20/2021 / kareem	M6152

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSAB (ICP) STOCK SOLN	ICSB-0710	06/20/2025	02/10/2025 / kareem	02/09/2024 / kareem	M6155

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	03/25/2029	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011325	03/18/2026	03/18/2025 / kareem	02/09/2025 / kareem	M6159

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV 5 0415	07/31/2025	05/01/2025 / mohan	03/30/2024 / mohan	M6161

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Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24H0162012	11/27/2025	05/27/2025 / Sagar	04/27/2025 / Sagar	M6162

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

Certificate of Analysis

ThermoFisher SCIENTIFIC

M5882 M3

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	T142	Quality Test / Release Date	08/17/2023
Lot Number	232820		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Aug/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	100.65
CALCIUM	%	<= 0.005	0.0017
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	0.0011
LEAD (Pb)	%	<= 0.01	0.0006
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	0.0001
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)

Harout Sahagian - Quality Control Supervisor - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

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Certified Reference Material CRM

M6032

R: 8/5/24

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CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**010924**	**Solvent:**	24002546	Nitric Acid	
Description:	**Barium (Ba)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	010927				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

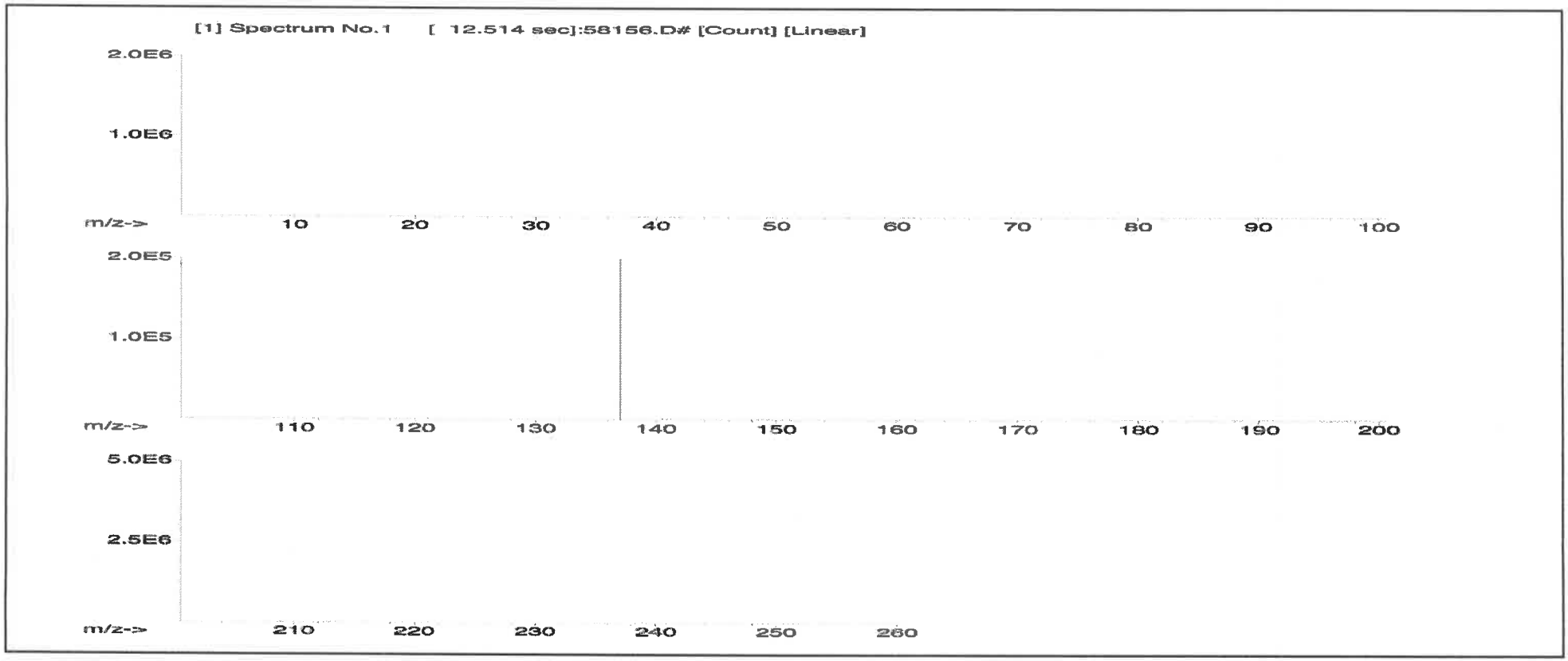
Giovanni Esposito

Formulated By:	Giovanni Esposito	010924

Pedro Rentas

Reviewed By:	Pedro L. Rentas	010924

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	**1000.1**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M6028

R 8/5/24

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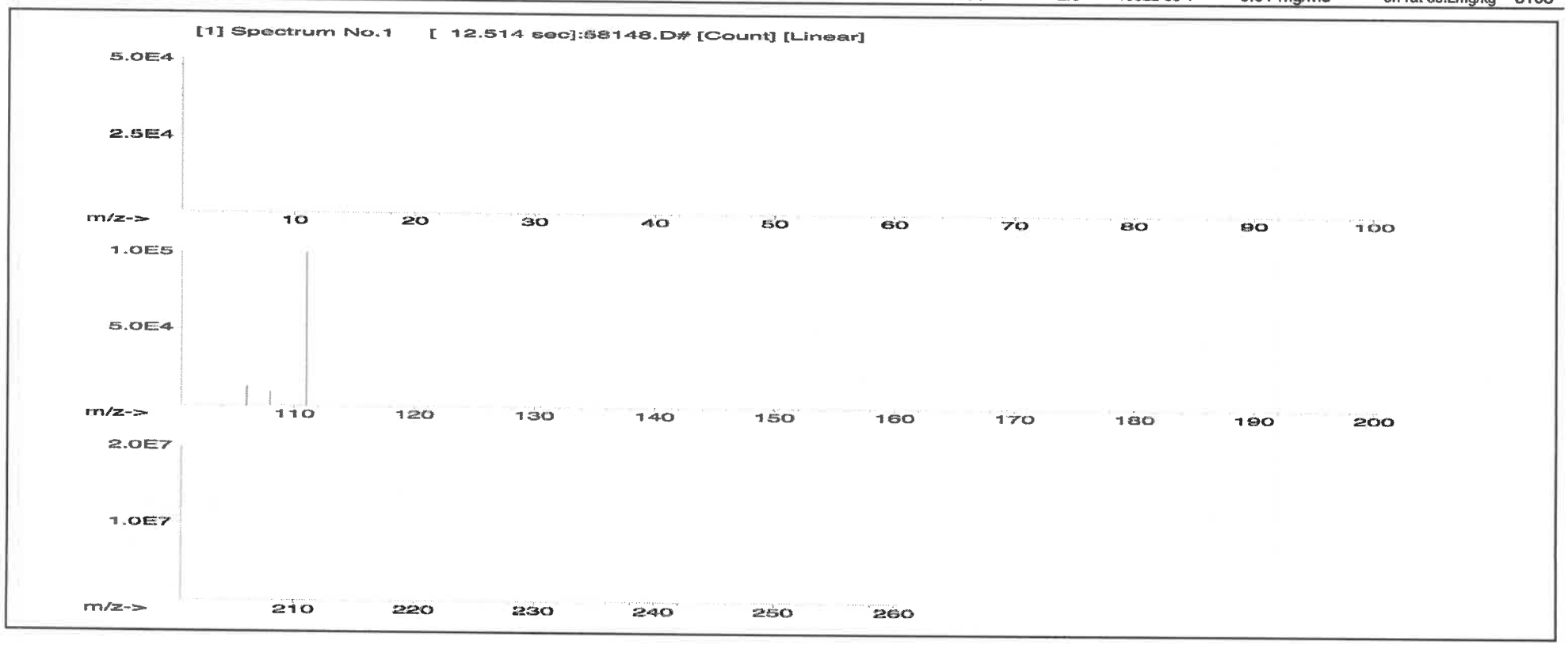
CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
Lot Number:	**070124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Cadmium (Cd)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Aleah O'Brady		
Formulated By:	Aleah O'Brady	070124
Pedro Rentas		
Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R : 01/03/24. M5810, M5811

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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 051523
Description: Iron (Fe)

Expiration Date: 051526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 5000.1

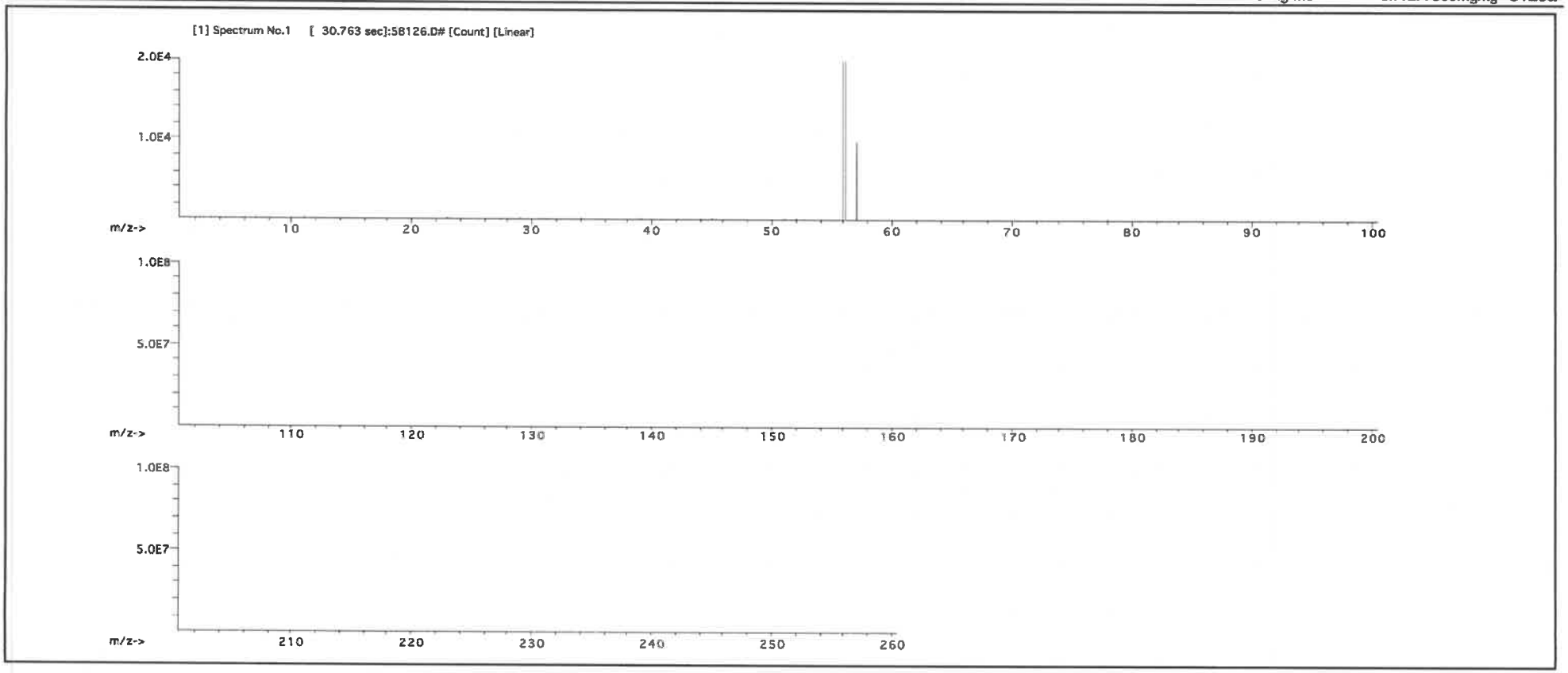
	Lot #		
Solvent:	21110221	Nitric Acid	
5.0%	250.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.12	Flask Uncertainty		

Giovanni Esposito

Formulated By: Giovanni Esposito 051523

Reviewed By: Pedro L. Rentas 051523

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron (Fe)	IN346	2302010-500	10000	99.995	0.10	100.0	50.0034	50.0111	**10001.5**	**20.0**	7439-89-6	5 mg/m3	orl-rat 7500mg/kg	3126a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.10	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.05	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.10
B	<0.02	Cu	<0.10	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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RD:05/14/2024

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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-1
Lot Number:	T2-MEB723367
Matrix:	5% (v/v) HNO3

Value / Analyte(s):	1 000 µg/mL ea: Potassium,	
	600 µg/mL ea: Phosphorus,	
	300 µg/mL ea: Sodium,	Iron,
	200 µg/mL ea: Magnesium, Cerium, Thallium,	Aluminum, Selenium,
	100 µg/mL ea: Lead,	Calcium,
	80 µg/mL ea: Arsenic,	
	70 µg/mL ea: Mercury,	
	50 µg/mL ea: Nickel,	
	40 µg/mL ea: Chromium,	
	30 µg/mL ea: Copper, Vanadium,	Boron,
	20 µg/mL ea: Zinc, Barium, Cadmium, Manganese,	Strontium, Beryllium, Cobalt, Lithium,
	7.5 µg/mL ea: Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	80.0 ± 0.7 µg/mL
Barium, Ba	20.00 ± 0.09 µg/mL	Beryllium, Be	20.00 ± 0.13 µg/mL
Boron, B	30.00 ± 0.18 µg/mL	Cadmium, Cd	20.00 ± 0.09 µg/mL
Calcium, Ca	100.0 ± 0.4 µg/mL	Cerium, Ce	200.0 ± 0.8 µg/mL
Chromium, Cr	40.00 ± 0.30 µg/mL	Cobalt, Co	20.00 ± 0.10 µg/mL
Copper, Cu	30.00 ± 0.13 µg/mL	Iron, Fe	300.0 ± 1.3 µg/mL
Lead, Pb	100.0 ± 0.4 µg/mL	Lithium, Li	20.00 ± 0.08 µg/mL
Magnesium, Mg	200.0 ± 0.8 µg/mL	Manganese, Mn	20.00 ± 0.08 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.00 ± 0.22 µg/mL
Phosphorus, P	600.0 ± 2.7 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	200.0 ± 1.3 µg/mL	Silver, Ag	7.50 ± 0.03 µg/mL
Sodium, Na	300.0 ± 1.4 µg/mL	Strontium, Sr	20.01 ± 0.08 µg/mL
Thallium, Tl	200.0 ± 1.4 µg/mL	Vanadium, V	30.00 ± 0.13 µg/mL
Zinc, Zn	20.00 ± 0.09 µg/mL		

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Ce	ICP Assay	3110	090504
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 30, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES

Refine your results. Redefine your industry.

Certificate of Analysis

RD:05/14/2024

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-2
Lot Number:	U2-MEB731108
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	200 µg/mL ea: Silica, 80 µg/mL ea: Antimony, 70 µg/mL ea: Tin, 40 µg/mL ea: Molybdenum, 20 µg/mL ea: Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.6 µg/mL	Molybdenum, Mo	40.03 ± 0.18 µg/mL
Silica, SiO2	200.2 ± 1.3 µg/mL	Tin, Sn	70.0 ± 0.4 µg/mL
Titanium, Ti	20.01 ± 0.13 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO2	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 17, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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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 Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	S2-HG709270
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO_3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO_3 / LDPE container, stable in 10% HNO_3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO_3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO_3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxide (Soluble in HNO_3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 22, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

N 5466

Certified Reference Material CRM

R: 03/01/23 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

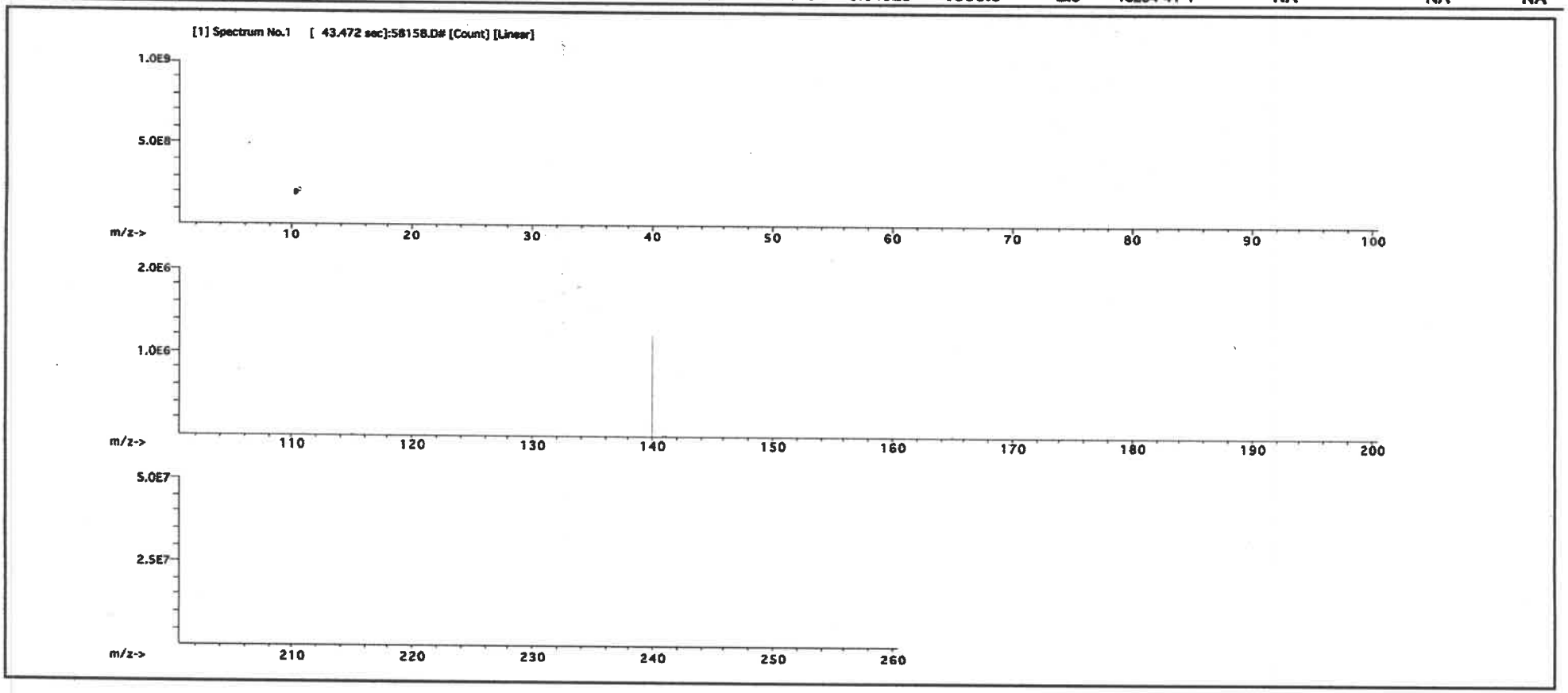
Part Number: 57058
Lot Number: 061322
Description: Cerium (Ce)

Expiration Date: 061325
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

	Lot #	
Solvent:	20510011	Nitric Acid
2%	20.0 (mL)	Nitric Acid

Formulated By:	Lawrence Barry	061322
Reviewed By:	Pedro L. Rentas	061322

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	3.04923	1000.0	2.0	10294-41-4	NA	NA	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5467 R: 03/01/23 (LA)

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CERTIFIED WEIGHT REPORT:

Part Number: 57058
Lot Number: 020623
Description: Cerium (Ce)

Expiration Date: 020626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

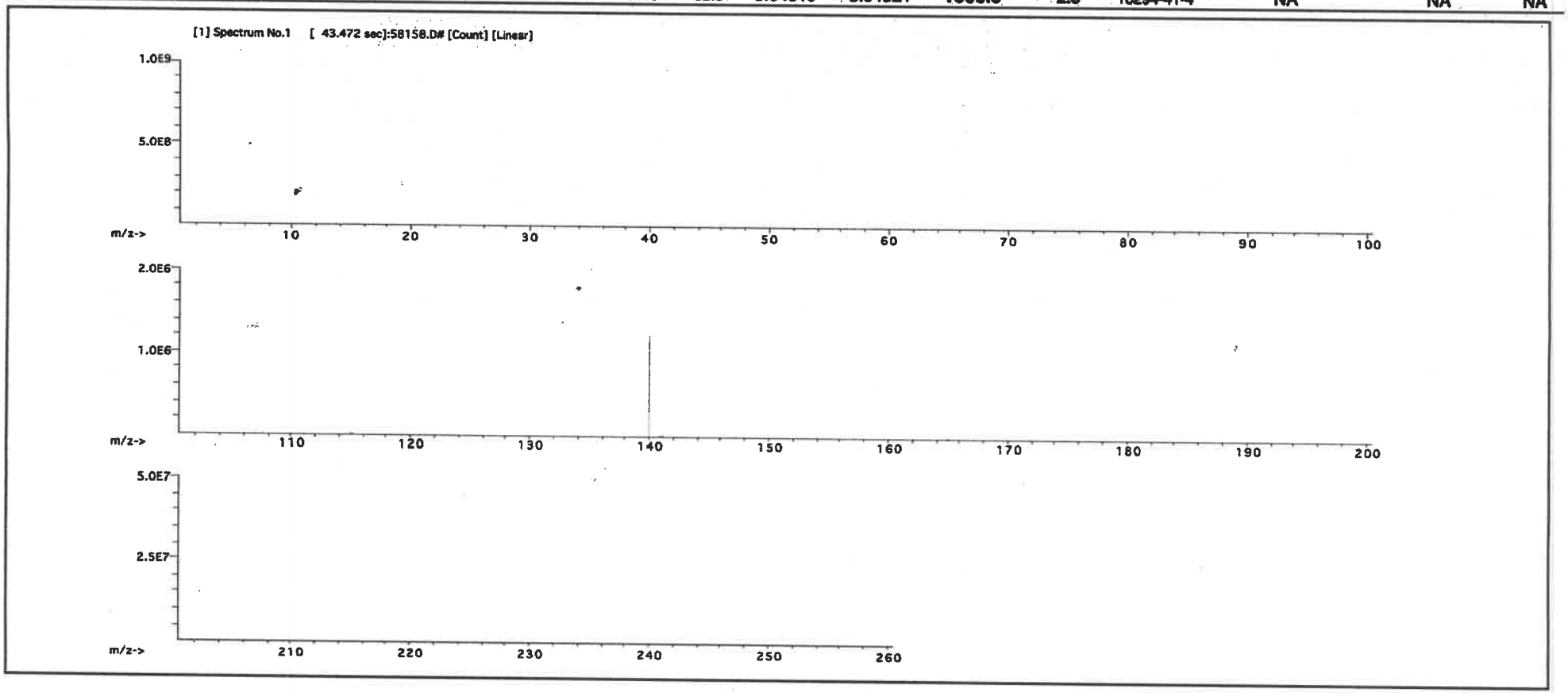
Weight shown below was diluted to (mL): 1000.12 0.058 Flask Uncertainty

		Lot #	
Solvent:	21110221	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	020623
Reviewed By:	Pedro L. Rentas	020623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04921	**1000.0**	**2.0**	10294-41-4	NA	NA	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5658 R! 8/25/23

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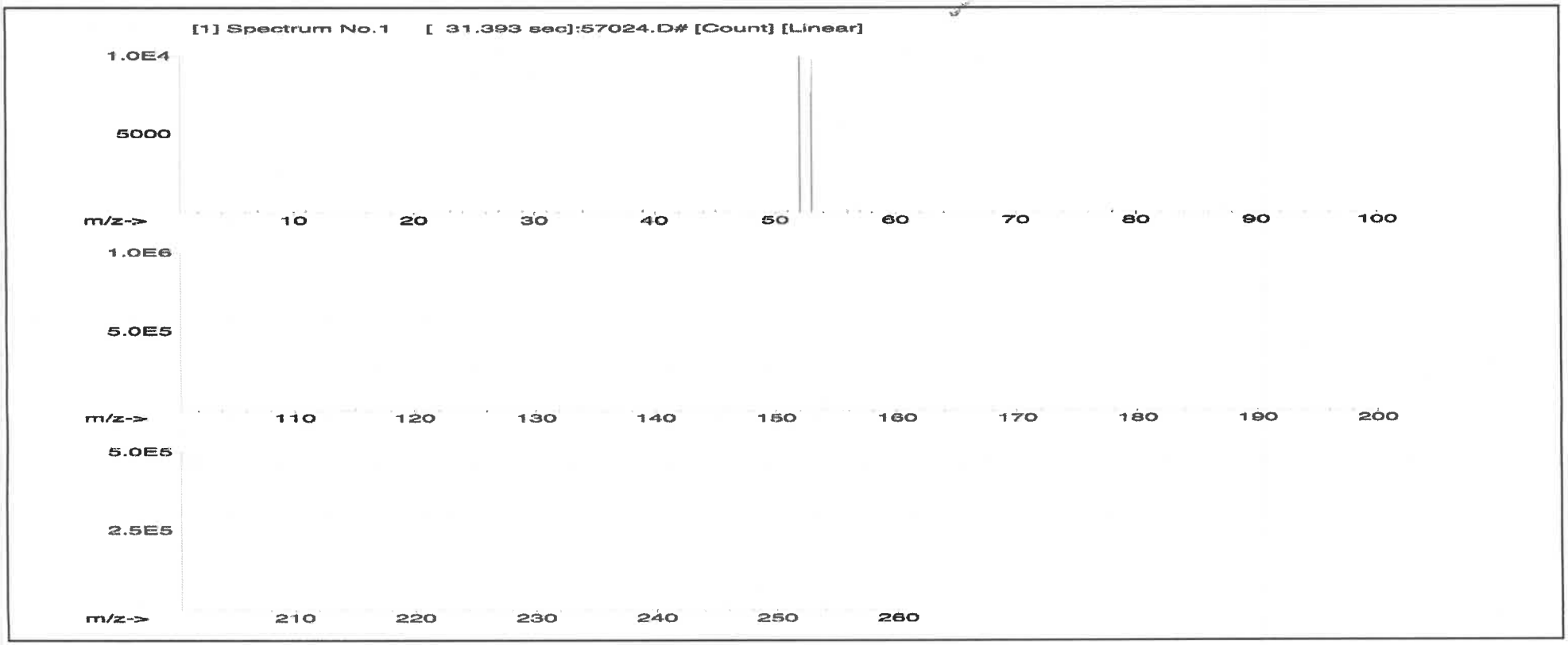
CERTIFIED WEIGHT REPORT:

		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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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M5697 R: 10/27/23

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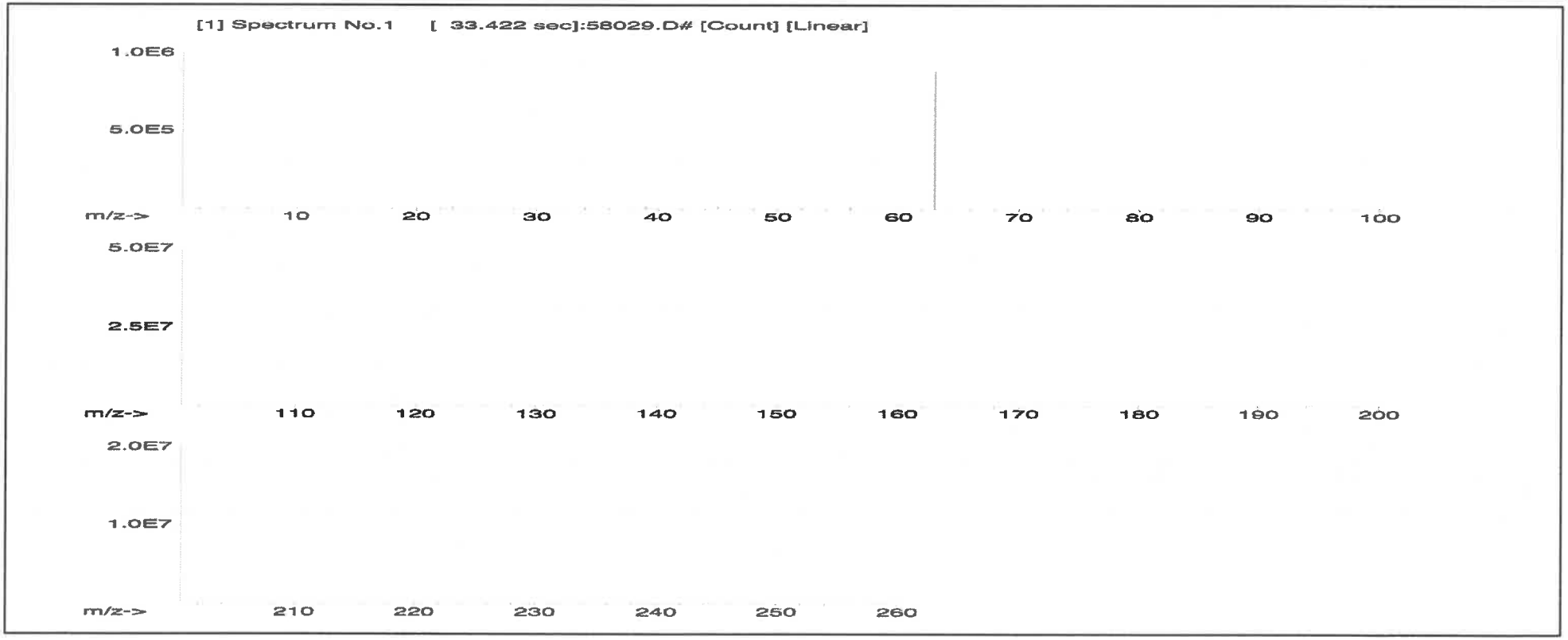
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Copper (Cu)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	100223	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 12/20/23 M5747

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CERTIFIED WEIGHT REPORT:

Part Number: 57082
Lot Number: 100923
Description: Lead (Pb)

Expiration Date: 100926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

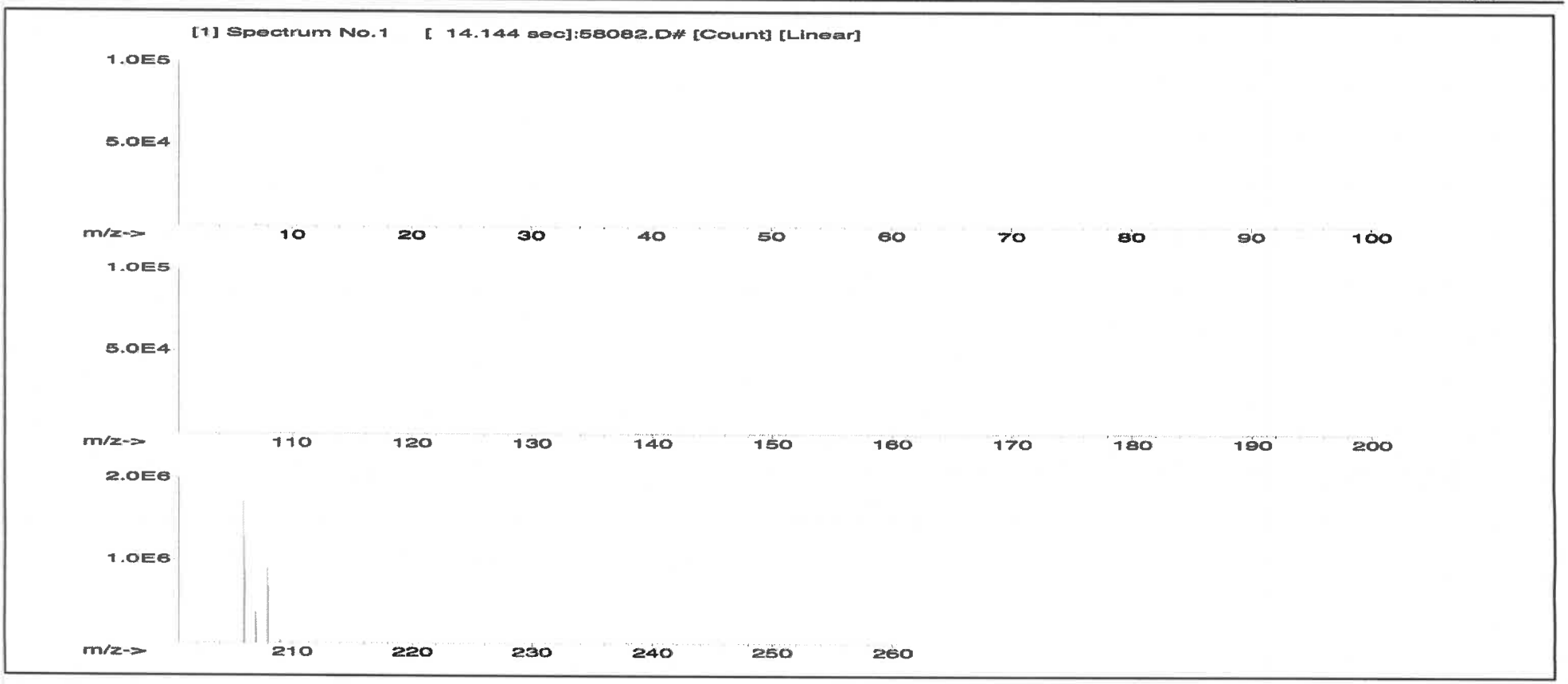
Weight shown below was diluted to (mL): 3000.41 ± 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	100923
Reviewed By:	Pedro L. Rentas	100923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	1000	99.999	0.10	62.5	4.80071	4.80077	**1000.0**	**2.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 12/20/23 M5748

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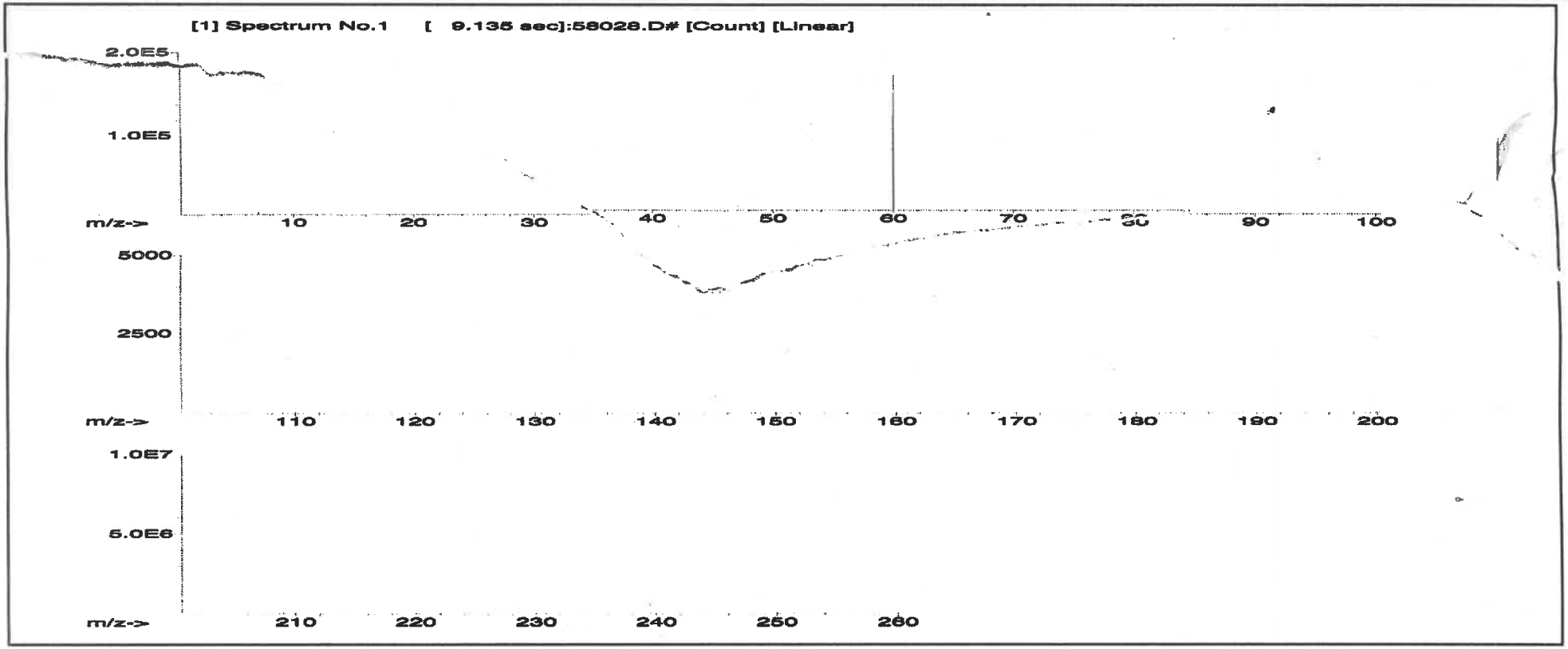
CERTIFIED WEIGHT REPORT:

		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



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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R: 02/09/24 M5798

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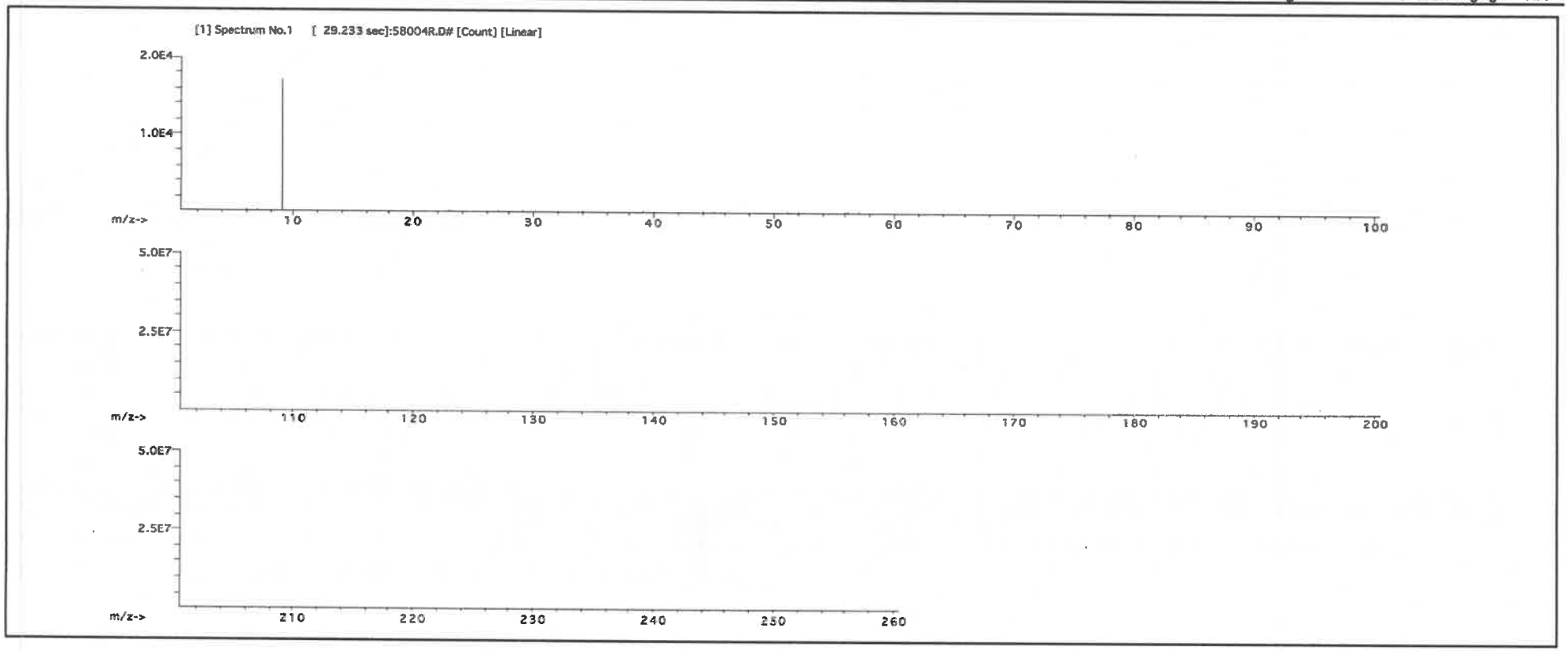
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

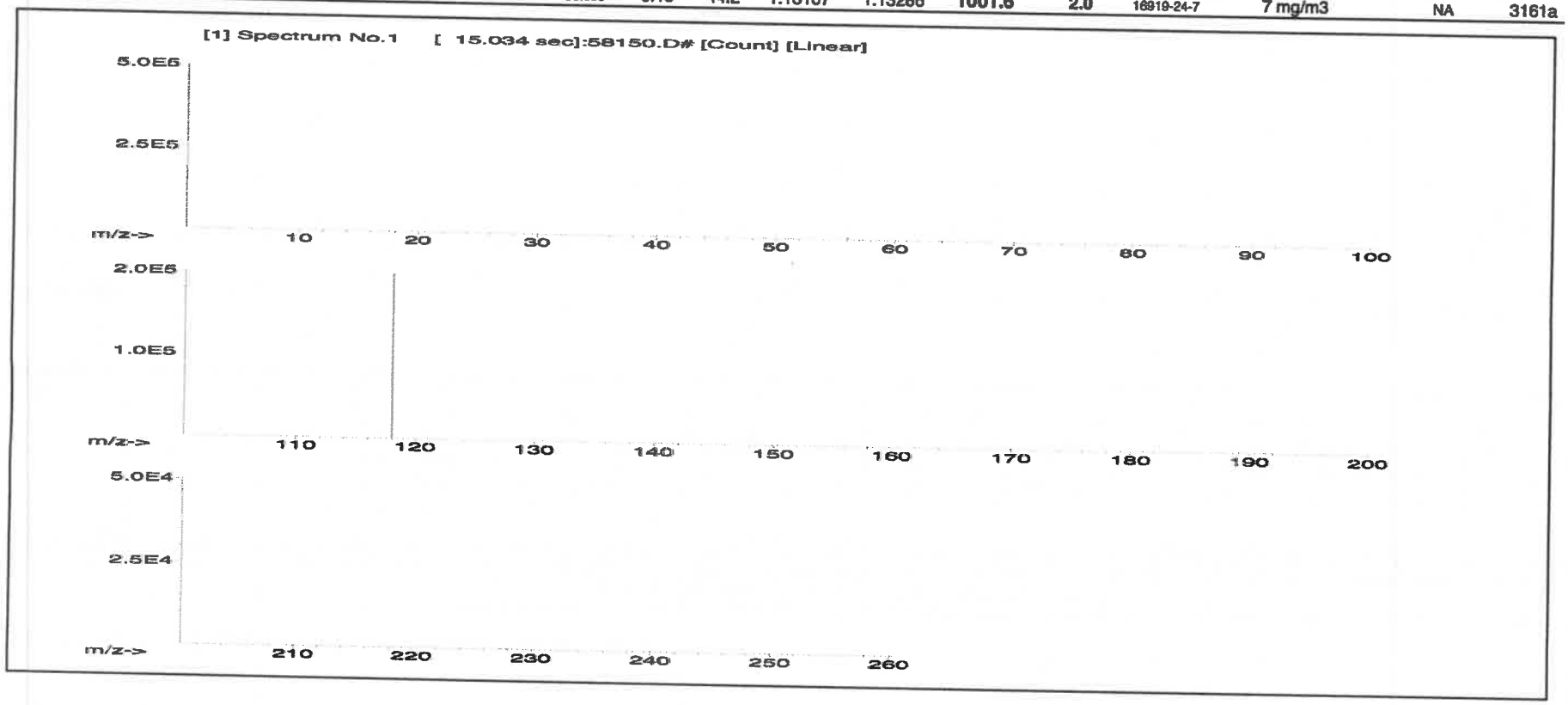
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



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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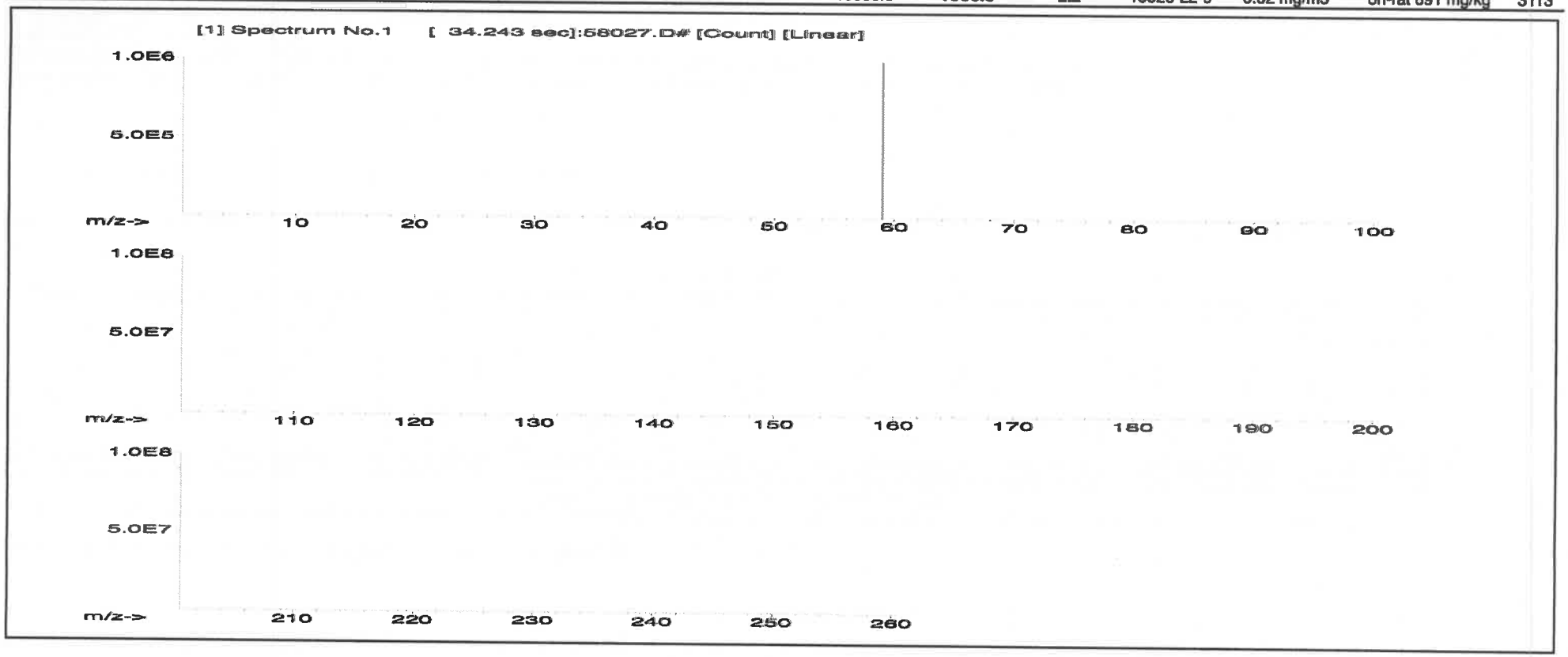
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**				
		2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091923
Reviewed By:	Pedro L. Rentas	091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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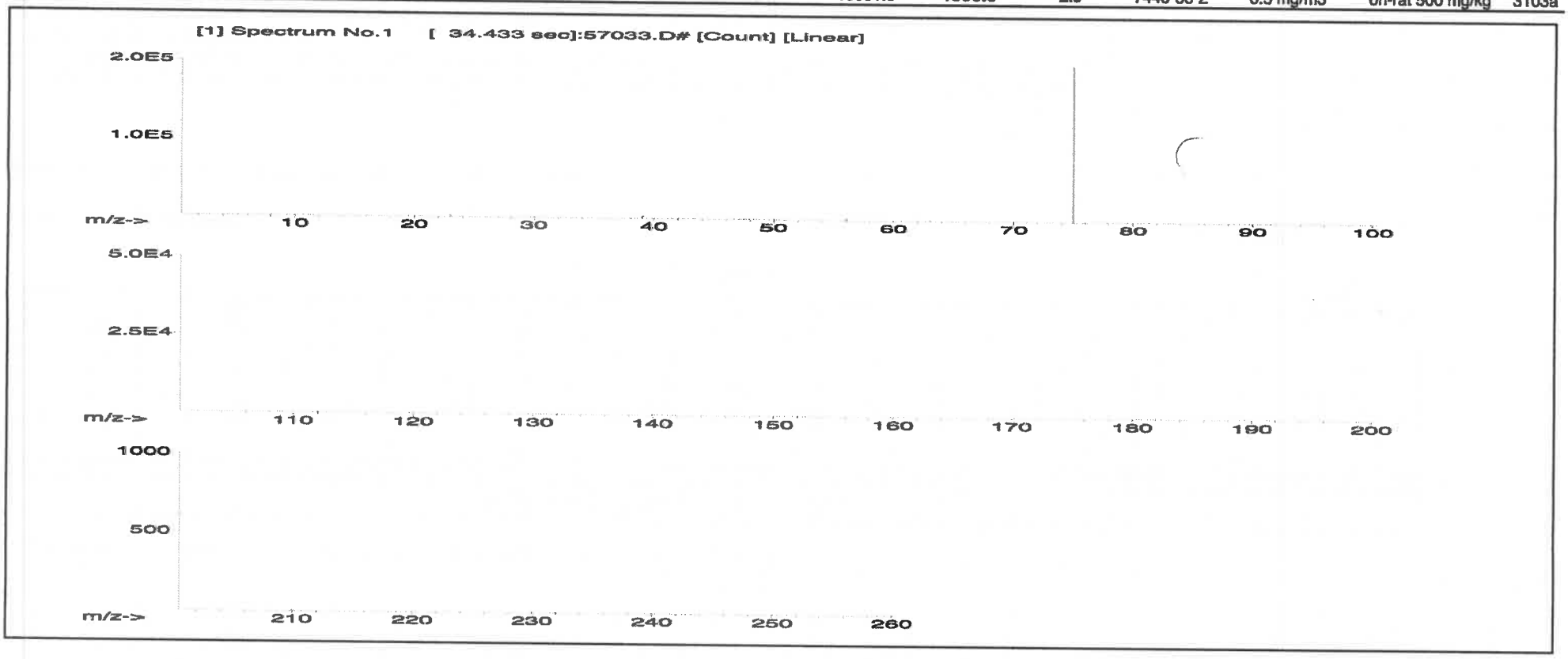
CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	24002546	Nitric Acid		
Lot Number:	**111323**				
Description:	**Arsenic (As)**	2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	**2.0**	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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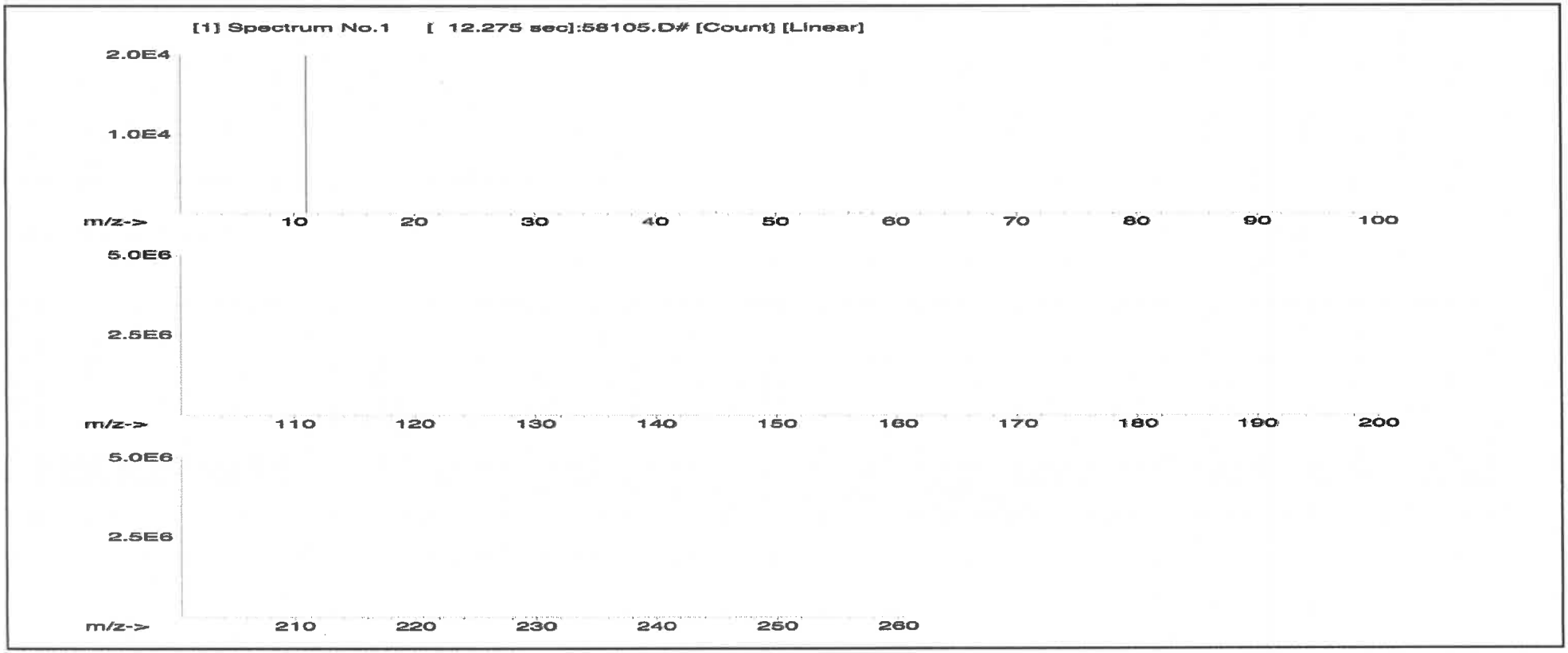
CERTIFIED WEIGHT REPORT:

Part Number:	**57005**		**Solvent:**	MKBQ8597V	Ammonium hydroxide
Lot Number:	**071123**				
Description:	**Boron (B)**		2.0%	40.0 (mL)	Ammonium hydroxide
Expiration Date:	071126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	1999.48	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Boric acid (B)	IN018	BV092016A1	1000	99.9999	0.10	17.3	11.55772	11.56201	**1000.4**	**2.0**	10043-35-3	2 mg/m3	orl-rat 2660 mg/kg	3107



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	T	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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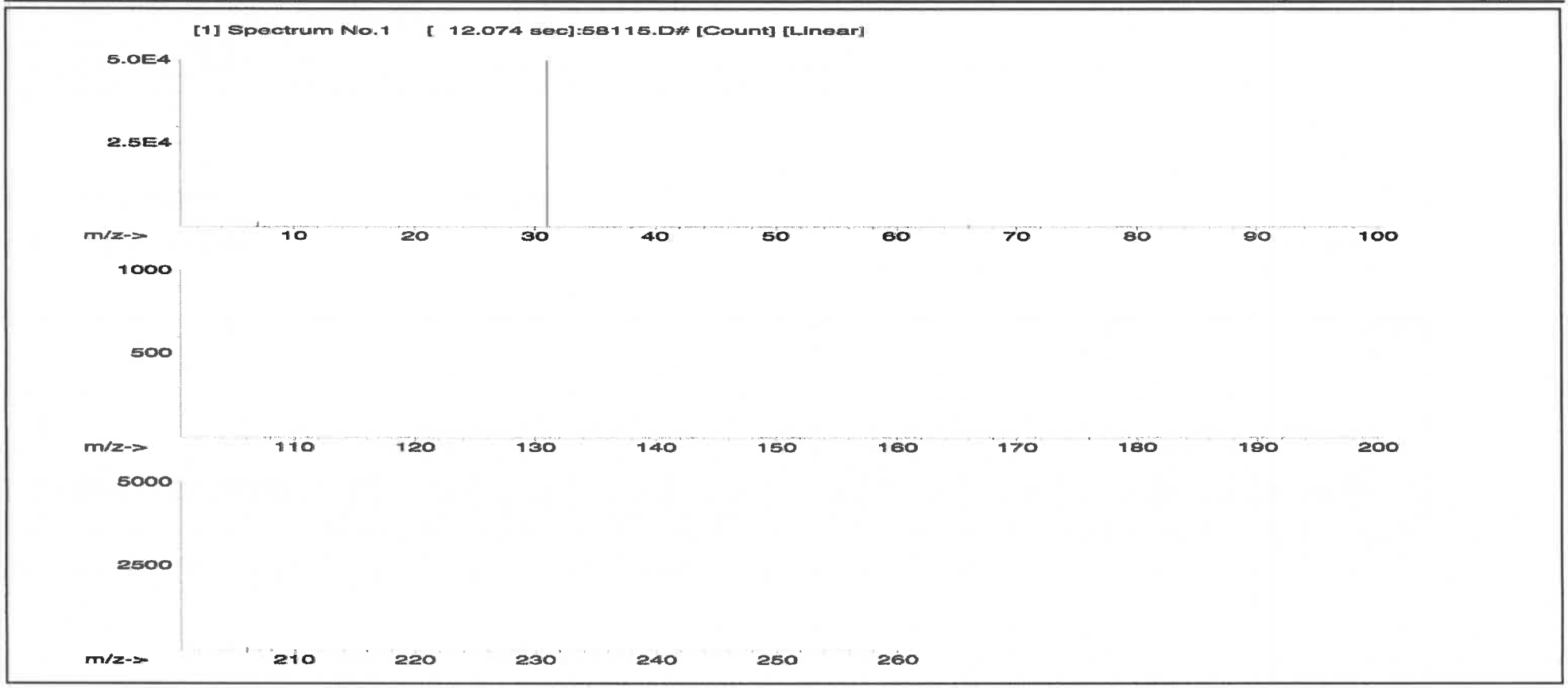
CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
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As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<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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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO_3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 17, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

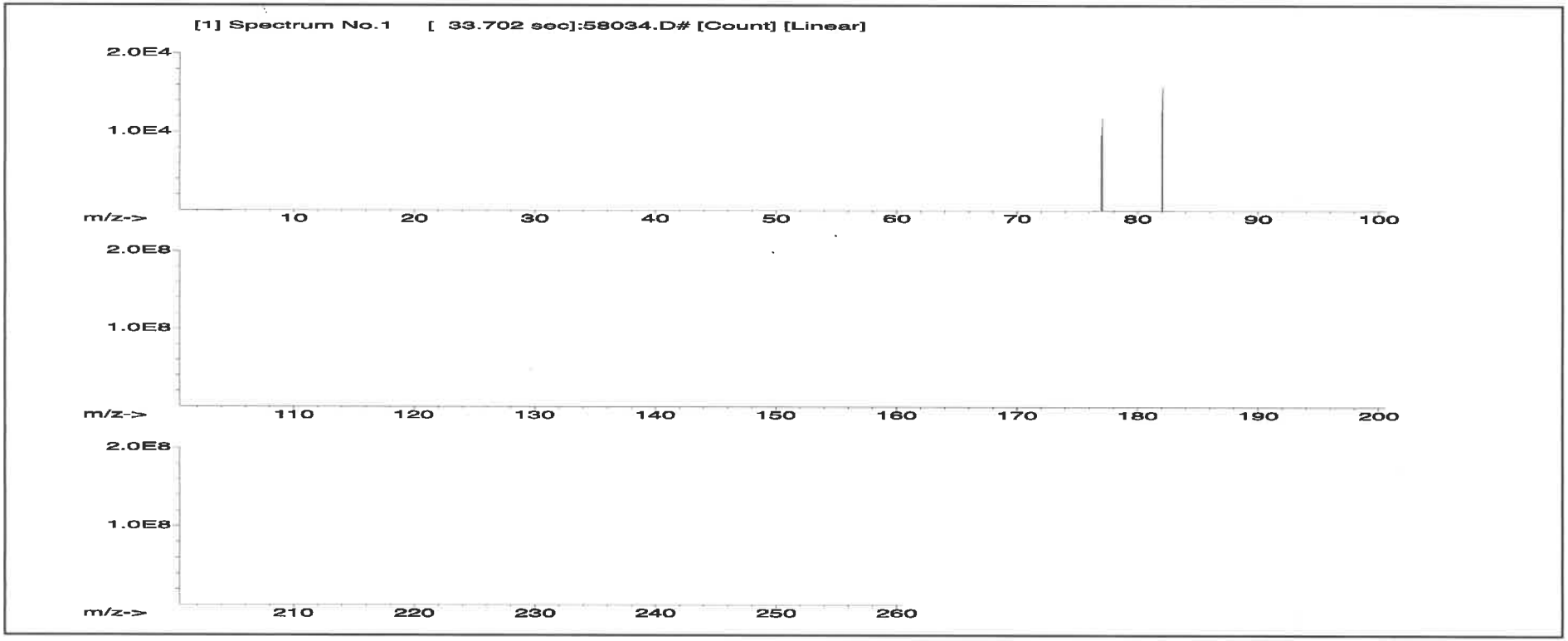
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* 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

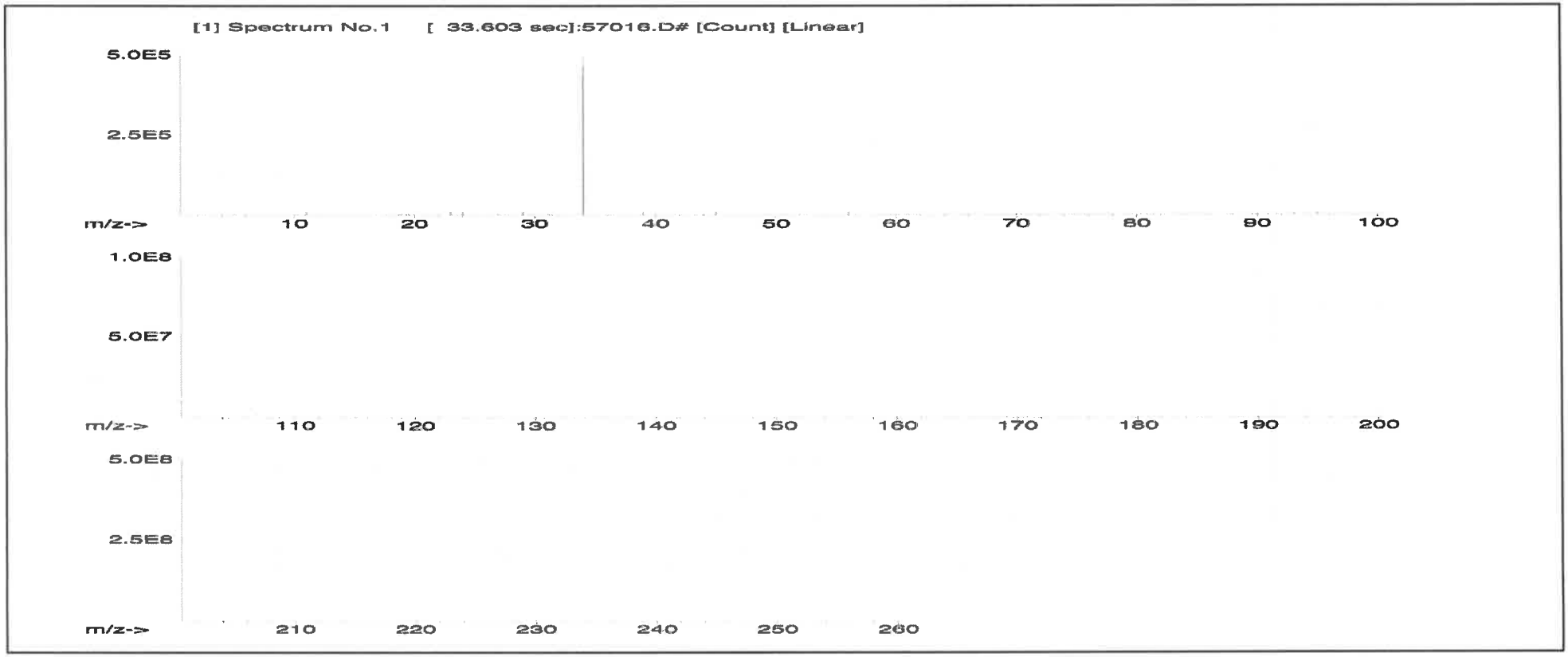
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



Absolute Standards, Inc.
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:

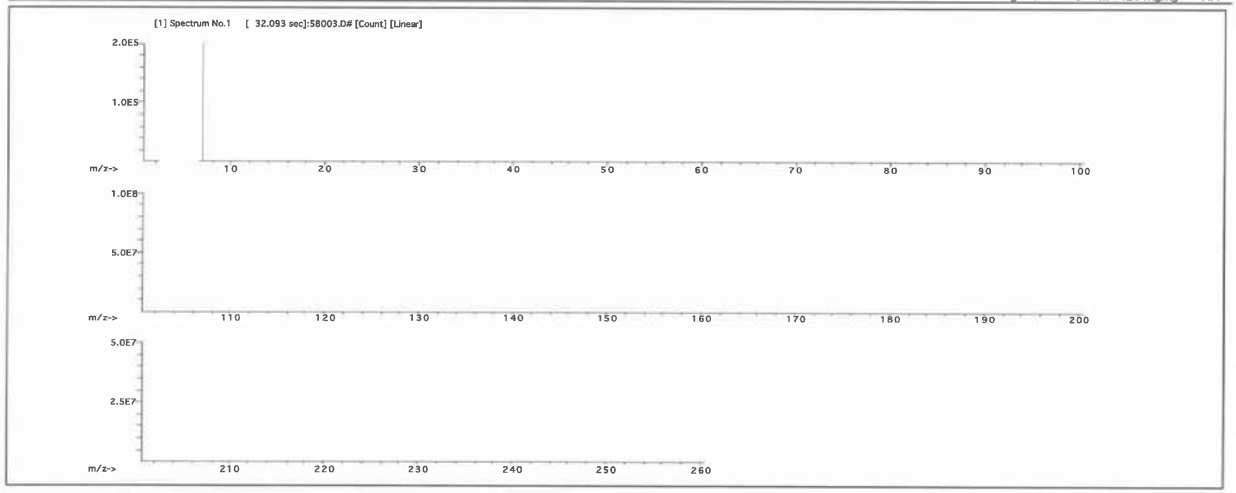
		Lot #	Solvent:
Part Number:	**57003**	24002546	Nitric Acid
Lot Number:	**062124**		
Description:	**Lithium (Li)**		
		2.0%	5.0 (mL) Nitric Acid
Expiration Date:	062127		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05 Balance Uncertainty	
Volume shown below was diluted to (mL):	250.11	0.016 Flask Uncertainty	

Giovanni Esposito

Formulated By: Giovanni Esposito 062124

Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

MS984
R:6/14/24

P: 800-669-6799/540-585-3030
F: 540-585-3012
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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:	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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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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:
	Calcium, Potassium,
	Magnesium, Sodium,
	2 000 µg/mL ea:
	Aluminum, Barium,
	1 000 µg/mL ea:
	Iron,
	500 µg/mL ea:
	Nickel, Vanadium,
	Zinc, Cobalt,
	Manganese,
	250 µg/mL ea:
	Silver, Copper,
	200 µg/mL ea:
	Chromium,
	50 µg/mL ea:
	Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.00 ± 0.26 µg/mL	Calcium, Ca	5 000 ± 22 µg/mL
Chromium, Cr	200.0 ± 1.0 µg/mL	Cobalt, Co	500.0 ± 2.4 µg/mL
Copper, Cu	250.0 ± 1.0 µg/mL	Iron, Fe	1 000 ± 4 µg/mL
Magnesium, Mg	5 000 ± 20 µg/mL	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Potassium, K	5 000 ± 19 µg/mL
Silver, Ag	250.0 ± 1.1 µg/mL	Sodium, Na	5 000 ± 18 µg/mL
Vanadium, V	499.7 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.118 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

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

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- January 27, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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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:	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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M6074
M6075
M6076
M6077

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EXP.: 9/6/2029

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746762
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 5 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 6 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

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

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R -> 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

R → 1/13/25

M 6127

			Lot #	
Part Number:	**58112**	**Solvent:**	24012496	Nitric Acid
Lot Number:	**112124**			
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	112127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

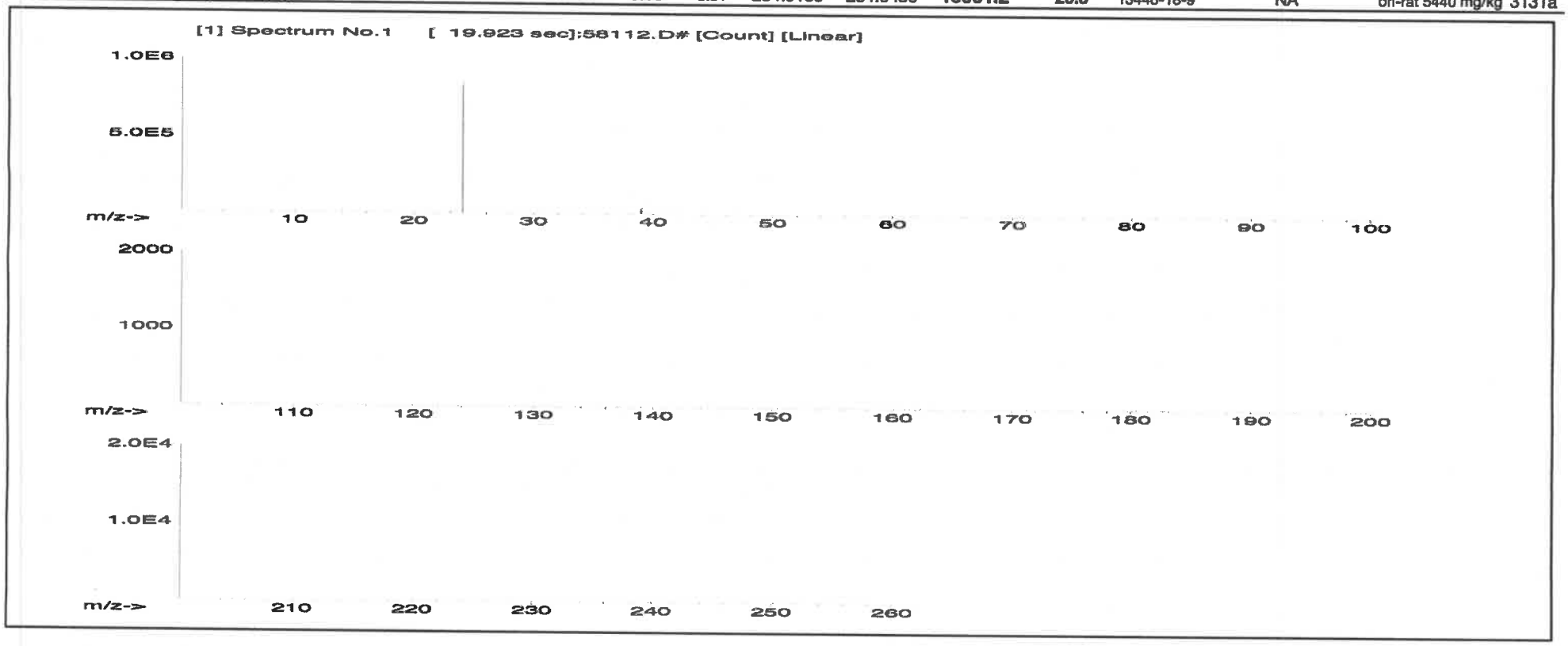
Giovanni Esposito

Formulated By:	Giovanni Esposito	112124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	112124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9183	234.9459	**10001.2**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

R->1/13/28

M6128

Part Number:	**58025**	**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**101124**			
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	101127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

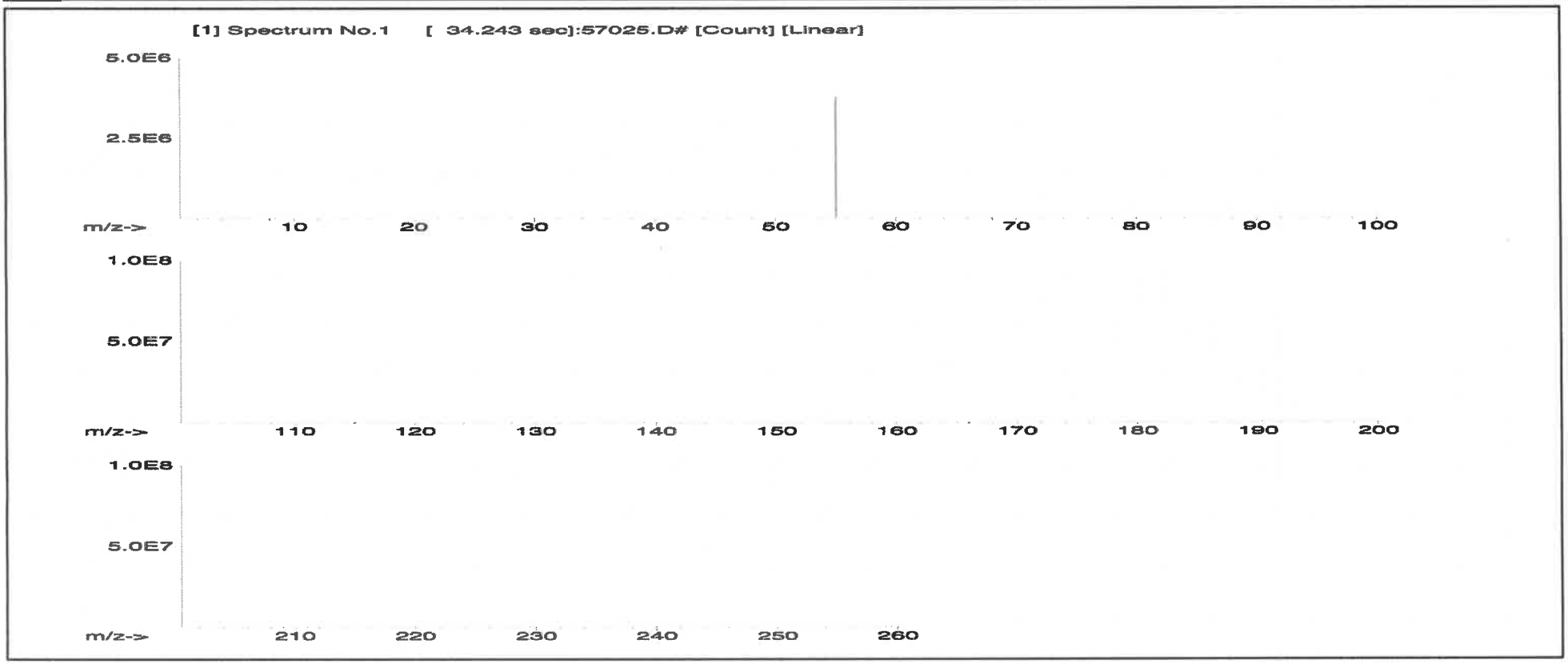
Giovanni Esposito

Formulated By:	Giovanni Esposito	101124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	101124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	**SDS Information** (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate hydrate (Mn)	IN031	MNM092020A1	1000	99.999	0.10	20.8	19.2322	19.2344	**1000.1**	**2.0**	15710-66-4	5 mg/m3	orl-rat >300mg/kg	3132



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Refine your results. Redefine your industry.

Certificate of Analysis

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Christiansburg, VA 24073 USA
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P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

M6137 R→10/3/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI1
Lot Number:	V2-SI744713
Matrix:	tr. HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon
Starting Material:	Silica
Starting Material Lot#:	1771
Starting Material Purity:	99.9981%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 6 µg/mL

Density: 1.003 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**999 ± 5 µg/mL** ICP Assay NIST SRM Traceable to 3150 Lot Number: S2-SI702546
Assay Method #2	**1000 ± 7 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	O	Na		0.001656	M	Se	<	0.022000	M	Zn	<	0.002500
M	Al		0.010787	M	Fe	<	0.027000	M	Nb	<	0.001300	s	Si	<		O	Zr	<	0.001900
M	As	<	0.001900	M	Ga	<	0.001300	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	M	Ni	<	0.005500	M	Sn		0.000096				
M	B		0.016180	M	Ge	<	0.001900	M	Os	<	0.000610	O	Sr		0.000092				
M	Ba		0.000096	M	Hf		0.000423	i	P	<		M	Ta		0.002542				
O	Be	<	0.000570	M	Hg	<	0.000610	M	Pb	<	0.000310	M	Tb	<	0.000310				
M	Bi	<	0.000310	M	Ho	<	0.000610	M	Pd	<	0.000610	M	Te	<	0.000910				
O	Ca		0.011557	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.001900				
M	Cd	<	0.000310	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.001078				
M	Ce	<	0.000610	O	K		0.000577	M	Rb	<	0.009100	M	Tl	<	0.000310				
M	Co	<	0.001600	M	La	<	0.000310	M	Re	<	0.000310	M	Tm	<	0.000310				
M	Cr	<	0.010000	O	Li	<	0.000460	M	Rh	<	0.000310	M	U	<	0.000310				
M	Cs	<	0.000310	M	Lu	<	0.000310	M	Ru	<	0.000310	O	V	<	0.001300				
M	Cu	<	0.002500	O	Mg		0.001348	O	S	<	0.570000	M	W	<	0.001900				
M	Dy	<	0.000310	M	Mn	<	0.002500	M	Sb	<	0.000310	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000310	O	Sc	<	0.000590	M	Yb	<	0.000310				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphic (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 10, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 10, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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

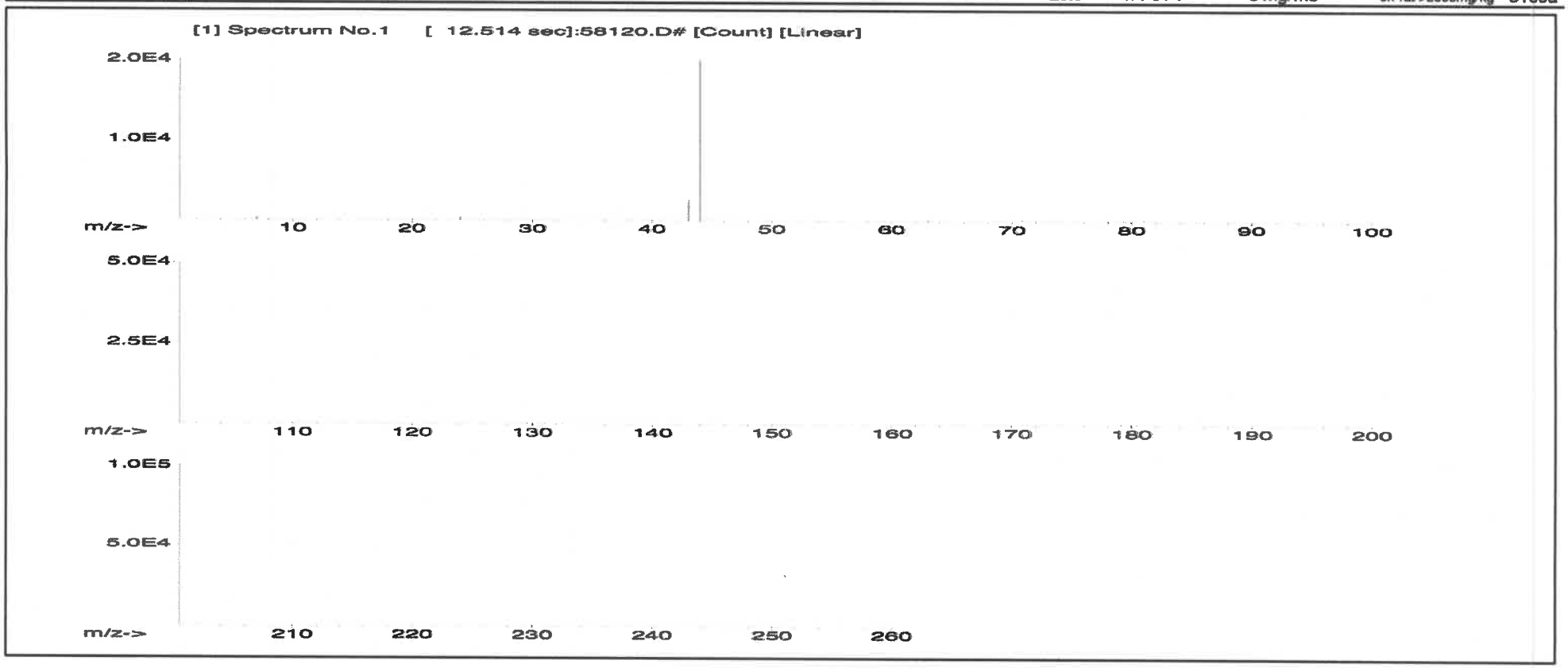
Weight shown below was diluted to (mL): 4000.1 0.15 Flask Uncertainty

	Lot #		
Solvent:	24012496	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	

Giovanni Esposito
Formulated By: Giovanni Esposito 121824

Pedro Rentas
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



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).

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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

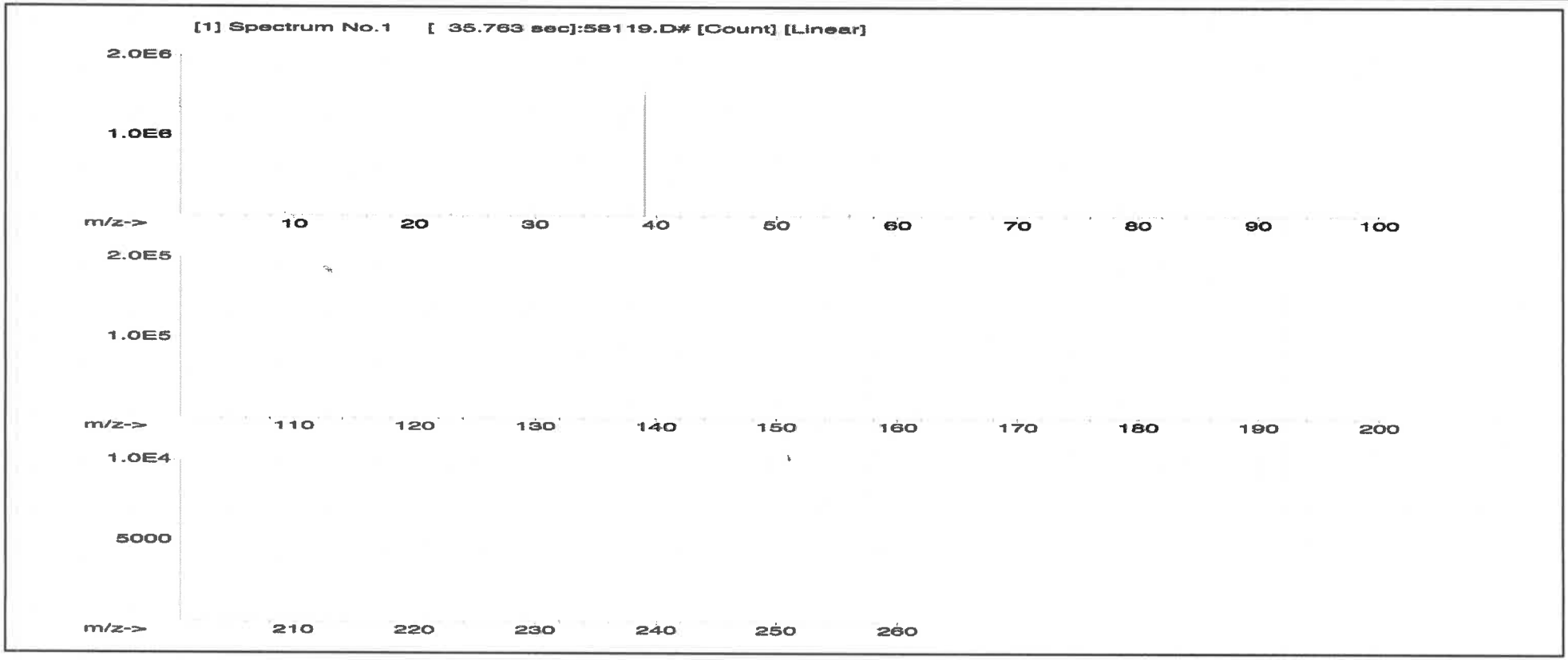
Part Number:	**57119**		**Lot #**		
Lot Number:	**103024**	**Solvent:**	24002546	Nitric Acid	
Description:	**Potassium (K)**	2%	80.0 (mL)	Nitric Acid	
Expiration Date:	103027				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.1	0.15	Flask Uncertainty		

M6141
M6142
M6143

Giovanni Esposito

Formulated By:	Giovanni Esposito	103024
Reviewed By:	Pedro L. Rentas	103024

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD062022A1	10000	99.999	0.10	37.7	106.1040	######	**10001.1**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3750 mg/kg	3141a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

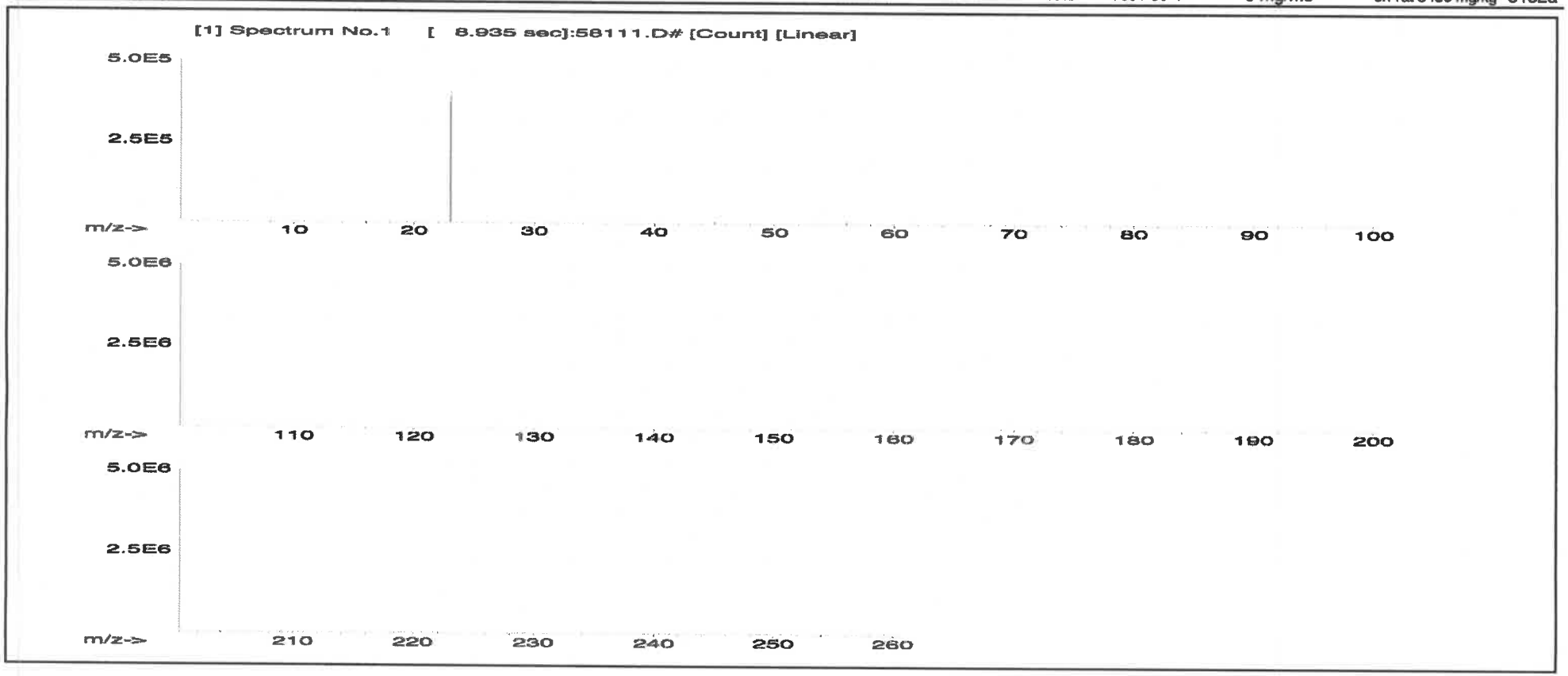
R->1/13/25

M6144

			Lot #	
Part Number:	**58111**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**072424**			
Description:	**Sodium (Na)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	072427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

Formulated By:	Benson Chan	072424
Reviewed By:	Pedro L. Rentas	072424

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	148.7096	######	**10000.0**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 121724
Description: Zinc (Zn)

R → 1/13/25

M6145

Expiration Date: 121727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

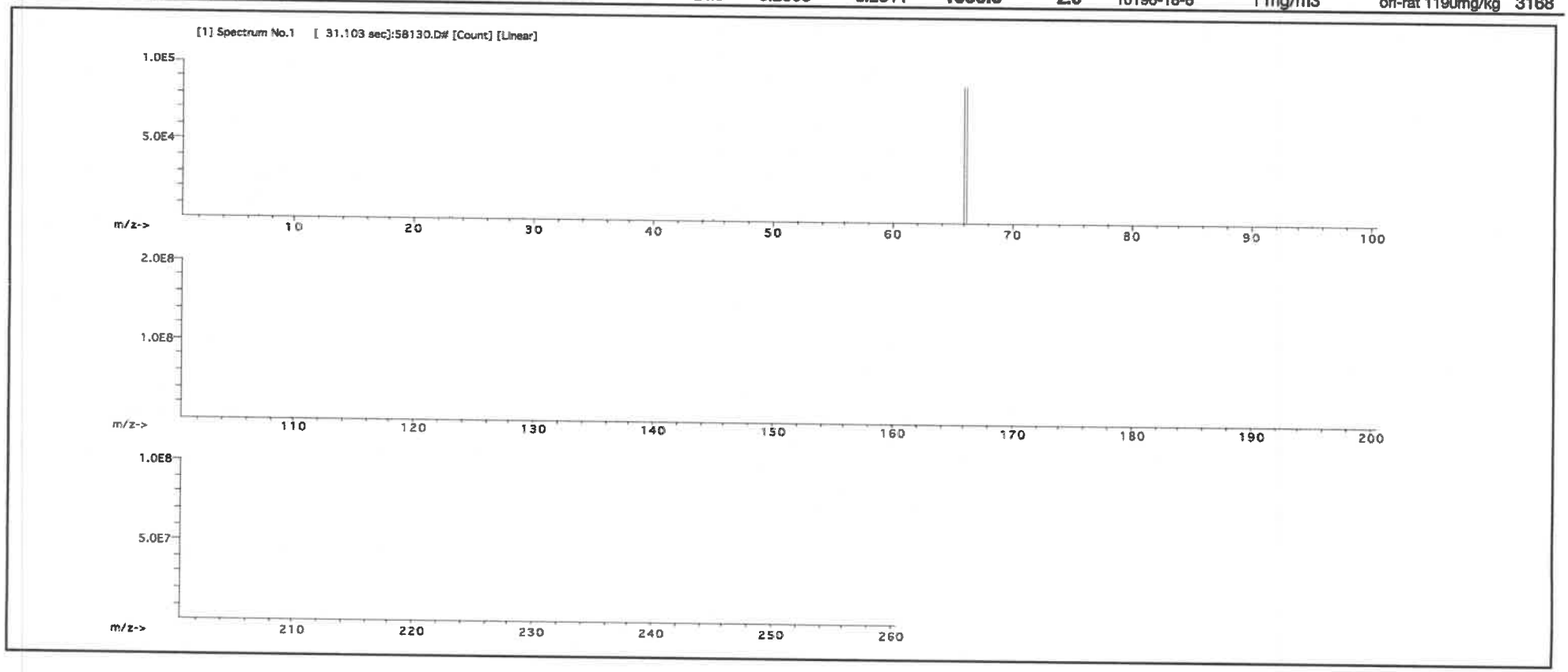
		Lot #	
Solvent:	24012496	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 2000.1 0.10 Flask Uncertainty

Aleah O'Brady

Formulated By:	Aleah O'Brady	121724
Reviewed By:	Pedro L. Rentas	121724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	8.2308	8.2311	**1000.0**	**2.0**	10196-18-6	1 mg/m3	ori-rat 1190mg/kg	3168



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

R : 4/20/21

QATS LABORATORY INORGANIC REFERENCE MATERIAL INITIAL CALIBRATION VERIFICATION SOLUTIONS (ICV1, ICV5, AND ICV6)

M6150

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

M6151

R→ 1/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R-02102/2025

M-6158

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
Trace Impurities - Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities - Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities - Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities - Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities - Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count - 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

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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

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

m-6162

R. Date :- 04/27/2025

Material No.: 9606-03
Batch No.: 24H0162012
Manufactured Date: 2024-06-28
Retest Date: 2029-06-27
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 – 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	0.1 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	0.1 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 1 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 1 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 1.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24H0162012

Test	Specification	Result
Trace Impurities - Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities - Potassium (K)	≤ 50 ppb	< 1 ppb
Trace Impurities - Silicon (Si)	≤ 50 ppb	1 ppb
Trace Impurities - Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Sodium (Na)	≤ 150.0 ppb	< 1.0 ppb
Trace Impurities - Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Tantalum (Ta)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Thallium (Tl)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Tin (Sn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count - 0.5 µm and greater	≤ 60 par/ml	13 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	5 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24H0162012

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6030

R: 8/5/24

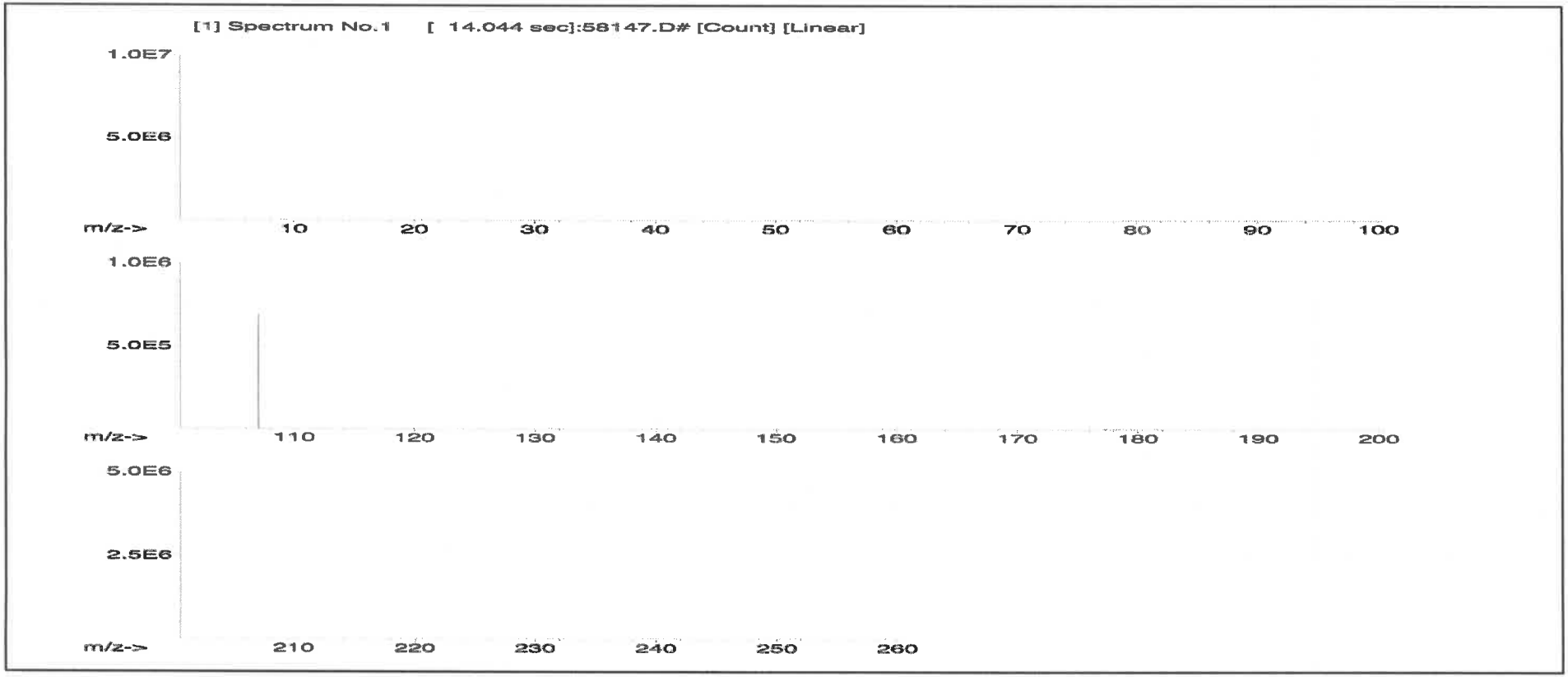
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57047**			**Lot #**	
Lot Number:	**122823**	**Solvent:**	24002546	Nitric Acid	
Description:	**Silver (Ag)**				
		2%	80.0 (mL)	Nitric Acid	
Expiration Date:	122826				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.30	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 10/18/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

MG146

		Lot #	Solvent:		
Part Number:	**57051**	24002546	Nitric Acid		
Lot Number:	**071724**				
Description:	**Antimony (Sb)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	071727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.26	0.058	Flask Uncertainty		

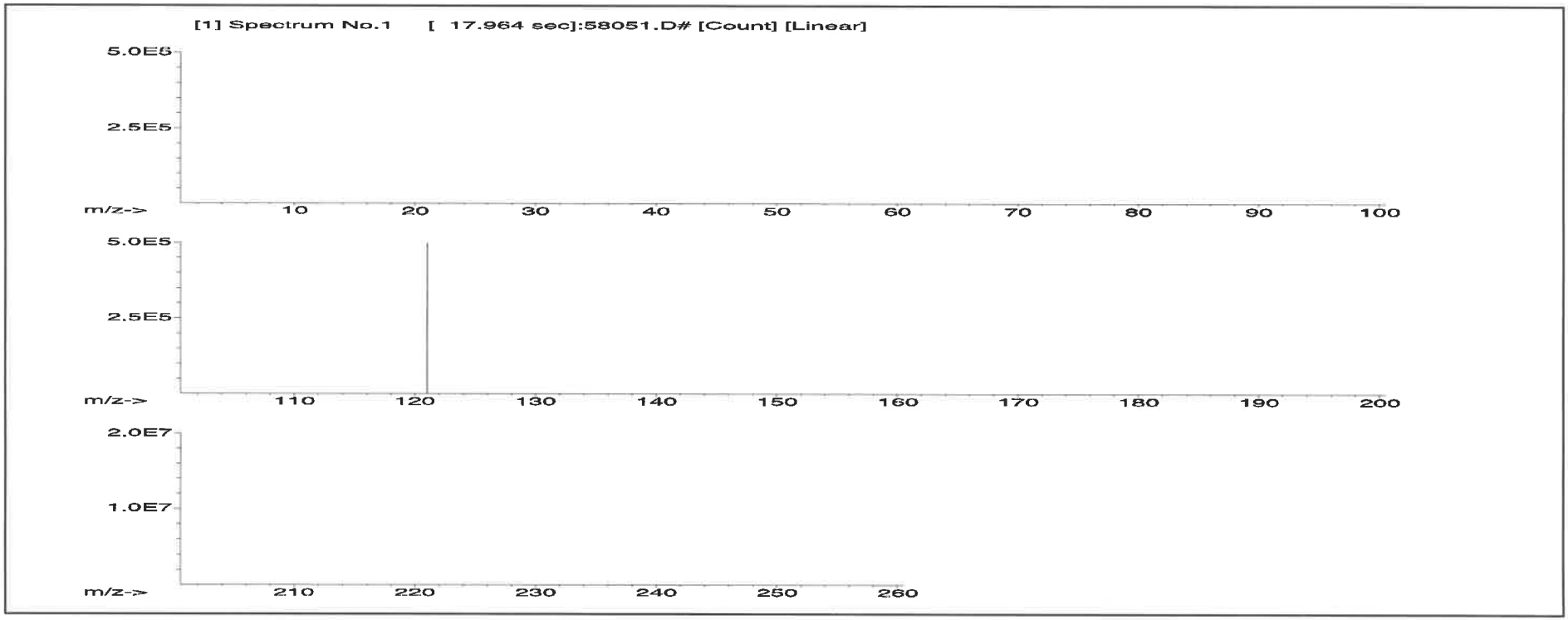
Giovanni Esposito

Formulated By:	Giovanni Esposito	071724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	071724

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	060324	0.1000	200.0	0.084	1000	10001.4	**1000.0**	**2.2**	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

APTIM

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *ICP-AES ICS*

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

M6152

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

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.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

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Instructions for QATS Reference Material: *ICP-AES ICS*

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

M6155

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

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.

INORGANIC VENTURES™

Refine your results. Redefine your industry.

Certificate of Analysis

R: 8/5/24 M6019

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 888.01 ACCREDITED Reference Material Producer Certificate 888.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	U2-SR730227
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	M2-2192
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985

Assay Method #2 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 2 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001980	M	Eu	<	0.000495	O	Na		0.000200	M	Se	<	0.013862	O	Zn		0.000143
O	Al		0.000370	O	Fe		0.000410	M	Nb	<	0.000495	i	Si	<		M	Zr	<	0.000495
M	As	<	0.000495	M	Ga	<	0.000495	M	Nd	<	0.000495	M	Sm	<	0.000495				
M	Au	<	0.000989	M	Gd	<	0.000495	O	Ni	<	0.007631	M	Sn	<	0.000990				
M	B	<	0.039606	M	Ge	<	0.000495	M	Os	<	0.000494	s	Sr	<					
M	Ba		0.006486	M	Hf	<	0.000495	i	P	<		M	Ta	<	0.000495				
M	Be	<	0.000990	M	Hg	<	0.000989	M	Pb	<	0.002970	M	Tb	<	0.000495				
M	Bi	<	0.000495	M	Ho	<	0.000495	M	Pd	<	0.003957	M	Te	<	0.027724				
O	Ca		0.004255	M	In	<	0.000495	M	Pr	<	0.000495	M	Th	<	0.000990				
M	Cd		0.001339	M	Ir	<	0.000494	M	Pt	<	0.002970	M	Ti	<	0.005940				
M	Ce	<	0.004950	O	K	<	0.008184	M	Rb	<	0.002970	M	Tl	<	0.000495				
M	Co	<	0.000495	M	La	<	0.000495	M	Re	<	0.000495	M	Tm	<	0.000495				
O	Cr	<	0.003207	O	Li	<	0.000884	O	Rh	<	0.012829	M	U	<	0.001485				
M	Cs	<	0.000990	M	Lu	<	0.002970	M	Ru	<	0.000989	M	V	<	0.001980				
M	Cu		0.000099	O	Mg		0.000064	i	S	<		M	W	<	0.003960				
M	Dy	<	0.000495	O	Mn		0.000066	M	Sb	<	0.014852	O	Y	<	0.000995				
M	Er	<	0.000495	M	Mo	<	0.001980	M	Sc	<	0.001980	M	Yb	<	0.000495				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 $Sr(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO_3 / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 03, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 03, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6023

R ! 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

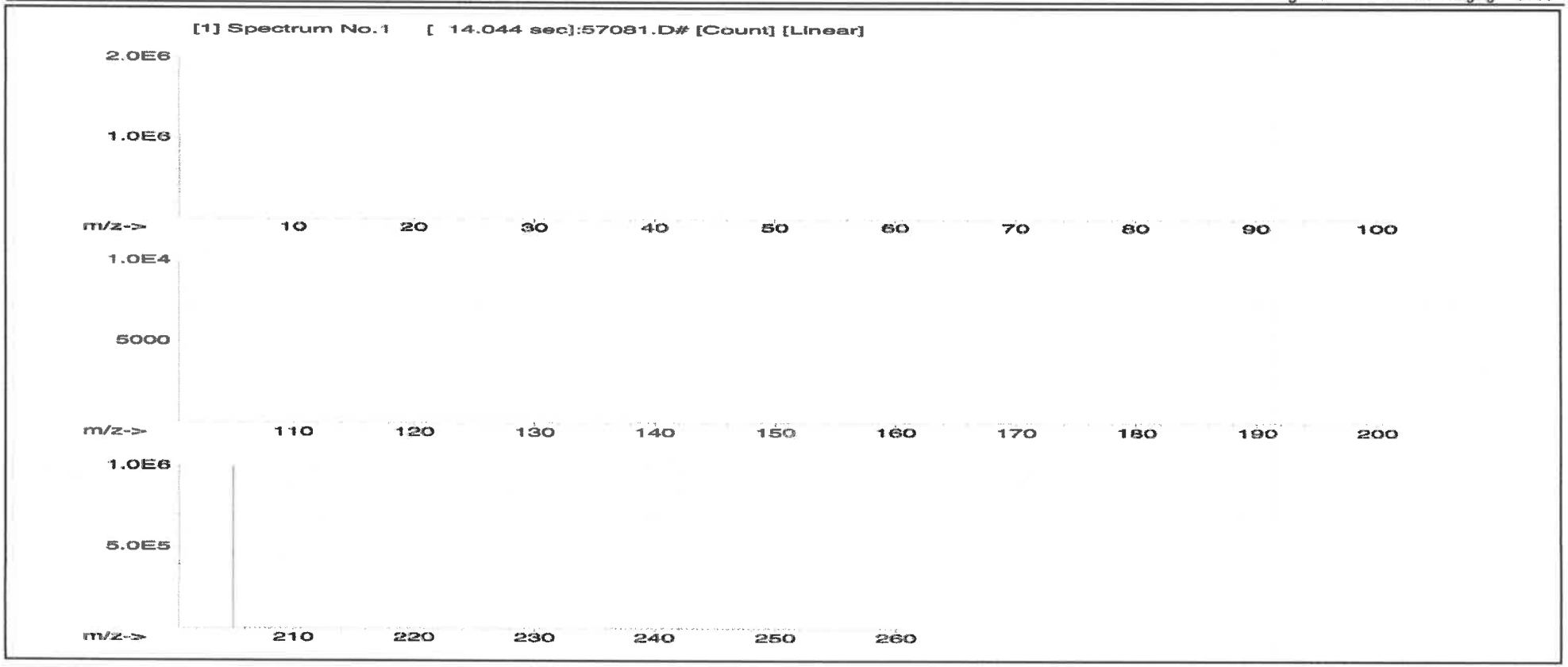
Aleah O'Brady

Formulated By:	Aleah O'Brady	062724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6021

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Rc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**			
Description:	**Vanadium (V)**	24002546	Nitric Acid	
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

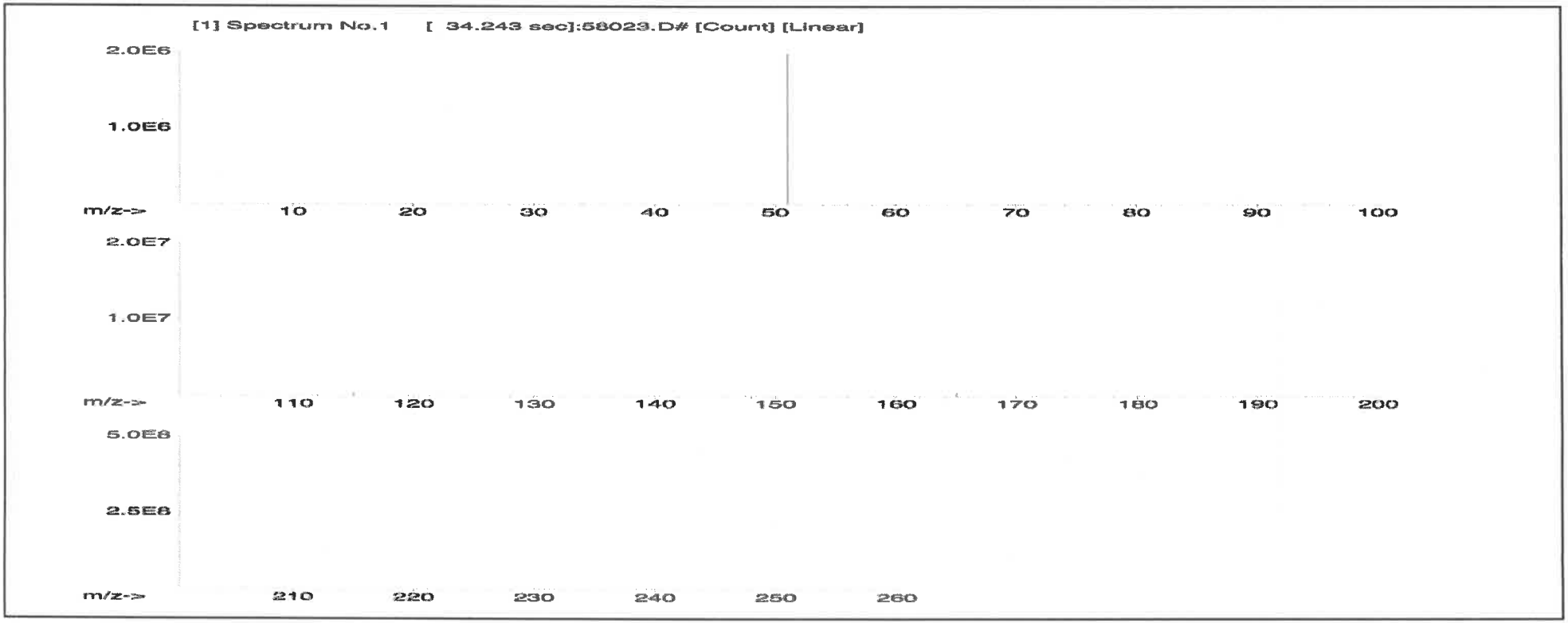
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

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Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

ALLIANCE PROJECT NO.
QUOTE NO. Q2177
COC Number 2046411

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Gannett Fleming
ADDRESS: 1010 Adams Avenue
CITY Audubon STATE: PA ZIP: 19403
ATTENTION: Joe Krupansky
PHONE: 610-310-8342 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Amtrak Sawdust
PROJECT NO.: 95000878 LOCATION: Kearny NJ
PROJECT MANAGER: Joe Krupansky
e-mail: QAQC@BEMSS.com
PHONE: 610-310-8342 FAX:

CLIENT BILLING INFORMATION

BILL TO: Alliance PO#:
ADDRESS: 284 Sheffield
CITY Mountainside STATE: NJ ZIP: 07092
ATTENTION Samantha Beasley PHONE: 908-728-3148

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): 10 DAYS*
EDD: 10 DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☐ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced
- ☐ NYS ASP A
- ☐ NYS ASP B
- ☐ US EPA CLP
- ☐ Other
- ☐ EDD FORMAT Bem EDD

ANALYSIS

1: TCL-VOC +10
2: PCBs
3: Cr(VI) Cr(III)
4: TCL-SVOCs-BNA 30
5: TAL metals
6: EPH
7: Full TCLP
8: RCRA parameters
9:

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1.	B-187-SB00	S		X	5/31/25	900	5	X									
2.	B-187-SB01			X		930	8	X	X	X	X	X	X	X	X		
3.	B-187-SB02			X		1000	8	X	X	X	X	X	X	X	Y		
4.	B-202-SB01			X		1015	8	X	X	X	X	X	X	X	X		
5.	EB05312025	DIW				1415	8	X	^	^	X	^	X				
6.	TB05312025	DIW			↓	NA		X									
7.																	
8.																	
9.																	
10.																	

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1.	5/31/25	1. 6-2-25 0700
2.		2.
3.		3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 4.7°C °C
Comments:

Page ____ of

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete ☐ YES ☐ NO

WHITE - ALLIANCE COPY FOR RETURN TO CLIENT YELLOW - ALLIANCE COPY PINK - SAMPLER COPY

284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

QA Control Code: A2070148

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2177 PORT06
Client Name : Portal Partners Tri-Venture
Client Contact : Joseph Krupansky
Invoice Name : Portal Partners Tri-Venture
Invoice Contact : Joseph Krupansky

Order Date : 6/2/2025 11:19:00 AM
Project Name : Amtrak Sawtooth Bridges 2
Receive DateTime : 6/2/2025 7:00:00 AM
Purchase Order :

Project Mgr : Yazmeen
Report Type : NJ Reduced
EDD Type : EXCEL NJCLEANUP
Hard Copy Date :
Date Signoff : 6/2/2025 12:21:09 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2177-01	B-187-SB00	Solid	05/31/2025	09:00					
					VOC-TCLVOA-10		8260D		10 Bus. Days
Q2177-02	B-187-SB01	Solid	05/31/2025	09:30					
					VOC-TCLVOA-10		8260D		10 Bus. Days
Q2177-04	B-187-SB02	Solid	05/31/2025	10:00					
					VOC-TCLVOA-10		8260D		10 Bus. Days
Q2177-06	B-202-SB01	Solid	05/31/2025	10:15					
					VOC-TCLVOA-10		8260D		10 Bus. Days
Q2177-08	EB05312025	Water	05/31/2025	14:15					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days
Q2177-09	TB05312025	Water	05/31/2025	00:00					
					VOC-TCLVOA-10		8260-Low		10 Bus. Days

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2177 PORT06
Client Name : Portal Partners Tri-Venture
Client Contact : Joseph Krupansky
Invoice Name : Portal Partners Tri-Venture
Invoice Contact : Joseph Krupansky

Order Date : 6/2/2025 11:19:00 AM
Project Name : Amtrak Sawtooth Bridges 2
Receive DateTime : 6/2/2025 7:00:00 AM
Purchase Order :

Project Mgr : Yazmeen
Report Type : NJ Reduced
EDD Type : EXCEL NJCLEANUP
Hard Copy Date :
Date Signoff : 6/2/2025 12:21:09 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES

Relinguished By : _____
Date / Time : 6/2/25 1150

Received By : JC
Date / Time : 6/2/25 1152

Storage Area : VOA Refridgerator Room