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Cover Page

Order ID : Q1447

Project ID : Nelson

Client : G Environmental

Lab Sample Number	Client Sample Number
Q1447-01	WC1
Q1447-02	WC1

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: 3/1/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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 #: **Q1447**

	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: **NILESH PRAJAPATI** **Date:** **03/01/2025**

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LAB CHRONICLE

OrderID:	Q1447	**OrderDate:**	2/26/2025 2:32:53 PM
Client:	G Environmental	**Project:**	Nelson
Contact:	Gary Landis	**Location:**	H31,H33,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1447-01	**WC1**	**SOIL**			**02/23/25**			**02/26/25**
			Mercury	7471B		02/27/25	02/27/25	
			Metals ICP-TAL	6010D		02/27/25	03/05/25	
Q1447-02	**WC1**	**TCLP**			**02/23/25**			**02/26/25**
			TCLP ICP Metals	6010D		02/27/25	03/03/25	
			TCLP Mercury	7470A		02/27/25	02/28/25	

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Hit Summary Sheet
SW-846

SDG No.: Q1447 **Order ID:** Q1447

Client: G Environmental **Project ID:** Nelson

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : WC1								
Q1447-02	WC1	TCLP	Barium	2370		62.8	500	ug/L
Q1447-02	WC1	TCLP	Cadmium	7.03	J	0.94	30.0	ug/L
Q1447-02	WC1	TCLP	Lead	373		35.1	60.0	ug/L

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SAMPLE DATA

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Report of Analysis

Client:	G Environmental	Date Collected:	02/23/25
Project:	Nelson	Date Received:	02/26/25
Client Sample ID:	WC1	SDG No.:	Q1447
Lab Sample ID:	Q1447-02	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-38-2	Arsenic	34.8	U	1	34.8	100	ug/L	02/27/25 12:05	03/03/25 20:27	SW6010	SW3050
7440-39-3	Barium	2370	N*	1	62.8	500	ug/L	02/27/25 12:05	03/03/25 20:27	SW6010	SW3050
7440-43-9	Cadmium	7.03	J	1	0.94	30.0	ug/L	02/27/25 12:05	03/03/25 20:27	SW6010	SW3050
7440-47-3	Chromium	6.60	U	1	6.60	50.0	ug/L	02/27/25 12:05	03/03/25 20:27	SW6010	SW3050
7439-92-1	Lead	373	*	1	35.1	60.0	ug/L	02/27/25 12:05	03/03/25 20:27	SW6010	SW3050
7439-97-6	Mercury	0.81	U	1	0.81	2.00	ug/L	02/27/25 13:15	02/28/25 11:10	SW7470A	
7782-49-2	Selenium	58.8	U	1	58.8	100	ug/L	02/27/25 12:05	03/03/25 20:27	SW6010	SW3050
7440-22-4	Silver	5.80	U	1	5.80	50.0	ug/L	02/27/25 12:05	03/03/25 20:27	SW6010	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	TCLP METALS				

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: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

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
ICV22	Mercury	3.98	4.0	100	90 - 110	CV	02/28/2025	10:35	LB134848

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

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
CCV35	Mercury	5.39	5.0	108	90 - 110	CV	02/28/2025	10:42	LB134848
CCV36	Mercury	4.77	5.0	96	90 - 110	CV	02/28/2025	11:16	LB134848
CCV37	Mercury	4.74	5.0	95	90 - 110	CV	02/28/2025	11:43	LB134848
CCV38	Mercury	4.61	5.0	92	90 - 110	CV	02/28/2025	12:06	LB134848

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

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	997	1000	100	90 - 110	P	03/03/2025	19:17	LB134881
	Barium	528	520	102	90 - 110	P	03/03/2025	19:17	LB134881
	Cadmium	494	510	97	90 - 110	P	03/03/2025	19:17	LB134881
	Chromium	510	520	98	90 - 110	P	03/03/2025	19:17	LB134881
	Lead	988	1000	99	90 - 110	P	03/03/2025	19:17	LB134881
	Selenium	994	1000	99	90 - 110	P	03/03/2025	19:17	LB134881
	Silver	247	250	99	90 - 110	P	03/03/2025	19:17	LB134881

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

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	21.2	20.0	106	80 - 120	P	03/03/2025	19:21	LB134881
	Barium	90.9	100	91	80 - 120	P	03/03/2025	19:21	LB134881
	Cadmium	5.82	6.0	97	80 - 120	P	03/03/2025	19:21	LB134881
	Chromium	9.59	10.0	96	80 - 120	P	03/03/2025	19:21	LB134881
	Lead	11.6	12.0	97	80 - 120	P	03/03/2025	19:21	LB134881
	Selenium	19.7	20.0	99	80 - 120	P	03/03/2025	19:21	LB134881
	Silver	9.46	10.0	95	80 - 120	P	03/03/2025	19:21	LB134881

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

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	5180	5000	104	90 - 110	P	03/03/2025	19:57	LB134881
	Barium	9570	10000	96	90 - 110	P	03/03/2025	19:57	LB134881
	Cadmium	2380	2500	95	90 - 110	P	03/03/2025	19:57	LB134881
	Chromium	957	1000	96	90 - 110	P	03/03/2025	19:57	LB134881
	Lead	4770	5000	95	90 - 110	P	03/03/2025	19:57	LB134881
	Selenium	5250	5000	105	90 - 110	P	03/03/2025	19:57	LB134881
	Silver	1190	1250	95	90 - 110	P	03/03/2025	19:57	LB134881
CCV02	Arsenic	5330	5000	107	90 - 110	P	03/03/2025	21:12	LB134881
	Barium	10300	10000	103	90 - 110	P	03/03/2025	21:12	LB134881
	Cadmium	2640	2500	105	90 - 110	P	03/03/2025	21:12	LB134881
	Chromium	1050	1000	105	90 - 110	P	03/03/2025	21:12	LB134881
	Lead	5300	5000	106	90 - 110	P	03/03/2025	21:12	LB134881
	Selenium	5360	5000	107	90 - 110	P	03/03/2025	21:12	LB134881
	Silver	1300	1250	104	90 - 110	P	03/03/2025	21:12	LB134881
CCV03	Arsenic	5140	5000	103	90 - 110	P	03/03/2025	22:02	LB134881
	Barium	10100	10000	101	90 - 110	P	03/03/2025	22:02	LB134881
	Cadmium	2540	2500	102	90 - 110	P	03/03/2025	22:02	LB134881
	Chromium	1020	1000	102	90 - 110	P	03/03/2025	22:02	LB134881
	Lead	5080	5000	102	90 - 110	P	03/03/2025	22:02	LB134881
	Selenium	5180	5000	104	90 - 110	P	03/03/2025	22:02	LB134881
	Silver	1280	1250	102	90 - 110	P	03/03/2025	22:02	LB134881
CCV04	Arsenic	5000	5000	100	90 - 110	P	03/03/2025	23:07	LB134881
	Barium	9860	10000	99	90 - 110	P	03/03/2025	23:07	LB134881
	Cadmium	2480	2500	99	90 - 110	P	03/03/2025	23:07	LB134881
	Chromium	985	1000	98	90 - 110	P	03/03/2025	23:07	LB134881
	Lead	4950	5000	99	90 - 110	P	03/03/2025	23:07	LB134881
	Selenium	5010	5000	100	90 - 110	P	03/03/2025	23:07	LB134881
	Silver	1230	1250	98	90 - 110	P	03/03/2025	23:07	LB134881
CCV05	Arsenic	4870	5000	97	90 - 110	P	03/04/2025	00:03	LB134881
	Barium	9750	10000	98	90 - 110	P	03/04/2025	00:03	LB134881
	Cadmium	2430	2500	97	90 - 110	P	03/04/2025	00:03	LB134881
	Chromium	973	1000	97	90 - 110	P	03/04/2025	00:03	LB134881
	Lead	4850	5000	97	90 - 110	P	03/04/2025	00:03	LB134881
	Selenium	4890	5000	98	90 - 110	P	03/04/2025	00:03	LB134881

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV05	Silver	1210	1250	97	90 - 110	P	03/04/2025	00:03	LB134881

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

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	1040	1000	104	90 - 110	P	03/05/2025	10:43	LB134904
	Barium	493	520	95	90 - 110	P	03/05/2025	10:43	LB134904
	Cadmium	508	510	100	90 - 110	P	03/05/2025	10:43	LB134904
	Chromium	534	520	103	90 - 110	P	03/05/2025	10:43	LB134904
	Lead	1020	1000	102	90 - 110	P	03/05/2025	10:43	LB134904
	Selenium	1040	1000	104	90 - 110	P	03/05/2025	10:43	LB134904
	Silver	258	250	103	90 - 110	P	03/05/2025	10:43	LB134904

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

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	19.0	20.0	95	80 - 120	P	03/05/2025	10:51	LB134904
	Barium	92.3	100	92	80 - 120	P	03/05/2025	10:51	LB134904
	Cadmium	5.96	6.0	99	80 - 120	P	03/05/2025	10:51	LB134904
	Chromium	10.7	10.0	107	80 - 120	P	03/05/2025	10:51	LB134904
	Lead	11.9	12.0	99	80 - 120	P	03/05/2025	10:51	LB134904
	Selenium	20.8	20.0	104	80 - 120	P	03/05/2025	10:51	LB134904
	Silver	10.7	10.0	107	80 - 120	P	03/05/2025	10:51	LB134904

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

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	5100	5000	102	90 - 110	P	03/05/2025	11:13	LB134904
	Barium	9750	10000	98	90 - 110	P	03/05/2025	11:13	LB134904
	Cadmium	2480	2500	99	90 - 110	P	03/05/2025	11:13	LB134904
	Chromium	1030	1000	104	90 - 110	P	03/05/2025	11:13	LB134904
	Lead	5000	5000	100	90 - 110	P	03/05/2025	11:13	LB134904
	Selenium	5150	5000	103	90 - 110	P	03/05/2025	11:13	LB134904
	Silver	1280	1250	102	90 - 110	P	03/05/2025	11:13	LB134904
CCV02	Arsenic	5190	5000	104	90 - 110	P	03/05/2025	11:55	LB134904
	Barium	9730	10000	97	90 - 110	P	03/05/2025	11:55	LB134904
	Cadmium	2500	2500	100	90 - 110	P	03/05/2025	11:55	LB134904
	Chromium	1040	1000	104	90 - 110	P	03/05/2025	11:55	LB134904
	Lead	5050	5000	101	90 - 110	P	03/05/2025	11:55	LB134904
	Selenium	5210	5000	104	90 - 110	P	03/05/2025	11:55	LB134904
	Silver	1300	1250	104	90 - 110	P	03/05/2025	11:55	LB134904
CCV03	Arsenic	5020	5000	100	90 - 110	P	03/05/2025	12:45	LB134904
	Barium	10000	10000	100	90 - 110	P	03/05/2025	12:45	LB134904
	Cadmium	2450	2500	98	90 - 110	P	03/05/2025	12:45	LB134904
	Chromium	1020	1000	102	90 - 110	P	03/05/2025	12:45	LB134904
	Lead	4940	5000	99	90 - 110	P	03/05/2025	12:45	LB134904
	Selenium	5040	5000	101	90 - 110	P	03/05/2025	12:45	LB134904
	Silver	1280	1250	102	90 - 110	P	03/05/2025	12:45	LB134904
CCV04	Arsenic	4980	5000	100	90 - 110	P	03/05/2025	14:07	LB134904
	Barium	10200	10000	102	90 - 110	P	03/05/2025	14:07	LB134904
	Cadmium	2490	2500	100	90 - 110	P	03/05/2025	14:07	LB134904
	Chromium	1020	1000	102	90 - 110	P	03/05/2025	14:07	LB134904
	Lead	4980	5000	100	90 - 110	P	03/05/2025	14:07	LB134904
	Selenium	4980	5000	100	90 - 110	P	03/05/2025	14:07	LB134904
	Silver	1270	1250	102	90 - 110	P	03/05/2025	14:07	LB134904

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Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

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	0.19	0.2	96	40 - 160	CV	02/28/2025	10:49	LB134848
CRI01	Arsenic	18.7	20.0	94	40 - 160	P	03/03/2025	19:30	LB134881
	Barium	87.6	100	88	40 - 160	P	03/03/2025	19:30	LB134881
	Cadmium	5.64	6.0	94	40 - 160	P	03/03/2025	19:30	LB134881
	Chromium	9.59	10.0	96	40 - 160	P	03/03/2025	19:30	LB134881
	Lead	11.5	12.0	96	40 - 160	P	03/03/2025	19:30	LB134881
	Selenium	18.0	20.0	90	40 - 160	P	03/03/2025	19:30	LB134881
	Silver	9.81	10.0	98	40 - 160	P	03/03/2025	19:30	LB134881
CRI01	Arsenic	20.2	20.0	101	40 - 160	P	03/05/2025	11:00	LB134904
	Barium	91.8	100	92	40 - 160	P	03/05/2025	11:00	LB134904
	Cadmium	5.85	6.0	98	40 - 160	P	03/05/2025	11:00	LB134904
	Chromium	10.5	10.0	105	40 - 160	P	03/05/2025	11:00	LB134904
	Lead	12.3	12.0	103	40 - 160	P	03/05/2025	11:00	LB134904
	Selenium	18.9	20.0	95	40 - 160	P	03/05/2025	11:00	LB134904
	Silver	10.5	10.0	105	40 - 160	P	03/05/2025	11:00	LB134904

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB22	Mercury	0.20	+/-0.20	U	0.20	CV	02/28/2025	10:40	LB134848

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB35	Mercury	0.20	+/-0.20	U	0.20	CV	02/28/2025	10:47	LB134848
CCB36	Mercury	0.20	+/-0.20	U	0.20	CV	02/28/2025	11:18	LB134848
CCB37	Mercury	0.20	+/-0.20	U	0.20	CV	02/28/2025	11:48	LB134848
CCB38	Mercury	0.20	+/-0.20	U	0.20	CV	02/28/2025	12:09	LB134848

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Arsenic	20.0	+/-20.0	U	20.0	P	03/03/2025	19:25	LB134881
	Barium	100	+/-100	U	100	P	03/03/2025	19:25	LB134881
	Cadmium	6.00	+/-6.00	U	6.00	P	03/03/2025	19:25	LB134881
	Chromium	10.0	+/-10.0	U	10.0	P	03/03/2025	19:25	LB134881
	Lead	12.0	+/-12.0	U	12.0	P	03/03/2025	19:25	LB134881
	Selenium	20.0	+/-20.0	U	20.0	P	03/03/2025	19:25	LB134881
	Silver	10.0	+/-10.0	U	10.0	P	03/03/2025	19:25	LB134881

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Arsenic	20.0	+/-20.0	U	20.0	P	03/03/2025	20:01	LB134881
	Barium	100	+/-100	U	100	P	03/03/2025	20:01	LB134881
	Cadmium	6.00	+/-6.00	U	6.00	P	03/03/2025	20:01	LB134881
	Chromium	10.0	+/-10.0	U	10.0	P	03/03/2025	20:01	LB134881
	Lead	12.0	+/-12.0	U	12.0	P	03/03/2025	20:01	LB134881
	Selenium	20.0	+/-20.0	U	20.0	P	03/03/2025	20:01	LB134881
	Silver	2.51	+/-10.0	J	10.0	P	03/03/2025	20:01	LB134881
CCB02	Arsenic	20.0	+/-20.0	U	20.0	P	03/03/2025	21:16	LB134881
	Barium	100	+/-100	U	100	P	03/03/2025	21:16	LB134881
	Cadmium	6.00	+/-6.00	U	6.00	P	03/03/2025	21:16	LB134881
	Chromium	10.0	+/-10.0	U	10.0	P	03/03/2025	21:16	LB134881
	Lead	12.0	+/-12.0	U	12.0	P	03/03/2025	21:16	LB134881
	Selenium	20.0	+/-20.0	U	20.0	P	03/03/2025	21:16	LB134881
	Silver	10.0	+/-10.0	U	10.0	P	03/03/2025	21:16	LB134881
CCB03	Arsenic	20.0	+/-20.0	U	20.0	P	03/03/2025	22:24	LB134881
	Barium	100	+/-100	U	100	P	03/03/2025	22:24	LB134881
	Cadmium	6.00	+/-6.00	U	6.00	P	03/03/2025	22:24	LB134881
	Chromium	10.0	+/-10.0	U	10.0	P	03/03/2025	22:24	LB134881
	Lead	12.0	+/-12.0	U	12.0	P	03/03/2025	22:24	LB134881
	Selenium	20.0	+/-20.0	U	20.0	P	03/03/2025	22:24	LB134881
	Silver	10.0	+/-10.0	U	10.0	P	03/03/2025	22:24	LB134881
CCB04	Arsenic	20.0	+/-20.0	U	20.0	P	03/03/2025	23:11	LB134881
	Barium	100	+/-100	U	100	P	03/03/2025	23:11	LB134881
	Cadmium	6.00	+/-6.00	U	6.00	P	03/03/2025	23:11	LB134881
	Chromium	10.0	+/-10.0	U	10.0	P	03/03/2025	23:11	LB134881
	Lead	12.0	+/-12.0	U	12.0	P	03/03/2025	23:11	LB134881
	Selenium	20.0	+/-20.0	U	20.0	P	03/03/2025	23:11	LB134881
	Silver	10.0	+/-10.0	U	10.0	P	03/03/2025	23:11	LB134881
CCB05	Arsenic	20.0	+/-20.0	U	20.0	P	03/04/2025	00:08	LB134881
	Barium	100	+/-100	U	100	P	03/04/2025	00:08	LB134881
	Cadmium	6.00	+/-6.00	U	6.00	P	03/04/2025	00:08	LB134881
	Chromium	10.0	+/-10.0	U	10.0	P	03/04/2025	00:08	LB134881
	Lead	12.0	+/-12.0	U	12.0	P	03/04/2025	00:08	LB134881
	Selenium	20.0	+/-20.0	U	20.0	P	03/04/2025	00:08	LB134881
	Silver	10.0	+/-10.0	U	10.0	P	03/04/2025	00:08	LB134881

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Arsenic	20.0	+/-20.0	U	20.0	P	03/05/2025	10:56	LB134904
	Barium	100	+/-100	U	100	P	03/05/2025	10:56	LB134904
	Cadmium	6.00	+/-6.00	U	6.00	P	03/05/2025	10:56	LB134904
	Chromium	10.0	+/-10.0	U	10.0	P	03/05/2025	10:56	LB134904
	Lead	12.0	+/-12.0	U	12.0	P	03/05/2025	10:56	LB134904
	Selenium	20.0	+/-20.0	U	20.0	P	03/05/2025	10:56	LB134904
	Silver	10.0	+/-10.0	U	10.0	P	03/05/2025	10:56	LB134904

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Arsenic	20.0	+/-20.0	U	20.0	P	03/05/2025	11:17	LB134904
	Barium	100	+/-100	U	100	P	03/05/2025	11:17	LB134904
	Cadmium	6.00	+/-6.00	U	6.00	P	03/05/2025	11:17	LB134904
	Chromium	10.0	+/-10.0	U	10.0	P	03/05/2025	11:17	LB134904
	Lead	12.0	+/-12.0	U	12.0	P	03/05/2025	11:17	LB134904
	Selenium	20.0	+/-20.0	U	20.0	P	03/05/2025	11:17	LB134904
	Silver	10.0	+/-10.0	U	10.0	P	03/05/2025	11:17	LB134904
CCB02	Arsenic	20.0	+/-20.0	U	20.0	P	03/05/2025	11:59	LB134904
	Barium	100	+/-100	U	100	P	03/05/2025	11:59	LB134904
	Cadmium	6.00	+/-6.00	U	6.00	P	03/05/2025	11:59	LB134904
	Chromium	10.0	+/-10.0	U	10.0	P	03/05/2025	11:59	LB134904
	Lead	12.0	+/-12.0	U	12.0	P	03/05/2025	11:59	LB134904
	Selenium	20.0	+/-20.0	U	20.0	P	03/05/2025	11:59	LB134904
	Silver	10.0	+/-10.0	U	10.0	P	03/05/2025	11:59	LB134904
CCB03	Arsenic	20.0	+/-20.0	U	20.0	P	03/05/2025	12:49	LB134904
	Barium	100	+/-100	U	100	P	03/05/2025	12:49	LB134904
	Cadmium	6.00	+/-6.00	U	6.00	P	03/05/2025	12:49	LB134904
	Chromium	10.0	+/-10.0	U	10.0	P	03/05/2025	12:49	LB134904
	Lead	12.0	+/-12.0	U	12.0	P	03/05/2025	12:49	LB134904
	Selenium	20.0	+/-20.0	U	20.0	P	03/05/2025	12:49	LB134904
	Silver	10.0	+/-10.0	U	10.0	P	03/05/2025	12:49	LB134904
CCB04	Arsenic	20.0	+/-20.0	U	20.0	P	03/05/2025	14:11	LB134904
	Barium	100	+/-100	U	100	P	03/05/2025	14:11	LB134904
	Cadmium	6.00	+/-6.00	U	6.00	P	03/05/2025	14:11	LB134904
	Chromium	10.0	+/-10.0	U	10.0	P	03/05/2025	14:11	LB134904
	Lead	12.0	+/-12.0	U	12.0	P	03/05/2025	14:11	LB134904
	Selenium	20.0	+/-20.0	U	20.0	P	03/05/2025	14:11	LB134904
	Silver	10.0	+/-10.0	U	10.0	P	03/05/2025	14:11	LB134904

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Metals
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PREPARATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q1447

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166879TB		**WATER**		**Batch Number:**	**PB166936**		**Prep Date:**	**02/27/2025**	
	Mercury	2.00	<2.00	U	2.00	CV	02/28/2025	11:53	LB134848

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166936BL		**WATER**		**Batch Number:**	**PB166936**		**Prep Date:**	**02/27/2025**	
	Mercury	0.20	<0.20	U	0.20	CV	02/28/2025	10:56	LB134848

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Metals
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PREPARATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q1447

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166879TB		**WATER**		**Batch Number:**	**PB166897**		**Prep Date:**	**02/27/2025**	
	Arsenic	100	<100	U	100	P	03/03/2025	20:55	LB134881
	Barium	500	<500	U	500	P	03/03/2025	20:55	LB134881
	Cadmium	30.0	<30.0	U	30.0	P	03/03/2025	20:55	LB134881
	Chromium	50.0	<50.0	U	50.0	P	03/03/2025	20:55	LB134881
	Lead	60.0	<60.0	U	60.0	P	03/03/2025	20:55	LB134881
	Selenium	100	<100	U	100	P	03/03/2025	20:55	LB134881
	Silver	50.0	<50.0	U	50.0	P	03/03/2025	20:55	LB134881

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166897BL		**WATER**		**Batch Number:**	**PB166897**		**Prep Date:**	**02/27/2025**	
	Arsenic	100	<100	U	100	P	03/05/2025	13:21	LB134904
	Barium	500	<500	U	500	P	03/05/2025	13:21	LB134904
	Cadmium	30.0	<30.0	U	30.0	P	03/05/2025	13:21	LB134904
	Chromium	50.0	<50.0	U	50.0	P	03/05/2025	13:21	LB134904
	Lead	60.0	<60.0	U	60.0	P	03/05/2025	13:21	LB134904
	Selenium	100	<100	U	100	P	03/05/2025	13:21	LB134904
	Silver	50.0	<50.0	U	50.0	P	03/05/2025	13:21	LB134904

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INTERFERENCE CHECK SAMPLE

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

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	1.51			-20	20	03/03/2025	19:34	LB134881
	Barium	6.31	6.0	105	-94	106	03/03/2025	19:34	LB134881
	Cadmium	-2.67	1.0	267	-5	7	03/03/2025	19:34	LB134881
	Chromium	54.7	52.0	105	42	62	03/03/2025	19:34	LB134881
	Lead	2.16			-12	12	03/03/2025	19:34	LB134881
	Selenium	-6.38			-20	20	03/03/2025	19:34	LB134881
	Silver	1.77			-10	10	03/03/2025	19:34	LB134881
ICSAB01	Arsenic	109	104	105	88.4	120	03/03/2025	19:38	LB134881
	Barium	460	537	86	437	637	03/03/2025	19:38	LB134881
	Cadmium	972	972	100	826	1120	03/03/2025	19:38	LB134881
	Chromium	534	542	98	460	624	03/03/2025	19:38	LB134881
	Lead	50.3	49.0	103	37	61	03/03/2025	19:38	LB134881
	Selenium	39.0	46.0	85	26	66	03/03/2025	19:38	LB134881
	Silver	206	201	102	170	232	03/03/2025	19:38	LB134881
ICSA01	Arsenic	4.69			-20	20	03/05/2025	11:04	LB134904
	Barium	3.05	6.0	51	-94	106	03/05/2025	11:04	LB134904
	Cadmium	-3.85	1.0	385	-5	7	03/05/2025	11:04	LB134904
	Chromium	60.3	52.0	116	42	62	03/05/2025	11:04	LB134904
	Lead	3.18			-12	12	03/05/2025	11:04	LB134904
	Selenium	-15.4			-20	20	03/05/2025	11:04	LB134904
	Silver	-1.85			-10	10	03/05/2025	11:04	LB134904
ICSAB01	Arsenic	115	104	111	88.4	120	03/05/2025	11:09	LB134904
	Barium	478	537	89	437	637	03/05/2025	11:09	LB134904
	Cadmium	1000	972	103	826	1120	03/05/2025	11:09	LB134904
	Chromium	583	542	108	460	624	03/05/2025	11:09	LB134904
	Lead	54.9	49.0	112	37	61	03/05/2025	11:09	LB134904
	Selenium	32.0	46.0	70	26	66	03/05/2025	11:09	LB134904
	Silver	224	201	111	170	232	03/05/2025	11:09	LB134904

METAL QC DATA

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metals
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MATRIX SPIKE SUMMARY

client: G Environmental **level:** low **sdg no.:** Q1447

contract: GENV01 **lab code:** CHEM **case no.:** Q1447 **sas no.:** Q1447

matrix: Water **sample id:** Q1447-02 **client id:** WC1MS

Percent Solids for Sample: NA **Spiked ID:** Q1447-02MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	4760		100	U	4000	119		P
Barium	ug/L	75 - 125	4090		2370		1000	172	N	P
Cadmium	ug/L	75 - 125	1150		7.03	J	1000	114		P
Chromium	ug/L	75 - 125	2330		50.0	U	2000	116		P
Lead	ug/L	75 - 125	5990		373		5000	112		P
Mercury	ug/L	75 - 125	37.3		2.00	U	40.0	93		CV
Selenium	ug/L	75 - 125	11400		100	U	10000	114		P
Silver	ug/L	75 - 125	427		50.0	U	380	112		P

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MATRIX SPIKE DUPLICATE SUMMARY

client: G Environmental **level:** low **sdg no.:** Q1447

contract: GENV01 **lab code:** CHEM **case no.:** Q1447 **sas no.:** Q1447

matrix: Water **sample id:** Q1447-02 **client id:** WC1MSD

Percent Solids for Sample: NA **Spiked ID:** Q1447-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	4470		100	U	4000	112		P
Barium	ug/L	75 - 125	3790		2370		1000	142	N	P
Cadmium	ug/L	75 - 125	1080		7.03	J	1000	107		P
Chromium	ug/L	75 - 125	2170		50.0	U	2000	108		P
Lead	ug/L	75 - 125	5630		373		5000	105		P
Mercury	ug/L	75 - 125	36.9		2.00	U	40.0	92		CV
Selenium	ug/L	75 - 125	10700		100	U	10000	107		P
Silver	ug/L	75 - 125	397		50.0	U	380	104		P

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POST DIGEST SPIKE SUMMARY

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

Matrix: Water **Level:** LOW **Client ID:** WC1A

Sample ID: Q1447-02 **Spiked ID:** Q1447-02A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Barium	ug/L	75 - 125	3780		2370		1000	141		P

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DUPLICATE SAMPLE SUMMARY

Client: G Environmental **Level:** LOW **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

Matrix: Water **Sample ID:** Q1447-02 **Client ID:** WC1DUP

Percent Solids for Sample: NA **Duplicate ID** Q1447-02DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	100	U	100	U			P
Barium	ug/L	20	2370		3120		27	*	P
Cadmium	ug/L	20	7.03	J	9.21	J	27		P
Chromium	ug/L	20	50.0	U	50.0	U			P
Lead	ug/L	20	373		501		29	*	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: G Environmental **Level:** LOW **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

Matrix: Water **Sample ID:** Q1447-02MS **Client ID:** WC1MSD

Percent Solids for Sample: NA **Duplicate ID** Q1447-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	4760		4470		6		P
Barium	ug/L	20	4090		3790		8		P
Cadmium	ug/L	20	1150		1080		6		P
Chromium	ug/L	20	2330		2170		7		P
Lead	ug/L	20	5990		5630		6		P
Mercury	ug/L	20	37.3		36.9		1		CV
Selenium	ug/L	20	11400		10700		6		P
Silver	ug/L	20	427		397		7		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: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166897BS							
Arsenic	ug/L	4000	3960		99	80 - 120	P
Barium	ug/L	1000	877		88	80 - 120	P
Cadmium	ug/L	1000	931		93	80 - 120	P
Chromium	ug/L	2000	2010		100	80 - 120	P
Lead	ug/L	5000	4730		95	80 - 120	P
Selenium	ug/L	10000	9740		97	80 - 120	P
Silver	ug/L	380	377		99	80 - 120	P

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LABORATORY CONTROL SAMPLE SUMMARY

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166936BS							
Mercury	ug/L	4.0	4.09		102	80 - 120	CV

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ICP SERIAL DILUTIONS

SAMPLE NO.

WC1L

Lab Name: Chemtech Consulting Group **Contract:** GENV01

Lab Code: CHEM **Lb No.:** lb134881 **Lab Sample ID :** Q1447-02L **SDG No.:** Q1447

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	2370		3260		37		P
Cadmium	7.03	J	11.0	J	57		P
Chromium	50.0	U	250	U			P
Lead	373		539		45		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
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

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: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

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
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

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
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Na	Ni	Pb	Sb	Se
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290
Selenium	196.090	0.0000000	0.0000000	0.0003330	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Case No.:** Q1447 **SAS No.:** Q1447

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: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Method:**

Case No.: Q1447 **SAS No.:** Q1447

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB166897**						
PB166879TB	PB166879TB	MB	WATER	02/27/2025	5.0	25.0	
PB166897BL	PB166897BL	MB	WATER	02/27/2025	5.0	25.0	
PB166897BS	PB166897BS	LCS	WATER	02/27/2025	5.0	25.0	
Q1447-02	WC1	SAM	WATER	02/27/2025	5.0	25.0	
Q1447-02DUP	WC1DUP	DUP	WATER	02/27/2025	5.0	25.0	
Q1447-02MS	WC1MS	MS	WATER	02/27/2025	5.0	25.0	
Q1447-02MSD	WC1MSD	MSD	WATER	02/27/2025	5.0	25.0	

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Metals
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SAMPLE PREPARATION SUMMARY

Client: G Environmental **SDG No.:** Q1447

Contract: GENV01 **Lab Code:** CHEM **Method:**

Case No.: Q1447 **SAS No.:** Q1447

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB166936**						
PB166879TB	PB166879TB	MB	WATER	02/27/2025	3.0	30.0	
PB166936BL	PB166936BL	MB	WATER	02/27/2025	30.0	30.0	
PB166936BS	PB166936BS	LCS	WATER	02/27/2025	30.0	30.0	
Q1447-02	WC1	SAM	WATER	02/27/2025	3.0	30.0	
Q1447-02DUP	WC1DUP	DUP	WATER	02/27/2025	3.0	30.0	
Q1447-02MS	WC1MS	MS	WATER	02/27/2025	3.0	30.0	
Q1447-02MSD	WC1MSD	MSD	WATER	02/27/2025	3.0	30.0	

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metals
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ANALYSIS RUN LOG

Client: G Environmental **Contract:** GENV01

Lab code: CHEM **Case no.:** Q1447 **Sas no.:** Q1447 **Sdg no.:** Q1447

Instrument id number: **Method:** **Run number:** LB134848

Start date: 02/28/2025 **End date:** 02/28/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1021	HG
S0.2	S0.2	1	1023	HG
S2.5	S2.5	1	1025	HG
S5	S5	1	1028	HG
S7.5	S7.5	1	1030	HG
S10	S10	1	1032	HG
ICV22	ICV22	1	1035	HG
ICB22	ICB22	1	1040	HG
CCV35	CCV35	1	1042	HG
CCB35	CCB35	1	1047	HG
CRA	CRA	1	1049	HG
PB166936BL	PB166936BL	1	1056	HG
PB166936BS	PB166936BS	1	1058	HG
Q1447-02	WC1	1	1110	HG
CCV36	CCV36	1	1116	HG
CCB36	CCB36	1	1118	HG
Q1447-02DUP	WC1DUP	1	1121	HG
Q1447-02MS	WC1MS	1	1123	HG
Q1447-02MSD	WC1MSD	1	1125	HG
CCV37	CCV37	1	1143	HG
CCB37	CCB37	1	1148	HG
PB166879TB	PB166879TB	1	1153	HG
Q1447-02L	WC1L	5	1155	HG
CCV38	CCV38	1	1206	HG
CCB38	CCB38	1	1209	HG

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metals
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ANALYSIS RUN LOG

Client: G Environmental **Contract:** GENV01

Lab code: CHEM **Case no.:** Q1447 **Sas no.:** Q1447 **Sdg no.:** Q1447

Instrument id number: **Method:** **Run number:** LB134881

Start date: 03/03/2025 **End date:** 03/04/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1826	Ag,As,Ba,Cd,Cr,Pb,Se
S1	S1	1	1831	Ag,As,Ba,Cd,Cr,Pb,Se
S2	S2	1	1835	Ag,As,Ba,Cd,Cr,Pb,Se
S3	S3	1	1839	Ag,As,Ba,Cd,Cr,Pb,Se
S4	S4	1	1843	Ag,As,Ba,Cd,Cr,Pb,Se
S5	S5	1	1847	Ag,As,Ba,Cd,Cr,Pb,Se
ICV01	ICV01	1	1917	Ag,As,Ba,Cd,Cr,Pb,Se
LLICV01	LLICV01	1	1921	Ag,As,Ba,Cd,Cr,Pb,Se
ICB01	ICB01	1	1925	Ag,As,Ba,Cd,Cr,Pb,Se
CRI01	CRI01	1	1930	Ag,As,Ba,Cd,Cr,Pb,Se
ICSA01	ICSA01	1	1934	Ag,As,Ba,Cd,Cr,Pb,Se
ICSAB01	ICSAB01	1	1938	Ag,As,Ba,Cd,Cr,Pb,Se
CCV01	CCV01	1	1957	Ag,As,Ba,Cd,Cr,Pb,Se
CCB01	CCB01	1	2001	Ag,As,Ba,Cd,Cr,Pb,Se
Q1447-02	WC1	1	2027	Ag,As,Ba,Cd,Cr,Pb,Se
PB166879TB	PB166879TB	1	2055	Ag,As,Ba,Cd,Cr,Pb,Se
CCV02	CCV02	1	2112	Ag,As,Ba,Cd,Cr,Pb,Se
CCB02	CCB02	1	2116	Ag,As,Ba,Cd,Cr,Pb,Se
CCV03	CCV03	1	2202	Ag,As,Ba,Cd,Cr,Pb,Se
CCB03	CCB03	1	2224	Ag,As,Ba,Cd,Cr,Pb,Se
Q1447-02DUP	WC1DUP	1	2245	Ag,As,Ba,Cd,Cr,Pb,Se
Q1447-02L	WC1L	5	2250	Ag,As,Ba,Cd,Cr,Pb,Se
Q1447-02MS	WC1MS	1	2254	Ag,As,Ba,Cd,Cr,Pb,Se
Q1447-02MSD	WC1MSD	1	2258	Ag,As,Ba,Cd,Cr,Pb,Se
Q1447-02A	WC1A	1	2302	Ba
CCV04	CCV04	1	2307	Ag,As,Ba,Cd,Cr,Pb,Se
CCB04	CCB04	1	2311	Ag,As,Ba,Cd,Cr,Pb,Se
CCV05	CCV05	1	0003	Ag,As,Ba,Cd,Cr,Pb,Se
CCB05	CCB05	1	0008	Ag,As,Ba,Cd,Cr,Pb,Se

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metals
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ANALYSIS RUN LOG

Client: G Environmental **Contract:** GENV01

Lab code: CHEM **Case no.:** Q1447 **Sas no.:** Q1447 **Sdg no.:** Q1447

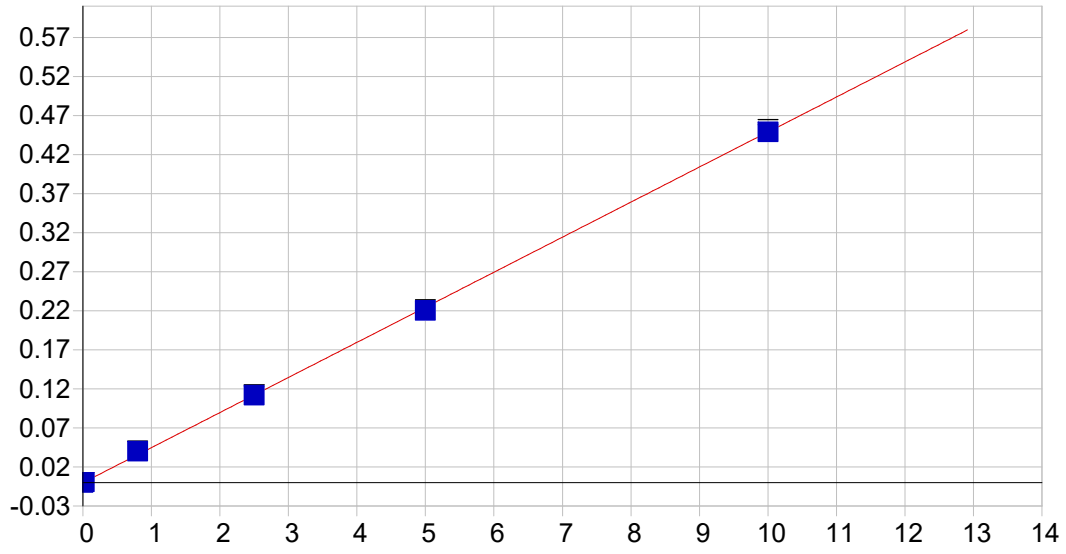
Instrument id number: **Method:** **Run number:** LB134904

Start date: 03/05/2025 **End date:** 03/05/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1017	Ag,As,Ba,Cd,Cr,Pb,Se
S1	S1	1	1022	Ag,As,Ba,Cd,Cr,Pb,Se
S2	S2	1	1026	Ag,As,Ba,Cd,Cr,Pb,Se
S3	S3	1	1030	Ag,As,Ba,Cd,Cr,Pb,Se
S4	S4	1	1034	Ag,As,Ba,Cd,Cr,Pb,Se
S5	S5	1	1039	Ag,As,Ba,Cd,Cr,Pb,Se
ICV01	ICV01	1	1043	Ag,As,Ba,Cd,Cr,Pb,Se
LLICV01	LLICV01	1	1051	Ag,As,Ba,Cd,Cr,Pb,Se
ICB01	ICB01	1	1056	Ag,As,Ba,Cd,Cr,Pb,Se
CRI01	CRI01	1	1100	Ag,As,Ba,Cd,Cr,Pb,Se
ICSA01	ICSA01	1	1104	Ag,As,Ba,Cd,Cr,Pb,Se
ICSAB01	ICSAB01	1	1109	Ag,As,Ba,Cd,Cr,Pb,Se
CCV01	CCV01	1	1113	Ag,As,Ba,Cd,Cr,Pb,Se
CCB01	CCB01	1	1117	Ag,As,Ba,Cd,Cr,Pb,Se
CCV02	CCV02	1	1155	Ag,As,Ba,Cd,Cr,Pb,Se
CCB02	CCB02	1	1159	Ag,As,Ba,Cd,Cr,Pb,Se
CCV03	CCV03	1	1245	Ag,As,Ba,Cd,Cr,Pb,Se
CCB03	CCB03	1	1249	Ag,As,Ba,Cd,Cr,Pb,Se
PB166897BL	PB166897BL	1	1321	Ag,As,Ba,Cd,Cr,Pb,Se
PB166897BS	PB166897BS	1	1359	Ag,As,Ba,Cd,Cr,Pb,Se
CCV04	CCV04	1	1407	Ag,As,Ba,Cd,Cr,Pb,Se
CCB04	CCB04	1	1411	Ag,As,Ba,Cd,Cr,Pb,Se

METAL
RAW DATA

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



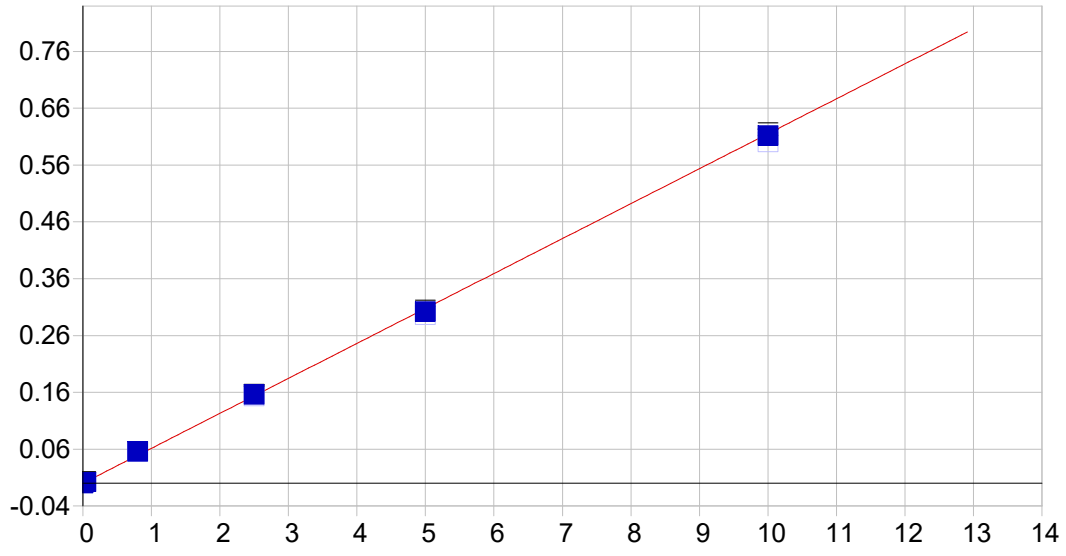
As 189.042 {479}

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A1 (Gain):	0.044895	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999634	Status:	OK.
Std Error of Est:	0.000028		
Predicted MDL:	0.002688		
Predicted MQL:	0.008959		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00012	.000	1
S1	.02000	.02112	.001	5.59	.00083	.000	1
S3	2.5000	2.4921	-.008	-.317	.11164	.001	1
S4	5.0000	4.9065	-.094	-1.87	.21992	.001	1
S5	10.000	10.004	.004	.042	.44854	.003	1
S2	.80000	.89614	.096	12.0	.04008	.000	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



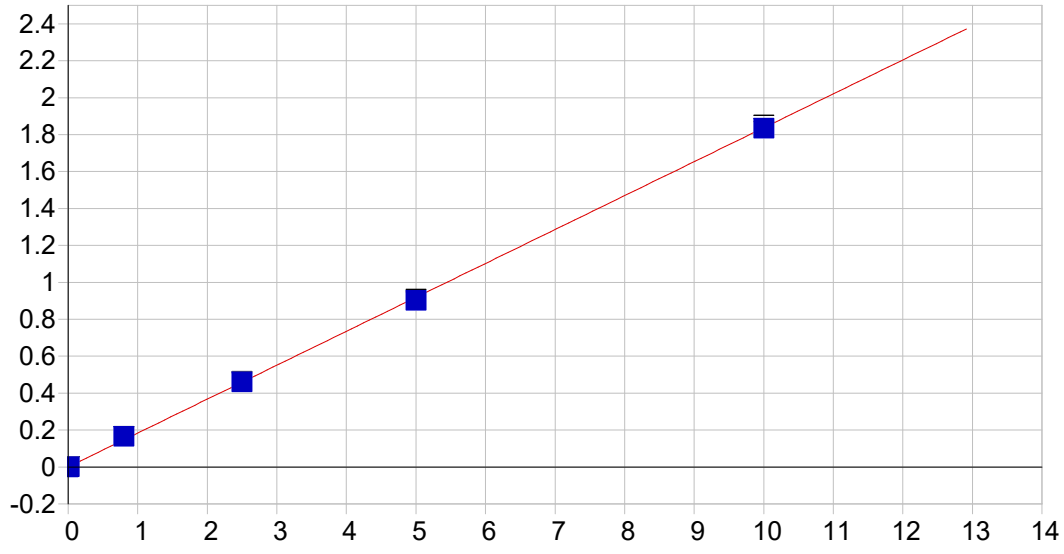
Tl 190.856 {477}

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A1 (Gain):	0.061528	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999499	Status:	OK.
Std Error of Est:	0.000063		
Predicted MDL:	0.001784		
Predicted MQL:	0.005945		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00008	.000	1
S1	.04000	.04248	.002	6.19	.00237	.000	1
S3	2.5000	2.5360	.036	1.44	.15312	.000	1
S4	5.0000	4.9078	-.092	-1.84	.29622	.003	1
S5	10.000	9.9442	-.056	-.558	.60044	.005	1
S2	.80000	.90962	.110	13.7	.05498	.000	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



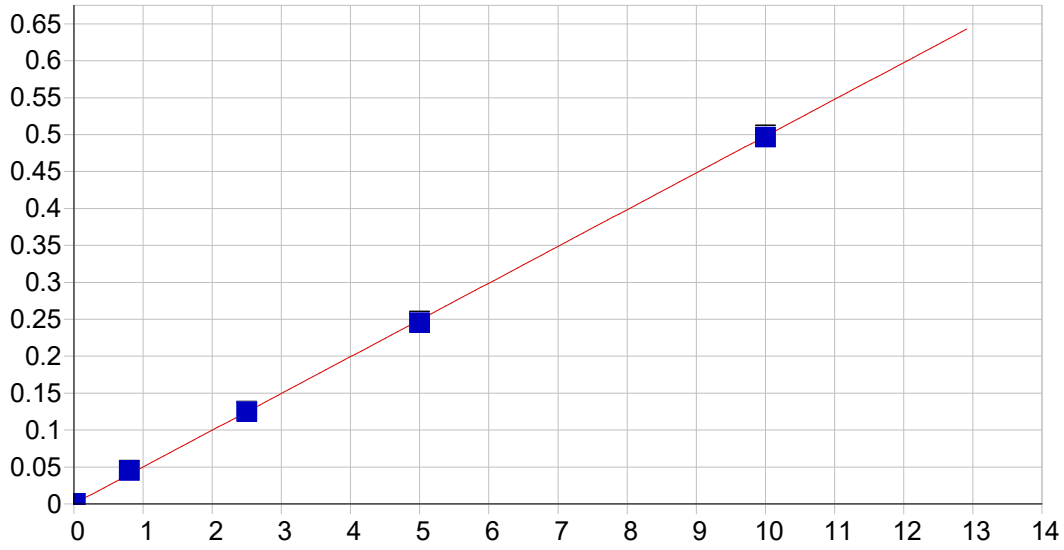
Pb 220.353 {453}

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A1 (Gain):	0.183697	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999606	Status:	OK.
Std Error of Est:	0.000094		
Predicted MDL:	0.001475		
Predicted MQL:	0.004917		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00002	.000	1
S1	.01200	.01018	-.002	-15.2	.00185	.000	1
S3	2.5000	2.5036	.004	.142	.45941	.004	1
S4	5.0000	4.9093	-.091	-1.81	.90083	.007	1
S5	10.000	9.9890	-.011	-.110	1.8330	.017	1
S2	.80000	.89993	.100	12.5	.16517	.001	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



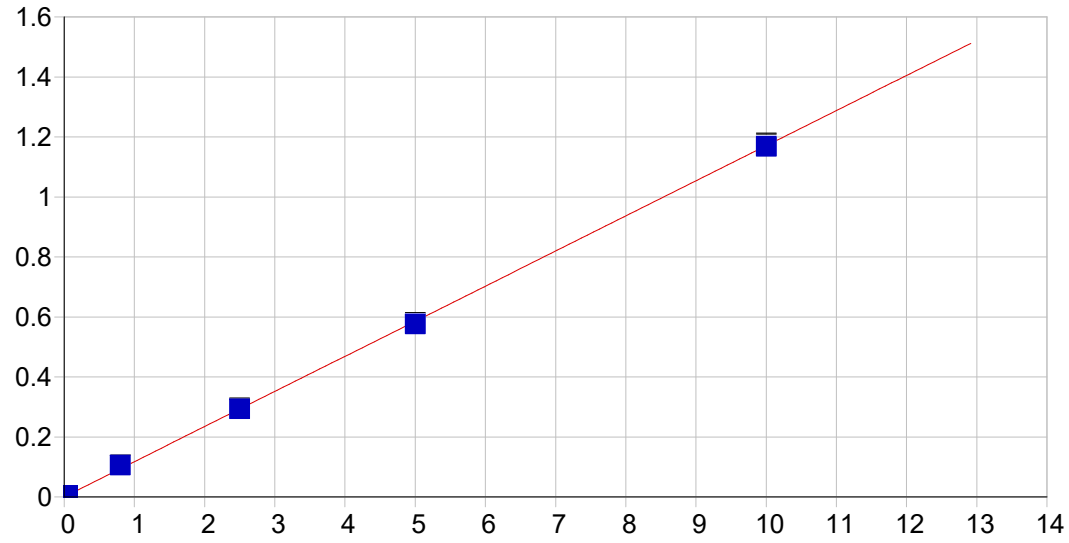
Se 196.090 {472}

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A0 (Offset):	0.000264	Re-Slope:	1.000000
A1 (Gain):	0.049767	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999621	Status:	OK.
Std Error of Est:	0.000032		
Predicted MDL:	0.002971		
Predicted MQL:	0.009905		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00026	.000	1
S1	.02000	.01801	-.002	-9.94	.00116	.000	1
S3	2.5000	2.5011	.001	.046	.12469	.001	1
S4	5.0000	4.9256	-.074	-1.49	.24531	.002	1
S5	10.000	9.9752	-.025	-.248	.49652	.003	1
S2	.80000	.90007	.100	12.5	.04504	.000	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



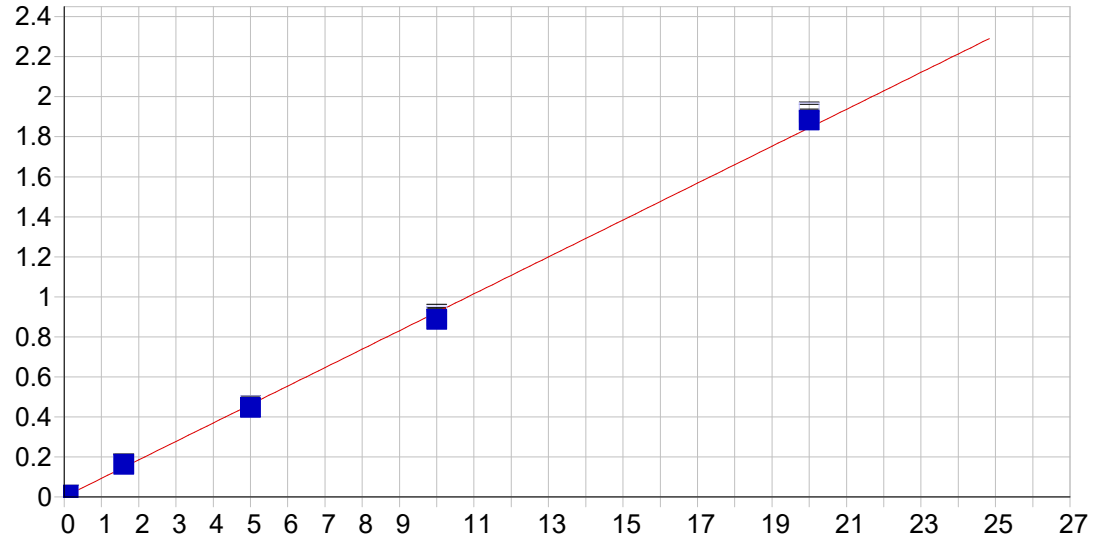
Sb 206.833 {463}

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A0 (Offset):	0.000382	Re-Slope:	1.000000
A1 (Gain):	0.117029	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999607	Status:	OK.
Std Error of Est:	0.000122		
Predicted MDL:	0.001594		
Predicted MQL:	0.005314		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00038	.000	1
S1	.05000	.05008	.000	.163	.00626	.000	1
S3	2.5000	2.5003	.000	.012	.29378	.002	1
S4	5.0000	4.9189	-.081	-1.62	.57763	.004	1
S5	10.000	9.9782	-.022	-.218	1.1713	.008	1
S2	.80000	.90249	.102	12.8	.10625	.001	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



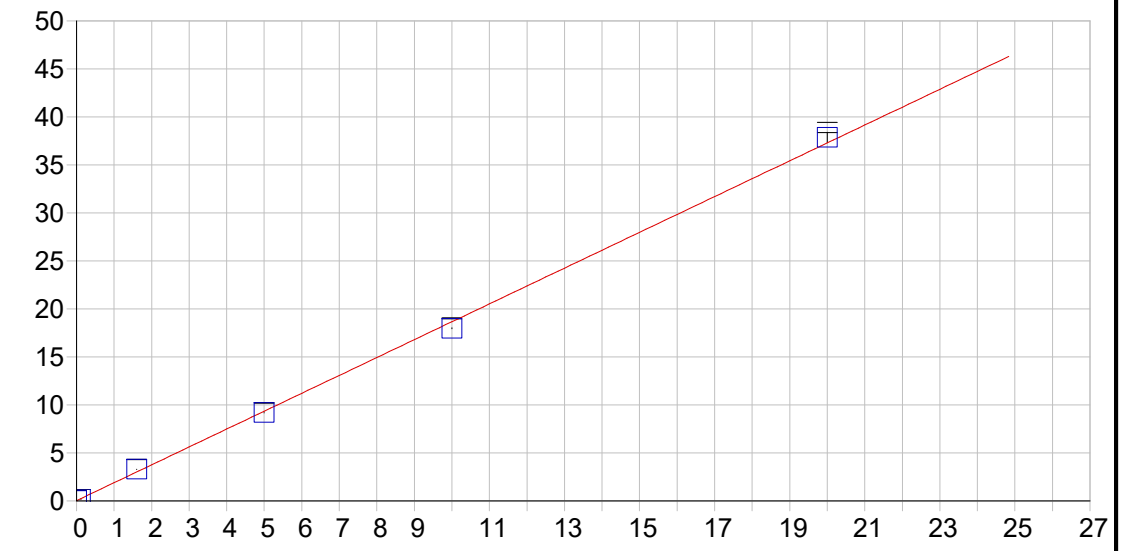
Al 396.152 { 85}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000666	Re-Slope:	1.000000
A1 (Gain):	0.092206	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999423	Status:	OK.
Std Error of Est:	0.000237		
Predicted MDL:	0.005798		
Predicted MQL:	0.019326		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00067	.000	1
S1	.10000	.09882	-.001	-1.18	.01049	.001	1
S3	5.0000	4.8306	-.169	-3.39	.45502	.001	1
S4	10.000	9.6062	-.394	-3.94	.90431	.008	1
S5	20.000	20.414	.414	2.07	1.9187	.006	1
S2	1.6000	1.7509	.151	9.43	.16497	.001	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



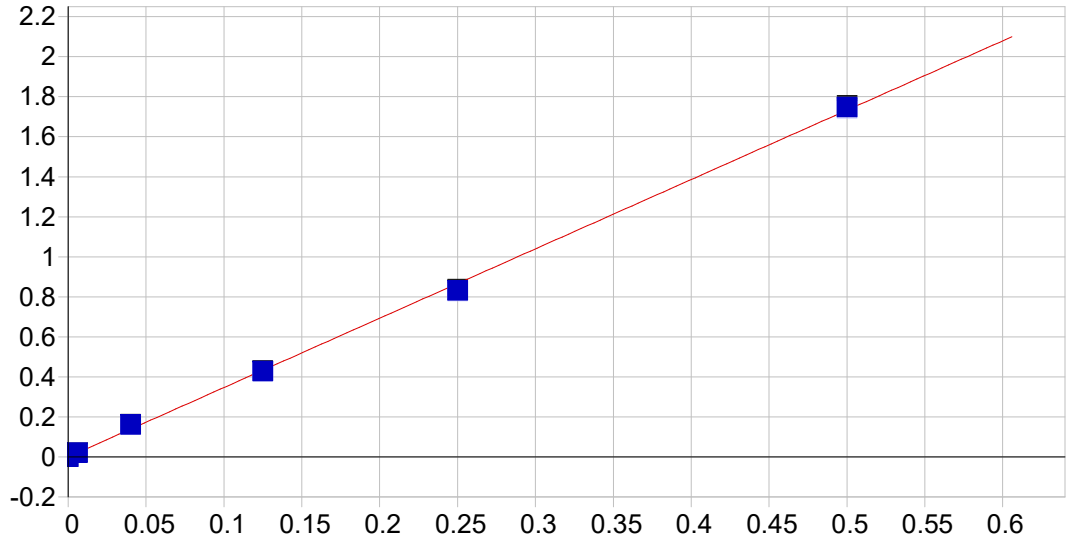
Ba 493.409 { 68}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.032485	Re-Slope:	1.000000
A1 (Gain):	1.862846	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999544	Status:	OK.
Std Error of Est:	0.004175		
Predicted MDL:	0.001004		
Predicted MQL:	0.003346		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.03249	.002	1
S1	.10000	.09279	-.007	-7.21	.20534	.002	1
S3	5.0000	4.9154	-.085	-1.69	9.1891	.018	1
S4	10.000	9.6336	-.366	-3.66	17.978	.044	1
S5	20.000	20.313	.313	1.56	37.872	.545	1
S2	1.6000	1.7457	.146	9.11	3.2844	.021	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



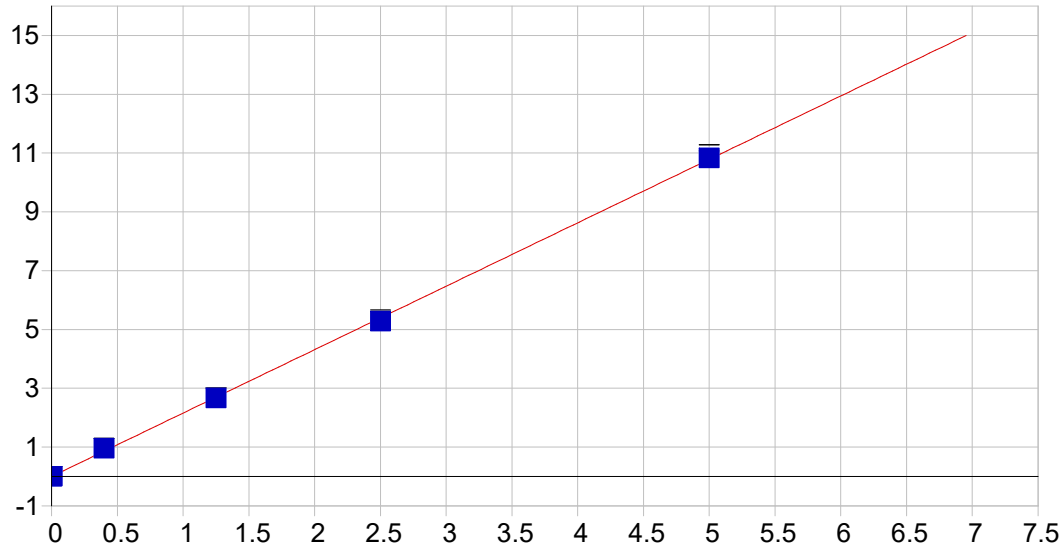
Be 234.861 {144}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000023	Re-Slope:	1.000000
A1 (Gain):	3.465325	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999153	Status:	OK.
Std Error of Est:	0.000409		
Predicted MDL:	0.000057		
Predicted MQL:	0.000189		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00003	.000	1
S1	.00600	.00608	.000	1.37	.02090	.000	1
S3	.12500	.12362	-.001	-1.10	.42643	.002	1
S4	.25000	.24008	-.010	-3.97	.82806	.006	1
S5	.50000	.50459	.005	.918	1.7408	.008	1
S2	.04000	.04662	.007	16.6	.16092	.001	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



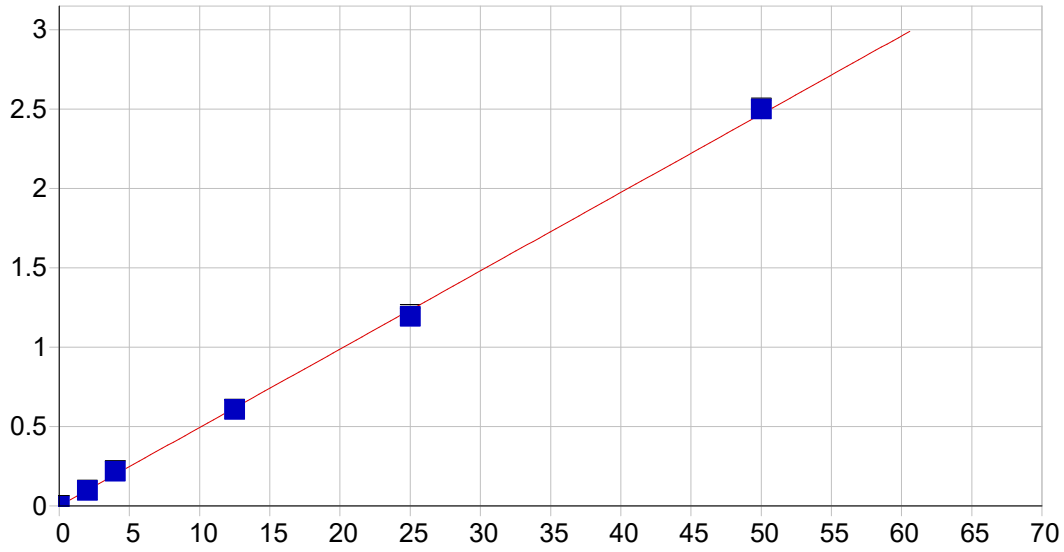
Cd 226.502 {449}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000022	Re-Slope:	1.000000
A1 (Gain):	2.157364	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999670	Status:	OK.
Std Error of Est:	0.000503		
Predicted MDL:	0.000087		
Predicted MQL:	0.000289		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00002	.000	1
S1	.00600	.00582	-.000	-3.04	.01260	.000	1
S3	1.2500	1.2358	-.014	-1.13	2.6685	.020	1
S4	2.5000	2.4491	-.051	-2.04	5.2883	.040	1
S5	5.0000	5.0216	.022	.433	10.843	.102	1
S2	.40000	.44364	.044	10.9	.95783	.003	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



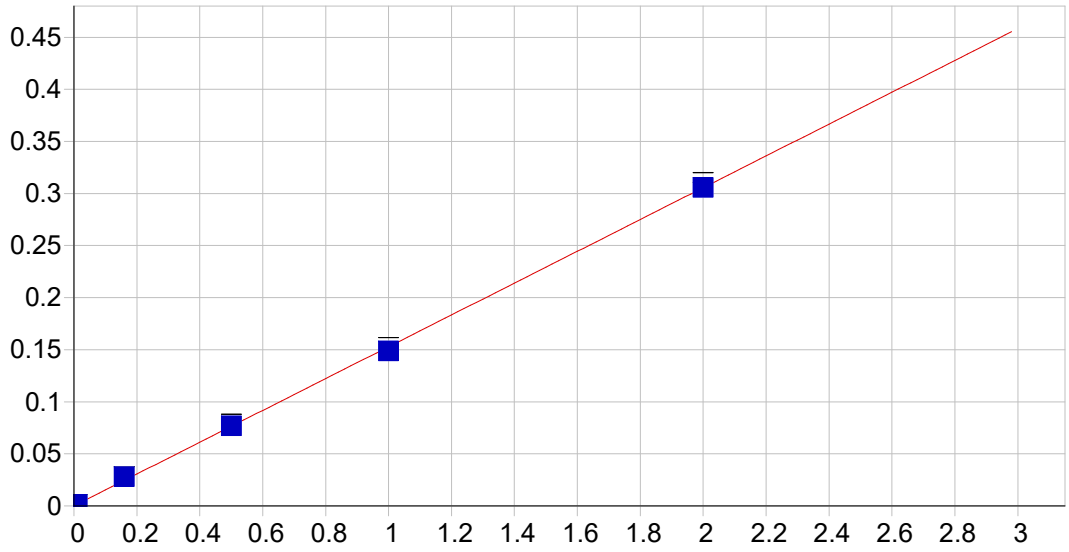
Ca 373.690 { 90}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000823	Re-Slope:	1.000000
A1 (Gain):	0.049353	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999561	Status:	OK.
Std Error of Est:	0.000774		
Predicted MDL:	0.008717		
Predicted MQL:	0.029055		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00009	-.000	.000	.00082	.000	1
S2	4.0000	4.4142	.414	10.4	.21868	.002	1
S3	12.500	12.294	-.206	-1.65	.60758	.001	1
S4	25.000	24.189	-.811	-3.24	1.1947	.010	1
S5	50.000	50.650	.650	1.30	2.5005	.006	1
S1	2.0000	1.9527	-.047	-2.37	.09719	.002	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



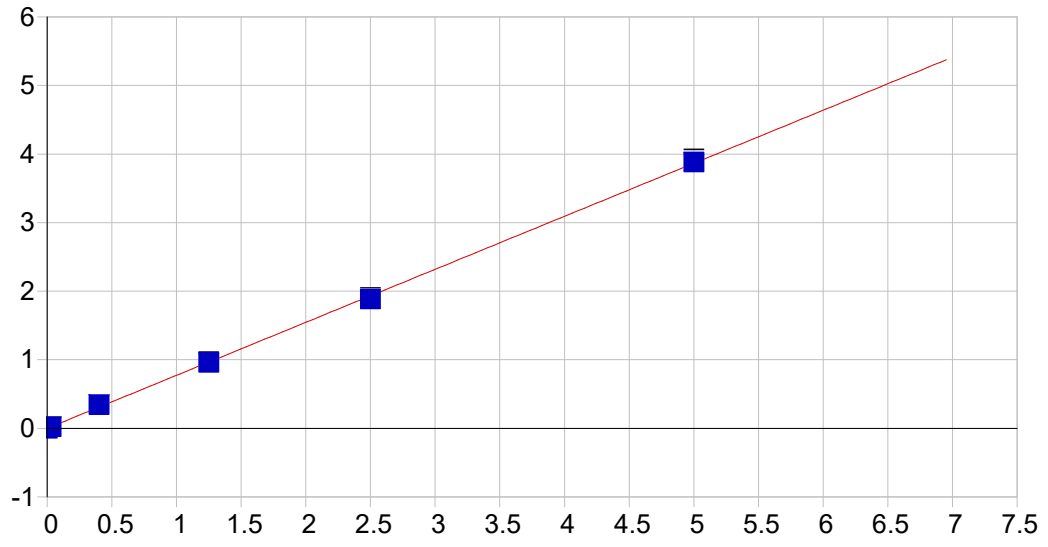
Cr 267.716 {126}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000065	Re-Slope:	1.000000
A1 (Gain):	0.152752	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999444	Status:	OK.
Std Error of Est:	0.000038		
Predicted MDL:	0.000415		
Predicted MQL:	0.001383		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00007	.000	1
S1	.01000	.00978	-.000	-2.23	.00156	.000	1
S3	.50000	.50206	.002	.412	.07678	.002	1
S4	1.0000	.97332	-.027	-2.67	.14879	.003	1
S5	2.0000	2.0017	.002	.083	.30591	.005	1
S2	.16000	.18319	.023	14.5	.02806	.000	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



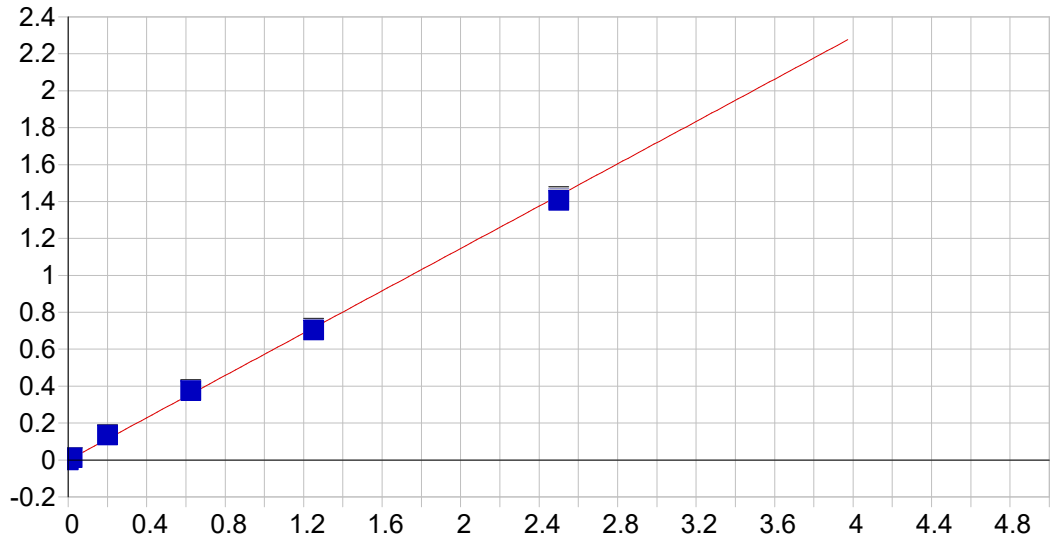
Co 228.616 {448}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000079	Re-Slope:	1.000000
A1 (Gain):	0.773056	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999599	Status:	OK.
Std Error of Est:	0.000446		
Predicted MDL:	0.000257		
Predicted MQL:	0.000856		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00008	.000	1
S1	.03000	.02949	-.001	-1.71	.02262	.000	1
S3	1.2500	1.2398	-.010	-.819	.95997	.008	1
S4	2.5000	2.4402	-.060	-2.39	1.8896	.015	1
S5	5.0000	5.0226	.023	.451	3.8892	.037	1
S2	.40000	.44802	.048	12.0	.34679	.002	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



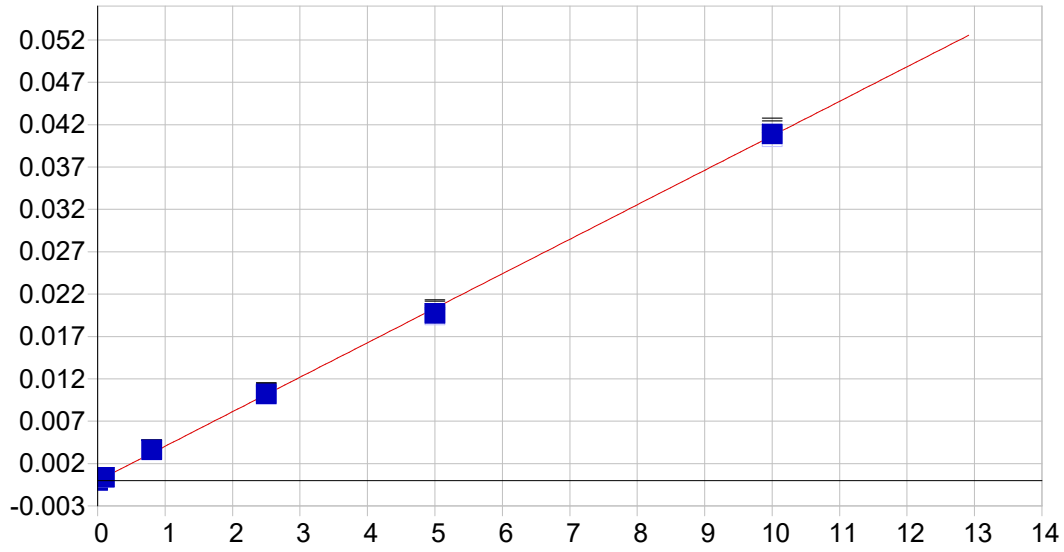
Cu 224.700 {450}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000721	Re-Slope:	1.000000
A1 (Gain):	0.573155	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998998	Status:	OK.
Std Error of Est:	0.000303		
Predicted MDL:	0.000454		
Predicted MQL:	0.001515		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00073	.000	1
S1	.02000	.02239	.002	12.0	.01222	.000	1
S3	.62500	.65634	.031	5.01	.37801	.002	1
S4	1.2500	1.2285	-.022	-1.72	.70846	.004	1
S5	2.5000	2.4525	-.047	-1.90	1.4151	.011	1
S2	.20000	.23527	.035	17.6	.13494	.001	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



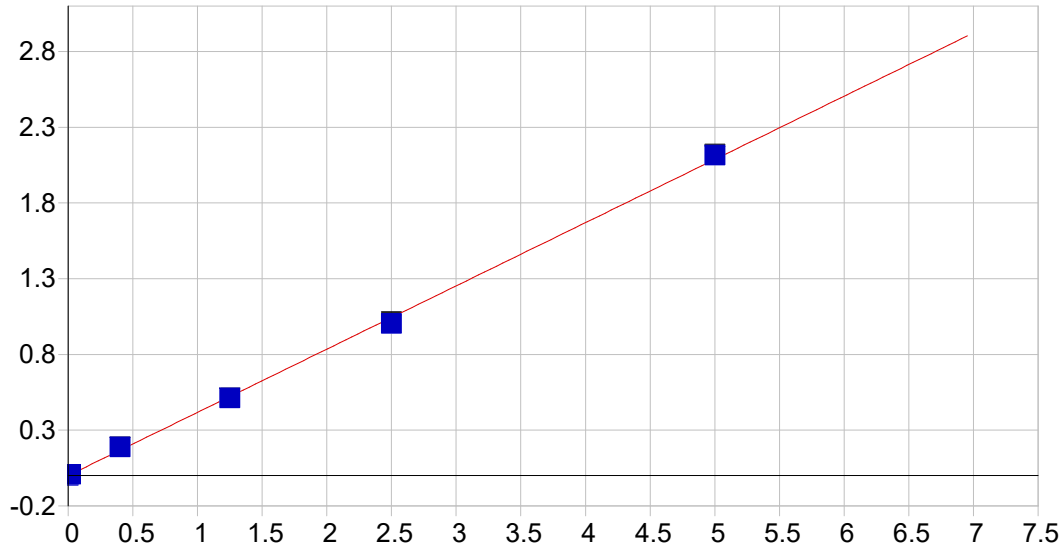
Fe 240.488 {140}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000027	Re-Slope:	1.000000
A1 (Gain):	0.004072	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999553	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.006867		
Predicted MQL:	0.022891		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00003	.000	1
S1	.10000	.09672	-.003	-3.28	.00036	.000	1
S3	2.5000	2.5124	.012	.498	.01012	.000	1
S4	5.0000	4.8444	-.156	-3.11	.01952	.000	1
S5	10.000	10.053	.053	.532	.04056	.001	1
S2	.80000	.89325	.093	11.7	.00358	.000	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



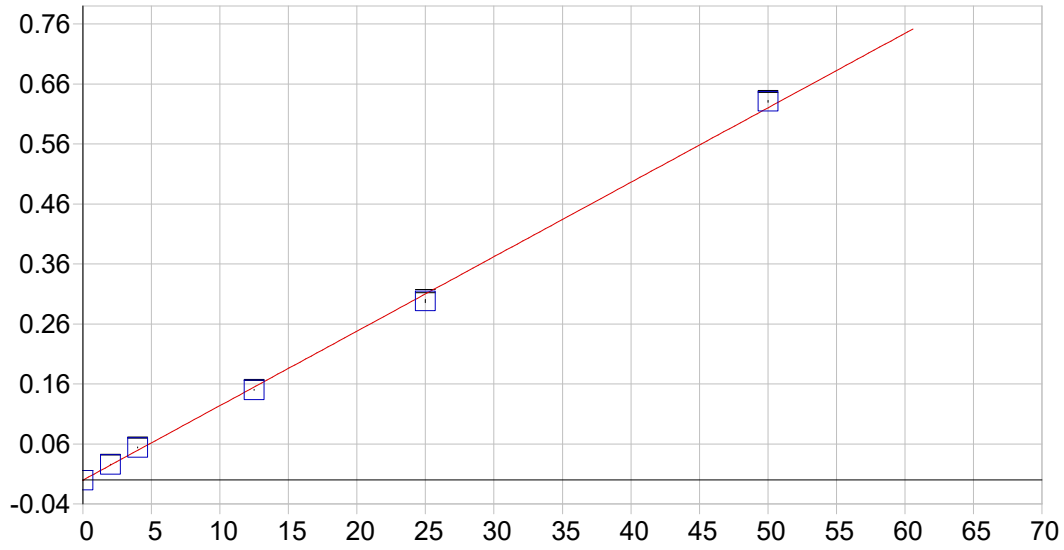
Mn 257.610 {131}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.417496	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999394	Status:	OK.
Std Error of Est:	0.000241		
Predicted MDL:	0.000373		
Predicted MQL:	0.001244		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00000	.000	1
S1	.02000	.02000	.000	.000	.00835	.000	1
S3	1.2500	1.2288	-.021	-1.69	.51313	.001	1
S4	2.5000	2.4053	-.095	-3.79	1.0044	.011	1
S5	5.0000	5.0656	.066	1.31	2.1153	.007	1
S2	.40000	.45031	.050	12.6	.18803	.001	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



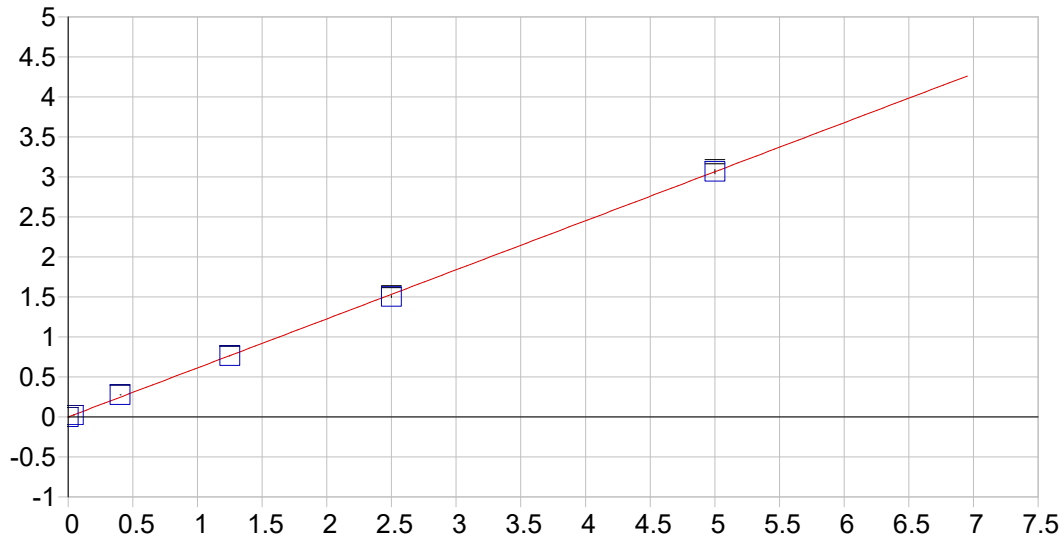
Mg 279.079 {121}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000267	Re-Slope:	1.000000
A1 (Gain):	0.012411	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999460	Status:	OK.
Std Error of Est:	0.000216		
Predicted MDL:	0.017267		
Predicted MQL:	0.057557		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00017	-.000	.000	-.00027	.000	1
S2	4.0000	4.3762	.376	9.40	.05404	.001	1
S3	12.500	12.118	-.382	-3.06	.15012	.001	1
S4	25.000	24.056	-.944	-3.77	.29829	.003	1
S5	50.000	50.869	.869	1.74	.63105	.001	1
S1	2.0000	2.0810	.081	4.05	.02556	.000	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



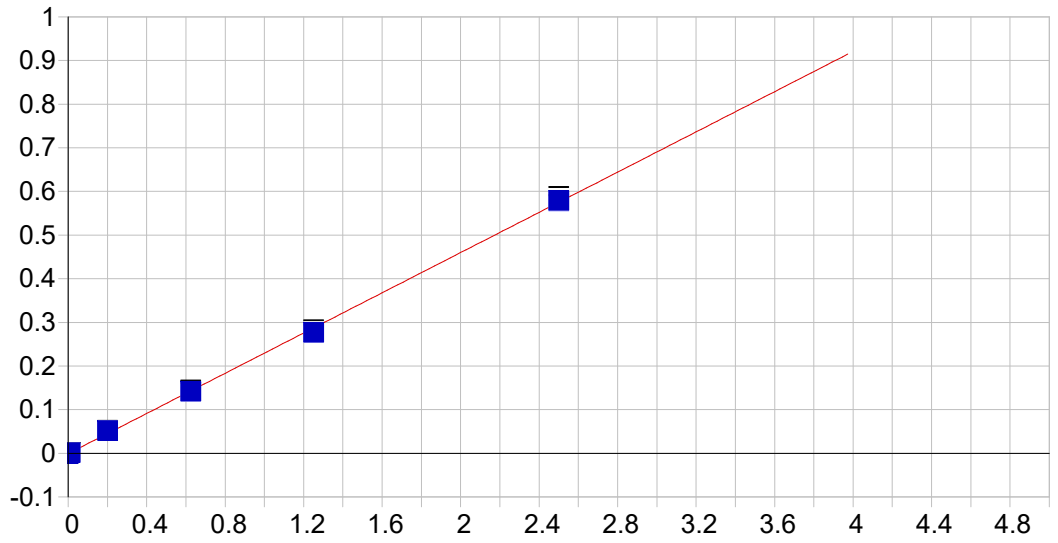
Ni 231.604 {446}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000027	Re-Slope:	1.000000
A1 (Gain):	0.612937	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999604	Status:	OK.
Std Error of Est:	0.000405		
Predicted MDL:	0.000303		
Predicted MQL:	0.001011		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00002	.000	1
S1	.04000	.03906	-.001	-2.34	.02397	.000	1
S3	1.2500	1.2470	-.003	-.243	.76433	.005	1
S4	2.5000	2.4513	-.049	-1.95	1.5025	.012	1
S5	5.0000	5.0025	.002	.050	3.0662	.028	1
S2	.40000	.45018	.050	12.5	.27596	.001	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



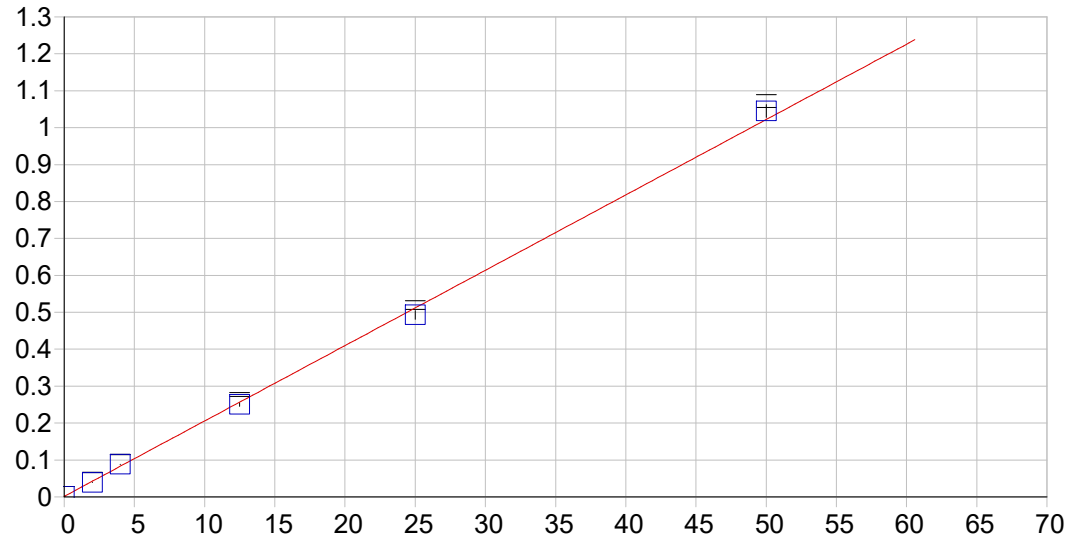
Ag 328.068 {103}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001007	Re-Slope:	1.000000
A1 (Gain):	0.230472	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999340	Status:	OK.
Std Error of Est:	0.000069		
Predicted MDL:	0.000381		
Predicted MQL:	0.001270		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00101	.000	1
S1	.01000	.00986	-.000	-1.39	.00125	.000	1
S3	.62500	.61989	-.005	-.817	.14129	.003	1
S4	1.2500	1.2075	-.042	-3.40	.27615	.005	1
S5	2.5000	2.5181	.018	.724	.57705	.010	1
S2	.20000	.22965	.030	14.8	.05174	.001	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



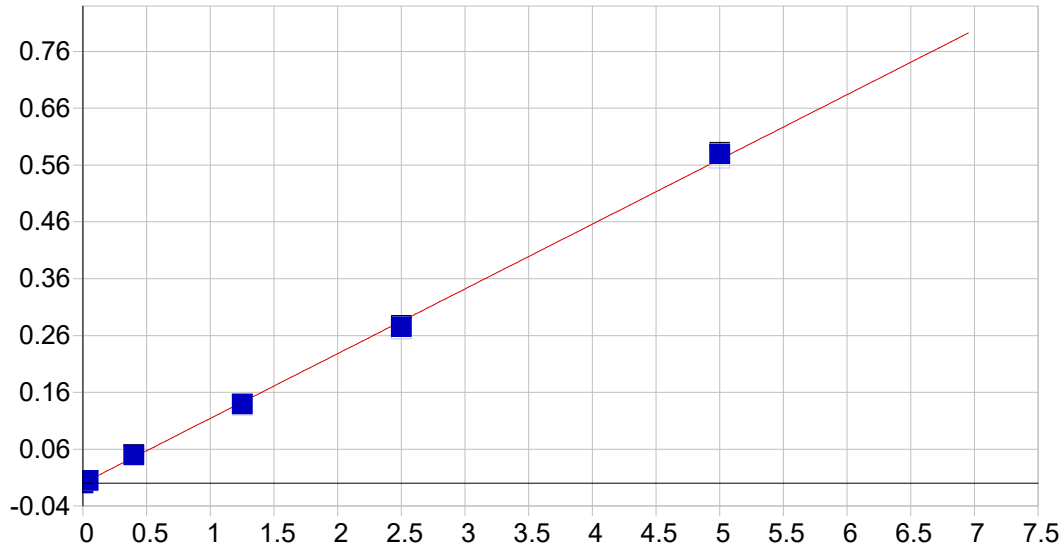
Na 589.592 { 57}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001642	Re-Slope:	1.000000
A1 (Gain):	0.020406	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999485	Status:	OK.
Std Error of Est:	0.000347		
Predicted MDL:	0.009570		
Predicted MQL:	0.031900		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00011	.000	.000	.00164	.000	1
S2	4.0000	4.2454	.245	6.14	.08828	.001	1
S3	12.500	12.185	-.315	-2.52	.25029	.005	1
S4	25.000	24.066	-.934	-3.74	.49274	.012	1
S5	50.000	51.157	1.16	2.31	1.0456	.017	1
S1	2.0000	1.8470	-.153	-7.65	.03933	.001	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



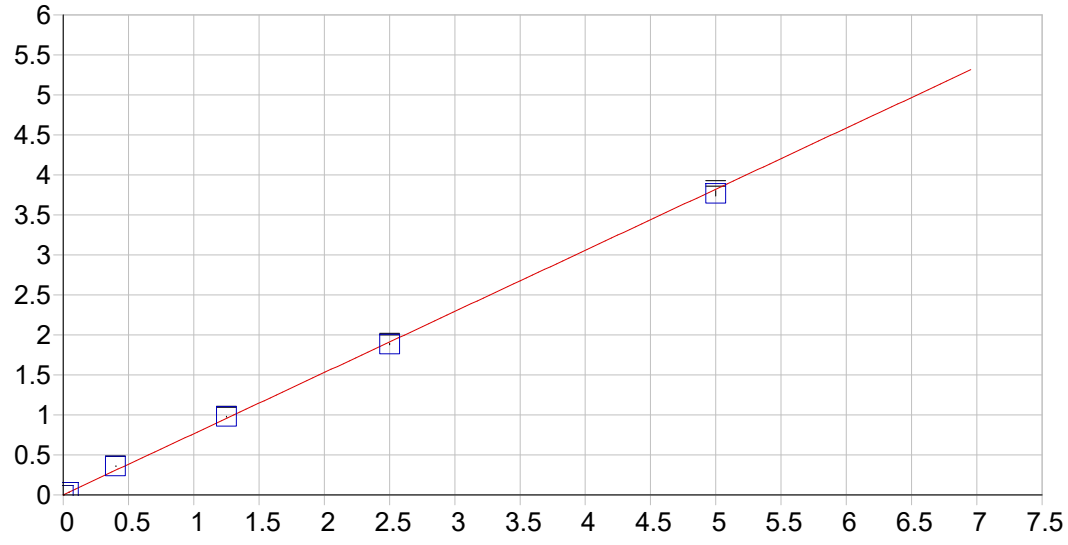
V 292.402 {115}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000075	Re-Slope:	1.000000
A1 (Gain):	0.113996	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999527	Status:	OK.
Std Error of Est:	0.000081		
Predicted MDL:	0.001718		
Predicted MQL:	0.005726		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00007	.000	1
S1	.04000	.03766	-.002	-5.86	.00420	.000	1
S3	1.2500	1.2176	-.032	-2.59	.13680	.000	1
S4	2.5000	2.4136	-.086	-3.46	.27106	.002	1
S5	5.0000	5.0865	.087	1.73	.57161	.002	1
S2	.40000	.43454	.035	8.63	.04895	.000	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



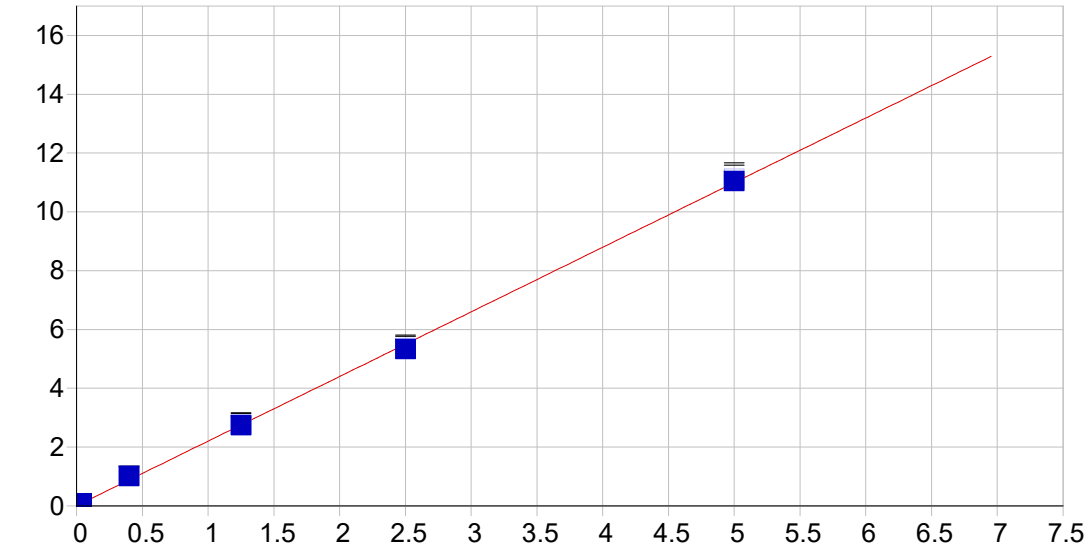
Zn 206.200 {464}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001078	Re-Slope:	1.000000
A1 (Gain):	0.764112	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999204	Status:	OK.
Std Error of Est:	0.000716		
Predicted MDL:	0.000207		
Predicted MQL:	0.000690		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00107	.000	1
S1	.04000	.04215	.002	5.38	.03329	.000	1
S3	1.2500	1.2802	.030	2.41	.97926	.006	1
S4	2.5000	2.4668	-.033	-1.33	1.8860	.011	1
S5	5.0000	4.9305	-.069	-1.39	3.7685	.034	1
S2	.40000	.47039	.070	17.6	.36051	.001	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



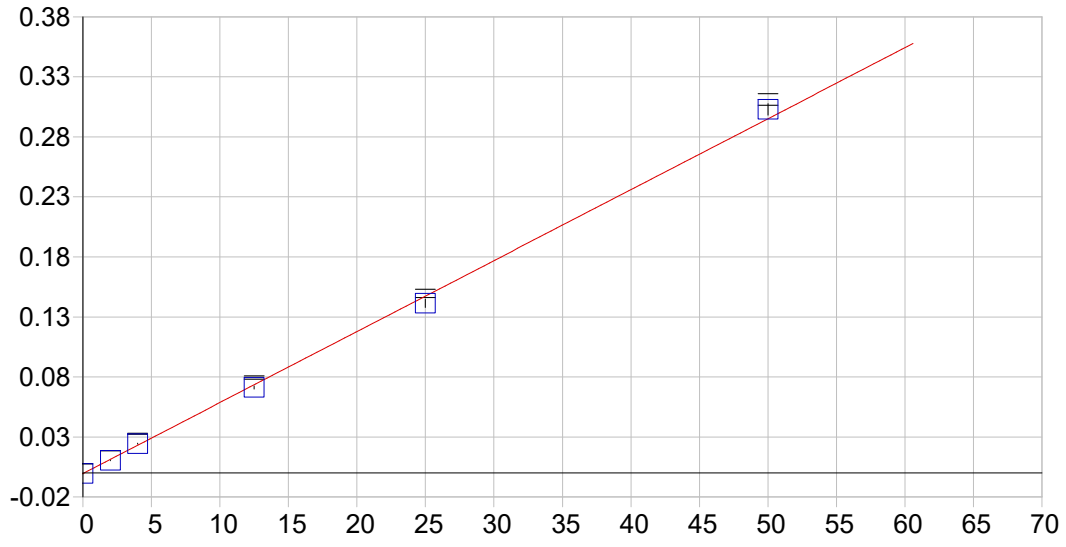
Zn 213.856 {158}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005121	Re-Slope:	1.000000
A1 (Gain):	2.198088	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999402	Status:	OK.
Std Error of Est:	0.001797		
Predicted MDL:	0.000339		
Predicted MQL:	0.001131		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00511	.001	1
S1	.04000	.04034	.000	.858	.09442	.001	1
S3	1.2500	1.2469	-.003	-.247	2.7650	.064	1
S4	2.5000	2.4222	-.078	-3.11	5.3676	.106	1
S5	5.0000	5.0218	.022	.436	11.120	.207	1
S2	.40000	.45872	.059	14.7	1.0196	.007	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



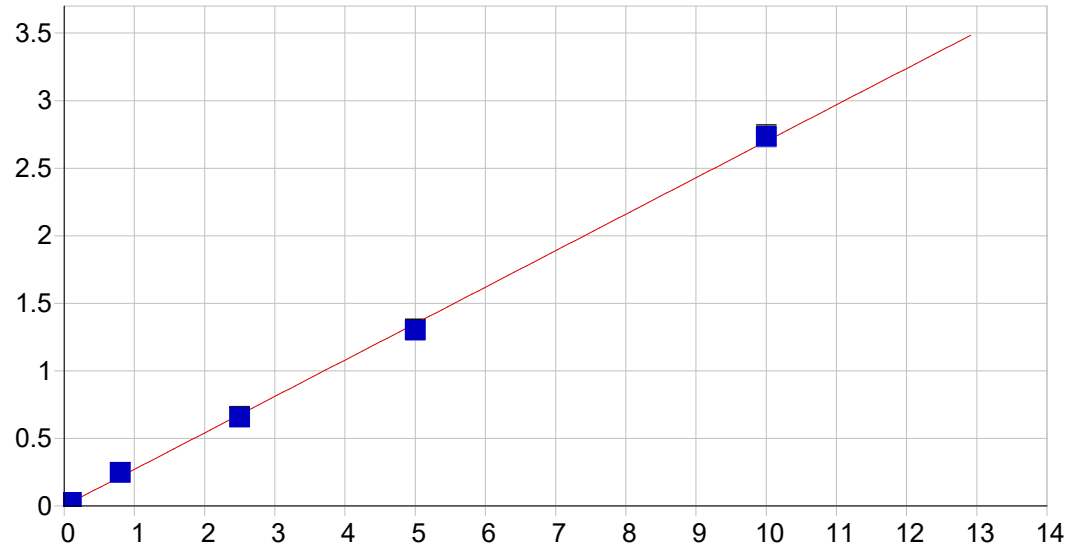
K 766.490 { 44}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000517	Re-Slope:	1.000000
A1 (Gain):	0.005914	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999403	Status:	OK.
Std Error of Est:	0.000108		
Predicted MDL:	0.033093		
Predicted MQL:	0.110309		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00015	.000	.000	-.00052	.000	1
S2	4.0000	4.2105	.210	5.26	.02438	.000	1
S3	12.500	12.122	-.378	-3.02	.07117	.001	1
S4	25.000	24.006	-.994	-3.98	.14145	.003	1
S5	50.000	51.330	1.33	2.66	.30304	.005	1
S1	2.0000	1.8308	-.169	-8.46	.01031	.000	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



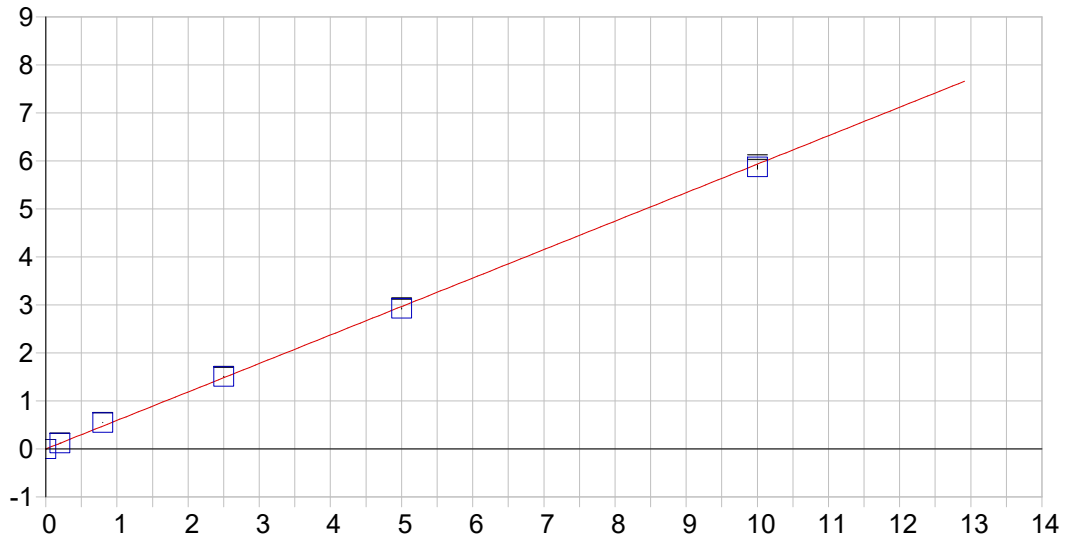
B 249.678 {135}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000562	Re-Slope:	1.000000
A1 (Gain):	0.269804	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999286	Status:	OK.
Std Error of Est:	0.000534		
Predicted MDL:	0.000863		
Predicted MQL:	0.002876		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00056	.000	1
S1	.10000	.10469	.005	4.69	.02866	.000	1
S3	2.5000	2.4337	-.066	-2.65	.65518	.005	1
S4	5.0000	4.8223	-.178	-3.55	1.2976	.008	1
S5	10.000	10.125	.125	1.25	2.7244	.014	1
S2	.80000	.91416	.114	14.3	.24657	.001	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



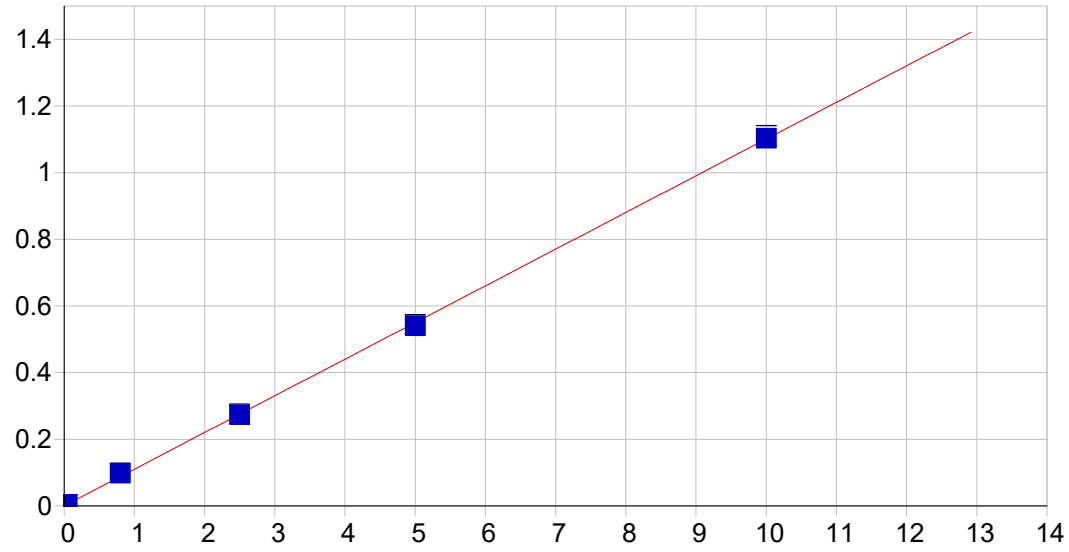
Mo 202.030 {467}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000018	Re-Slope:	1.000000
A1 (Gain):	0.593169	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999401	Status:	OK.
Std Error of Est:	0.001528		
Predicted MDL:	0.000281		
Predicted MQL:	0.000936		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00003	-.000	.000	-.00000	.000	1
S1	.20000	.20425	.004	2.13	.12117	.001	1
S3	2.5000	2.5389	.039	1.56	1.5060	.009	1
S4	5.0000	4.9306	-.069	-1.39	2.9247	.014	1
S5	10.000	9.9013	-.099	-.987	5.8732	.049	1
S2	.80000	.92496	.125	15.6	.54868	.003	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



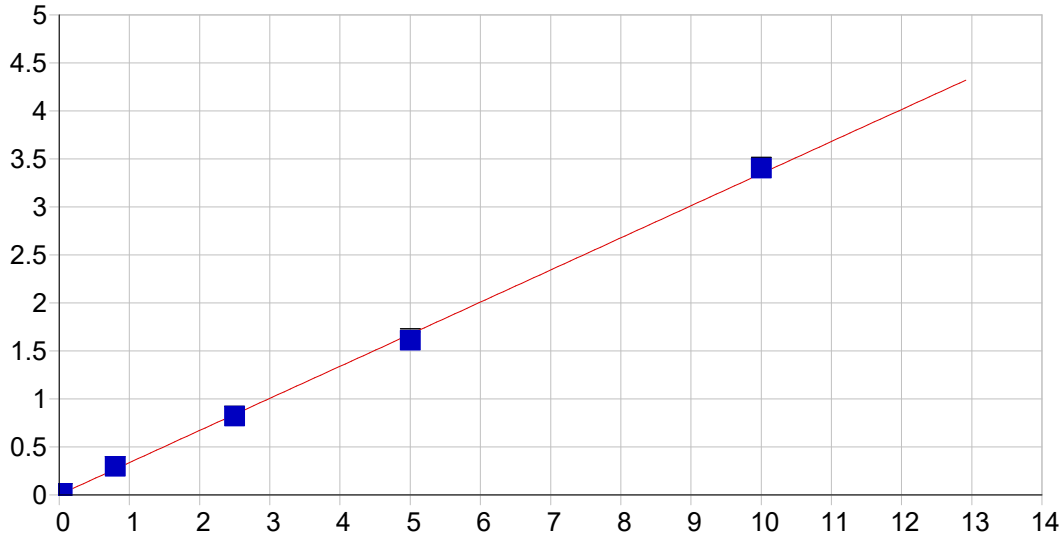
Sn 189.989 {478}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000162	Re-Slope:	1.000000
A1 (Gain):	0.110054	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999686	Status:	OK.
Std Error of Est:	0.000091		
Predicted MDL:	0.000776		
Predicted MQL:	0.002588		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00016	.000	1
S1	.04000	.03891	-.001	-2.71	.00444	.000	1
S3	2.5000	2.4851	-.015	-.598	.27337	.002	1
S4	5.0000	4.9079	-.092	-1.84	.53973	.004	1
S5	10.000	10.020	.020	.203	1.1018	.009	1
S2	.80000	.88785	.088	11.0	.09778	.000	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



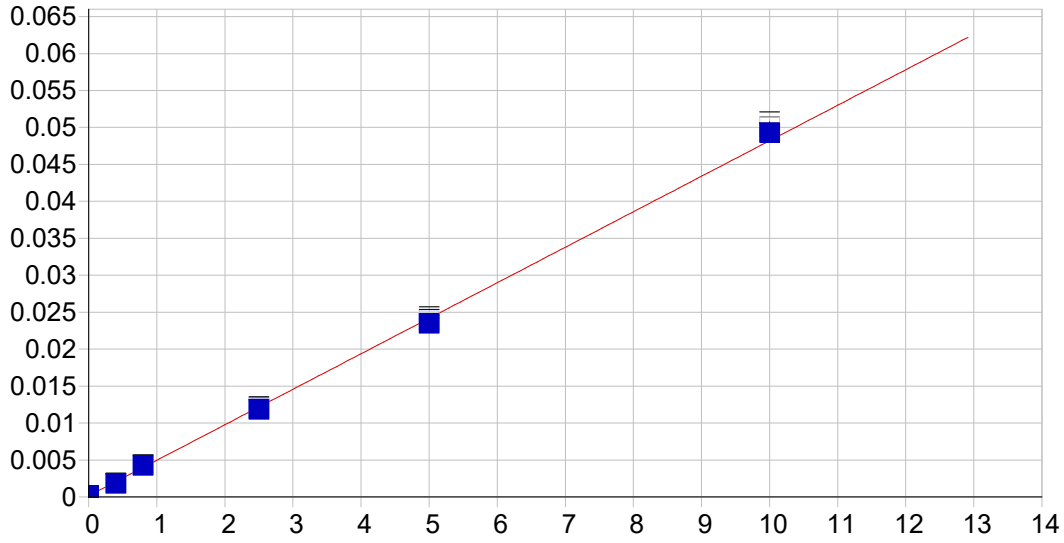
Ti 336.121 {100}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002077	Re-Slope:	1.000000
A1 (Gain):	0.334406	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999490	Status:	OK.
Std Error of Est:	0.000354		
Predicted MDL:	0.000792		
Predicted MQL:	0.002640		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00208	.000	1
S1	.04000	.03803	-.002	-4.92	.01479	.000	1
S3	2.5000	2.4434	-.057	-2.27	.81885	.001	1
S4	5.0000	4.8126	-.187	-3.75	1.6108	.016	1
S5	10.000	10.169	.169	1.69	3.4014	.012	1
S2	.80000	.87720	.077	9.65	.29532	.003	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



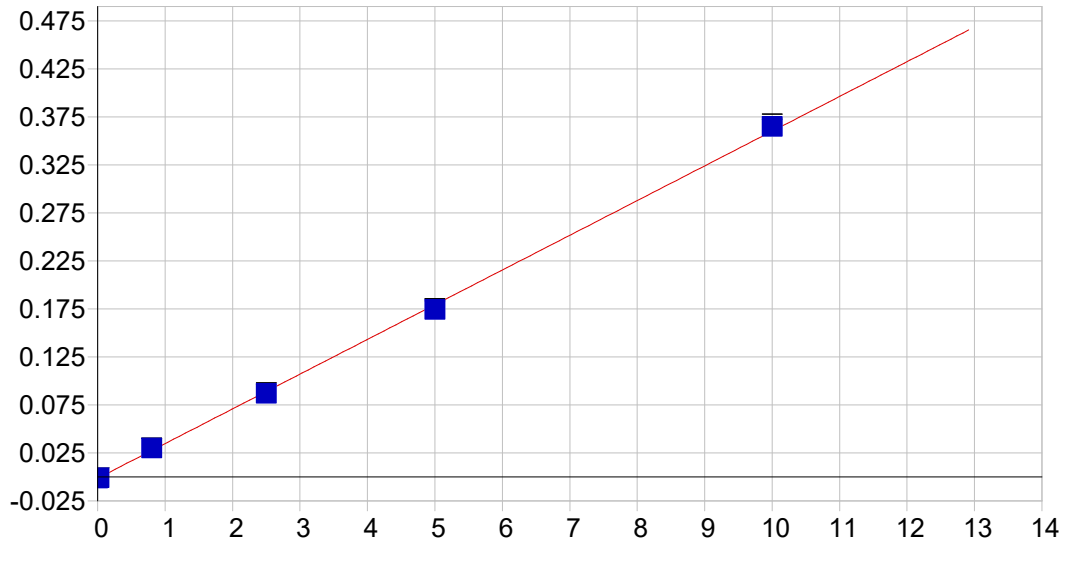
Si 288.158 {117}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000153	Re-Slope:	1.000000
A1 (Gain):	0.004805	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999420	Status:	OK.
Std Error of Est:	0.000018		
Predicted MDL:	0.008078		
Predicted MQL:	0.026927		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00004	.000	.000	.00015	.000	1
S1	.40000	.34667	-.053	-13.3	.00182	.000	1
S3	2.5000	2.4259	-.074	-2.97	.01199	.000	1
S4	5.0000	4.8492	-.151	-3.02	.02381	.001	1
S5	10.000	10.226	.226	2.26	.05001	.001	1
S2	.80000	.85206	.052	6.51	.00430	.000	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



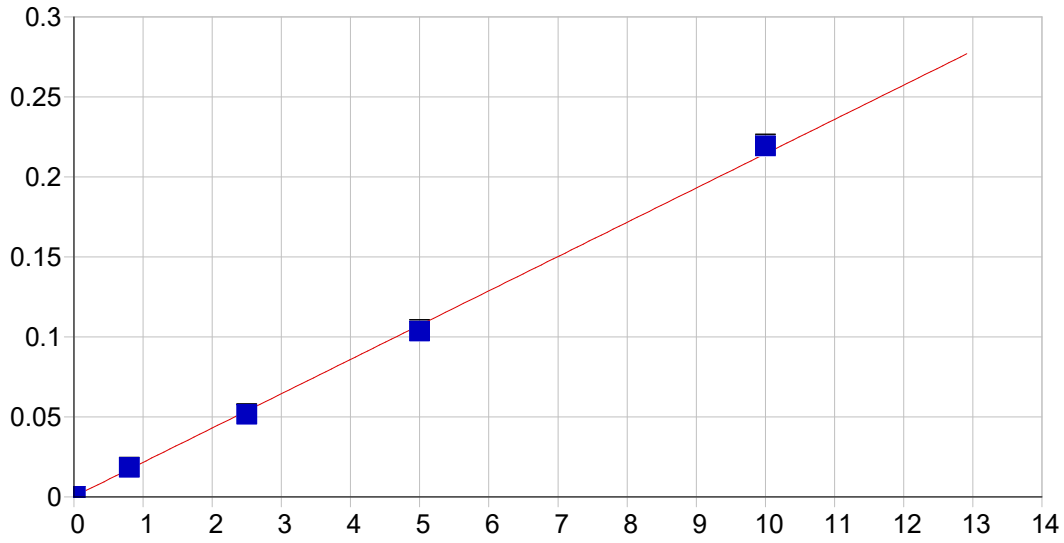
P 177.495 {490}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001452	Re-Slope:	1.000000
A1 (Gain):	0.036162	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999623	Status:	OK.
Std Error of Est:	0.000023		
Predicted MDL:	0.002611		
Predicted MQL:	0.008704		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00145	.000	1
S1	.02000	.01580	-.004	-21.0	-.00088	.000	1
S3	2.5000	2.4446	-.055	-2.22	.08693	.001	1
S4	5.0000	4.8592	-.141	-2.82	.17423	.001	1
S5	10.000	10.131	.131	1.31	.36485	.003	1
S2	.80000	.86944	.069	8.68	.02998	.000	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



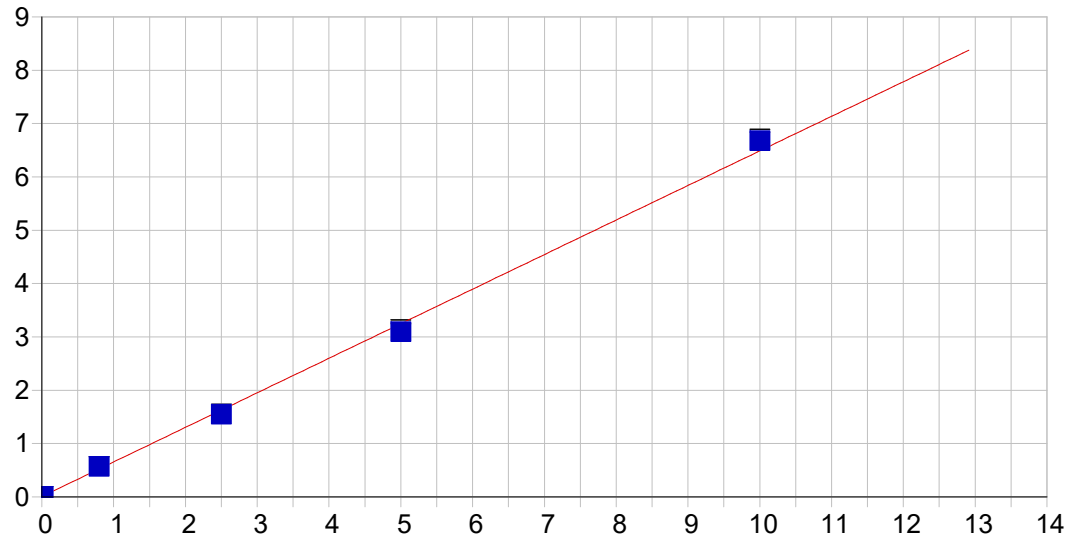
S 182.034 {485}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000199	Re-Slope:	1.000000
A1 (Gain):	0.021429	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999485	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.003681		
Predicted MQL:	0.012268		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00020	.000	1
S1	.02000	.01632	-.004	-18.4	.00053	.000	1
S3	2.5000	2.3997	-.100	-4.01	.05148	.000	1
S4	5.0000	4.8277	-.172	-3.45	.10337	.001	1
S5	10.000	10.227	.227	2.27	.21881	.001	1
S2	.80000	.84878	.049	6.10	.01834	.000	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



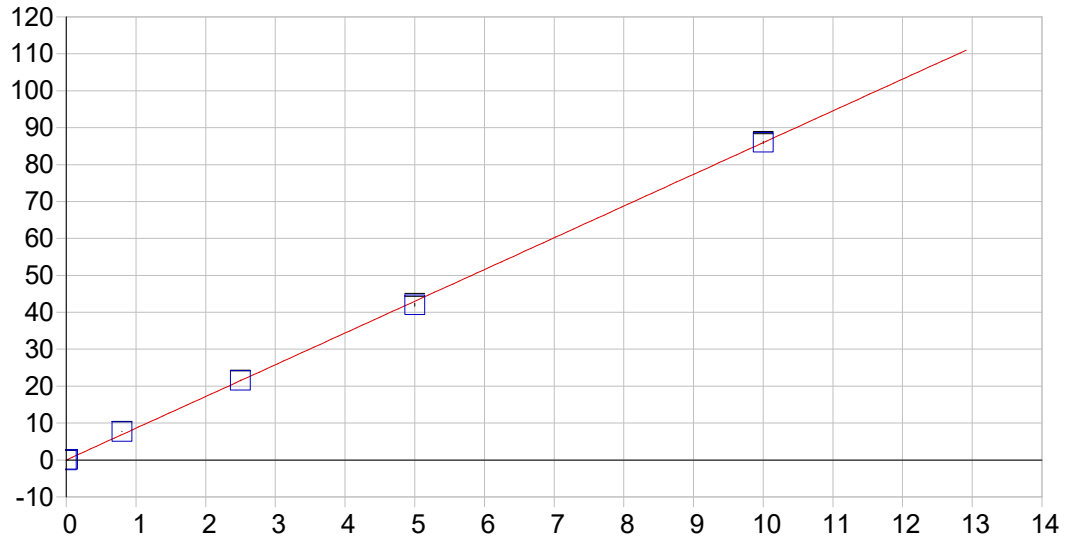
Li 670.784 { 50}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.007580	Re-Slope:	1.000000
A1 (Gain):	0.648028	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999167	Status:	OK.
Std Error of Est:	0.000620		
Predicted MDL:	0.001284		
Predicted MQL:	0.004282		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00758	.000	1
S5	10.000	10.292	.292	2.92	6.6803	.029	1
S4	5.0000	4.7652	-.235	-4.70	3.0972	.036	1
S3	2.5000	2.3806	-.119	-4.78	1.5511	.002	1
S1	.02000	.01818	-.002	-9.10	.01957	.001	1
S2	.80000	.86420	.064	8.03	.56787	.003	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881



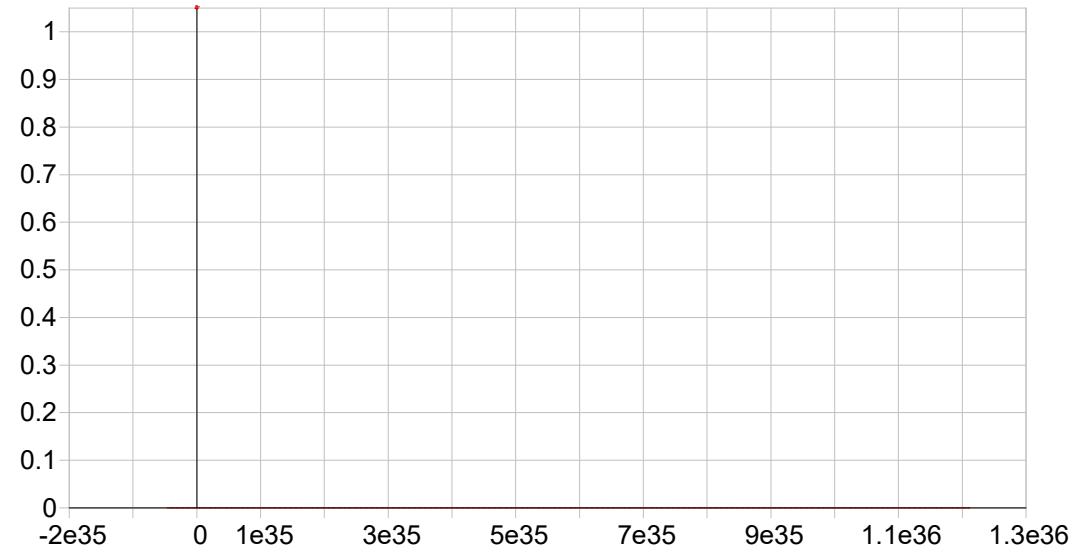
Sr 407.771 { 83}

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000261	Re-Slope:	1.000000
A1 (Gain):	8.595344	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999619	Status:	OK.
Std Error of Est:	0.005561		
Predicted MDL:	0.000055		
Predicted MQL:	0.000182		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00027	.000	1
S1	.02000	.01898	-.001	-5.08	.16291	.003	1
S3	2.5000	2.5089	.009	.356	21.565	.080	1
S4	5.0000	4.8906	-.109	-2.19	42.036	.360	1
S5	10.000	10.006	.006	.057	86.002	.288	1
S2	.80000	.89585	.096	12.0	7.6999	.053	1

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

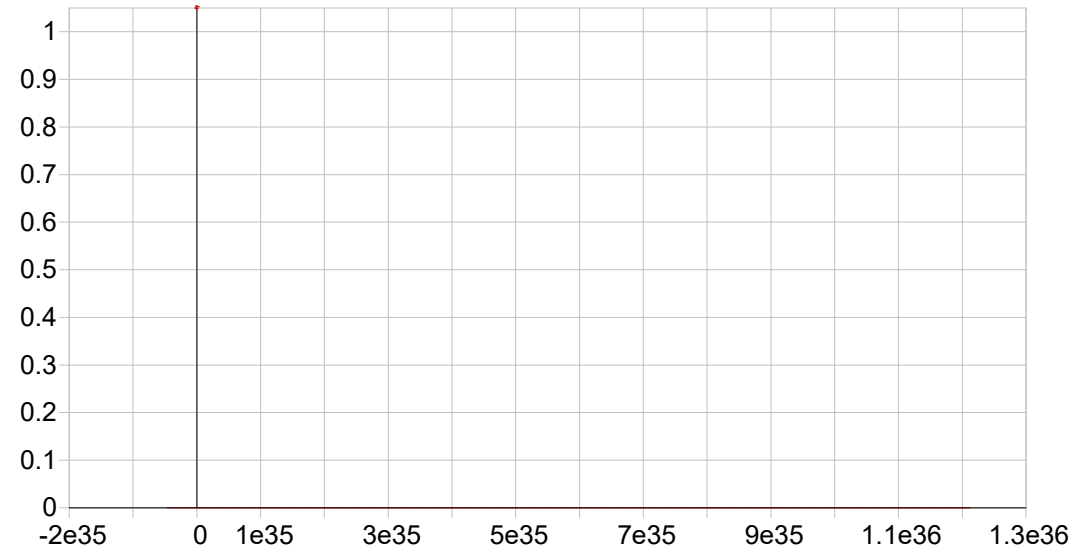


Y 224.306 {450}*

Date of Fit:	3/3/2025 19:18:08	Type of Fit:	Linear	Weighting:	1/Conc

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

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



Y 360.073 { 94}*

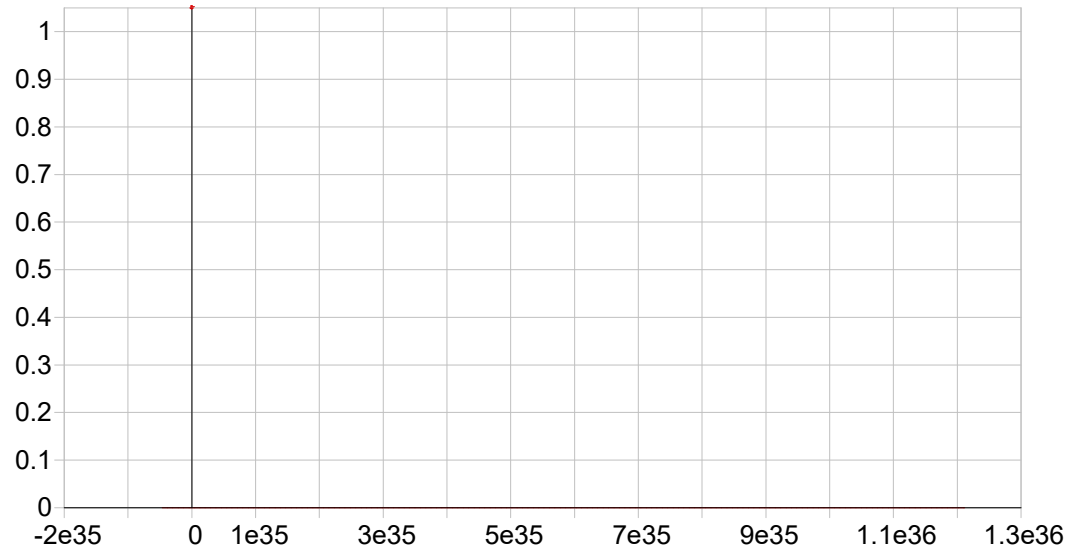
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

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

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



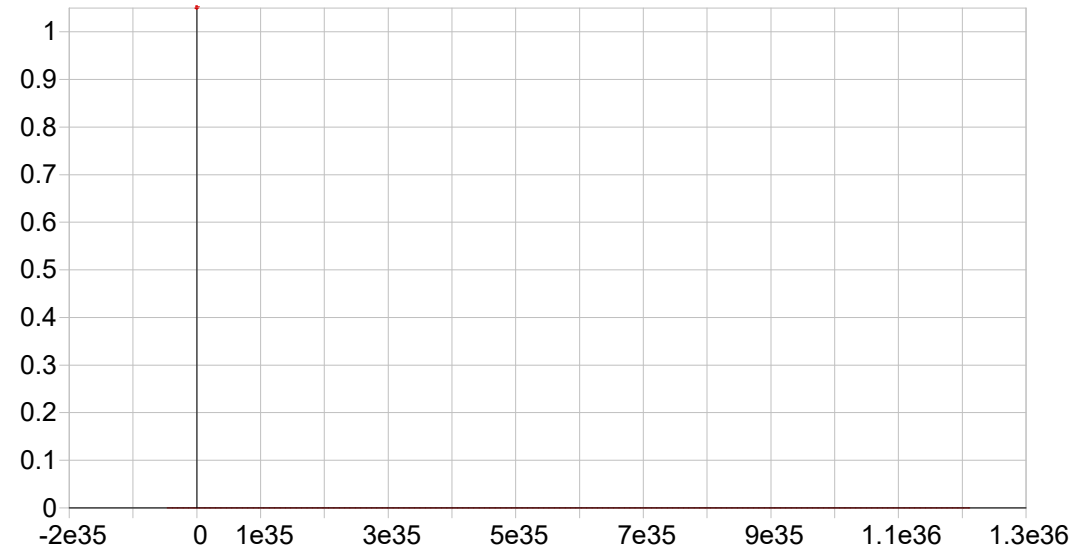
Y 371.030 { 91}*

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

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

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

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

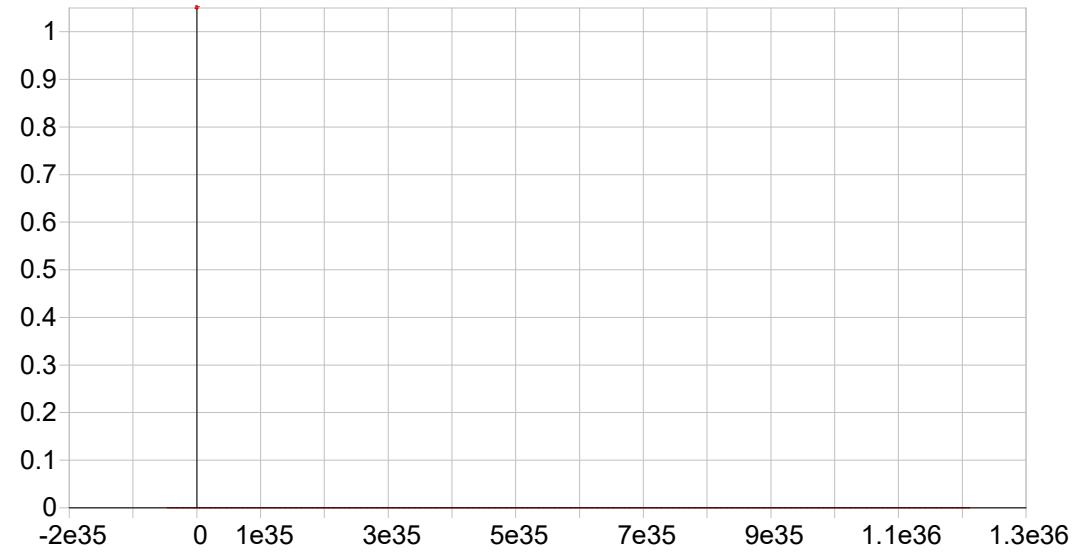


Y 224.306 {150}*

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

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

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



In 230.606 {446}*

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

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

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

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:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: S0 Acquired: 3/3/2025 18:26:52 Type: Cal
Method: NON EPA-6010-200.7(v2755) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	-.00012	-.00008	.00002	.00026	.00038	.00067	.03249	-.00003
Stddev	.00005	.00009	.00009	.00021	.00006	.00031	.00171	.00011
%RSD	40.282	111.28	440.10	79.221	15.965	47.267	5.2513	428.64
#1	-.00017	-.00009	.00009	.00013	.00041	.00102	.03057	-.00003
#2	-.00010	.00001	-.00008	.00016	.00042	.00041	.03307	-.00013
#3	-.00008	-.00017	.00006	.00051	.00031	.00058	.03383	.00009

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	-.00002	.00082	.00007	-.00008	-.00073	-.00003	-.00000	-.00027
Stddev	.00009	.00020	.00003	.00006	.00020	.00003	.00004	.00009
%RSD	408.75	24.064	53.213	71.301	27.816	125.14	3735.3	33.788
#1	-.00007	.00059	.00003	-.00015	-.00065	-.00005	-.00003	-.00016
#2	-.00008	.00093	.00008	-.00004	-.00057	.00001	.00005	-.00032
#3	.00008	.00093	.00009	-.00006	-.00095	-.00004	-.00003	-.00032

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	.00002	-.00101	.00164	.00007	.00511	-.00052	.00056	-.00000
Stddev	.00017	.00007	.00004	.00011	.00114	.00019	.00016	.00014
%RSD	675.07	7.2598	2.4711	151.73	22.225	36.387	28.232	6594.5
#1	.00001	-.00096	.00160	.00021	.00396	-.00067	.00038	-.00011
#2	.00020	-.00109	.00167	.00000	.00623	-.00057	.00068	-.00005
#3	-.00013	-.00097	.00166	.00002	.00514	-.00031	.00061	.00015

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	.00016	.00208	.00015	-.00145	.00020	.00758	-.00027
Stddev	.00002	.00017	.00002	.00006	.00008	.00034	.00015
%RSD	14.235	8.1456	13.385	4.0721	40.200	4.4732	54.435
#1	.00016	.00217	.00014	-.00149	.00027	.00781	-.00019
#2	.00019	.00188	.00018	-.00148	.00011	.00774	-.00018
#3	.00014	.00218	.00014	-.00138	.00022	.00719	-.00044

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: S0 Acquired: 3/3/2025 18:26:52 Type: Cal
Method: NON EPA-6010-200.7(v2755) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	3641.1	79618.	14877.	2375.7	5306.5
Stddev	48.1	1035.	169.	29.5	72.7
%RSD	1.3204	1.2996	1.1342	1.2435	1.3705
#1	3621.9	79626.	14801.	2374.6	5278.9
#2	3605.5	78580.	14759.	2346.7	5251.6
#3	3695.8	80649.	15070.	2405.7	5389.0

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: S1 Acquired: 3/3/2025 18:31:17 Type: Cal
Method: NON EPA-6010-200.7(v2755) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.00083	.00237	.00185	.00116	.00626	.01049	.20534	.02090
Stddev	.00001	.00012	.00011	.00012	.00016	.00061	.00194	.00015
%RSD	.86203	4.8630	6.1553	9.9714	2.6271	5.8373	.94613	.73784
#1	.00083	.00231	.00183	.00103	.00630	.01038	.20339	.02072
#2	.00083	.00230	.00174	.00122	.00639	.01115	.20728	.02102
#3	.00082	.00251	.00197	.00123	.00607	.00994	.20535	.02095

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	.01260	.09719	.00156	.02262	.01222	.00036	.00835	.02556
Stddev	.00019	.00151	.00004	.00032	.00018	.00001	.00029	.00040
%RSD	1.5031	1.5582	2.6918	1.4279	1.4687	2.9244	3.4446	1.5752
#1	.01278	.09554	.00151	.02277	.01230	.00037	.00812	.02519
#2	.01261	.09851	.00159	.02284	.01236	.00037	.00868	.02599
#3	.01240	.09753	.00158	.02225	.01202	.00035	.00826	.02550

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	.02397	.00125	.03933	.00420	.09442	.01031	.02866	.12117
Stddev	.00028	.00007	.00056	.00017	.00073	.00015	.00048	.00128
%RSD	1.1803	5.6367	1.4130	4.1230	.76862	1.4632	1.6701	1.0597
#1	.02395	.00117	.03869	.00404	.09365	.01031	.02811	.12184
#2	.02426	.00126	.03964	.00438	.09450	.01016	.02889	.12199
#3	.02370	.00131	.03967	.00416	.09509	.01046	.02899	.11969

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	.00444	.01479	.00182	-.00088	.00053	.01957	.16291
Stddev	.00010	.00018	.00003	.00012	.00008	.00064	.00280
%RSD	2.3023	1.1907	1.7616	13.850	15.284	3.2719	1.7161
#1	.00440	.01459	.00179	-.00077	.00053	.02017	.16010
#2	.00456	.01484	.00185	-.00087	.00061	.01964	.16569
#3	.00436	.01493	.00183	-.00101	.00045	.01890	.16293

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: S1 Acquired: 3/3/2025 18:31:17 Type: Cal
Method: NON EPA-6010-200.7(v2755) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	3656.5	80744.	14704.	2460.9	5223.5
Stddev	41.6	459.	161.	13.7	60.6
%RSD	1.1384	.56862	1.0979	.55537	1.1597
#1	3640.3	81239.	14890.	2466.4	5196.1
#2	3625.4	80661.	14612.	2471.0	5181.4
#3	3703.8	80332.	14610.	2445.4	5292.9

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: S2 Acquired: 3/3/2025 18:35:36 Type: Cal
Method: NON EPA-6010-200.7(v2755) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.04008	.05498	.16517	.04504	.10625	.16497	3.2844	.16092
Stddev	.00019	.00015	.00091	.00041	.00090	.00072	.0205	.00105
%RSD	.46559	.26500	.54929	.90619	.84392	.43761	.62541	.65496
#1	.03986	.05503	.16445	.04468	.10537	.16459	3.2926	.16066
#2	.04017	.05481	.16488	.04496	.10623	.16581	3.2996	.16208
#3	.04020	.05509	.16619	.04549	.10716	.16452	3.2610	.16002

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	.95783	.21868	.02806	.34679	.13494	.00358	.18803	.05404
Stddev	.00318	.00241	.00024	.00154	.00054	.00004	.00148	.00095
%RSD	.33206	1.1039	.83813	.44295	.39673	1.2166	.78495	1.7651
#1	.95543	.21837	.02795	.34579	.13437	.00354	.18871	.05382
#2	.95662	.22124	.02789	.34601	.13500	.00358	.18905	.05509
#3	.96144	.21644	.02832	.34856	.13544	.00363	.18634	.05322

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	.27596	.05174	.08828	.04895	1.0196	.02438	.24657	.54868
Stddev	.00111	.00059	.00055	.00031	.0068	.00042	.00074	.00276
%RSD	.40282	1.1347	.62003	.63831	.66993	1.7125	.29875	.50265
#1	.27512	.05154	.08791	.04875	1.0155	.02417	.24660	.54587
#2	.27553	.05127	.08801	.04931	1.0157	.02412	.24729	.54878
#3	.27722	.05240	.08891	.04878	1.0274	.02486	.24582	.55139

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	.09778	.29532	.00430	.02998	.01834	.56787	7.6999
Stddev	.00027	.00270	.00006	.00009	.00012	.00325	.0534
%RSD	.27351	.91362	1.3819	.30953	.64666	.57166	.69355
#1	.09757	.29552	.00425	.02991	.01822	.56877	7.7144
#2	.09770	.29792	.00430	.02996	.01846	.57056	7.7445
#3	.09808	.29253	.00436	.03009	.01834	.56426	7.6407

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: S2 Acquired: 3/3/2025 18:35:36 Type: Cal
Method: NON EPA-6010-200.7(v2755) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	3626.0	79330.	14523.	2434.7	5080.8
Stddev	18.0	377.	133.	18.6	21.0
%RSD	.49519	.47470	.91413	.76255	.41330
#1	3641.1	79446.	14500.	2450.9	5096.7
#2	3630.8	79636.	14403.	2438.8	5088.7
#3	3606.2	78910.	14665.	2414.5	5057.0

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: S3 Acquired: 3/3/2025 18:39:39 Type: Cal
Method: NON EPA-6010-200.7(v2755) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.11164	.15312	.45941	.12469	.29378	.45502	9.1891	.42643
Stddev	.00087	.00043	.00356	.00073	.00234	.00089	.0179	.00237
%RSD	.77505	.28150	.77484	.58655	.79714	.19560	.19475	.55578
#1	.11181	.15272	.46123	.12496	.29525	.45542	9.1687	.42631
#2	.11071	.15358	.45531	.12387	.29108	.45400	9.1961	.42412
#3	.11241	.15305	.46170	.12526	.29502	.45565	9.2023	.42885

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	2.6685	.60758	.07678	.95997	.37801	.01012	.51313	.15012
Stddev	.0198	.00107	.00174	.00768	.00218	.00018	.00084	.00084
%RSD	.74249	.17546	2.2624	.79994	.57757	1.8087	.16412	.55747
#1	2.6838	.60864	.07848	.96580	.37897	.01029	.51224	.15105
#2	2.6461	.60651	.07500	.95127	.37551	.00992	.51325	.14941
#3	2.6755	.60758	.07686	.96283	.37954	.01013	.51391	.14990

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	.76433	.14129	.25029	.13680	2.7650	.07117	.65518	1.5060
Stddev	.00527	.00280	.00514	.00030	.0644	.00127	.00507	.0095
%RSD	.69008	1.9783	2.0549	.22067	2.3298	1.7864	.77358	.62762
#1	.76796	.14401	.25576	.13692	2.8248	.07240	.65207	1.5125
#2	.75828	.13842	.24556	.13703	2.6968	.06986	.65245	1.4952
#3	.76676	.14143	.24955	.13646	2.7735	.07126	.66103	1.5104

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	.27337	.81885	.01199	.08693	.05148	1.5511	21.565
Stddev	.00205	.00118	.00021	.00063	.00032	.0020	.080
%RSD	.75055	.14389	1.7929	.72097	.61874	.13088	.36952
#1	.27460	.81967	.01221	.08755	.05155	1.5494	21.640
#2	.27100	.81750	.01178	.08630	.05113	1.5505	21.573
#3	.27451	.81939	.01197	.08695	.05176	1.5533	21.481

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: S3 Acquired: 3/3/2025 18:39:39 Type: Cal
Method: NON EPA-6010-200.7(v2755) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	3589.1	78586.	14917.	2379.0	4930.7
Stddev	19.9	1625.	29.	54.3	30.1
%RSD	.55551	2.0673	.19504	2.2837	.61045
#1	3572.7	76908.	14906.	2321.9	4905.2
#2	3611.3	80151.	14950.	2430.0	4963.9
#3	3583.3	78700.	14895.	2385.2	4922.9

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: S4 Acquired: 3/3/2025 18:43:46 Type: Cal
Method: NON EPA-6010-200.7(v2755) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.21992	.29622	.90083	.24531	.57763	.90431	17.978	.82806
Stddev	.00112	.00293	.00650	.00200	.00356	.00817	.044	.00560
%RSD	.51128	.98880	.72189	.81439	.61600	.90372	.24464	.67663
#1	.21894	.29284	.89743	.24326	.57391	.90100	17.992	.82443
#2	.22115	.29781	.90833	.24726	.58100	.89830	18.014	.82524
#3	.21966	.29802	.89673	.24540	.57798	.91361	17.929	.83451

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	5.2883	1.1947	.14879	1.8896	.70846	.01952	1.0044	.29829
Stddev	.0401	.0103	.00331	.0152	.00420	.00047	.0107	.00263
%RSD	.75922	.86289	2.2252	.80246	.59325	2.4238	1.0657	.88233
#1	5.2674	1.1894	.14810	1.8813	.70548	.01922	.99579	.29617
#2	5.3346	1.1880	.14587	1.9071	.71327	.01928	1.0011	.29747
#3	5.2629	1.2065	.15239	1.8804	.70664	.02007	1.0164	.30123

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	1.5025	.27615	.49274	.27106	5.3676	.14145	1.2976	2.9247
Stddev	.0117	.00538	.01201	.00247	.1055	.00346	.0076	.0141
%RSD	.78114	1.9479	2.4383	.91107	1.9655	2.4482	.58272	.48282
#1	1.4963	.27453	.48917	.26910	5.3374	.14040	1.2934	2.9111
#2	1.5161	.27176	.48292	.27024	5.2805	.13864	1.2932	2.9393
#3	1.4952	.28215	.50614	.27383	5.4849	.14532	1.3064	2.9236

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	.53973	1.6108	.02381	.17423	.10337	3.0972	42.036
Stddev	.00416	.0160	.00057	.00119	.00097	.0356	.360
%RSD	.77129	.99165	2.3903	.68562	.93980	1.1497	.85724
#1	.53757	1.6036	.02358	.17336	.10234	3.0791	41.692
#2	.54453	1.5998	.02340	.17560	.10428	3.0742	42.411
#3	.53709	1.6292	.02446	.17374	.10350	3.1382	42.004

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: S4 Acquired: 3/3/2025 18:43:46 Type: Cal
Method: NON EPA-6010-200.7(v2755) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	3556.9	77799.	14711.	2338.5	4785.7
Stddev	12.9	1353.	50.	40.6	27.6
%RSD	.36214	1.7387	.33761	1.7343	.57659
#1	3566.1	78114.	14742.	2347.0	4799.1
#2	3542.2	78966.	14739.	2374.2	4753.9
#3	3562.5	76317.	14654.	2294.4	4804.0

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: S5 Acquired: 3/3/2025 18:47:57 Type: Cal
Method: NON EPA-6010-200.7(v2755) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.44854	.60044	1.8330	.49652	1.1713	1.9187	37.872	1.7408
Stddev	.00312	.00541	.0170	.00280	.0083	.0059	.545	.0080
%RSD	.69458	.90041	.92759	.56328	.71118	.30546	1.4384	.45959
#1	.44550	.59554	1.8170	.49364	1.1633	1.9119	37.264	1.7318
#2	.45172	.59954	1.8508	.49922	1.1799	1.9223	38.033	1.7472
#3	.44839	.60624	1.8311	.49670	1.1707	1.9218	38.317	1.7433

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	10.843	2.5005	.30591	3.8892	1.4151	.04056	2.1153	.63105
Stddev	.102	.0057	.00469	.0374	.0112	.00069	.0066	.00144
%RSD	.94496	.22834	1.5333	.96254	.79159	1.7087	.31282	.22849
#1	10.745	2.4947	.30447	3.8542	1.4035	.04024	2.1078	.63054
#2	10.949	2.5009	.31116	3.9286	1.4258	.04135	2.1178	.62993
#3	10.835	2.5061	.30212	3.8848	1.4160	.04009	2.1203	.63268

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	3.0662	.57705	1.0456	.57161	11.120	.30304	2.7244	5.8732
Stddev	.0277	.00952	.0173	.00241	.207	.00481	.0143	.0486
%RSD	.90460	1.6490	1.6543	.42233	1.8637	1.5871	.52517	.82677
#1	3.0410	.57262	1.0401	.56883	11.031	.30156	2.7080	5.8224
#2	3.0959	.58798	1.0649	.57285	11.357	.30842	2.7311	5.9192
#3	3.0618	.57056	1.0317	.57315	10.972	.29915	2.7341	5.8779

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	1.1018	3.4014	.05001	.36485	.21881	6.6803	86.002
Stddev	.0093	.0122	.00076	.00266	.00133	.0292	.288
%RSD	.84300	.35794	1.5133	.72979	.60703	.43764	.33441
#1	1.0928	3.3875	.04961	.36183	.21734	6.6477	86.229
#2	1.1114	3.4065	.05088	.36688	.21993	6.7043	85.679
#3	1.1013	3.4102	.04953	.36582	.21915	6.6889	86.098

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: S5 Acquired: 3/3/2025 18:47:57 Type: Cal
Method: NON EPA-6010-200.7(v2755) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	3480.6	74561.	13966.	2228.2	4558.1
Stddev	28.7	980.	61.	35.7	42.7
%RSD	.82468	1.3139	.43945	1.6036	.93785
#1	3506.8	74884.	14022.	2244.0	4594.4
#2	3449.9	73460.	13977.	2187.3	4511.0
#3	3485.1	75337.	13900.	2253.3	4568.8

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: ICV01 Acquired: 3/3/2025 19:17:42 Type: Unk
Method: NON EPA-6010-200.7(v2756) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9969750	1.018885	.9875285	.9944249	.9727720	2.466231	.5276005
Stddev	.0019205	.010698	.0017425	.0029147	.0043260	.063365	.0125211
%RSD	.1926297	1.049956	.1764468	.2931019	.4447065	2.569312	2.373224
#1	.9983538	1.017122	.9859907	.9915204	.9679016	2.393615	.5133402
#2	.9947815	1.030355	.9871739	.9944047	.9742462	2.510307	.5367950
#3	.9977897	1.009178	.9894211	.9973497	.9761682	2.494771	.5326663

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4849087	.4935883	9.692497	.5101941	.5024811	.5145152	9.591707
Stddev	.0091015	.0019963	.230528	.0143525	.0021890	.0011773	.201705
%RSD	1.876945	.4044441	2.378413	2.813141	.4356305	.2288244	2.102907
#1	.4754177	.4924705	9.431751	.5263873	.5011049	.5137796	9.823439
#2	.4935629	.4958930	9.869256	.5051519	.5050052	.5158731	9.496087
#3	.4857455	.4924012	9.776485	.4990431	.5013331	.5138930	9.455594

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5045369	5.756729	.5409303	.2471856	9.203069	.5102290	.9900575
Stddev	.0126326	.151142	.0033966	.0072054	.176454	.0149466	.0258182
%RSD	2.503807	2.625485	.6279141	2.914975	1.917338	2.929386	2.607751
#1	.4900264	5.599793	.5389793	.2552085	9.405383	.4931107	1.019284
#2	.5130834	5.901320	.5448523	.2450827	9.122836	.5206916	.980539
#3	.5105009	5.769073	.5389593	.2412656	9.080989	.5168846	.970349

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.168915	2.596522	2.432929	2.467737	2.521801	2.337998	2.386435
Stddev	.185835	.049187	.009313	.009120	.055149	.040757	.012235
%RSD	2.026792	1.894356	.3827756	.3695550	2.186875	1.743249	.5126972
#1	9.383100	2.546287	2.425845	2.462337	2.459022	2.384644	2.386772
#2	9.073152	2.644590	2.443477	2.478267	2.562437	2.320090	2.398499
#3	9.050493	2.598688	2.429464	2.462609	2.543944	2.309262	2.374035

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: ICV01 Acquired: 3/3/2025 19:17:42 Type: Unk
Method: NON EPA-6010-200.7(v2756) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.437933	2.496380	2.554070
Stddev	.013101	.054251	.038655
%RSD	.5373644	2.173196	1.513460
#1	2.432975	2.434405	2.520365
#2	2.452788	2.535273	2.596264
#3	2.428034	2.519463	2.545581

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3700.128	80941.15	14817.93	2451.418	5129.366
Stddev	10.370	1918.01	308.69	58.631	20.928
%RSD	.2802711	2.369631	2.083250	2.391716	.4080120
#1	3708.546	78762.44	15161.82	2384.806	5146.602
#2	3688.544	81686.01	14564.78	2474.247	5106.078
#3	3703.295	82374.99	14727.18	2495.199	5135.418

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: LLICV01 Acquired: 3/3/2025 19:21:31 Type: Unk
Method: NON EPA-6010-200.7(v2757) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0212237	.0392289	.0116234	.0197489	.0485778	.1026075
Stddev	.0044660	.0014391	.0003611	.0015144	.0007783	.0024293
%RSD	21.04277	3.668373	3.106857	7.668198	1.602191	2.367552
#1	.0162549	.0383327	.0118094	.0214054	.0479577	.1049196
#2	.0249036	.0384652	.0112072	.0184354	.0483243	.1000759
#3	.0225125	.0408888	.0118537	.0194060	.0494512	.1028269

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0909183	.0059397	.0058161	1.934762	.0095857	.0287174
Stddev	.0010057	.0001659	.0000697	.027300	.0003643	.0001898
%RSD	1.106175	2.792890	1.198293	1.411031	3.800889	.6609016
#1	.0916343	.0061216	.0058021	1.931379	.0095830	.0286488
#2	.0897685	.0057967	.0057545	1.909311	.0092227	.0285713
#3	.0913521	.0059007	.0058918	1.963596	.0099514	.0289319

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0220430	.0965204	.0202253	1.934418	.0380592	.0094606
Stddev	.0007219	.0038788	.0004162	.028680	.0004217	.0004528
%RSD	3.275008	4.018587	2.057944	1.482628	1.108030	4.786606
#1	.0227640	.0927550	.0202429	1.956450	.0382158	.0098211
#2	.0213202	.0963030	.0198006	1.901989	.0375816	.0089523
#3	.0220448	.1005033	.0206325	1.944815	.0383803	.0096085

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.792761	.0361703	.0402091	1.763723	.1083479	.2001871
Stddev	.022048	.0013628	.0005847	.009781	.0013999	.0005590
%RSD	1.229820	3.767815	1.454276	.5545589	1.292012	.2792118
#1	1.789491	.0377394	.0406123	1.774754	.1094594	.2002308
#2	1.772530	.0354887	.0395385	1.760309	.1067757	.1996076
#3	1.816260	.0352827	.0404767	1.756107	.1088084	.2007229

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: LLICV01 Acquired: 3/3/2025 19:21:31 Type: Unk
Method: NON EPA-6010-200.7(v2757) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0377041	.0373783	.3524824	.0174180	.0171440	F .0156160
Stddev	.0002519	.0004094	.0034244	.0010379	.0006463	.0013942
%RSD	.6680620	1.095257	.9715171	5.958844	3.770123	8.928255
#1	.0374305	.0369920	.3532232	.0182895	.0177237	.0161725
#2	.0379263	.0373356	.3487482	.0176947	.0164471	.0140295
#3	.0377556	.0378074	.3554758	.0162697	.0172613	.0166461

Elem	Sr4077
Units	ppm
Avg	.0189066
Stddev	.0002251
%RSD	1.190820
#1	.0188141
#2	.0187424
#3	.0191632

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3780.513	82489.08	15116.84	2490.803	5437.595
Stddev	15.385	972.99	199.86	28.590	25.639
%RSD	.4069680	1.179537	1.322099	1.147822	.4715068
#1	3774.336	81585.66	14970.49	2461.866	5431.803
#2	3798.027	83519.22	15344.55	2519.033	5465.635
#3	3769.176	82362.37	15035.47	2491.510	5415.348

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: ICB01 Acquired: 3/3/2025 19:25:48 Type: Unk
Method: NON EPA-6010-200.7(v2757) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	-.000064	-.000036	-.001344	-.002651	-.001015	.0044420	.0003840
Stddev	.000853	.001003	.000501	.001449	.000452	.0028497	.0003805
%RSD	1332.301	2781.119	37.25785	54.68232	44.53567	64.15390	99.08257
#1	-.001046	-.000535	-.000827	-.004189	-.000640	.0070421	.0007861
#2	.000494	.001119	-.001379	-.002454	-.001517	.0048883	.0000295
#3	.000360	-.000692	-.001827	-.001310	-.000887	.0013954	.0003365

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000658	.0000271	.0013098	.0000594	.0000692	-.000095	.0008285
Stddev	.0000663	.0000541	.0063346	.0002488	.0000995	.000595	.0005376
%RSD	100.8378	199.7417	483.6384	419.1171	143.8357	624.9360	64.88302
#1	-.000009	.0000603	.0039181	.0002372	.0001824	.000221	.0005129
#2	.000117	.0000562	-.005913	.0001659	.0000292	-.000782	.0005235
#3	.000089	-.000035	.005924	-.000225	-.000004	.000275	.0014493

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000813	.0240386	.0000757	.0000467	-.035281	-.001096	.0000601
Stddev	.0001794	.0119597	.0001494	.0002919	.006111	.001385	.0002569
%RSD	220.7032	49.75191	197.4002	625.2399	17.32002	126.3568	427.5466
#1	.0001420	.0374479	.0002329	-.000174	-.040542	-.001262	.0000300
#2	-.000121	.0201935	-.000064	-.000063	-.036722	-.002391	-.000180
#3	.000222	.0144745	.000059	.000378	-.028578	.000364	.000331

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.052145	.0059394	.0001893	.0002425	-.000101	-.001372	-.001429
Stddev	.003915	.0002250	.0001397	.0006140	.000923	.007690	.001852
%RSD	7.507183	3.788884	73.77717	253.1647	910.3528	560.3243	129.6204
#1	-.049239	.0057516	.0003151	-.000466	-.001160	.000896	-.003505
#2	-.056596	.0061888	.0002139	.000595	.000539	-.009941	.000054
#3	-.050598	.0058777	.0000390	.000599	.000317	.004928	-.000836

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: ICB01 Acquired: 3/3/2025 19:25:48 Type: Unk
Method: NON EPA-6010-200.7(v2757) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.004492	-.003835	-.000034
Stddev	.001810	.000898	.000055
%RSD	40.29957	23.42543	160.3924
#1	-.006162	-.004676	-.000091
#2	-.002568	-.002889	-.000032
#3	-.004745	-.003940	.000019

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3736.971	81375.28	15890.84	2449.310	5414.624
Stddev	7.712	2800.44	406.85	83.246	9.765
%RSD	.2063592	3.441395	2.560258	3.398769	.1803534
#1	3729.148	80862.87	16107.63	2430.480	5403.352
#2	3737.198	84396.54	15421.51	2540.358	5419.977
#3	3744.566	78866.42	16143.38	2377.091	5420.542

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CRI01 Acquired: 3/3/2025 19:30:07 Type: Unk
Method: NON EPA-6010-200.7(v2757) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0187397	.0379426	.0115418	.0180174	.0484076	.0944659
Stddev	.0011474	.0007021	.0006872	.0002038	.0013105	.0006237
%RSD	6.122710	1.850545	5.953735	1.131362	2.707304	.6602890
#1	.0191755	.0371426	.0122605	.0182504	.0477909	.0950349
#2	.0196054	.0384566	.0108912	.0178720	.0475192	.0937990
#3	.0174383	.0382285	.0114738	.0179298	.0499127	.0945638

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0876479	.0056134	.0056421	1.854387	.0095896	.0279166
Stddev	.0027854	.0000804	.0000192	.052296	.0004253	.0005560
%RSD	3.177922	1.431699	.3397573	2.820115	4.435277	1.991720
#1	.0901321	.0056793	.0056207	1.912197	.0091697	.0275258
#2	.0846366	.0055238	.0056477	1.810370	.0100201	.0276708
#3	.0881749	.0056369	.0056578	1.840594	.0095791	.0285531

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0218330	.0908678	.0191312	1.843095	.0374406	.0098124
Stddev	.0001421	.0019491	.0007391	.027362	.0006126	.0001353
%RSD	.6510539	2.144936	3.863126	1.484585	1.636084	1.378343
#1	.0216722	.0887900	.0198450	1.874570	.0370461	.0098562
#2	.0218846	.0926555	.0183693	1.824977	.0371295	.0099203
#3	.0219420	.0911580	.0191794	1.829737	.0381463	.0096607

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.790046	.0360147	.0407144	1.736153	.0999927	.1946474
Stddev	.037303	.0006700	.0007679	.065107	.0022661	.0022650
%RSD	2.083932	1.860341	1.886151	3.750048	2.266303	1.163643
#1	1.758269	.0360259	.0400071	1.731795	.1018234	.1928092
#2	1.831118	.0353391	.0415312	1.803329	.0974582	.1939551
#3	1.780752	.0366790	.0406048	1.673335	.1006965	.1971777

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CRI01 Acquired: 3/3/2025 19:30:07 Type: Unk
Method: NON EPA-6010-200.7(v2757) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0374498	.0359020	.3495252	.0151240	.0162639	F .0138662
Stddev	.0003182	.0011181	.0090434	.0009755	.0016745	.0007118
%RSD	.8497638	3.114437	2.587341	6.449853	10.29584	5.133355
#1	.0377141	.0364291	.3455385	.0151727	.0156961	.0136419
#2	.0370965	.0346177	.3598769	.0141251	.0149471	.0132936
#3	.0375387	.0366592	.3431601	.0160742	.0181484	.0146632

Elem	Sr4077
Units	ppm
Avg	.0181154
Stddev	.0003514
%RSD	1.940033
#1	.0184715
#2	.0177688
#3	.0181059

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3825.470	82211.53	15778.55	2482.880	5450.193
Stddev	34.957	1674.94	329.68	50.424	55.144
%RSD	.9137985	2.037358	2.089401	2.030871	1.011776
#1	3853.870	83297.80	15435.85	2512.092	5497.485
#2	3836.113	80282.59	16093.44	2424.655	5463.473
#3	3786.429	83054.20	15806.38	2511.892	5389.622

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: ICSA01 Acquired: 3/3/2025 19:34:24 Type: Unk
Method: NON EPA-6010-200.7(v2757) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015077	.0113541	.0021632	-.006376	-.001472	237.9240
Stddev	.0012746	.0011118	.0021884	.002731	.002324	2.5572
%RSD	84.53812	9.792525	101.1684	42.83826	157.8691	1.074804
#1	.0001318	.0107221	.0010359	-.004997	-.001069	237.2618
#2	.0026481	.0107023	.0046854	-.004609	.000624	240.7472
#3	.0017433	.0126379	.0007682	-.009521	-.003972	235.7631

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063148	.0013309	-.002674	227.6675	.0547439	.0014999
Stddev	.0006600	.0000300	.000094	1.8284	.0007024	.0001427
%RSD	10.45134	2.250489	3.512426	.8030820	1.282987	9.515238
#1	.0063899	.0013394	-.002761	226.9645	.0549089	.0016621
#2	.0056204	.0012976	-.002688	229.7430	.0539737	.0013939
#3	.0069339	.0013557	-.002574	226.2950	.0553490	.0014436

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001265	96.94112	.0049099	232.3084	.0028627	.0017685
Stddev	.000622	.62506	.0007868	2.2154	.0002565	.0002108
%RSD	49.15565	.6447850	16.02446	.9536579	8.958484	11.91896
#1	-.001883	97.58453	.0040690	230.8966	.0026413	.0017940
#2	-.001273	96.33619	.0050326	234.8618	.0028030	.0019654
#3	-.000639	96.90263	.0056282	231.1668	.0031437	.0015461

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0097574	.0019827	.0028911	-.081946	F .1141711	.0005430
Stddev	.0050040	.0004530	.0001326	.014526	.0013755	.0006028
%RSD	51.28392	22.84602	4.586052	17.72607	1.204762	111.0159
#1	.0041902	.0018930	.0028517	-.087350	.1156874	.0001378
#2	.0112015	.0024737	.0027826	-.065492	.1138224	.0002555
#3	.0138806	.0015812	.0030389	-.092994	.1130035	.0012358

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: ICSA01 Acquired: 3/3/2025 19:34:24 Type: Unk
Method: NON EPA-6010-200.7(v2757) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004459	-.002110	.0075354	-.002536	-.015699	.0009875
Stddev	.000188	.000938	.0060504	.000145	.000825	.0013170
%RSD	4.220460	44.45522	80.29220	5.702083	5.253151	133.3632
#1	-.004669	-.002974	.0119004	-.002371	-.016229	.0014624
#2	-.004402	-.002243	.0100770	-.002598	-.016119	-.000501
#3	-.004306	-.001112	.0006288	-.002640	-.014749	.002001

Elem	Sr4077
Units	ppm
Avg	F .0941605
Stddev	.0005699
%RSD	.6051939
#1	.0941286
#2	.0947456
#3	.0936073

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3406.287	73829.81	14856.98	2283.340	4361.931
Stddev	19.472	702.89	43.53	22.922	28.671
%RSD	.5716414	.9520390	.2930196	1.003866	.6572923
#1	3411.265	73148.65	14870.70	2260.041	4369.729
#2	3422.787	74552.58	14808.23	2305.864	4385.897
#3	3384.810	73788.18	14891.99	2284.116	4330.168

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: ICSAB01 Acquired: 3/3/2025 19:38:39 Type: Unk
Method: NON EPA-6010-200.7(v2757) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1089125	.1000000	.0503297	.0390428	.5885307	232.6246
Stddev	.0040454	.0006832	.0013733	.0044161	.0048348	1.9073
%RSD	3.714327	.6832050	2.728641	11.31103	.8215046	.8199030
#1	.1121932	.0994096	.0491393	.0424599	.5859494	230.6861
#2	.1101518	.0998421	.0518323	.0406122	.5855344	234.4991
#3	.1043924	.1007484	.0500176	.0340563	.5941083	232.6885

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4602060	.4742882	.9715383	222.5939	.5343119	.4934475
Stddev	.0034665	.0043738	.0088149	1.6622	.0053153	.0040611
%RSD	.7532572	.9221910	.9073105	.7467592	.9948036	.8229998
#1	.4576047	.4723720	.9661640	221.4419	.5402786	.4914140
#2	.4641413	.4792931	.9667395	224.4994	.5325746	.4908050
#3	.4588719	.4711995	.9817114	221.8403	.5300826	.4981236

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4783382	94.05089	.4619126	227.0546	.9750833	.2062639
Stddev	.0051738	.74328	.0028115	1.8268	.0087320	.0021082
%RSD	1.081629	.7902996	.6086619	.8045647	.8955079	1.022077
#1	.4754989	94.82480	.4611902	225.4198	.9700981	.2084964
#2	.4752056	93.98530	.4650148	229.0264	.9699860	.2059883
#3	.4843100	93.34258	.4595327	226.7176	.9851659	.2043071

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0104891	.4513736	.9835515	-.086211	.9516305	.9335331
Stddev	.0105807	.0054558	.0068178	.026528	.0066897	.0071737
%RSD	100.8729	1.208706	.6931776	30.77041	.7029761	.7684417
#1	.0116328	.4488811	.9914240	-.063235	.9495290	.9294220
#2	-.000617	.4576304	.9796232	-.080156	.9591186	.9293609
#3	.020452	.4476091	.9796074	-.115243	.9462438	.9418165

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: ICSAB01 Acquired: 3/3/2025 19:38:39 Type: Unk
Method: NON EPA-6010-200.7(v2757) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	.9386517	.8729641	F .8142856	F -.001435	F -.014273	F .0000771
Stddev	.0082187	.0091338	.0066848	.002967	.007156	.0005809
%RSD	.8755892	1.046298	.8209437	206.7228	50.13820	753.1369
#1	.9349815	.8657694	.8184834	-.001521	-.011691	.0000844
#2	.9329076	.8832400	.8177966	-.004358	-.022361	-.000507
#3	.9480660	.8698829	.8065768	.001574	-.008766	.000654

Elem	Sr4077
Units	ppm
Avg	F .0919541
Stddev	.0008420
%RSD	.9157222
#1	.0911740
#2	.0928468
#3	.0918414

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3391.566	75041.90	15065.34	2294.643	4366.084
Stddev	25.070	720.13	134.52	18.422	33.481
%RSD	.7391801	.9596378	.8928837	.8028376	.7668412
#1	3404.975	74282.61	15116.91	2274.670	4384.404
#2	3407.079	75127.93	14912.68	2298.288	4386.407
#3	3362.643	75715.14	15166.45	2310.970	4327.441

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: ICSADLX20 Acquired: 3/3/2025 19:42:41 Type: Unk
Method: NON EPA-6010-200.7(v2757) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSADLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025132	.0010769	.0003054	-.001854	-.002225	11.62133	.0019377
Stddev	.0015817	.0012157	.0014798	.000860	.000495	.32196	.0011166
%RSD	62.93389	112.8940	484.5877	46.40612	22.23013	2.770443	57.62358
#1	.0006944	-.000130	.0001416	-.001125	-.002794	11.99278	.0030706
#2	.0035660	.001059	.0018603	-.002803	-.001986	11.44898	.0019043
#3	.0032793	.002301	-.001086	-.001634	-.001896	11.42223	.0008382

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001229	-.000184	11.61471	.0023533	.0001903	.0001600	4.622948
Stddev	.0000300	.000041	.33913	.0002323	.0000326	.0001827	.084378
%RSD	24.38783	22.41955	2.919794	9.872720	17.12582	114.1503	1.825197
#1	.0001397	-.000232	12.00520	.0025983	.0002183	.0003030	4.677743
#2	.0001407	-.000159	11.39401	.0023254	.0001981	.0002229	4.665321
#3	.0000883	-.000162	11.44494	.0021362	.0001545	-.000046	4.525782

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002607	11.30187	.0002111	-.000470	-.040124	.0005679	-.000140
Stddev	.0001852	.27056	.0001566	.000189	.006635	.0014647	.000058
%RSD	71.01935	2.393940	74.14865	40.11843	16.53686	257.9135	41.44862
#1	.0000573	11.61305	.0000458	-.000254	-.046934	.0022477	-.000077
#2	.0003055	11.12231	.0002305	-.000554	-.039761	-.000442	-.000151
#3	.0004194	11.17024	.0003571	-.000602	-.033678	-.000102	-.000192

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.075903	.0083173	.0002290	-.001515	-.000012	-.000508	-.002628
Stddev	.010003	.0002884	.0000249	.000476	.000311	.001970	.001308
%RSD	13.17809	3.467499	10.87292	31.43167	2641.952	387.9457	49.76162
#1	-.086537	.0080959	.0002027	-.001025	.000153	.001400	-.001143
#2	-.066682	.0086434	.0002320	-.001976	.000183	-.002536	-.003608
#3	-.074491	.0082125	.0002522	-.001544	-.000371	-.000388	-.003131

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: ICSADLX20 Acquired: 3/3/2025 19:42:41 Type: Unk
Method: NON EPA-6010-200.7(v2757) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSADLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002818	-.004169	.0046726
Stddev	.002672	.000517	.0001048
%RSD	94.81008	12.39030	2.242512
#1	-.000311	-.004567	.0047925
#2	-.005628	-.004354	.0045984
#3	-.002514	-.003585	.0046270

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3818.311	83905.94	15514.88	2530.002	5357.844
Stddev	11.379	1130.50	402.90	36.878	9.524
%RSD	.2980230	1.347341	2.596892	1.457645	.1777541
#1	3830.830	83239.09	15053.64	2502.597	5365.624
#2	3815.507	83267.51	15798.20	2515.479	5360.686
#3	3808.595	85211.23	15692.80	2571.931	5347.223

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: ICSABDLX20 Acquired: 3/3/2025 19:46:57 Type: Unk
Method: NON EPA-6010-200.7(v2757) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSABDLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041818	.0046840	.0014924	.0012851	.0298991	11.71085	.0247083
Stddev	.0018845	.0010709	.0004374	.0007296	.0018665	.19157	.0010843
%RSD	45.06510	22.86341	29.30906	56.77311	6.242509	1.635829	4.388588
#1	.0058367	.0035155	.0019625	.0015977	.0281934	11.69944	.0257862
#2	.0045781	.0049177	.0014173	.0018062	.0296111	11.90786	.0247211
#3	.0021306	.0056188	.0010974	.0004513	.0318928	11.52524	.0236176

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0253174	.0483429	11.65240	.0275752	.0247206	.0251731	4.659389
Stddev	.0002835	.0006953	.15306	.0007147	.0002791	.0005178	.154154
%RSD	1.119947	1.438249	1.313572	2.591629	1.129196	2.056954	3.308457
#1	.0254776	.0475487	11.67349	.0277938	.0243983	.0245783	4.751578
#2	.0254847	.0488421	11.79383	.0281549	.0248824	.0254178	4.745163
#3	.0249900	.0486378	11.48989	.0267767	.0248812	.0255233	4.481426

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0244200	11.35586	.0493159	.0099334	-.037425	.0228789	.0498372
Stddev	.0003911	.17746	.0008766	.0003695	.004727	.0015763	.0019762
%RSD	1.601385	1.562732	1.777530	3.719580	12.62975	6.889683	3.965373
#1	.0248634	11.37784	.0483047	.0102374	-.033050	.0244789	.0516819
#2	.0241241	11.52130	.0498615	.0100406	-.036787	.0213274	.0500781
#3	.0242726	11.16843	.0497814	.0095222	-.042439	.0228304	.0477515

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.063220	.0071110	.0002005	-.000777	-.000051	-.000330	-.002114
Stddev	.014117	.0006032	.0000548	.000585	.000526	.002817	.001520
%RSD	22.32966	8.482609	27.34830	75.28597	1034.882	854.9141	71.91030
#1	-.058967	.0068121	.0002292	-.001444	-.000647	.002854	-.002409
#2	-.051718	.0078052	.0002350	-.000348	.000144	-.002501	-.000468
#3	-.078974	.0067156	.0001373	-.000540	.000350	-.001341	-.003466

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: ICSABDLX20 Acquired: 3/3/2025 19:46:57 Type: Unk
Method: NON EPA-6010-200.7(v2757) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSABDLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001533	-.004787	.0046750
Stddev	.004062	.000970	.0000921
%RSD	264.9817	20.26213	1.969353
#1	-.006008	-.004473	.0046510
#2	-.000516	-.004012	.0047767
#3	.001924	-.005874	.0045973

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3825.262	83288.08	15416.71	2532.729	5364.445
Stddev	44.042	2676.81	210.39	73.996	62.543
%RSD	1.151339	3.213922	1.364686	2.921587	1.165889
#1	3875.990	81523.06	15313.23	2483.321	5434.291
#2	3796.781	81973.12	15278.11	2497.064	5313.619
#3	3803.015	86368.06	15658.80	2617.803	5345.426

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCV01 Acquired: 3/3/2025 19:57:02 Type: Unk
Method: NON EPA-6010-200.7(v2758) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	5.178367	4.820370	4.765871	5.245176	4.698367	9.298023	9.565118
Stddev	.080346	.069911	.068926	.061084	.068644	.387550	.271700
%RSD	1.551566	1.450326	1.446239	1.164584	1.461023	4.168094	2.840531
#1	5.086869	4.741857	4.689057	5.176997	4.620895	9.093621	9.406478
#2	5.210826	4.875884	4.786236	5.263611	4.722588	9.744985	9.878843
#3	5.237404	4.843368	4.822320	5.294919	4.751617	9.055463	9.410031

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2390725	2.380813	23.56700	.9571518	2.379303	1.192822	4.834160
Stddev	.0088821	.032339	.91415	.0116048	.033275	.014370	.086249
%RSD	3.715225	1.358337	3.878939	1.212428	1.398521	1.204719	1.784151
#1	.2324734	2.344606	23.02653	.9443911	2.341758	1.176588	4.768970
#2	.2491714	2.391001	24.62246	.9670740	2.391004	1.197968	4.931959
#3	.2355728	2.406831	23.05200	.9599903	2.405147	1.203912	4.801552

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.364561	23.87573	2.494900	1.188434	23.12819	2.365252	2.393432
Stddev	.094215	.95223	.038871	.013807	.31241	.093282	.029487
%RSD	3.984454	3.988294	1.558021	1.161800	1.350784	3.943842	1.232002
#1	2.313973	23.33202	2.450838	1.173440	22.92120	2.311535	2.360755
#2	2.473264	24.97525	2.509523	1.200624	23.48755	2.472964	2.418055
#3	2.306447	23.31991	2.524339	1.191238	22.97582	2.311256	2.401485

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.12604	4.737508	4.788963	4.772658	4.720637	4.607048	4.790591
Stddev	.24042	.176120	.062215	.066995	.184018	.065549	.060756
%RSD	1.039617	3.717576	1.299130	1.403735	3.898169	1.422803	1.268238
#1	22.98482	4.611629	4.719188	4.697252	4.618974	4.545331	4.722196
#2	23.40364	4.938775	4.809039	4.795401	4.933059	4.675853	4.811267
#3	22.98966	4.662121	4.838660	4.825321	4.609879	4.599960	4.838311

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCV01 Acquired: 3/3/2025 19:57:02 Type: Unk
Method: NON EPA-6010-200.7(v2758) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.681238	4.645955	4.779262
Stddev	.068302	.182757	.153863
%RSD	1.459050	3.933670	3.219398
#1	4.604929	4.543050	4.713969
#2	4.702136	4.856963	4.955006
#3	4.736649	4.537853	4.668813

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3776.646	82054.79	15241.56	2500.711	5060.598
Stddev	45.068	731.36	488.87	21.725	66.017
%RSD	1.193335	.8913128	3.207508	.8687581	1.304527
#1	3826.194	82877.09	15591.55	2525.785	5133.913
#2	3765.653	81477.03	14682.99	2487.509	5042.022
#3	3738.092	81810.26	15450.15	2488.838	5005.860

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCB01 Acquired: 3/3/2025 20:01:13 Type: Unk
Method: NON EPA-6010-200.7(v2758) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	-.000154	.0000581	-.001545	-.009160	.0000281	.0001611	.0009449
Stddev	.002855	.0018487	.000257	.000718	.0009146	.0025161	.0002426
%RSD	1851.926	3184.471	16.65363	7.835352	3258.022	1562.236	25.67330
#1	.002597	.0008161	-.001831	-.008946	-.000948	.0030589	.0007976
#2	-.003102	.0014073	-.001469	-.009960	.000866	-.001468	.0012249
#3	.000043	-.002049	-.001334	-.008574	.000166	-.001107	.0008123

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000104	-.000002	.0047445	-.000307	.0002051	.0001679	.0051246
Stddev	.0000126	.000050	.0098754	.000464	.0001445	.0004158	.0067979
%RSD	120.7231	2156.291	208.1454	151.1410	70.49015	247.6211	132.6513
#1	.0000118	.000055	.0049135	-.000029	.0000408	.0002478	-.002606
#2	-.000003	-.000027	.0145342	-.000843	.0002612	-.000282	.007811
#3	.000022	-.000035	-.005214	-.000049	.0003130	.000538	.010169

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000420	.0114656	.0003871	.0025107	-.035110	-.000367	.0088630
Stddev	.000296	.0100265	.0002790	.0002303	.010700	.001679	.0001835
%RSD	70.42024	87.44879	72.05950	9.173054	30.47641	457.3077	2.070432
#1	-.000081	.0120548	.0007093	.0022449	-.046715	-.001354	.0087545
#2	-.000628	.0011575	.0002240	.0026373	-.032981	.001572	.0087597
#3	-.000551	.0211845	.0002282	.0026500	-.025634	-.001320	.0090749

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.074182	.0119100	.0004681	-.000207	.0003568	-.009622	-.002760
Stddev	.031560	.0009670	.0000615	.000467	.0002055	.010901	.001937
%RSD	42.54354	8.119155	13.14284	226.0377	57.60105	113.2862	70.16769
#1	-.101630	.0114721	.0005390	-.000660	.0003487	-.012837	-.003266
#2	-.081217	.0130185	.0004288	-.000233	.0001555	-.018554	-.004394
#3	-.039698	.0112394	.0004365	.000273	.0005663	.002524	-.000621

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCB01 Acquired: 3/3/2025 20:01:13 Type: Unk
Method: NON EPA-6010-200.7(v2758) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002285	-.003094	.0000230
Stddev	.002315	.000330	.0000140
%RSD	101.3091	10.65791	60.83285
#1	-.002231	-.002930	.0000112
#2	.000003	-.003474	.0000194
#3	-.004626	-.002879	.0000384

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3853.488	82275.98	15535.13	2500.427	5574.354
Stddev	27.682	1678.36	22.39	53.909	31.568
%RSD	.7183661	2.039920	.1441389	2.155973	.5663163
#1	3826.508	81735.80	15558.22	2492.473	5542.033
#2	3881.823	84157.92	15513.50	2557.871	5605.112
#3	3852.133	80934.22	15533.66	2450.937	5575.918

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1420-04 Acquired: 3/3/2025 20:05:33 Type: Unk
Method: NON EPA-6010-200.7(v2758) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026604	-.004216	.0521762	-.011916	.0010555	.1128740	.6640291
Stddev	.0030800	.000695	.0012041	.002526	.0008260	.0047861	.0159822
%RSD	115.7706	16.49066	2.307778	21.19830	78.25259	4.240238	2.406853
#1	.0020962	-.003414	.0507890	-.011015	.0006268	.1083885	.6685920
#2	.0059835	-.004579	.0527883	-.009964	.0005321	.1123209	.6462617
#3	-.000098	-.004655	.0529514	-.014769	.0020077	.1179127	.6772337

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002244	-.000005	40.37549	.0008046	.0119458	.0568658	6.129556
Stddev	.0000045	.000089	1.05025	.0003291	.0001230	.0004029	.118418
%RSD	2.012095	1670.432	2.601205	40.90475	1.029482	.7084551	1.931920
#1	.0002273	-.000096	40.58847	.0010922	.0119829	.0571929	6.214942
#2	.0002192	-.000003	39.23508	.0008761	.0120459	.0569886	6.179355
#3	.0002267	.000083	41.30293	.0004456	.0118085	.0564158	5.994371

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.810310	4.251283	.0068317	.0016649	366.4644	-.000066	.1682877
Stddev	.044430	.088921	.0003671	.0002298	3.2550	.001503	.0033862
%RSD	2.454279	2.091624	5.373410	13.80469	.8882256	2284.980	2.012154
#1	1.824610	4.273157	.0067939	.0019259	369.1902	-.001789	.1716448
#2	1.760491	4.153467	.0072163	.0015760	367.3426	.000978	.1683453
#3	1.845830	4.327227	.0064851	.0014927	362.8603	.000613	.1648731

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.626798	.0475697	.0004915	-.001423	-.000015	.9093759	.0111887
Stddev	.030573	.0006002	.0001327	.000515	.000595	.0146557	.0008567
%RSD	1.879321	1.261732	26.99932	36.20878	4062.477	1.611623	7.656851
#1	1.658771	.0479341	.0006121	-.001620	-.000654	.9262236	.0113256
#2	1.597850	.0468769	.0005131	-.001811	.000088	.9023332	.0119687
#3	1.623772	.0478980	.0003494	-.000838	.000522	.8995710	.0102718

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1420-04 Acquired: 3/3/2025 20:05:33 Type: Unk
Method: NON EPA-6010-200.7(v2758) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.5336281	-.009384	.1766188
Stddev	.0066554	.000558	.0039886
%RSD	1.247197	5.942133	2.258305
#1	.5377835	-.009268	.1777882
#2	.5371490	-.009990	.1721762
#3	.5259519	-.008893	.1798919

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3558.277	78078.70	15315.53	2358.461	4689.806
Stddev	7.779	1168.25	370.35	32.133	6.873
%RSD	.2186270	1.496253	2.418146	1.362460	.1465497
#1	3552.028	77018.58	15218.52	2328.810	4681.871
#2	3555.815	77886.32	15724.72	2353.968	4693.830
#3	3566.990	79331.21	15003.33	2392.604	4693.719

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1420-08 Acquired: 3/3/2025 20:09:58 Type: Unk
Method: NON EPA-6010-200.7(v2758) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006296	-.004476	.0047844	-.013434	-.001241	.0234870	.4272235
Stddev	.002436	.000315	.0012955	.001785	.001374	.0020281	.0022653
%RSD	38.70073	7.047616	27.07779	13.28760	110.6612	8.635102	.5302302
#1	-.006821	-.004801	.0046308	-.015480	-.001649	.0239399	.4289365
#2	-.003639	-.004171	.0061499	-.012627	.000290	.0212707	.4246551
#3	-.008427	-.004457	.0035726	-.012195	-.002365	.0252504	.4280788

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000068	.0003001	71.43527	.0004648	.0042201	.0159277	.0188911
Stddev	.000026	.0000208	.26021	.0001034	.0003153	.0003895	.0019425
%RSD	37.76478	6.912717	.3642610	22.25744	7.472322	2.445682	10.28235
#1	-.000081	.0003092	71.72799	.0005648	.0042590	.0160035	.0181779
#2	-.000038	.0003148	71.23019	.0003582	.0038871	.0155058	.0174062
#3	-.000084	.0002764	71.34763	.0004713	.0045142	.0162737	.0210894

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9977638	6.516169	.0039993	.0025454	382.5752	-.001177	.0853722
Stddev	.0026713	.062380	.0004627	.0004274	6.8403	.001228	.0019064
%RSD	.2677250	.9573174	11.56882	16.78962	1.787969	104.3336	2.233005
#1	1.000395	6.572476	.0044700	.0020839	379.0887	-.002287	.0849303
#2	.995054	6.449112	.0039826	.0029276	378.1806	.000142	.0837255
#3	.997843	6.526918	.0035451	.0026246	390.4563	-.001386	.0874607

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.645184	.0260233	.0008251	-.002617	-.001731	.8468992	.0211674
Stddev	.025738	.0003128	.0003136	.000108	.000352	.0187588	.0023354
%RSD	1.564438	1.201914	38.00419	4.109336	20.31565	2.215001	11.03299
#1	1.627222	.0256638	.0008894	-.002711	-.002072	.8354490	.0200646
#2	1.633659	.0261735	.0004844	-.002500	-.001752	.8367007	.0195877
#3	1.674670	.0262327	.0011016	-.002639	-.001369	.8685480	.0238500

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1420-08 Acquired: 3/3/2025 20:09:58 Type: Unk
Method: NON EPA-6010-200.7(v2758) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6661617	-.016905	.2222971
Stddev	.0038397	.000158	.0011476
%RSD	.5763949	.9372368	.5162590
#1	.6617404	-.016835	.2232105
#2	.6686603	-.016793	.2210089
#3	.6680842	-.017086	.2226719

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3534.985	76808.17	15798.20	2323.352	4648.737
Stddev	16.797	1489.95	63.05	33.549	27.070
%RSD	.4751725	1.939834	.3990943	1.443984	.5823176
#1	3540.116	76793.83	15726.43	2330.139	4652.050
#2	3548.618	78305.24	15823.49	2352.989	4673.998
#3	3516.220	75325.45	15844.67	2286.929	4620.163

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1442-01 Acquired: 3/3/2025 20:14:22 Type: Unk
Method: NON EPA-6010-200.7(v2758) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006723	-.002632	-.000115	-.010604	.0015679	.0400165	.2861040
Stddev	.003356	.000822	.000783	.001069	.0004823	.0062857	.0096249
%RSD	49.91855	31.24583	681.7249	10.08401	30.76016	15.70763	3.364111
#1	-.005900	-.002598	-.000990	-.009428	.0015794	.0461801	.2928219
#2	-.003855	-.001827	.000520	-.010865	.0010800	.0402539	.2904126
#3	-.010414	-.003471	.000126	-.011518	.0020444	.0336156	.2750776

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000122	.0000231	11.41671	.0016032	-.000056	.0008100	.2971757
Stddev	.000009	.0000177	.35780	.0003898	.000113	.0002798	.0078797
%RSD	7.391419	76.92761	3.133987	24.31452	201.9711	34.54547	2.651539
#1	-.000119	.0000410	11.70503	.0012300	-.000160	.0011312	.2989156
#2	-.000114	.0000227	11.52882	.0015719	-.000073	.0006801	.3040401
#3	-.000131	.0000055	11.01628	.0020078	.000065	.0006188	.2885715

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0143081	.2907632	.0043856	.0025696	310.4218	-.000022	1.822281
Stddev	.0005755	.0086179	.0001386	.0003526	2.6936	.001430	.031135
%RSD	4.022208	2.963884	3.161335	13.72131	.8677293	6407.638	1.708591
#1	.0142767	.2994538	.0045379	.0029672	307.7083	-.001638	1.791790
#2	.0148987	.2822199	.0043523	.0022949	313.0951	.000490	1.854023
#3	.0137490	.2906159	.0042667	.0024469	310.4621	.001081	1.821031

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8340814	.1379105	.0023409	-.000247	-.000138	.1857401	.1674151
Stddev	.0444210	.0040710	.0001504	.000418	.000946	.0059305	.0026709
%RSD	5.325735	2.951882	6.424254	169.0853	686.1711	3.192887	1.595377
#1	.7828581	.1409980	.0023270	-.000723	.000953	.1796788	.1643398
#2	.8573793	.1394366	.0024978	.000065	-.000644	.1915304	.1687507
#3	.8620068	.1332971	.0021980	-.000084	-.000723	.1860111	.1691547

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1442-01 Acquired: 3/3/2025 20:14:22 Type: Unk
Method: NON EPA-6010-200.7(v2758) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.091311	-.008400	.0123129
Stddev	.022812	.000451	.0004033
%RSD	.7379500	5.372594	3.275259
#1	3.065942	-.007884	.0126292
#2	3.110135	-.008722	.0124508
#3	3.097857	-.008594	.0118588

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3721.269	82561.52	16264.70	2486.412	4981.060
Stddev	27.822	1165.59	401.68	30.590	36.456
%RSD	.7476365	1.411779	2.469623	1.230270	.7319023
#1	3750.043	83831.16	15936.30	2512.780	5019.943
#2	3694.509	81539.92	16145.25	2452.874	4947.649
#3	3719.253	82313.48	16712.56	2493.583	4975.586

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1442-02 Acquired: 3/3/2025 20:18:47 Type: Unk
Method: NON EPA-6010-200.7(v2758) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0073105	-.002869	-.000777	-.009247	-.000110	.0196151	.4408127
Stddev	.0028165	.001220	.001599	.003112	.001335	.0017641	.0061888
%RSD	38.52683	42.54029	205.6558	33.65378	1210.943	8.993359	1.403943
#1	.0103752	-.003675	-.000648	-.005696	-.001235	.0181668	.4388651
#2	.0067208	-.001465	-.002437	-.011497	-.000460	.0215797	.4477409
#3	.0048355	-.003467	.000753	-.010549	.001365	.0190988	.4358319

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000022	.0012971	15.57480	.0000442	.0017680	.0079119	.1993767
Stddev	.000035	.0000221	.23491	.0003178	.0001392	.0002383	.0122753
%RSD	159.5489	1.705135	1.508246	719.7345	7.874499	3.011969	6.156853
#1	-.000059	.0012751	15.44904	.0004107	.0018905	.0081146	.2114650
#2	-.000016	.0012967	15.84581	-.000126	.0016166	.0079719	.1997425
#3	.000010	.0013194	15.42955	-.000152	.0017970	.0076494	.1869225

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1356569	2.923208	.0102222	.0025630	301.3629	-.000783	1.547937
Stddev	.0028668	.059549	.0004555	.0004663	14.3083	.002652	.088387
%RSD	2.113242	2.037101	4.455603	18.19214	4.747848	338.8728	5.709995
#1	.1338731	2.877240	.0098075	.0028237	298.9392	.001244	1.544970
#2	.1389637	2.990478	.0107096	.0020247	316.7282	.000193	1.637771
#3	.1341338	2.901907	.0101494	.0028406	288.4213	-.003784	1.461071

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.751607	.3306802	.0003283	-.000520	-.000472	3.582085	.0416776
Stddev	.331997	.0080821	.0001532	.000380	.000370	.150657	.0016942
%RSD	4.282945	2.444087	46.66419	72.98839	78.35228	4.205837	4.064960
#1	7.783840	.3268173	.0004822	-.000399	-.000338	3.590393	.0431866
#2	8.066312	.3399689	.0003269	-.000216	-.000188	3.728415	.0398450
#3	7.404669	.3252544	.0001758	-.000946	-.000890	3.427446	.0420014

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1442-02 Acquired: 3/3/2025 20:18:47 Type: Unk
Method: NON EPA-6010-200.7(v2758) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.118036	-.004398	.1656312
Stddev	.037823	.000726	.0024443
%RSD	1.785746	16.50404	1.475726
#1	2.131215	-.004252	.1647420
#2	2.147505	-.003756	.1683956
#3	2.075386	-.005185	.1637561

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4103.554	85891.18	16679.34	2648.227	5461.849
Stddev	75.759	3745.07	253.05	110.336	99.863
%RSD	1.846182	4.360252	1.517131	4.166422	1.828380
#1	4078.133	85855.90	16888.27	2649.254	5436.001
#2	4043.775	82163.86	16397.97	2537.381	5377.451
#3	4188.755	89653.76	16751.78	2758.047	5572.095

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1443-01 Acquired: 3/3/2025 20:23:09 Type: Unk
Method: NON EPA-6010-200.7(v2758) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004062	-.002233	.0019335	-.009043	-.000049	.0135924	.4308548
Stddev	.000504	.000220	.0008687	.004685	.000541	.0035144	.0024009
%RSD	12.40799	9.859851	44.92754	51.81126	1092.217	25.85542	.5572339
#1	-.004562	-.002129	.0011561	-.010852	-.000640	.0168082	.4282936
#2	-.003554	-.002085	.0028711	-.003723	.000071	.0141278	.4312165
#3	-.004068	-.002486	.0017732	-.012554	.000421	.0098410	.4330543

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000099	.0003105	1.012211	.0004071	.0003569	.0103446	.0648539
Stddev	.000031	.0000418	.004093	.0003573	.0000536	.0001045	.0053831
%RSD	31.52773	13.44739	.4043565	87.78959	15.02658	1.009843	8.300263
#1	-.000072	.0002819	1.013110	-.000002	.0002951	.0104523	.0586680
#2	-.000091	.0002912	1.007743	.000563	.0003840	.0103378	.0674194
#3	-.000133	.0003584	1.015780	.000660	.0003916	.0102437	.0684743

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111162	.1508132	.0070964	.0025067	265.7115	-.000646	.5793207
Stddev	.0001284	.0209897	.0001684	.0003913	1.0637	.000349	.0179300
%RSD	1.155421	13.91766	2.372868	15.60886	.4003036	54.03329	3.095013
#1	.0110581	.1711852	.0071059	.0021796	266.8887	-.000971	.5868132
#2	.0110271	.1292561	.0072599	.0029401	264.8196	-.000691	.5588597
#3	.0112634	.1519983	.0069235	.0024003	265.4261	-.000277	.5922892

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5889307	.1442490	.0003134	.0000744	-.000047	.0399886	.0458171
Stddev	.0093140	.0009514	.0002600	.0007068	.000532	.0047387	.0007514
%RSD	1.581506	.6595545	82.97018	950.4480	1123.362	11.85020	1.639991
#1	.5850135	.1436110	.0006114	.0008850	-.000646	.0396942	.0462503
#2	.5822151	.1437935	.0001960	-.000413	.000370	.0354040	.0462515
#3	.5995635	.1453425	.0001328	-.000249	.000134	.0448677	.0449494

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1443-01 Acquired: 3/3/2025 20:23:09 Type: Unk
Method: NON EPA-6010-200.7(v2758) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7243130	-.006021	.0081551
Stddev	.0013415	.000331	.0000546
%RSD	.1852094	5.491574	.6690694
#1	.7257623	-.006401	.0081134
#2	.7231148	-.005795	.0081350
#3	.7240619	-.005867	.0082168

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4068.500	88753.57	16582.36	2703.634	5463.478
Stddev	14.108	2080.09	91.77	61.238	18.292
%RSD	.3467539	2.343670	.5534027	2.265031	.3348022
#1	4052.390	87569.87	16586.69	2676.996	5442.917
#2	4078.649	91155.37	16488.50	2773.680	5469.571
#3	4074.460	87535.46	16671.88	2660.226	5477.945

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1447-02 Acquired: 3/3/2025 20:27:16 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002380	-.004524	.0745000	.0022468	.0004108	.0297077	.4746657
Stddev	.000926	.001519	.0021854	.0030995	.0013224	.0067401	.0048754
%RSD	38.93175	33.57067	2.933414	137.9546	321.9349	22.68805	1.027125
#1	-.003382	-.005945	.0770233	.0043121	.0005888	.0220725	.4731842
#2	-.002201	-.002924	.0732666	-.001317	-.000992	.0322190	.4707029
#3	-.001555	-.004702	.0732102	.003745	.001635	.0348316	.4801100

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001513	.0014060	22.87374	.0005333	.0006459	.0116077	.0466596
Stddev	.0000257	.0000482	.28544	.0001940	.0001652	.0001912	.0014398
%RSD	17.00406	3.428098	1.247905	36.37845	25.57322	1.647557	3.085865
#1	.0001246	.0013583	22.76090	.0006995	.0006238	.0115564	.0478214
#2	.0001534	.0014547	22.66197	.0005803	.0004928	.0114473	.0450488
#3	.0001759	.0014052	23.19835	.0003201	.0008210	.0118193	.0471088

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6774501	4.142086	.0060916	-.000356	262.7762	-.000615	.2734494
Stddev	.0084142	.069535	.0001523	.000066	2.3043	.000195	.0051870
%RSD	1.242044	1.678751	2.500601	18.54556	.8768972	31.74085	1.896892
#1	.6736712	4.145763	.0061653	-.000363	264.3908	-.000392	.2794250
#2	.6715879	4.070785	.0059164	-.000418	263.8005	-.000752	.2708144
#3	.6870913	4.209710	.0061930	-.000287	260.1374	-.000702	.2701088

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.785581	.1136312	.0002643	-.000512	-.000528	1.543666	.0141317
Stddev	.053747	.0023619	.0000605	.000097	.000204	.038810	.0016776
%RSD	3.010067	2.078603	22.88159	18.98523	38.53610	2.514155	11.87130
#1	1.840870	.1130314	.0002069	-.000511	-.000761	1.586065	.0136540
#2	1.782351	.1116270	.0003275	-.000609	-.000440	1.535035	.0127448
#3	1.733522	.1162353	.0002586	-.000414	-.000384	1.509898	.0159964

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1447-02 Acquired: 3/3/2025 20:27:16 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9730137	-.009023	.1108491
Stddev	.0050428	.000649	.0011383
%RSD	.5182630	7.197056	1.026902
#1	.9770020	-.008911	.1103127
#2	.9673454	-.008436	.1100782
#3	.9746938	-.009720	.1121566

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4136.607	88067.64	17424.29	2673.255	5483.477
Stddev	13.329	1447.25	260.07	39.075	18.707
%RSD	.3222311	1.643336	1.492547	1.461712	.3411534
#1	4121.353	86491.42	17598.64	2630.709	5463.003
#2	4146.009	88374.96	17548.87	2681.519	5499.678
#3	4142.459	89336.54	17125.37	2707.538	5487.750

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: PB166879TB Acquired: 3/3/2025 20:55:29 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000730	-.003578	-.001329	.0004354	-.000054	.0041642
Stddev	.001210	.001373	.000704	.0016991	.000178	.0017498
%RSD	165.6546	38.38100	52.95608	390.2568	329.2362	42.02014
#1	-.000856	-.003704	-.000688	.0013485	.000076	.0056701
#2	-.001873	-.004883	-.001217	.0014826	.000019	.0045778
#3	.000537	-.002145	-.002082	-.001525	-.000257	.0022446

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000177	-.000100	-.000081	-.002240	.0010151	-.000041
Stddev	.000181	.000009	.000032	.001193	.0002650	.000200
%RSD	102.4288	9.086799	39.44255	53.25511	26.10577	489.8207
#1	-.000002	-.000101	-.000086	-.003393	.0009476	-.000186
#2	-.000364	-.000109	-.000111	-.002315	.0007904	-.000123
#3	-.000166	-.000091	-.000047	-.001011	.0013073	.000187

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005397	.0028240	.0022378	.0041044	.0022655	-.000315
Stddev	.0003904	.0024611	.0001656	.0021964	.0001927	.000181
%RSD	72.34932	87.14835	7.399493	53.51177	8.505058	57.67116
#1	.0000917	.0053656	.0021445	.0065503	.0024825	-.000177
#2	.0007197	.0026543	.0021400	.0034623	.0021143	-.000520
#3	.0008076	.0004522	.0024290	.0023007	.0021998	-.000247

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 291.4568	-.001149	-.000873	-.055504	.0007227	.0002942
Stddev	7.7434	.001098	.000219	.023029	.0005869	.0001159
%RSD	2.656777	95.57868	25.08544	41.49036	81.19830	39.39017
#1	295.2782	-.000197	-.000807	-.055330	.0000878	.0001674
#2	282.5456	-.000899	-.000695	-.032563	.0012452	.0003207
#3	296.5466	-.002351	-.001118	-.078620	.0008353	.0003945

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: PB166879TB Acquired: 3/3/2025 20:55:29 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000059	.0003378	.0039019	.0012065	F .0187325	-.007435
Stddev	.0006920	.0006822	.0125310	.0023795	.0000535	.000750
%RSD	11802.72	201.9394	321.1528	197.2188	.2853624	10.09374
#1	.0004345	-.000424	-.003704	-.000317	.0187298	-.007030
#2	.0003756	.000544	.018365	.003949	.0187872	-.008301
#3	-.000793	.000893	-.002956	-.000012	.0186804	-.006974

Elem	Sr4077
Units	ppm
Avg	-.000057
Stddev	.000035
%RSD	62.27848
#1	-.000076
#2	-.000016
#3	-.000078

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4078.210	87128.26	17019.05	2686.353	5427.365
Stddev	20.923	614.77	175.58	6.037	28.589
%RSD	.5130554	.7055884	1.031643	.2247394	.5267516
#1	4055.701	87133.45	16979.43	2682.920	5398.466
#2	4097.066	87740.42	16866.67	2693.324	5455.633
#3	4081.863	86510.91	17211.05	2682.815	5427.996

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCV02 Acquired: 3/3/2025 21:12:05 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.328114	5.294954	5.299967	5.362505	5.341836	10.29425	10.31117
Stddev	.026674	.039160	.016420	.028271	.031219	.04890	.19790
%RSD	.5006239	.7395738	.3098178	.5271964	.5844234	.4750369	1.919261
#1	5.304892	5.255528	5.286400	5.333053	5.310599	10.32914	10.52092
#2	5.322203	5.333842	5.295279	5.365039	5.341874	10.31525	10.12777
#3	5.357248	5.295493	5.318221	5.389424	5.373036	10.23835	10.28483

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2544448	2.635701	25.95148	1.047486	2.627349	1.327711	5.291206
Stddev	.0034085	.006576	.17479	.028173	.006533	.003676	.124364
%RSD	1.339577	.2494951	.6735321	2.689582	.2486533	.2768396	2.350388
#1	.2583733	2.630354	26.15331	1.047727	2.623026	1.324767	5.276940
#2	.2522738	2.633705	25.84985	1.019193	2.624157	1.326535	5.174590
#3	.2526873	2.643043	25.85129	1.075538	2.634864	1.331830	5.422087

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.590549	25.67126	2.653578	1.304942	26.18944	2.592301	2.625168
Stddev	.017150	.21246	.005496	.033700	.62810	.010260	.067277
%RSD	.6620024	.8276359	.2071035	2.582488	2.398289	.3957971	2.562759
#1	2.609902	25.91656	2.650244	1.305551	25.88121	2.604046	2.626796
#2	2.577238	25.55237	2.650570	1.270941	25.77500	2.587776	2.557093
#3	2.584508	25.54485	2.659921	1.338333	26.91210	2.585081	2.691617

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.23861	5.199934	5.304692	5.281394	5.177618	5.267593	5.228840
Stddev	.72319	.067844	.018839	.011806	.021802	.124936	.010455
%RSD	2.756217	1.304709	.3551449	.2235470	.4210792	2.371778	.1999556
#1	25.92696	5.277856	5.286367	5.271104	5.201688	5.210689	5.218718
#2	25.72349	5.153973	5.303704	5.278794	5.171969	5.181239	5.239599
#3	27.06538	5.167974	5.324006	5.294284	5.159196	5.410851	5.228202

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCV02 Acquired: 3/3/2025 21:12:05 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.237054	5.160365	5.245299
Stddev	.008809	.005679	.055800
%RSD	.1682014	.1100448	1.063814
#1	5.226883	5.166701	5.292329
#2	5.242126	5.155735	5.183642
#3	5.242154	5.158659	5.259928

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3449.296	75852.17	14528.84	2273.785	4637.978
Stddev	8.914	1921.26	166.34	53.809	7.200
%RSD	.2584249	2.532902	1.144868	2.366500	.1552453
#1	3457.432	75909.15	14336.77	2277.370	4645.124
#2	3450.687	77744.30	14624.89	2325.712	4638.087
#3	3439.768	73903.05	14624.85	2218.273	4630.724

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCB02 Acquired: 3/3/2025 21:16:16 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	.0011055	-.000375	-.000771	-.001304	-.001117	.0009376	.0004434
Stddev	.0004456	.001183	.000652	.001149	.000615	.0050824	.0010609
%RSD	40.30460	315.0376	84.48978	88.17170	55.04685	542.0680	239.2688
#1	.0005911	-.001375	-.000079	-.002398	-.000433	-.003211	.0016557
#2	.0013708	-.000681	-.001373	-.000106	-.001623	.006607	-.000315
#3	.0013546	.000930	-.000862	-.001406	-.001296	-.000583	-.000010

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000001	.0000345	.0058823	.0000623	.0002285	.0000178	.0006739
Stddev	.000031	.0000504	.0022270	.0003123	.0001325	.0002167	.0027418
%RSD	2257.151	145.9063	37.85853	500.8922	57.97323	1218.506	406.8318
#1	-.000036	.0000922	.0059496	-.000293	.0003287	.0002577	-.002432
#2	.000008	.0000118	.0036224	.000295	.0002786	-.000164	.001696
#3	.000023	-.000000	.0080748	.000185	.0000783	-.000041	.002758

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000002	.0010948	.0000565	-.000221	.0635672	-.000002	-.000423
Stddev	.000292	.0152507	.0002150	.000378	.0079119	.001391	.000280
%RSD	14027.07	1392.972	380.6084	171.2135	12.44652	64829.42	66.20473
#1	.000109	.0182686	.0003046	-.000297	.0555740	.001235	-.000597
#2	-.000334	-.010865	-.000063	-.000555	.0637323	-.001509	-.000570
#3	.000218	-.004119	-.000072	.000189	.0713952	.000267	-.000100

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009624	.0121376	.0003549	.0002472	.0003940	.0049773	-.002547
Stddev	.005470	.0004684	.0001016	.0006550	.0004561	.0050906	.000635
%RSD	56.84204	3.859448	28.63937	264.9932	115.7561	102.2762	24.93652
#1	-.015702	.0121063	.0002395	-.000200	.0000491	.0100718	-.002730
#2	-.005096	.0116855	.0004309	.000999	.0009111	.0049695	-.003070
#3	-.008073	.0126209	.0003944	-.000057	.0002218	-.000109	-.001840

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCB02 Acquired: 3/3/2025 21:16:16 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.004619	.0015480	.0001786
Stddev	.000617	.0004819	.0000733
%RSD	13.36761	31.13109	41.01678
#1	-.005246	.0013311	.0002549
#2	-.004601	.0021003	.0001720
#3	-.004011	.0012127	.0001089

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3545.814	78120.48	14822.83	2363.872	5144.077
Stddev	12.675	718.45	59.76	15.564	18.170
%RSD	.3574764	.9196699	.4031897	.6584039	.3532287
#1	3560.142	77293.51	14770.16	2345.951	5163.588
#2	3541.235	78591.15	14810.54	2374.007	5141.005
#3	3536.064	78476.76	14887.78	2371.656	5127.639

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1457-01 Acquired: 3/3/2025 21:21:02 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0284465	.0038513	.5107820	-.023662	.0010039	91.54635
Stddev	.0038440	.0012211	.0019623	.001431	.0022777	.38301
%RSD	13.51320	31.70674	.3841762	6.047494	226.8761	.4183733
#1	.0240078	.0052613	.5089332	-.022013	.0036061	91.65188
#2	.0306604	.0031384	.5128409	-.024579	.0000336	91.86553
#3	.0306713	.0031542	.5105718	-.024394	-.000628	91.12165

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5816282	.0068157	-.001863	121.9404	.1942111	.1058165
Stddev	.0009314	.0000160	.000751	.3607	.0034021	.0003301
%RSD	.1601307	.2350500	40.31300	.2957885	1.751775	.3119445
#1	.5827036	.0068192	-.001436	122.1808	.1936190	.1061008
#2	.5811030	.0067983	-.001423	122.1148	.1911438	.1058941
#3	.5810780	.0068297	-.002730	121.5257	.1978704	.1054545

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5096672	208.7917	3.329734	50.68333	.1932492	.0069093
Stddev	.0013763	3.5904	.004863	.14471	.0006850	.0002260
%RSD	.2700357	1.719631	.1460602	.2855101	.3544834	3.271208
#1	.5112057	207.5583	3.332644	50.71631	.1939292	.0069655
#2	.5092429	205.9806	3.332438	50.80870	.1925592	.0066605
#3	.5085531	212.8363	3.324120	50.52498	.1932591	.0071019

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.93774	.3122725	.5374665	7.846831	.3092586	.0029395
Stddev	.18299	.0021415	.0099080	.127523	.0087586	.0001864
%RSD	1.532850	.6857903	1.843471	1.625150	2.832130	6.341487
#1	11.87699	.3130710	.5325383	7.823278	.3064074	.0029956
#2	11.79285	.3139000	.5309889	7.732727	.3022808	.0027314
#3	12.14337	.3098464	.5488723	7.984489	.3190875	.0030913

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1457-01 Acquired: 3/3/2025 21:21:02 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2721439	3.563100	F 12.47448	5.981663	4.120713	.1842714
Stddev	.0012310	.009749	.19070	.012133	.013037	.0011806
%RSD	.4523228	.2736028	1.528714	.2028437	.3163787	.6407031
#1	.2735497	3.563618	12.39273	5.994654	4.134664	.1838124
#2	.2712591	3.572580	12.33829	5.970624	4.108840	.1833891
#3	.2716230	3.553103	12.69243	5.979710	4.118634	.1856126

Elem	Sr4077
Units	ppm
Avg	.4303558
Stddev	.0006935
%RSD	.1611372
#1	.4306333
#2	.4308676
#3	.4295666

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3745.341	82610.54	16338.06	2525.307	4431.871
Stddev	5.326	1188.41	69.78	33.634	5.445
%RSD	.1422100	1.438567	.4270767	1.331897	.1228538
#1	3742.607	83112.02	16326.11	2530.618	4429.404
#2	3751.479	83466.01	16275.03	2555.969	4438.113
#3	3741.937	81253.59	16413.04	2489.332	4428.096

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1420-01 Acquired: 3/3/2025 21:25:07 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0667399	.0065974	.7591873	-.015489	.0012870	80.10180	1.369034
Stddev	.0018516	.0035822	.0052725	.001492	.0006943	.17043	.001200
%RSD	2.774386	54.29635	.6944917	9.629946	53.94857	.2127620	.0876246
#1	.0688081	.0106552	.7600689	-.013971	.0018912	79.96000	1.370316
#2	.0652362	.0052634	.7535296	-.016952	.0005285	80.29087	1.367940
#3	.0661754	.0038737	.7639635	-.015543	.0014411	80.05452	1.368845

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067480	-.004128	57.66857	.1501698	.0794100	.2417856	171.3663
Stddev	.0000162	.000235	.13842	.0003149	.0004397	.0007500	.3669
%RSD	.2407375	5.684283	.2400329	.2096747	.5536889	.3102087	.2141014
#1	.0067408	-.004346	57.52314	.1502627	.0796566	.2418983	171.7789
#2	.0067365	-.004158	57.79872	.1498190	.0789023	.2409856	171.0767
#3	.0067665	-.003880	57.68384	.1504278	.0796710	.2424729	171.2433

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.021780	24.05858	.1431217	.0056146	3.007866	.2440017	.6033124
Stddev	.001314	.10470	.0009006	.0004823	.008292	.0010080	.0027447
%RSD	.0434856	.4351925	.6292764	8.590202	.2756613	.4131128	.4549306
#1	3.021735	23.94788	.1430109	.0059430	3.017436	.2451051	.6049999
#2	3.023115	24.15602	.1422816	.0050609	3.003333	.2431291	.6047920
#3	3.020488	24.07185	.1440726	.0058400	3.002829	.2437709	.6001454

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.057397	.2043192	.0019978	.0229966	1.406264	7.668347	5.418761
Stddev	.029352	.0022923	.0001305	.0012259	.002144	.021370	.022199
%RSD	.5803743	1.121921	6.529489	5.330887	.1524611	.2786816	.4096712
#1	5.089585	.2067745	.0020377	.0232322	1.406931	7.693023	5.410089
#2	5.050492	.2022353	.0018521	.0240876	1.403866	7.656079	5.402207
#3	5.032113	.2039477	.0021036	.0216700	1.407996	7.655938	5.443988

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1420-01 Acquired: 3/3/2025 21:25:07 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.181942	.1476449	.1936178
Stddev	.006032	.0002939	.0001538
%RSD	.2764635	.1990445	.0794134
#1	2.178191	.1476157	.1934602
#2	2.178734	.1473668	.1936259
#3	2.188900	.1479524	.1937674

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3876.525	84860.94	16802.22	2561.128	4709.946
Stddev	16.821	149.24	60.79	7.523	21.346
%RSD	.4339127	.1758619	.3617708	.2937555	.4532043
#1	3873.588	84860.52	16863.55	2554.855	4707.727
#2	3894.621	84711.91	16741.99	2559.059	4732.314
#3	3861.367	85010.38	16801.12	2569.469	4689.796

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1420-05 Acquired: 3/3/2025 21:29:12 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0327378	.0042807	.3266876	-.015236	.0014411	60.00111	.9658007
Stddev	.0023384	.0010521	.0023537	.002787	.0018207	.13559	.0058462
%RSD	7.142767	24.57792	.7204823	18.29068	126.3444	.2259827	.6053216
#1	.0339705	.0053803	.3265090	-.016654	.0007790	60.01410	.9609191
#2	.0342019	.0041782	.3244283	-.012026	.0035001	60.12974	.9722795
#3	.0300410	.0032836	.3291255	-.017029	.0000440	59.85949	.9642034

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059169	-.004080	100.2053	.1414509	.0815103	.1648671	162.9229
Stddev	.0000699	.000173	.4288	.0006972	.0003891	.0003866	.9223
%RSD	1.181392	4.236511	.4279296	.4929124	.4773094	.2345117	.5660667
#1	.0058958	-.003881	99.9155	.1407495	.0813236	.1649960	161.8744
#2	.0059949	-.004180	100.6979	.1421439	.0812497	.1644325	163.6083
#3	.0058600	-.004180	100.0026	.1414593	.0819575	.1651728	163.2860

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.509993	34.36047	.1468406	.0051778	2.430427	.2442009	.4442718
Stddev	.022079	.11147	.0004526	.0000248	.003531	.0006761	.0020765
%RSD	.6290331	.3243996	.3082390	.4791862	.1452663	.2768564	.4673933
#1	3.491951	34.27326	.1463211	.0051562	2.428402	.2439324	.4419587
#2	3.534613	34.48605	.1471495	.0052049	2.428376	.2449700	.4448816
#3	3.503414	34.32211	.1470513	.0051723	2.434504	.2437003	.4459751

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.801713	.2013502	.0019305	.0072979	1.843477	6.937923	6.102201
Stddev	.043233	.0013799	.0000524	.0016334	.008355	.014286	.016395
%RSD	.5541516	.6853031	2.712922	22.38238	.4532277	.2059120	.2686719
#1	7.764396	.2003557	.0019900	.0054553	1.840472	6.954419	6.121132
#2	7.791654	.2007693	.0018914	.0085681	1.852919	6.929556	6.092814
#3	7.849090	.2029255	.0019100	.0078702	1.837039	6.929795	6.092656

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1420-05 Acquired: 3/3/2025 21:29:12 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.102715	.1265217	.3356455
Stddev	.006792	.0018353	.0011056
%RSD	.6159728	1.450548	.3293992
#1	1.095227	.1244033	.3348692
#2	1.104439	.1275326	.3369114
#3	1.108479	.1276293	.3351559

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3744.930	82564.28	16557.10	2473.148	4574.847
Stddev	1.632	425.14	84.53	12.818	4.881
%RSD	.0435776	.5149147	.5105313	.5182729	.1066983
#1	3746.812	83046.35	16624.67	2486.733	4570.219
#2	3744.054	82242.98	16462.32	2461.269	4574.373
#3	3743.922	82403.49	16584.31	2471.443	4579.947

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1457-01DUP Acquired: 3/3/2025 21:33:21 Type: Unk
Method: NON EPA-6010-200.7(v2759) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0254625	.0003852	.5129400	-.030230	-.000038	91.24031
Stddev	.0018553	.0001258	.0056097	.001399	.001212	.12934
%RSD	7.286476	32.65073	1.093642	4.627678	3156.311	.1417550
#1	.0242481	.0002933	.5176357	-.030036	-.001160	91.35750
#2	.0245413	.0003337	.5144563	-.031715	-.000203	91.26189
#3	.0275981	.0005286	.5067280	-.028938	.001248	91.10154

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5816353	.0065682	.0086923	121.9336	.1938588	.1057605
Stddev	.0007061	.0000245	.0007174	.4488	.0022201	.0011242
%RSD	.1214026	.3727457	8.253818	.3680843	1.145208	1.062983
#1	.5821457	.0065963	.0092818	122.3600	.1943415	.1069470
#2	.5808294	.0065575	.0089015	121.9753	.1914371	.1056233
#3	.5819308	.0065510	.0078934	121.4653	.1957978	.1047112

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5226102	157.8384	3.278418	50.56555	.1937458	-.002010
Stddev	.0055374	2.1330	.013032	.25161	.0021836	.000100
%RSD	1.059559	1.351412	.3975215	.4975874	1.127064	4.987903
#1	.5275192	157.0276	3.292095	50.76659	.1957843	-.002030
#2	.5237039	156.2297	3.277018	50.64666	.1940118	-.001901
#3	.5166076	160.2580	3.266143	50.28339	.1914414	-.002099

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.20592	.3112036	.5393537	7.907487	.1909505	.0031611
Stddev	.18843	.0015582	.0065211	.134140	.0057730	.0002406
%RSD	1.543791	.5006968	1.209056	1.696361	3.023290	7.610596
#1	12.08702	.3104227	.5364061	7.863191	.1878590	.0033156
#2	12.10756	.3129978	.5348268	7.801098	.1873816	.0032839
#3	12.42318	.3101903	.5468282	8.058173	.1976108	.0028839

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1457-01DUP Acquired: 3/3/2025 21:33:21 Type: Unk
Method: NON EPA-6010-200.7(v2759) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2712187	3.553954	F 12.82354	5.871175	4.102449	.1613811
Stddev	.0034622	.007484	.18684	.078079	.055274	.0001816
%RSD	1.276541	.2105792	1.457014	1.329870	1.347332	.1125503
#1	.2751658	3.562140	12.75995	5.952190	4.158051	.1614515
#2	.2697950	3.552257	12.67679	5.864926	4.101788	.1611748
#3	.2686953	3.547464	13.03387	5.796408	4.047509	.1615170

Elem	Sr4077
Units	ppm
Avg	.4299424
Stddev	.0004577
%RSD	.1064674
#1	.4304691
#2	.4296409
#3	.4297171

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3731.832	82588.31	16756.02	2466.465	4448.200
Stddev	28.268	770.92	128.95	26.397	44.412
%RSD	.7574744	.9334499	.7695641	1.070249	.9984363
#1	3708.031	82781.18	16645.21	2478.401	4405.423
#2	3724.388	83244.49	16725.30	2484.785	4445.091
#3	3763.076	81739.27	16897.56	2436.207	4494.084

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1457-01LX5 Acquired: 3/3/2025 21:37:24 Type: Unk
Method: NON EPA-6010-200.7(v2759) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049594	.0016332	.1099085	-.003670	-.000483	20.44669	.1307503
Stddev	.0019564	.0013228	.0017705	.000598	.000524	.22765	.0022419
%RSD	39.44761	80.99112	1.610900	16.29113	108.4839	1.113368	1.714661
#1	.0070730	.0027809	.1119422	-.003241	-.000791	20.19798	.1281942
#2	.0032120	.0019323	.1090725	-.004353	-.000781	20.49738	.1316735
#3	.0045933	.0001865	.1087107	-.003417	.000122	20.64473	.1323832

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015438	.0009173	27.85369	.0439546	.0220113	.1246127	34.86145
Stddev	.0000481	.0002962	.30031	.0012758	.0002067	.0004245	.77002
%RSD	3.119092	32.28636	1.078170	2.902595	.9388300	.3406473	2.208796
#1	.0014885	.0010213	27.51313	.0428537	.0219744	.1248483	34.43308
#2	.0015670	.0011474	27.96743	.0436574	.0222340	.1248672	34.40087
#3	.0015760	.0005832	28.08053	.0453529	.0218257	.1241227	35.75039

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7627663	11.55486	.0407636	-.000442	2.598358	.0708832	.1209450
Stddev	.0057137	.13712	.0001700	.000292	.066797	.0029384	.0013137
%RSD	.7490802	1.186710	.4169986	66.12311	2.570754	4.145425	1.086199
#1	.7562127	11.39657	.0409083	-.000753	2.555538	.0690590	.1197221
#2	.7653839	11.63742	.0408061	-.000174	2.564209	.0742729	.1207792
#3	.7667023	11.63058	.0405764	-.000398	2.675326	.0693177	.1223337

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.601801	.0428563	.0007790	.0554219	.8128609	2.752143	1.195074
Stddev	.039131	.0018055	.0002940	.0004812	.0070287	.049477	.007892
%RSD	2.442930	4.212979	37.74020	.8682033	.8646857	1.797762	.6604026
#1	1.604882	.0420734	.0006169	.0552549	.8055794	2.713447	1.202961
#2	1.561220	.0415744	.0011183	.0550466	.8133972	2.735090	1.195085
#3	1.639300	.0449212	.0006017	.0559644	.8196061	2.807891	1.187176

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1457-01LX5 Acquired: 3/3/2025 21:37:24 Type: Unk
Method: NON EPA-6010-200.7(v2759) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.8225291	.0350750	.0959675
Stddev	.0064878	.0002569	.0008887
%RSD	.7887600	.7323476	.9260565
#1	.8297828	.0352117	.0952364
#2	.8205238	.0347787	.0957094
#3	.8172808	.0352347	.0969567

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3556.030	79685.76	15425.06	2374.701	4800.457
Stddev	7.665	1191.08	169.05	24.902	17.585
%RSD	.2155465	1.494724	1.095959	1.048637	.3663272
#1	3547.597	80698.56	15593.26	2395.665	4782.742
#2	3557.921	79985.18	15255.17	2381.263	4800.721
#3	3562.573	78373.53	15426.75	2347.175	4817.909

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1457-01MS Acquired: 3/3/2025 21:41:38 Type: Unk
Method: NON EPA-6010-200.7(v2759) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7096796	1.836167	1.457767	1.554358	.2639595	103.7136
Stddev	.0106225	.031076	.019749	.016871	.0034909	.2451
%RSD	1.496795	1.692458	1.354743	1.085404	1.322505	.2363412
#1	.7171145	1.871246	1.475098	1.571330	.2669187	103.6577
#2	.7144108	1.825171	1.461936	1.554155	.2648502	103.9818
#3	.6975136	1.812083	1.436266	1.537590	.2601096	103.5013

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7582213	.1745982	.2039164	102.6507	.5530409	.3069998
Stddev	.0029739	.0005105	.0027935	.2836	.0011438	.0035092
%RSD	.3922165	.2923814	1.369909	.2763248	.2068206	1.143074
#1	.7600484	.1740111	.2060624	102.4836	.5536128	.3098462
#2	.7598257	.1749380	.2049290	102.9782	.5517239	.3080743
#3	.7547898	.1748454	.2007579	102.4903	.5537859	.3030790

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7361883	157.5582	3.468978	52.99458	.6957508	.0636793
Stddev	.0073012	.4142	.006645	.17528	.0093586	.0003163
%RSD	.9917645	.2628563	.1915593	.3307456	1.345113	.4967110
#1	.7417896	157.5973	3.466062	52.80196	.7026286	.0633923
#2	.7388444	157.1259	3.476582	53.14470	.6995302	.0640184
#3	.7279308	157.9514	3.464289	53.03707	.6850934	.0636271

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.04793	.5732521	.7773480	17.74950	.5009549	.3318932
Stddev	.04978	.0045096	.0013198	.02942	.0015373	.0036588
%RSD	.3308345	.7866714	.1697820	.1657780	.3068673	1.102392
#1	15.06892	.5680485	.7766087	17.77389	.4998104	.3348979
#2	14.99109	.5760217	.7788718	17.75779	.5003520	.3329627
#3	15.08379	.5756862	.7765635	17.71682	.5027022	.3278188

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1457-01MS Acquired: 3/3/2025 21:41:38 Type: Unk
Method: NON EPA-6010-200.7(v2759) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6855197	3.845617	F 15.31347	F 12.17430	3.361307	.3537020
Stddev	.0111354	.005239	.04842	.15213	.043650	.0008230
%RSD	1.624368	.1362347	.3162051	1.249566	1.298596	.2326904
#1	.6944379	3.847461	15.30761	12.29963	3.394588	.3529197
#2	.6890821	3.849684	15.26825	12.21824	3.377448	.3545605
#3	.6730390	3.839705	15.36456	12.00504	3.311886	.3536260

Elem	Sr4077
Units	ppm
Avg	.5091901
Stddev	.0014159
%RSD	.2780586
#1	.5094960
#2	.5104280
#3	.5076463

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3833.799	84043.91	16545.98	2525.332	4459.057
Stddev	29.349	333.16	10.09	10.442	46.579
%RSD	.7655313	.3964079	.0610004	.4134786	1.044602
#1	3811.752	83948.64	16556.35	2514.837	4423.448
#2	3822.532	84414.33	16545.42	2535.720	4441.953
#3	3867.111	83768.77	16536.19	2525.438	4511.771

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: LR1 Acquired: 3/3/2025 21:45:38 Type: Unk
Method: NON EPA-6010-200.7(v2759) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.011676	.0770190	.0373506	-.225838	.0021253	2197.734	.0190992
Stddev	.003167	.0063421	.0057666	.006225	.0045932	14.400	.0008645
%RSD	27.12792	8.234496	15.43922	2.756424	216.1225	.6551992	4.526323
#1	-.015249	.0712795	.0334564	-.225960	.0025322	2184.848	.0181020
#2	-.009214	.0759496	.0346201	-.219552	.0065014	2195.078	.0195584
#3	-.010565	.0838278	.0439754	-.232000	-.002658	2213.277	.0196373

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0102733	.0671461	1785.429	.0112553	.0345639	.0210573	942.4406
Stddev	.0000517	.0032829	7.499	.0005609	.0005215	.0039585	13.2023
%RSD	.5028335	4.889122	.4199914	4.983811	1.508781	18.79862	1.400861
#1	.0103059	.0687898	1786.920	.0118295	.0348685	.0243183	928.8396
#2	.0102137	.0633661	1777.296	.0107086	.0348614	.0166530	955.2044
#3	.0103003	.0692825	1792.070	.0112279	.0339617	.0222007	943.2779

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.120983	1875.533	.0238769	-.052791	2131.576	.0167913	.1164647
Stddev	.001357	7.393	.0007676	.001351	21.569	.0021687	.0026770
%RSD	1.121790	.3941555	3.214774	2.558703	1.011858	12.91537	2.298582
#1	-.119455	1883.845	.0247447	-.052133	2107.136	.0178289	.1136179
#2	-.122048	1869.694	.0235991	-.051896	2147.943	.0142988	.1168446
#3	-.121445	1873.059	.0232869	-.054345	2139.650	.0182462	.1189314

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1399.850	.6515070	.0065849	.0029174	-.049261	.1553160	.0831727
Stddev	16.342	.0161744	.0006559	.0012353	.000606	.0051266	.0130623
%RSD	1.167386	2.482615	9.960355	42.34292	1.231180	3.300739	15.70499
#1	1383.515	.6370872	.0064902	.0015953	-.048697	.1609460	.0701021
#2	1399.838	.6689962	.0072830	.0031147	-.049183	.1509169	.0831893
#3	1416.198	.6484376	.0059816	.0040421	-.049902	.1540851	.0962266

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: LR1 Acquired: 3/3/2025 21:45:38 Type: Unk
Method: NON EPA-6010-200.7(v2759) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.195607	.1067685	.0133371
Stddev	.010649	.0073944	.0001146
%RSD	5.443941	6.925623	.8595008
#1	-.206604	.1005276	.0132223
#2	-.194871	.1149352	.0133375
#3	-.185345	.1048425	.0134516

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2364.121	51862.40	11889.76	1555.289	2826.841
Stddev	19.345	539.71	63.55	19.753	22.354
%RSD	.8182550	1.040651	.5344942	1.270030	.7907893
#1	2371.272	52485.34	11943.95	1578.097	2839.434
#2	2378.873	51535.16	11905.52	1543.720	2840.059
#3	2342.220	51566.71	11819.81	1544.051	2801.031

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: LR2 Acquired: 3/3/2025 21:50:35 Type: Unk
Method: NON EPA-6010-200.7(v2759) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0110087	-.013296	243.5648	.0084325	-.005541	.1806289
Stddev	.0020265	.002101	1.5369	.0023620	.001699	.0072994
%RSD	18.40770	15.80486	.6309901	28.01032	30.66441	4.041094
#1	.0095077	-.015555	241.8109	.0058262	-.004523	.1885754
#2	.0102047	-.012933	244.2075	.0090397	-.004597	.1790887
#3	.0133139	-.011399	244.6760	.0104317	-.007502	.1742225

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	90.82581	-.002207	-.005133	.2800764	.0139929	-.001636
Stddev	1.12915	.000062	.000053	.0037870	.0005401	.000163
%RSD	1.243208	2.816227	1.022747	1.352120	3.859561	9.971241
#1	89.58424	-.002275	-.005192	.2830525	.0134495	-.001448
#2	91.79137	-.002192	-.005091	.2813628	.0145295	-.001734
#3	91.10182	-.002153	-.005116	.2758138	.0139996	-.001726

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	265.5203	-.007172	43.94746	-.019744	48.72409	.0016718
Stddev	1.9128	.003961	.29626	.011606	.26689	.0004641
%RSD	.7204137	55.23220	.6741131	58.78165	.5477540	27.76077
#1	263.3777	-.007820	44.02627	-.007221	48.41869	.0011473
#2	266.1271	-.002927	44.19635	-.021873	48.84107	.0020292
#3	267.0562	-.010770	43.61977	-.030137	48.91253	.0018389

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3867688	-.011255	F 25.72559	.4877634	.0013742	-.006377
Stddev	.0337359	.001783	.20769	.0368896	.0004363	.000300
%RSD	8.722501	15.83960	.8073215	7.563001	31.74960	4.700098
#1	.4199318	-.011454	25.51571	.5303217	.0011835	-.006696
#2	.3878868	-.012929	25.73006	.4649246	.0018735	-.006101
#3	.3524877	-.009381	25.93101	.4680439	.0010658	-.006336

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: LR2 Acquired: 3/3/2025 21:50:35 Type: Unk
Method: NON EPA-6010-200.7(v2759) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004480	-.042057	-.015414	-.174371	-.009592	.0046848
Stddev	.000596	.000369	.000815	.005779	.007070	.0003738
%RSD	13.30320	.8782101	5.290311	3.314247	73.71155	7.978874
#1	-.004877	-.042174	-.014508	-.181035	-.013161	.0048532
#2	-.004768	-.042353	-.016089	-.170734	-.001448	.0049447
#3	-.003795	-.041643	-.015646	-.171345	-.014167	.0042564

Elem	Sr4077
Units	ppm
Avg	.0015958
Stddev	.0000764
%RSD	4.787870
#1	.0015318
#2	.0015751
#3	.0016804

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3224.285	78950.51	15093.63	2274.450	4813.721
Stddev	14.803	449.40	94.24	13.336	20.597
%RSD	.4590991	.5692223	.6243462	.5863490	.4278835
#1	3241.064	79395.30	15023.73	2284.368	4836.869
#2	3218.719	78959.59	15056.36	2279.693	4806.876
#3	3213.072	78496.63	15200.80	2259.289	4797.418

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1457-01MSD Acquired: 3/3/2025 21:55:14 Type: Unk
Method: NON EPA-6010-200.7(v2759) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7201332	1.877897	1.457073	1.596000	.2717231	103.8909
Stddev	.0063199	.017140	.003067	.004718	.0004729	.3831
%RSD	.8776064	.9127084	.2105169	.2955877	.1740210	.3687458
#1	.7174277	1.858417	1.458567	1.591048	.2712245	104.2255
#2	.7156163	1.884605	1.459108	1.596511	.2721651	103.4730
#3	.7273555	1.890668	1.453545	1.600442	.2717797	103.9743

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7713691	.1692872	.2040008	102.2775	.5409928	.3074383
Stddev	.0019893	.0007673	.0011170	.2243	.0087566	.0010414
%RSD	.2578961	.4532640	.5475651	.2193517	1.618624	.3387430
#1	.7736026	.1700596	.2028029	102.5365	.5469812	.3062498
#2	.7707173	.1685250	.2050139	102.1518	.5309429	.3078741
#3	.7697874	.1692771	.2041856	102.1441	.5450543	.3081911

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7424225	159.6001	3.471248	52.35764	.6990707	.0636686
Stddev	.0024662	1.9333	.011231	.07227	.0026428	.0002639
%RSD	.3321875	1.211339	.3235446	.1380389	.3780414	.4144378
#1	.7396135	160.9645	3.481936	52.39694	.6961435	.0637326
#2	.7442322	157.3878	3.472265	52.27423	.7012812	.0633786
#3	.7434219	160.4481	3.459543	52.40175	.6997874	.0638945

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.43380	.5761183	.7726821	18.18594	.5033203	.3360928
Stddev	.23243	.0014314	.0118106	.29856	.0063834	.0017179
%RSD	1.505996	.2484481	1.528517	1.641701	1.268269	.5111405
#1	15.54593	.5777178	.7754504	18.35699	.5089511	.3342822
#2	15.16656	.5749580	.7597333	17.84120	.4963856	.3362962
#3	15.58891	.5756792	.7828626	18.35964	.5046242	.3376999

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1457-01MSD Acquired: 3/3/2025 21:55:14 Type: Unk
Method: NON EPA-6010-200.7(v2759) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6826574	3.869320	F 15.68199	F 12.23918	3.399635	.3576677
Stddev	.0024932	.012241	.22226	.06899	.018084	.0011822
%RSD	.3652263	.3163534	1.417266	.5636778	.5319428	.3305262
#1	.6800675	3.882673	15.81018	12.16078	3.378884	.3586057
#2	.6828634	3.858629	15.42535	12.26615	3.407985	.3580576
#3	.6850412	3.866658	15.81044	12.29061	3.412035	.3563398

Elem	Sr4077
Units	ppm
Avg	.5160978
Stddev	.0016213
%RSD	.3141550
#1	.5179375
#2	.5148775
#3	.5154783

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3821.341	85548.01	17163.49	2530.063	4470.030
Stddev	13.841	1133.28	47.82	31.059	13.354
%RSD	.3621950	1.324734	.2786280	1.227604	.2987431
#1	3837.297	84805.42	17108.28	2514.171	4483.801
#2	3812.586	86852.45	17190.17	2565.853	4457.137
#3	3814.139	84986.16	17192.01	2510.166	4469.153

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1457-01A Acquired: 3/3/2025 21:59:13 Type: Unk
Method: NON EPA-6010-200.7(v2759) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8303105	1.852498	1.011234	1.932887	.7488371	19.75094
Stddev	.0054900	.007869	.006536	.018739	.0048808	.12330
%RSD	.6612010	.4247860	.6463442	.9695085	.6517803	.6242650
#1	.8239847	1.847398	1.003996	1.915937	.7441000	19.88243
#2	.8331155	1.861561	1.016705	1.953011	.7538499	19.63792
#3	.8338314	1.848535	1.013001	1.929712	.7485614	19.73246

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5486734	.1826565	.1915961	219.1614	.4477088	.2080195
Stddev	.0035164	.0008119	.0013843	1.0762	.0001387	.0018927
%RSD	.6408931	.4444922	.7224926	.4910469	.0309778	.9098742
#1	.5526379	.1835201	.1901157	220.3628	.4476138	.2064008
#2	.5474509	.1819087	.1928584	218.2857	.4476446	.2101006
#3	.5459314	.1825405	.1918144	218.8356	.4478679	.2075573

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4223886	11.31732	.5163115	11.07686	.5119474	.0739026
Stddev	.0032438	.05980	.0020819	.04210	.0039239	.0001500
%RSD	.7679757	.5284238	.4032323	.3800310	.7664721	.2029602
#1	.4190258	11.28481	.5186251	11.11983	.5079765	.0738198
#2	.4254987	11.38633	.5157204	11.03570	.5158226	.0740757
#3	.4226414	11.28081	.5145891	11.07504	.5120431	.0738122

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.345036	.3279399	.8445105	16.48812	.3862118	.4679477
Stddev	.011887	.0007687	.0008255	.05951	.0024794	.0038859
%RSD	.1424457	.2344093	.0977473	.3609341	.6419913	.8304116
#1	8.342300	.3283502	.8452288	16.44862	.3887162	.4638827
#2	8.358053	.3270531	.8436088	16.55657	.3837581	.4716255
#3	8.334755	.3284165	.8446940	16.45917	.3861611	.4683349

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1457-01A Acquired: 3/3/2025 21:59:13 Type: Unk
Method: NON EPA-6010-200.7(v2759) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5915454	.6692981	F 38.16239	6.507628	4.881507	.1789878
Stddev	.0049337	.0049950	.10256	.049719	.041539	.0013430
%RSD	.8340381	.7463055	.2687386	.7640152	.8509559	.7503213
#1	.5873363	.6747996	38.09577	6.463155	4.840967	.1805043
#2	.5969747	.6650472	38.28049	6.561307	4.923979	.1779488
#3	.5903251	.6680476	38.11091	6.498423	4.879574	.1785103

Elem	Sr4077
Units	ppm
Avg	.5701425
Stddev	.0028648
%RSD	.5024771
#1	.5734484
#2	.5685934
#3	.5683857

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3359.281	75554.15	15423.41	2215.574	4574.762
Stddev	20.539	125.91	112.25	13.858	23.401
%RSD	.6114240	.1666457	.7278164	.6254623	.5115170
#1	3381.485	75468.73	15299.12	2199.822	4598.869
#2	3340.960	75494.97	15517.41	2221.014	4552.138
#3	3355.397	75698.74	15453.70	2225.887	4573.280

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCV03 Acquired: 3/3/2025 22:02:49 Type: Unk
Method: NON EPA-6010-200.7(v2760) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.144813	5.070683	5.083460	5.180330	5.178238	10.06434	10.14141
Stddev	.046743	.080063	.048943	.043477	.046551	.15342	.08451
%RSD	.9085429	1.578930	.9627846	.8392697	.8989803	1.524355	.8333104
#1	5.101197	4.986766	5.046300	5.153060	5.144267	10.20345	10.21302
#2	5.194155	5.146234	5.138915	5.230469	5.231300	10.08978	10.04820
#3	5.139088	5.079048	5.065165	5.157462	5.159147	9.89979	10.16303

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2489190	2.537608	25.11234	1.024514	2.543103	1.287967	5.189483
Stddev	.0029991	.023895	.40024	.011070	.023194	.010692	.047607
%RSD	1.204845	.9416207	1.593807	1.080539	.9120499	.8301756	.9173655
#1	.2523594	2.516075	25.50532	1.037284	2.521908	1.277824	5.226327
#2	.2475411	2.563315	25.12648	1.017631	2.567880	1.299135	5.206393
#3	.2468564	2.533435	24.70521	1.018626	2.539520	1.286944	5.135730

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.521923	24.88507	2.538927	1.280516	25.94170	2.551616	2.547627
Stddev	.040161	.34115	.025368	.008291	.32697	.041322	.018665
%RSD	1.592461	1.370882	.9991478	.6474958	1.260418	1.619462	.7326511
#1	2.558566	25.23707	2.519647	1.290076	26.22119	2.589389	2.568435
#2	2.528214	24.86222	2.567665	1.276193	26.02180	2.557978	2.542085
#3	2.478988	24.55593	2.529469	1.275281	25.58213	2.507482	2.532360

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.88309	5.006276	5.160065	5.080853	5.069112	5.210078	4.977339
Stddev	.32214	.044876	.043609	.043066	.078312	.051875	.058900
%RSD	1.244606	.8963971	.8451238	.8476122	1.544876	.9956666	1.183363
#1	26.07540	5.056794	5.122631	5.039311	5.138761	5.258629	4.914015
#2	26.06268	4.991008	5.207950	5.125296	5.084232	5.216185	5.030490
#3	25.51118	4.971026	5.149615	5.077952	4.984343	5.155420	4.987511

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCV03 Acquired: 3/3/2025 22:02:49 Type: Unk
Method: NON EPA-6010-200.7(v2760) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.053456	5.003796	5.171807
Stddev	.049300	.083871	.064520
%RSD	.9755735	1.676141	1.247530
#1	5.000573	5.071914	5.211990
#2	5.098147	5.029355	5.206046
#3	5.061647	4.910120	5.097385

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3503.828	76577.21	14783.77	2278.968	4738.441
Stddev	25.518	538.92	154.31	15.525	39.105
%RSD	.7282899	.7037556	1.043748	.6812344	.8252747
#1	3521.596	75957.86	14608.91	2263.398	4770.693
#2	3474.587	76834.59	14841.59	2279.057	4694.946
#3	3515.300	76939.18	14900.81	2294.448	4749.685

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCB03 Acquired: 3/3/2025 22:24:14 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	-.001140	.0000741	-.000989	-.002327	-.001357	.0003918	-.001415
Stddev	.000408	.0013415	.000514	.000749	.000097	.0011154	.001109
%RSD	35.73728	1810.632	51.96542	32.19806	7.117293	284.7306	78.37941
#1	-.000978	.0013791	-.001562	-.003139	-.001442	-.000720	-.002593
#2	-.001604	.0001444	-.000834	-.001664	-.001377	.000385	-.000392
#3	-.000839	-.001301	-.000570	-.002176	-.001252	.001510	-.001259

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000203	-.000019	.0039284	-.000075	.0000990	.0002575	-.001959
Stddev	.0000476	.000049	.0039968	.000053	.0000781	.0003819	.002770
%RSD	234.4703	259.2448	101.7406	71.23720	78.90614	148.3048	141.3529
#1	-.000035	.000037	-.000687	-.000122	.0000567	.0004155	-.003024
#2	.000050	-.000055	.006270	-.000085	.0001891	.0005351	.001185
#3	.000045	-.000039	.006201	-.000017	.0000511	-.000178	-.004039

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000176	.0025623	.0004367	-.000330	.0884672	-.001665	-.000194
Stddev	.000244	.0035695	.0000888	.000282	.0200691	.001398	.000311
%RSD	138.0993	139.3099	20.33651	85.31610	22.68531	83.93888	160.2368
#1	-.000455	.0025259	.0005341	-.000654	.0655037	-.000322	-.000336
#2	-.000002	-.000989	.0004157	-.000144	.0972516	-.001562	-.000408
#3	-.000073	.006150	.0003602	-.000192	.1026463	-.003112	.000162

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0243976	.0022633	.0001426	.0003168	-.000075	-.000995	-.000384
Stddev	.0236278	.0000288	.0001691	.0002021	.000243	.002188	.001177
%RSD	96.84458	1.272523	118.5996	63.78864	324.6343	219.8894	306.7090
#1	.0072950	.0022476	.0003087	.0002298	-.000094	-.001148	.000531
#2	.0145398	.0022457	-.000029	.0001728	-.000308	.001266	-.001712
#3	.0513581	.0022965	.000149	.0005479	.000177	-.003103	.000030

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCB03 Acquired: 3/3/2025 22:24:14 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001659	-.000440	-.000017
Stddev	.003708	.000730	.000009
%RSD	223.4698	166.0326	54.26338
#1	.001901	-.000463	-.000012
#2	-.005500	.000302	-.000011
#3	-.001380	-.001157	-.000027

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3643.388	80412.32	15502.27	2392.258	5316.930
Stddev	17.454	178.72	116.27	8.982	22.322
%RSD	.4790500	.2222545	.7500506	.3754583	.4198315
#1	3629.433	80505.20	15409.00	2390.465	5296.335
#2	3637.773	80525.49	15465.27	2402.001	5313.805
#3	3662.958	80206.29	15632.55	2384.308	5340.650

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1439-01 Acquired: 3/3/2025 22:28:31 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000629	-.003551	-.000856	.0001949	.0006195	.0109113
Stddev	.004441	.001619	.000743	.0015921	.0006671	.0079833
%RSD	706.3036	45.59823	86.75769	816.8216	107.6788	73.16584
#1	-.000180	-.001908	.000000	.0016312	.0006042	.0146703
#2	.003571	-.005145	-.001323	.0004706	-.000040	.0017423
#3	-.005277	-.003599	-.001245	-.001517	.001294	.0163213

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1609062	-.000152	.0000286	118.9451	.0038654	.0001018
Stddev	.0024936	.000027	.0000677	1.4606	.0004267	.0002970
%RSD	1.549726	17.66337	236.8291	1.227989	11.03789	291.8127
#1	.1637375	-.000151	.0000230	120.5326	.0033978	.0000384
#2	.1599448	-.000180	-.000036	117.6581	.0039649	-.000158
#3	.1590365	-.000126	.000099	118.6445	.0042335	.000425

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022156	.7937897	.3657380	23.10619	.0168063	-.000437
Stddev	.0000959	.0106688	.0050141	.32714	.0007506	.000279
%RSD	4.328693	1.344033	1.370951	1.415812	4.466328	63.94511
#1	.0021169	.8047962	.3711569	23.45683	.0168676	-.000370
#2	.0023085	.7930788	.3612628	22.80917	.0160269	-.000197
#3	.0022215	.7834942	.3647943	23.05256	.0175244	-.000743

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	222.2406	.0063931	.0852438	18.51199	.2742054	.0091903
Stddev	1.4380	.0006648	.0005218	.13334	.0031536	.0001966
%RSD	.6470385	10.39920	.6121212	.7202722	1.150067	2.139518
#1	222.7418	.0066133	.0858356	18.66001	.2775078	.0093576
#2	220.6191	.0069198	.0850456	18.40130	.2712255	.0092396
#3	223.3610	.0056460	.0848501	18.47465	.2738830	.0089737

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1439-01 Acquired: 3/3/2025 22:28:31 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003126	-.002934	F 12.67976	.1453378	F 28.45874	-.015191
Stddev	.000574	.001284	.09507	.0031191	.68010	.000404
%RSD	18.35674	43.77779	.7497818	2.146096	2.389763	2.660921
#1	-.002879	-.003921	12.78468	.1464878	28.29050	-.015654
#2	-.002718	-.001482	12.59933	.1418070	27.87855	-.015010
#3	-.003782	-.003397	12.65528	.1477186	29.20716	-.014909

Elem	Sr4077
Units	ppm
Avg	1.229080
Stddev	.030610
%RSD	2.490471
#1	1.254494
#2	1.237647
#3	1.195099

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3391.856	74330.30	14964.23	2199.316	4576.516
Stddev	64.808	309.11	149.17	10.984	86.338
%RSD	1.910691	.4158580	.9968698	.4994117	1.886553
#1	3405.601	73981.88	14802.41	2187.652	4600.003
#2	3448.689	74571.62	15096.26	2200.835	4648.681
#3	3321.278	74437.39	14994.03	2209.461	4480.865

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1439-02 Acquired: 3/3/2025 22:33:02 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002052	-.005296	.0002433	-.002232	.0011409	.0127015
Stddev	.000413	.002171	.0010449	.003983	.0008287	.0021213
%RSD	20.11734	41.00376	429.5011	178.4239	72.64268	16.70126
#1	-.002146	-.003645	.0005555	-.005606	.0015015	.0114705
#2	-.002409	-.007756	.0010964	.002161	.0017282	.0114831
#3	-.001600	-.004487	-.000922	-.003252	.0001929	.0151510

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1670860	-.000144	.0000520	120.2631	.0112330	.0001255
Stddev	.0010057	.000026	.0000297	.6059	.0003967	.0002812
%RSD	.6018801	18.12633	57.06543	.5038476	3.531961	224.0082
#1	.1675358	-.000135	.0000501	120.2592	.0116337	.0004052
#2	.1659339	-.000174	.0000826	119.6591	.0112250	.0001285
#3	.1677881	-.000124	.0000233	120.8710	.0108403	-.000157

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032727	.8768273	.3708025	23.33146	.0183682	-.000565
Stddev	.0005949	.0031329	.0026502	.11366	.0002114	.000238
%RSD	18.17685	.3572936	.7147300	.4871366	1.150825	42.13201
#1	.0026444	.8793613	.3701317	23.30508	.0182330	-.000745
#2	.0038273	.8733245	.3685521	23.23330	.0182598	-.000295
#3	.0033464	.8777960	.3737237	23.45598	.0186118	-.000656

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	224.1794	.0067464	.0844961	18.67477	.2761558	.0091357
Stddev	5.9840	.0001321	.0008687	.16049	.0020162	.0003230
%RSD	2.669309	1.957365	1.028129	.8594160	.7300799	3.535143
#1	224.5260	.0066649	.0846932	18.75536	.2750854	.0089725
#2	218.0296	.0068988	.0835458	18.48995	.2749006	.0089270
#3	229.9826	.0066756	.0852493	18.77899	.2784815	.0095077

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1439-02 Acquired: 3/3/2025 22:33:02 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002875	-.002585	F 12.69983	.1545537	F 29.27465	-.015540
Stddev	.000930	.000982	.12889	.0010024	.30645	.001490
%RSD	32.32902	37.99576	1.014884	.6485589	1.046821	9.590805
#1	-.003812	-.001458	12.73301	.1555665	28.92278	-.016395
#2	-.001953	-.003262	12.55759	.1545324	29.48301	-.013819
#3	-.002860	-.003034	12.80888	.1535621	29.41816	-.016406

Elem	Sr4077
Units	ppm
Avg	1.257241
Stddev	.013076
%RSD	1.040039
#1	1.242634
#2	1.261234
#3	1.267855

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3417.323	76704.32	15327.52	2238.915	4604.059
Stddev	22.763	711.13	63.52	21.114	35.995
%RSD	.6660916	.9271105	.4144434	.9430517	.7818178
#1	3443.446	76586.20	15326.50	2241.965	4645.463
#2	3401.746	77467.12	15391.54	2258.339	4580.205
#3	3406.777	76059.64	15264.51	2216.442	4586.508

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1440-01 Acquired: 3/3/2025 22:37:33 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0519646	-.001914	.3291139	-.019861	.0005282	132.2807	.7941449
Stddev	.0013421	.002999	.0066566	.003018	.0012081	.4819	.0034876
%RSD	2.582793	156.6775	2.022590	15.19311	228.7330	.3643292	.4391602
#1	.0515593	-.003604	.3366036	-.020768	-.000664	132.6245	.7961957
#2	.0534627	-.003687	.3268657	-.016494	.000496	132.4879	.7961210
#3	.0508718	.001549	.3238726	-.022322	.001752	131.7299	.7901181

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0095995	-.002541	68.42646	.2305085	.1327298	.4792976	239.8715
Stddev	.0000883	.000348	.35077	.0017969	.0022893	.0063177	2.9740
%RSD	.9199996	13.68466	.5126164	.7795159	1.724820	1.318112	1.239828
#1	.0096576	-.002532	68.56251	.2325244	.1348443	.4847216	243.2448
#2	.0094979	-.002198	68.68881	.2299259	.1330467	.4808103	238.7420
#3	.0096431	-.002893	68.02805	.2290753	.1302986	.4723609	237.6277

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.438516	51.18685	.2491419	.0071595	9.639167	.4035826	.5419977
Stddev	.028220	.27333	.0039202	.0005522	.128360	.0011090	.0034730
%RSD	.5188905	.5339829	1.573496	7.712824	1.331651	.2747968	.6407831
#1	5.451773	51.15669	.2523429	.0077568	9.787383	.4047177	.5455848
#2	5.457666	51.47402	.2503133	.0070541	9.564588	.4035284	.5386513
#3	5.406108	50.92986	.2447695	.0066676	9.565529	.4025016	.5417569

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.55555	.3311473	.0070549	.0084951	5.525835	5.171931	7.603566
Stddev	.26594	.0064677	.0002240	.0005364	.029178	.053031	.128755
%RSD	1.359922	1.953113	3.174396	6.313688	.5280241	1.025359	1.693356
#1	19.86130	.3384546	.0072791	.0087434	5.546679	5.233049	7.723130
#2	19.37790	.3261582	.0070544	.0078796	5.538336	5.144652	7.620310
#3	19.42746	.3288292	.0068312	.0088623	5.492490	5.138093	7.467258

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1440-01 Acquired: 3/3/2025 22:37:33 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.070526	.2268279	.2157935
Stddev	.098506	.0016944	.0013743
%RSD	1.942723	.7469948	.6368378
#1	5.161333	.2286260	.2169756
#2	5.084444	.2252610	.2161193
#3	4.965801	.2265965	.2142856

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4218.699	91864.06	19267.42	2746.235	4670.847
Stddev	47.748	741.95	88.20	23.142	69.576
%RSD	1.131822	.8076638	.4577861	.8426734	1.489583
#1	4178.208	91014.47	19326.77	2722.355	4609.649
#2	4206.536	92193.27	19166.06	2768.561	4656.370
#3	4271.352	92384.45	19309.41	2747.788	4746.523

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1441-01 Acquired: 3/3/2025 22:41:37 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0688597	-.022438	.1441752	-.040092	-.000286	212.2663
Stddev	.0010799	.002696	.0031071	.003159	.000372	1.8366
%RSD	1.568204	12.01636	2.155050	7.880158	130.1903	.8652175
#1	.0681791	-.022512	.1467503	-.038759	-.000091	213.3037
#2	.0701048	-.025096	.1450511	-.043700	-.000052	210.1457
#3	.0682951	-.019705	.1407242	-.037818	-.000714	213.3493

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6244620	.0128095	.0152264	59.55996	.2036046	.2829142
Stddev	.0023395	.0000890	.0021651	.27530	.0021766	.0058854
%RSD	.3746483	.6946249	14.21963	.4622173	1.069052	2.080279
#1	.6258513	.0128637	.0176437	59.66780	.2039623	.2897059
#2	.6217609	.0127068	.0145703	59.24707	.2012712	.2793119
#3	.6257738	.0128581	.0134652	59.76501	.2055802	.2797248

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6212290	429.6728	5.017174	51.49283	.2954380	.0080640
Stddev	.0090689	2.1119	.028724	.27262	.0055105	.0003808
%RSD	1.459825	.4915119	.5725111	.5294411	1.865186	4.722277
#1	.6316840	430.1488	5.034157	51.55186	.3017974	.0080004
#2	.6165152	427.3635	4.984010	51.19553	.2920759	.0084727
#3	.6154878	431.5060	5.033355	51.73111	.2924406	.0077190

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.825297	.7652912	.4730843	8.202281	1.409086	.0051155
Stddev	.054301	.0051742	.0063115	.049190	.006964	.0001689
%RSD	.6939124	.6761120	1.334117	.5997173	.4942192	3.301303
#1	7.842965	.7679061	.4744002	8.226772	1.410697	.0053105
#2	7.764363	.7593314	.4662187	8.145653	1.401458	.0050144
#3	7.868564	.7686361	.4786342	8.234419	1.415104	.0050216

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1441-01 Acquired: 3/3/2025 22:41:37 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005896	F 12.29225	4.091610	8.129816	2.669832	.2830881
Stddev	.000548	.05502	.041451	.146233	.065026	.0017116
%RSD	9.292924	.4475836	1.013071	1.798725	2.435586	.6046228
#1	-.005628	12.32009	4.108628	8.297184	2.744895	.2838164
#2	-.005534	12.22887	4.044359	8.065498	2.633907	.2811328
#3	-.006526	12.32778	4.121844	8.026767	2.630694	.2843152

Elem	Sr4077
Units	ppm
Avg	.2327790
Stddev	.0008506
%RSD	.3654204
#1	.2332650
#2	.2317968
#3	.2332753

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4914.053	108166.4	22284.85	3270.255	4552.699
Stddev	51.801	935.5	100.76	32.819	74.378
%RSD	1.054148	.8648869	.4521349	1.003566	1.633719
#1	4854.241	108196.5	22273.80	3267.083	4466.822
#2	4943.490	109086.5	22390.67	3304.545	4594.640
#3	4944.429	107216.2	22190.07	3239.137	4596.635

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1447-02DUP Acquired: 3/3/2025 22:45:57 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004118	-.006198	.1002152	.0045326	.0017744	.0422540	.6230256
Stddev	.001845	.001105	.0022676	.0009776	.0005330	.0012774	.0054334
%RSD	44.81266	17.82340	2.262713	21.56730	30.03740	3.023216	.8720915
#1	-.003010	-.005488	.1007513	.0046275	.0023654	.0429882	.6211544
#2	-.003095	-.005634	.1021667	.0035111	.0016277	.0407790	.6291473
#3	-.006248	-.007471	.0977276	.0054593	.0013301	.0429948	.6187752

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001437	.0018413	28.73821	.0007939	.0010466	.0153993	.0760872
Stddev	.0000397	.0000397	.20583	.0001803	.0001896	.0000666	.0024861
%RSD	27.66726	2.157958	.7162282	22.70522	18.11605	.4326525	3.267389
#1	.0000980	.0018853	28.65550	.0010002	.0009491	.0153251	.0742811
#2	.0001622	.0018081	28.97253	.0007152	.0012651	.0154539	.0789226
#3	.0001708	.0018306	28.58660	.0006664	.0009256	.0154189	.0750578

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8683290	5.194615	.0079131	-.000249	345.3731	-.000470	.3549751
Stddev	.0070705	.028736	.0001750	.000090	4.5335	.000409	.0037715
%RSD	.8142675	.5531865	2.211969	36.24771	1.312636	86.95289	1.062467
#1	.8650079	5.205357	.0080434	-.000163	340.5173	-.000604	.3506480
#2	.8764487	5.216433	.0077142	-.000343	349.4946	-.000011	.3567126
#3	.8635305	5.162056	.0079818	-.000240	346.1075	-.000795	.3575647

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.377086	.1423015	.0003102	.0018450	-.000341	2.001607	.0201288
Stddev	.037037	.0008786	.0000187	.0009292	.000273	.028686	.0030025
%RSD	1.558097	.6174200	6.020458	50.36163	80.15195	1.433164	14.91643
#1	2.334341	.1418309	.0002889	.0021507	-.000094	1.971696	.0211472
#2	2.397263	.1433152	.0003237	.0025827	-.000293	2.004239	.0167496
#3	2.399654	.1417585	.0003179	.0008015	-.000634	2.028887	.0224897

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1447-02DUP Acquired: 3/3/2025 22:45:57 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.305546	-.009497	.1439127
Stddev	.009093	.000991	.0010642
%RSD	.6965212	10.43578	.7394642
#1	1.304280	-.010289	.1433164
#2	1.315206	-.008386	.1451413
#3	1.297152	-.009817	.1432804

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3489.085	77465.44	15649.00	2332.596	4638.641
Stddev	14.926	679.57	104.86	15.320	23.573
%RSD	.4277863	.8772604	.6700552	.6567868	.5081795
#1	3484.487	78214.10	15627.04	2350.193	4639.508
#2	3476.999	77294.74	15556.86	2325.366	4614.647
#3	3505.769	76887.50	15763.10	2322.229	4661.769

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1447-02LX5 Acquired: 3/3/2025 22:50:21 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001012	-.001553	.0215491	-.000307	.0003652	.0102246	.1303193
Stddev	.001937	.000328	.0005684	.001024	.0009704	.0024379	.0018890
%RSD	191.3895	21.09848	2.637651	333.4500	265.7356	23.84396	1.449510
#1	-.003098	-.001383	.0214320	-.000122	-.000284	.0076396	.1282221
#2	-.000671	-.001930	.0210484	.000612	.001481	.0124825	.1308484
#3	.000732	-.001345	.0221670	-.001411	-.000102	.0105516	.1318873

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000447	.0004401	6.279834	-.000031	.0004023	.0036616	.0156158
Stddev	.0000094	.0000130	.086321	.000467	.0000489	.0001854	.0026766
%RSD	21.03271	2.942570	1.374583	1492.435	12.14513	5.062958	17.14027
#1	.0000356	.0004288	6.181216	-.000391	.0004063	.0038637	.0152937
#2	.0000544	.0004542	6.316600	.000496	.0004490	.0036217	.0131148
#3	.0000441	.0004372	6.341685	-.000199	.0003516	.0034994	.0184389

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1915289	1.133872	.0016146	-.000315	72.12762	-.001126	.0790213
Stddev	.0023235	.033544	.0001435	.000152	.49689	.001155	.0004018
%RSD	1.213123	2.958334	8.886628	48.10111	.6889017	102.6479	.5084392
#1	.1891701	1.095404	.0014607	-.000142	71.80115	.000016	.0788303
#2	.1916012	1.149197	.0016382	-.000379	72.69946	-.001098	.0794829
#3	.1938154	1.157017	.0017448	-.000424	71.88224	-.002294	.0787507

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5522779	.0360845	.0000633	.0004290	.0000893	.4205361	.0031702
Stddev	.0119389	.0011954	.0001290	.0011684	.0006898	.0070912	.0040357
%RSD	2.161752	3.312736	204.0392	272.3364	772.4243	1.686226	127.3010
#1	.5385103	.0351775	.0001530	.0005474	.0007910	.4130988	.0002762
#2	.5585470	.0356369	-.000085	-.000794	-.000588	.4212884	.0014541
#3	.5597762	.0374391	.000121	.001534	.000065	.4272211	.0077803

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1447-02LX5 Acquired: 3/3/2025 22:50:21 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3097024	.0025607	.0307746
Stddev	.0032345	.0010245	.0004180
%RSD	1.044391	40.00963	1.358373
#1	.3134166	.0016170	.0302938
#2	.3075058	.0036504	.0309780
#3	.3081847	.0024148	.0310520

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3651.313	79373.12	15432.67	2383.274	5022.012
Stddev	36.621	601.61	171.39	27.217	50.298
%RSD	1.002964	.7579500	1.110557	1.141985	1.001560
#1	3622.629	79548.24	15630.56	2383.448	4981.167
#2	3692.563	78703.38	15331.33	2355.970	5078.193
#3	3638.745	79867.73	15336.14	2410.403	5006.676

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1447-02MS Acquired: 3/3/2025 22:54:40 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9522713	2.118556	1.198020	2.282791	.9362037	2.213077	.8183859
Stddev	.0201083	.033136	.020786	.041532	.0201587	.013571	.0046501
%RSD	2.111612	1.564093	1.735026	1.819350	2.153236	.6132233	.5681992
#1	.9342002	2.083411	1.177907	2.246228	.9150717	2.208669	.8165338
#2	.9486805	2.123029	1.196733	2.274199	.9383168	2.228305	.8236766
#3	.9739330	2.149229	1.219419	2.327948	.9552226	2.202259	.8149473

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2138365	.2303455	28.79219	.4663833	.2328282	.3526676	3.871855
Stddev	.0007135	.0038025	.15637	.0007644	.0034689	.0064918	.031620
%RSD	.3336742	1.650795	.5431142	.1638930	1.489903	1.840755	.8166537
#1	.2130155	.2268376	28.72461	.4672119	.2297097	.3464842	3.877135
#2	.2143073	.2298126	28.97098	.4662323	.2322104	.3520896	3.900502
#3	.2141866	.2343864	28.68097	.4657057	.2365645	.3594290	3.837928

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.047500	7.121775	.5806081	.0854480	341.4965	.3380169	.5795143
Stddev	.005162	.050751	.0102750	.0000737	1.0013	.0037709	.0012069
%RSD	.4928215	.7126115	1.769689	.0862892	.2932178	1.115607	.2082600
#1	1.045356	7.086800	.5708111	.0853911	341.9233	.3358961	.5804390
#2	1.053388	7.179984	.5797109	.0854216	340.3525	.3423707	.5799550
#3	1.043754	7.098543	.5913022	.0855313	342.2138	.3357839	.5781490

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.83946	.4299295	.4877698	.8097694	.2211925	2.970383	6.973373
Stddev	.07316	.0017881	.0086891	.0114117	.0013933	.011207	.111495
%RSD	.4930104	.4159010	1.781390	1.409256	.6298869	.3772748	1.598873
#1	14.88602	.4281158	.4793630	.7987741	.2201483	2.971687	6.869465
#2	14.87723	.4316908	.4872304	.8089779	.2227745	2.980881	6.959497
#3	14.75514	.4299819	.4967161	.8215563	.2206546	2.958582	7.091157

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1447-02MS Acquired: 3/3/2025 22:54:40 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.212369	.2171496	.3597369
Stddev	.014992	.0022581	.0019896
%RSD	1.236612	1.039870	.5530783
#1	1.197160	.2150186	.3583879
#2	1.212812	.2195163	.3620219
#3	1.227135	.2169140	.3588010

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3511.513	76687.53	15719.28	2292.491	4661.478
Stddev	56.009	72.71	54.50	9.743	70.976
%RSD	1.595020	.0948168	.3467096	.4250149	1.522610
#1	3564.207	76716.43	15778.16	2284.533	4727.655
#2	3517.641	76604.81	15670.60	2289.583	4670.258
#3	3452.692	76741.35	15709.09	2303.358	4586.520

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1447-02MSD Acquired: 3/3/2025 22:58:48 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8944160	1.996975	1.126127	2.140594	.8761601	2.087879	.7578698
Stddev	.0043560	.035296	.006046	.010569	.0023139	.034111	.0104913
%RSD	.4870178	1.767467	.5369273	.4937234	.2641011	1.633754	1.384310
#1	.8981233	2.036782	1.132986	2.151617	.8787499	2.127112	.7697812
#2	.8955062	1.984649	1.123825	2.130547	.8754346	2.071280	.7538264
#3	.8896185	1.969496	1.121569	2.139618	.8742959	2.065244	.7500019

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2069328	.2153381	26.93678	.4348111	.2174724	.3339050	3.369532
Stddev	.0029531	.0010550	.36502	.0167260	.0009679	.0007200	.103044
%RSD	1.427090	.4899262	1.355102	3.846722	.4450873	.2156349	3.058117
#1	.2101408	.2165131	27.35027	.4515565	.2183167	.3346712	3.476112
#2	.2043277	.2150289	26.80078	.4181046	.2176845	.3338014	3.270431
#3	.2063298	.2144722	26.65928	.4347723	.2164160	.3332424	3.362052

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9840091	6.703807	.5462980	.0793062	307.2186	.3157768	.5369668
Stddev	.0085671	.079936	.0023326	.0026686	8.2711	.0036198	.0196662
%RSD	.8706283	1.192398	.4269849	3.364967	2.692256	1.146329	3.662451
#1	.9936897	6.787369	.5489874	.0819963	313.8920	.3199566	.5557353
#2	.9809321	6.628073	.5450817	.0766596	297.9649	.3137084	.5165116
#3	.9774055	6.695979	.5448249	.0792628	309.7989	.3136655	.5386535

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.38201	.4177591	.4538932	.7599692	.2070692	2.674323	6.554589
Stddev	.47277	.0080122	.0012670	.0050078	.0026845	.078413	.047615
%RSD	3.532895	1.917901	.2791354	.6589491	1.296416	2.932073	.7264451
#1	13.89642	.4247090	.4552395	.7650543	.2101566	2.753298	6.606613
#2	12.96653	.4089955	.4537158	.7598109	.2052861	2.596484	6.543982
#3	13.28309	.4195727	.4527243	.7550424	.2057647	2.673188	6.513170

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1447-02MSD Acquired: 3/3/2025 22:58:48 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.150022	.2060470	.3352670
Stddev	.020153	.0028041	.0047479
%RSD	1.752407	1.360914	1.416152
#1	1.171217	.2092429	.3406836
#2	1.147743	.2048996	.3332923
#3	1.131105	.2039987	.3318252

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3508.775	77264.58	15109.75	2298.777	4649.991
Stddev	9.628	2485.71	169.00	73.237	18.090
%RSD	.2743955	3.217146	1.118508	3.185931	.3890236
#1	3499.434	74858.70	14915.90	2228.473	4633.427
#2	3508.223	79823.10	15226.13	2374.632	4647.253
#3	3518.666	77111.94	15187.23	2293.226	4669.294

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1447-02A Acquired: 3/3/2025 23:02:57 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8768261	1.959559	1.107352	2.103335	.8620896	2.040021	.7563616
Stddev	.0042534	.023615	.008897	.015363	.0084957	.024024	.0075832
%RSD	.4850903	1.205143	.8034553	.7304010	.9854803	1.177630	1.002587
#1	.8800881	1.985648	1.117564	2.120997	.8718878	2.012774	.7476857
#2	.8720154	1.953388	1.103213	2.095934	.8567733	2.049136	.7596741
#3	.8783750	1.939642	1.101277	2.093073	.8576076	2.058155	.7617250

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1972117	.2113603	26.50553	.4227140	.2141135	.3284876	3.382193
Stddev	.0015763	.0014915	.27169	.0020377	.0016615	.0020785	.008647
%RSD	.7993096	.7056453	1.025049	.4820508	.7760043	.6327515	.2556566
#1	.1954363	.2130419	26.19472	.4236530	.2160195	.3307798	3.385063
#2	.1984469	.2108414	26.62396	.4241129	.2133501	.3279574	3.389041
#3	.1977520	.2101976	26.69790	.4203761	.2129709	.3267255	3.372477

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9705121	6.544734	.5364303	.0767072	305.2346	.3118654	.5221337
Stddev	.0093555	.045922	.0043722	.0007133	1.1206	.0021903	.0028901
%RSD	.9639769	.7016615	.8150475	.9298337	.3671268	.7023161	.5535119
#1	.9604350	6.498533	.5412666	.0767697	306.3900	.3100313	.5254700
#2	.9721793	6.590372	.5352663	.0773872	304.1524	.3112743	.5205326
#3	.9789219	6.545296	.5327579	.0759648	305.1615	.3142905	.5203986

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.34910	.3966965	.4468076	.7464968	.2053535	2.669049	6.381952
Stddev	.00666	.0037094	.0034201	.0073691	.0021219	.013097	.055615
%RSD	.0499027	.9350796	.7654648	.9871558	1.033275	.4906952	.8714390
#1	13.34836	.3926355	.4506708	.7542236	.2030946	2.667962	6.443389
#2	13.35609	.3975476	.4455861	.7457199	.2056611	2.682655	6.367425
#3	13.34283	.3999064	.4441659	.7395469	.2073047	2.656529	6.335043

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1447-02A Acquired: 3/3/2025 23:02:57 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.119050	.2004740	.3326633
Stddev	.007812	.0015956	.0032024
%RSD	.6980975	.7959214	.9626598
#1	1.127113	.1986388	.3290612
#2	1.118523	.2012496	.3337407
#3	1.111516	.2015335	.3351881

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3568.653	79324.53	15852.79	2355.867	4739.691
Stddev	24.935	474.94	107.93	11.160	34.232
%RSD	.6987297	.5987301	.6808134	.4737125	.7222410
#1	3539.992	79011.99	15977.38	2344.497	4700.273
#2	3580.603	79090.53	15793.01	2356.299	4756.850
#3	3585.364	79871.06	15787.97	2366.805	4761.949

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCV04 Acquired: 3/3/2025 23:07:05 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.995263	4.908740	4.951522	5.012632	5.012283	9.716419	9.863081
Stddev	.029011	.044221	.015085	.031331	.032343	.113888	.142281
%RSD	.5807724	.9008576	.3046555	.6250431	.6452772	1.172121	1.442560
#1	5.026920	4.925695	4.968215	5.045609	5.047748	9.808084	9.890676
#2	4.969946	4.858551	4.938865	4.983258	4.984413	9.752249	9.989543
#3	4.988924	4.941974	4.947487	5.009027	5.004690	9.588925	9.709024

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2441884	2.481948	24.13048	.9850529	2.489636	1.254888	4.971853
Stddev	.0040437	.007226	.28929	.0308058	.010857	.006270	.133058
%RSD	1.655971	.2911548	1.198855	3.127325	.4361050	.4996582	2.676217
#1	.2440978	2.490256	24.33625	.9661186	2.501787	1.261558	4.890579
#2	.2482766	2.478463	24.25547	1.020599	2.480888	1.249114	5.125407
#3	.2401908	2.477123	23.79970	.968441	2.486233	1.253992	4.899573

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.434409	24.17156	2.469327	1.228662	25.09324	2.473450	2.460131
Stddev	.032640	.29141	.009708	.037875	.48695	.033393	.073430
%RSD	1.340791	1.205583	.3931546	3.082617	1.940566	1.350062	2.984808
#1	2.453318	24.30108	2.480314	1.203467	24.83898	2.494461	2.413208
#2	2.453191	24.37576	2.461905	1.272218	25.65469	2.490945	2.544753
#3	2.396720	23.83784	2.465764	1.210301	24.78606	2.434945	2.422432

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.73261	4.794871	5.018860	4.964692	4.895730	4.933977	4.861852
Stddev	.47993	.074756	.028096	.020624	.063718	.099971	.029402
%RSD	1.940491	1.559091	.5598125	.4154216	1.301502	2.026169	.6047493
#1	24.48152	4.778441	5.049145	4.987756	4.944018	4.860202	4.894929
#2	25.28600	4.876476	4.993642	4.948022	4.919662	5.047754	4.838688
#3	24.43030	4.729697	5.013793	4.958299	4.823511	4.893974	4.851940

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCV04 Acquired: 3/3/2025 23:07:05 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.928679	4.811530	4.989229
Stddev	.029094	.056254	.070768
%RSD	.5903048	1.169143	1.418412
#1	4.951898	4.864923	4.960025
#2	4.896043	4.816870	5.069926
#3	4.938096	4.752796	4.937738

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3644.919	80432.45	15347.43	2390.856	4915.821
Stddev	15.949	1995.60	185.77	52.260	15.378
%RSD	.4375564	2.481082	1.210448	2.185811	.3128227
#1	3628.323	81693.78	15282.92	2421.326	4899.343
#2	3660.130	78131.70	15202.52	2330.513	4929.790
#3	3646.303	81471.87	15556.87	2420.729	4918.330

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCB04 Acquired: 3/3/2025 23:11:15 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	-.000512	-.000656	-.000703	-.002482	-.001205	.0027557	-.001785
Stddev	.003021	.000824	.000887	.001283	.000404	.0036071	.000899
%RSD	589.9122	125.5403	126.1864	51.69512	33.47775	130.8971	50.36130
#1	-.002808	-.001256	-.001691	-.003706	-.000753	.0033430	-.000781
#2	-.001639	.000283	.000024	-.002592	-.001528	-.001109	-.002058
#3	.002910	-.000996	-.000441	-.001147	-.001335	.006033	-.002516

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000002	.0000148	.0128954	-.000149	.0001078	-.000096	.0005905
Stddev	.000029	.0000162	.0034533	.000276	.0000468	.000278	.0038943
%RSD	1162.233	109.5992	26.77916	185.0228	43.45152	289.3429	659.4453
#1	-.000034	.0000334	.0098763	.000131	.0001575	.000138	.0042904
#2	.000021	.0000066	.0166608	-.000421	.0000646	-.000023	.0009539
#3	.000006	.0000043	.0121492	-.000158	.0001011	-.000403	-.003473

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000203	-.005134	-.000143	-.000198	.1775047	.0005532	-.000612
Stddev	.000247	.009892	.000083	.000111	.0141628	.0010915	.000455
%RSD	121.6383	192.6663	58.00617	56.19433	7.978854	197.2816	74.33995
#1	-.000311	-.016523	-.000223	-.000118	.1612712	-.000120	-.000160
#2	.000079	-.000186	-.000057	-.000151	.1873366	-.000033	-.000606
#3	-.000377	.001307	-.000150	-.000325	.1839063	.001813	-.001069

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1787477	.0075670	.0003302	-.000194	.0005890	-.001278	-.000525
Stddev	.0180969	.0009811	.0001056	.000461	.0004818	.007197	.002651
%RSD	10.12430	12.96525	31.96460	237.5845	81.80255	563.0948	504.6261
#1	.1607973	.0070615	.0004261	-.000702	.0000408	-.009421	-.001919
#2	.1784580	.0086977	.0003474	-.000077	.0007810	.001353	.002532
#3	.1969877	.0069417	.0002171	.000197	.0009452	.004234	-.002189

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCB04 Acquired: 3/3/2025 23:11:15 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0000043	.0022593	.0000538
Stddev	.0014133	.0006079	.0000141
%RSD	33173.76	26.90582	26.26148
#1	-.001169	.0026232	.0000500
#2	.001573	.0015575	.0000694
#3	-.000391	.0025971	.0000420

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3744.864	83683.95	15042.15	2490.432	5449.365
Stddev	21.912	751.68	200.66	17.462	32.789
%RSD	.5851225	.8982321	1.334004	.7011687	.6017016
#1	3753.243	84496.94	14820.38	2509.036	5466.886
#2	3761.351	83540.69	15094.91	2487.865	5469.672
#3	3719.999	83014.21	15211.17	2474.396	5411.538

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1439-02DUP Acquired: 3/3/2025 23:15:36 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002070	-.005143	-.001997	-.000844	.0000844	.0059209
Stddev	.003698	.001198	.000978	.001779	.0016750	.0065361
%RSD	178.6488	23.29945	48.98172	210.8307	1983.696	110.3916
#1	-.001643	-.006452	-.001739	-.002863	.0019060	.0039363
#2	-.005963	-.004100	-.003078	.000492	-.001389	.0132192
#3	.001396	-.004877	-.001173	-.000160	-.000263	.0006070

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1555890	-.000142	.0000310	112.8260	.0055860	-.000134
Stddev	.0010029	.000061	.0000716	.4743	.0004682	.000135
%RSD	.6445673	43.26877	231.1578	.4203729	8.380859	100.2769
#1	.1546310	-.000081	.0001042	112.3270	.0058756	-.000200
#2	.1566314	-.000140	.0000274	112.8801	.0058366	.000021
#3	.1555045	-.000204	-.000039	113.2709	.0050459	-.000223

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037329	.8162641	.3564353	21.93382	.0184349	-.000610
Stddev	.0003693	.0138928	.0009858	.10804	.0000567	.000319
%RSD	9.893557	1.701995	.2765733	.4925504	.3077630	52.29211
#1	.0039062	.8259217	.3555821	21.89447	.0184859	-.000959
#2	.0033088	.8225285	.3575145	21.85098	.0184449	-.000539
#3	.0039838	.8003422	.3562093	22.05602	.0183738	-.000333

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	212.8069	.0043622	.0796563	17.59940	.2625646	.0089030
Stddev	3.7285	.0024751	.0019869	.37734	.0007763	.0002577
%RSD	1.752065	56.73985	2.494406	2.144047	.2956775	2.894536
#1	216.8210	.0015273	.0805343	17.84242	.2616684	.0091932
#2	212.1477	.0060939	.0810531	17.79108	.2630315	.0087009
#3	209.4519	.0054655	.0773816	17.16469	.2629939	.0088150

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1439-02DUP Acquired: 3/3/2025 23:15:36 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003065	-.002754	F 12.00292	.1469702	F 27.62087	-.014806
Stddev	.001174	.000420	.24568	.0012468	.09767	.000863
%RSD	38.28274	15.25929	2.046854	.8483032	.3535977	5.827677
#1	-.003804	-.002275	12.18985	.1455307	27.50834	-.013835
#2	-.003680	-.003059	12.09427	.1476713	27.68362	-.015483
#3	-.001712	-.002927	11.72465	.1477086	27.67064	-.015101

Elem	Sr4077
Units	ppm
Avg	1.187273
Stddev	.010025
%RSD	.8443666
#1	1.176135
#2	1.195572
#3	1.190112

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3509.321	77606.19	15590.32	2304.213	4715.241
Stddev	.977	1495.34	87.01	45.806	4.951
%RSD	.0278399	1.926837	.5580993	1.987911	.1049981
#1	3508.205	76396.38	15635.01	2262.740	4719.881
#2	3510.020	77144.18	15645.90	2296.523	4715.813
#3	3509.740	79278.02	15490.05	2353.378	4710.029

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1439-02LX5 Acquired: 3/3/2025 23:20:06 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000612	.0003748	-.000140	-.000686	-.000803	-.001152	.0356187
Stddev	.001188	.0009593	.001598	.004343	.001213	.006357	.0011746
%RSD	194.1067	255.9399	1144.398	633.3677	151.0839	551.6903	3.297646
#1	.000532	-.000242	-.001413	-.005691	-.002088	-.008448	.0367987
#2	-.001840	-.000114	.001654	.001546	-.000642	.001795	.0344496
#3	-.000528	.001480	-.000660	.002088	.000322	.003196	.0356078

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000049	.0000152	26.45804	.0022596	.0000725	.0009891	.1868947
Stddev	.000043	.0000300	.57241	.0002889	.0000488	.0003022	.0076644
%RSD	88.42213	197.7995	2.163476	12.78462	67.37516	30.54860	4.100914
#1	-.000097	.0000357	26.68891	.0025921	.0000167	.0006453	.1927224
#2	-.000036	.0000290	25.80625	.0020706	.0001075	.0012126	.1782127
#3	-.000013	-.000019	26.87897	.0021161	.0000933	.0011095	.1897489

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0832992	5.163440	.0041629	-.000561	46.13296	.0019041	.0180638
Stddev	.0016565	.087608	.0002708	.000116	.72352	.0007870	.0006279
%RSD	1.988605	1.696693	6.505236	20.62455	1.568332	41.33236	3.475763
#1	.0838627	5.194828	.0038740	-.000528	46.78527	.0027842	.0183925
#2	.0814344	5.064462	.0044110	-.000465	45.35476	.0012681	.0173399
#3	.0846003	5.231030	.0042036	-.000689	46.25885	.0016600	.0184591

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.801450	.0700055	.0021751	-.001668	-.000456	2.614979	.0332966
Stddev	.068734	.0001298	.0001910	.000558	.000685	.041769	.0008514
%RSD	1.808103	.1854001	8.781738	33.46041	150.1980	1.597311	2.557114
#1	3.817086	.0701515	.0020631	-.001764	-.000781	2.648964	.0336499
#2	3.726245	.0699617	.0020666	-.002173	-.000919	2.568348	.0323254
#3	3.861020	.0699033	.0023957	-.001069	.000331	2.627626	.0339146

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1439-02LX5 Acquired: 3/3/2025 23:20:06 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	6.177850	.0016778	.2732239
Stddev	.052058	.0004873	.0063187
%RSD	.8426630	29.04542	2.312648
#1	6.123629	.0012157	.2755712
#2	6.182485	.0021869	.2660675
#3	6.227436	.0016307	.2780331

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3747.950	81317.26	15343.26	2474.227	5181.744
Stddev	21.003	1159.51	261.96	36.107	35.762
%RSD	.5603876	1.425904	1.707311	1.459308	.6901600
#1	3771.076	80149.03	15209.49	2443.220	5220.171
#2	3742.713	82467.84	15645.10	2513.868	5175.625
#3	3730.061	81334.90	15175.20	2465.593	5149.436

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1439-02MS Acquired: 3/3/2025 23:24:23 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8127514	1.797306	.9362062	1.897243	1.348344	1.838198
Stddev	.0128613	.003765	.0163044	.031717	.022364	.026025
%RSD	1.582438	.2094737	1.741540	1.671754	1.658598	1.415810
#1	.7987528	1.793016	.9189583	1.861592	1.323133	1.838619
#2	.8240451	1.798837	.9513658	1.922330	1.365790	1.811964
#3	.8154562	1.800064	.9382945	1.907807	1.356110	1.864010

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3379017	.1823150	.1915628	110.3462	.3911544	.1950852
Stddev	.0039044	.0012439	.0033757	1.2257	.0100849	.0031676
%RSD	1.155489	.6822843	1.762198	1.110763	2.578237	1.623699
#1	.3401423	.1833366	.1877717	110.9614	.3818718	.1916687
#2	.3333933	.1809298	.1942431	108.9348	.4018850	.1979245
#3	.3401694	.1826786	.1926737	111.1425	.3897065	.1956624

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2949016	3.829657	.5317829	22.96811	.5029020	.0605779
Stddev	.0050067	.096845	.0068151	.29244	.0085502	.0015161
%RSD	1.697763	2.528810	1.281555	1.273248	1.700166	2.502717
#1	.2891699	3.737598	.5334373	23.16085	.4935839	.0591073
#2	.2984219	3.930666	.5242929	22.63162	.5103869	.0621357
#3	.2971130	3.820706	.5376185	23.11187	.5047351	.0604907

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	212.5326	.2885993	.2748497	27.84811	.5026318	.7023084
Stddev	5.4599	.0033636	.0075740	.68003	.0052055	.0110400
%RSD	2.568989	1.165497	2.755676	2.441932	1.035657	1.571967
#1	206.8475	.2917662	.2670488	27.16319	.5062996	.6900400
#2	217.7354	.2850685	.2821743	28.52315	.4966738	.7114424
#3	213.0150	.2889631	.2753261	27.85798	.5049220	.7054426

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1439-02MS Acquired: 3/3/2025 23:24:23 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.149245	.3122321	F 13.12328	6.101077	F 27.51254	.1787459
Stddev	.017156	.0025024	.32329	.093114	.41163	.0014928
%RSD	1.492782	.8014622	2.463512	1.526187	1.496160	.8351418
#1	1.130321	.3131771	12.80348	5.994822	27.04234	.1798572
#2	1.163779	.3093948	13.44996	6.168442	27.80786	.1770492
#3	1.153634	.3141245	13.11640	6.139966	27.68741	.1793314

Elem	Sr4077
Units	ppm
Avg	1.350482
Stddev	.027511
%RSD	2.037104
#1	1.353351
#2	1.321649
#3	1.376445

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3492.147	77922.52	15858.40	2345.941	4669.438
Stddev	43.390	1507.33	240.95	43.433	60.399
%RSD	1.242498	1.934399	1.519408	1.851416	1.293506
#1	3541.440	79406.98	15668.81	2391.867	4736.730
#2	3459.732	76393.31	16129.55	2305.528	4619.921
#3	3475.270	77967.26	15776.83	2340.427	4651.663

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1439-02MSD Acquired: 3/3/2025 23:28:37 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8142249	1.782764	.9282373	1.894358	1.346817	1.875808
Stddev	.0072881	.021004	.0082032	.013193	.006455	.024211
%RSD	.8951022	1.178163	.8837366	.6964243	.4792724	1.290680
#1	.8063765	1.765982	.9193281	1.879195	1.339541	1.861014
#2	.8155187	1.775992	.9299057	1.900669	1.349056	1.903748
#3	.8207795	1.806319	.9354780	1.903209	1.351855	1.862662

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3337335	.1843033	.1904253	111.5143	.3975817	.1943912
Stddev	.0065185	.0026549	.0013070	2.1956	.0105327	.0009638
%RSD	1.953207	1.440518	.6863853	1.968937	2.649201	.4957985
#1	.3286318	.1818087	.1889996	109.6718	.4005868	.1932854
#2	.3410771	.1870937	.1907093	113.9438	.3858730	.1948355
#3	.3314917	.1840074	.1915670	110.9274	.4062853	.1950526

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2925686	3.827506	.5318504	23.37073	.4992557	.0610393
Stddev	.0023637	.059744	.0112378	.50595	.0033140	.0015622
%RSD	.8079119	1.560915	2.112963	2.164886	.6637897	2.559333
#1	.2900361	3.829587	.5222904	22.90247	.4959513	.0618178
#2	.2929535	3.766748	.5442293	23.90741	.4992365	.0592409
#3	.2947163	3.886182	.5290316	23.30230	.5025793	.0620593

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	212.4093	.2894225	.2785886	27.70417	.5099860	.7000223
Stddev	4.7453	.0040239	.0057776	.55644	.0092534	.0043248
%RSD	2.234043	1.390334	2.073898	2.008517	1.814444	.6178156
#1	214.2283	.2865791	.2801525	27.90563	.5002424	.6951095
#2	207.0236	.2940267	.2721900	27.07506	.5186554	.7017024
#3	215.9761	.2876616	.2834234	28.13183	.5110602	.7032550

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1439-02MSD Acquired: 3/3/2025 23:28:37 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.143666	.3142438	F 13.29397	6.036051	F 27.27557	.1801160
Stddev	.008578	.0071305	.23692	.039104	.19367	.0024673
%RSD	.7500725	2.269090	1.782175	.6478397	.7100532	1.369824
#1	1.134628	.3080057	13.36326	5.992326	27.07039	.1784388
#2	1.144674	.3220167	13.03013	6.048153	27.30112	.1829490
#3	1.151695	.3127089	13.48852	6.067673	27.45519	.1789602

Elem	Sr4077
Units	ppm
Avg	1.336983
Stddev	.009137
%RSD	.6834231
#1	1.328073
#2	1.346332
#3	1.336543

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3505.898	76827.74	15554.84	2259.176	4699.113
Stddev	22.944	1608.22	290.07	38.699	30.670
%RSD	.6544391	2.093278	1.864802	1.712972	.6526768
#1	3532.200	76496.57	15823.18	2243.823	4733.254
#2	3495.497	78575.77	15247.08	2303.196	4690.192
#3	3489.996	75410.89	15594.27	2230.509	4673.892

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1439-02A Acquired: 3/3/2025 23:32:52 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.257671	2.791737	1.438563	2.941717	.7872943	2.934072
Stddev	.007357	.019358	.002214	.013105	.0014342	.051992
%RSD	.5849979	.6934121	.1539303	.4454824	.1821676	1.772023
#1	1.249532	2.778352	1.436008	2.927105	.7880483	2.875171
#2	1.263851	2.782926	1.439914	2.945613	.7856403	2.973585
#3	1.259631	2.813934	1.439768	2.952431	.7881941	2.953459

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4244217	.2935210	.2956101	109.6016	.6207566	.3029878
Stddev	.0062079	.0038626	.0015319	1.6276	.0023140	.0009585
%RSD	1.462680	1.315965	.5182113	1.485057	.3727665	.3163386
#1	.4174520	.2890925	.2938454	107.7410	.6181212	.3019873
#2	.4293576	.2952755	.2963883	110.7622	.6224557	.3030783
#3	.4264556	.2961950	.2965967	110.3015	.6216929	.3038978

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4476181	5.282715	.6252590	24.06172	.7602897	.0446362
Stddev	.0018522	.044378	.0078328	.34444	.0034667	.0001484
%RSD	.4137819	.8400573	1.252733	1.431465	.4559690	.3325103
#1	.4456327	5.259467	.6166576	23.66805	.7565158	.0446115
#2	.4479221	5.333887	.6319813	24.30755	.7610210	.0447954
#3	.4492994	5.254792	.6271382	24.20958	.7633325	.0445017

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	207.1935	.4497311	.3890322	32.25705	.6634877	.4163041
Stddev	2.2298	.0064077	.0039690	.19977	.0106504	.0019400
%RSD	1.076202	1.424780	1.020228	.6193218	1.605209	.4659954
#1	207.5627	.4423593	.3848258	32.09839	.6512608	.4142296
#2	209.2157	.4528680	.3927110	32.48140	.6684581	.4166093
#3	204.8022	.4539659	.3895599	32.19136	.6707443	.4180734

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: Q1439-02A Acquired: 3/3/2025 23:32:52 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6694945	.1821523	F 12.31521	9.157906	F 26.49804	.2865991
Stddev	.0015733	.0030276	.09104	.028671	.15162	.0044086
%RSD	.2350008	1.662101	.7392242	.3130714	.5721823	1.538247
#1	.6679183	.1788767	12.22498	9.126676	26.32847	.2820508
#2	.6710649	.1848480	12.40703	9.164007	26.54511	.2908532
#3	.6695004	.1827321	12.31363	9.183035	26.62054	.2868933

Elem	Sr4077
Units	ppm
Avg	1.399364
Stddev	.020655
%RSD	1.476006
#1	1.379987
#2	1.397010
#3	1.421095

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3537.455	77214.35	15254.08	2265.208	4754.603
Stddev	5.814	483.51	231.43	14.472	13.389
%RSD	.1643603	.6261886	1.517162	.6388808	.2815994
#1	3542.123	77731.14	15520.78	2280.528	4769.267
#2	3539.300	76772.99	15106.10	2251.768	4751.512
#3	3530.943	77138.90	15135.37	2263.327	4743.029

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: PB166904BL Acquired: 3/3/2025 23:42:22 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008254	-.000129	-.000062	-.002598	-.000163	.0016758	-.000770
Stddev	.0008153	.001126	.000840	.001433	.000814	.0020373	.001852
%RSD	98.77680	875.9187	1359.432	55.15856	499.3888	121.5713	240.6102
#1	.0003154	-.001181	-.000371	-.000957	-.000871	.0035741	.001294
#2	.0017658	.001059	.000889	-.003236	-.000344	.0019297	-.002287
#3	.0003951	-.000263	-.000704	-.003602	.000726	-.000477	-.001315

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000085	-.000005	.0048726	-.000100	.0001081	.0003949	-.002982
Stddev	.0000080	.000027	.0043188	.000122	.0000932	.0003073	.001750
%RSD	95.19156	506.9632	88.63475	121.6260	86.21529	77.81309	58.68045
#1	.0000177	-.000029	.0000482	-.000078	.0001860	.0005539	-.001155
#2	.0000041	-.000011	.0083786	.000009	.0001334	.0005902	-.004643
#3	.0000035	.000024	.0061911	-.000232	.0000049	.0000407	-.003147

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002043	-.001218	-.000128	-.000278	.1608280	-.000897	-.000671
Stddev	.0002933	.018882	.000405	.000276	.0152638	.001015	.000229
%RSD	143.5514	1549.774	316.5573	99.42852	9.490736	113.1276	34.09520
#1	-.000053	.019984	.000290	-.000574	.1450051	-.000415	-.000933
#2	.000142	-.016219	-.000520	-.000233	.1620158	-.002063	-.000576
#3	.000524	-.007421	-.000154	-.000027	.1754632	-.000213	-.000506

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0808074	.0016549	.0002265	.0000331	-.000454	-.007016	.0015299
Stddev	.0113969	.0001080	.0000959	.0006665	.000237	.002908	.0028583
%RSD	14.10378	6.527431	42.32294	2015.308	52.25888	41.45051	186.8222
#1	.0686476	.0015616	.0002423	.0007880	-.000312	-.007800	-.001770
#2	.0912455	.0016298	.0001238	-.000474	-.000727	-.003796	.003136
#3	.0825292	.0017732	.0003136	-.000215	-.000322	-.009451	.003224

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: PB166904BL Acquired: 3/3/2025 23:42:22 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000167	.0048502	.0000143
Stddev	.001095	.0004266	.0000175
%RSD	654.1228	8.794837	122.4478
#1	.000201	.0043617	-.000001
#2	.000696	.0051493	.000011
#3	-.001399	.0050397	.000033

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3864.830	86565.60	16044.34	2553.461	5655.935
Stddev	7.618	1304.57	267.41	25.086	17.536
%RSD	.1971070	1.507029	1.666715	.9824485	.3100386
#1	3858.216	88044.60	15755.61	2582.392	5641.295
#2	3863.115	86073.77	16093.93	2540.253	5651.139
#3	3873.159	85578.45	16283.49	2537.739	5675.369

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: PB166904BS Acquired: 3/3/2025 23:46:41 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7632387	1.807012	.9028418	1.787927	.7848068	1.860958
Stddev	.0108995	.038190	.0157128	.030206	.0129524	.020135
%RSD	1.428060	2.113453	1.740371	1.689428	1.650391	1.081990
#1	.7509130	1.763741	.8847629	1.753055	.7701721	1.879316
#2	.7716054	1.836011	.9132072	1.805971	.7947951	1.864135
#3	.7671978	1.821285	.9105551	1.804754	.7894530	1.839423

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1840783	.1768667	.1784249	.9329516	.3885760	.1869482
Stddev	.0006424	.0007366	.0029003	.0007715	.0020987	.0036294
%RSD	.3489712	.4164717	1.625512	.0826991	.5400943	1.941406
#1	.1847608	.1777051	.1751010	.9334716	.3878201	.1827669
#2	.1834854	.1763233	.1804411	.9320651	.3869599	.1892850
#3	.1839886	.1765717	.1797326	.9333181	.3909479	.1887926

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2953680	2.897224	.1928286	1.856053	.4645251	.0679633
Stddev	.0047258	.022402	.0016491	.010063	.0088238	.0004070
%RSD	1.599955	.7732066	.8552171	.5421851	1.899535	.5987926
#1	.2899215	2.873781	.1947318	1.865657	.4544497	.0680158
#2	.2983820	2.899476	.1919310	1.845586	.4708763	.0675326
#3	.2978004	2.918414	.1918229	1.856915	.4682493	.0683414

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.794390	.2871990	.1860805	9.105745	.2484997	.4213218
Stddev	.005699	.0036956	.0005138	.007033	.0009725	.0072969
%RSD	.2039378	1.286768	.2761064	.0772379	.3913632	1.731911
#1	2.788959	.2911258	.1861199	9.097629	.2493361	.4128993
#2	2.793886	.2837890	.1855481	9.110048	.2474325	.4257344
#3	2.800323	.2866824	.1865734	9.109559	.2487305	.4253317

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: PB166904BS Acquired: 3/3/2025 23:46:41 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6603122	.1929108	.7857571	4.974770	F -.004420	.1808311
Stddev	.0114042	.0011108	.0063307	.099131	.000466	.0018998
%RSD	1.727089	.5758094	.8056765	1.992665	10.54034	1.050582
#1	.6471476	.1941906	.7838751	4.861202	-.004958	.1815893
#2	.6666218	.1923456	.7805809	5.043942	-.004142	.1822347
#3	.6671673	.1921963	.7928154	5.019168	-.004160	.1786693

Elem	Sr4077
Units	ppm
Avg	.1898651
Stddev	.0014004
%RSD	.7375722
#1	.1912213
#2	.1899495
#3	.1884244

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3784.531	85650.58	16107.91	2501.865	5487.865
Stddev	50.959	385.37	64.88	5.475	75.456
%RSD	1.346513	.4499317	.4027748	.2188227	1.374970
#1	3843.351	85846.29	16033.53	2507.503	5574.757
#2	3756.532	85898.82	16152.86	2501.521	5438.845
#3	3753.710	85206.63	16137.34	2496.570	5449.993

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: PB166926BL Acquired: 3/3/2025 23:55:38 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016012	-.000434	-.000513	.0000063	-.000782	.0018998	-.001841
Stddev	.0012158	.000815	.001025	.0013696	.000485	.0024331	.000359
%RSD	75.92798	187.5455	199.9964	21908.86	62.02539	128.0714	19.47994
#1	.0006166	-.001341	-.000121	.0015230	-.000234	.0028320	-.001556
#2	.0029601	-.000198	-.001676	-.001140	-.001158	.0037290	-.002244
#3	.0012269	.000236	.000259	-.000364	-.000954	-.000862	-.001724

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000443	-.000016	.0025975	.0001413	.0001700	-.000292	-.000049
Stddev	.0000240	.000079	.0079166	.0002333	.0003069	.000061	.002287
%RSD	54.08905	506.5208	304.7791	165.1729	180.5164	21.04965	4699.271
#1	.0000546	.000055	-.005278	.0004089	.0001552	-.000254	.001726
#2	.0000169	-.000100	.010554	.0000344	.0004841	-.000259	.000757
#3	.0000614	-.000002	.002517	-.000019	-.000129	-.000362	-.002629

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003246	.0104085	-.000070	-.000214	.0697940	-.000623	-.000567
Stddev	.0000786	.0022583	.000049	.000431	.0172908	.000478	.000230
%RSD	24.20825	21.69672	69.21513	201.7157	24.77411	76.73490	40.53315
#1	.0002465	.0079620	-.000063	-.000676	.0573057	-.000748	-.000702
#2	.0004037	.0124134	-.000026	-.000141	.0625472	-.000095	-.000302
#3	.0003237	.0108501	-.000122	.000176	.0895291	-.001026	-.000697

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0363904	.0013831	.0001041	-.000180	-.000031	-.002068	-.000243
Stddev	.0396127	.0005923	.0001083	.000859	.000102	.001784	.000602
%RSD	108.8548	42.82314	104.0166	476.2055	329.4004	86.24554	247.9685
#1	.0011174	.0015203	.0001406	-.001167	-.000144	-.000055	-.000654
#2	.0792465	.0007342	.0001895	.000398	.000054	-.002698	-.000524
#3	.0288073	.0018947	-.000018	.000228	-.000003	-.003451	.000449

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: PB166926BL Acquired: 3/3/2025 23:55:38 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.003856	.0002766	-.000008
Stddev	.000395	.0010087	.000036
%RSD	10.23467	364.6606	464.5190
#1	-.004305	.0011415	.000017
#2	-.003564	-.000831	-.000049
#3	-.003699	.000520	.000009

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3888.769	86244.69	15737.15	2594.246	5648.149
Stddev	9.224	383.85	96.47	8.777	15.227
%RSD	.2371926	.4450692	.6130198	.3383410	.2696000
#1	3888.589	86203.07	15760.67	2593.023	5655.062
#2	3898.081	86647.65	15631.10	2603.570	5658.694
#3	3879.636	85883.35	15819.69	2586.144	5630.692

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: PB166926BS Acquired: 3/3/2025 23:59:57 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8203644	1.963934	.9793112	1.912875	.8268968	2.004253
Stddev	.0054632	.017765	.0050744	.008724	.0046025	.043169
%RSD	.6659456	.9045401	.5181594	.4560760	.5566015	2.153847
#1	.8227463	1.983000	.9813029	1.920221	.8289328	2.050972
#2	.8141147	1.947848	.9735431	1.903232	.8216274	1.995944
#3	.8242323	1.960954	.9830876	1.915171	.8301302	1.965843

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2009016	.1960308	.1944525	1.044728	.4314254	.2036550
Stddev	.0050688	.0036310	.0009384	.019427	.0036415	.0009142
%RSD	2.523040	1.852282	.4826072	1.859561	.8440648	.4488748
#1	.2058001	.1996938	.1953507	1.065813	.4336641	.2044759
#2	.2012265	.1959661	.1934785	1.040819	.4333885	.2026699
#3	.1956781	.1924326	.1945284	1.027553	.4272236	.2038193

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3199994	3.166559	.2244806	2.007469	.5066289	.0750112
Stddev	.0009808	.045934	.0051096	.040612	.0027658	.0008424
%RSD	.3064969	1.450599	2.276191	2.023051	.5459295	1.123027
#1	.3210483	3.190850	.2301470	2.051161	.5095353	.0752635
#2	.3191051	3.195248	.2230710	2.000374	.5040292	.0756986
#3	.3198448	3.113580	.2202237	1.970872	.5063222	.0740715

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.143962	.3103274	.2086732	9.932392	.2739323	.4498041
Stddev	.034358	.0066771	.0016796	.082415	.0042222	.0010022
%RSD	1.092830	2.151616	.8049046	.8297549	1.541342	.2228172
#1	3.178538	.3179728	.2095684	10.01510	.2773832	.4504047
#2	3.143523	.3073668	.2097155	9.93180	.2751895	.4486470
#3	3.109826	.3056424	.2067356	9.85027	.2692243	.4503604

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: PB166926BS Acquired: 3/3/2025 23:59:57 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7026614	.2058147	.8335462	5.502716	F .0352700	.1970119
Stddev	.0033368	.0041028	.0016560	.038103	.0002117	.0049163
%RSD	.4748776	1.993457	.1986689	.6924336	.6001237	2.495415
#1	.7054793	.2103930	.8318533	5.544045	.0355012	.2026656
#2	.6989768	.2045806	.8336228	5.468983	.0350858	.1946284
#3	.7035281	.2024706	.8351626	5.495121	.0352230	.1937418

Elem	Sr4077
Units	ppm
Avg	.2065900
Stddev	.0048046
%RSD	2.325677
#1	.2118594
#2	.2054584
#3	.2024522

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3828.391	85691.23	16076.35	2545.665	5544.036
Stddev	14.368	574.49	286.28	24.866	26.196
%RSD	.3753109	.6704132	1.780755	.9768128	.4725159
#1	3817.207	85409.47	15771.95	2529.800	5521.634
#2	3844.596	85312.03	16116.92	2532.872	5572.840
#3	3823.369	86352.20	16340.18	2574.323	5537.632

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCV05 Acquired: 3/4/2025 0:03:56 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	4.865930	4.864470	4.854889	4.886352	4.902044	9.554145	9.749561
Stddev	.024790	.025281	.022473	.023769	.017747	.144635	.126887
%RSD	.5094675	.5197098	.4629033	.4864350	.3620426	1.513849	1.301461
#1	4.845281	4.848179	4.842685	4.863426	4.884594	9.721129	9.894982
#2	4.893424	4.893594	4.880825	4.910882	4.920075	9.468067	9.692335
#3	4.859085	4.851638	4.841159	4.884746	4.901462	9.473239	9.661366

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2409681	2.431045	23.89378	.9731532	2.432327	1.226607	4.870200
Stddev	.0040800	.009811	.33295	.0337485	.010555	.004623	.158261
%RSD	1.693176	.4035830	1.393451	3.467952	.4339407	.3768746	3.249582
#1	.2455647	2.426578	24.27824	1.007454	2.426270	1.223370	5.033954
#2	.2395642	2.442295	23.70093	.972021	2.444515	1.231902	4.858572
#3	.2377754	2.424261	23.70218	.939985	2.426197	1.224551	4.718073

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.404122	23.95028	2.423035	1.211689	24.24042	2.427954	2.415967
Stddev	.037250	.33873	.009166	.041378	.75235	.034900	.084774
%RSD	1.549435	1.414287	.3782723	3.414867	3.103691	1.437419	3.508910
#1	2.447094	24.33976	2.416147	1.252795	25.00720	2.468080	2.505312
#2	2.381000	23.78660	2.433438	1.212226	24.21069	2.411120	2.405929
#3	2.384273	23.72447	2.419520	1.170045	23.50338	2.404662	2.336658

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.08608	4.764753	4.918537	4.867065	4.815763	4.817959	4.818434
Stddev	.65982	.079911	.019517	.023174	.069901	.134004	.031415
%RSD	2.739411	1.677135	.3968142	.4761401	1.451503	2.781347	.6519738
#1	24.76953	4.855151	4.904833	4.854840	4.896467	4.953680	4.801816
#2	24.03595	4.735584	4.940883	4.893792	4.776573	4.814456	4.854667
#3	23.45276	4.703524	4.909893	4.852564	4.774250	4.685741	4.798818

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCV05 Acquired: 3/4/2025 0:03:56 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.813334	4.713199	4.911078
Stddev	.037052	.070352	.030261
%RSD	.7697765	1.492653	.6161815
#1	4.782514	4.794205	4.945465
#2	4.854443	4.667415	4.888512
#3	4.803045	4.677977	4.899256

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3715.398	81540.71	15462.67	2440.909	5004.772
Stddev	7.930	2320.06	179.90	72.241	10.525
%RSD	.2134467	2.845281	1.163434	2.959585	.2102898
#1	3723.495	79245.69	15255.42	2363.907	5012.885
#2	3707.646	81491.43	15554.12	2451.629	4992.880
#3	3715.053	83885.03	15578.47	2507.191	5008.552

Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCB05 Acquired: 3/4/2025 0:08:08 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	.0005307	.0010761	-.000766	.0008298	-.000689	.0004672	-.000247
Stddev	.0009459	.0000696	.000555	.0014935	.000853	.0021218	.000959
%RSD	178.2179	6.472664	72.40661	179.9868	123.6647	454.1329	388.3696
#1	-.000041	.0011282	-.000736	.0021331	-.001193	-.000620	-.000571
#2	.001623	.0009970	-.001335	.0011561	-.001171	-.000891	-.001002
#3	.000010	.0011031	-.000227	-.000800	.000295	.002912	.000832

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000020	.0000547	.0034637	-.000078	-.000036	.0003640	-.003125
Stddev	.000025	.0000541	.0029012	.000337	.000162	.0001223	.001195
%RSD	127.6739	98.87805	83.76066	430.3924	445.1129	33.59675	38.23082
#1	-.000048	.0000467	.0062736	-.000101	-.000194	.0004957	-.003653
#2	-.000010	.0000050	.0036385	-.000403	.000130	.0003423	-.003964
#3	-.000000	.0001123	.0004790	.000270	-.000045	.0002540	-.001757

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001447	.0000485	-.000322	-.000182	.0647490	-.001209	-.000594
Stddev	.0000854	.0026363	.000103	.000197	.0070136	.000398	.000155
%RSD	59.02282	5432.367	32.00629	108.6387	10.83191	32.96647	26.02307
#1	.0002060	-.002578	-.000212	.000035	.0573667	-.000781	-.000748
#2	.0001810	.002694	-.000338	-.000229	.0655566	-.001569	-.000597
#3	.0000472	.000030	-.000417	-.000351	.0713239	-.001276	-.000438

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0885848	.0056408	.0003385	.0002490	.0007878	.0007222	.0000875
Stddev	.0038407	.0003551	.0000745	.0006118	.0003018	.0067789	.0002087
%RSD	4.335571	6.294779	22.01864	245.7530	38.30241	938.6960	238.5786
#1	.0848276	.0059598	.0003860	.0000028	.0008138	.0031226	.0003182
#2	.0925037	.0057044	.0003767	-.000201	.0004739	-.006930	.0000325
#3	.0884230	.0052582	.0002526	.000945	.0010758	.005974	-.000088

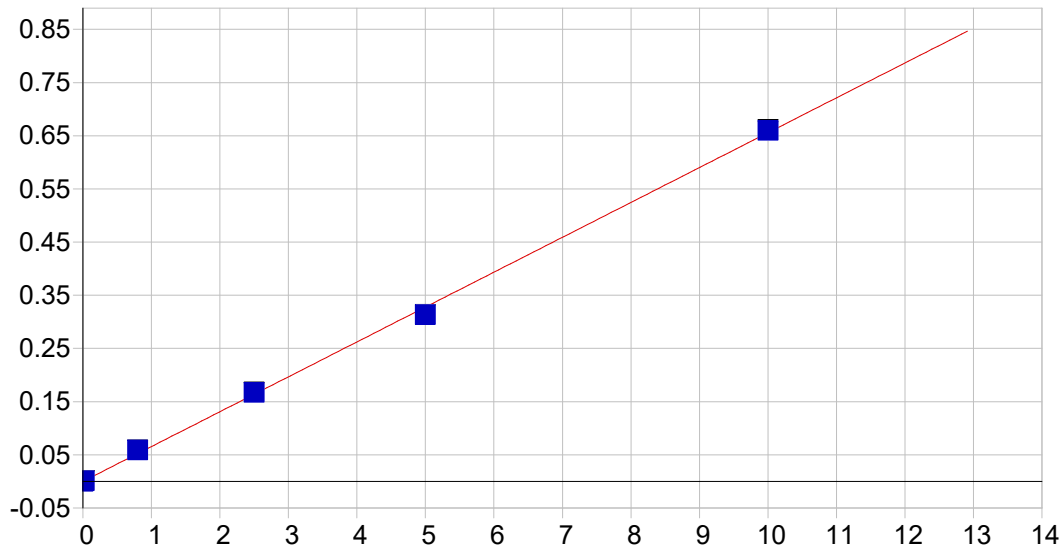
Reviewed By:Mohan
On:3/5/2025 4:17:58 PM
Inst Id :P4
LB :LB134881

Sample Name: CCB05 Acquired: 3/4/2025 0:08:08 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000078	-.002363	.0003186
Stddev	.002023	.000465	.0004436
%RSD	2579.866	19.68194	139.2186
#1	-.001480	-.002132	.0008305
#2	.002241	-.002059	.0000478
#3	-.000996	-.002899	.0000775

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3917.446	86622.49	15880.92	2554.144	5733.333
Stddev	16.098	1052.49	61.62	30.477	25.724
%RSD	.4109297	1.215031	.3880429	1.193246	.4486678
#1	3910.492	87349.03	15951.43	2576.311	5723.243
#2	3935.852	85415.51	15837.37	2519.389	5762.573
#3	3905.994	87102.92	15853.97	2566.732	5714.185

Reviewed By:
On:
Inst Id :P4
LB :LB134904



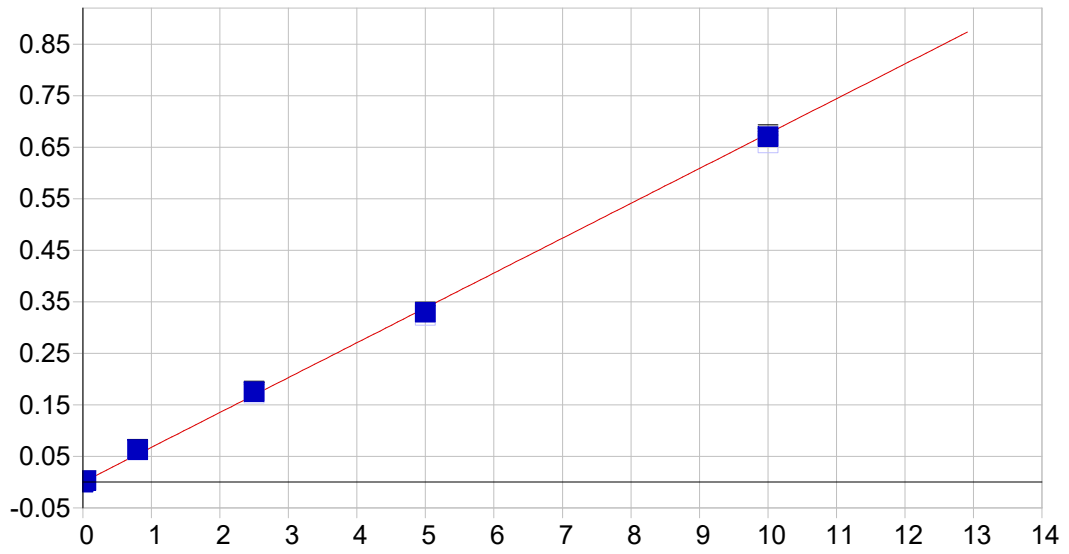
As 189.042 {479}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000104	Re-Slope:	1.000000
A1 (Gain):	0.065586	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999386	Status:	OK.
Std Error of Est:	0.000054		
Predicted MDL:	0.002427		
Predicted MQL:	0.008088		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00010	.000	1
S1	.02000	.02005	.000	.254	.00120	.000	1
S3	2.5000	2.5528	.053	2.11	.16714	.001	1
S4	5.0000	4.7848	-.215	-4.30	.31336	.001	1
S5	10.000	10.066	.066	.658	.65936	.002	1
S2	.80000	.89663	.097	12.1	.05864	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



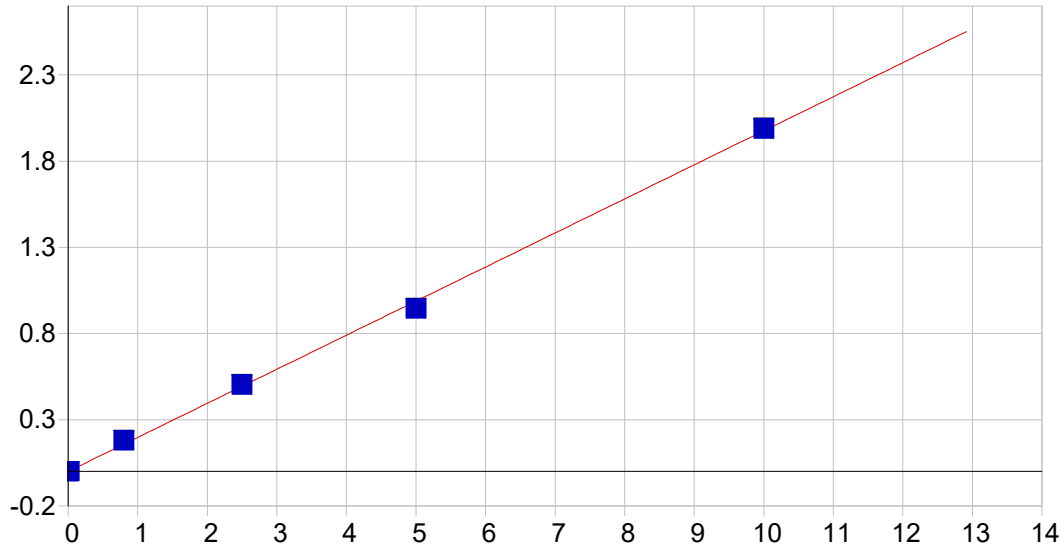
Tl 190.856 {477}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000038	Re-Slope:	1.000000
A1 (Gain):	0.067638	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999205	Status:	OK.
Std Error of Est:	0.000088		
Predicted MDL:	0.001693		
Predicted MQL:	0.005643		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00004	.000	1
S1	.04000	.03984	-.000	-.392	.00248	.000	1
S3	2.5000	2.5898	.090	3.59	.17201	.002	1
S4	5.0000	4.8711	-.129	-2.58	.32320	.000	1
S5	10.000	9.9104	-.090	-.896	.65782	.004	1
S2	.80000	.92887	.129	16.1	.06179	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



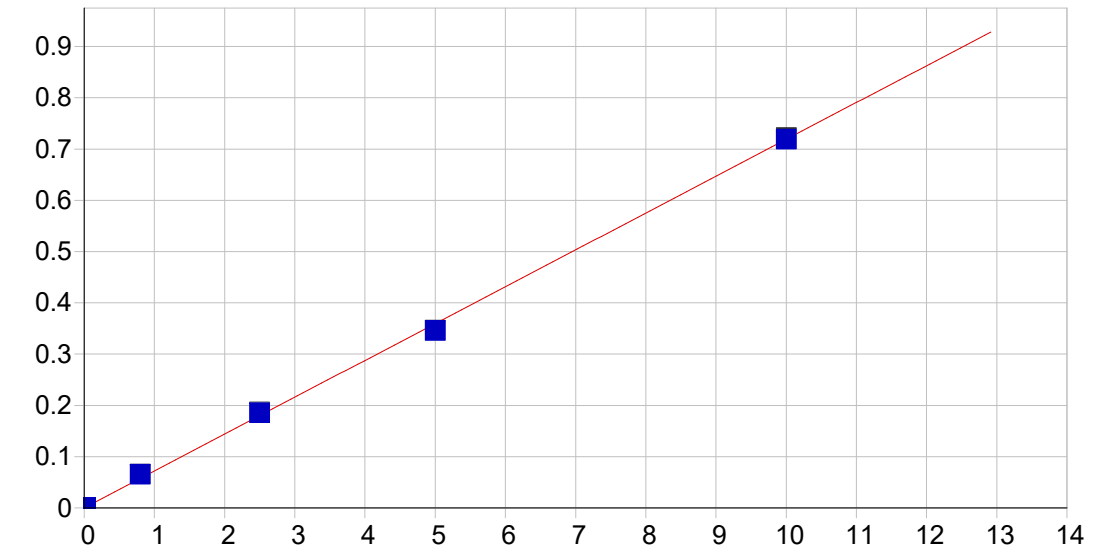
Pb 220.353 {453}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000091	Re-Slope:	1.000000
A1 (Gain):	0.197641	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999301	Status:	OK.
Std Error of Est:	0.000134		
Predicted MDL:	0.001423		
Predicted MQL:	0.004743		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00009	.000	1
S1	.01200	.01114	-.001	-7.16	.00206	.000	1
S3	2.5000	2.5450	.045	1.80	.50236	.002	1
S4	5.0000	4.7845	-.215	-4.31	.94444	.001	1
S5	10.000	10.062	.062	.616	1.9863	.005	1
S2	.80000	.90970	.110	13.7	.17953	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



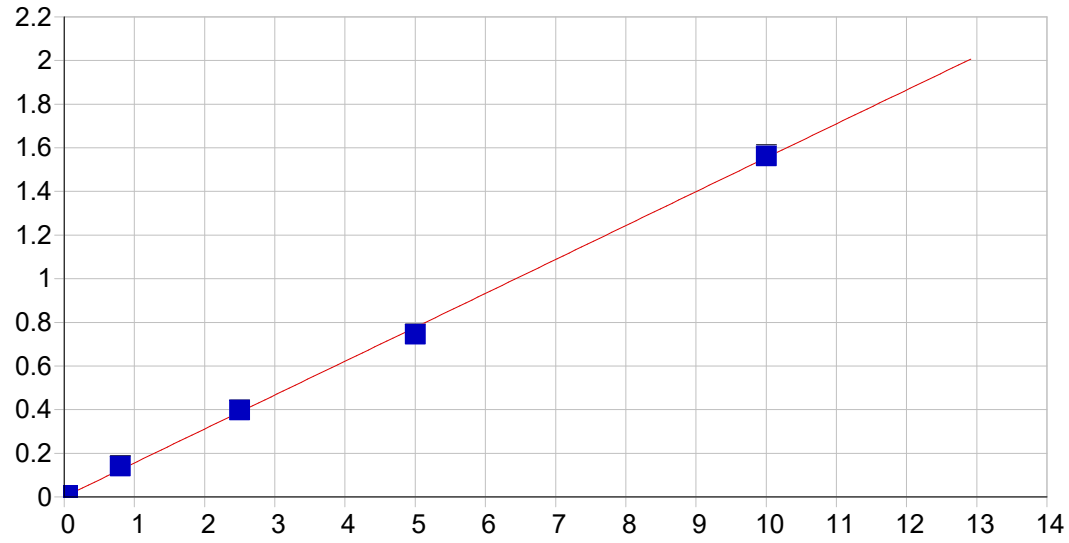
Se 196.090 {472}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000320	Re-Slope:	1.000000
A1 (Gain):	0.071852	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999363	Status:	OK.
Std Error of Est:	0.000060		
Predicted MDL:	0.002727		
Predicted MQL:	0.009091		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00032	.000	1
S1	.02000	.02067	.001	3.37	.00181	.000	1
S3	2.5000	2.5758	.076	3.03	.18533	.001	1
S4	5.0000	4.8120	-.188	-3.76	.34594	.000	1
S5	10.000	10.006	.006	.060	.71902	.002	1
S2	.80000	.90561	.106	13.2	.06537	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



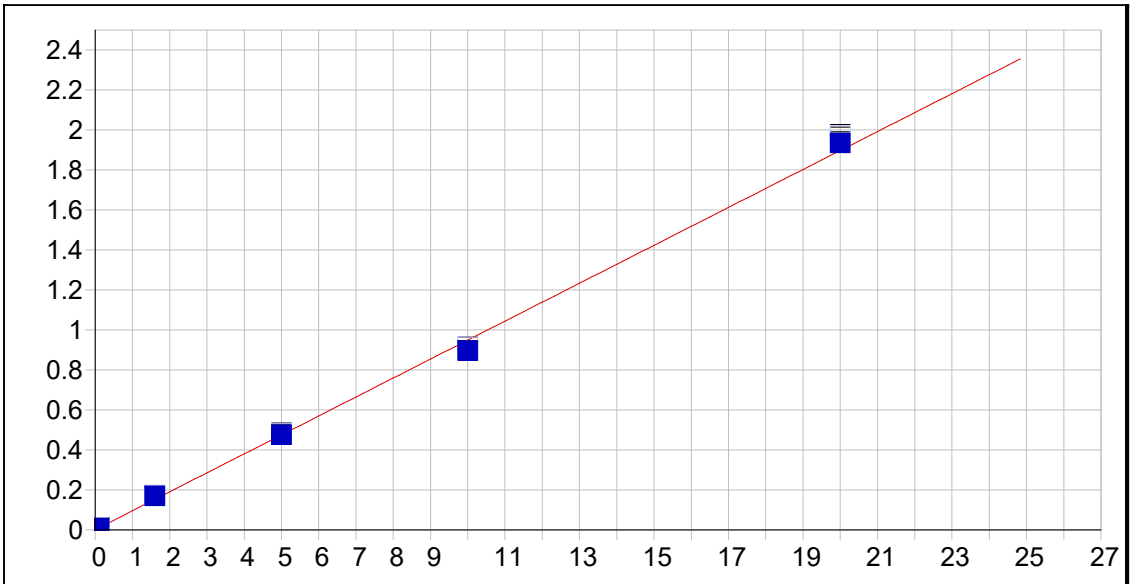
Sb 206.833 {463}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000395	Re-Slope:	1.000000
A1 (Gain):	0.155389	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999341	Status:	OK.
Std Error of Est:	0.000210		
Predicted MDL:	0.001546		
Predicted MQL:	0.005154		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00039	.000	1
S1	.05000	.04891	-.001	-2.17	.00801	.000	1
S3	2.5000	2.5548	.055	2.19	.39844	.001	1
S4	5.0000	4.7881	-.212	-4.24	.74652	.000	1
S5	10.000	10.053	.053	.529	1.5667	.003	1
S2	.80000	.90532	.105	13.2	.14141	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



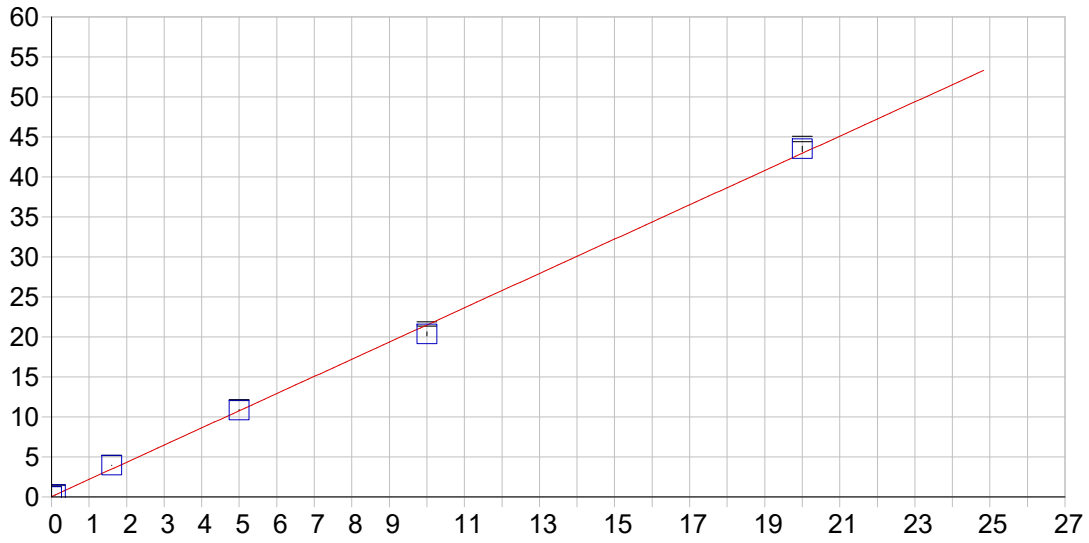
Al 396.152 { 85}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000979	Re-Slope:	1.000000
A1 (Gain):	0.094830	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999217	Status:	OK.
Std Error of Est:	0.000284		
Predicted MDL:	0.005683		
Predicted MQL:	0.018944		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00098	.001	1
S1	.10000	.09513	-.005	-4.87	.01074	.000	1
S3	5.0000	4.9964	-.004	-.072	.48399	.001	1
S4	10.000	9.4360	-.564	-5.64	.91420	.000	1
S5	20.000	20.394	.394	1.97	1.9717	.006	1
S2	1.6000	1.7790	.179	11.2	.17263	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



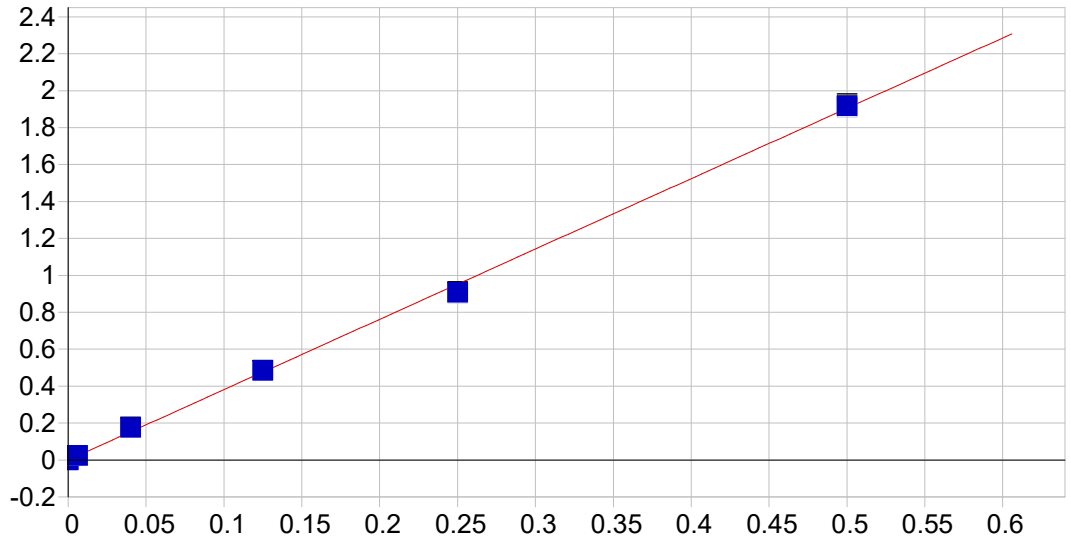
Ba 493.409 { 68}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.044720	Re-Slope:	1.000000
A1 (Gain):	2.145105	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999174	Status:	OK.
Std Error of Est:	0.006468		
Predicted MDL:	0.000826		
Predicted MQL:	0.002755		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.04470	.000	1
S1	.10000	.10080	.001	.802	.26095	.002	1
S3	5.0000	5.0410	.041	.819	10.858	.071	1
S4	10.000	9.4778	-.522	-5.22	20.376	.252	1
S5	20.000	20.263	.263	1.31	43.511	.339	1
S2	1.6000	1.8176	.218	13.6	3.9438	.008	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



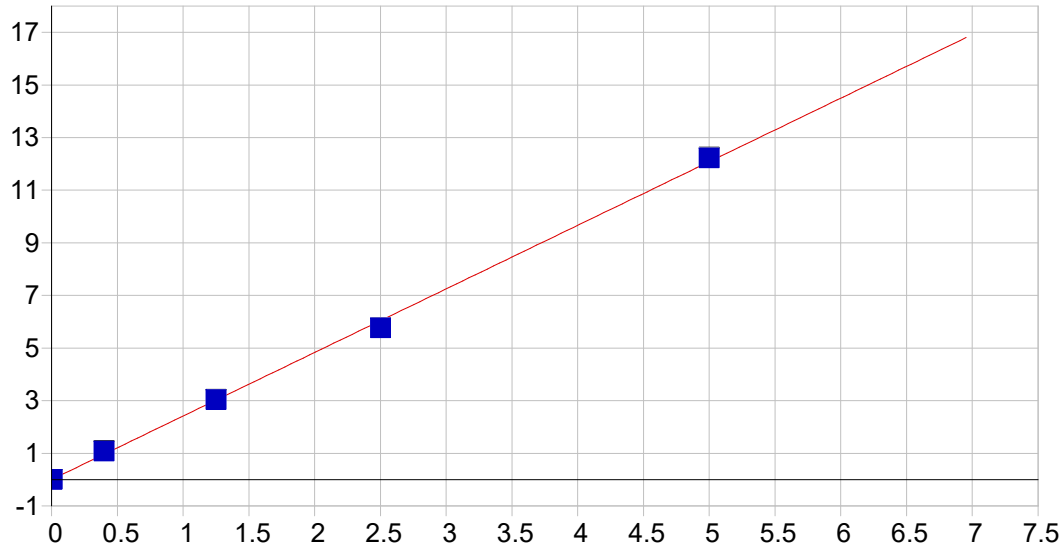
Be 234.861 {144}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000125	Re-Slope:	1.000000
A1 (Gain):	3.809637	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999134	Status:	OK.
Std Error of Est:	0.000455		
Predicted MDL:	0.000052		
Predicted MQL:	0.000175		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00013	.000	1
S1	.00600	.00613	.000	2.10	.02304	.000	1
S3	.12500	.12727	.002	1.81	.48258	.002	1
S4	.25000	.23807	-.012	-4.77	.90255	.005	1
S5	.50000	.50339	.003	.677	1.9091	.013	1
S2	.04000	.04615	.006	15.4	.17502	.002	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



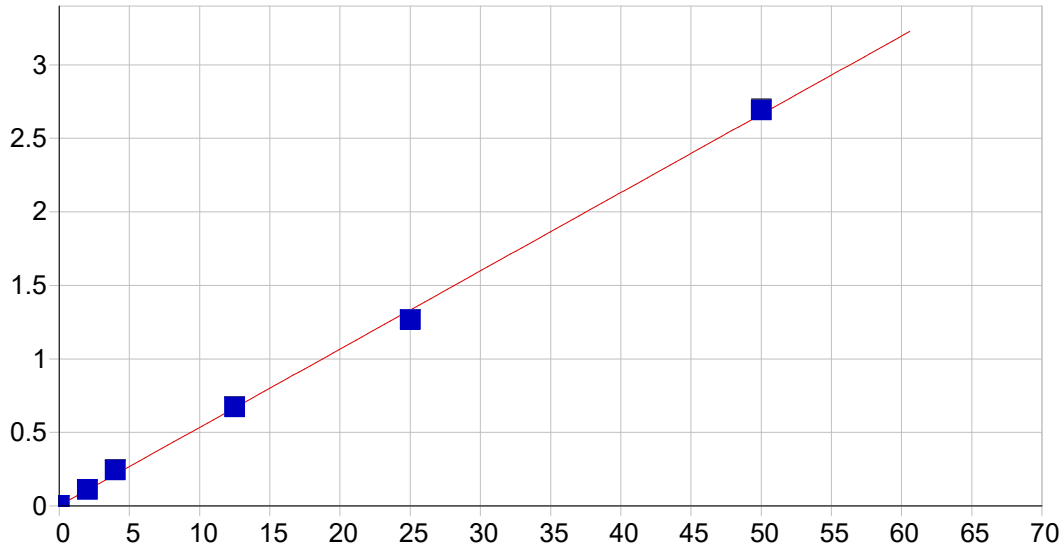
Cd 226.502 {449}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000160	Re-Slope:	1.000000
A1 (Gain):	2.416562	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999357	Status:	OK.
Std Error of Est:	0.000788		
Predicted MDL:	0.000080		
Predicted MQL:	0.000268		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00016	.000	1
S1	.00600	.00597	-.000	-.529	.01434	.000	1
S3	1.2500	1.2576	.008	.608	3.0416	.008	1
S4	2.5000	2.3861	-.114	-4.56	5.7712	.009	1
S5	5.0000	5.0578	.058	1.16	12.233	.027	1
S2	.40000	.44861	.049	12.2	1.0848	.002	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



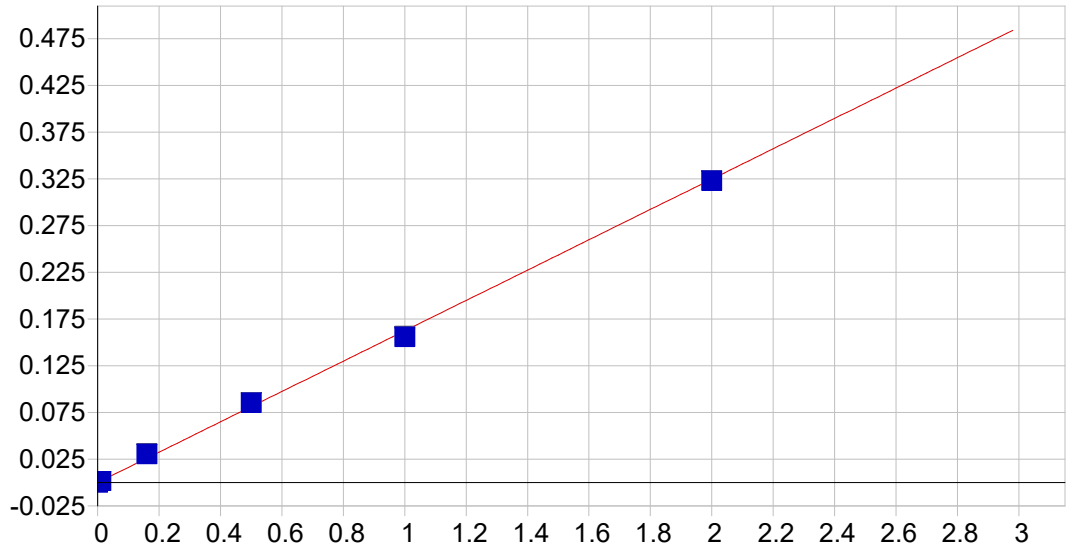
Ca 373.690 { 90}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001450	Re-Slope:	1.000000
A1 (Gain):	0.053246	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999195	Status:	OK.
Std Error of Est:	0.001131		
Predicted MDL:	0.008258		
Predicted MQL:	0.027528		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00027	-.000	.000	.00144	.000	1
S2	4.0000	4.5689	.569	14.2	.24473	.002	1
S3	12.500	12.611	.111	.891	.67296	.002	1
S4	25.000	23.752	-1.25	-4.99	1.2662	.002	1
S5	50.000	50.524	.524	1.05	2.6916	.008	1
S1	2.0000	2.0435	.044	2.18	.11026	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



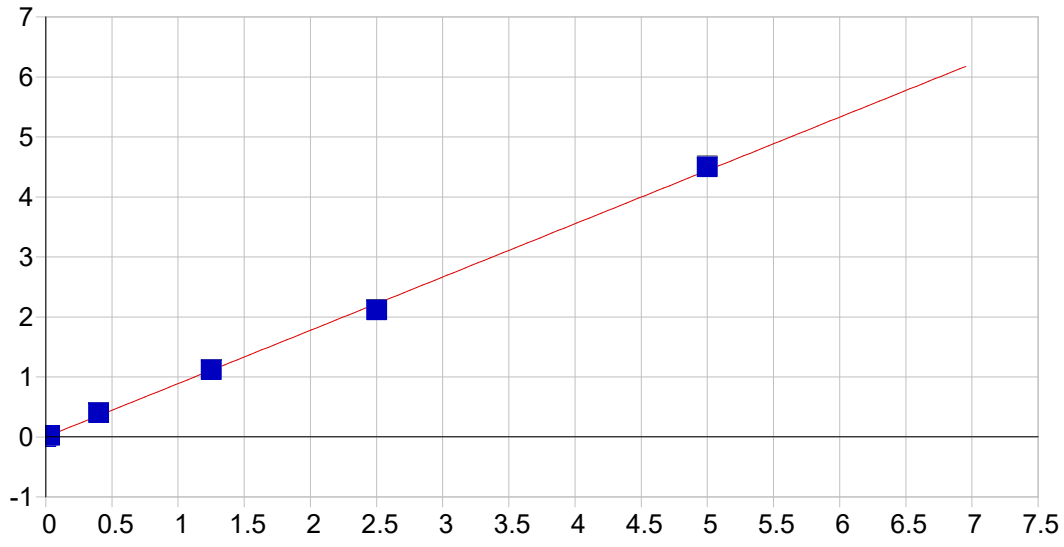
Cr 267.716 {126}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000024	Re-Slope:	1.000000
A1 (Gain):	0.162403	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998945	Status:	OK.
Std Error of Est:	0.000055		
Predicted MDL:	0.000396		
Predicted MQL:	0.001321		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00002	.000	1
S1	.01000	.01010	.000	.954	.00166	.000	1
S3	.50000	.52582	.026	5.16	.08544	.000	1
S4	1.0000	.95874	-.041	-4.13	.15578	.001	1
S5	2.0000	1.9881	-.012	-.597	.32299	.000	1
S2	.16000	.18729	.027	17.1	.03045	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



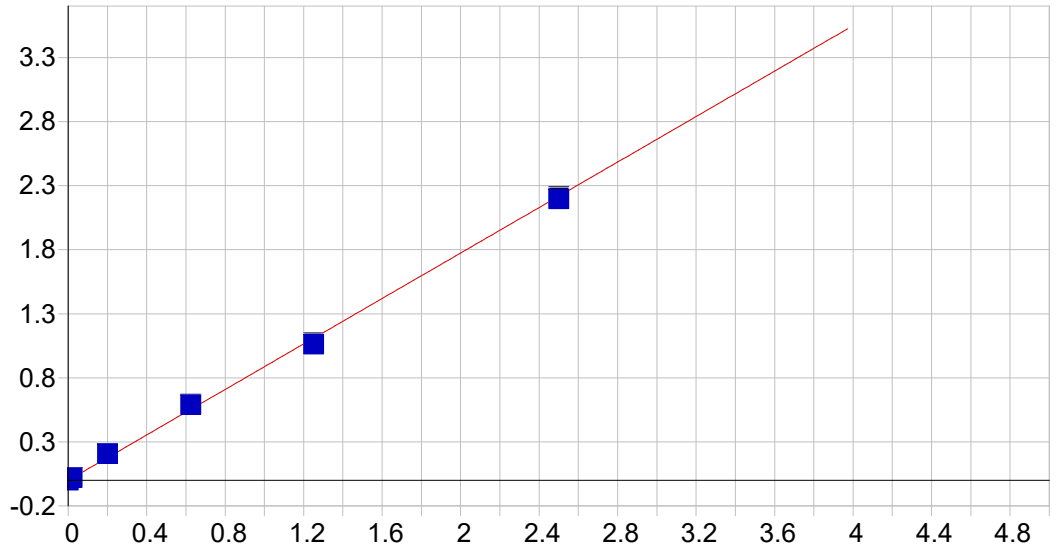
Co 228.616 {448}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.888193	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999272	Status:	OK.
Std Error of Est:	0.000690		
Predicted MDL:	0.000232		
Predicted MQL:	0.000774		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00001	.000	1
S1	.03000	.02968	-.000	-1.07	.02626	.000	1
S3	1.2500	1.2576	.008	.607	1.1189	.003	1
S4	2.5000	2.3779	-.122	-4.88	2.1158	.003	1
S5	5.0000	5.0634	.063	1.27	4.5048	.010	1
S2	.40000	.45140	.051	12.9	.40154	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



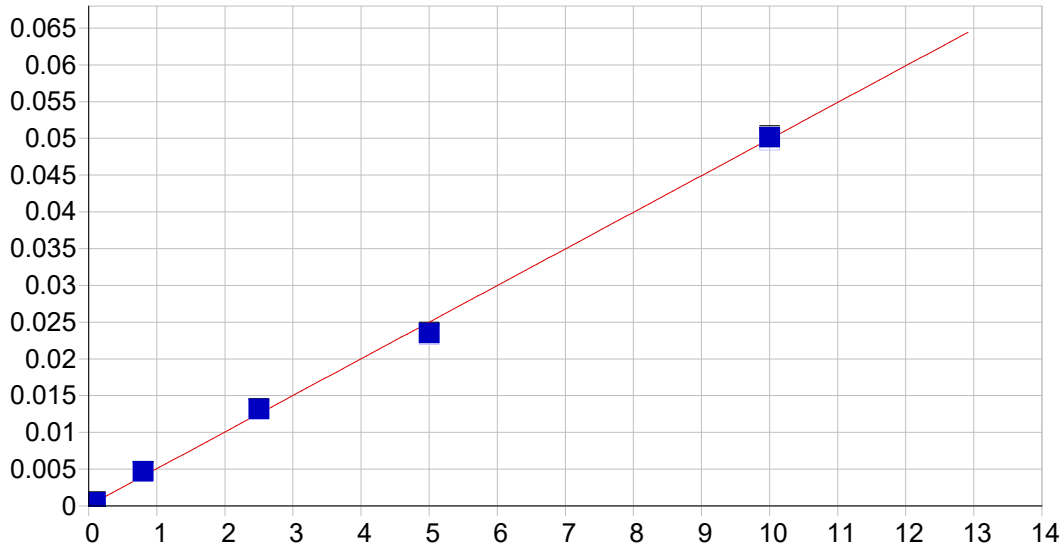
Cu 224.700 {450}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000772	Re-Slope:	1.000000
A1 (Gain):	0.887624	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998813	Status:	OK.
Std Error of Est:	0.000512		
Predicted MDL:	0.000389		
Predicted MQL:	0.001296		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00078	.000	1
S1	.02000	.02248	.002	12.4	.01936	.000	1
S3	.62500	.66526	.040	6.44	.59367	.002	1
S4	1.2500	1.1982	-.052	-4.15	1.0706	.002	1
S5	2.5000	2.4751	-.025	-.997	2.2119	.005	1
S2	.20000	.23400	.034	17.0	.20819	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



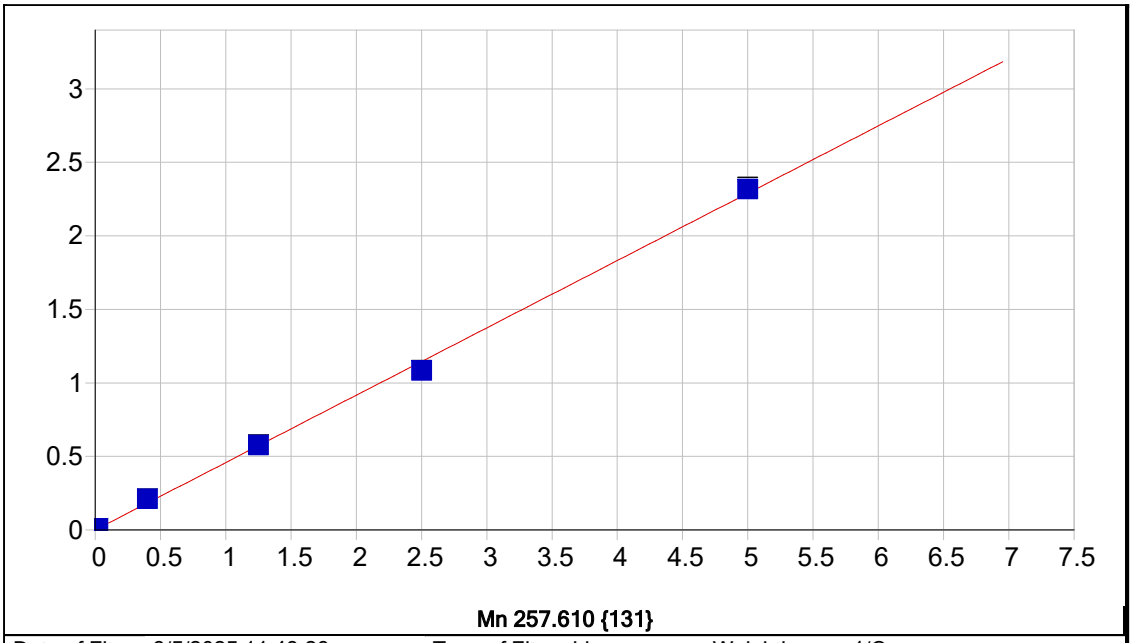
Fe 240.488 {140}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000075	Re-Slope:	1.000000
A1 (Gain):	0.004983	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998772	Status:	OK.
Std Error of Est:	0.000013		
Predicted MDL:	0.004477		
Predicted MQL:	0.014923		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00008	.000	1
S1	.10000	.09352	-.006	-6.48	.00054	.000	1
S3	2.5000	2.6289	.129	5.15	.01307	.000	1
S4	5.0000	4.7044	-.296	-5.91	.02331	.000	1
S5	10.000	10.048	.048	.475	.04972	.000	1
S2	.80000	.92563	.126	15.7	.00465	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



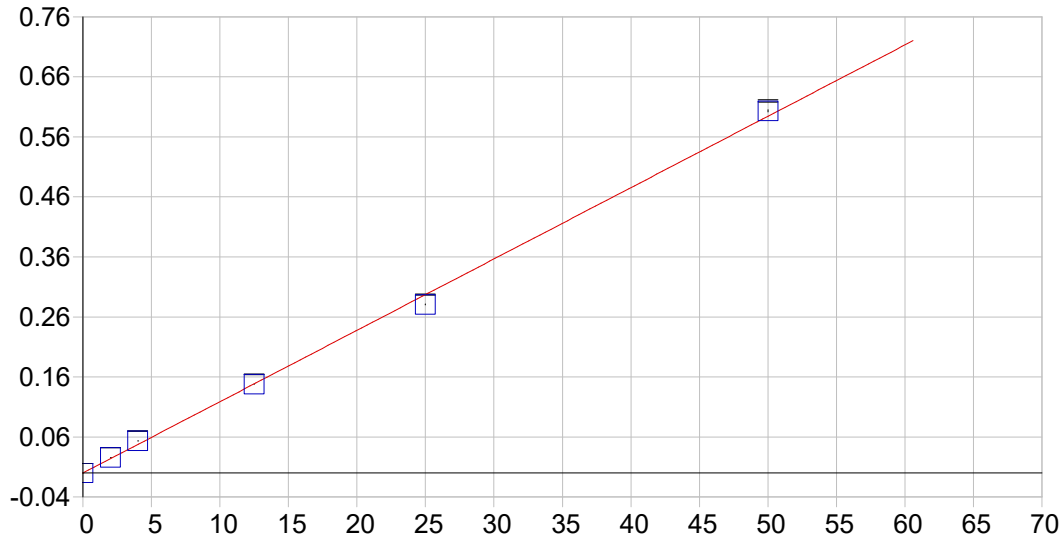
Mn 257.610 {131}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000041	Re-Slope:	1.000000
A1 (Gain):	0.458030	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999069	Status:	OK.
Std Error of Est:	0.000328		
Predicted MDL:	0.000359		
Predicted MQL:	0.001197		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00004	.000	1
S1	.02000	.02080	.001	4.00	.00957	.000	1
S3	1.2500	1.2607	.011	.860	.57762	.003	1
S4	2.5000	2.3669	-.133	-5.32	1.0844	.001	1
S5	5.0000	5.0611	.061	1.22	2.3186	.012	1
S2	.40000	.46048	.060	15.1	.21099	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



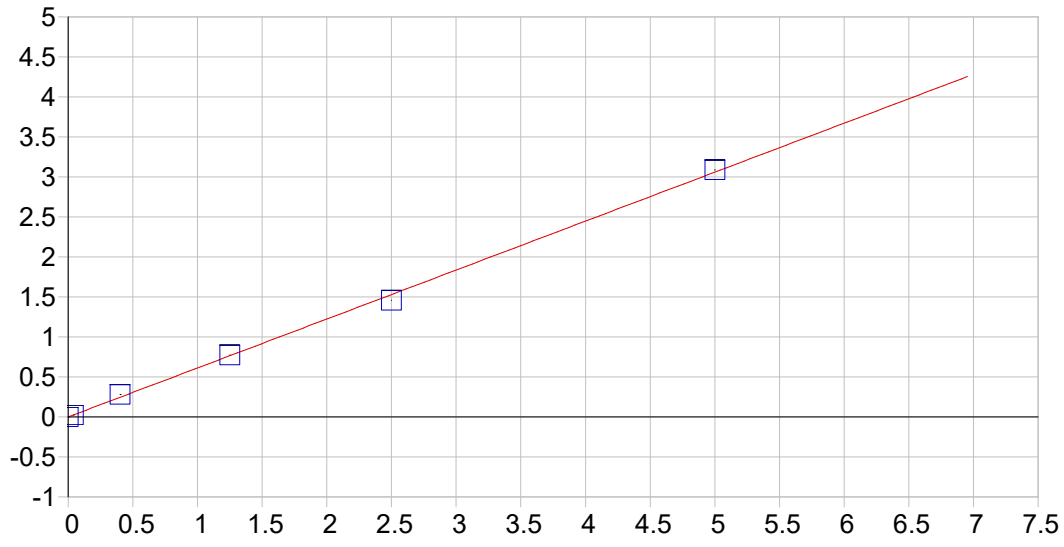
Mg 279.079 {121}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000232	Re-Slope:	1.000000
A1 (Gain):	0.011892	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999116	Status:	OK.
Std Error of Est:	0.000265		
Predicted MDL:	0.015374		
Predicted MQL:	0.051246		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00033	-.000	.000	-.00024	.000	1
S2	4.0000	4.5096	.510	12.7	.05340	.000	1
S3	12.500	12.443	-.057	-.457	.14774	.001	1
S4	25.000	23.624	-1.38	-5.50	.28072	.001	1
S5	50.000	50.762	.762	1.52	.60345	.002	1
S1	2.0000	2.1611	.161	8.05	.02547	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



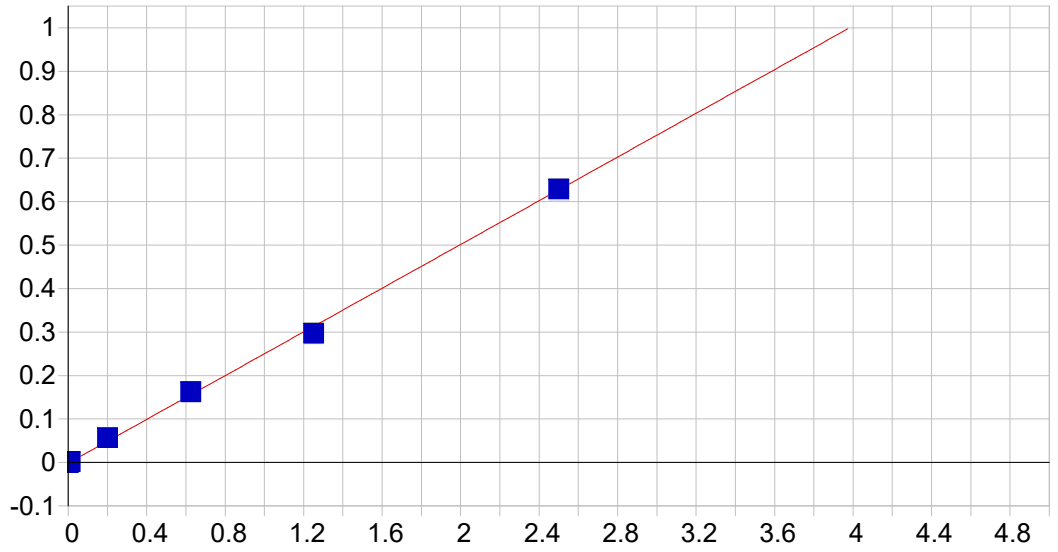
Ni 231.604 {446}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000021	Re-Slope:	1.000000
A1 (Gain):	0.611825	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999244	Status:	OK.
Std Error of Est:	0.000559		
Predicted MDL:	0.000316		
Predicted MQL:	0.001054		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00002	.000	1
S1	.04000	.03983	-.000	-.433	.02435	.000	1
S3	1.2500	1.2646	.015	1.17	.77368	.002	1
S4	2.5000	2.3824	-.118	-4.70	1.4576	.002	1
S5	5.0000	5.0474	.047	.948	3.0881	.006	1
S2	.40000	.45574	.056	13.9	.27881	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



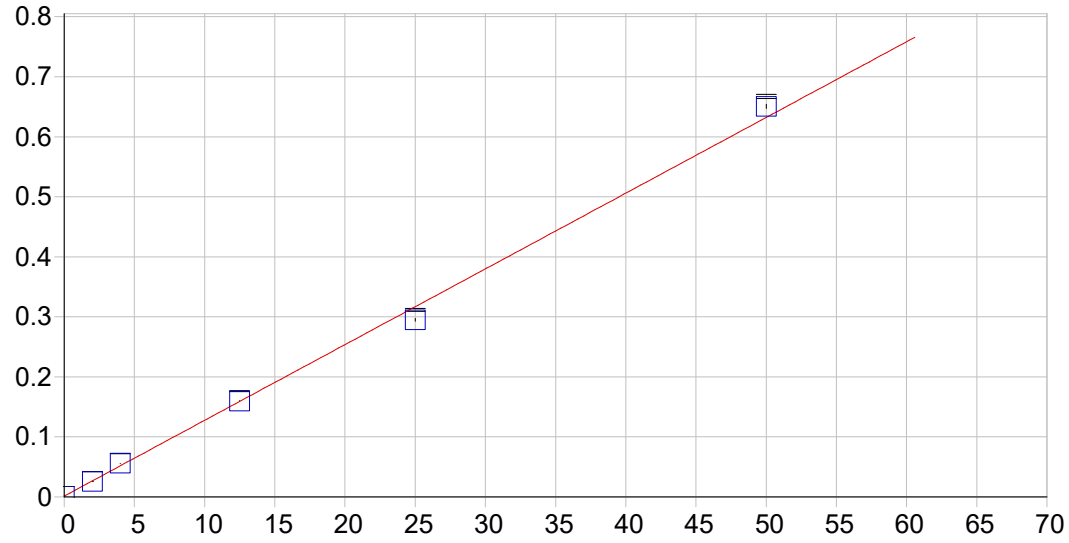
Ag 328.068 {103}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001448	Re-Slope:	1.000000
A1 (Gain):	0.251471	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998941	Status:	OK.
Std Error of Est:	0.000096		
Predicted MDL:	0.000366		
Predicted MQL:	0.001221		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00145	.000	1
S1	.01000	.01031	.000	3.08	.00113	.000	1
S3	.62500	.65035	.025	4.06	.16147	.000	1
S4	1.2500	1.1862	-.064	-5.10	.29560	.001	1
S5	2.5000	2.5054	.005	.217	.62610	.000	1
S2	.20000	.23270	.033	16.4	.05687	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



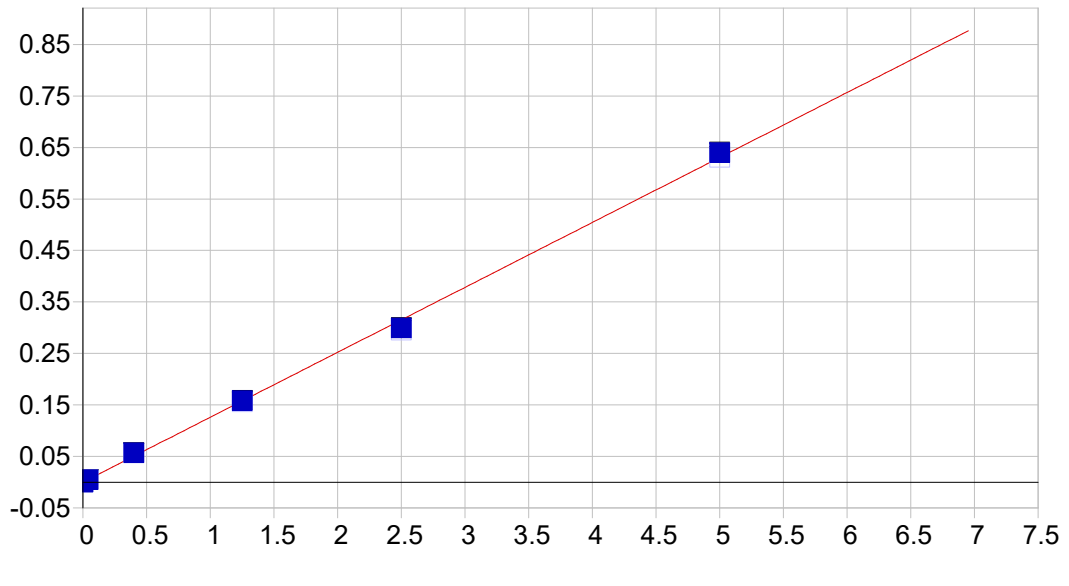
Na 589.592 { 57}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001460	Re-Slope:	1.000000
A1 (Gain):	0.012614	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998991	Status:	OK.
Std Error of Est:	0.000300		
Predicted MDL:	0.015554		
Predicted MQL:	0.051846		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00146	.000	1
S2	4.0000	4.3031	.303	7.58	.05574	.000	1
S3	12.500	12.542	.042	.339	.15966	.001	1
S4	25.000	23.277	-1.72	-6.89	.29507	.003	1
S5	50.000	51.467	1.47	2.93	.65065	.004	1
S1	2.0000	1.9101	-.090	-4.50	.02555	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



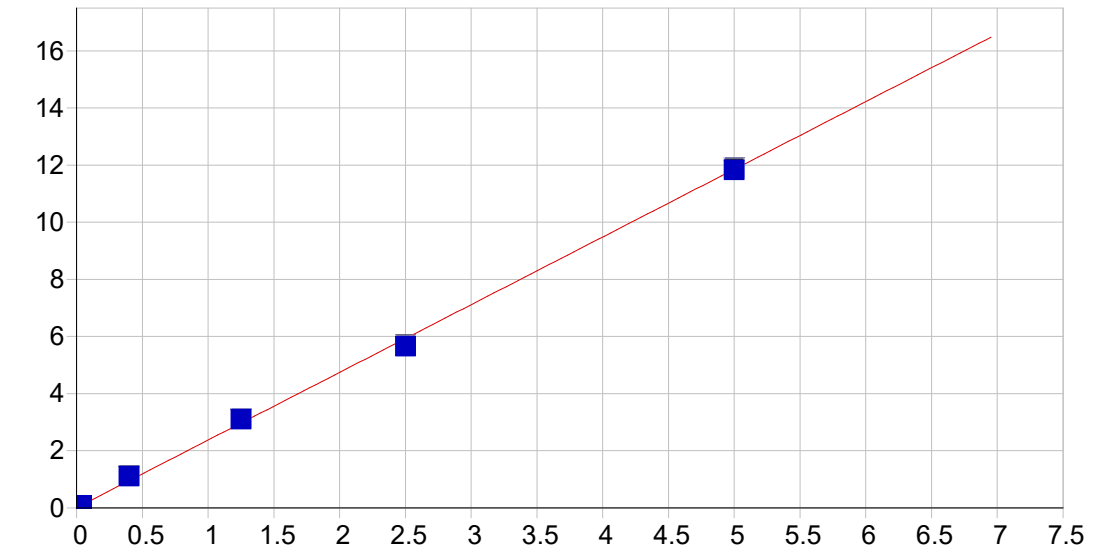
V 292.402 {115}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000026	Re-Slope:	1.000000
A1 (Gain):	0.126112	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999217	Status:	OK.
Std Error of Est:	0.000115		
Predicted MDL:	0.001608		
Predicted MQL:	0.005359		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00003	.000	1
S1	.04000	.03955	-.000	-1.13	.00477	.000	1
S3	1.2500	1.2525	.003	.202	.15563	.001	1
S4	2.5000	2.3743	-.126	-5.03	.29481	.000	1
S5	5.0000	5.0721	.072	1.44	.63044	.002	1
S2	.40000	.45148	.051	12.9	.05618	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



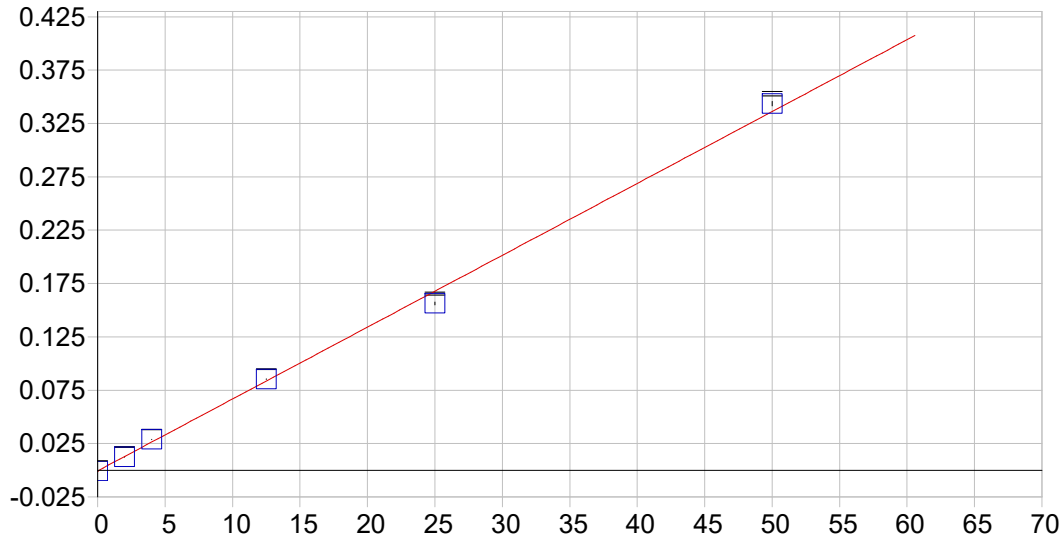
Zn 213.856 {158}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005180	Re-Slope:	1.000000
A1 (Gain):	2.369990	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998980	Status:	OK.
Std Error of Est:	0.002531		
Predicted MDL:	0.000307		
Predicted MQL:	0.001022		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00516	.000	1
S1	.04000	.04184	.002	4.60	.10501	.001	1
S3	1.2500	1.3072	.057	4.58	3.1239	.007	1
S4	2.5000	2.3865	-.114	-4.54	5.7023	.007	1
S5	5.0000	4.9877	-.012	-.246	11.908	.013	1
S2	.40000	.46677	.067	16.7	1.1180	.005	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



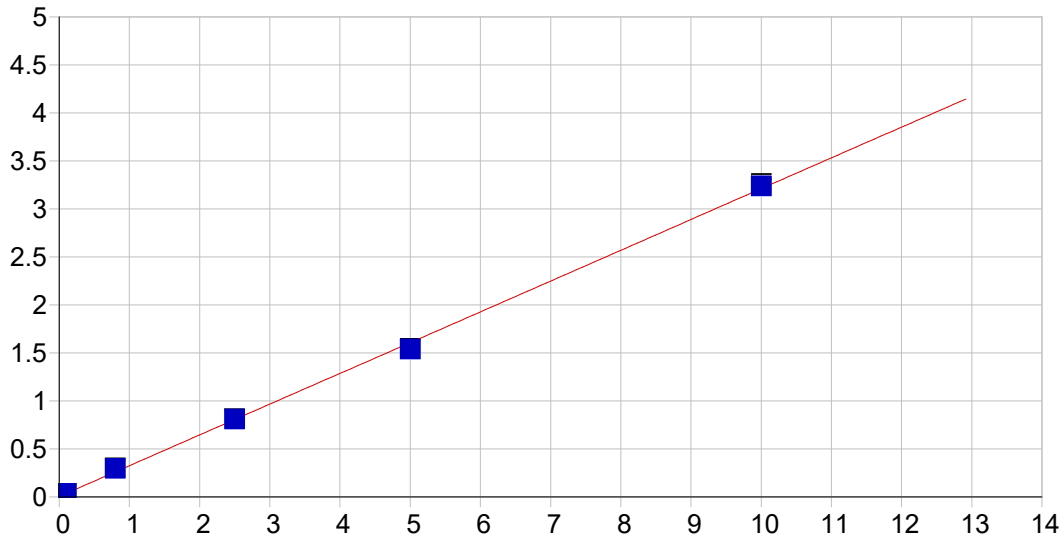
K 766.490 { 44}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000611	Re-Slope:	1.000000
A1 (Gain):	0.006736	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999027	Status:	OK.
Std Error of Est:	0.000157		
Predicted MDL:	0.029266		
Predicted MQL:	0.097554		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00009	-.000	.000	-.00061	.000	1
S2	4.0000	4.3818	.382	9.54	.02890	.000	1
S3	12.500	12.762	.262	2.09	.08535	.000	1
S4	25.000	23.306	-1.69	-6.78	.15637	.001	1
S5	50.000	51.100	1.10	2.20	.34359	.002	1
S1	2.0000	1.9504	-.050	-2.48	.01253	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



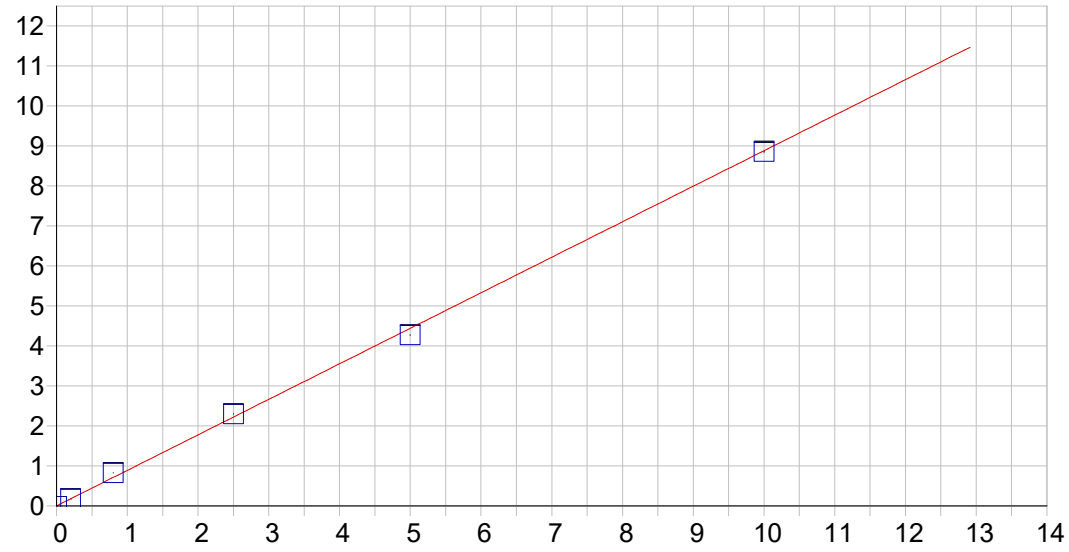
B 249.678 {135}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004222	Re-Slope:	1.000000
A1 (Gain):	0.320599	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999295	Status:	OK.
Std Error of Est:	0.000631		
Predicted MDL:	0.000742		
Predicted MQL:	0.002474		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00422	.000	1
S1	.10000	.09748	-.003	-2.52	.03530	.000	1
S3	2.5000	2.5160	.016	.642	.80850	.002	1
S4	5.0000	4.7858	-.214	-4.28	1.5338	.008	1
S5	10.000	10.089	.089	.887	3.2292	.026	1
S2	.80000	.91202	.112	14.0	.29586	.003	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



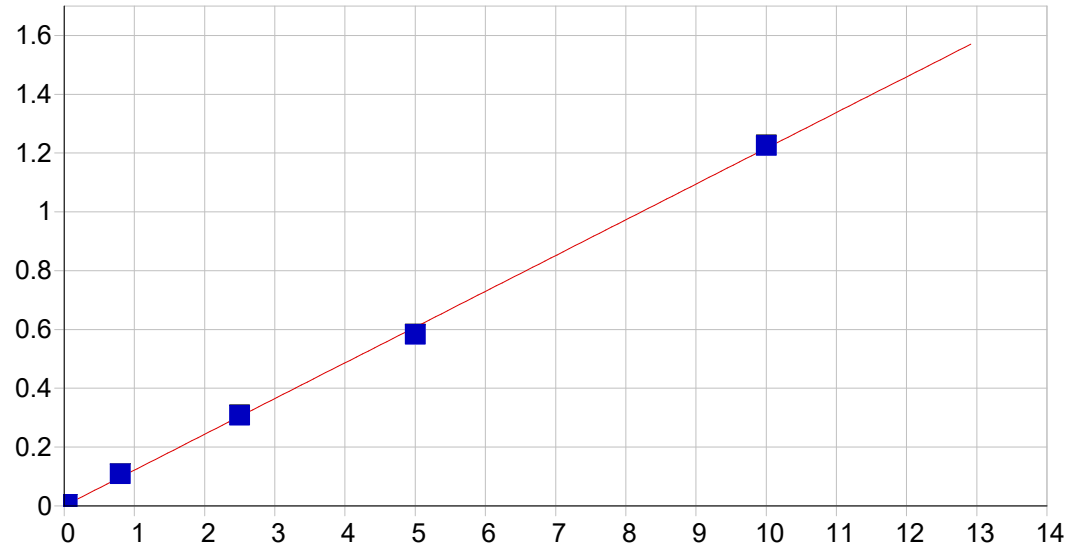
Mo 202.030 {467}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000318	Re-Slope:	1.000000
A1 (Gain):	0.888294	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999163	Status:	OK.
Std Error of Est:	0.002708		
Predicted MDL:	0.000247		
Predicted MQL:	0.000822		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00003	-.000	.000	.00029	.000	1
S1	.20000	.20054	.001	.272	.17846	.001	1
S3	2.5000	2.5877	.088	3.51	2.2989	.006	1
S4	5.0000	4.8119	-.188	-3.76	4.2747	.007	1
S5	10.000	9.9709	-.029	-.291	8.8574	.019	1
S2	.80000	.92892	.129	16.1	.82547	.003	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



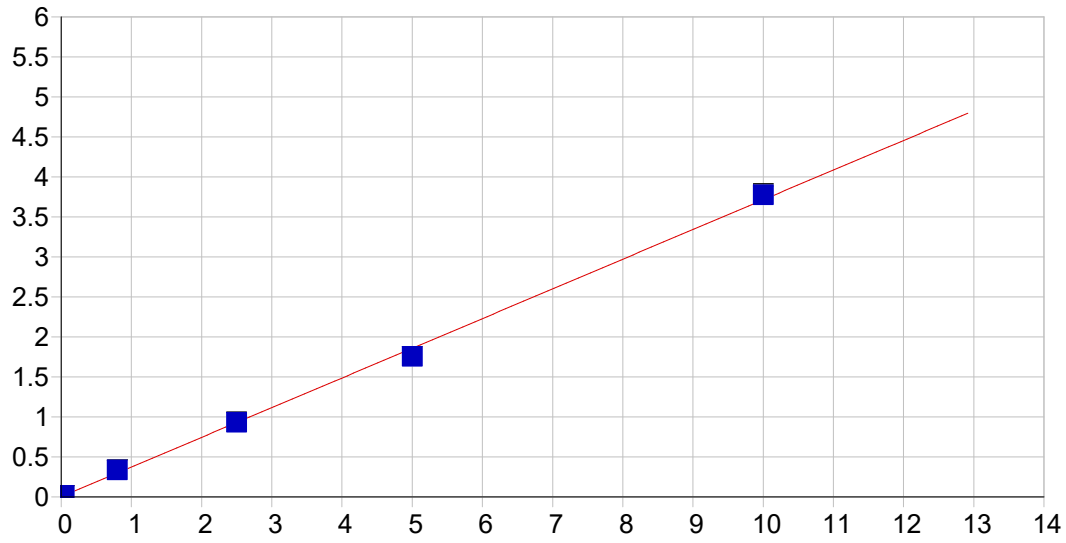
Sn 189.989 {478}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000190	Re-Slope:	1.000000
A1 (Gain):	0.121591	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999411	Status:	OK.
Std Error of Est:	0.000138		
Predicted MDL:	0.000726		
Predicted MQL:	0.002421		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00019	.000	1
S1	.04000	.03944	-.001	-1.40	.00498	.000	1
S3	2.5000	2.5318	.032	1.27	.30772	.001	1
S4	5.0000	4.7929	-.207	-4.14	.58235	.001	1
S5	10.000	10.078	.078	.780	1.2243	.002	1
S2	.80000	.89784	.098	12.2	.10926	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



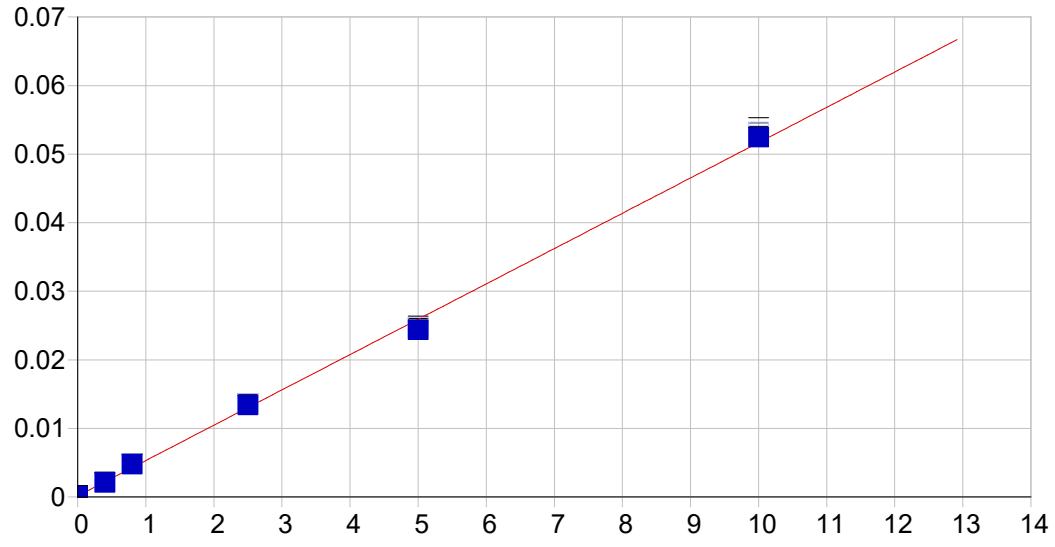
Ti 336.121 {100}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001865	Re-Slope:	1.000000
A1 (Gain):	0.371199	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999166	Status:	OK.
Std Error of Est:	0.000503		
Predicted MDL:	0.000748		
Predicted MQL:	0.002493		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00186	.000	1
S1	.04000	.03964	-.000	-.899	.01657	.000	1
S3	2.5000	2.5056	.006	.226	.93162	.003	1
S4	5.0000	4.7292	-.271	-5.42	1.7567	.000	1
S5	10.000	10.162	.162	1.62	3.7728	.014	1
S2	.80000	.90306	.103	12.9	.33697	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



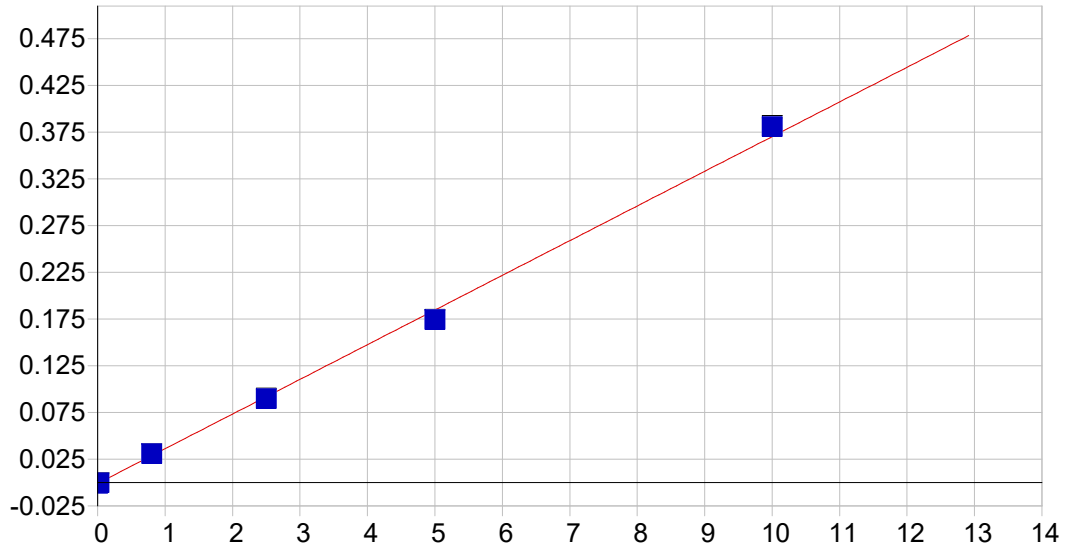
Si 288.158 {117}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000151	Re-Slope:	1.000000
A1 (Gain):	0.005152	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999066	Status:	OK.
Std Error of Est:	0.000024		
Predicted MDL:	0.007857		
Predicted MQL:	0.026189		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00015	.000	1
S1	.40000	.37647	-.024	-5.88	.00209	.000	1
S3	2.5000	2.5744	.074	2.97	.01361	.000	1
S4	5.0000	4.6989	-.301	-6.02	.02475	.000	1
S5	10.000	10.152	.152	1.52	.05323	.001	1
S2	.80000	.89774	.098	12.2	.00484	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



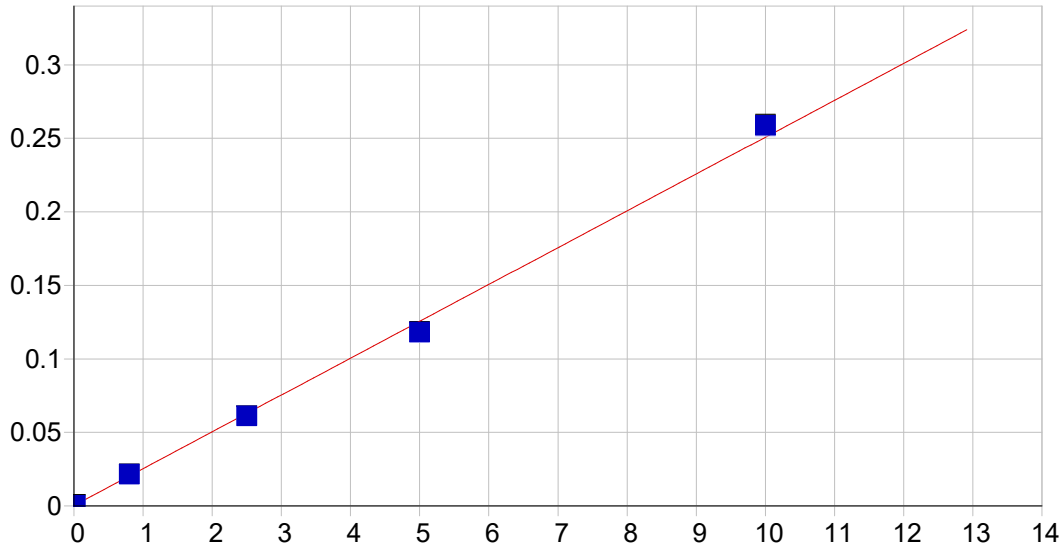
P 177.495 {490}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000931	Re-Slope:	1.000000
A1 (Gain):	0.037120	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999205	Status:	OK.
Std Error of Est:	0.000035		
Predicted MDL:	0.002505		
Predicted MQL:	0.008350		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00093	.000	1
S1	.02000	.01717	-.003	-14.1	-.00029	.000	1
S3	2.5000	2.4445	-.056	-2.22	.08979	.000	1
S4	5.0000	4.7192	-.281	-5.62	.17422	.000	1
S5	10.000	10.286	.286	2.86	.38082	.001	1
S2	.80000	.85342	.053	6.68	.03074	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



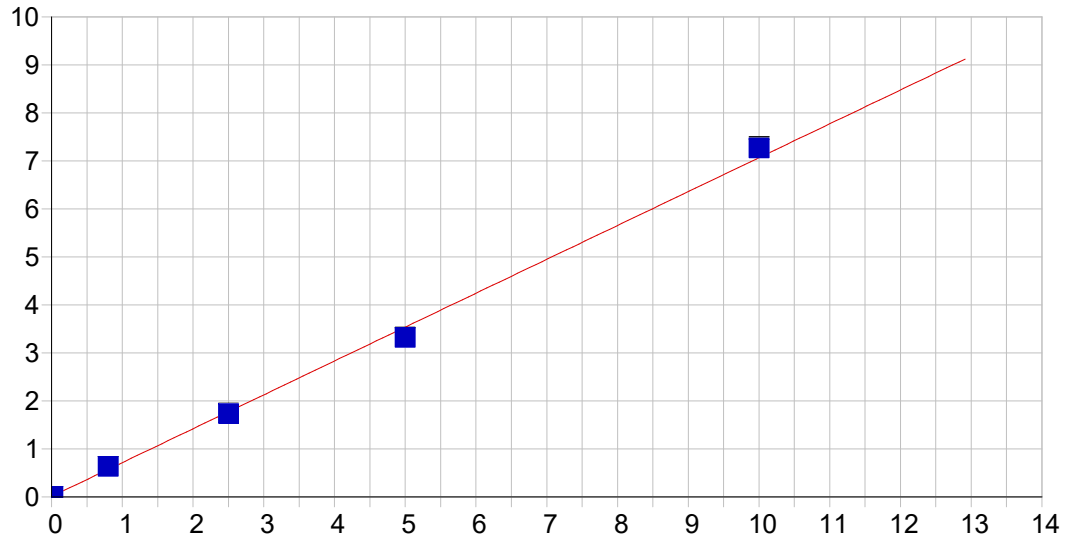
S 182.034 {485}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000301	Re-Slope:	1.000000
A1 (Gain):	0.025051	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999107	Status:	OK.
Std Error of Est:	0.000025		
Predicted MDL:	0.003265		
Predicted MQL:	0.010884		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00030	.000	1
S1	.02000	.01747	-.003	-12.6	.00072	.000	1
S3	2.5000	2.4320	-.068	-2.72	.06106	.000	1
S4	5.0000	4.7047	-.295	-5.91	.11783	.000	1
S5	10.000	10.318	.318	3.18	.25812	.001	1
S2	.80000	.84792	.048	5.99	.02149	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



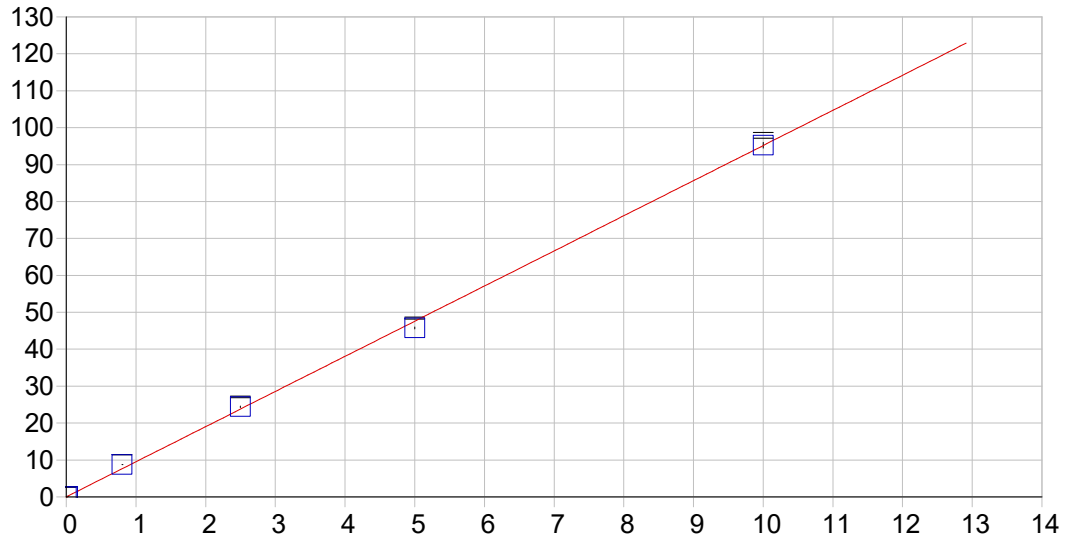
Li 670.784 { 50}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008921	Re-Slope:	1.000000
A1 (Gain):	0.705771	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998976	Status:	OK.
Std Error of Est:	0.000749		
Predicted MDL:	0.001174		
Predicted MQL:	0.003913		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00892	.001	1
S5	10.000	10.281	.281	2.81	7.2681	.027	1
S4	5.0000	4.6905	-.310	-6.19	3.3211	.005	1
S3	2.5000	2.4479	-.052	-2.09	1.7374	.007	1
S1	.02000	.01666	-.003	-16.7	.02091	.000	1
S2	.80000	.88452	.085	10.6	.63347	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904



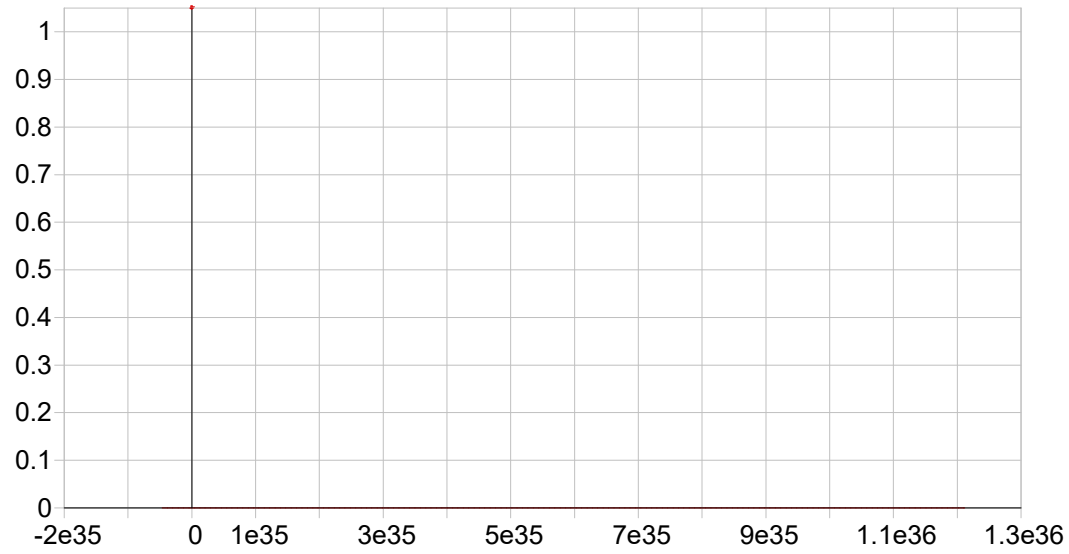
Sr 407.771 { 83}

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000837	Re-Slope:	1.000000
A1 (Gain):	9.517274	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999256	Status:	OK.
Std Error of Est:	0.008605		
Predicted MDL:	0.000051		
Predicted MQL:	0.000169		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00081	.000	1
S1	.02000	.01999	-.000	-.048	.19109	.001	1
S3	2.5000	2.5636	.064	2.54	24.399	.181	1
S4	5.0000	4.8074	-.193	-3.85	45.754	.256	1
S5	10.000	10.008	.008	.083	95.252	.788	1
S2	.80000	.92080	.121	15.1	8.7643	.020	1

Reviewed By:
On:
Inst Id :P4
LB :LB134904

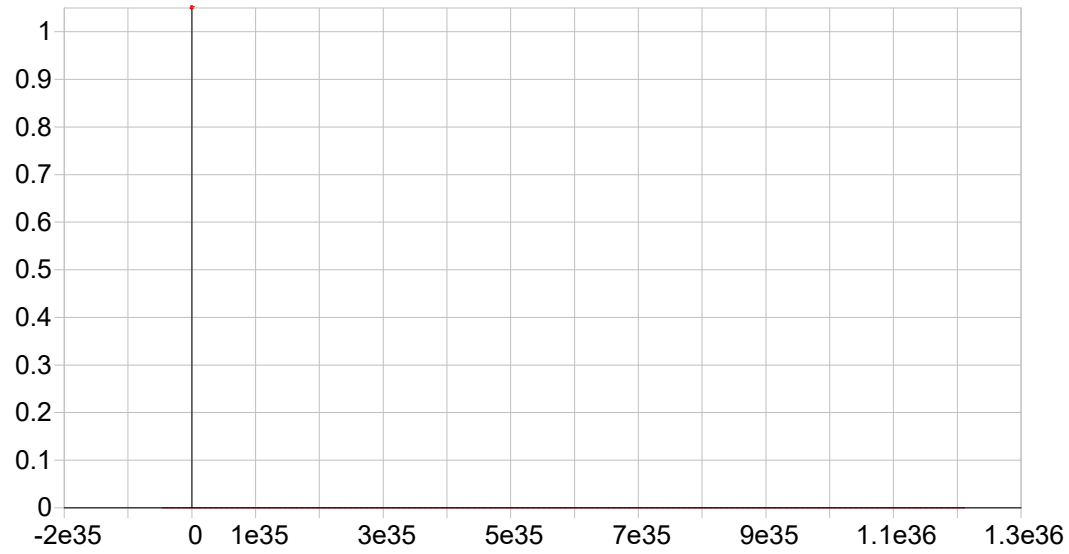


Y 224.306 {450}*

Date of Fit:	3/5/2025 11:43:26	Type of Fit:	Linear	Weighting:	1/Conc

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

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



Y 360.073 { 94}*

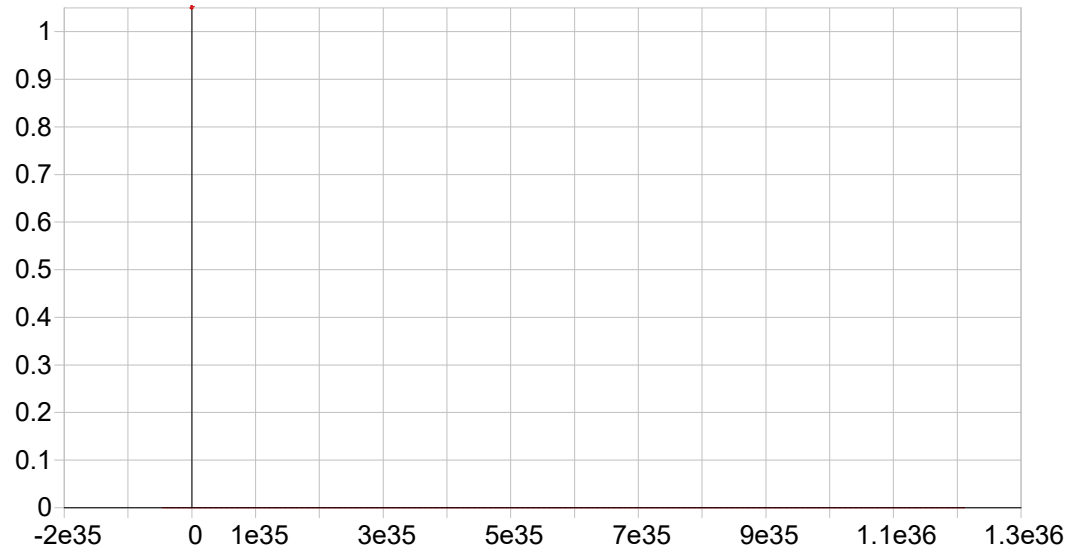
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:
On:
Inst Id :P4
LB :LB134904

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

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

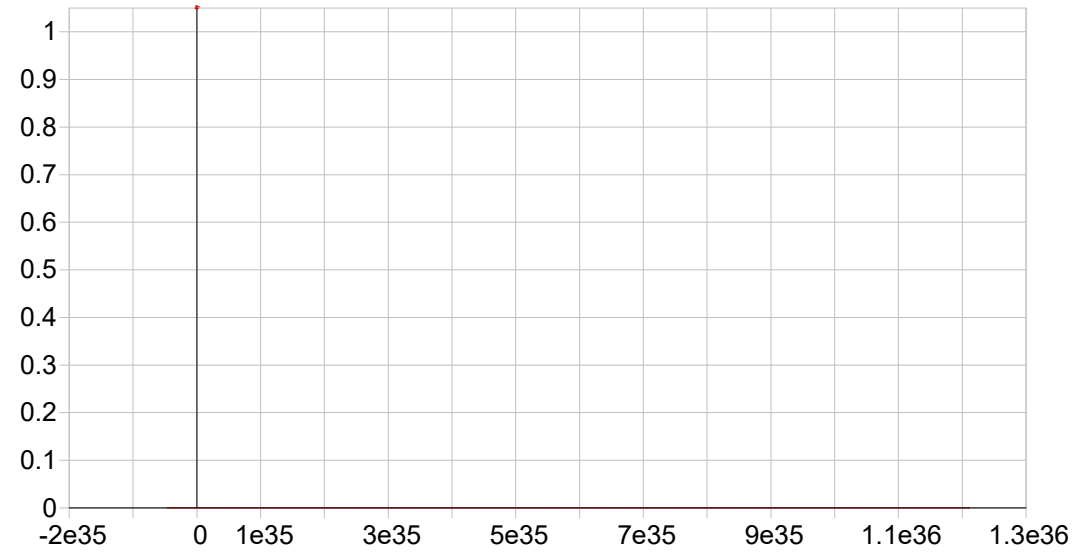


Y 371.030 { 91}*

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

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

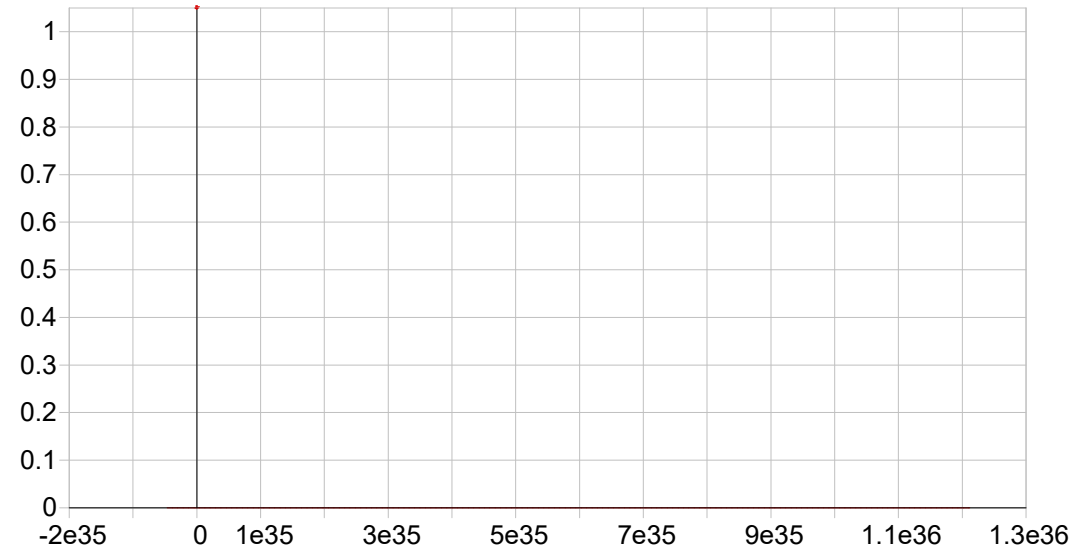
Reviewed By:
On:
Inst Id :P4
LB :LB134904



Y 224.306 {150}*

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

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



In 230.606 {446}*

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

Reviewed By:
On:
Inst Id :P4
LB :LB134904

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

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: S0 Acquired: 3/5/2025 10:17:50 Type: Cal
Method: NON EPA-6010-200.7(v2750) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	**-.00010**	**-.00004**	**-.00009**	**.00032**	**.00039**	**.00098**	**.04470**	**-.00013**
Stddev	.00003	.00004	.00012	.00012	.00026	.00063	.00041	.00012
%RSD	26.963	97.252	130.85	39.009	66.399	64.218	.91025	90.941
#1	-.00011	-.00006	-.00001	.00036	.00040	.00153	.04434	-.00003
#2	-.00013	.00000	-.00023	.00042	.00065	.00030	.04461	-.00010
#3	-.00007	-.00005	-.00004	.00018	.00013	.00111	.04514	-.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	**-.00016**	**.00144**	**.00002**	**.00001**	**-.00078**	**.00008**	**.00004**	**-.00024**
Stddev	.00018	.00033	.00003	.00018	.00026	.00000	.00002	.00015
%RSD	112.00	23.254	122.54	3424.0	33.306	.78161	45.075	62.201
#1	-.00019	.00106	.00004	.00011	-.00067	.00008	.00003	-.00023
#2	-.00032	.00154	-.00001	.00011	-.00059	.00007	.00003	-.00009
#3	.00003	.00171	.00004	-.00020	-.00107	.00008	.00006	-.00039

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	**-.00002**	**-.00145**	**.00146**	**-.00003**	**.00516**	**-.00061**	**.00422**	**.00029**
Stddev	.00013	.00004	.00011	.00015	.00047	.00012	.00034	.00005
%RSD	535.65	2.5050	7.8104	576.18	9.0517	19.154	8.0011	18.449
#1	-.00006	-.00145	.00133	-.00013	.00474	-.00072	.00434	.00026
#2	-.00013	-.00141	.00152	.00015	.00508	-.00049	.00448	.00035
#3	.00012	-.00148	.00154	-.00010	.00566	-.00062	.00384	.00026

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	**.00019**	**.00186**	**.00015**	**-.00093**	**.00030**	**.00892**	**.00081**
Stddev	.00006	.00004	.00003	.00003	.00002	.00095	.00043
%RSD	30.360	2.1576	17.142	2.7435	5.1192	10.686	52.935
#1	.00020	.00191	.00014	-.00095	.00031	.00992	.00111
#2	.00024	.00183	.00018	-.00090	.00028	.00802	.00032
#3	.00013	.00186	.00013	-.00095	.00031	.00884	.00101

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: S0 Acquired: 3/5/2025 10:17:50 Type: Cal
Method: NON EPA-6010-200.7(v2750) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2703.7	77586.	14727.	2523.3	5089.1
Stddev	3.6	206.	49.	15.2	5.8
%RSD	.13215	.26514	.33612	.60271	.11344
#1	2707.8	77643.	14718.	2534.1	5095.6
#2	2701.2	77757.	14780.	2505.9	5084.5
#3	2702.2	77358.	14682.	2530.0	5087.4

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: S1 Acquired: 3/5/2025 10:22:14 Type: Cal
Method: NON EPA-6010-200.7(v2750) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	**.00120**	**.00248**	**.00206**	**.00181**	**.00801**	**.01074**	**.26095**	**.02304**
Stddev	.00005	.00009	.00004	.00003	.00012	.00047	.00181	.00014
%RSD	4.3095	3.6514	1.7923	1.7163	1.4744	4.3601	.69462	.61292
#1	.00125	.00258	.00209	.00181	.00788	.01020	.25990	.02289
#2	.00122	.00247	.00209	.00183	.00806	.01097	.26305	.02306
#3	.00115	.00240	.00202	.00177	.00810	.01104	.25991	.02318

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	**.01434**	**.11026**	**.00166**	**.02626**	**.01936**	**.00054**	**.00957**	**.02547**
Stddev	.00019	.00016	.00004	.00037	.00008	.00001	.00013	.00013
%RSD	1.3122	.14714	2.2569	1.4254	.40346	1.2821	1.3713	.49445
#1	.01421	.11007	.00165	.02583	.01939	.00054	.00955	.02538
#2	.01455	.11035	.00164	.02653	.01927	.00053	.00971	.02561
#3	.01425	.11036	.00171	.02640	.01941	.00053	.00945	.02541

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	**.02435**	**.00113**	**.02555**	**.00477**	**.10501**	**.01253**	**.03530**	**.17846**
Stddev	.00019	.00011	.00009	.00010	.00073	.00020	.00035	.00064
%RSD	.76669	9.5188	.33686	2.1628	.69737	1.6055	.97799	.35669
#1	.02428	.00115	.02565	.00481	.10585	.01234	.03516	.17790
#2	.02420	.00101	.02551	.00485	.10458	.01249	.03570	.17833
#3	.02456	.00122	.02550	.00466	.10459	.01274	.03505	.17915

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	**.00498**	**.01657**	**.00209**	**-.00029**	**.00072**	**.02091**	**.19109**
Stddev	.00004	.00017	.00005	.00005	.00006	.00011	.00095
%RSD	.76421	1.0457	2.1517	16.181	8.7425	.53127	.49589
#1	.00494	.01652	.00210	-.00034	.00078	.02101	.19126
#2	.00501	.01676	.00213	-.00028	.00065	.02091	.19194
#3	.00499	.01642	.00205	-.00025	.00073	.02079	.19007

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: S1 Acquired: 3/5/2025 10:22:14 Type: Cal
Method: NON EPA-6010-200.7(v2750) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2610.0	76304.	14698.	2453.1	4865.6
Stddev	12.9	156.	78.	14.4	15.1
%RSD	.49549	.20443	.53098	.58541	.30939
#1	2622.7	76124.	14736.	2439.3	4882.7
#2	2610.5	76396.	14608.	2452.1	4860.0
#3	2596.8	76393.	14750.	2468.0	4854.3

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: S2 Acquired: 3/5/2025 10:26:35 Type: Cal
Method: NON EPA-6010-200.7(v2750) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.05864	.06179	.17953	.06537	.14141	.17263	3.9438	.17502
Stddev	.00017	.00055	.00069	.00036	.00053	.00065	.0076	.00208
%RSD	.28944	.89551	.38181	.55786	.37569	.37645	.19215	1.1911
#1	.05851	.06118	.17876	.06495	.14080	.17337	3.9505	.17733
#2	.05859	.06225	.17975	.06553	.14170	.17236	3.9355	.17447
#3	.05884	.06195	.18008	.06563	.14174	.17215	3.9453	.17327

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.0848	.24473	.03045	.40154	.20819	.00465	.21099	.05340
Stddev	.0022	.00154	.00009	.00087	.00103	.00002	.00048	.00016
%RSD	.20021	.62785	.30984	.21619	.49579	.43255	.22724	.29343
#1	1.0841	.24595	.03036	.40155	.20793	.00466	.21145	.05358
#2	1.0831	.24523	.03055	.40067	.20732	.00463	.21050	.05333
#3	1.0872	.24300	.03044	.40241	.20933	.00467	.21103	.05328

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	.27881	.05687	.05574	.05618	1.1180	.02890	.29586	.82547
Stddev	.00049	.00009	.00035	.00020	.0050	.00014	.00255	.00309
%RSD	.17460	.15071	.63475	.36355	.45047	.49001	.86095	.37434
#1	.27895	.05683	.05542	.05641	1.1130	.02880	.29867	.82193
#2	.27827	.05697	.05567	.05609	1.1231	.02884	.29518	.82683
#3	.27922	.05681	.05612	.05603	1.1179	.02907	.29372	.82765

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	.10926	.33697	.00484	.03074	.02149	.63347	8.7643
Stddev	.00017	.00108	.00001	.00002	.00012	.00057	.0199
%RSD	.15620	.31968	.27180	.06593	.54020	.09043	.22762
#1	.10914	.33789	.00483	.03076	.02162	.63310	8.7825
#2	.10918	.33725	.00484	.03076	.02146	.63318	8.7430
#3	.10946	.33579	.00485	.03072	.02139	.63413	8.7673

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: S2 Acquired: 3/5/2025 10:26:35 Type: Cal
Method: NON EPA-6010-200.7(v2750) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2555.0	76365.	14777.	2389.7	4768.6
Stddev	5.8	160.	109.	12.8	11.1
%RSD	.22764	.20901	.73866	.53401	.23241
#1	2561.0	76419.	14653.	2403.3	4768.0
#2	2554.6	76490.	14822.	2387.8	4779.9
#3	2549.4	76185.	14858.	2378.0	4757.8

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: S3 Acquired: 3/5/2025 10:30:40 Type: Cal
Method: NON EPA-6010-200.7(v2750) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.16714	.17201	.50236	.18533	.39844	.48399	10.858	.48258
Stddev	.00059	.00160	.00173	.00107	.00080	.00112	.071	.00185
%RSD	.35005	.93017	.34505	.57491	.20191	.23133	.65525	.38377
#1	.16679	.17032	.50179	.18431	.39785	.48528	10.788	.48435
#2	.16682	.17221	.50098	.18525	.39810	.48333	10.857	.48274
#3	.16782	.17350	.50431	.18644	.39936	.48335	10.930	.48066

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.0416	.67296	.08544	1.1189	.59367	.01307	.57762	.14774
Stddev	.0080	.00192	.00013	.0035	.00156	.00005	.00276	.00071
%RSD	.26229	.28467	.15272	.31102	.26244	.40995	.47815	.48226
#1	3.0379	.67402	.08559	1.1179	.59372	.01307	.57954	.14777
#2	3.0361	.67411	.08539	1.1159	.59208	.01313	.57886	.14844
#3	3.0507	.67074	.08535	1.1227	.59520	.01302	.57445	.14702

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	.77368	.16147	.15966	.15563	3.1239	.08535	.80850	2.2989
Stddev	.00213	.00027	.00084	.00066	.0074	.00021	.00153	.0056
%RSD	.27581	.16592	.52456	.42488	.23564	.24823	.18911	.24540
#1	.77289	.16172	.16002	.15602	3.1213	.08556	.81026	2.2933
#2	.77206	.16151	.16026	.15602	3.1322	.08535	.80761	2.2990
#3	.77610	.16119	.15871	.15487	3.1182	.08514	.80761	2.3046

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	.30772	.93162	.01361	.08979	.06106	1.7374	24.399
Stddev	.00107	.00327	.00004	.00045	.00023	.0066	.181
%RSD	.34670	.35139	.27859	.50119	.38075	.37964	.74283
#1	.30693	.93255	.01357	.08933	.06090	1.7418	24.608
#2	.30729	.93433	.01360	.08981	.06096	1.7407	24.289
#3	.30893	.92798	.01365	.09023	.06133	1.7298	24.300

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: S3 Acquired: 3/5/2025 10:30:40 Type: Cal
Method: NON EPA-6010-200.7(v2750) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	**2475.9**	**72687.**	**14707.**	**2274.0**	**4569.1**
Stddev	1.0	206.	68.	15.4	5.5
%RSD	.03947	.28409	.46247	.67890	.12057
#1	2476.7	72529.	14642.	2271.2	4571.5
#2	2474.8	72611.	14701.	2260.2	4573.0
#3	2476.2	72921.	14777.	2290.7	4562.8

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: S4 Acquired: 3/5/2025 10:34:52 Type: Cal
Method: NON EPA-6010-200.7(v2750) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.31336	.32320	.94444	.34594	.74652	.91420	20.376	.90255
Stddev	.00055	.00050	.00138	.00045	.00023	.00023	.252	.00519
%RSD	.17508	.15319	.14658	.13133	.03074	.02552	1.2354	.57504
#1	.31272	.32286	.94295	.34625	.74674	.91442	20.085	.89952
#2	.31369	.32297	.94468	.34542	.74653	.91422	20.517	.89959
#3	.31366	.32377	.94569	.34616	.74628	.91395	20.525	.90855

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	5.7712	1.2662	.15578	2.1158	1.0706	.02331	1.0844	.28072
Stddev	.0088	.0015	.00086	.0029	.0023	.00013	.0009	.00090
%RSD	.15243	.12248	.55003	.13955	.21475	.56740	.08568	.31954
#1	5.7636	1.2644	.15676	2.1136	1.0705	.02340	1.0851	.28058
#2	5.7692	1.2668	.15526	2.1147	1.0684	.02336	1.0847	.27990
#3	5.7808	1.2673	.15530	2.1192	1.0730	.02316	1.0833	.28167

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	1.4576	.29560	.29507	.29481	5.7023	.15637	1.5338	4.2747
Stddev	.0017	.00071	.00262	.00036	.0067	.00132	.0077	.0073
%RSD	.11910	.23939	.88931	.12096	.11756	.84476	.49953	.16956
#1	1.4561	.29640	.29787	.29452	5.7087	.15774	1.5271	4.2713
#2	1.4572	.29535	.29466	.29521	5.6953	.15627	1.5321	4.2698
#3	1.4595	.29506	.29267	.29470	5.7028	.15511	1.5422	4.2830

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	.58235	1.7567	.02475	.17422	.11783	3.3211	45.754
Stddev	.00094	.0004	.00020	.00036	.00044	.0050	.256
%RSD	.16190	.02025	.79525	.20414	.37162	.15167	.56000
#1	.58183	1.7567	.02497	.17408	.11734	3.3268	46.019
#2	.58178	1.7563	.02470	.17395	.11819	3.3194	45.507
#3	.58344	1.7570	.02458	.17462	.11797	3.3171	45.737

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: S4 Acquired: 3/5/2025 10:34:52 Type: Cal
Method: NON EPA-6010-200.7(v2750) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	**2447.8**	**74423.**	**14402.**	**2280.5**	**4415.5**
Stddev	5.3	415.	44.	11.7	9.4
%RSD	.21699	.55827	.30808	.51114	.21242
#1	2450.8	73953.	14430.	2268.2	4423.0
#2	2450.9	74571.	14424.	2291.4	4418.6
#3	2441.6	74744.	14350.	2282.1	4405.0

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: S5 Acquired: 3/5/2025 10:39:05 Type: Cal
Method: NON EPA-6010-200.7(v2750) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.65936	.65782	1.9863	.71902	1.5667	1.9717	43.511	1.9091
Stddev	.00173	.00381	.0050	.00240	.0033	.0059	.339	.0132
%RSD	.26245	.57893	.25383	.33341	.20922	.29671	.77980	.69372
#1	.65747	.65494	1.9856	.71634	1.5631	1.9748	43.813	1.9239
#2	.65973	.65638	1.9817	.71975	1.5677	1.9650	43.143	1.9049
#3	.66087	.66214	1.9917	.72096	1.5694	1.9753	43.576	1.8984

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	12.233	2.6916	.32299	4.5048	2.2119	.04972	2.3186	.60345
Stddev	.027	.0082	.00047	.0102	.0052	.00022	.0125	.00174
%RSD	.22076	.30527	.14695	.22591	.23597	.43505	.53802	.28824
#1	12.229	2.7004	.32257	4.5016	2.2060	.04949	2.3317	.60539
#2	12.208	2.6842	.32350	4.4967	2.2138	.04976	2.3069	.60291
#3	12.262	2.6903	.32289	4.5163	2.2159	.04991	2.3173	.60204

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	3.0881	.62610	.65065	.63044	11.908	.34359	3.2292	8.8574
Stddev	.0058	.00033	.00351	.00173	.013	.00202	.0259	.0185
%RSD	.18873	.05331	.53913	.27448	.10622	.58651	.80158	.20912
#1	3.0864	.62644	.64804	.63180	11.899	.34173	3.2578	8.8370
#2	3.0834	.62577	.64926	.62849	11.903	.34331	3.2222	8.8622
#3	3.0946	.62610	.65463	.63102	11.923	.34574	3.2075	8.8731

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	1.2243	3.7728	.05323	.38082	.25812	7.2681	95.252
Stddev	.0024	.0141	.00064	.00120	.00081	.0275	.788
%RSD	.19873	.37245	1.1949	.31562	.31243	.37816	.82685
#1	1.2238	3.7850	.05261	.37980	.25746	7.2932	95.978
#2	1.2222	3.7575	.05320	.38052	.25789	7.2387	95.364
#3	1.2270	3.7760	.05388	.38214	.25902	7.2725	94.415

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: S5 Acquired: 3/5/2025 10:39:05 Type: Cal
Method: NON EPA-6010-200.7(v2750) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2370.7	71722.	13872.	2201.7	4158.2
Stddev	4.2	102.	97.	4.5	3.3
%RSD	.17808	.14274	.69955	.20233	.08036
#1	2371.3	71840.	13761.	2201.3	4154.4
#2	2366.2	71657.	13912.	2206.3	4160.5
#3	2374.6	71669.	13942.	2197.4	4159.8

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: ICV01 Acquired: 3/5/2025 10:43:17 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.037142**	**1.062052**	**1.020287**	**1.039737**	**1.019217**	**2.558684**
Stddev	.003296	.004952	.003582	.003761	.000958	.010626
%RSD	.3177902	.4663138	.3511162	.3616788	.0940230	.4152943
#1	1.034770	1.056338	1.017731	1.035607	1.019570	2.570735
#2	1.040905	1.065113	1.018749	1.042962	1.018132	2.554657
#3	1.035750	1.064704	1.024382	1.040642	1.019948	2.550660

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4931526**	**.5133843**	**.5080113**	**9.961609**	**.5335949**	**.5163404**
Stddev	.0027163	.0018604	.0017016	.014667	.0010454	.0019769
%RSD	.5508115	.3623772	.3349619	.1472370	.1959247	.3828771
#1	.4962450	.5155324	.5064342	9.977118	.5341027	.5147022
#2	.4920601	.5122904	.5077848	9.959748	.5342895	.5157828
#3	.4911525	.5123302	.5098148	9.947962	.5323926	.5185363

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5343703**	**9.821553**	**.5093241**	**5.974629**	**.5189818**	**.2584337**
Stddev	.0015616	.059974	.0034678	.015077	.0011626	.0008060
%RSD	.2922339	.6106368	.6808691	.2523426	.2240053	.3118649
#1	.5325930	9.880347	.5130028	5.982806	.5184314	.2593638
#2	.5349951	9.823849	.5088546	5.983850	.5181966	.2579407
#3	.5355227	9.760465	.5061149	5.957231	.5203173	.2579966

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.126100**	**.4914018**	**1.033304**	**9.487727**	**2.460445**	**2.520515**
Stddev	.044816	.0001215	.008811	.016797	.005954	.003926
%RSD	.4910748	.0247250	.8526967	.1770398	.2419959	.1557758
#1	9.172196	.4913046	1.041756	9.507093	2.467128	2.517521
#2	9.123421	.4913627	1.033983	9.477117	2.458501	2.524960
#3	9.082684	.4915380	1.024173	9.478972	2.455706	2.519063

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: ICV01 Acquired: 3/5/2025 10:43:17 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.440403	2.396600	F 2.121866	F .0000265	F -.006835	F .0001346
Stddev	.005489	.012973	.007564	.0002594	.001184	.0011600
%RSD	.2249319	.5413041	.3564749	977.3934	17.31457	861.6580
#1	2.435519	2.410052	2.129296	-.000267	-.005472	-.000562
#2	2.439347	2.395581	2.122128	.000225	-.007595	-.000508
#3	2.446344	2.384166	2.114174	.000121	-.007439	.001474

Elem	Sr4077
Units	ppm
Avg	F .0013467
Stddev	.0000869
%RSD	6.456386
#1	.0014458
#2	.0013107
#3	.0012835

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2503.803	75865.84	14657.00	2323.014	4674.577
Stddev	5.413	311.07	67.48	15.066	13.836
%RSD	.2161990	.4100242	.4603759	.6485434	.2959943
#1	2509.099	75523.77	14580.57	2308.497	4688.633
#2	2498.280	75941.99	14682.10	2321.972	4674.128
#3	2504.031	76131.76	14708.34	2338.574	4660.971

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: LLICV01 Acquired: 3/5/2025 10:51:52 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0189844**	**.0409973**	**.0119100**	**.0208112**	**.0523001**	**.1009497**
Stddev	.0011304	.0007201	.0003315	.0020866	.0017222	.0008032
%RSD	5.954362	1.756351	2.782947	10.02612	3.292825	.7956554
#1	.0177712	.0417478	.0115642	.0204341	.0519417	.1015872
#2	.0200081	.0409320	.0122249	.0230606	.0541733	.1012143
#3	.0191740	.0403121	.0119409	.0189389	.0507854	.1000476

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0922977**	**.0058500**	**.0059558**	**1.974846**	**.0106821**	**.0295696**
Stddev	.0011771	.0000427	.0000330	.010587	.0003655	.0001473
%RSD	1.275369	.7292392	.5542410	.5360772	3.421604	.4982678
#1	.0919260	.0058208	.0059937	1.977901	.0110827	.0297341
#2	.0936158	.0058990	.0059408	1.983570	.0105969	.0294499
#3	.0913513	.0058304	.0059330	1.963068	.0103668	.0295247

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0228033**	**.0962560**	**.0201004**	**2.095146**	**.0395548**	**.0107006**
Stddev	.0003191	.0023133	.0003966	.016416	.0002663	.0005828
%RSD	1.399535	2.403309	1.973092	.7835273	.6733071	5.446575
#1	.0231713	.0965794	.0196637	2.111430	.0394633	.0100298
#2	.0226024	.0983906	.0204383	2.078601	.0393463	.0109891
#3	.0226361	.0937980	.0201991	2.095406	.0398548	.0110828

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.855437**	**.0402053**	**.0433872**	**1.967235**	**.0960952**	**.2123639**
Stddev	.024576	.0002394	.0003425	.006361	.0006960	.0005416
%RSD	1.324523	.5955541	.7894299	.3233544	.7243106	.2550255
#1	1.874105	.0402201	.0435497	1.971359	.0959437	.2129884
#2	1.827594	.0404369	.0436182	1.970436	.0968546	.2120234
#3	1.864613	.0399587	.0429937	1.959909	.0954875	.2120798

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: LLICV01 Acquired: 3/5/2025 10:51:52 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0391176	.0390620	.3966389	.0164259	.0166835	F .0153087
Stddev	.0004358	.0004894	.0067852	.0013179	.0020108	.0004566
%RSD	1.114051	1.252823	1.710683	8.023021	12.05272	2.982698
#1	.0392583	.0396259	.4018153	.0179270	.0187686	.0157617
#2	.0386288	.0388116	.3991440	.0158919	.0147563	.0153158
#3	.0394656	.0387485	.3889573	.0154589	.0165256	.0148486

Elem	Sr4077
Units	ppm
Avg	.0194821
Stddev	.0000737
%RSD	.3784421
#1	.0194365
#2	.0194427
#3	.0195672

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2467.825	73353.18	15103.39	2216.059	4834.158
Stddev	3.936	318.50	73.01	15.160	3.241
%RSD	.1594784	.4341993	.4833713	.6841052	.0670427
#1	2463.286	72989.05	15164.61	2200.103	4830.417
#2	2470.296	73490.49	15022.59	2217.801	4836.131
#3	2469.892	73579.99	15122.98	2230.273	4835.926

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: ICB01 Acquired: 3/5/2025 10:56:09 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	**-.001719**	**-.000865**	**-.001084**	**-.000615**	**.0005194**	**-.009001**	**-.003352**
Stddev	.001509	.001823	.001029	.001905	.0008846	.002407	.000719
%RSD	87.79726	210.7094	94.88450	309.8505	170.3085	26.74244	21.46412
#1	-.000555	.000972	-.000260	-.000832	-.000472	-.011702	-.003930
#2	-.003423	-.000893	-.000755	.001390	.000801	-.007080	-.003578
#3	-.001178	-.002674	-.002237	-.002402	.001229	-.008222	-.002546

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000593**	**.0000947**	**-.008435**	**.0003047**	**.0000085**	**-.000088**	**-.016364**
Stddev	.0000420	.0000651	.004635	.0001879	.0001525	.000017	.001581
%RSD	70.79713	68.79958	54.95133	61.65023	1792.600	19.33703	9.660600
#1	.0000124	.0000528	-.009286	.0001222	.0001613	-.000079	-.016209
#2	.0000720	.0000615	-.012585	.0002945	-.000144	-.000108	-.014866
#3	.0000935	.0001697	-.003433	.0004975	.000008	-.000077	-.018016

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014198**	**-.001642**	**-.000394**	**.0003339**	**-.058377**	**.0000767**	**-.000365**
Stddev	.0004028	.010623	.000193	.0002077	.020421	.0008366	.000129
%RSD	28.36998	646.8840	49.11379	62.20976	34.98087	1090.404	35.39455
#1	.0018686	-.002376	-.000564	.0005734	-.040323	.0000986	-.000225
#2	.0013008	-.011879	-.000433	.0002036	-.054267	-.000771	-.000479
#3	.0010899	.009328	-.000184	.0002247	-.080540	.000902	-.000393

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.056442**	**-.007617**	**-.000046**	**-.000816**	**-.000025**	**-.001592**	**-.002291**
Stddev	.022247	.000360	.000193	.000416	.000330	.007249	.002501
%RSD	39.41581	4.724165	416.1159	51.02033	1317.980	455.3067	109.1486
#1	-.081851	-.007236	.000157	-.000782	.000333	.006630	-.004001
#2	-.047016	-.007951	-.000229	-.000417	-.000090	-.007063	.000579
#3	-.040460	-.007665	-.000067	-.001248	-.000318	-.004343	-.003452

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: ICB01 Acquired: 3/5/2025 10:56:09 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.001184**	**-.003557**	**-.000096**
Stddev	.001052	.000514	.000051
%RSD	88.90841	14.44663	53.48761
#1	.000031	-.003543	-.000137
#2	-.001822	-.003051	-.000038
#3	-.001761	-.004078	-.000113

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2479.130**	**76731.59**	**14968.00**	**2268.201**	**4874.928**
Stddev	1.971	21.48	88.10	13.612	5.628
%RSD	.0794922	.0279948	.5886116	.6001016	.1154500
#1	2476.855	76747.81	14893.71	2252.588	4868.941
#2	2480.256	76707.23	15065.34	2274.442	4880.110
#3	2480.280	76739.74	14944.95	2277.573	4875.734

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CRI01 Acquired: 3/5/2025 11:00:28 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	.0202213	.0412545	.0123355	.0189324	.0516975	.1018715	.0917551
Stddev	.0014080	.0014809	.0014280	.0008480	.0010961	.0047655	.0015772
%RSD	6.962676	3.589579	11.57626	4.478988	2.120297	4.677910	1.718930
#1	.0187522	.0395954	.0111998	.0181609	.0527231	.1071412	.0929525
#2	.0215589	.0424425	.0139386	.0198403	.0505423	.0978646	.0923448
#3	.0203529	.0417257	.0118680	.0187959	.0518271	.1006087	.0899680

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059168	.0058521	1.968783	.0104708	.0293715	.0224748	.0931557
Stddev	.0000940	.0000874	.008710	.0001414	.0000928	.0002739	.0043989
%RSD	1.589210	1.492936	.4423801	1.350650	.3160171	1.218871	4.722082
#1	.0060195	.0057715	1.977757	.0103276	.0292662	.0222186	.0969779
#2	.0058348	.0059449	1.968229	.0104744	.0294412	.0227636	.0883475
#3	.0058961	.0058399	1.960364	.0106103	.0294071	.0224421	.0941416

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0197580	2.077969	.0391168	.0104861	1.834208	.0401334	.0429360
Stddev	.0002058	.019068	.0008087	.0002955	.014182	.0010172	.0004571
%RSD	1.041590	.9176234	2.067349	2.818211	.7731788	2.534423	1.064492
#1	.0198273	2.096060	.0386815	.0108254	1.840866	.0392010	.0425526
#2	.0199203	2.079792	.0386190	.0102857	1.843836	.0412181	.0434418
#3	.0195266	2.058055	.0400499	.0103470	1.817922	.0399810	.0428137

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.916724	.0931112	.2084631	.0387082	.0388529	.3821098	.0180858
Stddev	.054903	.0003094	.0005084	.0005264	.0001338	.0029513	.0006552
%RSD	2.864409	.3323061	.2438699	1.360010	.3444627	.7723804	3.622504
#1	1.870239	.0927579	.2089486	.0390508	.0388744	.3843458	.0173357
#2	1.902635	.0933337	.2085060	.0381020	.0389747	.3787645	.0183760
#3	1.977299	.0932420	.2079346	.0389718	.0387096	.3832190	.0185457

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CRI01 Acquired: 3/5/2025 11:00:28 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0178152	.0140422	.0192909
Stddev	.0015352	.0004408	.0001433
%RSD	8.617582	3.139276	.7427814
#1	.0174630	.0136169	.0194560
#2	.0194960	.0144970	.0192181
#3	.0164867	.0140126	.0191987

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2504.305	74237.58	15018.42	2262.864	4847.058
Stddev	1.901	441.92	106.33	22.003	3.116
%RSD	.0758981	.5952716	.7080098	.9723710	.0642797
#1	2502.283	73798.68	14903.46	2243.284	4845.693
#2	2504.577	74231.63	15038.55	2258.632	4850.623
#3	2506.055	74682.45	15113.25	2286.676	4844.858

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: ICSA01 Acquired: 3/5/2025 11:04:51 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046897**	**.0078843**	**.0031790**	**-.015410**	**-.002462**	**251.4901**
Stddev	.0046365	.0012153	.0005790	.002942	.001346	2.0257
%RSD	98.86429	15.41415	18.21309	19.09006	54.64891	.8054969
#1	.0073389	.0089449	.0032624	-.018722	-.003581	249.3104
#2	.0073943	.0081498	.0025628	-.013102	-.000969	251.8448
#3	-.000664	.0065582	.0037118	-.014405	-.002837	253.3150

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0030501**	**.0012039**	**-.003854**	**235.4346**	**.0603245**	**.0021526**
Stddev	.0002191	.0000772	.000123	.1408	.0003511	.0001697
%RSD	7.185105	6.410117	3.189044	.0598093	.5820357	7.881239
#1	.0028774	.0012867	-.003943	235.3506	.0601361	.0021783
#2	.0029763	.0011341	-.003714	235.5972	.0601078	.0019715
#3	.0032966	.0011907	-.003905	235.3561	.0607296	.0023078

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0148564**	**103.6344**	**.0024311**	**254.7631**	**.0018797**	**-.001845**
Stddev	.0003939	.5545	.0003778	.2219	.0005735	.000465
%RSD	2.651386	.5350781	15.53967	.0870837	30.51066	25.19291
#1	.0150620	104.0566	.0023494	254.7807	.0025016	-.001321
#2	.0151050	103.0064	.0028430	254.5330	.0017657	-.002006
#3	.0144023	103.8403	.0021008	254.9757	.0013717	-.002209

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002984**	**.0033396**	**.0038151**	**-.063178**	**-.095964**	**-.000254**
Stddev	.004733	.0019913	.0006245	.020038	.002085	.000239
%RSD	158.6285	59.62671	16.36930	31.71616	2.172738	94.03269
#1	-.008256	.0048046	.0033673	-.044872	-.093705	-.000451
#2	.000898	.0041417	.0045285	-.084586	-.097815	-.000325
#3	-.001593	.0010723	.0035496	-.060077	-.096371	.000012

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: ICSA01 Acquired: 3/5/2025 11:04:51 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003560	-.000960	.0235982	-.000237	-.017697	-.000309
Stddev	.000883	.000383	.0076135	.003567	.004907	.000065
%RSD	24.79434	39.90728	32.26324	1502.307	27.72817	20.99624
#1	-.004001	-.000518	.0306749	-.002959	-.013040	-.000245
#2	-.002544	-.001159	.0155425	-.001553	-.022821	-.000307
#3	-.004135	-.001202	.0245773	.003800	-.017230	-.000375

Elem	Sr4077
Units	ppm
Avg	F .0971220
Stddev	.0004339
%RSD	.4467666
#1	.0975178
#2	.0971901
#3	.0966580

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2201.442	64549.13	14439.04	1985.495	3840.051
Stddev	3.010	131.44	38.10	6.032	4.882
%RSD	.1367512	.2036334	.2639003	.3038215	.1271367
#1	2204.252	64524.63	14462.34	1988.258	3843.016
#2	2198.265	64691.10	14395.07	1989.652	3842.722
#3	2201.810	64431.66	14459.72	1978.576	3834.417

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: ICSAB01 Acquired: 3/5/2025 11:09:16 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1145741	.1066533	.0549349	.0319963	.6231336	251.2204
Stddev	.0034630	.0010673	.0032046	.0021213	.0050737	2.8730
%RSD	3.022480	1.000742	5.833349	6.629829	.8142263	1.143636
#1	.1112711	.1078560	.0517838	.0310074	.6180395	249.8352
#2	.1142738	.1058189	.0581903	.0344315	.6231747	254.5237
#3	.1181775	.1062851	.0548307	.0305500	.6281867	249.3025

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4779596	.4826068	1.003928	232.2339	.5825137	.5101716
Stddev	.0008953	.0027619	.002497	.4800	.0041199	.0015137
%RSD	.1873125	.5722964	.2487355	.2066876	.7072529	.2967089
#1	.4779529	.4802687	1.002995	232.4903	.5846797	.5094080
#2	.4788582	.4856543	1.002031	232.5313	.5850988	.5091917
#3	.4770677	.4818975	1.006757	231.6802	.5777627	.5119150

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5166650	103.1755	.4644769	249.5453	1.007605	.2236466
Stddev	.0017563	.6642	.0017767	.5386	.003220	.0006029
%RSD	.3399198	.6437300	.3825141	.2158288	.3195442	.2695997
#1	.5155638	103.9359	.4654573	249.9032	1.005497	.2234135
#2	.5157408	102.8822	.4655475	249.8069	1.006007	.2231950
#3	.5186903	102.7085	.4624260	248.9259	1.011311	.2243313

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083456	.4711268	1.091509	-.064068	.9306973	F 1.175973
Stddev	.0046672	.0027998	.002643	.009021	.0063744	.004254
%RSD	55.92376	.5942663	.2421491	14.08081	.6849030	.3617579
#1	.0038078	.4735154	1.091527	-.058671	.9255073	1.175092
#2	.0080968	.4718192	1.088857	-.074483	.9378123	1.172229
#3	.0131322	.4680458	1.094143	-.059051	.9287721	1.180599

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: ICSAB01 Acquired: 3/5/2025 11:09:16 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.149088	1.073341	1.118805	F .0042066	F -.015975	F -.000222
Stddev	.005999	.002565	.004170	.0031303	.004872	.000544
%RSD	.5220873	.2389740	.3727469	74.41456	30.49462	245.4611
#1	1.148527	1.074146	1.118173	.0052342	-.019031	.000126
#2	1.143389	1.075408	1.123255	.0006916	-.018538	-.000849
#3	1.155348	1.070471	1.114987	.0066939	-.010357	.000058

Elem	Sr4077
Units	ppm
Avg	F .0963634
Stddev	.0002240
%RSD	.2324738
#1	.0965980
#2	.0963405
#3	.0961517

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2163.707	64150.11	14545.59	1934.809	3813.232
Stddev	3.492	215.83	98.13	7.323	8.278
%RSD	.1613712	.3364449	.6746394	.3784722	.2170913
#1	2164.895	64113.18	14606.82	1926.816	3813.665
#2	2166.449	63955.13	14432.40	1936.418	3821.286
#3	2159.776	64382.03	14597.53	1941.193	3804.747

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCV01 Acquired: 3/5/2025 11:13:27 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	**5.102269**	**5.085233**	**5.000748**	**5.148929**	**5.119798**	**10.04398**	**9.753232**
Stddev	.025183	.084607	.014013	.017926	.024660	.01162	.111920
%RSD	.4935716	1.663779	.2802120	.3481583	.4816624	.1157260	1.147512
#1	5.113677	5.126067	4.995636	5.165490	5.129574	10.05426	9.740833
#2	5.073400	5.141679	4.990010	5.129894	5.091749	10.03137	9.648028
#3	5.119729	4.987954	5.016599	5.151402	5.138071	10.04631	9.870834

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2449206**	**2.484268**	**24.24341**	**1.034589**	**2.478535**	**1.272067**	**5.056768**
Stddev	.0015065	.004088	.11182	.001730	.005187	.005411	.021851
%RSD	.6150997	.1645744	.4612202	.1671872	.2092762	.4253973	.4321073
#1	.2436658	2.480492	24.16821	1.035548	2.476398	1.273486	5.070513
#2	.2445045	2.483702	24.19012	1.032593	2.474758	1.266087	5.068219
#3	.2465914	2.488610	24.37191	1.035627	2.484449	1.276627	5.031572

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.391436**	**24.24927**	**2.479768**	**1.281794**	**24.88249**	**2.464263**	**2.587095**
Stddev	.009268	.19370	.004867	.002363	.20375	.002986	.012081
%RSD	.3875330	.7987930	.1962487	.1843475	.8188583	.1211594	.4669579
#1	2.380758	24.07318	2.476447	1.284384	25.08611	2.462794	2.598401
#2	2.396168	24.21789	2.477503	1.279756	24.88275	2.467699	2.588518
#3	2.397382	24.45675	2.485355	1.281242	24.67861	2.462298	2.574366

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.57305**	**4.876050**	**5.139241**	**5.003987**	**4.867669**	**5.209244**	**4.949763**
Stddev	.15869	.046182	.014385	.003132	.010095	.038772	.021021
%RSD	.6205223	.9471116	.2799068	.0625841	.2073977	.7442872	.4246781
#1	25.71304	4.830172	5.138905	5.007594	4.856108	5.253062	4.932962
#2	25.60544	4.875450	5.125026	5.002406	4.874748	5.179384	4.942993
#3	25.40067	4.922529	5.153791	5.001961	4.872150	5.195288	4.973335

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCV01 Acquired: 3/5/2025 11:13:27 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.907346**	**4.857150**	**4.945302**
Stddev	.021757	.004616	.109186
%RSD	.4433537	.0950433	2.207875
#1	4.926158	4.858381	4.819543
#2	4.912360	4.861025	5.000427
#3	4.883520	4.852042	5.015935

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2350.502**	**69323.42**	**14322.58**	**2086.568**	**4315.275**
Stddev	14.211	215.12	113.37	12.596	12.233
%RSD	.6046052	.3103144	.7915261	.6036708	.2834798
#1	2350.704	69099.88	14418.62	2072.444	4317.615
#2	2364.610	69528.99	14351.58	2090.623	4326.169
#3	2336.190	69341.39	14197.52	2096.638	4302.042

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCB01 Acquired: 3/5/2025 11:17:39 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	**-.001399**	**-.000451**	**.0000184**	**.0003710**	**-.000399**	**-.009520**	**-.003818**
Stddev	.001099	.000460	.0008548	.0019096	.000116	.003712	.000511
%RSD	78.51206	101.9395	4656.128	514.6897	29.18402	38.98951	13.39404
#1	-.000982	-.000828	.0003699	.0021000	-.000528	-.006585	-.004406
#2	-.000570	-.000587	-.000956	-.001679	-.000365	-.013693	-.003478
#3	-.002645	.000061	.000641	.000692	-.000303	-.008283	-.003570

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000068**	**.0000660**	**-.010589**	**.0005083**	**-.000050**	**-.000300**	**-.011232**
Stddev	.0000165	.0000333	.001130	.0002338	.000113	.000281	.002196
%RSD	241.3487	50.39221	10.67453	45.99976	226.4346	93.67518	19.54946
#1	.0000032	.0001039	-.011660	.0007280	-.000176	-.000330	-.013536
#2	-.000008	.0000416	-.010701	.0002625	-.000016	-.000005	-.009164
#3	.000025	.0000525	-.009407	.0005346	.000042	-.000564	-.010996

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000204**	**.0069153**	**-.000230**	**-.000021**	**-.055850**	**-.000226**	**-.000696**
Stddev	.000067	.0093738	.000051	.000138	.013007	.001016	.000135
%RSD	32.93346	135.5499	22.23964	670.7560	23.28888	450.0757	19.41662
#1	-.000193	-.003650	-.000251	-.000132	-.059925	.000231	-.000768
#2	-.000275	.014233	-.000172	.000134	-.066330	.000482	-.000540
#3	-.000142	.010163	-.000268	-.000063	-.041293	-.001390	-.000780

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.059831**	**.0039734**	**.0000457**	**-.000013**	**.0006631**	**.0052053**	**-.002708**
Stddev	.013399	.0003147	.0002111	.000085	.0006171	.0097954	.001264
%RSD	22.39412	7.919810	461.7414	672.3679	93.06891	188.1830	46.67939
#1	-.067461	.0043297	.0002887	-.000014	.0004268	.0123222	-.003745
#2	-.067671	.0037335	-.000092	.000073	.0013635	-.005966	-.003080
#3	-.044360	.0038571	-.000060	-.000096	.0001991	.009260	-.001300

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCB01 Acquired: 3/5/2025 11:17:39 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.004154**	**-.005271**	**-.000040**
Stddev	.000264	.000471	.000012
%RSD	6.359357	8.942334	30.59709
#1	-.004247	-.005104	-.000027
#2	-.004358	-.005804	-.000052
#3	-.003855	-.004907	-.000042

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2451.357**	**72733.03**	**14792.28**	**2209.608**	**4841.033**
Stddev	1.968	186.98	22.04	6.107	5.631
%RSD	.0802893	.2570708	.1489770	.2763748	.1163239
#1	2450.870	72529.15	14813.24	2202.873	4837.384
#2	2449.678	72773.47	14794.29	2211.166	4838.197
#3	2453.523	72896.48	14769.30	2214.785	4847.519

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1447-01 Acquired: 3/5/2025 11:21:59 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0278365**	**.0109375**	**1.331443**	**-.033350**	**.0002802**	**66.59204**	**.9062432**
Stddev	.0013024	.0016496	.006479	.003215	.0008140	.21435	.0057221
%RSD	4.678782	15.08223	.4865928	9.639633	290.4835	.3218781	.6314141
#1	.0263666	.0106300	1.336246	-.036855	.0012129	66.42042	.8997242
#2	.0282961	.0127192	1.334009	-.030538	-.000288	66.52339	.9085704
#3	.0288468	.0094632	1.324075	-.032657	-.000085	66.83230	.9104351

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0072473**	**-.005550**	**22.15119**	**.1465742**	**.0819704**	**.4211565**	**210.5578**
Stddev	.0000811	.000138	.08883	.0007907	.0000975	.0010816	1.1236
%RSD	1.118867	2.488875	.4010171	.5394385	.1189023	.2568248	.5336219
#1	.0072123	-.005692	22.04869	.1460297	.0820785	.4220243	210.5928
#2	.0071896	-.005543	22.19901	.1474811	.0819433	.4199447	211.6634
#3	.0073400	-.005416	22.20586	.1462118	.0818893	.4215006	209.4171

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.329604**	**28.58344**	**.1556975**	**-.001512**	**1.007055**	**.1871516**	**.6425564**
Stddev	.036087	.04603	.0002517	.000106	.007947	.0019128	.0012031
%RSD	.6771026	.1610441	.1616533	7.036822	.7891032	1.022052	.1872399
#1	5.288563	28.53708	.1559294	-.001633	.997892	.1890281	.6429732
#2	5.356370	28.62914	.1557333	-.001463	1.012059	.1852045	.6434956
#3	5.343878	28.58411	.1554299	-.001438	1.011213	.1872223	.6412003

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.050972**	**-.170333**	**.0031746**	**.0080079**	**1.654555**	**4.806469**	**4.536932**
Stddev	.015281	.005159	.0002245	.0013885	.007595	.033112	.016804
%RSD	.1897991	3.028810	7.071538	17.33986	.4590466	.6889072	.3703737
#1	8.063518	-.165561	.0029202	.0065420	1.646755	4.834369	4.556116
#2	8.033954	-.169632	.0033450	.0093033	1.654984	4.815159	4.524819
#3	8.055442	-.175807	.0032586	.0081783	1.661927	4.769878	4.529863

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1447-01 Acquired: 3/5/2025 11:21:59 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.669743	.1969932	.1120205
Stddev	.010414	.0005917	.0005744
%RSD	.6236729	.3003778	.5127817
#1	1.661958	.1971367	.1113640
#2	1.665699	.1975000	.1122669
#3	1.681572	.1963430	.1124307

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2656.076	78991.18	16969.12	2385.164	4384.684
Stddev	1.511	246.48	68.69	15.045	2.872
%RSD	.0568714	.3120362	.4047664	.6307558	.0655103
#1	2655.343	78762.72	17040.63	2376.441	4382.132
#2	2657.813	78958.41	16963.05	2376.514	4387.795
#3	2655.071	79252.41	16903.66	2402.536	4384.124

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1474-01 Acquired: 3/5/2025 11:26:33 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0951742	.0096180	.2239671	-.032388	-.001047	64.18360	.2814544
Stddev	.0042153	.0041199	.0011463	.001532	.001038	.03569	.0018595
%RSD	4.429074	42.83505	.5118258	4.728724	99.15793	.0555989	.6606749
#1	.0943256	.0084432	.2229956	-.034035	-.001157	64.20367	.2810497
#2	.0914477	.0141977	.2236743	-.031007	-.002025	64.20473	.2798306
#3	.0997492	.0062131	.2252314	-.032121	.000042	64.14240	.2834829

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071785	-.010086	43.22546	.2246864	.0430227	.1063460	214.3199
Stddev	.0000251	.000260	.08355	.0006685	.0001877	.0001945	.8255
%RSD	.3494044	2.577133	.1932967	.2975268	.4361841	.1828570	.3851770
#1	.0072047	-.010074	43.22245	.2252958	.0432273	.1065652	214.3241
#2	.0071547	-.010352	43.14346	.2247919	.0429820	.1062786	215.1434
#3	.0071761	-.009832	43.31048	.2239714	.0428586	.1061943	213.4924

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8037926	16.56326	.0673077	-.001629	2.830954	.2717612	.3004968
Stddev	.0035606	.01063	.0003270	.000297	.015116	.0013288	.0023486
%RSD	.4429804	.0642005	.4857866	18.22976	.5339617	.4889464	.7815865
#1	.8041663	16.57224	.0674274	-.001907	2.832743	.2727023	.2984391
#2	.8000598	16.55152	.0669377	-.001662	2.845096	.2702411	.3030555
#3	.8071516	16.56603	.0675579	-.001316	2.815023	.2723400	.2999957

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.555554	-.187289	.0046597	.0057474	1.100336	5.293351	6.112799
Stddev	.086277	.008683	.0001365	.0004074	.004167	.028945	.005812
%RSD	1.008429	4.636162	2.929937	7.089152	.3786906	.5468243	.0950725
#1	8.571206	-.184986	.0045238	.0053961	1.098227	5.302578	6.110118
#2	8.632934	-.179990	.0047968	.0056519	1.097646	5.316559	6.108813
#3	8.462523	-.196891	.0046586	.0061941	1.105136	5.260917	6.119467

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1474-01 Acquired: 3/5/2025 11:26:33 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.095384**	**.1125258**	**.1718856**
Stddev	.014023	.0014778	.0002892
%RSD	.6692334	1.313265	.1682518
#1	2.087099	.1129285	.1715863
#2	2.087479	.1137605	.1719072
#3	2.111575	.1108885	.1721635

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2415.073**	**73632.41**	**15627.79**	**2211.646**	**4299.777**
Stddev	5.192	273.71	59.74	17.621	4.145
%RSD	.2149967	.3717217	.3822755	.7967528	.0963967
#1	2420.151	73499.58	15600.91	2209.877	4301.822
#2	2409.773	73450.46	15696.25	2194.976	4295.007
#3	2415.294	73947.19	15586.22	2230.085	4302.501

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1480-01 Acquired: 3/5/2025 11:30:40 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1300698	.0044162	.6368232	-.027448	.0034513	76.58227	.3845873
Stddev	.0030467	.0024715	.0002146	.004809	.0016178	.08735	.0010183
%RSD	2.342350	55.96471	.0336925	17.52211	46.87392	.1140652	.2647756
#1	.1301791	.0070375	.6368817	-.032384	.0047600	76.63729	.3851298
#2	.1330604	.0040830	.6365854	-.027184	.0016426	76.48154	.3852195
#3	.1269699	.0021282	.6370024	-.022776	.0039513	76.62797	.3834126

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0072628	-.005661	15.95156	.3199227	.0255697	.3421852	172.9834
Stddev	.0000228	.000121	.02394	.0022804	.0002553	.0007947	.7134
%RSD	.3133465	2.145805	.1500973	.7127861	.9984106	.2322579	.4124350
#1	.0072890	-.005801	15.93046	.3224495	.0256809	.3415478	173.8026
#2	.0072491	-.005602	15.97758	.3193010	.0257505	.3430757	172.6496
#3	.0072502	-.005580	15.94664	.3180177	.0252777	.3419322	172.4981

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5119991	8.738175	.0533472	-.000577	.3980823	.3936152	.4942734
Stddev	.0008474	.007685	.0001046	.000347	.0034211	.0026514	.0014162
%RSD	.1655118	.0879503	.1961552	60.21290	.8593936	.6736030	.2865221
#1	.5116487	8.745106	.0532266	-.000177	.4020326	.3914805	.4936135
#2	.5113831	8.729910	.0534132	-.000804	.3961091	.3965832	.4933075
#3	.5129656	8.739511	.0534019	-.000749	.3961051	.3927820	.4958991

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.793141	-.166947	.0086263	.0171206	1.071775	6.238167	6.463879
Stddev	.075741	.006396	.0001408	.0003361	.001458	.035205	.020225
%RSD	.9718884	3.831422	1.631942	1.963259	.1360615	.5643449	.3128870
#1	7.875549	-.159703	.0087498	.0167956	1.073377	6.268066	6.473772
#2	7.726574	-.169317	.0086560	.0174668	1.070524	6.247070	6.477253
#3	7.777300	-.171819	.0084730	.0170995	1.071425	6.199366	6.440612

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1480-01 Acquired: 3/5/2025 11:30:40 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.253511	.0963240	.1064785
Stddev	.023318	.0006546	.0001920
%RSD	.4438638	.6795563	.1803406
#1	5.227382	.0961298	.1066656
#2	5.260946	.0970537	.1064879
#3	5.272206	.0957885	.1062819

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2506.222	76861.00	16213.11	2267.694	4418.402
Stddev	5.074	115.77	51.59	8.192	9.612
%RSD	.2024599	.1506203	.3182194	.3612605	.2175455
#1	2511.568	76733.55	16267.62	2261.554	4429.019
#2	2501.473	76889.81	16206.67	2264.533	4415.898
#3	2505.624	76959.64	16165.04	2276.996	4410.290

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1480-09 Acquired: 3/5/2025 11:34:46 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1252851	.0012962	1.516503	-.025654	.0320676	53.96156
Stddev	.0001510	.0020901	.004559	.001977	.0015590	.37674
%RSD	.1205207	161.2466	.3006372	7.706643	4.861745	.6981729
#1	.1253036	.0014906	1.516761	-.027588	.0321143	53.75070
#2	.1251257	-.000884	1.511820	-.025736	.0336027	54.39652
#3	.1254259	.003282	1.520928	-.023637	.0304857	53.73746

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4350507	.0064396	-.003037	33.22832	.2415992	.0452491
Stddev	.0022477	.0000596	.000142	.26020	.0012323	.0000647
%RSD	.5166532	.9252188	4.686037	.7830782	.5100647	.1428999
#1	.4340900	.0063710	-.002877	33.06200	.2406925	.0452921
#2	.4376191	.0064784	-.003149	33.52818	.2411029	.0451748
#3	.4334430	.0064693	-.003085	33.09477	.2430023	.0452806

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2617720	176.4909	.4032397	10.17266	.1277801	.0006060
Stddev	.0004864	1.0591	.0026478	.03054	.0008056	.0002737
%RSD	.1857981	.6000799	.6566400	.3002358	.6304350	45.17488
#1	.2613053	175.3722	.4005018	10.15938	.1281137	.0003008
#2	.2617349	176.6224	.4057871	10.20759	.1268613	.0006872
#3	.2622759	177.4781	.4034302	10.15101	.1283652	.0008299

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3691706	.5266403	.7081203	4.397106	-.151936	.0129518
Stddev	.0090274	.0057133	.0018951	.004748	.006615	.0002919
%RSD	2.445321	1.084859	.2676303	.1079812	4.353509	2.253788
#1	.3640641	.5228514	.7087032	4.400065	-.155837	.0126190
#2	.3795939	.5332118	.7060022	4.391630	-.155672	.0130718
#3	.3638539	.5238576	.7096556	4.399625	-.144299	.0131645

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1480-09 Acquired: 3/5/2025 11:34:46 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0271334	1.126766	5.995364	5.548784	F 48.64316	.1083536
Stddev	.0006743	.009151	.049306	.023149	.16052	.0003836
%RSD	2.485153	.8121427	.8224038	.4171852	.3299902	.3540582
#1	.0277119	1.117435	6.017027	5.557247	48.51537	.1079624
#2	.0272955	1.135726	5.938935	5.522594	48.59077	.1083693
#3	.0263928	1.127138	6.030129	5.566510	48.82332	.1087292

Elem	Sr4077
Units	ppm
Avg	.2011939
Stddev	.0013033
%RSD	.6478012
#1	.2003852
#2	.2026974
#3	.2004990

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2538.526	76357.99	16319.23	2263.300	4458.246
Stddev	3.837	185.27	136.59	1.167	6.295
%RSD	.1511504	.2426283	.8369741	.0515559	.1412081
#1	2534.096	76567.98	16362.67	2263.275	4452.859
#2	2540.785	76288.35	16166.21	2262.145	4465.166
#3	2540.697	76217.64	16428.82	2264.478	4456.712

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1480-17 Acquired: 3/5/2025 11:38:50 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0639980	.0014694	.1196428	-.018027	-.003199	215.2328	.7848285
Stddev	.0015455	.0017893	.0014661	.002158	.001994	1.6667	.0016005
%RSD	2.414896	121.7706	1.225400	11.96945	62.32953	.7743619	.2039299
#1	.0656239	.0031472	.1207294	-.020479	-.005441	217.1505	.7866633
#2	.0625480	-.000414	.1179752	-.016416	-.002531	214.4138	.7841031
#3	.0638221	.001675	.1202237	-.017187	-.001625	214.1340	.7837192

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065440	-.008428	7.200770	.2082083	.0805440	.0939317	158.2298
Stddev	.0001025	.000305	.006431	.0004085	.0007740	.0007415	.5782
%RSD	1.566664	3.617824	.0893123	.1961891	.9609735	.7893634	.3654320
#1	.0066576	-.008110	7.208145	.2078872	.0809387	.0937254	157.8550
#2	.0065158	-.008719	7.196324	.2086681	.0796522	.0933152	158.8957
#3	.0064585	-.008454	7.197842	.2080696	.0810411	.0947545	157.9386

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3433205	5.655012	.0728320	-.000323	1.630933	.3012216	.1693954
Stddev	.0005052	.027784	.0004351	.000677	.003900	.0014728	.0002386
%RSD	.1471533	.4913186	.5974309	209.9597	.2391089	.4889298	.1408644
#1	.3438924	5.623031	.0732633	-.001053	1.627317	.3023406	.1692119
#2	.3429346	5.668794	.0723931	-.000201	1.630417	.2995531	.1693092
#3	.3431346	5.673211	.0728396	.000286	1.635065	.3017711	.1696651

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.887817	-.132519	.0038959	.0047605	1.550017	7.156191	3.251797
Stddev	.034866	.002599	.0002979	.0004141	.003996	.006544	.014886
%RSD	.5062051	1.961502	7.646412	8.698528	.2578294	.0914505	.4577628
#1	6.856271	-.135216	.0037553	.0045938	1.552903	7.151295	3.264829
#2	6.925254	-.130030	.0036943	.0052320	1.545456	7.163624	3.235575
#3	6.881928	-.132311	.0042381	.0044558	1.551692	7.153654	3.254986

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1480-17 Acquired: 3/5/2025 11:38:50 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.221742	.0833604	.0679895
Stddev	.010425	.0016420	.0000876
%RSD	.8532541	1.969786	.1289006
#1	1.229869	.0816704	.0678953
#2	1.225367	.0849498	.0680048
#3	1.209988	.0834609	.0680685

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2474.047	72021.43	15725.32	2221.598	4328.354
Stddev	3.299	48.69	77.74	3.749	15.651
%RSD	.1333562	.0676083	.4943578	.1687354	.3615902
#1	2471.303	71965.53	15645.57	2217.651	4316.655
#2	2473.132	72044.21	15800.88	2222.033	4346.133
#3	2477.708	72054.57	15729.51	2225.111	4322.276

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1480-25 Acquired: 3/5/2025 11:43:05 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0516414	.0042232	.1229074	-.013070	-.000175	31.29965	.1995660
Stddev	.0021923	.0018350	.0013062	.003037	.000785	.04562	.0007269
%RSD	4.245199	43.45088	1.062791	23.23222	448.7324	.1457633	.3642214
#1	.0527033	.0051631	.1218285	-.009793	-.000717	31.27025	.1987549
#2	.0491204	.0053978	.1243597	-.015788	-.000533	31.27649	.1997847
#3	.0531006	.0021086	.1225340	-.013631	.000726	31.35221	.2001584

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039374	-.005651	6.241667	.2228318	.0150078	.0560349	102.0579
Stddev	.0000575	.000049	.022832	.0000952	.0001965	.0001821	.3391
%RSD	1.459725	.8583146	.3657961	.0427230	1.309020	.3249372	.3322232
#1	.0039027	-.005684	6.231627	.2228137	.0147926	.0560439	101.9756
#2	.0039057	-.005673	6.225575	.2229347	.0150532	.0558485	102.4305
#3	.0040038	-.005595	6.267798	.2227469	.0151775	.0562124	101.7676

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2979401	4.355524	.0416702	-.000465	.5139223	.1516934	.2073021
Stddev	.0009786	.015548	.0003500	.000250	.0143591	.0012892	.0007240
%RSD	.3284421	.3569693	.8398939	53.75800	2.794021	.8498615	.3492695
#1	.2968106	4.342201	.0416137	-.000717	.4987731	.1510350	.2077589
#2	.2984776	4.351764	.0413519	-.000460	.5156607	.1508663	.2076801
#3	.2985320	4.372607	.0420450	-.000217	.5273330	.1531788	.2064673

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.694852	-.089900	.0057437	.0077195	.4817907	5.217752	2.365176
Stddev	.025427	.000917	.0002305	.0005774	.0012462	.005337	.012664
%RSD	.4464955	1.020301	4.013616	7.479157	.2586624	.1022849	.5354236
#1	5.701751	-.089929	.0059990	.0073050	.4831856	5.215472	2.350564
#2	5.716118	-.088968	.0055508	.0074746	.4807872	5.213935	2.372007
#3	5.666687	-.090802	.0056815	.0083789	.4813993	5.223851	2.372958

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1480-25 Acquired: 3/5/2025 11:43:05 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3298448	.0519522	.0549569
Stddev	.0019285	.0006504	.0000984
%RSD	.5846757	1.251939	.1789971
#1	.3319660	.0518638	.0548714
#2	.3293713	.0526423	.0550645
#3	.3281972	.0513505	.0549349

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2465.814	72612.35	15169.44	2184.283	4634.818
Stddev	5.321	179.93	21.12	7.042	6.498
%RSD	.2157906	.2477941	.1392468	.3224059	.1402069
#1	2464.865	72720.05	15178.16	2191.517	4642.263
#2	2461.031	72404.63	15184.80	2177.450	4631.903
#3	2471.545	72712.37	15145.35	2183.882	4630.287

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1474-01DUP Acquired: 3/5/2025 11:47:17 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0962357	.0094578	.2225870	-.035597	-.001141	64.75881	.2818524
Stddev	.0051366	.0002666	.0012504	.003117	.000344	.14047	.0011261
%RSD	5.337463	2.818893	.5617651	8.755059	30.18883	.2169097	.3995284
#1	.1021231	.0091923	.2227074	-.038570	-.000783	64.91711	.2831411
#2	.0926689	.0097255	.2212807	-.032355	-.001170	64.64906	.2813576
#3	.0939152	.0094556	.2237729	-.035866	-.001470	64.71025	.2810584

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0072142	-.009349	43.07075	.2245560	.0427946	.1084023	212.2640
Stddev	.0000661	.000096	.21803	.0009482	.0002000	.0011197	1.0083
%RSD	.9165767	1.025237	.5062097	.4222322	.4672515	1.032885	.4750070
#1	.0072444	-.009349	43.32163	.2255794	.0429332	.1091654	213.2197
#2	.0072598	-.009444	42.92711	.2243811	.0428853	.1071169	211.2103
#3	.0071383	-.009253	42.96351	.2237075	.0425654	.1089245	212.3619

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8069881	16.58430	.0672915	-.002395	2.783047	.2728350	.3037676
Stddev	.0037731	.02759	.0001384	.000295	.005625	.0012789	.0012690
%RSD	.4675491	.1663849	.2056844	12.29894	.2021147	.4687289	.4177546
#1	.8108162	16.60609	.0673138	-.002541	2.776615	.2740597	.3051903
#2	.8032726	16.55327	.0674174	-.002589	2.787047	.2729370	.3027525
#3	.8068755	16.59353	.0671433	-.002056	2.785478	.2715082	.3033599

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.507571	-.212394	.0045395	.0051286	1.114230	5.788184	6.066893
Stddev	.007961	.001939	.0001593	.0010736	.003833	.007504	.034338
%RSD	.0935734	.9127514	3.509065	20.93358	.3439712	.1296493	.5659980
#1	8.506798	-.212988	.0044114	.0047899	1.115515	5.796252	6.103486
#2	8.500025	-.213966	.0044893	.0063307	1.109920	5.781412	6.061822
#3	8.515890	-.210228	.0047179	.0042652	1.117254	5.786888	6.035373

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1474-01DUP Acquired: 3/5/2025 11:47:17 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.096826	.1120922	.1710611
Stddev	.015646	.0001617	.0005412
%RSD	.7461662	.1442331	.3164013
#1	2.114528	.1121793	.1716859
#2	2.084850	.1119056	.1707611
#3	2.091098	.1121916	.1707363

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2417.219	73753.24	15443.76	2203.909	4313.216
Stddev	7.811	177.81	68.43	.583	11.984
%RSD	.3231193	.2410899	.4431106	.0264627	.2778531
#1	2408.355	73578.57	15365.26	2204.539	4299.413
#2	2423.094	73934.04	15475.15	2203.387	4319.254
#3	2420.207	73747.11	15490.87	2203.802	4320.980

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1474-01LX5 Acquired: 3/5/2025 11:51:25 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0175681	.0017877	.0448713	-.005061	.0001125	13.32411	.0537005
Stddev	.0028246	.0019942	.0007988	.001301	.0001192	.01472	.0007332
%RSD	16.07827	111.5554	1.780133	25.71081	105.9556	.1104475	1.365424
#1	.0165924	.0012206	.0449303	-.003582	-.000025	13.32729	.0540615
#2	.0153606	.0001384	.0440447	-.005575	.000172	13.30806	.0541832
#3	.0207512	.0040040	.0456390	-.006027	.000190	13.33697	.0528568

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015997	-.002097	9.005153	.0461646	.0085771	.0237065	42.00162
Stddev	.0000636	.000096	.017693	.0001814	.0001204	.0002814	.22244
%RSD	3.977100	4.585504	.1964733	.3928774	1.403607	1.186996	.5295939
#1	.0016580	-.001996	9.021329	.0460311	.0085172	.0239144	41.95754
#2	.0016094	-.002188	9.007872	.0460915	.0087157	.0233863	41.80452
#3	.0015318	-.002106	8.986258	.0463711	.0084984	.0238189	42.24279

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1671457	3.435593	.0129714	-.000513	.4818615	.0577684	.0612276
Stddev	.0004970	.035760	.0001919	.000086	.0087175	.0015072	.0001866
%RSD	.2973461	1.040866	1.479549	16.82848	1.809127	2.609013	.3047986
#1	.1674750	3.435852	.0128925	-.000523	.4739315	.0567575	.0612127
#2	.1665740	3.471223	.0128314	-.000422	.4804570	.0595007	.0614212
#3	.1673881	3.399704	.0131901	-.000594	.4911959	.0570470	.0610489

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.563912	-.062647	.0005311	-.000034	.2261318	1.024750	1.181089
Stddev	.016917	.001726	.0001684	.000827	.0008414	.016714	.004908
%RSD	1.081697	2.755606	31.70347	2418.594	.3720713	1.631004	.4155111
#1	1.581799	-.064027	.0003936	-.000605	.2270966	1.023037	1.176647
#2	1.548170	-.063202	.0004809	-.000413	.2257476	1.008958	1.180264
#3	1.561767	-.060711	.0007189	.000915	.2255510	1.042253	1.186357

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1474-01LX5 Acquired: 3/5/2025 11:51:25 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4091284	.0175740	.0353896
Stddev	.0035818	.0002178	.0000949
%RSD	.8754659	1.239225	.2681055
#1	.4051599	.0178010	.0354055
#2	.4101041	.0175544	.0352878
#3	.4121213	.0173667	.0354756

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2408.039	75125.73	15021.11	2198.731	4610.917
Stddev	7.444	124.02	64.93	5.989	12.560
%RSD	.3091399	.1650778	.4322725	.2723737	.2723915
#1	2407.894	75082.63	15000.08	2198.595	4602.969
#2	2415.554	75265.54	14969.30	2204.787	4625.397
#3	2400.668	75029.01	15093.95	2192.812	4604.386

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCV02 Acquired: 3/5/2025 11:55:40 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	**5.191795**	**4.928589**	**5.051650**	**5.208731**	**5.218803**	**10.21888**	**9.728047**
Stddev	.029978	.044013	.021994	.022784	.015075	.03132	.121515
%RSD	.5774205	.8930227	.4353829	.4374223	.2888551	.3065070	1.249124
#1	5.208431	4.931971	5.038724	5.209427	5.225423	10.25342	9.811111
#2	5.157187	4.882982	5.039181	5.185608	5.201551	10.21092	9.784450
#3	5.209766	4.970813	5.077045	5.231160	5.229435	10.19231	9.588580

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2462108**	**2.503961**	**24.54289**	**1.042931**	**2.504482**	**1.298997**	**5.100294**
Stddev	.0008478	.009517	.12567	.002676	.007634	.003934	.008818
%RSD	.3443519	.3800869	.5120444	.2565647	.3047960	.3028163	.1728951
#1	.2464170	2.498532	24.65258	1.043982	2.501229	1.297501	5.109711
#2	.2469366	2.498401	24.57033	1.039889	2.499013	1.296032	5.098941
#3	.2452789	2.514950	24.40577	1.044921	2.513203	1.303459	5.092231

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.408812**	**24.38282**	**2.504165**	**1.295510**	**25.29030**	**2.493939**	**2.606331**
Stddev	.016659	.10438	.008568	.000486	.19524	.015603	.004889
%RSD	.6915671	.4280797	.3421654	.0374950	.7719883	.6256298	.1875851
#1	2.424358	24.50094	2.498975	1.295164	25.49322	2.510454	2.611176
#2	2.410851	24.34450	2.499465	1.296065	25.10378	2.491920	2.606417
#3	2.391228	24.30301	2.514055	1.295300	25.27391	2.479445	2.601399

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.05908**	**4.888313**	**5.208954**	**5.035373**	**4.918194**	**5.253984**	**5.054522**
Stddev	.12673	.026788	.018268	.021815	.021547	.037883	.025876
%RSD	.4863349	.5480050	.3507089	.4332420	.4381055	.7210270	.5119424
#1	26.16866	4.885593	5.211436	5.024106	4.940268	5.279796	5.048733
#2	25.92029	4.916358	5.189572	5.021495	4.917100	5.210494	5.032030
#3	26.08828	4.862990	5.225855	5.060518	4.897215	5.271664	5.082802

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCV02 Acquired: 3/5/2025 11:55:40 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.954342**	**4.952934**	**4.985910**
Stddev	.027538	.024171	.007453
%RSD	.5558453	.4880214	.1494830
#1	4.954497	4.980545	4.978545
#2	4.926727	4.942661	4.993448
#3	4.981803	4.935597	4.985737

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2305.118**	**68992.74**	**14303.32**	**2068.424**	**4261.085**
Stddev	6.236	250.69	54.19	7.641	12.838
%RSD	.2705497	.3633560	.3788972	.3694070	.3012901
#1	2305.101	68794.68	14270.69	2059.615	4270.404
#2	2311.363	69274.60	14273.38	2073.260	4266.410
#3	2298.891	68908.95	14365.88	2072.396	4246.441

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCB02 Acquired: 3/5/2025 11:59:51 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	**-.001153**	**-.000895**	**-.001067**	**-.000484**	**.0002279**	**-.008415**	**-.004264**
Stddev	.001377	.000355	.001174	.003820	.0006337	.003144	.000123
%RSD	119.4399	39.68207	109.9780	789.2518	278.0227	37.36105	2.894234
#1	-.000283	-.000518	.000116	.000916	-.000452	-.008059	-.004155
#2	-.000435	-.000944	-.002231	.002438	.000333	-.011723	-.004398
#3	-.002740	-.001222	-.001086	-.004806	.000802	-.005465	-.004240

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000026**	**.0000319**	**-.011984**	**.0000358**	**.0000884**	**.0000689**	**-.012786**
Stddev	.0000672	.0000695	.006192	.0001457	.0001767	.0003257	.001050
%RSD	2541.904	218.0381	51.66896	407.0371	199.9633	472.9128	8.213161
#1	.0000608	-.000042	-.011336	.0000904	.0002607	.0000937	-.012946
#2	.0000181	.000041	-.006141	-.000129	.0000969	.0003815	-.011665
#3	-.000071	.000097	-.018475	.000146	-.000092	-.000269	-.013747

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000122**	**.0067302**	**-.000101**	**.0002402**	**-.068220**	**-.000178**	**-.000644**
Stddev	.000206	.0134756	.000349	.0004778	.017200	.000258	.000070
%RSD	169.2320	200.2252	344.0346	198.8665	25.21296	144.7957	10.81936
#1	-.000202	.0168611	.000299	-.000094	-.053444	-.000288	-.000706
#2	.000112	-.008563	-.000335	.000028	-.064115	-.000362	-.000569
#3	-.000276	.011893	-.000269	.000787	-.087102	.000116	-.000657

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.030868**	**.0007902**	**.0001997**	**.0002172**	**-.000188**	**.0039329**	**-.001159**
Stddev	.020185	.0003953	.0002438	.0004650	.000610	.0038220	.001471
%RSD	65.38951	50.02201	122.0749	214.0741	323.7419	97.18192	126.9124
#1	-.049008	.0005821	.0001358	.0002955	.000242	.0045164	.000455
#2	-.034473	.0005425	.0004692	.0006380	-.000886	.0074296	-.002425
#3	-.009124	.0012461	-.000006	-.000282	.000079	-.000147	-.001507

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCB02 Acquired: 3/5/2025 11:59:51 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.006098**	**-.005380**	**-.000020**
Stddev	.004553	.001792	.000074
%RSD	74.66013	33.30201	368.5027
#1	-.003289	-.005515	.000064
#2	-.003654	-.003525	-.000051
#3	-.011350	-.007100	-.000073

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2445.748**	**73840.94**	**14725.97**	**2230.054**	**4848.080**
Stddev	10.572	198.34	74.18	5.601	15.287
%RSD	.4322470	.2686035	.5037145	.2511669	.3153126
#1	2439.671	73623.08	14740.54	2223.587	4842.398
#2	2457.955	74011.04	14645.59	2233.233	4865.394
#3	2439.617	73888.70	14791.78	2233.343	4836.448

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1474-01MS Acquired: 3/5/2025 12:04:10 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8428150**	**1.822727**	**1.117945**	**1.722265**	**.3907790**	**75.68826**
Stddev	.0060822	.012346	.001357	.002336	.0013587	.06160
%RSD	.7216556	.6773344	.1213623	.1356527	.3476822	.0813843
#1	.8357957	1.836242	1.116379	1.719772	.3897135	75.67503
#2	.8465275	1.819898	1.118699	1.722618	.3903145	75.63436
#3	.8461217	1.812041	1.118757	1.724404	.3923090	75.75540

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4149917**	**.1868112**	**.1811480**	**52.16599**	**.6432066**	**.2415881**
Stddev	.0005527	.0011334	.0001585	.16254	.0007667	.0004896
%RSD	.1331904	.6066956	.0874711	.3115764	.1191981	.2026684
#1	.4150760	.1879629	.1811575	52.34852	.6428041	.2410341
#2	.4154973	.1856971	.1809850	52.03690	.6427250	.2417673
#3	.4144016	.1867736	.1813014	52.11254	.6440907	.2419628

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3931252**	**224.5993**	**1.000350**	**21.91322**	**.5590358**	**.0730548**
Stddev	.0011703	.3932	.003546	.09641	.0012917	.0000979
%RSD	.2976800	.1750606	.3545013	.4399855	.2310650	.1339505
#1	.3922722	224.1717	1.003658	22.00019	.5598785	.0729444
#2	.3926440	224.9452	1.000787	21.80954	.5575486	.0730888
#3	.3944593	224.6812	.996606	21.92993	.5596802	.0731310

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.086097**	**.5415910**	**.5223237**	**22.93189**	**.0808502**	**.3774391**
Stddev	.012994	.0010842	.0014392	.09938	.0040037	.0002831
%RSD	.2134984	.2001778	.2755448	.4333524	4.951971	.0750053
#1	6.095775	.5419559	.5218462	22.86773	.0797401	.3774465
#2	6.091189	.5424455	.5211838	23.04636	.0852918	.3777184
#3	6.071329	.5403714	.5239409	22.88157	.0775187	.3771524

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1474-01MS Acquired: 3/5/2025 12:04:10 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6611428**	**1.204867**	**8.132975**	F **11.64128**	**1.941016**	**.3218879**
Stddev	.0013380	.005502	.037663	.02367	.003725	.0006718
%RSD	.2023826	.4566897	.4630852	.2033415	.1918855	.2087103
#1	.6623724	1.203635	8.093795	11.63271	1.939230	.3216230
#2	.6597178	1.200086	8.136219	11.62309	1.938520	.3226517
#3	.6613382	1.210882	8.168911	11.66804	1.945297	.3213888

Elem	Sr4077
Units	ppm
Avg	**.3505441**
Stddev	.0007384
%RSD	.2106564
#1	.3507512
#2	.3511568
#3	.3497242

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2389.883**	**72299.88**	**15372.12**	**2177.849**	**4227.612**
Stddev	2.715	154.94	89.93	14.161	7.718
%RSD	.1136048	.2143028	.5850267	.6502386	.1825504
#1	2391.752	72302.43	15286.18	2180.256	4229.404
#2	2391.127	72453.53	15465.57	2190.653	4234.276
#3	2386.769	72143.68	15364.60	2162.639	4219.156

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1474-01MSD Acquired: 3/5/2025 12:07:55 Type: Unk
Method: NON EPA-6010-200.7(v2767) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8468351**	**1.808033**	**1.359403**	**1.729078**	**.3937602**	**75.90199**
Stddev	.0006788	.015090	.000881	.003474	.0017046	.12875
%RSD	.0801567	.8346185	.0648219	.2009261	.4329068	.1696275
#1	.8476185	1.823507	1.358637	1.732999	.3957240	75.84525
#2	.8464213	1.793359	1.359205	1.726381	.3926622	75.81135
#3	.8464655	1.807233	1.360366	1.727855	.3928945	76.04936

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4101840**	**.1876452**	**.1734081**	**51.96702**	**.6462096**	**.2405229**
Stddev	.0011451	.0004481	.0004275	.01279	.0015905	.0003388
%RSD	.2791739	.2387985	.2465210	.0246129	.2461250	.1408376
#1	.4090596	.1881594	.1738980	51.97899	.6480090	.2402533
#2	.4113487	.1874379	.1731107	51.96851	.6456282	.2404123
#3	.4101436	.1873383	.1732157	51.95354	.6449916	.2409031

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3804808**	**259.9755**	**1.187115**	**21.92593**	**.5859462**	**.0794278**
Stddev	.0008206	1.0957	.003083	.06916	.0010602	.0002299
%RSD	.2156795	.4214610	.2597184	.3154396	.1809305	.2894477
#1	.3811886	258.8191	1.184386	21.85235	.5870980	.0794322
#2	.3795813	260.9982	1.190459	21.98961	.5850112	.0796554
#3	.3806724	260.1091	1.186500	21.93585	.5857296	.0791957

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.937231**	**.5384738**	**.8348315**	**22.76121**	**.1576536**	**.3768941**
Stddev	.021571	.0011704	.0045932	.07588	.0033599	.0008634
%RSD	.3633117	.2173492	.5501977	.3333898	2.131157	.2290704
#1	5.912793	.5373265	.8378912	22.68454	.1542743	.3778478
#2	5.953621	.5396659	.8370536	22.76281	.1576927	.3761659
#3	5.945277	.5384290	.8295498	22.83628	.1609937	.3766686

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1474-01MSD Acquired: 3/5/2025 12:07:55 Type: Unk
Method: NON EPA-6010-200.7(v2767) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6587757	1.195202	8.136173	F 11.55598	1.916780	.3336331
Stddev	.0006478	.003255	.016549	.05407	.004784	.0010785
%RSD	.0983387	.2723777	.2034062	.4678998	.2495916	.3232465
#1	.6592723	1.191959	8.117415	11.60806	1.920396	.3325868
#2	.6580429	1.198470	8.148712	11.50012	1.911355	.3335716
#3	.6590120	1.195177	8.142392	11.55976	1.918589	.3347411

Elem	Sr4077
Units	ppm
Avg	.3469235
Stddev	.0002405
%RSD	.0693310
#1	.3467054
#2	.3471815
#3	.3468837

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2391.194	71920.06	15255.02	2140.812	4241.780
Stddev	4.704	111.29	21.35	2.580	4.759
%RSD	.1967100	.1547422	.1399223	.1205182	.1121927
#1	2388.554	71939.83	15239.05	2140.695	4236.918
#2	2396.624	72020.14	15279.26	2143.448	4246.428
#3	2388.403	71800.21	15246.75	2138.292	4241.996

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1474-01A Acquired: 3/5/2025 12:11:54 Type: Unk
Method: NON EPA-6010-200.7(v2767) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8563901	1.833989	1.360184	1.764691	.3993361	77.07935
Stddev	.0026188	.008835	.002338	.005154	.0016242	.13229
%RSD	.3057975	.4817175	.1719219	.2920465	.4067280	.1716307
#1	.8546589	1.825494	1.357810	1.760579	.3998129	76.95588
#2	.8551086	1.843128	1.362485	1.763021	.4006685	77.06320
#3	.8594029	1.833346	1.360255	1.770472	.3975268	77.21898

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4011068	.1925223	.1762771	52.32896	.6486599	.2411275
Stddev	.0013781	.0004494	.0007662	.09186	.0005386	.0003975
%RSD	.3435675	.2334398	.4346582	.1755413	.0830351	.1648565
#1	.4002975	.1920219	.1754084	52.22898	.6487262	.2406722
#2	.4026980	.1926536	.1765659	52.40963	.6491624	.2413047
#3	.4003250	.1928915	.1768569	52.34827	.6480913	.2414056

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3863051	252.2247	1.184747	22.02729	.5889044	.0786259
Stddev	.0012184	1.2231	.002600	.03604	.0007641	.0006106
%RSD	.3154045	.4849285	.2194797	.1635961	.1297453	.7765895
#1	.3850363	253.5668	1.187674	22.05717	.5880688	.0793309
#2	.3874659	251.9344	1.182703	21.98727	.5890769	.0782703
#3	.3864130	251.1728	1.183864	22.03742	.5895674	.0782764

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.698783	.5396636	.8531422	22.17880	.1128753	.3822998
Stddev	.022432	.0010488	.0049263	.05760	.0038397	.0007437
%RSD	.3936265	.1943448	.5774344	.2597099	3.401758	.1945434
#1	5.709649	.5408730	.8586569	22.22393	.1171963	.3814422
#2	5.672988	.5390046	.8491766	22.11392	.1098545	.3826886
#3	5.713713	.5391132	.8515931	22.19855	.1115750	.3827685

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1474-01A Acquired: 3/5/2025 12:11:54 Type: Unk
Method: NON EPA-6010-200.7(v2767) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6618664	1.197383	8.105454	F 11.50668	1.934902	.3324507
Stddev	.0037851	.002733	.034248	.02565	.011842	.0005510
%RSD	.5718892	.2282179	.4225351	.2228716	.6119974	.1657301
#1	.6583284	1.196753	8.138829	11.47773	1.922194	.3326896
#2	.6614130	1.195020	8.107139	11.51580	1.945628	.3318205
#3	.6658578	1.200376	8.070395	11.52653	1.936883	.3328418

Elem	Sr4077
Units	ppm
Avg	.3430421
Stddev	.0007326
%RSD	.2135528
#1	.3423427
#2	.3429797
#3	.3438039

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2358.675	71622.96	14801.59	2108.665	4218.057
Stddev	.294	300.76	25.06	11.826	9.589
%RSD	.0124512	.4199178	.1693080	.5608150	.2273259
#1	2358.510	71379.46	14813.29	2098.614	4226.616
#2	2359.014	71530.26	14772.82	2105.684	4219.862
#3	2358.501	71959.15	14818.67	2121.696	4207.695

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: LR1 Acquired: 3/5/2025 12:15:55 Type: Unk
Method: NON EPA-6010-200.7(v2767) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0545667	.0750026	.0202748	-.141380	-.015438	2103.296	.0106760
Stddev	.0112925	.0033014	.0064763	.007869	.008035	19.449	.0007514
%RSD	20.69490	4.401755	31.94280	5.566215	52.04651	.9246690	7.037991
#1	.0416592	.0744599	.0150710	-.135185	-.015734	2086.710	.0115317
#2	.0594179	.0720061	.0182254	-.150235	-.023320	2098.477	.0101241
#3	.0626229	.0785417	.0275278	-.138719	-.007259	2124.701	.0103723

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0066454	-.027666	1959.462	.0124993	.0274245	.0279294	1025.235
Stddev	.0000763	.001165	10.733	.0002583	.0003935	.0027832	3.615
%RSD	1.148353	4.210156	.5477627	2.066479	1.434689	9.965235	.3525576
#1	.0065897	-.026962	1950.667	.0127199	.0269704	.0278483	1025.176
#2	.0067324	-.029011	1956.296	.0125629	.0276386	.0251876	1028.879
#3	.0066142	-.027026	1971.422	.0122152	.0276645	.0307522	1021.651

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0153295	1714.596	.0119779	-.005674	2082.119	.0145483	.0643785
Stddev	.0004369	8.300	.0017458	.000712	2.833	.0009395	.0004204
%RSD	2.850230	.4840910	14.57500	12.54660	.1360401	6.457658	.6529937
#1	.0157170	1705.490	.0120219	-.005258	2079.189	.0136705	.0639157
#2	.0154156	1721.739	.0102105	-.005269	2084.842	.0144352	.0647366
#3	.0148560	1716.559	.0137012	-.006496	2082.327	.0155392	.0644833

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1363.549	^ *****	.0068749	-.001892	-.036710	.1536029	.0705063
Stddev	11.616	-----	.0002227	.002030	.000933	.0093413	.0082378
%RSD	.8518898	-----	3.238984	107.2967	2.542488	6.081453	11.68384
#1	1350.136	^ -----	.0067973	-.003871	-.036044	.1432726	.0639332
#2	1370.345	^ -----	.0071260	.000185	-.036310	.1614556	.0678382
#3	1370.165	^ -----	.0067014	-.001990	-.037777	.1560806	.0797475

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: LR1 Acquired: 3/5/2025 12:15:55 Type: Unk
Method: NON EPA-6010-200.7(v2767) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.217003**	**.0978715**	**.0115080**
Stddev	.006381	.0040514	.0000794
%RSD	2.940695	4.139487	.6903255
#1	-.209838	.1006106	.0114658
#2	-.222074	.0997863	.0115996
#3	-.219097	.0932177	.0114586

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1622.129**	**48950.89**	**12396.03**	**1442.393**	**2557.414**
Stddev	3.426	118.20	53.23	7.082	1.983
%RSD	.2111814	.2414664	.4294445	.4909809	.0775300
#1	1618.239	49087.17	12451.06	1442.288	2555.141
#2	1624.698	48889.11	12392.25	1435.365	2558.789
#3	1623.448	48876.37	12344.79	1449.528	2558.312

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: LR2 Acquired: 3/5/2025 12:20:52 Type: Unk
Method: NON EPA-6010-200.7(v2767) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0095596**	**-.015878**	**268.7239**	**.0036940**	**.0071980**	**.1625209**	^F *****
Stddev	.0013524	.003535	.6248	.0016737	.0009384	.0062999	-----
%RSD	14.14740	22.26164	.2325003	45.30743	13.03680	3.876387	-----
#1	.0102231	-.015979	268.6540	.0056182	.0081734	.1689041	84.98522
#2	.0080036	-.019361	269.3807	.0028880	.0071191	.1563077	85.83174
#3	.0104522	-.012294	268.1370	.0025759	.0063016	.1623508	^ -----

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002555**	**-.002614**	**.2365199**	**.0086459**	**.0059328**	**243.7142**	**-.012720**
Stddev	.000043	.000121	.0074672	.0002087	.0001734	1.9113	.004125
%RSD	1.697773	4.632215	3.157117	2.414097	2.923361	.7842432	32.42935
#1	-.002563	-.002674	.2431608	.0088722	.0060386	244.4592	-.012003
#2	-.002594	-.002475	.2379620	.0086045	.0057326	241.5426	-.017157
#3	-.002508	-.002693	.2284368	.0084610	.0060272	245.1409	-.009001

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**45.44952**	**-.086720**	**45.64919**	**.0005419**	**.2007773**	**-.010011**	**37.82426**
Stddev	.19338	.014592	.13431	.0002657	.0302872	.000735	.23765
%RSD	.4254817	16.82639	.2942199	49.02423	15.08496	7.340856	.6283098
#1	45.22814	-.070131	45.56390	.0008487	.2278855	-.009832	38.09737
#2	45.53495	-.092461	45.80401	.0003926	.2063589	-.009383	37.66454
#3	45.58547	-.097569	45.57967	.0003846	.1680876	-.010820	37.71086

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2999526**	**-.010167**	**-.006165**	**-.003976**	**-.033915**	**-.012729**	**.3291173**
Stddev	.0421198	.000126	.000329	.000674	.000369	.004220	.0063530
%RSD	14.04215	1.239700	5.342879	16.95915	1.087412	33.15283	1.930320
#1	.3479782	-.010305	-.006025	-.004383	-.033518	-.007858	.3336024
#2	.2692891	-.010139	-.005929	-.003198	-.034247	-.015052	.3319022
#3	.2825904	-.010057	-.006541	-.004347	-.033980	-.015277	.3218475

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: LR2 Acquired: 3/5/2025 12:20:52 Type: Unk
Method: NON EPA-6010-200.7(v2767) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.008883	.0025087	.0014891
Stddev	.007966	.0012611	.0000846
%RSD	89.67270	50.26849	5.684643
#1	-.018074	.0016293	.0013957
#2	-.003964	.0039536	.0015111
#3	-.004612	.0019433	.0015606

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2238.438	72850.22	14862.05	2101.199	4503.355
Stddev	2.743	254.76	114.38	10.317	9.021
%RSD	.1225328	.3497092	.7695985	.4909955	.2003127
#1	2240.094	72583.55	14768.43	2089.468	4498.113
#2	2235.272	72875.97	14828.18	2108.862	4498.180
#3	2239.948	73091.13	14989.54	2105.266	4513.771

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1447-01DUP Acquired: 3/5/2025 12:25:31 Type: Unk
Method: NON EPA-6010-200.7(v2767) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0371389**	**.0179306**	**1.300404**	**-.042386**	**.0005428**	**74.43822**	**.9263788**
Stddev	.0020197	.0008974	.009883	.003258	.0025980	.02228	.0028110
%RSD	5.438230	5.005042	.7599654	7.687489	478.6317	.0299336	.3034365
#1	.0353427	.0189526	1.310563	-.039095	.0035220	74.41275	.9266154
#2	.0393252	.0172709	1.299827	-.045611	-.000642	74.45409	.9234570
#3	.0367488	.0175685	1.290823	-.042452	-.001251	74.44783	.9290640

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0081739**	**-.016592**	**11.56359**	**.1658848**	**.0948540**	**.4502482**	**332.9296**
Stddev	.0000489	.000195	.06854	.0002254	.0003788	.0011609	.8758
%RSD	.5980194	1.176636	.5927640	.1358989	.3993964	.2578314	.2630654
#1	.0081404	-.016450	11.48498	.1658799	.0952126	.4515781	332.2599
#2	.0081514	-.016511	11.59489	.1656619	.0948917	.4494382	332.6081
#3	.0082300	-.016814	11.61090	.1661127	.0944577	.4497282	333.9207

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.082304**	**31.25432**	**.1882919**	**.0050572**	**1.250837**	**.2137462**	**1.151103**
Stddev	.010020	.14882	.0006051	.0004325	.008847	.0010722	.009993
%RSD	.1647476	.4761655	.3213653	8.551766	.7072827	.5016121	.8681218
#1	6.076738	31.13964	.1886304	.0051510	1.259502	.2132930	1.141854
#2	6.076302	31.42250	.1875933	.0045855	1.241819	.2129751	1.149753
#3	6.093872	31.20084	.1886521	.0054351	1.251191	.2149706	1.161703

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.434086**	**-.131829**	**.0041028**	**.0084269**	**2.148484**	**3.980928**	**5.834890**
Stddev	.049941	.001346	.0002788	.0011818	.001660	.011647	.009107
%RSD	.5293673	1.021181	6.795832	14.02401	.0772466	.2925632	.1560756
#1	9.445207	-.130600	.0043453	.0097879	2.146774	3.967480	5.844246
#2	9.379522	-.133268	.0037982	.0078334	2.148590	3.987590	5.834368
#3	9.477529	-.131620	.0041651	.0076596	2.150089	3.987715	5.826055

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1447-01DUP Acquired: 3/5/2025 12:25:31 Type: Unk
Method: NON EPA-6010-200.7(v2767) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.881876	.2650080	.1281639
Stddev	.010809	.0013902	.0002616
%RSD	.5743581	.5245860	.2041079
#1	1.893957	.2647342	.1281719
#2	1.873121	.2637751	.1278984
#3	1.878550	.2665147	.1284214

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2617.992	79111.07	17218.97	2347.106	4282.902
Stddev	3.905	101.65	36.37	14.820	12.142
%RSD	.1491788	.1284935	.2112247	.6314002	.2834983
#1	2613.567	79212.09	17240.97	2363.025	4268.922
#2	2619.451	79112.32	17176.99	2344.582	4288.973
#3	2620.958	79008.79	17238.95	2333.710	4290.811

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1447-01LX5 Acquired: 3/5/2025 12:29:36 Type: Unk
Method: NON EPA-6010-200.7(v2767) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048797	.0019739	.3369567	-.007397	-.000349	14.66952	.1904639
Stddev	.0023775	.0002639	.0006882	.001533	.001237	.07488	.0004578
%RSD	48.72288	13.36747	.2042469	20.72880	354.6537	.5104783	.2403674
#1	.0028669	.0018110	.3377492	-.008966	-.000011	14.72732	.1909366
#2	.0042692	.0018324	.3366106	-.005902	.000684	14.69631	.1904326
#3	.0075029	.0022784	.3365102	-.007323	-.001720	14.58493	.1900226

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016898	-.003439	3.065830	.0334624	.0162098	.0960530	52.85398
Stddev	.0000693	.000056	.017934	.0004666	.0000516	.0007036	.34836
%RSD	4.099540	1.615227	.5849737	1.394298	.3185734	.7324663	.6591002
#1	.0017465	-.003395	3.052528	.0338097	.0162400	.0968633	52.45192
#2	.0017103	-.003421	3.086226	.0336455	.0162392	.0955975	53.06578
#3	.0016126	-.003502	3.058735	.0329321	.0161502	.0956981	53.04424

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.363777	6.243094	.0348629	.0007181	.2550991	.0404323	.2283822
Stddev	.003468	.045100	.0004037	.0001241	.0231408	.0001713	.0008477
%RSD	.2543093	.7223902	1.157982	17.27592	9.071293	.4237572	.3711872
#1	1.364509	6.277109	.0350795	.0006608	.2315598	.0405809	.2280166
#2	1.366822	6.260237	.0351120	.0008605	.2778196	.0402448	.2293514
#3	1.360002	6.191937	.0343971	.0006331	.2559179	.0404710	.2277786

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.770261	-.034329	.0005294	.0006343	.3631600	1.043510	.8894458
Stddev	.026154	.001260	.0001668	.0004997	.0014059	.006323	.0018231
%RSD	1.477422	3.669074	31.51093	78.77989	.3871213	.6059662	.2049702
#1	1.754051	-.035485	.0006971	.0001529	.3633748	1.049893	.8877254
#2	1.800434	-.034514	.0003634	.0005995	.3644461	1.043389	.8913566
#3	1.756298	-.032987	.0005279	.0011504	.3616591	1.037248	.8892553

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1447-01LX5 Acquired: 3/5/2025 12:29:36 Type: Unk
Method: NON EPA-6010-200.7(v2767) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3230760	.0456038	.0246475
Stddev	.0020189	.0004201	.0000885
%RSD	.6248877	.9212360	.3589898
#1	.3213798	.0455445	.0247289
#2	.3225392	.0460504	.0246604
#3	.3253090	.0452165	.0245533

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2490.013	73639.03	15505.39	2184.684	4671.310
Stddev	2.620	228.69	88.62	6.712	7.517
%RSD	.1052194	.3105602	.5715468	.3072239	.1609152
#1	2487.119	73867.13	15418.59	2190.314	4665.383
#2	2492.224	73409.75	15501.86	2177.256	4679.765
#3	2490.695	73640.21	15595.73	2186.482	4668.783

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1447-01MS Acquired: 3/5/2025 12:33:49 Type: Unk
Method: NON EPA-6010-200.7(v2767) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7736101	1.866060	2.335922	1.631708	.3966759	88.96778
Stddev	.0046606	.039841	.007671	.006388	.0029199	.18069
%RSD	.6024467	2.135053	.3283879	.3914649	.7360971	.2031001
#1	.7753072	1.867025	2.341710	1.636187	.3947440	89.04653
#2	.7771843	1.905410	2.338833	1.634544	.4000349	88.76108
#3	.7683388	1.825745	2.327221	1.624394	.3952488	89.09573

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.232617	.1696220	.1842621	12.74122	.5347380	.3060737
Stddev	.001764	.0003345	.0010599	.01304	.0022039	.0012366
%RSD	.1431307	.1971708	.5752076	.1023750	.4121435	.4040282
#1	1.234150	.1698129	.1850092	12.74038	.5334228	.3068245
#2	1.230688	.1698172	.1847280	12.75466	.5335088	.3067502
#3	1.233012	.1692358	.1830490	12.72862	.5372823	.3046465

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7561351	264.5303	8.043891	36.07649	.7414287	.0735510
Stddev	.0039035	.4531	.025174	.08563	.0030424	.0004080
%RSD	.5162473	.1712993	.3129627	.2373517	.4103452	.5547010
#1	.7573671	264.8328	8.072002	36.17280	.7443158	.0739861
#2	.7592740	264.0093	8.023427	36.00896	.7417184	.0731770
#3	.7517643	264.7488	8.036243	36.04769	.7382517	.0734898

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.922973	.4483662	1.330671	19.33902	.1013937	.3628922
Stddev	.005294	.0010756	.004918	.07995	.0030538	.0009047
%RSD	.1349451	.2399016	.3695830	.4133922	3.011860	.2493043
#1	3.918190	.4491863	1.327365	19.29964	.0980520	.3636862
#2	3.922067	.4487640	1.328325	19.28641	.1020894	.3630831
#3	3.928661	.4471483	1.336323	19.43102	.1040396	.3619073

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1447-01MS Acquired: 3/5/2025 12:33:49 Type: Unk
Method: NON EPA-6010-200.7(v2767) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6870868	1.951784	6.347144	F 11.11503	1.536729	.4476707
Stddev	.0018636	.004734	.023218	.03041	.008055	.0005010
%RSD	.2712295	.2425448	.3658071	.2735733	.5241572	.1119130
#1	.6875347	1.957243	6.326205	11.14842	1.538214	.4471880
#2	.6886856	1.949294	6.343114	11.10775	1.543938	.4476358
#3	.6850401	1.948814	6.372114	11.08893	1.528035	.4481882

Elem	Sr4077
Units	ppm
Avg	.3016704
Stddev	.0005005
%RSD	.1659022
#1	.3020340
#2	.3010996
#3	.3018775

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2598.805	79617.83	17458.26	2342.337	4206.220
Stddev	8.634	85.01	45.46	13.393	17.910
%RSD	.3322190	.1067756	.2604207	.5717624	.4257964
#1	2596.374	79675.79	17428.40	2352.689	4192.018
#2	2591.648	79520.24	17435.79	2347.111	4200.301
#3	2608.394	79657.47	17510.58	2327.212	4226.340

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1447-01MSD Acquired: 3/5/2025 12:37:37 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7518877**	**1.871001**	**1.899662**	**1.588134**	**.3792152**	**88.79806**
Stddev	.0016606	.014432	.006364	.006593	.0009628	.43562
%RSD	.2208607	.7713705	.3350149	.4151503	.2538956	.4905739
#1	.7511145	1.886226	1.905403	1.594132	.3803133	88.84301
#2	.7537939	1.857520	1.900765	1.581074	.3785157	89.20947
#3	.7507546	1.869257	1.892819	1.589196	.3788165	88.34171

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.222991**	**.1704214**	**.1905716**	**22.17873**	**.5331856**	**.3042880**
Stddev	.004036	.0017114	.0008613	.16769	.0017659	.0003980
%RSD	.3299816	1.004201	.4519796	.7560629	.3311899	.1307917
#1	1.225590	.1707956	.1913289	22.17213	.5323377	.3043343
#2	1.225042	.1719147	.1907514	22.34962	.5320037	.3038689
#3	1.218342	.1685539	.1896346	22.01445	.5352155	.3046608

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7561022**	**224.4851**	**6.845164**	**36.05410**	**.6995401**	**.0661812**
Stddev	.0016919	1.1320	.044176	.35667	.0007655	.0003437
%RSD	.2237598	.5042642	.6453608	.9892664	.1094270	.5193779
#1	.7579624	223.9898	6.847122	35.96370	.6999662	.0659707
#2	.7556891	223.6852	6.888328	36.44727	.6999978	.0659952
#3	.7546552	225.7804	6.800041	35.75133	.6986564	.0665779

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.864130**	**.4493481**	**.8263229**	**19.08572**	**.0117952**	**.3594792**
Stddev	.032417	.0043800	.0004082	.17750	.0087433	.0008120
%RSD	.8389212	.9747570	.0493974	.9300257	74.12582	.2258774
#1	3.860313	.4486462	.8266404	19.11086	.0106007	.3603717
#2	3.833790	.4540367	.8258625	18.89699	.0037106	.3592815
#3	3.898286	.4453614	.8264657	19.24931	.0210744	.3587843

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1447-01MSD Acquired: 3/5/2025 12:37:37 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6814413	1.944037	6.732122	F 10.92839	1.527872	.4276254
Stddev	.0017982	.008061	.047594	.02234	.003277	.0009286
%RSD	.2638805	.4146443	.7069696	.2044174	.2145002	.2171603
#1	.6811591	1.944507	6.713168	10.91176	1.524456	.4284572
#2	.6833639	1.951852	6.696924	10.95378	1.528168	.4277954
#3	.6798009	1.935751	6.786272	10.91962	1.530991	.4266234

Elem	Sr4077
Units	ppm
Avg	.2988294
Stddev	.0014238
%RSD	.4764656
#1	.2997220
#2	.2995788
#3	.2971874

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2650.719	80179.50	17464.57	2354.283	4266.019
Stddev	3.689	213.82	165.19	3.917	2.333
%RSD	.1391621	.2666813	.9458707	.1663829	.0546823
#1	2646.574	80245.45	17445.93	2353.774	4263.413
#2	2653.641	80352.58	17309.50	2358.429	4267.913
#3	2651.943	79940.47	17638.30	2350.644	4266.731

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1447-01A Acquired: 3/5/2025 12:41:36 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7442574	1.838411	2.056083	1.563128	.3706098	87.50149
Stddev	.0036767	.037743	.020610	.011003	.0007531	.10635
%RSD	.4940156	2.053012	1.002374	.7039251	.2032162	.1215434
#1	.7479756	1.863693	2.049268	1.562201	.3709251	87.52110
#2	.7406235	1.795027	2.039744	1.552618	.3697503	87.38670
#3	.7441730	1.856513	2.079237	1.574566	.3711541	87.59668

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.216993	.1647762	.1881652	23.43456	.5243046	.2984019
Stddev	.004832	.0006119	.0021445	.08472	.0027689	.0028224
%RSD	.3970194	.3713562	1.139664	.3615109	.5281087	.9458397
#1	1.217715	.1646590	.1875881	23.47183	.5260143	.2979316
#2	1.211840	.1642314	.1863684	23.33760	.5257896	.2958441
#3	1.221422	.1654383	.1905392	23.49426	.5211100	.3014299

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7632177	228.3811	5.658220	35.76662	.6881783	.0624396
Stddev	.0055895	.7221	.018997	.08880	.0066605	.0001497
%RSD	.7323536	.3161648	.3357400	.2482878	.9678418	.2397684
#1	.7615755	229.1641	5.662819	35.83917	.6859727	.0626109
#2	.7586333	228.2375	5.637347	35.66759	.6829004	.0623337
#3	.7694443	227.7415	5.674496	35.79311	.6956618	.0623742

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.776329	.4476078	.8454100	18.64373	-.012521	.3570975
Stddev	.016342	.0010724	.0027416	.03123	.004903	.0020565
%RSD	.4327437	.2395775	.3242887	.1675113	39.16231	.5758814
#1	3.766497	.4464834	.8430799	18.65242	-.016510	.3567722
#2	3.795193	.4486191	.8447192	18.66969	-.007047	.3552230
#3	3.767297	.4477209	.8484309	18.60907	-.014006	.3592972

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1447-01A Acquired: 3/5/2025 12:41:36 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6725663	2.125367	6.335253	F 11.49089	1.701664	.4182004
Stddev	.0071948	.006129	.022461	.13260	.021761	.0007091
%RSD	1.069757	.2883933	.3545330	1.153977	1.278830	.1695555
#1	.6720424	2.123577	6.361179	11.42187	1.695681	.4190189
#2	.6656477	2.120331	6.321687	11.40704	1.683520	.4177743
#3	.6800088	2.132191	6.322893	11.64377	1.725791	.4178079

Elem	Sr4077
Units	ppm
Avg	.2970738
Stddev	.0011239
%RSD	.3783156
#1	.2974056
#2	.2958214
#3	.2979944

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2635.650	82729.85	17616.91	2416.705	4223.009
Stddev	16.177	364.82	45.59	8.874	37.047
%RSD	.6137910	.4409813	.2587572	.3671879	.8772634
#1	2638.584	82412.31	17578.09	2408.118	4231.229
#2	2650.160	82648.89	17667.11	2416.158	4255.256
#3	2618.206	83128.35	17605.53	2425.840	4182.542

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCV03 Acquired: 3/5/2025 12:45:35 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.024252**	**4.790334**	**4.938568**	**5.036730**	**5.080583**	**10.10989**	**10.04263**
Stddev	.013853	.075288	.010894	.021363	.014201	.02166	.05352
%RSD	.2757151	1.571672	.2205850	.4241536	.2795095	.2142034	.5329120
#1	5.032366	4.864444	4.949405	5.059849	5.096138	10.10846	10.06206
#2	5.008257	4.713921	4.927619	5.017718	5.068312	10.13222	10.08372
#3	5.032133	4.792638	4.938681	5.032625	5.077299	10.08898	9.98211

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2442422**	**2.452642**	**24.43625**	**1.020747**	**2.469212**	**1.267301**	**4.957260**
Stddev	.0013838	.003524	.05933	.000271	.004155	.003246	.031374
%RSD	.5665608	.1436933	.2427834	.0265046	.1682806	.2561354	.6328980
#1	.2439163	2.456225	24.41906	1.020555	2.472505	1.270527	4.923687
#2	.2457599	2.449180	24.50228	1.021057	2.464544	1.264035	4.962258
#3	.2430505	2.452522	24.38742	1.020631	2.470587	1.267340	4.985835

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.388880**	**23.97962**	**2.471728**	**1.277159**	**25.59285**	**2.471892**	**2.555615**
Stddev	.004058	.05491	.003516	.003886	.11490	.011200	.011414
%RSD	.1698676	.2289727	.1422672	.3042815	.4489423	.4530806	.4466385
#1	2.384985	23.97381	2.475109	1.280250	25.61734	2.470291	2.568683
#2	2.393084	24.03721	2.468090	1.278431	25.46768	2.483806	2.550571
#3	2.388572	23.92785	2.471983	1.272796	25.69353	2.461579	2.547592

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.02667**	**4.867844**	**5.082993**	**4.911532**	**4.921806**	**5.098701**	**4.983987**
Stddev	.07967	.026018	.017161	.022319	.005789	.022387	.013549
%RSD	.3061250	.5344821	.3376124	.4544163	.1176202	.4390639	.2718465
#1	26.02464	4.864536	5.102685	4.936847	4.918108	5.092243	4.978468
#2	25.94804	4.895358	5.071228	4.894694	4.928478	5.080253	4.974068
#3	26.10735	4.843638	5.075067	4.903055	4.918833	5.123606	4.999424

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCV03 Acquired: 3/5/2025 12:45:35 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.878389**	**5.054215**	**5.030451**
Stddev	.026974	.004662	.030838
%RSD	.5529190	.0922395	.6130190
#1	4.895353	5.058339	4.998680
#2	4.847285	5.055150	5.032411
#3	4.892528	5.049157	5.060261

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2379.193**	**71274.99**	**14489.13**	**2114.859**	**4350.772**
Stddev	7.020	63.04	72.33	12.742	8.668
%RSD	.2950420	.0884413	.4992176	.6025158	.1992331
#1	2371.266	71291.11	14516.33	2101.051	4340.763
#2	2381.692	71205.46	14407.13	2117.360	4355.874
#3	2384.622	71328.40	14543.91	2126.165	4355.678

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCB03 Acquired: 3/5/2025 12:49:47 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	**-.001119**	**-.000978**	**-.000772**	**.0000795**	**-.000811**	**-.006392**	**-.006243**
Stddev	.000140	.001130	.000616	.0031715	.000871	.000857	.000268
%RSD	12.52095	115.5402	79.71943	3987.932	107.4226	13.40765	4.299513
#1	-.000974	-.000452	-.000727	.0014176	-.001809	-.007380	-.005940
#2	-.001253	-.000207	-.001409	-.003542	-.000204	-.005845	-.006448
#3	-.001130	-.002274	-.000180	.002363	-.000419	-.005950	-.006343

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000367**	**.0001080**	**-.006365**	**.0004365**	**.0000856**	**.0001003**	**-.010257**
Stddev	.0000165	.0000042	.002055	.0003122	.0000786	.0001888	.003900
%RSD	45.00264	3.913648	32.29404	71.52269	91.85468	188.2233	38.02098
#1	.0000557	.0001033	-.008447	.0001233	.0000431	.0002203	-.008317
#2	.0000265	.0001115	-.006311	.0004385	.0001763	-.000117	-.007708
#3	.0000278	.0001093	-.004337	.0007477	.0000374	.000198	-.014746

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000055**	**.0026366**	**-.000344**	**.0003214**	**-.000751**	**-.000022**	**-.000391**
Stddev	.000420	.0076111	.000093	.0004348	.027505	.002050	.000183
%RSD	759.7707	288.6665	27.00754	135.2829	3664.357	9196.210	46.96388
#1	-.000534	.0002467	-.000328	-.000130	-.011007	-.002389	-.000520
#2	.000256	.0111559	-.000260	.000356	-.021653	.001214	-.000181
#3	.000111	-.003493	-.000443	.000738	.030409	.001108	-.000471

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0393619**	**-.003934**	**.0002788**	**-.000127**	**.0006847**	**-.001614**	**-.001907**
Stddev	.0031531	.000892	.0004537	.000146	.0005362	.003200	.001733
%RSD	8.010648	22.66128	162.7033	114.4848	78.31377	198.2515	90.83673
#1	.0429549	-.002916	.0004294	-.000145	.0011381	.002075	-.001096
#2	.0370556	-.004575	.0006381	.000027	.0000928	-.003643	-.003897
#3	.0380751	-.004311	-.000231	-.000263	.0008233	-.003273	-.000729

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCB03 Acquired: 3/5/2025 12:49:47 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.006558**	**-.003782**	**-.000049**
Stddev	.003344	.000541	.000024
%RSD	50.98482	14.29767	48.87828
#1	-.008223	-.004172	-.000031
#2	-.002709	-.004010	-.000040
#3	-.008742	-.003165	-.000077

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2465.534**	**74723.27**	**14718.93**	**2214.996**	**4882.384**
Stddev	3.049	124.77	67.61	5.156	14.932
%RSD	.1236850	.1669796	.4593408	.2327858	.3058424
#1	2462.021	74650.75	14792.53	2209.582	4865.218
#2	2467.490	74651.71	14704.68	2215.557	4889.563
#3	2467.093	74867.34	14659.58	2219.848	4892.371

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166962BL Acquired: 3/5/2025 13:12:41 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011011	-.001918	-.001068	.0012119	-.000154	-.011373	-.005668
Stddev	.0009821	.001184	.000398	.0009352	.001461	.003487	.000450
%RSD	89.19213	61.73383	37.25072	77.16567	947.6599	30.66058	7.938937
#1	.0002782	-.000551	-.001295	.0015397	.000600	-.007349	-.006186
#2	.0021884	-.002609	-.000609	.0001569	-.001838	-.013256	-.005446
#3	.0008369	-.002594	-.001301	.0019390	.000775	-.013514	-.005372

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000106	-.000014	-.018078	.0001064	.0000858	-.000005	-.012567
Stddev	.0000400	.000028	.003395	.0001319	.0000932	.000121	.001007
%RSD	379.4654	205.6077	18.78066	123.9624	108.5805	2258.121	8.012331
#1	.0000458	.000018	-.014602	.0002236	.0001465	-.000136	-.012031
#2	-.000033	-.000022	-.018245	.0001319	.0001323	.000017	-.011941
#3	.000019	-.000037	-.021386	-.000036	-.000021	.000103	-.013729

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000469	.0009882	-.000382	.0001165	-.040421	-.000114	-.000934
Stddev	.000263	.0185077	.000130	.0004768	.012292	.000456	.000306
%RSD	56.10018	1872.926	34.07171	409.4233	30.41042	399.0021	32.72691
#1	-.000512	.0146511	-.000291	.0000846	-.051645	.000349	-.000656
#2	-.000708	.0083880	-.000324	-.000344	-.042335	-.000563	-.000884
#3	-.000187	-.020075	-.000531	.000608	-.027284	-.000129	-.001261

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.035020	-.009855	-.000273	-.000078	.0001390	-.000349	-.001274
Stddev	.020191	.001001	.000327	.000284	.0001939	.003223	.001974
%RSD	57.65625	10.15706	119.7479	365.0444	139.4562	923.2121	154.9539
#1	-.023333	-.010575	.000030	-.000402	.0001788	-.002939	-.003450
#2	-.058334	-.010279	-.000619	.000132	.0003100	.003260	-.000776
#3	-.023392	-.008712	-.000230	.000036	-.000072	-.001369	.000403

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166962BL Acquired: 3/5/2025 13:12:41 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.005679	-.004411	-.000126
Stddev	.001306	.000624	.000038
%RSD	23.00537	14.13860	30.18762
#1	-.004194	-.004930	-.000152
#2	-.006187	-.003719	-.000082
#3	-.006654	-.004584	-.000143

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2433.803	73808.92	14889.84	2183.033	4782.951
Stddev	6.256	276.72	55.12	2.506	8.690
%RSD	.2570563	.3749132	.3701728	.1147908	.1816830
#1	2435.256	73512.13	14896.39	2180.776	4780.054
#2	2439.205	73854.80	14831.74	2182.592	4792.720
#3	2426.948	74059.83	14941.39	2185.730	4776.080

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166962BS Acquired: 3/5/2025 13:17:01 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7974424**	**1.973533**	**.9455906**	**1.963125**	**.6595557**	**1.896596**
Stddev	.0043420	.019142	.0037709	.004493	.0020219	.004570
%RSD	.5444860	.9699480	.3987908	.2288477	.3065535	.2409565
#1	.7928938	1.959712	.9423154	1.962762	.6573914	1.895451
#2	.7978902	1.995382	.9497131	1.967788	.6613961	1.901629
#3	.8015431	1.965505	.9447433	1.958825	.6598795	1.892707

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1771471**	**.1883136**	**.1858526**	**.9242142**	**.4010046**	**.1896367**
Stddev	.0009802	.0008614	.0007370	.0046102	.0006975	.0009175
%RSD	.5533329	.4574053	.3965669	.4988207	.1739305	.4838024
#1	.1782745	.1892829	.1850249	.9223957	.4015509	.1887597
#2	.1766702	.1876359	.1864379	.9207907	.4002190	.1905899
#3	.1764966	.1880220	.1860949	.9294563	.4012440	.1895605

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3058916**	**2.883210**	**.1818478**	**1.812742**	**.4767710**	**.0754397**
Stddev	.0002514	.020477	.0001638	.006996	.0013130	.0003279
%RSD	.0821906	.7102282	.0900882	.3859449	.2753876	.4347236
#1	.3060234	2.864217	.1816864	1.818036	.4755279	.0756442
#2	.3060496	2.880510	.1818431	1.815379	.4781441	.0750615
#3	.3056016	2.904904	.1820139	1.804810	.4766409	.0756135

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.726828**	**.2790310**	**.2044191**	**9.663069**	**.2631184**	**.3359805**
Stddev	.023475	.0016722	.0009687	.058033	.0010439	.0011163
%RSD	.8608758	.5992975	.4738699	.6005676	.3967510	.3322596
#1	2.701695	.2771069	.2033453	9.609950	.2642442	.3349059
#2	2.730602	.2798524	.2052272	9.654251	.2629285	.3371343
#3	2.748187	.2801335	.2046848	9.725007	.2621825	.3359012

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166962BS Acquired: 3/5/2025 13:17:01 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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 .5526473	F .1535865	F .6816831	5.356617	F -.011088	.1889568
Stddev	.0034980	.0002782	.0095430	.037084	.001363	.0006509
%RSD	.6329563	.1811543	1.399915	.6922999	12.29248	.3444683
#1	.5496246	.1533038	.6864694	5.344973	-.011551	.1891240
#2	.5564789	.1535958	.6878857	5.398125	-.009554	.1882386
#3	.5518382	.1538600	.6706942	5.326753	-.012160	.1895077

Elem	Sr4077
Units	ppm
Avg	.1852699
Stddev	.0005504
%RSD	.2970798
#1	.1856483
#2	.1846385
#3	.1855230

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2417.307	71753.63	14860.24	2138.952	4659.226
Stddev	5.400	147.48	53.80	7.161	13.188
%RSD	.2233760	.2055398	.3620596	.3347715	.2830506
#1	2417.707	71813.16	14799.68	2146.406	4667.841
#2	2411.719	71862.04	14878.52	2132.126	4644.044
#3	2422.496	71585.69	14902.52	2138.324	4665.794

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166897BL Acquired: 3/5/2025 13:21:04 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002781**	**-.001200**	**-.000483**	**-.000034**	**-.000285**	**-.005409**	**-.004867**
Stddev	.0007546	.001887	.001776	.001106	.002866	.000345	.000796
%RSD	271.3760	157.2137	367.9085	3264.606	1005.052	6.377223	16.34847
#1	-.000555	-.002127	.001404	-.000679	-.003399	-.005443	-.004313
#2	.000472	-.002445	-.002121	-.000665	.002244	-.005049	-.005779
#3	.000917	.000971	-.000731	.001243	.000300	-.005736	-.004510

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000186**	**-.000009**	**-.016319**	**.0002567**	**-.000010**	**.0000635**	**-.014005**
Stddev	.0000058	.000058	.002294	.0000977	.000157	.0002962	.003090
%RSD	30.98829	613.0622	14.05815	38.06867	1575.708	466.2553	22.06173
#1	.0000133	.000054	-.014281	.0002257	-.000141	-.000270	-.015815
#2	.0000248	-.000059	-.015873	.0001782	.000165	.000165	-.015763
#3	.0000178	-.000023	-.018804	.0003661	-.000054	.000296	-.010437

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000014**	**.0009375**	**-.000148**	**.0002171**	**-.014623**	**-.000085**	**-.000848**
Stddev	.000359	.0113784	.000229	.0001816	.009666	.000681	.000064
%RSD	2504.623	1213.710	155.1875	83.65660	66.10427	800.4837	7.532706
#1	.000349	-.002991	-.000097	.0002219	-.008648	-.000048	-.000914
#2	-.000368	.013760	.000052	.0000331	-.025775	-.000784	-.000786
#3	-.000024	-.007956	-.000398	.0003962	-.009445	.000577	-.000845

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0068218**	**-.009939**	**-.000161**	**-.000237**	**.0005767**	**-.000130**	**-.001670**
Stddev	.0217104	.000466	.000267	.000910	.0003208	.006623	.001466
%RSD	318.2493	4.685798	165.3068	384.0419	55.61760	5090.571	87.79406
#1	.0309649	-.010475	-.000450	.000743	.0009171	-.001316	-.000901
#2	-.011096	-.009629	-.000109	-.001054	.0005331	.007006	-.000749
#3	.000597	-.009714	.000075	-.000400	.0002800	-.006081	-.003361

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166897BL Acquired: 3/5/2025 13:21:04 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.004290**	**-.004731**	**-.000095**
Stddev	.001585	.000999	.000018
%RSD	36.95624	21.10451	18.73352
#1	-.006091	-.005655	-.000111
#2	-.003675	-.004868	-.000098
#3	-.003104	-.003672	-.000076

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2480.827**	**72909.67**	**15042.55**	**2179.966**	**4887.636**
Stddev	2.625	124.36	34.80	9.029	5.829
%RSD	.1058121	.1705672	.2313507	.4141717	.1192595
#1	2477.796	72766.10	15019.25	2170.149	4882.288
#2	2482.336	72978.86	15082.56	2181.834	4893.849
#3	2482.350	72984.05	15025.86	2187.914	4886.773

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166898BL Acquired: 3/5/2025 13:29:25 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000269**	**-.001361**	**-.001982**	**.0005244**	**-.000492**	**-.010234**	**-.005222**
Stddev	.000925	.001052	.001043	.0016423	.001280	.002822	.000580
%RSD	344.1543	77.33863	52.62448	313.1549	260.2919	27.57696	11.10604
#1	-.000295	-.000386	-.002889	.0019367	.000832	-.008483	-.004566
#2	-.001181	-.001220	-.000843	-.001278	-.000584	-.013489	-.005666
#3	.000669	-.002476	-.002213	.000914	-.001723	-.008729	-.005434

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000004**	**-.000015**	**-.012961**	**.0001528**	**-.000177**	**-.000001**	**-.011803**
Stddev	.000072	.000034	.009993	.0000950	.000030	.000193	.003708
%RSD	1805.496	230.4396	77.10155	62.14994	16.81731	36599.69	31.41140
#1	-.000016	.000015	-.007744	.0000826	-.000161	-.000194	-.007649
#2	-.000069	-.000008	-.006657	.0001150	-.000159	.000192	-.012984
#3	.000073	-.000051	-.024483	.0002608	-.000211	.000001	-.014776

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000291**	**.0067013**	**-.000266**	**.0000491**	**-.026039**	**.0005461**	**-.001018**
Stddev	.000155	.0097855	.000285	.0000670	.003371	.0017638	.000280
%RSD	53.30120	146.0224	107.1751	136.5975	12.94468	322.9610	27.50298
#1	-.000320	.0153281	-.000052	.0001259	-.027429	.0020168	-.001308
#2	-.000430	-.003932	-.000156	.0000192	-.022196	.0010310	-.000749
#3	-.000123	.008708	-.000589	.0000022	-.028492	-.001409	-.000999

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.009998**	**-.010374**	**-.000123**	**-.000106**	**.0004531**	**.0036044**	**.0015235**
Stddev	.020664	.000131	.000033	.001068	.0002557	.0063180	.0007746
%RSD	206.6836	1.257987	27.09383	1009.868	56.43392	175.2863	50.84032
#1	.009669	-.010480	-.000161	-.001212	.0007334	.0066023	.0006890
#2	-.031532	-.010228	-.000107	-.000023	.0002324	.0078654	.0016621
#3	-.008131	-.010414	-.000100	.000918	.0003937	-.003654	.0022194

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166898BL Acquired: 3/5/2025 13:29:25 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.005109	-.005720	-.000096
Stddev	.002578	.000136	.000007
%RSD	50.46629	2.383185	7.566482
#1	-.003978	-.005603	-.000088
#2	-.003289	-.005870	-.000099
#3	-.008059	-.005689	-.000102

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2526.003	76209.50	15056.17	2253.279	4903.483
Stddev	5.749	152.05	52.19	10.659	8.939
%RSD	.2275781	.1995117	.3466461	.4730522	.1822953
#1	2522.083	76053.60	15083.48	2241.028	4898.063
#2	2523.324	76357.38	14995.99	2258.371	4898.585
#3	2532.602	76217.51	15089.05	2260.437	4913.800

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166924BL Acquired: 3/5/2025 13:37:48 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000827**	**-.000534**	**-.000818**	**.0015153**	**.0001796**	**-.008197**	**-.006093**
Stddev	.002401	.000513	.000913	.0022595	.0016501	.001330	.000357
%RSD	290.2015	96.05631	111.6743	149.1051	918.8696	16.22360	5.860443
#1	.001873	-.000224	-.000051	-.000584	.0020715	-.007693	-.005991
#2	-.002722	-.000252	-.001829	.001224	-.000962	-.007193	-.005799
#3	-.001633	-.001126	-.000574	.003906	-.000571	-.009705	-.006491

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000330**	**-.000007**	**-.016642**	**.0006846**	**.0000924**	**-.000038**	**-.015046**
Stddev	.0000582	.000032	.005335	.0001877	.0001565	.000133	.001689
%RSD	176.6760	480.5758	32.05590	27.41124	169.4134	348.5281	11.22350
#1	.0000293	.000027	-.012825	.0006779	-.000067	.000020	-.016211
#2	.0000929	-.000010	-.014363	.0005004	.000098	.000056	-.013109
#3	-.000023	-.000037	-.022738	.0008756	.000246	-.000190	-.015816

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000380**	**.0019967**	**-.000326**	**.0001391**	**-.044116**	**-.001143**	**-.000849**
Stddev	.000353	.0140410	.000116	.0004284	.005791	.000940	.000204
%RSD	92.93306	703.2168	35.62383	308.0102	13.12741	82.23999	23.99992
#1	.000013	.0160434	-.000318	.0005804	-.045120	-.000283	-.000915
#2	-.000671	.0019852	-.000213	.0001120	-.049340	-.000999	-.001011
#3	-.000482	-.012039	-.000445	-.000275	-.037888	-.002147	-.000620

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.049110**	**-.010228**	**-.000174**	**.0004105**	**-.000097**	**-.001017**	**-.001855**
Stddev	.020233	.000311	.000077	.0005921	.000590	.005822	.002367
%RSD	41.19894	3.039087	44.23430	144.2293	606.7094	572.7607	127.6369
#1	-.066680	-.010027	-.000239	.0006191	.000248	.000806	.000879
#2	-.026990	-.010072	-.000089	-.000258	.000239	.003677	-.003213
#3	-.053659	-.010586	-.000194	.000870	-.000779	-.007532	-.003230

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166924BL Acquired: 3/5/2025 13:37:48 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.005715	-.005781	-.000109
Stddev	.000963	.000506	.000015
%RSD	16.85372	8.758097	13.44509
#1	-.005792	-.005657	-.000096
#2	-.006637	-.006337	-.000125
#3	-.004716	-.005348	-.000107

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2416.163	72274.58	14782.51	2161.555	4739.725
Stddev	3.614	62.90	16.48	4.866	4.131
%RSD	.1495855	.0870329	.1114750	.2251250	.0871512
#1	2416.224	72272.80	14800.27	2163.536	4735.105
#2	2412.518	72212.58	14767.71	2156.011	4741.009
#3	2419.746	72338.35	14779.54	2165.120	4743.061

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166924BS Acquired: 3/5/2025 13:42:07 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7927544	1.932452	.9506950	1.950281	.7531500	1.909268
Stddev	.0009250	.027352	.0021246	.012076	.0039325	.020438
%RSD	.1166753	1.415428	.2234798	.6191956	.5221372	1.070461
#1	.7933170	1.908414	.9482661	1.946798	.7504475	1.904666
#2	.7932594	1.926728	.9516105	1.940329	.7513410	1.931614
#3	.7916869	1.962213	.9522083	1.963715	.7576614	1.891523

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1812730	.1908858	.1879363	.9515716	.4012065	.1915110
Stddev	.0009845	.0016015	.0002715	.0045724	.0003350	.0006428
%RSD	.5431261	.8389642	.1444607	.4805122	.0835011	.3356367
#1	.1817679	.1903124	.1876444	.9556218	.4015797	.1907722
#2	.1819119	.1926950	.1879833	.9524799	.4009316	.1919424
#3	.1801392	.1896499	.1881813	.9466132	.4011083	.1918184

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3076018	2.872451	.1854886	1.824296	.4821521	.0755674
Stddev	.0006707	.027237	.0019823	.006278	.0001581	.0002175
%RSD	.2180302	.9482100	1.068690	.3441457	.0327854	.2878565
#1	.3079245	2.902818	.1863101	1.830791	.4820801	.0757721
#2	.3068308	2.850180	.1869281	1.823838	.4820429	.0753390
#3	.3080501	2.864355	.1832276	1.818260	.4823334	.0755911

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.725556	.2843815	.2041259	9.650368	.2674808	.3846034
Stddev	.025090	.0039140	.0015821	.051651	.0027396	.0017715
%RSD	.9205563	1.376334	.7750683	.5352181	1.024228	.4606093
#1	2.753850	.2839398	.2043841	9.707893	.2671842	.3832235
#2	2.716804	.2884976	.2024305	9.607969	.2703567	.3839856
#3	2.706014	.2807070	.2055630	9.635244	.2649016	.3866011

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166924BS Acquired: 3/5/2025 13:42:07 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6391883**	**.1797307**	**.7880268**	**5.523219**	F **-.009446**	**.1922535**
Stddev	.0027044	.0020728	.0020866	.015945	.001286	.0016746
%RSD	.4231051	1.153274	.2647912	.2886922	13.61001	.8710402
#1	.6363726	.1806610	.7860786	5.504808	-.007972	.1931773
#2	.6394266	.1811754	.7902286	5.532578	-.010029	.1932628
#3	.6417657	.1773558	.7877732	5.532271	-.010336	.1903205

Elem	Sr4077
Units	ppm
Avg	**.1886076**
Stddev	.0016277
%RSD	.8630049
#1	.1895969
#2	.1894969
#3	.1867290

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2427.302**	**72582.15**	**14740.20**	**2166.956**	**4637.354**
Stddev	8.462	76.38	116.61	6.825	10.602
%RSD	.3486253	.1052264	.7910808	.3149786	.2286270
#1	2422.987	72541.25	14789.71	2164.371	4635.257
#2	2437.052	72670.26	14607.01	2174.696	4648.847
#3	2421.867	72534.92	14823.88	2161.800	4627.956

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1451-01 Acquired: 3/5/2025 13:46:08 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0866558**	**-.028970**	**.2628681**	**-.048440**	**.0252813**	**222.3466**
Stddev	.0043589	.004333	.0045317	.003816	.0015893	1.1376
%RSD	5.030152	14.95706	1.723941	7.878638	6.286258	.5116540
#1	.0818905	-.028618	.2679334	-.046577	.0255111	221.9664
#2	.0876353	-.033468	.2614724	-.052830	.0235896	223.6256
#3	.0904417	-.024824	.2591984	-.045912	.0267431	221.4477

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.290787**	**.0089562**	**.0014619**	F **2625.351**	**.3272297**	**.0581002**
Stddev	.008585	.0000173	.0000328	16.575	.0014162	.0003885
%RSD	.3747513	.1933176	2.242445	.6313428	.4327764	.6686492
#1	2.298498	.0089696	.0014718	2630.997	.3257824	.0578365
#2	2.292326	.0089623	.0014885	2638.366	.3272940	.0585464
#3	2.281537	.0089367	.0014253	2606.691	.3286126	.0579179

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1313591**	**145.0904**	**2.109543**	**107.6213**	**.2647300**	**.0005208**
Stddev	.0004843	.0850	.008196	.2806	.0005971	.0001196
%RSD	.3686662	.0585828	.3885024	.2607627	.2255413	22.96717
#1	.1312784	145.0471	2.115558	107.9202	.2640611	.0005954
#2	.1309203	145.1883	2.112862	107.5804	.2649199	.0005841
#3	.1318787	145.0357	2.100208	107.3634	.2652091	.0003828

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**35.05795**	**.3342624**	**1.120368**	**77.85531**	**.3452315**	**.0207668**
Stddev	.05774	.0032414	.003598	.21420	.0008457	.0006616
%RSD	.1647119	.9697323	.3211434	.2751269	.2449544	3.186108
#1	35.00528	.3347552	1.116643	77.61976	.3442620	.0202573
#2	35.11970	.3372293	1.123823	78.03843	.3458173	.0215146
#3	35.04889	.3308028	1.120637	77.90773	.3456152	.0205286

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1451-01 Acquired: 3/5/2025 13:46:08 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021109	7.105231	4.667201	5.530716	F 169.1329	-.167090
Stddev	.0023042	.029429	.011021	.005333	.1918	.002139
%RSD	109.1570	.4141869	.2361470	.0964171	.1133819	1.280271
#1	.0013272	7.127229	4.656148	5.526515	169.1443	-.168039
#2	.0047047	7.116663	4.678191	5.528918	169.3187	-.168590
#3	.0003008	7.071802	4.667265	5.536715	168.9357	-.164640

Elem	Sr4077
Units	ppm
Avg	F 11.76160
Stddev	.08241
%RSD	.7006666
#1	11.81279
#2	11.66654
#3	11.80548

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2101.149	62268.86	15014.22	1866.916	3019.359
Stddev	6.389	102.42	42.14	6.476	7.694
%RSD	.3040572	.1644849	.2806626	.3468982	.2548231
#1	2100.445	62385.91	14983.16	1863.758	3024.211
#2	2095.142	62225.03	14997.33	1874.366	3010.488
#3	2107.861	62195.65	15062.19	1862.625	3023.379

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1435-01 Acquired: 3/5/2025 13:50:38 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000136	-.006758	.0012618	.0032241	.0053086	1.058172
Stddev	.002756	.001286	.0007574	.0010355	.0017954	.002269
%RSD	2022.887	19.02855	60.02210	32.11780	33.82064	.2144334
#1	-.000165	-.008026	.0013883	.0031799	.0072568	1.055883
#2	.002634	-.005455	.0019480	.0042810	.0049486	1.060421
#3	-.002878	-.006793	.0004492	.0022114	.0037205	1.058213

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1319679	-.000075	-.000039	146.6612	.0306585	.0000692
Stddev	.0008825	.000026	.000059	.1807	.0000585	.0000423
%RSD	.6686882	34.18440	151.7684	.1232347	.1909202	61.11130
#1	.1329867	-.000073	-.000027	146.7271	.0306683	.0000754
#2	.1314396	-.000102	-.000103	146.7997	.0305956	.0001081
#3	.1314775	-.000051	.000013	146.4567	.0307114	.0000242

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0079586	1.227303	.0455583	34.95437	.0023079	-.000154
Stddev	.0003576	.006338	.0000866	.06084	.0006921	.000160
%RSD	4.493621	.5163986	.1900941	.1740418	29.98797	103.8736
#1	.0082826	1.225078	.0455039	34.91538	.0021845	-.000129
#2	.0075749	1.234453	.0456582	34.92326	.0030534	-.000325
#3	.0080182	1.222377	.0455129	35.02447	.0016858	-.000008

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	418.2638	.0118047	.0067302	10.26138	.5895557	.0151523
Stddev	2.0671	.0013123	.0001801	.07904	.0050094	.0000960
%RSD	.4942076	11.11638	2.676797	.7702232	.8496911	.6334838
#1	420.6350	.0127101	.0065305	10.17225	.5952989	.0151871
#2	417.3146	.0124043	.0068804	10.28898	.5872806	.0150437
#3	416.8417	.0102998	.0067796	10.32292	.5860876	.0152260

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: Q1435-01 Acquired: 3/5/2025 13:50:38 Type: Unk
Method: NON EPA-6010-200.7(v2768) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003035	.0289661	F 14.39261	.0970052	F 28.85325	-.020344
Stddev	.000183	.0007199	.10632	.0020399	.05382	.000890
%RSD	6.026784	2.485316	.7387269	2.102894	.1865430	4.376796
#1	-.002842	.0283926	14.26993	.0989988	28.80746	-.019899
#2	-.003206	.0297740	14.44977	.0970948	28.91254	-.021369
#3	-.003058	.0287318	14.45812	.0949219	28.83973	-.019764

Elem	Sr4077
Units	ppm
Avg	.7399176
Stddev	.0008869
%RSD	.1198603
#1	.7394552
#2	.7409401
#3	.7393575

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2195.316	66000.36	14271.39	1961.824	3864.427
Stddev	2.437	211.28	64.83	5.329	4.854
%RSD	.1110211	.3201175	.4542592	.2716292	.1256012
#1	2195.519	66238.06	14196.69	1967.974	3868.626
#2	2197.646	65929.08	14312.95	1958.919	3865.542
#3	2192.784	65833.95	14304.54	1958.579	3859.113

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166897BS Acquired: 3/5/2025 13:59:26 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7926363	1.839936	.9466860	1.947089	.6579630	1.899973
Stddev	.0032697	.039069	.0022105	.016225	.0048255	.001224
%RSD	.4125060	2.123410	.2334975	.8333188	.7334002	.0644273
#1	.7902054	1.795060	.9449365	1.928355	.6547014	1.900402
#2	.7913499	1.858367	.9491703	1.956646	.6556815	1.898592
#3	.7963535	1.866380	.9459511	1.956267	.6635062	1.900924

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1754678	.1898119	.1862554	.9346769	.4013606	.1895509
Stddev	.0016055	.0011071	.0004472	.0035722	.0008497	.0004832
%RSD	.9149665	.5832769	.2401090	.3821826	.2116978	.2548971
#1	.1747069	.1892106	.1857716	.9335788	.4007928	.1894678
#2	.1773122	.1910896	.1863410	.9386692	.4009515	.1891147
#3	.1743842	.1891356	.1866537	.9317826	.4023374	.1900703

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3065565	2.848298	.1813212	1.828012	.4771649	.0754673
Stddev	.0015413	.017330	.0005339	.017932	.0019454	.0001864
%RSD	.5027632	.6084282	.2944690	.9809509	.4076982	.2470043
#1	.3056257	2.865110	.1810036	1.829972	.4768735	.0753937
#2	.3057082	2.830493	.1819376	1.844883	.4753817	.0756793
#3	.3083355	2.849290	.1810223	1.809180	.4792396	.0753290

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.704802	.2795998	.2042988	9.574116	.2645883	.3325874
Stddev	.011092	.0038217	.0004045	.065082	.0025462	.0014673
%RSD	.4100933	1.366850	.1979804	.6797665	.9623345	.4411670
#1	2.695083	.2788833	.2044865	9.622575	.2621652	.3310691
#2	2.716886	.2837291	.2045754	9.500143	.2672419	.3326952
#3	2.702438	.2761871	.2038346	9.599631	.2643577	.3339977

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166897BS Acquired: 3/5/2025 13:59:26 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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 .5508074	F .1527929	F .6854057	5.461373	F -.006653	.1918216
Stddev	.0021561	.0004206	.0039108	.029187	.005148	.0015151
%RSD	.3914437	.2752596	.5705892	.5344193	77.37931	.7898472
#1	.5497856	.1527152	.6819899	5.436367	-.008021	.1919144
#2	.5493522	.1532468	.6845555	5.454308	-.000959	.1932881
#3	.5532845	.1524165	.6896718	5.493443	-.010978	.1902622

Elem	Sr4077
Units	ppm
Avg	.1831150
Stddev	.0002353
%RSD	.1284791
#1	.1833762
#2	.1830492
#3	.1829196

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2383.936	71033.01	14573.02	2111.627	4579.636
Stddev	2.371	47.84	99.68	5.491	6.890
%RSD	.0994481	.0673455	.6839875	.2600361	.1504536
#1	2386.139	71069.60	14609.61	2106.262	4582.800
#2	2384.241	70978.88	14460.22	2111.383	4584.377
#3	2381.427	71050.56	14649.24	2117.236	4571.733

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166898BS Acquired: 3/5/2025 14:03:29 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7907980	1.948231	.9524717	1.948503	.7532475	1.898140
Stddev	.0006626	.003098	.0017723	.004588	.0002402	.004113
%RSD	.0837948	.1590359	.1860723	.2354836	.0318891	.2166899
#1	.7915580	1.949861	.9539379	1.947154	.7532378	1.894810
#2	.7904950	1.944658	.9505022	1.953615	.7534924	1.902738
#3	.7903410	1.950175	.9529749	1.944741	.7530123	1.896873

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1829157	.1916342	.1882936	.9486994	.4018086	.1916717
Stddev	.0001594	.0012390	.0002580	.0097611	.0022269	.0004340
%RSD	.0871358	.6465517	.1369947	1.028887	.5542174	.2264401
#1	.1830695	.1919081	.1880936	.9539855	.4041386	.1918577
#2	.1827512	.1902812	.1882024	.9374354	.4015856	.1911757
#3	.1829262	.1927134	.1885847	.9546772	.3997016	.1919817

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3071818	2.873219	.1851953	1.854401	.4834407	.0758244
Stddev	.0002030	.004797	.0007379	.009493	.0008677	.0002545
%RSD	.0660873	.1669561	.3984514	.5119196	.1794761	.3356579
#1	.3070230	2.875973	.1851408	1.843588	.4834885	.0760718
#2	.3071119	2.876003	.1859590	1.861365	.4825502	.0758380
#3	.3074105	2.867680	.1844862	1.858249	.4842835	.0755633

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.791099	.2826790	.2045724	9.755024	.2687690	.3836092
Stddev	.028914	.0005181	.0012708	.061108	.0020083	.0007763
%RSD	1.035919	.1832888	.6211932	.6264257	.7472207	.2023630
#1	2.783416	.2828589	.2060346	9.740054	.2706819	.3844807
#2	2.823077	.2820949	.2039480	9.822226	.2666772	.3829918
#3	2.766802	.2830831	.2037346	9.702792	.2689480	.3833552

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: PB166898BS Acquired: 3/5/2025 14:03:29 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6414730**	**.1784679**	**.7868468**	**5.522972**	F **-.010087**	**.1942035**
Stddev	.0019628	.0004015	.0043636	.014162	.001490	.0003933
%RSD	.3059796	.2249839	.5545723	.2564136	14.77134	.2025057
#1	.6405283	.1787602	.7818359	5.537437	-.011382	.1944201
#2	.6401612	.1786334	.7898101	5.522344	-.008458	.1944410
#3	.6437295	.1780101	.7888944	5.509135	-.010421	.1937496

Elem	Sr4077
Units	ppm
Avg	**.1892468**
Stddev	.0007013
%RSD	.3705748
#1	.1895245
#2	.1897667
#3	.1884491

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2422.476**	**72278.25**	**14738.65**	**2165.606**	**4604.970**
Stddev	6.819	186.05	66.14	11.546	6.504
%RSD	.2814731	.2574051	.4487195	.5331414	.1412431
#1	2414.603	72141.32	14710.94	2156.245	4598.147
#2	2426.521	72203.36	14814.13	2178.507	4611.099
#3	2426.303	72490.07	14690.87	2162.064	4605.664

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCV04 Acquired: 3/5/2025 14:07:31 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.980012**	**5.024711**	**4.981896**	**4.979824**	**5.002754**	**10.00697**	**10.15211**
Stddev	.013074	.041551	.023770	.013406	.018493	.01979	.01267
%RSD	.2625275	.8269292	.4771282	.2692039	.3696635	.1978014	.1248356
#1	4.964941	4.976952	4.956257	4.966679	4.984101	9.99920	10.16536
#2	4.988304	5.052562	4.986230	4.979318	5.003078	10.02947	10.14010
#3	4.986791	5.044619	5.003200	4.993476	5.021084	9.99224	10.15086

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2474103**	**2.489525**	**24.49088**	**1.024138**	**2.509229**	**1.262659**	**4.895736**
Stddev	.0002923	.009497	.03773	.000463	.010534	.002876	.020525
%RSD	.1181340	.3814962	.1540683	.0451909	.4198167	.2277535	.4192493
#1	.2475860	2.479242	24.52955	1.024578	2.497636	1.261398	4.876540
#2	.2470729	2.491366	24.48894	1.024180	2.511838	1.260628	4.917373
#3	.2475720	2.497967	24.45416	1.023655	2.518214	1.265949	4.893294

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.370118**	**24.38885**	**2.520969**	**1.274685**	**25.28647**	**2.470355**	**2.570637**
Stddev	.004194	.02798	.011003	.001201	.02891	.004728	.008122
%RSD	.1769638	.1147442	.4364657	.0942032	.1143410	.1914045	.3159711
#1	2.373803	24.40694	2.509787	1.273336	25.27432	2.465285	2.562134
#2	2.370997	24.35662	2.521336	1.275638	25.31947	2.474644	2.571461
#3	2.365554	24.40299	2.531784	1.275079	25.26561	2.471137	2.578316

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.67664**	**4.910541**	**5.067718**	**4.996717**	**4.905001**	**5.021193**	**5.013500**
Stddev	.02748	.008491	.014002	.021105	.001170	.000291	.029099
%RSD	.1070206	.1729094	.2762905	.4223694	.0238608	.0058048	.5804149
#1	25.64736	4.920337	5.053967	4.972922	4.904696	5.021319	4.984355
#2	25.70187	4.905993	5.067228	5.004060	4.906293	5.020860	5.013592
#3	25.68069	4.905294	5.081958	5.013170	4.904013	5.021400	5.042553

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCV04 Acquired: 3/5/2025 14:07:31 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.979742**	**5.030962**	**5.015705**
Stddev	.017618	.008983	.030411
%RSD	.3537869	.1785492	.6063238
#1	4.960298	5.033013	4.981381
#2	4.994645	5.038742	5.026445
#3	4.984282	5.021131	5.039289

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2398.563**	**71344.24**	**14325.92**	**2116.187**	**4298.994**
Stddev	7.900	72.75	21.35	8.862	17.918
%RSD	.3293474	.1019705	.1490401	.4187613	.4168038
#1	2401.685	71361.82	14307.34	2124.380	4311.501
#2	2404.424	71406.59	14349.24	2117.399	4307.014
#3	2389.579	71264.31	14321.17	2106.781	4278.467

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCB04 Acquired: 3/5/2025 14:11:42 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	**-.000373**	**-.002563**	**-.000502**	**.0001523**	**.0003671**	**-.004231**	**-.005099**
Stddev	.002595	.000604	.000607	.0021369	.0011627	.002645	.001064
%RSD	695.1866	23.54722	120.8879	1403.303	316.6929	62.51704	20.85605
#1	.001803	-.002871	-.001179	.0015920	.0007367	-.003251	-.006098
#2	-.003245	-.001868	-.000004	-.002303	.0013001	-.007226	-.005219
#3	.000322	-.002951	-.000324	.001168	-.000935	-.002216	-.003981

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000566**	**.0000716**	**-.005360**	**.0006476**	**-.000213**	**.0001214**	**-.006480**
Stddev	.0000275	.0000291	.005347	.0002081	.000096	.0000558	.002185
%RSD	48.56344	40.70529	99.75287	32.13400	45.09028	45.98394	33.71730
#1	.0000873	.0000382	-.000438	.0005099	-.000128	.0001043	-.008602
#2	.0000341	.0000917	-.011049	.0005459	-.000317	.0001837	-.006601
#3	.0000485	.0000848	-.004594	.0008870	-.000194	.0000761	-.004237

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000166**	**.0156111**	**-.000105**	**.0001882**	**-.001521**	**.0001269**	**-.000972**
Stddev	.0004704	.0127221	.000257	.0002334	.012128	.0005802	.000335
%RSD	2833.785	81.49387	243.7129	124.0377	797.5117	457.1602	34.47284
#1	.0002970	.0288870	-.000158	.0000221	-.010274	.0004357	-.001342
#2	-.000527	.0035268	-.000332	.0004551	-.006612	-.000542	-.000886
#3	.000279	.0144193	.000173	.0000874	.012323	.000487	-.000689

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.004143**	**-.003964**	**.0001067**	**-.000143**	**.0004557**	**.0066922**	**-.000091**
Stddev	.019312	.000421	.0001982	.000345	.0009221	.0041360	.000797
%RSD	466.0975	10.60797	185.8297	242.0712	202.3457	61.80233	875.9343
#1	.015460	-.003633	.0002074	.000240	-.000129	.0114670	-.000959
#2	-.023150	-.004437	.0002343	-.000429	-.000022	.0042200	.000608
#3	-.004739	-.003822	-.000122	-.000238	.001519	.0043897	.000078

Reviewed By:
On:
Inst Id :P4
LB :LB134904

Sample Name: CCB04 Acquired: 3/5/2025 14:11:42 Type: Unk
Method: NON EPA-6010-200.7(v2750) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

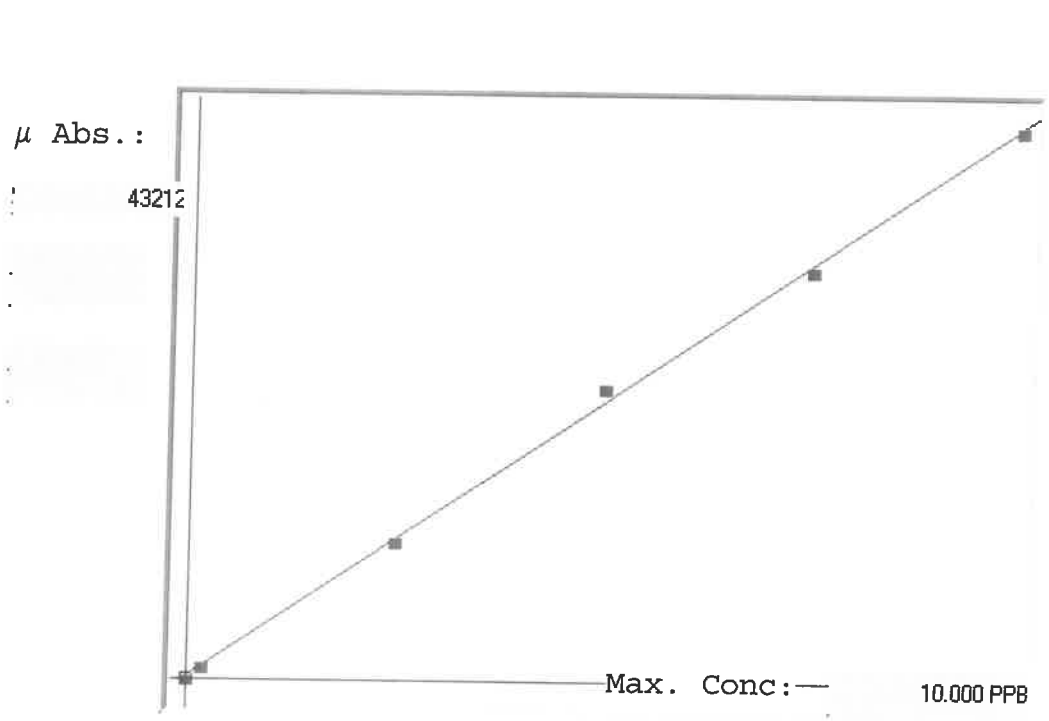
Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.005541**	**-.004633**	**.0000060**
Stddev	.002966	.001113	.0000146
%RSD	53.52397	24.03191	245.0106
#1	-.002718	-.004714	-.000011
#2	-.005272	-.005704	.000017
#3	-.008631	-.003481	.000011

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2496.711**	**73582.38**	**14834.96**	**2184.005**	**4835.098**
Stddev	8.085	249.17	47.59	10.758	8.100
%RSD	.3238251	.3386220	.3208205	.4925717	.1675339
#1	2503.231	73543.20	14853.40	2183.520	4835.089
#2	2499.239	73355.13	14780.90	2173.497	4843.203
#3	2487.665	73848.82	14870.57	2194.996	4827.002

Reviewed By:jaswal
On:3/4/2025 8:55:54 AM
Inst Id :CV1
LB :LB134848

LB134848

7470A INSTRUMENT ID: CV1



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	σ/σD
0.0	0.000	-0.042	-0.042	26	0.000	26	0				-
0.2	0.200	0.179	-0.021	980	0.0 %	980					-11
2.5	2.500	2.456	-0.044	10827	0.0 %	10827					-2
5.0	5.000	5.254	0.254	22926	0.0 %	22926					5
7.5	7.500	7.409	-0.091	32245	0.0 %	32245					-1
10.0	10.000	9.945	-0.055	43212	0.0 %	43212					-1

Reviewed By:jaswal
On:3/4/2025 8:55:54 AM
Inst Id :CV1
LB :LB134848

LB134848 INSTRUMENT ID : CV1

Method: 7470A Operator: Admin Date of Analysis: 28 Feb 2025 09:52:37

Sample ID	Extended ID	µ Abs.	Conc.	Stnd Conc	Method	Units	Date	Type	Type
0.0 - 1	SG	26	-	0.00000	7470A	PPB	28 Feb 2025 10:21:16	S	Std
0.2 - 1	50.2	980	-	0.20000	7470A	PPB	28 Feb 2025 10:23:32	S	Std
2.5 - 1	52.5	10827	-	2.50000	7470A	PPB	28 Feb 2025 10:25:49	S	Std
5.0 - 1	55	22926	-	5.00000	7470A	PPB	28 Feb 2025 10:28:07	S	Std
7.5 - 1	57.5	32245	-	7.50000	7470A	PPB	28 Feb 2025 10:30:24	S	Std
10.0 - 1	510	43212	-	10.00000	7470A	PPB	28 Feb 2025 10:32:45	S	Std
ICV22 - 1	ICV22	17432	3.9832		-7470A	PPB	28 Feb 2025 10:35:35	U	SMPL
ICB22 - 1	ICB22	-25	-0.0538		-7470A	PPB	28 Feb 2025 10:40:25	U	SMPL
CCV35 - 1	CCV35	23495	5.3853		-7470A	PPB	28 Feb 2025 10:42:39	U	SMPL
CCB35 - 1	CCB35	44	-0.0378		-7470A	PPB	28 Feb 2025 10:47:32	U	SMPL
CRA - 1	CRA	1042	0.1930		-7470A	PPB	28 Feb 2025 10:49:46	U	SMPL
HighStd - 1	HighStd	44319	10.2010		-7470A	PPB	28 Feb 2025 10:52:02	U	SMPL
ChkStd - 1	ChkStd	29757	6.8335		-7470A	PPB	28 Feb 2025 10:54:20	U	SMPL
PB166936BL - 1	PBW	-214	-0.0975		-7470A	PPB	28 Feb 2025 10:56:38	U	SMPL
PB166936BS - 1	LCSW	17914	4.0947		-7470A	PPB	28 Feb 2025 10:58:57	U	SMPL
Q1427-02 - 1	VNJ-227	-18	-0.0522		-7470A	PPB	28 Feb 2025 11:01:13	U	SMPL
Q1442-01 - 1	280	773	0.1308		-7470A	PPB	28 Feb 2025 11:03:32	U	SMPL
Q1442-02 - 1	281	241	0.0077		-7470A	PPB	28 Feb 2025 11:05:49	U	SMPL
Q1443-01 - 1	3733	336	0.0297		-7470A	PPB	28 Feb 2025 11:08:09	U	SMPL
Q1447-02 - 1	WC1	326	0.0274		-7470A	PPB	28 Feb 2025 11:10:24	U	SMPL
CCV36 - 1	CCV36	20854	4.7746		-7470A	PPB	28 Feb 2025 11:16:31	U	SMPL
CCB36 - 1	CCB36	-5	-0.0492		-7470A	PPB	28 Feb 2025 11:18:46	U	SMPL
Q1447-02DUP - 1	WC1DUP	224	0.0038		-7470A	PPB	28 Feb 2025 11:21:04	U	SMPL
Q1447-02MS - 1	WC1MS	16346	3.7321		-7470A	PPB	28 Feb 2025 11:23:19	U	SMPL
Q1447-02MSD - 1	WC1MSD	16170	3.6914		-7470A	PPB	28 Feb 2025 11:25:35	U	SMPL
PB166937BL - 1	PBW	2	-0.0475		-7470A	PPB	28 Feb 2025 11:27:53	U	SMPL
PB166937BS - 1	LCSW	16019	3.6565		-7470A	PPB	28 Feb 2025 11:30:10	U	SMPL
Q1435-01 - 1	286107	-15	-0.0515		-7470A	PPB	28 Feb 2025 11:32:26	U	SMPL
Q1439-02 - 1	LRSA-MOD	116	-0.0212		-7470A	PPB	28 Feb 2025 11:34:45	U	SMPL
Q1439-02DUP - 1	LRSA-MODDUP	147	-0.0140		-7470A	PPB	28 Feb 2025 11:37:02	U	SMPL
Q1439-02MS - 1	LRSA-MODMS	15345	3.5006		-7470A	PPB	28 Feb 2025 11:39:19	U	SMPL
Q1439-02MSD - 1	LRSA-MODMSD	15342	3.4999		-7470A	PPB	28 Feb 2025 11:41:34	U	SMPL
CCV37 - 1	CCV37	20724	4.7445		-7470A	PPB	28 Feb 2025 11:43:51	U	SMPL
CCB37 - 1	CCB37	213	0.0013		-7470A	PPB	28 Feb 2025 11:48:51	U	SMPL
Q1442-05 - 1	278	181	-0.0061		-7470A	PPB	28 Feb 2025 11:51:06	U	SMPL
PB166879TB - 1	PB166879TB	119	-0.0205		-7470A	PPB	28 Feb 2025 11:53:22	U	SMPL
Q1447-02LX5 - 1		64	-0.0332		-7470A	PPB	28 Feb 2025 11:55:38	U	SMPL
Q1447-02A - 1		14408	3.2839		-7470A	PPB	28 Feb 2025 11:57:53	U	SMPL
Q1439-02LX5 - 1		-190	-0.0919		-7470A	PPB	28 Feb 2025 12:00:09	U	SMPL
Q1439-02A - 1		15606	3.5610		-7470A	PPB	28 Feb 2025 12:02:28	U	SMPL
CCV38 - 1	CCV38	20161	4.6143		-7470A	PPB	28 Feb 2025 12:06:58	U	SMPL
CCB38 - 1	CCB38	-161	-0.0852		-7470A	PPB	28 Feb 2025 12:09:15	U	SMPL

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB166897

SOP ID : M3050B-Digestion-20

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: 02/27/2025 **Time :** 12:05 **Temp :** 96 °C

End Digest Date: 02/27/2025 **Time :** 14:10 **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	M6003
LFS-2	0.25	M6011
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	M6126
1:1 HCL	5.00	MP84297
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 55 Temp :96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
02/27/25 15:10	SLG. MET. DIG.	Contracts Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB166897

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB166879TB	PB166879TB	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	1
PB166897BL	PBW897	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	2
PB166897BS	LCS897	<2	5	25	Colorless	Colorless	Clear	Clear	M6003,M6011	3
Q1420-04	TP-1-WC	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	4
Q1420-08	TP-2-WC	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	5
Q1427-02	VNJ-227	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	6
Q1442-01	280	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	7
Q1442-02	281	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	8
Q1443-01	3733	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	9
Q1447-02	WC1	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	10
Q1447-02MS	WC1MS	<2	5	25	Colorless	Colorless	Clear	Clear	M6003,M6011	12
Q1447-02MSD	WC1MSD	<2	5	25	Colorless	Colorless	Clear	Clear	M6003,M6011	13
Q1447-02DUP	WC1DUP	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	11

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB166879

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
PB166879TB	LEB879	08	N/A	2000	N/A	N/A	N/A	4.94	1.5	T-1
Q1420-04	TP-1-WC	01	100.02	2000	N/A	N/A	N/A	6.2	1.0	T-1
Q1420-08	TP-2-WC	02	100.03	2000	N/A	N/A	N/A	6.2	1.5	T-1
Q1427-02	VNJ-227	03	100.02	2000	N/A	N/A	N/A	5.8	1.0	T-1
Q1442-01	280	04	100.01	2000	N/A	N/A	N/A	3.0	1.5	T-1
Q1442-02	281	05	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q1443-01	3733	06	100.03	2000	N/A	N/A	N/A	3.5	1.5	T-1
Q1447-02	WC1	07	100.04	2000	N/A	N/A	N/A	5.6	1.0	T-1

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB166936

SOP ID : M7470A-Mercury-19

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: 02/27/2025 **Time :** 13:15 **Temp :** 94 °C

End Digest Date: 02/27/2025 **Time :** 15:15 **Temp :** 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: MB

Supervisor Signature: IR

Temp : 1. 94°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP84671
CCV	30mL	MP84673
CRA	30mL	MP84675
Blank Spike	0.48mL	MP84664
Matrix Spike	0.48mL	MP84664

Chemical Used	ML/SAMPLE USED	Lot Number
HNO3/H2SO4(1:2)	2.5mL	MP84563
KMnO4 (5%)	4.5mL	MP84564
K2S2O8 (5%)	2.5mL	MP84565
Hydroxylamine HCL (12%)	2.0mL	MP84566
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	MP84665
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP84666
2.5 ppb	S2.5	30mL	MP84667
5.0 ppb	S5.0	30mL	MP84668
7.5 ppb	S7.5	30mL	MP84669
10.0 ppb	S10.0	30mL	MP84670
ICV	ICV	30mL	MP84671
ICB	ICB	30mL	MP84672
CCV	CCV	30mL	MP84673
CCB	CCB	30mL	MP84674
CRI	CRI	30mL	MP84675
CHK STD	CHK STD	30mL	MP84676

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
2/27/25 @ 17:16	MB - Dig. Lab	MB - metal Lab
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB166936

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
PB166879TB	PB166879TB	3	30	<2	N/A	3-1
PB166936BL	PBW936	30	30	<2	N/A	2
PB166936BS	LCS936	30	30	<2	MP84664	3
Q1427-02	VNJ-227	3	30	<2	N/A	4
Q1442-01	280	3	30	<2	N/A	5
Q1442-02	281	3	30	<2	N/A	6
Q1443-01	3733	3	30	<2	N/A	7
Q1447-02	WC1	3	30	<2	N/A	8
Q1447-02DUP	WC1DUP	3	30	<2	N/A	9
Q1447-02MS	WC1MS	3	30	<2	MP84664	10
Q1447-02MSD	WC1MSD	3	30	<2	MP84664	11

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB166879

SOP ID : M1311-TCLP-15

SDG No : N/A

Weigh By : JP

Balance ID : WC SC-7

pH Meter ID : WC PH METER-1

Extraction By : JP

Filter By : JP

Pippete ID : WC

Tumbler ID : T-1

TCLP Filter ID : 115525

Start Prep Date : 02/26/2025 **Time :** 16:00

End Prep Date : 02/27/2025 **Time :** 10:25

Combination Ratio : 20

ZHE Cleaning Batch : ~~N/A~~ JB

Initial Room Temperature: 23 °C

Final Room Temperature: 22 °C

TCLP Technician Signature : JB

Supervisor By : IR

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	WP110802
HCL-TCLP,1N	N/A	WP110803
HNO3-TCLP,1N	N/A	WP110804
pH Strips	W3172.	W1931,W1934,W3171,W3172
pH Strips	W1941,W1942	W3166,W1938,W1939,W1940,
1 Liter Amber	N/A	90424-08
120ml Plastic bottle	N/A	405130101
1:1 HNO3	N/A	MP84041

Extraction Conformance/Non-Conformance Comments:

Matrix spikes are added after fiftration and before preservation. TUMBLER T-1 checked,30 rpm. Particle size reduction is not required. q1447-02 is used for MS-MSD.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
02/27/25 11:00	JB TCLP Room	SKG. RS | Ext
	Preparation Group	Analysis Group Metals

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 # LB134848

Review By	Mohan	Review On	3/4/2025 8:33:37 AM
Supervise By	jaswal	Supervise On	3/4/2025 8:55:54 AM

STD. NAME	STD REF.#
ICAL Standard	MP84665,MP84666,MP84667,MP84668,MP84669,MP84670
ICV Standard	MP84671
CCV Standard	MP84673
ICSA Standard	
CRI Standard	MP84675
LCS Standard	
Chk Standard	MP84672,MP84674,MP84676,MP84691

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	02/28/25 10:21		Mohan	OK
2	S0.2	S0.2	CAL2	02/28/25 10:23		Mohan	OK
3	S2.5	S2.5	CAL3	02/28/25 10:25		Mohan	OK
4	S5	S5	CAL4	02/28/25 10:28		Mohan	OK
5	S7.5	S7.5	CAL5	02/28/25 10:30		Mohan	OK
6	S10	S10	CAL6	02/28/25 10:32		Mohan	OK
7	ICV22	ICV22	ICV	02/28/25 10:35		Mohan	OK
8	ICB22	ICB22	ICB	02/28/25 10:40		Mohan	OK
9	CCV35	CCV35	CCV	02/28/25 10:42		Mohan	OK
10	CCB35	CCB35	CCB	02/28/25 10:47		Mohan	OK
11	CRA	CRA	CRDL	02/28/25 10:49		Mohan	OK
12	HighStd	HighStd	HIGH STD	02/28/25 10:52		Mohan	OK
13	ChkStd	ChkStd	SAM	02/28/25 10:54		Mohan	OK
14	PB166936BL	PB166936BL	MB	02/28/25 10:56		Mohan	OK
15	PB166936BS	PB166936BS	LCS	02/28/25 10:58		Mohan	OK
16	Q1427-02	VNJ-227	SAM	02/28/25 11:01		Mohan	OK
17	Q1442-01	280	SAM	02/28/25 11:03		Mohan	OK
18	Q1442-02	281	SAM	02/28/25 11:05		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 # LB134848

Review By	Mohan	Review On	3/4/2025 8:33:37 AM
Supervise By	jaswal	Supervise On	3/4/2025 8:55:54 AM

STD. NAME	STD REF.#
ICAL Standard	MP84665,MP84666,MP84667,MP84668,MP84669,MP84670
ICV Standard	MP84671
CCV Standard	MP84673
ICSA Standard	
CRI Standard	MP84675
LCS Standard	
Chk Standard	MP84672,MP84674,MP84676,MP84691

19	Q1443-01	3733	SAM	02/28/25 11:08		Mohan	OK
20	Q1447-02	WC1	SAM	02/28/25 11:10		Mohan	OK
21	CCV36	CCV36	CCV	02/28/25 11:16		Mohan	OK
22	CCB36	CCB36	CCB	02/28/25 11:18		Mohan	OK
23	Q1447-02DUP	WC1DUP	DUP	02/28/25 11:21		Mohan	OK
24	Q1447-02MS	WC1MS	MS	02/28/25 11:23		Mohan	OK
25	Q1447-02MSD	WC1MSD	MSD	02/28/25 11:25		Mohan	OK
26	PB166937BL	PB166937BL	MB	02/28/25 11:27		Mohan	OK
27	PB166937BS	PB166937BS	LCS	02/28/25 11:30		Mohan	OK
28	Q1435-01	286107	SAM	02/28/25 11:32		Mohan	OK
29	Q1439-02	LRSA-MOD	SAM	02/28/25 11:34		Mohan	OK
30	Q1439-02DUP	LRSA-MODDUP	DUP	02/28/25 11:37		Mohan	OK
31	Q1439-02MS	LRSA-MODMS	MS	02/28/25 11:39		Mohan	OK
32	Q1439-02MSD	LRSA-MODMSD	MSD	02/28/25 11:41		Mohan	OK
33	CCV37	CCV37	CCV	02/28/25 11:43		Mohan	OK
34	CCB37	CCB37	CCB	02/28/25 11:48		Mohan	OK
35	Q1442-05	278	SAM	02/28/25 11:51		Mohan	OK
36	PB166879TB	PB166879TB	MB	02/28/25 11:53		Mohan	OK
37	Q1447-02L	WC1L	SD	02/28/25 11:55		Mohan	OK
38	Q1447-02A	WC1A	PS	02/28/25 11:57		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 # LB134848

Review By	Mohan	Review On	3/4/2025 8:33:37 AM
Supervise By	jaswal	Supervise On	3/4/2025 8:55:54 AM

STD. NAME	STD REF.#
ICAL Standard	MP84665,MP84666,MP84667,MP84668,MP84669,MP84670
ICV Standard	MP84671
CCV Standard	MP84673
ICSA Standard	
CRI Standard	MP84675
LCS Standard	
Chk Standard	MP84672,MP84674,MP84676,MP84691

39	Q1439-02L	LRSA-MODL	SD	02/28/25 12:00		Mohan	OK
40	Q1439-02A	LRSA-MODA	PS	02/28/25 12:02		Mohan	OK
41	CCV38	CCV38	CCV	02/28/25 12:06		Mohan	OK
42	CCB38	CCB38	CCB	02/28/25 12:09		Mohan	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134881

Review By	kareem	Review On	3/4/2025 12:24:05 PM
Supervise By	Mohan	Supervise On	3/5/2025 4:17:58 PM

STD. NAME	STD REF.#
ICAL Standard	MP84636,MP84637,MP84638,MP84639,MP84640,MP84642
ICV Standard	MP84643
CCV Standard	MP84646
ICSA Standard	MP84644,MP84721
CRI Standard	MP84642
LCS Standard	
Chk Standard	MP84649,MP84650

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	03/03/25 18:26		Kareem	OK
2	S1	S1	CAL2	03/03/25 18:31		Kareem	OK
3	S2	S2	CAL3	03/03/25 18:35		Kareem	OK
4	S3	S3	CAL4	03/03/25 18:39		Kareem	OK
5	S4	S4	CAL5	03/03/25 18:43		Kareem	OK
6	S5	S5	CAL6	03/03/25 18:47		Kareem	OK
7	ICV01	ICV01	ICV	03/03/25 19:17	ICV Fail for K,Na (200.7)	Kareem	OK
8	LLICV01	LLICV01	LLICV	03/03/25 19:21		Kareem	OK
9	ICB01	ICB01	ICB	03/03/25 19:25		Kareem	OK
10	CRI01	CRI01	CRDL	03/03/25 19:30		Kareem	OK
11	ICSA01	ICSA01	ICSA	03/03/25 19:34		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	03/03/25 19:38		Kareem	OK
13	ICSADL	ICSADL	ICSA	03/03/25 19:42		Kareem	OK
14	ICSABDL	ICSABDL	ICSAB	03/03/25 19:46		Kareem	OK
15	CCV01	CCV01	CCV	03/03/25 19:57		Kareem	OK
16	CCB01	CCB01	CCB	03/03/25 20:01		Kareem	OK
17	Q1420-04	TP-1-WC	SAM	03/03/25 20:05		Kareem	OK
18	Q1420-08	TP-2-WC	SAM	03/03/25 20:09		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134881

Review By	kareem	Review On	3/4/2025 12:24:05 PM
Supervise By	Mohan	Supervise On	3/5/2025 4:17:58 PM

STD. NAME	STD REF.#
ICAL Standard	MP84636,MP84637,MP84638,MP84639,MP84640,MP84642
ICV Standard	MP84643
CCV Standard	MP84646
ICSA Standard	MP84644,MP84721
CRI Standard	MP84642
LCS Standard	
Chk Standard	MP84649,MP84650

19	Q1442-01	280	SAM	03/03/25 20:14		Kareem	OK
20	Q1442-02	281	SAM	03/03/25 20:18		Kareem	OK
21	Q1443-01	3733	SAM	03/03/25 20:23		Kareem	OK
22	Q1447-02	WC1	SAM	03/03/25 20:27		Kareem	OK
23	PB166879TB	PB166879TB	MB	03/03/25 20:55		Kareem	OK
24	CCV02	CCV02	CCV	03/03/25 21:12		Kareem	OK
25	CCB02	CCB02	CCB	03/03/25 21:16		Kareem	OK
26	Q1457-01	HR-0-02272025	SAM	03/03/25 21:21		Kareem	OK
27	Q1420-01	TP-1-WC	SAM	03/03/25 21:25		Kareem	OK
28	Q1420-05	TP-2-WC	SAM	03/03/25 21:29		Kareem	OK
29	Q1457-01DUP	HR-0-02272025DUP	DUP	03/03/25 21:33		Kareem	OK
30	Q1457-01L	HR-0-02272025L	SD	03/03/25 21:37		Kareem	OK
31	Q1457-01MS	HR-0-02272025MS	MS	03/03/25 21:41	0.1 ML M6003 AND M6011	Kareem	OK
32	LR1	LR1	HIGH STD	03/03/25 21:45		Kareem	OK
33	LR2	LR2	HIGH STD	03/03/25 21:50		Kareem	OK
34	Q1457-01MSD	HR-0-02272025MSD	MSD	03/03/25 21:55	0.1 ML M6003 AND M6011	Kareem	OK
35	Q1457-01A	HR-0-02272025A	PS	03/03/25 21:59	0.1 ML M6003 AND M6011	Kareem	OK
36	CCV03	CCV03	CCV	03/03/25 22:02		Kareem	OK
37	CCB03	CCB03	CCB	03/03/25 22:24		Kareem	OK
38	Q1439-01	LRSA-MOD	SAM	03/03/25 22:28		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134881

Review By	kareem	Review On	3/4/2025 12:24:05 PM
Supervise By	Mohan	Supervise On	3/5/2025 4:17:58 PM

STD. NAME	STD REF.#
ICAL Standard	MP84636,MP84637,MP84638,MP84639,MP84640,MP84642
ICV Standard	MP84643
CCV Standard	MP84646
ICSA Standard	MP84644,MP84721
CRI Standard	MP84642
LCS Standard	
Chk Standard	MP84649,MP84650

39	Q1439-02	LRSA-MOD	SAM	03/03/25 22:33		Kareem	OK
40	Q1440-01	OR-02-022625	SAM	03/03/25 22:37		Kareem	OK
41	Q1441-01	HD-02-022625	SAM	03/03/25 22:41		Kareem	OK
42	Q1447-02DUP	WC1DUP	DUP	03/03/25 22:45		Kareem	OK
43	Q1447-02L	WC1L	SD	03/03/25 22:50		Kareem	OK
44	Q1447-02MS	WC1MS	MS	03/03/25 22:54	0.1 ML M6003 AND M6011	Kareem	OK
45	Q1447-02MSD	WC1MSD	MSD	03/03/25 22:58	0.1 ML M6003 AND M6011	Kareem	OK
46	Q1447-02A	WC1A	PS	03/03/25 23:02	0.1 ML M6003 AND M6011	Kareem	OK
47	CCV04	CCV04	CCV	03/03/25 23:07		Kareem	OK
48	CCB04	CCB04	CCB	03/03/25 23:11		Kareem	OK
49	Q1439-02DUP	LRSA-MODDUP	DUP	03/03/25 23:15		Kareem	OK
50	Q1439-02L	LRSA-MODL	SD	03/03/25 23:20		Kareem	OK
51	Q1439-02MS	LRSA-MODMS	MS	03/03/25 23:24	0.1 ML M6003 AND M6011	Kareem	OK
52	Q1439-02MSD	LRSA-MODMSD	MSD	03/03/25 23:28	0.1 ML M6003 AND M6011	Kareem	OK
53	Q1439-02A	LRSA-MODA	PS	03/03/25 23:32	0.1 ML M6003 AND M6011	Kareem	OK
54	PB166904BL	PB166904BL	MB	03/03/25 23:42		Kareem	OK
55	PB166904BS	PB166904BS	LCS	03/03/25 23:46	0.1 ML M6003 AND M6011	Kareem	OK
56	PB166926BL	PB166926BL	MB	03/03/25 23:55		Kareem	OK
57	PB166926BS	PB166926BS	LCS	03/03/25 23:59	0.1 ML M6003 AND M6011	Kareem	OK
58	CCV05	CCV05	CCV	03/04/25 00:03		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134881

Review By	kareem	Review On	3/4/2025 12:24:05 PM
Supervise By	Mohan	Supervise On	3/5/2025 4:17:58 PM

STD. NAME	STD REF.#
ICAL Standard	MP84636,MP84637,MP84638,MP84639,MP84640,MP84642
ICV Standard	MP84643
CCV Standard	MP84646
ICSA Standard	MP84644,MP84721
CRI Standard	MP84642
LCS Standard	
Chk Standard	MP84649,MP84650

59	CCB05	CCB05	CCB	03/04/25 00:08		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134904

Review By	Review On
Supervise By	Supervise On

STD. NAME	STD REF.#
ICAL Standard	
ICV Standard	
CCV Standard	
ICSA Standard	
CRI Standard	
LCS Standard	
Chk Standard	

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	03/05/25 10:17		Kareem	OK
2	S1	S1	CAL2	03/05/25 10:22		Kareem	OK
3	S2	S2	CAL3	03/05/25 10:26		Kareem	OK
4	S3	S3	CAL4	03/05/25 10:30		Kareem	OK
5	S4	S4	CAL5	03/05/25 10:34		Kareem	OK
6	S5	S5	CAL6	03/05/25 10:39		Kareem	OK
7	ICV01	ICV01	ICV	03/05/25 10:43		Kareem	OK
8	LLICV01	LLICV01	LLICV	03/05/25 10:51		Kareem	OK
9	ICB01	ICB01	ICB	03/05/25 10:56		Kareem	OK
10	CRI01	CRI01	CRDL	03/05/25 11:00		Kareem	OK
11	ICSA01	ICSA01	ICSA	03/05/25 11:04		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	03/05/25 11:09		Kareem	OK
13	CCV01	CCV01	CCV	03/05/25 11:13		Kareem	OK
14	CCB01	CCB01	CCB	03/05/25 11:17		Kareem	OK
15	Q1447-01	WC1	SAM	03/05/25 11:21		Kareem	OK
16	Q1474-01	BU-03-02282025	SAM	03/05/25 11:26		Kareem	OK
17	Q1480-01	TP-1	SAM	03/05/25 11:30		Kareem	OK
18	Q1480-09	TP-2	SAM	03/05/25 11:34		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134904

Review By	Review On
Supervise By	Supervise On

STD. NAME	STD REF.#
ICAL Standard	
ICV Standard	
CCV Standard	
ICSA Standard	
CRI Standard	
LCS Standard	
Chk Standard	

19	Q1480-17	TP-3	SAM	03/05/25 11:38		Kareem	OK
20	Q1480-25	TP-4	SAM	03/05/25 11:43		Kareem	OK
21	Q1474-01DUP	BU-03-02282025DUP	DUP	03/05/25 11:47		Kareem	OK
22	Q1474-01L	BU-03-02282025L	SD	03/05/25 11:51		Kareem	OK
23	CCV02	CCV02	CCV	03/05/25 11:55		Kareem	OK
24	CCB02	CCB02	CCB	03/05/25 11:59		Kareem	OK
25	Q1474-01MS	BU-03-02282025MS	MS	03/05/25 12:04		Kareem	OK
26	Q1474-01MSD	BU-03-02282025MSD	MSD	03/05/25 12:07		Kareem	OK
27	Q1474-01A	BU-03-02282025A	PS	03/05/25 12:11		Kareem	OK
28	LR1	LR1	HIGH STD	03/05/25 12:15		Kareem	OK
29	LR2	LR2	HIGH STD	03/05/25 12:20		Kareem	OK
30	Q1447-01DUP	WC1DUP	DUP	03/05/25 12:25		Kareem	OK
31	Q1447-01L	WC1L	SD	03/05/25 12:29		Kareem	OK
32	Q1447-01MS	WC1MS	MS	03/05/25 12:33		Kareem	OK
33	Q1447-01MSD	WC1MSD	MSD	03/05/25 12:37		Kareem	OK
34	Q1447-01A	WC1A	PS	03/05/25 12:41		Kareem	OK
35	CCV03	CCV03	CCV	03/05/25 12:45		Kareem	OK
36	CCB03	CCB03	CCB	03/05/25 12:49		Kareem	OK
37	PB166962BL	PB166962BL	MB	03/05/25 13:12		Kareem	OK
38	PB166962BS	PB166962BS	LCS	03/05/25 13:17		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134904

Review By	Review On
Supervise By	Supervise On

STD. NAME	STD REF.#
ICAL Standard	
ICV Standard	
CCV Standard	
ICSA Standard	
CRI Standard	
LCS Standard	
Chk Standard	

39	PB166897BL	PB166897BL	MB	03/05/25 13:21		Kareem	OK
40	PB166898BL	PB166898BL	MB	03/05/25 13:29		Kareem	OK
41	PB166924BL	PB166924BL	MB	03/05/25 13:37		Kareem	OK
42	PB166924BS	PB166924BS	LCS	03/05/25 13:42		Kareem	OK
43	Q1451-01	VNJ208	SAM	03/05/25 13:46		Kareem	OK
44	Q1475-01	TR-04-02282025	SAM	03/05/25 13:50		Kareem	OK
45	PB166897BS	PB166897BS	LCS	03/05/25 13:59		Kareem	OK
46	PB166898BS	PB166898BS	LCS	03/05/25 14:03		Kareem	OK
47	CCV04	CCV04	CCV	03/05/25 14:07		Kareem	OK
48	CCB04	CCB04	CCB	03/05/25 14:11		Kareem	OK

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB166879

SOP ID : M1311-TCLP-15

SDG No : N/A

Weigh By : JP

Balance ID : WC SC-7

pH Meter ID : WC PH METER-1

Extraction By : JP

Filter By : JP

Pippete ID : WC

Tumbler ID : T-1

TCLP Filter ID : 115525

Start Prep Date : 02/26/2025 **Time :** 16:00

End Prep Date : 02/27/2025 **Time :** 10:25

Combination Ratio : 20

ZHE Cleaning Batch : ~~N/A~~ JB

Initial Room Temperature: 23 °C

Final Room Temperature: 22 °C

TCLP Technician Signature : JB

Supervisor By : JR

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	WP110802
HCL-TCLP,1N	N/A	WP110803
HNO3-TCLP,1N	N/A	WP110804
pH Strips	W3172.	W1931,W1934,W3171,W3172
pH Strips	W1941,W1942	W3166,W1938,W1939,W1940,
1 Liter Amber	N/A	90424-08
120ml Plastic bottle	N/A	405130101
1:1 HNO3	N/A	MP84041

Extraction Conformance/Non-Conformance Comments:

Matrix spikes are added after fiftration and before preservation. TUMBLER T-1 checked,30 rpm. Particle size reduction is not required. q1447-02 is used for MS-MSD.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
02/27/25 11:00	JB TCLP Room	SKG. RS Ext
	Preparation Group	Analysis Group Inorg

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB166879

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
PB166879TB	LEB879	08	N/A	2000	N/A	N/A	N/A	4.94	1.5	T-1
Q1420-04	TP-1-WC	01	100.02	2000	N/A	N/A	N/A	6.2	1.0	T-1
Q1420-08	TP-2-WC	02	100.03	2000	N/A	N/A	N/A	6.2	1.5	T-1
Q1427-02	VNJ-227	03	100.02	2000	N/A	N/A	N/A	5.8	1.0	T-1
Q1442-01	280	04	100.01	2000	N/A	N/A	N/A	3.0	1.5	T-1
Q1442-02	281	05	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q1443-01	3733	06	100.03	2000	N/A	N/A	N/A	3.5	1.5	T-1
Q1447-02	WC1	07	100.04	2000	N/A	N/A	N/A	5.6	1.0	T-1

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
PB166879TB	LEB879	N/A	N/A	N/A	N/A	N/A	N/A
Q1420-04	TP-1-WC	N/A	N/A	N/A	N/A	100	N/A
Q1420-08	TP-2-WC	N/A	N/A	N/A	N/A	100	N/A
Q1427-02	VNJ-227	N/A	N/A	N/A	N/A	100	N/A
Q1442-01	280	N/A	N/A	N/A	N/A	100	N/A
Q1442-02	281	N/A	N/A	N/A	N/A	100	N/A
Q1443-01	3733	N/A	N/A	N/A	N/A	100	N/A
Q1447-02	WC1	N/A	N/A	N/A	N/A	100	N/A

Alliance TECHNICAL GROUP

TCLP Fluid Determination

PB166879

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
PB166879TB	LEB879	N/A	N/A	N/A	N/A	#1	4.94
Q1420-04	TP-1-WC	5.03	96.5	8.6	3.5	#1	4.94
Q1420-08	TP-2-WC	5.02	96.5	8.6	3.5	#1	4.94
Q1427-02	VNJ-227	5.01	96.5	8.0	3.0	#1	4.94
Q1442-01	280	5.00	96.5	5.8	1.5	#1	4.94
Q1442-02	281	5.03	96.5	6.2	2.0	#1	4.94
Q1443-01	3733	5.02	96.5	6.0	2.0	#1	4.94
Q1447-02	WC1	5.04	96.5	7.0	2.5	#1	4.94

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Prep Standard - Chemical Standard Summary

Order ID : Q1447

Test : TCLP ICP Metals,TCLP Mercury

Prepbatch ID : PB166897,PB166936,

Sequence ID/Qc Batch ID: LB134848,LB134881,LB134881,LB134904,

Standard ID :
MP84297,MP84563,MP84564,MP84565,MP84566,MP84636,MP84637,MP84638,MP84639,MP84640,MP84641,MP84642,MP84643,MP84644,MP84646,MP84649,MP84650,MP84664,MP84665,MP84666,MP84667,MP84668,MP84669,MP84670,MP84671,MP84672,MP84673,MP84674,MP84675,MP84676,MP84691,MP84721,

Chemical ID :
M4371,M4465,M4884,M4916,M5062,M5192,M5218,M5288,M5296,M5395,M5429,M5467,M5472,M5496,M5497,M5532,M5658,M5747,M5748,M5751,M5789,M5792,M5798,M5799,M5800,M5801,M5811,M5814,M5815,M5816,M5817,M5820,M5875,M5882,M5884,M5959,M5962,M5970,M5978,M5985,M6003,M6011,M6021,M6023,M6028,M6030,M6032,M6041,M6077,M6121,M6126,M6127,M6128,M6144,M6145,M6146,M6150,M6151,M6152,M6155,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
170	1:1HCL	MP84297	01/31/2025	02/28/2025	Eman Mughal	None	None	Sarabjit Jaswal 01/31/2025

FROM 1250.00000ml of M6121 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3965	2:1 H2SO4 : HNO3	MP84563	02/18/2025	06/03/2025	Mohan Bera	None	None	Janvi Patel 02/19/2025

FROM 1600.00000ml of M6041 + 800.00000ml of M6126 = Final Quantity: 3200.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP84564	02/18/2025	08/18/2025	Mohan Bera	None	None	Janvi Patel 02/19/2025

FROM 100.00000gram of M4916 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
66	POTASSIUM PERSULFATE SOLUTION 5 %	MP84565	02/18/2025	08/06/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Janvi Patel 02/19/2025

FROM 100.00000ml of M4465 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
67	SODIUM CHLORIDE - HYDROXYL- CHLORIDE SOLUTION	MP84566	02/18/2025	06/25/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Janvi Patel 02/19/2025

FROM 2000.00000ml of W3112 + 240.00000gram of M4371 + 240.00000gram of M5884 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP84636	02/25/2025	03/25/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 02/28/2025

FROM 125.00000ml of M5792 + 2350.00000ml of W3112 + 25.00000ml of M5789 = 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)	MP84637	02/25/2025	03/25/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 02/28/2025

FROM 5.00000ml of M5395 + 5.00000ml of M5467 + 5.00000ml of M5472 + 5.00000ml of M5816 + 5.00000ml of M5820 + 5.00000ml of M5875 + 5.00000ml of M5970 + 5.00000ml of M6077 + 5.00000ml of M6146 + 455.00000ml of MP84636 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP84638	02/25/2025	03/25/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 02/28/2025

FROM 50.00000ml of MP84636 + 50.00000ml of MP84637 = 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	MP84639	02/25/2025	03/25/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 02/28/2025

FROM 25.00000ml of MP84637 + 75.00000ml of MP84636 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP84640	02/25/2025	03/25/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 02/28/2025

FROM 16.00000ml of MP84637 + 184.00000ml of MP84636 = Final Quantity: 200.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP84641	02/25/2025	03/09/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 02/28/2025

FROM 0.00200ml of M5816 + 0.00400ml of M5978 + 0.03000ml of M6028 + 0.04000ml of M4884 + 0.05000ml of M5496 + 0.05000ml of M5658 + 0.05000ml of M5811 + 0.05000ml of M6030 + 0.06000ml of M5747 + 0.10000ml of M5472 + 0.10000ml of M5751 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5970 + 0.10000ml of M6128 + 0.15000ml of M5800 + 0.20000ml of M5748 + 0.20000ml of M5799 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.20000ml of M6145 + 0.25000ml of M5467 + 0.25000ml of M6146 + 0.50000ml of M5798 + 0.50000ml of M5814 + 0.50000ml of M6032 + 1.00000ml of M5192 + 1.00000ml of M5288 + 1.00000ml of M5497 + 1.00000ml of M6127 + 1.00000ml of M6144 + 77.68000ml of MP84636 = 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	MP84642	02/25/2025	03/09/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 02/28/2025

FROM 2.00000ml of MP84641 + 98.00000ml of MP84636 = 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	MP84643	02/25/2025	03/25/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 02/28/2025

FROM 0.02500ml of M5429 + 0.02500ml of M5815 + 0.02500ml of M5817 + 0.10000ml of M5467 + 0.25000ml of M5218 + 0.25000ml of M5472 + 10.00000ml of M6150 + 89.77500ml of MP84636 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP84644	02/24/2025	03/25/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 02/28/2025

FROM 25.00000ml of M6152 + 225.00000ml of MP84636 = 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
911	ICP AES CCV SOLN	MP84646	02/25/2025	03/25/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 02/28/2025

FROM 50.00000ml of MP84636 + 50.00000ml of MP84637 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP84649	02/25/2025	03/25/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 02/28/2025

FROM 1.00000ml of M5959 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M5789 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
513	RINSE SOLN	MP84650	02/25/2025	03/25/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 02/28/2025

FROM 200.00000ml of M5789 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP84664	02/27/2025	03/28/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/28/2025

FROM 1.00000ml of M6126 + 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	MP84665	02/27/2025	03/28/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/28/2025

FROM 2.50000ml of M6126 + 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	MP84666	02/27/2025	03/28/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/28/2025

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP84664 = 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	MP84667	02/27/2025	03/28/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/28/2025

FROM 2.50000ml of M6126 + 245.00000ml of W3112 + 2.50000ml of MP84664 = 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	MP84668	02/27/2025	03/28/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/28/2025

FROM 2.50000ml of M6126 + 242.50000ml of W3112 + 5.00000ml of MP84664 = 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	MP84669	02/27/2025	03/28/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/28/2025

FROM 2.50000ml of M6126 + 240.00000ml of W3112 + 7.50000ml of MP84664 = 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	MP84670	02/27/2025	03/28/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/28/2025

FROM 2.50000ml of M6126 + 237.50000ml of W3112 + 10.00000ml of MP84664 = 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	MP84671	02/27/2025	02/28/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/28/2025

FROM 2.50000ml of M5532 + 2.50000ml of M6126 + 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)	MP84672	02/27/2025	03/28/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/28/2025

FROM 2.50000ml of M6126 + 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)	MP84673	02/27/2025	03/28/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/28/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6126 + 10.00000ml of MP84664 = 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)	MP84674	02/27/2025	03/28/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/28/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6126 = 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)	MP84675	02/27/2025	03/28/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/28/2025

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP84664 = 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)	MP84676	02/27/2025	03/28/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/28/2025

FROM 2.50000ml of M6126 + 240.50000ml of W3112 + 7.00000ml of MP84664 = 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	MP84691	02/28/2025	03/01/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/28/2025

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
3494	ICP AES ICSAB SOLN-1	MP84721	02/25/2025	03/25/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 02/28/2025

FROM 0.01000ml of M5815 + 0.01000ml of M5817 + 0.10000ml of M5296 + 0.10000ml of M5472 + 0.10000ml of M5970 + 10.00000ml of M6152 + 10.00000ml of M6155 + 79.50000ml of MP84636 = Final Quantity: 100.000 ml

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-2196-01 / Hydroxylamine Hydrochloride, Crystal (cs/4x500g)	0000215387	06/25/2025	07/01/2019 / RICHARD	06/07/2019 / RICHARD	M4371

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3238-05 / Potassium Persulfate (2.5kg)	0000234156	08/06/2025	07/23/2019 /	07/25/2019 / manojkumar	M4465

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57014 / Si, 1000 PPM, 125 ml	030921	03/09/2025	08/06/2021 / jaswal	08/05/2021 / jaswal	M4884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3227-05 / Potassium Permanganate (2.5kg)	210800	03/31/2026	11/30/2022 / mohan	07/28/2021 / mohan	M4916

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCl 125mL 10ug/mL	S2-HG709270	09/22/2026	05/28/2022 / mohan	01/27/2022 / mohan	M5062

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57042 / Mo, 1000 PPM, 125 ml	051722	05/17/2025	07/01/2022 / bin	06/17/2022 / jaswal	M5192

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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	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	S2-MEB711674	11/02/2026	07/01/2022 / bin	09/10/2021 / bin	M5218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58119 / K, 10000 PPM, 500 ml	071122	07/11/2025	09/01/2022 / jaswal	07/21/2022 / jaswal	M5288

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	S2-MEB711673	11/02/2026	09/19/2022 / jaswal	08/20/2022 / jaswal	M5296

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-MEB714159	01/13/2027	01/30/2024 / bin	09/19/2022 / bin	M5395

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57103 / Li, 10000 PPM, 125 ml	070622	07/06/2025	01/30/2023 / bin	01/26/2023 / bin	M5429

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

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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	01/14/2025 / Jaswal	03/16/2023 / jaswal	M5472

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5496

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	03/18/2023 / bin	03/17/2023 / bin	M5497

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV5-0415	03/15/2025	01/02/2025 /	03/30/2023 / mohan	M5532

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Lead (Pb) 1000PPM	100923	10/09/2026	05/20/2024 / Jaswal	12/20/2023 / jaswal	M5747

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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.	58029 / Cu, 1000 PPM, 500 ml	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	23G1262003	07/30/2025	02/08/2024 / Al-Terek	06/26/2023 / Al-Terek	M5789

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)	22D1462006	08/05/2025	02/05/2024 / Al-Terek	02/24/2022 / Al-Terek	M5792

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	051523	05/15/2026	02/06/2025 / kareem	01/03/2024 / jaswal	M5811

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.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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 #
Inorganic Ventures	CLPP-CAL-1 / CLP CAL SOLUTION #1, 125mL	T2-MEB714417	01/27/2027	04/19/2024 / jaswal	02/22/2024 / jaswal	M5875

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	232820	08/31/2028	04/30/2024 / mohan	04/25/2024 / mohan	M5882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	04/30/2024 / mohan	04/25/2024 / mohan	M5884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	07/01/2024 / Jaswal	06/14/2024 / Jaswal	M5959

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	07/01/2024 / Jaswal	07/01/2024 / Jaswal	M5970

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5978

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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	WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml	T2-MEB723367	08/26/2025	02/26/2025 / Eman	05/14/2024 / Jaswal	M6003

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	07/14/2025	01/14/2025 / Eman	05/14/2024 / Jaswal	M6011

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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 #
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

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 #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	08/16/2024 / mohan	08/16/2024 / mohan	M6041

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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	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-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

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 #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	072424	07/24/2027	01/23/2025 / kareem	01/13/2025 / Jaswal	M6144

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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.	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

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		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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	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.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6032

R: 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**010924**	**Solvent:**	24002546	Nitric Acid	
Description:	**Barium (Ba)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	010927				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

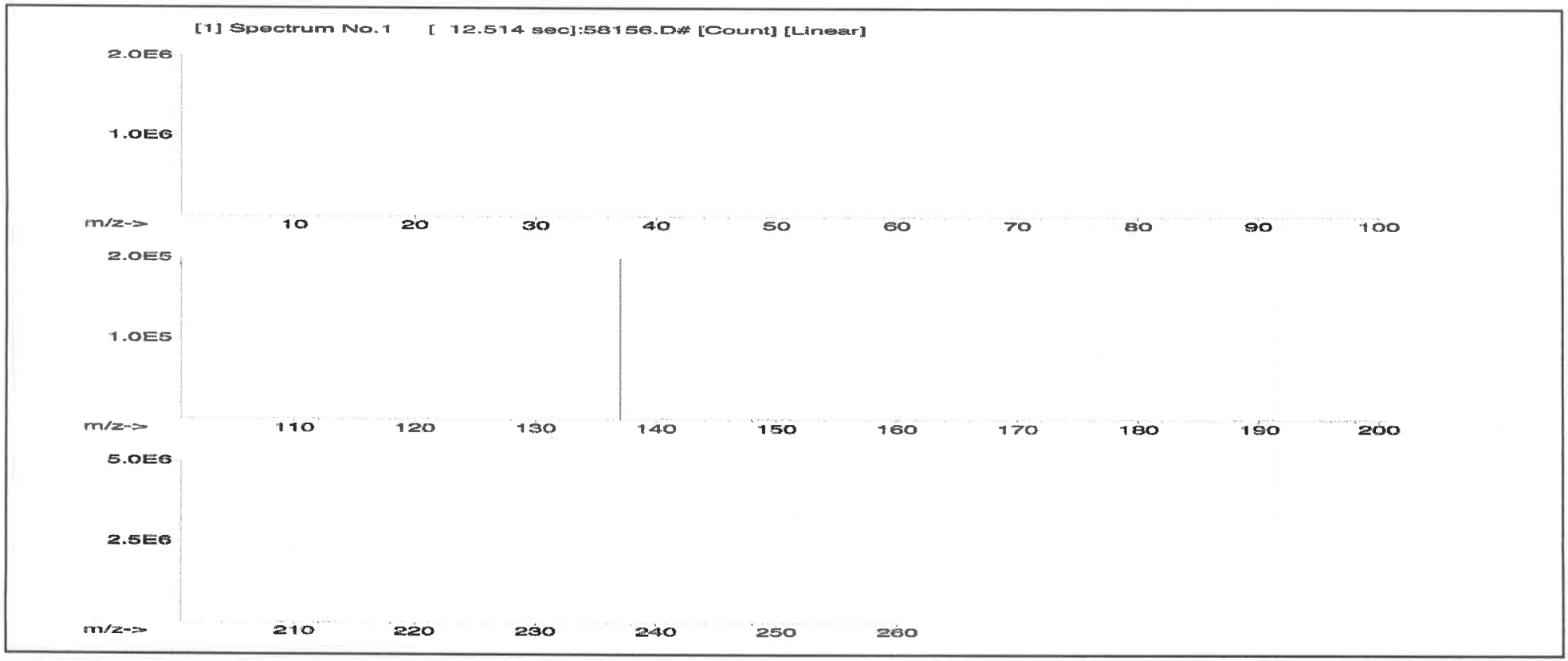
Giovanni Esposito

Formulated By:	Giovanni Esposito	010924

Pedro Rentas

Reviewed By:	Pedro L. Rentas	010924

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	**1000.1**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
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Certified Reference Material CRM

M6028

R 8/5/24

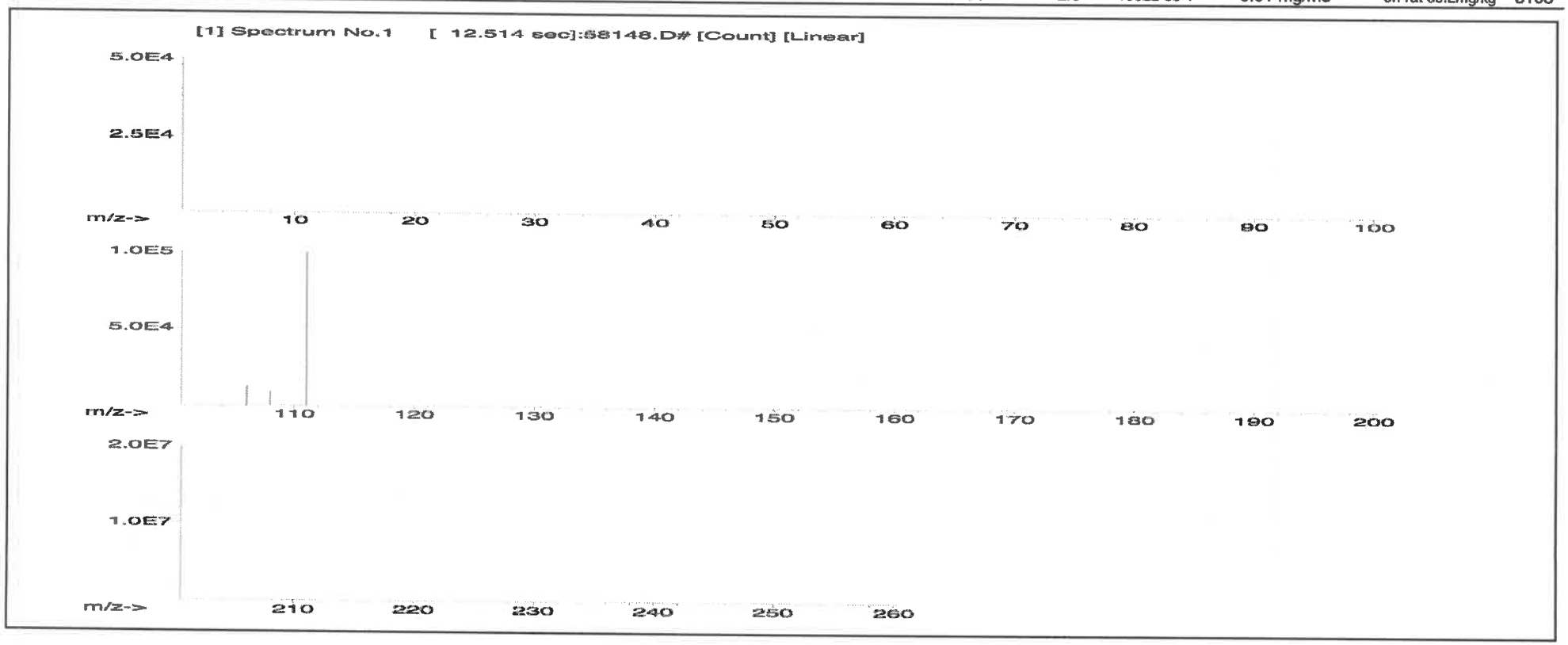
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
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.

* 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).

M5296 OP: 09/19/2022 BH

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	S2-MEB711673
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 ± 6 µg/mL**	**Molybdenum, Mo**	**1 000 ± 6 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 6 µg/mL**
Titanium, Ti	**1 000 ± 7 µg/mL**		

Density: 1.030 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

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**

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

November 02, 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

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

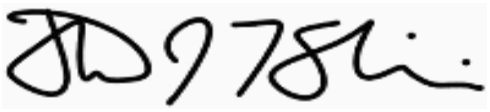
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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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-MEB714159
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 ± 8 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.1 µg/mL**
Lead, Pb	**1 000 ± 5 µg/mL**	**Selenium, Se**	**1 000 ± 8 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.043 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- 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.

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- 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

January 13, 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 13, 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

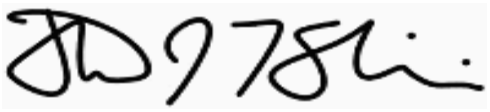
- Sealed TCT Bag Open Date: _____

- 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

R : 01/03/24. M5810, M5811

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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

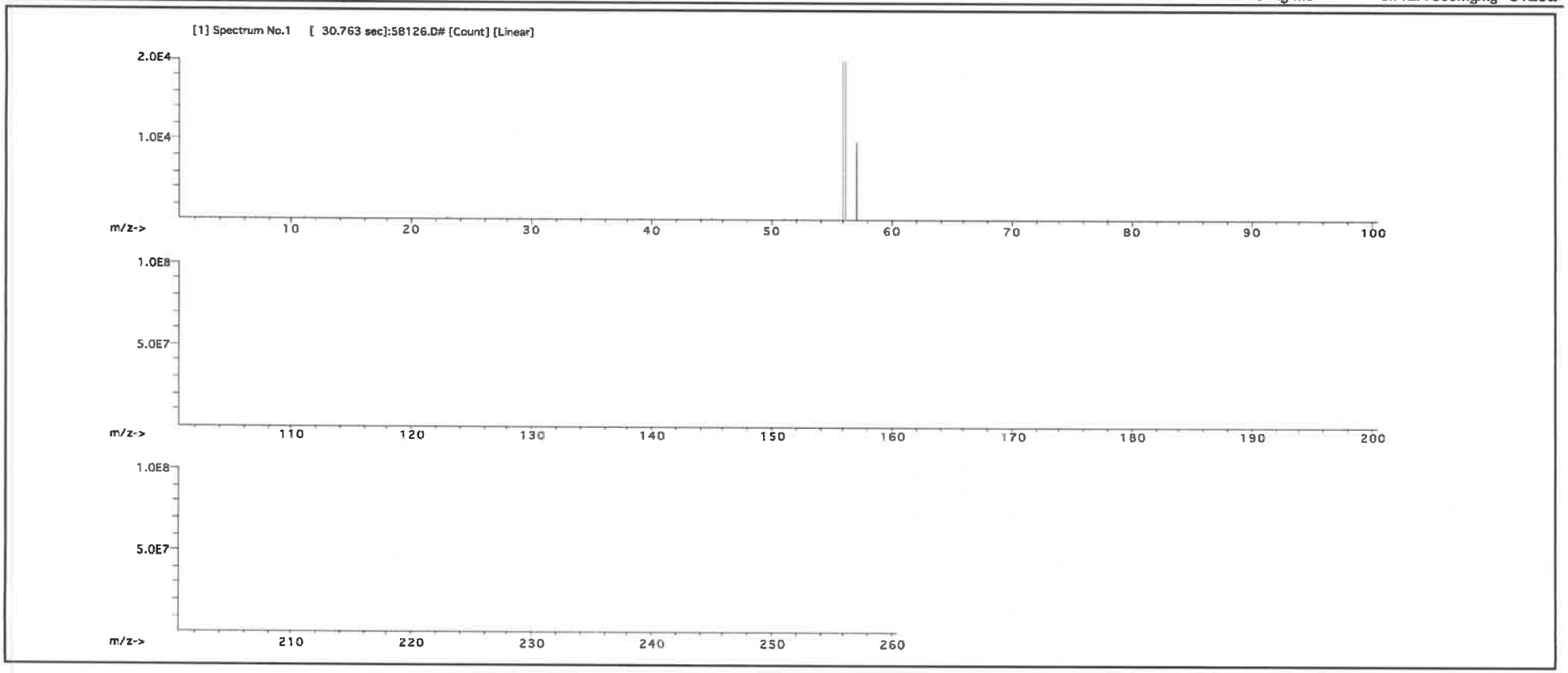
	Lot #		
Solvent:	21110221	Nitric Acid	
5.0%	250.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.12	Flask Uncertainty		

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:

* 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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RD:05/14/2024

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ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	T2-MEB723367
Matrix:	5% (v/v) HNO3

Value / Analyte(s):	1 000 µg/mL ea: Potassium,	
	600 µg/mL ea: Phosphorus,	
	300 µg/mL ea: Sodium,	Iron,
	200 µg/mL ea: Magnesium, Cerium, Thallium,	Aluminum, Selenium,
	100 µg/mL ea: Lead,	Calcium,
	80 µg/mL ea: Arsenic,	
	70 µg/mL ea: Mercury,	
	50 µg/mL ea: Nickel,	
	40 µg/mL ea: Chromium,	
	30 µg/mL ea: Copper, Vanadium,	Boron,
	20 µg/mL ea: Zinc, Barium, Cadmium, Manganese,	Strontium, Beryllium, Cobalt, Lithium,
	7.5 µg/mL ea: Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	80.0 ± 0.7 µg/mL
Barium, Ba	20.00 ± 0.09 µg/mL	Beryllium, Be	20.00 ± 0.13 µg/mL
Boron, B	30.00 ± 0.18 µg/mL	Cadmium, Cd	20.00 ± 0.09 µg/mL
Calcium, Ca	100.0 ± 0.4 µg/mL	Cerium, Ce	200.0 ± 0.8 µg/mL
Chromium, Cr	40.00 ± 0.30 µg/mL	Cobalt, Co	20.00 ± 0.10 µg/mL
Copper, Cu	30.00 ± 0.13 µg/mL	Iron, Fe	300.0 ± 1.3 µg/mL
Lead, Pb	100.0 ± 0.4 µg/mL	Lithium, Li	20.00 ± 0.08 µg/mL
Magnesium, Mg	200.0 ± 0.8 µg/mL	Manganese, Mn	20.00 ± 0.08 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.00 ± 0.22 µg/mL
Phosphorus, P	600.0 ± 2.7 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	200.0 ± 1.3 µg/mL	Silver, Ag	7.50 ± 0.03 µg/mL
Sodium, Na	300.0 ± 1.4 µg/mL	Strontium, Sr	20.01 ± 0.08 µg/mL
Thallium, Tl	200.0 ± 1.4 µg/mL	Vanadium, V	30.00 ± 0.13 µg/mL
Zinc, Zn	20.00 ± 0.09 µg/mL		

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Ce	ICP Assay	3110	090504
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 30, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



INORGANIC VENTURES

Refine your results. Redefine your industry.

Certificate of Analysis

RD:05/14/2024

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-2
Lot Number:	U2-MEB731108
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	200 µg/mL ea: Silica, 80 µg/mL ea: Antimony, 70 µg/mL ea: Tin, 40 µg/mL ea: Molybdenum, 20 µg/mL ea: Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.6 µg/mL	Molybdenum, Mo	40.03 ± 0.18 µg/mL
Silica, SiO2	200.2 ± 1.3 µg/mL	Tin, Sn	70.0 ± 0.4 µg/mL
Titanium, Ti	20.01 ± 0.13 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO2	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 17, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



M4371

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(hydroxylammonium chloride)

Rec – 06.07.19

J.T.Baker® | avantor™

Material No.: 2196-01
Batch No.: 0000215387
Manufactured Date: 2018/06/27
Retest Date: 2025/06/25
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($NH_2OH \cdot HCl$) (by $KMnO_4$ titrn)	>= 96.0 %	99.1
Clarity of Alcohol Solution	Passes Test	PT
Residue after Ignition	<= 0.050 %	0.017
Titrable Free Acid (meq/g)	<= 0.25	0.19
Ammonium (NH_4)	Passes Test	PT
Sulfur Compounds (as SO_4)	<= 0.005 %	< 0.003
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	4
Trace Impurities - Iron (Fe)	<= 5 ppm	< 3
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	< 0.005

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2015, FSSC22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Gliwice, Poland 9001:2015, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2015, 17025:2005
Panoli, India 9001:2015

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

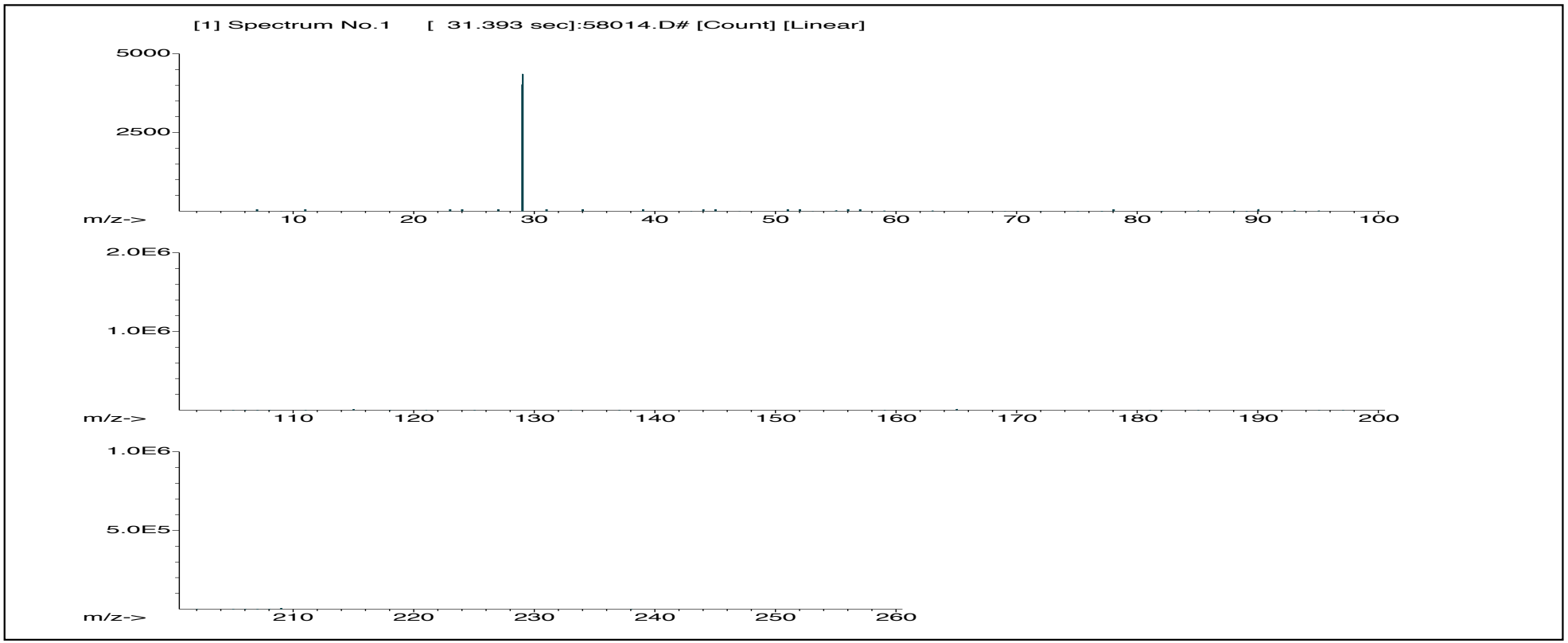
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57014**	19410105	Nitric Acid	
Lot Number:	**030921**			
Description:	**Silicon (Si)**			
		2.0%	60.0	Nitric Acid
Expiration Date:	030924		(mL)	
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry 030921
Reviewed By:	Pedro L. Rentas 030921

	Part	Lot	Dilution	Initial	Uncertainty	Nominal	Initial	**Final**	Expanded Uncertainty	SDS Information (Solvent Safety Info. On Attached pg.)			NIST
Compound	Number	Number	Factor	Vol. (mL)	Pipette (mL)	Conc. (µg/mL)	Conc. (µg/mL)	**Conc. (µg/mL)**	+/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	SRM
1. Ammonium hexafluorosilicate (Si)	58114	070120	0.1000	300.0	0.084	1000	10000.0	**1000.0**	**2.1**	16919-19-0	2.50 mg/m3	orl-rat 70 mg/kg	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	T	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* 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).

ThermoFisher SCIENTIFIC

M4913-16

MB

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	P279	Quality Test / Release Date	01/12/2021
Lot Number	210306		
Description	POTASSIUM PERMANGANATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Jan/2026

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Dark purple to purple green crystals
ASSAY	%	>= 99	99.3
CHLORIDE & CHLORATE	%	<= 0.005	<0.005
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
INSOLUBLE MATTER	%	<= 0.2	<0.2
MERCURY (Hg)	ppm	<= 0.05	<0.004
SULFATE (SO4)	%	<= 0.02	<0.02

Julian Burton

Julian Burton - Quality Control Manager – Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
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P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

M5062
M5063
M3

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	S2-HG709270
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO_3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO_3 / LDPE container, stable in 10% HNO_3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO_3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO_3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxide (Soluble in HNO_3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 22, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5192 R: 06/17/22

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

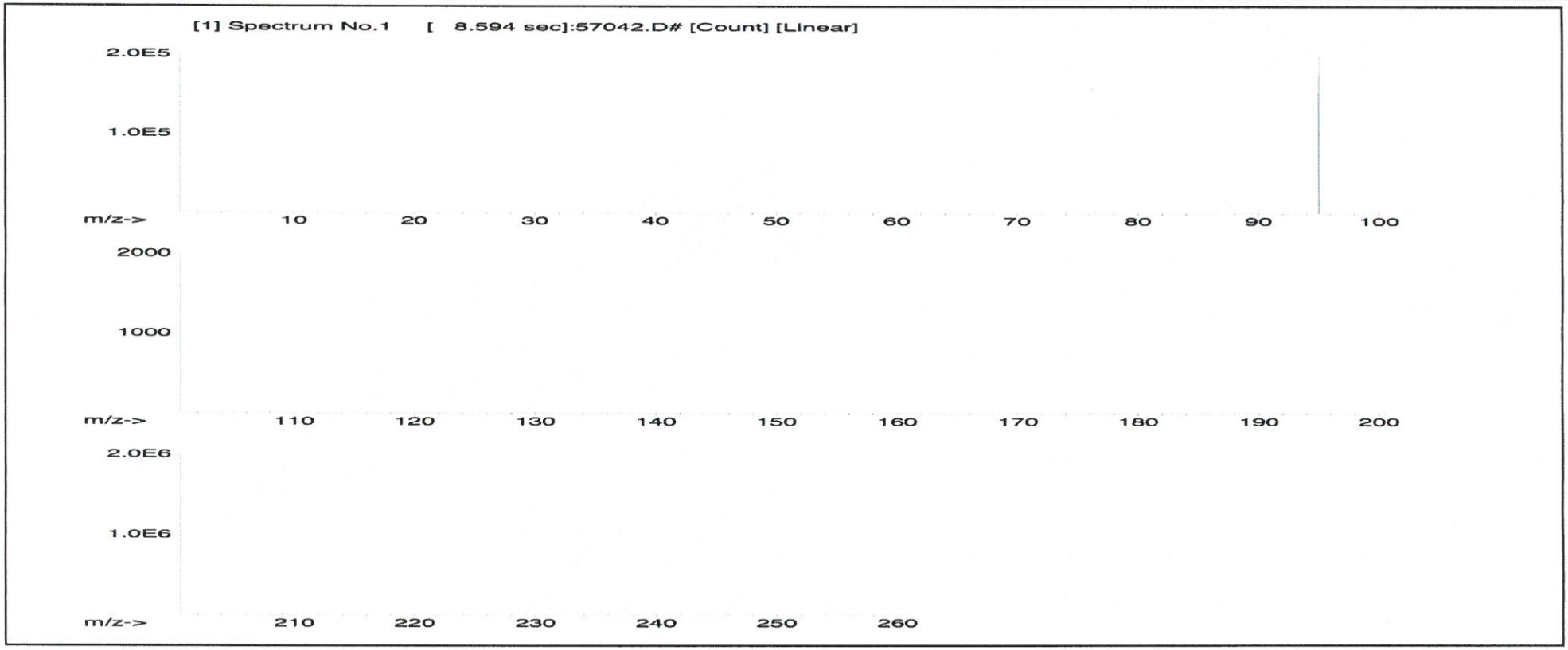
Part Number: 57042
Lot Number: 051722
Description: Molybdenum (Mo)
Expiration Date: 051725
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 3000.41

Lot #	Solvent:		
MKBQ8597V	Ammonium hydroxide		
0.5%	15.0 (mL)	Ammonium hydroxide	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By: Lawrence Barry 051722

Reviewed By: Pedro L. Rentas 051722

	Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1.	Ammonium molybdate (Mo)	58142	022222	0.1000	300.0	0.084	1000	10001.0	**1000.0**	**2.1**	13106-76-8	5 mg(Mo)/m3	orl-rat 333 mg/kg	3134



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	T	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

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-QC-4
Lot Number:	S2-MEB711674
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 7 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	**1 001 ± 6 µg/mL**		

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

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**

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

November 02, 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

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5288 R: 07/21/2022

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

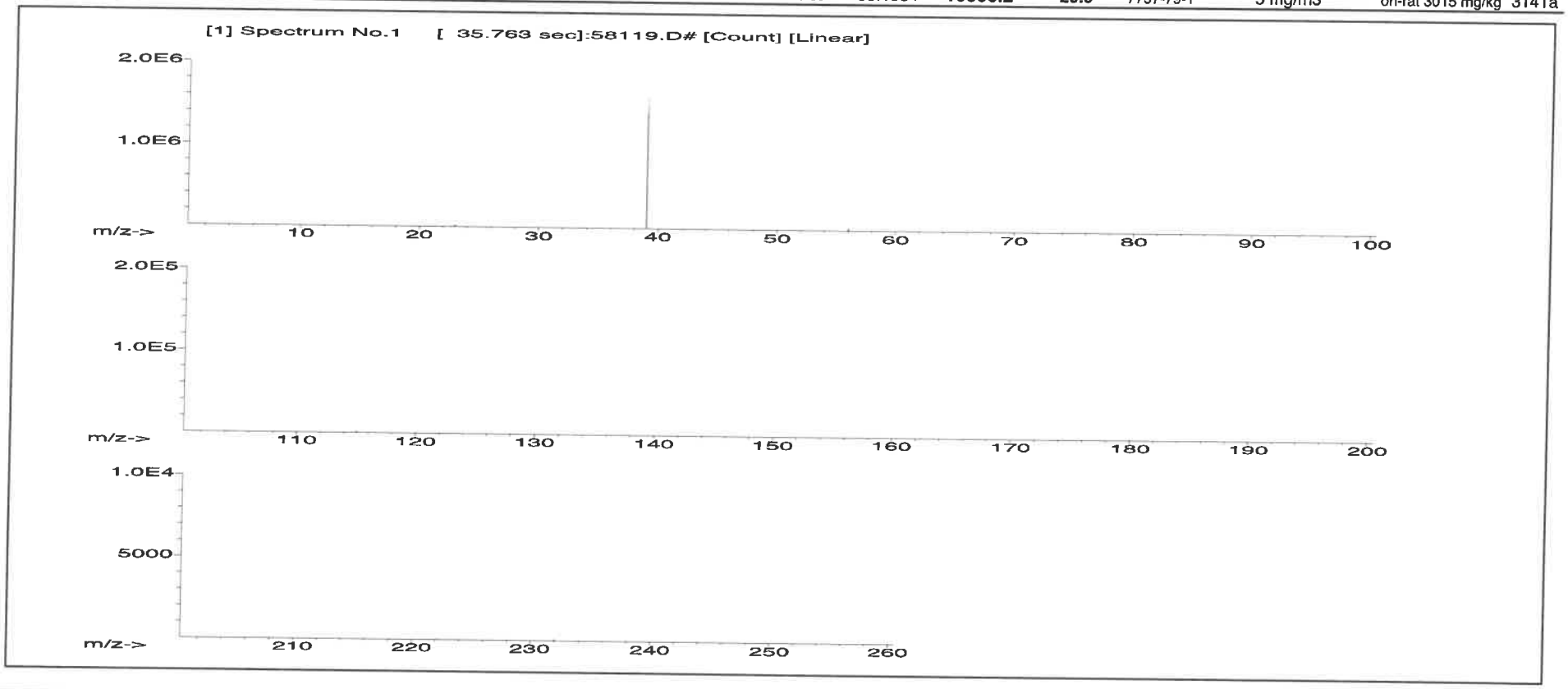
Part Number: 58119
Lot Number: 071122
Description: Potassium (K)

Expiration Date: 071125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	071122
Reviewed By:	Pedro L. Rentas	071122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD022021A1	10000	99.999	0.10	37.6	53.1925	53.1934	**10000.2**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 mg/kg	3141a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5429 R1 01/26/23 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12 | 0.058 Flask Uncertainty

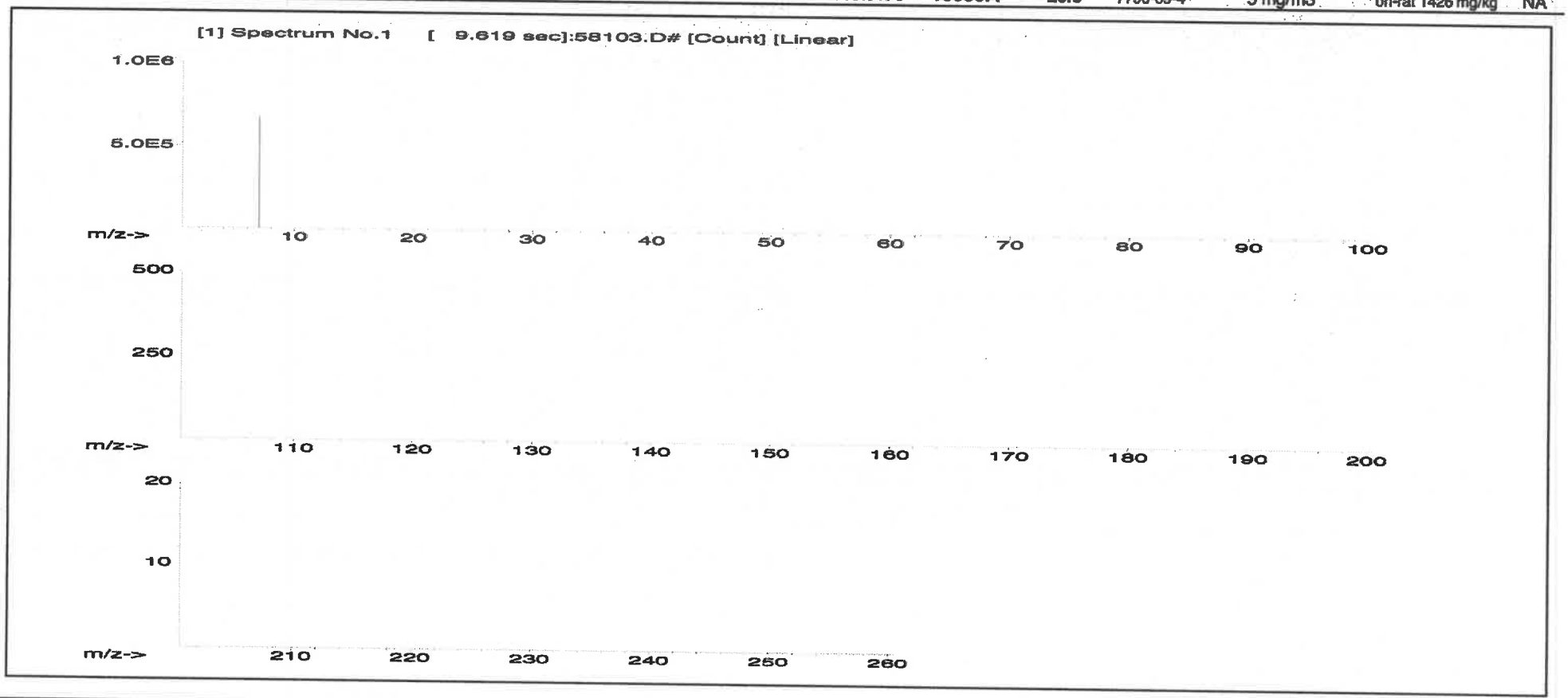
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By: Lawrence Barry 070622

Reviewed By: Pedro L. Rentas 070622

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. Lithium nitrate (Li)	IN019	LIZ042018A1	10000	99.999	0.10	10.0	100.0134	100.0173	**10000.4**	**20.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	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	T	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* 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

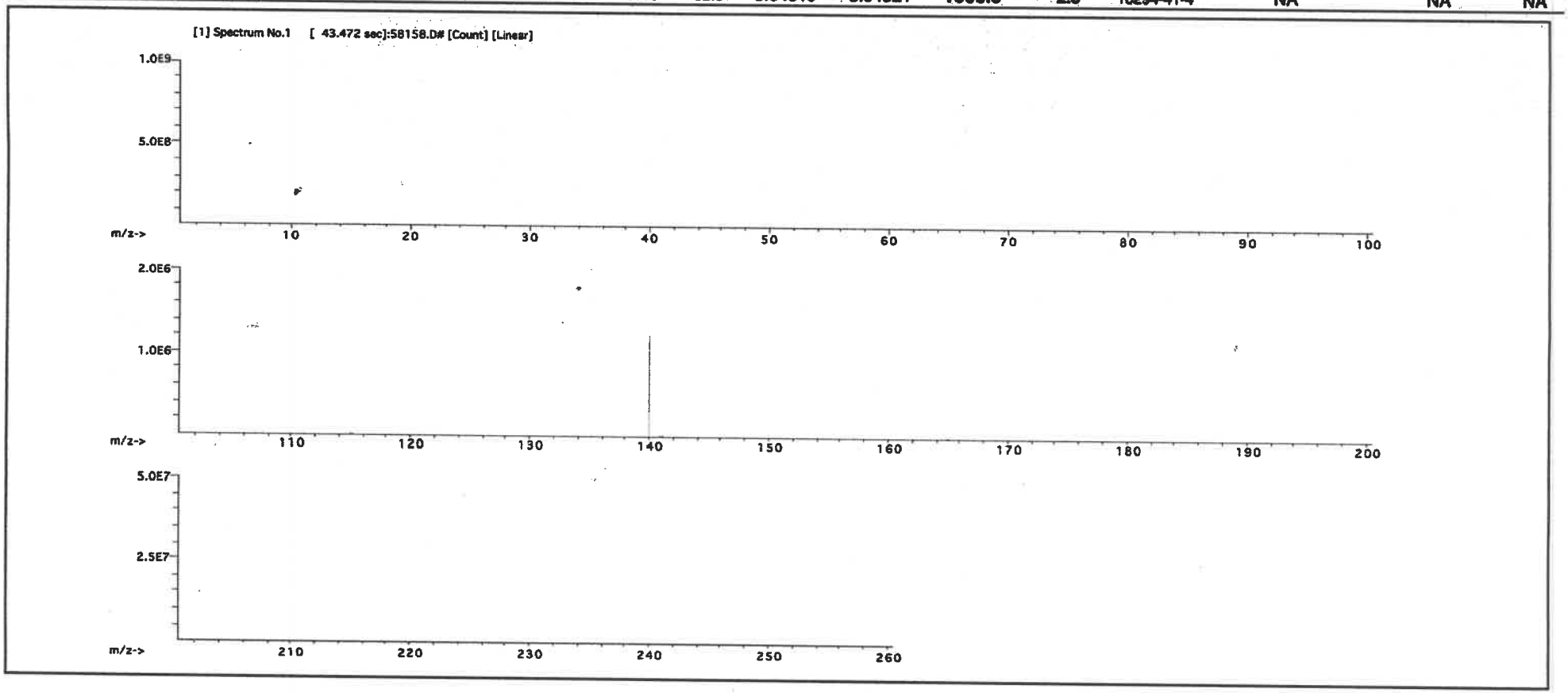
Weight shown below was diluted to (mL): 1000.12 0.058 Flask Uncertainty

		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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* 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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M5496 R 7/20/23

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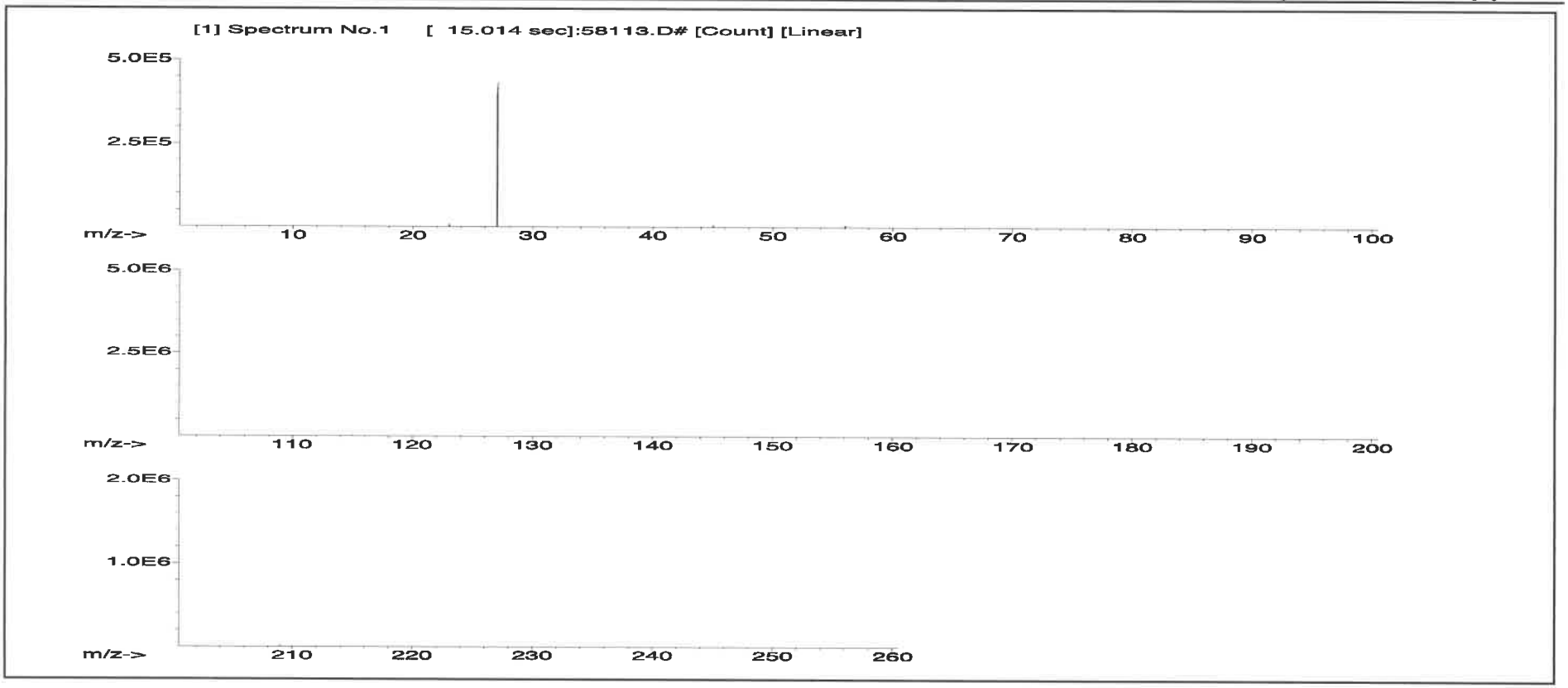
CERTIFIED WEIGHT REPORT:

Part Number:	**58113**		**Lot #**		
Lot Number:	**011623**	**Solvent:**	20510011	Nitric Acid	
Description:	**Aluminum (Al)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	011626				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	011623
Reviewed By:	Pedro L. Rentas	011623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALM112021A1	10000	99.999	0.10	7.30	273.9779	274.0078	**10001.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



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IN5497 - IN5498 R: 03/17/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41 ± 0.058 Flask Uncertainty

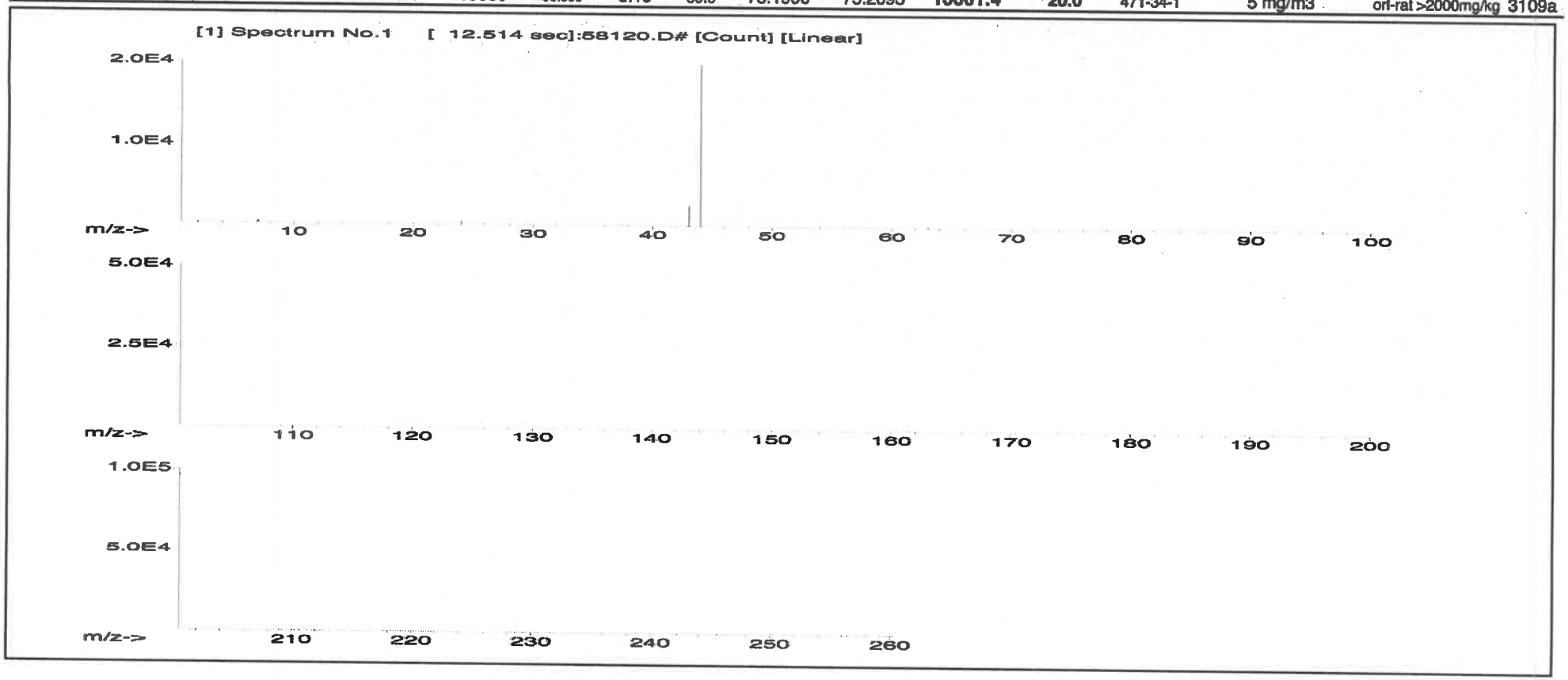
		Lot #	
Solvent:	21110221		Nitric Acid
	2%	60.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	031523
Reviewed By:	Pedro L. Rentas	031523

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD072022A1	10000	99.999	0.10	39.9	75.1990	75.2093	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.



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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).

QATS LABORATORY INORGANIC REFERENCE MATERIAL INITIAL CALIBRATION VERIFICATION SOLUTIONS (ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

MSS28-37
MB

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.

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

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

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M5658 R! 8/25/23

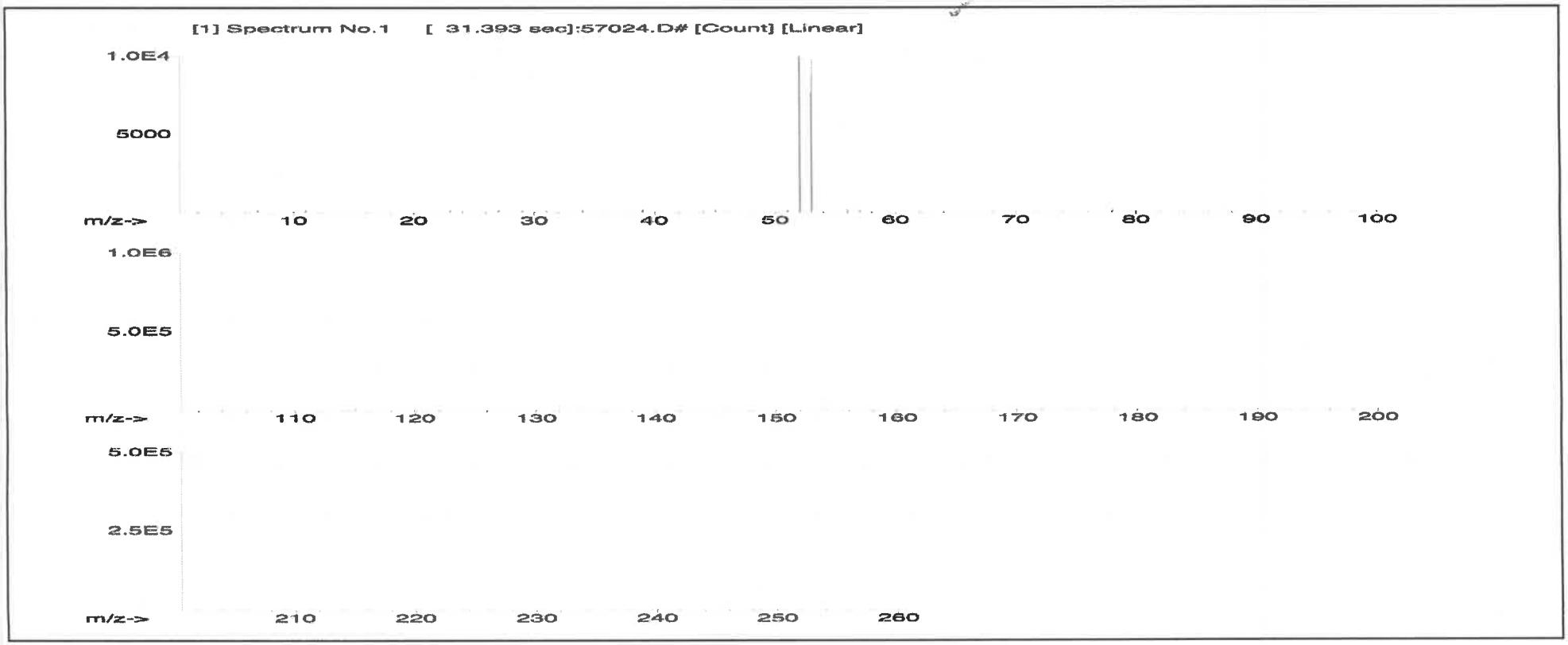
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AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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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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

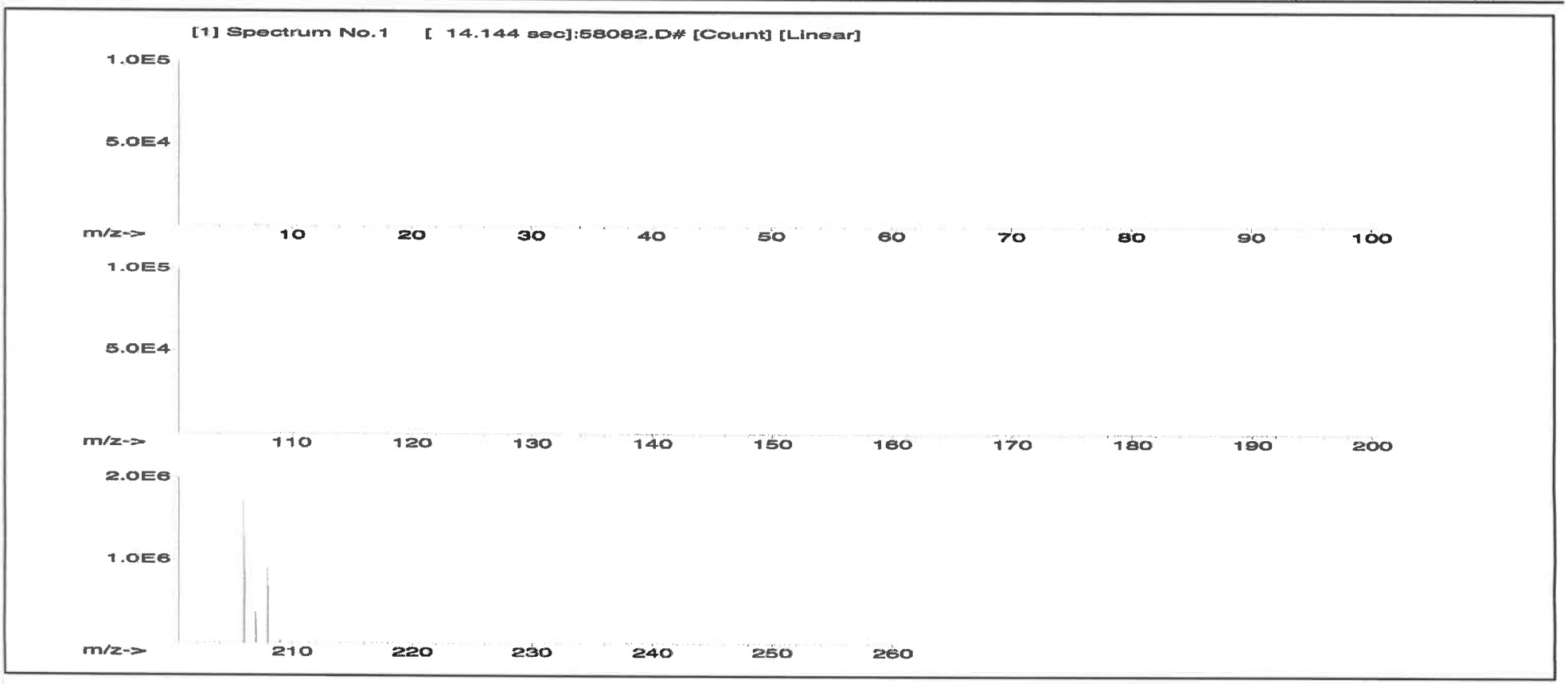
Weight shown below was diluted to (mL): 3000.41 ± 0.06 Flask Uncertainty

	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

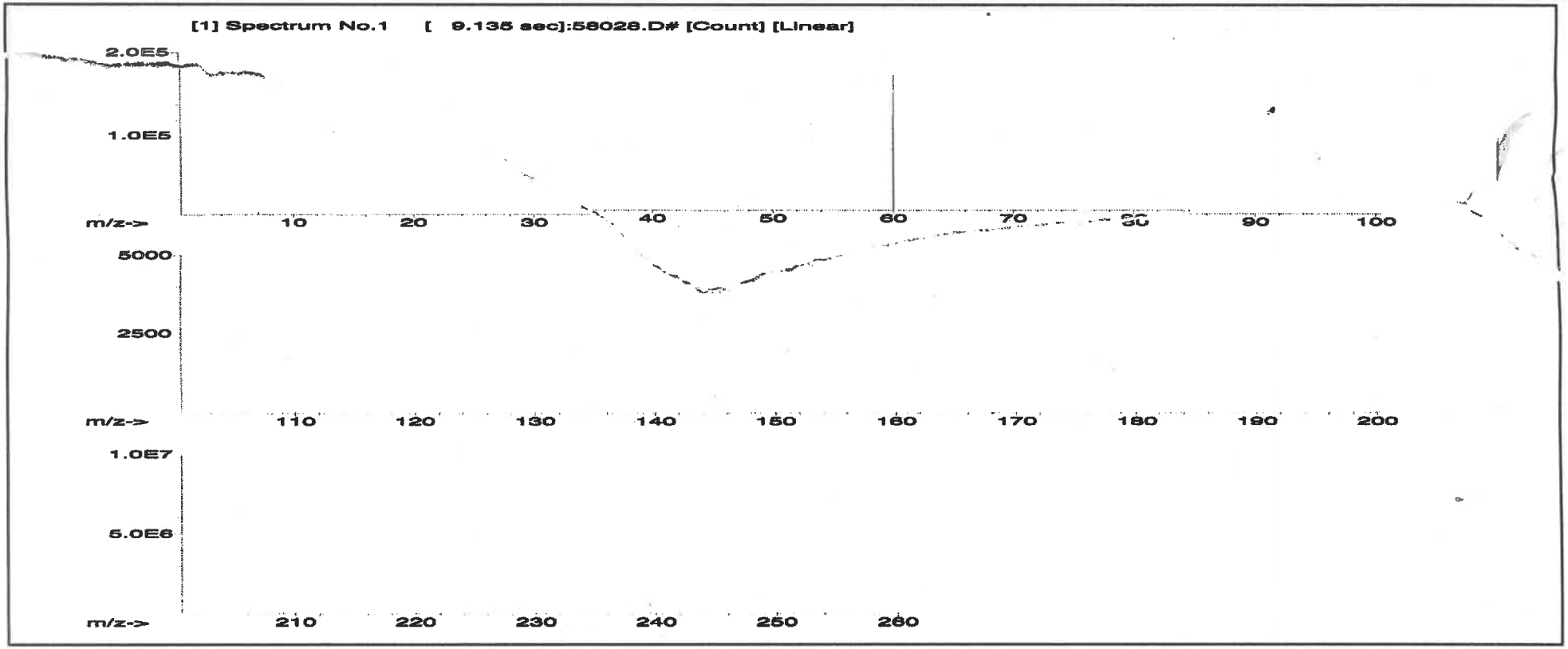
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CERTIFIED WEIGHT REPORT:

		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.

* 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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R: 8/25/23 M5751

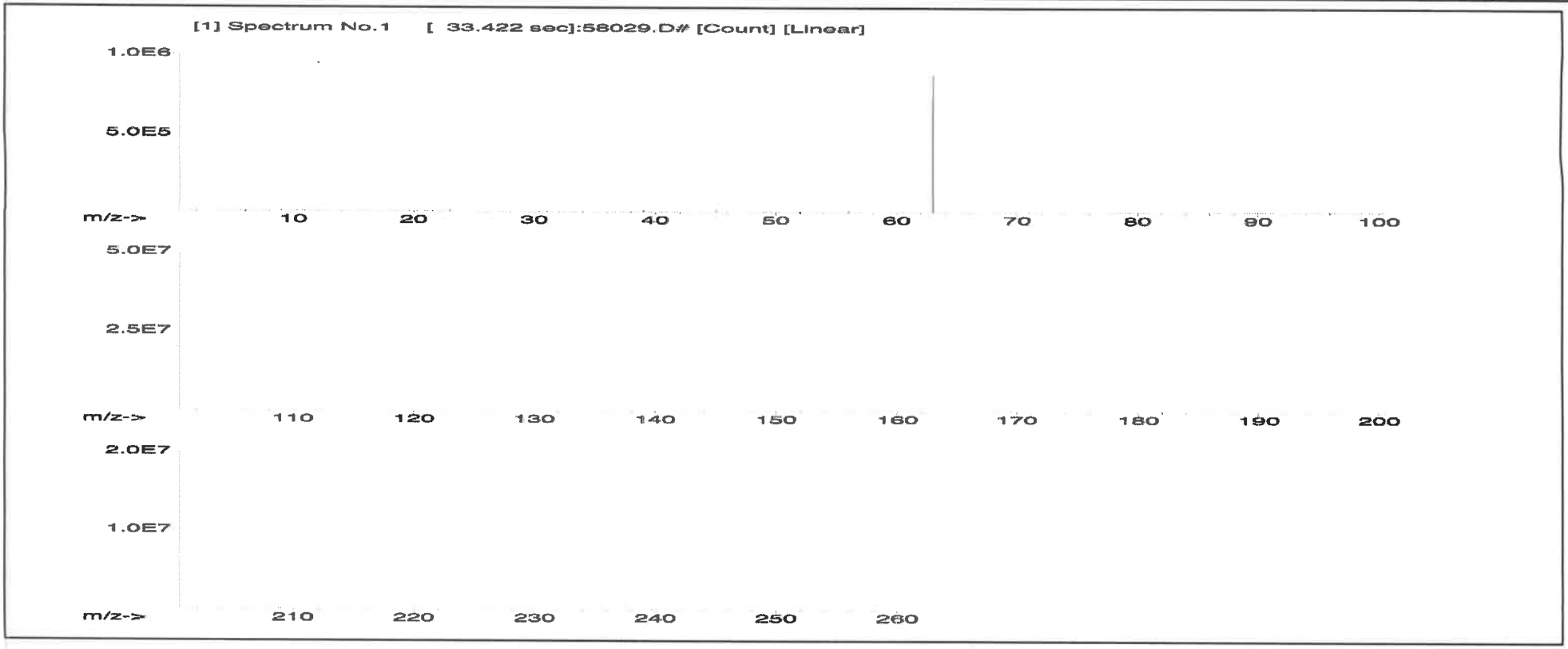
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	21110221	Nitric Acid	
Lot Number:	**071723**			
Description:	**Copper (Cu)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Rentas	071723

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	022723	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M5798

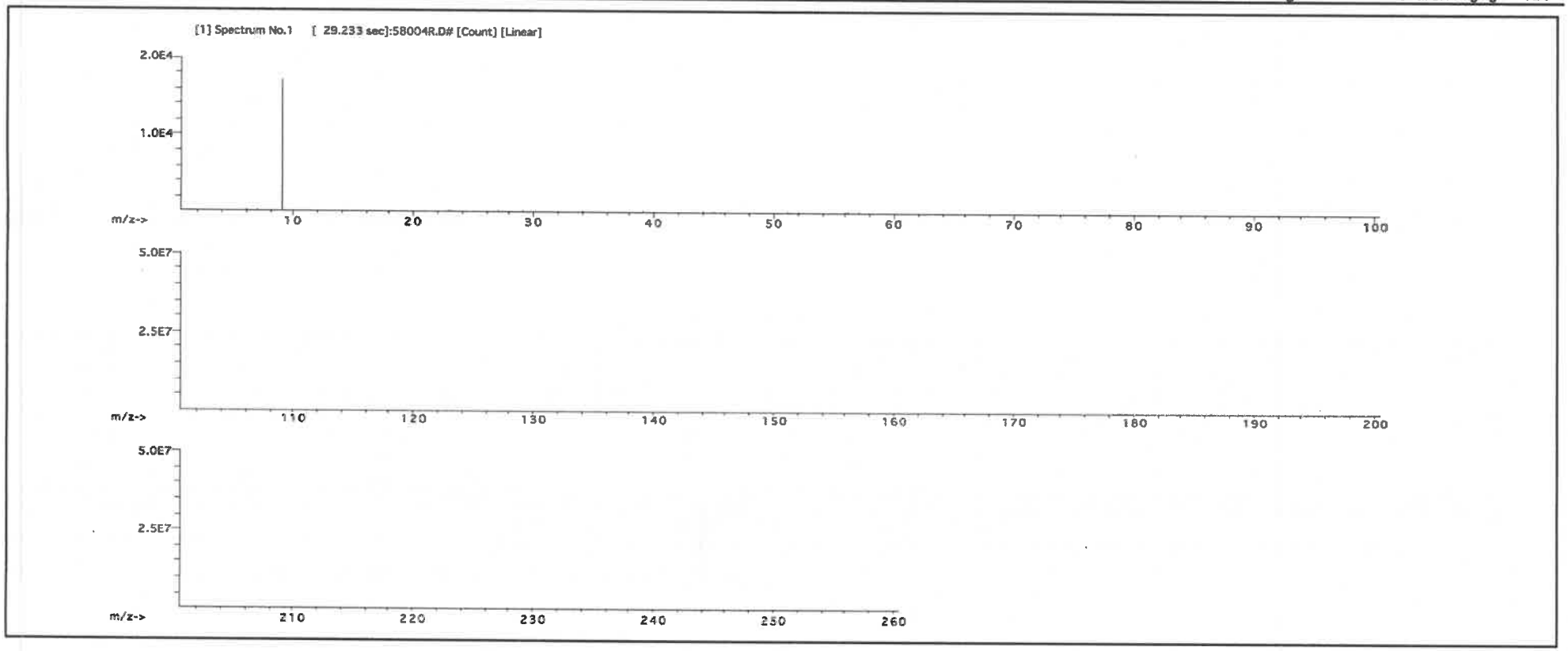
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



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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R? 02/09/24 IV15799

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

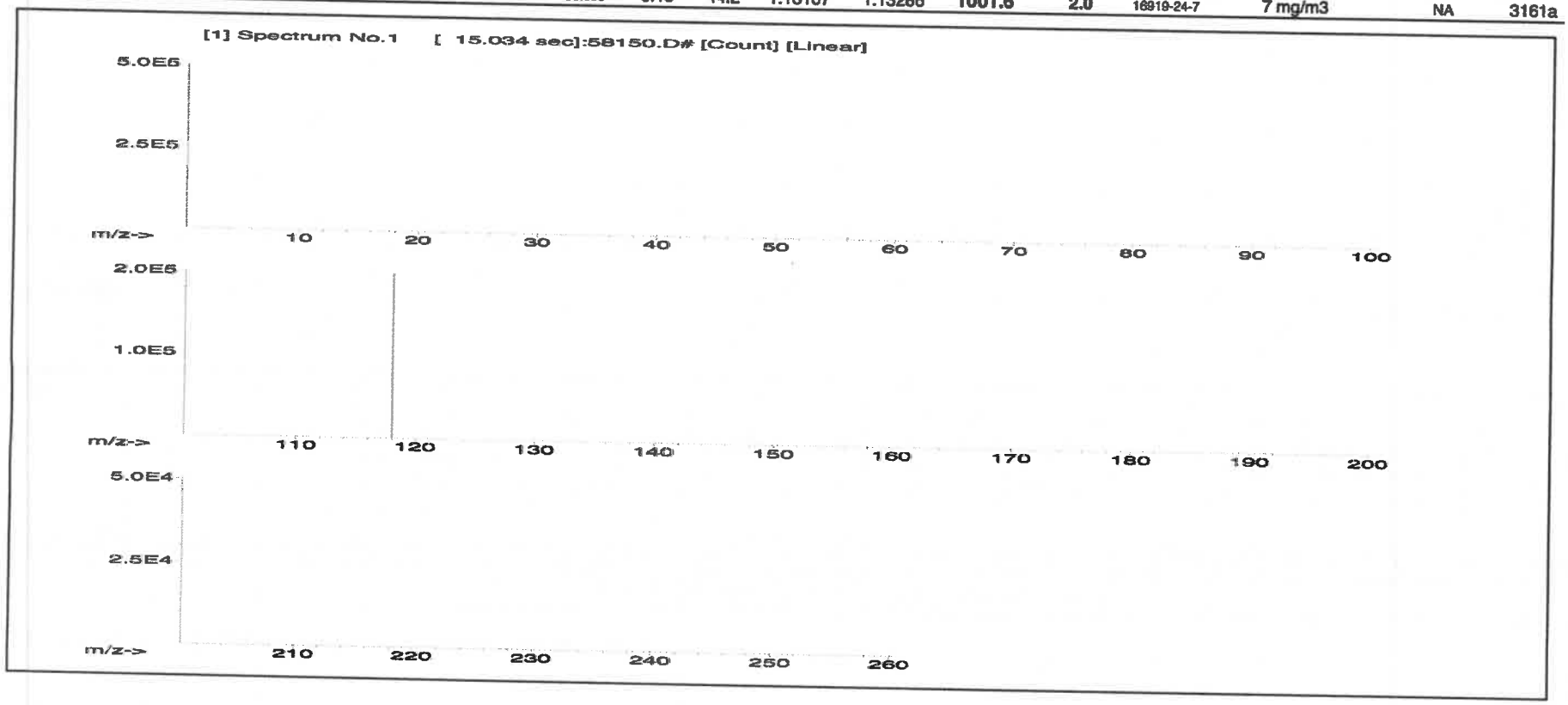
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



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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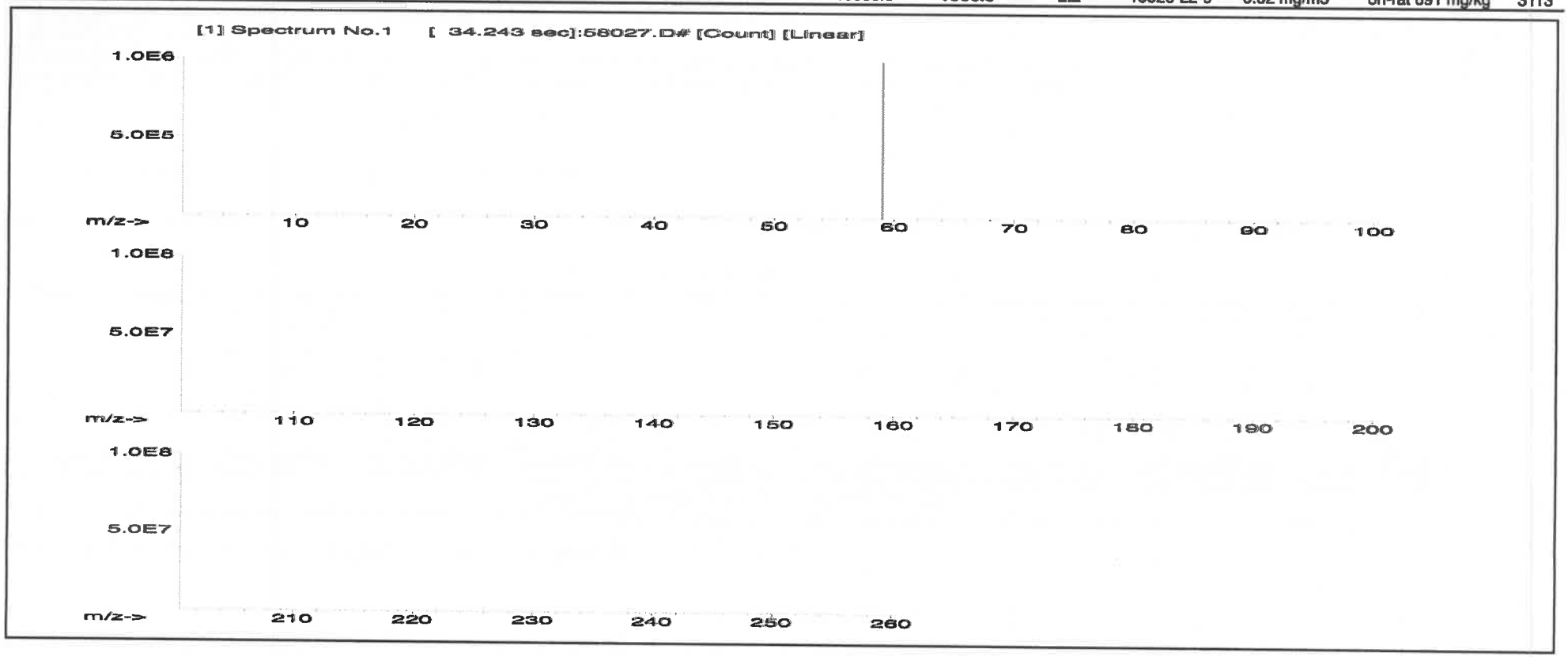
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CERTIFIED WEIGHT REPORT:

		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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R: 02/09/24 IM5801 BH

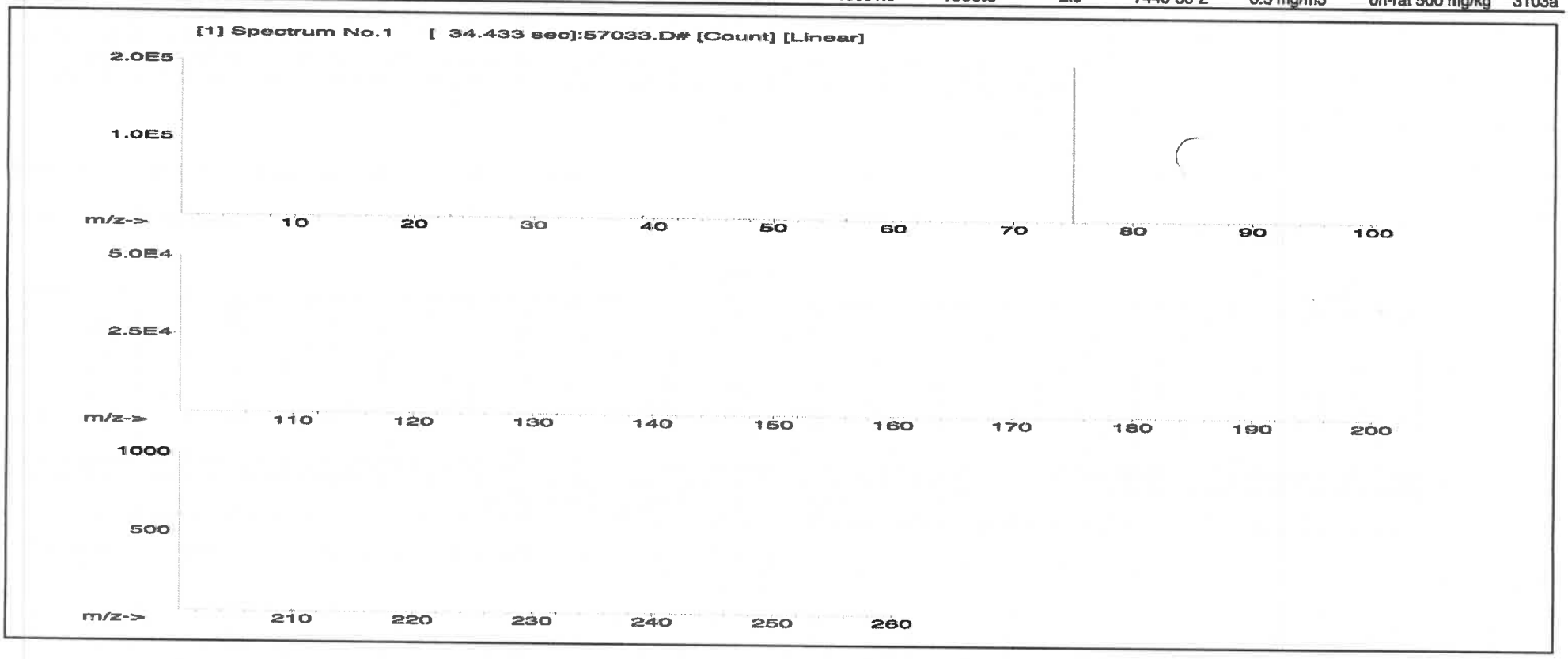
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CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	24002546	Nitric Acid		
Lot Number:	**111323**				
Description:	**Arsenic (As)**	2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	**2.0**	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



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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* 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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A: 02/09/24 M.5814

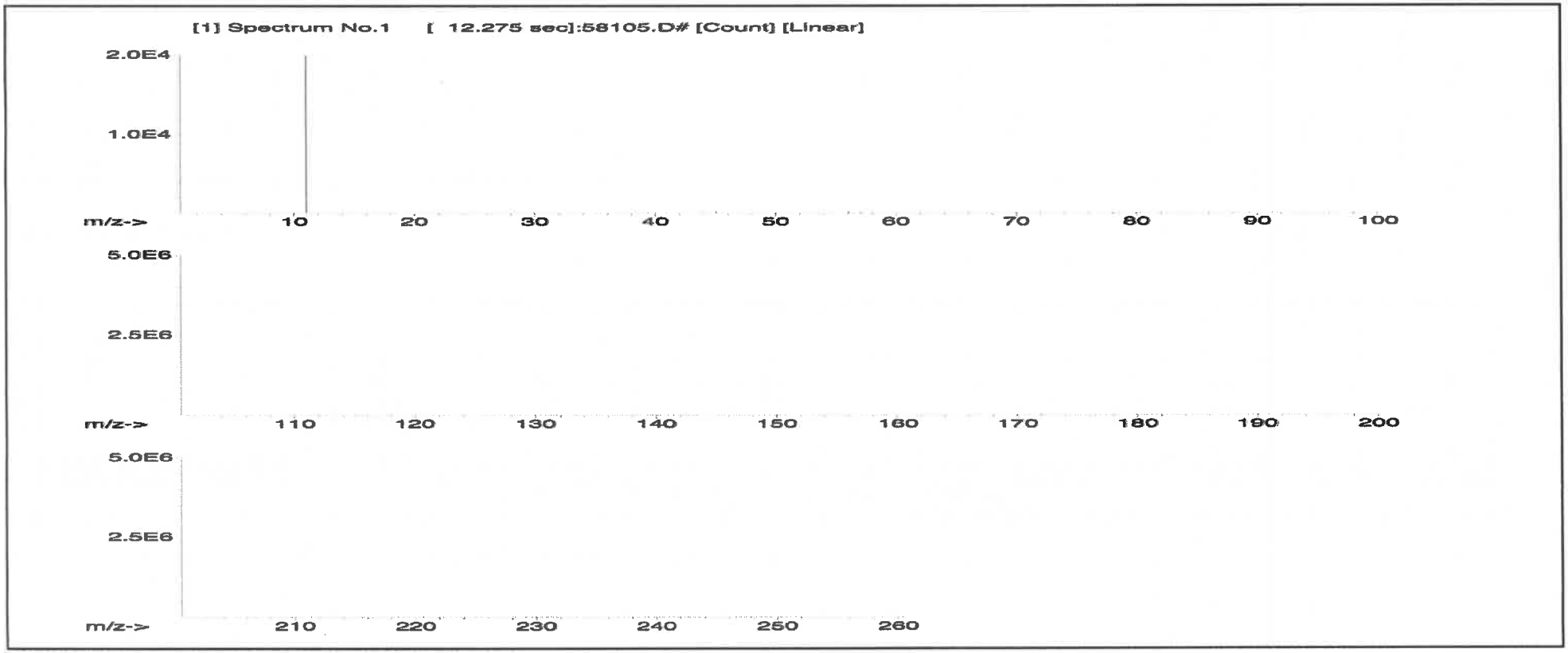
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CERTIFIED WEIGHT REPORT:

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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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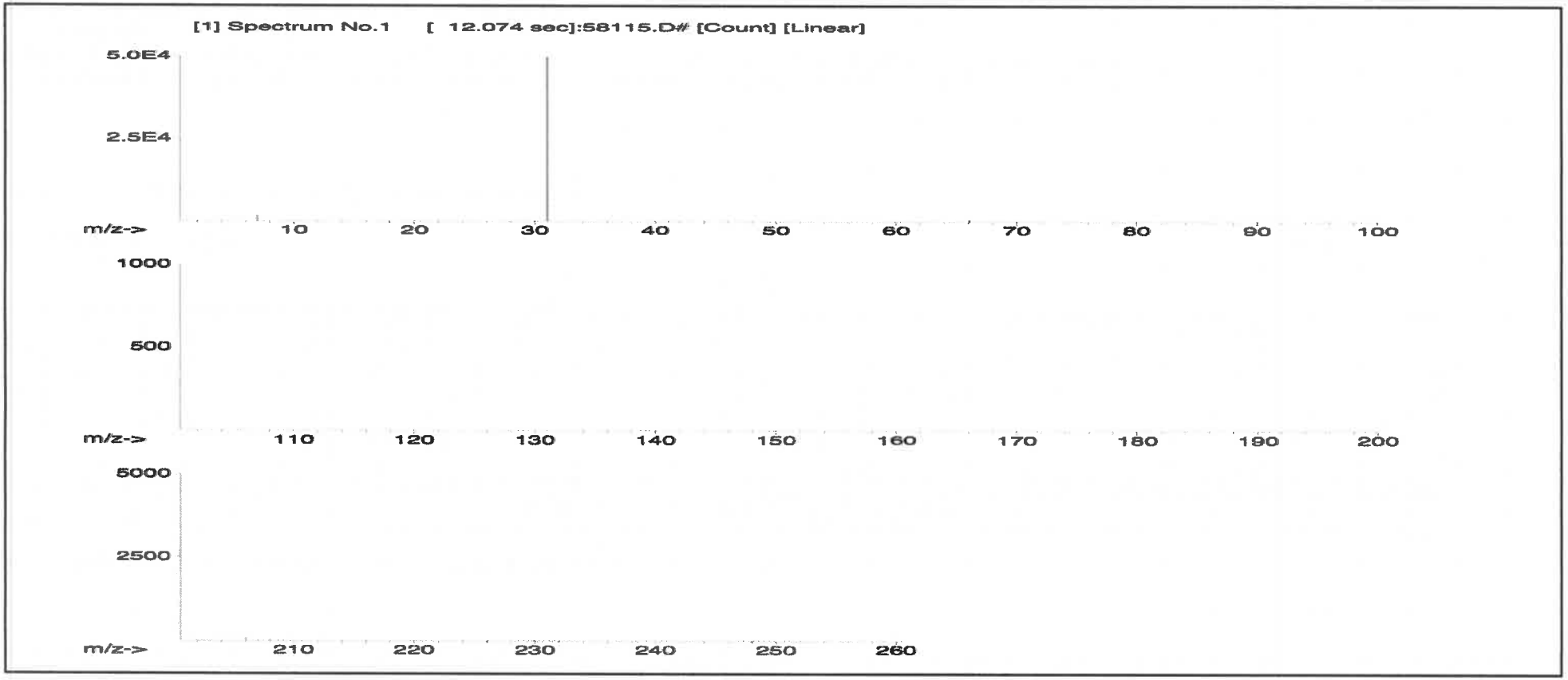
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CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**57115**	**Solvent:**	21110221	Nitric Acid
Lot Number:	**041723**			
Description:	**Phosphorous (P)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	041726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	041723
Reviewed By:	Pedro L. Rentas	041723

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	10000	99.999	0.10	27.5	72.7287	72.7289	**10000.0**	**20.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/kg	3186



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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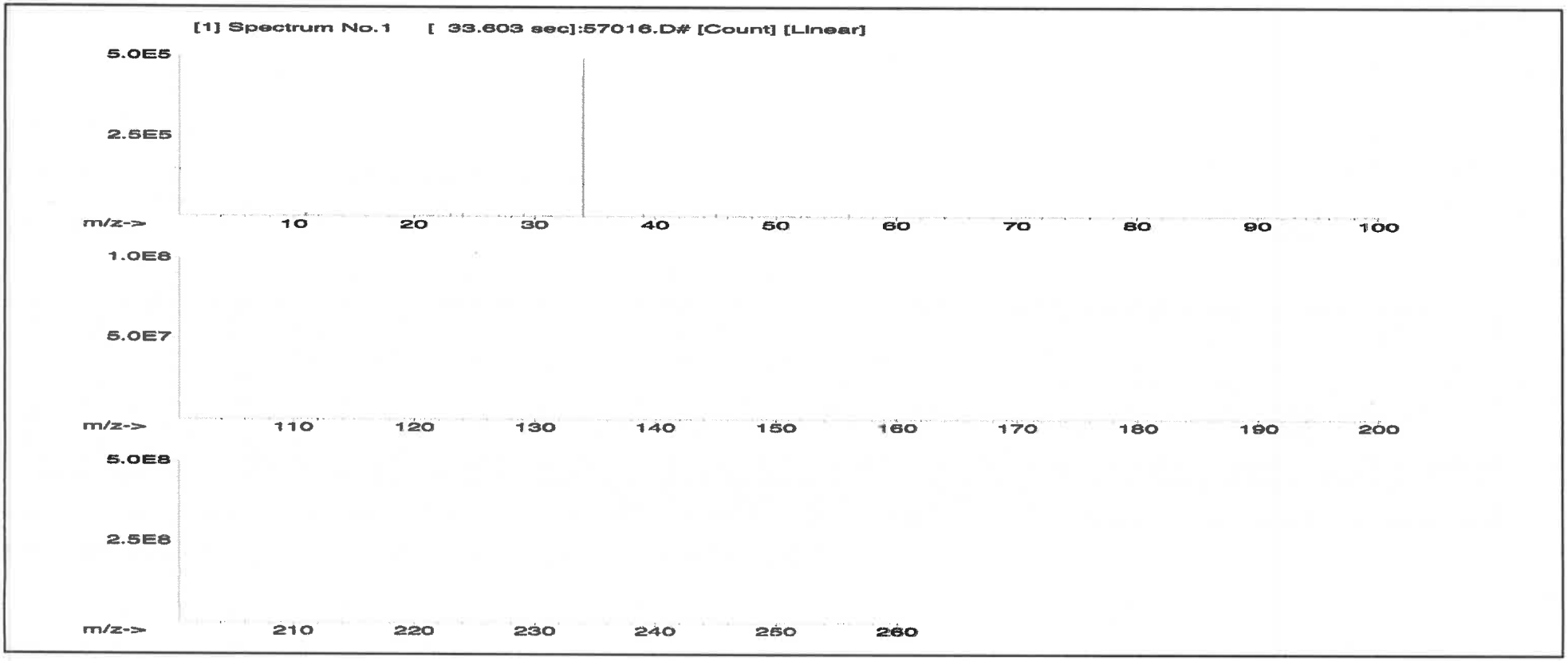
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CERTIFIED WEIGHT REPORT:

Part Number:	**57016**	**Solvent:**	**Lot #** 122923	ASTM Type 1 Water
Lot Number:	**122923**			
Description:	**Sulfur (S)**			
Expiration Date:	122926			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty	

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



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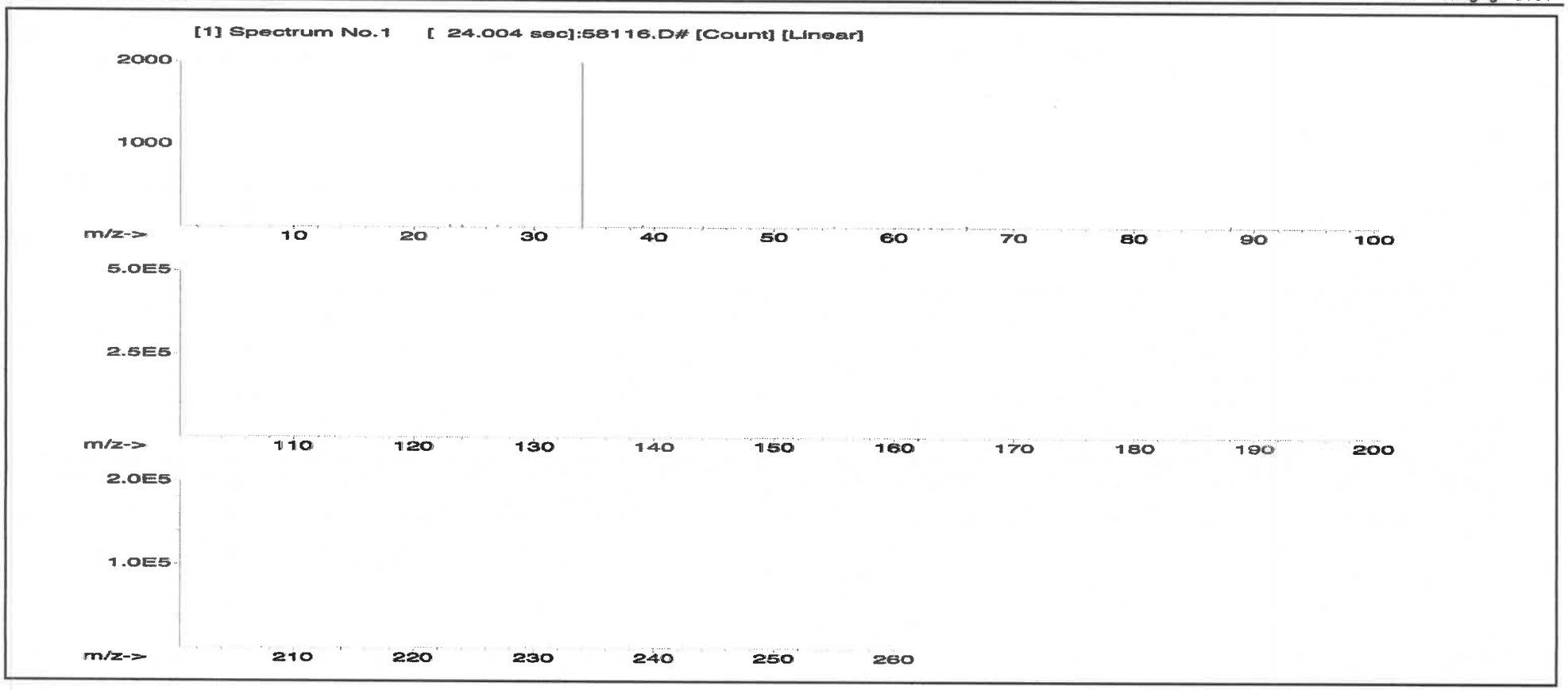
CERTIFIED WEIGHT REPORT:

Part Number:	**57116**			
Lot Number:	**071123**	**Solvent:**	071123	ASTM Type 1 Water
Description:	**Sulfur (S)**			
Expiration Date:	071126			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	1999.48	0.058	Flask Uncertainty	

Lot #

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

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Certified by:



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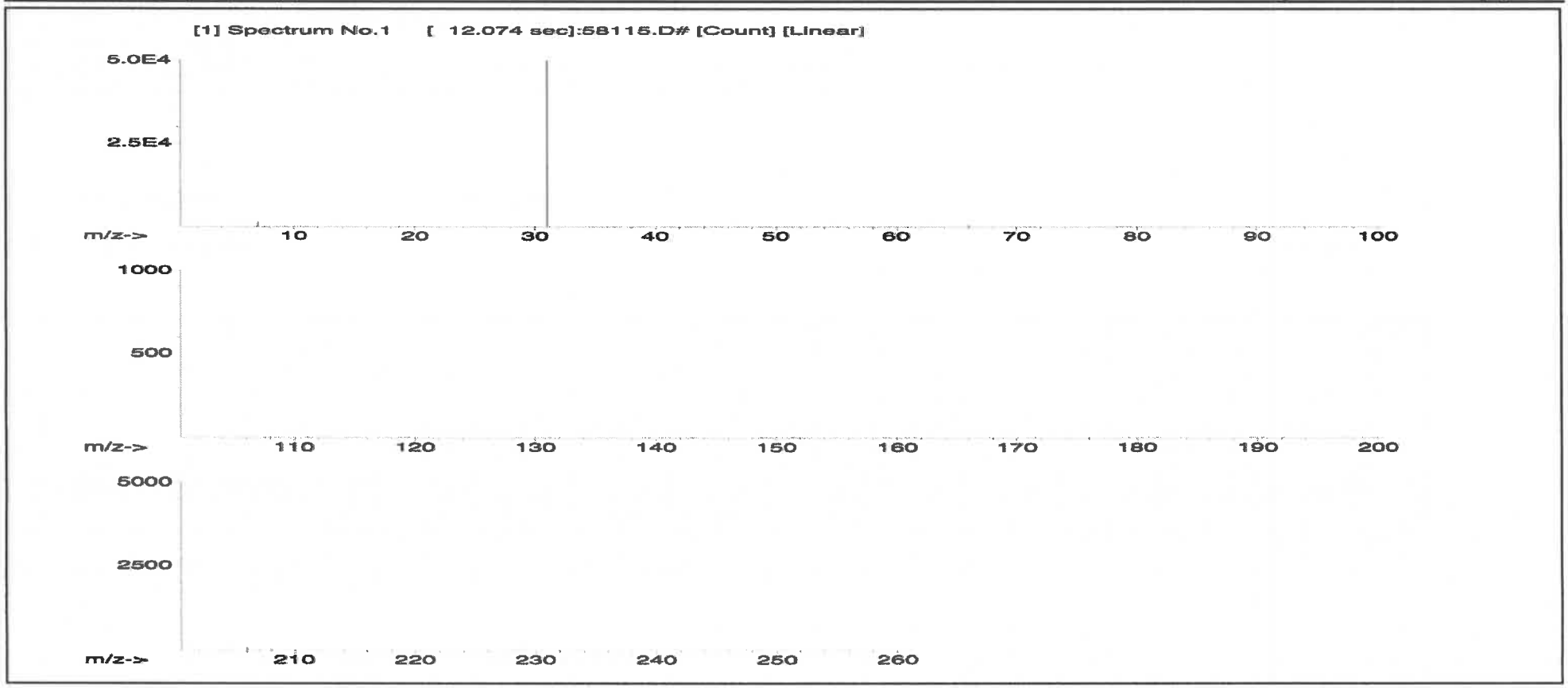
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CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

MT884
MB

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 1

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Sulfate (SO_4)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory,Research,or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Mansford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

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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 863.01
ACCREDITED Reference Material Producer Certificate 863.02

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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

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	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

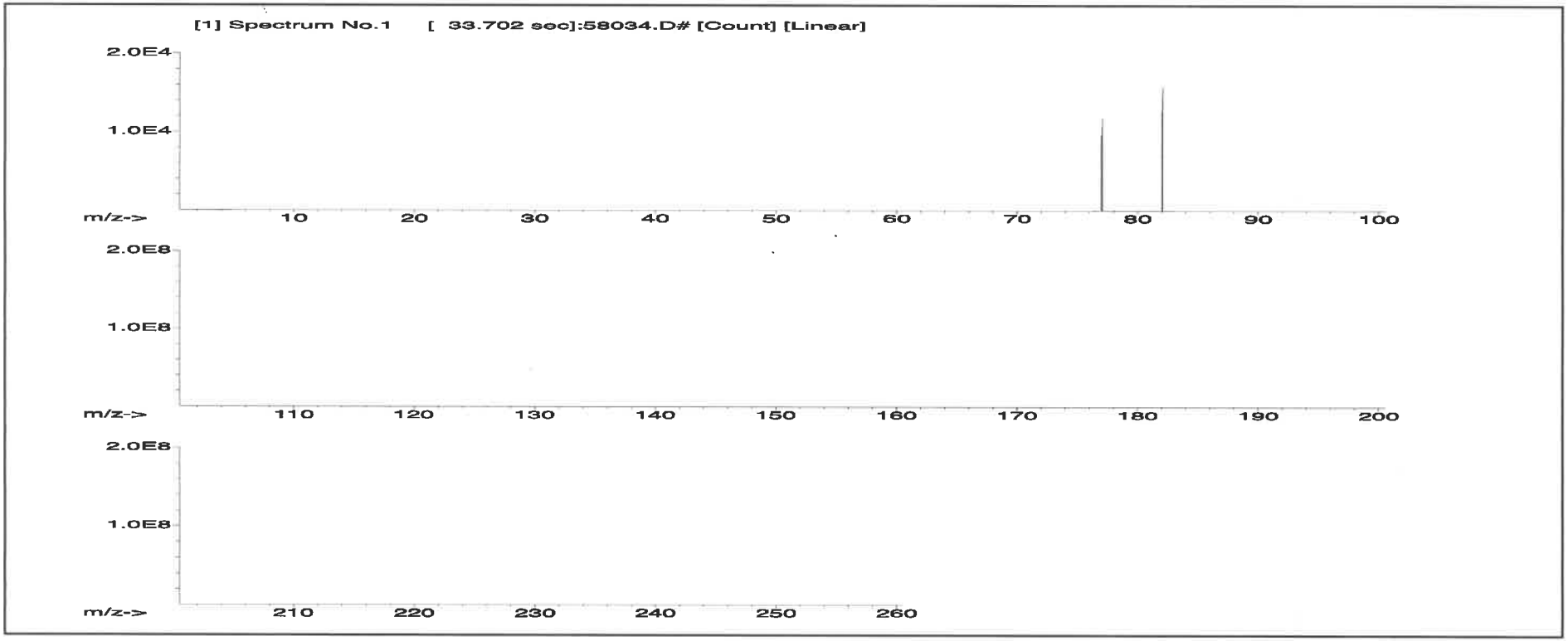
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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

M5970, M5971 R: 7/01/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

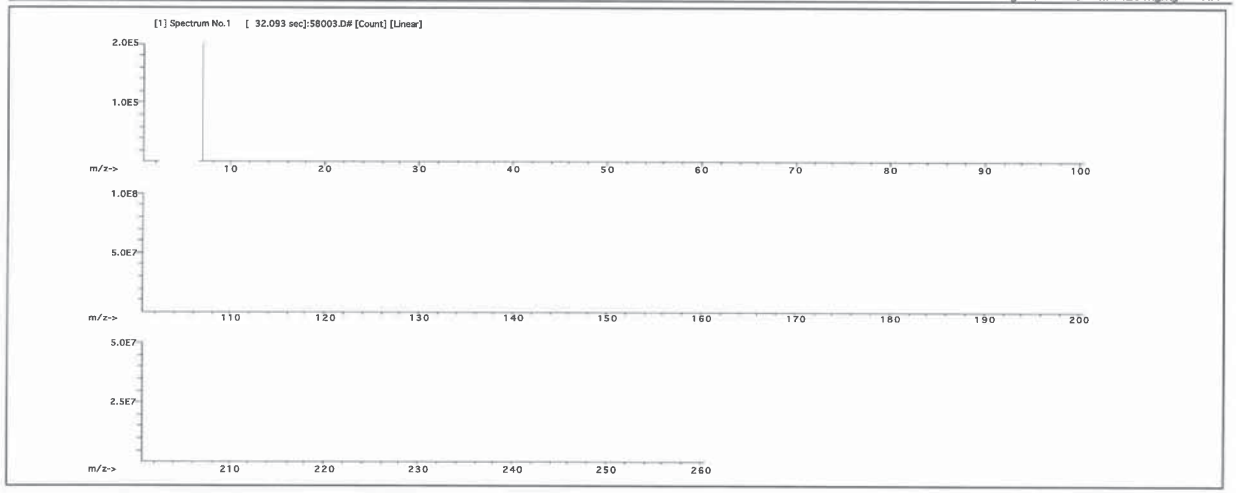
		Lot #	Solvent:
Part Number:	**57003**	24002546	Nitric Acid
Lot Number:	**062124**		
Description:	**Lithium (Li)**		
		2.0%	5.0 (mL) Nitric Acid
Expiration Date:	062127		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05 Balance Uncertainty	
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).

M5978, M5979

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

R: 2/22/24

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO_3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(\bar{x}_i)$

$\bar{x}_i$ = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = (\Sigma(w_i)^2\,(u_{char\ i})^2)^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (\bar{x}_a)\ (u_{char\ a})$

$\bar{x}_a$ = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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Certificate of Analysis

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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



Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M 6041-46
MS

avantor™ | J.T.Baker®

Material No.: 9673-33
Batch No.: 23D2462010
Manufactured Date: 2023-03-22
Retest Date: 2028-03-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H_2SO_4)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Substances Reducing Permanganate (as SO2)	≤ 2 ppm	< 2 ppm
Ammonium (NH_4)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO_3)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO_4)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

avantor™ | J.T.Baker®

Material No.: 9673-33
Batch No.: 23D2462010

Test	Specification	Result
Trace Impurities - Sodium (Na)	≤ 500.0 ppb	5.4 ppb
Trace Impurities - Strontium (Sr)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.4 ppb

For Laboratory,Research,or Manufacturing Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

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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

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 06, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

R → 10/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.190
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	1
ACS - Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.3
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

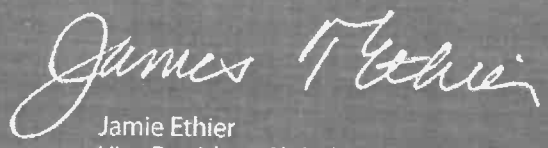
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Material No.: 9530-33
Batch No.: 0000275677

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	<1
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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

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800-368-1131
www.absolutestandards.com

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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	

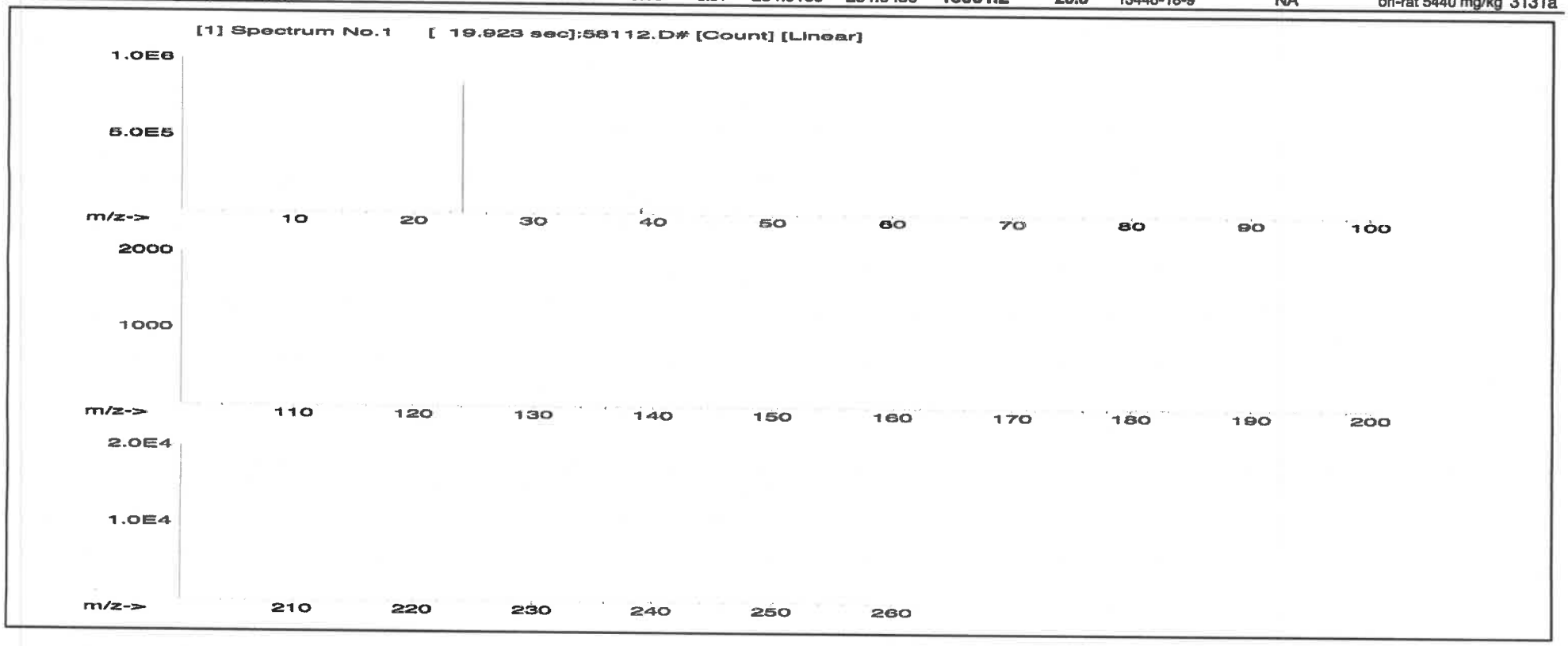
Giovanni Esposito

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).

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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	

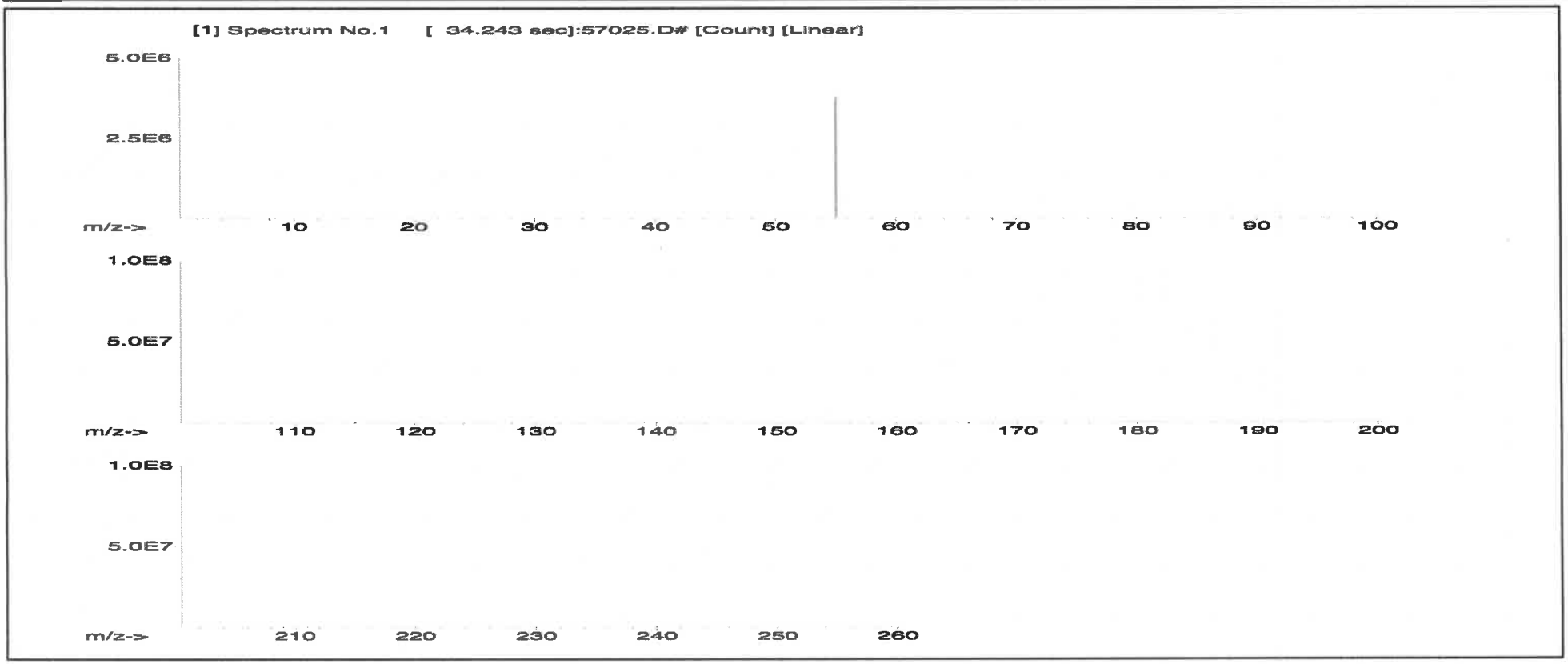
Giovanni Esposito

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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CERTIFIED WEIGHT REPORT:

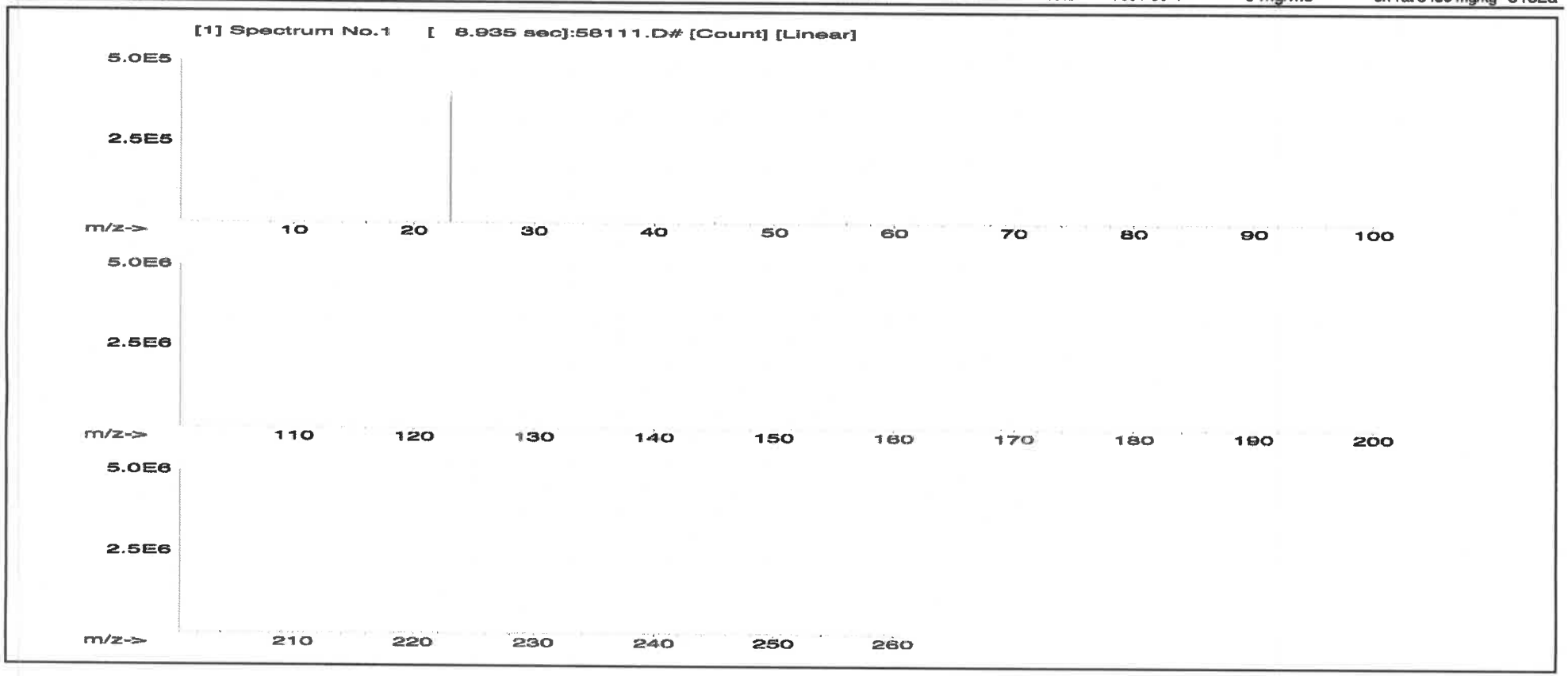
R->1/13/25

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.
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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
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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: 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

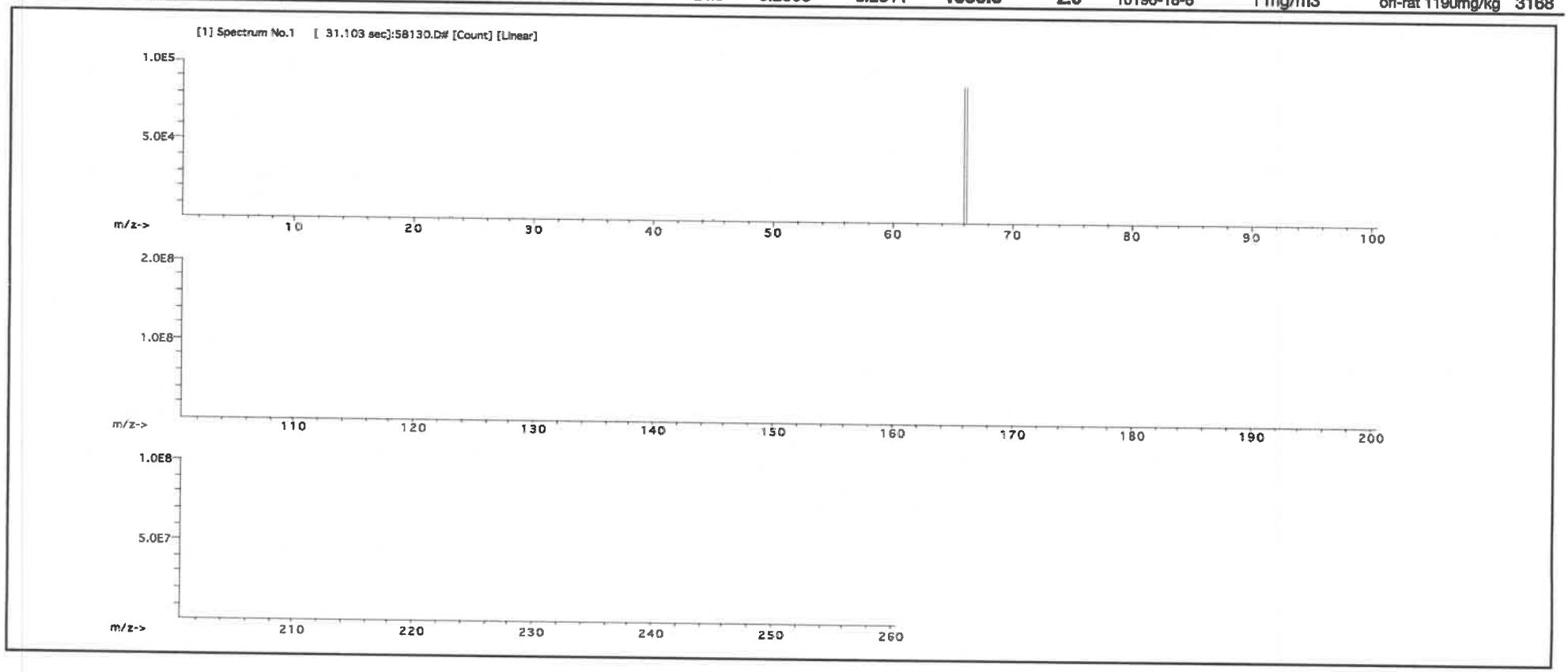
		Lot #	
Solvent:	24012496	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid

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.

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6030

R: 8/5/24

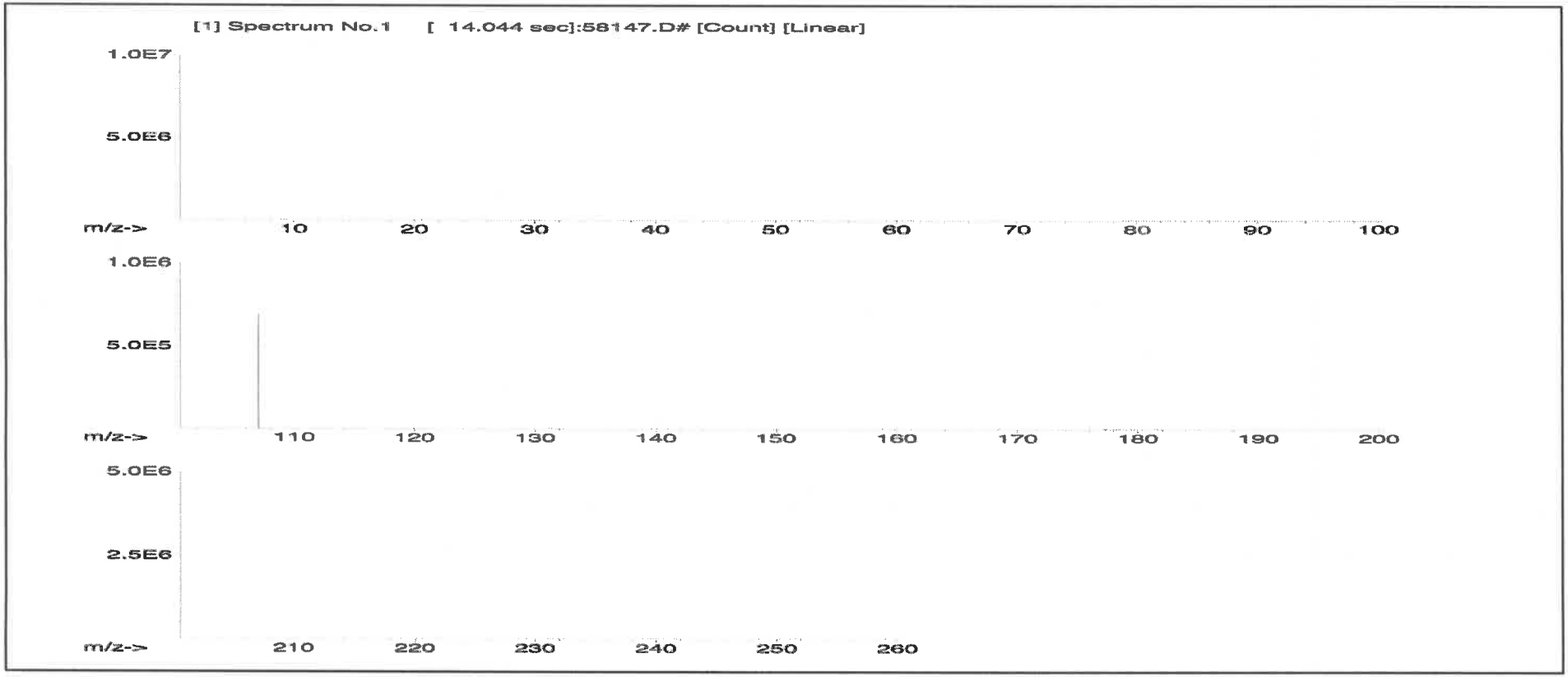
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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		

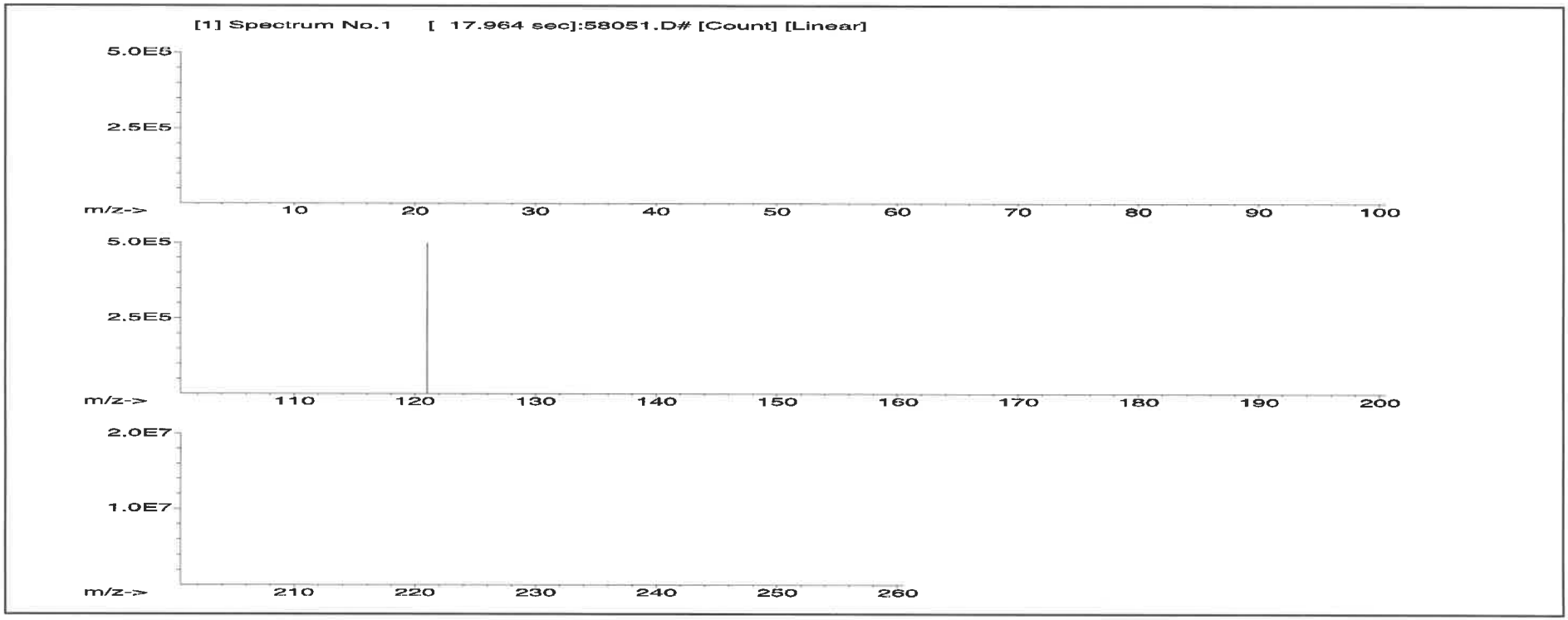
Giovanni Esposito

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,

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

APTIM

Instructions for QATS Reference Material: *ICP-AES ICS*

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

M6155

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

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		

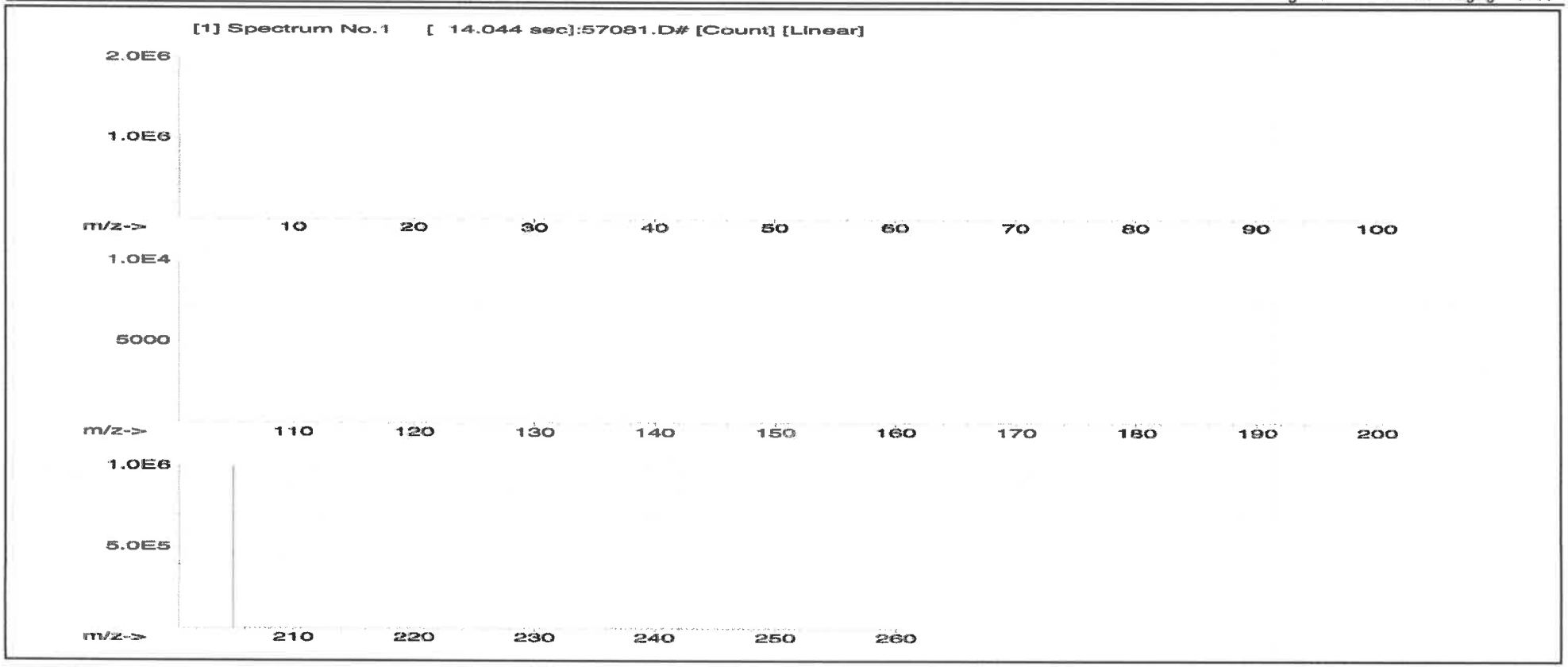
Aleah O'Brady

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).

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www.absolutestandards.com

Certified Reference Material CRM

M6021

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Rc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**			
Description:	**Vanadium (V)**	24002546	Nitric Acid	
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

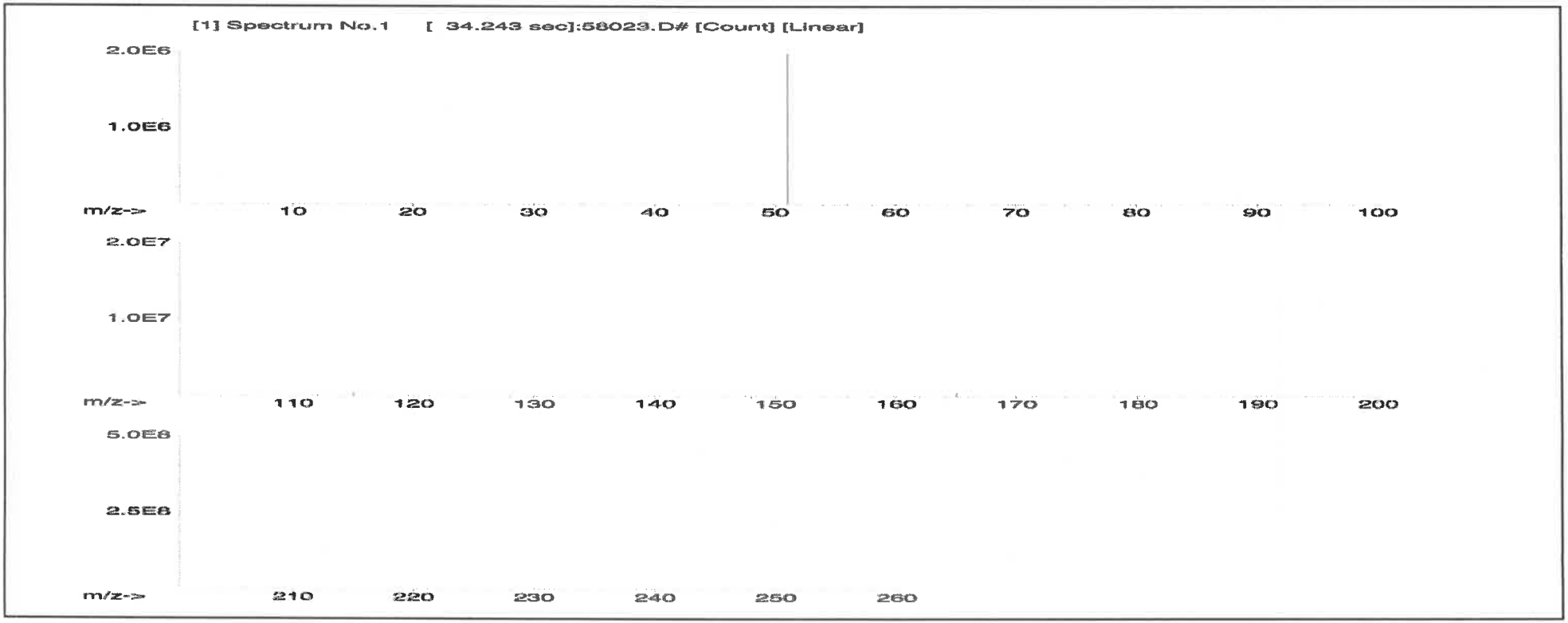
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 · Fax (908) 789-8922
www.chemtech.net

ALLIANCE PROJECT NO.
QUOTE NO. Q1447
COC Number 2046139

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: G-Environmental
ADDRESS: 8 Carriage
CITY Succasunna STATE: NJ ZIP: 07876
ATTENTION:
PHONE: FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Nelson
PROJECT NO.: LOCATION:
PROJECT MANAGER: GL
e-mail: gary@g-environmental.com
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: G-Environmental PO#:
ADDRESS: 8 Carriage
CITY Succasunna STATE NJ ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) 5 DAYS*
HARDCOPY (DATA PACKAGE): 5-day DAYS*
EDD: DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☒ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC + Raw Data) ☐ NYS ASP A ☐ NYS ASP B
☐ Other
☒ EDD FORMAT Excel

ANALYSIS

1. EDH
2. VOC BNFLS
3. PCBs
4. RCRA Cr, Ignitability
5. TAL Metals
6. TCLP Metals
7. Paint Filter
8. pH
9. Ignitability

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.	WC1	Soil	X		2/23/25	1600	2	X	X	X	X	X	X	X	X	X	
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

PRESERVATIVES — Specify Preservatives: A-HCl, B-HN03, C-H2SO4, D-NaOH, E-ICE, F-OTHER

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1.	2/26/25 1415	1.
2.		2.
3.		3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 2.1 °C
Comments: Waste Class

Page ____ of

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete ☐ YES ☐ NO

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WHITE - ALLIANCE COPY FOR RETURN TO CLIENT YELLOW - ALLIANCE COPY PINK - SAMPLER COPY

CHEMTECH 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

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1447 GENV01
Client Name : G Environmental
Client Contact : Gary Landis
Invoice Name : G Environmental
Invoice Contact : Gary Landis

Order Date : 2/26/2025 2:32:53 PM
Project Name : Nelson
Receive DateTime : 2/26/2025 2:15:00 PM
Purchase Order :

Project Mgr :
Report Type : ~~Level I~~ NJ Reduce
EDD Type : Excel NJ
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1447-01	WC1	Solid	02/23/2025	16:00	VOC-TCLVOA-10		8260D		5 ~~10 Bus.~~ Days

Relinguished By :
Date / Time : 2-26-251505

Received By :
Date / Time : 02/26/25 15:05
Storage Area : VOA Refridgerator Room

Ng #6 F27