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Cover Page

Order ID : Q1744

Project ID : Amtrak Sawtooth Bridges 2025

Client : Portal Partners Tri-Venture

Lab Sample Number	Client Sample Number
Q1744-01	B-158-SB01
Q1744-02	B-158-SB01
Q1744-03	B-158-SB02
Q1744-04	B-158-SB02

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: 4/16/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

Alliance TECHNICAL GROUP

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

DATA REPORTING QUALIFIERS- INORGANIC

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

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

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: **Q1744**

	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:** **04/16/2025**

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LAB CHRONICLE

OrderID:	Q1744	**OrderDate:**	4/7/2025 11:34:00 AM
Client:	Portal Partners Tri-Venture	**Project:**	Amtrak Sawtooth Bridges 2025
Contact:	Joseph Krupansky	**Location:**	L41,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1744-01	**B-158-SB01**	**SOIL**			**04/05/25**			**04/07/25**
			Mercury	7471B		04/08/25	04/09/25	
			Metals ICP-TAL	6010D		04/07/25	04/10/25	
Q1744-02	**B-158-SB01**	**TCLP**			**04/05/25**			**04/07/25**
			TCLP ICP Metals	6010D		04/09/25	04/10/25	
			TCLP Mercury	7470A		04/10/25	04/10/25	
Q1744-03	**B-158-SB02**	**SOIL**			**04/05/25**			**04/07/25**
			Mercury	7471B		04/08/25	04/09/25	
			Metals ICP-TAL	6010D		04/07/25	04/10/25	
Q1744-04	**B-158-SB02**	**TCLP**			**04/05/25**			**04/07/25**
			TCLP ICP Metals	6010D		04/09/25	04/10/25	
			TCLP Mercury	7470A		04/10/25	04/10/25	

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Hit Summary Sheet
SW-846

SDG No.: Q1744 **Order ID:** Q1744

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

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :	**B-158-SB01**							
Q1744-01	B-158-SB01	SOIL	Aluminum	4480		2.64	5.47	mg/Kg
Q1744-01	B-158-SB01	SOIL	Arsenic	1.49		0.32	1.09	mg/Kg
Q1744-01	B-158-SB01	SOIL	Barium	31.4		0.70	5.47	mg/Kg
Q1744-01	B-158-SB01	SOIL	Beryllium	0.33		0.013	0.33	mg/Kg
Q1744-01	B-158-SB01	SOIL	Calcium	1020		3.07	109	mg/Kg
Q1744-01	B-158-SB01	SOIL	Chromium	8.24		0.059	0.55	mg/Kg
Q1744-01	B-158-SB01	SOIL	Cobalt	3.89		0.063	1.64	mg/Kg
Q1744-01	B-158-SB01	SOIL	Copper	12.3		0.52	1.09	mg/Kg
Q1744-01	B-158-SB01	SOIL	Iron	9420		2.94	5.47	mg/Kg
Q1744-01	B-158-SB01	SOIL	Lead	14.2		0.16	0.66	mg/Kg
Q1744-01	B-158-SB01	SOIL	Magnesium	1190		3.75	109	mg/Kg
Q1744-01	B-158-SB01	SOIL	Manganese	253		0.078	1.09	mg/Kg
Q1744-01	B-158-SB01	SOIL	Mercury	0.020		0.0080	0.014	mg/Kg
Q1744-01	B-158-SB01	SOIL	Nickel	7.46		0.099	2.19	mg/Kg
Q1744-01	B-158-SB01	SOIL	Potassium	458		31.4	109	mg/Kg
Q1744-01	B-158-SB01	SOIL	Silver	0.32	J	0.057	0.55	mg/Kg
Q1744-01	B-158-SB01	SOIL	Sodium	71.3	J	39.5	109	mg/Kg
Q1744-01	B-158-SB01	SOIL	Vanadium	11.4		0.30	2.19	mg/Kg
Q1744-01	B-158-SB01	SOIL	Zinc	19.4		0.12	2.19	mg/Kg
Client ID :	**B-158-SB02**							
Q1744-03	B-158-SB02	SOIL	Aluminum	10900		4.10	8.50	mg/Kg
Q1744-03	B-158-SB02	SOIL	Arsenic	8.96		0.49	1.70	mg/Kg
Q1744-03	B-158-SB02	SOIL	Barium	29.6		1.09	8.50	mg/Kg
Q1744-03	B-158-SB02	SOIL	Beryllium	0.46	J	0.020	0.51	mg/Kg
Q1744-03	B-158-SB02	SOIL	Calcium	1440		4.76	170	mg/Kg
Q1744-03	B-158-SB02	SOIL	Chromium	25.6		0.092	0.85	mg/Kg
Q1744-03	B-158-SB02	SOIL	Cobalt	5.09		0.099	2.55	mg/Kg
Q1744-03	B-158-SB02	SOIL	Copper	16.8		0.80	1.70	mg/Kg
Q1744-03	B-158-SB02	SOIL	Iron	20800		4.57	8.50	mg/Kg
Q1744-03	B-158-SB02	SOIL	Lead	291		0.26	1.02	mg/Kg
Q1744-03	B-158-SB02	SOIL	Magnesium	2870		5.83	170	mg/Kg
Q1744-03	B-158-SB02	SOIL	Manganese	123		0.12	1.70	mg/Kg
Q1744-03	B-158-SB02	SOIL	Mercury	0.11		0.012	0.022	mg/Kg
Q1744-03	B-158-SB02	SOIL	Nickel	14.4		0.15	3.40	mg/Kg
Q1744-03	B-158-SB02	SOIL	Potassium	1600		48.8	170	mg/Kg
Q1744-03	B-158-SB02	SOIL	Silver	0.71	J	0.088	0.85	mg/Kg
Q1744-03	B-158-SB02	SOIL	Sodium	475		61.4	170	mg/Kg

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Hit Summary Sheet
SW-846

SDG No.:	Q1744	**Order ID:**	Q1744
Client:	Portal Partners Tri-Venture	**Project ID:**	Amtrak Sawtooth Bridges 2025

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Q1744-03	B-158-SB02	SOIL	Vanadium	31.8		0.46	3.40	mg/Kg
Q1744-03	B-158-SB02	SOIL	Zinc	47.4		0.19	3.40	mg/Kg



SAMPLE DATA

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Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	04/05/25
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	04/07/25
Client Sample ID:	B-158-SB01	SDG No.:	Q1744
Lab Sample ID:	Q1744-01	Matrix:	SOIL
Level (low/med):	low	% Solid:	90

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	4480		1	2.64	5.47	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-36-0	Antimony	0.16	U	1	0.16	2.74	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-38-2	Arsenic	1.49		1	0.32	1.09	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-39-3	Barium	31.4		1	0.70	5.47	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-41-7	Beryllium	0.33	N	1	0.013	0.33	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-43-9	Cadmium	0.018	U	1	0.018	0.33	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-70-2	Calcium	1020		1	3.07	109	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-47-3	Chromium	8.24		1	0.059	0.55	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-48-4	Cobalt	3.89		1	0.063	1.64	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-50-8	Copper	12.3		1	0.52	1.09	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7439-89-6	Iron	9420		1	2.94	5.47	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7439-92-1	Lead	14.2		1	0.16	0.66	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7439-95-4	Magnesium	1190		1	3.75	109	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7439-96-5	Manganese	253		1	0.078	1.09	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7439-97-6	Mercury	0.020	N*	1	0.0080	0.014	mg/Kg	04/08/25 16:50	04/09/25 12:08	SW7471B	
7440-02-0	Nickel	7.46		1	0.099	2.19	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-09-7	Potassium	458		1	31.4	109	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7782-49-2	Selenium	0.36	U	1	0.36	1.09	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-22-4	Silver	0.32	J	1	0.057	0.55	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-23-5	Sodium	71.3	J	1	39.5	109	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-28-0	Thallium	0.48	U	1	0.48	2.19	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-62-2	Vanadium	11.4		1	0.30	2.19	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050
7440-66-6	Zinc	19.4		1	0.12	2.19	mg/Kg	04/07/25 14:05	04/10/25 14:15	SW6010	SW3050

Color Before:	Colorless	Clarity Before:		Texture:	Fine
Color After:	Colorless	Clarity After:		Artifacts:	
Comments:	METALS-TAL				

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

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

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Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	04/05/25
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	04/07/25
Client Sample ID:	B-158-SB02	SDG No.:	Q1744
Lab Sample ID:	Q1744-03	Matrix:	SOIL
Level (low/med):	low	% Solid:	56

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	10900		1	4.10	8.50	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-36-0	Antimony	0.26	U	1	0.26	4.25	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-38-2	Arsenic	8.96		1	0.49	1.70	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-39-3	Barium	29.6		1	1.09	8.50	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-41-7	Beryllium	0.46	JN	1	0.020	0.51	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-43-9	Cadmium	0.027	U	1	0.027	0.51	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-70-2	Calcium	1440		1	4.76	170	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-47-3	Chromium	25.6		1	0.092	0.85	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-48-4	Cobalt	5.09		1	0.099	2.55	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-50-8	Copper	16.8		1	0.80	1.70	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7439-89-6	Iron	20800		1	4.57	8.50	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7439-92-1	Lead	291		1	0.26	1.02	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7439-95-4	Magnesium	2870		1	5.83	170	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7439-96-5	Manganese	123		1	0.12	1.70	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7439-97-6	Mercury	0.11	N*	1	0.012	0.022	mg/Kg	04/08/25 16:50	04/09/25 12:10	SW7471B	
7440-02-0	Nickel	14.4		1	0.15	3.40	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-09-7	Potassium	1600		1	48.8	170	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7782-49-2	Selenium	0.56	U	1	0.56	1.70	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-22-4	Silver	0.71	J	1	0.088	0.85	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-23-5	Sodium	475		1	61.4	170	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-28-0	Thallium	0.75	U	1	0.75	3.40	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-62-2	Vanadium	31.8		1	0.46	3.40	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050
7440-66-6	Zinc	47.4		1	0.19	3.40	mg/Kg	04/07/25 14:05	04/10/25 14:19	SW6010	SW3050

Color Before:	Colorless	Clarity Before:		Texture:	Fine
Color After:	Colorless	Clarity After:		Artifacts:	
Comments:	METALS-TAL				

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

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

METAL CALIBRATION DATA

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

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
ICV82	Mercury	3.62	4.0	90	90 - 110	CV	04/09/2025	11:34	LB135354

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

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
CCV49	Mercury	5.13	5.0	103	90 - 110	CV	04/09/2025	11:43	LB135354
CCV50	Mercury	4.80	5.0	96	90 - 110	CV	04/09/2025	12:17	LB135354
CCV51	Mercury	5.07	5.0	101	90 - 110	CV	04/09/2025	12:46	LB135354
CCV52	Mercury	4.60	5.0	92	90 - 110	CV	04/09/2025	13:58	LB135354
CCV53	Mercury	4.96	5.0	99	90 - 110	CV	04/09/2025	14:18	LB135354

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Aluminum	2380	2500	95	90 - 110	P	04/10/2025	10:09	LB135373
	Antimony	1000	1000	100	90 - 110	P	04/10/2025	10:09	LB135373
	Arsenic	985	1000	98	90 - 110	P	04/10/2025	10:09	LB135373
	Barium	534	520	103	90 - 110	P	04/10/2025	10:09	LB135373
	Beryllium	469	510	92	90 - 110	P	04/10/2025	10:09	LB135373
	Cadmium	483	510	95	90 - 110	P	04/10/2025	10:09	LB135373
	Calcium	9300	10000	93	90 - 110	P	04/10/2025	10:09	LB135373
	Chromium	505	520	97	90 - 110	P	04/10/2025	10:09	LB135373
	Cobalt	488	520	94	90 - 110	P	04/10/2025	10:09	LB135373
	Copper	517	510	102	90 - 110	P	04/10/2025	10:09	LB135373
	Iron	10300	10000	103	90 - 110	P	04/10/2025	10:09	LB135373
	Lead	951	1000	95	90 - 110	P	04/10/2025	10:09	LB135373
	Magnesium	5420	6000	90	90 - 110	P	04/10/2025	10:09	LB135373
	Manganese	468	520	90	90 - 110	P	04/10/2025	10:09	LB135373
	Nickel	497	530	94	90 - 110	P	04/10/2025	10:09	LB135373
	Potassium	10200	9900	103	90 - 110	P	04/10/2025	10:09	LB135373
	Selenium	1030	1000	103	90 - 110	P	04/10/2025	10:09	LB135373
	Silver	245	250	98	90 - 110	P	04/10/2025	10:09	LB135373
	Sodium	10300	10000	103	90 - 110	P	04/10/2025	10:09	LB135373
	Thallium	1020	1000	102	90 - 110	P	04/10/2025	10:09	LB135373
	Vanadium	460	500	92	90 - 110	P	04/10/2025	10:09	LB135373
	Zinc	996	1000	100	90 - 110	P	04/10/2025	10:09	LB135373

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Aluminum	93.1	100	93	80 - 120	P	04/10/2025	10:25	LB135373
	Antimony	51.6	50.0	103	80 - 120	P	04/10/2025	10:25	LB135373
	Arsenic	18.5	20.0	92	80 - 120	P	04/10/2025	10:25	LB135373
	Barium	85.5	100	86	80 - 120	P	04/10/2025	10:25	LB135373
	Beryllium	5.39	6.0	90	80 - 120	P	04/10/2025	10:25	LB135373
	Cadmium	5.62	6.0	94	80 - 120	P	04/10/2025	10:25	LB135373
	Calcium	1880	2000	94	80 - 120	P	04/10/2025	10:25	LB135373
	Chromium	9.56	10.0	96	80 - 120	P	04/10/2025	10:25	LB135373
	Cobalt	28.1	30.0	94	80 - 120	P	04/10/2025	10:25	LB135373
	Copper	21.9	20.0	110	80 - 120	P	04/10/2025	10:25	LB135373
	Iron	89.9	100	90	80 - 120	P	04/10/2025	10:25	LB135373
	Lead	9.94	12.0	83	80 - 120	P	04/10/2025	10:25	LB135373
	Magnesium	1990	2000	99	80 - 120	P	04/10/2025	10:25	LB135373
	Manganese	20.8	20.0	104	80 - 120	P	04/10/2025	10:25	LB135373
	Nickel	37.7	40.0	94	80 - 120	P	04/10/2025	10:25	LB135373
	Potassium	1810	2000	91	80 - 120	P	04/10/2025	10:25	LB135373
	Selenium	18.9	20.0	94	80 - 120	P	04/10/2025	10:25	LB135373
	Silver	10.5	10.0	104	80 - 120	P	04/10/2025	10:25	LB135373
	Sodium	1770	2000	88	80 - 120	P	04/10/2025	10:25	LB135373
	Thallium	38.9	40.0	97	80 - 120	P	04/10/2025	10:25	LB135373
	Vanadium	37.1	40.0	93	80 - 120	P	04/10/2025	10:25	LB135373
	Zinc	39.6	40.0	99	80 - 120	P	04/10/2025	10:25	LB135373

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Aluminum	9820	10000	98	90 - 110	P	04/10/2025	11:00	LB135373
	Antimony	4910	5000	98	90 - 110	P	04/10/2025	11:00	LB135373
	Arsenic	4750	5000	95	90 - 110	P	04/10/2025	11:00	LB135373
	Barium	9770	10000	98	90 - 110	P	04/10/2025	11:00	LB135373
	Beryllium	246	250	98	90 - 110	P	04/10/2025	11:00	LB135373
	Cadmium	2340	2500	94	90 - 110	P	04/10/2025	11:00	LB135373
	Calcium	24000	25000	96	90 - 110	P	04/10/2025	11:00	LB135373
	Chromium	1010	1000	101	90 - 110	P	04/10/2025	11:00	LB135373
	Cobalt	2450	2500	98	90 - 110	P	04/10/2025	11:00	LB135373
	Copper	1260	1250	101	90 - 110	P	04/10/2025	11:00	LB135373
	Iron	5250	5000	105	90 - 110	P	04/10/2025	11:00	LB135373
	Lead	5240	5000	105	90 - 110	P	04/10/2025	11:00	LB135373
	Magnesium	24000	25000	96	90 - 110	P	04/10/2025	11:00	LB135373
	Manganese	2350	2500	94	90 - 110	P	04/10/2025	11:00	LB135373
	Nickel	2460	2500	98	90 - 110	P	04/10/2025	11:00	LB135373
	Potassium	26900	25000	108	90 - 110	P	04/10/2025	11:00	LB135373
	Selenium	4820	5000	96	90 - 110	P	04/10/2025	11:00	LB135373
	Silver	1250	1250	100	90 - 110	P	04/10/2025	11:00	LB135373
	Sodium	22500	25000	90	90 - 110	P	04/10/2025	11:00	LB135373
	Thallium	4770	5000	95	90 - 110	P	04/10/2025	11:00	LB135373
	Vanadium	2420	2500	97	90 - 110	P	04/10/2025	11:00	LB135373
	Zinc	2540	2500	102	90 - 110	P	04/10/2025	11:00	LB135373
CCV02	Aluminum	9830	10000	98	90 - 110	P	04/10/2025	12:08	LB135373
	Antimony	4970	5000	99	90 - 110	P	04/10/2025	12:08	LB135373
	Arsenic	4800	5000	96	90 - 110	P	04/10/2025	12:08	LB135373
	Barium	9680	10000	97	90 - 110	P	04/10/2025	12:08	LB135373
	Beryllium	249	250	100	90 - 110	P	04/10/2025	12:08	LB135373
	Cadmium	2350	2500	94	90 - 110	P	04/10/2025	12:08	LB135373
	Calcium	24000	25000	96	90 - 110	P	04/10/2025	12:08	LB135373
	Chromium	1020	1000	102	90 - 110	P	04/10/2025	12:08	LB135373
	Cobalt	2470	2500	99	90 - 110	P	04/10/2025	12:08	LB135373
	Copper	1270	1250	102	90 - 110	P	04/10/2025	12:08	LB135373
	Iron	5230	5000	104	90 - 110	P	04/10/2025	12:08	LB135373
	Lead	4720	5000	94	90 - 110	P	04/10/2025	12:08	LB135373

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV02	Magnesium	24100	25000	96	90 - 110	P	04/10/2025	12:08	LB135373
	Manganese	2340	2500	94	90 - 110	P	04/10/2025	12:08	LB135373
	Nickel	2480	2500	99	90 - 110	P	04/10/2025	12:08	LB135373
	Potassium	26800	25000	107	90 - 110	P	04/10/2025	12:08	LB135373
	Selenium	4860	5000	97	90 - 110	P	04/10/2025	12:08	LB135373
	Silver	1260	1250	101	90 - 110	P	04/10/2025	12:08	LB135373
	Sodium	27100	25000	108	90 - 110	P	04/10/2025	12:08	LB135373
	Thallium	4860	5000	97	90 - 110	P	04/10/2025	12:08	LB135373
	Vanadium	2430	2500	97	90 - 110	P	04/10/2025	12:08	LB135373
	Zinc	2530	2500	101	90 - 110	P	04/10/2025	12:08	LB135373
CCV03	Aluminum	9940	10000	99	90 - 110	P	04/10/2025	12:59	LB135373
	Antimony	5070	5000	101	90 - 110	P	04/10/2025	12:59	LB135373
	Arsenic	4890	5000	98	90 - 110	P	04/10/2025	12:59	LB135373
	Barium	10100	10000	101	90 - 110	P	04/10/2025	12:59	LB135373
	Beryllium	235	250	94	90 - 110	P	04/10/2025	12:59	LB135373
	Cadmium	2360	2500	94	90 - 110	P	04/10/2025	12:59	LB135373
	Calcium	24200	25000	97	90 - 110	P	04/10/2025	12:59	LB135373
	Chromium	1020	1000	102	90 - 110	P	04/10/2025	12:59	LB135373
	Cobalt	2480	2500	99	90 - 110	P	04/10/2025	12:59	LB135373
	Copper	1290	1250	103	90 - 110	P	04/10/2025	12:59	LB135373
	Iron	5230	5000	105	90 - 110	P	04/10/2025	12:59	LB135373
	Lead	4740	5000	95	90 - 110	P	04/10/2025	12:59	LB135373
	Magnesium	23900	25000	96	90 - 110	P	04/10/2025	12:59	LB135373
	Manganese	2370	2500	95	90 - 110	P	04/10/2025	12:59	LB135373
	Nickel	2490	2500	100	90 - 110	P	04/10/2025	12:59	LB135373
	Potassium	23300	25000	93	90 - 110	P	04/10/2025	12:59	LB135373
	Selenium	4990	5000	100	90 - 110	P	04/10/2025	12:59	LB135373
	Silver	1270	1250	101	90 - 110	P	04/10/2025	12:59	LB135373
	Sodium	24300	25000	97	90 - 110	P	04/10/2025	12:59	LB135373
	Thallium	4840	5000	97	90 - 110	P	04/10/2025	12:59	LB135373
	Vanadium	2470	2500	99	90 - 110	P	04/10/2025	12:59	LB135373
	Zinc	2560	2500	102	90 - 110	P	04/10/2025	12:59	LB135373
CCV04	Aluminum	9990	10000	100	90 - 110	P	04/10/2025	13:51	LB135373
	Antimony	5040	5000	101	90 - 110	P	04/10/2025	13:51	LB135373

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV04	Arsenic	4880	5000	98	90 - 110	P	04/10/2025	13:51	LB135373
	Barium	9600	10000	96	90 - 110	P	04/10/2025	13:51	LB135373
	Beryllium	239	250	96	90 - 110	P	04/10/2025	13:51	LB135373
	Cadmium	2380	2500	95	90 - 110	P	04/10/2025	13:51	LB135373
	Calcium	24200	25000	97	90 - 110	P	04/10/2025	13:51	LB135373
	Chromium	1020	1000	102	90 - 110	P	04/10/2025	13:51	LB135373
	Cobalt	2490	2500	100	90 - 110	P	04/10/2025	13:51	LB135373
	Copper	1290	1250	103	90 - 110	P	04/10/2025	13:51	LB135373
	Iron	4980	5000	100	90 - 110	P	04/10/2025	13:51	LB135373
	Lead	4760	5000	95	90 - 110	P	04/10/2025	13:51	LB135373
	Magnesium	24400	25000	98	90 - 110	P	04/10/2025	13:51	LB135373
	Manganese	2380	2500	95	90 - 110	P	04/10/2025	13:51	LB135373
	Nickel	2500	2500	100	90 - 110	P	04/10/2025	13:51	LB135373
	Potassium	25400	25000	101	90 - 110	P	04/10/2025	13:51	LB135373
	Selenium	4960	5000	99	90 - 110	P	04/10/2025	13:51	LB135373
	Silver	1270	1250	102	90 - 110	P	04/10/2025	13:51	LB135373
	Sodium	26400	25000	106	90 - 110	P	04/10/2025	13:51	LB135373
	Thallium	4980	5000	100	90 - 110	P	04/10/2025	13:51	LB135373
	Vanadium	2450	2500	98	90 - 110	P	04/10/2025	13:51	LB135373
	Zinc	2570	2500	103	90 - 110	P	04/10/2025	13:51	LB135373
CCV05	Aluminum	9910	10000	99	90 - 110	P	04/10/2025	14:44	LB135373
	Antimony	5000	5000	100	90 - 110	P	04/10/2025	14:44	LB135373
	Arsenic	4820	5000	96	90 - 110	P	04/10/2025	14:44	LB135373
	Barium	9730	10000	97	90 - 110	P	04/10/2025	14:44	LB135373
	Beryllium	230	250	92	90 - 110	P	04/10/2025	14:44	LB135373
	Cadmium	2350	2500	94	90 - 110	P	04/10/2025	14:44	LB135373
	Calcium	24000	25000	96	90 - 110	P	04/10/2025	14:44	LB135373
	Chromium	1020	1000	102	90 - 110	P	04/10/2025	14:44	LB135373
	Cobalt	2470	2500	99	90 - 110	P	04/10/2025	14:44	LB135373
	Copper	1280	1250	103	90 - 110	P	04/10/2025	14:44	LB135373
	Iron	5160	5000	103	90 - 110	P	04/10/2025	14:44	LB135373
	Lead	4720	5000	94	90 - 110	P	04/10/2025	14:44	LB135373
	Magnesium	24100	25000	96	90 - 110	P	04/10/2025	14:44	LB135373
	Manganese	2360	2500	94	90 - 110	P	04/10/2025	14:44	LB135373

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV05	Nickel	2480	2500	99	90 - 110	P	04/10/2025	14:44	LB135373
	Potassium	26100	25000	105	90 - 110	P	04/10/2025	14:44	LB135373
	Selenium	4910	5000	98	90 - 110	P	04/10/2025	14:44	LB135373
	Silver	1270	1250	101	90 - 110	P	04/10/2025	14:44	LB135373
	Sodium	26900	25000	108	90 - 110	P	04/10/2025	14:44	LB135373
	Thallium	4830	5000	96	90 - 110	P	04/10/2025	14:44	LB135373
	Vanadium	2440	2500	98	90 - 110	P	04/10/2025	14:44	LB135373
	Zinc	2550	2500	102	90 - 110	P	04/10/2025	14:44	LB135373
CCV06	Aluminum	9970	10000	100	90 - 110	P	04/10/2025	15:44	LB135373
	Antimony	4960	5000	99	90 - 110	P	04/10/2025	15:44	LB135373
	Arsenic	4780	5000	96	90 - 110	P	04/10/2025	15:44	LB135373
	Barium	9640	10000	96	90 - 110	P	04/10/2025	15:44	LB135373
	Beryllium	228	250	91	90 - 110	P	04/10/2025	15:44	LB135373
	Cadmium	2340	2500	93	90 - 110	P	04/10/2025	15:44	LB135373
	Calcium	24100	25000	96	90 - 110	P	04/10/2025	15:44	LB135373
	Chromium	1010	1000	101	90 - 110	P	04/10/2025	15:44	LB135373
	Cobalt	2450	2500	98	90 - 110	P	04/10/2025	15:44	LB135373
	Copper	1270	1250	102	90 - 110	P	04/10/2025	15:44	LB135373
	Iron	5060	5000	101	90 - 110	P	04/10/2025	15:44	LB135373
	Lead	4690	5000	94	90 - 110	P	04/10/2025	15:44	LB135373
	Magnesium	24200	25000	97	90 - 110	P	04/10/2025	15:44	LB135373
	Manganese	2380	2500	95	90 - 110	P	04/10/2025	15:44	LB135373
	Nickel	2470	2500	99	90 - 110	P	04/10/2025	15:44	LB135373
	Potassium	25700	25000	103	90 - 110	P	04/10/2025	15:44	LB135373
	Selenium	4850	5000	97	90 - 110	P	04/10/2025	15:44	LB135373
	Silver	1260	1250	100	90 - 110	P	04/10/2025	15:44	LB135373
	Sodium	26500	25000	106	90 - 110	P	04/10/2025	15:44	LB135373
	Thallium	4770	5000	95	90 - 110	P	04/10/2025	15:44	LB135373
	Vanadium	2450	2500	98	90 - 110	P	04/10/2025	15:44	LB135373
	Zinc	2520	2500	101	90 - 110	P	04/10/2025	15:44	LB135373
CCV07	Aluminum	10100	10000	101	90 - 110	P	04/10/2025	16:56	LB135373
	Antimony	5100	5000	102	90 - 110	P	04/10/2025	16:56	LB135373
	Arsenic	4920	5000	98	90 - 110	P	04/10/2025	16:56	LB135373
	Barium	9570	10000	96	90 - 110	P	04/10/2025	16:56	LB135373

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

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
CCV07	Beryllium	241	250	96	90 - 110	P	04/10/2025	16:56	LB135373
	Cadmium	2350	2500	94	90 - 110	P	04/10/2025	16:56	LB135373
	Calcium	24200	25000	97	90 - 110	P	04/10/2025	16:56	LB135373
	Chromium	1020	1000	102	90 - 110	P	04/10/2025	16:56	LB135373
	Cobalt	2460	2500	98	90 - 110	P	04/10/2025	16:56	LB135373
	Copper	1290	1250	103	90 - 110	P	04/10/2025	16:56	LB135373
	Iron	4820	5000	96	90 - 110	P	04/10/2025	16:56	LB135373
	Lead	4740	5000	95	90 - 110	P	04/10/2025	16:56	LB135373
	Magnesium	24500	25000	98	90 - 110	P	04/10/2025	16:56	LB135373
	Manganese	2380	2500	95	90 - 110	P	04/10/2025	16:56	LB135373
	Nickel	2500	2500	100	90 - 110	P	04/10/2025	16:56	LB135373
	Potassium	24200	25000	97	90 - 110	P	04/10/2025	16:56	LB135373
	Selenium	5020	5000	100	90 - 110	P	04/10/2025	16:56	LB135373
	Silver	1260	1250	101	90 - 110	P	04/10/2025	16:56	LB135373
	Sodium	25500	25000	102	90 - 110	P	04/10/2025	16:56	LB135373
	Thallium	4910	5000	98	90 - 110	P	04/10/2025	16:56	LB135373
	Vanadium	2450	2500	98	90 - 110	P	04/10/2025	16:56	LB135373
	Zinc	2560	2500	102	90 - 110	P	04/10/2025	16:56	LB135373
CCV08	Aluminum	10100	10000	101	90 - 110	P	04/10/2025	17:56	LB135373
	Antimony	5060	5000	101	90 - 110	P	04/10/2025	17:56	LB135373
	Arsenic	4890	5000	98	90 - 110	P	04/10/2025	17:56	LB135373
	Barium	9470	10000	95	90 - 110	P	04/10/2025	17:56	LB135373
	Beryllium	233	250	93	90 - 110	P	04/10/2025	17:56	LB135373
	Cadmium	2360	2500	94	90 - 110	P	04/10/2025	17:56	LB135373
	Calcium	23900	25000	96	90 - 110	P	04/10/2025	17:56	LB135373
	Chromium	1030	1000	103	90 - 110	P	04/10/2025	17:56	LB135373
	Cobalt	2460	2500	99	90 - 110	P	04/10/2025	17:56	LB135373
	Copper	1280	1250	103	90 - 110	P	04/10/2025	17:56	LB135373
	Iron	5030	5000	100	90 - 110	P	04/10/2025	17:56	LB135373
	Lead	4740	5000	95	90 - 110	P	04/10/2025	17:56	LB135373
	Magnesium	24300	25000	97	90 - 110	P	04/10/2025	17:56	LB135373
	Manganese	2330	2500	93	90 - 110	P	04/10/2025	17:56	LB135373
	Nickel	2500	2500	100	90 - 110	P	04/10/2025	17:56	LB135373
	Potassium	25100	25000	100	90 - 110	P	04/10/2025	17:56	LB135373

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

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
CCV08	Selenium	4980	5000	100	90 - 110	P	04/10/2025	17:56	LB135373
	Silver	1260	1250	101	90 - 110	P	04/10/2025	17:56	LB135373
	Sodium	26300	25000	105	90 - 110	P	04/10/2025	17:56	LB135373
	Thallium	4870	5000	97	90 - 110	P	04/10/2025	17:56	LB135373
	Vanadium	2410	2500	97	90 - 110	P	04/10/2025	17:56	LB135373
	Zinc	2550	2500	102	90 - 110	P	04/10/2025	17:56	LB135373
CCV09	Aluminum	9970	10000	100	90 - 110	P	04/10/2025	18:19	LB135373
	Antimony	5050	5000	101	90 - 110	P	04/10/2025	18:19	LB135373
	Arsenic	4850	5000	97	90 - 110	P	04/10/2025	18:19	LB135373
	Barium	9730	10000	97	90 - 110	P	04/10/2025	18:19	LB135373
	Beryllium	247	250	99	90 - 110	P	04/10/2025	18:19	LB135373
	Cadmium	2350	2500	94	90 - 110	P	04/10/2025	18:19	LB135373
	Calcium	23900	25000	95	90 - 110	P	04/10/2025	18:19	LB135373
	Chromium	1000	1000	100	90 - 110	P	04/10/2025	18:19	LB135373
	Cobalt	2460	2500	99	90 - 110	P	04/10/2025	18:19	LB135373
	Copper	1290	1250	103	90 - 110	P	04/10/2025	18:19	LB135373
	Iron	5130	5000	103	90 - 110	P	04/10/2025	18:19	LB135373
	Lead	4720	5000	94	90 - 110	P	04/10/2025	18:19	LB135373
	Magnesium	23900	25000	96	90 - 110	P	04/10/2025	18:19	LB135373
	Manganese	2350	2500	94	90 - 110	P	04/10/2025	18:19	LB135373
	Nickel	2480	2500	99	90 - 110	P	04/10/2025	18:19	LB135373
	Potassium	26400	25000	105	90 - 110	P	04/10/2025	18:19	LB135373
	Selenium	4930	5000	99	90 - 110	P	04/10/2025	18:19	LB135373
	Silver	1240	1250	99	90 - 110	P	04/10/2025	18:19	LB135373
	Sodium	27400	25000	110	90 - 110	P	04/10/2025	18:19	LB135373
	Thallium	4700	5000	94	90 - 110	P	04/10/2025	18:19	LB135373
	Vanadium	2450	2500	98	90 - 110	P	04/10/2025	18:19	LB135373
	Zinc	2500	2500	100	90 - 110	P	04/10/2025	18:19	LB135373

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Metals

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CRDL STANDARD FOR AA & ICP

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

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	0.17	0.2	86	40 - 160	CV	04/09/2025	11:47	LB135354
CRI01	Aluminum	98.0	100	98	40 - 160	P	04/10/2025	10:33	LB135373
	Antimony	51.0	50.0	102	40 - 160	P	04/10/2025	10:33	LB135373
	Arsenic	18.9	20.0	95	40 - 160	P	04/10/2025	10:33	LB135373
	Barium	85.4	100	85	40 - 160	P	04/10/2025	10:33	LB135373
	Beryllium	5.48	6.0	91	40 - 160	P	04/10/2025	10:33	LB135373
	Cadmium	5.51	6.0	92	40 - 160	P	04/10/2025	10:33	LB135373
	Calcium	1880	2000	94	40 - 160	P	04/10/2025	10:33	LB135373
	Chromium	9.42	10.0	94	40 - 160	P	04/10/2025	10:33	LB135373
	Cobalt	28.2	30.0	94	40 - 160	P	04/10/2025	10:33	LB135373
	Copper	21.9	20.0	109	40 - 160	P	04/10/2025	10:33	LB135373
	Iron	102	100	102	40 - 160	P	04/10/2025	10:33	LB135373
	Lead	11.6	12.0	97	40 - 160	P	04/10/2025	10:33	LB135373
	Magnesium	1980	2000	99	40 - 160	P	04/10/2025	10:33	LB135373
	Manganese	15.0	20.0	75	40 - 160	P	04/10/2025	10:33	LB135373
	Nickel	38.0	40.0	95	40 - 160	P	04/10/2025	10:33	LB135373
	Potassium	1960	2000	98	40 - 160	P	04/10/2025	10:33	LB135373
	Selenium	18.1	20.0	91	40 - 160	P	04/10/2025	10:33	LB135373
	Silver	10.4	10.0	104	40 - 160	P	04/10/2025	10:33	LB135373
	Sodium	1480	2000	74	40 - 160	P	04/10/2025	10:33	LB135373
	Thallium	38.3	40.0	96	40 - 160	P	04/10/2025	10:33	LB135373
	Vanadium	36.3	40.0	91	40 - 160	P	04/10/2025	10:33	LB135373
	Zinc	39.6	40.0	99	40 - 160	P	04/10/2025	10:33	LB135373

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB82	Mercury	0.20	+/-0.20	U	0.20	CV	04/09/2025	11:36	LB135354

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB49	Mercury	0.20	+/-0.20	U	0.20	CV	04/09/2025	11:45	LB135354
CCB50	Mercury	0.20	+/-0.20	U	0.20	CV	04/09/2025	12:20	LB135354
CCB51	Mercury	0.20	+/-0.20	U	0.20	CV	04/09/2025	12:48	LB135354
CCB52	Mercury	0.20	+/-0.20	U	0.20	CV	04/09/2025	14:04	LB135354
CCB53	Mercury	0.20	+/-0.20	U	0.20	CV	04/09/2025	14:21	LB135354

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	100	+/-100	U	100	P	04/10/2025	10:29	LB135373
	Antimony	50.0	+/-50.0	U	50.0	P	04/10/2025	10:29	LB135373
	Arsenic	20.0	+/-20.0	U	20.0	P	04/10/2025	10:29	LB135373
	Barium	100	+/-100	U	100	P	04/10/2025	10:29	LB135373
	Beryllium	6.00	+/-6.00	U	6.00	P	04/10/2025	10:29	LB135373
	Cadmium	6.00	+/-6.00	U	6.00	P	04/10/2025	10:29	LB135373
	Calcium	2000	+/-2000	U	2000	P	04/10/2025	10:29	LB135373
	Chromium	10.0	+/-10.0	U	10.0	P	04/10/2025	10:29	LB135373
	Cobalt	30.0	+/-30.0	U	30.0	P	04/10/2025	10:29	LB135373
	Copper	20.0	+/-20.0	U	20.0	P	04/10/2025	10:29	LB135373
	Iron	100	+/-100	U	100	P	04/10/2025	10:29	LB135373
	Lead	12.0	+/-12.0	U	12.0	P	04/10/2025	10:29	LB135373
	Magnesium	2000	+/-2000	U	2000	P	04/10/2025	10:29	LB135373
	Manganese	20.0	+/-20.0	U	20.0	P	04/10/2025	10:29	LB135373
	Nickel	40.0	+/-40.0	U	40.0	P	04/10/2025	10:29	LB135373
	Potassium	2000	+/-2000	U	2000	P	04/10/2025	10:29	LB135373
	Selenium	20.0	+/-20.0	U	20.0	P	04/10/2025	10:29	LB135373
	Silver	10.0	+/-10.0	U	10.0	P	04/10/2025	10:29	LB135373
	Sodium	2000	+/-2000	U	2000	P	04/10/2025	10:29	LB135373
	Thallium	40.0	+/-40.0	U	40.0	P	04/10/2025	10:29	LB135373
	Vanadium	40.0	+/-40.0	U	40.0	P	04/10/2025	10:29	LB135373
	Zinc	40.0	+/-40.0	U	40.0	P	04/10/2025	10:29	LB135373

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	100	+/-100	U	100	P	04/10/2025	11:21	LB135373
	Antimony	50.0	+/-50.0	U	50.0	P	04/10/2025	11:21	LB135373
	Arsenic	20.0	+/-20.0	U	20.0	P	04/10/2025	11:21	LB135373
	Barium	100	+/-100	U	100	P	04/10/2025	11:21	LB135373
	Beryllium	6.00	+/-6.00	U	6.00	P	04/10/2025	11:21	LB135373
	Cadmium	6.00	+/-6.00	U	6.00	P	04/10/2025	11:21	LB135373
	Calcium	2000	+/-2000	U	2000	P	04/10/2025	11:21	LB135373
	Chromium	10.0	+/-10.0	U	10.0	P	04/10/2025	11:21	LB135373
	Cobalt	30.0	+/-30.0	U	30.0	P	04/10/2025	11:21	LB135373
	Copper	20.0	+/-20.0	U	20.0	P	04/10/2025	11:21	LB135373
	Iron	100	+/-100	U	100	P	04/10/2025	11:21	LB135373
	Lead	12.0	+/-12.0	U	12.0	P	04/10/2025	11:21	LB135373
	Magnesium	2000	+/-2000	U	2000	P	04/10/2025	11:21	LB135373
	Manganese	20.0	+/-20.0	U	20.0	P	04/10/2025	11:21	LB135373
	Nickel	40.0	+/-40.0	U	40.0	P	04/10/2025	11:21	LB135373
	Potassium	2000	+/-2000	U	2000	P	04/10/2025	11:21	LB135373
	Selenium	20.0	+/-20.0	U	20.0	P	04/10/2025	11:21	LB135373
	Silver	10.0	+/-10.0	U	10.0	P	04/10/2025	11:21	LB135373
	Sodium	2000	+/-2000	U	2000	P	04/10/2025	11:21	LB135373
	Thallium	40.0	+/-40.0	U	40.0	P	04/10/2025	11:21	LB135373
	Vanadium	40.0	+/-40.0	U	40.0	P	04/10/2025	11:21	LB135373
	Zinc	40.0	+/-40.0	U	40.0	P	04/10/2025	11:21	LB135373
CCB02	Aluminum	100	+/-100	U	100	P	04/10/2025	12:12	LB135373
	Antimony	50.0	+/-50.0	U	50.0	P	04/10/2025	12:12	LB135373
	Arsenic	20.0	+/-20.0	U	20.0	P	04/10/2025	12:12	LB135373
	Barium	100	+/-100	U	100	P	04/10/2025	12:12	LB135373
	Beryllium	6.00	+/-6.00	U	6.00	P	04/10/2025	12:12	LB135373
	Cadmium	6.00	+/-6.00	U	6.00	P	04/10/2025	12:12	LB135373
	Calcium	2000	+/-2000	U	2000	P	04/10/2025	12:12	LB135373
	Chromium	10.0	+/-10.0	U	10.0	P	04/10/2025	12:12	LB135373
	Cobalt	30.0	+/-30.0	U	30.0	P	04/10/2025	12:12	LB135373
	Copper	20.0	+/-20.0	U	20.0	P	04/10/2025	12:12	LB135373
	Iron	100	+/-100	U	100	P	04/10/2025	12:12	LB135373
	Lead	12.0	+/-12.0	U	12.0	P	04/10/2025	12:12	LB135373
	Magnesium	2000	+/-2000	U	2000	P	04/10/2025	12:12	LB135373
	Manganese	20.0	+/-20.0	U	20.0	P	04/10/2025	12:12	LB135373
	Nickel	40.0	+/-40.0	U	40.0	P	04/10/2025	12:12	LB135373
	Potassium	2000	+/-2000	U	2000	P	04/10/2025	12:12	LB135373
	Selenium	20.0	+/-20.0	U	20.0	P	04/10/2025	12:12	LB135373

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	10.0	+/-10.0	U	10.0	P	04/10/2025	12:12	LB135373
	Sodium	2000	+/-2000	U	2000	P	04/10/2025	12:12	LB135373
	Thallium	40.0	+/-40.0	U	40.0	P	04/10/2025	12:12	LB135373
	Vanadium	40.0	+/-40.0	U	40.0	P	04/10/2025	12:12	LB135373
	Zinc	40.0	+/-40.0	U	40.0	P	04/10/2025	12:12	LB135373
CCB03	Aluminum	100	+/-100	U	100	P	04/10/2025	13:04	LB135373
	Antimony	50.0	+/-50.0	U	50.0	P	04/10/2025	13:04	LB135373
	Arsenic	20.0	+/-20.0	U	20.0	P	04/10/2025	13:04	LB135373
	Barium	100	+/-100	U	100	P	04/10/2025	13:04	LB135373
	Beryllium	6.00	+/-6.00	U	6.00	P	04/10/2025	13:04	LB135373
	Cadmium	6.00	+/-6.00	U	6.00	P	04/10/2025	13:04	LB135373
	Calcium	2000	+/-2000	U	2000	P	04/10/2025	13:04	LB135373
	Chromium	10.0	+/-10.0	U	10.0	P	04/10/2025	13:04	LB135373
	Cobalt	30.0	+/-30.0	U	30.0	P	04/10/2025	13:04	LB135373
	Copper	20.0	+/-20.0	U	20.0	P	04/10/2025	13:04	LB135373
	Iron	100	+/-100	U	100	P	04/10/2025	13:04	LB135373
	Lead	12.0	+/-12.0	U	12.0	P	04/10/2025	13:04	LB135373
	Magnesium	2000	+/-2000	U	2000	P	04/10/2025	13:04	LB135373
	Manganese	20.0	+/-20.0	U	20.0	P	04/10/2025	13:04	LB135373
	Nickel	40.0	+/-40.0	U	40.0	P	04/10/2025	13:04	LB135373
	Potassium	2000	+/-2000	U	2000	P	04/10/2025	13:04	LB135373
	Selenium	20.0	+/-20.0	U	20.0	P	04/10/2025	13:04	LB135373
	Silver	10.0	+/-10.0	U	10.0	P	04/10/2025	13:04	LB135373
	Sodium	2000	+/-2000	U	2000	P	04/10/2025	13:04	LB135373
	Thallium	40.0	+/-40.0	U	40.0	P	04/10/2025	13:04	LB135373
	Vanadium	40.0	+/-40.0	U	40.0	P	04/10/2025	13:04	LB135373
	Zinc	40.0	+/-40.0	U	40.0	P	04/10/2025	13:04	LB135373
CCB04	Aluminum	100	+/-100	U	100	P	04/10/2025	13:55	LB135373
	Antimony	50.0	+/-50.0	U	50.0	P	04/10/2025	13:55	LB135373
	Arsenic	20.0	+/-20.0	U	20.0	P	04/10/2025	13:55	LB135373
	Barium	100	+/-100	U	100	P	04/10/2025	13:55	LB135373
	Beryllium	6.00	+/-6.00	U	6.00	P	04/10/2025	13:55	LB135373
	Cadmium	6.00	+/-6.00	U	6.00	P	04/10/2025	13:55	LB135373
	Calcium	2000	+/-2000	U	2000	P	04/10/2025	13:55	LB135373
	Chromium	10.0	+/-10.0	U	10.0	P	04/10/2025	13:55	LB135373
	Cobalt	30.0	+/-30.0	U	30.0	P	04/10/2025	13:55	LB135373
	Copper	20.0	+/-20.0	U	20.0	P	04/10/2025	13:55	LB135373
	Iron	100	+/-100	U	100	P	04/10/2025	13:55	LB135373
	Lead	12.0	+/-12.0	U	12.0	P	04/10/2025	13:55	LB135373

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB04	Magnesium	2000	+/-2000	U	2000	P	04/10/2025	13:55	LB135373
	Manganese	20.0	+/-20.0	U	20.0	P	04/10/2025	13:55	LB135373
	Nickel	40.0	+/-40.0	U	40.0	P	04/10/2025	13:55	LB135373
	Potassium	2000	+/-2000	U	2000	P	04/10/2025	13:55	LB135373
	Selenium	20.0	+/-20.0	U	20.0	P	04/10/2025	13:55	LB135373
	Silver	10.0	+/-10.0	U	10.0	P	04/10/2025	13:55	LB135373
	Sodium	2000	+/-2000	U	2000	P	04/10/2025	13:55	LB135373
	Thallium	40.0	+/-40.0	U	40.0	P	04/10/2025	13:55	LB135373
	Vanadium	40.0	+/-40.0	U	40.0	P	04/10/2025	13:55	LB135373
	Zinc	40.0	+/-40.0	U	40.0	P	04/10/2025	13:55	LB135373
CCB05	Aluminum	100	+/-100	U	100	P	04/10/2025	14:49	LB135373
	Antimony	50.0	+/-50.0	U	50.0	P	04/10/2025	14:49	LB135373
	Arsenic	20.0	+/-20.0	U	20.0	P	04/10/2025	14:49	LB135373
	Barium	100	+/-100	U	100	P	04/10/2025	14:49	LB135373
	Beryllium	6.00	+/-6.00	U	6.00	P	04/10/2025	14:49	LB135373
	Cadmium	6.00	+/-6.00	U	6.00	P	04/10/2025	14:49	LB135373
	Calcium	2000	+/-2000	U	2000	P	04/10/2025	14:49	LB135373
	Chromium	10.0	+/-10.0	U	10.0	P	04/10/2025	14:49	LB135373
	Cobalt	30.0	+/-30.0	U	30.0	P	04/10/2025	14:49	LB135373
	Copper	20.0	+/-20.0	U	20.0	P	04/10/2025	14:49	LB135373
	Iron	100	+/-100	U	100	P	04/10/2025	14:49	LB135373
	Lead	12.0	+/-12.0	U	12.0	P	04/10/2025	14:49	LB135373
	Magnesium	2000	+/-2000	U	2000	P	04/10/2025	14:49	LB135373
	Manganese	20.0	+/-20.0	U	20.0	P	04/10/2025	14:49	LB135373
	Nickel	40.0	+/-40.0	U	40.0	P	04/10/2025	14:49	LB135373
	Potassium	2000	+/-2000	U	2000	P	04/10/2025	14:49	LB135373
	Selenium	20.0	+/-20.0	U	20.0	P	04/10/2025	14:49	LB135373
	Silver	10.0	+/-10.0	U	10.0	P	04/10/2025	14:49	LB135373
	Sodium	2000	+/-2000	U	2000	P	04/10/2025	14:49	LB135373
	Thallium	40.0	+/-40.0	U	40.0	P	04/10/2025	14:49	LB135373
	Vanadium	40.0	+/-40.0	U	40.0	P	04/10/2025	14:49	LB135373
	Zinc	40.0	+/-40.0	U	40.0	P	04/10/2025	14:49	LB135373
CCB06	Aluminum	100	+/-100	U	100	P	04/10/2025	15:48	LB135373
	Antimony	50.0	+/-50.0	U	50.0	P	04/10/2025	15:48	LB135373
	Arsenic	20.0	+/-20.0	U	20.0	P	04/10/2025	15:48	LB135373
	Barium	100	+/-100	U	100	P	04/10/2025	15:48	LB135373
	Beryllium	6.00	+/-6.00	U	6.00	P	04/10/2025	15:48	LB135373
	Cadmium	6.00	+/-6.00	U	6.00	P	04/10/2025	15:48	LB135373
	Calcium	2000	+/-2000	U	2000	P	04/10/2025	15:48	LB135373

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Chromium	10.0	+/-10.0	U	10.0	P	04/10/2025	15:48	LB135373
	Cobalt	30.0	+/-30.0	U	30.0	P	04/10/2025	15:48	LB135373
	Copper	20.0	+/-20.0	U	20.0	P	04/10/2025	15:48	LB135373
	Iron	100	+/-100	U	100	P	04/10/2025	15:48	LB135373
	Lead	12.0	+/-12.0	U	12.0	P	04/10/2025	15:48	LB135373
	Magnesium	2000	+/-2000	U	2000	P	04/10/2025	15:48	LB135373
	Manganese	20.0	+/-20.0	U	20.0	P	04/10/2025	15:48	LB135373
	Nickel	40.0	+/-40.0	U	40.0	P	04/10/2025	15:48	LB135373
	Potassium	2000	+/-2000	U	2000	P	04/10/2025	15:48	LB135373
	Selenium	20.0	+/-20.0	U	20.0	P	04/10/2025	15:48	LB135373
	Silver	10.0	+/-10.0	U	10.0	P	04/10/2025	15:48	LB135373
	Sodium	2000	+/-2000	U	2000	P	04/10/2025	15:48	LB135373
	Thallium	40.0	+/-40.0	U	40.0	P	04/10/2025	15:48	LB135373
	Vanadium	40.0	+/-40.0	U	40.0	P	04/10/2025	15:48	LB135373
	Zinc	40.0	+/-40.0	U	40.0	P	04/10/2025	15:48	LB135373
CCB07	Aluminum	100	+/-100	U	100	P	04/10/2025	17:00	LB135373
	Antimony	50.0	+/-50.0	U	50.0	P	04/10/2025	17:00	LB135373
	Arsenic	20.0	+/-20.0	U	20.0	P	04/10/2025	17:00	LB135373
	Barium	100	+/-100	U	100	P	04/10/2025	17:00	LB135373
	Beryllium	6.00	+/-6.00	U	6.00	P	04/10/2025	17:00	LB135373
	Cadmium	6.00	+/-6.00	U	6.00	P	04/10/2025	17:00	LB135373
	Calcium	2000	+/-2000	U	2000	P	04/10/2025	17:00	LB135373
	Chromium	10.0	+/-10.0	U	10.0	P	04/10/2025	17:00	LB135373
	Cobalt	30.0	+/-30.0	U	30.0	P	04/10/2025	17:00	LB135373
	Copper	20.0	+/-20.0	U	20.0	P	04/10/2025	17:00	LB135373
	Iron	100	+/-100	U	100	P	04/10/2025	17:00	LB135373
	Lead	12.0	+/-12.0	U	12.0	P	04/10/2025	17:00	LB135373
	Magnesium	2000	+/-2000	U	2000	P	04/10/2025	17:00	LB135373
	Manganese	20.0	+/-20.0	U	20.0	P	04/10/2025	17:00	LB135373
	Nickel	40.0	+/-40.0	U	40.0	P	04/10/2025	17:00	LB135373
	Potassium	2000	+/-2000	U	2000	P	04/10/2025	17:00	LB135373
	Selenium	20.0	+/-20.0	U	20.0	P	04/10/2025	17:00	LB135373
	Silver	10.0	+/-10.0	U	10.0	P	04/10/2025	17:00	LB135373
	Sodium	2000	+/-2000	U	2000	P	04/10/2025	17:00	LB135373
	Thallium	40.0	+/-40.0	U	40.0	P	04/10/2025	17:00	LB135373
	Vanadium	40.0	+/-40.0	U	40.0	P	04/10/2025	17:00	LB135373
	Zinc	40.0	+/-40.0	U	40.0	P	04/10/2025	17:00	LB135373
CCB08	Aluminum	100	+/-100	U	100	P	04/10/2025	18:00	LB135373
	Antimony	50.0	+/-50.0	U	50.0	P	04/10/2025	18:00	LB135373

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB08	Arsenic	20.0	+/-20.0	U	20.0	P	04/10/2025	18:00	LB135373
	Barium	100	+/-100	U	100	P	04/10/2025	18:00	LB135373
	Beryllium	6.00	+/-6.00	U	6.00	P	04/10/2025	18:00	LB135373
	Cadmium	6.00	+/-6.00	U	6.00	P	04/10/2025	18:00	LB135373
	Calcium	2000	+/-2000	U	2000	P	04/10/2025	18:00	LB135373
	Chromium	10.0	+/-10.0	U	10.0	P	04/10/2025	18:00	LB135373
	Cobalt	30.0	+/-30.0	U	30.0	P	04/10/2025	18:00	LB135373
	Copper	20.0	+/-20.0	U	20.0	P	04/10/2025	18:00	LB135373
	Iron	100	+/-100	U	100	P	04/10/2025	18:00	LB135373
	Lead	12.0	+/-12.0	U	12.0	P	04/10/2025	18:00	LB135373
	Magnesium	2000	+/-2000	U	2000	P	04/10/2025	18:00	LB135373
	Manganese	20.0	+/-20.0	U	20.0	P	04/10/2025	18:00	LB135373
	Nickel	40.0	+/-40.0	U	40.0	P	04/10/2025	18:00	LB135373
	Potassium	2000	+/-2000	U	2000	P	04/10/2025	18:00	LB135373
	Selenium	20.0	+/-20.0	U	20.0	P	04/10/2025	18:00	LB135373
	Silver	10.0	+/-10.0	U	10.0	P	04/10/2025	18:00	LB135373
	Sodium	2000	+/-2000	U	2000	P	04/10/2025	18:00	LB135373
	Thallium	40.0	+/-40.0	U	40.0	P	04/10/2025	18:00	LB135373
	Vanadium	40.0	+/-40.0	U	40.0	P	04/10/2025	18:00	LB135373
	Zinc	40.0	+/-40.0	U	40.0	P	04/10/2025	18:00	LB135373
CCB09	Aluminum	100	+/-100	U	100	P	04/10/2025	18:23	LB135373
	Antimony	50.0	+/-50.0	U	50.0	P	04/10/2025	18:23	LB135373
	Arsenic	20.0	+/-20.0	U	20.0	P	04/10/2025	18:23	LB135373
	Barium	100	+/-100	U	100	P	04/10/2025	18:23	LB135373
	Beryllium	6.00	+/-6.00	U	6.00	P	04/10/2025	18:23	LB135373
	Cadmium	6.00	+/-6.00	U	6.00	P	04/10/2025	18:23	LB135373
	Calcium	2000	+/-2000	U	2000	P	04/10/2025	18:23	LB135373
	Chromium	10.0	+/-10.0	U	10.0	P	04/10/2025	18:23	LB135373
	Cobalt	30.0	+/-30.0	U	30.0	P	04/10/2025	18:23	LB135373
	Copper	20.0	+/-20.0	U	20.0	P	04/10/2025	18:23	LB135373
	Iron	100	+/-100	U	100	P	04/10/2025	18:23	LB135373
	Lead	12.0	+/-12.0	U	12.0	P	04/10/2025	18:23	LB135373
	Magnesium	2000	+/-2000	U	2000	P	04/10/2025	18:23	LB135373
	Manganese	20.0	+/-20.0	U	20.0	P	04/10/2025	18:23	LB135373
	Nickel	40.0	+/-40.0	U	40.0	P	04/10/2025	18:23	LB135373
	Potassium	2000	+/-2000	U	2000	P	04/10/2025	18:23	LB135373
	Selenium	20.0	+/-20.0	U	20.0	P	04/10/2025	18:23	LB135373
	Silver	10.0	+/-10.0	U	10.0	P	04/10/2025	18:23	LB135373
	Sodium	2000	+/-2000	U	2000	P	04/10/2025	18:23	LB135373

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB09	Thallium	40.0	+/-40.0	U	40.0	P	04/10/2025	18:23	LB135373
	Vanadium	40.0	+/-40.0	U	40.0	P	04/10/2025	18:23	LB135373
	Zinc	40.0	+/-40.0	U	40.0	P	04/10/2025	18:23	LB135373

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Metals
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PREPARATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Instrument: CV1

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB167532BL		**SOLID**		**Batch Number:**	**PB167532**		**Prep Date:**	**04/08/2025**	
	Mercury	0.012	<0.012	U	0.012	CV	04/09/2025	11:58	LB135354

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Instrument: P4

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB167490BL		**SOLID**		**Batch Number:**	**PB167490**		**Prep Date:**	**04/07/2025**	
	Aluminum	4.12	<4.12	U	4.12	P	04/10/2025	16:26	LB135373
	Antimony	2.06	<2.06	U	2.06	P	04/10/2025	16:26	LB135373
	Arsenic	0.82	<0.82	U	0.82	P	04/10/2025	16:26	LB135373
	Barium	4.12	<4.12	U	4.12	P	04/10/2025	16:26	LB135373
	Beryllium	0.25	<0.25	U	0.25	P	04/10/2025	16:26	LB135373
	Cadmium	0.25	<0.25	U	0.25	P	04/10/2025	16:26	LB135373
	Calcium	82.3	<82.3	U	82.3	P	04/10/2025	16:26	LB135373
	Chromium	0.41	<0.41	U	0.41	P	04/10/2025	16:26	LB135373
	Cobalt	1.23	<1.23	U	1.23	P	04/10/2025	16:26	LB135373
	Copper	0.82	<0.82	U	0.82	P	04/10/2025	16:26	LB135373
	Iron	4.12	<4.12	U	4.12	P	04/10/2025	16:26	LB135373
	Lead	0.49	<0.49	U	0.49	P	04/10/2025	16:26	LB135373
	Magnesium	82.3	<82.3	U	82.3	P	04/10/2025	16:26	LB135373
	Manganese	0.82	<0.82	U	0.82	P	04/10/2025	16:26	LB135373
	Nickel	1.65	<1.65	U	1.65	P	04/10/2025	16:26	LB135373
	Potassium	82.3	<82.3	U	82.3	P	04/10/2025	16:26	LB135373
	Selenium	0.82	<0.82	U	0.82	P	04/10/2025	16:26	LB135373
	Silver	0.41	<0.41	U	0.41	P	04/10/2025	16:26	LB135373
	Sodium	82.3	<82.3	U	82.3	P	04/10/2025	16:26	LB135373
	Thallium	1.65	<1.65	U	1.65	P	04/10/2025	16:26	LB135373
	Vanadium	1.65	<1.65	U	1.65	P	04/10/2025	16:26	LB135373
	Zinc	1.65	<1.65	U	1.65	P	04/10/2025	16:26	LB135373

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

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

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Aluminum	243000	255000	95	216000	294000	04/10/2025	10:37	LB135373
	Antimony	-1.86			-50	50	04/10/2025	10:37	LB135373
	Arsenic	5.16			-20	20	04/10/2025	10:37	LB135373
	Barium	-3.92	6.0	65	-94	106	04/10/2025	10:37	LB135373
	Beryllium	1.14			-6	6	04/10/2025	10:37	LB135373
	Cadmium	-3.53	1.0	353	-5	7	04/10/2025	10:37	LB135373
	Calcium	227000	245000	93	208000	282000	04/10/2025	10:37	LB135373
	Chromium	55.8	52.0	107	42	62	04/10/2025	10:37	LB135373
	Cobalt	1.58			-30	30	04/10/2025	10:37	LB135373
	Copper	-4.96	2.0	248	-18	22	04/10/2025	10:37	LB135373
	Iron	107000	101000	106	85600	116500	04/10/2025	10:37	LB135373
	Lead	7.32			-12	12	04/10/2025	10:37	LB135373
	Magnesium	243000	255000	95	216000	294000	04/10/2025	10:37	LB135373
	Manganese	0.78	7.0	11	-13	27	04/10/2025	10:37	LB135373
	Nickel	2.46	2.0	123	-38	42	04/10/2025	10:37	LB135373
	Potassium	-132			0	0	04/10/2025	10:37	LB135373
	Selenium	-8.19			-20	20	04/10/2025	10:37	LB135373
	Silver	3.75			-10	10	04/10/2025	10:37	LB135373
	Sodium	-202			0	0	04/10/2025	10:37	LB135373
	Thallium	9.79			-40	40	04/10/2025	10:37	LB135373
	Vanadium	2.28			-40	40	04/10/2025	10:37	LB135373
	Zinc	2.74			-40	40	04/10/2025	10:37	LB135373
ICSAB01	Aluminum	236000	247000	96	209000	285000	04/10/2025	10:42	LB135373
	Antimony	624	618	101	525	711	04/10/2025	10:42	LB135373
	Arsenic	111	104	107	88.4	120	04/10/2025	10:42	LB135373
	Barium	459	537	86	437	637	04/10/2025	10:42	LB135373
	Beryllium	525	495	106	420	570	04/10/2025	10:42	LB135373
	Cadmium	981	972	101	826	1120	04/10/2025	10:42	LB135373
	Calcium	219000	235000	93	199000	271000	04/10/2025	10:42	LB135373
	Chromium	553	542	102	460	624	04/10/2025	10:42	LB135373
	Cobalt	498	476	105	404	548	04/10/2025	10:42	LB135373
	Copper	500	511	98	434	588	04/10/2025	10:42	LB135373
	Iron	93600	99300	94	84400	114500	04/10/2025	10:42	LB135373
	Lead	57.3	49.0	117	37	61	04/10/2025	10:42	LB135373
	Magnesium	237000	248000	96	210000	286000	04/10/2025	10:42	LB135373
	Manganese	454	507	90	430	584	04/10/2025	10:42	LB135373
	Nickel	995	954	104	810	1100	04/10/2025	10:42	LB135373
	Potassium	-183			0	0	04/10/2025	10:42	LB135373
	Selenium	36.7	46.0	80	26	66	04/10/2025	10:42	LB135373
	Silver	186	201	92	170	232	04/10/2025	10:42	LB135373
	Sodium	-267			0	0	04/10/2025	10:42	LB135373
	Thallium	103	108	95	68	148	04/10/2025	10:42	LB135373

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

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

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSAB01	Vanadium	460	491	94	417	565	04/10/2025	10:42	LB135373
	Zinc	1060	952	111	809	1095	04/10/2025	10:42	LB135373

METAL
QC
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metals
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MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1744

contract: PORT06 **lab code:** CHEM **case no.:** Q1744 **sas no.:** Q1744

matrix: Solid **sample id:** Q1745-09 **client id:** IB-6.5-WCMS

Percent Solids for Sample: 71.5 **Spiked ID:** Q1745-09MS **Percent Solids for Spike Sample:** 71.5

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	5740		5630		130	82		P
Antimony	mg/Kg	75 - 125	49.3		3.35	U	53.5	92		P
Arsenic	mg/Kg	75 - 125	82.2		36.0		53.5	86		P
Barium	mg/Kg	75 - 125	403		386		13.4	129		P
Beryllium	mg/Kg	75 - 125	10.8		0.54		13.4	77		P
Cadmium	mg/Kg	75 - 125	12.4		0.13	J	13.4	91		P
Calcium	mg/Kg	75 - 125	9880		9780		66.9	149		P
Chromium	mg/Kg	75 - 125	39.0		16.2		26.8	85		P
Cobalt	mg/Kg	75 - 125	18.7		6.11		13.4	94		P
Copper	mg/Kg	75 - 125	230		217		20.1	63		P
Iron	mg/Kg	75 - 125	18100		18500		200	-219		P
Lead	mg/Kg	75 - 125	740		694		66.9	69		P
Magnesium	mg/Kg	75 - 125	1140		1030		130	86		P
Manganese	mg/Kg	75 - 125	207		193		13.4	103		P
Nickel	mg/Kg	75 - 125	57.1		26.1		33.5	93		P
Potassium	mg/Kg	75 - 125	1810		1240		670	85		P
Selenium	mg/Kg	75 - 125	115		1.34	U	130	88		P
Silver	mg/Kg	75 - 125	7.33		3.03		5.0	86		P
Sodium	mg/Kg	75 - 125	1270		1130		200	73		P
Thallium	mg/Kg	75 - 125	120		0.76	J	130	92		P
Vanadium	mg/Kg	75 - 125	37.8		21.1		20.1	83		P
Zinc	mg/Kg	75 - 125	298		292		13.4	43		P

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1744

contract: PORT06 **lab code:** CHEM **case no.:** Q1744 **sas no.:** Q1744

matrix: Solid **sample id:** Q1745-09 **client id:** IB-6.5-WCMSD

Percent Solids for Sample: 71.5 **Spiked ID:** Q1745-09MSD **Percent Solids for Spike Sample:** 71.5

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	5680		5630		130	40		P
Antimony	mg/Kg	75 - 125	47.3		3.35	U	52.5	90		P
Arsenic	mg/Kg	75 - 125	79.3		36.0		52.5	82		P
Barium	mg/Kg	75 - 125	425		386		13.1	297		P
Beryllium	mg/Kg	75 - 125	9.94		0.54		13.1	72	N	P
Cadmium	mg/Kg	75 - 125	11.8		0.13	J	13.1	89		P
Calcium	mg/Kg	75 - 125	9780		9780		65.7	-10		P
Chromium	mg/Kg	75 - 125	37.9		16.2		26.3	82		P
Cobalt	mg/Kg	75 - 125	18.1		6.11		13.1	91		P
Copper	mg/Kg	75 - 125	223		217		19.7	28		P
Iron	mg/Kg	75 - 125	18400		18500		200	-31		P
Lead	mg/Kg	75 - 125	725		694		65.7	47		P
Magnesium	mg/Kg	75 - 125	1120		1030		130	69		P
Manganese	mg/Kg	75 - 125	204		193		13.1	84		P
Nickel	mg/Kg	75 - 125	55.3		26.1		32.8	89		P
Potassium	mg/Kg	75 - 125	1870		1240		660	94		P
Selenium	mg/Kg	75 - 125	110		1.34	U	130	85		P
Silver	mg/Kg	75 - 125	7.24		3.03		4.9	86		P
Sodium	mg/Kg	75 - 125	1300		1130		200	84		P
Thallium	mg/Kg	75 - 125	116		0.76	J	130	89		P
Vanadium	mg/Kg	75 - 125	37.0		21.1		19.7	81		P
Zinc	mg/Kg	75 - 125	289		292		13.1	-17		P

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metals
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MATRIX SPIKE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1744

contract: PORT06 **lab code:** CHEM **case no.:** Q1744 **sas no.:** Q1744

matrix: Solid **sample id:** Q1753-05 **client id:** WC-2MS

Percent Solids for Sample: 89 **Spiked ID:** Q1753-05MS **Percent Solids for Spike Sample:** 89

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.23		0.026		0.3	69	N	CV

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: Portal Partners Tri-Venture **level:** low **sdg no.:** Q1744

contract: PORT06 **lab code:** CHEM **case no.:** Q1744 **sas no.:** Q1744

matrix: Solid **sample id:** Q1753-05 **client id:** WC-2MSD

Percent Solids for Sample: 89 **Spiked ID:** Q1753-05MSD **Percent Solids for Spike Sample:** 89

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.18		0.026		0.28	56	N	CV

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Metals
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POST DIGEST SPIKE SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Matrix: Solid **Level:** LOW **Client ID:** IB-6.5-WCA

Sample ID: Q1745-09 **Spiked ID:** Q1745-09A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Beryllium	mg/Kg	75 - 125	10.1		0.54		13.4	71		P

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Metals
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POST DIGEST SPIKE SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Matrix: Solid **Level:** LOW **Client ID:** WC-2A

Sample ID: Q1753-05 **Spiked ID:** Q1753-05A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.26		0.026		0.30	78		CV

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DUPLICATE SAMPLE SUMMARY

Client: Portal Partners Tri-Venture **Level:** LOW **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Matrix: Solid **Sample ID:** Q1745-09 **Client ID:** IB-6.5-WCDUP

Percent Solids for Sample: 71.5 **Duplicate ID** Q1745-09DUP **Percent Solids for Spike Sample:** 71.5

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	5630		5310		6		P
Antimony	mg/Kg	20	3.35	U	3.15	U			P
Arsenic	mg/Kg	20	36.0		32.8		9		P
Barium	mg/Kg	20	386		369		5		P
Beryllium	mg/Kg	20	0.54		0.48		12		P
Cadmium	mg/Kg	20	0.13	J	0.11	J	15		P
Calcium	mg/Kg	20	9780		9280		5		P
Chromium	mg/Kg	20	16.2		15.2		6		P
Cobalt	mg/Kg	20	6.11		5.76		6		P
Copper	mg/Kg	20	217		202		7		P
Iron	mg/Kg	20	18500		17300		7		P
Lead	mg/Kg	20	694		647		7		P
Magnesium	mg/Kg	20	1030		973		6		P
Manganese	mg/Kg	20	193		184		5		P
Nickel	mg/Kg	20	26.1		24.3		7		P
Potassium	mg/Kg	20	1240		1140		8		P
Selenium	mg/Kg	20	1.34	U	1.26	U			P
Silver	mg/Kg	20	3.03		2.77		9		P
Sodium	mg/Kg	20	1130		1050		7		P
Thallium	mg/Kg	20	0.76	J	0.73	J	4		P
Vanadium	mg/Kg	20	21.1		20.0		5		P
Zinc	mg/Kg	20	292		274		6		P

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

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DUPLICATE SAMPLE SUMMARY

Client: Portal Partners Tri-Venture **Level:** LOW **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Matrix: Solid **Sample ID:** Q1745-09MS **Client ID:** IB-6.5-WCMSD

Percent Solids for Sample: 71.5 **Duplicate ID** Q1745-09MSD **Percent Solids for Spike Sample:** 71.5

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	5740		5680		1		P
Antimony	mg/Kg	20	49.3		47.3		4		P
Arsenic	mg/Kg	20	82.2		79.3		4		P
Barium	mg/Kg	20	403		425		5		P
Beryllium	mg/Kg	20	10.8		9.94		8		P
Cadmium	mg/Kg	20	12.4		11.8		5		P
Calcium	mg/Kg	20	9880		9780		1		P
Chromium	mg/Kg	20	39.0		37.9		3		P
Cobalt	mg/Kg	20	18.7		18.1		3		P
Copper	mg/Kg	20	230		223		3		P
Iron	mg/Kg	20	18100		18400		2		P
Lead	mg/Kg	20	740		725		2		P
Magnesium	mg/Kg	20	1140		1120		2		P
Manganese	mg/Kg	20	207		204		1		P
Nickel	mg/Kg	20	57.1		55.3		3		P
Potassium	mg/Kg	20	1810		1870		3		P
Selenium	mg/Kg	20	115		110		4		P
Silver	mg/Kg	20	7.33		7.24		1		P
Sodium	mg/Kg	20	1270		1300		2		P
Thallium	mg/Kg	20	120		116		3		P
Vanadium	mg/Kg	20	37.8		37.0		2		P
Zinc	mg/Kg	20	298		289		3		P

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

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DUPLICATE SAMPLE SUMMARY

Client: Portal Partners Tri-Venture **Level:** LOW **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Matrix: Solid **Sample ID:** Q1753-05 **Client ID:** WC-2DUP

Percent Solids for Sample: 89 **Duplicate ID** Q1753-05DUP **Percent Solids for Spike Sample:** 89

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.026		0.026		0		CV

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

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DUPLICATE SAMPLE SUMMARY

Client: Portal Partners Tri-Venture **Level:** LOW **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Matrix: Solid **Sample ID:** Q1753-05MS **Client ID:** WC-2MSD

Percent Solids for Sample: 89 **Duplicate ID** Q1753-05MSD **Percent Solids for Spike Sample:** 89

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.23		0.18		25	*	CV

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

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB167490BS							
Aluminum	mg/Kg	94.8	88.7		94	80 - 120	P
Antimony	mg/Kg	37.9	38.4		101	80 - 120	P
Arsenic	mg/Kg	37.9	36.7		97	80 - 120	P
Barium	mg/Kg	9.5	7.77		82	80 - 120	P
Beryllium	mg/Kg	9.5	8.55		90	80 - 120	P
Cadmium	mg/Kg	9.5	8.72		92	80 - 120	P
Calcium	mg/Kg	47.4	44.3	J	94	80 - 120	P
Chromium	mg/Kg	19.0	18.6		98	80 - 120	P
Cobalt	mg/Kg	9.5	8.77		92	80 - 120	P
Copper	mg/Kg	14.2	14.4		101	80 - 120	P
Iron	mg/Kg	140	133		95	80 - 120	P
Lead	mg/Kg	47.4	43.5		92	80 - 120	P
Magnesium	mg/Kg	94.8	86.2	J	91	80 - 120	P
Manganese	mg/Kg	9.5	8.45		89	80 - 120	P
Nickel	mg/Kg	23.7	22.6		95	80 - 120	P
Potassium	mg/Kg	470	427		91	80 - 120	P
Selenium	mg/Kg	94.8	94.0		99	80 - 120	P
Silver	mg/Kg	3.6	3.47		96	80 - 120	P
Sodium	mg/Kg	140	127		91	80 - 120	P
Thallium	mg/Kg	94.8	91.2		96	80 - 120	P
Vanadium	mg/Kg	14.2	13.0		92	80 - 120	P
Zinc	mg/Kg	9.5	9.43		99	80 - 120	P

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB167532BS							
Mercury	mg/Kg	0.27	0.24		90	80 - 120	CV

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ICP SERIAL DILUTIONS

SAMPLE NO.

IB-6.5-WCL

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

Lab Code: CHEM **Lb No.:** lb135373 **Lab Sample ID :** Q1745-09L **SDG No.:** Q1744

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

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	5630		6110		9		P
Antimony	3.35	U	16.7	U			P
Arsenic	36.0		38.3		6		P
Barium	386		428		11		P
Beryllium	0.54		0.59	J	9		P
Cadmium	0.13	J	2.01	U	100.0		P
Calcium	9780		10900		11		P
Chromium	16.2		18.2		12		P
Cobalt	6.11		6.18	J	1		P
Copper	217		249		15		P
Iron	18500		20400		10		P
Lead	694		737		6		P
Magnesium	1030		1160		13		P
Manganese	193		218		13		P
Nickel	26.1		26.7		2		P
Potassium	1240		1260		1		P
Selenium	1.34	U	6.69	U			P
Silver	3.03		3.38		12		P
Sodium	1130		1200		6		P
Thallium	0.76	J	13.4	U	100.0		P
Vanadium	21.1		22.8		8		P
Zinc	292		334		14		P

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ICP SERIAL DILUTIONS

SAMPLE NO.

WC-2L

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

Lab Code: CHEM **Lb No.:** lb135354 **Lab Sample ID :** Q1753-05L **SDG No.:** Q1744

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

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Mercury	0.026		0.074	U	100.0		CV

METAL PREPARATION & INSTRUMENT DATA

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ICP INTERELEMENT CORRECTION FACTORS

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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ICP INTERELEMENT CORRECTION FACTORS

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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ICP INTERELEMENT CORRECTION FACTORS

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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ICP INTERELEMENT CORRECTION FACTORS

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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ICP INTERELEMENT CORRECTION FACTORS

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

Contract: PORT06 **Lab Code:** CHEM **Case No.:** Q1744 **SAS No.:** Q1744

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

METAL PREPARATION & ANALYICAL SUMMARY

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SAMPLE PREPARATION SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

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

Case No.: Q1744 **SAS No.:** Q1744

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB167490**						
PB167490BL	PB167490BL	MB	SOLID	04/07/2025	2.43	100.0	100.00
PB167490BS	PB167490BS	LCS	SOLID	04/07/2025	2.11	100.0	100.00
Q1744-01	B-158-SB01	SAM	SOLID	04/07/2025	2.03	100.0	90.00
Q1744-03	B-158-SB02	SAM	SOLID	04/07/2025	2.10	100.0	56.00
Q1745-09DUP	IB-6.5-WCDUP	DUP	SOLID	04/07/2025	2.22	100.0	71.50
Q1745-09MS	IB-6.5-WCMS	MS	SOLID	04/07/2025	2.09	100.0	71.50
Q1745-09MSD	IB-6.5-WCMSD	MSD	SOLID	04/07/2025	2.13	100.0	71.50

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Fax : 908 789 8922

Metals
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SAMPLE PREPARATION SUMMARY

Client: Portal Partners Tri-Venture **SDG No.:** Q1744

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

Case No.: Q1744 **SAS No.:** Q1744

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB167532**						
PB167532BL	PB167532BL	MB	SOLID	04/08/2025	0.57	35.0	100.00
PB167532BS	PB167532BS	LCS	SOLID	04/08/2025	0.52	35.0	100.00
Q1744-01	B-158-SB01	SAM	SOLID	04/08/2025	0.57	35.0	90.00
Q1744-03	B-158-SB02	SAM	SOLID	04/08/2025	0.57	35.0	56.00
Q1753-05DUP	WC-2DUP	DUP	SOLID	04/08/2025	0.55	35.0	89.00
Q1753-05MS	WC-2MS	MS	SOLID	04/08/2025	0.52	35.0	89.00
Q1753-05MSD	WC-2MSD	MSD	SOLID	04/08/2025	0.56	35.0	89.00

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metals
- 14 -
ANALYSIS RUN LOG

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

Lab code: CHEM **Case no.:** Q1744 **Sas no.:** Q1744 **Sdg no.:** Q1744

Instrument id number: **Method:** **Run number:** LB135354

Start date: 04/09/2025 **End date:** 04/09/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1106	HG
S0.2	S0.2	1	1109	HG
S2.5	S2.5	1	1111	HG
S5	S5	1	1113	HG
S7.5	S7.5	1	1115	HG
S10	S10	1	1131	HG
ICV82	ICV82	1	1134	HG
ICB82	ICB82	1	1136	HG
CCV49	CCV49	1	1143	HG
CCB49	CCB49	1	1145	HG
CRA	CRA	1	1147	HG
PB167532BL	PB167532BL	1	1158	HG
PB167532BS	PB167532BS	1	1203	HG
Q1744-01	B-158-SB01	1	1208	HG
Q1744-03	B-158-SB02	1	1210	HG
CCV50	CCV50	1	1217	HG
CCB50	CCB50	1	1220	HG
CCV51	CCV51	1	1246	HG
CCB51	CCB51	1	1248	HG
Q1753-05DUP	WC-2DUP	1	1257	HG
Q1753-05MS	WC-2MS	1	1259	HG
Q1753-05MSD	WC-2MSD	1	1302	HG
Q1753-05L	WC-2L	5	1334	HG
Q1753-05A	WC-2A	1	1336	HG
CCV52	CCV52	1	1358	HG
CCB52	CCB52	1	1404	HG
CCV53	CCV53	1	1418	HG
CCB53	CCB53	1	1421	HG

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metals
- 14 -
ANALYSIS RUN LOG

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

Lab code: CHEM **Case no.:** Q1744 **Sas no.:** Q1744 **Sdg no.:** Q1744

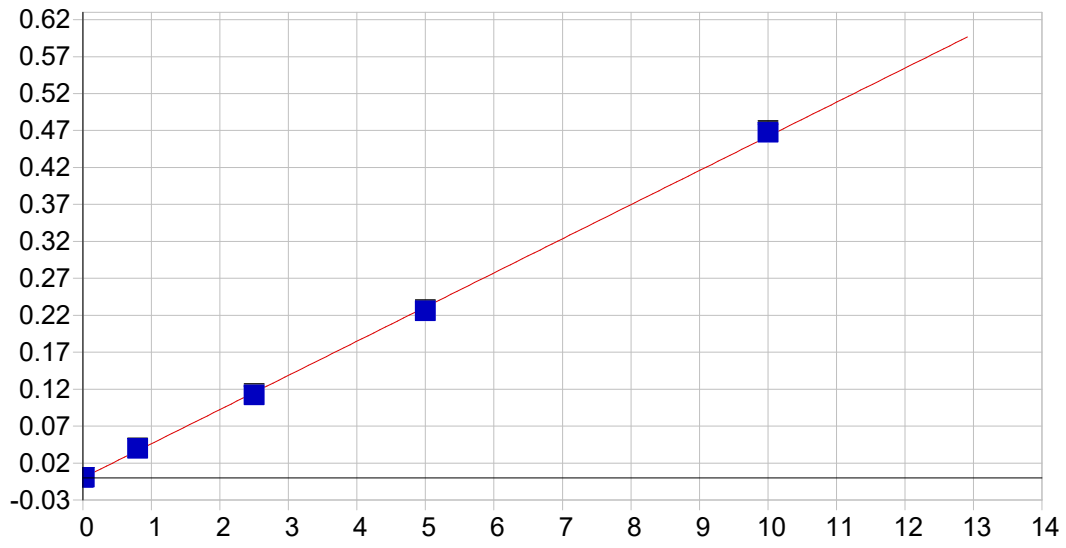
Instrument id number: **Method:** **Run number:** LB135373

Start date: 04/10/2025 **End date:** 04/10/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	0930	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S1	S1	1	0935	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S2	S2	1	0939	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S3	S3	1	0943	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S4	S4	1	0947	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S5	S5	1	0951	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICV01	ICV01	1	1009	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
LLICV01	LLICV01	1	1025	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICB01	ICB01	1	1029	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CRI01	CRI01	1	1033	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSA01	ICSA01	1	1037	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSAB01	ICSAB01	1	1042	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV01	CCV01	1	1100	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB01	CCB01	1	1121	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV02	CCV02	1	1208	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB02	CCB02	1	1212	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV03	CCV03	1	1259	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB03	CCB03	1	1304	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV04	CCV04	1	1351	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB04	CCB04	1	1355	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1744-01	B-158-SB01	1	1415	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1744-03	B-158-SB02	1	1419	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1745-09DUP	IB-6.5-WCDUP	1	1432	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1745-09L	IB-6.5-WCL	5	1436	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV05	CCV05	1	1444	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB05	CCB05	1	1449	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1745-09A	IB-6.5-WCA	1	1457	Be
Q1745-09MS	IB-6.5-WCMS	1	1505	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q1745-09MSD	IB-6.5-WCMSD	1	1509	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV06	CCV06	1	1544	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB06	CCB06	1	1548	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB167490BL	PB167490BL	1	1626	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB167490BS	PB167490BS	1	1639	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV07	CCV07	1	1656	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB07	CCB07	1	1700	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV08	CCV08	1	1756	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB08	CCB08	1	1800	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV09	CCV09	1	1819	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB09	CCB09	1	1823	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

METAL
RAW DATA

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



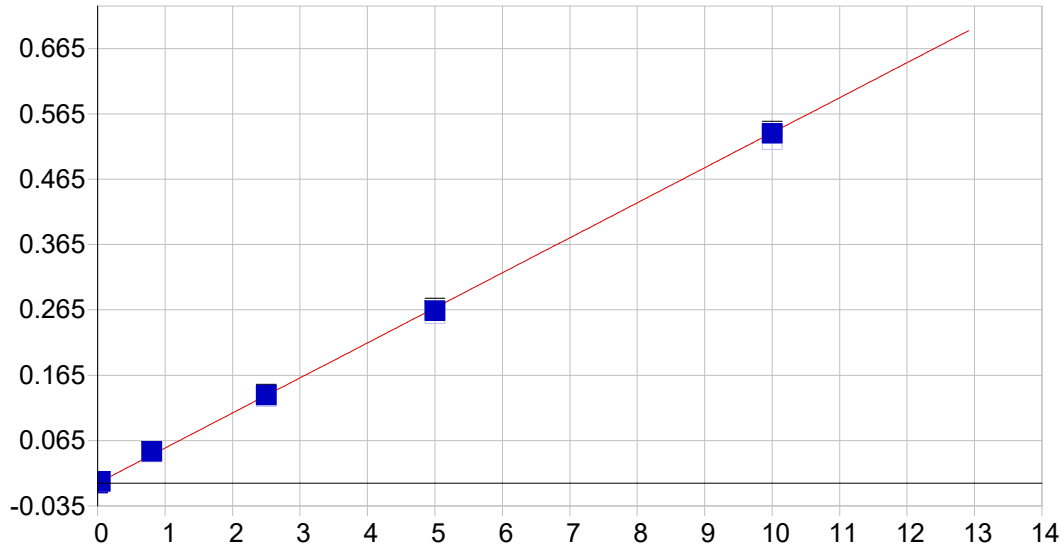
As 189.042 {479}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000082	Re-Slope:	1.000000
A1 (Gain):	0.046218	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999689	Status:	OK.
Std Error of Est:	0.000027		
Predicted MDL:	0.002522		
Predicted MQL:	0.008406		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00008	.000	1
S1	.02000	.02011	.000	.545	.00084	.000	1
S3	2.5000	2.4244	-.076	-3.02	.11184	.002	1
S4	5.0000	4.8907	-.109	-2.19	.22570	.001	1
S5	10.000	10.120	.120	1.20	.46714	.002	1
S2	.80000	.86483	.065	8.10	.03985	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



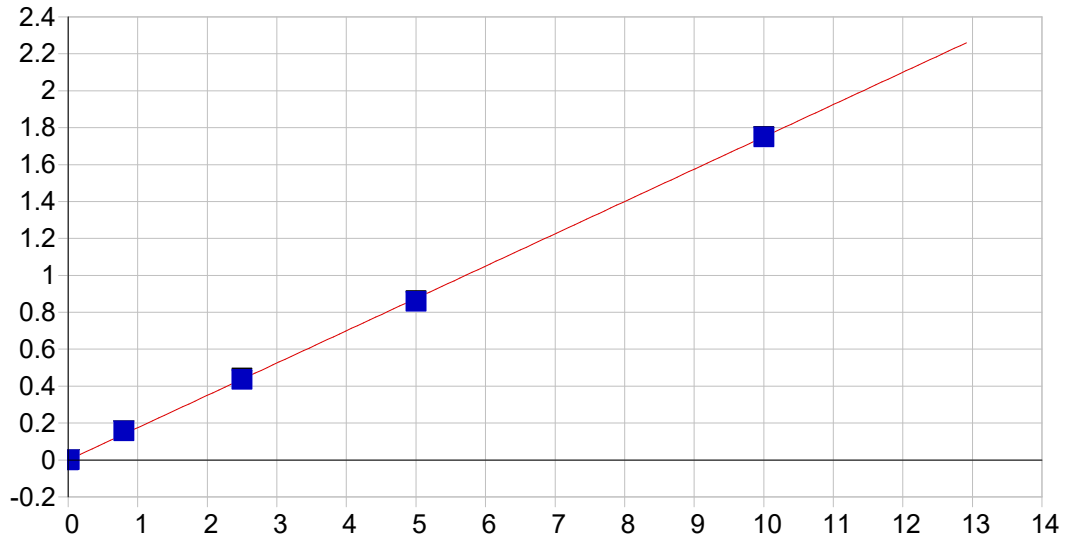
Tl 190.856 {477}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000009	Re-Slope:	1.000000
A1 (Gain):	0.053615	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999635	Status:	OK.
Std Error of Est:	0.000047		
Predicted MDL:	0.001828		
Predicted MQL:	0.006092		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00001	.000	1
S1	.04000	.03946	-.001	-1.35	.00199	.000	1
S3	2.5000	2.5038	.004	.152	.13178	.002	1
S4	5.0000	4.9184	-.082	-1.63	.25877	.004	1
S5	10.000	9.9823	-.018	-.177	.52533	.003	1
S2	.80000	.89599	.096	12.0	.04726	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



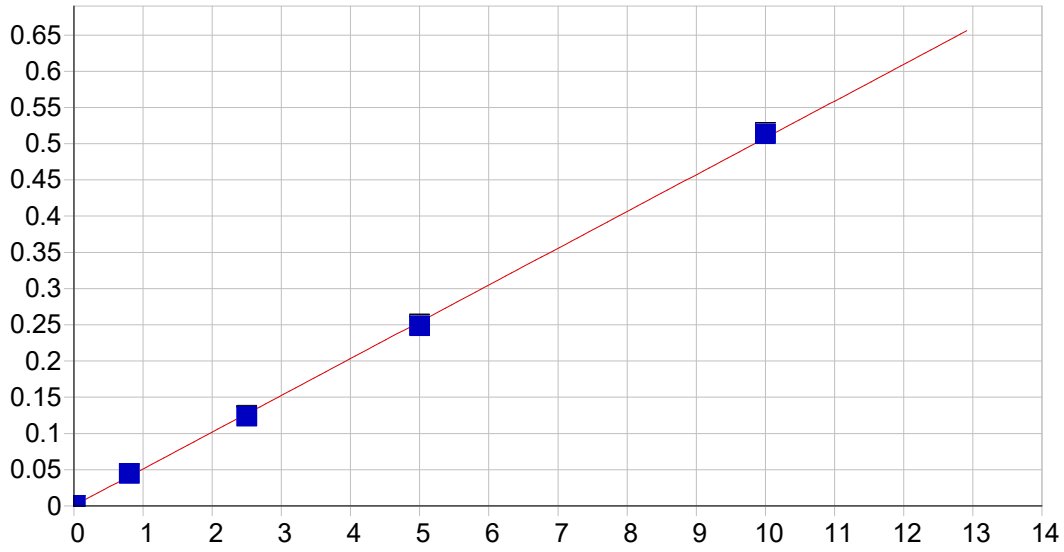
Pb 220.353 {453}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000007	Re-Slope:	1.000000
A1 (Gain):	0.175003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999605	Status:	OK.
Std Error of Est:	0.000089		
Predicted MDL:	0.001384		
Predicted MQL:	0.004612		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00001	.000	1
S1	.01200	.01096	-.001	-8.63	.00187	.000	1
S3	2.5000	2.4961	-.004	-.156	.43634	.007	1
S4	5.0000	4.9086	-.091	-1.83	.85805	.003	1
S5	10.000	9.9957	-.004	-.043	1.7473	.002	1
S2	.80000	.90068	.101	12.6	.15746	.001	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



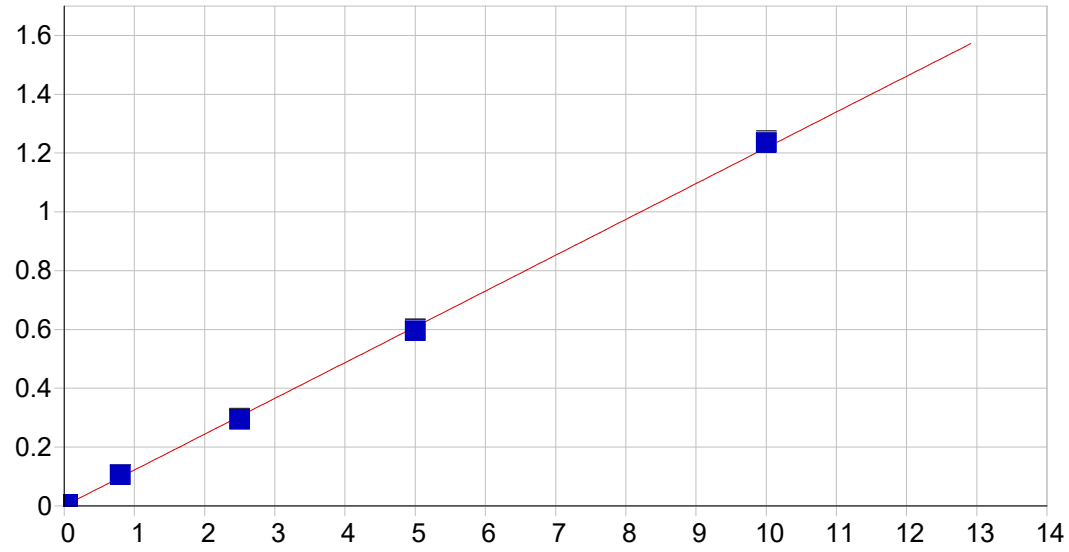
Se 196.090 {472}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000341	Re-Slope:	1.000000
A1 (Gain):	0.050757	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999665	Status:	OK.
Std Error of Est:	0.000031		
Predicted MDL:	0.002789		
Predicted MQL:	0.009296		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00034	.000	1
S1	.02000	.01715	-.003	-14.3	.00121	.000	1
S3	2.5000	2.4290	-.071	-2.84	.12358	.002	1
S4	5.0000	4.8899	-.110	-2.20	.24845	.003	1
S5	10.000	10.114	.114	1.14	.51352	.002	1
S2	.80000	.86992	.070	8.74	.04448	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



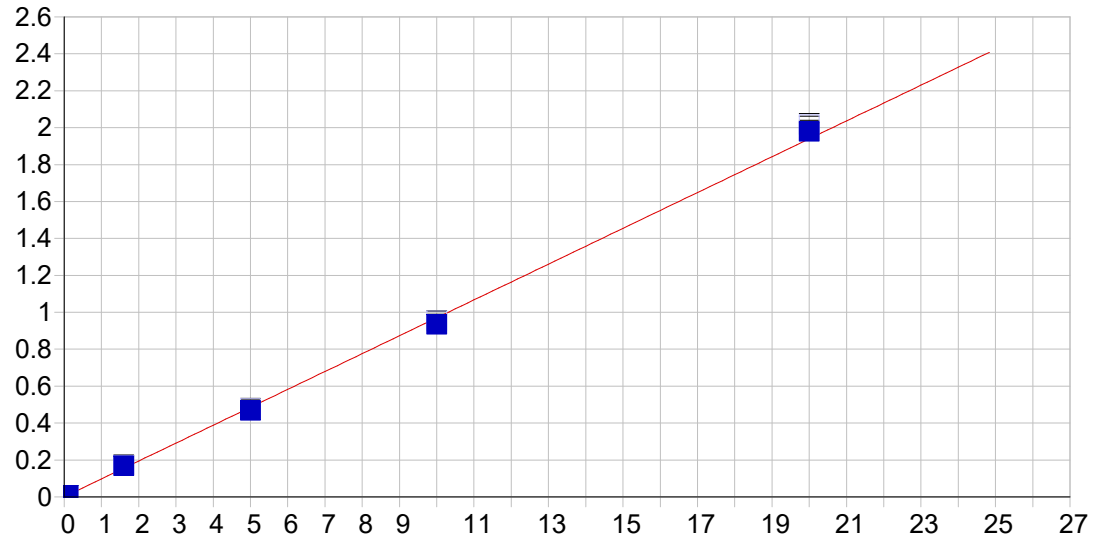
Sb 206.833 {463}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000285	Re-Slope:	1.000000
A1 (Gain):	0.121754	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999662	Status:	OK.
Std Error of Est:	0.000118		
Predicted MDL:	0.001756		
Predicted MQL:	0.005854		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00028	.000	1
S1	.05000	.04866	-.001	-2.67	.00622	.000	1
S3	2.5000	2.4114	-.089	-3.55	.29470	.004	1
S4	5.0000	4.8885	-.112	-2.23	.59713	.005	1
S5	10.000	10.139	.139	1.39	1.2381	.004	1
S2	.80000	.86234	.062	7.79	.10554	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



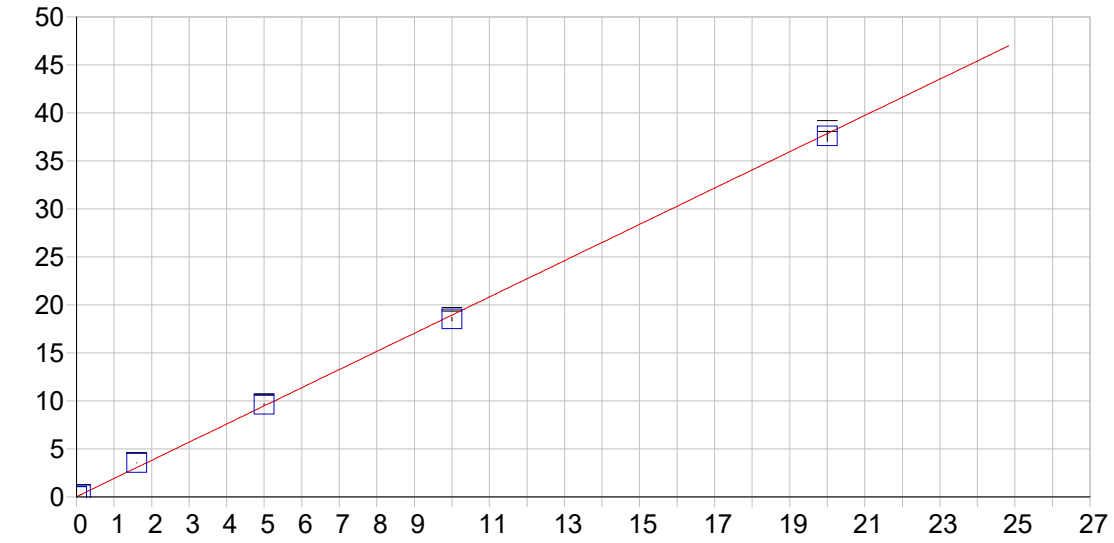
Al 396.152 { 85}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000586	Re-Slope:	1.000000
A1 (Gain):	0.096946	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999486	Status:	OK.
Std Error of Est:	0.000235		
Predicted MDL:	0.005139		
Predicted MQL:	0.017131		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00059	.000	1
S1	.10000	.09401	-.006	-5.99	.01045	.001	1
S3	5.0000	4.8300	-.170	-3.40	.47824	.001	1
S4	10.000	9.6352	-.365	-3.65	.95348	.001	1
S5	20.000	20.405	.405	2.02	2.0163	.007	1
S2	1.6000	1.7363	.136	8.52	.17192	.001	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



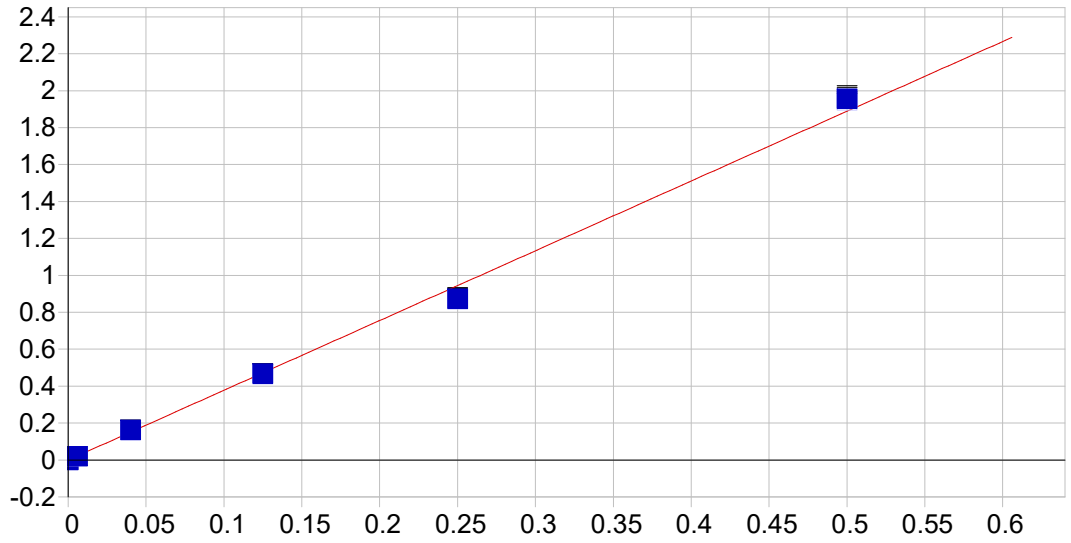
Ba 493.409 { 68}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.030975	Re-Slope:	1.000000
A1 (Gain):	1.890720	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999300	Status:	OK.
Std Error of Est:	0.005248		
Predicted MDL:	0.000911		
Predicted MQL:	0.003036		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.03095	.001	1
S1	.10000	.10033	.000	.332	.22067	.002	1
S3	5.0000	5.0784	.078	1.57	9.6327	.064	1
S4	10.000	9.7792	-.221	-2.21	18.521	.176	1
S5	20.000	19.875	-.125	-.624	37.609	.559	1
S2	1.6000	1.8669	.267	16.7	3.5608	.011	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



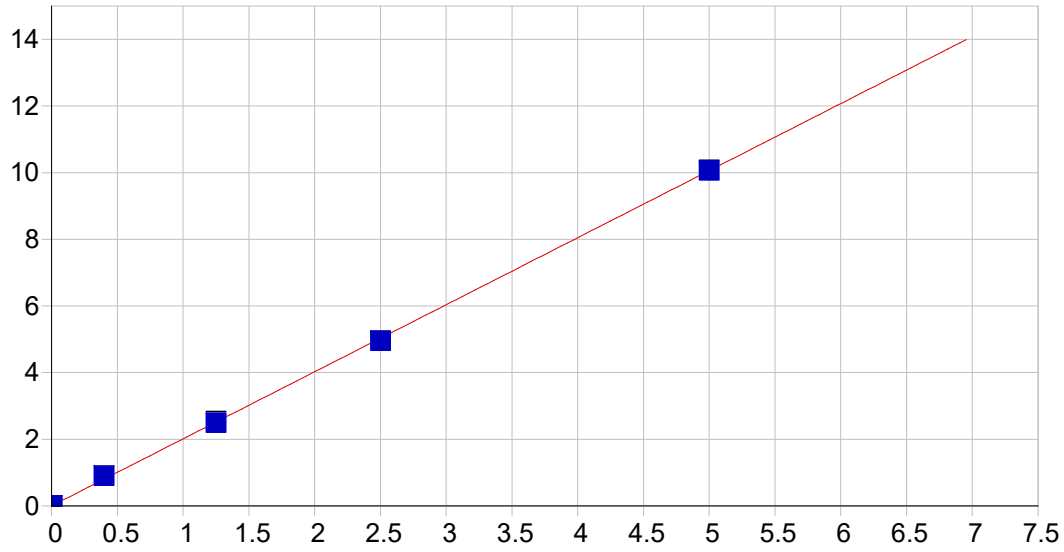
Be 234.861 {144}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000255	Re-Slope:	1.000000
A1 (Gain):	3.777939	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998724	Status:	OK.
Std Error of Est:	0.000547		
Predicted MDL:	0.000050		
Predicted MQL:	0.000167		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00025	.000	1
S1	.00600	.00542	-.001	-9.66	.02005	.000	1
S3	.12500	.12353	-.001	-1.18	.46431	.001	1
S4	.25000	.23122	-.019	-7.51	.86906	.006	1
S5	.50000	.51797	.018	3.59	1.9482	.016	1
S2	.04000	.04285	.003	7.13	.16096	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



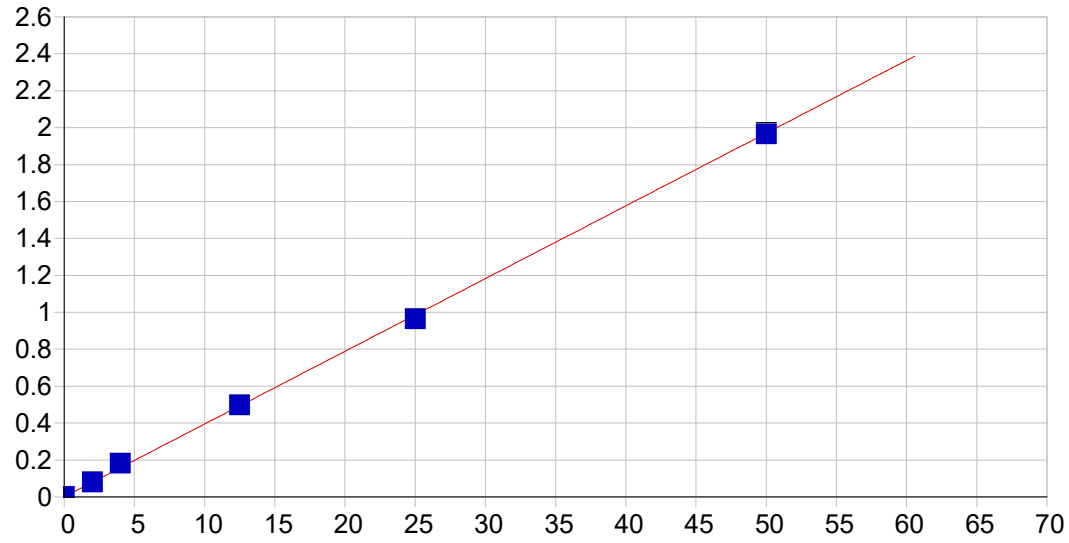
Cd 226.502 {449}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000204	Re-Slope:	1.000000
A1 (Gain):	2.012283	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999637	Status:	OK.
Std Error of Est:	0.000493		
Predicted MDL:	0.000083		
Predicted MQL:	0.000275		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00020	.000	1
S1	.00600	.00570	-.000	-4.96	.01174	.000	1
S3	1.2500	1.2416	-.008	-.669	2.5009	.040	1
S4	2.5000	2.4603	-.040	-1.59	4.9555	.013	1
S5	5.0000	4.9995	-.000	-.010	10.069	.013	1
S2	.40000	.44885	.049	12.2	.90412	.003	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



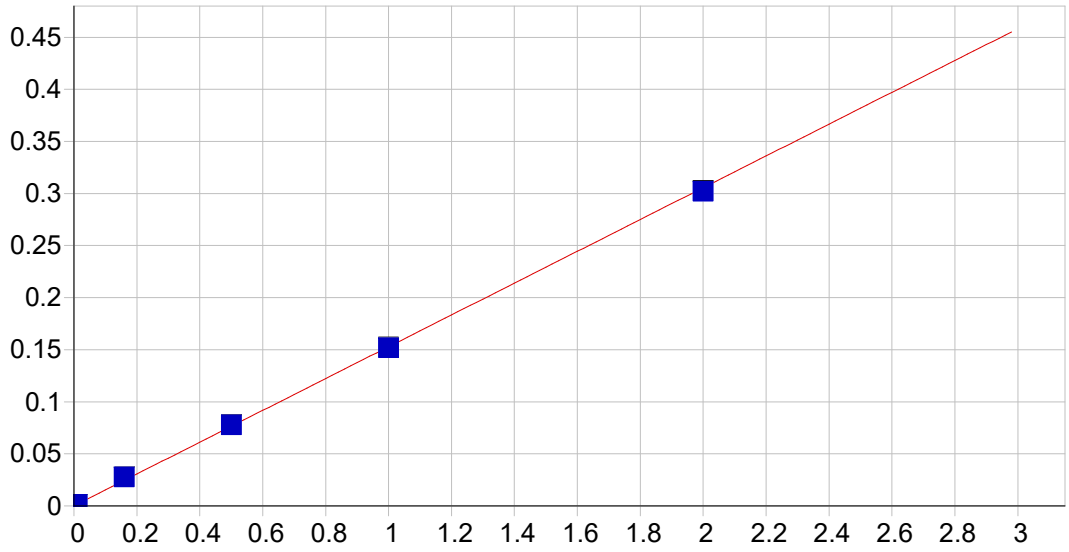
Ca 373.690 { 90}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000913	Re-Slope:	1.000000
A1 (Gain):	0.039390	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999477	Status:	OK.
Std Error of Est:	0.000674		
Predicted MDL:	0.009753		
Predicted MQL:	0.032511		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00024	-.000	.000	.00090	.000	1
S2	4.0000	4.5814	.581	14.5	.18137	.001	1
S3	12.500	12.600	.100	.798	.49721	.001	1
S4	25.000	24.452	-.548	-2.19	.96406	.001	1
S5	50.000	49.883	-.117	-.235	1.9658	.007	1
S1	2.0000	1.9844	-.016	-.778	.07908	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



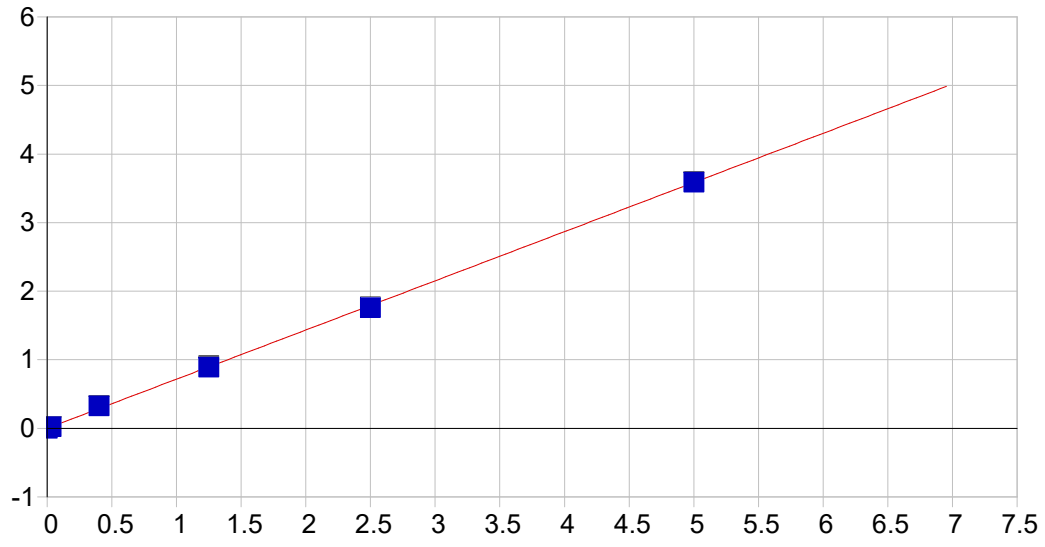
Cr 267.716 {126}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000117	Re-Slope:	1.000000
A1 (Gain):	0.152713	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999544	Status:	OK.
Std Error of Est:	0.000034		
Predicted MDL:	0.000364		
Predicted MQL:	0.001213		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00012	.000	1
S1	.01000	.00916	-.001	-8.36	.00152	.000	1
S3	.50000	.50848	.008	1.70	.07779	.000	1
S4	1.0000	.99365	-.006	-.635	.15191	.001	1
S5	2.0000	1.9774	-.023	-1.13	.30218	.000	1
S2	.16000	.18133	.021	13.3	.02782	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



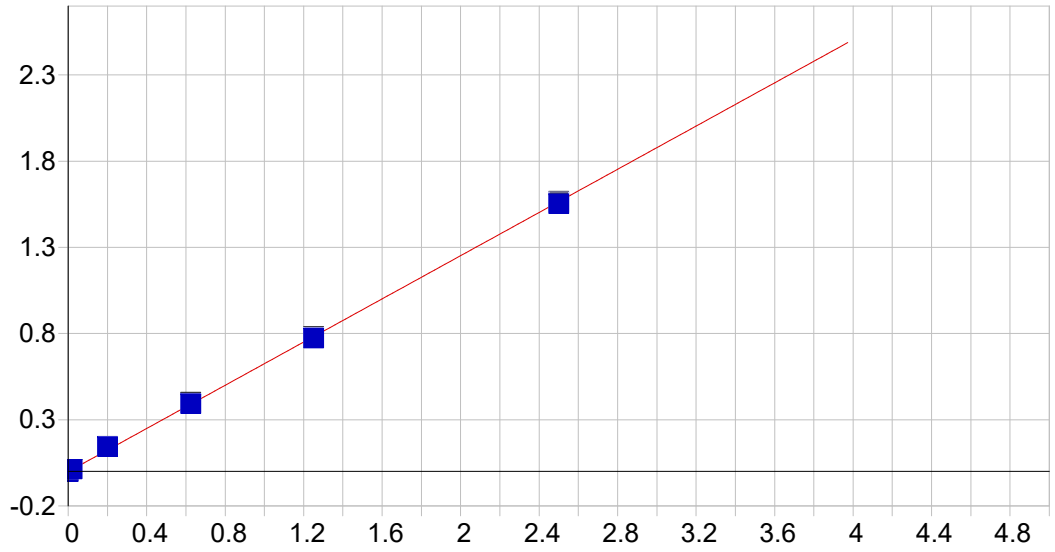
Co 228.616 {448}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000158	Re-Slope:	1.000000
A1 (Gain):	0.717042	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999594	Status:	OK.
Std Error of Est:	0.000416		
Predicted MDL:	0.000244		
Predicted MQL:	0.000813		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00016	.000	1
S1	.03000	.02933	-.001	-2.25	.02110	.000	1
S3	1.2500	1.2435	-.006	-.517	.89335	.015	1
S4	2.5000	2.4544	-.046	-1.82	1.7631	.005	1
S5	5.0000	5.0013	.001	.025	3.5924	.005	1
S2	.40000	.45143	.051	12.9	.32434	.001	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



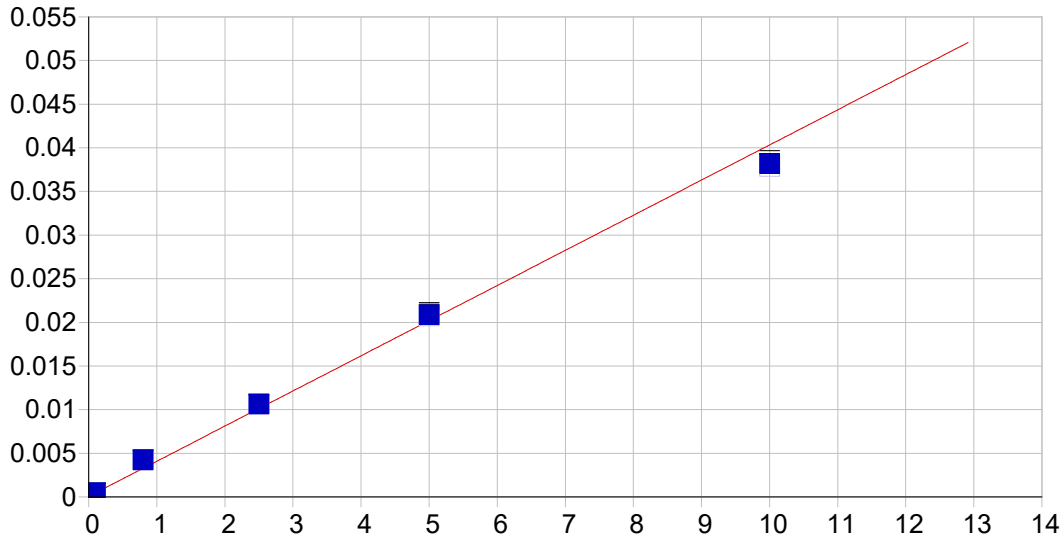
Cu 224.700 {450}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000487	Re-Slope:	1.000000
A1 (Gain):	0.626250	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999439	Status:	OK.
Std Error of Est:	0.000248		
Predicted MDL:	0.000401		
Predicted MQL:	0.001336		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00049	.000	1
S1	.02000	.02172	.002	8.59	.01324	.000	1
S3	.62500	.62843	.003	.549	.39584	.006	1
S4	1.2500	1.2350	-.015	-1.20	.77850	.004	1
S5	2.5000	2.4791	-.021	-.835	1.5632	.005	1
S2	.20000	.23069	.031	15.3	.14487	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



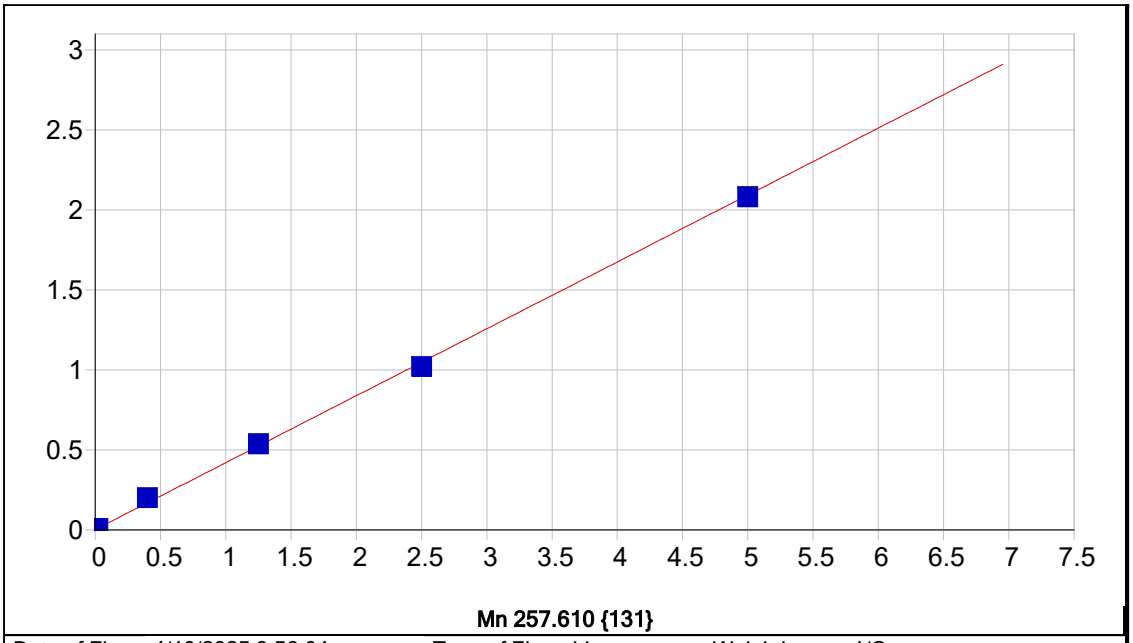
Fe 240.488 {140}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000059	Re-Slope:	1.000000
A1 (Gain):	0.004027	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.996956	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.004645		
Predicted MQL:	0.015485		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00004	-.000	.000	.00006	.000	1
S1	.10000	.10495	.005	4.95	.00048	.000	1
S3	2.5000	2.6244	.124	4.98	.01054	.000	1
S4	5.0000	5.1680	.168	3.36	.02070	.000	1
S5	10.000	9.4660	-.534	-5.34	.03784	.000	1
S2	.80000	1.0366	.237	29.6	.00421	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



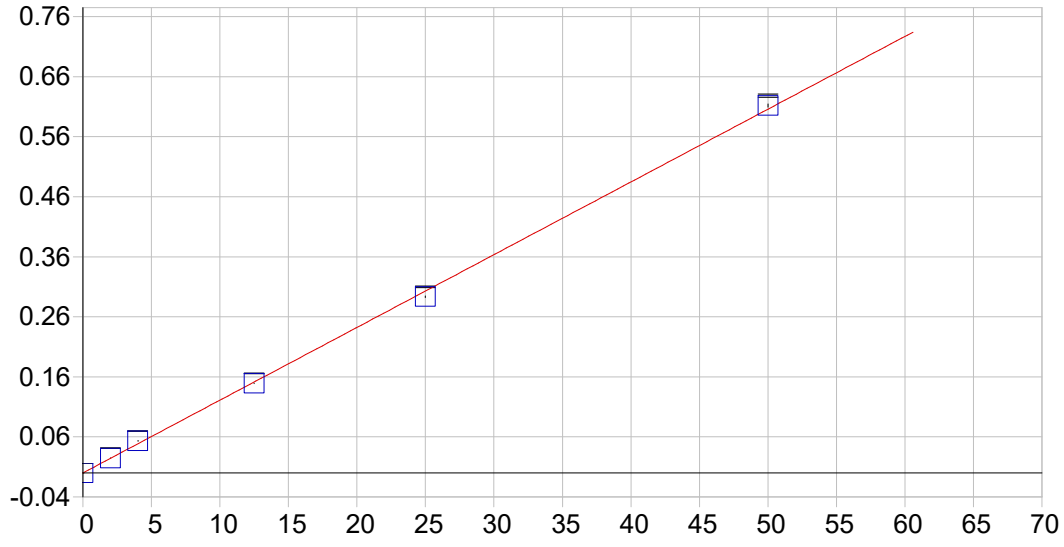
Mn 257.610 {131}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002233	Re-Slope:	1.000000
A1 (Gain):	0.418158	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999152	Status:	OK.
Std Error of Est:	0.000286		
Predicted MDL:	0.000362		
Predicted MQL:	0.001205		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00223	.000	1
S1	.02000	.01745	-.003	-12.8	.00953	.000	1
S3	1.2500	1.2784	.028	2.27	.53692	.002	1
S4	2.5000	2.4353	-.065	-2.59	1.0208	.001	1
S5	5.0000	4.9675	-.032	-.649	2.0799	.004	1
S2	.40000	.47131	.071	17.8	.19935	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



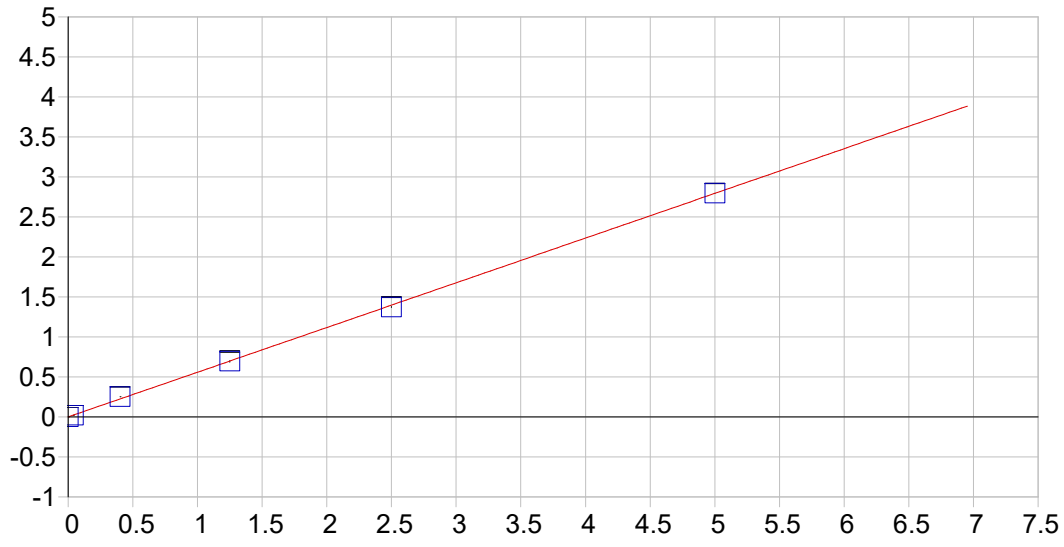
Mg 279.079 {121}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000081	Re-Slope:	1.000000
A1 (Gain):	0.012118	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999607	Status:	OK.
Std Error of Est:	0.000180		
Predicted MDL:	0.013807		
Predicted MQL:	0.046022		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00018	-.000	.000	-.00008	.000	1
S2	4.0000	4.4075	.408	10.2	.05333	.000	1
S3	12.500	12.329	-.171	-1.37	.14933	.001	1
S4	25.000	24.227	-.773	-3.09	.29351	.001	1
S5	50.000	50.494	.494	.989	.61184	.003	1
S1	2.0000	2.0421	.042	2.10	.02467	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



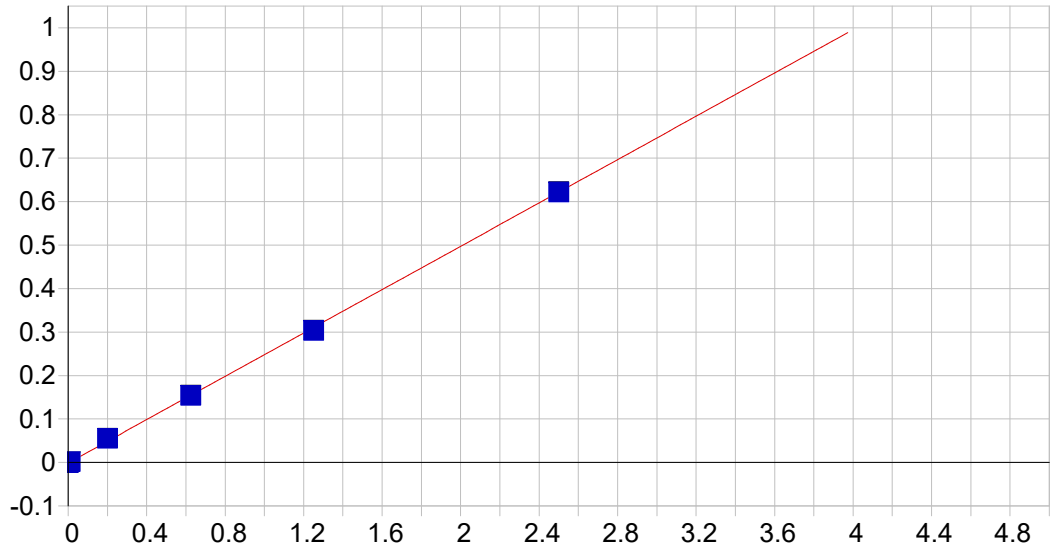
Ni 231.604 {446}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000032	Re-Slope:	1.000000
A1 (Gain):	0.558800	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999609	Status:	OK.
Std Error of Est:	0.000367		
Predicted MDL:	0.000292		
Predicted MQL:	0.000973		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00003	.000	1
S1	.04000	.03831	-.002	-4.23	.02138	.000	1
S3	1.2500	1.2423	-.008	-.613	.69418	.011	1
S4	2.5000	2.4573	-.043	-1.71	1.3731	.005	1
S5	5.0000	5.0016	.002	.032	2.7949	.002	1
S2	.40000	.45040	.050	12.6	.25165	.001	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



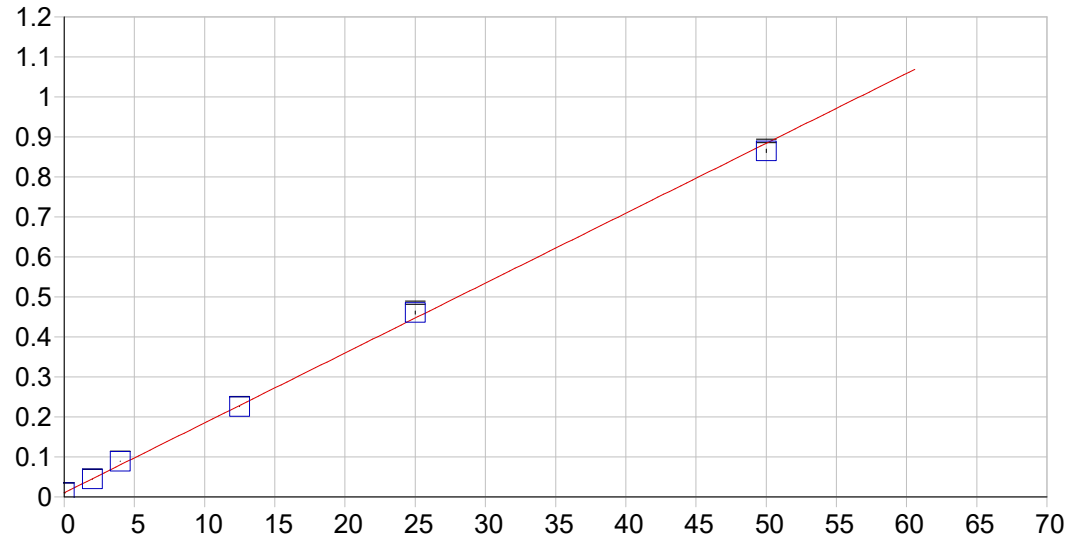
Ag 328.068 {103}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001208	Re-Slope:	1.000000
A1 (Gain):	0.249272	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999548	Status:	OK.
Std Error of Est:	0.000062		
Predicted MDL:	0.000321		
Predicted MQL:	0.001069		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00121	.000	1
S1	.01000	.00986	-.000	-1.38	.00123	.000	1
S3	.62500	.62398	-.001	-.163	.15371	.000	1
S4	1.2500	1.2233	-.027	-2.14	.30248	.000	1
S5	2.5000	2.5013	.001	.052	.61982	.000	1
S2	.20000	.22659	.027	13.3	.05508	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



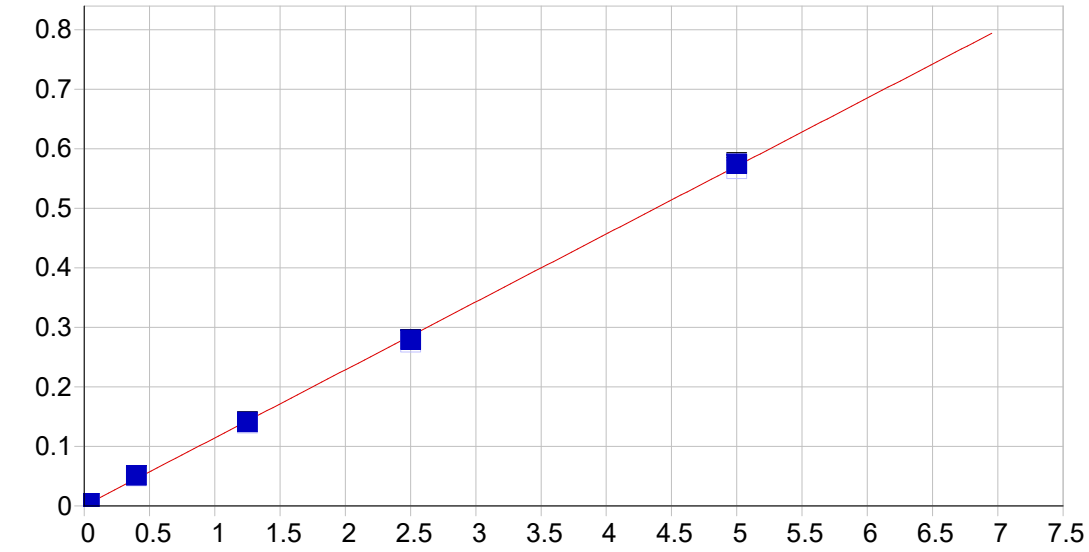
Na 589.592 { 57}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.010310	Re-Slope:	1.000000
A1 (Gain):	0.017473	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999376	Status:	OK.
Std Error of Est:	0.000327		
Predicted MDL:	0.009079		
Predicted MQL:	0.030263		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00020	-.000	.000	.01031	.000	1
S2	4.0000	4.5122	.512	12.8	.08915	.000	1
S3	12.500	12.336	-.164	-1.31	.22585	.001	1
S4	25.000	25.781	.781	3.13	.46080	.004	1
S5	50.000	48.915	-1.08	-2.17	.86502	.004	1
S1	2.0000	1.9555	-.044	-2.22	.04448	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



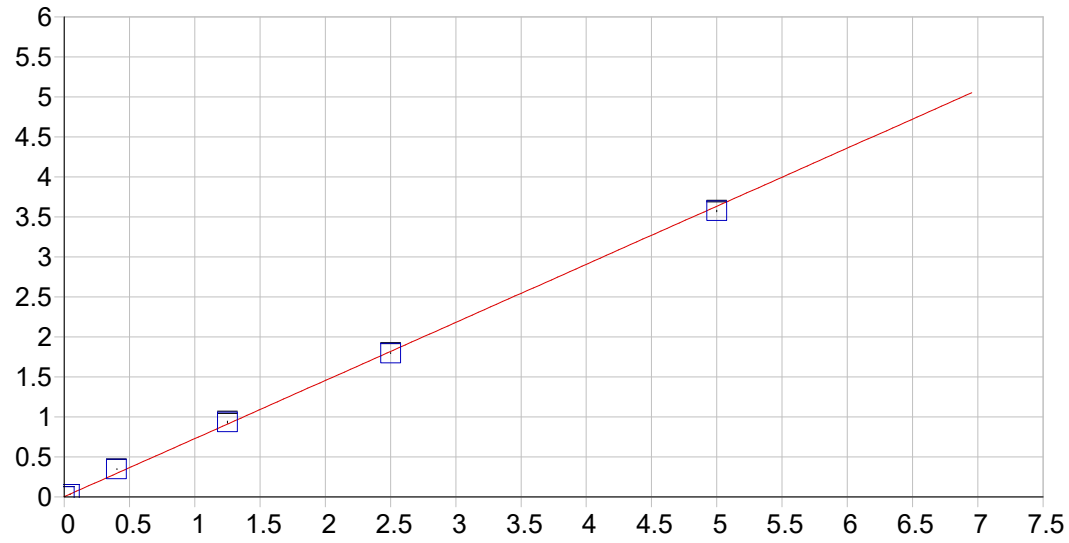
V 292.402 {115}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000119	Re-Slope:	1.000000
A1 (Gain):	0.114220	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999620	Status:	OK.
Std Error of Est:	0.000073		
Predicted MDL:	0.001610		
Predicted MQL:	0.005365		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00012	.000	1
S1	.04000	.03776	-.002	-5.60	.00426	.000	1
S3	1.2500	1.2341	-.016	-1.27	.13899	.000	1
S4	2.5000	2.4421	-.058	-2.32	.27489	.001	1
S5	5.0000	5.0317	.032	.634	.56651	.002	1
S2	.40000	.44434	.044	11.1	.05021	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



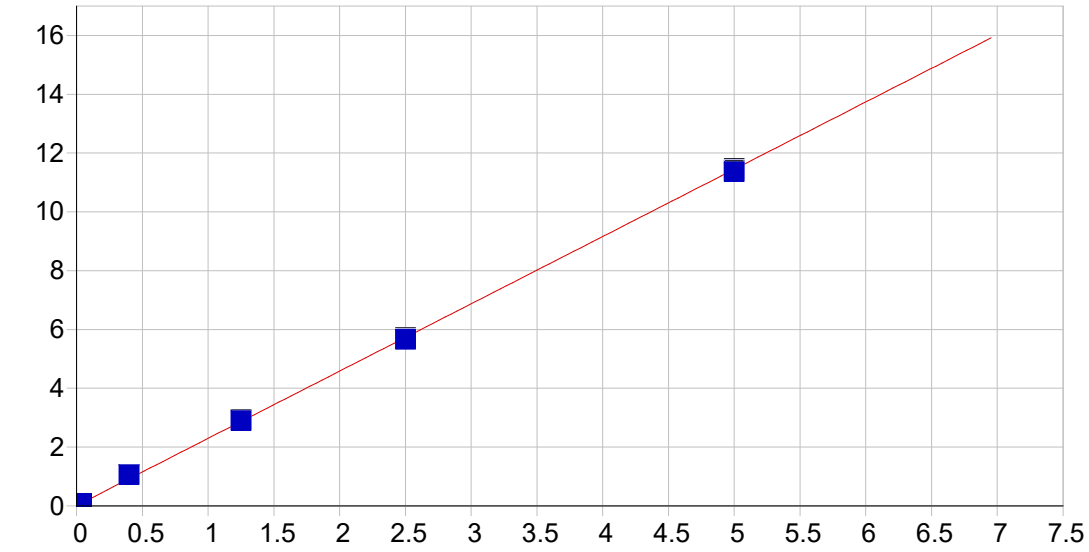
Zn 206.200 {464}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002532	Re-Slope:	1.000000
A1 (Gain):	0.726208	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999095	Status:	OK.
Std Error of Est:	0.000726		
Predicted MDL:	0.000209		
Predicted MQL:	0.000697		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00253	.000	1
S1	.04000	.03988	-.000	-.296	.03149	.000	1
S3	1.2500	1.2842	.034	2.74	.93512	.014	1
S4	2.5000	2.4716	-.028	-1.13	1.7975	.006	1
S5	5.0000	4.9192	-.081	-1.62	3.5749	.011	1
S2	.40000	.47508	.075	18.8	.34754	.001	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



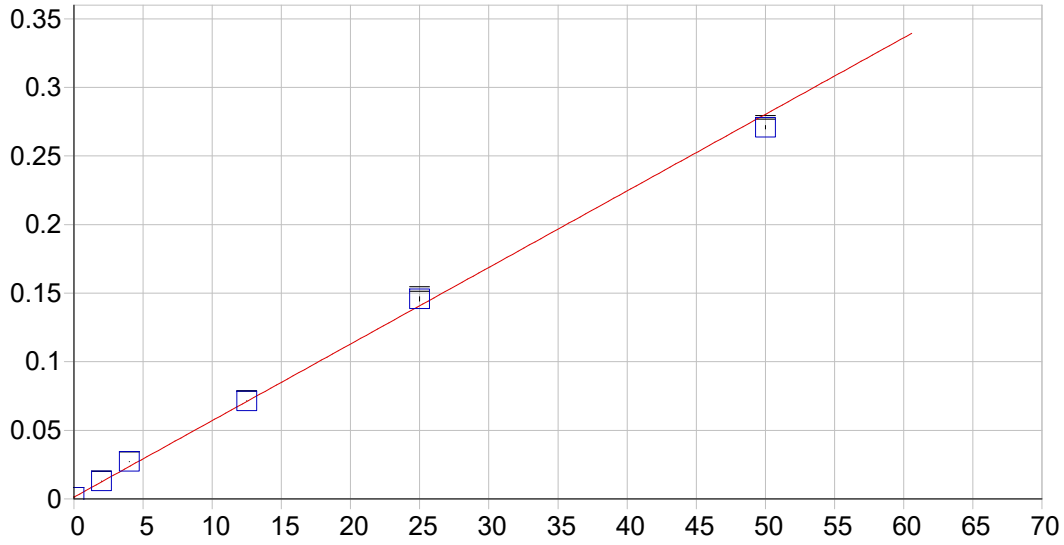
Zn 213.856 {158}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.009048	Re-Slope:	1.000000
A1 (Gain):	2.288293	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999482	Status:	OK.
Std Error of Est:	0.001742		
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	.00904	.000	1
S1	.04000	.03861	-.001	-3.48	.09803	.001	1
S3	1.2500	1.2627	.013	1.01	2.9183	.005	1
S4	2.5000	2.4688	-.031	-1.25	5.6981	.025	1
S5	5.0000	4.9607	-.039	-.787	11.440	.031	1
S2	.40000	.45930	.059	14.8	1.0664	.005	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



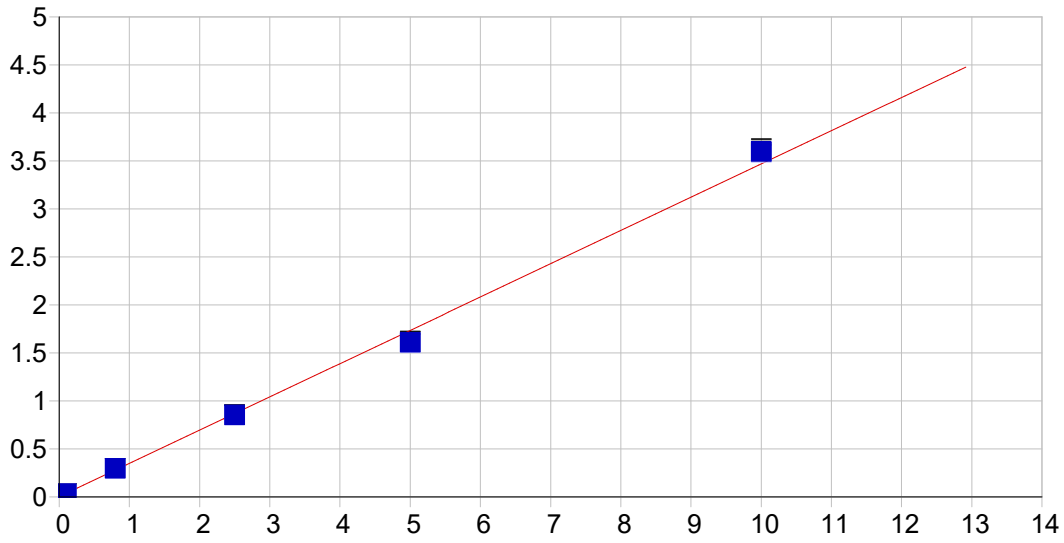
K 766.490 { 44}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001284	Re-Slope:	1.000000
A1 (Gain):	0.005582	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998951	Status:	OK.
Std Error of Est:	0.000135		
Predicted MDL:	0.029798		
Predicted MQL:	0.099327		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00043	-.000	.000	.00128	.000	1
S2	4.0000	4.6400	.640	16.0	.02718	.000	1
S3	12.500	12.574	.074	.596	.07147	.000	1
S4	25.000	25.888	.888	3.55	.14579	.002	1
S5	50.000	48.305	-1.70	-3.39	.27092	.001	1
S1	2.0000	2.0929	.093	4.65	.01297	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



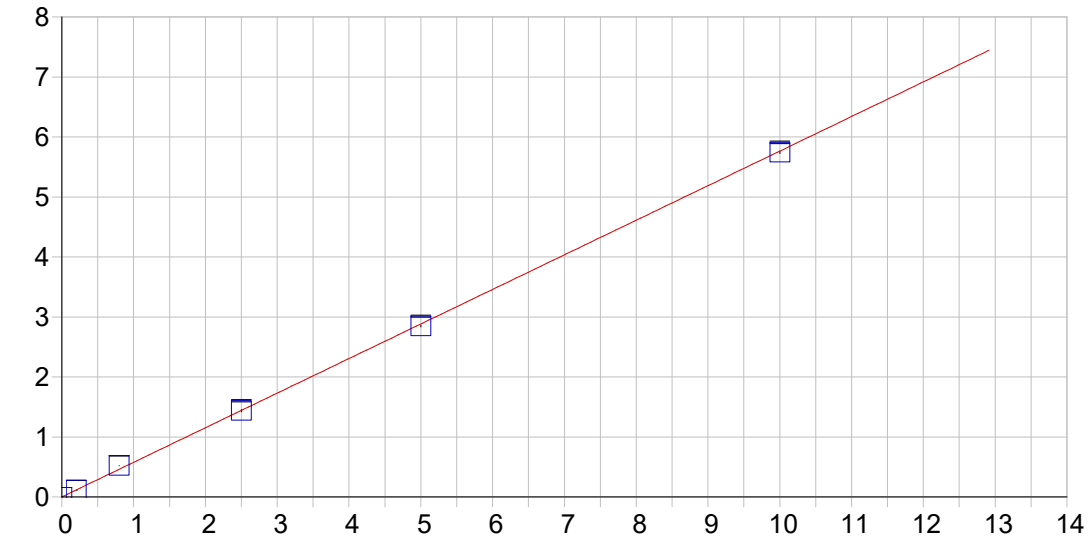
B 249.678 {135}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003492	Re-Slope:	1.000000
A1 (Gain):	0.346429	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998761	Status:	OK.
Std Error of Est:	0.000904		
Predicted MDL:	0.000649		
Predicted MQL:	0.002163		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00350	.000	1
S1	.10000	.09020	-.010	-9.80	.03456	.000	1
S3	2.5000	2.4516	-.048	-1.94	.85023	.002	1
S4	5.0000	4.6352	-.365	-7.30	1.6041	.013	1
S5	10.000	10.376	.376	3.76	3.5879	.029	1
S2	.80000	.84688	.047	5.86	.29606	.001	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



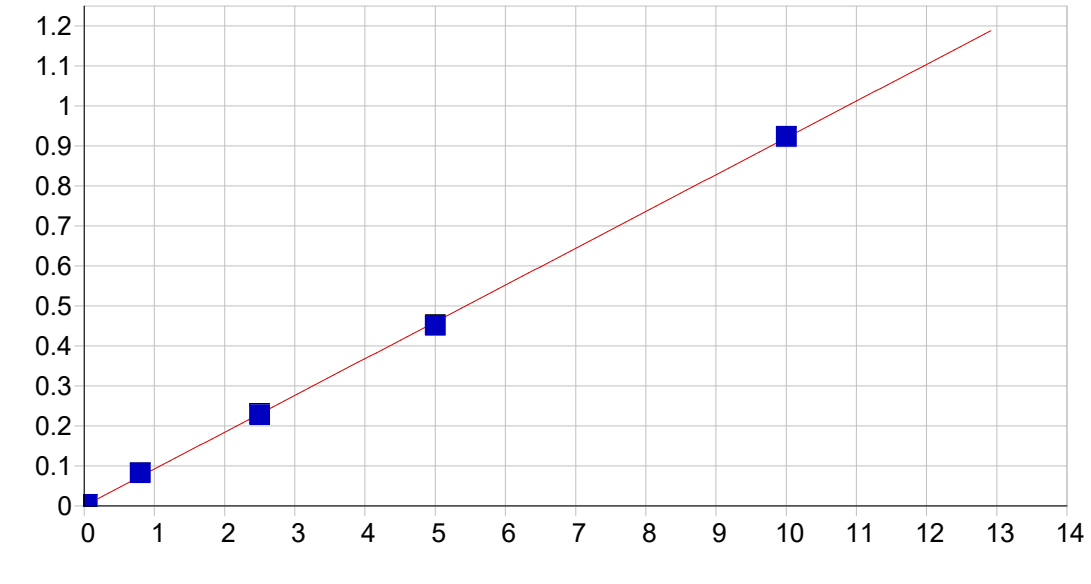
Mo 202.030 {467}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000418	Re-Slope:	1.000000
A1 (Gain):	0.576342	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999624	Status:	OK.
Std Error of Est:	0.001177		
Predicted MDL:	0.000275		
Predicted MQL:	0.000917		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00041	.000	1
S1	.20000	.19684	-.003	-1.58	.11387	.000	1
S3	2.5000	2.4948	-.005	-.210	1.4383	.019	1
S4	5.0000	4.9403	-.060	-1.19	2.8477	.016	1
S5	10.000	9.9661	-.034	-.339	5.7443	.019	1
S2	.80000	.90208	.102	12.8	.52033	.001	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



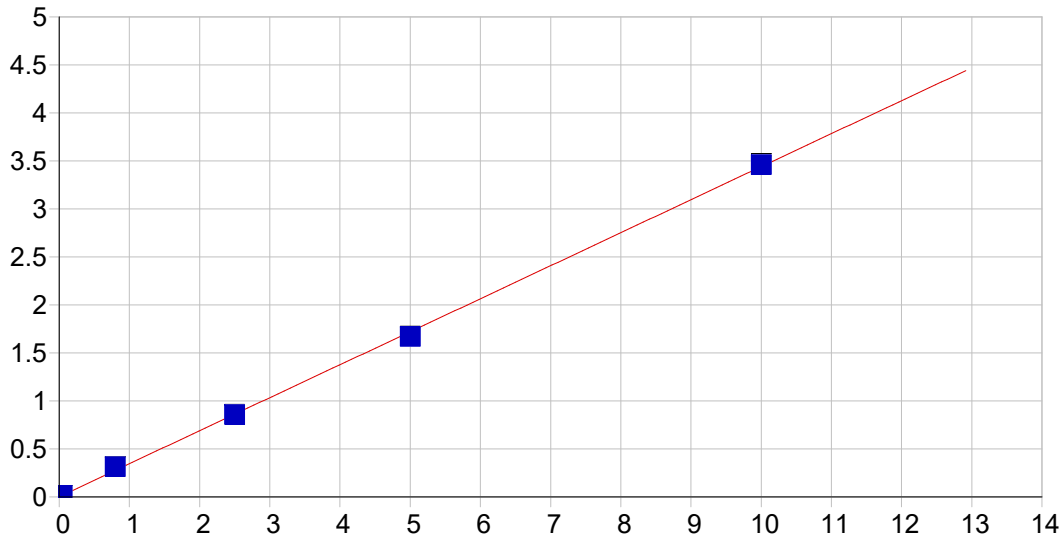
Sn 189.989 {478}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000155	Re-Slope:	1.000000
A1 (Gain):	0.092005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999646	Status:	OK.
Std Error of Est:	0.000081		
Predicted MDL:	0.000825		
Predicted MQL:	0.002751		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00015	.000	1
S1	.04000	.03729	-.003	-6.78	.00358	.000	1
S3	2.5000	2.4746	-.025	-1.02	.22759	.003	1
S4	5.0000	4.9034	-.097	-1.93	.45082	.002	1
S5	10.000	10.033	.033	.329	.92229	.001	1
S2	.80000	.89184	.092	11.5	.08213	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



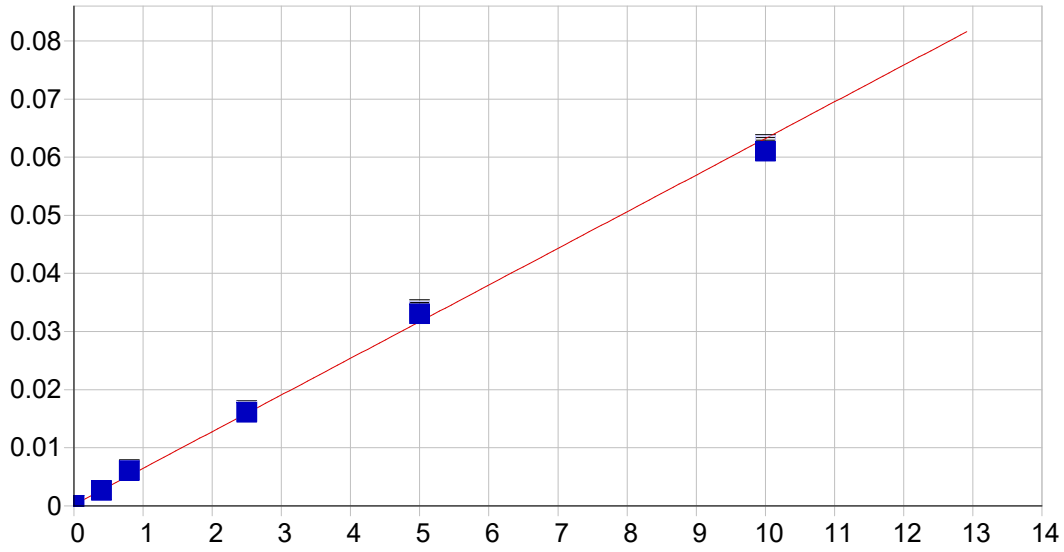
Ti 336.121 {100}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001960	Re-Slope:	1.000000
A1 (Gain):	0.343757	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999506	Status:	OK.
Std Error of Est:	0.000358		
Predicted MDL:	0.000737		
Predicted MQL:	0.002455		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00196	.000	1
S1	.04000	.03932	-.001	-1.69	.01547	.000	1
S3	2.5000	2.4841	-.016	-.636	.85557	.004	1
S4	5.0000	4.8531	-.147	-2.94	1.6696	.004	1
S5	10.000	10.060	.060	.603	3.4590	.012	1
S2	.80000	.90320	.103	12.9	.31234	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



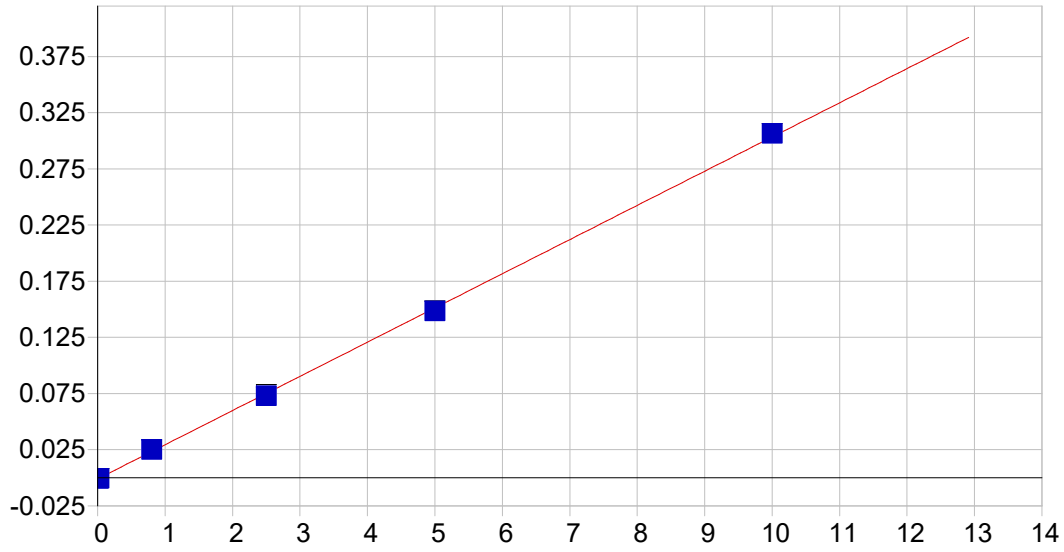
Si 288.158 {117}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000174	Re-Slope:	1.000000
A1 (Gain):	0.006305	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998860	Status:	OK.
Std Error of Est:	0.000032		
Predicted MDL:	0.006021		
Predicted MQL:	0.020071		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00006	-.000	.000	.00017	.000	1
S1	.40000	.38827	-.012	-2.93	.00263	.000	1
S3	2.5000	2.5237	.024	.950	.01632	.000	1
S4	5.0000	5.2094	.209	4.19	.03349	.000	1
S5	10.000	9.6457	-.354	-3.54	.06194	.000	1
S2	.80000	.93281	.133	16.6	.00613	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



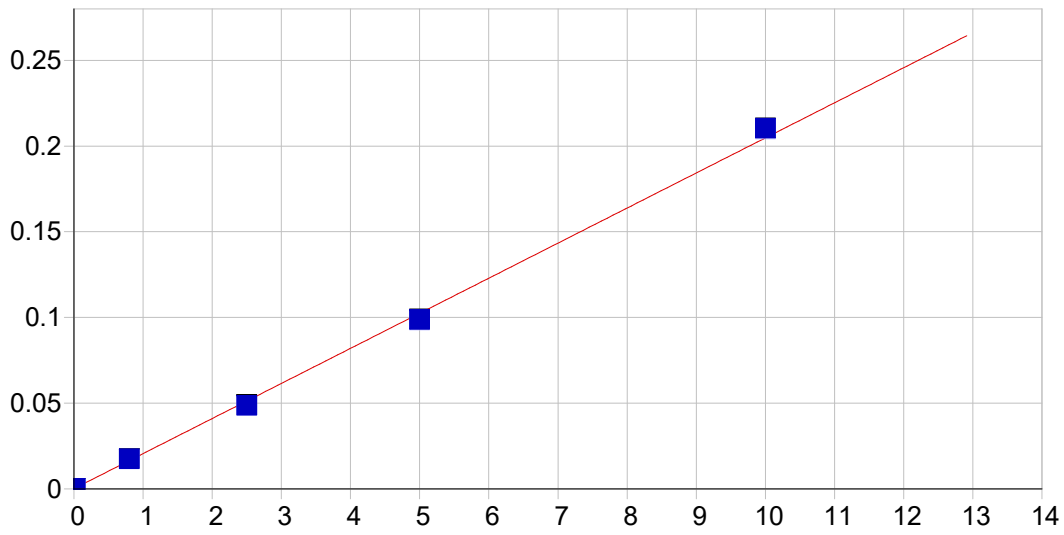
P 177.495 {490}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000995	Re-Slope:	1.000000
A1 (Gain):	0.030444	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999753	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.002719		
Predicted MQL:	0.009064		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00099	.000	1
S1	.02000	.01639	-.004	-18.1	-.00050	.000	1
S3	2.5000	2.4316	-.068	-2.74	.07302	.001	1
S4	5.0000	4.9111	-.089	-1.78	.14849	.000	1
S5	10.000	10.106	.106	1.06	.30661	.000	1
S2	.80000	.85527	.055	6.91	.02504	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



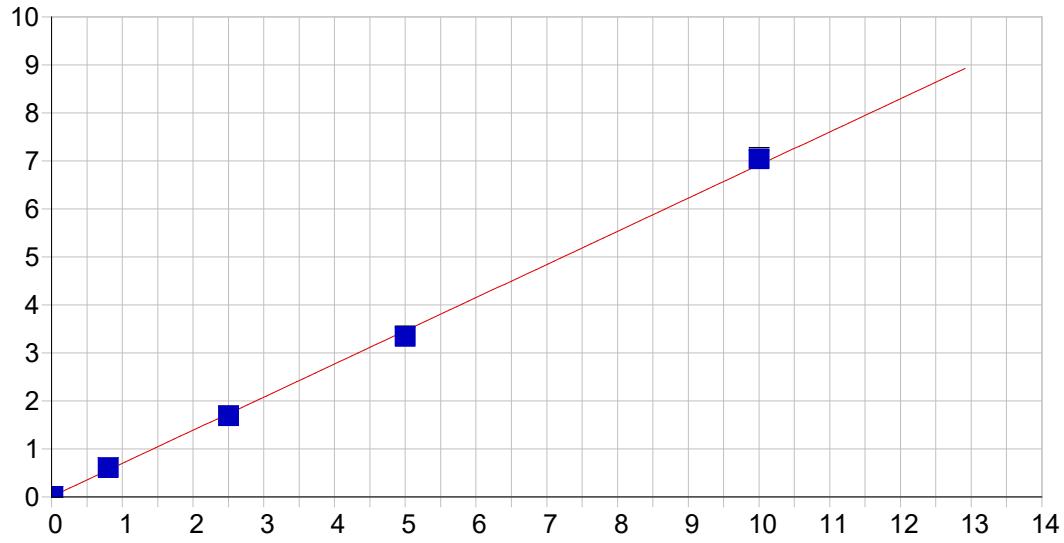
S 182.034 {485}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000159	Re-Slope:	1.000000
A1 (Gain):	0.020461	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999331	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	0.003508		
Predicted MQL:	0.011693		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00016	.000	1
S1	.02000	.01559	-.004	-22.0	.00046	.000	1
S3	2.5000	2.3725	-.127	-5.10	.04857	.001	1
S4	5.0000	4.8138	-.186	-3.72	.09839	.000	1
S5	10.000	10.272	.272	2.72	.20981	.000	1
S2	.80000	.84541	.045	5.68	.01741	.000	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



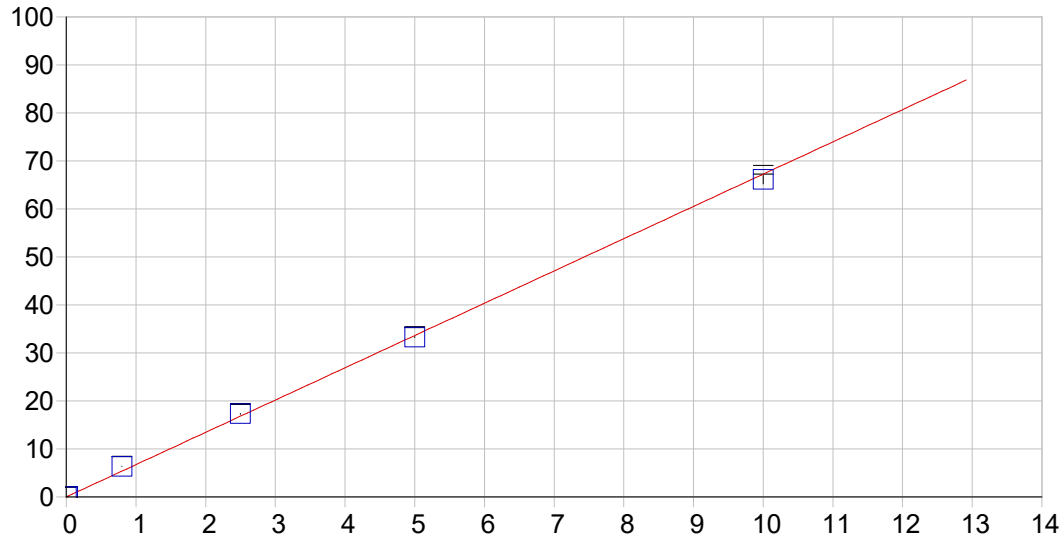
Li 670.784 { 50}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006780	Re-Slope:	1.000000
A1 (Gain):	0.690720	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999491	Status:	OK.
Std Error of Est:	0.000517		
Predicted MDL:	0.001116		
Predicted MQL:	0.003721		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00678	.000	1
S5	10.000	10.178	.178	1.78	7.0402	.031	1
S4	5.0000	4.8237	-.176	-3.53	3.3403	.011	1
S3	2.5000	2.4296	-.070	-2.81	1.6858	.008	1
S1	.02000	.01624	-.004	-18.8	.01822	.000	1
S2	.80000	.87280	.073	9.10	.60992	.003	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



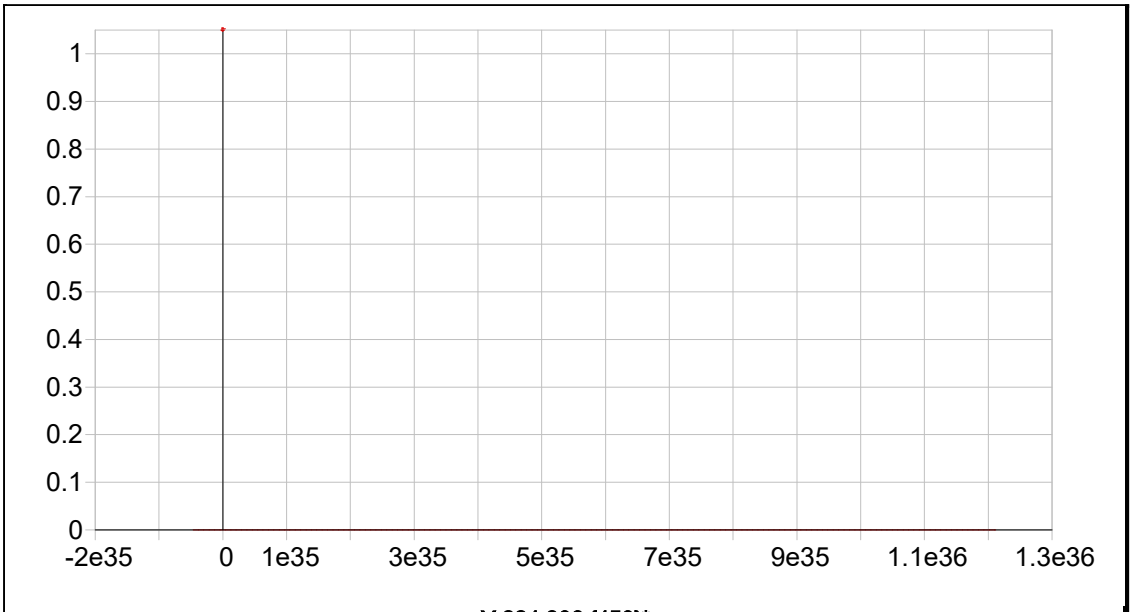
Sr 407.771 { 83}

Date of Fit:	4/10/2025 9:56:04	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002523	Re-Slope:	1.000000
A1 (Gain):	6.724150	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999142	Status:	OK.
Std Error of Est:	0.006531		
Predicted MDL:	0.000074		
Predicted MQL:	0.000248		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00250	.000	1
S1	.02000	.02000	.000	.024	.13704	.001	1
S3	2.5000	2.5743	.074	2.97	17.312	.112	1
S4	5.0000	4.9488	-.051	-1.02	33.279	.113	1
S5	10.000	9.8328	-.167	-1.67	66.120	.890	1
S2	.80000	.94410	.144	18.0	6.3508	.016	1

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

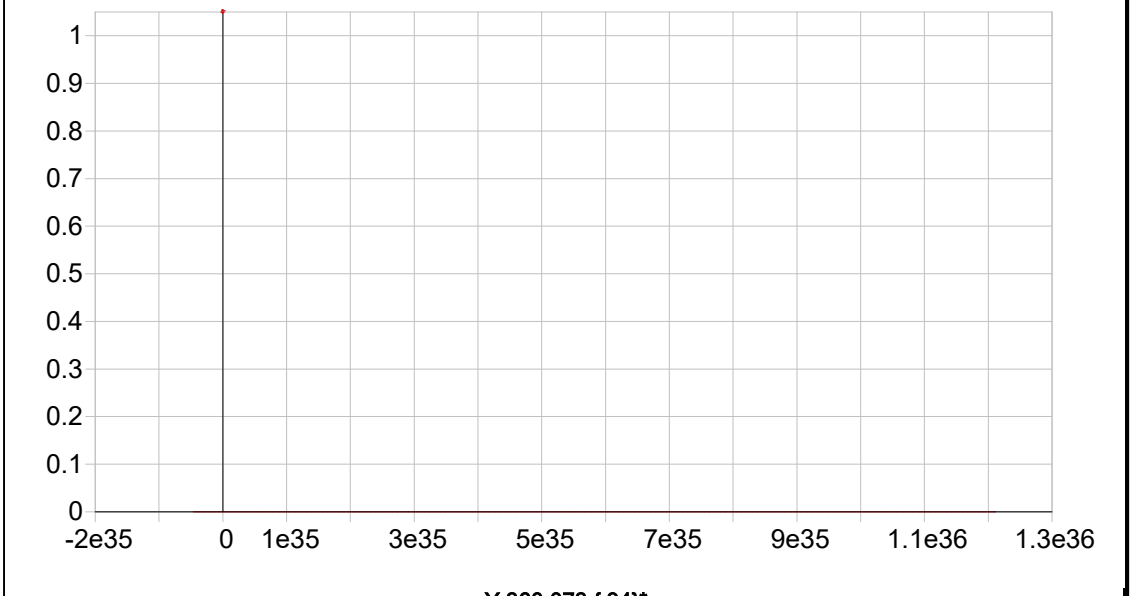


Y 224.306 {450}*

Date of Fit:	4/9/2025 13:12:50	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}*

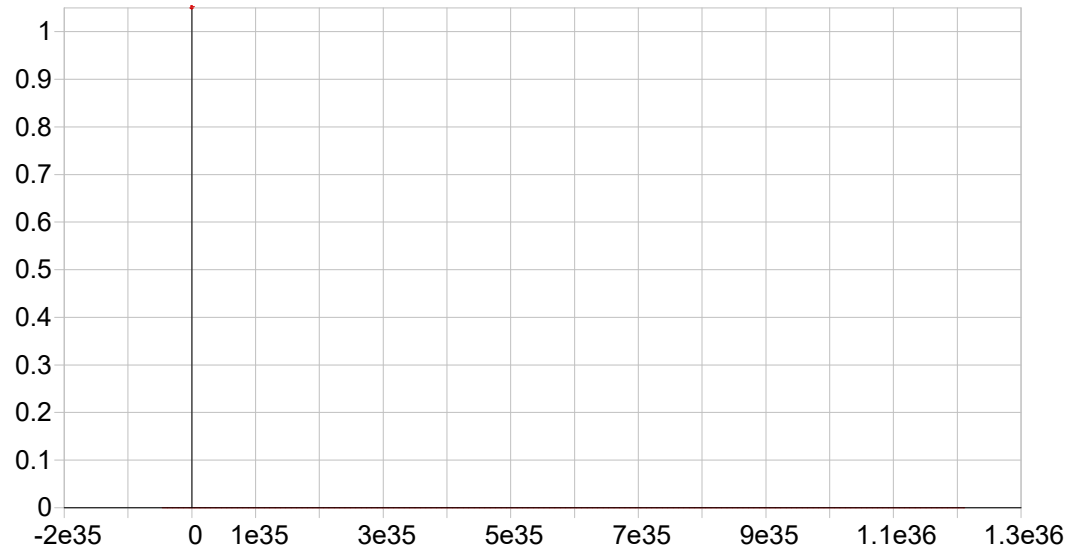
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

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



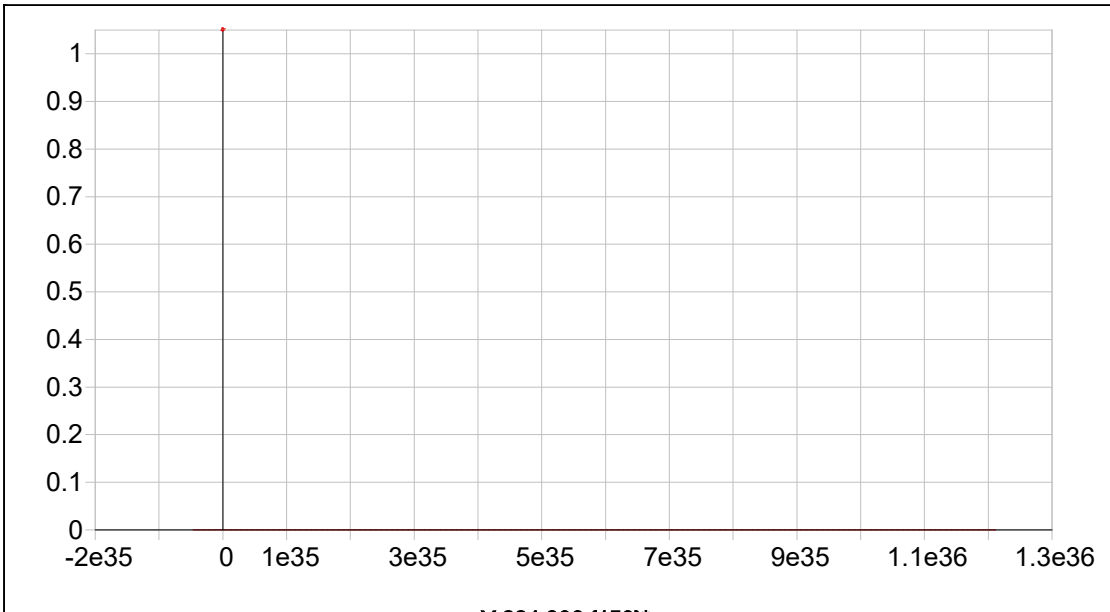
Y 371.030 { 91}*

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

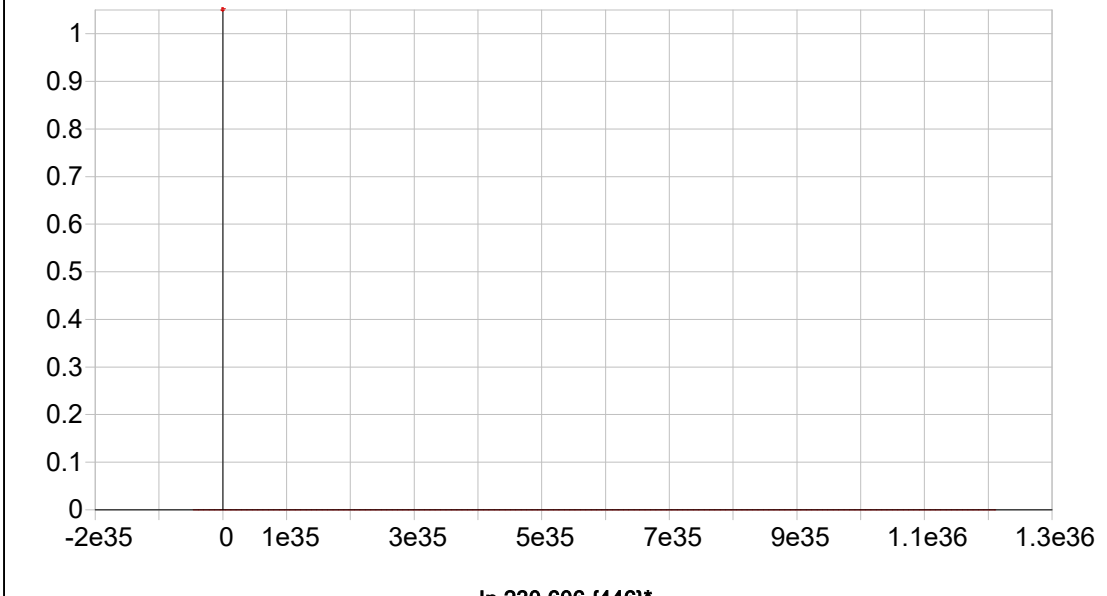
Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373



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:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

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:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: S0 Acquired: 4/10/2025 9:30:36 Type: Cal
Method: NON EPA-6010-200.7(v2904) 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	-.00008	.00001	-.00001	.00034	.00028	.00059	.03095	-.00025
Stddev	.00004	.00005	.00009	.00005	.00007	.00007	.00128	.00010
%RSD	43.657	596.22	1278.3	15.433	23.545	11.280	4.1268	41.086
#1	-.00010	-.00002	-.00001	.00028	.00036	.00064	.02973	-.00019
#2	-.00004	-.00002	.00009	.00036	.00024	.00061	.03083	-.00037
#3	-.00010	.00007	-.00010	.00038	.00025	.00051	.03228	-.00020

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	.00020	.00090	.00012	.00016	-.00049	.00006	.00223	-.00008
Stddev	.00014	.00006	.00002	.00020	.00025	.00001	.00015	.00013
%RSD	68.807	7.1574	17.321	130.17	51.990	14.656	6.7921	154.98
#1	.00017	.00097	.00009	.00034	-.00065	.00005	.00206	-.00002
#2	.00008	.00084	.00012	.00019	-.00020	.00006	.00234	.00000
#3	.00036	.00091	.00013	-.00006	-.00063	.00006	.00230	-.00023

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	-.00003	-.00121	.01031	.00012	.00904	.00128	.00350	.00041
Stddev	.00025	.00002	.00012	.00006	.00048	.00010	.00010	.00006
%RSD	737.24	1.7633	1.1785	54.198	5.2713	7.9551	2.9083	13.945
#1	.00011	-.00120	.01020	.00005	.00879	.00135	.00344	.00035
#2	.00011	-.00123	.01028	.00015	.00874	.00117	.00361	.00047
#3	-.00032	-.00119	.01044	.00017	.00959	.00133	.00343	.00040

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	.00015	.00196	.00017	-.00099	.00016	.00678	.00250
Stddev	.00002	.00006	.00000	.00008	.00007	.00046	.00043
%RSD	15.893	3.0035	2.1007	7.7949	41.798	6.8227	17.322
#1	.00014	.00189	.00018	-.00108	.00009	.00655	.00200
#2	.00015	.00198	.00018	-.00097	.00022	.00731	.00269
#3	.00018	.00201	.00017	-.00093	.00016	.00648	.00280

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: S0 Acquired: 4/10/2025 9:30:36 Type: Cal
Method: NON EPA-6010-200.7(v2904) 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	3607.1	85561.	14797.	2562.3	5708.3
Stddev	5.7	276.	88.	11.9	13.3
%RSD	.15713	.32301	.59442	.46430	.23297
#1	3605.2	85252.	14897.	2551.2	5706.8
#2	3613.5	85783.	14761.	2574.9	5722.3
#3	3602.6	85648.	14733.	2560.9	5695.8

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: S1 Acquired: 4/10/2025 9:35:03 Type: Cal
Method: NON EPA-6010-200.7(v2904) 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	.00084	.00199	.00187	.00121	.00622	.01045	.22067	.02005
Stddev	.00008	.00009	.00015	.00005	.00012	.00053	.00206	.00019
%RSD	9.7510	4.3008	7.8994	4.4766	1.9436	5.0751	.93372	.94498
#1	.00084	.00195	.00180	.00124	.00623	.01101	.21837	.01983
#2	.00076	.00208	.00204	.00125	.00634	.00995	.22234	.02016
#3	.00093	.00192	.00177	.00115	.00610	.01040	.22131	.02017

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	.01174	.07908	.00152	.02110	.01324	.00048	.00953	.02467
Stddev	.00011	.00009	.00005	.00035	.00011	.00002	.00012	.00033
%RSD	.90715	.11128	3.0186	1.6521	.80489	4.5522	1.2247	1.3180
#1	.01163	.07903	.00156	.02082	.01335	.00047	.00948	.02450
#2	.01184	.07918	.00147	.02149	.01314	.00046	.00945	.02446
#3	.01175	.07902	.00153	.02098	.01321	.00050	.00967	.02504

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	.02138	.00123	.04448	.00426	.09803	.01297	.03456	.11387
Stddev	.00021	.00006	.00034	.00010	.00091	.00006	.00019	.00021
%RSD	.99578	5.2281	.77407	2.3512	.93206	.48558	.55395	.18013
#1	.02161	.00116	.04420	.00420	.09709	.01302	.03439	.11404
#2	.02120	.00128	.04437	.00421	.09810	.01298	.03451	.11364
#3	.02132	.00126	.04487	.00438	.09891	.01290	.03477	.11392

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	.00358	.01547	.00263	-.00050	.00046	.01822	.13704
Stddev	.00010	.00014	.00001	.00010	.00006	.00026	.00055
%RSD	2.9126	.88999	.43306	20.609	13.105	1.4539	.39871
#1	.00346	.01551	.00264	-.00059	.00043	.01819	.13656
#2	.00363	.01558	.00262	-.00050	.00053	.01797	.13692
#3	.00365	.01531	.00262	-.00039	.00043	.01850	.13763

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: S1 Acquired: 4/10/2025 9:35:03 Type: Cal
Method: NON EPA-6010-200.7(v2904) 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	3555.9	84282.	16067.	2504.5	5581.0
Stddev	4.3	265.	34.	6.5	10.3
%RSD	.12168	.31477	.21001	.25822	.18437
#1	3551.5	84491.	16078.	2505.1	5571.5
#2	3560.2	84371.	16094.	2510.7	5579.6
#3	3556.1	83983.	16029.	2497.8	5591.9

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: S2 Acquired: 4/10/2025 9:39:25 Type: Cal
Method: NON EPA-6010-200.7(v2904) 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	.03985	.04726	.15746	.04448	.10554	.17192	3.5608	.16096
Stddev	.00019	.00014	.00076	.00010	.00001	.00082	.0108	.00030
%RSD	.48816	.29438	.48037	.22640	.00513	.47714	.30287	.18691
#1	.03976	.04740	.15762	.04452	.10554	.17176	3.5497	.16075
#2	.03971	.04725	.15663	.04437	.10554	.17120	3.5613	.16131
#3	.04007	.04712	.15812	.04456	.10555	.17281	3.5713	.16083

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	.90412	.18137	.02782	.32434	.14487	.00421	.19935	.05333
Stddev	.00274	.00092	.00010	.00068	.00026	.00005	.00029	.00020
%RSD	.30353	.50859	.35682	.20860	.18198	1.0867	.14620	.38351
#1	.90404	.18199	.02793	.32405	.14515	.00424	.19950	.05355
#2	.90141	.18181	.02779	.32385	.14463	.00415	.19901	.05329
#3	.90690	.18031	.02773	.32511	.14484	.00423	.19953	.05315

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	.25165	.05508	.08915	.05021	1.0664	.02718	.29606	.52033
Stddev	.00058	.00007	.00042	.00033	.0046	.00019	.00131	.00146
%RSD	.23224	.12633	.47304	.66367	.43331	.70813	.44246	.28049
#1	.25159	.05503	.08877	.04984	1.0611	.02713	.29618	.51998
#2	.25110	.05516	.08908	.05027	1.0690	.02703	.29730	.51907
#3	.25227	.05505	.08961	.05050	1.0692	.02740	.29469	.52193

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	.08213	.31234	.00613	.02504	.01741	.60992	6.3508
Stddev	.00012	.00030	.00008	.00015	.00009	.00295	.0159
%RSD	.15205	.09632	1.2842	.59365	.52151	.48439	.25093
#1	.08200	.31202	.00617	.02487	.01738	.60761	6.3343
#2	.08224	.31239	.00604	.02509	.01735	.60889	6.3521
#3	.08217	.31262	.00619	.02516	.01752	.61325	6.3661

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: S2 Acquired: 4/10/2025 9:39:25 Type: Cal
Method: NON EPA-6010-200.7(v2904) 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	3515.7	83404.	15468.	2487.6	5447.3
Stddev	2.0	39.	44.	9.5	4.1
%RSD	.05758	.04654	.28398	.38336	.07515
#1	3517.6	83407.	15457.	2498.6	5448.1
#2	3515.8	83441.	15431.	2481.3	5451.0
#3	3513.6	83363.	15517.	2483.0	5442.9

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: S3 Acquired: 4/10/2025 9:43:32 Type: Cal
Method: NON EPA-6010-200.7(v2904) 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	.11184	.13178	.43634	.12358	.29470	.47824	9.6327	.46431
Stddev	.00168	.00179	.00652	.00151	.00370	.00124	.0636	.00108
%RSD	1.5005	1.3584	1.4936	1.2251	1.2554	.25969	.66079	.23358
#1	.11262	.13226	.44116	.12440	.29714	.47709	9.6720	.46534
#2	.11299	.13328	.43892	.12451	.29653	.47956	9.6669	.46443
#3	.10992	.12980	.42892	.12184	.29045	.47808	9.5593	.46318

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	2.5009	.49721	.07779	.89335	.39584	.01054	.53692	.14933
Stddev	.0396	.00091	.00019	.01471	.00564	.00002	.00201	.00060
%RSD	1.5832	.18226	.24889	1.6469	1.4254	.18573	.37420	.40125
#1	2.5282	.49797	.07777	.90352	.39946	.01052	.53907	.14884
#2	2.5191	.49745	.07761	.90005	.39872	.01056	.53662	.15000
#3	2.4555	.49621	.07799	.87648	.38934	.01054	.53508	.14915

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	.69418	.15371	.22585	.13899	2.9183	.07147	.85023	1.4383
Stddev	.01065	.00031	.00055	.00033	.0053	.00008	.00239	.0187
%RSD	1.5338	.20176	.24530	.23486	.18187	.11083	.28110	1.3013
#1	.70093	.15386	.22549	.13937	2.9185	.07155	.85092	1.4488
#2	.69971	.15336	.22558	.13883	2.9129	.07140	.85220	1.4493
#3	.68191	.15392	.22649	.13878	2.9235	.07147	.84757	1.4166

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	.22759	.85557	.01632	.07302	.04857	1.6858	17.312
Stddev	.00320	.00365	.00007	.00111	.00065	.0083	.112
%RSD	1.4079	.42651	.40681	1.5250	1.3398	.49280	.64555
#1	.22967	.85841	.01635	.07373	.04906	1.6912	17.440
#2	.22920	.85685	.01625	.07360	.04882	1.6901	17.235
#3	.22390	.85146	.01637	.07174	.04783	1.6763	17.262

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: S3 Acquired: 4/10/2025 9:43:32 Type: Cal
Method: NON EPA-6010-200.7(v2904) 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	3452.4	81357.	14543.	2374.2	5288.7
Stddev	37.4	141.	58.	4.9	70.6
%RSD	1.0834	.17312	.39950	.20516	1.3345
#1	3430.8	81454.	14530.	2376.6	5243.3
#2	3430.8	81421.	14492.	2377.4	5252.8
#3	3495.6	81195.	14606.	2368.6	5370.0

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: S4 Acquired: 4/10/2025 9:47:39 Type: Cal
Method: NON EPA-6010-200.7(v2904) 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	.22570	.25877	.85805	.24845	.59713	.95348	18.521	.86906
Stddev	.00140	.00410	.00329	.00251	.00507	.00064	.176	.00570
%RSD	.62065	1.5835	.38320	1.0106	.84899	.06733	.95140	.65643
#1	.22470	.25423	.85506	.24700	.59279	.95371	18.404	.86316
#2	.22511	.25990	.85751	.24699	.59589	.95276	18.434	.86946
#3	.22731	.26219	.86157	.25135	.60270	.95399	18.723	.87455

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	4.9555	.96406	.15191	1.7631	.77850	.02070	1.0208	.29351
Stddev	.0127	.00139	.00056	.0055	.00402	.00024	.0012	.00144
%RSD	.25595	.14367	.37038	.31086	.51701	1.1667	.11462	.49198
#1	4.9450	.96324	.15229	1.7587	.77607	.02092	1.0203	.29305
#2	4.9518	.96329	.15216	1.7615	.77628	.02074	1.0221	.29236
#3	4.9696	.96566	.15126	1.7693	.78314	.02044	1.0199	.29513

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	1.3731	.30248	.46080	.27489	5.6981	.14579	1.6041	2.8477
Stddev	.0052	.00026	.00436	.00071	.0248	.00158	.0128	.0165
%RSD	.37508	.08580	.94625	.25764	.43525	1.0816	.79921	.57866
#1	1.3693	.30269	.46483	.27492	5.7156	.14703	1.5937	2.8350
#2	1.3711	.30219	.46140	.27558	5.6697	.14633	1.6003	2.8417
#3	1.3790	.30256	.45617	.27416	5.7090	.14401	1.6184	2.8663

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	.45082	1.6696	.03349	.14849	.09839	3.3403	33.279
Stddev	.00157	.0037	.00024	.00029	.00046	.0114	.113
%RSD	.34891	.22143	.71982	.19288	.46439	.33972	.33814
#1	.44929	1.6718	.03371	.14881	.09793	3.3445	33.402
#2	.45074	1.6718	.03353	.14825	.09839	3.3490	33.180
#3	.45244	1.6654	.03323	.14842	.09884	3.3275	33.256

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: S4 Acquired: 4/10/2025 9:47:39 Type: Cal
Method: NON EPA-6010-200.7(v2904) 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	3306.9	78896.	14744.	2234.4	5028.2
Stddev	13.2	292.	89.	18.1	14.0
%RSD	.39822	.37011	.60189	.80900	.27818
#1	3312.9	78560.	14812.	2216.8	5037.8
#2	3315.9	79088.	14777.	2252.9	5034.7
#3	3291.8	79040.	14644.	2233.5	5012.2

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: S5 Acquired: 4/10/2025 9:51:52 Type: Cal
Method: NON EPA-6010-200.7(v2904) 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	.46714	.52533	1.7473	.51352	1.2381	2.0163	37.609	1.9482
Stddev	.00232	.00337	.0017	.00185	.0043	.0069	.559	.0160
%RSD	.49718	.64063	.09441	.36079	.34447	.34146	1.4874	.82261
#1	.46491	.52322	1.7485	.51174	1.2334	2.0143	37.961	1.9419
#2	.46697	.52357	1.7455	.51340	1.2390	2.0107	36.964	1.9362
#3	.46955	.52921	1.7481	.51544	1.2418	2.0240	37.903	1.9664

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	10.069	1.9658	.30218	3.5924	1.5632	.03784	2.0799	.61184
Stddev	.013	.0069	.00046	.0054	.0052	.00036	.0045	.00260
%RSD	.12694	.35260	.15134	.14966	.33449	.94344	.21556	.42467
#1	10.059	1.9631	.30177	3.5877	1.5582	.03798	2.0756	.61061
#2	10.066	1.9606	.30209	3.5911	1.5627	.03810	2.0794	.61007
#3	10.084	1.9736	.30267	3.5983	1.5686	.03743	2.0846	.61482

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.7949	.61982	.86502	.56651	11.440	.27092	3.5879	5.7443
Stddev	.0019	.00023	.00431	.00235	.031	.00129	.0292	.0192
%RSD	.06653	.03694	.49817	.41521	.27096	.47460	.81367	.33445
#1	2.7929	.61972	.86514	.56542	11.468	.27129	3.5740	5.7271
#2	2.7952	.62008	.86926	.56491	11.445	.27198	3.5682	5.7408
#3	2.7966	.61966	.86065	.56921	11.407	.26949	3.6214	5.7650

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	.92229	3.4590	.06194	.30661	.20981	7.0402	66.120
Stddev	.00114	.0117	.00024	.00008	.00016	.0314	.890
%RSD	.12376	.33709	.39499	.02653	.07428	.44666	1.3456
#1	.92119	3.4507	.06172	.30654	.20963	7.0062	66.111
#2	.92223	3.4539	.06220	.30660	.20991	7.0460	65.234
#3	.92347	3.4723	.06189	.30670	.20989	7.0682	67.014

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: S5 Acquired: 4/10/2025 9:51:52 Type: Cal
Method: NON EPA-6010-200.7(v2904) 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	3154.6	76472.	12711.	2110.2	4716.3
Stddev	8.7	164.	91.	14.0	6.1
%RSD	.27709	.21496	.71619	.66293	.12907
#1	3158.5	76323.	12731.	2095.0	4714.3
#2	3160.7	76445.	12790.	2112.8	4723.1
#3	3144.6	76649.	12612.	2122.6	4711.4

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: ICV01 Acquired: 4/10/2025 10:09:48 Type: Unk
Method: NON EPA-6010-200.7(v2912) 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	.9847964	1.019649	.9512114	1.033103	1.001121	2.375501
Stddev	.0047460	.007811	.0010732	.002346	.004621	.003377
%RSD	.4819246	.7660296	.1128256	.2271288	.4615825	.1421711
#1	.9878783	1.027011	.9520886	1.033731	.996614	2.377885
#2	.9793310	1.011456	.9515309	1.030506	1.000900	2.371636
#3	.9871797	1.020480	.9500148	1.035071	1.005848	2.376981

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5338797	.4691498	.4833567	9.297973	.5051040	.4884050
Stddev	.0018043	.0041168	.0003990	.065655	.0008917	.0007329
%RSD	.3379688	.8774975	.0825426	.7061201	.1765283	.1500516
#1	.5359504	.4711668	.4835810	9.317367	.5042157	.4887981
#2	.5326445	.4718691	.4828961	9.351746	.5059989	.4875594
#3	.5330442	.4644135	.4835931	9.224805	.5050974	.4888574

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5174279	10.32463	.4684399	5.415083	.4965128	.2447265
Stddev	.0014056	.05193	.0027077	.047895	.0009300	.0001901
%RSD	.2716567	.5029553	.5780239	.8844792	.1872961	.0776879
#1	.5171348	10.36306	.4697477	5.404372	.4974297	.2446867
#2	.5161919	10.26556	.4702454	5.467427	.4955703	.2445595
#3	.5189570	10.34528	.4653265	5.373450	.4965383	.2449334

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.28948	.4599615	.9961496	10.21207	F 2.121679	2.537144
Stddev	.08953	.0014943	.0022210	.09392	.013049	.005776
%RSD	.8701484	.3248653	.2229582	.9196814	.6150274	.2276504
#1	10.25471	.4592230	.9944492	10.25095	2.128385	2.538298
#2	10.22256	.4616812	.9953371	10.10496	2.130011	2.530878
#3	10.39119	.4589803	.9986624	10.28031	2.106640	2.542255

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: ICV01 Acquired: 4/10/2025 10:09:48 Type: Unk
Method: NON EPA-6010-200.7(v2912) 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	2.418315	2.349501	2.287021	F -.002095	F -.005767	F -.000208
Stddev	.000735	.005332	.017971	.003038	.002073	.000056
%RSD	.0304061	.2269561	.7857740	145.0239	35.93502	27.19662
#1	2.419164	2.355211	2.279374	-.001950	-.003433	-.000211
#2	2.417894	2.348643	2.274138	-.005203	-.007390	-.000150
#3	2.417888	2.344650	2.307550	.000868	-.006479	-.000262

Elem	Sr4077
Units	ppm
Avg	F .0008624
Stddev	.0000528
%RSD	6.117569
#1	.0009140
#2	.0008646
#3	.0008086

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3254.728	79353.65	15998.69	2186.308	5193.165
Stddev	8.246	222.84	160.01	7.643	4.112
%RSD	.2533626	.2808236	1.000123	.3495909	.0791746
#1	3260.597	79498.30	15964.55	2193.934	5197.011
#2	3258.287	79097.02	15858.51	2178.648	5193.651
#3	3245.300	79465.62	16173.01	2186.341	5188.831

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: LLICV01 Acquired: 4/10/2025 10:25:11 Type: Unk
Method: NON EPA-6010-200.7(v2913) 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	.0184904	.0389366	.0099446	.0188900	.0516260	.0930976
Stddev	.0018667	.0022305	.0012299	.0013546	.0010309	.0003456
%RSD	10.09572	5.728501	12.36771	7.171141	1.996940	.3711755
#1	.0205714	.0368845	.0089252	.0173818	.0513406	.0928311
#2	.0169632	.0386149	.0113107	.0192851	.0507679	.0929737
#3	.0179366	.0413105	.0095980	.0200032	.0527696	.0934881

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0854958	.0053911	.0056180	1.876705	.0095638	.0280865
Stddev	.0016366	.0000491	.0000652	.014039	.0004715	.0002164
%RSD	1.914272	.9104253	1.160720	.7480741	4.930397	.7705543
#1	.0848134	.0053746	.0055648	1.861987	.0094683	.0280915
#2	.0843108	.0054463	.0056907	1.889949	.0091474	.0278676
#3	.0873632	.0053524	.0055984	1.878180	.0100758	.0283004

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0219428	.0898547	.0208059	1.985816	.0377380	.0104529
Stddev	.0003157	.0005536	.0000626	.007397	.0000856	.0003819
%RSD	1.438850	.6161360	.3010770	.3725131	.2267603	3.653711
#1	.0221156	.0899071	.0208070	1.981845	.0377782	.0103793
#2	.0221345	.0903802	.0208681	1.981252	.0376398	.0108662
#3	.0215784	.0892767	.0207428	1.994351	.0377961	.0101131

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.768319	.0370776	.0396118	1.811848	.0902454	.2015061
Stddev	.024139	.0007088	.0004690	.044708	.0005258	.0003166
%RSD	1.365073	1.911671	1.183963	2.467521	.5826223	.1571242
#1	1.744066	.0362871	.0400803	1.770086	.0908035	.2016965
#2	1.768548	.0372891	.0396126	1.806447	.0901734	.2016811
#3	1.792342	.0376565	.0391423	1.859010	.0897594	.2011406

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: LLICV01 Acquired: 4/10/2025 10:25:11 Type: Unk
Method: NON EPA-6010-200.7(v2913) 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	.0369692	.0375301	.3737665	F .0152760	F .0145998	F .0129575
Stddev	.0004871	.0002293	.0065892	.0022322	.0024314	.0004412
%RSD	1.317691	.6109222	1.762916	14.61222	16.65381	3.405270
#1	.0374071	.0376695	.3722608	.0166196	.0135341	.0134604
#2	.0364445	.0372654	.3680604	.0165092	.0128832	.0126351
#3	.0370560	.0376553	.3809782	.0126994	.0173821	.0127771

Elem	Sr4077
Units	ppm
Avg	.0184151
Stddev	.0001730
%RSD	.9394631
#1	.0182181
#2	.0185425
#3	.0184846

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3341.821	80677.71	15235.45	2223.767	5441.305
Stddev	5.153	142.40	58.04	15.141	11.769
%RSD	.1542116	.1765009	.3809822	.6808686	.2162946
#1	3342.452	80606.75	15205.99	2211.242	5446.248
#2	3346.630	80584.74	15198.04	2219.465	5449.796
#3	3336.382	80841.65	15302.32	2240.593	5427.870

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: ICB01 Acquired: 4/10/2025 10:29:06 Type: Unk
Method: NON EPA-6010-200.7(v2914) 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	.0023444	-.002181	.0003285	-.002833	-.001488	.0020287	-.006584
Stddev	.0025720	.000847	.0021986	.002555	.001271	.0050944	.000261
%RSD	109.7099	38.81805	669.3556	90.17971	85.39921	251.1106	3.960678
#1	.0027242	-.001208	-.000236	-.004638	-.001613	.0007673	-.006885
#2	.0047054	-.002747	.002754	.000090	-.002692	-.002316	-.006444
#3	-.000396	-.002587	-.001533	-.003951	-.000159	.007635	-.006423

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000483	-.000128	-.021864	-.000323	-.000148	-.000645	-.008063
Stddev	.0000048	.000048	.007371	.000205	.000090	.000109	.002020
%RSD	9.865557	37.28306	33.71412	63.51083	60.87803	16.95377	25.04997
#1	.0000451	-.000146	-.016837	-.000135	-.000222	-.000769	-.010156
#2	.0000537	-.000074	-.018429	-.000292	-.000048	-.000601	-.007907
#3	.0000460	-.000165	-.030325	-.000542	-.000175	-.000564	-.006126

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003694	-.013686	-.000330	.0004633	-.326535	-.001030	-.001953
Stddev	.000244	.006571	.000082	.0001728	.005051	.001075	.000173
%RSD	6.602614	48.01200	24.85797	37.30144	1.546996	104.3680	8.883562
#1	-.003604	-.016421	-.000424	.0004346	-.331004	-.001368	-.002147
#2	-.003971	-.006189	-.000272	.0006487	-.327546	-.001895	-.001812
#3	-.003509	-.018447	-.000294	.0003067	-.321054	.000173	-.001900

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.223564	-.004040	-.000380	-.000426	.0007967	.0016612	-.002484
Stddev	.043363	.000307	.000110	.000774	.0004520	.0025322	.003047
%RSD	19.39616	7.606741	29.05025	181.7721	56.72639	152.4306	122.6601
#1	-.248909	-.003835	-.000347	-.001122	.0003605	.0000217	-.000937
#2	-.248289	-.004393	-.000503	.000407	.0007668	.0003843	-.000521
#3	-.173494	-.003891	-.000289	-.000562	.0012629	.0045777	-.005994

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: ICB01 Acquired: 4/10/2025 10:29:06 Type: Unk
Method: NON EPA-6010-200.7(v2914) 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	-.002952	-.004167	-.000314
Stddev	.003332	.000866	.000022
%RSD	112.8679	20.78030	6.945146
#1	-.006329	-.004065	-.000291
#2	.000332	-.005079	-.000334
#3	-.002859	-.003356	-.000318

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3296.002	80208.50	15838.19	2186.623	5469.003
Stddev	18.596	138.32	50.28	14.089	22.266
%RSD	.5641905	.1724551	.3174460	.6443425	.4071342
#1	3315.381	80140.87	15809.03	2178.428	5484.271
#2	3294.322	80117.01	15896.25	2178.549	5479.285
#3	3278.304	80367.63	15809.30	2202.891	5443.454

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CRI01 Acquired: 4/10/2025 10:33:26 Type: Unk
Method: NON EPA-6010-200.7(v2914) 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	.0189466	.0382808	.0116484	.0181171	.0510466	.0979640
Stddev	.0012453	.0013718	.0015709	.0015899	.0006922	.0055266
%RSD	6.572870	3.583541	13.48594	8.775510	1.355974	5.641432
#1	.0192125	.0383837	.0134326	.0196765	.0504673	.1007109
#2	.0200375	.0368604	.0110392	.0181763	.0518131	.0916022
#3	.0175898	.0395982	.0104733	.0164984	.0508593	.1015789

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0853933	.0054804	.0055074	1.875683	.0094248	.0281712
Stddev	.0007861	.0000653	.0000546	.002097	.0001431	.0001478
%RSD	.9206149	1.191393	.9913209	.1118186	1.518797	.5247736
#1	.0845158	.0054816	.0054453	1.873370	.0094043	.0280005
#2	.0856311	.0055451	.0055478	1.877461	.0092930	.0282570
#3	.0860331	.0054146	.0055291	1.876217	.0095771	.0282561

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0218742	.1020287	.0150455	1.980487	.0380316	.0104005
Stddev	.0002102	.0033826	.0000834	.017401	.0002306	.0003714
%RSD	.9610499	3.315365	.5542660	.8786386	.6063956	3.570456
#1	.0220995	.1052382	.0150261	1.962763	.0380432	.0108115
#2	.0216833	.0984962	.0151369	1.997547	.0377953	.0100891
#3	.0218397	.1023518	.0149735	1.981150	.0382562	.0103010

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.482868	.0362631	.0396212	1.962017	.0796568	.2049427
Stddev	.015113	.0014121	.0005707	.021102	.0005979	.0007756
%RSD	1.019193	3.894146	1.440428	1.075537	.7506350	.3784517
#1	1.479261	.0364412	.0399403	1.951328	.0795600	.2047144
#2	1.499459	.0347703	.0389624	1.948399	.0791132	.2043069
#3	1.469885	.0375777	.0399611	1.986325	.0802973	.2058068

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CRI01 Acquired: 4/10/2025 10:33:26 Type: Unk
Method: NON EPA-6010-200.7(v2914) 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	.0369423	.0380093	.4123105	.0162972	F .0135227	F .0138047
Stddev	.0003063	.0002488	.0018227	.0010687	.0036051	.0012583
%RSD	.8290509	.6544525	.4420768	6.557779	26.65989	9.115079
#1	.0368005	.0381951	.4144097	.0159990	.0161046	.0144690
#2	.0367327	.0381061	.4113931	.0154093	.0094038	.0145916
#3	.0372938	.0377267	.4111287	.0174834	.0150597	.0123535

Elem	Sr4077
Units	ppm
Avg	.0184445
Stddev	.0000651
%RSD	.3527684
#1	.0185112
#2	.0183812
#3	.0184411

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3263.294	78963.48	16458.23	2128.477	5386.525
Stddev	3.359	171.12	51.72	16.968	11.417
%RSD	.1029279	.2167090	.3142392	.7971677	.2119640
#1	3266.536	78954.04	16439.12	2112.387	5399.421
#2	3263.517	79139.12	16516.79	2146.203	5382.448
#3	3259.830	78797.27	16418.79	2126.840	5377.706

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: ICSA01 Acquired: 4/10/2025 10:37:43 Type: Unk
Method: NON EPA-6010-200.7(v2914) 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	.0051604	.0097886	.0073188	-.008186	-.001857	243.1321
Stddev	.0048095	.0030885	.0042699	.002643	.000945	2.0946
%RSD	93.20013	31.55184	58.34157	32.28995	50.88828	.8615072
#1	.0081538	.0063931	.0116600	-.005459	-.001162	245.1201
#2	.0077147	.0124306	.0071722	-.010736	-.001475	243.3310
#3	-.000387	.0105420	.0031240	-.008362	-.002933	240.9451

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003920	.0011355	-.003529	226.5924	.0557962	.0015817
Stddev	.000218	.0000282	.000414	.5925	.0003210	.0001625
%RSD	5.557988	2.479728	11.72802	.2614981	.5753338	10.27173
#1	-.004120	.0011157	-.003940	227.1600	.0557783	.0015336
#2	-.003688	.0011678	-.003534	225.9777	.0554845	.0014486
#3	-.003952	.0011232	-.003112	226.6397	.0561258	.0017627

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004964	106.7488	.0007817	243.2609	.0024624	.0037469
Stddev	.000942	.3011	.0003742	1.0562	.0003191	.0003460
%RSD	18.98011	.2820594	47.87273	.4341708	12.95803	9.235376
#1	-.005891	106.4041	.0008696	244.1504	.0028118	.0035328
#2	-.004007	106.9603	.0003714	242.0936	.0021864	.0035618
#3	-.004993	106.8820	.0011041	243.5385	.0023891	.0041462

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.202208	.0022820	.0027389	-.132272	F .1588668	.0001123
Stddev	.013887	.0002332	.0008002	.008877	.0004550	.0007655
%RSD	6.867657	10.21699	29.21474	6.711504	.2863690	681.8243
#1	-.200474	.0020670	.0032287	-.123907	.1583670	.0001417
#2	-.216880	.0025298	.0018155	-.141586	.1592569	-.000668
#3	-.189269	.0022490	.0031725	-.131324	.1589764	.000863

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: ICSA01 Acquired: 4/10/2025 10:37:43 Type: Unk
Method: NON EPA-6010-200.7(v2914) 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	-.006603	-.000995	.0210512	.0031543	-.019185	.0028872
Stddev	.001610	.000503	.0062562	.0025035	.006570	.0002470
%RSD	24.38886	50.52344	29.71887	79.36629	34.24564	8.556177
#1	-.005177	-.001084	.0263995	.0003642	-.026771	.0030722
#2	-.006282	-.000454	.0141715	.0038945	-.015480	.0026067
#3	-.008350	-.001447	.0225826	.0052043	-.015304	.0029827

Elem	Sr4077
Units	ppm
Avg	F .0942149
Stddev	.0003424
%RSD	.3633902
#1	.0940448
#2	.0946090
#3	.0939908

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2936.492	69840.12	15452.96	1890.480	4370.437
Stddev	60.017	123.55	82.08	5.745	100.351
%RSD	2.043819	.1769027	.5311497	.3039011	2.296129
#1	3003.878	69733.92	15368.36	1888.281	4484.020
#2	2916.811	69975.72	15532.26	1886.160	4333.502
#3	2888.787	69810.73	15458.26	1897.000	4293.787

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: ICSAB01 Acquired: 4/10/2025 10:42:08 Type: Unk
Method: NON EPA-6010-200.7(v2914) 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	.1106279	.1031214	.0572577	.0367083	.6238266	236.4193
Stddev	.0033645	.0006792	.0012085	.0042399	.0037551	.3529
%RSD	3.041248	.6586312	2.110581	11.55018	.6019419	.1492762
#1	.1125869	.1023904	.0563584	.0406746	.6196550	236.7753
#2	.1067430	.1037329	.0567833	.0322396	.6248883	236.4131
#3	.1125538	.1032410	.0586314	.0372107	.6269366	236.0695

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4585892	.5250418	.9806628	218.5021	.5526211	.4982671
Stddev	.0016646	.0024306	.0035584	.3997	.0001667	.0021862
%RSD	.3629897	.4629250	.3628613	.1829224	.0301711	.4387559
#1	.4605097	.5231564	.9797441	218.1700	.5524412	.4966958
#2	.4576968	.5241840	.9776537	218.3906	.5526517	.4973418
#3	.4575610	.5277849	.9845905	218.9457	.5527705	.5007638

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4999114	93.58896	.4542800	236.8297	.9945172	.1863518
Stddev	.0037635	.24616	.0004319	.6055	.0044254	.0002822
%RSD	.7528386	.2630263	.0950816	.2556737	.4449838	.1514097
#1	.4992693	93.82835	.4547136	236.2093	.9933999	.1866765
#2	.4965102	93.60200	.4538498	236.8604	.9907575	.1862126
#3	.5039546	93.33654	.4542767	237.4192	.9993942	.1861664

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.267477	.4598223	1.057743	-.182971	1.112347	1.114809
Stddev	.008541	.0008684	.001567	.013275	.002648	.005917
%RSD	3.193094	.1888495	.1481360	7.255406	.2380252	.5307857
#1	-.270782	.4606504	1.057447	-.188932	1.110014	1.112558
#2	-.273871	.4598979	1.056346	-.192221	1.111801	1.110348
#3	-.257778	.4589186	1.059438	-.167760	1.115225	1.121522

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: ICSAB01 Acquired: 4/10/2025 10:42:08 Type: Unk
Method: NON EPA-6010-200.7(v2914) 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	1.086012	1.016554	1.019846	F .0015509	F -.018050	F -.001974
Stddev	.006011	.002782	.013991	.0037946	.007071	.000624
%RSD	.5534742	.2736699	1.371900	244.6678	39.17640	31.60719
#1	1.084111	1.017752	1.026354	.0054609	-.014180	-.001283
#2	1.081181	1.013374	1.029399	-.002117	-.026212	-.002144
#3	1.092743	1.018536	1.003787	.001308	-.013758	-.002496

Elem	Sr4077
Units	ppm
Avg	F .0888286
Stddev	.0004788
%RSD	.5389862
#1	.0893021
#2	.0883447
#3	.0888390

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2905.696	70768.28	13928.77	1922.314	4323.602
Stddev	13.014	157.13	51.86	3.692	15.488
%RSD	.4478938	.2220341	.3723176	.1920740	.3582168
#1	2909.187	70738.20	13976.50	1922.440	4326.614
#2	2916.608	70628.37	13936.23	1918.560	4337.363
#3	2891.291	70938.27	13873.59	1925.942	4306.830

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: ICSADLX20 Acquired: 4/10/2025 10:46:11 Type: Unk
Method: NON EPA-6010-200.7(v2914) 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	.0006107	-.000139	-.000194	-.001039	-.001510	11.88961	-.006586
Stddev	.0009340	.001283	.001780	.001189	.001324	.02664	.000788
%RSD	152.9405	922.5020	917.9732	114.4662	87.68466	.2240256	11.96525
#1	.0009901	-.000719	.001845	-.000859	-.000480	11.90992	-.006080
#2	.0012952	-.001029	-.001436	-.002307	-.003004	11.85946	-.006185
#3	-.000453	.001331	-.000990	.000050	-.001047	11.89947	-.007494

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002394	-.000110	11.71483	.0024757	-.000075	-.000170	5.259396
Stddev	.0000455	.000061	.01032	.0004737	.000205	.000424	.025790
%RSD	19.01101	55.94321	.0881194	19.13587	272.4976	249.3706	.4903627
#1	.0002258	-.000175	11.70614	.0019438	-.000219	-.000083	5.277133
#2	.0002022	-.000053	11.71213	.0028523	.000159	-.000632	5.271244
#3	.0002901	-.000102	11.72624	.0026310	-.000165	.000204	5.229811

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003386	11.99382	.0000240	.0004759	-.339124	-.000730	.0005979
Stddev	.000121	.03136	.0000473	.0002113	.004013	.000652	.0002590
%RSD	3.570624	.2614956	197.1601	44.40344	1.183492	89.32762	43.31254
#1	-.003482	11.97403	.0000742	.0005497	-.339715	-.001394	.0007569
#2	-.003426	11.97744	-.000020	.0002376	-.342809	-.000706	.0007378
#3	-.003250	12.02998	.000018	.0006404	-.334848	-.000090	.0002991

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.273749	.0028563	-.000271	-.002077	.0013248	.0024108	-.002532
Stddev	.011003	.0002491	.000116	.001498	.0009634	.0031487	.002087
%RSD	4.019519	8.720389	42.58373	72.12051	72.71993	130.6048	82.44499
#1	-.283401	.0031334	-.000274	-.002214	.0005869	.0044376	-.000506
#2	-.261767	.0026510	-.000386	-.000515	.0009727	-.001217	-.002414
#3	-.276080	.0027844	-.000155	-.003502	.0024146	.004012	-.004675

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: ICSADLX20 Acquired: 4/10/2025 10:46:11 Type: Unk
Method: NON EPA-6010-200.7(v2914) 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	-.000618	-.003709	.0044836
Stddev	.000828	.000920	.0000263
%RSD	133.9351	24.80961	.5865943
#1	-.001292	-.004274	.0044655
#2	.000306	-.002647	.0045137
#3	-.000867	-.004206	.0044715

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3283.329	78937.39	15870.86	2170.141	5274.652
Stddev	14.409	59.61	41.61	10.778	16.838
%RSD	.4388481	.0755126	.2621623	.4966669	.3192290
#1	3270.827	78936.46	15893.06	2174.120	5261.906
#2	3299.087	78878.25	15896.67	2157.939	5293.740
#3	3280.074	78997.45	15822.86	2178.364	5268.310

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: ICSABDLX20 Acquired: 4/10/2025 10:50:27 Type: Unk
Method: NON EPA-6010-200.7(v2914) 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	.0073627	.0054447	.0016475	.0020310	.0311532	12.39209	.0169009
Stddev	.0011275	.0010687	.0007796	.0024236	.0003421	.02343	.0009703
%RSD	15.31331	19.62737	47.31893	119.3295	1.098237	.1890485	5.741181
#1	.0084930	.0058847	.0017074	.0000760	.0314796	12.40921	.0180153
#2	.0062381	.0062231	.0023953	.0012744	.0307972	12.36539	.0162433
#3	.0073570	.0042263	.0008396	.0047426	.0311829	12.40167	.0164441

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0270645	.0495966	12.00582	.0292194	.0247923	.0266348	5.127469
Stddev	.0001796	.0000440	.04591	.0001890	.0003102	.0000617	.013065
%RSD	.6636875	.0886820	.3824292	.6466728	1.251130	.2316931	.2548114
#1	.0272702	.0495722	12.05294	.0290014	.0250789	.0267048	5.131696
#2	.0269849	.0495702	12.00330	.0293196	.0244630	.0265881	5.112813
#3	.0269384	.0496473	11.96122	.0293371	.0248349	.0266116	5.137898

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0209624	12.51188	.0506467	.0096761	-.343405	.0231508	.0527589
Stddev	.0003401	.05518	.0000839	.0002510	.004391	.0008334	.0002027
%RSD	1.622411	.4410496	.1657181	2.594337	1.278701	3.599707	.3842284
#1	.0210453	12.53454	.0505502	.0099591	-.348037	.0241072	.0529764
#2	.0212535	12.55212	.0506866	.0094804	-.342878	.0225805	.0525753
#3	.0205886	12.44897	.0507031	.0095887	-.339302	.0227647	.0527250

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.245583	.0016277	-.000370	-.001783	.0010208	-.000687	-.005399
Stddev	.036345	.0004639	.000141	.001426	.0005559	.000706	.001405
%RSD	14.79968	28.49978	38.10911	79.94503	54.46265	102.8252	26.02992
#1	-.272595	.0020898	-.000531	-.000251	.0016625	-.000411	-.005557
#2	-.204260	.0016313	-.000311	-.003070	.0007137	-.000160	-.003921
#3	-.259893	.0011621	-.000268	-.002028	.0006861	-.001489	-.006718

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: ICSABDLX20 Acquired: 4/10/2025 10:50:27 Type: Unk
Method: NON EPA-6010-200.7(v2914) 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	-.004524	-.004337	.0045216
Stddev	.001521	.000505	.0000269
%RSD	33.61768	11.64412	.5950598
#1	-.005855	-.004751	.0044924
#2	-.004850	-.003774	.0045454
#3	-.002866	-.004485	.0045271

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3239.664	77746.00	14828.66	2109.140	5244.752
Stddev	13.567	90.23	82.45	9.280	17.581
%RSD	.4187810	.1160623	.5560498	.4399819	.3352092
#1	3251.465	77773.37	14752.61	2098.954	5262.675
#2	3242.686	77819.39	14817.09	2111.354	5244.049
#3	3224.841	77645.26	14916.29	2117.113	5227.534

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV01 Acquired: 4/10/2025 11:00:25 Type: Unk
Method: NON EPA-6010-200.7(v2914) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.751163	4.772034	5.241634	4.818364	4.908135	9.817712
Stddev	.007927	.023456	.007161	.013583	.013582	.023555
%RSD	.1668425	.4915220	.1366103	.2819067	.2767266	.2399266
#1	4.748025	4.793485	5.247229	4.824940	4.923565	9.828358
#2	4.745285	4.746989	5.244110	4.802744	4.897987	9.834066
#3	4.760178	4.775629	5.233564	4.827408	4.902854	9.790714

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.767630	.2463695	2.337069	24.00899	1.011728	2.447029
Stddev	.092703	.0001875	.006522	.04104	.002227	.005818
%RSD	.9490850	.0760992	.2790561	.1709473	.2201275	.2377459
#1	9.693801	.2463754	2.342082	24.00439	1.013042	2.451565
#2	9.737419	.2461792	2.339428	23.97045	1.009156	2.449053
#3	9.871669	.2465540	2.329696	24.05214	1.012985	2.440470

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.256964	5.246861	2.349064	23.96112	2.463510	1.252708
Stddev	.001567	.014872	.002774	.03291	.006191	.001401
%RSD	.1246484	.2834389	.1180706	.1373286	.2512944	.1118401
#1	1.257218	5.241970	2.349595	23.99332	2.470425	1.253655
#2	1.255286	5.235051	2.346063	23.92755	2.461620	1.251098
#3	1.258388	5.263562	2.351534	23.96250	2.458484	1.253369

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.51396	2.424411	2.539191	26.91043	F 4.423424	4.911612
Stddev	.04120	.003563	.005315	.04689	.008942	.003238
%RSD	.1829908	.1469524	.2093365	.1742431	.2021556	.0659226
#1	22.55187	2.427895	2.544868	26.94152	4.421972	4.913648
#2	22.47012	2.420774	2.534332	26.85650	4.433004	4.907879
#3	22.51988	2.424563	2.538373	26.93328	4.415297	4.913310

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV01 Acquired: 4/10/2025 11:00:25 Type: Unk
Method: NON EPA-6010-200.7(v2914) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.742207	4.658566	F 6.246868	4.752096	4.594503	4.650618
Stddev	.012055	.012323	.023096	.011031	.009841	.015965
%RSD	.2542119	.2645232	.3697152	.2321373	.2141870	.3432834
#1	4.754541	4.671269	6.237626	4.764558	4.605011	4.666934
#2	4.741628	4.657767	6.229824	4.743583	4.585504	4.649890
#3	4.730451	4.646662	6.273153	4.748146	4.592994	4.635030

Elem	Sr4077
Units	ppm
Avg	4.745931
Stddev	.014517
%RSD	.3058777
#1	4.758639
#2	4.749043
#3	4.730110

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3172.056	75441.92	14942.34	2046.879	4909.976
Stddev	7.385	236.04	14.09	8.031	17.176
%RSD	.2328249	.3128732	.0942870	.3923375	.3498246
#1	3164.110	75383.18	14932.15	2042.548	4890.418
#2	3178.711	75701.78	14958.42	2056.145	4916.902
#3	3173.346	75240.79	14936.46	2041.943	4922.608

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB01 Acquired: 4/10/2025 11:21:50 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	-.000467	-.001965	-.001453	-.001590	-.000767	-.004886	-.008209
Stddev	.000805	.001245	.000631	.001365	.000602	.003765	.000610
%RSD	172.4165	63.37676	43.42232	85.82756	78.51621	77.06048	7.435105
#1	-.000387	-.003123	-.001650	-.001164	-.001162	-.009155	-.007562
#2	-.001309	-.000648	-.001961	-.003117	-.001065	-.003464	-.008290
#3	.000295	-.002123	-.000747	-.000489	-.000074	-.002039	-.008774

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000543	-.000134	-.015540	-.000130	-.000154	-.000552	-.010169
Stddev	.0000258	.000028	.011325	.000190	.000027	.000131	.002355
%RSD	47.41987	21.07603	72.87398	146.1526	17.55740	23.80804	23.15723
#1	.0000812	-.000108	-.007418	-.000310	-.000126	-.000412	-.010701
#2	.0000520	-.000164	-.028476	-.000147	-.000154	-.000672	-.007594
#3	.0000298	-.000131	-.010726	.000068	-.000180	-.000572	-.012213

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004018	-.007370	-.000489	.0005663	-.331604	-.001593	-.002192
Stddev	.000222	.003612	.000271	.0001883	.002660	.000566	.000125
%RSD	5.537588	49.00717	55.38918	33.24597	.8020803	35.53515	5.713358
#1	-.004111	-.008177	-.000780	.0004283	-.334360	-.002186	-.002066
#2	-.003764	-.003423	-.000442	.0004899	-.331401	-.001059	-.002317
#3	-.004178	-.010510	-.000244	.0007808	-.329052	-.001534	-.002193

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.250047	-.003103	-.000352	-.001260	.0011668	-.001123	-.000996
Stddev	.017391	.000353	.000219	.000549	.0001959	.002658	.001532
%RSD	6.955092	11.37809	62.29934	43.57467	16.78658	236.6467	153.8435
#1	-.248146	-.002830	-.000363	-.001673	.0011019	.001333	-.002101
#2	-.233684	-.002978	-.000127	-.000637	.0013870	-.003946	-.001640
#3	-.268310	-.003502	-.000565	-.001470	.0010117	-.000757	.000753

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB01 Acquired: 4/10/2025 11:21:50 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	-.004314	-.004869	-.000360
Stddev	.002401	.000821	.000009
%RSD	55.65688	16.86788	2.535756
#1	-.005980	-.004554	-.000355
#2	-.001562	-.005801	-.000371
#3	-.005400	-.004252	-.000356

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3322.171	80811.57	15372.33	2187.221	5538.030
Stddev	7.878	139.98	29.73	12.978	21.157
%RSD	.2371306	.1732142	.1933814	.5933369	.3820327
#1	3325.437	80716.47	15345.52	2184.896	5552.778
#2	3327.890	80972.30	15404.30	2201.204	5547.523
#3	3313.185	80745.93	15367.17	2175.563	5513.790

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167483BL Acquired: 4/10/2025 11:26:11 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	-.000093	-.001873	-.001399	-.001962	-.000591	-.003628	-.006901
Stddev	.000265	.000762	.001439	.000986	.001541	.003039	.000894
%RSD	286.5166	40.67823	102.9055	50.26068	260.4812	83.77583	12.95630
#1	.000154	-.001070	-.002074	-.000901	.001043	-.001938	-.007933
#2	-.000059	-.001963	-.002376	-.002850	-.002017	-.001810	-.006411
#3	-.000373	-.002587	.000254	-.002136	-.000800	-.007137	-.006358

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000307	-.000092	-.017919	-.000137	-.000246	.0001460	-.004367
Stddev	.0000384	.000066	.007572	.000223	.000081	.0000513	.003513
%RSD	125.0910	71.84017	42.26024	163.0565	32.97934	35.13759	80.43556
#1	.0000425	-.000085	-.025560	.000112	-.000327	.0000869	-.005764
#2	-.000012	-.000030	-.017779	-.000203	-.000249	.0001716	-.006966
#3	.000062	-.000162	-.010417	-.000320	-.000164	.0001795	-.000371

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003518	-.010547	-.000407	.0001416	-.335397	-.001523	-.001758
Stddev	.000096	.006604	.000082	.0001453	.018775	.001973	.000268
%RSD	2.718510	62.61354	20.09452	102.5703	5.597778	129.5365	15.23331
#1	-.003427	-.003795	-.000499	.0001624	-.349458	-.001485	-.002066
#2	-.003617	-.016992	-.000343	.0002754	-.342657	.000430	-.001576
#3	-.003510	-.010855	-.000380	-.000013	-.314076	-.003514	-.001633

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.270748	-.004019	-.000412	-.001240	.0007276	.0019410	-.001644
Stddev	.011987	.000280	.000080	.000325	.0005319	.0083132	.001708
%RSD	4.427501	6.972692	19.32645	26.22709	73.10601	428.2906	103.8930
#1	-.257109	-.004211	-.000404	-.001595	.0005749	-.006929	.000327
#2	-.279611	-.004148	-.000495	-.000958	.0002887	.003198	-.002568
#3	-.275524	-.003697	-.000336	-.001166	.0013191	.009554	-.002691

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167483BL Acquired: 4/10/2025 11:26:11 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	-.004979	-.005493	-.000362
Stddev	.001646	.000658	.000035
%RSD	33.05569	11.98151	9.720780
#1	-.003096	-.006131	-.000334
#2	-.005696	-.004816	-.000350
#3	-.006145	-.005531	-.000402

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3324.066	79259.33	15617.20	2169.533	5540.865
Stddev	12.598	173.96	68.78	6.543	13.385
%RSD	.3790075	.2194829	.4404303	.3015785	.2415705
#1	3334.517	79456.24	15581.66	2176.308	5551.905
#2	3327.605	79195.25	15573.47	2169.039	5544.713
#3	3310.077	79126.50	15696.49	2163.251	5525.978

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167483BS Acquired: 4/10/2025 11:30:30 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	.7630763	1.925439	.9072437	1.962402	.7960454	1.830571
Stddev	.0058421	.018151	.0007563	.012419	.0059523	.029993
%RSD	.7655981	.9427066	.0833576	.6328299	.7477285	1.638453
#1	.7597388	1.908570	.9068929	1.952561	.7905227	1.864255
#2	.7596679	1.944646	.9081117	1.958289	.7952635	1.820699
#3	.7698220	1.923102	.9067266	1.976355	.8023500	1.806758

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1691284	.1865247	.1819346	.9040928	.3857396	.1837087
Stddev	.0021816	.0026585	.0000822	.0149973	.0009511	.0000773
%RSD	1.289879	1.425289	.0451900	1.658818	.2465740	.0420662
#1	.1712839	.1895797	.1819751	.9212566	.3867874	.1837691
#2	.1691794	.1852578	.1819888	.8935183	.3855008	.1836216
#3	.1669217	.1847366	.1818400	.8975034	.3849307	.1837353

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3006019	2.968453	.1834906	1.770230	.4695466	.0716884
Stddev	.0014033	.016980	.0023880	.028314	.0007047	.0001799
%RSD	.4668310	.5719995	1.301416	1.599444	.1500694	.2510026
#1	.2991703	2.949085	.1862302	1.802733	.4687376	.0717661
#2	.3006602	2.980777	.1823919	1.750917	.4698755	.0714826
#3	.3019751	2.975496	.1818497	1.757041	.4700267	.0718164

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.722283	.2707977	.1947905	9.628228	.2475330	.3902303
Stddev	.012123	.0024750	.0006304	.023749	.0037072	.0014835
%RSD	.4453381	.9139758	.3236460	.2466619	1.497673	.3801486
#1	2.726948	.2736263	.1942992	9.602122	.2518020	.3888442
#2	2.731381	.2690301	.1945710	9.648551	.2451243	.3900519
#3	2.708520	.2697366	.1955014	9.634012	.2456727	.3917949

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167483BS Acquired: 4/10/2025 11:30:30 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	.6411569	.1804015	.8145317	5.434024	F -.014016	.1837233
Stddev	.0008907	.0019096	.0034072	.017705	.002573	.0021047
%RSD	.1389227	1.058539	.4183043	.3258094	18.36051	1.145556
#1	.6402011	.1826062	.8148883	5.454466	-.011995	.1861188
#2	.6413057	.1792643	.8109602	5.423579	-.016913	.1828799
#3	.6419638	.1793340	.8177466	5.424027	-.013140	.1821711

Elem	Sr4077
Units	ppm
Avg	.1827041
Stddev	.0021335
%RSD	1.167751
#1	.1851424
#2	.1817897
#3	.1811802

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3176.630	77875.77	15397.77	2097.993	5179.297
Stddev	10.611	95.84	211.91	4.364	10.848
%RSD	.3340322	.1230629	1.376216	.2079926	.2094586
#1	3179.117	77783.34	15153.56	2102.125	5170.315
#2	3185.776	77869.30	15506.66	2093.430	5191.350
#3	3164.996	77974.68	15533.09	2098.424	5176.226

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167497BL Acquired: 4/10/2025 11:34:32 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	.0004105	-.002175	-.001531	-.002498	-.001134	-.004825	-.009186
Stddev	.0009871	.001151	.001282	.001977	.001908	.001883	.000121
%RSD	240.4417	52.91938	83.75882	79.14262	168.1999	39.02692	1.311936
#1	.0008200	-.002695	-.001826	-.004770	-.000010	-.006702	-.009269
#2	.0011269	-.002975	-.002640	-.001167	-.003338	-.002936	-.009241
#3	-.000715	-.000856	-.000127	-.001557	-.000056	-.004838	-.009047

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000744	-.000133	-.016580	-.000262	-.000418	-.000063	-.007860
Stddev	.0000717	.000033	.005591	.000427	.000075	.000294	.003812
%RSD	96.41895	24.99737	33.72252	162.8753	17.85548	468.9326	48.49733
#1	.0000060	-.000170	-.010277	-.000199	-.000374	.000107	-.004079
#2	.0001490	-.000105	-.018522	-.000717	-.000375	-.000402	-.007799
#3	.0000681	-.000124	-.020941	.000130	-.000504	.000107	-.011701

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003717	.0005133	-.000349	.0007252	-.337274	-.001788	-.002145
Stddev	.000055	.0087697	.000278	.0000958	.020340	.000769	.000296
%RSD	1.489299	1708.496	79.55748	13.20811	6.030783	42.99073	13.79705
#1	-.003735	-.003018	-.000044	.0007244	-.359254	-.000905	-.002418
#2	-.003655	-.005941	-.000586	.0008214	-.333452	-.002149	-.001831
#3	-.003761	.010498	-.000417	.0006299	-.319115	-.002310	-.002188

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.268225	-.005537	-.000420	-.001293	.0011093	.0000215	-.002900
Stddev	.028806	.000463	.000267	.000484	.0004024	.0015914	.001245
%RSD	10.73961	8.354651	63.47459	37.40556	36.27726	7413.259	42.94398
#1	-.301426	-.005886	-.000450	-.000739	.0015677	-.001575	-.001481
#2	-.249863	-.005012	-.000140	-.001505	.0009462	.000031	-.003406
#3	-.253387	-.005714	-.000670	-.001634	.0008140	.001608	-.003813

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167497BL Acquired: 4/10/2025 11:34:32 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	-.004423	-.004737	-.000358
Stddev	.001547	.000300	.000056
%RSD	34.98056	6.329930	15.61035
#1	-.004691	-.004888	-.000338
#2	-.005819	-.004931	-.000316
#3	-.002759	-.004391	-.000422

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3237.365	79651.17	16444.51	2133.228	5440.845
Stddev	5.751	2545.63	119.54	60.388	4.857
%RSD	.1776503	3.195969	.7269140	2.830833	.0892609
#1	3243.833	82579.02	16349.56	2202.697	5438.951
#2	3235.434	78413.09	16405.23	2093.277	5437.222
#3	3232.827	77961.41	16578.75	2103.709	5446.364

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167497BS Acquired: 4/10/2025 11:38:51 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	.7715250	1.943734	.9190867	1.990186	.8038979	1.838379
Stddev	.0026160	.010580	.0018564	.013101	.0021617	.005685
%RSD	.3390699	.5443146	.2019819	.6582857	.2689065	.3092182
#1	.7727607	1.931692	.9212020	1.986940	.8014041	1.844798
#2	.7685200	1.951538	.9177285	1.979013	.8050504	1.836358
#3	.7732942	1.947972	.9183297	2.004605	.8052390	1.833981

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1673807	.1950672	.1847232	.9060386	.3829456	.1867503
Stddev	.0008401	.0004186	.0004334	.0070046	.0013237	.0004237
%RSD	.5019296	.2145673	.2346468	.7731057	.3456536	.2268849
#1	.1675746	.1953179	.1849652	.9139539	.3842946	.1863051
#2	.1664606	.1952997	.1842228	.9035217	.3828935	.1867974
#3	.1681069	.1945840	.1849816	.9006402	.3816488	.1871486

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3045778	2.775839	.1773149	1.772450	.4748527	.0709678
Stddev	.0016381	.016871	.0005603	.008905	.0008273	.0000494
%RSD	.5378280	.6077957	.3159966	.5023915	.1742277	.0696623
#1	.3038276	2.794599	.1779606	1.762288	.4742613	.0710234
#2	.3034492	2.771008	.1770269	1.778890	.4744988	.0709508
#3	.3064567	2.761910	.1769572	1.776172	.4757982	.0709290

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.526457	.2721009	.1939048	9.034127	.2615344	.3957228
Stddev	.007827	.0012722	.0009034	.035483	.0011004	.0014429
%RSD	.3097861	.4675420	.4659259	.3927716	.4207403	.3646187
#1	2.526287	.2711192	.1941098	9.065579	.2617811	.3947711
#2	2.518716	.2735381	.1929165	8.995660	.2624905	.3950143
#3	2.534366	.2716454	.1946882	9.041144	.2603316	.3973829

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167497BS Acquired: 4/10/2025 11:38:51 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	.6518475	.1807321	.7672256	5.462897	F -.013838	.1809877
Stddev	.0014646	.0010201	.0043115	.031250	.000488	.0008345
%RSD	.2246855	.5644449	.5619555	.5720321	3.527154	.4610864
#1	.6502891	.1810056	.7648477	5.437226	-.013797	.1818044
#2	.6520579	.1796031	.7722025	5.453772	-.014345	.1801364
#3	.6531956	.1815876	.7646268	5.497693	-.013372	.1810224

Elem	Sr4077
Units	ppm
Avg	.1814793
Stddev	.0007189
%RSD	.3961576
#1	.1823059
#2	.1809996
#3	.1811324

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3203.336	81081.93	14840.03	2159.103	5203.674
Stddev	5.886	216.82	32.61	1.602	7.263
%RSD	.1837542	.2674098	.2197227	.0742125	.1395808
#1	3209.043	80860.58	14815.70	2157.911	5211.913
#2	3203.679	81091.31	14827.32	2160.924	5200.914
#3	3197.286	81293.91	14877.08	2158.472	5198.195

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1715-01 Acquired: 4/10/2025 11:42:54 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	-.001976	-.008457	-.001115	.0032455	-.003264	16.36833
Stddev	.000819	.002625	.001767	.0022608	.002524	.03162
%RSD	41.47183	31.03896	158.4603	69.66020	77.33556	.1931544
#1	-.002280	-.008610	.000654	.0058173	-.004538	16.38023
#2	-.002599	-.011002	-.002880	.0023484	-.004896	16.33249
#3	-.001048	-.005759	-.001118	.0015710	-.000357	16.39228

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009288	-.000018	-.000216	10.17977	.9291275	.0103214
Stddev	.000506	.000047	.000081	.02611	.0018785	.0000956
%RSD	5.448336	261.6489	37.42648	.2564666	.2021781	.9263510
#1	-.009842	-.000051	-.000229	10.16401	.9312317	.0104318
#2	-.008850	-.000038	-.000129	10.16540	.9276193	.0102660
#3	-.009173	.000035	-.000289	10.20991	.9285315	.0102663

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0209526	.5265676	.0121156	2.200563	.0365630	.0004319
Stddev	.0002027	.0045618	.0001929	.004913	.0003203	.0004061
%RSD	.9675122	.8663314	1.591784	.2232477	.8758869	94.03052
#1	.0208956	.5216361	.0123181	2.205897	.0369324	-.000032
#2	.0207844	.5306367	.0119341	2.199568	.0363648	.000721
#3	.0211777	.5274300	.0120947	2.196224	.0363917	.000608

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1861.883	-.001273	1.223496	190.7616	5.662378	.0398473
Stddev	7.445	.000317	.004304	.5569	.021544	.0002022
%RSD	.3998701	24.88869	.3517631	.2919173	.3804703	.5074051
#1	1870.291	-.001006	1.227265	191.3364	5.648254	.0398272
#2	1859.228	-.001189	1.224417	190.7239	5.651705	.0396560
#3	1856.128	-.001623	1.218806	190.2246	5.687174	.0400588

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1715-01 Acquired: 4/10/2025 11:42:54 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	.0375681	.0004317	.7628360	5.223920	F 836.4594	-.000467
Stddev	.0006005	.0004245	.0081592	.034792	2.0127	.000730
%RSD	1.598400	98.31900	1.069589	.6660149	.2406167	156.5414
#1	.0369700	.0004502	.7601136	5.200218	835.9797	-.000620
#2	.0381710	.0008466	.7720083	5.207679	834.7299	.000328
#3	.0375634	-.000002	.7563860	5.263863	838.6686	-.001108

Elem	Sr4077
Units	ppm
Avg	.0460039
Stddev	.0000294
%RSD	.0638568
#1	.0459707
#2	.0460266
#3	.0460145

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2710.282	65392.65	13967.05	1766.142	3919.106
Stddev	13.007	226.38	78.73	4.523	18.135
%RSD	.4798960	.3461876	.5636874	.2560721	.4627232
#1	2711.440	65226.32	13981.60	1762.616	3923.135
#2	2722.671	65650.45	14037.48	1771.241	3934.888
#3	2696.735	65301.17	13882.05	1764.568	3899.296

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-01 Acquired: 4/10/2025 11:47:15 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	.0621837	.0052527	3.869204	-.018206	.0762525	71.63698	1.969675
Stddev	.0018359	.0032587	.014376	.003846	.0005526	.26856	.010323
%RSD	2.952410	62.03928	.3715615	21.12297	.7246887	.3748951	.5241073
#1	.0631988	.0016198	3.871063	-.013818	.0756437	71.32867	1.958003
#2	.0600644	.0062202	3.882561	-.019810	.0767223	71.82004	1.973413
#3	.0632879	.0079182	3.853989	-.020990	.0763915	71.76224	1.977607

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065838	.0016238	48.53476	.3031900	.0818225	7.077507	179.5087
Stddev	.0000121	.0002438	.17948	.0010580	.0005476	.021389	.9706
%RSD	.1830372	15.01492	.3697878	.3489709	.6693020	.3022132	.5407113
#1	.0065837	.0018891	48.33258	.3020499	.0824522	7.083701	178.6394
#2	.0065719	.0015729	48.59645	.3033796	.0815573	7.095116	179.3307
#3	.0065960	.0014095	48.67526	.3041404	.0814579	7.053705	180.5560

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.844063	28.80764	.3688022	.0143762	6.121834	.2031928	8.908127
Stddev	.003522	.03347	.0008354	.0001891	.033884	.0013595	.020692
%RSD	.1909835	.1161923	.2265143	1.315167	.5534983	.6690672	.2322848
#1	1.840055	28.76938	.3695887	.0141762	6.085471	.2016246	8.892293
#2	1.846662	28.83149	.3688925	.0145521	6.127509	.2040388	8.900548
#3	1.845471	28.82206	.3679253	.0144003	6.152523	.2039150	8.931540

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.924213	.3395212	.0034264	3.819395	2.252329	9.209509	4.869236
Stddev	.077293	.0014112	.0004753	.017064	.007367	.030499	.020385
%RSD	.7788328	.4156489	13.87107	.4467665	.3271013	.3311693	.4186503
#1	9.844656	.3387241	.0028778	3.827215	2.243831	9.174430	4.873574
#2	9.928958	.3386888	.0036887	3.831146	2.256918	9.224341	4.887103
#3	9.999024	.3411506	.0037127	3.799822	2.256238	9.229755	4.847031

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-01 Acquired: 4/10/2025 11:47:15 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	8.477923	.2178928	.2915500
Stddev	.036692	.0018117	.0016034
%RSD	.4327995	.8314521	.5499473
#1	8.510088	.2158561	.2897652
#2	8.485724	.2184977	.2920163
#3	8.437958	.2193247	.2928685

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3497.941	85239.44	17000.16	2268.545	4879.426
Stddev	8.313	112.57	39.67	4.738	13.907
%RSD	.2376672	.1320671	.2333585	.2088522	.2850100
#1	3496.488	85363.44	16983.16	2270.847	4869.790
#2	3490.450	85211.22	16971.82	2271.692	4873.119
#3	3506.885	85143.66	17045.49	2263.096	4895.369

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-09 Acquired: 4/10/2025 11:51:18 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	.5383387	.0113974	10.36788	-.011292	-.000137	84.13329
Stddev	.0042067	.0018848	.01881	.003059	.001899	.46851
%RSD	.7814301	16.53714	.1813890	27.08593	1382.621	.5568632
#1	.5414394	.0126834	10.38950	-.014243	-.000697	83.95050
#2	.5335502	.0092338	10.35532	-.008136	-.001693	83.78373
#3	.5400266	.0122749	10.35881	-.011496	.001979	84.66564

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.766048	.0080410	.0018883	146.1714	.2424032	.0912317
Stddev	.063025	.0001170	.0001546	1.0034	.0009954	.0002973
%RSD	1.093037	1.454785	8.185764	.6864649	.4106337	.3258381
#1	5.773907	.0080004	.0017389	145.7628	.2428947	.0908884
#2	5.699462	.0079497	.0020476	145.4367	.2430573	.0914068
#3	5.824775	.0081729	.0018784	147.3146	.2412577	.0913998

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.241632	276.5256	2.880695	15.32766	.3896574	.0452604
Stddev	.002388	.9993	.016887	.09528	.0013374	.0003538
%RSD	.0736762	.3613891	.5862129	.6216485	.3432350	.7817298
#1	3.242434	277.1669	2.875984	15.29966	.3907459	.0455322
#2	3.243516	277.0358	2.866663	15.24951	.3881644	.0453887
#3	3.238946	275.3742	2.899437	15.43381	.3900618	.0448604

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.83741	.3155223	4.359728	18.59240	.4935762	.0371060
Stddev	.08472	.0010540	.019759	.10458	.0033444	.0002899
%RSD	.5031356	.3340476	.4532056	.5624842	.6775843	.7813456
#1	16.87531	.3153947	4.361220	18.65093	.4965987	.0368389
#2	16.89656	.3145379	4.378699	18.65461	.4941468	.0374143
#3	16.74036	.3166343	4.339266	18.47166	.4899833	.0370648

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-09 Acquired: 4/10/2025 11:51:18 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	1.943054	1.435652	5.548383	F 11.47938	F 17.39359	.3738001
Stddev	.007662	.007769	.029424	.03094	.03881	.0011864
%RSD	.3943100	.5411491	.5303191	.2695626	.2231453	.3173942
#1	1.949337	1.428547	5.577773	11.51395	17.43660	.3739304
#2	1.934518	1.434460	5.548453	11.45425	17.36118	.3725539
#3	1.945305	1.443948	5.518924	11.46995	17.38298	.3749160

Elem	Sr4077
Units	ppm
Avg	.9731438
Stddev	.0148253
%RSD	1.523448
#1	.9591113
#2	.9886517
#3	.9716684

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3219.484	79986.35	16826.85	2094.279	4528.274
Stddev	6.329	451.35	100.08	13.754	5.902
%RSD	.1965754	.5642896	.5947639	.6567406	.1303421
#1	3223.072	79975.41	16900.56	2097.530	4529.205
#2	3212.177	79540.56	16867.08	2079.191	4521.961
#3	3223.204	80443.07	16712.92	2106.116	4533.655

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1748-01 Acquired: 4/10/2025 11:55:38 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	.1337580	.0153978	8.110684	-.006910	.0007800	82.51350
Stddev	.0026948	.0010311	.020474	.001673	.0010228	.28015
%RSD	2.014674	6.696485	.2524299	24.20292	131.1271	.3395175
#1	.1332039	.0145125	8.118593	-.008714	.0015712	82.21606
#2	.1366867	.0151510	8.087435	-.005411	-.000375	82.77236
#3	.1313833	.0165299	8.126024	-.006606	.001144	82.55208

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.838236	.0073602	-.000763	214.3819	.1993808	.1022104
Stddev	.011096	.0000657	.000496	.6067	.0002781	.0003998
%RSD	.3909539	.8927223	65.02608	.2829792	.1394647	.3911260
#1	2.826659	.0073363	-.000242	213.8737	.1990605	.1024700
#2	2.848779	.0073098	-.001230	215.0535	.1995226	.1017501
#3	2.839270	.0074345	-.000816	214.2184	.1995594	.1024113

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.472130	285.2394	2.734795	33.48808	.4171479	.0216041
Stddev	.008326	1.6991	.014820	.14734	.0004454	.0000587
%RSD	.1521499	.5956812	.5418941	.4399779	.1067705	.2718374
#1	5.476499	283.5947	2.720190	33.39873	.4173762	.0216719
#2	5.462529	286.9882	2.749821	33.65814	.4166347	.0215706
#3	5.477361	285.1354	2.734374	33.40736	.4174329	.0215699

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.70942	.3226802	4.490134	13.39560	.4560888	.0205097
Stddev	.13365	.0012693	.022446	.10146	.0043441	.0000826
%RSD	.5408998	.3933639	.4999046	.7574204	.9524715	.4029517
#1	24.56713	.3229711	4.505617	13.28095	.4516356	.0204379
#2	24.83232	.3237788	4.500395	13.47382	.4603150	.0206000
#3	24.72880	.3212907	4.464391	13.43202	.4563157	.0204911

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1748-01 Acquired: 4/10/2025 11:55:38 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	1.492437	1.984416	4.907175	F 13.87163	F 14.90210	.2503499
Stddev	.009386	.003500	.024367	.07351	.04034	.0013713
%RSD	.6289197	.1763598	.4965681	.5299075	.2706960	.5477504
#1	1.498026	1.981694	4.895532	13.94639	14.87796	.2489411
#2	1.481601	1.988364	4.935180	13.79944	14.87967	.2516803
#3	1.497685	1.983190	4.890813	13.86906	14.94867	.2504285

Elem	Sr4077
Units	ppm
Avg	1.108628
Stddev	.014108
%RSD	1.272558
#1	1.124417
#2	1.097261
#3	1.104205

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3229.056	79311.55	16461.70	2068.597	4544.679
Stddev	1.828	127.69	34.42	4.273	4.013
%RSD	.0566082	.1609997	.2090878	.2065862	.0882983
#1	3226.959	79383.87	16433.59	2069.008	4542.346
#2	3230.313	79164.12	16451.43	2064.132	4549.313
#3	3229.896	79386.68	16500.09	2072.649	4542.379

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1748-05 Acquired: 4/10/2025 11:59:50 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	.0412148	.0146007	1.392178	-.030233	-.006601	128.3542
Stddev	.0014395	.0011480	.001455	.001842	.002644	.1147
%RSD	3.492574	7.862302	.1045412	6.092149	40.05662	.0893689
#1	.0417747	.0138654	1.392782	-.031308	-.009636	128.4090
#2	.0395795	.0140133	1.390518	-.028107	-.004791	128.4313
#3	.0422902	.0159235	1.393234	-.031285	-.005377	128.2224

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.417618	.0112488	-.000780	39.03395	.2769398	.1775605
Stddev	.002624	.0000950	.000174	.04658	.0022470	.0004448
%RSD	.1851091	.8444886	22.29084	.1193298	.8113650	.2504845
#1	1.415041	.0112743	-.000762	39.08499	.2783582	.1780251
#2	1.420287	.0111436	-.000616	38.99375	.2743491	.1771386
#3	1.417526	.0113284	-.000963	39.02310	.2781122	.1775178

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6572381	354.9531	8.694815	54.56552	.3370640	.0239940
Stddev	.0008417	1.1448	.010035	.13404	.0003581	.0002323
%RSD	.1280679	.3225185	.1154152	.2456491	.1062332	.9679666
#1	.6580611	355.5494	8.698114	54.69691	.3366505	.0238234
#2	.6572745	353.6333	8.683545	54.42898	.3372702	.0239001
#3	.6563788	355.6767	8.702785	54.57067	.3372712	.0242585

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.084785	.3340663	.9572255	21.97316	.5862531	.0011401
Stddev	.021936	.0012291	.0015187	.00885	.0019942	.0002380
%RSD	.2414626	.3679141	.1586535	.0402633	.3401547	20.87662
#1	9.108422	.3351455	.9559500	21.97216	.5878204	.0012543
#2	9.065082	.3327285	.9568211	21.96485	.5840085	.0008665
#3	9.080850	.3343249	.9589055	21.98246	.5869304	.0012994

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1748-05 Acquired: 4/10/2025 11:59:50 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	.4844298	3.266745	7.712326	7.161487	F 17.37934	.3972862
Stddev	.0023013	.004363	.012575	.009666	.02933	.0004873
%RSD	.4750454	.1335550	.1630550	.1349708	.1687892	.1226531
#1	.4817752	3.270044	7.717758	7.161594	17.41303	.3975801
#2	.4856533	3.268391	7.697947	7.171100	17.35950	.3975548
#3	.4858608	3.261798	7.721272	7.151769	17.36547	.3967237

Elem	Sr4077
Units	ppm
Avg	.2130206
Stddev	.0001817
%RSD	.0852772
#1	.2131192
#2	.2131317
#3	.2128110

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3756.197	91926.21	19940.48	2438.418	4614.887
Stddev	5.220	403.94	41.71	9.476	7.056
%RSD	.1389608	.4394227	.2091867	.3886108	.1529041
#1	3750.235	91566.51	19900.84	2436.288	4608.798
#2	3758.416	92363.23	19984.00	2430.189	4622.620
#3	3759.942	91848.89	19936.59	2448.778	4613.244

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1749-01 Acquired: 4/10/2025 12:03:53 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	.0263095	-.002132	2.551917	-.011869	.0193977	35.80367	.2327218
Stddev	.0035903	.001205	.007527	.002543	.0011972	.09979	.0003863
%RSD	13.64634	56.53365	.2949591	21.42917	6.171885	.2787205	.1660103
#1	.0301201	-.003247	2.551344	-.014076	.0183091	35.75458	.2323119
#2	.0258181	-.000853	2.544693	-.009088	.0192042	35.73793	.2330792
#3	.0229902	-.002295	2.559715	-.012442	.0206799	35.91850	.2327744

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044544	-.001895	5.389428	.1105721	.0399298	.4461174	80.02505
Stddev	.0000153	.000074	.007969	.0002625	.0003328	.0010337	.19662
%RSD	.3429942	3.921047	.1478707	.2374084	.8335478	.2317013	.2456956
#1	.0044371	-.001942	5.386353	.1105512	.0400127	.4473069	80.05942
#2	.0044602	-.001933	5.398476	.1108445	.0395634	.4456075	80.20222
#3	.0044660	-.001809	5.383453	.1103207	.0402134	.4454377	79.81352

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3470551	2.676767	.0781860	.0034198	1.550109	.1871101	.8672368
Stddev	.0011583	.009946	.0004096	.0002109	.004256	.0016068	.0045488
%RSD	.3337507	.3715563	.5238490	6.165837	.2745331	.8587522	.5245149
#1	.3460942	2.670906	.0777242	.0036082	1.553110	.1887573	.8628774
#2	.3467298	2.688251	.0783284	.0034592	1.551979	.1855470	.8668791
#3	.3483412	2.671144	.0785054	.0031920	1.545239	.1870259	.8719539

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.515107	.1192863	.0077841	.0623217	.6549549	3.672151	1.194476
Stddev	.024358	.0004685	.0001622	.0006084	.0025855	.010536	.004407
%RSD	1.607701	.3927310	2.084094	.9763091	.3947538	.2869252	.3689346
#1	1.505630	.1196245	.0078735	.0629500	.6542647	3.671911	1.193477
#2	1.496910	.1194828	.0078820	.0617352	.6578154	3.682805	1.190654
#3	1.542779	.1187516	.0075969	.0622800	.6527846	3.661736	1.199296

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1749-01 Acquired: 4/10/2025 12:03:53 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	1.007419	.0380890	.0408115
Stddev	.004346	.0003134	.0001224
%RSD	.4314318	.8227223	.2998070
#1	1.010931	.0379470	.0408753
#2	1.008768	.0384482	.0406704
#3	1.002558	.0378717	.0408887

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3396.554	83900.54	15641.65	2257.668	5162.635
Stddev	6.020	315.78	91.71	9.766	2.406
%RSD	.1772315	.3763751	.5863058	.4325644	.0465964
#1	3393.401	84206.19	15747.50	2263.820	5164.063
#2	3392.765	83575.52	15591.32	2246.408	5159.857
#3	3403.495	83919.92	15586.13	2262.778	5163.984

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV02 Acquired: 4/10/2025 12:08:04 Type: Unk
Method: NON EPA-6010-200.7(v2915) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.802838	4.856003	4.715725	4.864793	4.969272	9.830462
Stddev	.032649	.032992	.011303	.031089	.032725	.025840
%RSD	.6797838	.6794148	.2396891	.6390657	.6585442	.2628606
#1	4.770673	4.819382	4.704966	4.832143	4.935885	9.844570
#2	4.801892	4.865221	4.714708	4.868194	4.970640	9.800639
#3	4.835950	4.883406	4.727503	4.894042	5.001291	9.846178

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.675149	.2492668	2.354865	24.00969	1.021131	2.467166
Stddev	.121843	.0014188	.004534	.10816	.004184	.003867
%RSD	1.259335	.5692041	.1925175	.4504649	.4096958	.1567372
#1	9.534625	.2487899	2.349691	24.00712	1.021737	2.462863
#2	9.739464	.2481478	2.356768	23.90285	1.024979	2.468284
#3	9.751358	.2508626	2.358138	24.11911	1.016678	2.470351

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.274572	5.226019	2.344493	24.11762	2.479125	1.260692
Stddev	.003724	.029528	.007568	.14533	.007270	.001004
%RSD	.2921654	.5650112	.3228177	.6025807	.2932337	.0796408
#1	1.271021	5.257124	2.348683	24.11060	2.471259	1.261595
#2	1.274247	5.222559	2.335757	23.97593	2.480520	1.260870
#3	1.278448	5.198374	2.349041	24.26633	2.485596	1.259611

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.09167	2.432752	2.534778	26.80812	F 4.453158	4.963059
Stddev	.23644	.013378	.006893	.24021	.029796	.020281
%RSD	.8727578	.5499305	.2719438	.8960525	.6691066	.4086431
#1	27.26305	2.433253	2.537694	26.99506	4.443995	4.943006
#2	27.19005	2.419130	2.539733	26.89211	4.429019	4.962609
#3	26.82192	2.445873	2.526906	26.53719	4.486460	4.983561

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV02 Acquired: 4/10/2025 12:08:04 Type: Unk
Method: NON EPA-6010-200.7(v2915) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.797318	4.656074	F 6.242821	4.827944	4.675280	4.650698
Stddev	.016507	.018640	.022329	.015283	.016124	.020174
%RSD	.3440958	.4003354	.3576694	.3165476	.3448732	.4337817
#1	4.779555	4.660155	6.266186	4.811077	4.657591	4.671786
#2	4.800211	4.635732	6.240578	4.831886	4.689153	4.631584
#3	4.812187	4.672336	6.221698	4.840870	4.679096	4.648725

Elem	Sr4077
Units	ppm
Avg	4.714991
Stddev	.075301
%RSD	1.597063
#1	4.718630
#2	4.637936
#3	4.788407

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3164.474	75871.85	14926.97	2040.820	4906.699
Stddev	12.872	139.09	96.83	1.604	13.648
%RSD	.4067776	.1833158	.6486701	.0785999	.2781549
#1	3177.929	75814.89	14947.34	2042.649	4922.410
#2	3163.218	75770.29	15011.99	2040.161	4899.921
#3	3152.276	76030.37	14821.58	2039.651	4897.767

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB02 Acquired: 4/10/2025 12:12:15 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	-.002084	-.000844	-.001480	-.002703	-.000101	-.003730	-.008985
Stddev	.001231	.000336	.001586	.000833	.002569	.001525	.000750
%RSD	59.06313	39.78608	107.1267	30.82673	2541.068	40.87958	8.345073
#1	-.003415	-.001192	-.002084	-.003660	-.000959	-.002520	-.008634
#2	-.001854	-.000820	-.002675	-.002138	-.002131	-.005443	-.008475
#3	-.000985	-.000521	.000319	-.002310	.002787	-.003228	-.009846

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000872	-.000128	-.019729	-.000497	-.000061	-.000113	-.003734
Stddev	.0000158	.000020	.010143	.000307	.000137	.000299	.003066
%RSD	18.10682	15.59097	51.41254	61.78725	224.3550	265.4116	82.12178
#1	.0000940	-.000105	-.017671	-.000809	-.000218	.000159	-.000197
#2	.0000691	-.000137	-.010773	-.000195	-.000002	-.000434	-.005355
#3	.0000984	-.000142	-.030744	-.000486	.000037	-.000064	-.005648

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003760	-.001510	-.000085	.0007487	-.276556	-.000314	-.001871
Stddev	.000124	.006357	.000236	.0001485	.008074	.001510	.000233
%RSD	3.310885	420.9444	277.2274	19.83914	2.919447	481.5173	12.44726
#1	-.003638	-.008842	.000171	.0006926	-.285682	.001401	-.001619
#2	-.003887	.002469	-.000293	.0009171	-.273644	-.001445	-.002079
#3	-.003755	.001842	-.000133	.0006364	-.270343	-.000896	-.001914

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.188141	-.002074	-.000159	-.000541	.0013909	.0073831	-.001904
Stddev	.006446	.000346	.000101	.000718	.0001124	.0055700	.001351
%RSD	3.426344	16.66713	63.96711	132.5371	8.081531	75.44267	70.95387
#1	-.195080	-.001852	-.000258	-.000336	.0015084	.0122284	-.003297
#2	-.182339	-.001897	-.000162	-.001339	.0012844	.0086234	-.000600
#3	-.187004	-.002472	-.000056	.000051	.0013799	.0012975	-.001815

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB02 Acquired: 4/10/2025 12:12:15 Type: Unk
Method: NON EPA-6010-200.7(v2915) 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	-.000836	-.004575	-.000256
Stddev	.000844	.000145	.000045
%RSD	101.0542	3.172848	17.40038
#1	.000086	-.004436	-.000213
#2	-.001021	-.004564	-.000302
#3	-.001572	-.004725	-.000254

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3264.874	78670.60	15545.19	2093.884	5490.688
Stddev	7.549	236.09	18.44	6.496	8.156
%RSD	.2312312	.3000992	.1186381	.3102268	.1485353
#1	3273.164	78865.01	15564.79	2092.322	5497.212
#2	3263.063	78407.89	15542.62	2088.312	5493.306
#3	3258.395	78738.90	15528.17	2101.019	5481.544

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1732-01 Acquired: 4/10/2025 12:17:10 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	.0767385	.0007833	2.077115	-.033447	.0031573	114.6619	1.268970
Stddev	.0022883	.0017755	.009488	.001581	.0001956	.2569	.003666
%RSD	2.981928	226.6699	.4567838	4.726557	6.193994	.2240696	.2888681
#1	.0793127	-.000739	2.072189	-.033705	.0029364	114.7449	1.269544
#2	.0759675	.002734	2.071103	-.031753	.0033085	114.8671	1.272315
#3	.0749353	.000356	2.088052	-.034883	.0032268	114.3738	1.265051

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081685	.0037783	223.7338	.2073820	.1843658	.7662815	269.1339
Stddev	.0000690	.0002192	.5835	.0010254	.0007802	.0012315	.2884
%RSD	.8443582	5.801127	.2607846	.4944235	.4231815	.1607136	.1071465
#1	.0081956	.0037198	224.3054	.2074057	.1836028	.7673678	269.1495
#2	.0082198	.0035944	223.7566	.2063450	.1843325	.7649436	269.4142
#3	.0080901	.0040208	223.1392	.2083953	.1851621	.7665331	268.8381

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.266042	59.04340	.3007113	.0088972	14.26703	.3757659	1.433027
Stddev	.027222	.17641	.0001809	.0002420	.06690	.0014663	.002824
%RSD	.4344443	.2987777	.0601520	2.719438	.4689462	.3902284	.1970839
#1	6.291010	59.22481	.3006850	.0089958	14.19294	.3762317	1.429802
#2	6.270095	59.03295	.3005450	.0090743	14.32301	.3769427	1.435063
#3	6.237020	58.87245	.3009039	.0086216	14.28515	.3741232	1.434214

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.78716	.4827309	.0069838	.0826710	3.824028	6.304579	8.145017
Stddev	.06695	.0015004	.0003700	.0017735	.011463	.027711	.008652
%RSD	.4855705	.3108185	5.298375	2.145300	.2997546	.4395407	.1062200
#1	13.73130	.4833897	.0073957	.0843441	3.830657	6.273886	8.150612
#2	13.86137	.4837892	.0066797	.0808117	3.830635	6.312092	8.135053
#3	13.76882	.4810138	.0068759	.0828572	3.810792	6.327760	8.149388

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1732-01 Acquired: 4/10/2025 12:17:10 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	5.993543	.2634445	.7847101
Stddev	.019671	.0013245	.0027146
%RSD	.3282084	.5027654	.3459350
#1	5.975880	.2630607	.7853603
#2	5.990006	.2649185	.7870405
#3	6.014743	.2623543	.7817294

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3319.127	81533.91	18278.36	2123.044	4405.969
Stddev	9.357	124.46	42.89	10.784	13.802
%RSD	.2819115	.1526530	.2346289	.5079533	.3132582
#1	3310.730	81675.91	18229.11	2118.731	4402.713
#2	3329.214	81482.07	18307.42	2115.084	4421.108
#3	3317.437	81443.74	18298.57	2135.317	4394.087

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1733-01 Acquired: 4/10/2025 12:21:13 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	.1538305	-.006345	.2719292	-.017465	-.003391	118.1648
Stddev	.0037608	.002536	.0008118	.005041	.002753	.0981
%RSD	2.444746	39.96407	.2985351	28.86468	81.16981	.0830285
#1	.1568863	-.007286	.2717626	-.014821	-.000253	118.0724
#2	.1496305	-.008275	.2712136	-.023278	-.004525	118.1544
#3	.1549747	-.003473	.2728113	-.014295	-.005396	118.2677

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6569979	.0334377	.0104923	77.75459	.3978178	.1557954
Stddev	.0013809	.0000965	.0001935	.17029	.0008122	.0006981
%RSD	.2101909	.2884921	1.844636	.2190045	.2041564	.4480828
#1	.6559452	.0333607	.0102919	77.68129	.3986567	.1550734
#2	.6564869	.0335459	.0106781	77.63323	.3970354	.1558461
#3	.6585615	.0334064	.0105069	77.94925	.3977613	.1564668

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2132617	137.7256	2.185400	104.2853	.2524029	.0093462
Stddev	.0004456	.6115	.005673	.2027	.0007114	.0001694
%RSD	.2089266	.4440328	.2595823	.1943449	.2818522	1.812824
#1	.2134498	137.9859	2.178851	104.3673	.2521298	.0092010
#2	.2135823	137.0269	2.188573	104.0545	.2518684	.0095324
#3	.2127529	138.1639	2.188777	104.4342	.2532103	.0093052

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	93.26922	.4298093	1.278364	19.21321	.2239240	.0078681
Stddev	.26914	.0005272	.003054	.07456	.0020932	.0001012
%RSD	.2885580	.1226633	.2389269	.3880680	.9347962	1.286582
#1	93.48311	.4292008	1.279068	19.27811	.2244435	.0078488
#2	93.35753	.4301286	1.275019	19.13177	.2216200	.0077779
#3	92.96703	.4300985	1.281004	19.22976	.2257086	.0079776

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1733-01 Acquired: 4/10/2025 12:21:13 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	.0158175	.8284805	2.461302	F 27.71619	5.042854	.1095456
Stddev	.0016602	.0018557	.022192	.10150	.008033	.0001624
%RSD	10.49562	.2239890	.9016186	.3662175	.1592875	.1482605
#1	.0139038	.8279308	2.481614	27.64378	5.035134	.1093912
#2	.0168717	.8269617	2.437617	27.67258	5.042263	.1095306
#3	.0166770	.8305489	2.464674	27.83221	5.051166	.1097150

Elem	Sr4077
Units	ppm
Avg	.4569402
Stddev	.0010961
%RSD	.2398885
#1	.4559761
#2	.4567120
#3	.4581325

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3763.627	92459.53	18820.32	2440.662	4393.589
Stddev	13.115	259.09	50.91	14.306	6.547
%RSD	.3484647	.2802215	.2705240	.5861387	.1490176
#1	3748.533	92389.20	18876.92	2440.884	4388.848
#2	3770.111	92746.53	18805.75	2454.855	4401.060
#3	3772.236	92242.87	18778.27	2426.246	4390.860

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1740-01 Acquired: 4/10/2025 12:25:25 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	.0257352	.0050319	.1357108	-.026269	-.004391	72.60556	.7193262
Stddev	.0019760	.0016948	.0016689	.000347	.001230	.07927	.0026920
%RSD	7.678202	33.68114	1.229727	1.320588	28.00520	.1091730	.3742383
#1	.0235541	.0040434	.1366482	-.026068	-.003138	72.66203	.7200795
#2	.0274060	.0069888	.1367002	-.026670	-.004439	72.63970	.7163378
#3	.0262455	.0040634	.1337840	-.026070	-.005597	72.51494	.7215612

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0102876	-.000491	18.94918	.1600540	.0871450	.2707263	187.6568
Stddev	.0001145	.000176	.07465	.0003267	.0001154	.0003311	.9876
%RSD	1.112792	35.82757	.3939730	.2041269	.1324083	.1223154	.5262617
#1	.0101557	-.000521	18.89573	.1596829	.0870148	.2703464	187.7413
#2	.0103607	-.000302	19.03448	.1601807	.0871858	.2708784	186.6297
#3	.0103464	-.000650	18.91732	.1602984	.0872345	.2709540	188.5994

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.708576	27.54385	.1902184	.0021293	7.784446	.2012734	.4776144
Stddev	.006362	.20984	.0007231	.0002849	.084034	.0014253	.0039770
%RSD	.1351164	.7618277	.3801230	13.38031	1.079508	.7081580	.8326876
#1	4.701769	27.37651	.1894306	.0023241	7.818653	.2028811	.4746491
#2	4.714372	27.77928	.1908519	.0018023	7.688703	.2007745	.4760602
#3	4.709587	27.47577	.1903725	.0022615	7.845981	.2001646	.4821338

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.554353	.2756024	.0000420	.0026325	2.212818	2.958227	6.931623
Stddev	.090602	.0024471	.0003164	.0003234	.001597	.030762	.033532
%RSD	1.059135	.8878990	753.0774	12.28713	.0721811	1.039884	.4837574
#1	8.593220	.2767601	.0001655	.0024794	2.211759	2.988415	6.892904
#2	8.450802	.2727913	.0002781	.0030040	2.212039	2.926921	6.950747
#3	8.619037	.2772558	-.000318	.0024139	2.214655	2.959346	6.951217

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1740-01 Acquired: 4/10/2025 12:25:25 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	.3073152	.2026908	.1057872
Stddev	.0073233	.0012659	.0001818
%RSD	2.382999	.6245521	.1718637
#1	.3023398	.2014925	.1059969
#2	.3038813	.2025651	.1056916
#3	.3157244	.2040149	.1056732

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3582.471	86714.11	16537.82	2350.987	4898.685
Stddev	7.735	185.53	104.61	14.252	1.498
%RSD	.2159035	.2139550	.6325479	.6062087	.0305719
#1	3576.087	86855.97	16578.69	2353.084	4898.274
#2	3591.072	86782.19	16418.94	2364.074	4900.346
#3	3580.254	86504.15	16615.81	2335.802	4897.436

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1743-01 Acquired: 4/10/2025 12:29:30 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	.0263876	-.003029	1.019781	-.015919	.0063378	49.20446	.4065609
Stddev	.0003581	.003309	.000858	.005182	.0003621	.11363	.0019672
%RSD	1.357219	109.2515	.0841604	32.55186	5.713533	.2309278	.4838659
#1	.0265895	.000656	1.019652	-.009961	.0067554	49.13357	.4046379
#2	.0259741	-.003995	1.018994	-.018413	.0061478	49.14429	.4085695
#3	.0265992	-.005747	1.020696	-.019382	.0061103	49.33552	.4064755

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048292	-.000924	54.64361	.0982334	.1051883	.4532403	113.0016
Stddev	.0000420	.000272	.11135	.0016760	.0002675	.0012303	1.5004
%RSD	.8687091	29.43598	.2037835	1.706187	.2542649	.2714363	1.327785
#1	.0048015	-.001207	54.63201	.1001007	.1050238	.4520470	114.6832
#2	.0048087	-.000901	54.53852	.0968593	.1050441	.4531695	112.5216
#3	.0048775	-.000665	54.76032	.0977401	.1054969	.4545045	111.7999

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.117681	30.82602	.1175863	.0029603	1.748953	.2163412	.9709606
Stddev	.000671	.10403	.0006341	.0002693	.029378	.0016350	.0147030
%RSD	.0600194	.3374767	.5392686	9.098164	1.679749	.7557695	1.514274
#1	1.117534	30.85874	.1169617	.0026612	1.776990	.2169779	.9878920
#2	1.117096	30.70957	.1175677	.0030361	1.751472	.2175621	.9614107
#3	1.118413	30.90976	.1182295	.0031837	1.718397	.2144836	.9635793

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.583749	.1609791	.0039391	.0341636	2.123150	4.200086	1.918607
Stddev	.012776	.0038169	.0002486	.0016338	.002728	.043674	.012230
%RSD	.8066899	2.371072	6.311969	4.782158	.1284865	1.039844	.6374555
#1	1.598499	.1650233	.0037845	.0337518	2.121128	4.250457	1.928589
#2	1.576596	.1604746	.0038069	.0359639	2.122068	4.177034	1.922269
#3	1.576152	.1574396	.0042259	.0327752	2.126253	4.172767	1.904965

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1743-01 Acquired: 4/10/2025 12:29:30 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	1.393923	.0622192	.1982532
Stddev	.004294	.0003840	.0003514
%RSD	.3080497	.6171741	.1772638
#1	1.392425	.0626444	.1979211
#2	1.390580	.0618978	.1986212
#3	1.398766	.0621154	.1982174

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3322.575	81131.95	15946.78	2166.111	4879.895
Stddev	6.361	1266.26	79.17	37.040	4.330
%RSD	.1914422	1.560740	.4964791	1.709965	.0887405
#1	3329.348	79669.90	15902.17	2123.366	4884.701
#2	3321.649	81877.54	16038.19	2186.207	4878.691
#3	3316.728	81848.41	15899.97	2188.759	4876.295

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1739-01 Acquired: 4/10/2025 12:33:38 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	.0009130	-.005519	.0455140	-.002488	.0020760	3.152453	.2540546
Stddev	.0035372	.003306	.0019689	.002998	.0016015	.013645	.0004121
%RSD	387.4292	59.89975	4.325934	120.4891	77.14167	.4328515	.1622058
#1	.0033148	-.001933	.0447362	-.001106	.0038635	3.137154	.2540213
#2	-.003149	-.006178	.0477530	-.000430	.0007719	3.156839	.2544824
#3	.002573	-.008445	.0440528	-.005927	.0015926	3.163366	.2536602

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010770	-.000678	61.11785	.0143716	.0015404	.0301871	20.22679
Stddev	.0000289	.000129	.21023	.0003225	.0000389	.0002545	.12139
%RSD	2.679191	18.96274	.3439721	2.243837	2.522002	.8429805	.6001261
#1	.0010960	-.000823	60.96775	.0140366	.0014972	.0300942	20.34008
#2	.0010438	-.000576	61.35812	.0146798	.0015516	.0299922	20.09867
#3	.0010913	-.000636	61.02767	.0143984	.0015724	.0304750	20.24163

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.642706	11.37737	.0047816	.0013590	843.7837	.0410811	.0992329
Stddev	.005542	.03184	.0001475	.0002223	6.3244	.0010252	.0005110
%RSD	.3373866	.2798206	3.084322	16.35334	.7495285	2.495443	.5149611
#1	1.639664	11.35753	.0046466	.0015183	847.5205	.0421408	.0986704
#2	1.649104	11.41409	.0047593	.0014537	836.4816	.0400944	.0993600
#3	1.639352	11.36048	.0049390	.0011051	847.3490	.0410083	.0996684

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.92733	.0905783	.0034763	-.001458	.1677936	6.506686	.4772570
Stddev	.07660	.0000842	.0000616	.000696	.0005780	.041549	.0049768
%RSD	.6422551	.0929650	1.773171	47.71914	.3444702	.6385607	1.042798
#1	11.99842	.0904827	.0034121	-.000697	.1672817	6.551716	.4762727
#2	11.84620	.0906414	.0035350	-.001618	.1684205	6.469833	.4728459
#3	11.93736	.0906108	.0034818	-.002061	.1676787	6.498510	.4826525

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1739-01 Acquired: 4/10/2025 12:33:38 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	8.158826	.0038588	.4666544
Stddev	.012643	.0004761	.0008234
%RSD	.1549555	12.33740	.1764366
#1	8.144228	.0034729	.4665804
#2	8.166253	.0043908	.4675123
#3	8.165996	.0037125	.4658706

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2885.034	71279.24	16252.47	1869.448	4166.845
Stddev	5.795	172.42	118.92	8.620	6.220
%RSD	.2008469	.2418887	.7316877	.4611071	.1492821
#1	2891.655	71314.10	16374.32	1878.375	4174.024
#2	2880.888	71431.56	16136.72	1868.796	4163.471
#3	2882.559	71092.06	16246.37	1861.172	4163.042

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1748-04 Acquired: 4/10/2025 12:38:00 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	-.007469	-.007439	.1681492	.0033203	.0025977	-.024192
Stddev	.000383	.001411	.0010239	.0025644	.0022825	.001767
%RSD	5.123134	18.96122	.6089282	77.23429	87.86569	7.305606
#1	-.007242	-.008600	.1673347	.0013903	.0001877	-.022896
#2	-.007911	-.007848	.1678143	.0023404	.0028788	-.023475
#3	-.007255	-.005869	.1692986	.0062302	.0047267	-.026205

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1268941	-.000160	.0010652	133.9467	.0006112	.0065707
Stddev	.0018759	.000016	.0000783	.7659	.0003699	.0002775
%RSD	1.478284	10.10579	7.351369	.5718262	60.52490	4.223679
#1	.1249894	-.000145	.0010557	133.0767	.0001861	.0067130
#2	.1269530	-.000177	.0009920	134.2439	.0007870	.0062509
#3	.1287398	-.000160	.0011478	134.5195	.0008604	.0067482

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0665040	-.001473	1.090825	3.754902	.0178338	.0006277
Stddev	.0003317	.001834	.007362	.040900	.0002250	.0001141
%RSD	.4987925	124.5049	.6749398	1.089233	1.261828	18.17485
#1	.0662032	-.000047	1.082342	3.707675	.0176301	.0006446
#2	.0668597	-.003541	1.095540	3.778648	.0177960	.0005062
#3	.0664490	-.000830	1.094594	3.778382	.0180754	.0007325

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	358.5701	-.000303	1.443994	3.101039	.0178024	.0009172
Stddev	2.3603	.000568	.003722	.029580	.0002253	.0003626
%RSD	.6582515	187.5900	.2577676	.9538764	1.265765	39.53485
#1	357.8324	-.000395	1.442986	3.082797	.0178468	.0005295
#2	361.2111	.000305	1.448116	3.135168	.0175582	.0009740
#3	356.6667	-.000819	1.440879	3.085152	.0180022	.0012480

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1748-04 Acquired: 4/10/2025 12:38:00 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	-.003412	-.001710	2.231793	.0296628	F 10.04583	-.011553
Stddev	.000786	.000419	.010142	.0019154	.00648	.000615
%RSD	23.04700	24.52083	.4544167	6.457137	.0644868	5.324969
#1	-.003454	-.001317	2.220091	.0285446	10.05173	-.012102
#2	-.002605	-.001663	2.238029	.0318744	10.04686	-.010888
#3	-.004177	-.002152	2.237260	.0285693	10.03890	-.011670

Elem	Sr4077
Units	ppm
Avg	.5077389
Stddev	.0021058
%RSD	.4147403
#1	.5053087
#2	.5088850
#3	.5090231

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2827.284	69972.77	15188.65	1847.351	4350.532
Stddev	3.784	224.17	31.45	10.781	5.569
%RSD	.1338247	.3203669	.2070826	.5835840	.1280053
#1	2824.008	69930.96	15219.18	1835.780	4344.103
#2	2826.419	69772.45	15190.42	1849.159	4353.635
#3	2831.425	70214.90	15156.34	1857.113	4353.858

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1748-08 Acquired: 4/10/2025 12:42:23 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	-.001669	-.006211	.0676200	.0025811	.0015044	.2080882	.4980144
Stddev	.000891	.000466	.0015588	.0025225	.0014506	.0043924	.0023889
%RSD	53.38983	7.498100	2.305262	97.73150	96.42193	2.110843	.4796921
#1	-.002653	-.006565	.0670211	-.000165	.0023690	.2032785	.4990056
#2	-.000916	-.005683	.0664494	.003113	.0023146	.2118870	.4952894
#3	-.001439	-.006384	.0693895	.004795	-.000170	.2090992	.4997481

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001840	-.000730	37.91300	-.000258	.0082313	.0134764	17.51526
Stddev	.0000362	.000016	.20945	.000173	.0000564	.0003232	.10589
%RSD	19.67286	2.168677	.5524616	66.82943	.6845275	2.398220	.6045506
#1	.0002242	-.000713	38.13277	-.000456	.0081663	.0131883	17.55870
#2	.0001739	-.000744	37.89057	-.000138	.0082655	.0138259	17.39456
#3	.0001539	-.000734	37.71567	-.000181	.0082622	.0134151	17.59251

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.967483	1.726018	.0110325	.0011562	345.3503	-.001824	.3551207
Stddev	.005995	.007892	.0002281	.0002163	1.5944	.000691	.0026215
%RSD	.3046927	.4572319	2.067813	18.70946	.4616772	37.87789	.7382022
#1	1.974259	1.735120	.0112642	.0012804	347.1687	-.001064	.3523922
#2	1.962871	1.721861	.0110252	.0012818	344.1918	-.002414	.3576202
#3	1.965320	1.721074	.0108082	.0009064	344.6905	-.001994	.3553499

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.625980	.0768730	-.000327	-.001558	.0060047	1.334742	.0205999
Stddev	.012712	.0003010	.000209	.000988	.0002141	.005351	.0025488
%RSD	.4840828	.3915534	63.89362	63.42169	3.565912	.4008778	12.37277
#1	2.630241	.0766143	-.000498	-.001674	.0057686	1.339532	.0187506
#2	2.611685	.0772033	-.000094	-.002483	.0061863	1.328968	.0195419
#3	2.636014	.0768013	-.000388	-.000517	.0060593	1.335726	.0235073

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1748-08 Acquired: 4/10/2025 12:42:23 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	.8207269	-.003891	.1841623
Stddev	.0055543	.000253	.0006113
%RSD	.6767548	6.508451	.3319278
#1	.8157179	-.003938	.1838983
#2	.8267002	-.003618	.1837274
#3	.8197626	-.004118	.1848613

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2965.914	72761.00	15245.72	1952.570	4543.259
Stddev	10.109	199.84	114.72	5.099	15.095
%RSD	.3408497	.2746478	.7524585	.2611251	.3322569
#1	2960.364	72533.20	15161.23	1952.594	4533.230
#2	2977.583	72843.04	15199.62	1947.460	4560.620
#3	2959.795	72906.76	15376.32	1957.657	4535.927

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-02 Acquired: 4/10/2025 12:46:46 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	-.004048	-.007199	.0458442	.0004847	.0012055	.0209184	.3026898
Stddev	.001160	.001036	.0012642	.0011521	.0001420	.0020815	.0007947
%RSD	28.66234	14.39635	2.757514	237.7029	11.78291	9.950610	.2625532
#1	-.004562	-.008304	.0472916	.0004163	.0013160	.0231277	.3020735
#2	-.004863	-.007044	.0452849	-.000632	.0012550	.0206334	.3035868
#3	-.002720	-.006248	.0449562	.001670	.0010453	.0189941	.3024091

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000047	.0003364	16.39586	.0209237	-.000203	.0169220	.1389557
Stddev	.000015	.0001334	.02189	.0004592	.000116	.0003609	.0054734
%RSD	31.04066	39.65445	.1335000	2.194658	57.07031	2.132801	3.938937
#1	-.000058	.0004389	16.41758	.0204920	-.000077	.0166388	.1332443
#2	-.000031	.0003847	16.39618	.0214062	-.000229	.0173284	.1394677
#3	-.000054	.0001856	16.37381	.0208730	-.000304	.0167987	.1441551

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0211068	.9487980	.0096155	.0004140	242.5437	.0000184	.2215281
Stddev	.0002266	.0087166	.0003895	.0002061	1.7461	.0006358	.0007919
%RSD	1.073504	.9187034	4.051068	49.78827	.7198962	3447.435	.3574517
#1	.0209458	.9561214	.0096365	.0003909	240.8044	.0005102	.2222169
#2	.0210087	.9391567	.0092158	.0006307	242.5303	-.000700	.2206630
#3	.0213659	.9511158	.0099940	.0002204	244.2964	.000245	.2217045

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9694712	.0479812	-.000022	-.001155	.0007840	.7529021	.0875063
Stddev	.0117109	.0013843	.000279	.000219	.0003767	.0065017	.0023452
%RSD	1.207962	2.885143	1250.995	18.92919	48.04710	.8635474	2.680027
#1	.9773139	.0491427	-.000199	-.000956	.0005914	.7524499	.0895623
#2	.9560097	.0483516	-.000167	-.001389	.0012181	.7466383	.0849520
#3	.9750899	.0464494	.000299	-.001119	.0005426	.7596180	.0880046

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-02 Acquired: 4/10/2025 12:46:46 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	.7085559	-.009613	.0934650
Stddev	.0008279	.000056	.0001143
%RSD	.1168493	.5874152	.1222817
#1	.7089024	-.009574	.0933458
#2	.7091543	-.009678	.0934754
#3	.7076110	-.009587	.0935737

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3073.947	74472.23	14909.05	2000.277	4802.876
Stddev	5.426	126.55	43.94	7.295	10.723
%RSD	.1765313	.1699238	.2947094	.3647116	.2232555
#1	3067.714	74561.71	14858.70	2003.765	4794.753
#2	3077.619	74527.52	14928.89	2005.173	4815.030
#3	3076.508	74327.44	14939.58	1991.892	4798.845

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-04 Acquired: 4/10/2025 12:51:11 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	-.005385	-.009739	.0038831	.0008727	.0007483	.8891898	.0785454
Stddev	.002157	.002283	.0016313	.0015734	.0016266	.0103315	.0007597
%RSD	40.05236	23.43574	42.01102	180.2899	217.3807	1.161899	.9672155
#1	-.006095	-.007720	.0056554	.0008590	-.000031	.8987562	.0778761
#2	-.002963	-.012216	.0035498	.0024529	-.000342	.8905794	.0793712
#3	-.007097	-.009283	.0024442	-.000694	.002618	.8782339	.0783891

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000070	-.000173	174.5504	.0506444	-.000728	.0015576	.3848007
Stddev	.000018	.000015	.3124	.0006649	.000092	.0004110	.0061249
%RSD	25.49434	8.880960	.1789644	1.312784	12.57536	26.38783	1.591715
#1	-.000058	-.000156	174.2828	.0503366	-.000623	.0010856	.3780172
#2	-.000061	-.000185	174.8937	.0501892	-.000792	.0018370	.3864597
#3	-.000090	-.000178	174.4748	.0514074	-.000769	.0017501	.3899252

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0172485	.5866924	.0001472	.0002753	328.6506	-.000760	.0063102
Stddev	.0002256	.0102573	.0001585	.0000727	1.6344	.000182	.0004099
%RSD	1.307877	1.748325	107.6753	26.41545	.4973091	24.00557	6.495957
#1	.0174788	.5825512	.0000360	.0002566	327.2394	-.000588	.0062150
#2	.0170280	.5983729	.0000770	.0002137	328.2709	-.000951	.0059563
#3	.0172387	.5791532	.0003286	.0003555	330.4414	-.000742	.0067593

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.780777	.0023587	.0026712	-.003726	.0205808	2.991401	.0266972
Stddev	.028766	.0001259	.0000810	.000620	.0008093	.017044	.0030764
%RSD	.7608588	5.336624	3.031491	16.64910	3.932123	.5697517	11.52323
#1	3.771073	.0022314	.0025785	-.004417	.0200118	2.994064	.0239029
#2	3.758117	.0024831	.0027068	-.003216	.0202234	2.973183	.0299938
#3	3.813140	.0023616	.0027283	-.003546	.0215073	3.006957	.0261950

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-04 Acquired: 4/10/2025 12:51:11 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	6.359617	-.027305	1.481262
Stddev	.018245	.000503	.010975
%RSD	.2868848	1.842376	.7409005
#1	6.379588	-.026853	1.473670
#2	6.343823	-.027847	1.476270
#3	6.355440	-.027215	1.493845

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2865.171	71853.73	15760.42	1885.774	4401.283
Stddev	5.172	202.17	59.49	6.515	5.708
%RSD	.1805190	.2813606	.3774849	.3454700	.1296820
#1	2870.799	71965.49	15796.33	1889.842	4403.788
#2	2860.627	71975.35	15691.75	1889.219	4394.752
#3	2864.085	71620.36	15793.19	1878.259	4405.310

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-01 Acquired: 4/10/2025 12:55:44 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	.0969117	.0073401	3.468905	-.019729	-.009752	81.26911	1.746116
Stddev	.0058642	.0021032	.004866	.004421	.000689	.08114	.003463
%RSD	6.051114	28.65366	.1402800	22.40722	7.066563	.0998386	.1983506
#1	.0971082	.0081948	3.463288	-.016667	-.010433	81.19899	1.743816
#2	.0909516	.0049441	3.471837	-.024797	-.009055	81.35798	1.750100
#3	.1026752	.0088813	3.471590	-.017723	-.009769	81.25037	1.744434

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065925	.0004988	32.48540	.2268536	.0952006	.5577304	203.8905
Stddev	.0000924	.0000592	.06842	.0013681	.0006248	.0009212	.3101
%RSD	1.400966	11.86041	.2106114	.6030610	.6563004	.1651745	.1520761
#1	.0066860	.0005555	32.51068	.2268579	.0955617	.5583040	203.5325
#2	.0065901	.0005033	32.53757	.2254834	.0955609	.5582194	204.0694
#3	.0065013	.0004375	32.40793	.2282195	.0944791	.5566678	204.0697

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.492922	19.83206	.1655688	.0077749	.9329442	.2732331	1.162181
Stddev	.019379	.03023	.0002560	.0001299	.0120754	.0015450	.003626
%RSD	.4313219	.1524383	.1546010	1.670867	1.294331	.5654500	.3120349
#1	4.493918	19.85077	.1653119	.0078523	.9207464	.2715683	1.166345
#2	4.511784	19.84823	.1658238	.0078474	.9331929	.2746208	1.159716
#3	4.473064	19.79718	.1655706	.0076249	.9448933	.2735103	1.160482

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.341156	.3095818	.0019059	.6700174	1.770967	7.562334	8.769151
Stddev	.046953	.0012240	.0004911	.0000911	.006321	.083888	.016827
%RSD	.7404483	.3953742	25.76762	.0135948	.3569171	1.109292	.1918889
#1	6.308097	.3091939	.0022507	.6701087	1.766545	7.476063	8.785576
#2	6.320471	.3085987	.0021235	.6700169	1.778206	7.567320	8.751949
#3	6.394900	.3109527	.0013436	.6699266	1.768148	7.643617	8.769927

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-01 Acquired: 4/10/2025 12:55:44 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	1.765399	.1740709	.1733574
Stddev	.002168	.0002211	.0005209
%RSD	.1228275	.1270313	.3004686
#1	1.764703	.1738231	.1729885
#2	1.767830	.1742481	.1739532
#3	1.763665	.1741413	.1731303

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3629.538	88326.74	18936.42	2328.091	4873.909
Stddev	9.539	88.55	71.43	10.766	9.040
%RSD	.2628088	.1002498	.3771930	.4624227	.1854737
#1	3633.397	88313.65	18892.10	2317.906	4879.617
#2	3618.674	88421.11	18898.34	2327.012	4863.486
#3	3636.543	88245.47	19018.82	2339.356	4878.623

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV03 Acquired: 4/10/2025 12:59:48 Type: Unk
Method: NON EPA-6010-200.7(v2916) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.892151	4.838343	4.736216	4.987317	5.068789	9.939889
Stddev	.012111	.023932	.013040	.009818	.011844	.016842
%RSD	.2475625	.4946365	.2753184	.1968621	.2336660	.1694431
#1	4.892597	4.849772	4.734488	4.996726	5.071679	9.954179
#2	4.879823	4.810839	4.724126	4.977136	5.055767	9.921320
#3	4.904033	4.854419	4.750033	4.988091	5.078920	9.944169

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.10442	.2350868	2.360539	24.20593	1.015656	2.476167
Stddev	.11123	.0011758	.004899	.08049	.001220	.006297
%RSD	1.100820	.5001504	.2075254	.3325103	.1201424	.2543161
#1	10.04158	.2359369	2.360953	24.26794	1.014360	2.476075
#2	10.03883	.2337450	2.355446	24.11497	1.016783	2.469917
#3	10.23285	.2355785	2.365217	24.23487	1.015824	2.482510

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.288120	5.227525	2.367533	23.90134	2.494595	1.266130
Stddev	.002730	.020775	.008643	.11987	.006615	.000748
%RSD	.2119064	.3974248	.3650459	.5015257	.2651803	.0590862
#1	1.286486	5.224786	2.376619	23.96250	2.497049	1.266543
#2	1.286603	5.249534	2.359415	23.76322	2.487104	1.265266
#3	1.291271	5.208254	2.366567	23.97829	2.499633	1.266580

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.29467	2.466949	2.557179	23.28752	F 4.235824	5.015188
Stddev	.10677	.005151	.006139	.11442	.025588	.010892
%RSD	.4394850	.2087880	.2400668	.4913496	.6040790	.2171735
#1	24.26015	2.469846	2.550359	23.29613	4.253893	5.016241
#2	24.41443	2.470000	2.558915	23.39740	4.206544	5.003808
#3	24.20942	2.461002	2.562263	23.16904	4.247036	5.025515

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV03 Acquired: 4/10/2025 12:59:48 Type: Unk
Method: NON EPA-6010-200.7(v2916) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.794317	4.751049	F 6.663249	4.756902	4.679432	4.761302
Stddev	.015881	.014540	.041293	.028392	.007682	.015056
%RSD	.3312381	.3060470	.6197179	.5968638	.1641742	.3162098
#1	4.798668	4.766822	6.632467	4.749630	4.680703	4.778339
#2	4.776715	4.738180	6.710175	4.732854	4.671193	4.749786
#3	4.807569	4.748145	6.647104	4.788223	4.686399	4.755781

Elem	Sr4077
Units	ppm
Avg	4.905086
Stddev	.039641
%RSD	.8081692
#1	4.944205
#2	4.864942
#3	4.906113

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3129.009	75958.23	15812.63	2014.528	4883.682
Stddev	6.135	114.86	65.73	5.636	11.812
%RSD	.1960640	.1512170	.4156862	.2797672	.2418685
#1	3123.947	75993.26	15755.97	2013.268	4875.635
#2	3135.831	75829.93	15884.70	2009.629	4897.243
#3	3127.247	76051.49	15797.23	2020.688	4878.170

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB03 Acquired: 4/10/2025 13:04:00 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	.0002176	-.002742	.0002164	-.001377	.0003206	-.003526	-.008480
Stddev	.0036532	.000882	.0006303	.001625	.0014865	.003556	.000510
%RSD	1678.910	32.14287	291.2230	118.0178	463.6889	100.8643	6.009603
#1	.0015610	-.003610	.0006700	-.000198	-.000015	-.005375	-.009017
#2	.0030089	-.002769	-.000503	-.003230	.001946	-.005776	-.008003
#3	-.003917	-.001848	.000483	-.000702	-.000970	.000574	-.008418

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000876	.0000137	-.013731	-.000122	-.000062	-.000128	.0003047
Stddev	.0000161	.0000916	.002156	.000578	.000118	.000142	.0055305
%RSD	18.32895	668.3539	15.70242	475.1866	190.3424	110.6528	1814.799
#1	.0000881	-.000029	-.016201	-.000164	.000052	-.000200	.0066511
#2	.0000713	-.000049	-.012768	-.000678	-.000055	.000035	-.003484
#3	.0001034	.000119	-.012224	.000476	-.000183	-.000219	-.002253

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003251	-.007572	-.000295	.0004616	-.161017	-.001416	-.001899
Stddev	.000469	.011116	.000102	.0000595	.011554	.000539	.000294
%RSD	14.42775	146.7972	34.56648	12.88046	7.175367	38.03983	15.46940
#1	-.003194	-.010793	-.000178	.0003949	-.170806	-.001234	-.001606
#2	-.002813	.004798	-.000368	.0005092	-.148273	-.000991	-.001897
#3	-.003746	-.016722	-.000339	.0004806	-.163973	-.002021	-.002193

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.147871	-.003035	-.000047	-.000494	.0010049	.0005456	-.002258
Stddev	.020409	.000493	.000187	.000340	.0005854	.0019266	.000678
%RSD	13.80198	16.23794	399.9722	68.89447	58.24820	353.1063	30.03660
#1	-.160044	-.002654	-.000003	-.000435	.0016112	-.001532	-.001698
#2	-.124309	-.002859	.000114	-.000860	.0009606	.002272	-.002064
#3	-.159259	-.003591	-.000251	-.000187	.0004430	.000897	-.003012

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB03 Acquired: 4/10/2025 13:04:00 Type: Unk
Method: NON EPA-6010-200.7(v2916) 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	-.000675	-.002424	-.000184
Stddev	.002502	.000505	.000015
%RSD	370.4268	20.83882	8.212679
#1	.000390	-.003003	-.000176
#2	.001117	-.002194	-.000201
#3	-.003534	-.002075	-.000174

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3234.173	78836.15	14929.78	2132.032	5343.439
Stddev	9.900	904.01	44.68	21.858	13.185
%RSD	.3061114	1.146700	.2992913	1.025225	.2467466
#1	3228.574	79879.04	14896.64	2156.752	5339.468
#2	3228.342	78353.79	14980.60	2124.080	5332.696
#3	3245.604	78275.63	14912.10	2115.262	5358.153

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-03 Acquired: 4/10/2025 13:07:55 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0365042	-.006803	.1522668	-.028541	.0022720	132.5724
Stddev	.0026383	.001784	.0009579	.003394	.0022782	.3189
%RSD	7.227331	26.22208	.6290909	11.89163	100.2728	.2405774
#1	.0339672	-.006704	.1523399	-.025587	.0048591	132.6831
#2	.0363121	-.005070	.1531861	-.027788	.0013916	132.2129
#3	.0392332	-.008634	.1512745	-.032248	.0005654	132.8213

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6516183	.0053299	-.002726	931.6813	.1628689	.0707356
Stddev	.0036514	.0000269	.000039	10.2009	.0000598	.0005481
%RSD	.5603562	.5053762	1.431201	1.094894	.0366930	.7747941
#1	.6526080	.0053559	-.002682	933.2137	.1628560	.0713290
#2	.6475741	.0053021	-.002754	920.8009	.1628166	.0702484
#3	.6546729	.0053317	-.002743	941.0293	.1629340	.0706294

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2752183	163.2640	3.135728	55.06156	.1740218	.0062503
Stddev	.0003501	.3165	.028162	.41821	.0003596	.0002043
%RSD	.1272098	.1938580	.8980858	.7595346	.2066584	3.268799
#1	.2756166	163.3781	3.143391	55.08582	.1744340	.0063553
#2	.2749593	162.9063	3.104529	54.63174	.1738591	.0063807
#3	.2750791	163.5076	3.159266	55.46711	.1737723	.0060148

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.47139	.2664870	.3103771	39.84601	.3964513	.0023395
Stddev	.05011	.0007905	.0019846	.15641	.0009382	.0002126
%RSD	.4367859	.2966459	.6394252	.3925257	.2366510	9.087554
#1	11.44754	.2658246	.3108659	39.79050	.3960278	.0023162
#2	11.52897	.2662741	.3120716	40.02260	.3957996	.0021395
#3	11.43768	.2673621	.3081937	39.72493	.3975266	.0025628

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-03 Acquired: 4/10/2025 13:07:55 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0020775	5.507309	8.296443	7.114095	F 11.03854	.0206568
Stddev	.0000844	.027336	.031939	.034230	.04792	.0017268
%RSD	4.064518	.4963504	.3849769	.4811570	.4340821	8.359661
#1	.0021718	5.510962	8.284701	7.122399	11.06361	.0211520
#2	.0020091	5.478331	8.332592	7.143408	11.06871	.0220820
#3	.0020516	5.532635	8.272037	7.076476	10.98329	.0187365

Elem	Sr4077
Units	ppm
Avg	5.493578
Stddev	.116150
%RSD	2.114279
#1	5.527488
#2	5.364247
#3	5.588998

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2981.110	72712.32	16149.95	1960.662	4030.367
Stddev	6.637	102.59	132.68	2.874	10.282
%RSD	.2226443	.1410908	.8215493	.1465704	.2551144
#1	2983.636	72654.74	16124.73	1957.989	4028.912
#2	2973.581	72830.77	16293.43	1963.701	4020.890
#3	2986.114	72651.46	16031.69	1960.297	4041.300

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-03DUP Acquired: 4/10/2025 13:12:19 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0357461	-.008958	.1526581	-.024046	.0027478	132.5667
Stddev	.0037934	.001274	.0042131	.002560	.0007298	.5138
%RSD	10.61195	14.21623	2.759832	10.64812	26.55795	.3876149
#1	.0371535	-.010420	.1574683	-.027002	.0020935	132.9195
#2	.0314502	-.008086	.1496233	-.022505	.0026150	132.8035
#3	.0386347	-.008369	.1508826	-.022632	.0035347	131.9772

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6459381	.0053751	-.002631	933.1039	.1646515	.0706502
Stddev	.0026070	.0000527	.000115	13.6958	.0003835	.0001818
%RSD	.4035953	.9812449	4.384775	1.467772	.2329399	.2573336
#1	.6456453	.0053913	-.002529	923.3208	.1647480	.0708283
#2	.6486792	.0053161	-.002756	948.7562	.1642289	.0706574
#3	.6434900	.0054178	-.002610	927.2347	.1649775	.0704649

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2742597	163.8660	3.108428	55.04140	.1744928	.0063486
Stddev	.0014176	.1560	.010568	.14402	.0005816	.0003141
%RSD	.5168962	.0952264	.3399627	.2616547	.3333230	4.947201
#1	.2740417	163.7815	3.103937	54.93271	.1739027	.0067031
#2	.2757737	164.0461	3.120499	55.20475	.1750656	.0062377
#3	.2729637	163.7705	3.100847	54.98675	.1745101	.0061050

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.59738	.2658227	.3119818	39.99986	.3959690	.0020202
Stddev	.02416	.0022236	.0006591	.06001	.0009088	.0005216
%RSD	.2082990	.8364948	.2112514	.1500144	.2295129	25.81878
#1	11.61558	.2647181	.3112445	39.99437	.3964545	.0016196
#2	11.60659	.2683823	.3125136	40.06242	.3965320	.0026100
#3	11.56997	.2643677	.3121875	39.94279	.3949206	.0018310

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-03DUP Acquired: 4/10/2025 13:12:19 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0035057	5.484546	8.514816	7.081342	F 10.97772	.0202506
Stddev	.0013604	.020863	.038040	.009981	.02329	.0017410
%RSD	38.80396	.3804047	.4467532	.1409485	.2121968	8.597168
#1	.0024712	5.484830	8.544197	7.088603	10.95381	.0217343
#2	.0029993	5.505266	8.471848	7.069961	10.97901	.0183340
#3	.0050467	5.463542	8.528403	7.085463	11.00035	.0206834

Elem	Sr4077
Units	ppm
Avg	5.507559
Stddev	.088484
%RSD	1.606586
#1	5.578796
#2	5.535369
#3	5.408511

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2961.376	71899.80	16161.90	1931.673	4024.419
Stddev	2.549	173.55	62.84	5.830	3.188
%RSD	.0860879	.2413783	.3888036	.3018318	.0792186
#1	2962.997	72075.26	16195.06	1925.667	4026.662
#2	2958.438	71728.22	16089.43	1932.043	4020.769
#3	2962.694	71895.92	16201.22	1937.310	4025.824

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-03LX5 Acquired: 4/10/2025 13:16:41 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0038112	-.002763	.0306055	-.011650	-.002003	27.91626	.1203974
Stddev	.0016151	.000527	.0018665	.002028	.000728	.10512	.0012442
%RSD	42.37779	19.06767	6.098558	17.40358	36.35996	.3765698	1.033412
#1	.0053605	-.003157	.0320069	-.013490	-.001188	28.03570	.1218311
#2	.0021374	-.002968	.0284868	-.009476	-.002230	27.87531	.1196005
#3	.0039357	-.002165	.0313228	-.011984	-.002591	27.83778	.1197605

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013346	-.000806	203.2928	.0355586	.0141737	.0638923	30.45526
Stddev	.0000796	.000071	.7837	.0003177	.0000915	.0000781	.14620
%RSD	5.967040	8.856277	.3855017	.8935379	.6454019	.1222783	.4800552
#1	.0012969	-.000887	204.1670	.0352587	.0140816	.0638194	30.34043
#2	.0012808	-.000753	202.6531	.0358916	.0142646	.0639748	30.61985
#3	.0014261	-.000778	203.0584	.0355254	.0141750	.0638828	30.40549

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6833721	12.03412	.0353435	.0010650	1.874172	.0571271	.0636998
Stddev	.0029675	.06958	.0001625	.0001424	.024191	.0013015	.0005246
%RSD	.4342381	.5782053	.4597677	13.37390	1.290733	2.278293	.8235827
#1	.6861240	12.10262	.0355018	.0011934	1.861497	.0586281	.0631250
#2	.6802281	11.96350	.0353515	.0009118	1.902066	.0564406	.0638215
#3	.6837642	12.03623	.0351771	.0010898	1.858953	.0563125	.0641529

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.481377	.0721915	.0004066	-.004508	1.178967	1.553171	1.355197
Stddev	.031047	.0004035	.0003017	.000317	.007460	.007803	.006992
%RSD	.4790153	.5589586	74.19556	7.026393	.6327283	.5024138	.5159454
#1	6.462577	.0726480	.0006840	-.004413	1.187581	1.555928	1.347943
#2	6.517212	.0720443	.0000854	-.004861	1.174624	1.544363	1.355754
#3	6.464342	.0718823	.0004504	-.004250	1.174697	1.559221	1.361894

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-03LX5 Acquired: 4/10/2025 13:16:41 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	2.082080	-.002710	1.141462
Stddev	.004215	.001010	.014580
%RSD	.2024526	37.27686	1.277335
#1	2.077280	-.003065	1.153908
#2	2.085176	-.003495	1.125420
#3	2.083786	-.001570	1.145057

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3040.778	74654.48	13926.97	1986.081	4649.262
Stddev	6.789	440.70	59.85	9.658	10.700
%RSD	.2232700	.5903129	.4297288	.4862753	.2301435
#1	3045.899	75163.05	13893.96	1997.159	4658.138
#2	3043.359	74385.16	13996.05	1979.437	4652.266
#3	3033.077	74415.22	13890.89	1981.646	4637.381

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-03A Acquired: 4/10/2025 13:29:40 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.7604654	1.730631	1.021775	1.722692	.7461294	133.7819
Stddev	.0088386	.018328	.003926	.011819	.0050413	.7121
%RSD	1.162266	1.059062	.3842789	.6860774	.6756608	.5322708
#1	.7568982	1.712280	1.020360	1.710646	.7422118	133.1213
#2	.7539678	1.730677	1.018753	1.723158	.7443593	133.6884
#3	.7705302	1.748937	1.026213	1.734270	.7518170	134.5362

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7981671	.1638248	.1802954	929.6730	.5000912	.2549558
Stddev	.0032452	.0004687	.0017601	8.3884	.0006802	.0021778
%RSD	.4065761	.2861043	.9762405	.9022947	.1360119	.8541668
#1	.7944967	.1633649	.1790277	925.9078	.4993829	.2533570
#2	.8006561	.1638077	.1795535	923.8269	.5007393	.2540742
#3	.7993484	.1643018	.1823050	939.2843	.5001515	.2574361

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5258475	155.5728	3.261713	56.81695	.6296309	.0752627
Stddev	.0029323	.2963	.012773	.18599	.0050726	.0004991
%RSD	.5576272	.1904756	.3915956	.3273582	.8056451	.6631981
#1	.5249942	155.5867	3.248849	56.60663	.6258506	.0748033
#2	.5234366	155.8620	3.274392	56.88444	.6276464	.0751911
#3	.5291118	155.2698	3.261898	56.95978	.6353958	.0757938

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.87821	.5087497	.4890540	47.25378	.5926228	.3574507
Stddev	.04528	.0041499	.0006360	.06733	.0013004	.0012227
%RSD	.3262463	.8156988	.1300574	.1424883	.2194284	.3420678
#1	13.84044	.5039723	.4884994	47.17742	.5918999	.3571757
#2	13.86581	.5114599	.4897483	47.30462	.5918446	.3563890
#3	13.92840	.5108170	.4889143	47.27930	.5941241	.3587876

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-03A Acquired: 4/10/2025 13:29:40 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.6491773	5.602191	9.555572	F 13.01928	F 10.86209	.1979933
Stddev	.0038727	.022388	.057303	.10184	.07381	.0010198
%RSD	.5965528	.3996314	.5996806	.7822139	.6794937	.5150839
#1	.6474472	5.576722	9.497132	12.94150	10.81296	.1974672
#2	.6464713	5.611088	9.557918	12.98180	10.82635	.1991687
#3	.6536135	5.618764	9.611665	13.13455	10.94696	.1973439

Elem	Sr4077
Units	ppm
Avg	5.523581
Stddev	.072608
%RSD	1.314509
#1	5.489513
#2	5.606958
#3	5.474271

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2968.349	72181.27	15052.98	1940.100	4015.536
Stddev	12.422	25.68	36.42	7.934	24.042
%RSD	.4184935	.0355770	.2419671	.4089300	.5987144
#1	2978.656	72201.90	15090.86	1948.283	4035.441
#2	2971.834	72189.40	15049.87	1939.575	4022.342
#3	2954.556	72152.51	15018.21	1932.442	3988.825

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1715-01DUP Acquired: 4/10/2025 13:33:56 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.000556	-.008979	-.000925	.0043815	-.002889	16.49535
Stddev	.001456	.001012	.000880	.0015784	.002387	.02163
%RSD	262.0591	11.27639	95.06192	36.02562	82.61202	.1311169
#1	-.001290	-.008392	-.000173	.0049076	-.004357	16.51691
#2	.001121	-.010148	-.001893	.0056296	-.004176	16.49547
#3	-.001498	-.008397	-.000710	.0026071	-.000135	16.47366

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009467	-.000060	-.000224	10.23837	.9480934	.0102482
Stddev	.000226	.000063	.000147	.04653	.0022108	.0001009
%RSD	2.387814	104.6281	65.60223	.4544432	.2331859	.9848316
#1	-.009209	-.000037	-.000311	10.27355	.9468355	.0103035
#2	-.009631	-.000012	-.000054	10.25595	.9506461	.0101317
#3	-.009560	-.000131	-.000306	10.18562	.9467985	.0103094

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0211439	.5230362	.0119327	2.232853	.0371260	.0004421
Stddev	.0003876	.0037059	.0003124	.007037	.0003425	.0001233
%RSD	1.833099	.7085363	2.618018	.3151382	.9225378	27.89720
#1	.0215429	.5201733	.0121919	2.240882	.0369353	.0005775
#2	.0207689	.5217134	.0120203	2.229919	.0369213	.0004126
#3	.0211198	.5272220	.0115858	2.227758	.0375214	.0003362

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1845.649	-.000450	1.244628	185.3652	5.833027	.0411036
Stddev	12.755	.001616	.006527	1.3927	.041642	.0001553
%RSD	.6910667	359.4553	.5244000	.7513134	.7138999	.3778720
#1	1856.876	-.002129	1.249912	185.3057	5.845383	.0412824
#2	1848.289	.001095	1.246642	184.0032	5.867092	.0410256
#3	1831.780	-.000315	1.237332	186.7867	5.786605	.0410027

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1715-01DUP Acquired: 4/10/2025 13:33:56 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0391927	.0017970	.7682323	5.319044	F 836.2307	-.001166
Stddev	.0004737	.0003590	.0076720	.003374	2.1030	.000335
%RSD	1.208574	19.97606	.9986588	.0634248	.2514874	28.68890
#1	.0387540	.0016338	.7698012	5.317007	838.5175	-.001302
#2	.0391290	.0022086	.7598971	5.317188	834.3798	-.000785
#3	.0396950	.0015487	.7749986	5.322938	835.7947	-.001411

Elem	Sr4077
Units	ppm
Avg	.0453370
Stddev	.0002221
%RSD	.4898769
#1	.0455490
#2	.0451060
#3	.0453561

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2651.582	63643.03	13451.62	1714.613	3854.416
Stddev	7.188	101.50	99.71	10.233	7.718
%RSD	.2710955	.1594786	.7412671	.5968259	.2002442
#1	2658.234	63585.00	13373.11	1703.387	3862.701
#2	2643.956	63760.23	13417.94	1723.421	3853.118
#3	2652.557	63583.86	13563.81	1717.030	3847.429

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1715-01LX5 Acquired: 4/10/2025 13:38:17 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0003485	-.003793	-.001514	-.001568	-.001452	3.325653
Stddev	.0019904	.000976	.001046	.000964	.001103	.010394
%RSD	571.1585	25.73355	69.05894	61.49269	75.98451	.3125548
#1	.0025081	-.004364	-.000787	-.000456	-.001509	3.333058
#2	-.001412	-.004349	-.001043	-.002089	-.000321	3.330131
#3	-.000050	-.002666	-.002712	-.002160	-.002525	3.313770

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.011263	-.000041	-.000170	2.118751	.1944825	.0016630
Stddev	.000666	.000043	.000066	.006203	.0003974	.0003869
%RSD	5.912923	105.9071	38.53198	.2927855	.2043324	23.26189
#1	-.011676	-.000058	-.000245	2.115321	.1947451	.0019736
#2	-.010495	.000008	-.000124	2.115019	.1940254	.0017857
#3	-.011618	-.000073	-.000141	2.125912	.1946772	.0012297

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043826	.1102356	.0000833	.4590098	.0072149	.0005846
Stddev	.0001967	.0030422	.0002400	.0056678	.0002211	.0001590
%RSD	4.488253	2.759717	288.0652	1.234777	3.064522	27.19983
#1	.0042827	.1067994	.0003377	.4655334	.0069623	.0005213
#2	.0046092	.1113218	.0000514	.4562004	.0073089	.0007655
#3	.0042559	.1125856	-.000139	.4552955	.0073734	.0004670

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	420.1929	-.001398	.2428415	37.83285	1.196743	.0078096
Stddev	2.2153	.000945	.0004437	.07044	.002888	.0000421
%RSD	.5272171	67.61129	.1827078	.1861973	.2413066	.5395924
#1	418.5407	-.002489	.2433233	37.87872	1.193750	.0078183
#2	422.7102	-.000852	.2427516	37.75174	1.199512	.0077638
#3	419.3277	-.000852	.2424497	37.86809	1.196968	.0078467

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1715-01LX5 Acquired: 4/10/2025 13:38:17 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0071603	.0016313	.1707250	.9914009	F 192.0485	.0048801
Stddev	.0005157	.0000851	.0011849	.0034099	1.3237	.0008097
%RSD	7.201845	5.217004	.6940588	.3439442	.6892391	16.59213
#1	.0071346	.0015851	.1706764	.9930494	193.3545	.0056968
#2	.0076883	.0015792	.1695651	.9936733	192.0830	.0040776
#3	.0066579	.0017295	.1719335	.9874800	190.7079	.0048659

Elem	Sr4077
Units	ppm
Avg	.0093607
Stddev	.0000567
%RSD	.6058527
#1	.0093015
#2	.0094146
#3	.0093661

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2941.862	70862.32	15842.39	1901.641	4502.864
Stddev	15.864	151.74	50.00	10.412	19.916
%RSD	.5392365	.2141351	.3155949	.5475202	.4423056
#1	2925.555	70995.91	15898.63	1912.820	4484.128
#2	2942.789	70893.72	15802.97	1892.219	4500.682
#3	2957.242	70697.34	15825.58	1899.885	4523.781

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-04 Acquired: 4/10/2025 13:42:39 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.008113	-.007856	.3491737	.0024441	.0023363	.0184489	.3488877
Stddev	.002191	.002048	.0003568	.0017792	.0012577	.0006032	.0035717
%RSD	27.00165	26.07320	.1021707	72.79482	53.83390	3.269397	1.023741
#1	-.008604	-.006172	.3489358	.0006857	.0036015	.0191252	.3479322
#2	-.010016	-.010136	.3495839	.0042433	.0023211	.0182546	.3528400
#3	-.005718	-.007260	.3490014	.0024033	.0010862	.0179668	.3458909

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000207	.0049639	24.65675	-.000565	.0072588	3.234120	.0740941
Stddev	.0000236	.0000958	.21643	.000044	.0002479	.012305	.0026887
%RSD	114.3184	1.930421	.8777811	7.840456	3.415349	.3804874	3.628746
#1	-.000006	.0049084	24.66507	-.000609	.0069840	3.221612	.0769519
#2	.000031	.0049087	24.86891	-.000565	.0074656	3.246213	.0737160
#3	.000037	.0050745	24.43628	-.000521	.0073268	3.234535	.0716145

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7007293	1.432744	.0573981	.0004870	323.3304	-.001213	4.215091
Stddev	.0058971	.015588	.0002250	.0003410	4.7303	.001469	.009331
%RSD	.8415690	1.087995	.3920460	70.00639	1.462994	121.0446	.2213652
#1	.6990403	1.445234	.0572946	.0007173	317.9052	.000410	4.218086
#2	.7072866	1.437723	.0572433	.0006485	325.4942	-.002451	4.204631
#3	.6958609	1.415274	.0576562	.0000953	326.5919	-.001599	4.222557

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.489369	.0448351	-.000743	.0008751	.0007620	.6181892	.0029093
Stddev	.021234	.0009721	.000338	.0008852	.0001349	.0032968	.0017302
%RSD	1.425709	2.168263	45.56966	101.1546	17.70237	.5333028	59.47360
#1	1.465200	.0452531	-.000778	.0014414	.0009142	.6180879	.0016842
#2	1.497879	.0455284	-.000388	-.000145	.0007149	.6149442	.0021550
#3	1.505028	.0437239	-.001062	.001329	.0006570	.6215355	.0048886

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-04 Acquired: 4/10/2025 13:42:39 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.8978479	-.004534	.1202925
Stddev	.0067091	.000148	.0011879
%RSD	.7472401	3.257965	.9875483
#1	.8901135	-.004608	.1198088
#2	.9020976	-.004630	.1216460
#3	.9013326	-.004364	.1194228

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2973.053	72223.64	14306.26	1959.118	4584.181
Stddev	10.360	139.26	126.59	7.381	16.922
%RSD	.3484600	.1928157	.8848248	.3767259	.3691386
#1	2981.763	72213.88	14245.85	1957.335	4603.417
#2	2961.596	72367.52	14221.19	1967.226	4571.592
#3	2975.799	72089.51	14451.73	1952.792	4577.534

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-12 Acquired: 4/10/2025 13:47:02 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.007139	-.007113	.1770749	.0025860	.0026521	-.008568	.1534269
Stddev	.003270	.001181	.0015723	.0019072	.0014447	.007171	.0010902
%RSD	45.79933	16.60093	.8879214	73.75344	54.47585	83.68890	.7105403
#1	-.009721	-.006408	.1780081	.0009315	.0009899	-.002300	.1534540
#2	-.008234	-.008476	.1779569	.0021544	.0033602	-.016387	.1545032
#3	-.003463	-.006455	.1752596	.0046720	.0036061	-.007017	.1523234

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000121	.0022175	98.29282	.0060345	.0105148	.0581473	.1533704
Stddev	.000017	.0001190	.16192	.0003555	.0002165	.0005300	.0019987
%RSD	14.24549	5.366553	.1647280	5.890801	2.058995	.9115360	1.303163
#1	-.000124	.0020841	98.11032	.0057854	.0102770	.0581401	.1540800
#2	-.000137	.0023128	98.41924	.0064416	.0107004	.0586809	.1549174
#3	-.000103	.0022555	98.34891	.0058766	.0105671	.0576209	.1511137

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.203075	3.060189	.0755974	.0001906	380.4688	-.000870	1.230968
Stddev	.004302	.033534	.0005691	.0002757	.3989	.002181	.002230
%RSD	.3576087	1.095803	.7528448	144.6488	.1048380	250.6874	.1811807
#1	1.199227	3.030836	.0759097	-.000111	380.0569	-.000862	1.229039
#2	1.207720	3.052996	.0759422	.000253	380.4964	-.003055	1.233410
#3	1.202278	3.096736	.0749405	.000430	380.8532	.001307	1.230454

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.282840	.0569115	.0002953	-.004274	-.001535	.9807150	.0033474
Stddev	.049390	.0008449	.0001764	.000671	.000452	.0079264	.0019353
%RSD	.6781722	1.484645	59.74706	15.70110	29.48085	.8082315	57.81370
#1	7.305061	.0578349	.0004340	-.005000	-.001813	.9857032	.0017908
#2	7.317216	.0561770	.0003551	-.003677	-.001013	.9848667	.0027372
#3	7.226243	.0567226	.0000967	-.004145	-.001778	.9715751	.0055142

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-12 Acquired: 4/10/2025 13:47:02 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	8.407517	.0268069	.3557818
Stddev	.021464	.0011680	.0006439
%RSD	.2552929	4.357176	.1809804
#1	8.426101	.0281531	.3563051
#2	8.412426	.0260615	.3559775
#3	8.384024	.0262063	.3550628

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2928.747	72308.85	14553.37	1950.440	4452.487
Stddev	6.150	32.10	34.04	7.980	10.499
%RSD	.2099891	.0443910	.2338798	.4091247	.2357947
#1	2924.604	72343.25	14561.29	1946.141	4446.200
#2	2925.824	72303.58	14582.75	1945.531	4446.654
#3	2935.814	72279.71	14516.07	1959.647	4464.607

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV04 Acquired: 4/10/2025 13:51:25 Type: Unk
Method: NON EPA-6010-200.7(v2917) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.875554	4.979611	4.762253	4.959153	5.043739	9.988176
Stddev	.021413	.031229	.010380	.013895	.008710	.015243
%RSD	.4391835	.6271396	.2179662	.2801878	.1726850	.1526073
#1	4.882252	4.944104	4.755172	4.954726	5.038977	9.998552
#2	4.851593	4.991912	4.757418	4.948011	5.038450	9.970676
#3	4.892816	5.002815	4.774168	4.974722	5.053792	9.995301

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.603583	.2389479	2.377172	24.16086	1.024853	2.488995
Stddev	.031214	.0008488	.006474	.09195	.003535	.006088
%RSD	.3250219	.3552440	.2723601	.3805863	.3449733	.2445829
#1	9.581681	.2393370	2.375409	24.25398	1.021163	2.490728
#2	9.589745	.2379742	2.371761	24.07012	1.025185	2.482229
#3	9.639324	.2395324	2.384345	24.15847	1.028210	2.494029

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.290233	4.982074	2.377575	24.41826	2.504217	1.274795
Stddev	.003713	.020752	.012668	.07881	.006491	.002321
%RSD	.2878074	.4165306	.5328214	.3227299	.2591953	.1820583
#1	1.292210	4.961969	2.390148	24.39995	2.503511	1.272463
#2	1.285949	5.003417	2.364813	24.35021	2.498108	1.277105
#3	1.292539	4.980837	2.377762	24.50460	2.511032	1.274818

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.42188	2.452780	2.567442	25.35928	4.792520	5.030539
Stddev	.12313	.010518	.006251	.06483	.029760	.013853
%RSD	.4660248	.4288042	.2434542	.2556389	.6209654	.2753697
#1	26.35951	2.459517	2.571466	25.33035	4.811325	5.030369
#2	26.56372	2.440660	2.570619	25.43354	4.758209	5.016773
#3	26.34242	2.458162	2.560241	25.31396	4.808026	5.044476

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV04 Acquired: 4/10/2025 13:51:25 Type: Unk
Method: NON EPA-6010-200.7(v2917) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.846730	4.681728	F 5.983082	4.915531	4.742605	4.677474
Stddev	.014895	.009377	.048700	.006597	.018935	.012185
%RSD	.3073239	.2002829	.8139626	.1342095	.3992508	.2605005
#1	4.839076	4.692480	5.929066	4.914587	4.730197	4.688623
#2	4.837218	4.675247	5.996545	4.909457	4.733220	4.679333
#3	4.863896	4.677457	6.023634	4.922549	4.764400	4.664467

Elem	Sr4077
Units	ppm
Avg	4.698606
Stddev	.018104
%RSD	.3853030
#1	4.712891
#2	4.704681
#3	4.678246

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3135.616	75100.96	13895.98	2021.083	4873.627
Stddev	8.532	155.83	68.17	4.989	10.666
%RSD	.2721042	.2074888	.4905717	.2468357	.2188596
#1	3129.462	75264.61	13854.35	2015.507	4867.838
#2	3145.356	75083.89	13974.65	2022.620	4885.936
#3	3132.030	74954.37	13858.94	2025.122	4867.106

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB04 Acquired: 4/10/2025 13:55:35 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0022062	-.001282	-.000145	-.002847	.0000276	-.004866	-.008262
Stddev	.0005662	.000758	.000332	.000136	.0020444	.003110	.000550
%RSD	25.66338	59.11046	228.8995	4.764205	7418.810	63.91271	6.651056
#1	.0015524	-.000487	-.000006	-.002830	.0023514	-.001488	-.008829
#2	.0025324	-.001996	.000095	-.002720	-.000775	-.005500	-.007732
#3	.0025338	-.001362	-.000524	-.002990	-.001494	-.007610	-.008227

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000468	.0000105	-.017397	.0000700	-.000002	.0000692	-.006876
Stddev	.0000233	.0000607	.005989	.0001029	.000200	.0000890	.004667
%RSD	49.79965	579.2829	34.42307	147.0358	8033.362	128.6063	67.87367
#1	.0000614	.0000805	-.011240	-.000047	.000181	.0000148	-.008169
#2	.0000199	-.000028	-.023201	.000112	.000027	.0000209	-.010760
#3	.0000591	-.000021	-.017750	.000145	-.000216	.0001720	-.001699

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003636	-.016177	-.000288	.0007468	.0030245	-.001646	-.002024
Stddev	.000120	.012332	.000025	.0002937	.0021971	.001257	.000058
%RSD	3.291854	76.23175	8.840193	39.32008	72.64303	76.37534	2.851549
#1	-.003541	-.026898	-.000259	.0009367	.0045106	-.000257	-.001972
#2	-.003598	-.018931	-.000308	.0004086	.0005008	-.002705	-.002086
#3	-.003770	-.002700	-.000297	.0008951	.0040622	-.001976	-.002014

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.093940	-.001696	.0002482	-.000681	.0018172	.0074351	-.001894
Stddev	.028683	.000407	.0000569	.000426	.0003185	.0087410	.002712
%RSD	30.53270	23.99789	22.91438	62.64281	17.52543	117.5649	143.2114
#1	-.126844	-.002119	.0001865	-.000444	.0015597	.0173462	-.003285
#2	-.074219	-.001663	.0002596	-.000425	.0021734	.0041326	.001232
#3	-.080758	-.001307	.0002985	-.001173	.0017186	.0008264	-.003628

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB04 Acquired: 4/10/2025 13:55:35 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0044712	-.001779	-.000222
Stddev	.0029106	.000429	.000048
%RSD	65.09599	24.14204	21.44138
#1	.0074486	-.002045	-.000197
#2	.0043327	-.001283	-.000278
#3	.0016324	-.002007	-.000193

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3237.444	77585.93	15167.90	2084.352	5421.033
Stddev	2.556	264.39	38.30	13.112	7.747
%RSD	.0789385	.3407740	.2524865	.6290674	.1429064
#1	3235.749	77353.56	15124.38	2083.858	5417.795
#2	3240.383	77873.59	15196.46	2097.703	5429.874
#3	3236.199	77530.63	15182.87	2071.493	5415.431

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1715-01MS Acquired: 4/10/2025 13:59:55 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.7364156	1.532758	.7835984	1.931032	.5618590	17.74489
Stddev	.0040801	.014362	.0025428	.006108	.0041439	.01393
%RSD	.5540423	.9369950	.3245073	.3163181	.7375267	.0784954
#1	.7372461	1.549040	.7808507	1.931383	.5628436	17.74933
#2	.7319841	1.521892	.7858687	1.924756	.5573115	17.72929
#3	.7400165	1.527340	.7840758	1.936957	.5654219	17.75606

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1456819	.1415568	.1709481	10.78888	1.238268	.1809785
Stddev	.0013062	.0002919	.0001621	.03928	.005590	.0010721
%RSD	.8966028	.2062308	.0948275	.3641206	.4514402	.5923816
#1	.1446298	.1417827	.1708421	10.74414	1.242811	.1803980
#2	.1452721	.1416606	.1708675	10.81773	1.239969	.1803218
#3	.1471439	.1412272	.1711347	10.80478	1.232025	.1822156

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2596378	3.345660	.1715771	3.646682	.4629158	.0703737
Stddev	.0023724	.032374	.0007250	.033125	.0007766	.0006234
%RSD	.9137281	.9676386	.4225327	.9083490	.1677565	.8858332
#1	.2589863	3.308625	.1708322	3.609277	.4634547	.0700701
#2	.2576592	3.359776	.1716186	3.658463	.4620257	.0710907
#3	.2622679	3.368579	.1722804	3.672305	.4632670	.0699603

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1896.988	.2403410	1.368096	200.5823	5.490068	.3081928
Stddev	9.041	.0023107	.008677	.7434	.006961	.0016007
%RSD	.4765953	.9614423	.6342617	.3706427	.1267932	.5193710
#1	1886.563	.2407060	1.358258	199.8521	5.495454	.3080761
#2	1902.670	.2424474	1.371368	200.5565	5.482207	.3066537
#3	1901.732	.2378694	1.374661	201.3383	5.492541	.3098487

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1715-01MS Acquired: 4/10/2025 13:59:55 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.4839587	.1214783	1.394477	F 10.75191	F 817.7367	.1808592
Stddev	.0007663	.0004799	.007993	.04789	2.0956	.0009515
%RSD	.1583459	.3950360	.5731573	.4454290	.2562712	.5261123
#1	.4848322	.1218789	1.385291	10.77075	819.4724	.1807332
#2	.4833993	.1209465	1.398291	10.69746	815.4087	.1799769
#3	.4836447	.1216096	1.399848	10.78752	818.3290	.1818674

Elem	Sr4077
Units	ppm
Avg	.2064297
Stddev	.0008341
%RSD	.4040491
#1	.2057627
#2	.2061616
#3	.2073649

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2674.416	65014.18	14301.12	1720.102	3873.812
Stddev	12.822	85.72	44.78	7.993	10.226
%RSD	.4794317	.1318443	.3131527	.4646882	.2639753
#1	2667.981	64916.93	14254.64	1729.133	3868.881
#2	2689.181	65046.86	14304.72	1717.235	3885.569
#3	2666.086	65078.76	14343.99	1713.938	3866.985

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1715-01MSD Acquired: 4/10/2025 14:07:00 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.7265332	1.512685	.7846566	1.904253	.5515046	17.63978
Stddev	.0061081	.016386	.0044277	.003255	.0025573	.02619
%RSD	.8407218	1.083224	.5642845	.1709121	.4636884	.1484777
#1	.7209149	1.503338	.7828572	1.902414	.5499347	17.65516
#2	.7330349	1.503111	.7814120	1.902334	.5501237	17.60954
#3	.7256497	1.531605	.7897008	1.908011	.5544555	17.65463

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1479587	.1461069	.1706990	10.81071	1.239303	.1808120
Stddev	.0015439	.0005859	.0009793	.04654	.003526	.0007001
%RSD	1.043440	.4010153	.5737175	.4305022	.2844907	.3871855
#1	.1463888	.1454305	.1699833	10.76496	1.237153	.1801456
#2	.1480121	.1464571	.1702986	10.80915	1.243372	.1807489
#3	.1494752	.1464331	.1718150	10.85800	1.237385	.1815415

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2589951	3.335575	.1716173	3.658208	.4621891	.0704360
Stddev	.0014052	.004379	.0005559	.019359	.0019314	.0002692
%RSD	.5425618	.1312916	.3239261	.5291831	.4178807	.3821521
#1	.2584575	3.340021	.1720853	3.652233	.4605051	.0706496
#2	.2579380	3.331266	.1710028	3.679849	.4617648	.0705246
#3	.2605897	3.335438	.1717637	3.642540	.4642973	.0701337

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1863.082	.2422608	1.365320	197.7329	5.633063	.3064643
Stddev	2.998	.0010917	.009597	.1474	.024008	.0011363
%RSD	.1609148	.4506423	.7029081	.0745648	.4261932	.3707684
#1	1863.608	.2421440	1.359647	197.6806	5.616272	.3054364
#2	1859.855	.2434063	1.376401	197.6188	5.660562	.3062720
#3	1865.782	.2412322	1.359914	197.8994	5.622356	.3076844

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1715-01MSD Acquired: 4/10/2025 14:07:00 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.4815134	.1216073	1.356323	F 10.84543	F 819.2797	.1801431
Stddev	.0016710	.0006348	.007604	.06321	3.8290	.0008685
%RSD	.3470368	.5219944	.5606171	.5827888	.4673609	.4821006
#1	.4812093	.1218891	1.348547	10.79932	816.9023	.1801223
#2	.4800152	.1208804	1.356679	10.81950	817.2401	.1792852
#3	.4833155	.1220524	1.363742	10.91748	823.6968	.1810217

Elem	Sr4077
Units	ppm
Avg	.2065215
Stddev	.0003869
%RSD	.1873376
#1	.2062912
#2	.2063051
#3	.2069682

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2698.868	65216.10	14135.89	1769.199	3899.140
Stddev	1.813	101.28	12.15	4.535	7.004
%RSD	.0671604	.1553024	.0859285	.2563358	.1796277
#1	2700.919	65124.40	14142.84	1769.581	3904.596
#2	2698.203	65199.08	14121.86	1764.485	3901.581
#3	2697.481	65324.81	14142.96	1773.531	3891.242

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1715-01A Acquired: 4/10/2025 14:11:12 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.8319907	1.724011	.8855440	2.186949	.8404016	18.03968
Stddev	.0008569	.014206	.0024870	.010607	.0056058	.02076
%RSD	.1029924	.8240023	.2808410	.4850196	.6670371	.1150749
#1	.8312182	1.722177	.8838987	2.182641	.8371172	18.02092
#2	.8318414	1.739045	.8884050	2.179174	.8372133	18.03613
#3	.8329124	1.710812	.8843283	2.199033	.8468744	18.06198

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1684366	.1631876	.1924087	11.01701	1.293263	.2022425
Stddev	.0012001	.0009302	.0006090	.05051	.006024	.0004791
%RSD	.7125158	.5700259	.3164881	.4584494	.4657769	.2368917
#1	.1673230	.1623692	.1918693	10.95914	1.293263	.2017846
#2	.1682790	.1629943	.1930690	11.05216	1.287239	.2027403
#3	.1697077	.1641992	.1922876	11.03975	1.299286	.2022026

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2925142	3.753137	.2078694	3.896149	.5174754	.0667696
Stddev	.0008536	.013241	.0012679	.026389	.0021003	.0010513
%RSD	.2918073	.3528055	.6099379	.6773102	.4058730	1.574454
#1	.2931453	3.741011	.2065065	3.884513	.5150634	.0674203
#2	.2915430	3.751136	.2080879	3.877577	.5184623	.0673317
#3	.2928543	3.767265	.2090138	3.926356	.5189004	.0655568

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1894.418	.2722241	1.410249	202.4805	5.664449	.4416959
Stddev	11.360	.0024406	.002802	.6020	.024955	.0006554
%RSD	.5996718	.8965353	.1987125	.2973329	.4405484	.1483813
#1	1905.617	.2699614	1.407455	203.0874	5.635674	.4421426
#2	1882.903	.2719006	1.413060	201.8835	5.677507	.4409435
#3	1894.734	.2748103	1.410232	202.4706	5.680165	.4420015

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1715-01A Acquired: 4/10/2025 14:11:12 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.7126780	.1824752	1.796801	F 11.66698	F 825.7018	.2027063
Stddev	.0042134	.0009159	.011276	.04201	3.1234	.0007914
%RSD	.5912045	.5019071	.6275627	.3601096	.3782732	.3904238
#1	.7078361	.1831271	1.784406	11.62329	824.2216	.2033346
#2	.7155109	.1814281	1.799546	11.70709	829.2901	.2018174
#3	.7146869	.1828704	1.806451	11.67058	823.5937	.2029668

Elem	Sr4077
Units	ppm
Avg	.2285868
Stddev	.0006371
%RSD	.2786893
#1	.2284385
#2	.2280370
#3	.2292849

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2667.284	64892.69	14237.21	1744.002	3875.426
Stddev	8.038	51.26	41.04	3.477	4.229
%RSD	.3013367	.0789843	.2882334	.1993458	.1091132
#1	2670.126	64837.00	14284.02	1744.079	3880.255
#2	2673.514	64903.18	14220.21	1740.488	3873.631
#3	2658.211	64937.89	14207.42	1747.440	3872.390

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1744-01 Acquired: 4/10/2025 14:15:22 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0271334	.0040979	.2601242	-.015217	-.000353	81.80127	.5744161
Stddev	.0010628	.0020597	.0017617	.001139	.000870	.09486	.0017932
%RSD	3.916791	50.26273	.6772672	7.484554	246.6564	.1159628	.3121850
#1	.0260018	.0038292	.2590299	-.013966	-.000050	81.72084	.5723577
#2	.0281104	.0021857	.2591861	-.015490	.000326	81.90588	.5756401
#3	.0272879	.0062788	.2621564	-.016194	-.001333	81.77708	.5752505

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060466	-.004868	18.65998	.1504957	.0710951	.2243769	172.1056
Stddev	.0000523	.000131	.05008	.0011937	.0001128	.0014092	.2509
%RSD	.8649724	2.696132	.2683962	.7931791	.1586394	.6280432	.1457898
#1	.0060718	-.004873	18.62174	.1516811	.0711641	.2259408	172.2035
#2	.0060816	-.004734	18.71667	.1492938	.0711563	.2232057	171.8206
#3	.0059865	-.004996	18.64152	.1505121	.0709650	.2239842	172.2929

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.625795	21.74983	.1363385	.0058341	1.302000	.2080318	.3546357
Stddev	.015351	.06258	.0004173	.0003235	.009899	.0024615	.0006834
%RSD	.3318602	.2877389	.3060913	5.545418	.7603296	1.183232	.1927063
#1	4.608185	21.67771	.1361650	.0054764	1.309600	.2070244	.3542910
#2	4.632842	21.78186	.1360359	.0061063	1.305595	.2108372	.3554228
#3	4.636357	21.78991	.1368146	.0059195	1.290805	.2062338	.3541933

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.370534	.2733494	.0014967	.0125433	2.098264	2.096997	3.834890
Stddev	.045955	.0001518	.0000749	.0016462	.003294	.004481	.024547
%RSD	.5490074	.0555465	5.006960	13.12373	.1569998	.2136672	.6401095
#1	8.320615	.2732379	.0015247	.0127976	2.094998	2.092473	3.855222
#2	8.379907	.2735224	.0014118	.0140475	2.098208	2.097086	3.841827
#3	8.411079	.2732880	.0015536	.0107848	2.101586	2.101432	3.807620

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1744-01 Acquired: 4/10/2025 14:15:22 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.2917548	.1728816	.1527477
Stddev	.0046255	.0008172	.0002165
%RSD	1.585417	.4726934	.1417585
#1	.2963334	.1729583	.1527667
#2	.2918474	.1736578	.1525223
#3	.2870837	.1720288	.1529541

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3374.876	82901.61	16901.18	2179.710	4877.649
Stddev	3.533	308.04	67.21	13.200	4.326
%RSD	.1046707	.3715704	.3976786	.6056045	.0886888
#1	3377.367	82968.44	16963.22	2192.015	4876.681
#2	3370.833	83170.75	16910.55	2181.347	4873.889
#3	3376.429	82565.65	16829.78	2165.767	4882.377

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1744-03 Acquired: 4/10/2025 14:19:30 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.1053777	.0064367	3.423277	-.020905	-.004608	128.3374
Stddev	.0010381	.0024042	.010420	.005025	.000645	.3129
%RSD	.9851636	37.35203	.3043721	24.03739	14.00617	.2438167
#1	.1048290	.0046075	3.425931	-.026546	-.005352	128.0469
#2	.1047291	.0091598	3.432114	-.016907	-.004192	128.6687
#3	.1065751	.0055427	3.411788	-.019264	-.004281	128.2965

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3483010	.0054501	-.002631	16.98772	.3006450	.0598964
Stddev	.0013416	.0001184	.000349	.05512	.0002897	.0002120
%RSD	.3851843	2.172655	13.28149	.3244404	.0963480	.3539198
#1	.3478738	.0054652	-.002292	16.96849	.3004742	.0597230
#2	.3498042	.0055603	-.002611	17.04988	.3004813	.0598334
#3	.3472250	.0053249	-.002990	16.94480	.3009794	.0601327

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1971279	244.6933	1.446026	33.72087	.1695680	.0083775
Stddev	.0001960	.8926	.007065	.20834	.0007784	.0001893
%RSD	.0994422	.3648006	.4885802	.6178258	.4590356	2.259529
#1	.1971422	244.6404	1.446029	33.62035	.1703053	.0082474
#2	.1973164	243.8283	1.453089	33.96041	.1696445	.0082904
#3	.1969251	245.6112	1.438959	33.58186	.1687542	.0085947

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.581675	.3745336	.5575617	18.87099	.4066850	.0264127
Stddev	.044592	.0008675	.0014691	.11397	.0037115	.0002086
%RSD	.7989068	.2316143	.2634935	.6039461	.9126145	.7898596
#1	5.558925	.3755155	.5559675	18.90306	.4085923	.0266434
#2	5.553047	.3738712	.5588610	18.74443	.4024077	.0262374
#3	5.633054	.3742141	.5578566	18.96550	.4090549	.0263572

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1744-03 Acquired: 4/10/2025 14:19:30 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0115365	2.215363	7.311636	8.952090	F 19.36076	.3210459
Stddev	.0014604	.001618	.063597	.027301	.00515	.0005659
%RSD	12.65896	.0730537	.8698042	.3049711	.0265985	.1762810
#1	.0120311	2.216210	7.246940	8.978104	19.35643	.3215778
#2	.0098930	2.216382	7.313895	8.954505	19.36645	.3204512
#3	.0126853	2.213497	7.374074	8.923662	19.35941	.3211086

Elem	Sr4077
Units	ppm
Avg	.1237423
Stddev	.0000632
%RSD	.0510393
#1	.1237949
#2	.1237598
#3	.1236723

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3466.299	87519.23	18028.52	2268.246	4680.330
Stddev	4.236	120.90	115.60	6.360	4.076
%RSD	.1222179	.1381373	.6412062	.2804082	.0870848
#1	3462.573	87624.79	18034.90	2272.245	4675.850
#2	3470.907	87545.55	17909.86	2260.912	4681.322
#3	3465.417	87387.34	18140.80	2271.582	4683.819

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-03MS Acquired: 4/10/2025 14:23:35 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.7919265	1.755248	1.054449	1.805413	.7816330	135.9390
Stddev	.0075132	.011389	.001531	.004724	.0067177	.1116
%RSD	.9487236	.6488714	.1451557	.2616713	.8594507	.0821273
#1	.7866609	1.766716	1.054911	1.810356	.7883000	135.9581
#2	.8005303	1.755089	1.052741	1.804939	.7748656	136.0398
#3	.7885882	1.743939	1.055696	1.800943	.7817335	135.8190

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7964195	.1742050	.1875120	922.4096	.5071643	.2612439
Stddev	.0030029	.0009075	.0001549	2.8710	.0019577	.0005950
%RSD	.3770496	.5209227	.0825793	.3112492	.3860033	.2277432
#1	.7976145	.1731827	.1876119	920.0586	.5076416	.2611020
#2	.7986409	.1749153	.1875904	925.6093	.5050121	.2607326
#3	.7930031	.1745170	.1873336	921.5610	.5088391	.2618969

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5439062	149.7880	3.271229	57.22177	.6473487	.0762766
Stddev	.0028204	.5244	.011243	.13069	.0005973	.0001802
%RSD	.5185530	.3501241	.3436922	.2283838	.0922760	.2362950
#1	.5443184	150.3773	3.268856	57.09613	.6478754	.0761375
#2	.5409023	149.6143	3.283469	57.35697	.6466997	.0762121
#3	.5464979	149.3725	3.261362	57.21220	.6474712	.0764802

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.68636	.5138300	.4979097	45.44638	.6034987	.3695056
Stddev	.08640	.0029636	.0012901	.27221	.0016480	.0014441
%RSD	.6312810	.5767583	.2591087	.5989734	.2730695	.3908063
#1	13.78432	.5159902	.4993993	45.76044	.6035857	.3710701
#2	13.62100	.5150482	.4971814	45.30029	.6051014	.3682237
#3	13.65376	.5104515	.4971485	45.27840	.6018089	.3692231

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-03MS Acquired: 4/10/2025 14:23:35 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.6710360	5.684919	F 11.54231	F 13.35964	F 11.07757	.2067269
Stddev	.0008973	.018111	.02642	.03295	.02208	.0022444
%RSD	.1337174	.3185742	.2288738	.2466571	.1993123	1.085698
#1	.6712348	5.678254	11.52389	13.36228	11.09708	.2091954
#2	.6700560	5.705417	11.53045	13.39120	11.05360	.2061765
#3	.6718173	5.671084	11.57257	13.32545	11.08203	.2048089

Elem	Sr4077
Units	ppm
Avg	5.493076
Stddev	.049732
%RSD	.9053666
#1	5.437549
#2	5.508155
#3	5.533524

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2912.559	72383.35	14425.67	1928.247	3955.043
Stddev	6.050	177.53	47.73	10.332	3.978
%RSD	.2077329	.2452580	.3308692	.5358087	.1005770
#1	2906.305	72207.61	14475.72	1917.134	3950.539
#2	2918.383	72562.61	14380.66	1937.561	3958.078
#3	2912.989	72379.82	14420.63	1930.048	3956.511

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-03MSD Acquired: 4/10/2025 14:27:52 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.7603788	1.685047	1.022950	1.729238	.7491720	135.3550
Stddev	.0028904	.008908	.002047	.005677	.0013545	.3616
%RSD	.3801241	.5286597	.2001001	.3282951	.1808040	.2671130
#1	.7619324	1.681642	1.021009	1.733692	.7497961	135.7193
#2	.7570439	1.678344	1.025089	1.722845	.7501020	135.3494
#3	.7621602	1.695156	1.022752	1.731176	.7476179	134.9963

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7844074	.1798100	.1821784	917.5670	.4965168	.2545772
Stddev	.0008062	.0010304	.0004857	3.6301	.0016229	.0003687
%RSD	.1027834	.5730451	.2666172	.3956255	.3268561	.1448391
#1	.7839365	.1799444	.1826099	921.1364	.4953888	.2549639
#2	.7853384	.1787190	.1816524	913.8790	.4957849	.2545382
#3	.7839474	.1807666	.1822728	917.6857	.4983768	.2542295

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5341040	143.8213	3.287477	57.19928	.6304843	.0731627
Stddev	.0013324	.7933	.007803	.12795	.0012526	.0003851
%RSD	.2494576	.5515729	.2373705	.2236929	.1986691	.5263576
#1	.5341480	142.9053	3.288390	57.30824	.6314700	.0730446
#2	.5327502	144.2740	3.279257	57.05839	.6290748	.0728505
#3	.5354138	144.2846	3.294783	57.23121	.6309082	.0735930

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.86139	.5090807	.4905218	42.95856	.5968374	.3557036
Stddev	.08297	.0009041	.0024812	.22395	.0012306	.0014728
%RSD	.6451097	.1775968	.5058369	.5213201	.2061902	.4140554
#1	12.77035	.5088271	.4877641	42.70100	.5963718	.3565153
#2	12.93275	.5100846	.4925738	43.10735	.5959075	.3540035
#3	12.88107	.5083306	.4912274	43.06734	.5982329	.3565920

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1754-03MSD Acquired: 4/10/2025 14:27:52 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.6465076	5.606324	8.651139	F 13.05741	F 10.94893	.1998374
Stddev	.0031173	.008285	.013710	.02598	.02562	.0006723
%RSD	.4821805	.1477714	.1584719	.1989831	.2339561	.3364443
#1	.6483478	5.615790	8.645290	13.06891	10.93446	.1990802
#2	.6429083	5.602784	8.666803	13.02766	10.93382	.2000673
#3	.6482667	5.600397	8.641324	13.07566	10.97850	.2003646

Elem	Sr4077
Units	ppm
Avg	5.466000
Stddev	.048051
%RSD	.8790854
#1	5.521482
#2	5.438681
#3	5.437837

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2940.993	72185.20	13696.64	1939.541	3990.330
Stddev	4.157	182.79	47.54	4.866	4.057
%RSD	.1413613	.2532178	.3471085	.2508913	.1016763
#1	2941.061	72391.92	13649.04	1937.167	3990.755
#2	2945.115	72044.96	13744.13	1936.318	3994.158
#3	2936.801	72118.72	13696.74	1945.139	3986.077

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-09DUP Acquired: 4/10/2025 14:32:08 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.5211898	.0115832	10.26612	-.016619	-.001094	84.24187
Stddev	.0035584	.0030965	.02609	.001342	.002620	.18081
%RSD	.6827525	26.73252	.2541191	8.078165	239.5489	.2146323
#1	.5178259	.0087735	10.29228	-.016457	.001422	84.04549
#2	.5208282	.0149031	10.26597	-.015364	-.000896	84.40145
#3	.5249152	.0110729	10.24010	-.018035	-.003808	84.27867

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.853899	.0076045	.0017212	147.2299	.2419181	.0913980
Stddev	.082038	.0001107	.0003909	.8219	.0008064	.0000968
%RSD	1.401431	1.455489	22.71044	.5582422	.3333283	.1058734
#1	5.828862	.0076355	.0021636	147.4826	.2413627	.0913513
#2	5.945539	.0076964	.0014225	147.8958	.2428430	.0915093
#3	5.787296	.0074816	.0015775	146.3113	.2415485	.0913335

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.202751	274.0681	2.927999	15.45026	.3856676	.0439089
Stddev	.003714	.5156	.017334	.09944	.0010259	.0003096
%RSD	.1159682	.1881213	.5920006	.6436178	.2660067	.7050491
#1	3.205943	273.4792	2.936170	15.48797	.3859294	.0440367
#2	3.198674	274.2869	2.939737	15.52533	.3865373	.0435559
#3	3.203635	274.4381	2.908090	15.33748	.3845362	.0441341

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.63147	.3173981	4.344424	18.15698	.4910787	.0371350
Stddev	.12855	.0006179	.007988	.10607	.0011830	.0001584
%RSD	.7729126	.1946874	.1838642	.5842073	.2408897	.4265864
#1	16.54783	.3174854	4.335322	18.08105	.4910158	.0372812
#2	16.56709	.3179677	4.350268	18.11171	.4922918	.0369667
#3	16.77949	.3167411	4.347683	18.27818	.4899284	.0371569

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-09DUP Acquired: 4/10/2025 14:32:08 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	1.926208	1.437877	5.316722	F 11.43240	F 17.13938	.3720130
Stddev	.004946	.004782	.038655	.01789	.02696	.0015082
%RSD	.2567556	.3325439	.7270524	.1564743	.1572923	.4054116
#1	1.929234	1.437963	5.276428	11.42003	17.16632	.3703602
#2	1.928889	1.442614	5.320239	11.45291	17.13942	.3733146
#3	1.920501	1.433052	5.353499	11.42426	17.11240	.3723641

Elem	Sr4077
Units	ppm
Avg	.9850665
Stddev	.0156591
%RSD	1.589649
#1	.9944452
#2	.9937650
#3	.9669891

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3299.758	81066.71	16575.76	2141.777	4622.769
Stddev	10.065	262.90	123.71	8.023	5.463
%RSD	.3050255	.3242993	.7463363	.3745892	.1181723
#1	3303.208	81368.70	16569.48	2150.728	4617.502
#2	3307.644	80888.91	16455.31	2139.372	4628.409
#3	3288.421	80942.52	16702.49	2135.232	4622.397

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-09LX5 Acquired: 4/10/2025 14:36:27 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.1145378	.0012734	2.201203	-.002875	-.000810	18.27130	1.278750
Stddev	.0032078	.0007970	.004161	.000976	.001831	.03868	.003990
%RSD	2.800673	62.59071	.1890239	33.96266	225.9193	.2116785	.3120292
#1	.1146155	.0020537	2.197566	-.003552	.000172	18.23107	1.275871
#2	.1177061	.0013059	2.205740	-.003316	-.002923	18.27462	1.277074
#3	.1112918	.0004606	2.200303	-.001756	.000319	18.30821	1.283305

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017597	-.001412	32.44908	.0542615	.0184725	.7454260	60.91821
Stddev	.0000271	.000025	.18130	.0001333	.0000481	.0012934	.12678
%RSD	1.541878	1.739861	.5587235	.2457398	.2606387	.1735102	.2081163
#1	.0017755	-.001438	32.33182	.0544149	.0185275	.7449618	61.06417
#2	.0017284	-.001410	32.35752	.0541734	.0184515	.7444289	60.83553
#3	.0017754	-.001389	32.65790	.0541961	.0184383	.7468875	60.85493

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6515748	3.453038	.0797337	.0101093	3.579068	.0680869	.9975765
Stddev	.0047276	.019376	.0004524	.0001624	.007170	.0011676	.0059585
%RSD	.7255701	.5611329	.5673335	1.606379	.2003437	1.714807	.5972960
#1	.6485811	3.441231	.0798675	.0099776	3.586896	.0693481	1.004419
#2	.6491184	3.442482	.0801042	.0100595	3.577491	.0678689	.994780
#3	.6570250	3.475400	.0792296	.0102907	3.572818	.0670437	.993530

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.765411	.1060782	.0080244	.3936330	.3232258	1.299499	2.346024
Stddev	.021576	.0002073	.0001627	.0004104	.0021259	.010750	.004892
%RSD	.5729935	.1953896	2.027711	.1042509	.6577125	.8272315	.2085329
#1	3.746325	.1060907	.0079750	.3940787	.3208175	1.299354	2.351389
#2	3.788821	.1062789	.0078922	.3935494	.3240184	1.288822	2.341810
#3	3.761088	.1058649	.0082061	.3932709	.3248416	1.310320	2.344872

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-09LX5 Acquired: 4/10/2025 14:36:27 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	3.491621	.0780964	.2132542
Stddev	.011399	.0006198	.0007138
%RSD	.3264644	.7936289	.3347301
#1	3.483629	.0785196	.2130094
#2	3.486560	.0773850	.2126950
#3	3.504674	.0783847	.2140582

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3193.432	78222.50	15939.02	2078.078	5012.221
Stddev	3.175	124.72	110.08	10.502	8.674
%RSD	.0994262	.1594384	.6906074	.5053769	.1730559
#1	3189.837	78099.92	16011.07	2066.558	5002.981
#2	3194.606	78349.25	15993.67	2087.118	5013.493
#3	3195.853	78218.33	15812.31	2080.557	5020.188

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV05 Acquired: 4/10/2025 14:44:54 Type: Unk
Method: NON EPA-6010-200.7(v2917) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.821979	4.825935	4.718089	4.907144	4.999745	9.907616
Stddev	.002808	.030563	.012583	.002419	.004594	.028687
%RSD	.0582410	.6333096	.2666918	.0492896	.0918849	.2895405
#1	4.824181	4.809950	4.703625	4.904353	4.996468	9.880362
#2	4.818816	4.806681	4.724122	4.908433	5.004996	9.904940
#3	4.822941	4.861176	4.726518	4.908644	4.997770	9.937547

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.733984	.2304198	2.354077	23.95709	1.018219	2.472167
Stddev	.087060	.0001433	.006113	.10084	.004217	.006080
%RSD	.8943873	.0622101	.2596979	.4209285	.4141962	.2459580
#1	9.820099	.2303611	2.347198	23.87340	1.019939	2.466069
#2	9.646009	.2303152	2.356142	23.92883	1.021305	2.472201
#3	9.735845	.2305832	2.358890	24.06905	1.013414	2.478230

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.282280	5.158174	2.358224	24.08553	2.479636	1.267849
Stddev	.001658	.024394	.010677	.07179	.006571	.004514
%RSD	.1293054	.4729115	.4527765	.2980533	.2650034	.3559999
#1	1.280366	5.151484	2.351713	24.00429	2.472196	1.271354
#2	1.283194	5.185214	2.352413	24.11190	2.482065	1.269437
#3	1.283280	5.137823	2.370547	24.14041	2.484646	1.262756

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.89867	2.437499	2.546806	26.14758	4.632018	4.969619
Stddev	.08030	.003809	.011573	.08747	.009385	.007095
%RSD	.2985233	.1562721	.4544175	.3345246	.2026060	.1427644
#1	26.91969	2.437239	2.555273	26.17052	4.625535	4.962994
#2	26.96637	2.433827	2.551527	26.22129	4.627740	4.968757
#3	26.80995	2.441432	2.533619	26.05092	4.642780	4.977105

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV05 Acquired: 4/10/2025 14:44:54 Type: Unk
Method: NON EPA-6010-200.7(v2917) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.789494	4.676318	F 6.175608	4.827351	4.700318	4.663326
Stddev	.015395	.018705	.008378	.035942	.017954	.018076
%RSD	.3214229	.3999928	.1356559	.7445586	.3819678	.3876100
#1	4.772081	4.660975	6.182705	4.786818	4.685806	4.653284
#2	4.795105	4.670824	6.166367	4.839889	4.694753	4.652501
#3	4.801296	4.697154	6.177752	4.855345	4.720395	4.684193

Elem	Sr4077
Units	ppm
Avg	4.702302
Stddev	.042505
%RSD	.9039225
#1	4.738748
#2	4.655610
#3	4.712546

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3140.040	75470.04	14456.04	2036.838	4874.950
Stddev	2.744	313.56	28.06	8.432	9.603
%RSD	.0873858	.4154824	.1941143	.4139625	.1969827
#1	3143.209	75221.21	14466.92	2031.484	4885.925
#2	3138.443	75366.66	14477.03	2032.473	4870.836
#3	3138.469	75822.24	14424.16	2046.558	4868.090

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB05 Acquired: 4/10/2025 14:49:04 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0012222	-.002355	-.001357	-.003021	-.000555	-.004687	-.007424
Stddev	.0011635	.000959	.001031	.001430	.000178	.003035	.000211
%RSD	95.19583	40.71774	75.95975	47.34290	32.07084	64.74689	2.848709
#1	.0019639	-.001294	-.002307	-.001567	-.000397	-.001194	-.007315
#2	-.000119	-.003160	-.000261	-.003069	-.000748	-.006191	-.007288
#3	.001821	-.002612	-.001503	-.004427	-.000519	-.006677	-.007667

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000576	-.000059	-.014956	-.000213	.0001144	-.000176	-.002123
Stddev	.0000336	.000068	.002600	.000203	.0001487	.000233	.003287
%RSD	58.41430	114.6369	17.38535	95.31902	130.0460	132.2313	154.8384
#1	.0000913	.000017	-.017814	-.000422	.0002802	-.000427	-.005303
#2	.0000240	-.000083	-.014327	-.000198	.0000701	.000035	-.002327
#3	.0000574	-.000113	-.012729	-.000018	-.000007	-.000138	.001262

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003586	-.013716	-.000267	.0005769	-.064198	-.002280	.0008825
Stddev	.000093	.009365	.000165	.0001920	.015787	.001057	.0003361
%RSD	2.598914	68.27822	61.63864	33.27344	24.59058	46.34834	38.08581
#1	-.003664	-.010035	-.000093	.0007380	-.082404	-.002396	.0005069
#2	-.003611	-.006751	-.000420	.0003645	-.055885	-.003274	.0009857
#3	-.003483	-.024363	-.000289	.0006282	-.054305	-.001170	.0011550

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.045741	-.000737	.0001443	-.000817	.0013294	.0047205	-.002371
Stddev	.025077	.000392	.0001746	.000528	.0001901	.0019889	.002311
%RSD	54.82447	53.27764	120.9974	64.63241	14.29569	42.13308	97.47502
#1	-.070855	-.000327	-.000057	-.000594	.0011107	.0070122	.000199
#2	-.045668	-.001110	.000252	-.001419	.0014548	.0034457	-.004279
#3	-.020701	-.000772	.000238	-.000437	.0014226	.0037035	-.003034

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB05 Acquired: 4/10/2025 14:49:04 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0028881	-.003035	-.000158
Stddev	.0013020	.000757	.000019
%RSD	45.08110	24.93826	12.02036
#1	.0015235	-.003909	-.000151
#2	.0041168	-.002609	-.000145
#3	.0030238	-.002588	-.000180

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3301.976	80344.06	15232.16	2163.456	5488.386
Stddev	6.748	152.15	99.05	5.252	10.413
%RSD	.2043587	.1893770	.6502609	.2427675	.1897260
#1	3309.581	80216.22	15121.87	2159.642	5496.235
#2	3296.704	80303.60	15313.53	2161.280	5476.573
#3	3299.643	80512.35	15261.08	2169.447	5492.349

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-09A Acquired: 4/10/2025 14:57:40 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	1.247967	1.771760	11.00033	1.744867	.7541677	85.67153
Stddev	.005756	.007312	.03443	.005284	.0080000	.31846
%RSD	.4612391	.4127078	.3129748	.3028263	1.060775	.3717240
#1	1.242301	1.777503	10.96521	1.739577	.7460783	86.03857
#2	1.247791	1.774248	11.00176	1.744878	.7543494	85.46848
#3	1.253810	1.763528	11.03402	1.750145	.7620753	85.50754

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.028086	.1504675	.1818714	146.4638	.5849426	.2766394
Stddev	.128283	.0003314	.0007846	.6824	.0008207	.0006212
%RSD	2.128087	.2202689	.4314008	.4659442	.1402954	.2245383
#1	6.156594	.1507811	.1810829	147.1330	.5854780	.2768439
#2	6.027634	.1501207	.1818793	145.7689	.5839978	.2759417
#3	5.900030	.1505007	.1826520	146.4895	.5853521	.2771325

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.437251	282.7662	3.026176	16.82639	.8508241	.1124113
Stddev	.012840	1.1232	.017488	.08204	.0026793	.0002689
%RSD	.3735476	.3972314	.5778895	.4875595	.3149019	.2392267
#1	3.424271	283.6392	3.041247	16.88080	.8486635	.1127083
#2	3.437538	281.4990	3.007001	16.73203	.8499868	.1123411
#3	3.449945	283.1603	3.030279	16.86635	.8538220	.1121844

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.37814	.5596774	4.477476	28.93263	.7138190	.4038517
Stddev	.09392	.0023913	.009885	.09008	.0035487	.0018949
%RSD	.4608754	.4272717	.2207766	.3113456	.4971427	.4692002
#1	20.47279	.5613223	4.482411	29.03638	.7169618	.4018351
#2	20.37665	.5569342	4.466095	28.87434	.7099705	.4041245
#3	20.28497	.5607757	4.483922	28.88717	.7145248	.4055953

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-09A Acquired: 4/10/2025 14:57:40 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	2.546950	1.594701	6.494810	F 16.55133	F 16.95805	.5480931
Stddev	.008246	.006798	.023429	.02090	.04038	.0033148
%RSD	.3237735	.4262818	.3607343	.1262911	.2381192	.6047969
#1	2.543871	1.601162	6.516714	16.56369	16.94030	.5519017
#2	2.540686	1.587610	6.470107	16.52720	16.92958	.5465190
#3	2.556293	1.595330	6.497610	16.56311	17.00426	.5458585

Elem	Sr4077
Units	ppm
Avg	1.142288
Stddev	.002952
%RSD	.2583945
#1	1.144486
#2	1.138934
#3	1.143445

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3208.678	79381.62	16994.03	2075.333	4525.755
Stddev	17.662	133.98	54.01	6.692	16.614
%RSD	.5504402	.1687752	.3177955	.3224766	.3671093
#1	3228.360	79331.14	16967.64	2069.239	4541.624
#2	3203.467	79533.51	17056.16	2082.495	4527.156
#3	3194.209	79280.22	16958.30	2074.263	4508.484

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-09MS Acquired: 4/10/2025 15:05:31 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	1.228179	1.794192	11.06009	1.714554	.7366440	85.73221
Stddev	.004343	.006963	.02586	.004958	.0027243	.18487
%RSD	.3535980	.3880959	.2338344	.2891911	.3698198	.2156347
#1	1.228292	1.787807	11.08045	1.708963	.7397102	85.92934
#2	1.232464	1.801616	11.06884	1.718417	.7357192	85.70457
#3	1.223781	1.793153	11.03099	1.716282	.7345025	85.56272

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.023587	.1614431	.1850411	147.6590	.5821810	.2788221
Stddev	.089315	.0006368	.0003018	.3265	.0010577	.0011598
%RSD	1.482762	.3944568	.1630961	.2211317	.1816772	.4159723
#1	6.025770	.1614339	.1853896	147.8984	.5813735	.2792507
#2	5.933199	.1608110	.1848671	147.2871	.5817912	.2797067
#3	6.111790	.1620845	.1848667	147.7916	.5833782	.2775090

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.431432	269.9722	3.086191	17.00000	.8528761	.1095059
Stddev	.002331	.5203	.004822	.03023	.0029325	.0001016
%RSD	.0679210	.1927274	.1562399	.1778149	.3438383	.0927999
#1	3.431161	270.3636	3.086635	16.96573	.8553224	.1094050
#2	3.433886	270.1712	3.081162	17.02290	.8536806	.1096082
#3	3.429248	269.3817	3.090775	17.01135	.8496253	.1095046

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.03101	.5642822	4.446043	27.08727	.6952369	.4008237
Stddev	.07901	.0010878	.027251	.08057	.0011733	.0003819
%RSD	.4151498	.1927758	.6129255	.2974316	.1687590	.0952746
#1	19.06424	.5633442	4.444117	27.09839	.6963000	.4011067
#2	19.08797	.5654747	4.419806	27.16169	.6954327	.4009750
#3	18.94081	.5640277	4.474206	27.00172	.6939781	.4003893

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-09MS Acquired: 4/10/2025 15:05:31 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	2.563729	1.604546	6.097515	F 16.87723	F 17.11972	.5450000
Stddev	.005776	.005640	.008481	.05382	.06241	.0009810
%RSD	.2252881	.3514717	.1390966	.3188838	.3645388	.1799997
#1	2.569711	1.611044	6.104344	16.81564	17.09950	.5455656
#2	2.563293	1.600937	6.100180	16.91522	17.18973	.5455671
#3	2.558184	1.601656	6.088021	16.90082	17.06993	.5438672

Elem	Sr4077
Units	ppm
Avg	1.151019
Stddev	.011332
%RSD	.9845527
#1	1.162274
#2	1.139610
#3	1.151172

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3252.781	80214.85	15969.47	2133.394	4544.343
Stddev	2.803	52.32	51.99	10.041	3.315
%RSD	.0861607	.0652249	.3255865	.4706802	.0729467
#1	3251.205	80267.45	15986.62	2139.063	4540.743
#2	3256.017	80214.29	16010.73	2139.318	4547.270
#3	3251.121	80162.81	15911.07	2121.800	4545.016

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-09MSD Acquired: 4/10/2025 15:09:46 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	1.208200	1.763974	11.03826	1.674924	.7206198	86.53569
Stddev	.004067	.009548	.04063	.009082	.0060007	.24900
%RSD	.3366284	.5412794	.3680797	.5422494	.8327174	.2877389
#1	1.210155	1.752979	10.99393	1.674943	.7208704	86.24842
#2	1.203525	1.768764	11.04715	1.665833	.7144977	86.66904
#3	1.210921	1.770178	11.07371	1.683997	.7264913	86.68961

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.468890	.1514341	.1793649	148.8687	.5769227	.2752258
Stddev	.116227	.0006306	.0008691	.4531	.0024636	.0015884
%RSD	1.796710	.4163841	.4845729	.3043791	.4270272	.5771409
#1	6.580196	.1521612	.1785061	149.0327	.5766056	.2734600
#2	6.478175	.1511033	.1793446	149.2171	.5746331	.2756792
#3	6.348299	.1510378	.1802440	148.3564	.5795296	.2765382

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.388769	280.8587	3.102812	16.99343	.8429482	.1103165
Stddev	.009318	1.4341	.007081	.07167	.0030779	.0001346
%RSD	.2749620	.5106004	.2281999	.4217528	.3651399	.1220332
#1	3.387757	279.8550	3.103470	17.03721	.8396719	.1101927
#2	3.379998	280.2201	3.109541	17.03236	.8433934	.1102970
#3	3.398551	282.5012	3.095426	16.91072	.8457792	.1104598

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.73285	.5638163	4.408932	28.44060	.7111312	.3934843
Stddev	.19858	.0021969	.004064	.20805	.0053380	.0014549
%RSD	1.006357	.3896403	.0921689	.7315274	.7506401	.3697486
#1	19.57253	.5649233	4.412286	28.26636	.7075308	.3925441
#2	19.67102	.5652395	4.404413	28.38449	.7085987	.3927487
#3	19.95499	.5612862	4.410097	28.67095	.7172641	.3951601

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1745-09MSD Acquired: 4/10/2025 15:09:46 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	2.532487	1.691386	8.251917	F 16.74352	F 16.92428	.5508845
Stddev	.011126	.004978	.063250	.09982	.05398	.0034452
%RSD	.4393182	.2943385	.7664904	.5961775	.3189280	.6253909
#1	2.519653	1.692840	8.193891	16.63550	16.86857	.5469591
#2	2.538404	1.695475	8.242520	16.76269	16.92793	.5522885
#3	2.539404	1.685842	8.319340	16.83236	16.97633	.5534060

Elem	Sr4077
Units	ppm
Avg	1.173332
Stddev	.005919
%RSD	.5044394
#1	1.180151
#2	1.169523
#3	1.170322

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3291.817	81417.90	16886.43	2160.304	4595.428
Stddev	5.765	371.18	103.05	5.794	15.894
%RSD	.1751416	.4558906	.6102339	.2682111	.3458763
#1	3297.664	81296.59	16781.01	2153.613	4613.775
#2	3291.649	81834.55	16891.36	2163.652	4586.695
#3	3286.137	81122.55	16986.93	2163.646	4585.815

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PBW04 Acquired: 4/10/2025 15:14:00 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.000920	-.002017	.0002746	-.000846	.0001129	.0062032	-.009020
Stddev	.001920	.000704	.0009572	.003350	.0009254	.0014709	.001417
%RSD	208.7652	34.91921	348.5355	395.7748	819.4365	23.71141	15.70344
#1	-.000137	-.002694	-.000665	.003007	.0011067	.0058637	-.010233
#2	.000486	-.001288	.000241	-.003059	-.000724	.0078141	-.009365
#3	-.003108	-.002070	.001248	-.002488	-.000044	.0049318	-.007463

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000409	-.000064	-.003560	-.000223	-.000199	-.000210	.0232555
Stddev	.0000298	.000019	.004432	.000216	.000107	.000603	.0032453
%RSD	72.73248	29.94521	124.5024	96.97990	53.84214	287.6197	13.95503
#1	.0000691	-.000066	.001538	-.000448	-.000139	.000364	.0197109
#2	.0000098	-.000083	-.006503	-.000017	-.000322	-.000838	.0239748
#3	.0000438	-.000044	-.005714	-.000204	-.000135	-.000155	.0260808

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003769	-.007325	-.000134	.0006742	-.131425	-.001466	-.001421
Stddev	.000077	.004961	.000108	.0001320	.021162	.001252	.000139
%RSD	2.040776	67.72347	80.57281	19.58080	16.10204	85.41095	9.751119
#1	-.003839	-.008804	-.000033	.0005697	-.154551	-.000194	-.001577
#2	-.003782	-.001793	-.000121	.0008225	-.126699	-.002697	-.001312
#3	-.003687	-.011378	-.000247	.0006302	-.113025	-.001508	-.001373

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.111367	-.006304	-.000129	-.000362	.0014458	.0006190	-.001375
Stddev	.009883	.000378	.000094	.000864	.0005717	.0022959	.003795
%RSD	8.874113	6.002046	72.75766	238.2884	39.54158	370.9184	276.1164
#1	-.120312	-.006589	-.000086	.000594	.0019300	.0032566	.002303
#2	-.100758	-.005875	-.000064	-.001084	.0008151	-.000931	-.001149
#3	-.113031	-.006448	-.000237	-.000597	.0015922	-.000468	-.005278

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PBW04 Acquired: 4/10/2025 15:14:00 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0068061	-.002972	-.000273
Stddev	.0011667	.000991	.000016
%RSD	17.14208	33.35241	5.704360
#1	.0079597	-.001833	-.000285
#2	.0056267	-.003639	-.000256
#3	.0068320	-.003445	-.000278

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3223.476	77939.69	15734.18	2080.503	5370.619
Stddev	10.893	328.35	75.34	2.491	10.440
%RSD	.3379411	.4212890	.4788330	.1197070	.1943902
#1	3224.299	78186.26	15789.43	2082.502	5364.040
#2	3233.934	77566.97	15764.76	2081.295	5382.657
#3	3212.194	78065.83	15648.36	2077.713	5365.161

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: LCSW04 Acquired: 4/10/2025 15:18:19 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.7576424	1.903532	.9062977	1.953392	.8051331	1.845046
Stddev	.0007736	.018103	.0006047	.003476	.0018380	.038263
%RSD	.1021098	.9510414	.0667267	.1779519	.2282829	2.073828
#1	.7569277	1.889535	.9063786	1.954416	.8048953	1.845801
#2	.7575357	1.897086	.9068580	1.949519	.8034256	1.882926
#3	.7584639	1.923977	.9056566	1.956242	.8070784	1.806411

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .1653987	F .1648112	.1813829	.9041579	.3952404	.1845451
Stddev	.0026550	.0028124	.0003363	.0138689	.0018705	.0003901
%RSD	1.605189	1.706449	.1854063	1.533903	.4732537	.2114051
#1	.1654010	.1659516	.1816872	.9065691	.3964775	.1846203
#2	.1680525	.1668744	.1810218	.9166631	.3930886	.1841229
#3	.1627426	.1616077	.1814398	.8892415	.3961551	.1848922

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3025452	3.018301	.1748570	1.791013	.4682837	.0730825
Stddev	.0006136	.015657	.0023634	.033183	.0008605	.0002291
%RSD	.2028156	.5187346	1.351616	1.852762	.1837533	.3134175
#1	.3027375	3.007026	.1756486	1.804063	.4686687	.0732816
#2	.3018585	3.011699	.1767230	1.815687	.4672979	.0731337
#3	.3030397	3.036177	.1721995	1.753288	.4688844	.0728322

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.977005	.2715203	.1977653	9.967833	F .2449088	.3987081
Stddev	.014007	.0037918	.0009959	.069412	.0055344	.0006036
%RSD	.4705157	1.396498	.5035772	.6963566	2.259791	.1513899
#1	2.979902	.2726200	.1972812	9.965286	.2461018	.3984715
#2	2.961776	.2746407	.1989107	9.899729	.2497494	.3982586
#3	2.989338	.2673003	.1971040	10.03848	.2388751	.3993941

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: LCSW04 Acquired: 4/10/2025 15:18:19 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.6380625	.1795643	.8431739	5.280737	F -.005559	.1803545
Stddev	.0011780	.0035611	.0086002	.018048	.000548	.0026506
%RSD	.1846144	1.983180	1.019983	.3417749	9.858230	1.469685
#1	.6376259	.1805903	.8358969	5.271652	-.005274	.1802544
#2	.6371653	.1824998	.8526646	5.269037	-.005213	.1830537
#3	.6393965	.1756029	.8409603	5.301523	-.006191	.1777553

Elem	Sr4077
Units	ppm
Avg	.1819517
Stddev	.0029714
%RSD	1.633064
#1	.1821534
#2	.1848171
#3	.1788846

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3216.148	76896.94	15545.84	2048.400	5323.371
Stddev	4.440	181.26	266.93	9.466	7.481
%RSD	.1380389	.2357177	1.717020	.4621259	.1405316
#1	3217.498	76859.15	15462.27	2059.323	5330.327
#2	3219.755	77094.11	15330.70	2042.586	5324.330
#3	3211.190	76737.55	15844.55	2043.291	5315.457

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PBS04 Acquired: 4/10/2025 15:23:05 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0007325	-.001210	-.000581	-.002501	-.000736	-.002091	-.009780
Stddev	.0013715	.000419	.000198	.001259	.000279	.003676	.001014
%RSD	187.2491	34.60836	34.01436	50.32441	37.98503	175.8422	10.36345
#1	.0022984	-.001410	-.000391	-.003728	-.001028	.001788	-.008620
#2	-.000255	-.000729	-.000567	-.002562	-.000472	-.002535	-.010495
#3	.000154	-.001492	-.000786	-.001213	-.000707	-.005524	-.010224

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000515	-.000110	-.021503	-.000336	-.000157	-.000270	-.008461
Stddev	.0000303	.000077	.002720	.000260	.000163	.000087	.002052
%RSD	58.84267	70.41559	12.65019	77.25646	103.4122	32.24927	24.24987
#1	.0000860	-.000199	-.022190	-.000266	-.000102	-.000184	-.008513
#2	.0000294	-.000070	-.023815	-.000624	-.000340	-.000358	-.010487
#3	.0000390	-.000060	-.018506	-.000119	-.000029	-.000269	-.006384

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004111	-.001549	-.000365	.0007575	-.205568	-.001317	-.001749
Stddev	.000278	.012440	.000113	.0000726	.008946	.000486	.000286
%RSD	6.754406	803.2388	31.00371	9.585263	4.351715	36.89719	16.33950
#1	-.003861	.011295	-.000369	.0007766	-.214090	-.001762	-.001441
#2	-.004063	-.013542	-.000476	.0006773	-.206361	-.000798	-.001798
#3	-.004410	-.002398	-.000250	.0008187	-.196252	-.001392	-.002006

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.130481	-.006425	-.000353	-.000887	.0013311	.0067658	-.000131
Stddev	.035839	.000712	.000061	.000466	.0005311	.0014352	.002690
%RSD	27.46694	11.07798	17.19214	52.55240	39.89799	21.21270	2048.614
#1	-.148349	-.005664	-.000349	-.001350	.0011981	.0059301	-.003108
#2	-.153873	-.006536	-.000295	-.000418	.0008792	.0084231	.002126
#3	-.089220	-.007074	-.000416	-.000894	.0019161	.0059444	.000588

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PBS04 Acquired: 4/10/2025 15:23:05 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0033195	-.003952	-.000318
Stddev	.0039189	.000692	.000029
%RSD	118.0558	17.51701	9.251480
#1	.0078413	-.003901	-.000333
#2	.0009094	-.004669	-.000284
#3	.0012077	-.003287	-.000335

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3253.745	78814.10	15192.33	2116.773	5428.569
Stddev	5.785	112.39	62.41	3.627	7.548
%RSD	.1777876	.1425981	.4108163	.1713561	.1390359
#1	3254.884	78768.84	15125.92	2117.009	5421.781
#2	3258.876	78942.06	15201.28	2120.277	5436.697
#3	3247.476	78731.39	15249.78	2113.034	5427.229

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: LCSS04 Acquired: 4/10/2025 15:27:25 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.7403343	1.890259	.9014139	1.901494	.7776342	1.834527
Stddev	.0030027	.004759	.0044376	.006278	.0016461	.020483
%RSD	.4055916	.2517472	.4922987	.3301516	.2116802	1.116501
#1	.7368976	1.895709	.9038716	1.896629	.7785508	1.841394
#2	.7424507	1.888143	.8962911	1.899272	.7757338	1.850694
#3	.7416545	1.886925	.9040789	1.908581	.7786180	1.811494

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .1619171	.1904143	.1811821	.9060248	.3890079	.1842340
Stddev	.0029232	.0023115	.0009250	.0027718	.0008297	.0007488
%RSD	1.805342	1.213936	.5105348	.3059330	.2132876	.4064522
#1	.1633485	.1921736	.1811253	.9031789	.3894738	.1840871
#2	.1638487	.1912731	.1802868	.9087161	.3880500	.1835695
#3	.1585541	.1877963	.1821342	.9061793	.3895000	.1850453

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2984718	2.701343	.1765063	1.789391	.4662514	.0725879
Stddev	.0016074	.013125	.0014659	.021871	.0016011	.0002042
%RSD	.5385476	.4858685	.8305126	1.222279	.3434062	.2813381
#1	.2977001	2.686950	.1776946	1.807399	.4658600	.0723941
#2	.2973957	2.704430	.1769561	1.795722	.4648823	.0725685
#3	.3003195	2.712649	.1748682	1.765053	.4680120	.0728011

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2.512675	.2689246	.1972977	8.590969	.2821641	.3902779
Stddev	.020077	.0014382	.0001161	.012321	.0030780	.0010862
%RSD	.7990154	.5347795	.0588572	.1434216	1.090854	.2783138
#1	2.495470	.2704925	.1974237	8.576766	.2842250	.3892615
#2	2.507821	.2686143	.1971951	8.597349	.2836413	.3901497
#3	2.534733	.2676669	.1972743	8.598792	.2786259	.3914225

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: LCSS04 Acquired: 4/10/2025 15:27:25 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.6331335	.1784203	F .7254084	5.362893	F -.006223	.1801486
Stddev	.0026694	.0018615	.0056940	.018580	.001646	.0021658
%RSD	.4216246	1.043345	.7849348	.3464607	26.44923	1.202240
#1	.6341145	.1795103	.7202965	5.355548	-.005816	.1803488
#2	.6301123	.1794797	.7315453	5.349108	-.004819	.1822074
#3	.6351736	.1762708	.7243834	5.384023	-.008035	.1778897

Elem	Sr4077
Units	ppm
Avg	.1767692
Stddev	.0014246
%RSD	.8059290
#1	.1771999
#2	.1779287
#3	.1751789

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3272.900	77885.63	13636.95	2129.308	5347.270
Stddev	2.457	76.98	167.03	6.595	8.808
%RSD	.0750708	.0988323	1.224815	.3097039	.1647156
#1	3275.403	77839.14	13535.98	2127.533	5351.833
#2	3272.806	77843.26	13545.13	2123.783	5352.861
#3	3270.492	77974.48	13829.75	2136.609	5337.117

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PBW05 Acquired: 4/10/2025 15:31:29 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.000332	-.001290	-.001967	-.000647	.0007979	-.002085	-.008708
Stddev	.002701	.000759	.000524	.000958	.0006656	.003861	.000633
%RSD	813.9202	58.80375	26.64932	147.9285	83.42186	185.1529	7.269680
#1	-.001803	-.002165	-.002564	.000433	.0015218	-.003489	-.008309
#2	-.001978	-.000890	-.001585	-.001391	.0002123	-.005049	-.008376
#3	.002785	-.000816	-.001751	-.000984	.0006595	.002281	-.009438

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000779	-.000075	-.019910	-.000070	.0000132	-.000335	-.006429
Stddev	.0000598	.000018	.002474	.000037	.0001378	.000359	.004668
%RSD	76.82727	23.56383	12.42404	52.41728	1043.095	107.2323	72.61161
#1	.0000935	-.000059	-.018334	-.000037	.0000210	-.000097	-.004761
#2	.0001283	-.000072	-.022761	-.000063	.0001469	-.000160	-.011702
#3	.0000118	-.000094	-.018636	-.000110	-.000128	-.000749	-.002824

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004135	-.009244	-.000401	.0006058	-.251491	-.001695	-.001927
Stddev	.000330	.004575	.000357	.0000802	.011889	.000750	.000313
%RSD	7.983433	49.49142	89.09716	13.24344	4.727543	44.23561	16.24602
#1	-.004084	-.014471	-.000814	.0005504	-.263309	-.000918	-.002277
#2	-.003834	-.007294	-.000204	.0006978	-.251633	-.001753	-.001674
#3	-.004488	-.005967	-.000186	.0005692	-.239532	-.002414	-.001831

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.140168	-.006502	-.000408	-.001203	.0014345	.0000743	-.002304
Stddev	.007733	.000303	.000140	.000153	.0004535	.0034311	.000837
%RSD	5.516906	4.660796	34.29605	12.73160	31.61364	4620.451	36.33761
#1	-.146083	-.006405	-.000393	-.001379	.0011709	-.003880	-.002678
#2	-.143003	-.006259	-.000555	-.001134	.0011745	.002259	-.001345
#3	-.131418	-.006842	-.000276	-.001097	.0019582	.001844	-.002889

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PBW05 Acquired: 4/10/2025 15:31:29 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0006803	-.004720	-.000324
Stddev	.0011312	.000208	.000053
%RSD	166.2671	4.415249	16.37272
#1	.0017096	-.004892	-.000326
#2	-.000531	-.004781	-.000377
#3	.000862	-.004489	-.000271

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3250.483	79473.87	14913.50	2142.447	5387.221
Stddev	10.741	164.89	217.69	3.913	11.077
%RSD	.3304518	.2074729	1.459652	.1826373	.2056108
#1	3255.573	79497.06	15161.08	2145.695	5394.289
#2	3257.734	79298.61	14752.09	2143.543	5392.918
#3	3238.143	79625.93	14827.35	2138.103	5374.455

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PBS05 Acquired: 4/10/2025 15:35:50 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0005206	-.001747	-.001207	-.001490	.0001547	.0167442	-.009906
Stddev	.0028431	.000858	.001148	.003893	.0010575	.0018270	.000476
%RSD	546.1054	49.12278	95.12769	261.2563	683.7956	10.91106	4.804924
#1	-.002749	-.002710	-.002472	-.002461	-.000172	.0149640	-.009383
#2	.001901	-.001472	-.000230	-.004806	.001337	.0186146	-.010313
#3	.002410	-.001060	-.000919	.002796	-.000701	.0166540	-.010024

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000552	-.000089	-.014153	-.000236	-.000074	-.000512	-.011288
Stddev	.0000185	.000052	.006750	.000051	.000220	.000316	.003998
%RSD	33.51974	57.79000	47.69612	21.54504	295.9927	61.78506	35.41531
#1	.0000403	-.000075	-.008719	-.000207	-.000030	-.000292	-.013711
#2	.0000494	-.000046	-.021710	-.000205	.000120	-.000369	-.013478
#3	.0000759	-.000147	-.012030	-.000294	-.000313	-.000874	-.006674

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004211	-.001209	-.000186	.0004527	-.254231	-.001624	-.001648
Stddev	.000313	.017348	.000154	.0001344	.005661	.001775	.000220
%RSD	7.440293	1434.618	82.92646	29.68019	2.226842	109.2670	13.35593
#1	-.004194	.017570	-.000364	.0004161	-.248481	-.002600	-.001597
#2	-.004532	-.016637	-.000103	.0006016	-.259799	-.002697	-.001459
#3	-.003906	-.004561	-.000091	.0003405	-.254414	.000424	-.001890

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.186907	-.007556	-.000309	-.001619	.0010021	.0006799	-.000830
Stddev	.005255	.000786	.000156	.000150	.0003511	.0044738	.001402
%RSD	2.811525	10.40471	50.43576	9.242377	35.03785	658.0116	168.9295
#1	-.191844	-.008209	-.000472	-.001780	.0010770	.0039401	-.002154
#2	-.187492	-.006683	-.000294	-.001484	.0006195	.0025201	.000639
#3	-.181383	-.007775	-.000161	-.001592	.0013096	-.004421	-.000975

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PBS05 Acquired: 4/10/2025 15:35:50 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0014869	-.004544	-.000390
Stddev	.0010648	.001199	.000051
%RSD	71.61293	26.39223	13.02705
#1	.0002774	-.005264	-.000441
#2	.0019000	-.003160	-.000340
#3	.0022833	-.005209	-.000390

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3223.032	77717.63	15672.74	2083.378	5382.960
Stddev	13.716	372.53	114.33	4.450	11.819
%RSD	.4255497	.4793406	.7294671	.2135802	.2195698
#1	3238.869	77690.67	15785.40	2086.823	5396.352
#2	3215.033	78102.90	15676.00	2078.354	5378.543
#3	3215.194	77359.30	15556.82	2084.957	5373.985

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: WATER MDL-4 Acquired: 4/10/2025 15:40:10 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0054705	.0075109	.0008554	.0034555	.0129267	.0238575	.0119860
Stddev	.0007645	.0009014	.0009971	.0007065	.0015854	.0052321	.0006495
%RSD	13.97541	12.00114	116.5683	20.44632	12.26427	21.93068	5.418940
#1	.0062096	.0085275	.0018896	.0035684	.0144731	.0283115	.0126250
#2	.0055191	.0071959	.0007767	.0040989	.0130020	.0251656	.0113265
#3	.0046829	.0068093	-.000100	.0026994	.0113050	.0180955	.0120064

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013411	.0012679	.4421826	.0022396	.0069203	.0053947	.0177538
Stddev	.0000122	.0001006	.0070417	.0004472	.0001994	.0003349	.0041573
%RSD	.9096884	7.933961	1.592487	19.96715	2.881668	6.208443	23.41638
#1	.0013509	.0011557	.4406997	.0017235	.0071221	.0052984	.0208748
#2	.0013274	.0013501	.4360004	.0025104	.0069154	.0051185	.0193520
#3	.0013450	.0012978	.4498476	.0024849	.0067233	.0057672	.0130346

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006626	.4862936	.0092069	.0032443	.2839204	.0076631	.0085414
Stddev	.0002287	.0111098	.0000424	.0001074	.0063909	.0010557	.0001366
%RSD	34.51744	2.284586	.4603594	3.309060	2.250948	13.77578	1.599209
#1	.0004562	.4932896	.0092143	.0033155	.2775618	.0076336	.0084045
#2	.0006232	.4921080	.0091613	.0032966	.2903431	.0066225	.0085421
#3	.0009085	.4734833	.0092451	.0031208	.2838565	.0087331	.0086777

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3574287	.0153396	.0513230	.0080638	.0107351	.1031963	.0000893
Stddev	.0272943	.0007696	.0005387	.0005171	.0006906	.0031126	.0031864
%RSD	7.636285	5.017126	1.049540	6.412545	6.432960	3.016151	3569.227
#1	.3280902	.0149220	.0515169	.0084499	.0114778	.1056535	.0030209
#2	.3621270	.0162278	.0507142	.0082652	.0106150	.1042393	.0005488
#3	.3820688	.0148691	.0517377	.0074763	.0101124	.0996962	-.003302

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: WATER MDL-4 Acquired: 4/10/2025 15:40:10 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0062418	-.000598	.0042564
Stddev	.0014291	.000678	.0000254
%RSD	22.89537	113.3639	.5963747
#1	.0057765	-.000245	.0042407
#2	.0078455	-.001379	.0042428
#3	.0051033	-.000170	.0042857

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3251.013	77195.09	15372.36	2066.975	5438.664
Stddev	16.197	489.12	33.69	19.137	16.915
%RSD	.4982177	.6336097	.2191888	.9258327	.3110228
#1	3240.834	77705.84	15391.21	2085.405	5430.413
#2	3269.690	77148.46	15392.41	2047.202	5458.122
#3	3242.513	76730.95	15333.46	2068.316	5427.457

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV06 Acquired: 4/10/2025 15:44:28 Type: Unk
Method: NON EPA-6010-200.7(v2917) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.775879	4.767511	4.693859	4.851858	4.962260	9.969920
Stddev	.007799	.005463	.008347	.006428	.008862	.131164
%RSD	.1633080	.1145779	.1778351	.1324844	.1785810	1.315593
#1	4.766939	4.766933	4.699860	4.848438	4.961135	9.833723
#2	4.779405	4.773239	4.684327	4.847863	4.954014	10.09539
#3	4.781293	4.762360	4.697392	4.859273	4.971630	9.98065

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.635493	.2284817	2.335379	24.06699	1.012095	2.451475
Stddev	.118976	.0020046	.001990	.27580	.004967	.002504
%RSD	1.234771	.8773549	.0851938	1.145948	.4907872	.1021345
#1	9.618195	.2262828	2.337148	23.74918	1.017830	2.451909
#2	9.526113	.2289548	2.333225	24.24343	1.009249	2.448782
#3	9.762172	.2302074	2.335765	24.20838	1.009205	2.453733

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.269651	5.061043	2.375758	24.20802	2.467823	1.256160
Stddev	.001799	.007998	.026709	.30939	.002455	.002697
%RSD	.1417276	.1580384	1.124214	1.278068	.0994766	.2147111
#1	1.268327	5.051817	2.345032	23.85082	2.470136	1.259085
#2	1.268926	5.065282	2.393413	24.38145	2.465247	1.253771
#3	1.271700	5.066029	2.388831	24.39180	2.468086	1.255626

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.51730	2.450747	2.523793	25.72441	4.628227	4.963566
Stddev	.16365	.033081	.005691	.10760	.050710	.005280
%RSD	.6171523	1.349829	.2254841	.4182801	1.095668	.1063787
#1	26.55574	2.417384	2.527865	25.75010	4.571404	4.966812
#2	26.65830	2.483538	2.526223	25.81683	4.644397	4.957473
#3	26.33784	2.451319	2.517290	25.60629	4.668881	4.966413

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV06 Acquired: 4/10/2025 15:44:28 Type: Unk
Method: NON EPA-6010-200.7(v2917) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.751129	4.698192	F 6.113281	4.901263	4.624206	4.709618
Stddev	.001916	.054816	.026628	.016841	.008163	.055742
%RSD	.0403243	1.166743	.4355706	.3436106	.1765297	1.183586
#1	4.748918	4.637397	6.110854	4.914638	4.624714	4.652190
#2	4.752189	4.743846	6.141039	4.882350	4.615800	4.763506
#3	4.752282	4.713332	6.087950	4.906801	4.632103	4.713157

Elem	Sr4077
Units	ppm
Avg	4.772335
Stddev	.012469
%RSD	.2612771
#1	4.758389
#2	4.776210
#3	4.782407

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3153.917	75888.05	14297.77	2044.284	4911.362
Stddev	4.211	431.40	97.61	11.542	7.189
%RSD	.1335180	.5684727	.6827237	.5645760	.1463678
#1	3151.592	75390.03	14408.86	2031.753	4908.123
#2	3158.777	76127.41	14258.70	2046.623	4919.600
#3	3151.380	76146.71	14225.73	2054.477	4906.362

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB06 Acquired: 4/10/2025 15:48:39 Type: Unk
Method: NON EPA-6010-200.7(v2917) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000532	-.002726	-.001121	-.001312	.0008289	-.005013	-.009198
Stddev	.0018022	.000571	.000389	.001445	.0005535	.000467	.000828
%RSD	3387.708	20.95435	34.71620	110.1321	66.78172	9.322187	9.004694
#1	-.001427	-.002112	-.000683	-.002663	.0007138	-.005429	-.008565
#2	.002060	-.002824	-.001427	.000212	.0003419	-.004507	-.008895
#3	-.000473	-.003242	-.001253	-.001486	.0014309	-.005102	-.010135

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000155	-.000076	-.017657	-.000236	-.000166	-.000409	-.005386
Stddev	.0000500	.000062	.006985	.000251	.000059	.000140	.003679
%RSD	323.3673	81.64763	39.56027	106.1360	35.81566	34.28146	68.30505
#1	-.000017	-.000091	-.024693	-.000427	-.000111	-.000363	-.007182
#2	.000073	-.000008	-.017555	-.000330	-.000158	-.000567	-.007821
#3	-.000010	-.000129	-.010724	.000048	-.000229	-.000298	-.001154

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005279	-.011210	-.000019	.0007534	-.269984	-.000805	-.002091
Stddev	.000053	.009785	.000107	.0000857	.014049	.001247	.000210
%RSD	.9955503	87.28176	564.1582	11.37772	5.203751	154.9495	10.03679
#1	-.005263	-.014673	.000101	.0007386	-.283605	.000249	-.002301
#2	-.005338	-.018793	-.000102	.0006761	-.270803	-.002181	-.001881
#3	-.005237	-.000165	-.000056	.0008456	-.255543	-.000482	-.002091

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.159313	-.002632	.0000149	-.000222	.0012751	.0012626	-.002263
Stddev	.020958	.000384	.0000702	.000854	.0004119	.0055554	.001876
%RSD	13.15536	14.59448	469.7263	384.8935	32.30700	439.9777	82.87741
#1	-.182528	-.002308	-.000060	-.000676	.0017147	.0054658	-.000836
#2	-.153623	-.003057	.000026	-.000753	.0008979	.0033578	-.001566
#3	-.141787	-.002532	.000079	.000764	.0012127	-.005036	-.004387

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB06 Acquired: 4/10/2025 15:48:39 Type: Unk
Method: NON EPA-6010-200.7(v2917) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0009861	-.003542	-.000277
Stddev	.0044133	.000602	.000057
%RSD	447.5310	16.98987	20.68765
#1	-.001949	-.003062	-.000300
#2	.006061	-.004217	-.000212
#3	-.001154	-.003347	-.000319

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3282.606	82536.40	14671.99	2201.877	5439.543
Stddev	14.099	114.38	78.72	6.300	21.626
%RSD	.4294973	.1385794	.5365359	.2861234	.3975691
#1	3295.757	82667.04	14708.36	2197.640	5456.059
#2	3284.341	82454.29	14725.95	2198.874	5447.506
#3	3267.720	82487.86	14581.66	2209.117	5415.065

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: WATER MDL-5 Acquired: 4/10/2025 15:52:59 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0040235	.0086178	.0021002	.0027784	.0129291	.0197929	.0137773
Stddev	.0014892	.0016663	.0010452	.0026308	.0025837	.0018308	.0005551
%RSD	37.01244	19.33484	49.76572	94.68534	19.98388	9.249758	4.029184
#1	.0025970	.0087511	.0010607	.0057369	.0099459	.0187913	.0134006
#2	.0055684	.0068890	.0031509	.0018962	.0144525	.0186815	.0135165
#3	.0039053	.0102135	.0020889	.0007022	.0143890	.0219060	.0144148

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013979	.0013060	.4573054	.0019170	.0071615	.0055788	.0201520
Stddev	.0000374	.0000572	.0056158	.0000609	.0002768	.0001766	.0061225
%RSD	2.677185	4.381664	1.228028	3.177445	3.864724	3.164933	30.38163
#1	.0013821	.0012555	.4508727	.0019644	.0071377	.0056685	.0237878
#2	.0013710	.0012943	.4612307	.0019383	.0068974	.0056924	.0130833
#3	.0014407	.0013682	.4598128	.0018483	.0074494	.0053753	.0235848

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005435	.5010994	.0093939	.0029971	.1870645	.0083377	.0085101
Stddev	.0002588	.0103671	.0002858	.0002626	.0056007	.0010772	.0003584
%RSD	47.61101	2.068878	3.042350	8.761286	2.993998	12.91965	4.211591
#1	.0004304	.4913956	.0090947	.0028651	.1806005	.0079345	.0083972
#2	.0003605	.4998804	.0096640	.0028267	.1901246	.0095583	.0089114
#3	.0008396	.5120221	.0094229	.0032995	.1904685	.0075202	.0082217

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2901734	.0187435	.0511392	.0081911	.0096674	.0907073	.0035053
Stddev	.0122579	.0006059	.0005587	.0002626	.0006195	.0051306	.0017459
%RSD	4.224324	3.232398	1.092442	3.205322	6.407565	5.656224	49.80862
#1	.3004330	.0188476	.0506419	.0083754	.0097168	.0960386	.0055193
#2	.2934880	.0180923	.0510321	.0083075	.0102607	.0858043	.0025776
#3	.2765990	.0192905	.0517437	.0078905	.0090248	.0902789	.0024191

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: WATER MDL-5 Acquired: 4/10/2025 15:52:59 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0025723	.0001341	.0044138
Stddev	.0010609	.0008327	.0000697
%RSD	41.24284	620.8001	1.579129
#1	.0033332	-.000751	.0044942
#2	.0030232	.000251	.0043769
#3	.0013604	.000902	.0043702

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3300.804	83108.72	15156.23	2223.240	5463.514
Stddev	5.354	122.60	141.89	9.370	3.027
%RSD	.1622055	.1475200	.9362120	.4214389	.0553952
#1	3305.930	83174.59	15127.99	2216.827	5462.721
#2	3301.235	82967.26	15310.12	2218.901	5466.858
#3	3295.248	83184.30	15030.58	2233.993	5460.963

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: SOIL MDL-4 Acquired: 4/10/2025 16:09:14 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0049587	.0068798	.0018826	.0017424	.0123722	.0257507	.0135319
Stddev	.0019888	.0008945	.0005111	.0012718	.0018063	.0033367	.0002490
%RSD	40.10671	13.00136	27.14668	72.99433	14.59948	12.95781	1.839734
#1	.0070924	.0078292	.0013023	.0031222	.0128493	.0286991	.0132444
#2	.0031566	.0067573	.0022657	.0006170	.0138921	.0221285	.0136737
#3	.0046271	.0060529	.0020797	.0014879	.0103753	.0264244	.0136775

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014013	.0013005	.4609824	.0019785	.0071116	.0055477	.0185920
Stddev	.0000403	.0000188	.0073986	.0001681	.0001489	.0002847	.0035139
%RSD	2.875420	1.445575	1.604970	8.498672	2.093512	5.131657	18.90005
#1	.0014426	.0013222	.4596419	.0018202	.0070080	.0052215	.0225379
#2	.0013621	.0012885	.4543456	.0021550	.0072822	.0057459	.0174371
#3	.0013992	.0012909	.4689596	.0019604	.0070447	.0056758	.0158008

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017088	.5061459	.0094145	.0031633	.1882874	.0084191	.0087130
Stddev	.0006039	.0109847	.0001595	.0002256	.0025396	.0007502	.0000709
%RSD	35.33930	2.170255	1.694552	7.131814	1.348766	8.910754	.8139369
#1	.0010553	.5027488	.0095379	.0034070	.1911890	.0076169	.0087419
#2	.0022462	.4972611	.0094711	.0031213	.1872039	.0085373	.0087649
#3	.0018248	.5184278	.0092343	.0029617	.1864693	.0091033	.0086322

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2896234	.0191734	.0517097	.0089976	.0103676	.0950767	.0001001
Stddev	.0101135	.0004193	.0001915	.0005674	.0002349	.0104604	.0010178
%RSD	3.491943	2.186978	.3703976	6.306195	2.266030	11.00201	1016.438
#1	.2998792	.0188993	.0515000	.0092956	.0105070	.0947421	.0012200
#2	.2893323	.0189648	.0517538	.0083433	.0104994	.0847877	-.000151
#3	.2796586	.0196561	.0518754	.0093539	.0100963	.1057003	-.000769

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: SOIL MDL-4 Acquired: 4/10/2025 16:09:14 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0062634	.0001725	.0043774
Stddev	.0028628	.0011089	.0000239
%RSD	45.70665	642.6939	.5456699
#1	.0030592	-.000523	.0044009
#2	.0071616	-.000411	.0043532
#3	.0085695	.001451	.0043782

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3258.679	79301.19	14662.18	2154.381	5368.867
Stddev	1.806	151.59	67.93	14.312	4.515
%RSD	.0554204	.1911610	.4633127	.6643004	.0840964
#1	3259.251	79224.97	14718.05	2151.798	5369.983
#2	3256.656	79475.77	14681.92	2169.808	5372.719
#3	3260.129	79202.84	14586.56	2141.537	5363.898

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1746-01 Acquired: 4/10/2025 16:17:52 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0835356	.0175518	2.300192	-.045518	.0194045	107.6618	.4548957
Stddev	.0008229	.0006666	.005182	.002139	.0021375	.1435	.0014131
%RSD	.9850830	3.798056	.2252710	4.698997	11.01534	.1332582	.3106518
#1	.0827240	.0169526	2.294456	-.044083	.0179991	107.8118	.4558797
#2	.0843693	.0174330	2.304533	-.047976	.0218643	107.5259	.4555310
#3	.0835136	.0182699	2.301588	-.044494	.0183500	107.6477	.4532764

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0087367	-.000837	39.54465	.2287103	.2132220	1.782942	474.1039
Stddev	.0000559	.000578	.15838	.0003622	.0001836	.004457	1.3941
%RSD	.6393787	69.01484	.4005176	.1583703	.0860927	.2499945	.2940599
#1	.0087878	-.000583	39.55612	.2284877	.2130293	1.782110	472.6501
#2	.0087453	-.000430	39.69699	.2291283	.2132418	1.787757	474.2319
#3	.0086771	-.001498	39.38085	.2285150	.2133948	1.778960	475.4296

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.422678	51.61666	.3889980	.0132349	2.589314	.5152524	3.174960
Stddev	.012352	.11011	.0016672	.0004850	.001843	.0015365	.015514
%RSD	.2277895	.2133199	.4285835	3.664644	.0711891	.2982080	.4886317
#1	5.421596	51.70687	.3876919	.0127402	2.591407	.5169115	3.188990
#2	5.435535	51.64915	.3908758	.0132550	2.587935	.5138784	3.158299
#3	5.410902	51.49396	.3884262	.0137096	2.588599	.5149673	3.177591

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.776130	.6599913	.0024080	.2353944	6.265579	3.836564	8.811507
Stddev	.017296	.0025088	.0005550	.0014070	.015837	.022024	.031819
%RSD	.2224222	.3801299	23.04645	.5977375	.2527586	.5740439	.3611070
#1	7.757438	.6582611	.0030064	.2369105	6.275764	3.822161	8.836445
#2	7.791567	.6588441	.0023073	.2351423	6.273640	3.825615	8.822405
#3	7.779385	.6628686	.0019103	.2341305	6.247333	3.861917	8.775671

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1746-01 Acquired: 4/10/2025 16:17:52 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	1.036902	.4452730	.1905896
Stddev	.003879	.0003473	.0003333
%RSD	.3740831	.0779892	.1748612
#1	1.037943	.4452298	.1905148
#2	1.040155	.4449494	.1909539
#3	1.032609	.4456399	.1903000

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3397.041	83397.50	16592.67	2213.856	4623.488
Stddev	8.844	66.73	38.68	11.301	11.942
%RSD	.2603501	.0800148	.2331443	.5104509	.2582872
#1	3406.104	83357.45	16575.87	2200.846	4636.862
#2	3388.433	83360.52	16565.23	2219.484	4613.893
#3	3396.589	83474.54	16636.92	2221.236	4619.708

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1746-03 Acquired: 4/10/2025 16:22:05 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0445984	.0014404	.0956505	-.015871	-.002092	102.8554
Stddev	.0041228	.0013437	.0025970	.002911	.001334	.2019
%RSD	9.244252	93.28597	2.715116	18.33955	63.75880	.1962746
#1	.0471645	.0028652	.0926519	-.015082	-.002017	102.8039
#2	.0467879	.0001960	.0971826	-.019095	-.000798	103.0780
#3	.0398428	.0012601	.0971169	-.013436	-.003462	102.6842

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1335195	.0059146	-.006503	10.91897	.2072167	.0889767
Stddev	.0010351	.0000159	.000229	.01689	.0010870	.0006238
%RSD	.7752013	.2693237	3.516639	.1546752	.5245741	.7011115
#1	.1343866	.0059238	-.006512	10.93844	.2068232	.0896168
#2	.1323736	.0059238	-.006269	10.91019	.2063812	.0883705
#3	.1337984	.0058962	-.006726	10.90828	.2084456	.0889428

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2731150	193.5334	1.267854	47.40466	.1924330	.0078183
Stddev	.0002362	.6467	.001179	.06373	.0002890	.0001335
%RSD	.0864846	.3341711	.0929727	.1344397	.1502027	1.707380
#1	.2729675	192.9194	1.267860	47.35548	.1921126	.0078600
#2	.2729901	193.4723	1.269030	47.38185	.1926742	.0079259
#3	.2733874	194.2086	1.266673	47.47666	.1925122	.0076689

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.387876	.2439455	.5397365	13.83932	.3232059	.0038354
Stddev	.010622	.0015557	.0028038	.01841	.0014100	.0003799
%RSD	.4448482	.6377415	.5194759	.1329961	.4362629	9.904658
#1	2.391186	.2456613	.5418101	13.81811	.3224329	.0039439
#2	2.375993	.2435484	.5365464	13.85115	.3223513	.0034131
#3	2.396450	.2426268	.5408529	13.84869	.3248333	.0041493

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1746-03 Acquired: 4/10/2025 16:22:05 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.000922	4.648098	6.510064	3.733486	F 20.95804	.2588705
Stddev	.000237	.008887	.040313	.004785	.03638	.0012305
%RSD	25.68029	.1911989	.6192385	.1281545	.1735763	.4753487
#1	-.000849	4.650236	6.467344	3.728262	20.91693	.2574929
#2	-.001187	4.655721	6.547435	3.734544	20.97110	.2592579
#3	-.000731	4.638337	6.515414	3.737654	20.98608	.2598607

Elem	Sr4077
Units	ppm
Avg	.0714022
Stddev	.0000739
%RSD	.1034934
#1	.0714346
#2	.0714543
#3	.0713176

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3286.668	78840.26	15826.59	2127.088	4865.768
Stddev	9.359	189.44	21.02	4.081	9.176
%RSD	.2847581	.2402882	.1327835	.1918758	.1885809
#1	3276.559	78915.96	15803.82	2122.381	4857.162
#2	3288.413	78980.15	15845.25	2129.253	4864.720
#3	3295.031	78624.68	15830.70	2129.632	4875.423

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167490BL Acquired: 4/10/2025 16:26:10 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0004559	-.002496	-.001414	-.003431	.0002525	-.002347	-.009503
Stddev	.0015116	.001158	.000599	.001965	.0014678	.003967	.000360
%RSD	331.5708	46.38697	42.37698	57.28214	581.2424	169.0106	3.793023
#1	-.001157	-.001554	-.002052	-.005373	-.001202	-.006649	-.009088
#2	.000684	-.003788	-.000863	-.001443	.000226	-.001556	-.009736
#3	.001841	-.002146	-.001327	-.003478	.001734	.001165	-.009686

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000661	-.000133	-.015449	-.000238	-.000364	-.000391	.0005003
Stddev	.0000193	.000037	.003033	.000326	.000111	.000297	.0052291
%RSD	29.19425	27.86169	19.63491	137.3150	30.46635	75.98104	1045.240
#1	.0000876	-.000155	-.018949	-.000242	-.000478	-.000268	-.005340
#2	.0000606	-.000154	-.013581	.000091	-.000360	-.000175	.002092
#3	.0000502	-.000090	-.013817	-.000562	-.000256	-.000730	.004749

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003558	-.012483	-.000357	.0006034	-.340659	-.001054	-.001830
Stddev	.000210	.002252	.000043	.0003561	.004764	.000882	.000102
%RSD	5.902307	18.04243	12.09496	59.01465	1.398345	83.70822	5.567573
#1	-.003402	-.014908	-.000350	.0010071	-.343771	-.001234	-.001841
#2	-.003797	-.010457	-.000404	.0004687	-.343032	-.001832	-.001926
#3	-.003475	-.012083	-.000318	.0003343	-.335175	-.000096	-.001723

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.223327	-.006479	-.000405	-.000872	.0008426	.0003006	-.002443
Stddev	.006914	.000195	.000122	.000074	.0004214	.0050644	.000791
%RSD	3.095724	3.004925	30.09100	8.534112	50.01653	1685.025	32.37250
#1	-.229146	-.006608	-.000405	-.000953	.0006398	-.002756	-.002775
#2	-.225152	-.006573	-.000282	-.000807	.0013270	.006146	-.001541
#3	-.215684	-.006255	-.000526	-.000858	.0005609	-.002489	-.003015

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167490BL Acquired: 4/10/2025 16:26:10 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0012847	-.005144	-.000380
Stddev	.0031200	.000840	.000056
%RSD	242.8509	16.32655	14.87039
#1	.0029178	-.006089	-.000318
#2	.0032492	-.004860	-.000429
#3	-.002313	-.004482	-.000392

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3282.597	78849.75	14167.22	2165.689	5472.931
Stddev	11.185	130.81	71.69	8.961	11.004
%RSD	.3407235	.1658918	.5060213	.4137563	.2010626
#1	3279.573	78718.13	14144.86	2156.090	5473.310
#2	3294.983	78851.41	14247.42	2167.144	5483.741
#3	3273.235	78979.72	14109.37	2173.833	5461.742

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167490BS Acquired: 4/10/2025 16:39:31 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.7745465	1.924436	.9179780	1.982508	.8100457	1.872501
Stddev	.0032124	.031383	.0011472	.010032	.0047135	.003909
%RSD	.4147402	1.630782	.1249664	.5060391	.5818761	.2087614
#1	.7777565	1.955065	.9187295	1.991260	.8154771	1.873919
#2	.7713318	1.892349	.9185469	1.971559	.8070265	1.875504
#3	.7745513	1.925895	.9166575	1.984705	.8076336	1.868081

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1639784	.1804996	.1839290	.9337657	.3924149	.1851046
Stddev	.0014985	.0015535	.0002358	.0120476	.0005850	.0006337
%RSD	.9138655	.8606789	.1282218	1.290211	.1490818	.3423410
#1	.1647327	.1803295	.1839561	.9326740	.3917446	.1854682
#2	.1649500	.1821312	.1836808	.9463220	.3928225	.1843729
#3	.1622526	.1790381	.1841501	.9223012	.3926776	.1854727

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3045438	2.799601	.1783515	1.818153	.4766853	.0731190
Stddev	.0002781	.008879	.0014877	.013008	.0018037	.0005194
%RSD	.0913295	.3171697	.8341328	.7154750	.3783845	.7102973
#1	.3046237	2.792846	.1780968	1.832395	.4784563	.0734339
#2	.3042345	2.796299	.1799501	1.815165	.4748506	.0734036
#3	.3047733	2.809659	.1770076	1.806898	.4767490	.0725196

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.690104	.2745307	.1990242	9.006831	.2708898	.3980671
Stddev	.035849	.0028238	.0011123	.057372	.0032787	.0021544
%RSD	1.332636	1.028587	.5588547	.6369841	1.210354	.5412053
#1	2.688323	.2738711	.1983432	9.011830	.2713426	.3992720
#2	2.655178	.2776259	.2003077	8.947122	.2739186	.3955798
#3	2.726811	.2720951	.1984216	9.061539	.2674083	.3993494

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167490BS Acquired: 4/10/2025 16:39:31 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.6462179	.1826255	.7726328	5.554306	F -.010424	.1859371
Stddev	.0018674	.0009435	.0110139	.021577	.001650	.0016517
%RSD	.2889682	.5166163	1.425505	.3884733	15.82828	.8883098
#1	.6480996	.1831245	.7636063	5.568739	-.012130	.1862146
#2	.6443652	.1832147	.7693873	5.529501	-.010306	.1841642
#3	.6461888	.1815373	.7849048	5.564676	-.008836	.1874325

Elem	Sr4077
Units	ppm
Avg	.1810779
Stddev	.0003474
%RSD	.1918564
#1	.1812152
#2	.1813357
#3	.1806828

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3161.822	76924.57	13991.34	2052.026	5183.615
Stddev	11.278	133.18	108.02	2.408	15.272
%RSD	.3566848	.1731258	.7720439	.1173503	.2946284
#1	3152.747	76864.61	13973.07	2051.692	5171.679
#2	3174.448	77077.18	13893.62	2049.803	5200.825
#3	3158.270	76831.91	14107.33	2054.584	5178.340

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167517TB Acquired: 4/10/2025 16:43:33 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.004846	-.006992	-.001117	.0002871	.0013805	.0125208
Stddev	.002741	.001938	.000171	.0020351	.0015464	.0027702
%RSD	56.55959	27.72254	15.35358	708.8395	112.0162	22.12455
#1	-.002040	-.008268	-.001164	.0018406	-.000153	.0110055
#2	-.004982	-.004761	-.001259	-.002017	.001355	.0157181
#3	-.007517	-.007945	-.000926	.001037	.002939	.0108389

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.011605	-.000170	-.000229	.0085231	-.000468	-.000592
Stddev	.000630	.000040	.000036	.0066801	.000149	.000227
%RSD	5.431343	23.59452	15.48828	78.37607	31.77495	38.40346
#1	-.011646	-.000130	-.000209	.0035067	-.000635	-.000369
#2	-.012214	-.000169	-.000270	.0059569	-.000419	-.000824
#3	-.010956	-.000210	-.000209	.0161058	-.000350	-.000582

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000617	.0240945	-.003090	.0096845	-.000459	.0008603
Stddev	.000443	.0036356	.000106	.0199481	.000113	.0002048
%RSD	71.80105	15.08884	3.416274	205.9806	24.54513	23.80540
#1	-.001096	.0200006	-.002971	-.011208	-.000576	.0010207
#2	-.000223	.0253365	-.003174	.011731	-.000351	.0009305
#3	-.000531	.0269462	-.003124	.028530	-.000450	.0006296

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.461330	-.001846	.0009160	-.358408	-.006784	-.000205
Stddev	.001071	.001002	.0000916	.009662	.000321	.000104
%RSD	.2321062	54.28126	9.996412	2.695685	4.738352	50.91083
#1	-.461993	-.001837	.0008143	-.359455	-.006413	-.000126
#2	-.460095	-.000848	.0009918	-.367503	-.006951	-.000166
#3	-.461903	-.002852	.0009421	-.348265	-.006987	-.000324

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167517TB Acquired: 4/10/2025 16:43:33 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.000320	.0010189	.0167590	.0036072	F 14.76014	-.006459
Stddev	.000509	.0002192	.0055259	.0008908	.03182	.000571
%RSD	158.8776	21.51161	32.97275	24.69551	.2155743	8.838340
#1	.000174	.0010586	.0182533	.0043391	14.77605	-.006538
#2	-.000293	.0012155	.0213840	.0026153	14.72351	-.005853
#3	-.000842	.0007826	.0106396	.0038672	14.78087	-.006987

Elem	Sr4077
Units	ppm
Avg	-.000342
Stddev	.000070
%RSD	20.53066
#1	-.000324
#2	-.000419
#3	-.000283

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3208.516	79557.98	15780.80	2098.872	5474.087
Stddev	12.637	96.41	60.03	3.910	13.943
%RSD	.3938714	.1211803	.3803749	.1863063	.2547047
#1	3194.175	79494.54	15726.11	2096.449	5458.279
#2	3218.025	79668.92	15771.26	2103.383	5479.349
#3	3213.347	79510.47	15845.02	2096.783	5484.633

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1744-02 Acquired: 4/10/2025 16:47:52 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.005155	-.008438	.0004068	.0017467	.0013650	.0162619	.1556782
Stddev	.001944	.000914	.0019593	.0006162	.0024428	.0050281	.0000900
%RSD	37.71962	10.82672	481.6613	35.27930	178.9532	30.91936	.0578233
#1	-.003250	-.009156	.0014167	.0013980	.0002942	.0107931	.1557597
#2	-.007136	-.007410	-.001851	.0024582	.0041603	.0173080	.1555816
#3	-.005078	-.008748	.001655	.0013840	-.000359	.0206846	.1556934

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000044	.0000608	8.527603	.0022662	.0008161	.0097917	.0134572
Stddev	.000029	.0000919	.022699	.0000694	.0000889	.0001040	.0054973
%RSD	65.31788	151.1942	.2661789	3.062537	10.89716	1.062140	40.85050
#1	-.000033	-.000041	8.535299	.0022250	.0009151	.0097305	.0197133
#2	-.000023	.000137	8.502057	.0023463	.0007431	.0099118	.0112596
#3	-.000077	.000087	8.545453	.0022273	.0007900	.0097328	.0093986

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8621366	.9411583	.0026539	.0004658	347.6210	-.002530	.0416353
Stddev	.0017886	.0040625	.0002203	.0000394	2.5527	.001309	.0003131
%RSD	.2074621	.4316488	8.300947	8.461020	.7343353	51.71958	.7520393
#1	.8626715	.9382056	.0024671	.0005081	350.2989	-.002391	.0417039
#2	.8601416	.9457914	.0028968	.0004590	347.3487	-.003903	.0412935
#3	.8635968	.9394779	.0025978	.0004302	345.2153	-.001297	.0419084

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7708686	.0087433	-.000182	-.000756	.0009193	.5998658	.0281083
Stddev	.0106958	.0002178	.000161	.000548	.0008430	.0071060	.0033515
%RSD	1.387503	2.491168	88.37506	72.46446	91.70051	1.184594	11.92347
#1	.7698404	.0089113	-.000177	-.000884	-.000036	.5970981	.0258747
#2	.7820415	.0084972	-.000346	-.000156	.001233	.5945600	.0264881
#3	.7607241	.0088214	-.000024	-.001229	.001560	.6079391	.0319620

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1744-02 Acquired: 4/10/2025 16:47:52 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.1799271	-.007523	.0703640
Stddev	.0020565	.000349	.0001215
%RSD	1.142935	4.632364	.1727027
#1	.1822590	-.007922	.0702930
#2	.1783733	-.007275	.0702947
#3	.1791489	-.007372	.0705043

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2998.482	73624.64	14216.32	2002.564	4655.128
Stddev	3.775	332.17	68.81	12.708	5.302
%RSD	.1259119	.4511699	.4839881	.6345724	.1139047
#1	2996.997	74007.98	14275.49	2017.229	4650.982
#2	3002.774	73421.61	14232.64	1995.680	4661.103
#3	2995.674	73444.35	14140.82	1994.785	4653.298

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1744-04 Acquired: 4/10/2025 16:52:18 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0018050	-.006781	.0073879	.0019707	.0000622	.1208300	.4346153
Stddev	.0011749	.001556	.0013935	.0007570	.0005008	.0036745	.0006599
%RSD	65.09408	22.94088	18.86208	38.41537	805.6457	3.041082	.1518446
#1	.0004907	-.006175	.0089588	.0024529	-.000370	.1173425	.4342153
#2	.0027537	-.008548	.0069043	.0023609	-.000054	.1246667	.4342536
#3	.0021705	-.005620	.0063006	.0010981	.000611	.1204807	.4353770

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000749	-.000824	5.092565	.0000358	.0011571	.0100796	13.57094
Stddev	.0000163	.000043	.016478	.0000792	.0000409	.0004496	.04726
%RSD	21.78475	5.249046	.3235674	221.1987	3.535741	4.460581	.3482564
#1	.0000844	-.000845	5.074074	.0000470	.0011191	.0105303	13.51901
#2	.0000561	-.000854	5.105694	.0001089	.0011519	.0100773	13.58236
#3	.0000843	-.000775	5.097927	-.000048	.0012004	.0096311	13.61144

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1912062	1.209316	.0030462	.0007464	352.4438	.0008276	.2179503
Stddev	.0010886	.008435	.0000807	.0002620	3.5875	.0005625	.0015029
%RSD	.5693141	.6974736	2.650568	35.09606	1.017894	67.96337	.6895781
#1	.1919916	1.202329	.0029635	.0008380	352.8181	.0005337	.2194429
#2	.1899636	1.218686	.0030505	.0004510	355.8295	.0014762	.2164372
#3	.1916634	1.206932	.0031248	.0009503	348.6839	.0004730	.2179709

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.358511	.1091500	.0003259	-.001283	.0028892	.6414374	.0169313
Stddev	.009728	.0006335	.0001460	.000891	.0007051	.0026482	.0019391
%RSD	.7161006	.5803752	44.78098	69.42617	24.40530	.4128598	11.45256
#1	1.369208	.1084834	.0004648	-.000279	.0022226	.6444918	.0151953
#2	1.356130	.1097441	.0003393	-.001977	.0028178	.6400371	.0165747
#3	1.350194	.1092225	.0001738	-.001592	.0036274	.6397834	.0190239

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1744-04 Acquired: 4/10/2025 16:52:18 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.6067970	-.002064	.0358079
Stddev	.0036124	.000772	.0001046
%RSD	.5953217	37.40498	.2920305
#1	.6026260	-.002648	.0358192
#2	.6088489	-.002356	.0356982
#3	.6089162	-.001189	.0359065

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3006.996	73044.42	13862.06	1971.017	4693.289
Stddev	4.222	203.16	49.21	2.394	6.147
%RSD	.1403957	.2781296	.3549690	.1214768	.1309710
#1	3004.390	73065.64	13830.97	1971.490	4688.606
#2	3011.867	72831.49	13836.42	1968.422	4700.249
#3	3004.732	73236.14	13918.79	1973.141	4691.011

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV07 Acquired: 4/10/2025 16:56:43 Type: Unk
Method: NON EPA-6010-200.7(v2917) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.915192	4.910137	4.741338	5.021254	5.104803	10.08484
Stddev	.017894	.058149	.012849	.020552	.019148	.01273
%RSD	.3640463	1.184266	.2710098	.4092929	.3750988	.1261884
#1	4.902274	4.845425	4.728210	5.000158	5.086711	10.07047
#2	4.907685	4.926983	4.741917	5.022388	5.102841	10.08936
#3	4.935616	4.958004	4.753889	5.041214	5.124856	10.09468

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.568702	.2409834	2.354417	24.15864	1.020500	2.458615
Stddev	.057941	.0008350	.006909	.06284	.003582	.008710
%RSD	.6055255	.3465132	.2934620	.2601098	.3510001	.3542601
#1	9.535862	.2417985	2.347675	24.23069	1.018090	2.449175
#2	9.635603	.2401297	2.354093	24.11516	1.018794	2.460330
#3	9.534642	.2410219	2.361483	24.13007	1.024616	2.466340

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.290446	4.817954	2.382141	24.53129	2.504086	1.261753
Stddev	.003274	.026286	.008254	.04708	.005629	.005198
%RSD	.2537154	.5455916	.3464754	.1919276	.2247815	.4119754
#1	1.288213	4.804940	2.391631	24.53191	2.497616	1.257498
#2	1.288920	4.800714	2.378152	24.48390	2.506782	1.260214
#3	1.294205	4.848209	2.376640	24.57806	2.507860	1.267547

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.52083	2.448149	2.555474	24.23686	4.905122	5.026483
Stddev	.17926	.009473	.019903	.12283	.015551	.023556
%RSD	.7024067	.3869314	.7788358	.5067945	.3170423	.4686307
#1	25.32027	2.454879	2.546769	24.10778	4.917566	5.005451
#2	25.57675	2.452251	2.541407	24.25050	4.887688	5.022061
#3	25.66546	2.437317	2.578246	24.35230	4.910112	5.051935

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV07 Acquired: 4/10/2025 16:56:43 Type: Unk
Method: NON EPA-6010-200.7(v2917) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.799573	4.690296	F 5.807119	4.987859	4.719225	4.704892
Stddev	.017813	.012942	.060571	.017196	.031013	.007739
%RSD	.3711344	.2759366	1.043055	.3447480	.6571531	.1644884
#1	4.780087	4.704842	5.737313	4.969016	4.687602	4.704185
#2	4.803615	4.685990	5.838246	4.991860	4.720484	4.712961
#3	4.815018	4.680055	5.845797	5.002702	4.749588	4.697531

Elem	Sr4077
Units	ppm
Avg	4.676422
Stddev	.039965
%RSD	.8546075
#1	4.705483
#2	4.692937
#3	4.630846

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3075.039	74981.54	13383.46	1994.318	4816.920
Stddev	9.215	336.29	38.33	12.788	14.386
%RSD	.2996605	.4484993	.2863707	.6411977	.2986620
#1	3080.374	75294.16	13341.28	1996.513	4830.130
#2	3080.343	75024.72	13416.16	2005.866	4819.036
#3	3064.399	74625.74	13392.94	1980.575	4801.592

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB07 Acquired: 4/10/2025 17:00:54 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0002921	-.002017	-.000774	-.000627	.0012414	-.000506	-.009740
Stddev	.0009891	.001753	.000386	.003673	.0010680	.002347	.001503
%RSD	338.5886	86.90538	49.87802	585.4435	86.02948	463.6928	15.42680
#1	-.000699	-.000490	-.001200	-.004847	.0023464	.001917	-.011027
#2	.001280	-.001630	-.000675	.001109	.0011630	-.002769	-.010106
#3	.000295	-.003931	-.000447	.001855	.0002148	-.000667	-.008089

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000734	-.000052	-.016382	-.000060	-.000173	-.000466	-.010993
Stddev	.0000135	.000062	.004083	.000188	.000150	.000183	.002470
%RSD	18.39833	119.4356	24.92483	313.7212	86.49912	39.25040	22.46715
#1	.0000707	-.000123	-.021051	.000079	-.000221	-.000270	-.012947
#2	.0000614	-.000024	-.013474	.000015	-.000005	-.000496	-.011816
#3	.0000880	-.000008	-.014623	-.000274	-.000294	-.000632	-.008217

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005102	-.006949	-.000023	.0008350	-.225739	-.001555	-.002077
Stddev	.000224	.007475	.000141	.0000202	.008087	.000927	.000121
%RSD	4.392887	107.5732	602.9888	2.414915	3.582462	59.59100	5.837863
#1	-.005162	.001390	-.000116	.0008582	-.223511	-.002278	-.001943
#2	-.004855	-.013048	.000138	.0008238	-.218999	-.001877	-.002109
#3	-.005291	-.009188	-.000092	.0008228	-.234706	-.000510	-.002179

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.179145	-.002847	.0002066	-.000357	.0014692	.0035232	-.002914
Stddev	.021244	.000754	.0001680	.000570	.0004138	.0042937	.002487
%RSD	11.85839	26.48350	81.32679	159.7415	28.16370	121.8671	85.34584
#1	-.203052	-.003698	.0003004	.000300	.0018786	.0064700	-.000122
#2	-.171951	-.002579	.0003068	-.000723	.0014778	.0055028	-.003727
#3	-.162433	-.002263	.0000126	-.000648	.0010512	-.001403	-.004893

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB07 Acquired: 4/10/2025 17:00:54 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.001468	-.002779	-.000225
Stddev	.002086	.000656	.000063
%RSD	142.0911	23.61437	28.15704
#1	.000390	-.003445	-.000293
#2	-.001069	-.002133	-.000169
#3	-.003726	-.002758	-.000212

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3233.828	78433.74	15125.35	2105.365	5392.858
Stddev	12.371	429.35	105.08	14.715	15.130
%RSD	.3825523	.5474087	.6947169	.6989316	.2805649
#1	3223.418	78015.41	15168.08	2089.737	5385.561
#2	3247.505	78412.50	15202.34	2107.404	5410.254
#3	3230.561	78873.33	15005.64	2118.954	5382.759

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1780-01 Acquired: 4/10/2025 17:05:13 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0028603	-.006697	.0157057	-.000412	.0022050	1.556775
Stddev	.0018615	.003018	.0005402	.002204	.0008272	.014453
%RSD	65.08036	45.06654	3.439421	535.2259	37.51413	.9284216
#1	.0031065	-.008989	.0156866	.001954	.0030693	1.572216
#2	.0008880	-.007825	.0162552	-.000782	.0021251	1.543570
#3	.0045864	-.003278	.0151754	-.002407	.0014207	1.554539

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0793509	.0000289	-.000615	89.22546	.0229608	.0025838
Stddev	.0000980	.0000190	.000096	.05433	.0004030	.0001530
%RSD	.1234901	65.92427	15.54636	.0608937	1.755217	5.921627
#1	.0794097	.0000300	-.000523	89.16514	.0234040	.0026125
#2	.0794051	.0000093	-.000714	89.24065	.0226163	.0027203
#3	.0792377	.0000473	-.000607	89.27057	.0228620	.0024184

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149939	13.35245	.4043500	8.264430	.0207760	.0012595
Stddev	.0003554	.05830	.0001796	.032640	.0003849	.0003056
%RSD	2.370363	.4366043	.0444100	.3949490	1.852458	24.26157
#1	.0151943	13.35838	.4041590	8.272066	.0209543	.0009155
#2	.0152039	13.29141	.4043758	8.228648	.0203343	.0014995
#3	.0145836	13.40755	.4045153	8.292574	.0210394	.0013636

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	147.2774	.0029795	.2107093	12.21450	.0645400	.0030627
Stddev	.6739	.0009641	.0000909	.06592	.0006818	.0000872
%RSD	.4575419	32.35702	.0431532	.5397050	1.056362	2.847925
#1	147.6836	.0030039	.2106571	12.26463	.0649872	.0030430
#2	147.6491	.0039312	.2106564	12.13983	.0637553	.0031581
#3	146.4996	.0020035	.2108143	12.23905	.0648775	.0029870

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1780-01 Acquired: 4/10/2025 17:05:13 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.002976	.1164251	F 13.88386	1.412426	4.527303	.0026552
Stddev	.000161	.0119038	.05847	.011558	.016128	.0007137
%RSD	5.394464	10.22442	.4211384	.8183152	.3562304	26.87807
#1	-.002806	.1137489	13.94507	1.413006	4.525216	.0033806
#2	-.003125	.1060871	13.82858	1.400589	4.512321	.0019539
#3	-.002999	.1294391	13.87795	1.423683	4.544373	.0026310

Elem	Sr4077
Units	ppm
Avg	.3789206
Stddev	.0003049
%RSD	.0804547
#1	.3792533
#2	.3786545
#3	.3788541

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3020.428	74034.77	15162.27	1965.840	4796.370
Stddev	5.817	341.99	57.01	11.882	11.028
%RSD	.1925912	.4619283	.3760037	.6044042	.2299200
#1	3013.728	73645.76	15108.28	1952.341	4797.295
#2	3024.189	74288.11	15156.65	1974.709	4806.906
#3	3023.368	74170.43	15221.89	1970.472	4784.909

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1780-02 Acquired: 4/10/2025 17:09:32 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.002437	-.006933	.0240402	-.001038	.0032837	1.859733
Stddev	.001847	.000531	.0016146	.002184	.0006647	.012333
%RSD	75.78671	7.656528	6.716256	210.3123	20.24145	.6631406
#1	-.004463	-.006469	.0235054	.000548	.0040488	1.854761
#2	-.000850	-.007512	.0227608	-.003529	.0029532	1.873775
#3	-.001997	-.006818	.0258543	-.000134	.0028490	1.850662

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0842743	.0000810	-.000736	94.14235	.0086042	.0028816
Stddev	.0007561	.0000115	.000068	.61904	.0002589	.0000656
%RSD	.8972265	14.14770	9.194435	.6575536	3.008900	2.277944
#1	.0836812	.0000767	-.000739	93.49607	.0083070	.0028445
#2	.0840159	.0000723	-.000803	94.20101	.0087807	.0029574
#3	.0851257	.0000940	-.000667	94.72997	.0087250	.0028430

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0178499	14.87354	.4094273	8.521663	.0162621	.0011202
Stddev	.0001420	.08594	.0021719	.049289	.0002932	.0003223
%RSD	.7957128	.5778001	.5304657	.5783921	1.802765	28.76991
#1	.0176867	14.82547	.4071328	8.471881	.0159250	.0007494
#2	.0179179	14.82239	.4096978	8.522666	.0164040	.0012782
#3	.0179452	14.97276	.4114512	8.570443	.0164573	.0013330

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	161.1578	.0050029	.2228504	13.57929	.0669336	.0031589
Stddev	1.3092	.0010032	.0003329	.10948	.0006506	.0000594
%RSD	.8123590	20.05280	.1493920	.8062356	.9719861	1.879841
#1	162.5921	.0055598	.2228506	13.67534	.0662251	.0031768
#2	160.8541	.0038448	.2225174	13.46008	.0670714	.0030927
#3	160.0271	.0056042	.2231833	13.60246	.0675042	.0032073

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1780-02 Acquired: 4/10/2025 17:09:32 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.002841	.1336294	F 15.04910	1.595884	4.671479	.0031000
Stddev	.000485	.0070911	.05475	.004301	.013159	.0008016
%RSD	17.06813	5.306510	.3638096	.2695173	.2816947	25.85701
#1	-.003282	.1258786	15.05623	1.591804	4.657494	.0022573
#2	-.002322	.1352184	15.09993	1.600377	4.683618	.0038528
#3	-.002919	.1397911	14.99113	1.595471	4.673324	.0031899

Elem	Sr4077
Units	ppm
Avg	.3887903
Stddev	.0015320
%RSD	.3940494
#1	.3876528
#2	.3881858
#3	.3905323

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2976.326	74962.21	15890.05	1991.843	4687.488
Stddev	5.710	58.31	77.23	5.262	9.776
%RSD	.1918346	.0777831	.4860496	.2641733	.2085624
#1	2982.815	74909.02	15977.40	1988.706	4697.746
#2	2974.088	74953.06	15861.93	1997.917	4686.438
#3	2972.074	75024.56	15830.81	1988.904	4678.278

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1780-02DUP Acquired: 4/10/2025 17:13:53 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.000231	-.006935	.0255164	-.001666	.0024714	1.867514
Stddev	.003584	.001514	.0010531	.003665	.0022530	.002557
%RSD	1551.119	21.83744	4.127147	220.0270	91.16609	.1369019
#1	-.002936	-.005429	.0244694	.002436	.0047479	1.865954
#2	-.001590	-.008458	.0255043	-.004619	.0002426	1.870465
#3	.003833	-.006917	.0265755	-.002813	.0024235	1.866124

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0801006	.0001033	-.000744	93.53896	.0086969	.0029628
Stddev	.0004492	.0000233	.000069	.36037	.0001321	.0001369
%RSD	.5607467	22.55585	9.233934	.3852589	1.519205	4.621471
#1	.0800981	.0001174	-.000820	93.40099	.0088180	.0030466
#2	.0796528	.0001162	-.000686	93.26796	.0087168	.0028048
#3	.0805511	.0000764	-.000726	93.94793	.0085560	.0030369

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0179777	14.68827	.4043505	8.483834	.0161680	.0011761
Stddev	.0001400	.11115	.0004176	.055721	.0002444	.0000402
%RSD	.7787274	.7567058	.1032670	.6567896	1.511361	3.418826
#1	.0180997	14.78770	.4041248	8.490035	.0163958	.0011978
#2	.0178248	14.56828	.4048323	8.425273	.0159099	.0011297
#3	.0180085	14.70884	.4040943	8.536196	.0161984	.0012007

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	162.3788	.0046006	.2252809	13.42866	.0672755	.0033695
Stddev	2.7160	.0007354	.0025966	.08110	.0003832	.0001640
%RSD	1.672622	15.98522	1.152595	.6039606	.5696135	4.868232
#1	162.7217	.0037684	.2268325	13.49672	.0676848	.0032415
#2	159.5076	.0048701	.2222833	13.33892	.0669252	.0035544
#3	164.9070	.0051631	.2267270	13.45032	.0672165	.0033127

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1780-02DUP Acquired: 4/10/2025 17:13:53 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.003228	.1351851	F 14.90913	1.569094	4.565893	.0023901
Stddev	.000244	.0005445	.12017	.003142	.010638	.0005422
%RSD	7.548472	.4028117	.8060484	.2002720	.2329854	22.68758
#1	-.002952	.1350975	14.98599	1.572246	4.553811	.0024583
#2	-.003318	.1346897	14.77064	1.565961	4.573856	.0018169
#3	-.003414	.1357682	14.97076	1.569075	4.570011	.0028950

Elem	Sr4077
Units	ppm
Avg	.3856575
Stddev	.0013532
%RSD	.3508906
#1	.3841156
#2	.3866482
#3	.3862086

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2966.303	73752.84	15536.93	1946.119	4711.895
Stddev	13.530	594.17	58.37	16.323	13.561
%RSD	.4561094	.8056293	.3756553	.8387692	.2878049
#1	2974.661	73221.66	15515.12	1932.090	4715.946
#2	2973.555	74394.50	15603.07	1964.035	4722.968
#3	2950.693	73642.34	15492.62	1942.232	4696.770

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1780-02LX5 Acquired: 4/10/2025 17:18:13 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0000488	-.002974	.0040191	-.001209	.0019368	.3639103	.0064821
Stddev	.0025817	.001758	.0009160	.001851	.0013533	.0078498	.0002611
%RSD	5295.271	59.10696	22.79245	153.0957	69.87436	2.157079	4.028364
#1	.0010717	-.001453	.0033275	-.000013	.0004076	.3729641	.0067810
#2	.0019622	-.004898	.0050580	-.000273	.0029799	.3597593	.0062981
#3	-.002888	-.002570	.0036716	-.003341	.0024229	.3590074	.0063672

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000325	-.000311	19.39020	.0019304	.0005250	.0036207	2.959402
Stddev	.0000189	.000031	.05216	.0004600	.0001006	.0001723	.024299
%RSD	58.19061	9.881172	.2689986	23.83200	19.17083	4.758344	.8210933
#1	.0000297	-.000276	19.39502	.0014415	.0004583	.0035255	2.936426
#2	.0000152	-.000322	19.33579	.0019948	.0006407	.0035170	2.956943
#3	.0000527	-.000335	19.43978	.0023548	.0004758	.0038196	2.984838

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0803685	1.785978	.0035511	.0007784	31.23113	.0005041	.0451562
Stddev	.0007736	.010364	.0002223	.0001077	.08643	.0009254	.0004294
%RSD	.9625987	.5803193	6.260154	13.84094	.2767436	183.5827	.9509621
#1	.0810527	1.775893	.0037216	.0009003	31.18529	.0015664	.0452698
#2	.0795290	1.785438	.0036321	.0006958	31.33082	-.000127	.0446814
#3	.0805237	1.796601	.0032997	.0007392	31.17727	.000072	.0455174

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.361691	.0090050	.0003438	-.001310	.0257229	2.860866	.3152682
Stddev	.006835	.0001630	.0001352	.000599	.0022755	.013972	.0031307
%RSD	.2894002	1.810073	39.32846	45.72205	8.846127	.4883703	.9930229
#1	2.353904	.0091736	.0001992	-.001726	.0282559	2.863487	.3118603
#2	2.364477	.0088483	.0003650	-.000623	.0250609	2.873342	.3180166
#3	2.366693	.0089932	.0004672	-.001580	.0238518	2.845770	.3159277

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1780-02LX5 Acquired: 4/10/2025 17:18:13 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.9418781	-.000599	.0770752
Stddev	.0063032	.000951	.0000574
%RSD	.6692107	158.8730	.0744254
#1	.9346426	-.001659	.0770132
#2	.9461784	-.000316	.0771264
#3	.9448132	.000179	.0770861

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3130.070	76774.57	15511.78	2053.750	5108.140
Stddev	15.321	307.52	111.17	8.441	15.835
%RSD	.4894903	.4005535	.7166797	.4109876	.3099975
#1	3143.047	76650.09	15470.84	2058.489	5122.381
#2	3133.996	77124.82	15637.61	2058.756	5110.951
#3	3113.168	76548.81	15426.88	2044.004	5091.088

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1780-02MS Acquired: 4/10/2025 17:22:30 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.7783736	1.781272	.9041255	1.902424	.8191575	3.785525
Stddev	.0018205	.007856	.0031355	.006581	.0019946	.011653
%RSD	.2338904	.4410163	.3467995	.3459170	.2434900	.3078250
#1	.7766727	1.790300	.9048835	1.896742	.8198870	3.798108
#2	.7781542	1.775996	.9006805	1.909634	.8206846	3.775105
#3	.7802939	1.777520	.9068125	1.900895	.8169009	3.783364

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2538454	.1813291	.1821420	93.89135	.3979722	.1900544
Stddev	.0031307	.0003439	.0007245	.42547	.0020257	.0011145
%RSD	1.233325	.1896364	.3977480	.4531520	.5090065	.5864318
#1	.2508566	.1813328	.1822148	93.40681	.3998463	.1896700
#2	.2535786	.1816712	.1813839	94.06329	.3982474	.1891829
#3	.2571010	.1809835	.1828273	94.20394	.3958230	.1913102

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3097436	15.73630	.5839631	10.37250	.4884075	.0727751
Stddev	.0001452	.09870	.0049615	.02065	.0012002	.0001827
%RSD	.0468686	.6271818	.8496264	.1990942	.2457354	.2510862
#1	.3099111	15.63705	.5784807	10.35816	.4874245	.0729747
#2	.3096660	15.73740	.5852641	10.39617	.4880530	.0726162
#3	.3096537	15.83443	.5881445	10.36317	.4897450	.0727343

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	146.0998	.2847954	.4197768	21.47870	.3266782	.4202768
Stddev	1.5138	.0008881	.0016240	.12859	.0012038	.0005844
%RSD	1.036151	.3118331	.3868838	.5986911	.3684928	.1390455
#1	144.9044	.2844576	.4210902	21.38773	.3254305	.4208598
#2	145.5929	.2841258	.4179609	21.42254	.3267712	.4196910
#3	147.8020	.2858029	.4202794	21.62581	.3278327	.4202797

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1780-02MS Acquired: 4/10/2025 17:22:30 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.6477171	.3183509	F 14.00064	7.350869	4.521375	.1994748
Stddev	.0014789	.0067167	.02201	.011812	.006644	.0011681
%RSD	.2283181	2.109833	.1572358	.1606920	.1469419	.5855838
#1	.6475091	.3109876	14.01503	7.341114	4.517397	.1981438
#2	.6463532	.3241421	13.97529	7.347492	4.517682	.2003294
#3	.6492889	.3199229	14.01158	7.364002	4.529044	.1999511

Elem	Sr4077
Units	ppm
Avg	.5589139
Stddev	.0026927
%RSD	.4817810
#1	.5561972
#2	.5589624
#3	.5615820

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2976.628	73684.03	13559.61	1955.249	4690.544
Stddev	22.218	144.81	24.94	2.992	22.623
%RSD	.7464057	.1965231	.1839537	.1530052	.4823023
#1	2961.462	73547.15	13556.90	1957.191	4676.095
#2	2966.291	73835.64	13536.13	1956.752	4678.923
#3	3002.131	73669.29	13585.80	1951.804	4716.616

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1780-02MSD Acquired: 4/10/2025 17:26:38 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.7688239	1.747450	.8982494	1.877037	.8114362	3.743776
Stddev	.0096353	.014303	.0024060	.002242	.0019869	.022458
%RSD	1.253248	.8185068	.2678491	.1194309	.2448618	.5998734
#1	.7784459	1.737544	.8954986	1.875969	.8126623	3.766430
#2	.7591754	1.740959	.8992885	1.875528	.8125024	3.743380
#3	.7688503	1.763848	.8999612	1.879613	.8091438	3.721519

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2685671	.1654632	.1801319	94.67709	.3975560	.1887909
Stddev	.0007941	.0005923	.0003995	.22242	.0007531	.0004877
%RSD	.2956734	.3579862	.2218096	.2349221	.1894275	.2583364
#1	.2694025	.1650290	.1798310	94.50081	.3970379	.1883725
#2	.2678221	.1652227	.1799795	94.60349	.3984199	.1886736
#3	.2684767	.1661380	.1805853	94.92698	.3972102	.1893266

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3077010	17.51978	.5901761	10.28115	.4844051	.0727691
Stddev	.0005998	.01302	.0009013	.03690	.0012854	.0010555
%RSD	.1949413	.0742906	.1527115	.3589563	.2653493	1.450517
#1	.3079994	17.52580	.5892676	10.24445	.4841030	.0716648
#2	.3070105	17.52870	.5901907	10.28074	.4832977	.0728746
#3	.3080931	17.50485	.5910699	10.31825	.4858146	.0737680

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	158.5945	.2888961	.4234448	24.26403	.3048851	.4204350
Stddev	1.5819	.0017329	.0010482	.05537	.0013208	.0010801
%RSD	.9974672	.5998470	.2475463	.2282016	.4332259	.2569033
#1	160.2332	.2881006	.4246294	24.23698	.3047508	.4212491
#2	157.0763	.2908840	.4230675	24.32773	.3036365	.4192097
#3	158.4739	.2877038	.4226374	24.22739	.3062680	.4208463

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1780-02MSD Acquired: 4/10/2025 17:26:38 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.6419131	.3230233	F 15.37628	7.217365	4.436116	.2033968
Stddev	.0008757	.0063112	.06879	.061601	.020959	.0003219
%RSD	.1364244	1.953802	.4473881	.8535142	.4724616	.1582836
#1	.6410828	.3230742	15.45567	7.153751	4.414099	.2036819
#2	.6428281	.3293089	15.33443	7.221609	4.438422	.2030476
#3	.6418285	.3166868	15.33873	7.276734	4.455826	.2034610

Elem	Sr4077
Units	ppm
Avg	.5798633
Stddev	.0008336
%RSD	.1437544
#1	.5791588
#2	.5807835
#3	.5796475

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2994.770	73810.29	15066.92	1982.207	4718.864
Stddev	22.438	81.96	40.62	1.371	23.904
%RSD	.7492329	.1110363	.2695899	.0691906	.5065700
#1	2968.916	73716.67	15086.12	1981.157	4691.269
#2	3006.229	73845.09	15094.38	1983.758	4733.228
#3	3009.164	73869.10	15020.26	1981.704	4732.094

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1780-02A Acquired: 4/10/2025 17:30:48 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.7743341	1.771185	.8965975	1.902290	.8198247	3.727198
Stddev	.0029335	.018978	.0021334	.004677	.0026672	.017679
%RSD	.3788392	1.071478	.2379400	.2458650	.3253333	.4743236
#1	.7739799	1.781278	.8974668	1.904679	.8194289	3.747597
#2	.7715938	1.749293	.8941667	1.896901	.8173776	3.716322
#3	.7774286	1.782983	.8981589	1.905291	.8226677	3.717675

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2633218	.1669204	.1810300	93.82973	.3952475	.1899585
Stddev	.0004112	.0009730	.0005354	.16782	.0009519	.0000121
%RSD	.1561693	.5829222	.2957550	.1788543	.2408283	.0063692
#1	.2633520	.1677766	.1810714	93.74497	.3945281	.1899543
#2	.2628964	.1671222	.1804751	94.02303	.3963268	.1899722
#3	.2637172	.1658622	.1815435	93.72120	.3948875	.1899491

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3096764	17.04861	.5863301	10.18652	.4859220	.0719715
Stddev	.0001786	.08701	.0005170	.00784	.0012760	.0002213
%RSD	.0576678	.5103676	.0881704	.0770034	.2626020	.3075311
#1	.3095226	16.95377	.5869264	10.18402	.4861659	.0721177
#2	.3096343	17.12475	.5860555	10.18022	.4845416	.0720800
#3	.3098723	17.06731	.5860084	10.19530	.4870585	.0717169

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	156.9419	.2843988	.4208141	23.59994	.3054136	.4197634
Stddev	.8337	.0023622	.0004268	.05684	.0004394	.0010466
%RSD	.5311928	.8305894	.1014309	.2408409	.1438585	.2493280
#1	156.0658	.2864613	.4204849	23.53580	.3059153	.4209667
#2	157.0348	.2849133	.4212964	23.61995	.3050970	.4192597
#3	157.7253	.2818217	.4206611	23.64407	.3052286	.4190640

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: Q1780-02A Acquired: 4/10/2025 17:30:48 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.6450575	.3124806	F 15.04654	7.418416	4.559137	.2019356
Stddev	.0025494	.0002205	.01186	.043708	.019580	.0004520
%RSD	.3952218	.0705734	.0788271	.5891784	.4294579	.2238201
#1	.6450057	.3126926	15.03608	7.442296	4.573886	.2020311
#2	.6425345	.3124970	15.05943	7.367970	4.536923	.2014436
#3	.6476325	.3122524	15.04411	7.444981	4.566600	.2023323

Elem	Sr4077
Units	ppm
Avg	.5739677
Stddev	.0007801
%RSD	.1359112
#1	.5732289
#2	.5747834
#3	.5738909

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2961.492	73653.54	14757.35	1961.349	4659.939
Stddev	4.848	285.83	26.05	14.909	9.944
%RSD	.1637154	.3880723	.1765445	.7601657	.2133866
#1	2957.715	73967.69	14743.33	1977.058	4651.698
#2	2966.960	73408.83	14741.31	1947.394	4670.983
#3	2959.802	73584.10	14787.41	1959.594	4657.135

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: SOIL MDL-5 Acquired: 4/10/2025 17:34:56 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0055670	.0077178	.0020699	.0014118	.0137871	.0286700	.0120505
Stddev	.0016856	.0000898	.0003394	.0025435	.0010232	.0031025	.0008646
%RSD	30.27863	1.163327	16.39893	180.1621	7.421663	10.82131	7.174751
#1	.0036345	.0076730	.0017628	.0043443	.0148996	.0274427	.0119661
#2	.0067345	.0078211	.0020124	.0000872	.0128864	.0263688	.0112313
#3	.0063319	.0076591	.0024344	-.000196	.0135752	.0321983	.0129543

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014336	.0013037	.4653899	.0020433	.0070341	.0056550	.0280391
Stddev	.0000096	.0001072	.0054171	.0001875	.0000891	.0002465	.0022740
%RSD	.6701843	8.223388	1.163996	9.174778	1.266957	4.359009	8.110229
#1	.0014446	.0012862	.4704868	.0018551	.0069447	.0053723	.0278439
#2	.0014286	.0014186	.4659818	.0020449	.0070347	.0058249	.0258690
#3	.0014274	.0012063	.4597012	.0022300	.0071229	.0057678	.0304045

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000140	.5075543	.0094568	.0035996	.3797858	.0087063	.0096505
Stddev	.000489	.0031109	.0002237	.0001402	.0080147	.0014919	.0003633
%RSD	349.1991	.6129298	2.365802	3.894039	2.110325	17.13541	3.764827
#1	.000369	.5083631	.0095535	.0035515	.3705408	.0080337	.0093458
#2	-.000183	.5041188	.0092010	.0034897	.3840433	.0076692	.0095532
#3	-.000607	.5101809	.0096159	.0037574	.3847732	.0104161	.0100526

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3692640	.0171233	.0525872	.0090837	.0111097	.1042414	.0038124
Stddev	.0305031	.0009320	.0003877	.0006492	.0003678	.0009655	.0016861
%RSD	8.260515	5.442686	.7372528	7.147240	3.311003	.9262001	44.22671
#1	.3667914	.0173556	.0528374	.0091464	.0106881	.1035083	.0039593
#2	.4009282	.0160971	.0521406	.0084053	.0113657	.1053353	.0054203
#3	.3400725	.0179171	.0527837	.0096992	.0112752	.1038806	.0020577

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: SOIL MDL-5 Acquired: 4/10/2025 17:34:56 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0104516	.0037148	.0043803
Stddev	.0008567	.0015717	.0000395
%RSD	8.196566	42.30998	.9028604
#1	.0098310	.0026796	.0043377
#2	.0114290	.0055233	.0043876
#3	.0100949	.0029413	.0044158

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3258.909	79217.12	14686.36	2124.785	5436.227
Stddev	12.875	212.64	8.01	8.418	19.486
%RSD	.3950573	.2684309	.0545176	.3961917	.3584488
#1	3247.121	79309.55	14680.00	2133.950	5417.547
#2	3272.647	78973.91	14695.35	2117.396	5456.430
#3	3256.959	79367.91	14683.73	2123.010	5434.703

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167554BL Acquired: 4/10/2025 17:39:16 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	-.000419	-.002293	-.000568	-.002901	-.000495	.0014643	-.010964
Stddev	.001251	.000613	.000574	.000481	.000694	.0033684	.000624
%RSD	298.7952	26.74854	101.1695	16.56426	140.0993	230.0272	5.688535
#1	-.001151	-.001827	.000005	-.003085	-.000783	.0028346	-.010791
#2	-.001131	-.002988	-.000565	-.003262	.000296	.0039316	-.010445
#3	.001026	-.002064	-.001144	-.002356	-.000998	-.002373	-.011656

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000604	-.000117	-.023595	.0000114	-.000209	-.000205	-.006647
Stddev	.0000202	.000055	.002668	.0002729	.000071	.000511	.001059
%RSD	33.45410	46.96282	11.30835	2389.341	33.90695	248.8061	15.93529
#1	.0000394	-.000141	-.020525	-.000284	-.000220	.000377	-.005957
#2	.0000620	-.000054	-.025354	.000254	-.000134	-.000417	-.007867
#3	.0000798	-.000156	-.024907	.000065	-.000274	-.000577	-.006117

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005304	-.012048	-.000353	.0009050	-.220600	-.001128	-.001947
Stddev	.000189	.009169	.000257	.0000727	.003385	.000790	.000076
%RSD	3.570317	76.10294	72.74804	8.033653	1.534501	69.97516	3.903826
#1	-.005518	-.022565	-.000611	.0009614	-.224006	-.000545	-.001997
#2	-.005156	-.005727	-.000097	.0008230	-.220556	-.002027	-.001984
#3	-.005240	-.007853	-.000352	.0009307	-.217237	-.000813	-.001859

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.122735	-.007295	-.000502	-.000283	.0015630	.0061730	-.003774
Stddev	.012923	.000594	.000023	.000248	.0004801	.0050544	.002160
%RSD	10.52953	8.144532	4.550223	87.67971	30.71420	81.88017	57.23647
#1	-.133493	-.007964	-.000525	-.000545	.0019576	.0003899	-.004155
#2	-.126312	-.007097	-.000500	-.000051	.0010285	.0083829	-.005719
#3	-.108399	-.006826	-.000480	-.000253	.0017030	.0097461	-.001449

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167554BL Acquired: 4/10/2025 17:39:16 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.0019005	-.003949	-.000384
Stddev	.0018886	.001494	.000030
%RSD	99.37680	37.84146	7.858884
#1	.0007220	-.002368	-.000407
#2	.0040788	-.005339	-.000350
#3	.0009006	-.004139	-.000395

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3210.131	77481.25	14123.41	2086.392	5375.870
Stddev	5.960	223.16	61.03	15.358	13.774
%RSD	.1856726	.2880231	.4320845	.7361185	.2562226
#1	3211.684	77673.37	14069.23	2104.115	5385.965
#2	3215.160	77533.92	14111.47	2078.063	5381.467
#3	3203.547	77236.46	14189.52	2076.997	5360.178

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167554BS Acquired: 4/10/2025 17:43:35 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.7426763	1.877368	.8960891	1.895875	.7774065	1.811402
Stddev	.0047833	.016813	.0023223	.006321	.0023240	.013574
%RSD	.6440634	.8955397	.2591592	.3334232	.2989382	.7493545
#1	.7431474	1.862135	.8959048	1.893778	.7755908	1.820985
#2	.7472066	1.895407	.8938645	1.902979	.7766032	1.795869
#3	.7376748	1.874562	.8984981	1.890869	.7800256	1.817353

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .1639992	.1772460	.1803204	.9032919	.3815674	.1828458
Stddev	.0010743	.0012822	.0003874	.0084609	.0000650	.0007939
%RSD	.6550481	.7233958	.2148417	.9366738	.0170328	.4342183
#1	.1651759	.1757709	.1799754	.8936771	.3815305	.1819328
#2	.1630709	.1778735	.1802462	.9096005	.3816425	.1832303
#3	.1637507	.1780935	.1807395	.9065980	.3815293	.1833743

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2958616	2.746436	.1755574	1.796045	.4654734	.0707559
Stddev	.0006693	.019387	.0005503	.030002	.0010559	.0002241
%RSD	.2262288	.7058808	.3134824	1.670463	.2268446	.3167353
#1	.2963918	2.768810	.1761929	1.810213	.4650601	.0706591
#2	.2951096	2.735873	.1752480	1.761582	.4646866	.0705965
#3	.2960836	2.734625	.1752315	1.816339	.4666734	.0710122

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.561057	.2692628	.1926038	8.774481	.2637743	.3859323
Stddev	.030762	.0011570	.0010172	.093715	.0022931	.0011603
%RSD	1.201150	.4296793	.5281349	1.068037	.8693518	.3006453
#1	2.593714	.2684460	.1927449	8.878841	.2611591	.3859935
#2	2.532627	.2687558	.1935432	8.747084	.2647228	.3847426
#3	2.556829	.2705868	.1915235	8.697519	.2654410	.3870607

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: PB167554BS Acquired: 4/10/2025 17:43:35 Type: Unk
Method: NON EPA-6010-200.7(v2917) 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	.6355101	.1797376	F .7518060	5.492204	F -.006710	.1792328
Stddev	.0015866	.0006501	.0038796	.020495	.000330	.0013334
%RSD	.2496549	.3616940	.5160317	.3731567	4.922044	.7439353
#1	.6337863	.1804686	.7547602	5.468588	-.006439	.1807719
#2	.6369092	.1792243	.7474125	5.502685	-.006613	.1784999
#3	.6358349	.1795199	.7532452	5.505338	-.007078	.1784266

Elem	Sr4077
Units	ppm
Avg	.1780697
Stddev	.0007734
%RSD	.4342993
#1	.1789612
#2	.1775790
#3	.1776689

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3225.450	78780.13	14201.36	2137.582	5238.296
Stddev	2.138	122.81	93.17	9.180	1.829
%RSD	.0662916	.1558927	.6560636	.4294771	.0349183
#1	3223.370	78644.59	14308.86	2127.127	5239.725
#2	3225.337	78884.01	14143.90	2144.325	5236.234
#3	3227.642	78811.80	14151.33	2141.294	5238.927

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV08 Acquired: 4/10/2025 17:56:40 Type: Unk
Method: NON EPA-6010-200.7(v2904) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.886601	4.871786	4.739570	4.975057	5.062344	10.14301
Stddev	.011337	.016233	.004994	.016276	.014889	.24600
%RSD	.2320024	.3331998	.1053664	.3271579	.2941190	2.425307
#1	4.884504	4.862594	4.738663	4.974919	5.050574	10.34482
#2	4.876459	4.862235	4.735091	4.958850	5.057374	10.21522
#3	4.898840	4.890529	4.744955	4.991401	5.079082	9.86899

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.471310	.2330354	2.357105	23.86373	1.026133	2.464132
Stddev	.126674	.0040982	.002512	.43446	.002580	.003244
%RSD	1.337446	1.758610	.1065760	1.820594	.2514494	.1316655
#1	9.545882	.2360747	2.354270	24.20441	1.027857	2.461555
#2	9.542999	.2346571	2.357994	24.01232	1.023167	2.463065
#3	9.325049	.2283746	2.359053	23.37447	1.027376	2.467775

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.284879	5.025078	2.327836	24.26130	2.497462	1.263858
Stddev	.003172	.045773	.043651	.47963	.003589	.002482
%RSD	.2468952	.9108926	1.875169	1.976933	.1436963	.1963618
#1	1.285324	5.072844	2.358900	24.70257	2.493320	1.266250
#2	1.281507	5.020793	2.346679	24.33051	2.499638	1.264029
#3	1.287805	4.981599	2.277929	23.75083	2.499429	1.261295

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.27594	2.414985	2.548627	25.12851	4.689674	4.991639
Stddev	.03774	.034530	.011007	.04415	.088665	.010711
%RSD	.1436132	1.429836	.4318839	.1757099	1.890647	.2145735
#1	26.30908	2.440409	2.561308	25.16780	4.754929	4.987130
#2	26.23487	2.428873	2.541546	25.08073	4.725369	4.983920
#3	26.28386	2.375673	2.543028	25.13699	4.588725	5.003867

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV08 Acquired: 4/10/2025 17:56:40 Type: Unk
Method: NON EPA-6010-200.7(v2904) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.810762	4.619296	F 6.049095	5.028366	4.743979	4.613389
Stddev	.008851	.080327	.022947	.013255	.001289	.072363
%RSD	.1839905	1.738952	.3793497	.2635959	.0271744	1.568550
#1	4.801090	4.681630	6.038813	5.035802	4.742603	4.668098
#2	4.812738	4.647614	6.033087	5.013063	4.744175	4.640731
#3	4.818459	4.528645	6.075385	5.036232	4.745159	4.531339

Elem	Sr4077
Units	ppm
Avg	4.605377
Stddev	.103561
%RSD	2.248703
#1	4.657455
#2	4.672562
#3	4.486113

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3095.032	74637.41	14005.00	2009.866	4821.347
Stddev	11.893	136.46	244.57	9.091	16.474
%RSD	.3842566	.1828345	1.746313	.4523292	.3416936
#1	3098.804	74490.66	13814.75	2003.234	4830.895
#2	3104.580	74760.49	13919.38	2020.229	4830.821
#3	3081.710	74661.08	14280.87	2006.134	4802.324

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB08 Acquired: 4/10/2025 18:00:48 Type: Unk
Method: NON EPA-6010-200.7(v2904) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003571	-.001962	-.000539	-.002426	-.000051	.0049162	-.009184
Stddev	.0011269	.000417	.000544	.001107	.001025	.0103767	.000795
%RSD	315.5449	21.27973	100.9390	45.64457	2013.891	211.0726	8.654441
#1	-.000466	-.001591	-.000179	-.003694	.001131	-.001068	-.009332
#2	.001642	-.001880	-.001165	-.001651	-.000709	-.001082	-.008325
#3	-.000105	-.002414	-.000273	-.001933	-.000575	.016898	-.009894

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000304	.0000399	-.014995	-.000251	-.000141	-.000288	-.002361
Stddev	.0000279	.0000770	.002140	.000190	.000044	.000242	.003596
%RSD	91.58680	192.9728	14.26941	75.77320	31.17838	84.06606	152.2841
#1	.0000626	.0000981	-.015306	-.000402	-.000140	-.000566	.000704
#2	.0000143	-.000047	-.016962	-.000314	-.000097	-.000172	-.006320
#3	.0000144	.000069	-.012716	-.000037	-.000184	-.000126	-.001469

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005180	-.010764	-.000153	.0009207	-.286946	-.002389	-.001772
Stddev	.000195	.007636	.000146	.0000669	.008548	.000935	.000058
%RSD	3.768011	70.93956	95.51447	7.264597	2.979104	39.15491	3.267476
#1	-.005397	-.019558	-.000228	.0008440	-.295821	-.001901	-.001760
#2	-.005125	-.005803	-.000247	.0009667	-.278766	-.001798	-.001721
#3	-.005018	-.006933	.000015	.0009515	-.286250	-.003467	-.001835

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.206899	-.001885	.0003659	-.000002	.0013702	.0084823	-.005021
Stddev	.012435	.000149	.0000571	.000730	.0004189	.0044737	.003101
%RSD	6.010250	7.899183	15.60264	29301.04	30.57012	52.74073	61.76548
#1	-.219423	-.002036	.0003258	.000089	.0017863	.0121492	-.002452
#2	-.194554	-.001879	.0003406	-.000774	.0009486	.0034979	-.008466
#3	-.206720	-.001739	.0004313	.000677	.0013757	.0098000	-.004146

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB08 Acquired: 4/10/2025 18:00:48 Type: Unk
Method: NON EPA-6010-200.7(v2904) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000060	-.004357	-.000132
Stddev	.001775	.000968	.000069
%RSD	2965.001	22.21732	52.23155
#1	.001532	-.003356	-.000123
#2	-.001973	-.004428	-.000205
#3	.000262	-.005288	-.000068

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3246.693	78262.84	16104.64	2114.489	5430.726
Stddev	2.540	132.30	105.92	12.862	4.545
%RSD	.0782226	.1690453	.6577109	.6082873	.0836921
#1	3247.898	78159.45	16024.58	2107.793	5431.545
#2	3248.405	78411.93	16064.59	2129.317	5434.806
#3	3243.775	78217.14	16224.75	2106.356	5425.827

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: LR1 Acquired: 4/10/2025 18:05:04 Type: Unk
Method: NON EPA-6010-200.7(v2918) 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	.0750164	.0936123	6.009374	-.000295	.0034484	1895.656	.0900504
Stddev	.0113373	.0111121	.015575	.012884	.0088513	23.146	.0003968
%RSD	15.11306	11.87032	.2591805	4370.660	256.6836	1.220987	.4406135
#1	.0879649	.0811985	5.995821	.013712	.0112760	1883.423	.0896343
#2	.0668726	.0970084	6.026389	-.011641	-.006157	1922.351	.0900924
#3	.0702119	.1026301	6.005912	-.002955	.005226	1881.194	.0904245

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055579	-.042490	1639.112	.0214786	.0221693	-.097351	1092.438
Stddev	.0001254	.001768	12.566	.0002472	.0008427	.003670	7.729
%RSD	2.256026	4.160765	.7666366	1.151052	3.801276	3.769583	.7074570
#1	.0054588	-.044324	1624.710	.0217574	.0213711	-.101123	1100.276
#2	.0056989	-.042349	1644.779	.0213926	.0230504	-.097137	1092.215
#3	.0055161	-.040797	1647.846	.0212859	.0220863	-.093793	1084.823

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.076314	1813.668	.0163136	.0610655	1937.875	.0114768	.3845696
Stddev	.000550	38.252	.0008234	.0012560	33.034	.0000996	.0047108
%RSD	.7212408	2.109086	5.047146	2.056776	1.704666	.8674822	1.224960
#1	-.076439	1857.827	.0170341	.0620720	1970.912	.0115766	.3802564
#2	-.076791	1792.410	.0164906	.0614665	1937.869	.0113775	.3895966
#3	-.075712	1790.766	.0154162	.0596580	1904.844	.0114761	.3838558

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1215.072	1.815307	-.007446	-.009144	-.033482	.2082371	.0650745
Stddev	3.149	.023833	.000789	.004313	.000642	.0086712	.0069311
%RSD	.2591841	1.312892	10.59903	47.16534	1.917298	4.164103	10.65099
#1	1218.527	1.841056	-.007545	-.011947	-.033070	.2181923	.0686024
#2	1214.327	1.810845	-.006612	-.011307	-.033153	.2041871	.0570891
#3	1212.362	1.794021	-.008181	-.004178	-.034221	.2023319	.0695318

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: LR1 Acquired: 4/10/2025 18:05:04 Type: Unk
Method: NON EPA-6010-200.7(v2918) 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	-.228560	.1820174	.0103018
Stddev	.017803	.0060066	.0000612
%RSD	7.789046	3.300002	.5939535
#1	-.249088	.1883523	.0103689
#2	-.219235	.1812955	.0102491
#3	-.217356	.1764044	.0102873

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2246.588	54472.37	12506.50	1461.509	2939.809
Stddev	10.035	334.72	36.89	9.121	6.061
%RSD	.4466677	.6144731	.2949631	.6240922	.2061726
#1	2243.915	54088.91	12548.17	1451.010	2941.494
#2	2257.688	54622.26	12493.34	1467.475	2944.849
#3	2238.160	54705.96	12478.00	1466.043	2933.084

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: LR2 Acquired: 4/10/2025 18:10:01 Type: Unk
Method: NON EPA-6010-200.7(v2918) 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	.0091964	-.020949	225.6856	.0012375	-.009396	.1755365	108.6091
Stddev	.0026873	.001577	.5597	.0007503	.002867	.0069980	.3359
%RSD	29.22180	7.527519	.2480156	60.63092	30.51651	3.986639	.3092504
#1	.0089470	-.021340	226.2080	.0005749	-.012687	.1676646	108.6545
#2	.0066424	-.019213	225.0948	.0020521	-.008067	.1810526	108.9200
#3	.0119997	-.022293	225.7539	.0010854	-.007435	.1778923	108.2529

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001768	-.003469	.2288537	.0099243	-.000179	237.8426	.0680672
Stddev	.000045	.000117	.0098237	.0000634	.000301	.6263	.0042982
%RSD	2.539235	3.377019	4.292568	.6392518	168.7087	.2633431	6.314702
#1	-.001716	-.003553	.2236040	.0099190	-.000525	237.9862	.0636313
#2	-.001792	-.003336	.2401869	.0098637	-.000029	237.1569	.0722131
#3	-.001795	-.003519	.2227702	.0099902	.000019	238.3847	.0683572

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.94433	.0274686	51.81543	.0014011	-.021559	-.011208	32.49553
Stddev	.17307	.0181246	.13676	.0002154	.013584	.001185	.17509
%RSD	.4126250	65.98293	.2639434	15.37637	63.00878	10.57482	.5388134
#1	42.14397	.0204869	51.95064	.0012475	-.014005	-.012216	32.29364
#2	41.83666	.0138732	51.67717	.0016473	-.013431	-.009902	32.60576
#3	41.85237	.0480458	51.81848	.0013084	-.037241	-.011505	32.58719

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.241797	-.006048	-.005146	-.005380	-.037341	-.005672	-.071482
Stddev	.028909	.001171	.000250	.000439	.000596	.003026	.002592
%RSD	11.95573	19.36351	4.859104	8.154083	1.594827	53.34174	3.625396
#1	-.209550	-.005904	-.005352	-.005837	-.036730	-.008834	-.069152
#2	-.265391	-.004956	-.004868	-.005342	-.037920	-.002805	-.074274
#3	-.250451	-.007285	-.005218	-.004962	-.037374	-.005377	-.071021

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: LR2 Acquired: 4/10/2025 18:10:01 Type: Unk
Method: NON EPA-6010-200.7(v2918) 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	-.022473	-.003825	.0011278
Stddev	.001846	.000790	.0000113
%RSD	8.214558	20.66249	.9971551
#1	-.023495	-.003730	.0011149
#2	-.020342	-.003087	.0011355
#3	-.023582	-.004659	.0011330

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2993.094	79086.30	14878.32	2102.104	5130.747
Stddev	7.514	288.17	67.51	13.533	16.776
%RSD	.2510431	.3643725	.4537733	.6438071	.3269605
#1	2997.562	79210.26	14824.91	2115.475	5128.599
#2	2997.300	79291.75	14855.84	2102.423	5148.493
#3	2984.419	78756.90	14954.20	2088.414	5115.149

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV09 Acquired: 4/10/2025 18:19:00 Type: Unk
Method: NON EPA-6010-200.7(v2919) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV09 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.852810	4.700917	4.715700	4.931389	5.050058	9.967390
Stddev	.023845	.095977	.018259	.042591	.023915	.047882
%RSD	.4913605	2.041671	.3871906	.8636672	.4735600	.4803842
#1	4.830127	4.598074	4.713702	4.889011	5.027358	10.01432
#2	4.850633	4.716575	4.698523	4.930966	5.047791	9.96924
#3	4.877668	4.788103	4.734876	4.974190	5.075026	9.91861

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.733897	.2470464	2.345795	23.85626	1.003182	2.464752
Stddev	.081614	.0009445	.007310	.14900	.002383	.007242
%RSD	.8384500	.3823269	.3116305	.6245611	.2375310	.2938133
#1	9.827290	.2476887	2.345429	24.00148	1.001065	2.462210
#2	9.676287	.2474886	2.338674	23.86353	1.005763	2.459125
#3	9.698114	.2459619	2.353281	23.70375	1.002717	2.472922

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.286464	5.132700	2.353130	23.92282	2.484635	1.241408
Stddev	.003199	.033228	.013395	.15017	.006953	.002440
%RSD	.2486439	.6473752	.5692408	.6277240	.2798209	.1965753
#1	1.283247	5.159972	2.364787	24.08297	2.483206	1.239258
#2	1.286502	5.142436	2.356105	23.90030	2.478508	1.244060
#3	1.289644	5.095691	2.338498	23.78518	2.492191	1.240907

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.40867	2.445768	2.500483	26.35471	F 4.447086	4.990387
Stddev	.07482	.016147	.006879	.08099	.015058	.026684
%RSD	.2729742	.6602059	.2751022	.3073254	.3385930	.5347124
#1	27.36539	2.460808	2.503633	26.37313	4.457238	4.966616
#2	27.49506	2.447789	2.505224	26.42490	4.454235	4.985296
#3	27.36556	2.428705	2.492594	26.26609	4.429786	5.019250

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCV09 Acquired: 4/10/2025 18:19:00 Type: Unk
Method: NON EPA-6010-200.7(v2919) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV09 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.766041	4.710004	F 6.239858	4.867978	4.666624	4.704433
Stddev	.023781	.030962	.037556	.019693	.038511	.028542
%RSD	.4989721	.6573638	.6018682	.4045487	.8252484	.6066959
#1	4.750730	4.730197	6.200124	4.848372	4.626178	4.716090
#2	4.753954	4.725459	6.274770	4.867806	4.670838	4.725301
#3	4.793438	4.674357	6.244680	4.887757	4.702854	4.671908

Elem	Sr4077
Units	ppm
Avg	4.804953
Stddev	.065501
%RSD	1.363195
#1	4.879244
#2	4.780098
#3	4.755518

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3113.540	77085.79	14911.04	2033.785	4862.730
Stddev	9.462	126.89	83.60	11.400	15.441
%RSD	.3039141	.1646081	.5606876	.5605092	.3175409
#1	3122.959	77077.62	14835.44	2021.487	4875.909
#2	3113.625	76963.18	14896.85	2035.871	4866.542
#3	3104.035	77216.57	15000.83	2043.997	4845.740

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB09 Acquired: 4/10/2025 18:23:11 Type: Unk
Method: NON EPA-6010-200.7(v2919) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB09 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001840	-.000900	-.000046	-.001406	.0008344	-.000491	-.011584
Stddev	.001190	.000498	.000410	.000646	.0009702	.001459	.000531
%RSD	64.66233	55.35064	888.2593	45.92328	116.2767	297.1636	4.582042
#1	-.001612	-.000449	-.000213	-.000869	.0019482	-.000227	-.012096
#2	-.000781	-.000818	.000421	-.001228	.0001723	.000818	-.011620
#3	-.003128	-.001435	-.000346	-.002122	.0003828	-.002064	-.011036

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000397	-.000022	-.020182	-.000341	-.000127	.0001567	-.006088
Stddev	.0000491	.000050	.003721	.000317	.000052	.0006657	.001501
%RSD	123.7731	223.3618	18.43609	92.99601	41.10895	424.9480	24.65613
#1	-.000016	-.000063	-.024474	-.000354	-.000068	-.000456	-.004363
#2	.000058	-.000036	-.018189	-.000652	-.000142	.000865	-.007096
#3	.000077	.000033	-.017882	-.000018	-.000169	.000061	-.006804

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005132	-.012159	-.000082	.0008040	-.128593	-.001859	-.001996
Stddev	.000107	.006301	.000196	.0002338	.011572	.001084	.000207
%RSD	2.093343	51.82428	239.2836	29.08726	8.999085	58.32046	10.37645
#1	-.005179	-.009008	-.000109	.0009881	-.141549	-.001869	-.002225
#2	-.005010	-.019415	.000126	.0008829	-.124949	-.002938	-.001941
#3	-.005208	-.008055	-.000263	.0005408	-.119282	-.000770	-.001822

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.205817	-.002281	-.000001	-.000083	.0018275	.0085177	-.001236
Stddev	.001123	.000448	.000250	.000255	.0002444	.0042490	.000598
%RSD	.5454588	19.66436	35032.77	304.9466	13.37562	49.88383	48.39921
#1	-.205833	-.001808	.000222	-.000345	.0018638	.0096392	-.000952
#2	-.206931	-.002700	.000048	.000164	.0015669	.0120936	-.001923
#3	-.204686	-.002334	-.000271	-.000070	.0020517	.0038205	-.000832

Reviewed By:kareem
On:4/11/2025 10:25:08 AM
Inst Id :P4
LB :LB135373

Sample Name: CCB09 Acquired: 4/10/2025 18:23:11 Type: Unk
Method: NON EPA-6010-200.7(v2919) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB09 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.003739	-.002793	-.000234
Stddev	.001409	.000656	.000051
%RSD	37.69283	23.47127	21.63749
#1	-.002416	-.002996	-.000291
#2	-.003579	-.002060	-.000193
#3	-.005221	-.003324	-.000218

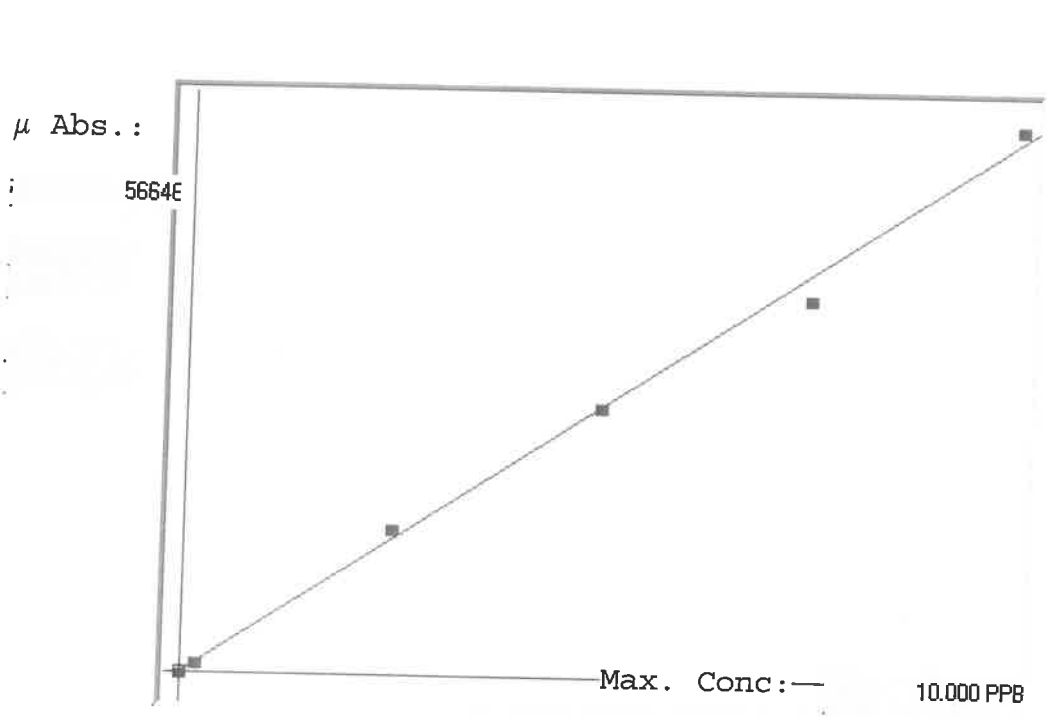
Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3238.599	79326.31	14670.15	2131.595	5423.931
Stddev	15.902	259.35	31.42	8.166	21.385
%RSD	.4910215	.3269385	.2141886	.3830789	.3942638
#1	3250.967	79106.94	14700.46	2124.377	5441.215
#2	3244.169	79612.54	14672.27	2140.458	5430.562
#3	3220.661	79259.44	14637.72	2129.950	5400.016

Reviewed By:mohan
On:4/16/2025 4:32:00 PM
Inst Id :CV1
LB :LB135354

LB135354

7471B

INSTRUMENT ID: CV1



A= 0.0000e+000

B= 1.8078e-004

C= -4.2487e-003

Rho= 0.9983017

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0.0	0.000	0.004	0.004	46	0.000	46				
0.2	0.200	0.176	-0.024	998	0.0 %	998				
2.5	2.500	2.692	0.192	14914	0.0 %	14914				
5.0	5.000	5.021	0.021	27796	0.0 %	27796				
7.5	7.500	7.071	-0.429	39140	0.0 %	39140				
10.0	10.000	10.236	0.236	56646	0.0 %	56646				

0/1

-12
8
0
-6
2

Reviewed By:mohan
On:4/16/2025 4:32:00 PM
Inst Id :CV1
LB :LB135354

LB135354 INSTRUMENT ID : CV1

Method: 7471B Operator: Admin Date of Analysis: 09 Apr 2025 10:53:09

Sample ID	Extended ID	µ Abs.	Conc.	Stnd Conc	Method	Units	Date	Type	Type
0.0 - 1	S0	46	-	0.00000	7471B	PPB	09 Apr 2025 11:06:45	S	Std
0.2 - 1	S0.2	998	-	0.20000	7471B	PPB	09 Apr 2025 11:09:03	S	Std
2.5 - 1	T2.5	14914	-	2.50000	7471B	PPB	09 Apr 2025 11:11:20	S	Std
5.0 - 1	S5	27796	-	5.00000	7471B	PPB	09 Apr 2025 11:13:36	S	Std
7.5 - 1	S7.5	39140	-	7.50000	7471B	PPB	09 Apr 2025 11:15:55	S	Std
10.0 - 1	S10	56646	-	10.00000	7471B	PPB	09 Apr 2025 11:31:05	S	Std
ICV82 - 1	ICV82	20031	3.6169	-	7471B	PPB	09 Apr 2025 11:34:23	U	SMPL
ICB82 - 1	ICB82	-327	-0.0634	-	7471B	PPB	09 Apr 2025 11:36:38	U	SMPL
CCV49 - 1	CCV49	28389	5.1278	-	7471B	PPB	09 Apr 2025 11:43:16	U	SMPL
CCB49 - 1	CCB49	-272	-0.0534	-	7471B	PPB	09 Apr 2025 11:45:31	U	SMPL
CRA - 1	CRA	976	0.1722	-	7471B	PPB	09 Apr 2025 11:47:51	U	SMPL
HighStd - 1	HighStd	56708	10.2472	-	7471B	PPB	09 Apr 2025 11:50:07	U	SMPL
ChkStd - 1	ChkStd	35877	6.4815	-	7471B	PPB	09 Apr 2025 11:52:23	U	SMPL
PB167532BL - 1	PBS	97	0.0133	-	7471B	PPB	09 Apr 2025 11:58:46	U	SMPL
PB167532BS - 1	LCSS	20099	3.6292	-	7471B	PPB	09 Apr 2025 12:03:44	U	SMPL
Q1742-01 - 1	TR-06-040725	3519	0.6319	-	7471B	PPB	09 Apr 2025 12:05:59	U	SMPL
Q1744-01 - 1	B-158-SB01	1605	0.2859	-	7471B	PPB	09 Apr 2025 12:08:19	U	SMPL
Q1744-03 - 1	B-158-SB02	5376	0.9676	-	7471B	PPB	09 Apr 2025 12:10:39	U	SMPL
Q1745-01 - 1	IB-6A-WC	572527	HIGH	-	7471B	PPB	09 Apr 2025 12:12:57	X	
Q1745-09 - 1	IB-6.5-WC	71324	12.8894	-	7471B	PPB	09 Apr 2025 12:14:47	U	SMPL
CCV50 - 1	CCV50	26600	4.8044	-	7471B	PPB	09 Apr 2025 12:17:55	U	SMPL
CCB50 - 1	CCB50	-468	-0.0889	-	7471B	PPB	09 Apr 2025 12:20:26	U	SMPL
Q1746-01 - 1	B-149-SB01	43051	7.7783	-	7471B	PPB	09 Apr 2025 12:22:45	U	SMPL
Q1746-03 - 1	B-149-SB02	-126	-0.0270	-	7471B	PPB	09 Apr 2025 12:25:01	U	SMPL
Q1747-01 - 1	ARS20-0008	195	0.0310	-	7471B	PPB	09 Apr 2025 12:27:27	U	SMPL
Q1748-01 - 1	IB-1.5-WC	159931	28.9074	-	7471B	PPB	09 Apr 2025 12:29:42	U	SMPL
Q1748-05 - 1	IB-2A-WC	44324	8.0085	-	7471B	PPB	09 Apr 2025 12:31:58	U	SMPL
Q1749-01 - 1	TP-14	963	0.1698	-	7471B	PPB	09 Apr 2025 12:34:40	U	SMPL
Q1752-01 - 1	TP-1	1483	0.2638	-	7471B	PPB	09 Apr 2025 12:37:05	U	SMPL
Q1752-03 - 1	TP-2	35238	6.3659	-	7471B	PPB	09 Apr 2025 12:39:22	U	SMPL
Q1752-05 - 1	TP-3	1095	0.1937	-	7471B	PPB	09 Apr 2025 12:41:40	U	SMPL
Q1752-07 - 1	TP-4	5241	0.9432	-	7471B	PPB	09 Apr 2025 12:44:01	U	SMPL
CCV51 - 1	CCV51	28077	5.0714	-	7471B	PPB	09 Apr 2025 12:46:16	U	SMPL
CCB51 - 1	CCB51	-348	-0.0672	-	7471B	PPB	09 Apr 2025 12:48:34	U	SMPL
Q1753-01 - 1	WC-1	81	0.0104	-	7471B	PPB	09 Apr 2025 12:53:07	U	SMPL
Q1753-05 - 1	WC-2	1958	0.3497	-	7471B	PPB	09 Apr 2025 12:55:22	U	SMPL
Q1753-05DUP - 1	WC-2DUP	2067	0.3694	-	7471B	PPB	09 Apr 2025 12:57:38	U	SMPL
Q1753-05MS - 1	WC-2MS	17067	3.0811	-	7471B	PPB	09 Apr 2025 12:59:54	U	SMPL
Q1753-05MSD - 1	WC-2MSD	14371	2.5937	-	7471B	PPB	09 Apr 2025 13:02:09	U	SMPL
Q1753-05LX5 - 1		438	0.0749	-	7471B	PPB	09 Apr 2025 13:34:29	U	SMPL
Q1753-05A - 1		19337	3.4914	-	7471B	PPB	09 Apr 2025 13:36:45	U	SMPL
Q1745-01DLX10 - 1		140670	25.4255	-	7471B	PPB	09 Apr 2025 13:41:22	U	SMPL
Q1745-09DLX5 - 1		16179	2.9205	-	7471B	PPB	09 Apr 2025 13:48:40	U	SMPL
Q1748-01DLX5 - 1		26371	4.7630	-	7471B	PPB	09 Apr 2025 13:56:38	U	SMPL
CCV52 - 1	CCV52	25494	4.6045	-	7471B	PPB	09 Apr 2025 13:58:54	U	SMPL
CCB52 - 1	CCB52	16	-0.0014	-	7471B	PPB	09 Apr 2025 14:04:52	U	SMPL
Q1745-01DL2X50 - 1		25538	4.6124	-	7471B	PPB	09 Apr 2025 14:13:49	U	SMPL
CCV53 - 1	CCV53	27475	4.9626	-	7471B	PPB	09 Apr 2025 14:18:49	U	SMPL
CCB53 - 1	CCB53	-526	-0.0993	-	7471B	PPB	09 Apr 2025 14:21:04	U	SMPL

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB167490

SOP ID : M3050B-Digestion-20

SDG No : N/A

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

Block ID: 1. HOT BLOCK #2 2. N/A

Start Digest Date: 04/07/2025 **Time :** 14:05 **Temp :** 96 °C

End Digest Date: 04/07/2025 **Time :** 16:10 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #2

Dig Technician Signature: SLDS.

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	1.00	M6003
LFS-2	1.00	M6012
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
1:1 HNO3	10.00	MP84041
Conc. HNO3	5.00	M6158
30% H2O2	3.00	M6125
Conc. HCL	10.00	M6151
PTFE Boiling Stones	N/A	M5581
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK # 2 CELL 35 Temp :96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
04/07/25 17:10	SLDS. mcb 4/9	SM (Metals Lab)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB167490

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
PB167490BL	PBS490	N/A	2.43	100	Colorless	Colorless	Fine	N/A	N/A	1
PB167490BS	LCS490	N/A	2.11	100	Colorless	Colorless	Fine	N/A	M6003,M6012	2
Q1744-01	B-158-SB01	N/A	2.03	100	Colorless	Colorless	Fine	N/A	N/A	3
Q1744-03	B-158-SB02	N/A	2.10	100	Colorless	Colorless	Fine	N/A	N/A	4
Q1745-01	IB-6A-WC	N/A	2.10	100	Brown	Yellow	Medium	N/A	N/A	5
Q1745-09	IB-6.5-WC	N/A	2.09	100	Gray	Yellow	Medium	N/A	N/A	6
Q1745-09MS	IB-6.5-WCMS	N/A	2.09	100	Gray	Yellow	Medium	N/A	M6003,M6012	8
Q1745-09MSD	IB-6.5-WCMSD	N/A	2.13	100	Gray	Yellow	Medium	N/A	M6003,M6012	9
Q1745-09DUP	IB-6.5-WCDUP	N/A	2.22	100	Gray	Yellow	Medium	N/A	N/A	7
Q1746-01	B-149-SB01	N/A	2.14	100	Brown	Yellow	Medium	N/A	N/A	10
Q1746-03	B-149-SB02	N/A	2.05	100	Brown	Yellow	Medium	N/A	N/A	11

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB167490 **WorkList ID :** 188779 **Department :** Digestion **Date :** 04-07-2025 13:18:34

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1744-01	B-158-SB01	Solid	Metals ICP-TAL	Cool 4 deg C	PORT06	L41	04/05/2025	6010D
Q1744-03	B-158-SB02	Solid	Metals ICP-TAL	Cool 4 deg C	PORT06	L41	04/05/2025	6010D
Q1745-01	IB-6A-WC	Solid	Metals ICP-TAL	Cool 4 deg C	PORT06	L41	04/05/2025	6010D
Q1745-09	IB-6.5-WC	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	L41	04/07/2025	6010D
Q1746-01	B-149-SB01	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	L41	04/07/2025	6010D
Q1746-03	B-149-SB02	Solid	Metals ICP-TAL	Cool 4 deg C	PORT06	L41	04/05/2025	6010D

Date/Time 04/07/25 13:40
Raw Sample Received by: SKS. met. dlg
Raw Sample Relinquished by: JM (SM)

Date/Time 04/07/25 14:40
Raw Sample Received by: JM (SM)
Raw Sample Relinquished by: SKS. met. dlg

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB167532

SOP ID : M7471B-Mercury-18

SDG No : NA

Matrix : SOIL

Pippete ID: HG A

Balance ID : M SC-3

Filter paper ID : NA

pH Strip ID : NA

Hood ID : #1

Block ID: 1. HG HOT BLOCK#3 2. N/A

Start Digest Date: 04/08/2025 **Time :** 16:50 **Temp :** 94 °C

End Digest Date: 04/08/2025 **Time :** 17:20 **Temp :** 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: [signature]

Supervisor Signature: [signature]

Temp : 1. 94°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP85164
CCV	30mL	MP85166
CRA	30mL	MP85168
Blank Spike	0.48mL	MP85157
Matrix Spike	0.48mL	MP85157

Chemical Used	ML/SAMPLE USED	Lot Number
AQUA REGIA	1.5mL	N/A
KMnO4 (5%)	4.5mL	MP84564
Hydroxylamine HCL (12%)	2.0mL	MP84566
PTFE Boiling Stones	----------	M4583
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	MP85158
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP85159
2.5 ppb	S2.5	30mL	MP85160
5.0 ppb	S5.0	30mL	MP85161
7.5 ppb	S7.5	30mL	MP85162
10.0 ppb	S10.0	30mL	MP85163
ICV	ICV	30mL	MP85164
ICB	ICB	30mL	MP85165
CCV	CCV	30mL	MP85166
CCB	CCB	30mL	MP85167
CRI	CRI	30mL	MP85168
CHK STD	CHK STD	30mL	MP85169

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
4/8/25 @ 17:10	[illegible]	[illegible]
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB167532

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Comment	Prep Pos
PB167532BL	PBS532	0.57	35	NA	N/A	3-1
PB167532BS	LCS532	0.52	35	NA	MP85157	2
Q1742-01	TR-06-040725	0.56	35	NA	N/A	3
Q1744-01	B-158-SB01	0.57	35	NA	N/A	4
Q1744-03	B-158-SB02	0.57	35	NA	N/A	5
Q1745-01	IB-6A-WC	0.51	35	NA	N/A	6
Q1745-09	IB-6.5-WC	0.50	35	NA	N/A	7
Q1746-01	B-149-SB01	0.54	35	NA	N/A	8
Q1746-03	B-149-SB02	0.58	35	NA	N/A	9
Q1747-01	ARS20-0008	0.57	35	NA	N/A	10
Q1748-01	IB-1.5-WC	0.52	35	NA	N/A	11
Q1748-05	IB-2A-WC	0.52	35	NA	N/A	12
Q1749-01	TP-14	0.55	35	NA	N/A	13
Q1752-01	TP-1	0.55	35	NA	N/A	14
Q1752-03	TP-2	0.56	35	NA	N/A	15
Q1752-05	TP-3	0.59	35	NA	N/A	16
Q1752-07	TP-4	0.50	35	NA	N/A	17
Q1753-01	WC-1	0.53	35	NA	N/A	18
Q1753-05	WC-2	0.53	35	NA	N/A	19
Q1753-05DUP	WC-2DUP	0.55	35	NA	N/A	20
Q1753-05MS	WC-2MS	0.52	35	NA	MP85157	21
Q1753-05MSD	WC-2MSD	0.56	35	NA	MP85157	22

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 040825_7471 **WorkList ID :** 188810 **Department :** Digestion **Date :** 04-08-2025 16:18:23

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1742-01	TR-06-040725	Solid	Mercury	Cool 4 deg C	PSEG05		04/07/2025	7471B
Q1744-01	B-158-SB01	Solid	Mercury	Cool 4 deg C	PORT06	L41	04/05/2025	7471B
Q1744-03	B-158-SB02	Solid	Mercury	Cool 4 deg C	PORT06	L41	04/05/2025	7471B
Q1745-01	IB-6A-WC	Solid	Mercury	Cool 4 deg C	PSEG03	L41	04/07/2025	7471B
Q1745-09	IB-6.5-WC	Solid	Mercury	Cool 4 deg C	PSEG03	L41	04/07/2025	7471B
Q1746-01	B-149-SB01	Solid	Mercury	Cool 4 deg C	PORT06	L41	04/05/2025	7471B
Q1746-03	B-149-SB02	Solid	Mercury	Cool 4 deg C	PORT06	L41	04/06/2025	7471B
Q1747-01	ARS20-0008	Solid	Mercury	Cool 4 deg C	PSEG03	I41	04/07/2025	7471B
Q1748-01	IB-1.5-WC	Solid	Mercury	Cool 4 deg C	PSEG03	L31	04/08/2025	7471B
Q1748-05	IB-2A-WC	Solid	Mercury	Cool 4 deg C	PSEG03	L31	04/08/2025	7471B
Q1749-01	TP-14	Solid	Mercury	Cool 4 deg C	PSEG03	L31	04/07/2025	7471B
Q1752-01	TP-1	Solid	Mercury	Cool 4 deg C	PSEG03	L41	04/08/2025	7471B
Q1752-03	TP-2	Solid	Mercury	Cool 4 deg C	PSEG03	L41	04/08/2025	7471B
Q1752-05	TP-4	Solid	Mercury	Cool 4 deg C	PSEG03	L41	04/08/2025	7471B
Q1752-07	TP-3	Solid	Mercury	Cool 4 deg C	PSEG03	L41	04/08/2025	7471B
Q1753-01	WC-1	Solid	Mercury	Cool 4 deg C	PSEG03	L41	04/08/2025	7471B
Q1753-05	WC-2	Solid	Mercury	Cool 4 deg C	PSEG03	L41	04/08/2025	7471B

Date/Time 4/8/25 @ 16:20

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

Date/Time 4/8/25 @ 17:10

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 4/8/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:05
In Date: 04/07/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:19
Out Date: 04/08/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB135324

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q1740-01	TP-20	1	1.14	9.97	11.11	9.88	87.7	
Q1740-02	TP-20-E2	2	1.15	10.14	11.29	10.06	87.9	
Q1740-03	TP-20-VOC	3	1.18	11.96	13.14	11.9	89.6	
Q1742-01	TR-06-040725	17	1.14	10.11	11.25	10.00	87.6	
Q1742-02	TR-06-040725-E2	18	1.18	10.20	11.38	10.24	88.8	
Q1743-01	TP-16	4	1.14	10.15	11.29	10.74	94.6	
Q1743-02	TP-16-EPH	5	1.16	9.91	11.07	9.27	81.8	
Q1743-03	TP-16-VOC	6	1.14	10.34	11.48	10.84	93.8	
Q1744-01	B-158-SB01	7	1.12	9.66	10.78	9.81	90.0	
Q1744-03	B-158-SB02	8	1.18	10.73	11.91	7.19	56.0	
Q1745-01	IB-6A-WC	9	1.17	10.10	11.27	9.76	85.0	
Q1745-02	IB-6A-EPH	10	1.18	9.96	11.14	9.56	84.1	
Q1745-03	IB-6A-VOC	11	1.18	10.06	11.24	9.98	87.5	
Q1745-09	IB-6.5-WC	12	1.15	10.49	11.64	8.65	71.5	
Q1745-10	IB-6.5-EPH	13	1.18	10.26	11.44	8.46	71.0	
Q1745-11	IB-6.5-VOC	14	1.15	9.98	11.13	7.93	67.9	
Q1746-01	B-149-SB01	15	1.14	10.17	11.31	10.22	89.3	
Q1746-03	B-149-SB02	16	1.14	10.23	11.37	9.81	84.8	
Q1747-01	ARS20-0008	19	1.15	10.33	11.48	11.08	96.1	
Q1747-02	ARS20-0008-E2	20	1.19	10.08	11.27	10.8	95.3	

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

VB135324

WorkList Name : %1-040725 **WorkList ID :** 188763 **Department :** Wet-Chemistry **Date :** 04-07-2025 08:21:09

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1740-01	TP-20	Solid	Percent Solids	Cool 4 deg C	PSEG03	L21	04/04/2025	Chemtech -SO
Q1740-02	TP-20-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L21	04/04/2025	Chemtech -SO
Q1740-03	TP-20-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L21	04/04/2025	Chemtech -SO
Q1742-01	TR-06-040725	Solid	Percent Solids	Cool 4 deg C	PSEG05		04/04/2025	Chemtech -SO
Q1742-02	TR-06-040725-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05		04/04/2025	Chemtech -SO
Q1743-01	TP-16	Solid	Percent Solids	Cool 4 deg C	PSEG03	L33	04/07/2025	Chemtech -SO
Q1743-02	TP-16-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L33	04/07/2025	Chemtech -SO
Q1743-03	TP-16-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L33	04/07/2025	Chemtech -SO
Q1744-01	B-158-SB01	Solid	Percent Solids	Cool 4 deg C	PORT06	L41	04/05/2025	Chemtech -SO
Q1744-03	B-158-SB02	Solid	Percent Solids	Cool 4 deg C	PORT06	L41	04/05/2025	Chemtech -SO
Q1745-01	IB-6A-WC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/07/2025	Chemtech -SO
Q1745-02	IB-6A-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/07/2025	Chemtech -SO
Q1745-03	IB-6A-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/07/2025	Chemtech -SO
Q1745-09	IB-6.5-WC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/07/2025	Chemtech -SO
Q1745-10	IB-6.5-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/07/2025	Chemtech -SO
Q1745-11	IB-6.5-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/07/2025	Chemtech -SO
Q1746-01	B-149-SB01	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/07/2025	Chemtech -SO
Q1746-03	B-149-SB02	Solid	Percent Solids	Cool 4 deg C	PORT06	L41	04/05/2025	Chemtech -SO
Q1747-01	ARS20-0008	Solid	Percent Solids	Cool 4 deg C	PORT06	L41	04/06/2025	Chemtech -SO
Q1747-02	ARS20-0008-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	I41	04/07/2025	Chemtech -SO
					PSEG03	I41	04/07/2025	Chemtech -SO

Date/Time 04/07/25 1525
Raw Sample Received by:
Raw Sample Relinquished by:

Date/Time 04/07/25 17:15
Raw Sample Received by:
Raw Sample Relinquished by:

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB135354

Review By	jaswal	Review On	4/10/2025 10:50:44 PM
Supervise By	mohan	Supervise On	4/16/2025 4:32:00 PM

STD. NAME	STD REF.#
ICAL Standard	MP85158,MP85159,MP85160,MP85161,MP85162,MP85163
ICV Standard	MP85164
CCV Standard	MP85166
ICSA Standard	
CRI Standard	MP85168
LCS Standard	
Chk Standard	MP85165,MP85167,MP85169,MP85174

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	04/09/25 11:06		mohan	OK
2	S0.2	S0.2	CAL2	04/09/25 11:09		mohan	OK
3	S2.5	S2.5	CAL3	04/09/25 11:11		mohan	OK
4	S5	S5	CAL4	04/09/25 11:13		mohan	OK
5	S7.5	S7.5	CAL5	04/09/25 11:15		mohan	OK
6	S10	S10	CAL6	04/09/25 11:31		mohan	OK
7	ICV82	ICV82	ICV	04/09/25 11:34		mohan	OK
8	ICB82	ICB82	ICB	04/09/25 11:36		mohan	OK
9	CCV49	CCV49	CCV	04/09/25 11:43		mohan	OK
10	CCB49	CCB49	CCB	04/09/25 11:45		mohan	OK
11	CRA	CRA	CRDL	04/09/25 11:47		mohan	OK
12	HighStd	HighStd	HIGH STD	04/09/25 11:50		mohan	OK
13	ChkStd	ChkStd	SAM	04/09/25 11:52		mohan	OK
14	PB167532BL	PB167532BL	MB	04/09/25 11:58		mohan	OK
15	PB167532BS	PB167532BS	LCS	04/09/25 12:03		mohan	OK
16	Q1742-01	TR-06-040725	SAM	04/09/25 12:05		mohan	OK
17	Q1744-01	B-158-SB01	SAM	04/09/25 12:08		mohan	OK
18	Q1744-03	B-158-SB02	SAM	04/09/25 12:10		mohan	OK

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Instrument ID: CV1

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Review By	jaswal	Review On	4/10/2025 10:50:44 PM
Supervise By	mohan	Supervise On	4/16/2025 4:32:00 PM

STD. NAME	STD REF.#
ICAL Standard	MP85158,MP85159,MP85160,MP85161,MP85162,MP85163
ICV Standard	MP85164
CCV Standard	MP85166
ICSA Standard	
CRI Standard	MP85168
LCS Standard	
Chk Standard	MP85165,MP85167,MP85169,MP85174

19	Q1745-01	IB-6A-WC	SAM	04/09/25 12:12	High	mohan	Dilution
20	Q1745-09	IB-6.5-WC	SAM	04/09/25 12:14	High	mohan	Dilution
21	CCV50	CCV50	CCV	04/09/25 12:17		mohan	OK
22	CCB50	CCB50	CCB	04/09/25 12:20		mohan	OK
23	Q1746-01	B-149-SB01	SAM	04/09/25 12:22		mohan	OK
24	Q1746-03	B-149-SB02	SAM	04/09/25 12:25		mohan	OK
25	Q1747-01	ARS20-0008	SAM	04/09/25 12:27		mohan	OK
26	Q1748-01	IB-1.5-WC	SAM	04/09/25 12:29	High	mohan	Dilution
27	Q1748-05	IB-2A-WC	SAM	04/09/25 12:31		mohan	OK
28	Q1749-01	TP-14	SAM	04/09/25 12:34		mohan	OK
29	Q1752-01	TP-1	SAM	04/09/25 12:37		mohan	OK
30	Q1752-03	TP-2	SAM	04/09/25 12:39		mohan	OK
31	Q1752-05	TP-4	SAM	04/09/25 12:41		mohan	OK
32	Q1752-07	TP-3	SAM	04/09/25 12:44		mohan	OK
33	CCV51	CCV51	CCV	04/09/25 12:46		mohan	OK
34	CCB51	CCB51	CCB	04/09/25 12:48		mohan	OK
35	Q1753-01	WC-1	SAM	04/09/25 12:53		mohan	OK
36	Q1753-05	WC-2	SAM	04/09/25 12:55		mohan	OK
37	Q1753-05DUP	WC-2DUP	DUP	04/09/25 12:57		mohan	OK
38	Q1753-05MS	WC-2MS	MS	04/09/25 12:59		mohan	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB135354

Review By	jaswal	Review On	4/10/2025 10:50:44 PM
Supervise By	mohan	Supervise On	4/16/2025 4:32:00 PM

STD. NAME	STD REF.#
ICAL Standard	MP85158,MP85159,MP85160,MP85161,MP85162,MP85163
ICV Standard	MP85164
CCV Standard	MP85166
ICSA Standard	
CRI Standard	MP85168
LCS Standard	
Chk Standard	MP85165,MP85167,MP85169,MP85174

39	Q1753-05MSD	WC-2MSD	MSD	04/09/25 13:02		mohan	OK
40	Q1753-05L	WC-2L	SD	04/09/25 13:34		mohan	OK
41	Q1753-05A	WC-2A	PS	04/09/25 13:36		mohan	OK
42	Q1745-01DL	IB-6A-WCDL	SAM	04/09/25 13:41	Report 10X,Still high	mohan	Dilution
43	Q1745-09DL	IB-6.5-WCDL	SAM	04/09/25 13:48	Report 5X	mohan	Confirms
44	Q1748-01DL	IB-1.5-WCDL	SAM	04/09/25 13:56	Report 5X	mohan	Confirms
45	CCV52	CCV52	CCV	04/09/25 13:58		mohan	OK
46	CCB52	CCB52	CCB	04/09/25 14:04		mohan	OK
47	Q1745-01DL2	IB-6A-WCDL2	SAM	04/09/25 14:13	Report 50X	mohan	Confirms
48	CCV53	CCV53	CCV	04/09/25 14:18		mohan	OK
49	CCB53	CCB53	CCB	04/09/25 14:21		mohan	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB135373

Review By	jaswal	Review On	4/11/2025 8:35:52 AM
Supervise By	kareem	Supervise On	4/11/2025 10:25:08 AM

STD. NAME	STD REF.#
ICAL Standard	MP85016,MP85017,MP85018,MP85019,MP85020,MP85022
ICV Standard	MP85023
CCV Standard	MP85026
ICSA Standard	MP85024,MP85025
CRI Standard	MP85022
LCS Standard	
Chk Standard	MP85030,MP85031

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	04/10/25 09:30		Kareem	OK
2	S1	S1	CAL2	04/10/25 09:35		Kareem	OK
3	S2	S2	CAL3	04/10/25 09:39		Kareem	OK
4	S3	S3	CAL4	04/10/25 09:43		Kareem	OK
5	S4	S4	CAL5	04/10/25 09:47		Kareem	OK
6	S5	S5	CAL6	04/10/25 09:51		Kareem	OK
7	ICV01	ICV01	ICV	04/10/25 10:09	ICV01 Fail For Be,Cd,Ca,Co,Mg,Mn,NI,V (200.7)	Kareem	OK
8	LLICV01	LLICV01	LLICV	04/10/25 10:25		Kareem	OK
9	ICB01	ICB01	ICB	04/10/25 10:29		Kareem	OK
10	CRI01	CRI01	CRDL	04/10/25 10:33		Kareem	OK
11	ICSA01	ICSA01	ICSA	04/10/25 10:37		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	04/10/25 10:42		Kareem	OK
13	ICSADL	ICSADL	ICSA	04/10/25 10:46		Kareem	OK
14	ICSABDL	ICSABDL	ICSAB	04/10/25 10:50		Kareem	OK
15	CCV01	CCV01	CCV	04/10/25 11:00		Kareem	OK
16	CCB01	CCB01	CCB	04/10/25 11:21		Kareem	OK
17	PB167483BL	PB167483BL	MB	04/10/25 11:26		Kareem	OK
18	PB167483BS	PB167483BS	LCS	04/10/25 11:30		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB135373

Review By	jaswal	Review On	4/11/2025 8:35:52 AM
Supervise By	kareem	Supervise On	4/11/2025 10:25:08 AM

STD. NAME	STD REF.#
ICAL Standard	MP85016,MP85017,MP85018,MP85019,MP85020,MP85022
ICV Standard	MP85023
CCV Standard	MP85026
ICSA Standard	MP85024,MP85025
CRI Standard	MP85022
LCS Standard	
Chk Standard	MP85030,MP85031

19	PB167497BL	PB167497BL	MB	04/10/25 11:34		Kareem	OK
20	PB167497BS	PB167497BS	LCS	04/10/25 11:38		Kareem	OK
21	Q1715-01	WATER TREATMENT	SAM	04/10/25 11:42		Kareem	OK
22	Q1745-01	IB-6A-WC	SAM	04/10/25 11:47		Kareem	OK
23	Q1745-09	IB-6.5-WC	SAM	04/10/25 11:51		Kareem	OK
24	Q1748-01	IB-1.5-WC	SAM	04/10/25 11:55		Kareem	OK
25	Q1748-05	IB-2A-WC	SAM	04/10/25 11:59		Kareem	OK
26	Q1749-01	TP-14	SAM	04/10/25 12:03		Kareem	OK
27	CCV02	CCV02	CCV	04/10/25 12:08		Kareem	OK
28	CCB02	CCB02	CCB	04/10/25 12:12		Kareem	OK
29	Q1732-01	TT-8	SAM	04/10/25 12:17		Kareem	OK
30	Q1733-01	ETGI-328	SAM	04/10/25 12:21		Kareem	OK
31	Q1740-01	TP-20	SAM	04/10/25 12:25		Kareem	OK
32	Q1743-01	TP-16	SAM	04/10/25 12:29		Kareem	OK
33	Q1739-01	WC-LIQUID-2025040	SAM	04/10/25 12:33		Kareem	OK
34	Q1748-04	IB-1.5-WC	SAM	04/10/25 12:38		Kareem	OK
35	Q1748-08	IB-2A-WC	SAM	04/10/25 12:42		Kareem	OK
36	Q1754-02	TP-1	SAM	04/10/25 12:46		Kareem	OK
37	Q1754-04	TP-1-CONCRETE	SAM	04/10/25 12:51		Kareem	OK
38	Q1754-01	TP-1	SAM	04/10/25 12:55		Kareem	OK

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Daily Analysis Runlog For Sequence/QCBatch ID # LB135373

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Supervise By	kareem	Supervise On	4/11/2025 10:25:08 AM

STD. NAME	STD REF.#
ICAL Standard	MP85016,MP85017,MP85018,MP85019,MP85020,MP85022
ICV Standard	MP85023
CCV Standard	MP85026
ICSA Standard	MP85024,MP85025
CRI Standard	MP85022
LCS Standard	
Chk Standard	MP85030,MP85031

39	CCV03	CCV03	CCV	04/10/25 12:59		Kareem	OK
40	CCB03	CCB03	CCB	04/10/25 13:04		Kareem	OK
41	Q1754-03	TP-1-CONCRETE	SAM	04/10/25 13:07		Kareem	OK
42	Q1754-03DUP	TP-1-CONCRETEDUI	DUP	04/10/25 13:12		Kareem	OK
43	Q1754-03L	TP-1-CONCRETEL	SD	04/10/25 13:16		Kareem	OK
44	Q1754-03A	TP-1-CONCRETEA	PS	04/10/25 13:29		Kareem	OK
45	Q1715-01DUP	WATER TREATMENT	DUP	04/10/25 13:33		Kareem	OK
46	Q1715-01L	WATER TREATMENT	SD	04/10/25 13:38		Kareem	OK
47	Q1745-04	IB-6A-WC	SAM	04/10/25 13:42		Kareem	OK
48	Q1745-12	IB-6.5-WC	SAM	04/10/25 13:47		Kareem	OK
49	CCV04	CCV04	CCV	04/10/25 13:51		Kareem	OK
50	CCB04	CCB04	CCB	04/10/25 13:55		Kareem	OK
51	Q1715-01MS	WATER TREATMENT	MS	04/10/25 13:59		Kareem	OK
52	Q1715-01MSD	WATER TREATMENT	MSD	04/10/25 14:07		Kareem	OK
53	Q1715-01A	WATER TREATMENT	PS	04/10/25 14:11		Kareem	OK
54	Q1744-01	B-158-SB01	SAM	04/10/25 14:15		Kareem	OK
55	Q1744-03	B-158-SB02	SAM	04/10/25 14:19		Kareem	OK
56	Q1754-03MS	TP-1-CONCRETEMS	MS	04/10/25 14:23		Kareem	OK
57	Q1754-03MSD	TP-1-CONCRETEMS	MSD	04/10/25 14:27		Kareem	OK
58	Q1745-09DUP	IB-6.5-WCDUP	DUP	04/10/25 14:32		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB135373

Review By	jaswal	Review On	4/11/2025 8:35:52 AM
Supervise By	kareem	Supervise On	4/11/2025 10:25:08 AM

STD. NAME	STD REF.#
ICAL Standard	MP85016,MP85017,MP85018,MP85019,MP85020,MP85022
ICV Standard	MP85023
CCV Standard	MP85026
ICSA Standard	MP85024,MP85025
CRI Standard	MP85022
LCS Standard	
Chk Standard	MP85030,MP85031

59	Q1745-09L	IB-6.5-WCL	SD	04/10/25 14:36		Kareem	OK
60	CCV05	CCV05	CCV	04/10/25 14:44		Kareem	OK
61	CCB05	CCB05	CCB	04/10/25 14:49		Kareem	OK
62	Q1745-09A	IB-6.5-WCA	PS	04/10/25 14:57	0.1 ML OF M6004 AND M6013 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
63	Q1745-09MS	IB-6.5-WCMS	MS	04/10/25 15:05	0.1 ML OF M6004 AND M6013 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
64	Q1745-09MSD	IB-6.5-WCMSD	MSD	04/10/25 15:09	0.1 ML OF M6004 AND M6013 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
65	PBW04	PBW04	MB	04/10/25 15:14		Kareem	OK
66	LCSW04	LCSW04	LCS	04/10/25 15:18	0.1 ML OF M6004 AND M6013 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
67	PBS04	PBS04	MB	04/10/25 15:23		Kareem	OK
68	LCSS04	LCSS04	LCS	04/10/25 15:27	0.1 ML OF M6004 AND M6013 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
69	PBW05	PBW05	MB	04/10/25 15:31		Kareem	OK
70	PBS05	PBS05	MB	04/10/25 15:35		Kareem	OK
71	WATER MDL-4	WATER MDL-4	SAM	04/10/25 15:40		Kareem	OK
72	CCV06	CCV06	CCV	04/10/25 15:44		Kareem	OK
73	CCB06	CCB06	CCB	04/10/25 15:48		Kareem	OK
74	WATER MDL-5	WATER MDL-5	SAM	04/10/25 15:52		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB135373

Review By	jaswal	Review On	4/11/2025 8:35:52 AM
Supervise By	kareem	Supervise On	4/11/2025 10:25:08 AM

STD. NAME	STD REF.#
ICAL Standard	MP85016,MP85017,MP85018,MP85019,MP85020,MP85022
ICV Standard	MP85023
CCV Standard	MP85026
ICSA Standard	MP85024,MP85025
CRI Standard	MP85022
LCS Standard	
Chk Standard	MP85030,MP85031

75	SOIL MDL-4	SOIL MDL-4	SAM	04/10/25 16:09		Kareem	OK
76	Q1746-01	B-149-SB01	SAM	04/10/25 16:17		Kareem	OK
77	Q1746-03	B-149-SB02	SAM	04/10/25 16:22		Kareem	OK
78	PB167490BL	PB167490BL	MB	04/10/25 16:26		Kareem	OK
79	PB167490BS	PB167490BS	LCS	04/10/25 16:39	0.1 ML OF M6004 AND M6013 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
80	PB167517TB	PB167517TB	MB	04/10/25 16:43		Kareem	OK
81	Q1744-02	B-158-SB01	SAM	04/10/25 16:47		Kareem	OK
82	Q1744-04	B-158-SB02	SAM	04/10/25 16:52	Confirm TCLP for Ba	Kareem	OK
83	CCV07	CCV07	CCV	04/10/25 16:56		Kareem	OK
84	CCB07	CCB07	CCB	04/10/25 17:00		Kareem	OK
85	Q1780-01	001-WILLETS-PT-BL	SAM	04/10/25 17:05		Kareem	OK
86	Q1780-02	002-35TH-AVE(MAR)	SAM	04/10/25 17:09		Kareem	OK
87	Q1780-02DUP	002-35TH-AVE(MAR)	DUP	04/10/25 17:13		Kareem	OK
88	Q1780-02L	002-35TH-AVE(MAR)	SD	04/10/25 17:18		Kareem	OK
89	Q1780-02MS	002-35TH-AVE(MAR)	MS	04/10/25 17:22	0.1 ML OF M6004 AND M6013 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
90	Q1780-02MSD	002-35TH-AVE(MAR)	MSD	04/10/25 17:26	0.1 ML OF M6004 AND M6013 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB135373

Review By	jaswal	Review On	4/11/2025 8:35:52 AM
Supervise By	kareem	Supervise On	4/11/2025 10:25:08 AM

STD. NAME	STD REF.#
ICAL Standard	MP85016,MP85017,MP85018,MP85019,MP85020,MP85022
ICV Standard	MP85023
CCV Standard	MP85026
ICSA Standard	MP85024,MP85025
CRI Standard	MP85022
LCS Standard	
Chk Standard	MP85030,MP85031

91	Q1780-02A	002-35TH-AVE(MAR)	PS	04/10/25 17:30	0.1 ML OF M6004 AND M6013 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
92	SOIL MDL-5	SOIL MDL-5	SAM	04/10/25 17:34		Kareem	OK
93	PB167554BL	PB167554BL	MB	04/10/25 17:39		Kareem	OK
94	PB167554BS	PB167554BS	LCS	04/10/25 17:43	0.1 ML OF M6004 AND M6013 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
95	CCV08	CCV08	CCV	04/10/25 17:56		Kareem	OK
96	CCB08	CCB08	CCB	04/10/25 18:00		Kareem	OK
97	LR1	LR1	HIGH STD	04/10/25 18:05		Kareem	OK
98	LR2	LR2	HIGH STD	04/10/25 18:10		Kareem	OK
99	CCV09	CCV09	CCV	04/10/25 18:19		Kareem	OK
100	CCB09	CCB09	CCB	04/10/25 18:23		Kareem	OK

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Prep Standard - Chemical Standard Summary

Order ID : Q1744

Test : Mercury,Metals ICP-TAL

Prepbatch ID : PB167490,PB167532,

Sequence ID/Qc Batch ID: LB135354,LB135373,

Standard ID :
MP84041,MP84564,MP84566,MP85016,MP85017,MP85018,MP85019,MP85020,MP85021,MP85022,MP85023,MP850
24,MP85025,MP85026,MP85030,MP85031,MP85157,MP85158,MP85159,MP85160,MP85161,MP85162,MP85163,MP
85164,MP85165,MP85166,MP85167,MP85168,MP85169,MP85174,

Chemical ID :
M4371,M4583,M4883,M4891,M4916,M5020,M5062,M5288,M5387,M5395,M5429,M5466,M5472,M5496,M5497,M5516
,M5521,M5532,M5581,M5658,M5747,M5748,M5768,M5789,M5798,M5799,M5800,M5801,M5811,M5814,M5816,M5817
,M5820,M5875,M5882,M5884,M5959,M5970,M5978,M5985,M6003,M6012,M6021,M6023,M6028,M6030,M6058,M607
6,M6125,M6126,M6128,M6137,M6150,M6151,M6152,M6155,M6156,M6158,M6160,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP84041	01/14/2025	07/14/2025	Eman Mughal	None	None	Sarabjit Jaswal 01/16/2025

FROM 1250.00000ml of M6126 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	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

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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)	MP85016	03/26/2025	04/26/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 125.00000ml of M6151 + 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)	MP85017	03/26/2025	04/26/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 5.00000ml of M5395 + 5.00000ml of M5466 + 5.00000ml of M5472 + 5.00000ml of M5816 + 5.00000ml of M5820 + 5.00000ml of M5875 + 5.00000ml of M5970 + 5.00000ml of M6076 + 5.00000ml of M6160 + 455.00000ml of MP85016 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP85018	03/26/2025	04/26/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 50.00000ml of MP85016 + 50.00000ml of MP85017 = 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	MP85019	03/26/2025	04/26/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 25.00000ml of MP85017 + 75.00000ml of MP85016 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP85020	03/26/2025	04/26/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 16.00000ml of MP85017 + 184.00000ml of MP85016 = 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	MP85021	03/26/2025	04/26/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 0.04000ml of M6137 + 0.05000ml of M5496 + 0.05000ml of M5658 + 0.05000ml of M5811 + 0.05000ml of M6030 + 0.06000ml of M5747 + 0.10000ml of M4883 + 0.10000ml of M5472 + 0.10000ml of M5521 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5970 + 0.10000ml of M6128 + 0.15000ml of M5800 + 0.20000ml of M4891 + 0.20000ml of M5748 + 0.20000ml of M5799 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.25000ml of M5466 + 0.25000ml of M6160 + 0.50000ml of M5387 + 0.50000ml of M5814 + 1.00000ml of M5288 + 1.00000ml of M5497 + 1.00000ml of M5516 + 1.00000ml of M5768 + 1.00000ml of M5978 + 1.00000ml of M6156 + 2.00000ml of M5816 + 77.68000ml of MP85016 = 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	MP85022	03/26/2025	04/26/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 2.00000ml of MP85021 + 98.00000ml of MP85016 = 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	MP85023	03/26/2025	04/26/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 0.02500ml of M5020 + 0.02500ml of M5429 + 0.02500ml of M5817 + 0.10000ml of M5466 + 0.25000ml of M5472 + 0.25000ml of M6058 + 10.00000ml of M6150 + 89.77500ml of MP85016 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP85024	03/26/2025	04/26/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 25.00000ml of M6152 + 225.00000ml of MP85016 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP85025	03/26/2025	04/26/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 0.01000ml of M5020 + 0.01000ml of M5817 + 0.10000ml of M5472 + 0.10000ml of M5970 + 0.10000ml of M6076 + 10.00000ml of M6152 + 10.00000ml of M6155 + 79.50000ml of MP85016 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP85026	03/26/2025	04/26/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 50.00000ml of MP85016 + 50.00000ml of MP85017 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP85030	03/26/2025	04/26/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 1.00000ml of M5959 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M5789 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
513	RINSE SOLN	MP85031	03/26/2025	04/26/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 200.00000ml of M5789 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP85157	04/08/2025	04/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 04/15/2025

FROM 1.00000ml of M6158 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP85158	04/08/2025	04/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 04/15/2025

FROM 2.50000ml of M6158 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1341	Hg 0.2 PPB STD	MP85159	04/08/2025	04/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 04/15/2025

FROM 2.50000ml of M6158 + 247.30000ml of W3112 + 0.20000ml of MP85157 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP85160	04/08/2025	04/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 04/15/2025

FROM 2.50000ml of M6158 + 245.00000ml of W3112 + 2.50000ml of MP85157 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP85161	04/08/2025	04/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 04/15/2025

FROM 2.50000ml of M6158 + 242.50000ml of W3112 + 5.00000ml of MP85157 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP85162	04/08/2025	04/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 04/15/2025

FROM 2.50000ml of M6158 + 240.00000ml of W3112 + 7.50000ml of MP85157 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP85163	04/08/2025	04/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 04/15/2025

FROM 2.50000ml of M6158 + 237.50000ml of W3112 + 50.00000ml of MP85157 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP85164	04/08/2025	04/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 04/15/2025

FROM 2.50000ml of M5532 + 2.50000ml of M6158 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP85165	04/08/2025	04/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 04/15/2025

FROM 2.50000ml of M6158 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP85166	04/08/2025	04/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 04/15/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6158 + 10.00000ml of MP85157 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP85167	04/08/2025	04/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 04/15/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6158 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP85168	04/08/2025	04/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 04/15/2025

FROM 2.50000ml of M6158 + 247.30000ml of W3112 + 0.20000ml of MP85157 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP85169	04/08/2025	04/09/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 04/15/2025

FROM 2.50000ml of M6158 + 240.50000ml of W3112 + 7.00000ml of MP85157 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP85174	04/09/2025	04/10/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 04/15/2025

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6151 = Final Quantity: 500.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-2196-01 / Hydroxylamine Hydrochloride, Crystal (cs/4x500g)	0000215387	06/25/2025	07/01/2019 / RICHARD	06/07/2019 / RICHARD	M4371

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Labpure	0919120 / Boiling Stones	26275770	07/07/2025	07/03/2020 / mohan	05/07/2020 / mohan	M4583

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	070221	09/07/2025	08/06/2021 / jaswal	08/05/2021 / jaswal	M4883

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	031921	05/19/2025	08/25/2021 / bin	08/05/2021 / jaswal	M4891

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 #
Absolute Standards, Inc.	57115 / P, 10000 PPM, 125 ml	032921	05/17/2025	12/13/2021 / bin	12/09/2021 / bin	M5020

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCl 125mL 10ug/mL	S2-HG709270	09/22/2026	05/28/2022 / mohan	01/27/2022 / mohan	M5062

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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 #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	072122	07/21/2025	11/01/2022 / jaswal	09/18/2022 / jaswal	M5387

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	061322	06/13/2025	03/06/2023 / bin	03/01/2023 / bin	M5466

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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.	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 #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	022123	11/06/2025	11/06/2024 / kareem	03/17/2023 / bin	M5516

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	102622	10/26/2025	11/21/2022 / bin	11/20/2022 / bin	M5521

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	04/30/2025	01/02/2025 /	03/30/2023 / mohan	M5532

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	26397-103 / PTFE BOILING STONES	W126678	03/20/2026	03/20/2025 /	06/12/2023 / jaswal	M5581

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Lead (Pb) 1000PPM	100923	10/09/2026	05/20/2024 / Jaswal	12/20/2023 / jaswal	M5747

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Nickel (Ni) 1000PPM	091223	09/12/2026	01/02/2024 / bin	12/20/2023 / jaswal	M5748

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	091823	09/18/2026	01/08/2024 / bin	01/03/2024 / bin	M5768

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	051523	05/15/2026	02/06/2025 / kareem	01/03/2024 / jaswal	M5811

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57005 / B, 1000 PPM, 125 ml	071123	07/11/2026	03/26/2024 / Sohil	01/03/2024 / jaswal	M5814

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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

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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

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	09/17/2025	03/17/2025 / Eman	05/14/2024 / Jaswal	M6012

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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 #
Inorganic Ventures	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	V2-MEB746173	01/29/2026	01/29/2025 / JANVI	08/22/2024 / Jaswal	M6058

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	01/01/2026	01/01/2025 / kareem	09/19/2024 / kareem	M6076

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1403 / Hydrogen Peroxide, 30% 1 gal	820803	05/25/2025	11/26/2024 / Eman	11/22/2024 / Eman	M6125

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.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	V2-SI744713	07/10/2029	01/14/2025 / Jaswal	10/03/2024 / Jaswal	M6137

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	08/24/2025	02/24/2025 / kareem	04/20/2021 / kareem	M6152

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSAB (ICP) STOCK SOLN	ICSB-0710	06/20/2025	02/10/2025 / kareem	02/09/2024 / kareem	M6155

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57042 / Mo, 1000 PPM, 125 ml	032123	03/21/2026	11/06/2024 / JANVI	06/12/2024 / JANVI	M6156

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	03/25/2029	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	071724	03/24/2026	03/24/2025 / kareem	10/18/2024 / kareem	M6160

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

R 8/5/24

M6028

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

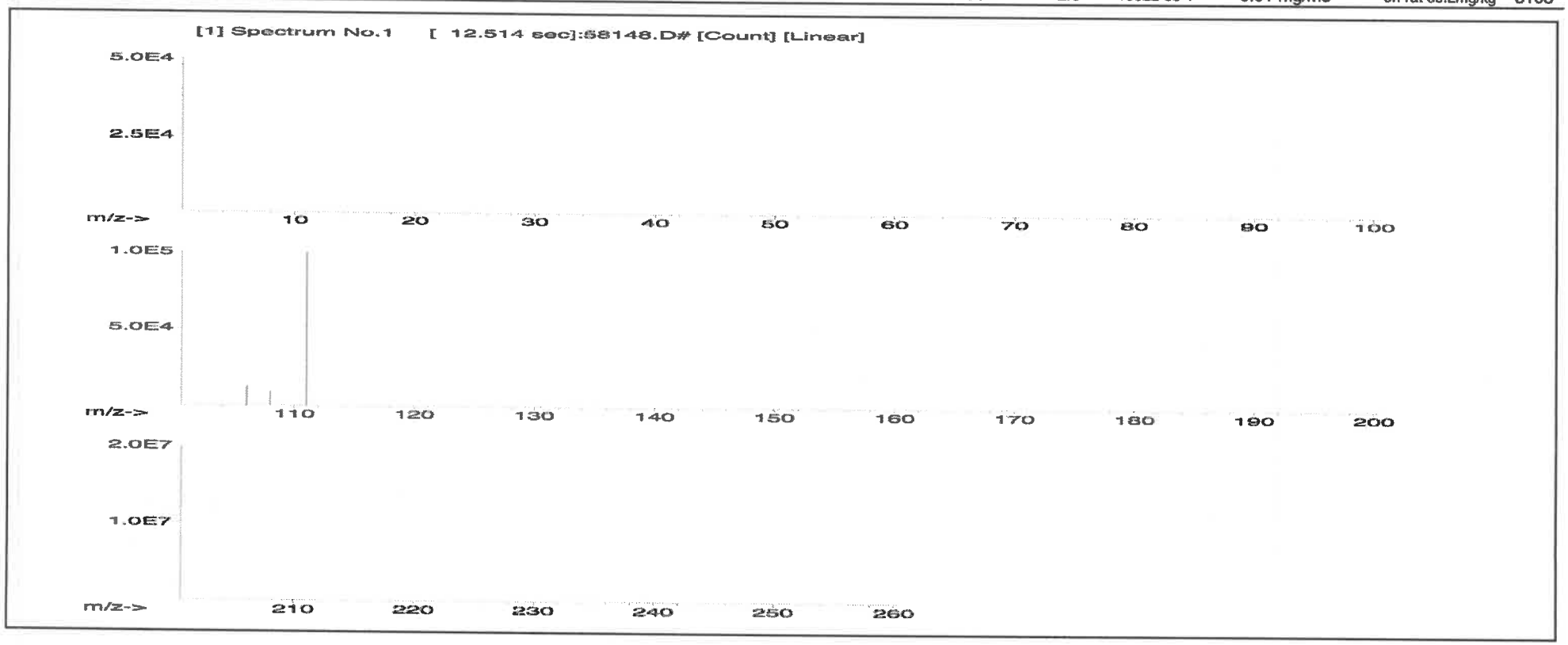
CERTIFIED WEIGHT REPORT:

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
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).

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Certificate of Analysis

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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

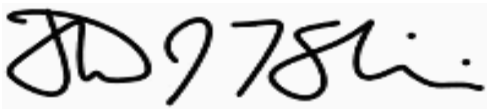
- Sealed TCT Bag Open Date: _____

- 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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Certificate of Analysis

300 Technology Drive
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inorganicventures.com

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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

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u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

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- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

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7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

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10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 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

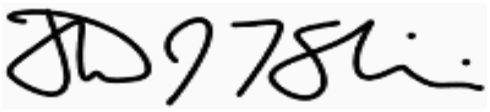
- Sealed TCT Bag Open Date: _____

- 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)

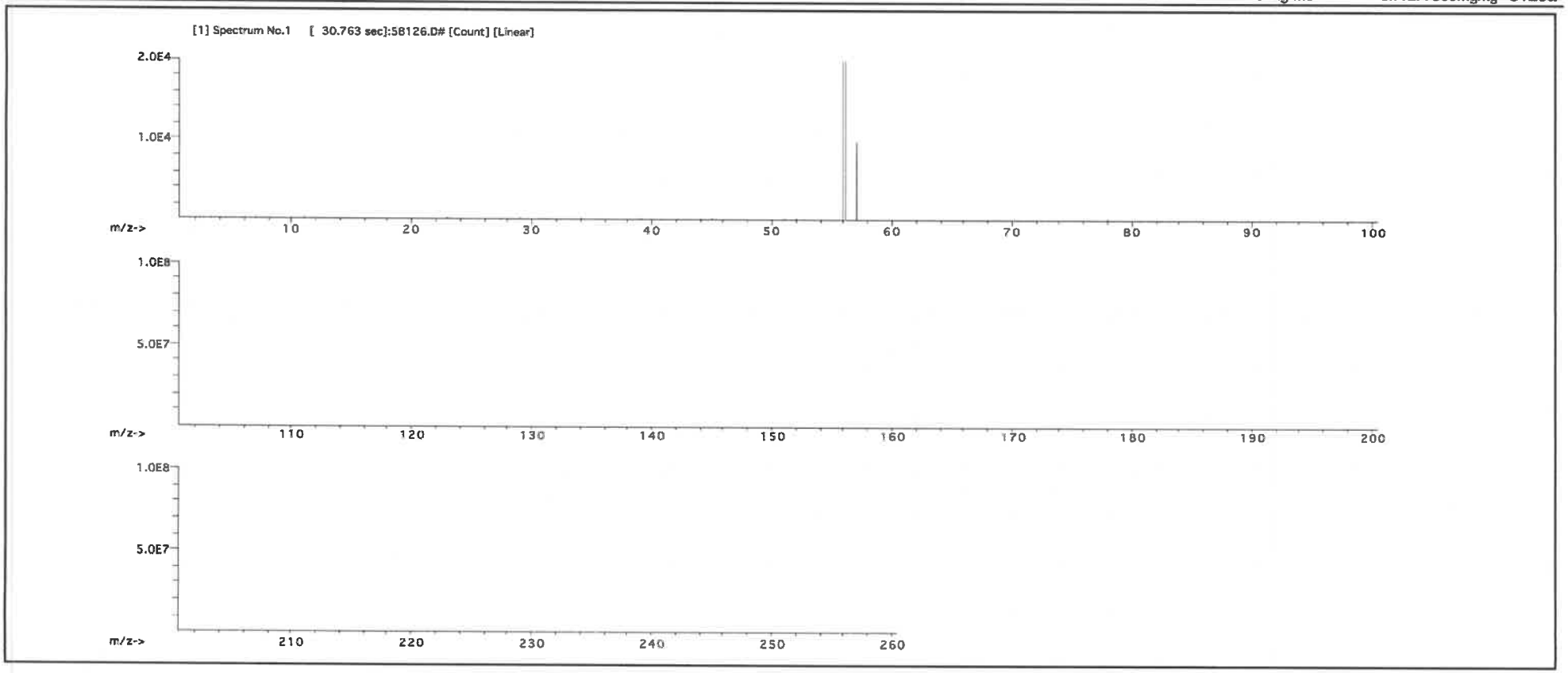
Expiration Date: 051526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 5000.1 ± 0.12 Flask Uncertainty

		Lot #	
Solvent:	21110221	Nitric Acid	
	5.0%	250.0 (mL)	Nitric Acid
	5E-05	Balance 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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Certificate of Analysis

RD:05/14/2024

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inorganicventures.com

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

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N/A

6.0 INTENDED USE

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7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

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- 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

M45 P3
Expd Dt. 5 7 24
MB

SAINT-GOBAIN

Manufacturer:
Saint-Gobain Performance Plastics
11 Sicho Drive
Poestenkill, NY 12140

Certificate of Conformance

Part Number/ Revision:	D1069103 0	**Customer Part Number/ Revision:**	1069103 N/A
Description:	*PTFE BOILING STONES-450 GRAMS		
Lot Number:	26275770	**Lot Quantity:**	10 EA
Date of Manufacture (MM/DD/YY)	03/23/20	**Expiration Date: (MM/DD/YY)**	N/A
Post Processing Run Number: (Refer to the attached Certificate for Additional Detail)		N/A	

We certify the material listed above confirms in full with the following specifications:

All items have been manufactured, inspected, tested, and accepted in accordance with our Quality Management system, ISO 9001-2015. Documentation substantiating this certification is kept on record per the Company's retention policy and is available for review.
All materials and processes used in manufacturing conform to the materials and/or manufacturing specifications and notes indicated on the purchase order, drawing, specifications, quality assurance requirements, or other applicable documents effective on the date of manufacture.
Saint-Gobain does not warrant the product for any particular application and it is the responsibility of the user to conduct tests that are deemed necessary to determine the suitability of the product for any particular use. Saint-Gobain's sole responsibility shall be for failure to manufacture the product in accordance with specifications and requirements of the buyer, and from defects in material and workmanship. This warranty is expressly made in lieu of any and all other warranties and Saint-Gobain's sole liability shall be to replace any product not in conformance with the specification and requirements of the buyer.

Quality Approval:	Jonathan Kimble	**Date:**	05/13/20

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:	**57034**	20370011	Nitric Acid	
Lot Number:	**070221**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	070224			
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):	2000.02	0.058	Flask Uncertainty	

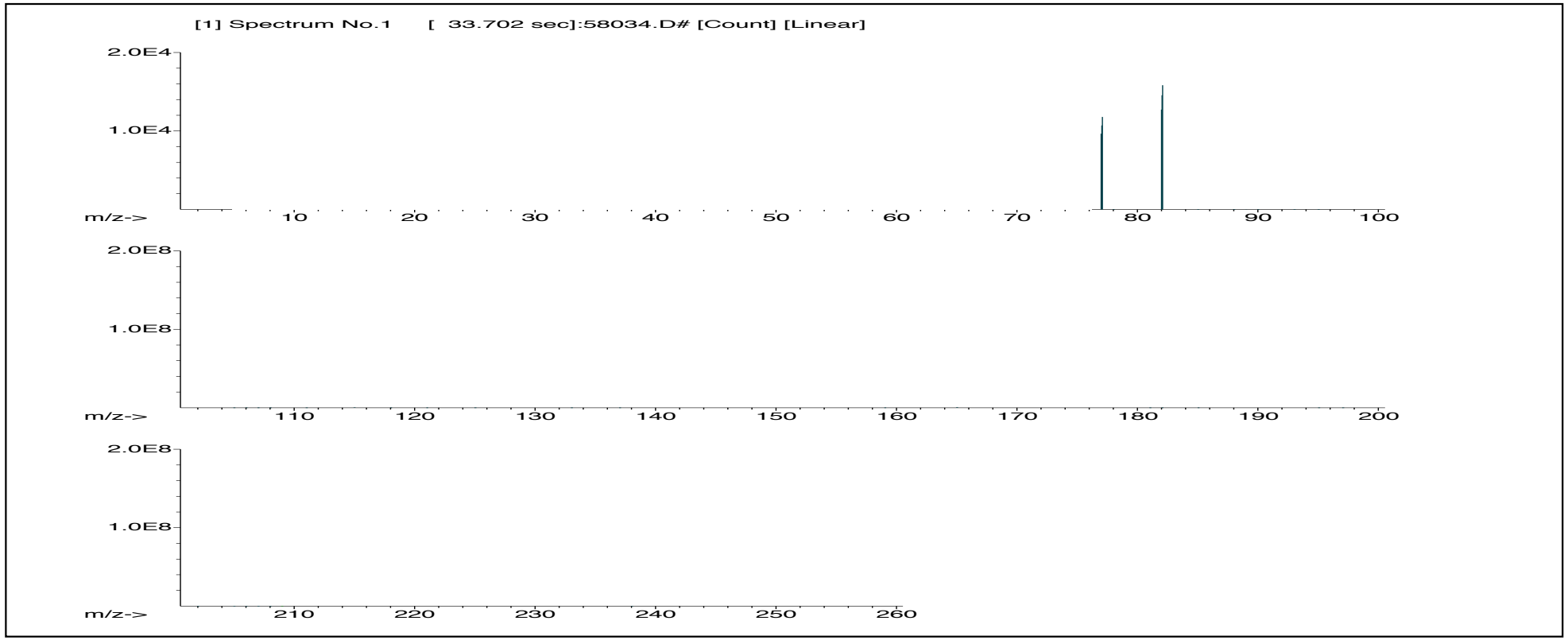
Giovanni Esposito

Formulated By:	Giovanni Esposito	070221

Pedro Rentas

Reviewed By:	Pedro L. Rentas	070221

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(IV) oxide (Se)	58134	021621	0.1000	200.0	0.084	1000	10000.2	**1000.0**	**2.2**	7446-08-4	0.2 mg/m3	orl-rat 68 mg/kg	3149



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	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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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:	**58030**	20370011	Nitric Acid	
Lot Number:	**031921**			
Description:	**Zinc (Zn)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	031924			
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):	2000.02	0.058	Flask Uncertainty	

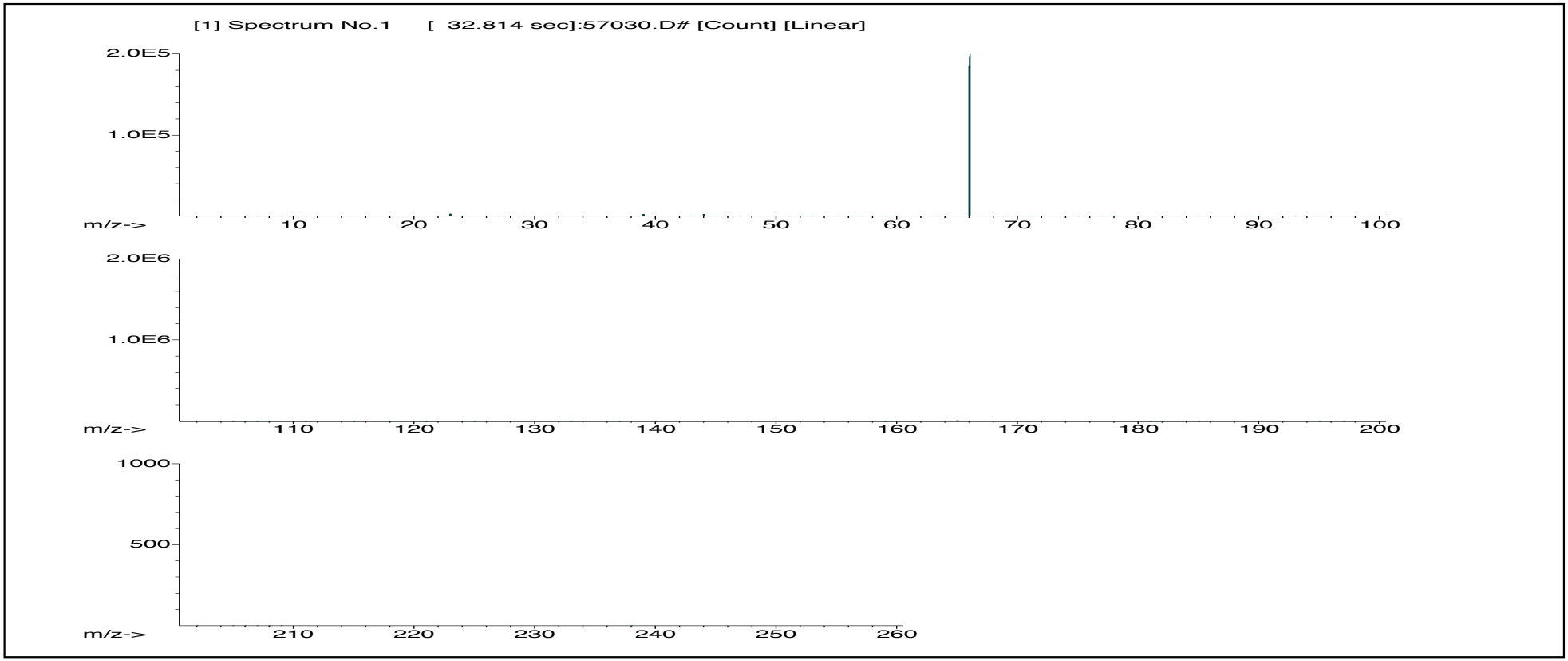
Giovanni Esposito

Formulated By:	Giovanni Esposito	031921

Pedro Rentas

Reviewed By:	Pedro L. Rentas	031921

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. Zinc nitrate hexahydrate (Zn)	58130	082020	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



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	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:

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.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

BA

M5020

R: 12/09/21

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57115
Lot Number: 032921
Description: Phosphorous (P)

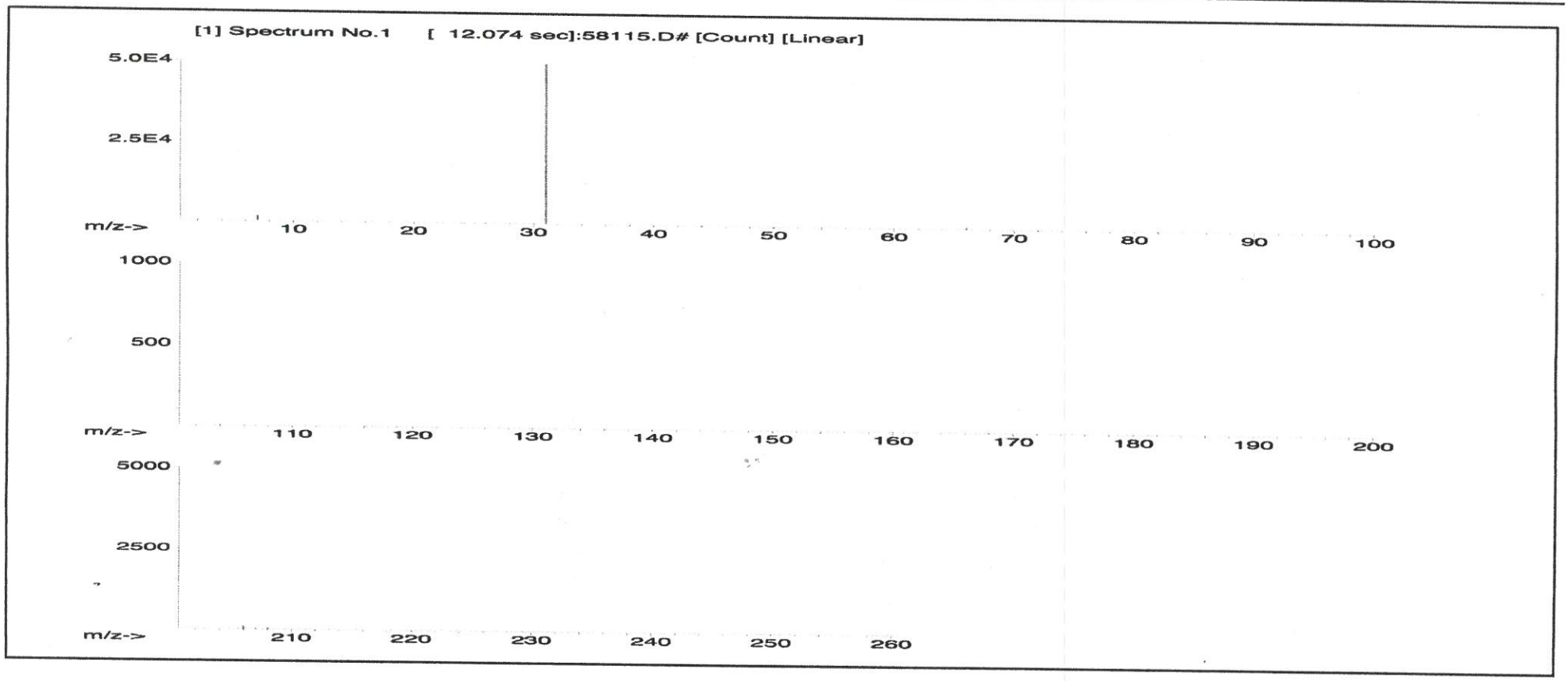
Expiration Date: 032924
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	20370011	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	032921
Reviewed By:	Pedro L. Rentas	032921

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	PV052018A1	10000	99.999	0.10	27.3	109.9063	109.9093	**10000.3**	**20.0**	7722-76-1	5 mg/m3	NA	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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

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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



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Certified Reference Material CRM

M5288 R: 07/21/2022

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CERTIFIED WEIGHT REPORT:

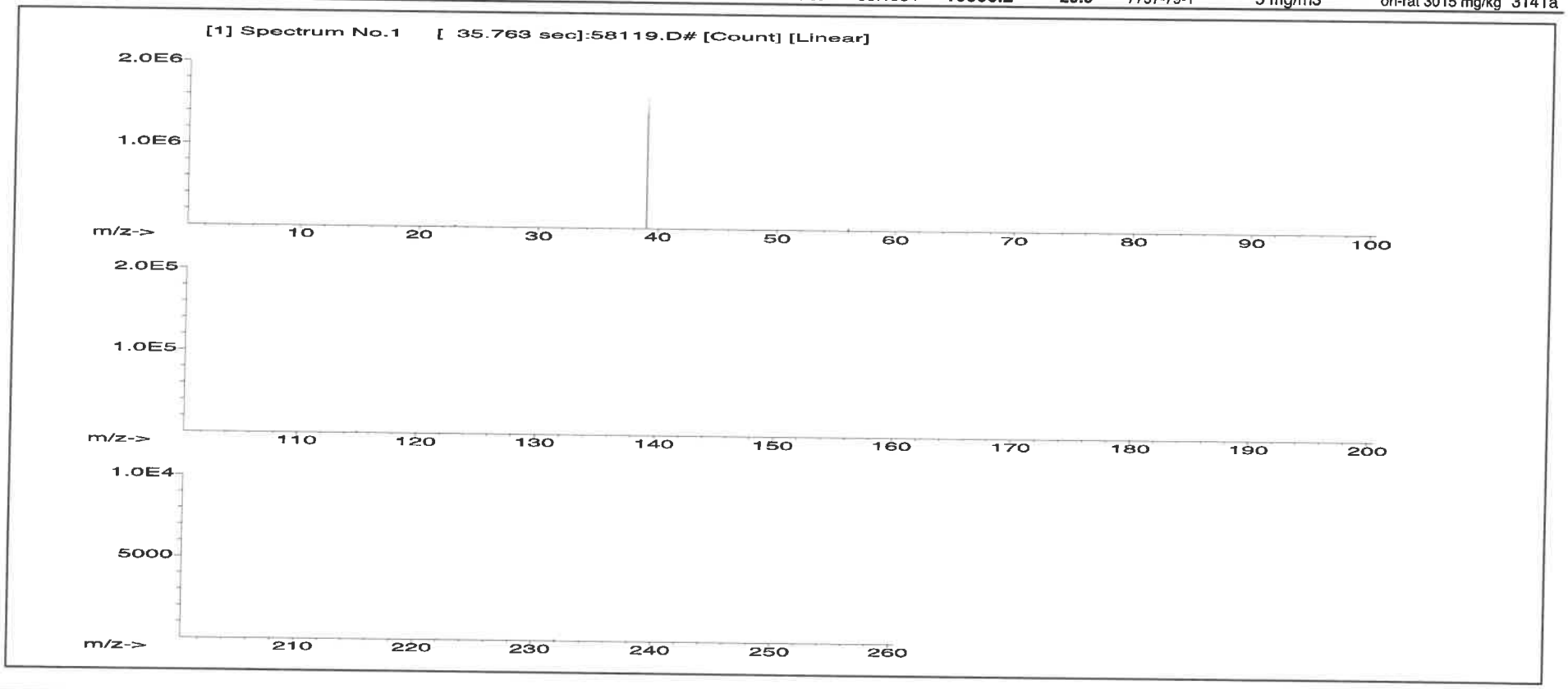
Part Number: 58119
Lot Number: 071122
Description: Potassium (K)

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

M5387 . M5389 . M5390 . M5391 . M5392

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AR-1539 Certificate Number
https://Absolutestandards.com

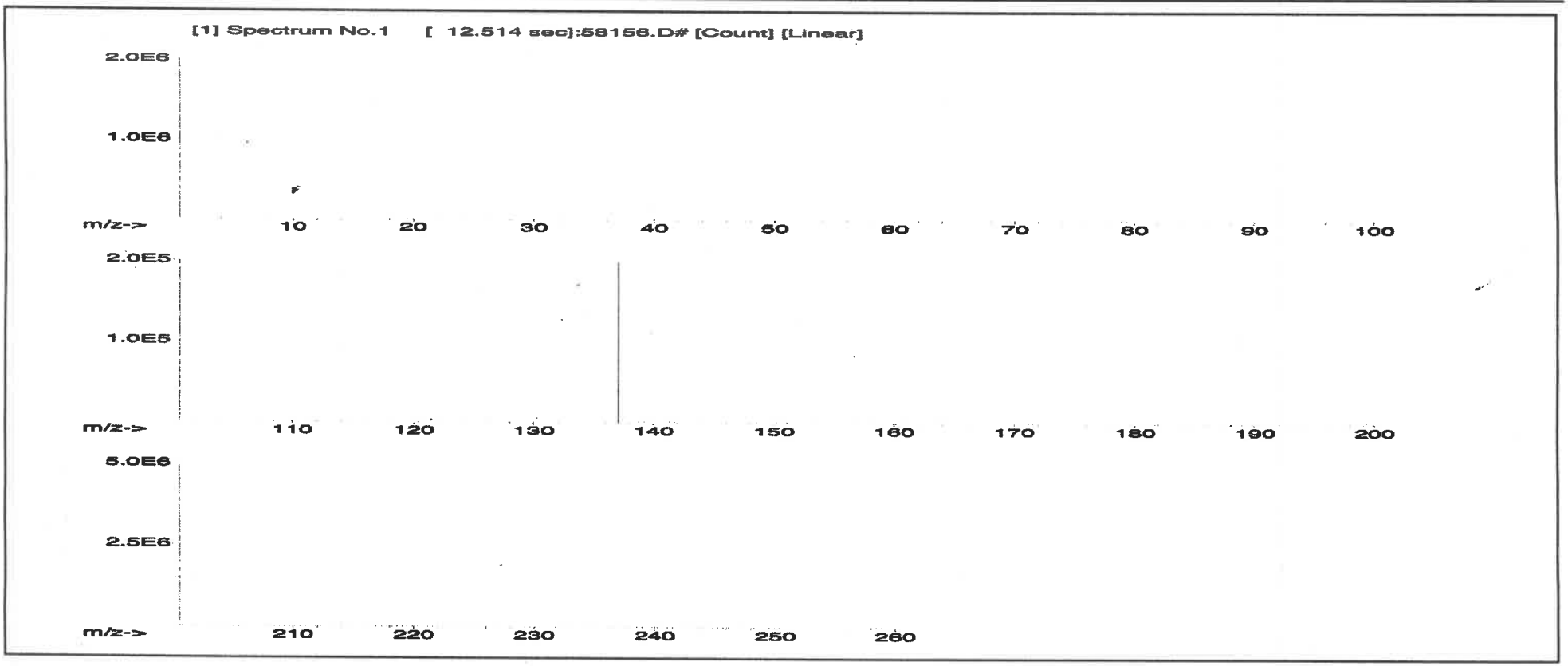
CERTIFIED WEIGHT REPORT:

		Lot #		
Part Number:	**57056**	**Solvent:**	20510011	Nitric Acid
Lot Number:	**072122**			
Description:	**Barium (Ba)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	072125			
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	072122
Reviewed By:	Pedro L. Rentas	072122

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	3.82426	**1000.0**	**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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5429 R1 01/26/23 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

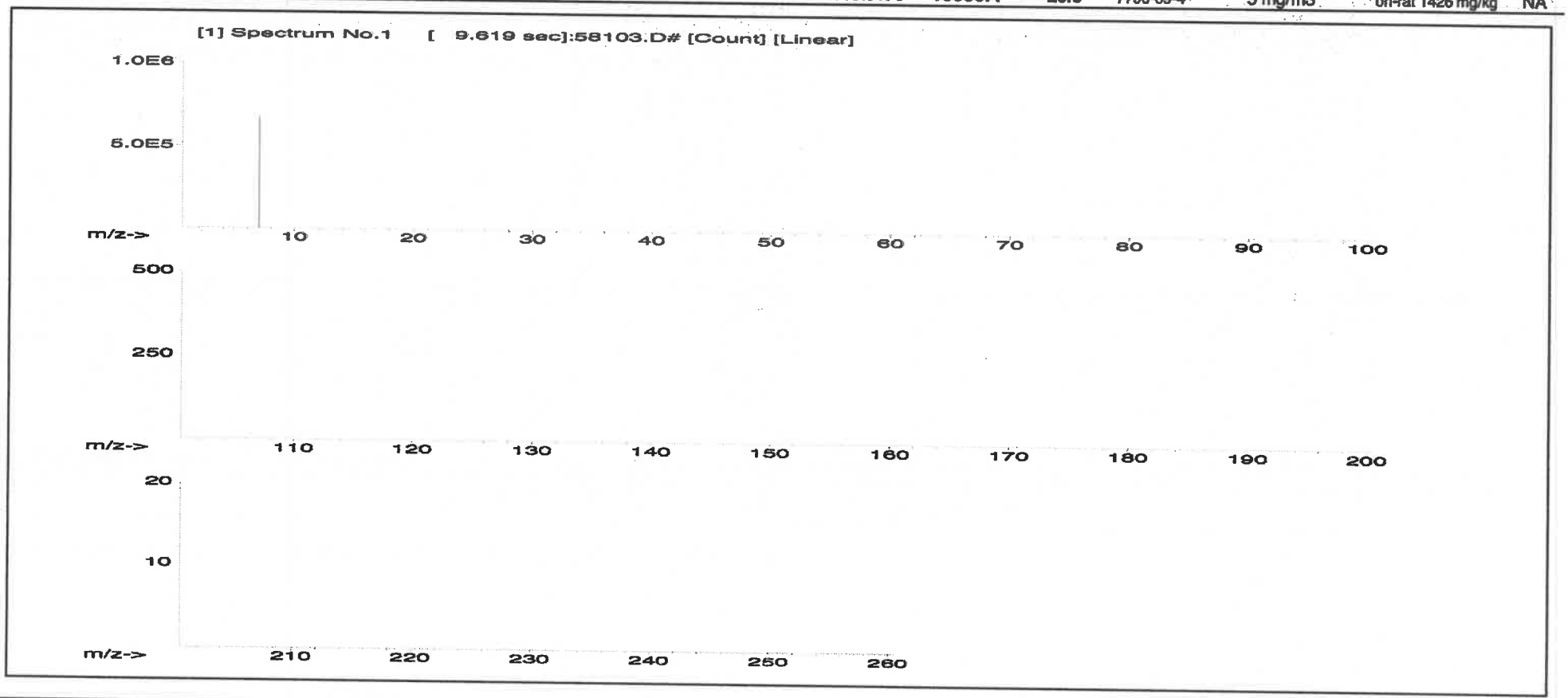
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask 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.

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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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IN 5466
R: 03/01/23 BH

Certified Reference Material CRM

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CERTIFIED WEIGHT REPORT:

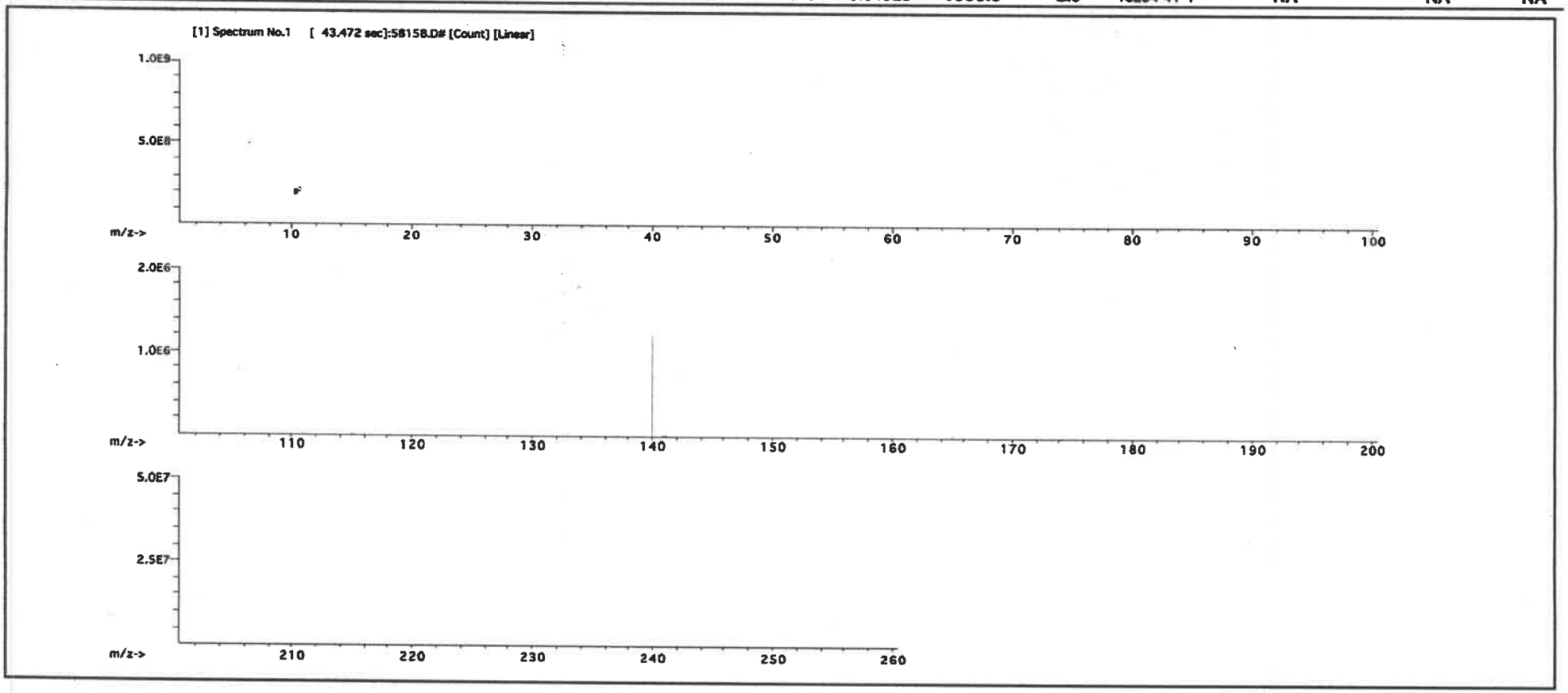
Part Number: 57058
Lot Number: 061322
Description: Cerium (Ce)

Expiration Date: 061325
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12 5E-05 Balance Uncertainty 0.058 Flask Uncertainty

	Lot #	
Solvent:	20510011	Nitric Acid
2%	20.0 (mL)	Nitric Acid

Formulated By:	Lawrence Barry	061322
Reviewed By:	Pedro L. Rentas	061322

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04923	1000.0	2.0	10294-41-4	NA	NA	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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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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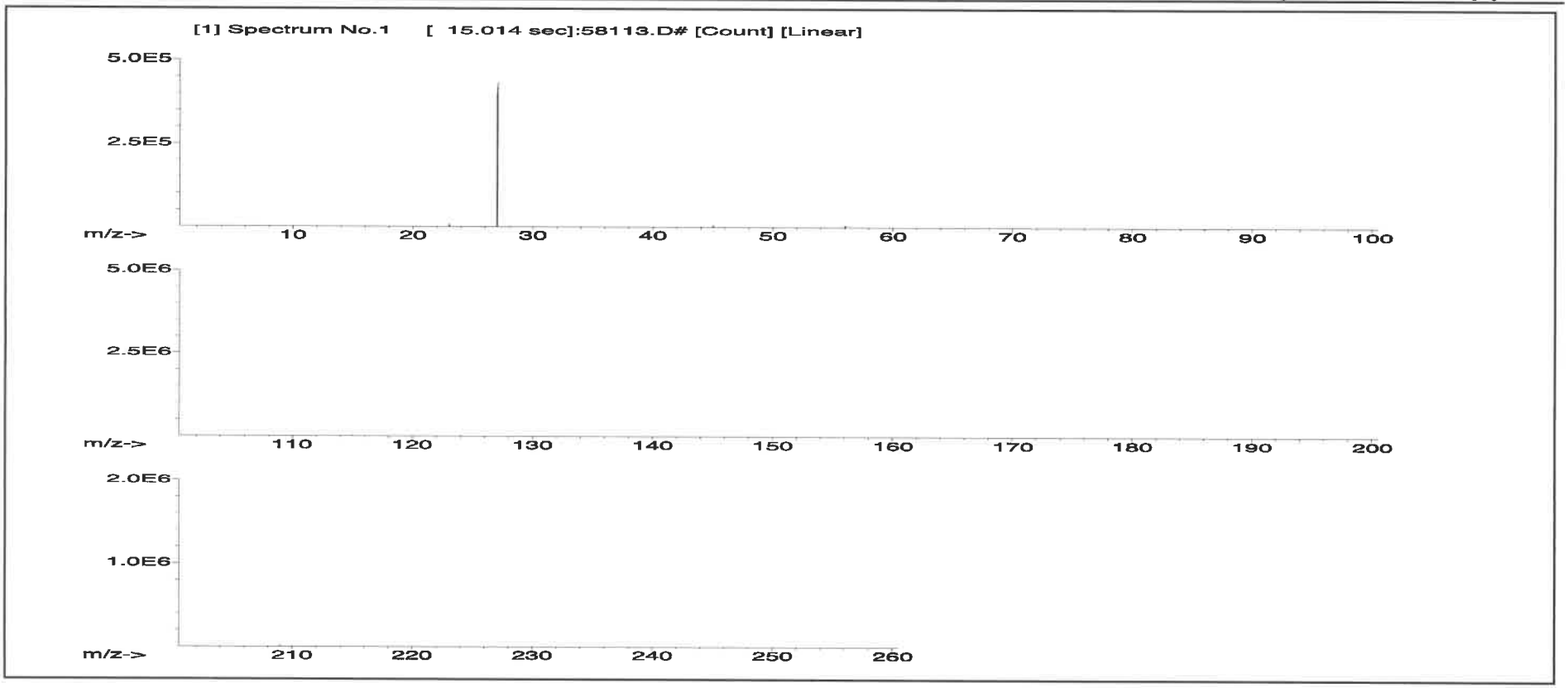
CERTIFIED WEIGHT REPORT:

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)

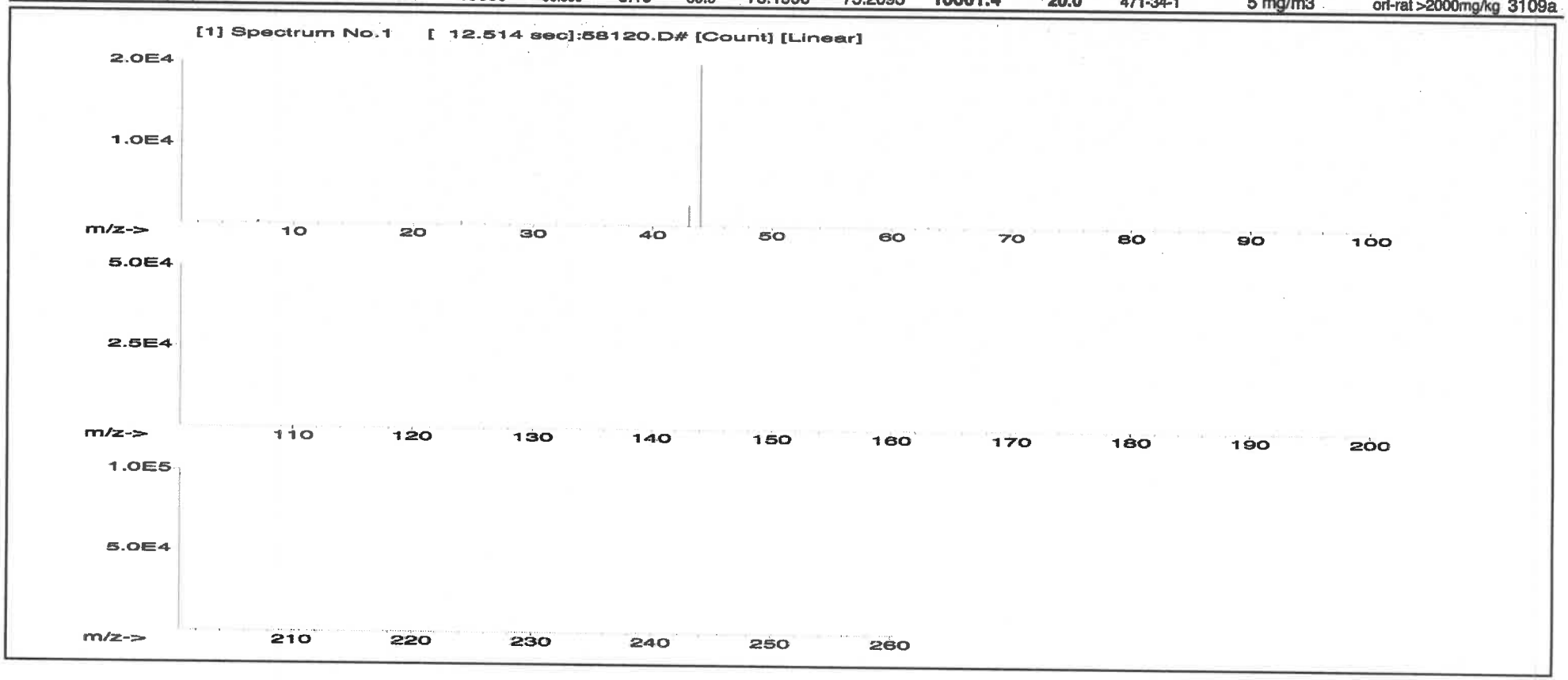
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41 ± 0.058 Flask Uncertainty

		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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M516 M517 R: 03/17/22 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 022123
Description: Sodium (Na)

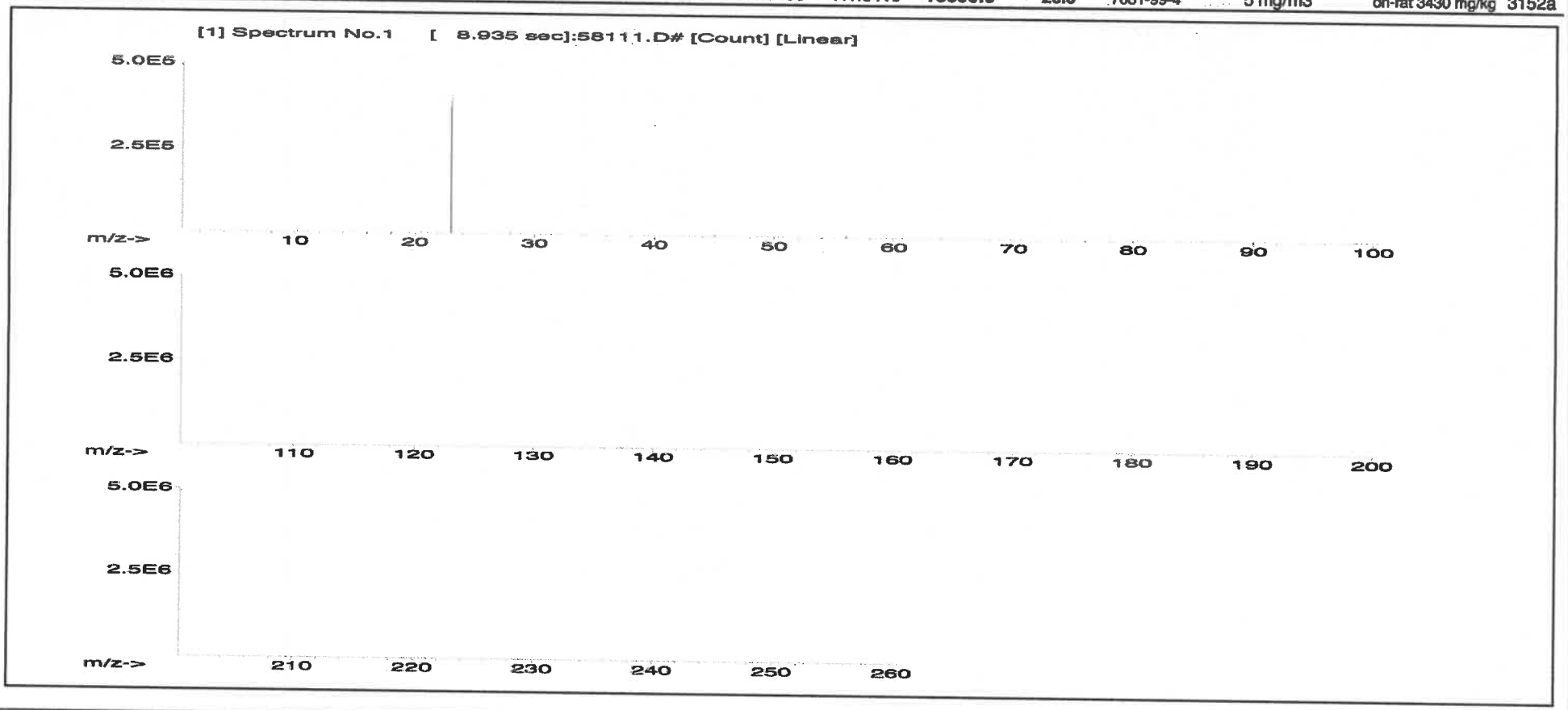
Expiration Date: 022126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41 0.06 Flask Uncertainty

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	022123
Reviewed By:	Pedro L. Rentas	022123

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	111.5406	111.5410	**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	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	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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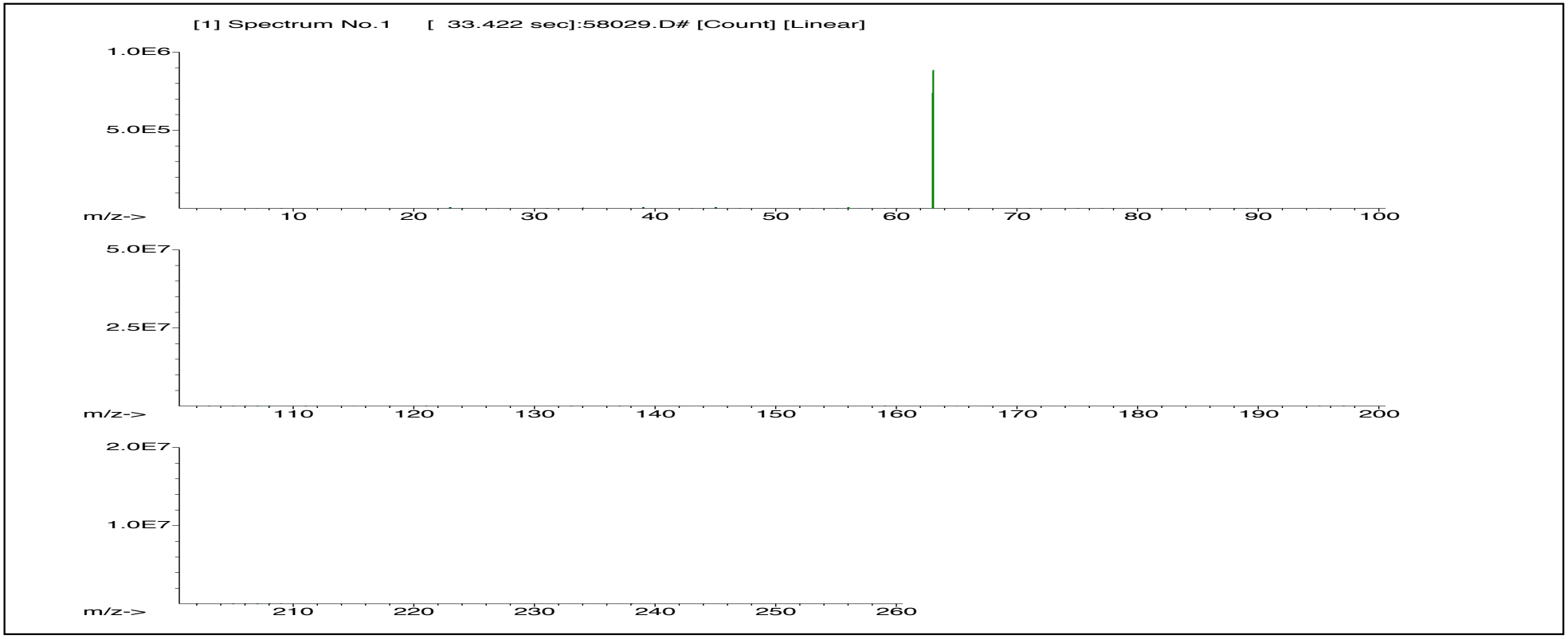
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	20510011	Nitric Acid	
Lot Number:	**102622**			
Description:	**Copper (Cu)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102625			
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):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Eli Aliaga 102622
Reviewed By:	Pedro L. Rentas 102622

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	021422	0.1000	200.0	0.084	1000	10000.8	**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

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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.

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

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

RD: 06/12/2023, M5581, M5582, M5583, M5584, M5585

JENSEN INERT PRODUCTS

MATERIAL CERTIFICATE OF COMPLIANCE

DATE: JUNE 12, 2023

CUSTOMER:	PCI SCIENTIFIC SUPPLY, INC
PURCHASE ORDER NO.	6054931
CATALOG NO.	BOI5021-450L
PRODUCT DESCRIPTION:	BOILING STONES, TFE, 454GMS
QUANTITY:	10 EACH
LOT NO.	W126678
SPECIFICATION (S):	Made from Virgin PTFE Resin

We certify that we have complied with the terms and conditions of the above Purchase Order and the Part Specifications in the manufacturing of the above product.

Laura Valencia

Laura Valencia
Quality Assurance Inspector

F:U:J:CF:PCISCI:COC-68118-BOI5021-061223

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M5658 R ! 8/25/23

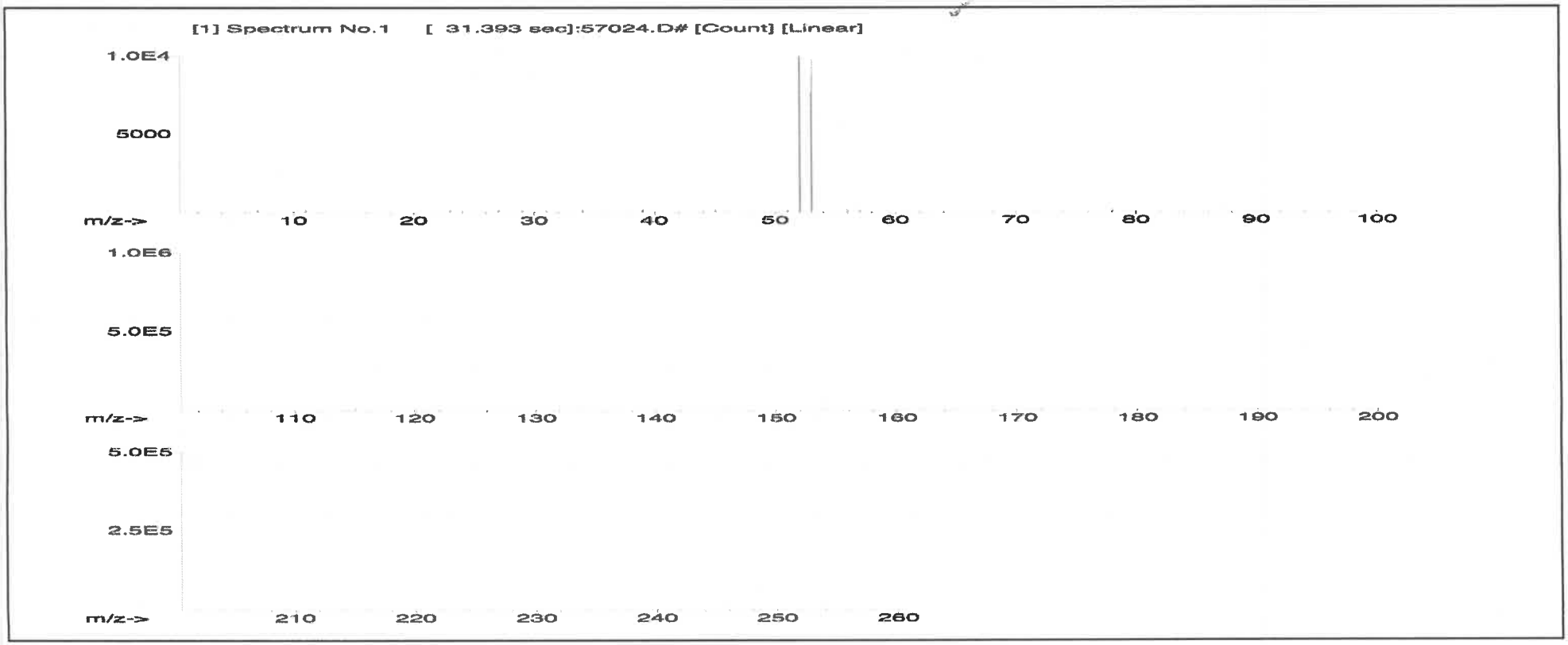
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* 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 prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

Part Number: 57082
Lot Number: 100923
Description: Lead (Pb)

Expiration Date: 100926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

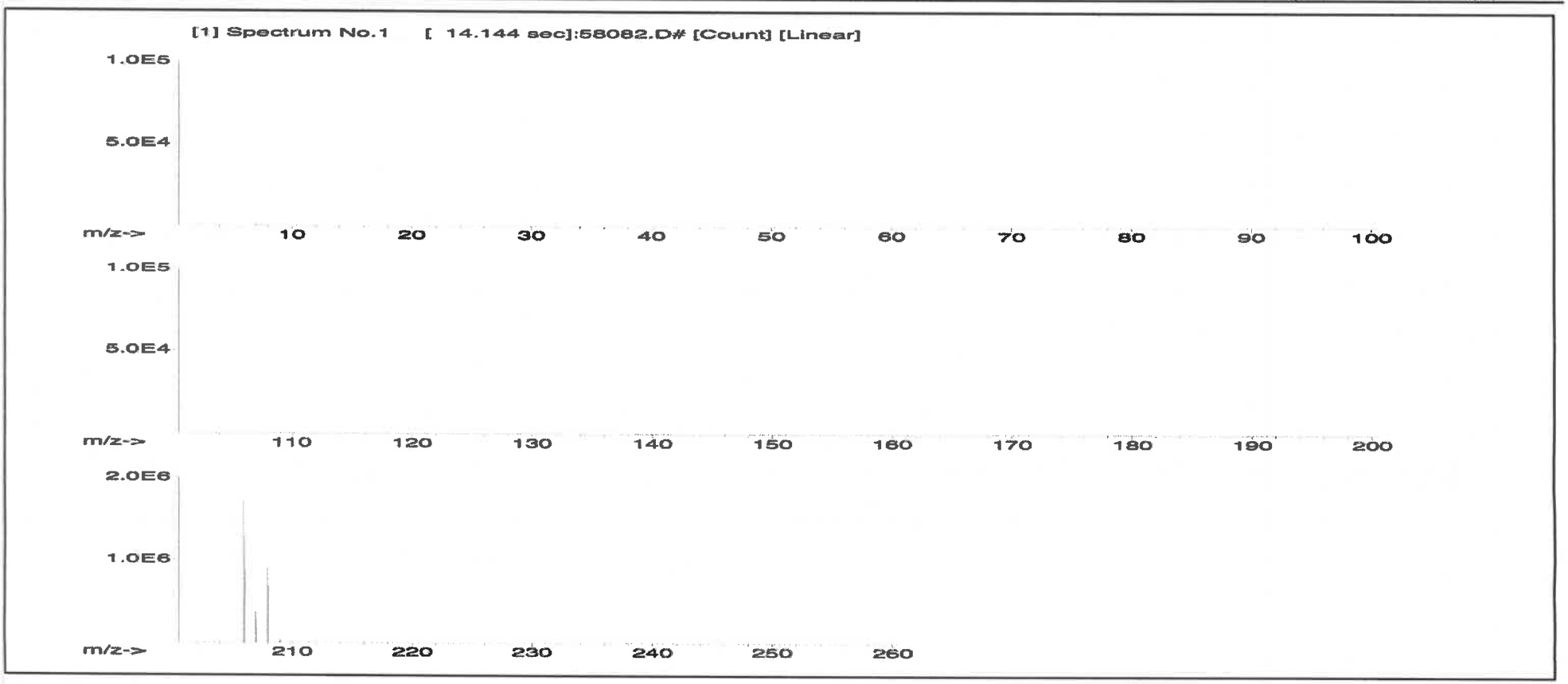
Weight shown below was diluted to (mL): 3000.41 0.06 Flask Uncertainty

	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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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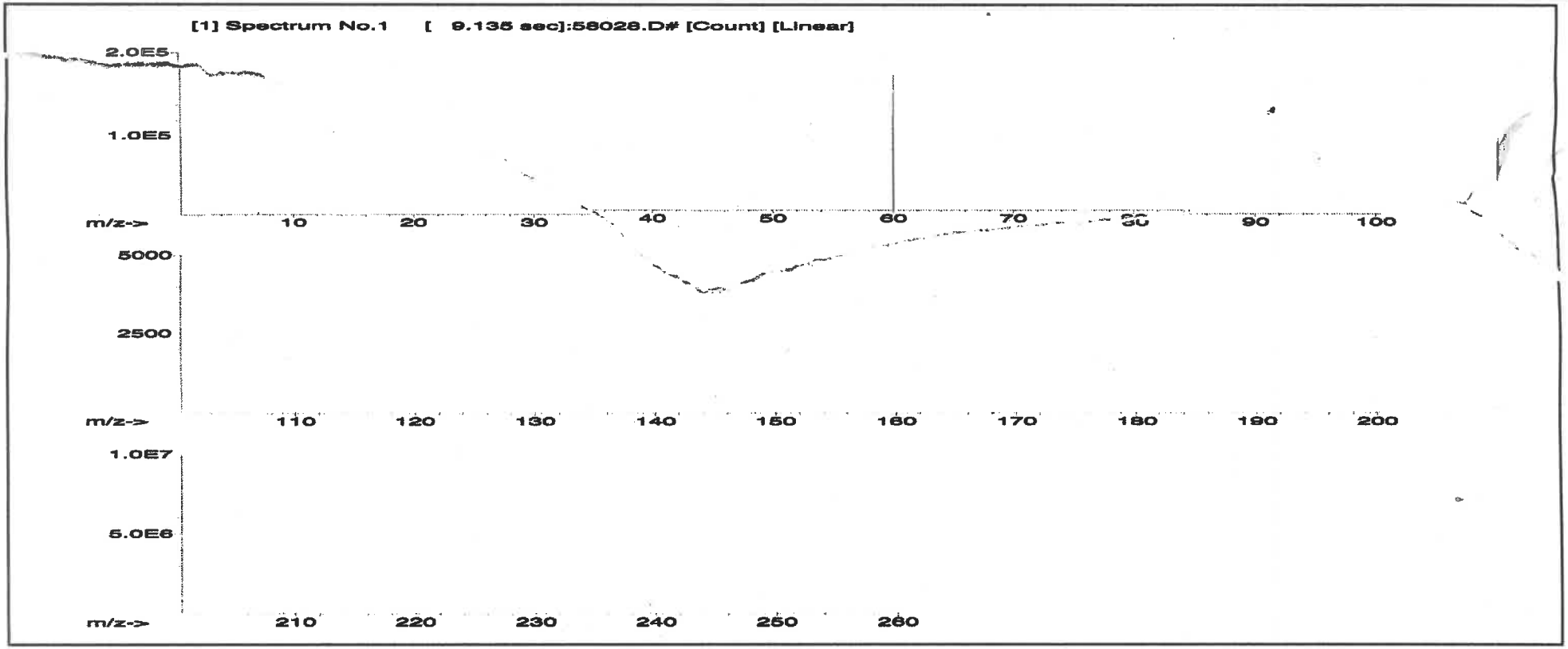
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**091223**			
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	091226			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	091223
Reviewed By:	Pedro L. Rentas	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	**2.2**	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* 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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M5768 M5769 (BP) R:1/3/24

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CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Expiration Date: 091826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

M5768, M5769 (BP) R: 1/3/24

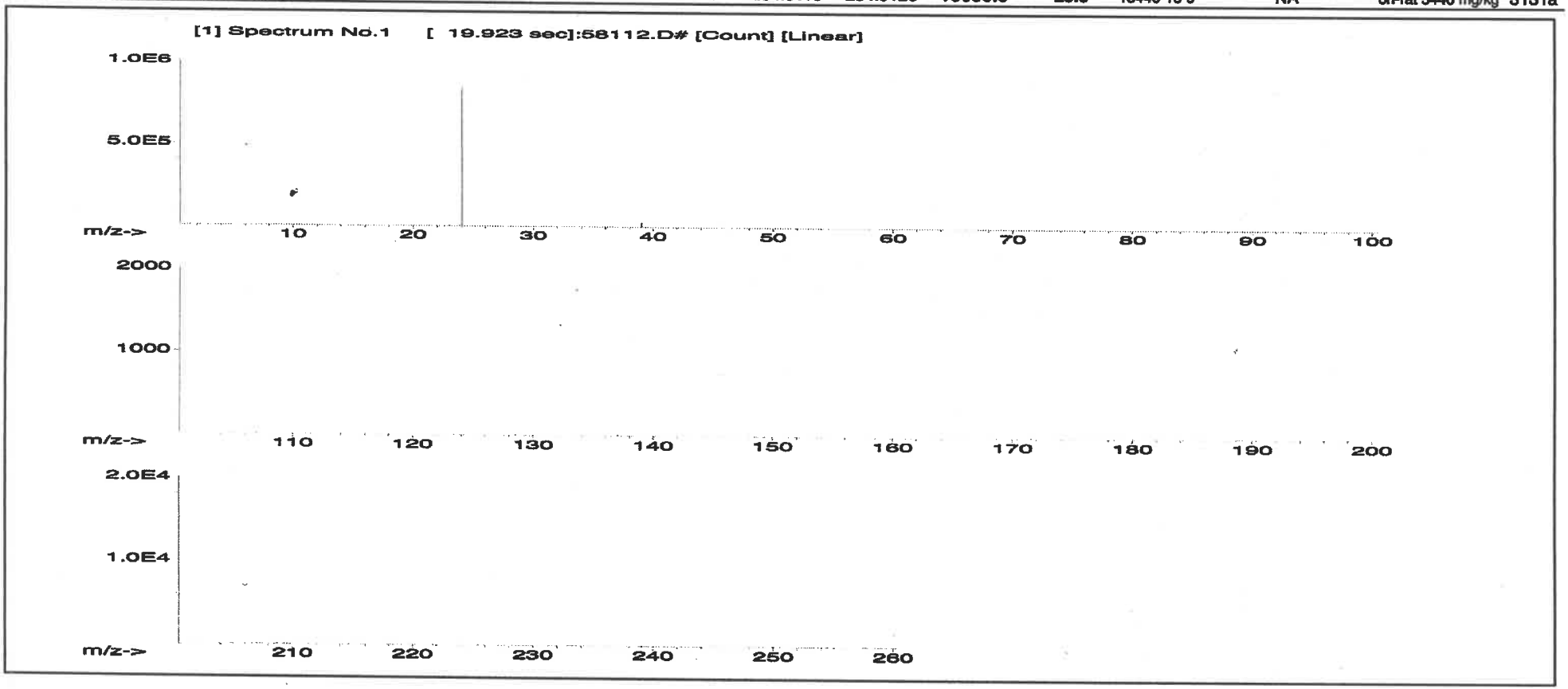
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid
		5E-05	Balance Uncertainty

Formulated By: Lawrence Barry 091823

Reviewed By: Pedro L. Rentas 091823

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	234.9118	234.9126	**10000.0**	**20.0**	13446-18-9	NA	ori-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:

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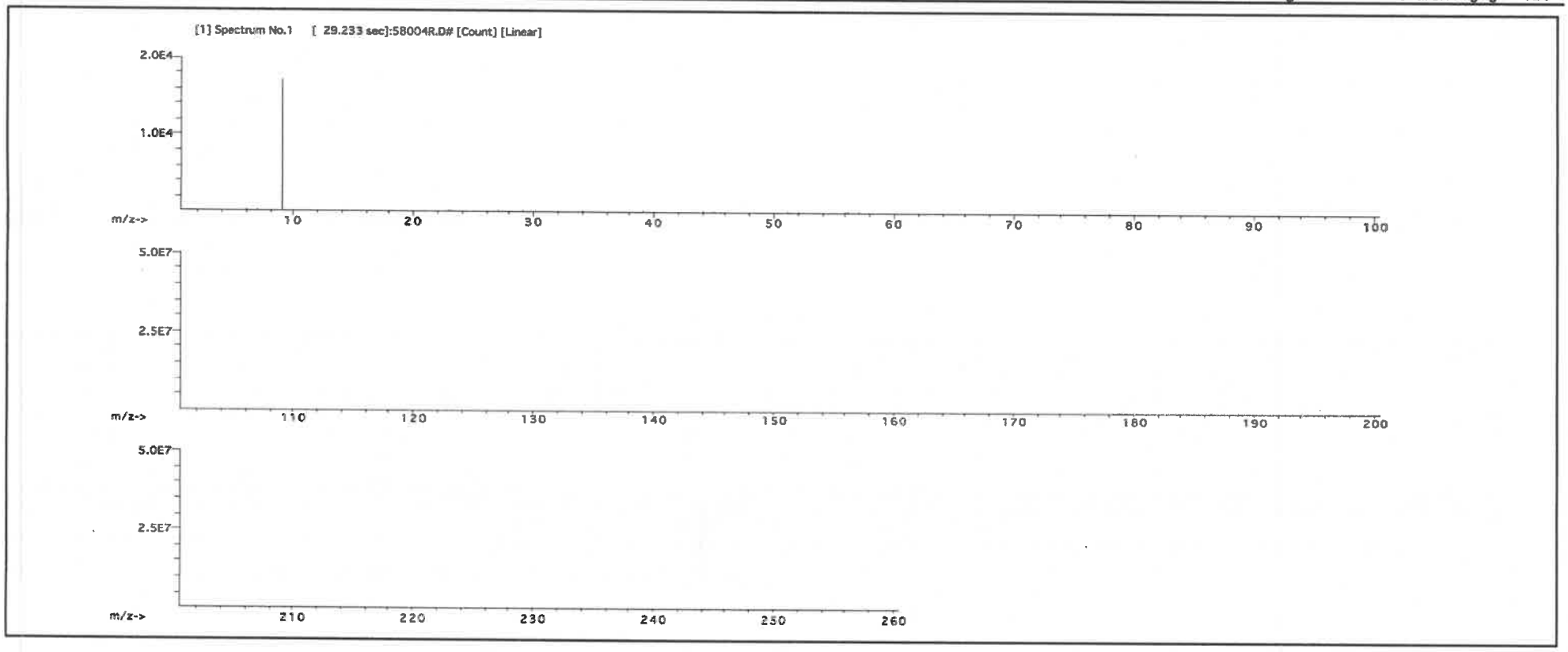
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CERTIFIED WEIGHT REPORT:

		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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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

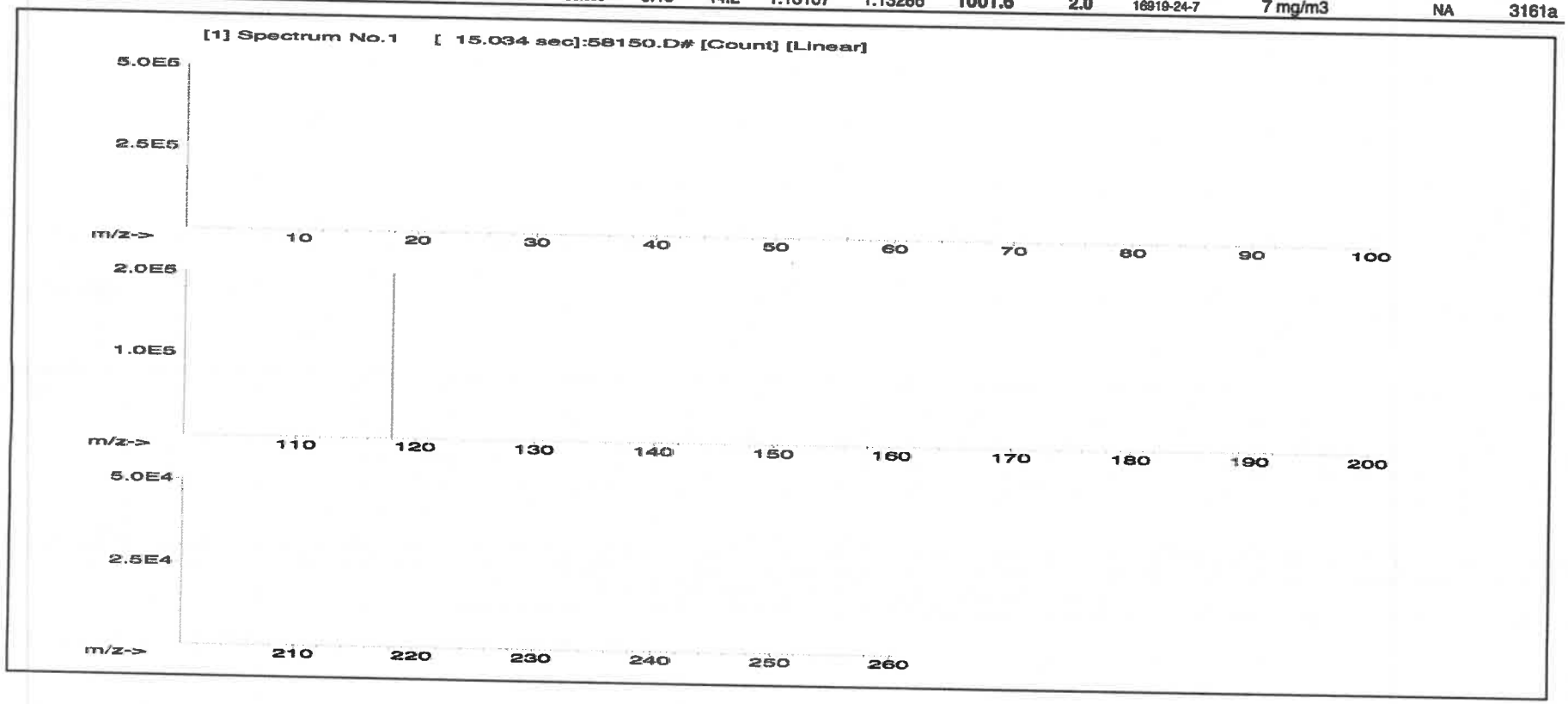
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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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* 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 IM5800 BH

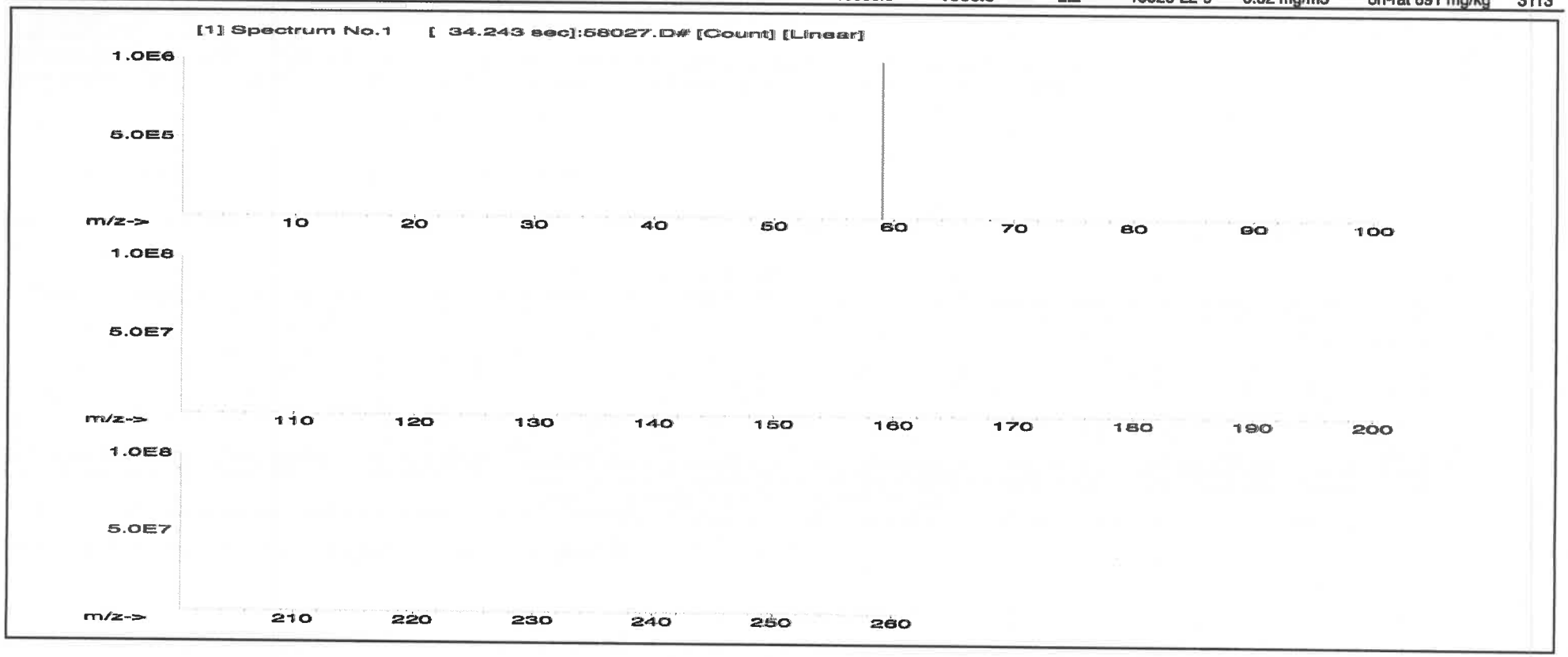
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091923
Reviewed By:	Pedro L. Rentas	091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



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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* 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 IM5801 BH

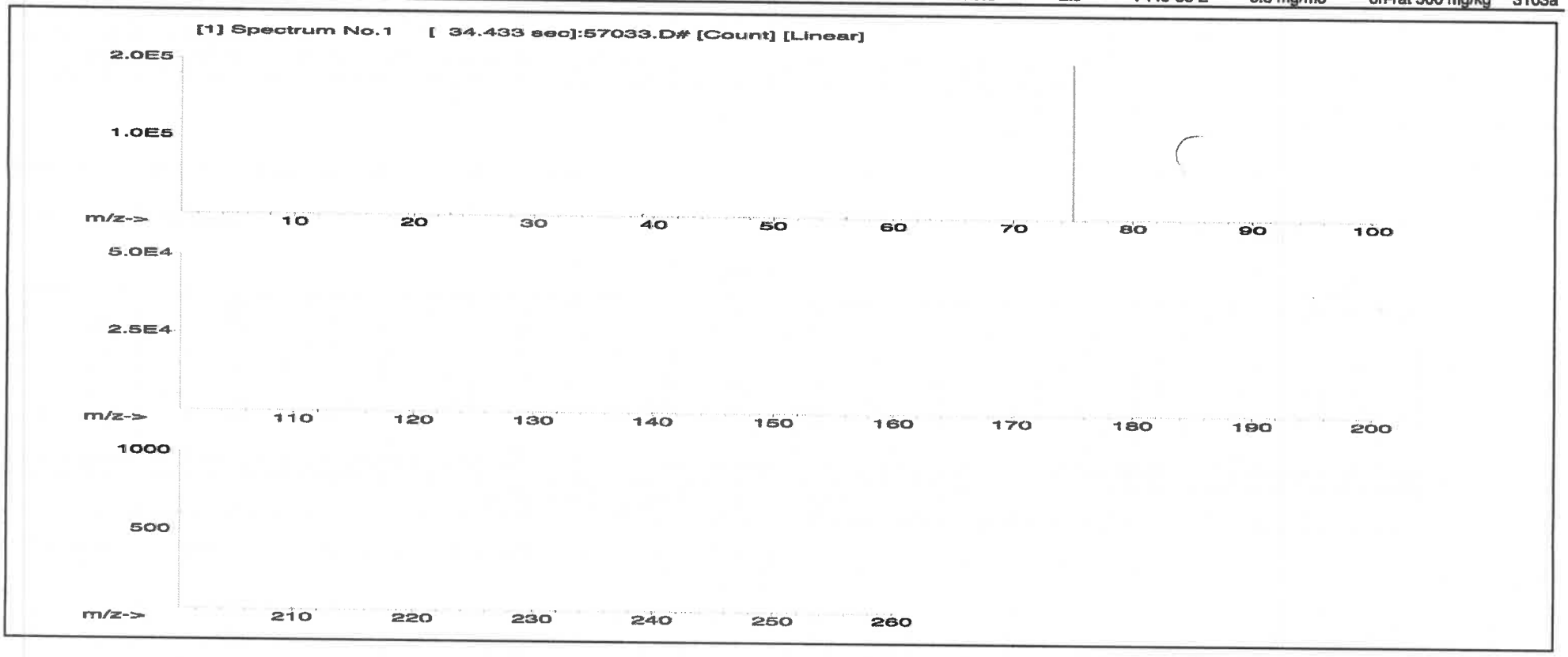
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CERTIFIED **WEIGHT** REPORT:

		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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A: 02/09/24 M.5814

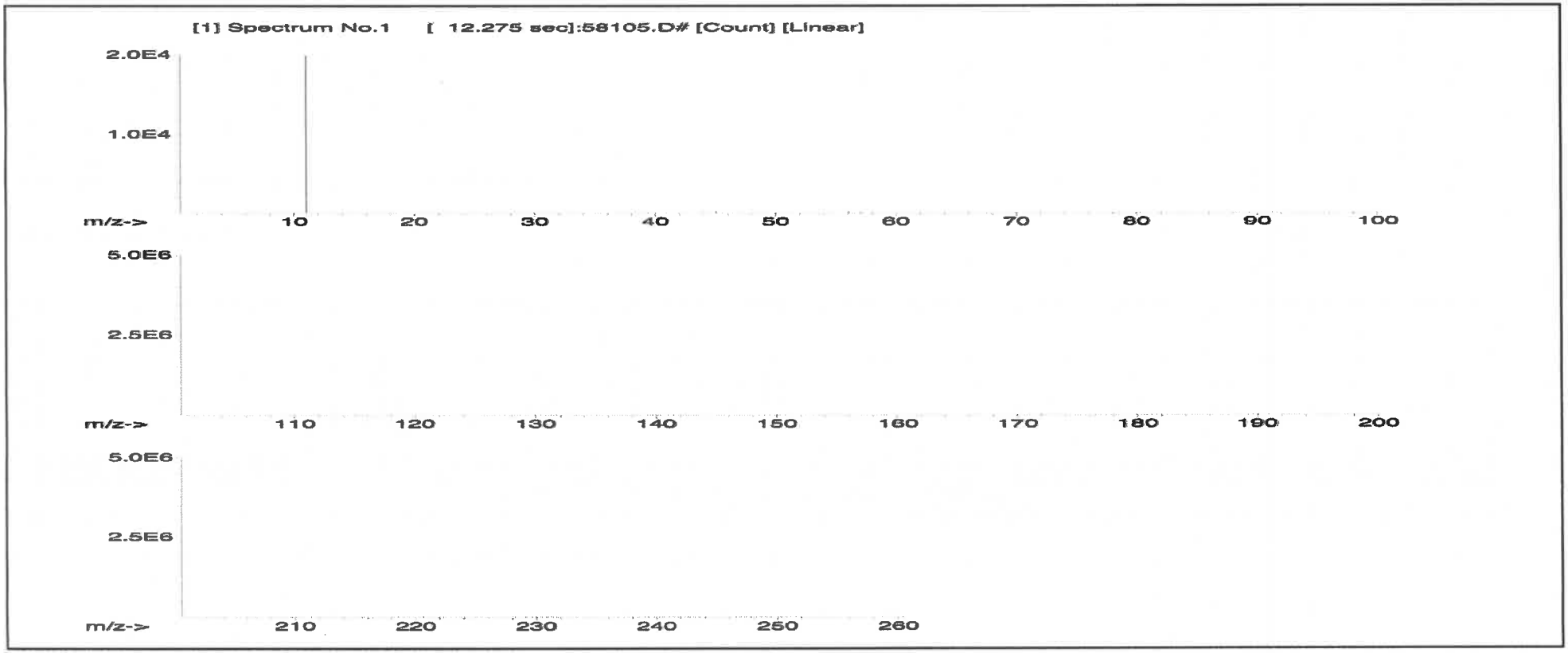
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CERTIFIED WEIGHT REPORT:

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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* 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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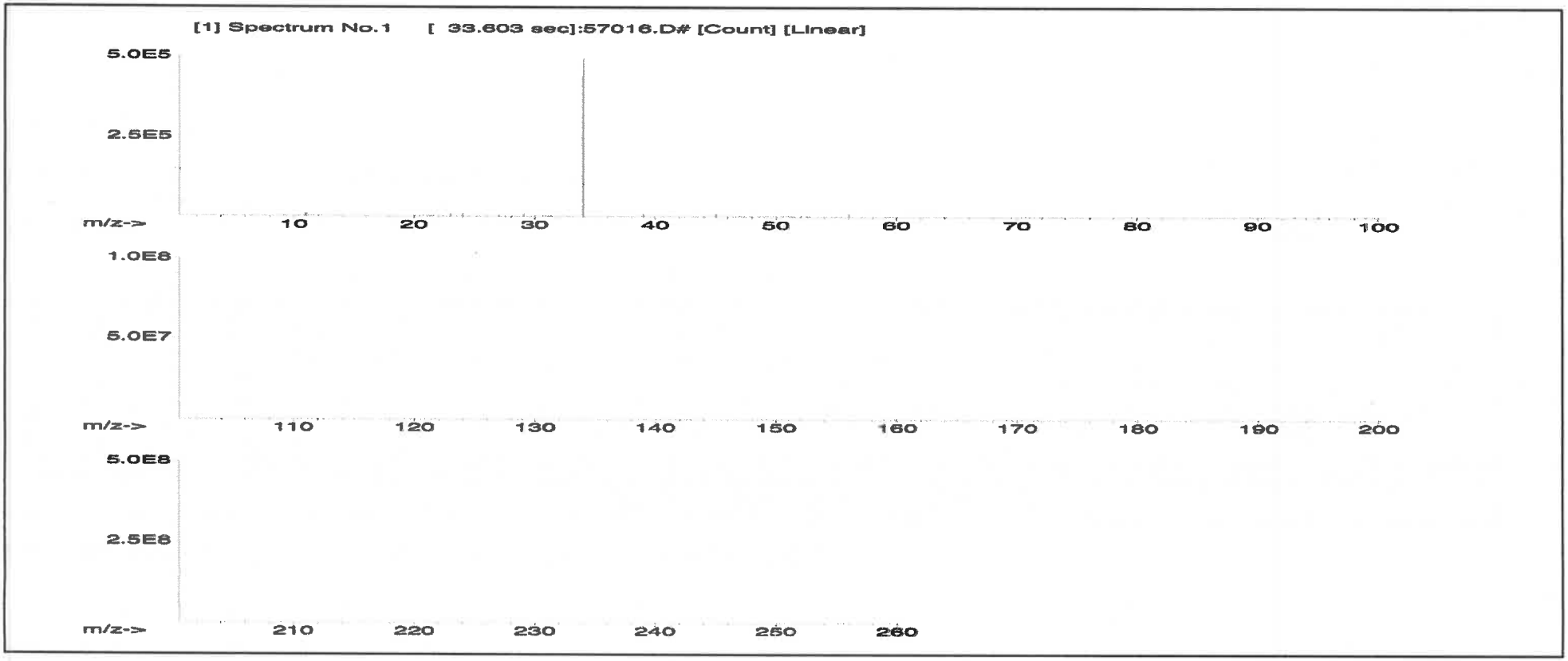
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CERTIFIED WEIGHT REPORT:

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:

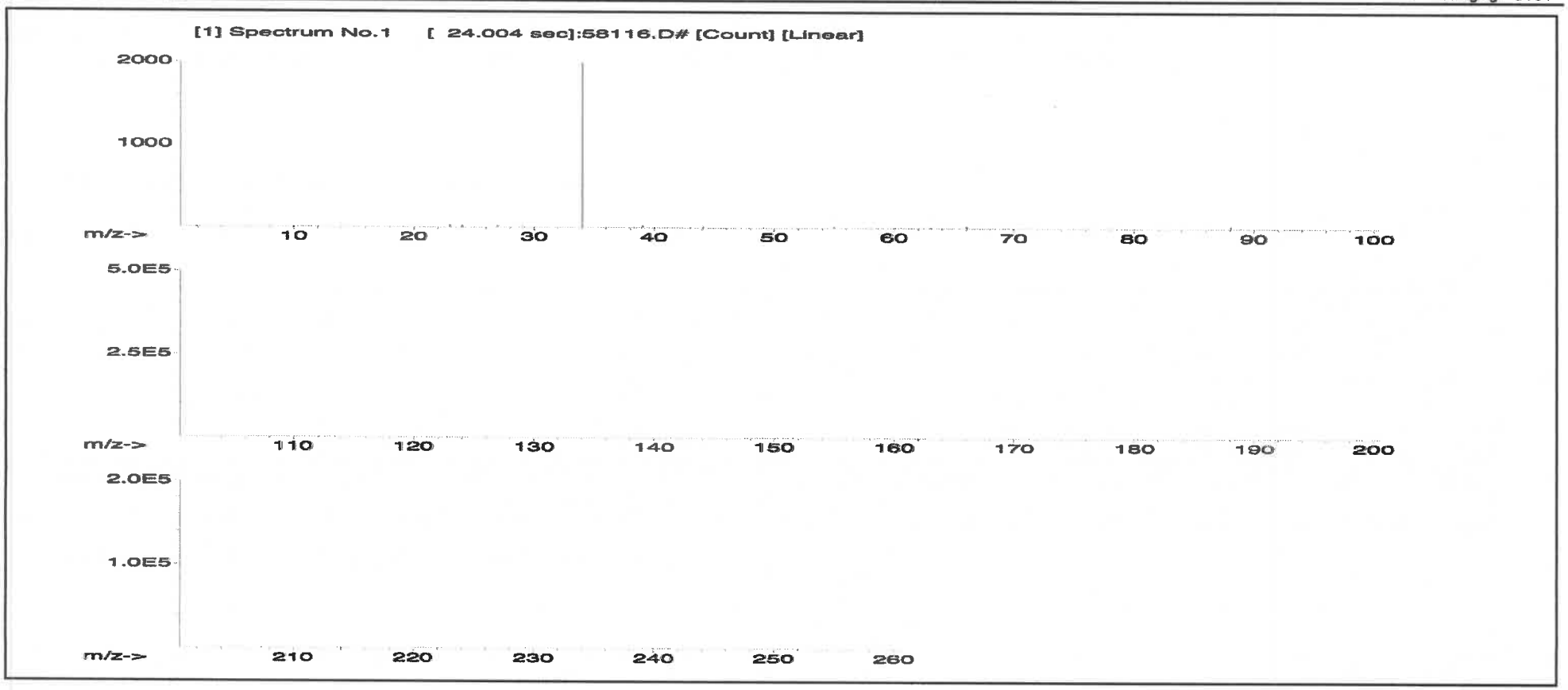
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

Lot #
Solvent: 071123 ASTM Type 1 Water

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

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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



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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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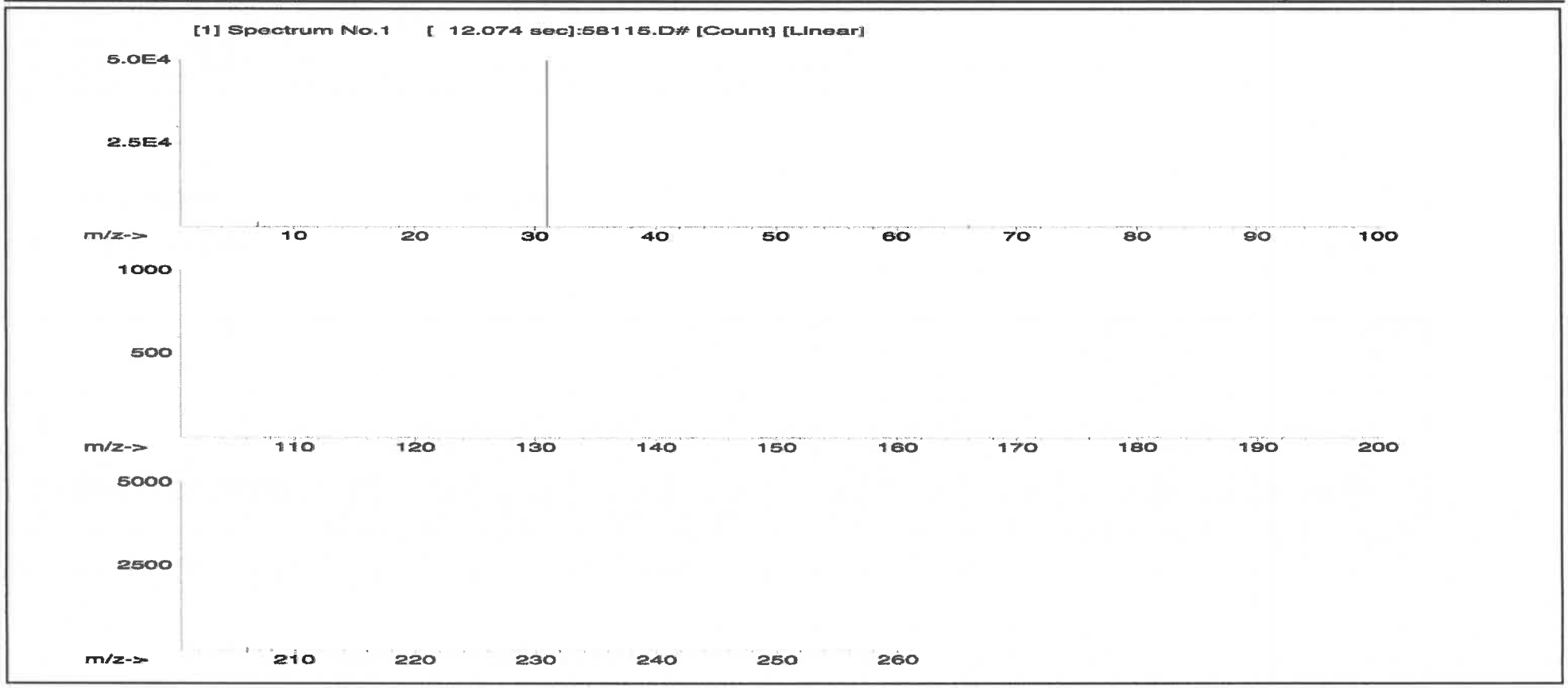
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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

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.

* 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).

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

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

M5959 R: 6/14/24.

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Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 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

M5970, M5971 R: 7/01/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

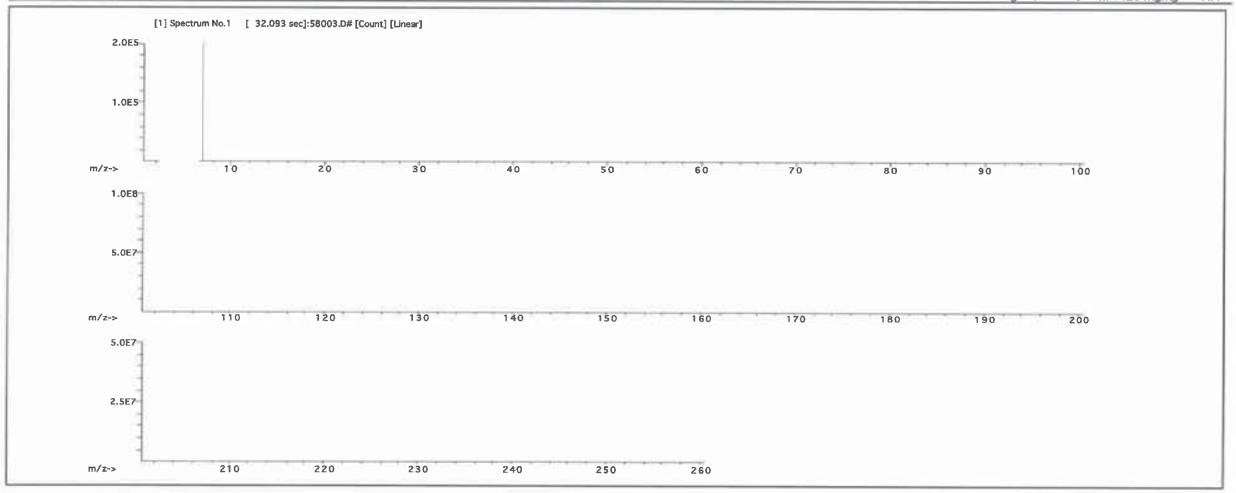
CERTIFIED WEIGHT REPORT:

		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

Pedro Rentas
Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO_3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma(w_i)^2\ (u_{char\ i})^2]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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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



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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746172
Matrix:	3% (v/v) HNO_3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 5 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 6 µg/mL		

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

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

August 12, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 12, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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EXP.: 9/6/2029

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746762
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 5 µg/mL**	**Molybdenum, Mo**	**1 000 ± 5 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 5 µg/mL**
Titanium, Ti	**1 000 ± 6 µg/mL**		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 06, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



M6125 Receive -> 11/22/24

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

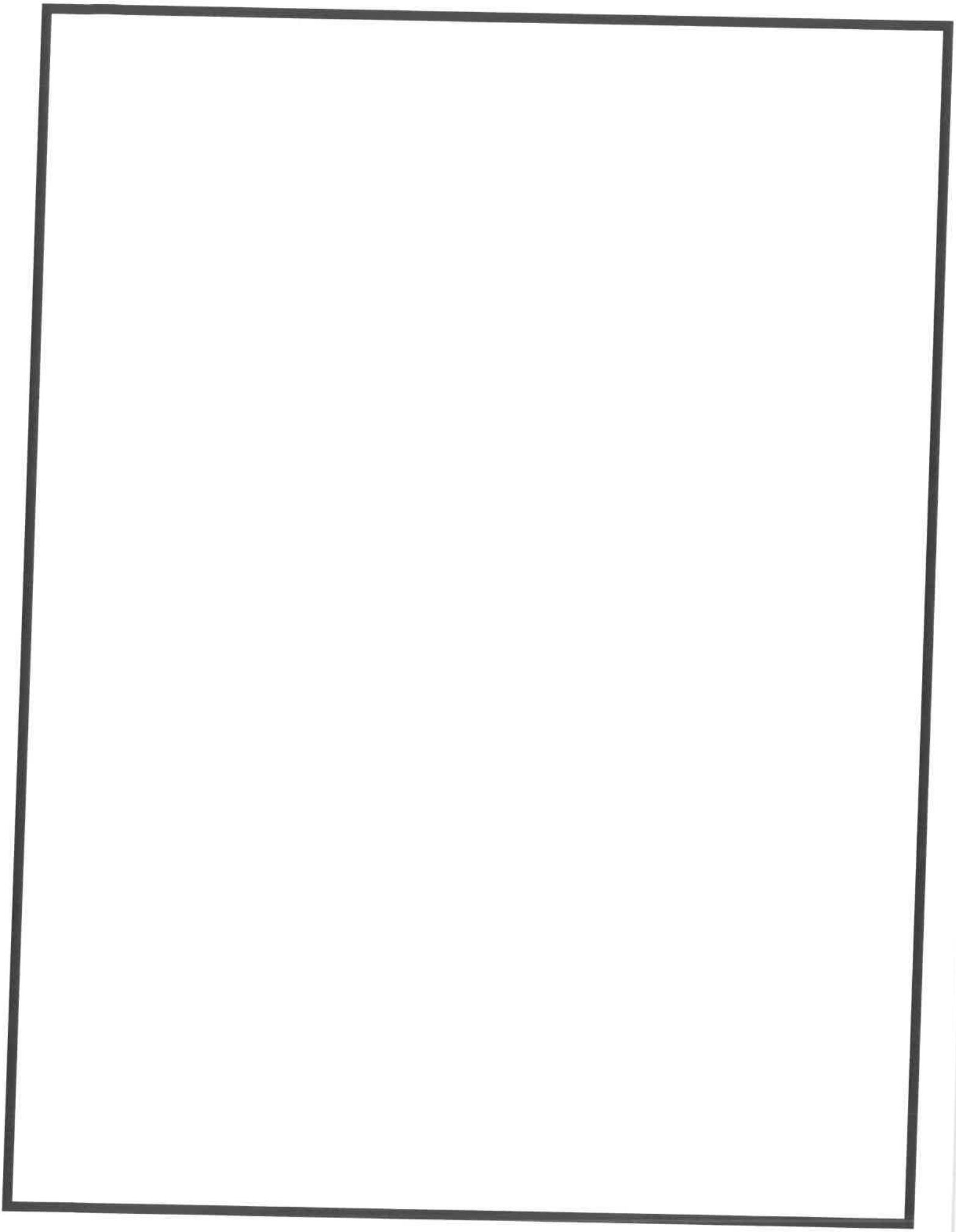
Office and Plant
299 Cedar Lane
Fairless Hills, PA 19030

Phone: 215-295-5006
Fax: 215-295-0781

Hydrogen Peroxide 30%, ACS

Reagent Grade

SPECIFICATION	MAXIMUM LIMITS
Appearance	Colorless and free from suspended matter or sediment
Assay	29-32%
Color (APHA)	10
Residue after Evaporation	0.002%
Titratable Acid	0.0006 meq/g
Chloride (Cl)	3 ppm
Nitrate (NO_3)	2 ppm
Phosphate	2 ppm
Sulfate (SO_4)	5 ppm
Ammonium (NH_4)	5 ppm
Heavy Metals (as Pb)	1 ppm
Iron (Fe)	0.5 ppm



Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R -> 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

R->1/13/28

M6128

Part Number:	**58025**	**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**101124**			
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	101127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

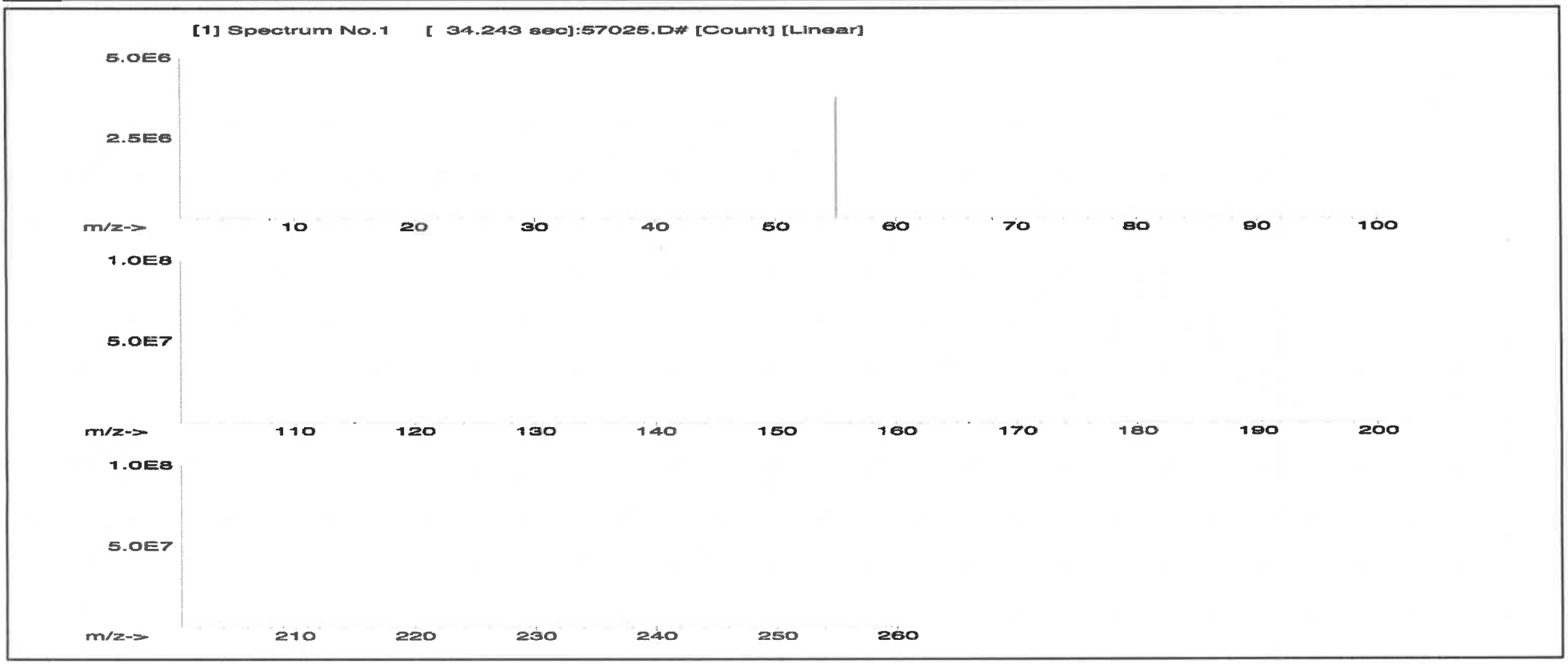
Giovanni Esposito

Formulated By:	Giovanni Esposito	101124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	101124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	**SDS Information** (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate hydrate (Mn)	IN031	MNM092020A1	1000	99.999	0.10	20.8	19.2322	19.2344	**1000.1**	**2.0**	15710-66-4	5 mg/m3	orl-rat >300mg/kg	3132



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

M6137 R→10/3/24

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI1
Lot Number:	V2-SI744713
Matrix:	tr. HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon
Starting Material:	Silica
Starting Material Lot#:	1771
Starting Material Purity:	99.9981%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 6 µg/mL

Density: 1.003 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**999 ± 5 µg/mL** ICP Assay NIST SRM Traceable to 3150 Lot Number: S2-SI702546
Assay Method #2	**1000 ± 7 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	O	Na		0.001656	M	Se	<	0.022000	M	Zn	<	0.002500
M	Al		0.010787	M	Fe	<	0.027000	M	Nb	<	0.001300	s	Si	<		O	Zr	<	0.001900
M	As	<	0.001900	M	Ga	<	0.001300	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	M	Ni	<	0.005500	M	Sn		0.000096				
M	B		0.016180	M	Ge	<	0.001900	M	Os	<	0.000610	O	Sr		0.000092				
M	Ba		0.000096	M	Hf		0.000423	i	P	<		M	Ta		0.002542				
O	Be	<	0.000570	M	Hg	<	0.000610	M	Pb	<	0.000310	M	Tb	<	0.000310				
M	Bi	<	0.000310	M	Ho	<	0.000610	M	Pd	<	0.000610	M	Te	<	0.000910				
O	Ca		0.011557	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.001900				
M	Cd	<	0.000310	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.001078				
M	Ce	<	0.000610	O	K		0.000577	M	Rb	<	0.009100	M	Tl	<	0.000310				
M	Co	<	0.001600	M	La	<	0.000310	M	Re	<	0.000310	M	Tm	<	0.000310				
M	Cr	<	0.010000	O	Li	<	0.000460	M	Rh	<	0.000310	M	U	<	0.000310				
M	Cs	<	0.000310	M	Lu	<	0.000310	M	Ru	<	0.000310	O	V	<	0.001300				
M	Cu	<	0.002500	O	Mg		0.001348	O	S	<	0.570000	M	W	<	0.001900				
M	Dy	<	0.000310	M	Mn	<	0.002500	M	Sb	<	0.000310	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000310	O	Sc	<	0.000590	M	Yb	<	0.000310				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphic (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 10, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 10, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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

M6156

Certified Reference Material CRM

R→ 6/12/24

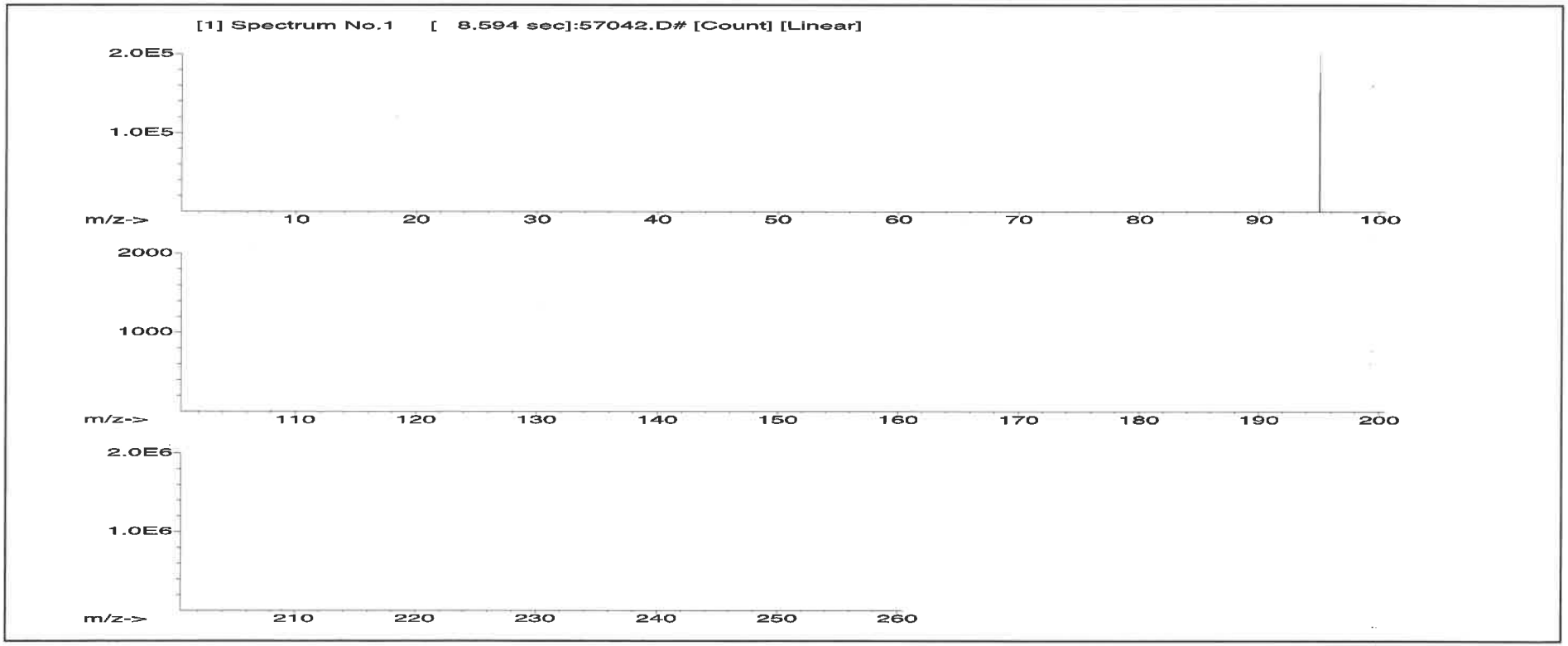
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57042**			
Lot Number:	**032123**			
Description:	**Molybdenum (Mo)**	MKBQ8597V	Ammonium hydroxide	
		0.5%	15.0 (mL)	Ammonium hydroxide
Expiration Date:	032126			
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):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	032123
Reviewed By:	Pedro L. Rentas	032123

	Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1.	Ammonium molybdate (Mo)	58142	112322	0.1000	300.0	0.084	1000	10001.4	**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).

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R-02102/2025

M-6158

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
Trace Impurities - Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities - Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities - Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities - Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities - Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count - 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6030

R: 8/5/24

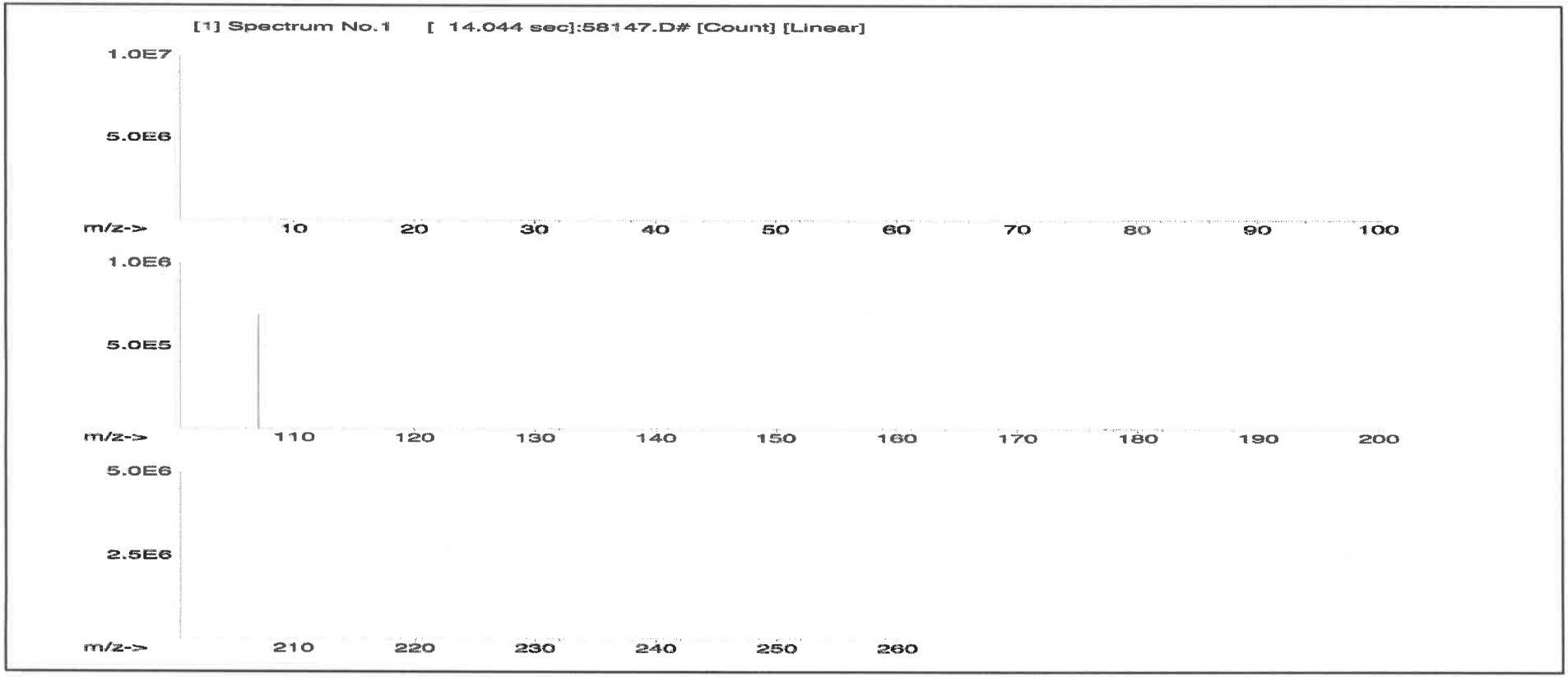
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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).

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.

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2700 Chandler Avenue - Building C
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(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

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.

opened : 3/24/25

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

M6160

Part Number: 57051
Lot Number: 071724
Description: Antimony (Sb)
Expiration Date: 071727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.26

Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

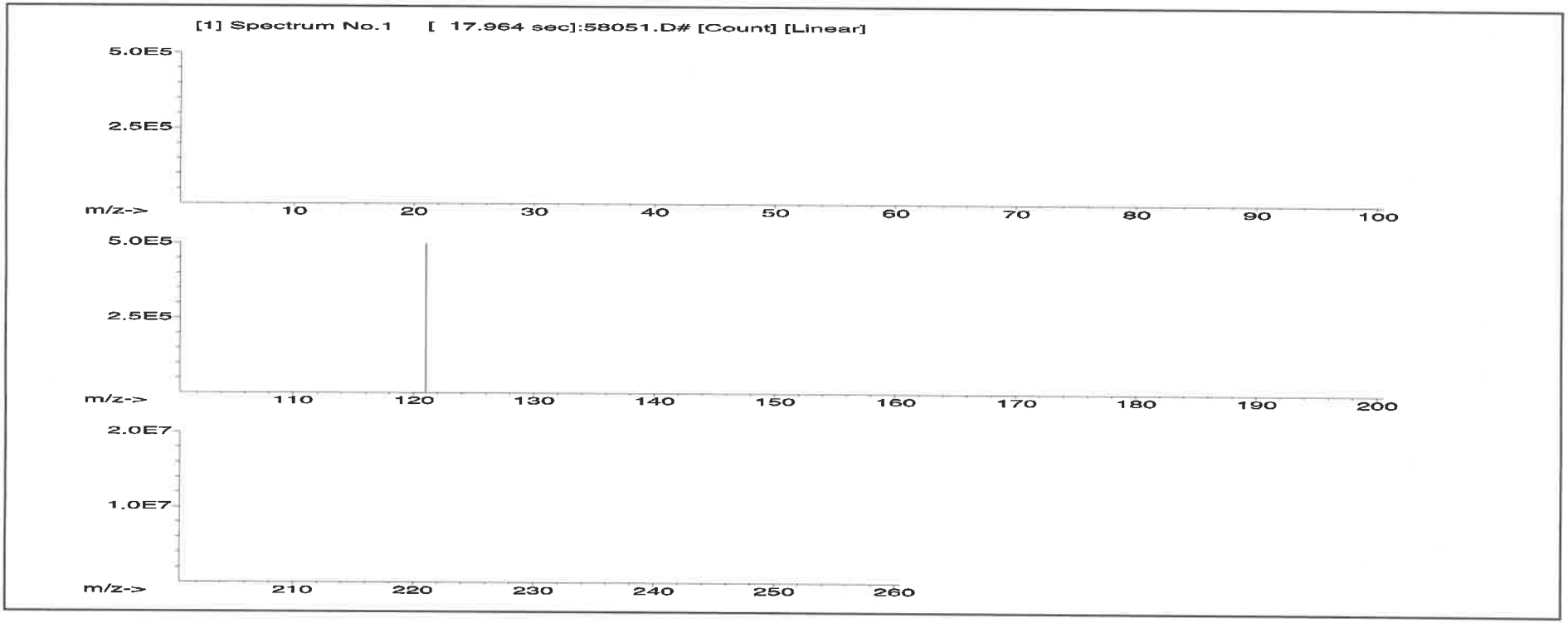
Giovanni Esposito

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).

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

R ! 8/5/24

M6023

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

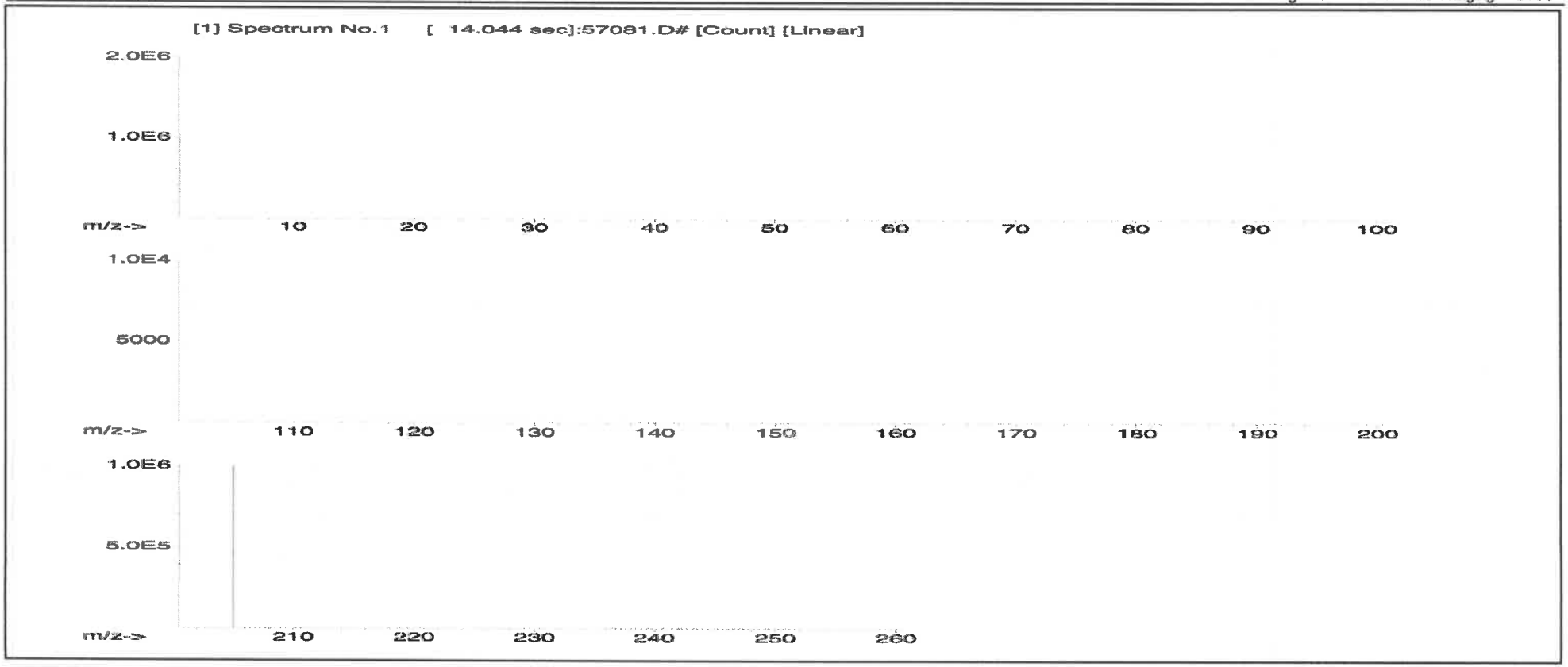
CERTIFIED WEIGHT REPORT:

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
Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6021

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Bc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**	24002546	Nitric Acid	
Description:	**Vanadium (V)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

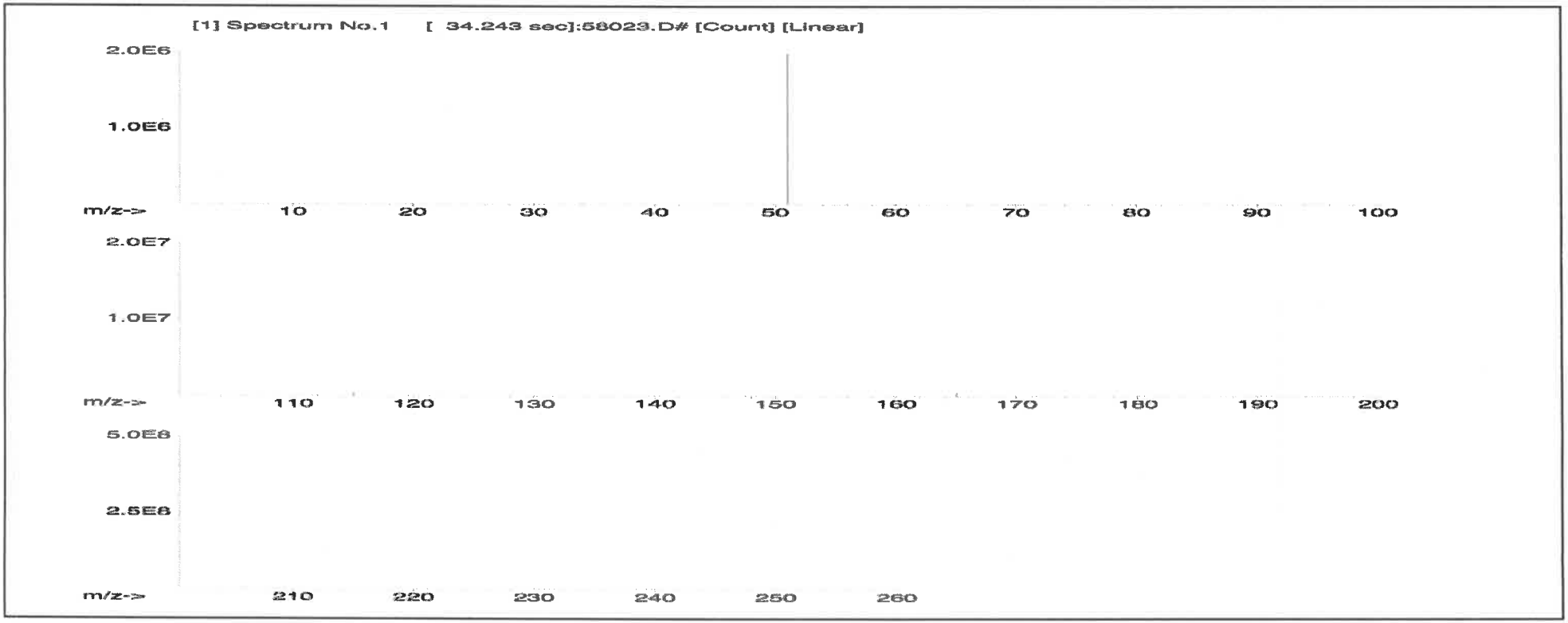
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



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:

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).



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. Q1744
COC Number 2046612

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Gannett Fleming
ADDRESS: 1010 Adams Ave
CITY Audubon STATE: PA ZIP: 19405
ATTENTION: Joe Krupansky
PHONE: 610-301-8342 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Amtrak replacement of SR
PROJECT NO.: 9500000818 LOCATION: Kearny, NJ
PROJECT MANAGER: Joe Krupansky
e-mail: QA&C@BEMS1S.com
PHONE: 610-301-8432 FAX:

CLIENT BILLING INFORMATION

BILL TO: Alliance PO#:
ADDRESS: 284 Shefied St
CITY Mantanside STATE: NJ ZIP: 07093
ATTENTION: Samavia Beasley PHONE: 908-788-3148

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): 10 DAYS*
EDD: 10 DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☐ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ Level 4 (QC + Full Raw Data)
- ☒ NJ Reduced
- ☐ US EPA CLP
- ☐ NYS ASP A
- ☐ NYS ASP B
- ☐ Other
- ☐ EDD FORMAT BEMEDD

ANALYSIS

1: Full TCLP Analysis
2: RCRA parameter
3: PCBs
4: TAL Metals
5: TCL-VOC+10
6: Cr(III) Cr(VI)
7: TCL-SVOCs-BNA+20
8: EPH
9:

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1.	B-188-SB01	S		X	4/5/25	13:20	9	X	X	X	X	X	X	X	X		
2.	B-158-SB02	S		X	4/5/25	17:10	9	X	X	X	X	X	X	X	X		
3.	~~TB~~				~~NA~~	~~NA~~						~~X~~					
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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.	4-5-25 1040	1.
2. Natalie Zucca	4-7-25 1040	2.
3.		3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 2.1 °C
Comments: IR. Gun #1 "Adjust factor +1"

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

284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

QA Control Code: A2070148

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1744 PORT06
Client Name : Portal Partners Tri-Venture
Client Contact : Joseph Krupansky
Invoice Name : Portal Partners Tri-Venture
Invoice Contact : Joseph Krupansky

Order Date : 4/7/2025 11:34:00 AM
Project Name : Amtrak Sawtooth Bridges 2
Receive DateTime : 4/7/2025 10:40:00 AM
Purchase Order :

Project Mgr :
Report Type : NJ Reduced
EDD Type : EXCEL NJCLEANUP
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1744-01	B-158-SB01	Solid	04/05/2025	13:20	VOC-TCLVOA-10		8260D		10 Bus. Days
Q1744-03	B-158-SB02	Solid	04/05/2025	17:10	VOC-TCLVOA-10		8260D		10 Bus. Days

Relinguished By : CR
Date / Time : 4-7-25 1255

Received By : RL
Date / Time : 4.7.25 12:55

Storage Area : VOA Refridgerator Room