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Cover Page

Order ID : Q1282

Project ID : 540 Degraw St, Brooklyn, NY - E9309

Client : ENTACT

Lab Sample Number	Client Sample Number
Q1282-01	SW-WTS-02

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: 2/10/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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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 #: **Q1282**

	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: **SHREENA PATEL** **Date:** **02/10/2025**

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LAB CHRONICLE

OrderID:	Q1282	**OrderDate:**	2/3/2025 4:26:00 PM
Client:	ENTACT	**Project:**	540 Degraw St, Brooklyn, NY - E9309
Contact:	Jarod Stanfield	**Location:**	D11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1282-01	**SW-WTS-02**	**Water**			**01/31/25**			**02/03/25**
			Mercury	7470A		02/06/25	02/06/25	
			Metals Group4	6010D		02/06/25	02/07/25	

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Hit Summary Sheet
SW-846

SDG No.: Q1282 **Order ID:** Q1282

Client: ENTACT **Project ID:** 540 Degraw St, Brooklyn, NY - E9309

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : SW-WTS-02								
Q1282-01	SW-WTS-02	Water	Nickel	2.51	J	0.85	20.0	ug/L
Q1282-01	SW-WTS-02	Water	Zinc	19.7	J	1.75	20.0	ug/L

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SAMPLE DATA

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Report of Analysis

Client:	ENTACT	Date Collected:	01/31/25
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	02/03/25
Client Sample ID:	SW-WTS-02	SDG No.:	Q1282
Lab Sample ID:	Q1282-01	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-43-9	Cadmium	0.094	U	1	0.094	3.00	ug/L	02/06/25 10:25	02/07/25 14:24	SW6010	SW3010
7440-50-8	Copper	7.07	U	1	7.07	10.0	ug/L	02/06/25 10:25	02/07/25 14:24	SW6010	SW3010
7439-92-1	Lead	3.51	U	1	3.51	6.00	ug/L	02/06/25 10:25	02/07/25 14:24	SW6010	SW3010
7439-97-6	Mercury	0.081	UN	1	0.081	0.20	ug/L	02/06/25 08:00	02/06/25 12:32	SW7470A	
7440-02-0	Nickel	2.51	J	1	0.85	20.0	ug/L	02/06/25 10:25	02/07/25 14:24	SW6010	SW3010
7440-66-6	Zinc	19.7	J	1	1.75	20.0	ug/L	02/06/25 10:25	02/07/25 14:24	SW6010	SW3010

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS TAL+CN				

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: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

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
ICV88	Mercury	3.80	4.0	95	90 - 110	CV	02/06/2025	11:52	LB134599

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

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
CCV30	Mercury	4.90	5.0	98	90 - 110	CV	02/06/2025	11:57	LB134599
CCV31	Mercury	4.68	5.0	94	90 - 110	CV	02/06/2025	12:28	LB134599
CCV32	Mercury	5.12	5.0	102	90 - 110	CV	02/06/2025	12:59	LB134599

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

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	Cadmium	510	510	100	95 - 105	P	02/07/2025	12:11	LB134636
	Copper	527	510	103	95 - 105	P	02/07/2025	12:11	LB134636
	Lead	999	1000	100	95 - 105	P	02/07/2025	12:11	LB134636
	Nickel	520	530	98	95 - 105	P	02/07/2025	12:11	LB134636
	Zinc	1030	1000	103	95 - 105	P	02/07/2025	12:11	LB134636

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

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	Cadmium	6.03	6.0	100	80 - 120	P	02/07/2025	12:27	LB134636
	Copper	20.6	20.0	103	80 - 120	P	02/07/2025	12:27	LB134636
	Lead	11.2	12.0	94	80 - 120	P	02/07/2025	12:27	LB134636
	Nickel	39.7	40.0	99	80 - 120	P	02/07/2025	12:27	LB134636
	Zinc	38.2	40.0	96	80 - 120	P	02/07/2025	12:27	LB134636

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

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	Cadmium	2490	2500	100	90 - 110	P	02/07/2025	12:57	LB134636
	Copper	1270	1250	101	90 - 110	P	02/07/2025	12:57	LB134636
	Lead	4990	5000	100	90 - 110	P	02/07/2025	12:57	LB134636
	Nickel	2490	2500	100	90 - 110	P	02/07/2025	12:57	LB134636
	Zinc	2520	2500	101	90 - 110	P	02/07/2025	12:57	LB134636
CCV02	Cadmium	2470	2500	99	90 - 110	P	02/07/2025	13:49	LB134636
	Copper	1270	1250	102	90 - 110	P	02/07/2025	13:49	LB134636
	Lead	4970	5000	99	90 - 110	P	02/07/2025	13:49	LB134636
	Nickel	2490	2500	100	90 - 110	P	02/07/2025	13:49	LB134636
	Zinc	2500	2500	100	90 - 110	P	02/07/2025	13:49	LB134636
CCV03	Cadmium	2440	2500	98	90 - 110	P	02/07/2025	14:41	LB134636
	Copper	1290	1250	103	90 - 110	P	02/07/2025	14:41	LB134636
	Lead	4920	5000	98	90 - 110	P	02/07/2025	14:41	LB134636
	Nickel	2470	2500	99	90 - 110	P	02/07/2025	14:41	LB134636
	Zinc	2500	2500	100	90 - 110	P	02/07/2025	14:41	LB134636
CCV04	Cadmium	2430	2500	97	90 - 110	P	02/07/2025	15:32	LB134636
	Copper	1250	1250	100	90 - 110	P	02/07/2025	15:32	LB134636
	Lead	4890	5000	98	90 - 110	P	02/07/2025	15:32	LB134636
	Nickel	2450	2500	98	90 - 110	P	02/07/2025	15:32	LB134636
	Zinc	2450	2500	98	90 - 110	P	02/07/2025	15:32	LB134636
CCV05	Cadmium	2480	2500	99	90 - 110	P	02/07/2025	16:24	LB134636
	Copper	1270	1250	102	90 - 110	P	02/07/2025	16:24	LB134636
	Lead	4990	5000	100	90 - 110	P	02/07/2025	16:24	LB134636
	Nickel	2500	2500	100	90 - 110	P	02/07/2025	16:24	LB134636
	Zinc	2520	2500	101	90 - 110	P	02/07/2025	16:24	LB134636
CCV06	Cadmium	2440	2500	97	90 - 110	P	02/07/2025	17:16	LB134636
	Copper	1260	1250	101	90 - 110	P	02/07/2025	17:16	LB134636
	Lead	4910	5000	98	90 - 110	P	02/07/2025	17:16	LB134636
	Nickel	2460	2500	98	90 - 110	P	02/07/2025	17:16	LB134636
	Zinc	2510	2500	100	90 - 110	P	02/07/2025	17:16	LB134636
CCV07	Cadmium	2450	2500	98	90 - 110	P	02/07/2025	18:00	LB134636
	Copper	1320	1250	106	90 - 110	P	02/07/2025	18:00	LB134636
	Lead	4980	5000	100	90 - 110	P	02/07/2025	18:00	LB134636
	Nickel	2490	2500	100	90 - 110	P	02/07/2025	18:00	LB134636

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

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	Zinc	2470	2500	99	90 - 110	P	02/07/2025	18:00	LB134636
CCV08	Cadmium	2480	2500	99	90 - 110	P	02/07/2025	18:23	LB134636
	Copper	1300	1250	104	90 - 110	P	02/07/2025	18:23	LB134636
	Lead	5020	5000	100	90 - 110	P	02/07/2025	18:23	LB134636
	Nickel	2510	2500	101	90 - 110	P	02/07/2025	18:23	LB134636
	Zinc	2530	2500	101	90 - 110	P	02/07/2025	18:23	LB134636

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Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

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	0.20	0.2	99	40 - 160	CV	02/06/2025	12:01	LB134599
CRI01	Cadmium	5.87	6.0	98	40 - 160	P	02/07/2025	12:35	LB134636
	Copper	21.0	20.0	105	40 - 160	P	02/07/2025	12:35	LB134636
	Lead	10.9	12.0	91	40 - 160	P	02/07/2025	12:35	LB134636
	Nickel	39.7	40.0	99	40 - 160	P	02/07/2025	12:35	LB134636
	Zinc	48.6	40.0	122	40 - 160	P	02/07/2025	12:35	LB134636

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB88	Mercury	0.20	+/-0.20	U	0.20	CV	02/06/2025	11:55	LB134599

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB30	Mercury	0.20	+/-0.20	U	0.20	CV	02/06/2025	11:59	LB134599
CCB31	Mercury	0.20	+/-0.20	U	0.20	CV	02/06/2025	12:30	LB134599
CCB32	Mercury	0.20	+/-0.20	U	0.20	CV	02/06/2025	13:01	LB134599

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Cadmium	6.00	+/-6.00	U	6.00	P	02/07/2025	12:31	LB134636
	Copper	20.0	+/-20.0	U	20.0	P	02/07/2025	12:31	LB134636
	Lead	12.0	+/-12.0	U	12.0	P	02/07/2025	12:31	LB134636
	Nickel	40.0	+/-40.0	U	40.0	P	02/07/2025	12:31	LB134636
	Zinc	40.0	+/-40.0	U	40.0	P	02/07/2025	12:31	LB134636

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Cadmium	6.00	+/-6.00	U	6.00	P	02/07/2025	13:01	LB134636
	Copper	20.0	+/-20.0	U	20.0	P	02/07/2025	13:01	LB134636
	Lead	12.0	+/-12.0	U	12.0	P	02/07/2025	13:01	LB134636
	Nickel	40.0	+/-40.0	U	40.0	P	02/07/2025	13:01	LB134636
	Zinc	40.0	+/-40.0	U	40.0	P	02/07/2025	13:01	LB134636
CCB02	Cadmium	0.41	+/-6.00	J	6.00	P	02/07/2025	13:53	LB134636
	Copper	20.0	+/-20.0	U	20.0	P	02/07/2025	13:53	LB134636
	Lead	12.0	+/-12.0	U	12.0	P	02/07/2025	13:53	LB134636
	Nickel	40.0	+/-40.0	U	40.0	P	02/07/2025	13:53	LB134636
	Zinc	40.0	+/-40.0	U	40.0	P	02/07/2025	13:53	LB134636
CCB03	Cadmium	0.42	+/-6.00	J	6.00	P	02/07/2025	14:45	LB134636
	Copper	20.0	+/-20.0	U	20.0	P	02/07/2025	14:45	LB134636
	Lead	12.0	+/-12.0	U	12.0	P	02/07/2025	14:45	LB134636
	Nickel	40.0	+/-40.0	U	40.0	P	02/07/2025	14:45	LB134636
	Zinc	40.0	+/-40.0	U	40.0	P	02/07/2025	14:45	LB134636
CCB04	Cadmium	0.26	+/-6.00	J	6.00	P	02/07/2025	15:37	LB134636
	Copper	20.0	+/-20.0	U	20.0	P	02/07/2025	15:37	LB134636
	Lead	12.0	+/-12.0	U	12.0	P	02/07/2025	15:37	LB134636
	Nickel	40.0	+/-40.0	U	40.0	P	02/07/2025	15:37	LB134636
	Zinc	40.0	+/-40.0	U	40.0	P	02/07/2025	15:37	LB134636
CCB05	Cadmium	6.00	+/-6.00	U	6.00	P	02/07/2025	16:28	LB134636
	Copper	20.0	+/-20.0	U	20.0	P	02/07/2025	16:28	LB134636
	Lead	12.0	+/-12.0	U	12.0	P	02/07/2025	16:28	LB134636
	Nickel	40.0	+/-40.0	U	40.0	P	02/07/2025	16:28	LB134636
	Zinc	40.0	+/-40.0	U	40.0	P	02/07/2025	16:28	LB134636
CCB06	Cadmium	0.28	+/-6.00	J	6.00	P	02/07/2025	17:20	LB134636
	Copper	20.0	+/-20.0	U	20.0	P	02/07/2025	17:20	LB134636
	Lead	12.0	+/-12.0	U	12.0	P	02/07/2025	17:20	LB134636
	Nickel	40.0	+/-40.0	U	40.0	P	02/07/2025	17:20	LB134636
	Zinc	40.0	+/-40.0	U	40.0	P	02/07/2025	17:20	LB134636
CCB07	Cadmium	6.00	+/-6.00	U	6.00	P	02/07/2025	18:10	LB134636
	Copper	20.0	+/-20.0	U	20.0	P	02/07/2025	18:10	LB134636
	Lead	12.0	+/-12.0	U	12.0	P	02/07/2025	18:10	LB134636
	Nickel	40.0	+/-40.0	U	40.0	P	02/07/2025	18:10	LB134636
	Zinc	40.0	+/-40.0	U	40.0	P	02/07/2025	18:10	LB134636
CCB08	Cadmium	0.27	+/-6.00	J	6.00	P	02/07/2025	18:27	LB134636
	Copper	20.0	+/-20.0	U	20.0	P	02/07/2025	18:27	LB134636
	Lead	12.0	+/-12.0	U	12.0	P	02/07/2025	18:27	LB134636
	Nickel	40.0	+/-40.0	U	40.0	P	02/07/2025	18:27	LB134636

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB08	Zinc	40.0	+/-40.0	U	40.0	P	02/07/2025	18:27	LB134636

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: ENTACT **SDG No.:** Q1282

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166596BL		**WATER**		**Batch Number:**	**PB166596**		**Prep Date:**	**02/06/2025**	
	Mercury	0.20	<0.20	U	0.20	CV	02/06/2025	12:49	LB134599

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: ENTACT **SDG No.:** Q1282

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166595BL		**WATER**		**Batch Number:**	**PB166595**		**Prep Date:**	**02/06/2025**	
	Cadmium	3.00	<3.00	U	3.00	P	02/07/2025	14:58	LB134636
	Copper	10.0	<10.0	U	10.0	P	02/07/2025	14:58	LB134636
	Lead	6.00	<6.00	U	6.00	P	02/07/2025	14:58	LB134636
	Nickel	20.0	<20.0	U	20.0	P	02/07/2025	14:58	LB134636
	Zinc	20.0	<20.0	U	20.0	P	02/07/2025	14:58	LB134636

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Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

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	Cadmium	2.97	1.0	297	-5	7	02/07/2025	12:40	LB134636
	Copper	9.83	2.0	492	-18	22	02/07/2025	12:40	LB134636
	Lead	8.02			-12	12	02/07/2025	12:40	LB134636
	Nickel	3.82	2.0	191	-38	42	02/07/2025	12:40	LB134636
	Zinc	5.22			-40	40	02/07/2025	12:40	LB134636
ICSAB01	Cadmium	1020	972	105	826	1120	02/07/2025	12:44	LB134636
	Copper	519	511	102	434	588	02/07/2025	12:44	LB134636
	Lead	56.3	49.0	115	37	61	02/07/2025	12:44	LB134636
	Nickel	1020	954	107	810	1100	02/07/2025	12:44	LB134636
	Zinc	1070	952	112	809	1095	02/07/2025	12:44	LB134636

METAL QC DATA

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metals
- 5a -
MATRIX SPIKE SUMMARY

client: ENTACT **level:** low **sdg no.:** Q1282

contract: ENTA05 **lab code:** CHEM **case no.:** Q1282 **sas no.:** Q1282

matrix: Water **sample id:** Q1201-01 **client id:** TAPHHA-MW12-012725-00-T2MS

Percent Solids for Sample: NA **Spiked ID:** Q1201-01MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	82 - 119	3.28		0.20	U	4.0	82		CV

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metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: ENTACT **level:** low **sdg no.:** Q1282

contract: ENTA05 **lab code:** CHEM **case no.:** Q1282 **sas no.:** Q1282

matrix: Water **sample id:** Q1201-01 **client id:** TAPHHA-MW12-012725-00-T2MSD

Percent Solids for Sample: NA **Spiked ID:** Q1201-01MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	82 - 119	3.13		0.20	U	4.0	78	N	CV

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metals
- 5a -
MATRIX SPIKE SUMMARY

client: ENTACT **level:** low **sdg no.:** Q1282

contract: ENTA05 **lab code:** CHEM **case no.:** Q1282 **sas no.:** Q1282

matrix: Water **sample id:** Q1282-01 **client id:** SW-WTS-02MS

Percent Solids for Sample: NA **Spiked ID:** Q1282-01MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cadmium	ug/L	75 - 125	96.1		3.00	U	100	96		P
Copper	ug/L	75 - 125	153		10.0	U	150	102		P
Lead	ug/L	75 - 125	470		6.00	U	500	94		P
Nickel	ug/L	75 - 125	249		2.51	J	250	99		P
Zinc	ug/L	75 - 125	125		19.7	J	100	106		P

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metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: ENTACT **level:** low **sdg no.:** Q1282

contract: ENTA05 **lab code:** CHEM **case no.:** Q1282 **sas no.:** Q1282

matrix: Water **sample id:** Q1282-01 **client id:** SW-WTS-02MSD

Percent Solids for Sample: NA **Spiked ID:** Q1282-01MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cadmium	ug/L	75 - 125	96.1		3.00	U	100	96		P
Copper	ug/L	75 - 125	152		10.0	U	150	101		P
Lead	ug/L	75 - 125	471		6.00	U	500	94		P
Nickel	ug/L	75 - 125	249		2.51	J	250	98		P
Zinc	ug/L	75 - 125	124		19.7	J	100	105		P

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Metals
- 5b -
POST DIGEST SPIKE SUMMARY

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

Matrix: Water **Level:** LOW **Client ID:** TAPHHA-MW12-012725-00-T2A

Sample ID: Q1201-01 **Spiked ID:** Q1201-01A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	82 - 119	3.61		0.20	U	4.00	90		CV

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: ENTACT **Level:** LOW **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

Matrix: Water **Sample ID:** Q1201-01 **Client ID:** TAPHHA-MW12-012725-00-T2DUP

Percent Solids for Sample: NA **Duplicate ID** Q1201-01DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L	20	0.20	U	0.20	U			CV

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: ENTACT **Level:** LOW **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

Matrix: Water **Sample ID:** Q1201-01MS **Client ID:** TAPHHA-MW12-012725-00-T2MSD

Percent Solids for Sample: NA **Duplicate ID** Q1201-01MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L	20	3.28		3.13		5		CV

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: ENTACT **Level:** LOW **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

Matrix: Water **Sample ID:** Q1282-01 **Client ID:** SW-WTS-02DUP

Percent Solids for Sample: NA **Duplicate ID** Q1282-01DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cadmium	ug/L	20	3.00	U	3.00	U			P
Copper	ug/L	20	10.0	U	10.0	U			P
Lead	ug/L	20	6.00	U	6.00	U			P
Nickel	ug/L	20	2.51	J	2.57	J	2		P
Zinc	ug/L	20	19.7	J	19.4	J	2		P

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: ENTACT **Level:** LOW **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

Matrix: Water **Sample ID:** Q1282-01MS **Client ID:** SW-WTS-02MSD

Percent Solids for Sample: NA **Duplicate ID** Q1282-01MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cadmium	ug/L	20	96.1		96.1		0		P
Copper	ug/L	20	153		152		1		P
Lead	ug/L	20	470		471		0		P
Nickel	ug/L	20	249		249		0		P
Zinc	ug/L	20	125		124		1		P

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

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LABORATORY CONTROL SAMPLE SUMMARY

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166595BS							
Cadmium	ug/L	100	97.0		97	80 - 120	P
Copper	ug/L	150	159		106	80 - 120	P
Lead	ug/L	500	482		96	80 - 120	P
Nickel	ug/L	250	249		100	80 - 120	P
Zinc	ug/L	100	104		104	80 - 120	P

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LABORATORY CONTROL SAMPLE SUMMARY

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166596BS							
Mercury	ug/L	4.0	3.81		95	82 - 119	CV

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

TAPHHA-MW12-012725-00-T2L

Lab Name: Chemtech Consulting Group **Contract:** ENTA05

Lab Code: CHEM **Lb No.:** lb134599 **Lab Sample ID :** Q1201-01L **SDG No.:** Q1282

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Mercury	0.20	U	1.00	U			CV

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

SW-WTS-02L

Lab Name: Chemtech Consulting Group **Contract:** ENTA05

Lab Code: CHEM **Lb No.:** lb134636 **Lab Sample ID :** Q1282-01L **SDG No.:** Q1282

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Cadmium	3.00	U	15.0	U			P
Copper	10.0	U	50.0	U			P
Lead	6.00	U	30.0	U			P
Nickel	2.51	J	100	U	100.0		P
Zinc	19.7	J	17.7	J	10		P

METAL PREPARATION & INSTRUMENT DATA

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

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
Cadmium	226.502	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0007850	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	0.0000000	0.0000000
Nickel	231.604	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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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0002870
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0000000	0.0009530
Lead	220.353	0.0000000	0.0003170	0.0000000	0.0000000	0.0000000
Nickel	231.604	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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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0006510	0.0020500
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0009010	0.0000000	0.0000000	0.0000000

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	-0.0047000	0.0036100	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290
Nickel	231.604	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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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Case No.:** Q1282 **SAS No.:** Q1282

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
Cadmium	226.502	0.0000000	0.0000630	0.0001280	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0003840	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0003610	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	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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Metals
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SAMPLE PREPARATION SUMMARY

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Method:**

Case No.: Q1282 **SAS No.:** Q1282

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB166595**						
PB166595BL	PB166595BL	MB	WATER	02/06/2025	50.0	25.0	
PB166595BS	PB166595BS	LCS	WATER	02/06/2025	50.0	25.0	
Q1282-01	SW-WTS-02	SAM	WATER	02/06/2025	50.0	25.0	
Q1282-01DUP	SW-WTS-02DUP	DUP	WATER	02/06/2025	50.0	25.0	
Q1282-01MS	SW-WTS-02MS	MS	WATER	02/06/2025	50.0	25.0	
Q1282-01MSD	SW-WTS-02MSD	MSD	WATER	02/06/2025	50.0	25.0	

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SAMPLE PREPARATION SUMMARY

Client: ENTACT **SDG No.:** Q1282

Contract: ENTA05 **Lab Code:** CHEM **Method:**

Case No.: Q1282 **SAS No.:** Q1282

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB166596**						
PB166596BL	PB166596BL	MB	WATER	02/06/2025	30.0	30.0	
PB166596BS	PB166596BS	LCS	WATER	02/06/2025	30.0	30.0	
Q1201-01DUP	TAPHHA-MW12-012725-00-T2DUP	DUP	WATER	02/06/2025	30.0	30.0	
Q1201-01MS	TAPHHA-MW12-012725-00-T2MS	MS	WATER	02/06/2025	30.0	30.0	
Q1201-01MSD	TAPHHA-MW12-012725-00-T2MSD	MSD	WATER	02/06/2025	30.0	30.0	
Q1282-01	SW-WTS-02	SAM	WATER	02/06/2025	30.0	30.0	

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ANALYSIS RUN LOG

Client: ENTACT **Contract:** ENTA05

Lab code: CHEM **Case no.:** Q1282 **Sas no.:** Q1282 **Sdg no.:** Q1282

Instrument id number: **Method:** **Run number:** LB134599

Start date: 02/06/2025 **End date:** 02/06/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1122	HG
S0.2	S0.2	1	1125	HG
S2.5	S2.5	1	1130	HG
S5	S5	1	1134	HG
S7.5	S7.5	1	1139	HG
S10	S10	1	1147	HG
ICV88	ICV88	1	1152	HG
ICB88	ICB88	1	1155	HG
CCV30	CCV30	1	1157	HG
CCB30	CCB30	1	1159	HG
CRA	CRA	1	1201	HG
CCV31	CCV31	1	1228	HG
CCB31	CCB31	1	1230	HG
Q1282-01	SW-WTS-02	1	1232	HG
Q1201-01DUP	TAPHHA-MW12-012725-00-T2	1	1235	HG
Q1201-01MS	TAPHHA-MW12-012725-00-T2	1	1237	HG
Q1201-01MSD	TAPHHA-MW12-012725-00-T2	1	1239	HG
Q1201-01L	TAPHHA-MW12-012725-00-T2	5	1241	HG
Q1201-01A	TAPHHA-MW12-012725-00-T2	1	1244	HG
PB166596BL	PB166596BL	1	1249	HG
PB166596BS	PB166596BS	1	1256	HG
CCV32	CCV32	1	1259	HG
CCB32	CCB32	1	1301	HG

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metals
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ANALYSIS RUN LOG

Client: ENTACT **Contract:** ENTA05

Lab code: CHEM **Case no.:** Q1282 **Sas no.:** Q1282 **Sdg no.:** Q1282

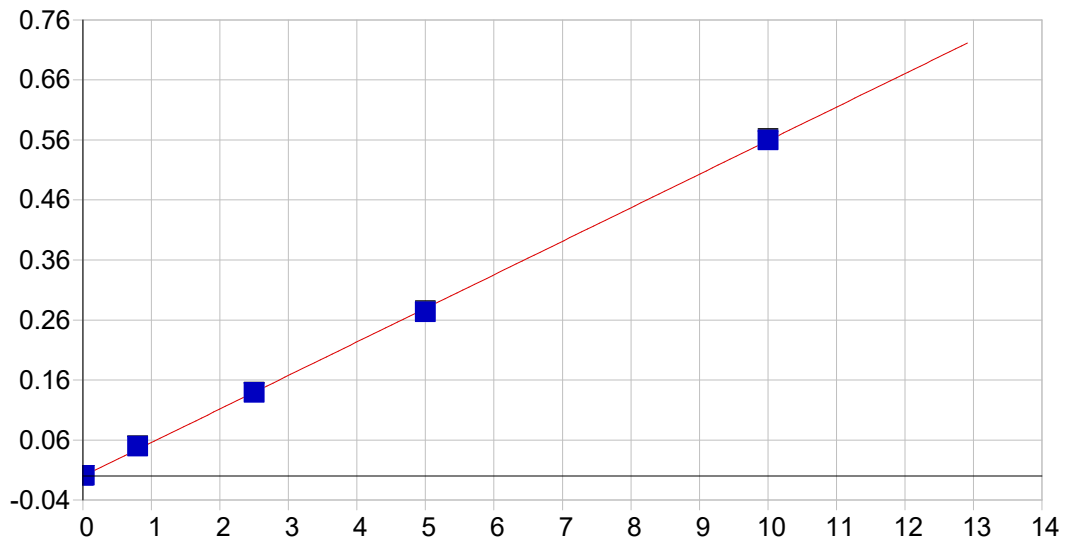
Instrument id number: **Method:** **Run number:** LB134636

Start date: 02/07/2025 **End date:** 02/07/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1140	Cd,Cu,Ni,Pb,Zn
S1	S1	1	1144	Cd,Cu,Ni,Pb,Zn
S2	S2	1	1148	Cd,Cu,Ni,Pb,Zn
S3	S3	1	1152	Cd,Cu,Ni,Pb,Zn
S4	S4	1	1157	Cd,Cu,Ni,Pb,Zn
S5	S5	1	1201	Cd,Cu,Ni,Pb,Zn
ICV01	ICV01	1	1211	Cd,Cu,Ni,Pb,Zn
LLICV01	LLICV01	1	1227	Cd,Cu,Ni,Pb,Zn
ICB01	ICB01	1	1231	Cd,Cu,Ni,Pb,Zn
CRI01	CRI01	1	1235	Cd,Cu,Ni,Pb,Zn
ICSA01	ICSA01	1	1240	Cd,Cu,Ni,Pb,Zn
ICSAB01	ICSAB01	1	1244	Cd,Cu,Ni,Pb,Zn
CCV01	CCV01	1	1257	Cd,Cu,Ni,Pb,Zn
CCB01	CCB01	1	1301	Cd,Cu,Ni,Pb,Zn
CCV02	CCV02	1	1349	Cd,Cu,Ni,Pb,Zn
CCB02	CCB02	1	1353	Cd,Cu,Ni,Pb,Zn
Q1282-01	SW-WTS-02	1	1424	Cd,Cu,Ni,Pb,Zn
Q1282-01DUP	SW-WTS-02DUP	1	1428	Cd,Cu,Ni,Pb,Zn
Q1282-01L	SW-WTS-02L	5	1433	Cd,Cu,Ni,Pb,Zn
Q1282-01MS	SW-WTS-02MS	1	1437	Cd,Cu,Ni,Pb,Zn
CCV03	CCV03	1	1441	Cd,Cu,Ni,Pb,Zn
CCB03	CCB03	1	1445	Cd,Cu,Ni,Pb,Zn
Q1282-01MSD	SW-WTS-02MSD	1	1450	Cd,Cu,Ni,Pb,Zn
PB166595BL	PB166595BL	1	1458	Cd,Cu,Ni,Pb,Zn
PB166595BS	PB166595BS	1	1503	Cd,Cu,Ni,Pb,Zn
CCV04	CCV04	1	1532	Cd,Cu,Ni,Pb,Zn
CCB04	CCB04	1	1537	Cd,Cu,Ni,Pb,Zn
CCV05	CCV05	1	1624	Cd,Cu,Ni,Pb,Zn
CCB05	CCB05	1	1628	Cd,Cu,Ni,Pb,Zn
CCV06	CCV06	1	1716	Cd,Cu,Ni,Pb,Zn
CCB06	CCB06	1	1720	Cd,Cu,Ni,Pb,Zn
CCV07	CCV07	1	1800	Cd,Cu,Ni,Pb,Zn
CCB07	CCB07	1	1810	Cd,Cu,Ni,Pb,Zn
CCV08	CCV08	1	1823	Cd,Cu,Ni,Pb,Zn
CCB08	CCB08	1	1827	Cd,Cu,Ni,Pb,Zn

METAL
RAW DATA

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



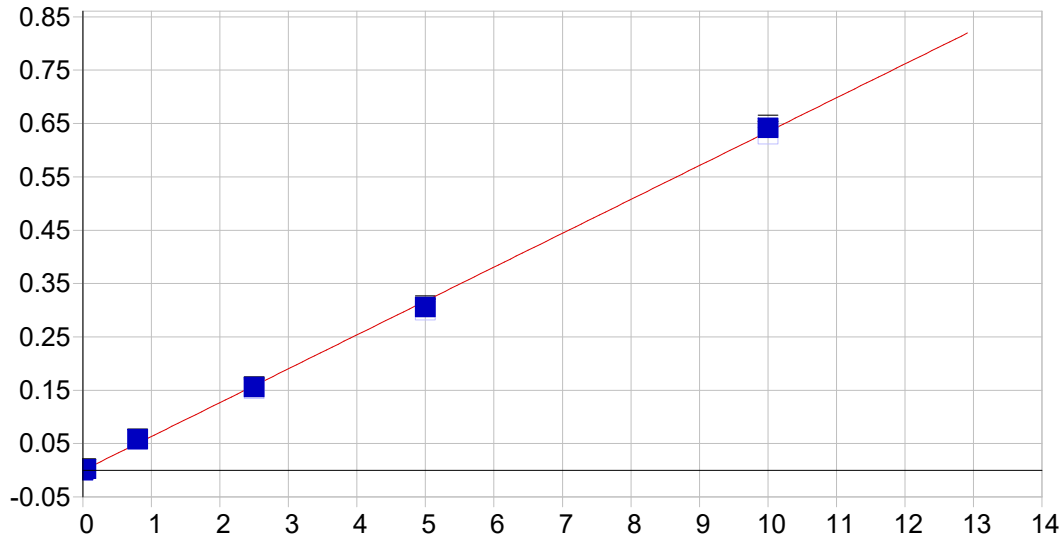
As 189.042 {479}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000166	Re-Slope:	1.000000
A1 (Gain):	0.055896	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999665	Status:	OK.
Std Error of Est:	0.000034		
Predicted MDL:	0.002256		
Predicted MQL:	0.007519		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00017	.000	1
S1	.02000	.02117	.001	5.83	.00101	.000	1
S3	2.5000	2.4892	-.011	-.430	.13882	.001	1
S4	5.0000	4.8983	-.102	-2.03	.27333	.001	1
S5	10.000	10.022	.022	.217	.55941	.002	1
S2	.80000	.88960	.090	11.2	.04951	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



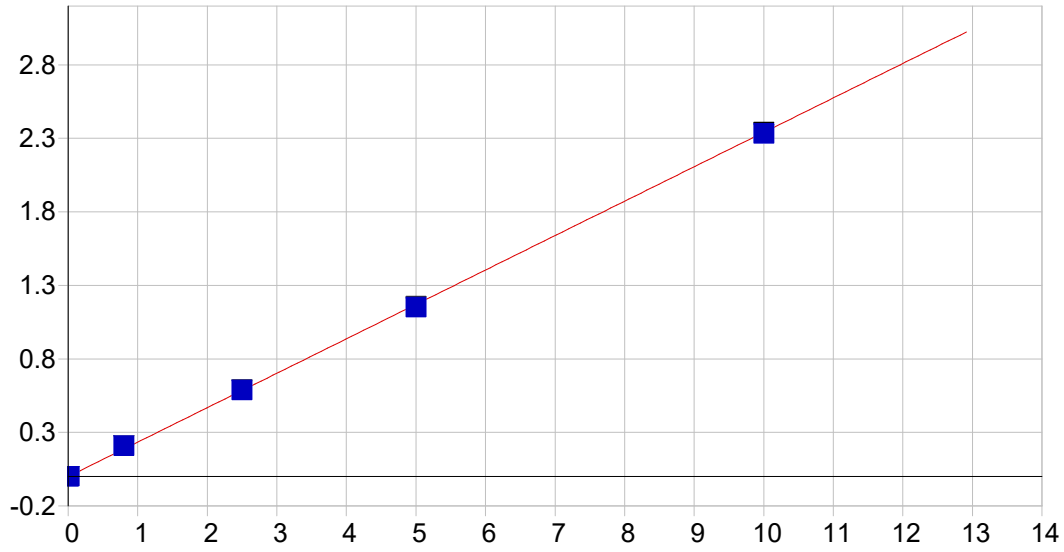
Tl 190.856 {477}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000231	Re-Slope:	1.000000
A1 (Gain):	0.063490	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999251	Status:	OK.
Std Error of Est:	0.000080		
Predicted MDL:	0.002011		
Predicted MQL:	0.006703		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00023	.000	1
S1	.04000	.04153	.002	3.83	.00224	.000	1
S3	2.5000	2.4540	-.046	-1.84	.15265	.001	1
S4	5.0000	4.8162	-.184	-3.68	.29970	.003	1
S5	10.000	10.110	.110	1.10	.62994	.006	1
S2	.80000	.91879	.119	14.8	.05717	.001	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



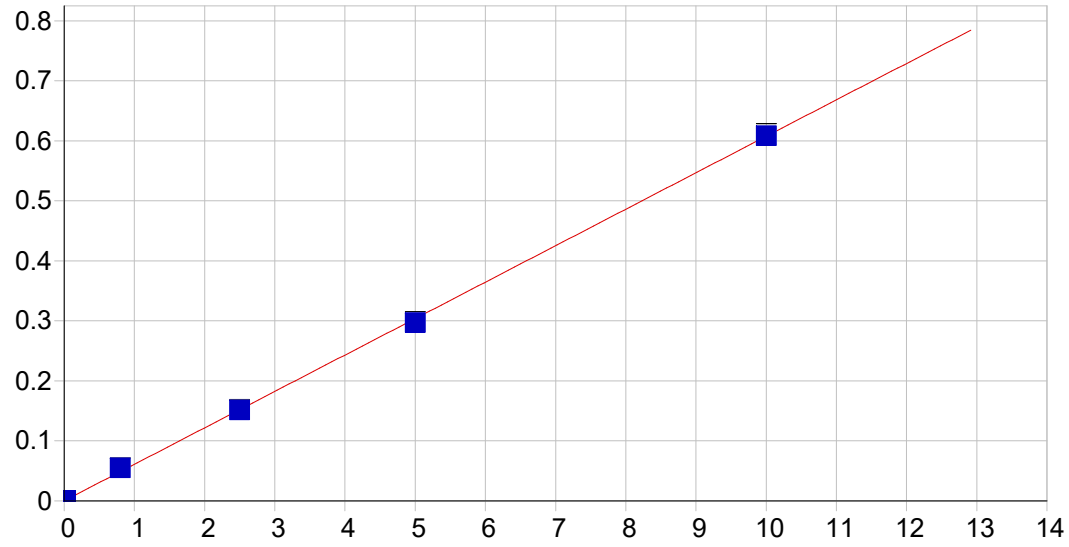
Pb 220.353 {453}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000091	Re-Slope:	1.000000
A1 (Gain):	0.234125	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999642	Status:	OK.
Std Error of Est:	0.000114		
Predicted MDL:	0.001154		
Predicted MQL:	0.003845		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00009	.000	1
S1	.01200	.01041	-.002	-13.2	.00229	.000	1
S3	2.5000	2.5102	.010	.407	.58696	.003	1
S4	5.0000	4.9231	-.077	-1.54	1.1513	.006	1
S5	10.000	9.9720	-.028	-.280	2.3320	.007	1
S2	.80000	.89623	.096	12.0	.20953	.001	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



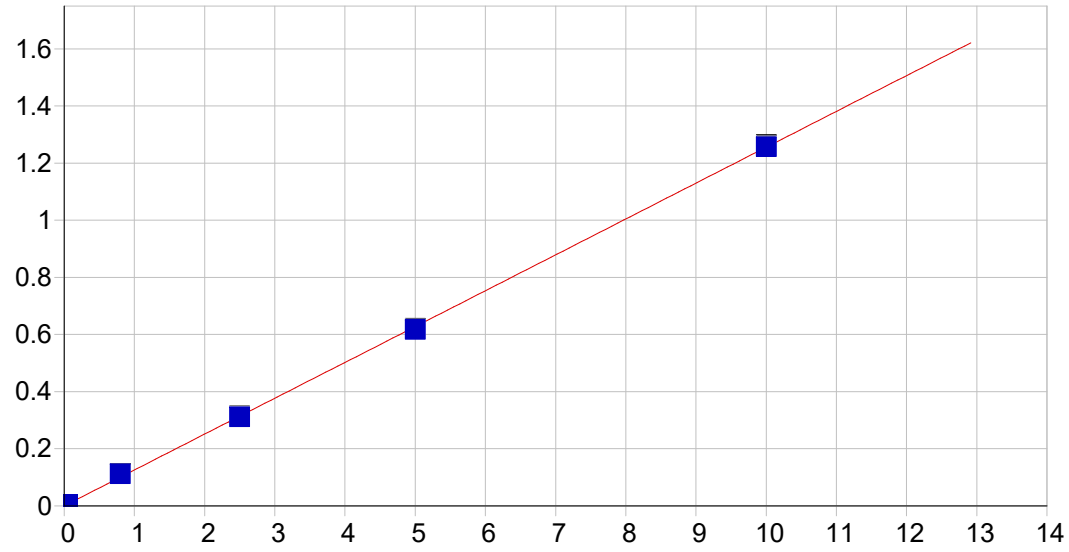
Se 196.090 {472}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000197	Re-Slope:	1.000000
A1 (Gain):	0.060736	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999599	Status:	OK.
Std Error of Est:	0.000040		
Predicted MDL:	0.002570		
Predicted MQL:	0.008568		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00020	.000	1
S1	.02000	.01928	-.001	-3.58	.00137	.000	1
S3	2.5000	2.4936	-.006	-.256	.15159	.001	1
S4	5.0000	4.8915	-.109	-2.17	.29718	.001	1
S5	10.000	10.017	.017	.166	.60835	.004	1
S2	.80000	.89905	.099	12.4	.05478	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



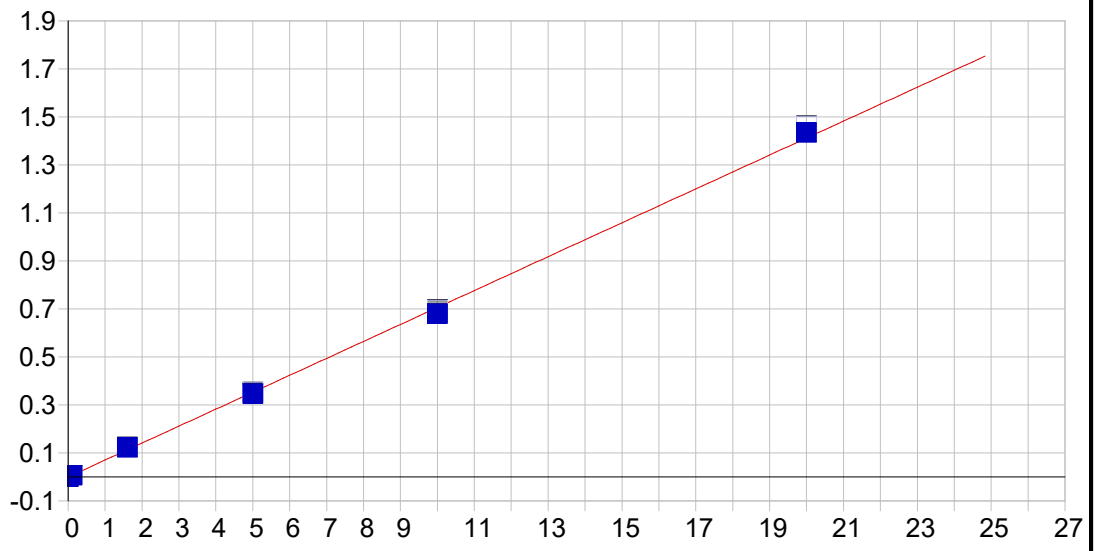
Sb 206.833 {463}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000222	Re-Slope:	1.000000
A1 (Gain):	0.125533	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999684	Status:	OK.
Std Error of Est:	0.000117		
Predicted MDL:	0.001507		
Predicted MQL:	0.005024		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00022	.000	1
S1	.05000	.05074	.001	1.47	.00660	.000	1
S3	2.5000	2.4784	-.022	-.865	.31219	.002	1
S4	5.0000	4.9163	-.084	-1.67	.61908	.002	1
S5	10.000	10.015	.015	.151	1.2609	.004	1
S2	.80000	.88959	.090	11.2	.11217	.001	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



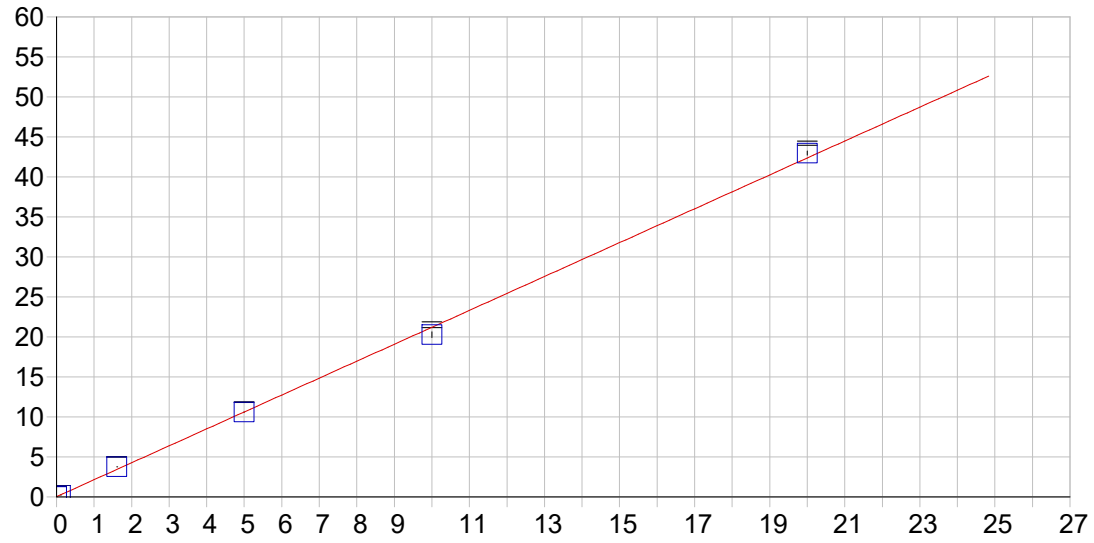
Al 396.152 { 85}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000225	Re-Slope:	1.000000
A1 (Gain):	0.070603	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999601	Status:	OK.
Std Error of Est:	0.000151		
Predicted MDL:	0.006435		
Predicted MQL:	0.021449		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00022	.000	1
S1	.10000	.10046	.000	.459	.00742	.000	1
S3	5.0000	4.9040	-.096	-1.92	.35286	.001	1
S4	10.000	9.6431	-.357	-3.57	.69431	.003	1
S5	20.000	20.321	.321	1.61	1.4619	.000	1
S2	1.6000	1.7312	.131	8.20	.12419	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



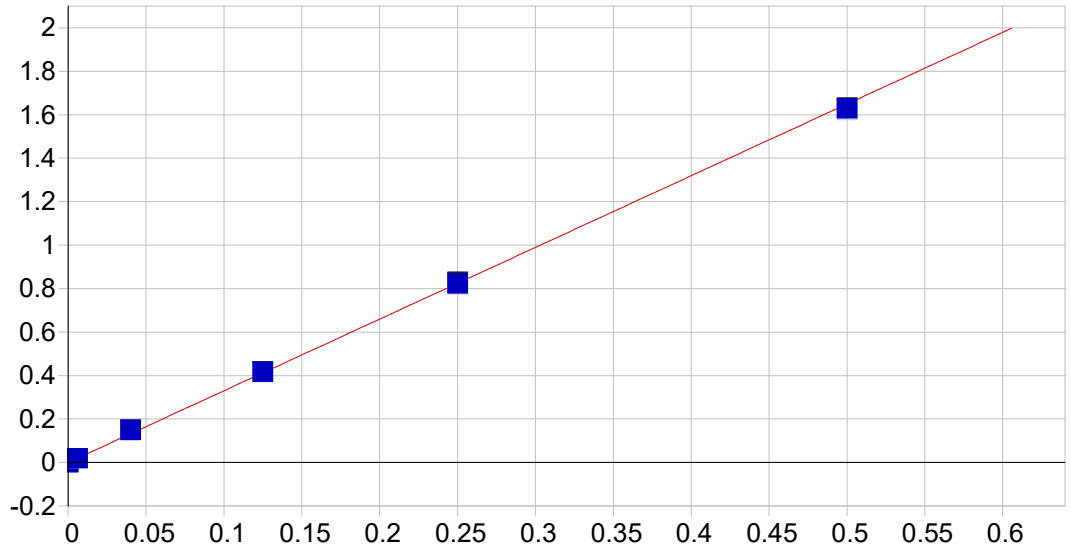
Ba 493.409 { 68}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.033897	Re-Slope:	1.000000
A1 (Gain):	2.116752	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999457	Status:	OK.
Std Error of Est:	0.005175		
Predicted MDL:	0.000711		
Predicted MQL:	0.002369		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.03389	.001	1
S1	.10000	.09517	-.005	-4.83	.23535	.002	1
S3	5.0000	4.9928	-.007	-.144	10.602	.055	1
S4	10.000	9.5651	-.435	-4.35	20.281	.361	1
S5	20.000	20.283	.283	1.42	42.969	.262	1
S2	1.6000	1.7635	.164	10.2	3.7668	.009	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



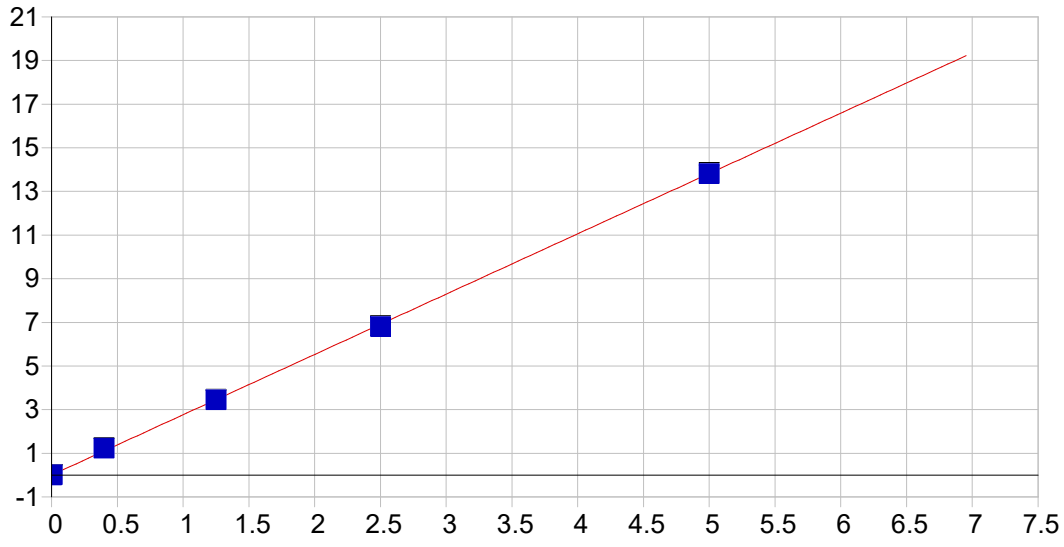
Be 234.861 {144}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000120	Re-Slope:	1.000000
A1 (Gain):	3.298550	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999581	Status:	OK.
Std Error of Est:	0.000274		
Predicted MDL:	0.000056		
Predicted MQL:	0.000185		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00012	.000	1
S1	.00600	.00591	-.000	-1.54	.01922	.000	1
S3	.12500	.12645	.001	1.16	.41515	.000	1
S4	.25000	.24960	-.000	-.159	.81951	.007	1
S5	.50000	.49386	-.006	-1.23	1.6215	.002	1
S2	.04000	.04518	.005	13.0	.14832	.001	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



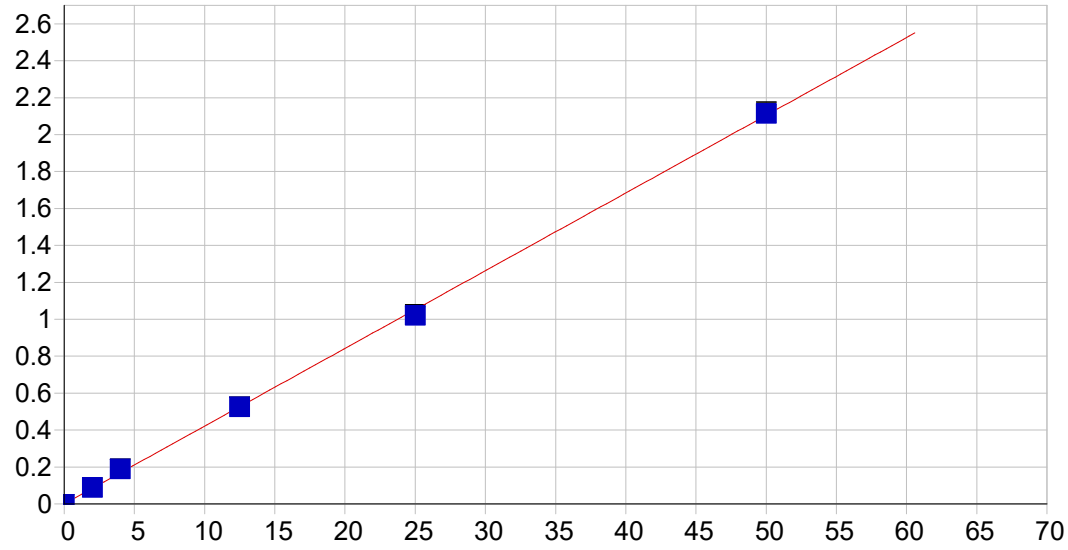
Cd 226.502 {449}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000090	Re-Slope:	1.000000
A1 (Gain):	2.764846	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999679	Status:	OK.
Std Error of Est:	0.000636		
Predicted MDL:	0.000080		
Predicted MQL:	0.000268		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00009	.000	1
S1	.00600	.00602	.000	.414	.01664	.000	1
S3	1.2500	1.2479	-.002	-.166	3.4529	.019	1
S4	2.5000	2.4622	-.038	-1.51	6.8130	.029	1
S5	5.0000	4.9937	-.006	-.125	13.818	.058	1
S2	.40000	.44608	.046	11.5	1.2341	.004	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



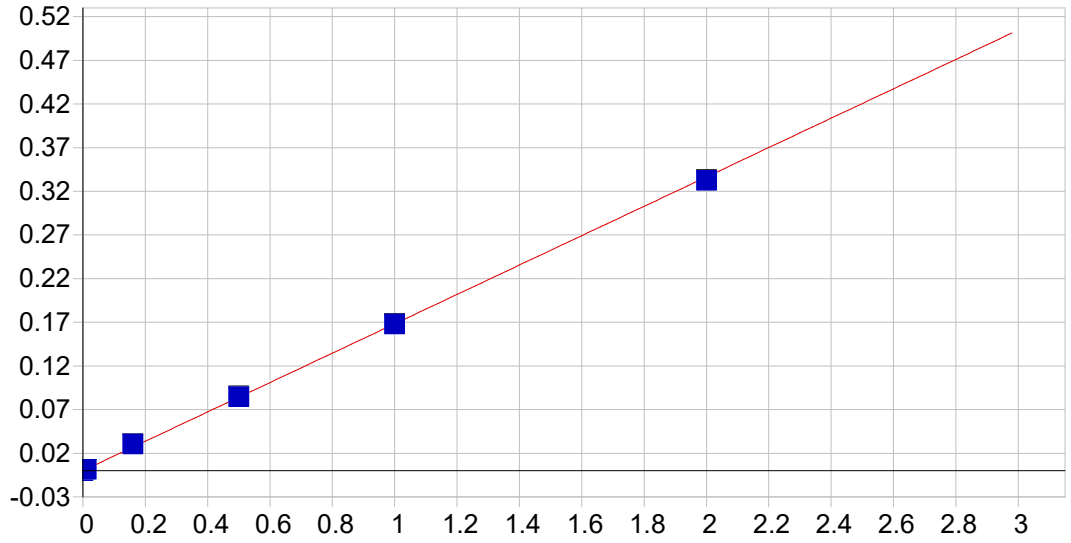
Ca 373.690 { 90}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000441	Re-Slope:	1.000000
A1 (Gain):	0.042084	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999550	Status:	OK.
Std Error of Est:	0.000668		
Predicted MDL:	0.009473		
Predicted MQL:	0.031576		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00027	-.000	.000	.00043	.000	1
S2	4.0000	4.4705	.471	11.8	.18858	.000	1
S3	12.500	12.481	-.019	-.151	.52570	.001	1
S4	25.000	24.226	-.774	-3.09	1.0200	.006	1
S5	50.000	50.236	.236	.472	2.1146	.008	1
S1	2.0000	2.0857	.086	4.29	.08822	.001	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



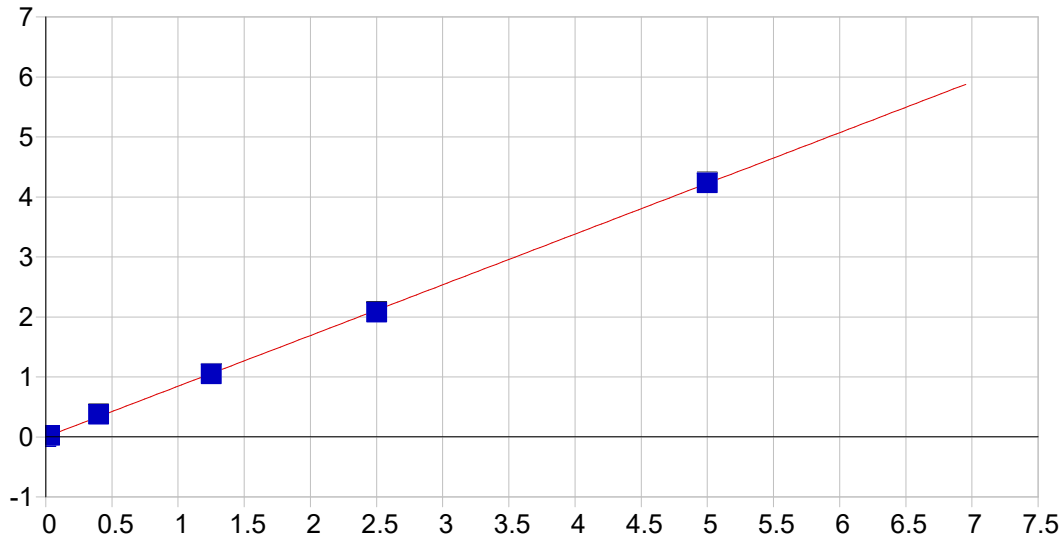
Cr 267.716 {126}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000024	Re-Slope:	1.000000
A1 (Gain):	0.168222	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999557	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.000376		
Predicted MQL:	0.001254		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00002	.000	1
S1	.01000	.00988	-.000	-1.23	.00169	.000	1
S3	.50000	.50423	.004	.845	.08487	.001	1
S4	1.0000	.99824	-.002	-.176	.16800	.001	1
S5	2.0000	1.9760	-.024	-1.20	.33253	.001	1
S2	.16000	.18165	.022	13.5	.03059	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



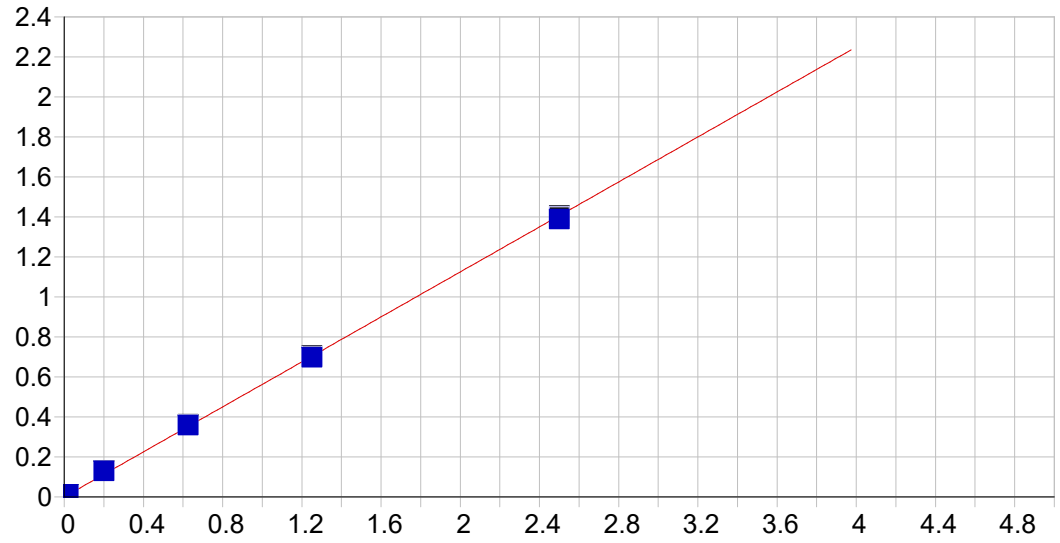
Co 228.616 {448}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000013	Re-Slope:	1.000000
A1 (Gain):	0.845104	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999672	Status:	OK.
Std Error of Est:	0.000441		
Predicted MDL:	0.000216		
Predicted MQL:	0.000721		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00002	.000	1
S1	.03000	.02953	-.000	-1.57	.02484	.000	1
S3	1.2500	1.2423	-.008	-.618	1.0516	.005	1
S4	2.5000	2.4563	-.044	-1.75	2.0794	.009	1
S5	5.0000	5.0062	.006	.124	4.2379	.012	1
S2	.40000	.44569	.046	11.4	.37721	.002	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



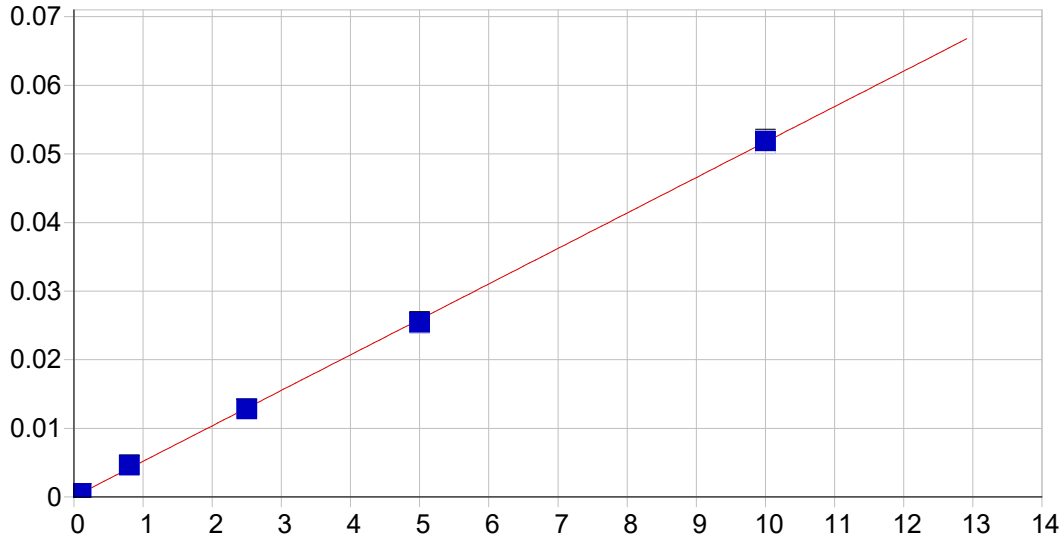
Cu 224.700 {450}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000340	Re-Slope:	1.000000
A1 (Gain):	0.562367	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999434	Status:	OK.
Std Error of Est:	0.000224		
Predicted MDL:	0.000440		
Predicted MQL:	0.001467		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00034	.000	1
S1	.02000	.02123	.001	6.17	.01243	.000	1
S3	.62500	.63591	.011	1.75	.36145	.002	1
S4	1.2500	1.2387	-.011	-.900	.70395	.003	1
S5	2.5000	2.4689	-.031	-1.24	1.4027	.003	1
S2	.20000	.23017	.030	15.1	.13090	.001	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



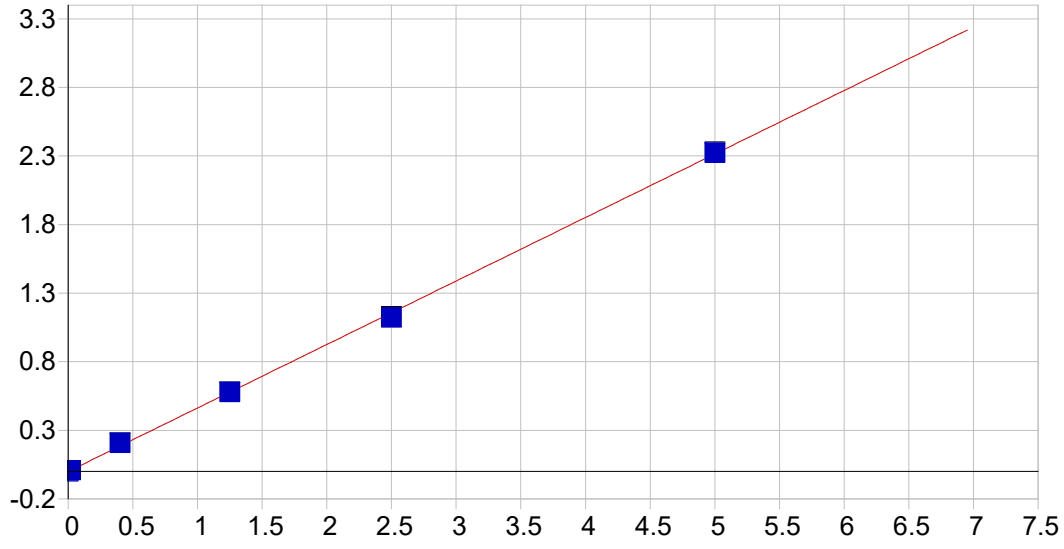
Fe 240.488 {140}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000024	Re-Slope:	1.000000
A1 (Gain):	0.005170	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999658	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.004290		
Predicted MQL:	0.014300		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00002	.000	1
S1	.10000	.09068	-.009	-9.32	.00049	.000	1
S3	2.5000	2.4735	-.026	-1.06	.01270	.000	1
S4	5.0000	4.9160	-.084	-1.68	.02522	.000	1
S5	10.000	10.031	.031	.315	.05145	.000	1
S2	.80000	.88825	.088	11.0	.00458	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



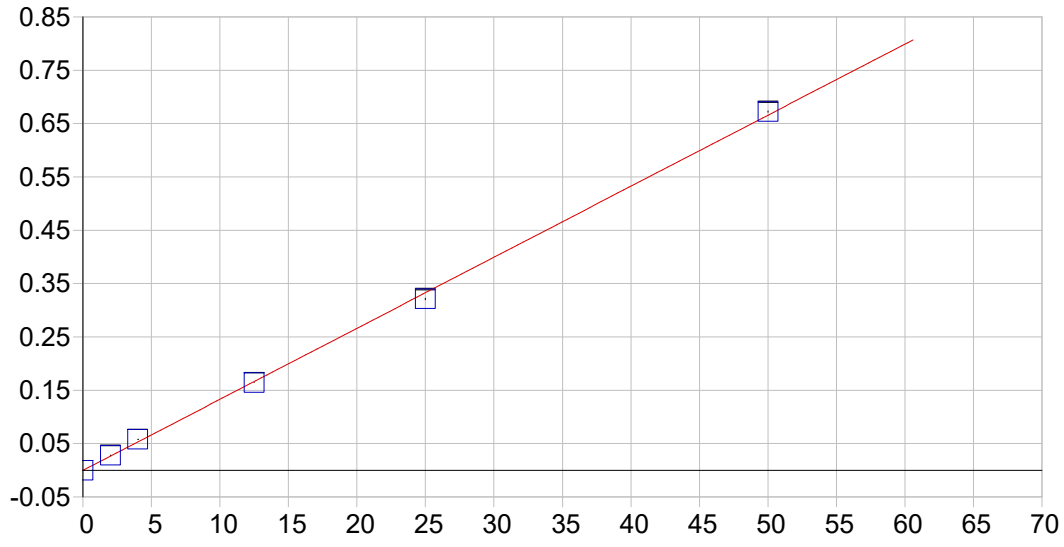
Mn 257.610 {131}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000074	Re-Slope:	1.000000
A1 (Gain):	0.462944	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999521	Status:	OK.
Std Error of Est:	0.000238		
Predicted MDL:	0.000343		
Predicted MQL:	0.001142		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00008	.000	1
S1	.02000	.02121	.001	6.04	.00975	.000	1
S3	1.2500	1.2501	.000	.008	.57877	.001	1
S4	2.5000	2.4259	-.074	-2.96	1.1232	.006	1
S5	5.0000	5.0221	.022	.442	2.3253	.004	1
S2	.40000	.45067	.051	12.7	.20860	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



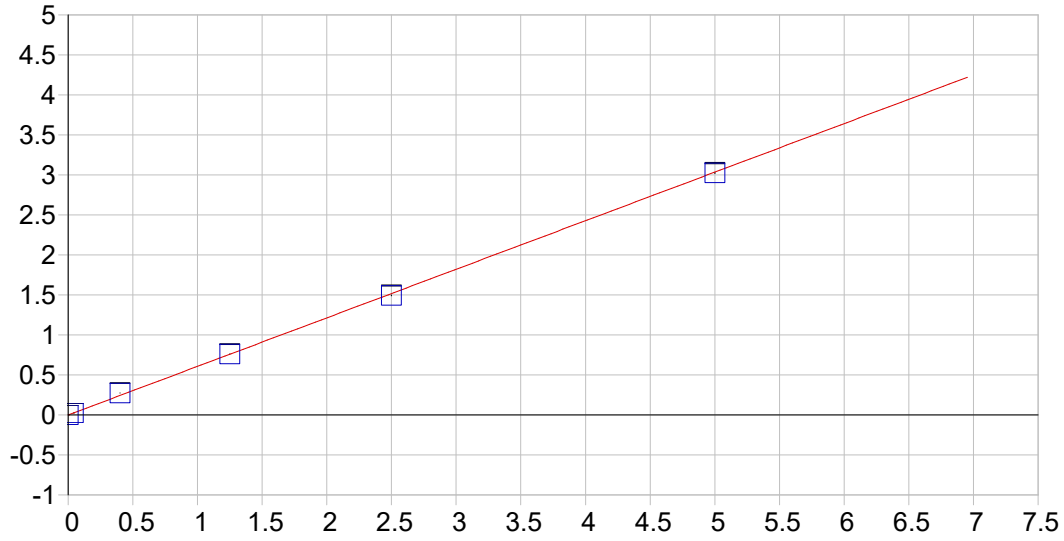
Mg 279.079 {121}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000292	Re-Slope:	1.000000
A1 (Gain):	0.013321	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999568	Status:	OK.
Std Error of Est:	0.000207		
Predicted MDL:	0.013425		
Predicted MQL:	0.044750		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00024	-.000	.000	-.00029	.000	1
S2	4.0000	4.3855	.385	9.64	.05813	.000	1
S3	12.500	12.365	-.135	-1.08	.16443	.000	1
S4	25.000	24.132	-.868	-3.47	.32117	.001	1
S5	50.000	50.499	.499	.998	.67242	.001	1
S1	2.0000	2.1190	.119	5.95	.02794	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



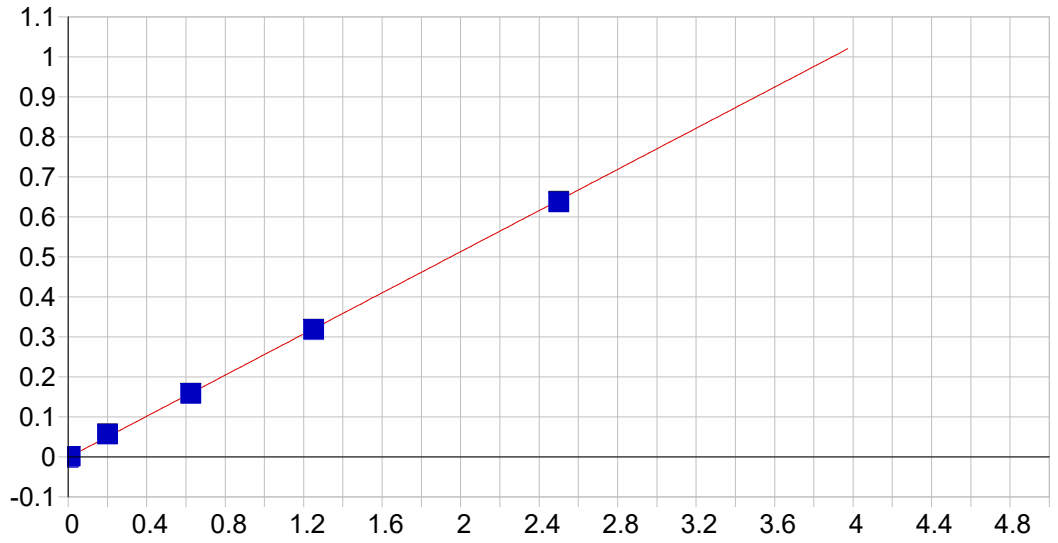
Ni 231.604 {446}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000376	Re-Slope:	1.000000
A1 (Gain):	0.606950	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999611	Status:	OK.
Std Error of Est:	0.000397		
Predicted MDL:	0.000337		
Predicted MQL:	0.001122		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00038	.000	1
S1	.04000	.03992	-.000	-.196	.02385	.000	1
S3	1.2500	1.2544	.004	.353	.76099	.005	1
S4	2.5000	2.4609	-.039	-1.56	1.4933	.006	1
S5	5.0000	4.9839	-.016	-.323	3.0246	.009	1
S2	.40000	.45089	.051	12.7	.27329	.001	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



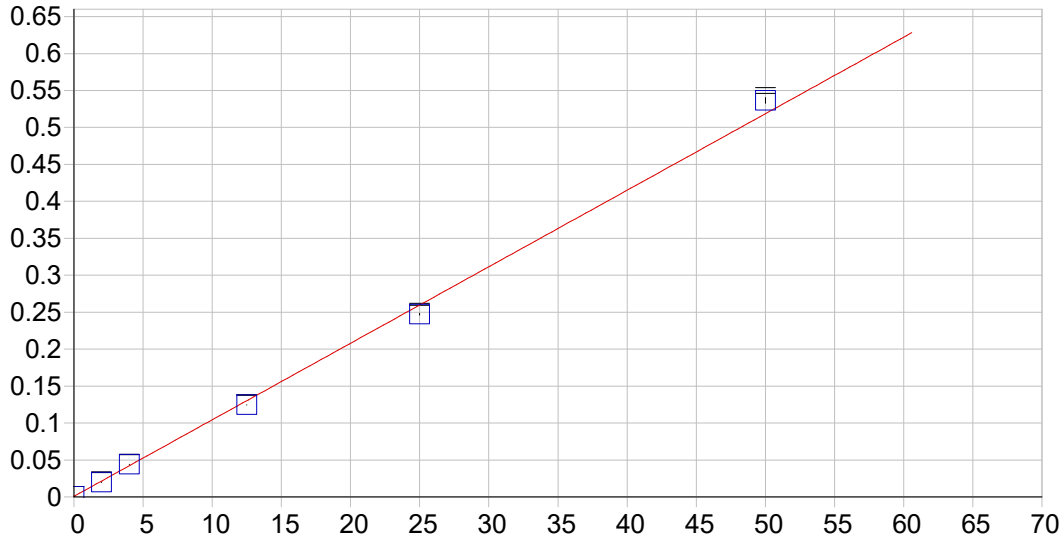
Ag 328.068 {103}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001224	Re-Slope:	1.000000
A1 (Gain):	0.257149	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999599	Status:	OK.
Std Error of Est:	0.000060		
Predicted MDL:	0.000343		
Predicted MQL:	0.001143		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00122	.000	1
S1	.01000	.00979	-.000	-2.10	.00128	.000	1
S3	.62500	.62156	-.003	-.551	.15797	.000	1
S4	1.2500	1.2429	-.007	-.565	.31712	.001	1
S5	2.5000	2.4843	-.016	-.628	.63506	.001	1
S2	.20000	.22642	.026	13.2	.05680	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



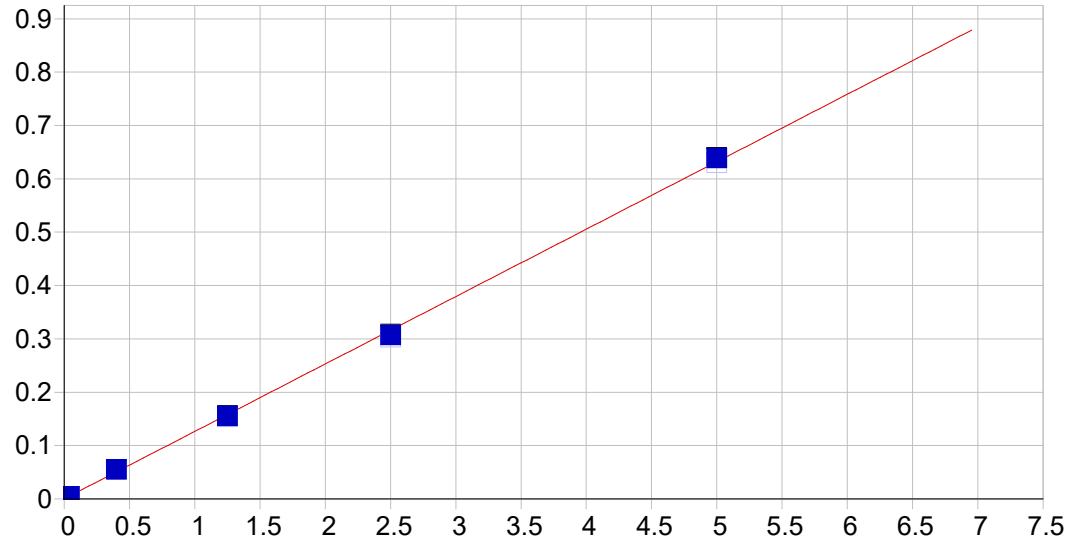
Na 589.592 { 57}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000815	Re-Slope:	1.000000
A1 (Gain):	0.010355	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999124	Status:	OK.
Std Error of Est:	0.000229		
Predicted MDL:	0.014054		
Predicted MQL:	0.046847		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00018	.000	.000	.00082	.000	1
S2	4.0000	4.1689	.169	4.22	.04398	.000	1
S3	12.500	11.949	-.551	-4.41	.12454	.000	1
S4	25.000	23.783	-1.22	-4.87	.24709	.001	1
S5	50.000	51.753	1.75	3.51	.53671	.004	1
S1	2.0000	1.8465	-.154	-7.68	.01993	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



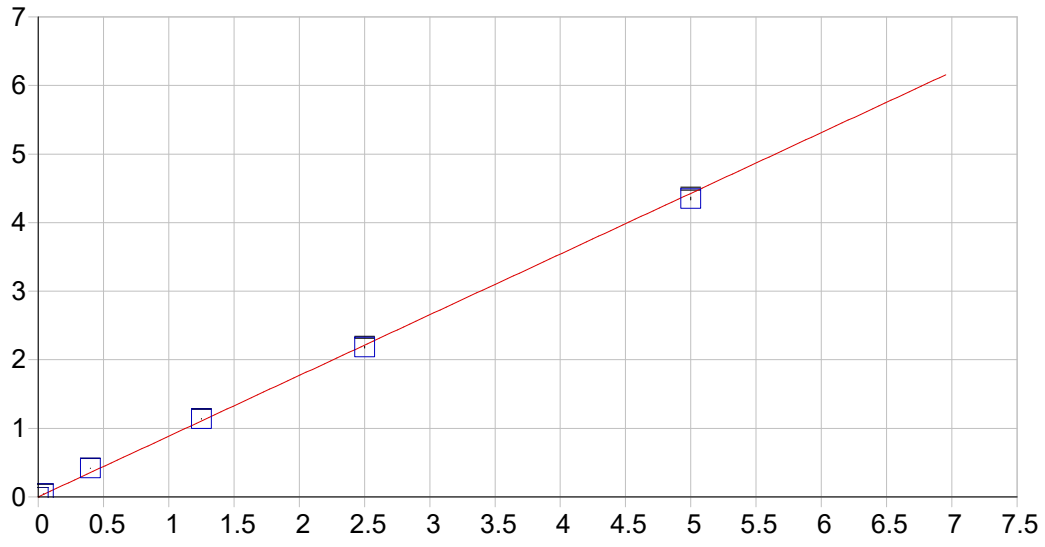
V 292.402 {115}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000121	Re-Slope:	1.000000
A1 (Gain):	0.126394	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999668	Status:	OK.
Std Error of Est:	0.000075		
Predicted MDL:	0.001549		
Predicted MQL:	0.005165		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00012	.000	1
S1	.04000	.03873	-.001	-3.17	.00483	.000	1
S3	1.2500	1.2300	-.020	-1.60	.15328	.000	1
S4	2.5000	2.4308	-.069	-2.77	.30275	.001	1
S5	5.0000	5.0556	.056	1.11	.62991	.001	1
S2	.40000	.43484	.035	8.71	.05434	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



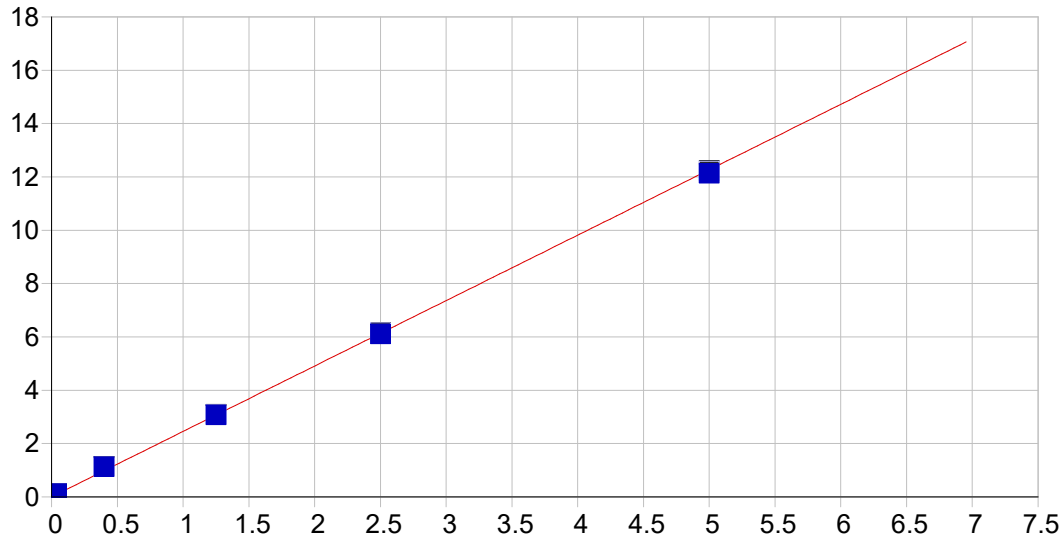
Zn 206.200 {464}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000439	Re-Slope:	1.000000
A1 (Gain):	0.885317	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998989	Status:	OK.
Std Error of Est:	0.000935		
Predicted MDL:	0.000187		
Predicted MQL:	0.000624		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00042	.000	1
S1	.04000	.05054	.011	26.4	.04519	.001	1
S3	1.2500	1.2857	.036	2.85	1.1387	.005	1
S4	2.5000	2.4674	-.033	-1.30	2.1849	.013	1
S5	5.0000	4.9145	-.086	-1.71	4.3513	.021	1
S2	.40000	.47189	.072	18.0	.41821	.002	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



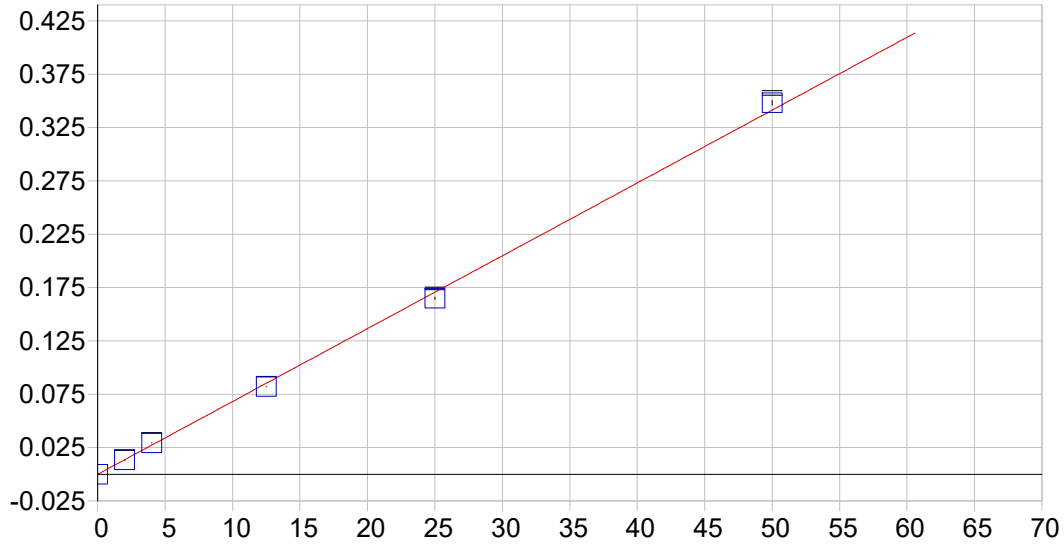
Zn 213.856 {158}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002571	Re-Slope:	1.000000
A1 (Gain):	2.453164	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999457	Status:	OK.
Std Error of Est:	0.001911		
Predicted MDL:	0.000268		
Predicted MQL:	0.000893		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00254	.000	1
S1	.04000	.04758	.008	19.0	.11999	.001	1
S3	1.2500	1.2495	-.000	-.039	3.0892	.004	1
S4	2.5000	2.4907	-.009	-.372	6.1553	.009	1
S5	5.0000	4.9454	-.055	-1.09	12.220	.024	1
S2	.40000	.45677	.057	14.2	1.1299	.001	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



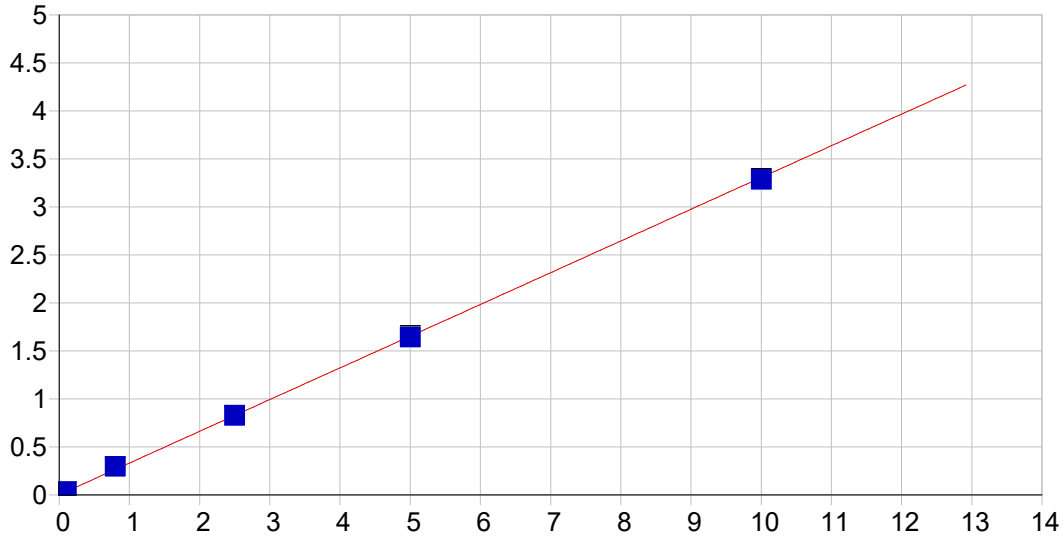
K 766.490 { 44}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000085	Re-Slope:	1.000000
A1 (Gain):	0.006829	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999521	Status:	OK.
Std Error of Est:	0.000112		
Predicted MDL:	0.027754		
Predicted MQL:	0.092515		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00004	-.000	.000	-.00008	.000	1
S2	4.0000	4.3227	.323	8.07	.02944	.000	1
S3	12.500	12.049	-.451	-3.60	.08221	.000	1
S4	25.000	24.168	-.832	-3.33	.16497	.001	1
S5	50.000	50.984	.984	1.97	.34811	.002	1
S1	2.0000	1.9754	-.025	-1.23	.01341	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



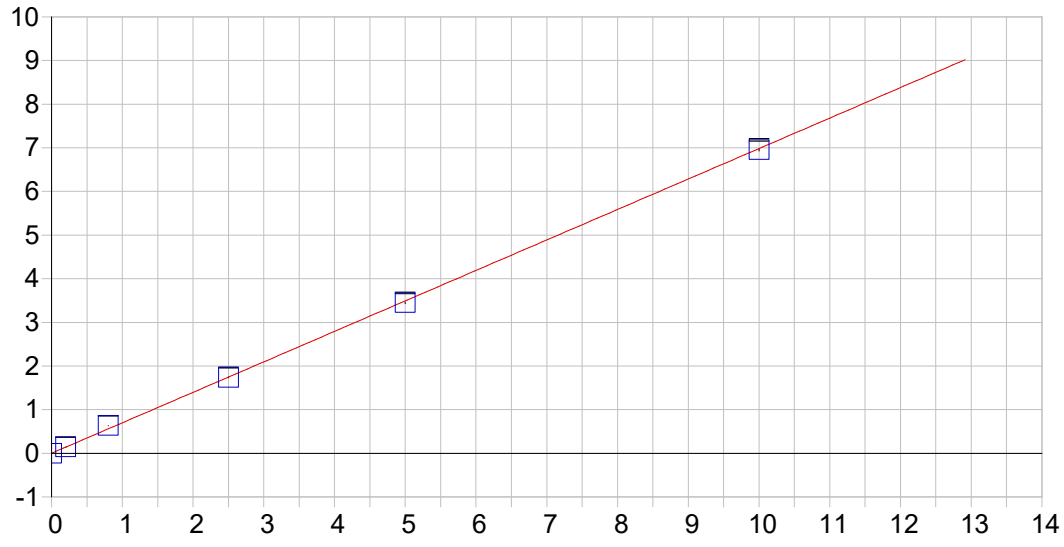
B 249.678 {135}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001308	Re-Slope:	1.000000
A1 (Gain):	0.330469	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999693	Status:	OK.
Std Error of Est:	0.000429		
Predicted MDL:	0.000682		
Predicted MQL:	0.002272		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00130	.000	1
S1	.10000	.10080	.001	.802	.03448	.000	1
S3	2.5000	2.5003	.000	.013	.82597	.002	1
S4	5.0000	4.9660	-.034	-.680	1.6392	.017	1
S5	10.000	9.9405	-.059	-.595	3.2799	.010	1
S2	.80000	.89238	.092	11.5	.29570	.002	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



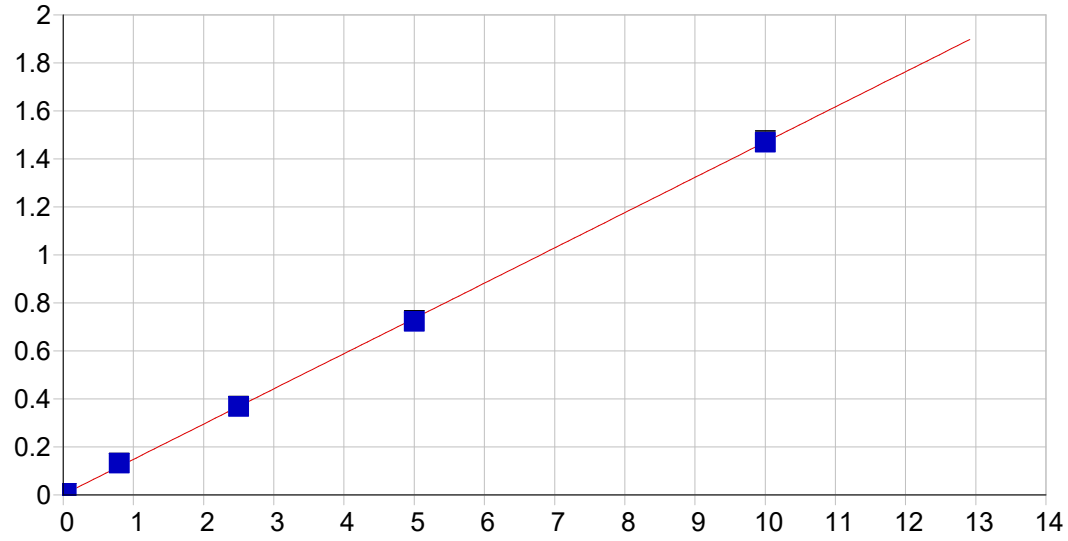
Mo 202.030 {467}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000049	Re-Slope:	1.000000
A1 (Gain):	0.698321	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999596	Status:	OK.
Std Error of Est:	0.001478		
Predicted MDL:	0.000250		
Predicted MQL:	0.000834		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00003	.000	1
S1	.20000	.20178	.002	.890	.14096	.000	1
S3	2.5000	2.4878	-.012	-.487	1.7373	.011	1
S4	5.0000	4.9414	-.059	-1.17	3.4507	.019	1
S5	10.000	9.9630	-.037	-.370	6.9575	.031	1
S2	.80000	.90599	.106	13.2	.63272	.003	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



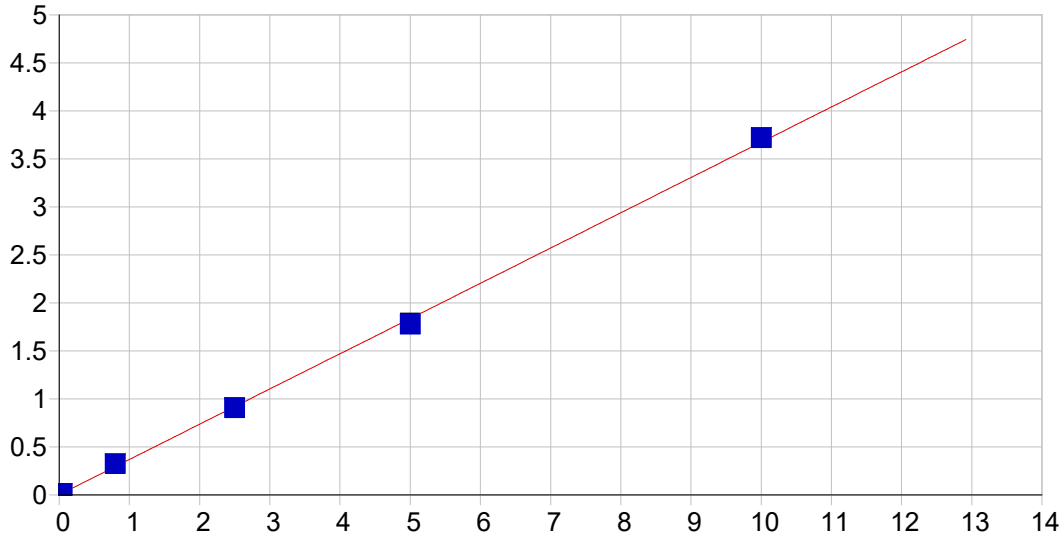
Sn 189.989 {478}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001262	Re-Slope:	1.000000
A1 (Gain):	0.146849	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999669	Status:	OK.
Std Error of Est:	0.000125		
Predicted MDL:	0.000703		
Predicted MQL:	0.002343		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00126	.000	1
S1	.04000	.04718	.007	17.9	.00818	.000	1
S3	2.5000	2.4937	-.006	-.251	.36709	.002	1
S4	5.0000	4.9157	-.084	-1.69	.72238	.004	1
S5	10.000	9.9967	-.003	-.033	1.4678	.007	1
S2	.80000	.88662	.087	10.8	.13134	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



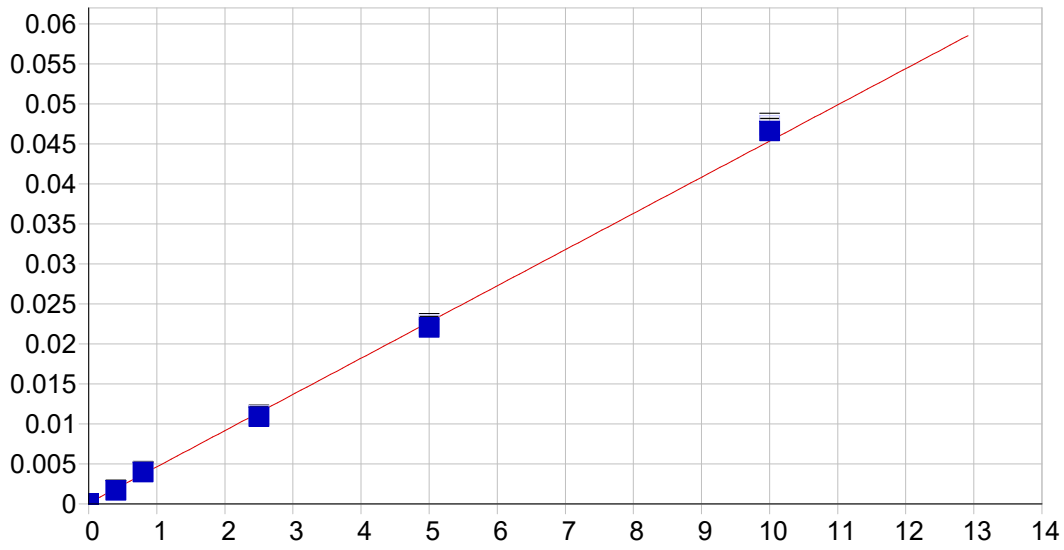
Ti 336.121 {100}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001989	Re-Slope:	1.000000
A1 (Gain):	0.367119	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999590	Status:	OK.
Std Error of Est:	0.000348		
Predicted MDL:	0.000716		
Predicted MQL:	0.002388		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00199	.000	1
S1	.04000	.03833	-.002	-4.18	.01605	.000	1
S3	2.5000	2.4605	-.039	-1.58	.90497	.001	1
S4	5.0000	4.8385	-.161	-3.23	1.7776	.010	1
S5	10.000	10.125	.125	1.25	3.7177	.006	1
S2	.80000	.87782	.078	9.73	.32415	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



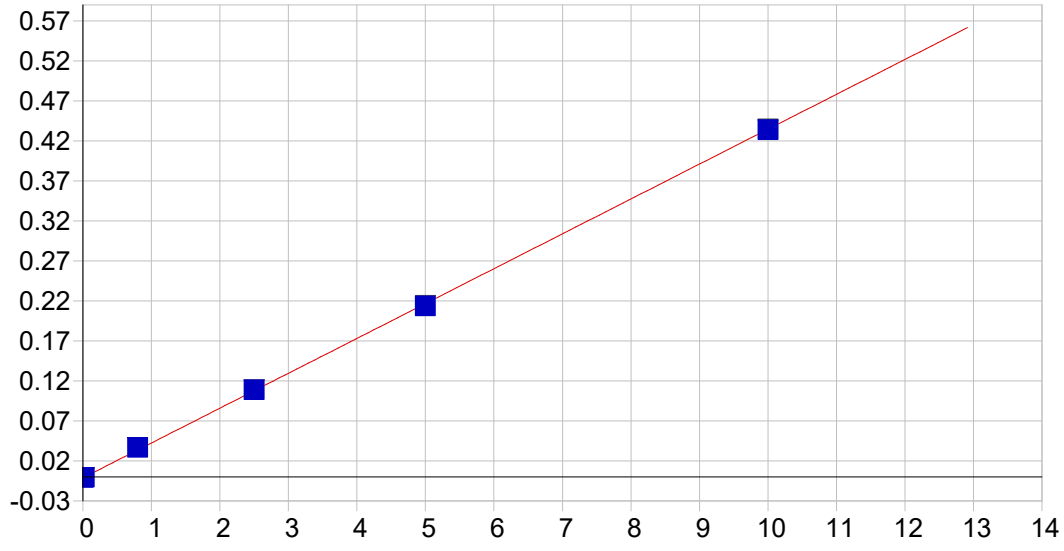
Si 288.158 {117}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000108	Re-Slope:	1.000000
A1 (Gain):	0.004525	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999272	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	0.008253		
Predicted MQL:	0.027511		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00005	.000	.000	.00011	.000	1
S1	.40000	.34859	-.051	-12.9	.00169	.000	1
S3	2.5000	2.3802	-.120	-4.79	.01105	.000	1
S4	5.0000	4.8431	-.157	-3.14	.02236	.000	1
S5	10.000	10.278	.278	2.78	.04729	.000	1
S2	.80000	.84926	.049	6.16	.00401	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



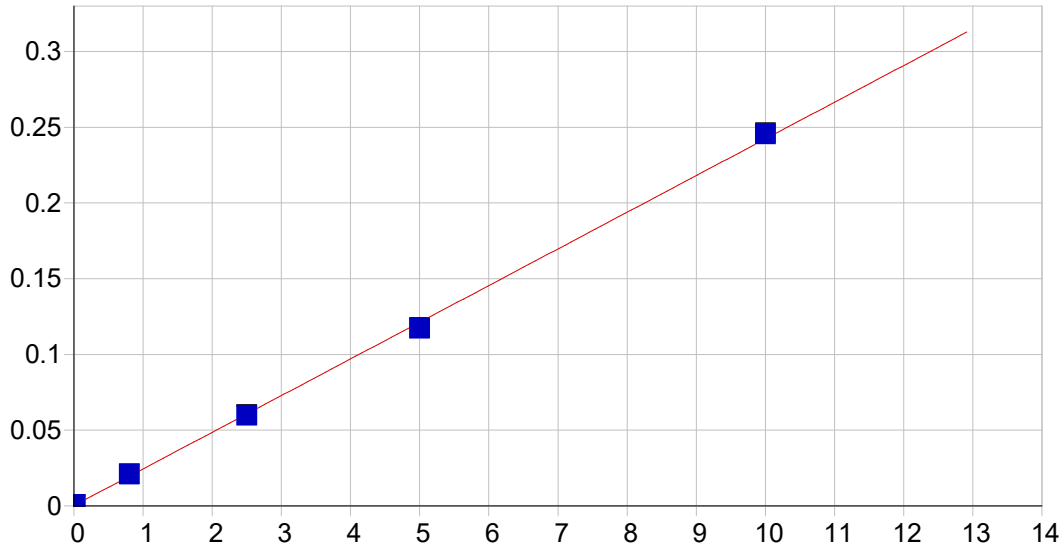
P 177.495 {490}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001259	Re-Slope:	1.000000
A1 (Gain):	0.043587	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999791	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	0.002191		
Predicted MQL:	0.007303		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00126	.000	1
S1	.02000	.01710	-.003	-14.5	-.00051	.000	1
S3	2.5000	2.5244	.024	.978	.10876	.001	1
S4	5.0000	4.9279	-.072	-1.44	.21350	.001	1
S5	10.000	9.9816	-.018	-.184	.43374	.001	1
S2	.80000	.86891	.069	8.61	.03661	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



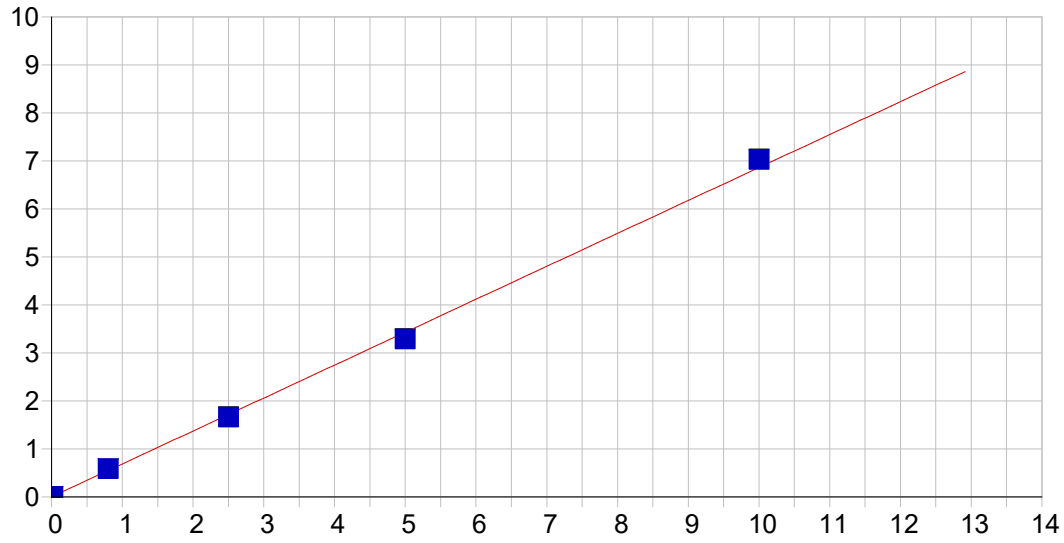
S 182.034 {485}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000188	Re-Slope:	1.000000
A1 (Gain):	0.024211	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999578	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.003618		
Predicted MQL:	0.012061		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00019	.000	1
S1	.02000	.02724	.007	36.2	.00083	.000	1
S3	2.5000	2.4577	-.042	-1.69	.05953	.000	1
S4	5.0000	4.8343	-.166	-3.31	.11692	.001	1
S5	10.000	10.141	.141	1.41	.24508	.001	1
S2	.80000	.86039	.060	7.55	.02097	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



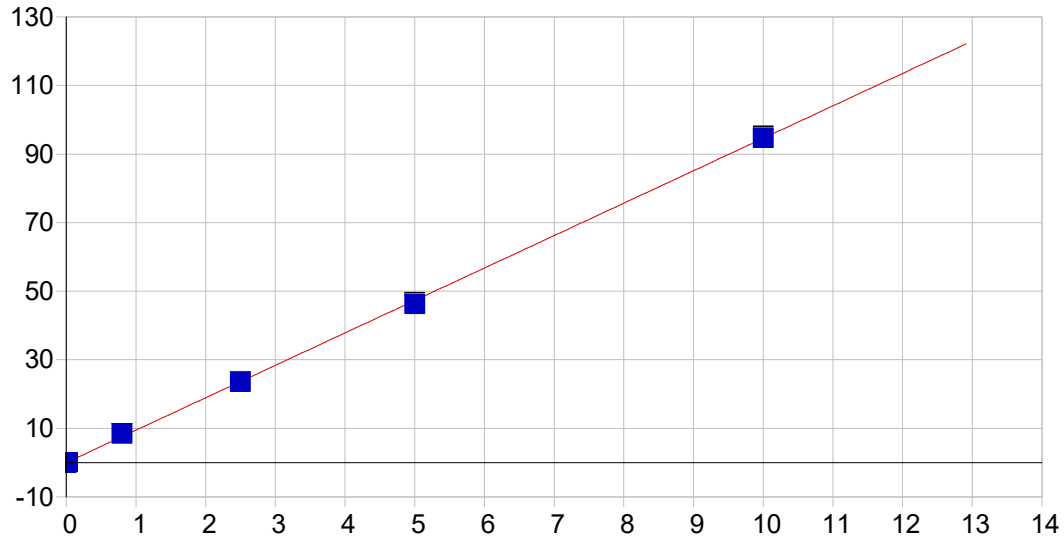
Li 670.784 { 50}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000966	Re-Slope:	1.000000
A1 (Gain):	0.686144	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999395	Status:	OK.
Std Error of Est:	0.000560		
Predicted MDL:	0.001142		
Predicted MQL:	0.003807		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00097	.000	1
S5	10.000	10.242	.242	2.42	7.0321	.007	1
S4	5.0000	4.7839	-.216	-4.32	3.2851	.015	1
S3	2.5000	2.4203	-.080	-3.19	1.6625	.004	1
S1	.02000	.01698	-.003	-15.1	.01284	.000	1
S2	.80000	.85658	.057	7.07	.58898	.000	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



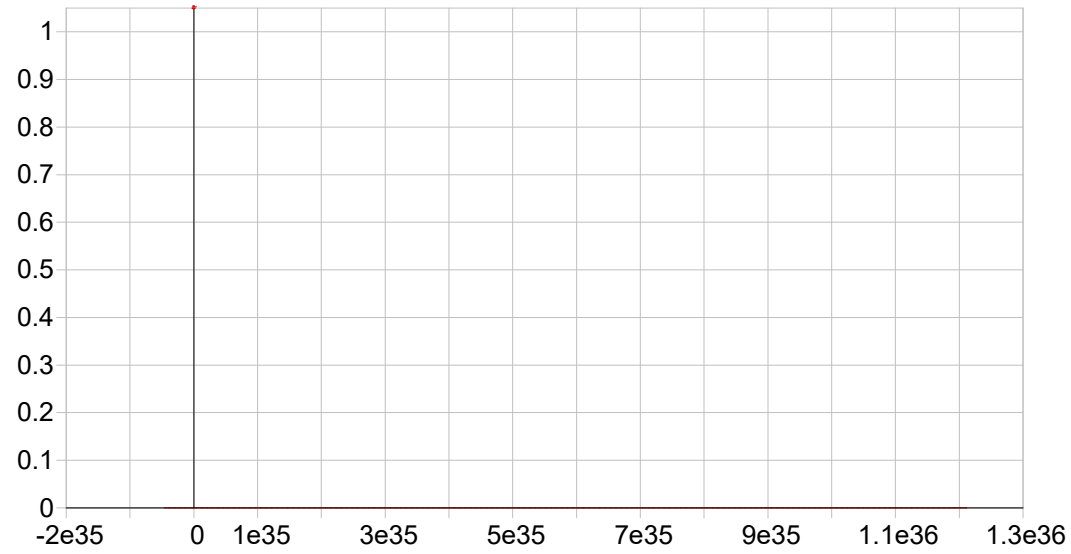
Sr 407.771 { 83}

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000245	Re-Slope:	1.000000
A1 (Gain):	9.458731	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999602	Status:	OK.
Std Error of Est:	0.006258		
Predicted MDL:	0.000048		
Predicted MQL:	0.000160		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00023	.000	1
S1	.02000	.01935	-.001	-3.23	.18426	.000	1
S3	2.5000	2.4963	-.004	-.148	23.636	.056	1
S4	5.0000	4.8930	-.107	-2.14	46.329	.445	1
S5	10.000	10.012	.012	.123	94.798	.450	1
S2	.80000	.89909	.099	12.4	8.5120	.011	1

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

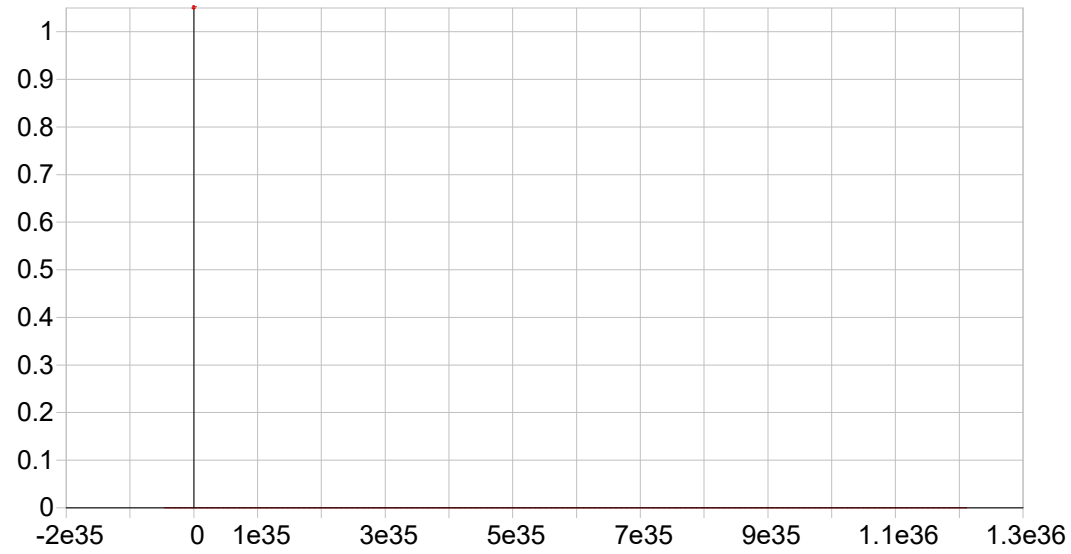


Y 224.306 {450}*

Date of Fit:	2/7/2025 13:57:27	Type of Fit:	Linear	Weighting:	1/Conc

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

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



Y 360.073 { 94}*

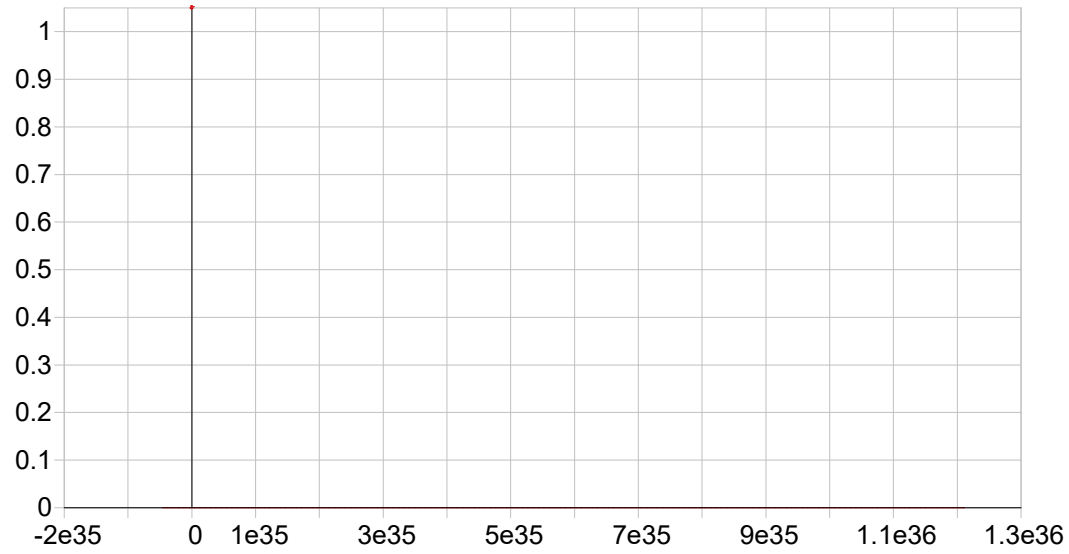
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

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

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



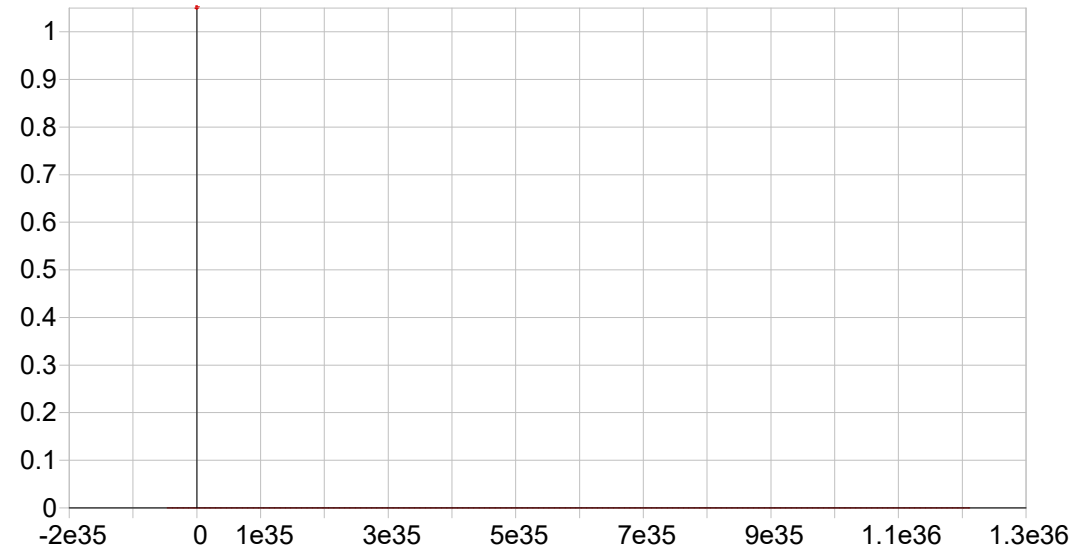
Y 371.030 { 91}*

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

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

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

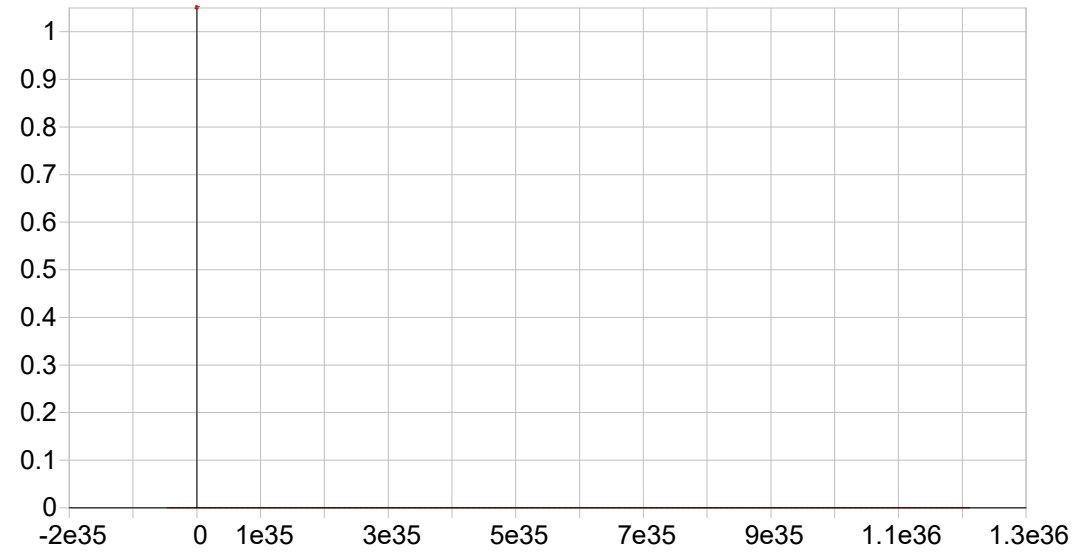
Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636



Y 224.306 {150}*

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

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



In 230.606 {446}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

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

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

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: S0 Acquired: 2/7/2025 11:40:08 Type: Cal
Method: NON EPA-6010-200.7(v2667) 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	-.00017	-.00023	-.00009	.00020	.00022	-.00022	.03389	-.00012
Stddev	.00005	.00007	.00004	.00008	.00018	.00017	.00080	.00026
%RSD	27.563	29.200	48.777	40.461	79.064	76.738	2.3464	215.92
#1	-.00015	-.00016	-.00008	.00021	.00008	-.00042	.03320	.00018
#2	-.00022	-.00024	-.00014	.00011	.00042	-.00012	.03476	-.00030
#3	-.00013	-.00030	-.00006	.00027	.00017	-.00013	.03372	-.00025

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	-.00009	.00043	.00002	-.00002	.00034	.00002	-.00008	-.00029
Stddev	.00002	.00025	.00004	.00002	.00020	.00002	.00019	.00001
%RSD	20.293	59.084	180.68	139.56	58.648	79.756	245.31	4.3821
#1	-.00011	.00068	-.00001	-.00003	.00044	.00001	-.00009	-.00028
#2	-.00009	.00044	.00001	-.00002	.00046	.00004	.00012	-.00030
#3	-.00007	.00017	.00007	.00001	.00011	.00002	-.00025	-.00031

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00038	-.00122	.00082	.00012	.00254	-.00008	.00130	.00003
Stddev	.00005	.00003	.00013	.00006	.00050	.00012	.00027	.00013
%RSD	13.662	2.5470	16.419	49.572	19.626	146.73	20.971	386.19
#1	-.00044	-.00119	.00096	.00006	.00311	-.00023	.00152	-.00011
#2	-.00033	-.00122	.00069	.00011	.00219	-.00001	.00139	.00011
#3	-.00037	-.00126	.00080	.00018	.00232	-.00001	.00100	.00010

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	.00126	.00199	.00011	-.00126	.00019	.00097	.00023
Stddev	.00006	.00006	.00003	.00006	.00005	.00017	.00024
%RSD	5.1245	3.0245	24.461	4.9004	28.522	17.733	101.64
#1	.00133	.00193	.00012	-.00119	.00019	.00111	.00041
#2	.00120	.00199	.00008	-.00128	.00024	.00078	.00032
#3	.00125	.00205	.00012	-.00131	.00013	.00101	-.00004

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: S0 Acquired: 2/7/2025 11:40:08 Type: Cal
Method: NON EPA-6010-200.7(v2667) 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	3563.3	77389.	15064.	2488.2	4456.8
Stddev	17.7	202.	142.	7.0	62.8
%RSD	.49805	.26122	.94188	.28295	1.4094
#1	3583.4	77465.	14973.	2489.1	4528.6
#2	3549.7	77542.	14992.	2480.7	4429.9
#3	3556.9	77160.	15228.	2494.7	4412.0

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: S1 Acquired: 2/7/2025 11:44:31 Type: Cal
Method: NON EPA-6010-200.7(v2667) 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	.00101	.00224	.00229	.00137	.00660	.00742	.23535	.01922
Stddev	.00009	.00009	.00016	.00009	.00010	.00021	.00220	.00007
%RSD	8.9263	3.8479	7.0441	6.5227	1.4617	2.8527	.93497	.38166
#1	.00106	.00234	.00220	.00132	.00666	.00721	.23783	.01914
#2	.00107	.00221	.00219	.00131	.00666	.00741	.23460	.01923
#3	.00091	.00218	.00248	.00147	.00649	.00763	.23363	.01929

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	.01664	.08822	.00169	.02484	.01243	.00049	.00975	.02794
Stddev	.00002	.00058	.00002	.00028	.00017	.00002	.00012	.00039
%RSD	.12935	.65815	1.3361	1.1241	1.3832	4.1185	1.2018	1.3825
#1	.01665	.08870	.00167	.02489	.01232	.00049	.00973	.02757
#2	.01661	.08838	.00168	.02453	.01234	.00047	.00964	.02834
#3	.01665	.08757	.00171	.02508	.01263	.00051	.00987	.02790

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	.02385	.00128	.01993	.00483	.11999	.01341	.03448	.14096
Stddev	.00011	.00002	.00024	.00005	.00053	.00013	.00036	.00032
%RSD	.48199	1.9189	1.2250	.93822	.44408	.97157	1.0585	.22943
#1	.02391	.00129	.02016	.00483	.11942	.01352	.03439	.14060
#2	.02394	.00129	.01997	.00478	.12048	.01343	.03417	.14104
#3	.02372	.00125	.01967	.00487	.12006	.01327	.03488	.14123

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	.00818	.01605	.00169	-.00051	.00083	.01284	.18426
Stddev	.00008	.00023	.00003	.00003	.00005	.00034	.00027
%RSD	.91991	1.4043	1.6529	6.7244	5.6751	2.6177	.14576
#1	.00814	.01631	.00170	-.00051	.00080	.01287	.18397
#2	.00814	.01594	.00166	-.00048	.00088	.01315	.18428
#3	.00827	.01590	.00171	-.00055	.00080	.01248	.18451

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: S1 Acquired: 2/7/2025 11:44:31 Type: Cal
Method: NON EPA-6010-200.7(v2667) 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	3504.6	76324.	15266.	2483.1	4293.1
Stddev	5.7	357.	41.	13.7	12.9
%RSD	.16260	.46744	.26647	.55217	.30114
#1	3500.4	76239.	15309.	2472.3	4286.9
#2	3511.1	76017.	15261.	2478.5	4307.9
#3	3502.3	76715.	15228.	2498.5	4284.4

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: S2 Acquired: 2/7/2025 11:48:50 Type: Cal
Method: NON EPA-6010-200.7(v2667) 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	.04951	.05717	.20953	.05478	.11217	.12419	3.7668	.14832
Stddev	.00045	.00052	.00081	.00014	.00093	.00032	.0086	.00133
%RSD	.89891	.91116	.38456	.24810	.83034	.25688	.22759	.89663
#1	.04918	.05659	.20917	.05463	.11222	.12437	3.7635	.14986
#2	.04933	.05732	.20897	.05482	.11121	.12382	3.7766	.14748
#3	.05002	.05760	.21046	.05490	.11307	.12438	3.7604	.14763

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.2341	.18858	.03059	.37721	.13090	.00458	.20860	.05813
Stddev	.0040	.00034	.00006	.00162	.00097	.00003	.00035	.00012
%RSD	.32791	.18109	.18007	.42970	.74159	.75773	.16610	.20219
#1	1.2311	.18858	.03053	.37613	.13105	.00460	.20821	.05808
#2	1.2324	.18892	.03061	.37644	.12986	.00461	.20872	.05804
#3	1.2387	.18824	.03063	.37908	.13178	.00454	.20887	.05826

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	.27329	.05680	.04398	.05434	1.1299	.02944	.29570	.63272
Stddev	.00141	.00011	.00018	.00015	.0010	.00007	.00156	.00328
%RSD	.51726	.19940	.40239	.27871	.08643	.23236	.52759	.51893
#1	.27259	.05691	.04378	.05421	1.1306	.02936	.29661	.63057
#2	.27237	.05680	.04412	.05431	1.1288	.02949	.29390	.63109
#3	.27492	.05668	.04404	.05451	1.1304	.02946	.29659	.63650

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	.13134	.32415	.00401	.03661	.02097	.58898	8.5120
Stddev	.00044	.00022	.00006	.00037	.00018	.00010	.0109
%RSD	.33170	.06725	1.4193	1.0159	.87488	.01710	.12854
#1	.13133	.32409	.00395	.03639	.02084	.58888	8.5137
#2	.13091	.32397	.00406	.03640	.02089	.58899	8.5220
#3	.13178	.32439	.00401	.03704	.02118	.58908	8.5003

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: S2 Acquired: 2/7/2025 11:48:50 Type: Cal
Method: NON EPA-6010-200.7(v2667) 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	3502.8	75106.	15075.	2488.5	4238.7
Stddev	8.5	206.	72.	7.5	10.7
%RSD	.24391	.27400	.47733	.30234	.25339
#1	3509.0	75005.	14993.	2482.0	4248.0
#2	3506.3	74969.	15129.	2486.7	4241.2
#3	3493.0	75342.	15102.	2496.7	4227.0

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: S3 Acquired: 2/7/2025 11:52:54 Type: Cal
Method: NON EPA-6010-200.7(v2667) 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	.13882	.15265	.58696	.15159	.31219	.35286	10.602	.41515
Stddev	.00064	.00094	.00311	.00092	.00212	.00086	.055	.00050
%RSD	.46099	.61323	.52942	.60755	.67805	.24405	.51740	.11948
#1	.13826	.15162	.58403	.15096	.31068	.35199	10.665	.41539
#2	.13869	.15286	.58664	.15117	.31128	.35371	10.565	.41547
#3	.13952	.15346	.59022	.15265	.31461	.35288	10.576	.41457

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.4529	.52570	.08487	1.0516	.36145	.01270	.57877	.16443
Stddev	.0193	.00069	.00050	.0053	.00216	.00001	.00134	.00042
%RSD	.55989	.13054	.58955	.50108	.59748	.11131	.23213	.25384
#1	3.4329	.52610	.08431	1.0463	.35983	.01271	.58032	.16413
#2	3.4544	.52491	.08527	1.0517	.36061	.01269	.57788	.16491
#3	3.4715	.52609	.08503	1.0569	.36390	.01271	.57811	.16425

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	.76099	.15797	.12454	.15328	3.0892	.08221	.82597	1.7373
Stddev	.00455	.00035	.00033	.00048	.0035	.00019	.00187	.0110
%RSD	.59732	.22237	.26631	.31379	.11351	.22856	.22651	.63305
#1	.75637	.15761	.12452	.15338	3.0874	.08208	.82811	1.7276
#2	.76114	.15799	.12422	.15370	3.0869	.08242	.82516	1.7352
#3	.76546	.15831	.12488	.15276	3.0932	.08211	.82465	1.7493

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	.36709	.90497	.01105	.10876	.05953	1.6625	23.636
Stddev	.00189	.00069	.00009	.00059	.00045	.0037	.056
%RSD	.51622	.07621	.77430	.54565	.76028	.22118	.23892
#1	.36505	.90570	.01095	.10817	.05902	1.6650	23.588
#2	.36741	.90432	.01111	.10875	.05985	1.6582	23.620
#3	.36880	.90488	.01108	.10936	.05973	1.6641	23.698

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: S3 Acquired: 2/7/2025 11:52:54 Type: Cal
Method: NON EPA-6010-200.7(v2667) 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	3433.3	74466.	14811.	2449.3	4087.9
Stddev	22.0	229.	27.	5.4	25.7
%RSD	.64015	.30703	.18428	.22100	.62913
#1	3451.7	74708.	14794.	2445.1	4113.2
#2	3439.3	74253.	14797.	2455.4	4088.8
#3	3409.0	74438.	14843.	2447.5	4061.8

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: S4 Acquired: 2/7/2025 11:57:08 Type: Cal
Method: NON EPA-6010-200.7(v2667) 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	.27333	.29970	1.1513	.29718	.61908	.69431	20.281	.81951
Stddev	.00132	.00261	.0059	.00135	.00241	.00266	.361	.00749
%RSD	.48401	.87075	.50787	.45407	.38885	.38309	1.7823	.91431
#1	.27246	.29725	1.1472	.29657	.61747	.69726	20.681	.82785
#2	.27267	.29940	1.1486	.29623	.61792	.69357	19.978	.81335
#3	.27485	.30245	1.1580	.29872	.62185	.69210	20.183	.81732

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	6.8130	1.0200	.16800	2.0794	.70395	.02522	1.1232	.32117
Stddev	.0291	.0062	.00080	.0089	.00289	.00012	.0065	.00146
%RSD	.42699	.60392	.47429	.42607	.41107	.48865	.57403	.45413
#1	6.7882	1.0268	.16716	2.0723	.70187	.02508	1.1306	.32272
#2	6.8058	1.0149	.16875	2.0765	.70273	.02531	1.1186	.31982
#3	6.8450	1.0182	.16808	2.0893	.70725	.02527	1.1204	.32098

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	1.4933	.31712	.24709	.30275	6.1553	.16497	1.6392	3.4507
Stddev	.0064	.00100	.00129	.00140	.0091	.00124	.0166	.0189
%RSD	.42620	.31554	.52244	.46313	.14713	.74963	1.0136	.54706
#1	1.4875	.31614	.24578	.30416	6.1497	.16359	1.6576	3.4352
#2	1.4923	.31708	.24836	.30135	6.1658	.16597	1.6252	3.4452
#3	1.5001	.31814	.24713	.30274	6.1506	.16535	1.6347	3.4717

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	.72238	1.7776	.02236	.21350	.11692	3.2851	46.329
Stddev	.00357	.0101	.00022	.00099	.00052	.0148	.445
%RSD	.49426	.56618	.97714	.46593	.44366	.44920	.96006
#1	.72020	1.7892	.02211	.21303	.11641	3.2987	46.578
#2	.72045	1.7709	.02247	.21283	.11690	3.2872	46.593
#3	.72650	1.7729	.02250	.21464	.11744	3.2694	45.815

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: S4 Acquired: 2/7/2025 11:57:08 Type: Cal
Method: NON EPA-6010-200.7(v2667) 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	3414.8	72081.	14603.	2332.0	4039.1
Stddev	15.9	271.	114.	5.8	15.5
%RSD	.46688	.37567	.78333	.24805	.38258
#1	3421.1	72382.	14477.	2337.9	4046.1
#2	3426.6	72004.	14699.	2331.8	4049.9
#3	3396.7	71857.	14635.	2326.3	4021.4

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: S5 Acquired: 2/7/2025 12:01:18 Type: Cal
Method: NON EPA-6010-200.7(v2667) 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	.55941	.62994	2.3320	.60835	1.2609	1.4619	42.969	1.6215
Stddev	.00225	.00568	.0075	.00361	.0037	.0003	.262	.0022
%RSD	.40261	.90153	.31981	.59404	.29479	.02027	.60912	.13340
#1	.55740	.62364	2.3235	.60472	1.2578	1.4623	43.190	1.6237
#2	.55899	.63152	2.3355	.60836	1.2597	1.4617	43.037	1.6215
#3	.56184	.63466	2.3371	.61195	1.2650	1.4617	42.680	1.6194

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	13.818	2.1146	.33253	4.2379	1.4027	.05145	2.3253	.67242
Stddev	.058	.0079	.00051	.0120	.0034	.00027	.0043	.00143
%RSD	.41622	.37532	.15271	.28241	.24467	.53297	.18550	.21276
#1	13.755	2.1237	.33286	4.2250	1.3990	.05133	2.3302	.67407
#2	13.828	2.1101	.33195	4.2402	1.4036	.05125	2.3219	.67169
#3	13.869	2.1099	.33279	4.2486	1.4057	.05176	2.3239	.67151

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.0246	.63506	.53671	.62991	12.220	.34811	3.2799	6.9575
Stddev	.0089	.00133	.00398	.00108	.024	.00214	.0096	.0311
%RSD	.29397	.21010	.74173	.17115	.19424	.61365	.29399	.44762
#1	3.0152	.63386	.53457	.62897	12.222	.34658	3.2856	6.9248
#2	3.0256	.63482	.53425	.62967	12.243	.34719	3.2853	6.9606
#3	3.0329	.63649	.54130	.63108	12.195	.35055	3.2687	6.9869

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.4678	3.7177	.04729	.43374	.24508	7.0321	94.798
Stddev	.0068	.0058	.00032	.00085	.00069	.0068	.450
%RSD	.46550	.15592	.67937	.19491	.28064	.09715	.47420
#1	1.4610	3.7243	.04699	.43300	.24432	7.0283	94.519
#2	1.4676	3.7139	.04726	.43357	.24524	7.0281	95.317
#3	1.4747	3.7148	.04763	.43466	.24567	7.0400	94.560

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: S5 Acquired: 2/7/2025 12:01:18 Type: Cal
Method: NON EPA-6010-200.7(v2667) 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	3289.7	70336.	14214.	2227.0	3820.8
Stddev	7.1	208.	36.	5.7	6.5
%RSD	.21624	.29604	.25378	.25745	.17123
#1	3293.1	70466.	14180.	2222.6	3823.2
#2	3294.4	70447.	14210.	2233.5	3825.7
#3	3281.5	70096.	14251.	2224.9	3813.3

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: ICV01 Acquired: 2/7/2025 12:11:40 Type: Unk
Method: NON EPA-6010-200.7(v2667) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.004359	1.060895	.9993432	1.041840	1.024472	2.513697
Stddev	.003093	.005526	.0006935	.007517	.005402	.008204
%RSD	.3080007	.5209170	.0693922	.7215391	.5273220	.3263822
#1	1.004332	1.054606	1.000026	1.042406	1.024628	2.521854
#2	1.001279	1.063105	.999364	1.034056	1.018993	2.505447
#3	1.007465	1.064975	.998640	1.049058	1.029794	2.513791

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5023253	.5196002	.5102386	10.02037	.5324982	.5154023
Stddev	.0018427	.0027632	.0021363	.04082	.0008666	.0020320
%RSD	.3668323	.5317983	.4186949	.4073920	.1627416	.3942622
#1	.5027337	.5200743	.5089353	10.04072	.5315321	.5146609
#2	.5003127	.5220956	.5090763	10.04701	.5332069	.5138450
#3	.5039295	.5166305	.5127041	9.97337	.5327557	.5177009

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5265831	10.12613	.5161736	5.969035	.5196420	.2514824
Stddev	.0015086	.05905	.0020177	.041822	.0020269	.0001741
%RSD	.2864785	.5831923	.3908952	.7006557	.3900482	.0692077
#1	.5262885	10.11050	.5177854	6.000424	.5190153	.2516832
#2	.5252436	10.07645	.5168247	5.985123	.5180025	.2513744
#3	.5282172	10.19142	.5139108	5.921557	.5219082	.2513896

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.653169	.5017386	1.029627	9.903980	F .0113286	F -.000207
Stddev	.062426	.0042024	.001030	.045723	.0001106	.000102
%RSD	.6466909	.8375590	.1000081	.4616673	.9758625	49.14353
#1	9.667607	.5000338	1.030549	9.906586	.0114172	-.000107
#2	9.584789	.5065255	1.028516	9.857010	.0112047	-.000204
#3	9.707112	.4986566	1.029816	9.948345	.0113639	-.000310

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: ICV01 Acquired: 2/7/2025 12:11:40 Type: Unk
Method: NON EPA-6010-200.7(v2667) 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	F .0053112	F -.000536	F -.015698	F .0000481	F -.000249	F .0005636
Stddev	.0001975	.000594	.008036	.0016814	.004059	.0005076
%RSD	3.718345	110.7913	51.19363	3492.706	1627.137	90.07328
#1	.0052707	-.000597	-.006456	.0003595	-.002091	.0006255
#2	.0055258	.000086	-.021038	-.001767	-.003061	.0010373
#3	.0051371	-.001098	-.019599	.001552	.004404	.0000278

Elem	Sr4077
Units	ppm
Avg	F -.008880
Stddev	.000057
%RSD	.6455784
#1	-.008909
#2	-.008814
#3	-.008917

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3487.831	73733.03	15052.25	2430.199	4241.398
Stddev	11.588	123.99	77.64	2.706	13.474
%RSD	.3322287	.1681562	.5158317	.1113342	.3176759
#1	3485.255	73777.54	15023.03	2427.122	4239.581
#2	3500.490	73828.62	14993.46	2431.267	4255.688
#3	3477.748	73592.93	15140.27	2432.208	4228.925

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: LLICV01 Acquired: 2/7/2025 12:27:44 Type: Unk
Method: NON EPA-6010-200.7(v2668) 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	.0218368	.0418894	.0112152	.0219836	.0506670	.0998300
Stddev	.0008541	.0009418	.0013972	.0001807	.0017640	.0079968
%RSD	3.911433	2.248310	12.45801	.8218604	3.481539	8.010378
#1	.0225642	.0417349	.0124211	.0221477	.0518209	.0907064
#2	.0208963	.0410343	.0096840	.0217900	.0486364	.1031602
#3	.0220499	.0428988	.0115404	.0220132	.0515436	.1056235

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0914900	.0060162	.0060253	2.096214	.0098972	.0298921
Stddev	.0001142	.0000790	.0000481	.014246	.0002930	.0002129
%RSD	.1248030	1.313071	.7982483	.6795899	2.960063	.7122571
#1	.0916216	.0059292	.0059779	2.081752	.0095601	.0300994
#2	.0914185	.0060835	.0060240	2.096655	.0100907	.0296740
#3	.0914298	.0060358	.0060741	2.110234	.0100407	.0299031

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0206382	.0924389	.0216838	2.118897	.0396978	.0100915
Stddev	.0003233	.0022837	.0001065	.018271	.0001037	.0002603
%RSD	1.566525	2.470473	.4910532	.8623024	.2611780	2.579838
#1	.0205094	.0917310	.0217386	2.117459	.0396726	.0103873
#2	.0203991	.0905930	.0217517	2.101387	.0396090	.0099901
#3	.0210060	.0949927	.0215611	2.137845	.0398117	.0098971

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.779892	.0378896	.0381918	1.991847	.1021072	.2053887
Stddev	.004945	.0014984	.0003008	.020221	.0003893	.0008600
%RSD	.2778450	3.954667	.7874899	1.015180	.3812667	.4187232
#1	1.781162	.0383356	.0384692	1.970518	.1018581	.2059249
#2	1.784078	.0391145	.0378722	2.010738	.1019078	.2043968
#3	1.774435	.0362189	.0382341	1.994285	.1025558	.2058445

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: LLICV01 Acquired: 2/7/2025 12:27:44 Type: Unk
Method: NON EPA-6010-200.7(v2668) 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	.0470496	.0379733	.3502421	.0179538	F .0314681	F .0158831
Stddev	.0006723	.0002276	.0041227	.0037404	.0040836	.0006531
%RSD	1.428873	.5994706	1.177104	20.83366	12.97681	4.111876
#1	.0472507	.0378022	.3548615	.0210547	.0272296	.0158695
#2	.0462998	.0378860	.3469360	.0137997	.0353767	.0165429
#3	.0475984	.0382317	.3489288	.0190071	.0317980	.0152369

Elem	Sr4077
Units	ppm
Avg	.0191826
Stddev	.0001154
%RSD	.6015995
#1	.0190494
#2	.0192521
#3	.0192463

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3474.562	74089.23	14941.80	2426.886	4295.546
Stddev	12.664	163.47	85.81	3.885	14.069
%RSD	.3644652	.2206425	.5743223	.1600673	.3275265
#1	3468.733	74040.95	15027.97	2423.137	4292.270
#2	3489.090	74271.40	14941.09	2430.894	4310.964
#3	3465.862	73955.33	14856.35	2426.626	4283.404

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: ICB01 Acquired: 2/7/2025 12:31:34 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0010333	.0012050	-.001247	.0014208	.0000492	.0012790	-.002227
Stddev	.0018262	.0004466	.000690	.0023803	.0019014	.0012979	.000567
%RSD	176.7282	37.06434	55.31334	167.5297	3868.796	101.4841	25.45516
#1	.0030121	.0017136	-.000451	.0038371	-.001810	-.000178	-.002759
#2	.0006751	.0008764	-.001669	-.000922	-.000033	.002311	-.002292
#3	-.000587	.0010251	-.001620	.001347	.001990	.001704	-.001631

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000497	.0000334	-.003037	-.000260	-.000075	-.001582	-.011116
Stddev	.0000116	.0000243	.006069	.000059	.000218	.000603	.003447
%RSD	23.35841	72.76418	199.8616	22.57115	289.3029	38.10520	31.00645
#1	.0000364	.0000068	-.009866	-.000218	.000010	-.002245	-.014602
#2	.0000581	.0000390	-.000986	-.000234	.000087	-.001434	-.011034
#3	.0000545	.0000544	.001741	-.000327	-.000323	-.001067	-.007711

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000196	.0148351	-.000098	-.000292	-.001634	-.001356	-.000250
Stddev	.000347	.0095893	.000363	.000036	.012443	.000906	.000281
%RSD	176.8876	64.63912	371.5041	12.15714	761.4425	66.78888	112.4967
#1	-.000472	.0100094	-.000385	-.000283	-.015148	-.001659	-.000071
#2	.000193	.0086172	-.000217	-.000331	.009349	-.000338	-.000105
#3	-.000310	.0258786	.000310	-.000262	.000897	-.002071	-.000574

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0898927	-.000441	-.000308	.0077957	.0000744	-.009780	-.003336
Stddev	.0098203	.000622	.000145	.0007834	.0004427	.002319	.001108
%RSD	10.92448	141.0940	46.96631	10.04876	594.8305	23.71042	33.21748
#1	.0942354	-.000695	-.000423	.0069552	.0005402	-.012447	-.004605
#2	.0967930	-.000895	-.000146	.0079262	.0000242	-.008653	-.002565
#3	.0786498	.000268	-.000355	.0085056	-.000341	-.008240	-.002837

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: ICB01 Acquired: 2/7/2025 12:31:34 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0002441	-.002599	-.000037
Stddev	.0017141	.000493	.000034
%RSD	702.3329	18.97420	90.84416
#1	.0006898	-.003126	.000002
#2	-.001649	-.002148	-.000054
#3	.001691	-.002523	-.000059

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3435.448	74286.70	14712.92	2439.559	4240.093
Stddev	5.209	238.59	38.01	8.272	9.961
%RSD	.1516353	.3211805	.2583681	.3390923	.2349314
#1	3432.691	74560.12	14728.45	2448.858	4234.747
#2	3441.457	74120.65	14740.71	2436.801	4251.586
#3	3432.198	74179.34	14669.61	2433.018	4233.945

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CRI01 Acquired: 2/7/2025 12:35:54 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0202965	.0406866	.0109042	.0198335	.0505003	.0974343
Stddev	.0007916	.0016891	.0013268	.0012656	.0013648	.0030193
%RSD	3.900163	4.151398	12.16733	6.381253	2.702551	3.098800
#1	.0193878	.0393407	.0124106	.0194834	.0491071	.0994684
#2	.0206648	.0425820	.0099092	.0187798	.0505588	.0988693
#3	.0208368	.0401372	.0103929	.0212373	.0518349	.0939651

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0928076	.0061250	.0058655	2.077336	.0094789	.0295173
Stddev	.0002767	.0000603	.0000871	.008742	.0002517	.0000889
%RSD	.2981460	.9848236	1.484143	.4208481	2.654860	.3011969
#1	.0927569	.0061642	.0058860	2.070663	.0096644	.0295449
#2	.0931061	.0061553	.0059405	2.087232	.0091925	.0295891
#3	.0925597	.0060556	.0057700	2.074112	.0095800	.0294178

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0209577	.0891093	.0214088	2.113563	.0396860	.0101417
Stddev	.0002854	.0030416	.0003728	.013147	.0003251	.0003840
%RSD	1.361716	3.413294	1.741576	.6220494	.8190846	3.786830
#1	.0209302	.0891322	.0216400	2.120874	.0393168	.0103697
#2	.0206871	.0860564	.0216078	2.121429	.0398122	.0096983
#3	.0212559	.0921394	.0209787	2.098385	.0399291	.0103571

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.793763	.0380705	.0486460	1.981934	.1010673	.2057689
Stddev	.007341	.0001989	.0004966	.037224	.0003821	.0006181
%RSD	.4092579	.5224466	1.020739	1.878149	.3781162	.3003763
#1	1.785354	.0378857	.0488791	1.969948	.1012353	.2050843
#2	1.798895	.0382810	.0489832	1.952179	.1013367	.2059368
#3	1.797039	.0380448	.0480758	2.023674	.1006300	.2062858

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CRI01 Acquired: 2/7/2025 12:35:54 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0466319	.0383785	.3470414	.0162421	F .0263900	.0170172
Stddev	.0007962	.0001719	.0061883	.0011088	.0017030	.0004878
%RSD	1.707424	.4480237	1.783156	6.826687	6.453218	2.866732
#1	.0466222	.0383545	.3421051	.0167513	.0247149	.0173968
#2	.0474330	.0385611	.3450352	.0149702	.0263355	.0171879
#3	.0458407	.0382198	.3539839	.0170049	.0281196	.0164670

Elem	Sr4077
Units	ppm
Avg	.0192002
Stddev	.0000632
%RSD	.3289392
#1	.0191580
#2	.0191698
#3	.0192728

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3496.154	74131.00	14921.07	2415.326	4353.973
Stddev	10.151	73.95	52.66	2.774	5.397
%RSD	.2903342	.0997536	.3529031	.1148689	.1239504
#1	3501.841	74172.55	14860.35	2415.940	4353.487
#2	3502.187	74174.83	14948.62	2417.742	4359.596
#3	3484.435	74045.63	14954.22	2412.296	4348.835

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: ICSA01 Acquired: 2/7/2025 12:40:11 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021649	.0089411	.0080184	-.011105	-.000170	245.9501	.0033688
Stddev	.0013458	.0017153	.0006156	.004260	.000883	2.8709	.0007222
%RSD	62.16257	19.18467	7.677834	38.35549	519.3510	1.167259	21.43927
#1	.0017252	.0077611	.0084447	-.014781	-.001187	247.5866	.0027951
#2	.0010940	.0109088	.0073126	-.012097	.000396	247.6285	.0041798
#3	.0036755	.0081533	.0082979	-.006437	.000281	242.6352	.0031314

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020537	.0029720	232.7217	.0584971	.0021820	.0098262	101.1272
Stddev	.0000908	.0000698	1.0781	.0002013	.0000658	.0008470	.2942
%RSD	4.421749	2.348185	.4632554	.3441142	3.017558	8.619798	.2908832
#1	.0019489	.0029014	233.7453	.0584606	.0022580	.0089192	101.2074
#2	.0021023	.0030410	232.8234	.0587141	.0021455	.0105966	100.8013
#3	.0021098	.0029737	231.5964	.0583164	.0021424	.0099627	101.3729

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045257	252.0134	.0038195	.0013751	.0332725	.0025869	.0052196
Stddev	.0003759	.8334	.0005995	.0003250	.0144942	.0008971	.0002532
%RSD	8.305065	.3306966	15.69557	23.63191	43.56195	34.67859	4.850684
#1	.0049545	252.1710	.0031293	.0015082	.0245011	.0033555	.0051087
#2	.0043689	252.7568	.0042112	.0016123	.0253141	.0016012	.0050409
#3	.0042535	251.1125	.0041179	.0010047	.0500023	.0028040	.0055093

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0486007	.0495622	.0003250	.0038651	-.001925	.0082774	-.000356
Stddev	.0089403	.0003330	.0004694	.0014453	.000728	.0022503	.002936
%RSD	18.39547	.6719557	144.4365	37.39296	37.79644	27.18620	823.8748
#1	.0460158	.0493656	.0000901	.0034934	-.001086	.0057912	.001105
#2	.0585487	.0493744	.0000194	.0054598	-.002309	.0101747	.001562
#3	.0412377	.0499467	.0008654	.0026419	-.002381	.0088662	-.003737

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: ICSA01 Acquired: 2/7/2025 12:40:11 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.017618	.0030763	-.005533
Stddev	.004347	.0006887	.000645
%RSD	24.67374	22.38761	11.65704
#1	-.015967	.0030646	-.004871
#2	-.014339	.0023935	-.005568
#3	-.022549	.0037708	-.006160

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3038.294	64996.01	14660.36	2102.283	3503.046
Stddev	3.847	72.29	70.44	6.065	6.042
%RSD	.1266307	.1112196	.4805129	.2884965	.1724662
#1	3040.176	65050.36	14636.29	2103.839	3503.656
#2	3040.838	65023.71	14605.11	2095.591	3508.760
#3	3033.868	64913.97	14739.69	2107.418	3496.723

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: ICSAB01 Acquired: 2/7/2025 12:44:32 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.1080389	.0986732	.0563351	.0416184	.6454931	248.3479
Stddev	.0005549	.0040099	.0021892	.0008140	.0021404	1.6687
%RSD	.5136181	4.063795	3.885947	1.955971	.3315977	.6719109
#1	.1086791	.1012966	.0553912	.0408868	.6478558	248.9807
#2	.1077425	.1006656	.0547762	.0414731	.6449401	249.6077
#3	.1076952	.0940573	.0588378	.0424953	.6436835	246.4554

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4732582	.5065717	1.018773	232.5674	.5750895	.5166460
Stddev	.0012666	.0010949	.003401	.7301	.0009433	.0024178
%RSD	.2676350	.2161452	.3338153	.3139355	.1640321	.4679771
#1	.4724874	.5053656	1.018626	231.9430	.5741245	.5162761
#2	.4747200	.5075032	1.015449	233.3702	.5751345	.5144344
#3	.4725672	.5068463	1.022245	232.3889	.5760096	.5192274

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5191192	98.79430	.4738929	252.2699	1.022283	.2228403
Stddev	.0019779	.29825	.0025173	.7666	.003330	.0005976
%RSD	.3810168	.3018880	.5311946	.3038693	.3257501	.2681721
#1	.5191912	98.63243	.4726099	251.6137	1.020820	.2233700
#2	.5171063	99.13849	.4767933	253.1125	1.019934	.2229585
#3	.5210602	98.61198	.4722757	252.0836	1.026094	.2221925

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0403822	.4714003	1.071177	.1012326	F .0430185	F .0003057
Stddev	.0134078	.0013216	.006867	.0269129	.0006143	.0001570
%RSD	33.20218	.2803523	.6411117	26.58519	1.427891	51.35435
#1	.0293829	.4726421	1.077442	.1190632	.0423513	.0002007
#2	.0364462	.4700112	1.072256	.0702752	.0435606	.0004862
#3	.0553174	.4715475	1.063834	.1143595	.0431436	.0002303

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: ICSAB01 Acquired: 2/7/2025 12:44:32 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	F .0021417	F -.002630	F -.001933	F .0036273	F -.019262	F .0007940
Stddev	.0013617	.000287	.009448	.0011970	.004253	.0019003
%RSD	63.58299	10.92275	488.6483	32.99902	22.08095	239.3175
#1	.0005775	-.002958	.004792	.0041123	-.014415	.0028669
#2	.0027842	-.002423	.002143	.0022639	-.020999	-.000866
#3	.0030632	-.002509	-.012735	.0045056	-.022371	.000381

Elem	Sr4077
Units	ppm
Avg	F -.003590
Stddev	.000126
%RSD	3.499302
#1	-.003454
#2	-.003614
#3	-.003702

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3017.973	65118.43	14377.41	2097.070	3494.491
Stddev	14.167	71.01	28.68	12.657	14.882
%RSD	.4694317	.1090526	.1994577	.6035446	.4258789
#1	3020.249	65103.06	14394.72	2083.417	3499.693
#2	3030.863	65056.36	14344.31	2099.381	3506.074
#3	3002.805	65195.87	14393.21	2108.412	3477.706

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: ICSADLX20 Acquired: 2/7/2025 12:48:42 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0001489	-.000024	-.001043	.0012574	-.000465	12.20544	-.002351
Stddev	.0015233	.000748	.000237	.0022506	.000998	.01721	.000019
%RSD	1023.400	3158.252	22.69207	178.9930	214.7462	.1410061	.7959795
#1	-.001092	-.000775	-.000893	-.000586	-.001616	12.21079	-.002339
#2	.001849	.000721	-.001316	.000593	.000078	12.18620	-.002372
#3	-.000310	-.000017	-.000920	.003765	.000144	12.21934	-.002341

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002635	.0002233	12.08772	.0025499	.0001440	-.000766	4.957410
Stddev	.0000486	.0000746	.00927	.0003389	.0001329	.000110	.021550
%RSD	18.44227	33.41247	.0766917	13.29143	92.29152	14.39601	.4347087
#1	.0002657	.0003070	12.08614	.0023714	.0002975	-.000851	4.937376
#2	.0003109	.0001636	12.07935	.0023376	.0000664	-.000806	4.954644
#3	.0002138	.0001993	12.09768	.0029408	.0000682	-.000642	4.980210

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004926	12.53399	.0002241	-.000022	.0062018	-.000617	-.000034
Stddev	.0001033	.02297	.0002021	.000347	.0127071	.001139	.000211
%RSD	20.96458	.1832751	90.19858	1600.366	204.8943	184.4898	619.3931
#1	.0004900	12.52264	.0003977	.000298	-.008365	-.000703	.000199
#2	.0005972	12.51890	.0002724	-.000391	.015010	.000562	-.000089
#3	.0003907	12.56043	.0000022	.000027	.011960	-.001711	-.000213

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0897188	.0011274	.0000794	.0067166	.0000584	.0049735	-.001498
Stddev	.0279443	.0004332	.0002640	.0002454	.0006545	.0081134	.001006
%RSD	31.14653	38.42004	332.2628	3.653388	1120.592	163.1302	67.12582
#1	.1032892	.0016121	.0003552	.0065842	.0002133	.0142535	-.002475
#2	.0575808	.0007779	-.000171	.0065658	-.000660	-.000780	-.000466
#3	.1082866	.0009924	.000054	.0069998	.000622	.001447	-.001554

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: ICSADLX20 Acquired: 2/7/2025 12:48:42 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0013198	-.002129	-.000079
Stddev	.0022246	.000324	.000059
%RSD	168.5618	15.19844	74.54447
#1	.0031943	-.002211	-.000012
#2	.0019036	-.001773	-.000124
#3	-.001139	-.002404	-.000103

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3383.996	72696.92	14967.38	2368.653	4110.134
Stddev	7.018	148.29	36.90	1.859	3.801
%RSD	.2074027	.2039836	.2465555	.0784667	.0924723
#1	3377.407	72739.59	14941.10	2370.799	4108.265
#2	3391.377	72819.20	15009.57	2367.587	4114.508
#3	3383.205	72531.97	14951.46	2367.573	4107.630

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: ICSABDLX20 Acquired: 2/7/2025 12:52:59 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0058521	.0053000	.0015205	.0024597	.0312854	12.29161	.0212583
Stddev	.0011286	.0015300	.0006858	.0014963	.0008327	.01518	.0005629
%RSD	19.28500	28.86842	45.10493	60.83299	2.661738	.1235088	2.648052
#1	.0070414	.0070411	.0023020	.0020842	.0313519	12.27447	.0218885
#2	.0057187	.0041699	.0010191	.0041081	.0304214	12.29698	.0208052
#3	.0047961	.0046889	.0012403	.0011869	.0320829	12.30337	.0210812

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0269229	.0520499	12.26998	.0293016	.0257376	.0262965	4.917724
Stddev	.0002075	.0000522	.04462	.0003420	.0001270	.0003493	.027316
%RSD	.7705759	.1003596	.3636521	1.167113	.4934759	1.328279	.5554630
#1	.0269483	.0519934	12.24673	.0294531	.0258324	.0266989	4.897927
#2	.0267039	.0520597	12.24179	.0289101	.0257872	.0261196	4.906357
#3	.0271165	.0520965	12.32143	.0295418	.0255933	.0260711	4.948888

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0255889	12.66738	.0521996	.0105353	.0267527	.0227096	.0531670
Stddev	.0001627	.05071	.0002370	.0002211	.0018369	.0013081	.0001703
%RSD	.6357924	.4002978	.4539333	2.098867	6.866313	5.760107	.3203710
#1	.0255047	12.63300	.0522811	.0104367	.0253748	.0212274	.0529854
#2	.0254856	12.64353	.0519327	.0107886	.0260453	.0237026	.0531924
#3	.0257764	12.72562	.0523851	.0103807	.0288382	.0231987	.0533232

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0658818	.0012029	-.000146	.0073078	-.000932	.0013338	-.004281
Stddev	.0259881	.0001733	.000120	.0004336	.000866	.0009559	.000567
%RSD	39.44657	14.40761	82.29043	5.933438	92.93412	71.66790	13.24782
#1	.0501121	.0013084	-.000284	.0077058	-.000470	.0004057	-.004359
#2	.0958770	.0012975	-.000081	.0073718	-.001930	.0023152	-.003679
#3	.0516562	.0010029	-.000072	.0068457	-.000394	.0012804	-.004805

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: ICSABDLX20 Acquired: 2/7/2025 12:52:59 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0013581	-.002219	.0000514
Stddev	.0005404	.000892	.0000418
%RSD	39.78913	40.18336	81.31363
#1	.0019755	-.002515	.0000996
#2	.0011277	-.001217	.0000267
#3	.0009712	-.002925	.0000279

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3388.323	73176.90	14650.62	2412.404	4113.032
Stddev	4.946	313.31	65.63	7.307	10.190
%RSD	.1459825	.4281542	.4479386	.3028818	.2477483
#1	3392.757	73311.83	14671.15	2420.662	4123.343
#2	3389.225	73400.15	14703.53	2409.773	4112.785
#3	3382.988	72818.74	14577.19	2406.777	4102.968

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV01 Acquired: 2/7/2025 12:57:14 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.070821	5.197836	4.991585	5.110491	5.044948	9.852172	9.861062
Stddev	.017631	.002619	.018454	.016291	.017626	.016745	.032493
%RSD	.3476880	.0503789	.3697052	.3187746	.3493759	.1699585	.3295055
#1	5.052340	5.198858	4.979927	5.098100	5.037715	9.834630	9.842479
#2	5.072666	5.199789	4.981967	5.104429	5.032089	9.853902	9.898581
#3	5.087456	5.194860	5.012862	5.128944	5.065039	9.867985	9.842126

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2503534	2.494358	24.37634	1.011011	2.482944	1.266265	4.933270
Stddev	.0018241	.007878	.01108	.002633	.006556	.004207	.046368
%RSD	.7285989	.3158255	.0454416	.2604037	.2640518	.3322366	.9399023
#1	.2523873	2.489364	24.38406	1.008634	2.478905	1.265226	4.891655
#2	.2498104	2.490269	24.36365	1.010560	2.479417	1.262676	4.924902
#3	.2488624	2.503439	24.38132	1.013841	2.490508	1.270895	4.983252

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.417724	24.53380	2.491677	1.253360	23.89120	2.445396	2.515198
Stddev	.004961	.06674	.007689	.003550	.27694	.003362	.007327
%RSD	.2051957	.2720353	.3085932	.2832540	1.159191	.1374801	.2913106
#1	2.419909	24.54864	2.486353	1.249937	23.63132	2.447433	2.506896
#2	2.412045	24.46088	2.488185	1.253119	23.85975	2.441515	2.517941
#3	2.421217	24.59186	2.500492	1.257025	24.18252	2.447239	2.520759

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.53268	4.958683	5.041049	5.025125	4.851068	4.902527	5.020698
Stddev	.33008	.040874	.012988	.018602	.013031	.049038	.015096
%RSD	1.345452	.8242911	.2576431	.3701895	.2686215	1.000260	.3006723
#1	24.20866	5.003953	5.036822	5.017674	4.845184	4.852204	5.005546
#2	24.52087	4.947608	5.030701	5.011402	4.842017	4.905209	5.020810
#3	24.86849	4.924487	5.055624	5.046297	4.866003	4.950170	5.035738

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV01 Acquired: 2/7/2025 12:57:14 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.003805	4.781879	4.892278
Stddev	.011010	.021954	.044985
%RSD	.2200265	.4591018	.9195183
#1	4.991416	4.768863	4.887243
#2	5.007527	4.769547	4.850021
#3	5.012471	4.807226	4.939569

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3311.880	70480.68	14411.18	2275.413	3927.520
Stddev	12.363	324.81	73.79	14.722	13.433
%RSD	.3732981	.4608448	.5120537	.6470053	.3420281
#1	3315.011	70827.38	14331.45	2291.845	3933.836
#2	3322.377	70431.24	14424.99	2270.970	3936.632
#3	3298.252	70183.44	14477.09	2263.424	3912.093

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB01 Acquired: 2/7/2025 13:01:25 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0013246	.0010748	-.000567	-.001683	.0011516	-.002231	-.003923
Stddev	.0012661	.0006052	.000633	.002708	.0006283	.000417	.000621
%RSD	95.58743	56.30989	111.6422	160.9054	54.55335	18.70962	15.83374
#1	.0019850	.0004427	-.000390	.001389	.0005885	-.001866	-.003589
#2	.0021240	.0016489	-.001270	-.003726	.0018292	-.002686	-.003540
#3	-.000135	.0011328	-.000041	-.002712	.0010372	-.002141	-.004639

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000874	.0001672	.0000444	-.000408	.0002805	-.001563	-.007530
Stddev	.0000222	.0000582	.0047865	.000300	.0001400	.000248	.003134
%RSD	25.33077	34.80480	10769.75	73.63746	49.91337	15.85859	41.61751
#1	.0000748	.0001678	-.003665	-.000555	.0004348	-.001650	-.006509
#2	.0000745	.0002252	.005447	-.000062	.0002449	-.001756	-.011048
#3	.0001130	.0001088	-.001649	-.000607	.0001617	-.001284	-.005034

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002679	.0150771	-.000080	.0001569	.0097049	-.000246	-.000197
Stddev	.0001750	.0041213	.000308	.0002059	.0091605	.001135	.000147
%RSD	65.33029	27.33506	383.9762	131.2098	94.39038	461.1436	74.44425
#1	.0001188	.0181382	-.000374	.0003101	.0193362	-.001500	-.000140
#2	.0002243	.0103910	.000239	.0002377	.0011020	.000711	-.000363
#3	.0004605	.0167020	-.000105	-.000077	.0086766	.000050	-.000087

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0855678	.0105071	.0006071	.0072187	.0004962	.0065091	-.000106
Stddev	.0089233	.0005477	.0002202	.0005635	.0002755	.0064798	.002341
%RSD	10.42835	5.212388	36.27471	7.805882	55.51571	99.55099	2215.766
#1	.0886599	.0104842	.0006609	.0077174	.0008084	.0053064	.002580
#2	.0755097	.0110658	.0007954	.0073313	.0003927	.0135060	-.001186
#3	.0925337	.0099712	.0003649	.0066075	.0002875	.0007148	-.001711

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB01 Acquired: 2/7/2025 13:01:25 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.002499	-.001987	.0002500
Stddev	.001327	.000891	.0000348
%RSD	53.10357	44.83443	13.93131
#1	-.003976	-.002546	.0002902
#2	-.001408	-.000960	.0002295
#3	-.002113	-.002454	.0002303

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3435.062	74161.54	14643.03	2363.816	4322.019
Stddev	12.759	58.15	40.71	3.630	12.190
%RSD	.3714240	.0784097	.2779892	.1535620	.2820380
#1	3444.347	74115.46	14664.51	2367.793	4326.588
#2	3440.325	74142.29	14596.08	2362.974	4331.265
#3	3420.514	74226.88	14668.49	2360.681	4308.205

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1277-02 Acquired: 2/7/2025 13:05:45 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.2298882	.0028415	1.781033	-.040614	-.001065	172.7847
Stddev	.0022344	.0013725	.005828	.004013	.001633	.3851
%RSD	.9719366	48.30299	.3272464	9.879971	153.2688	.2228865
#1	.2273619	.0033784	1.777114	-.035992	.000320	172.3476
#2	.2316050	.0012817	1.787731	-.043200	-.002866	172.9321
#3	.2306976	.0038645	1.778256	-.042651	-.000650	173.0743

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.214792	.0159071	.0169456	80.87285	.4691689	.1255545
Stddev	.002051	.0000696	.0004835	.15234	.0008329	.0004753
%RSD	.1688247	.4373774	2.852998	.1883742	.1775241	.3785891
#1	1.216325	.0158605	.0163882	80.74095	.4693166	.1252139
#2	1.212463	.0158736	.0171967	81.03960	.4682721	.1260975
#3	1.215590	.0159870	.0172517	80.83799	.4699181	.1253520

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2930527	396.6849	2.404679	56.56742	.3031700	.0022706
Stddev	.0033042	3.0450	.003432	.23508	.0020151	.0008636
%RSD	1.127508	.7676124	.1427107	.4155783	.6646795	38.03572
#1	.2896705	400.1747	2.405116	56.29733	.3018025	.0032389
#2	.2962729	394.5688	2.401049	56.72599	.3054842	.0015797
#3	.2932147	395.3111	2.407871	56.67894	.3022234	.0019933

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.633941	.5125333	1.207457	15.98866	.2830765	.0080344
Stddev	.008671	.0024074	.004081	.09407	.0056006	.0003290
%RSD	.5306917	.4697128	.3379697	.5883546	1.978489	4.094622
#1	1.643587	.5124591	1.202937	16.08739	.2886595	.0076905
#2	1.626793	.5149770	1.208563	15.90007	.2774584	.0083461
#3	1.631442	.5101639	1.210871	15.97852	.2831114	.0080665

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1277-02 Acquired: 2/7/2025 13:05:45 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0255915	3.673778	F 15.90286	5.608538	8.656448	.5197438
Stddev	.0008335	.000482	.08674	.008172	.009163	.0017879
%RSD	3.256865	.0131282	.5454504	.1456989	.1058539	.3439997
#1	.0261675	3.674128	15.94733	5.599144	8.647204	.5217942
#2	.0246358	3.673979	15.80290	5.614003	8.665528	.5189270
#3	.0259713	3.673228	15.95834	5.612467	8.656613	.5185102

Elem	Sr4077
Units	ppm
Avg	-.065756
Stddev	.002759
%RSD	4.196359
#1	-.068942
#2	-.064203
#3	-.064124

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3526.178	75736.38	16613.44	2422.743	3786.491
Stddev	4.609	184.94	82.32	2.342	4.839
%RSD	.1307124	.2441907	.4955284	.0966507	.1277838
#1	3521.557	75548.82	16679.44	2420.088	3786.472
#2	3526.200	75918.59	16521.19	2423.630	3781.661
#3	3530.776	75741.73	16639.69	2424.512	3791.338

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1284-01 Acquired: 2/7/2025 13:09:56 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0543590	-.011454	.2894832	-.030502	-.002419	131.5655
Stddev	.0019844	.003418	.0023374	.003457	.000543	.2902
%RSD	3.650503	29.83872	.8074487	11.33445	22.45011	.2205976
#1	.0532620	-.014810	.2869272	-.026651	-.002922	131.3267
#2	.0566496	-.007978	.2915120	-.031515	-.002491	131.8885
#3	.0531652	-.011572	.2900105	-.033340	-.001843	131.4814

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6944952	.0112515	.0144598	52.78071	.2493678	.1505313
Stddev	.0019598	.0001723	.0001450	.18039	.0012873	.0002460
%RSD	.2821862	1.531518	1.002414	.3417680	.5162237	.1634498
#1	.6934668	.0112295	.0143892	52.87212	.2484440	.1504854
#2	.6967551	.0110912	.0143636	52.89710	.2508382	.1503115
#3	.6932638	.0114337	.0146265	52.57292	.2488211	.1507971

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4751574	277.0405	4.918571	47.09890	.2707364	.0017053
Stddev	.0018034	1.5078	.016845	.21172	.0012185	.0001820
%RSD	.3795273	.5442603	.3424821	.4495195	.4500832	10.67193
#1	.4732379	277.1917	4.930901	47.18587	.2696401	.0015917
#2	.4754181	278.4670	4.925434	47.25327	.2720484	.0019152
#3	.4768162	275.4627	4.899377	46.85754	.2705206	.0016089

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.480939	.3891006	.7413049	13.78721	.1719607	.0055727
Stddev	.043542	.0009696	.0021345	.06718	.0021111	.0000184
%RSD	.6718533	.2491979	.2879434	.4872867	1.227660	.3294607
#1	6.448867	.3900896	.7427242	13.74284	.1702995	.0055913
#2	6.530508	.3890605	.7388502	13.86450	.1743363	.0055720
#3	6.463441	.3881516	.7423405	13.75427	.1712462	.0055546

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1284-01 Acquired: 2/7/2025 13:09:56 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0031501	3.954526	F 13.46435	7.117307	2.546848	.3058216
Stddev	.0003673	.009111	.07074	.022840	.000395	.0009541
%RSD	11.65810	.2304045	.5253516	.3209095	.0155287	.3119776
#1	.0033936	3.954221	13.41845	7.092397	2.546826	.3057005
#2	.0027277	3.963786	13.54581	7.122259	2.546464	.3068305
#3	.0033291	3.945570	13.42879	7.137265	2.547254	.3049339

Elem	Sr4077
Units	ppm
Avg	-.076807
Stddev	.001222
%RSD	1.590432
#1	-.076988
#2	-.077928
#3	-.075505

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3954.387	88113.58	18466.14	2812.604	3781.527
Stddev	2.989	164.13	36.04	4.424	1.666
%RSD	.0755824	.1862744	.1951417	.1572950	.0440542
#1	3951.340	88142.60	18432.04	2817.697	3780.528
#2	3954.505	87936.87	18503.84	2810.397	3780.603
#3	3957.314	88261.26	18462.54	2809.717	3783.451

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166530BS Acquired: 2/7/2025 13:18:22 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.7798273	2.029085	.9485051	1.987093	.7856119	1.901636
Stddev	.0024473	.006823	.0018338	.001793	.0043389	.002840
%RSD	.3138236	.3362751	.1933316	.0902142	.5522890	.1493279
#1	.7807027	2.021599	.9468607	1.985495	.7837714	1.903877
#2	.7770627	2.030700	.9481719	1.989031	.7824967	1.898442
#3	.7817165	2.034956	.9504825	1.986752	.7905676	1.902587

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1777197	.1971422	.1912853	.9662293	.3994922	.1934768
Stddev	.0014287	.0007700	.0000548	.0083190	.0006635	.0002086
%RSD	.8039073	.3905735	.0286415	.8609814	.1660969	.1078164
#1	.1788503	.1978827	.1913416	.9746348	.4001471	.1937061
#2	.1781949	.1971979	.1912823	.9660538	.3988203	.1934260
#3	.1761140	.1963458	.1912322	.9579995	.3995093	.1932983

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3069657	2.847900	.1891963	1.895769	.4871611	.0740285
Stddev	.0005393	.011402	.0011426	.002187	.0007290	.0005733
%RSD	.1756925	.4003776	.6039139	.1153441	.1496452	.7744678
#1	.3075310	2.839552	.1902126	1.898260	.4879726	.0733704
#2	.3069092	2.860891	.1894166	1.894881	.4865617	.0742952
#3	.3064569	2.843255	.1879596	1.894167	.4869489	.0744200

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.571066	.2813971	.2024967	9.229888	.2887456	.4000447
Stddev	.021938	.0010265	.0002584	.056660	.0006819	.0005677
%RSD	.8532792	.3647896	.1276030	.6138769	.2361674	.1419020
#1	2.549540	.2825757	.2027558	9.251875	.2892471	.4001588
#2	2.593394	.2806984	.2022391	9.272260	.2879692	.3994286
#3	2.570264	.2809172	.2024951	9.165530	.2890207	.4005466

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166530BS Acquired: 2/7/2025 13:18:22 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.6842592	.1863960	.7462531	5.610301	F -.009500	.1878067
Stddev	.0005565	.0006038	.0074329	.012447	.002476	.0014412
%RSD	.0813244	.3239445	.9960238	.2218632	26.06610	.7673604
#1	.6838567	.1860624	.7442323	5.623681	-.006882	.1890771
#2	.6848942	.1870930	.7544874	5.599065	-.009811	.1881024
#3	.6840266	.1860325	.7400395	5.608158	-.011805	.1862406

Elem	Sr4077
Units	ppm
Avg	.1836379
Stddev	.0007145
%RSD	.3890623
#1	.1840100
#2	.1840895
#3	.1828142

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3418.144	73009.63	14783.64	2345.061	4237.822
Stddev	4.821	166.52	13.95	3.741	6.874
%RSD	.1410275	.2280773	.0943523	.1595223	.1621949
#1	3416.153	72993.59	14769.09	2343.746	4230.549
#2	3423.641	73183.59	14796.89	2349.282	4244.211
#3	3414.638	72851.71	14784.94	2342.155	4238.705

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166423TB Acquired: 2/7/2025 13:22:22 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.004092	-.005056	-.001024	.0056667	-.000094	.0091000
Stddev	.001409	.000273	.000997	.0012552	.000686	.0053526
%RSD	34.43078	5.409322	97.32523	22.15014	726.6382	58.81952
#1	-.003538	-.004810	-.000446	.0055284	-.000775	.0146475
#2	-.005693	-.005007	-.000452	.0044864	-.000106	.0039663
#3	-.003044	-.005350	-.002176	.0069853	.000597	.0086863

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006113	-.000160	.0000246	.0032251	.0007907	-.000169
Stddev	.000334	.000034	.0000682	.0096228	.0001149	.000138
%RSD	5.465583	21.26894	276.7943	298.3750	14.52982	81.89694
#1	-.005754	-.000171	.0000974	.0131435	.0008083	-.000263
#2	-.006171	-.000122	.0000141	.0026035	.0006681	-.000010
#3	-.006415	-.000187	-.000038	-.006072	.0008958	-.000234

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000817	.0139040	.0008799	.0014710	.0003525	-.000005
Stddev	.000322	.0056103	.0002014	.0015044	.0002322	.000193
%RSD	39.43420	40.35000	22.88452	102.2716	65.87045	3540.272
#1	-.001156	.0199286	.0009072	.0005663	.0004057	-.000045
#2	-.000514	.0129541	.0010663	.0032077	.0005536	-.000175
#3	-.000782	.0088293	.0006663	.0006390	.0000984	.000204

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 328.0979	-.000948	.0010644	.1202530	-.001534	.0005314
Stddev	1.3918	.001195	.0000863	.0015248	.000398	.0000560
%RSD	.4241986	126.0734	8.112021	1.268031	25.96740	10.54458
#1	327.7774	-.000927	.0010667	.1193178	-.001290	.0004667
#2	329.6219	.000237	.0009770	.1220126	-.001319	.0005629
#3	326.8943	-.002153	.0011496	.1194285	-.001994	.0005647

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166423TB Acquired: 2/7/2025 13:22:22 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.006687	-.000174	.0260030	.0048357	F .0140984	-.003159
Stddev	.000838	.000119	.0057642	.0025512	.0005503	.000322
%RSD	12.53911	68.75053	22.16749	52.75844	3.903034	10.18769
#1	-.007560	-.000067	.0227191	.0033864	.0139456	-.003124
#2	-.006612	-.000303	.0326588	.0077815	.0147089	-.002856
#3	-.005888	-.000151	.0226312	.0033391	.0136406	-.003497

Elem	Sr4077
Units	ppm
Avg	-.000036
Stddev	.000023
%RSD	62.21498
#1	-.000060
#2	-.000015
#3	-.000033

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3179.189	68876.13	15229.06	2173.381	3829.083
Stddev	5.553	264.05	35.74	12.823	6.940
%RSD	.1746634	.3833657	.2346824	.5899802	.1812364
#1	3176.888	68639.74	15187.91	2167.091	3827.678
#2	3185.523	68827.57	15252.46	2164.918	3836.618
#3	3175.157	69161.09	15246.79	2188.134	3822.954

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1238-01 Acquired: 2/7/2025 13:26:52 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.004682	-.009296	-.001027	.0044049	.0035980	-.054352
Stddev	.000445	.002596	.001247	.0008143	.0004690	.005000
%RSD	9.506775	27.92634	121.4998	18.48669	13.03621	9.200100
#1	-.004833	-.012292	-.002261	.0037099	.0035728	-.057290
#2	-.005032	-.007696	.000233	.0053009	.0031421	-.057187
#3	-.004181	-.007901	-.001051	.0042039	.0040791	-.048578

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0459473	-.000137	-.000020	154.3572	.0038852	-.000538
Stddev	.0004600	.000009	.000078	.6444	.0001284	.000220
%RSD	1.001174	6.480148	395.6604	.4174460	3.305109	40.81599
#1	.0464785	-.000143	-.000044	154.8559	.0040319	-.000526
#2	.0456753	-.000127	.000068	154.5860	.0037931	-.000764
#3	.0456883	-.000141	-.000083	153.6297	.0038306	-.000325

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048029	.0196587	.0024620	7.412276	.0018358	.0001350
Stddev	.0005228	.0014462	.0001170	.028386	.0002182	.0000910
%RSD	10.88461	7.356606	4.750469	.3829567	11.88744	67.42806
#1	.0043745	.0192054	.0024907	7.439410	.0015994	.0002241
#2	.0046486	.0212773	.0023334	7.414631	.0020297	.0001386
#3	.0053854	.0184935	.0025619	7.382785	.0018782	.0000422

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	339.9223	.0248736	.0063276	14.60196	.0609058	.0074086
Stddev	5.5889	.0010539	.0002808	.07516	.0006518	.0000193
%RSD	1.644183	4.236910	4.436896	.5147244	1.070216	.2606310
#1	334.6695	.0237635	.0063731	14.51557	.0614661	.0074094
#2	339.3017	.0249970	.0065828	14.63792	.0610611	.0074275
#3	345.7956	.0258604	.0060269	14.65238	.0601904	.0073889

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1238-01 Acquired: 2/7/2025 13:26:52 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.009395	-.003427	1.850421	.0087870	F 31.14750	.0141808
Stddev	.000584	.000417	.008500	.0016586	.06167	.0005106
%RSD	6.218779	12.18251	.4593515	18.87557	.1979885	3.600589
#1	-.009886	-.003902	1.840620	.0078829	31.20727	.0137103
#2	-.008749	-.003259	1.854865	.0077768	31.15114	.0147238
#3	-.009550	-.003119	1.855778	.0107012	31.08409	.0141085

Elem	Sr4077
Units	ppm
Avg	1.124039
Stddev	.009434
%RSD	.8392664
#1	1.119940
#2	1.134829
#3	1.117349

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3068.172	67886.23	15071.32	2129.763	3652.495
Stddev	8.218	258.01	62.20	5.522	9.728
%RSD	.2678617	.3800653	.4127225	.2592650	.2663281
#1	3060.466	68121.78	15033.63	2134.949	3646.085
#2	3067.229	67610.48	15037.21	2123.958	3647.711
#3	3076.822	67926.44	15143.11	2130.382	3663.688

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1238-02 Acquired: 2/7/2025 13:31:22 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.004316	-.008308	.0103416	.0043781	.0032490	-.043069	.3551989
Stddev	.001897	.002429	.0005928	.0019401	.0001755	.009977	.0020602
%RSD	43.93916	29.24142	5.732451	44.31255	5.400066	23.16430	.5800243
#1	-.006458	-.010903	.0104840	.0028066	.0032920	-.034554	.3531713
#2	-.002850	-.006088	.0096905	.0037812	.0033990	-.040607	.3551350
#3	-.003641	-.007933	.0108502	.0065465	.0030561	-.054046	.3572903

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000184	.0002199	141.6612	.0003618	-.000344	-.000349	.0586241
Stddev	.000039	.0000834	.4356	.0003089	.000102	.000393	.0033912
%RSD	21.45001	37.90651	.3075269	85.37513	29.70192	112.6953	5.784605
#1	-.000139	.0003030	141.2545	.0000056	-.000275	.000028	.0620777
#2	-.000201	.0002204	141.6082	.0005248	-.000461	-.000757	.0552990
#3	-.000212	.0001363	142.1209	.0005552	-.000294	-.000317	.0584954

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0175088	1.038252	.0011336	-.000357	355.1945	-.000989	.3010762
Stddev	.0005545	.006795	.0003701	.000321	6.0739	.001586	.0008092
%RSD	3.166888	.6544469	32.65058	90.03164	1.710027	160.4173	.2687649
#1	.0168984	1.030541	.0007065	-.000192	361.8909	-.002820	.3012115
#2	.0176465	1.043363	.0013609	-.000727	353.6523	-.000069	.3002080
#3	.0179815	1.040852	.0013335	-.000151	350.0403	-.000077	.3018093

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7252245	.0422797	.0008023	-.009771	-.003744	.1385258	.0045399
Stddev	.0145463	.0007193	.0000956	.001102	.000155	.0080433	.0007477
%RSD	2.005765	1.701357	11.91902	11.28089	4.136369	5.806348	16.46995
#1	.7272532	.0414869	.0007325	-.010454	-.003889	.1472624	.0036779
#2	.7097704	.0428906	.0007632	-.010359	-.003761	.1314283	.0050132
#3	.7386500	.0424617	.0009114	-.008499	-.003581	.1368867	.0049285

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1238-02 Acquired: 2/7/2025 13:31:22 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	1.023378	-.026262	.0808566
Stddev	.005849	.000395	.0003212
%RSD	.5715859	1.502545	.3972610
#1	1.017176	-.026079	.0805684
#2	1.024161	-.026715	.0807984
#3	1.028796	-.025992	.0812029

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3096.710	68365.51	15020.15	2162.885	3654.696
Stddev	5.108	166.66	47.20	4.428	6.495
%RSD	.1649501	.2437793	.3142589	.2047135	.1777240
#1	3093.275	68219.43	15064.93	2157.852	3653.960
#2	3102.580	68330.06	14970.85	2164.621	3661.527
#3	3094.275	68547.05	15024.66	2166.181	3648.599

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1238-03 Acquired: 2/7/2025 13:35:47 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.002450	-.007178	.0185128	.0037520	.0085546	.0731135	.2854083
Stddev	.002715	.001309	.0004044	.0005117	.0012043	.0047417	.0009255
%RSD	110.8331	18.23918	2.184478	13.63712	14.07795	6.485390	.3242624
#1	-.004067	-.006933	.0188955	.0034774	.0072387	.0694861	.2864059
#2	.000685	-.006008	.0185531	.0043424	.0088229	.0713754	.2852413
#3	-.003967	-.008592	.0180897	.0034363	.0096021	.0784790	.2845777

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000139	.0002330	8.737437	.0020329	.0000733	.0141891	.2068129
Stddev	.000053	.0000838	.024066	.0001985	.0000953	.0001205	.0038541
%RSD	37.99390	35.97604	.2754343	9.766297	129.9898	.8492915	1.863560
#1	-.000191	.0001567	8.762882	.0022575	-.000026	.0141346	.2026160
#2	-.000141	.0003227	8.715041	.0018807	.000164	.0143273	.2101933
#3	-.000086	.0002195	8.734388	.0019605	.000081	.0141056	.2076294

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0142852	.6953712	.0025609	.0001336	328.3783	.0004417	.3092010
Stddev	.0001176	.0104826	.0000427	.0001304	4.3055	.0006774	.0004752
%RSD	.8233398	1.507487	1.667861	97.58700	1.311147	153.3621	.1536912
#1	.0142208	.6844139	.0025857	.0002057	332.9148	.0011629	.3090534
#2	.0144210	.6963955	.0025116	-.000017	324.3487	.0003433	.3088172
#3	.0142138	.7053040	.0025854	.000212	327.8714	-.000181	.3097326

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7886427	.1109329	.0006522	-.007551	-.000275	.2767189	.0129956
Stddev	.0084674	.0008823	.0000940	.000202	.000573	.0062260	.0017102
%RSD	1.073666	.7953302	14.40989	2.676678	208.3186	2.249921	13.15967
#1	.7914490	.1100840	.0005464	-.007597	.000370	.2839013	.0139674
#2	.7953508	.1108695	.0006840	-.007330	-.000472	.2728595	.0110209
#3	.7791285	.1118452	.0007261	-.007727	-.000723	.2733958	.0139984

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1238-03 Acquired: 2/7/2025 13:35:47 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	1.516419	-.003250	.0352623
Stddev	.008847	.001312	.0000992
%RSD	.5834345	40.36231	.2813792
#1	1.519373	-.001913	.0353764
#2	1.506473	-.004534	.0351963
#3	1.523412	-.003302	.0352140

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3210.921	69999.60	15002.69	2219.420	3845.999
Stddev	1.689	258.63	127.70	6.443	5.436
%RSD	.0526061	.3694710	.8511863	.2902886	.1413479
#1	3209.032	69733.76	14859.45	2212.922	3841.700
#2	3212.288	70014.68	15104.64	2219.533	3852.110
#3	3211.441	70250.35	15043.98	2225.805	3844.187

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1241-04 Acquired: 2/7/2025 13:40:13 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.004150	-.007088	.1397039	.0024701	.0044531	-.007702	.3004118
Stddev	.002523	.000659	.0008789	.0031852	.0011519	.008787	.0020522
%RSD	60.78684	9.296730	.6290788	128.9518	25.86719	114.0834	.6831339
#1	-.002490	-.006738	.1386897	.0057837	.0057830	.002147	.2980559
#2	-.007053	-.006678	.1401785	-.000569	.0037686	-.010517	.3018110
#3	-.002907	-.007848	.1402433	.002195	.0038077	-.014737	.3013684

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000148	.0052785	142.9333	.0393764	.0017932	.0331773	.2515779
Stddev	.000009	.0000405	.4288	.0004788	.0000524	.0001700	.0063966
%RSD	5.991678	.7676244	.3000248	1.216039	2.921276	.5124648	2.542601
#1	-.000140	.0053198	142.4398	.0389840	.0017329	.0333647	.2497382
#2	-.000147	.0052770	143.1447	.0392352	.0018268	.0330330	.2463027
#3	-.000158	.0052388	143.2153	.0399100	.0018200	.0331341	.2586928

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3118851	2.388139	.0468327	.0001573	337.5970	.0008707	2.232102
Stddev	.0017448	.012276	.0007019	.0000875	3.6796	.0000712	.011400
%RSD	.5594495	.5140374	1.498725	55.63426	1.089938	8.181185	.5107348
#1	.3098704	2.379426	.0460961	.0001050	333.6794	.0008491	2.240326
#2	.3128785	2.382811	.0474937	.0002583	338.1316	.0008128	2.236893
#3	.3129064	2.402178	.0469084	.0001086	340.9801	.0009502	2.219089

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.147637	.0153627	.0014279	-.009438	-.001672	3.723437	.0240199
Stddev	.029285	.0007383	.0001376	.000541	.000272	.009911	.0009601
%RSD	.9303702	4.805630	9.638072	5.728570	16.27108	.2661782	3.996916
#1	3.147377	.0157757	.0015644	-.009418	-.001373	3.712124	.0237582
#2	3.177050	.0158019	.0012892	-.009988	-.001737	3.730593	.0232177
#3	3.118483	.0145103	.0014302	-.008907	-.001906	3.727592	.0250836

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1241-04 Acquired: 2/7/2025 13:40:13 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	2.742892	-.021766	.3997435
Stddev	.008402	.000817	.0015839
%RSD	.3063018	3.751652	.3962374
#1	2.737111	-.022259	.3980704
#2	2.739036	-.020824	.4012199
#3	2.752530	-.022215	.3999402

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3043.749	67473.72	15026.93	2100.029	3624.755
Stddev	6.853	22.68	16.97	12.158	9.486
%RSD	.2251396	.0336153	.1129281	.5789550	.2617138
#1	3046.066	67496.39	15011.24	2092.095	3627.498
#2	3049.143	67473.75	15024.61	2093.966	3632.567
#3	3036.039	67451.03	15044.94	2114.027	3614.199

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1241-08 Acquired: 2/7/2025 13:44:35 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.003486	-.007190	.0028753	.0029785	.0039697	-.027890	.1279715
Stddev	.001765	.001070	.0008486	.0019988	.0007400	.007645	.0012631
%RSD	50.63468	14.88913	29.51410	67.10718	18.64194	27.41263	.9870310
#1	-.003923	-.007858	.0037618	.0035338	.0033880	-.022659	.1282175
#2	-.001543	-.005955	.0027939	.0007608	.0048027	-.036665	.1290936
#3	-.004991	-.007755	.0020704	.0046410	.0037186	-.024347	.1266035

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000166	.0002773	147.1972	.0053112	.0006308	.0054551	.0006139
Stddev	.000020	.0000695	.1740	.0002875	.0002189	.0004009	.0018896
%RSD	12.02924	25.07794	.1182109	5.413455	34.70388	7.348255	307.8157
#1	-.000179	.0003572	147.2497	.0053045	.0006615	.0058632	.0027530
#2	-.000143	.0002435	147.3389	.0056020	.0008328	.0054404	-.000083
#3	-.000177	.0002310	147.0030	.0050271	.0003982	.0050619	-.000828

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2322307	3.068086	.0087079	.0001539	370.1183	.0010064	.0693534
Stddev	.0009153	.011955	.0003152	.0001188	4.6919	.0003105	.0001836
%RSD	.3941516	.3896612	3.619426	77.19827	1.267682	30.84946	.2647916
#1	.2329094	3.058421	.0087556	.0001175	368.9198	.0012807	.0693661
#2	.2325931	3.081455	.0089965	.0000576	375.2932	.0006694	.0695304
#3	.2311897	3.064381	.0083716	.0002866	366.1418	.0010691	.0691638

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.369206	.0200106	.0025846	-.009276	-.003519	5.693940	.0126852
Stddev	.007304	.0005953	.0001535	.000097	.000110	.015419	.0002508
%RSD	.1671812	2.975026	5.939648	1.043209	3.130735	.2708044	1.977419
#1	4.368416	.0195253	.0027583	-.009167	-.003437	5.685982	.0127072
#2	4.376874	.0206749	.0025285	-.009308	-.003475	5.684124	.0129243
#3	4.362329	.0198315	.0024670	-.009353	-.003644	5.711712	.0124241

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1241-08 Acquired: 2/7/2025 13:44:35 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	3.273378	-.025275	.5327170
Stddev	.012383	.000522	.0021048
%RSD	.3782806	2.063790	.3951127
#1	3.264609	-.024908	.5347837
#2	3.267982	-.025045	.5327911
#3	3.287543	-.025872	.5305760

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3094.601	67364.18	14966.82	2082.018	3691.766
Stddev	8.370	117.19	48.46	5.761	5.479
%RSD	.2704678	.1739707	.3237893	.2766837	.1484015
#1	3092.619	67464.08	14990.30	2077.921	3694.182
#2	3103.784	67235.18	14911.09	2079.529	3695.622
#3	3087.400	67393.29	14999.07	2088.605	3685.495

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV02 Acquired: 2/7/2025 13:49:01 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	5.062659	5.141413	4.967600	5.110491	5.055933	9.881558	9.832512
Stddev	.011130	.017760	.013088	.006992	.014581	.015529	.169364
%RSD	.2198382	.3454248	.2634617	.1368100	.2883851	.1571527	1.722490
#1	5.067225	5.159910	4.961019	5.109002	5.056075	9.877590	9.780007
#2	5.049973	5.139832	4.959108	5.104364	5.041281	9.898686	10.02191
#3	5.070780	5.124497	4.982672	5.118108	5.070441	9.868398	9.69562

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2478589	2.474130	24.50827	1.005084	2.478079	1.270567	4.961659
Stddev	.0016483	.006080	.07928	.005406	.008450	.003564	.007727
%RSD	.6650185	.2457494	.3234750	.5379016	.3410092	.2805320	.1557413
#1	.2473711	2.473133	24.44829	1.001947	2.477323	1.271774	4.960643
#2	.2496960	2.468611	24.59815	1.011327	2.470032	1.266556	4.954490
#3	.2465095	2.480648	24.47836	1.001979	2.486882	1.273371	4.969844

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.436094	24.53758	2.486500	1.250183	24.76604	2.455121	2.502010
Stddev	.008123	.12454	.008010	.001466	.06191	.002885	.004196
%RSD	.3334619	.5075463	.3221221	.1172603	.2499996	.1175237	.1677155
#1	2.432782	24.59838	2.488607	1.249306	24.76820	2.455255	2.499802
#2	2.445351	24.62005	2.477648	1.249369	24.70307	2.452171	2.499380
#3	2.430151	24.39432	2.493245	1.251876	24.82684	2.457937	2.506850

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.97136	4.908416	5.008801	4.983602	4.894105	4.989592	5.044402
Stddev	.08417	.035553	.009320	.014529	.010340	.023624	.018835
%RSD	.3370518	.7243292	.1860630	.2915394	.2112690	.4734577	.3733830
#1	24.91089	4.885611	5.009239	4.984446	4.891115	5.000222	5.062862
#2	24.93571	4.949381	4.999271	4.968669	4.905609	4.962521	5.025214
#3	25.06749	4.890255	5.017894	4.997691	4.885589	5.006034	5.045131

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV02 Acquired: 2/7/2025 13:49:01 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	5.001386	4.866678	4.944525
Stddev	.005936	.011241	.091264
%RSD	.1186821	.2309699	1.845754
#1	5.006106	4.853781	5.007623
#2	4.994722	4.874392	4.986073
#3	5.003331	4.871860	4.839880

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3322.701	71438.19	14700.31	2295.725	3955.427
Stddev	9.008	140.14	98.29	8.283	11.966
%RSD	.2711151	.1961644	.6686591	.3608078	.3025335
#1	3320.057	71382.49	14712.41	2287.544	3951.904
#2	3332.736	71334.46	14596.52	2295.524	3968.760
#3	3315.311	71597.61	14791.99	2304.107	3945.618

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB02 Acquired: 2/7/2025 13:53:11 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0019726	.0011062	-.000184	.0003863	.0012630	.0031165	-.001342
Stddev	.0004711	.0013025	.000660	.0012614	.0011618	.0022548	.000463
%RSD	23.88135	117.7434	358.3433	326.5250	91.98702	72.34949	34.50569
#1	.0018131	-.000360	-.000478	-.000125	.0024175	.0037935	-.001846
#2	.0016020	.002130	.000572	-.000539	.0012772	.0006008	-.000934
#3	.0025027	.001548	-.000646	.001823	.0000941	.0049552	-.001248

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000739	.0004072	.0080432	-.000107	.0003282	-.001054	-.008770
Stddev	.0000083	.0000168	.0046155	.000203	.0000901	.000458	.002289
%RSD	11.24533	4.113544	57.38408	189.7465	27.46082	43.41701	26.10340
#1	.0000803	.0004042	.0103891	-.000124	.0003718	-.001572	-.006182
#2	.0000645	.0004253	.0027259	.000104	.0002246	-.000703	-.009595
#3	.0000768	.0003922	.0110147	-.000300	.0003882	-.000888	-.010532

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004650	.0048259	.0003689	.0002735	.1191714	-.001521	-.000130
Stddev	.0001638	.0053407	.0000609	.0002978	.0126349	.000288	.000251
%RSD	35.21914	110.6662	16.49648	108.8938	10.60229	18.92228	193.3369
#1	.0004498	.0101528	.0004139	.0004237	.1115380	-.001286	-.000158
#2	.0006359	.0048535	.0002996	-.000070	.1122206	-.001435	-.000364
#3	.0003094	-.000528	.0003932	.000466	.1337556	-.001842	.000134

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1478647	.0087967	.0009996	.0075981	.0009060	.0013673	-.001262
Stddev	.0179337	.0004340	.0002997	.0008088	.0004182	.0076727	.000503
%RSD	12.12844	4.933625	29.98697	10.64532	46.15530	561.1420	39.86348
#1	.1482460	.0092797	.0011296	.0085062	.0013199	.0091548	-.001732
#2	.1656047	.0086711	.0012123	.0073333	.0009145	.0011324	-.000732
#3	.1297434	.0084394	.0006568	.0069549	.0004837	-.006185	-.001322

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB02 Acquired: 2/7/2025 13:53:11 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0034269	.0031317	.0008710
Stddev	.0032571	.0012752	.0001178
%RSD	95.04714	40.71907	13.52097
#1	.0043370	.0025610	.0009934
#2	.0061322	.0022415	.0008612
#3	-.000189	.0045925	.0007585

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3450.471	74885.07	15060.03	2435.429	4293.540
Stddev	17.231	7.77	52.06	13.511	18.676
%RSD	.4993700	.0103736	.3456886	.5547866	.4349813
#1	3459.769	74878.06	15115.56	2443.140	4300.827
#2	3461.055	74893.42	15012.32	2443.320	4307.474
#3	3430.589	74883.73	15052.23	2419.828	4272.319

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1241-12 Acquired: 2/7/2025 13:58:13 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.005191	-.008620	.0002311	.0028191	.0035907	-.049871	.0868355
Stddev	.000649	.001464	.0020424	.0010469	.0007601	.002514	.0011058
%RSD	12.49969	16.98594	883.6579	37.13538	21.16831	5.041015	1.273473
#1	-.004615	-.007005	-.002127	.0029597	.0044382	-.047110	.0880008
#2	-.005894	-.009861	.001389	.0017090	.0033648	-.052027	.0867051
#3	-.005064	-.008996	.001431	.0037885	.0029692	-.050478	.0858007

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000141	.0001646	140.6428	.0020307	.0002627	.0043387	-.002976
Stddev	.000038	.0000137	.5688	.0001376	.0001027	.0003261	.003010
%RSD	26.86894	8.319432	.4044108	6.775591	39.09598	7.515840	101.1429
#1	-.000171	.0001653	141.2959	.0021675	.0001517	.0044009	-.006101
#2	-.000153	.0001506	140.3758	.0020323	.0003544	.0039860	-.002731
#3	-.000098	.0001780	140.2565	.0018923	.0002818	.0046292	-.000096

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1735816	2.969254	.0042314	.0000285	324.0840	.0015128	.0197168
Stddev	.0005947	.015800	.0003234	.0000419	1.6736	.0012650	.0000897
%RSD	.3425952	.5321174	7.643584	146.9620	.5164235	83.62448	.4547991
#1	.1732935	2.958218	.0045746	.0000760	325.9089	.0006800	.0197616
#2	.1731858	2.987354	.0041872	-.000003	322.6207	.0008899	.0196136
#3	.1742654	2.962191	.0039323	.000013	323.7224	.0029685	.0197753

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.541927	.0231673	.0027182	-.009784	-.003194	4.835878	.0201815
Stddev	.014546	.0004500	.0003311	.000435	.000361	.035452	.0010923
%RSD	.2624741	1.942483	12.17979	4.450928	11.28764	.7331081	5.412211
#1	5.529870	.0236768	.0030674	-.009630	-.003468	4.811608	.0206715
#2	5.537830	.0230009	.0026785	-.009446	-.002786	4.819463	.0189300
#3	5.558083	.0228242	.0024088	-.010275	-.003329	4.876562	.0209430

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1241-12 Acquired: 2/7/2025 13:58:13 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	5.627519	-.020833	.4207200
Stddev	.023187	.000719	.0014565
%RSD	.4120346	3.449026	.3461990
#1	5.629188	-.021440	.4223036
#2	5.603543	-.020039	.4194377
#3	5.649827	-.021020	.4204186

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3097.879	67786.06	14952.51	2119.220	3695.538
Stddev	8.957	12.28	100.37	2.163	8.049
%RSD	.2891213	.0181184	.6712438	.1020726	.2177965
#1	3104.651	67773.62	14855.32	2118.215	3699.983
#2	3101.264	67798.18	14946.42	2117.742	3700.384
#3	3087.724	67786.39	15055.78	2121.703	3686.247

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1241-16 Acquired: 2/7/2025 14:02:38 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.005066	-.009625	.0267707	.0040041	.0038997	-.038518	.1339232
Stddev	.000922	.002389	.0005402	.0010158	.0009588	.005989	.0002420
%RSD	18.19632	24.82386	2.017776	25.36810	24.58535	15.54975	.1806696
#1	-.004628	-.012384	.0273793	.0050474	.0042952	-.037525	.1339542
#2	-.004445	-.008264	.0263482	.0030183	.0028065	-.044942	.1336672
#3	-.006125	-.008227	.0265844	.0039466	.0045975	-.033087	.1341481

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000187	.0002544	132.8654	.0004702	.0063044	.0098688	.0043349
Stddev	.000013	.0000506	.1819	.0001426	.0001596	.0001596	.0014004
%RSD	6.805079	19.87843	.1368784	30.32609	2.531536	1.616958	32.30514
#1	-.000179	.0002970	133.0219	.0005226	.0062277	.0100447	.0038656
#2	-.000202	.0002676	132.9084	.0003088	.0061977	.0097334	.0059096
#3	-.000181	.0001985	132.6659	.0005791	.0064879	.0098281	.0032294

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7665859	3.511428	.0167554	.0000982	378.6216	-.000716	.0826888
Stddev	.0013477	.005813	.0000524	.0000922	4.8724	.000697	.0004429
%RSD	.1758072	.1655581	.3124786	93.87505	1.286875	97.25721	.5355645
#1	.7653402	3.505198	.0168001	.0000772	373.7273	-.001286	.0821783
#2	.7680166	3.512380	.0166978	.0001990	378.6657	-.000923	.0829186
#3	.7664009	3.516708	.0167682	.0000183	383.4717	.000060	.0829696

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.668325	.0219058	.0016068	-.009829	-.003086	4.373154	.0088126
Stddev	.005587	.0000822	.0000978	.000423	.000776	.029686	.0014350
%RSD	.2093810	.3753627	6.086600	4.306299	25.15177	.6788331	16.28399
#1	2.674276	.0218705	.0015175	-.010084	-.002287	4.342741	.0084259
#2	2.663192	.0219998	.0015915	-.009340	-.003134	4.402057	.0104014
#3	2.667507	.0218471	.0017113	-.010062	-.003837	4.374663	.0076105

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1241-16 Acquired: 2/7/2025 14:02:38 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	3.137728	-.019041	.5097908
Stddev	.022312	.000791	.0008148
%RSD	.7110773	4.154730	.1598198
#1	3.124368	-.018493	.5091491
#2	3.125330	-.019948	.5107074
#3	3.163485	-.018681	.5095159

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3041.582	67297.78	15112.95	2089.370	3623.201
Stddev	6.334	150.56	93.21	4.754	10.169
%RSD	.2082468	.2237230	.6167653	.2275369	.2806522
#1	3040.135	67471.15	15005.96	2094.588	3629.962
#2	3048.515	67199.91	15156.31	2088.236	3628.134
#3	3036.097	67222.27	15176.59	2085.285	3611.507

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1241-20 Acquired: 2/7/2025 14:07:03 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.002474	-.006733	.0020958	.0035004	.0031065	-.043233	.0620997
Stddev	.000842	.000273	.0006767	.0011490	.0005874	.004813	.0000714
%RSD	34.03674	4.059959	32.28820	32.82419	18.90709	11.13317	.1149966
#1	-.003427	-.006419	.0025044	.0026163	.0024341	-.042397	.0621667
#2	-.002164	-.006861	.0024684	.0047991	.0033660	-.038893	.0621080
#3	-.001831	-.006919	.0013147	.0030858	.0035194	-.048410	.0620246

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000160	.0002416	121.0839	.0013239	.0007266	.0060676	.0002871
Stddev	.000070	.0000822	.3418	.0002492	.0001786	.0001242	.0006606
%RSD	43.49471	34.00498	.2822994	18.82447	24.57552	2.046542	230.0855
#1	-.000124	.0001470	121.1392	.0012094	.0005443	.0059344	-.000469
#2	-.000240	.0002827	120.7178	.0011525	.0009012	.0061802	.000575
#3	-.000116	.0002951	121.3947	.0016098	.0007344	.0060881	.000755

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1968156	1.798008	.0028502	.0001423	237.4389	-.000191	.0502232
Stddev	.0009659	.015651	.0001949	.0001008	2.6184	.001122	.0005058
%RSD	.4907686	.8704873	6.836654	70.80415	1.102783	587.6556	1.007064
#1	.1962651	1.815327	.0029250	.0002466	239.1503	.001104	.0496477
#2	.1962507	1.784876	.0026290	.0001350	238.7417	-.000859	.0504254
#3	.1979309	1.793821	.0029965	.0000454	234.4246	-.000818	.0505967

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.433189	.0230307	.0018393	-.009625	-.002629	3.102840	.0322138
Stddev	.003473	.0001497	.0001296	.000165	.000600	.013390	.0013185
%RSD	.1427220	.6501532	7.045656	1.717872	22.80088	.4315273	4.092907
#1	2.429281	.0228622	.0017749	-.009472	-.002621	3.107878	.0310117
#2	2.434368	.0230815	.0019884	-.009800	-.002034	3.112980	.0336239
#3	2.435919	.0231485	.0017545	-.009602	-.003233	3.087662	.0320058

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1241-20 Acquired: 2/7/2025 14:07:03 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	5.650430	-.020285	.4240814
Stddev	.006834	.001029	.0007191
%RSD	.1209491	5.071802	.1695669
#1	5.656973	-.019181	.4247936
#2	5.643338	-.020457	.4233556
#3	5.650977	-.021217	.4240950

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3153.549	68355.39	15004.22	2144.562	3787.693
Stddev	3.215	121.39	53.93	10.947	4.296
%RSD	.1019488	.1775893	.3594295	.5104738	.1134185
#1	3157.260	68471.33	14989.29	2155.529	3788.749
#2	3151.786	68229.20	15064.04	2133.634	3782.968
#3	3151.601	68365.64	14959.33	2144.525	3791.363

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1242-04 Acquired: 2/7/2025 14:11:28 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.003435	-.010386	.0003856	.0027652	.0047277	-.066372	.0720378
Stddev	.001961	.001357	.0012615	.0012330	.0008060	.004607	.0003180
%RSD	57.08481	13.06213	327.1400	44.59054	17.04897	6.940800	.4414122
#1	-.004847	-.010076	-.000476	.0019088	.0039811	-.067588	.0723788
#2	-.001196	-.011871	-.000201	.0022083	.0046198	-.070249	.0719851
#3	-.004263	-.009211	.001834	.0041784	.0055823	-.061279	.0717494

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000169	-.000035	164.0225	.0059696	-.000429	.0049392	.0109544
Stddev	.000038	.000057	.3001	.0001454	.000143	.0005162	.0029157
%RSD	22.50786	163.7888	.1829831	2.435815	33.31471	10.45074	26.61644
#1	-.000204	.000031	164.3149	.0059486	-.000389	.0055351	.0076262
#2	-.000129	-.000071	163.7152	.0058358	-.000310	.0046542	.0121788
#3	-.000173	-.000063	164.0374	.0061243	-.000588	.0046284	.0130582

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0604581	4.488380	.0031006	-.000140	301.7779	.0011522	.0065424
Stddev	.0004293	.010153	.0000524	.000273	6.5711	.0018545	.0004999
%RSD	.7100217	.2262025	1.689398	195.5442	2.177447	160.9522	7.641237
#1	.0609271	4.483359	.0031042	.000176	309.1748	.0032518	.0061250
#2	.0600846	4.500065	.0031511	-.000293	299.5435	.0004673	.0064058
#3	.0603625	4.481716	.0030465	-.000302	296.6155	-.000262	.0070964

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.657027	.0283692	.0040046	-.009751	-.003895	4.108232	.0167441
Stddev	.023669	.0003462	.0001618	.000521	.000422	.023301	.0018666
%RSD	.8908152	1.220485	4.041195	5.343136	10.84244	.5671686	11.14785
#1	2.678811	.0287362	.0038285	-.009302	-.003457	4.114627	.0186674
#2	2.660429	.0280484	.0041467	-.009628	-.004299	4.127666	.0166250
#3	2.631841	.0283231	.0040388	-.010322	-.003928	4.082401	.0149399

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1242-04 Acquired: 2/7/2025 14:11:28 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	7.624722	-.022629	.4179151
Stddev	.012694	.000912	.0019563
%RSD	.1664798	4.030682	.4681191
#1	7.625920	-.022508	.4199290
#2	7.611472	-.023595	.4177942
#3	7.636774	-.021783	.4160220

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3087.896	67818.07	14763.12	2141.888	3667.473
Stddev	8.155	122.20	96.65	11.807	5.779
%RSD	.2640886	.1801830	.6546383	.5512349	.1575791
#1	3087.748	67807.32	14763.77	2134.554	3666.267
#2	3096.124	67945.29	14859.44	2155.508	3673.760
#3	3079.817	67701.61	14666.16	2135.602	3662.392

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166488BL Acquired: 2/7/2025 14:15:52 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0004732	.0002847	-.000898	.0024838	.0004542	-.004274	-.002758
Stddev	.0017766	.0009188	.000932	.0014395	.0021307	.004132	.001069
%RSD	375.4081	322.7534	103.7338	57.95819	469.1234	96.66870	38.76065
#1	-.001191	-.000443	.000080	.0008375	-.000063	-.003191	-.002112
#2	.002344	.001317	-.001775	.0035062	-.001370	-.000792	-.003992
#3	.000266	-.000020	-.001000	.0031076	.002796	-.008840	-.002170

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000476	.0000450	.0379697	-.000163	-.000172	-.001474	-.008282
Stddev	.0000620	.0000149	.0129843	.000143	.000063	.000257	.002799
%RSD	130.3407	33.16481	34.19651	87.90486	36.80650	17.40545	33.79281
#1	.0000966	.0000284	.0507667	-.000258	-.000121	-.001331	-.006061
#2	-.000022	.0000573	.0383366	-.000231	-.000152	-.001770	-.007359
#3	.000068	.0000494	.0248059	.000002	-.000243	-.001321	-.011425

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000126	.0047353	.0001367	.0000469	.2814593	-.001135	-.000506
Stddev	.000077	.0105538	.0000697	.0002865	.0135285	.000504	.000266
%RSD	61.14386	222.8756	51.02151	610.6203	4.806550	44.39292	52.61482
#1	-.000092	-.000146	.0001251	-.000166	.2880476	-.001472	-.000464
#2	-.000072	.016846	.0002115	.000373	.2904315	-.000556	-.000791
#3	-.000215	-.002494	.0000735	-.000066	.2658987	-.001379	-.000263

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1297626	-.000870	.0000459	.0072379	-.000396	-.008266	-.002295
Stddev	.0149593	.000340	.0002215	.0005124	.000266	.004853	.000853
%RSD	11.52823	39.08879	482.8780	7.079278	67.03676	58.71349	37.15588
#1	.1137083	-.000704	.0002899	.0077792	-.000653	-.013747	-.003258
#2	.1322693	-.000646	-.000143	.0067603	-.000123	-.004516	-.001635
#3	.1433102	-.001262	-.000010	.0071743	-.000413	-.006535	-.001993

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166488BL Acquired: 2/7/2025 14:15:52 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0004951	.0017840	.0000356
Stddev	.0002735	.0002868	.0000204
%RSD	55.24017	16.07513	57.09954
#1	.0007354	.0014930	.0000231
#2	.0005526	.0017928	.0000591
#3	.0001975	.0020663	.0000247

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3423.254	74772.44	15030.64	2419.559	4259.698
Stddev	14.397	230.78	45.63	6.046	11.822
%RSD	.4205685	.3086428	.3035694	.2498907	.2775364
#1	3439.347	75034.75	15015.51	2423.494	4273.315
#2	3418.820	74681.97	15081.92	2422.585	4253.723
#3	3411.596	74600.61	14994.51	2412.597	4252.056

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166488BS Acquired: 2/7/2025 14:20:11 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.8010956	2.071252	.9634336	2.033674	.8046480	1.928192
Stddev	.0056133	.010290	.0033845	.010854	.0013926	.007172
%RSD	.7007089	.4968155	.3512916	.5337287	.1730708	.3719744
#1	.7959674	2.062456	.9641786	2.024491	.8031364	1.930986
#2	.8002267	2.068734	.9597387	2.030878	.8049288	1.933548
#3	.8070927	2.082568	.9663834	2.045653	.8058788	1.920044

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1790012	.2018303	.1946179	.9943237	.4075192	.1971297
Stddev	.0008998	.0016735	.0008340	.0039931	.0021767	.0008676
%RSD	.5026825	.8291789	.4285426	.4015875	.5341421	.4401089
#1	.1788809	.2033391	.1945372	.9967364	.4078005	.1965467
#2	.1799552	.2021215	.1938271	.9965201	.4095416	.1967158
#3	.1781677	.2000302	.1954893	.9897146	.4052155	.1981268

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3130587	2.857687	.1923534	1.924894	.4970068	.0751957
Stddev	.0013786	.022450	.0004057	.020126	.0022630	.0000211
%RSD	.4403561	.7856055	.2108965	1.045564	.4553184	.0280401
#1	.3114880	2.832506	.1921051	1.930896	.4956314	.0752167
#2	.3136201	2.875611	.1928216	1.941336	.4957704	.0751959
#3	.3140680	2.864944	.1921336	1.902450	.4996187	.0751745

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.650030	.2849901	.2063662	9.333530	.2954889	.4102185
Stddev	.029137	.0010619	.0011937	.075658	.0005963	.0015417
%RSD	1.099479	.3726113	.5784448	.8106008	.2018033	.3758336
#1	2.626586	.2841229	.2057717	9.248648	.2952830	.4095052
#2	2.682650	.2861744	.2077404	9.393871	.2961609	.4091626
#3	2.640853	.2846730	.2055864	9.358071	.2950229	.4119877

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166488BS Acquired: 2/7/2025 14:20:11 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.6947724	.1889087	.7471203	5.705053	F -.010136	.1943456
Stddev	.0027984	.0015025	.0073372	.019607	.000270	.0016077
%RSD	.4027750	.7953616	.9820640	.3436860	2.667544	.8272407
#1	.6961010	.1877176	.7388243	5.693988	-.010275	.1935872
#2	.6915573	.1905967	.7497794	5.693478	-.010308	.1961922
#3	.6966591	.1884117	.7527572	5.727691	-.009824	.1932572

Elem	Sr4077
Units	ppm
Avg	.1865841
Stddev	.0008908
%RSD	.4774392
#1	.1862007
#2	.1876024
#3	.1859492

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3413.607	73231.56	14687.72	2335.952	4256.465
Stddev	9.177	384.59	86.42	14.099	15.341
%RSD	.2688444	.5251667	.5883593	.6035629	.3604132
#1	3414.076	73395.95	14628.56	2350.796	4251.714
#2	3422.541	72792.09	14647.70	2322.741	4273.620
#3	3404.204	73506.62	14786.89	2334.319	4244.062

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1282-01 Acquired: 2/7/2025 14:24:12 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0003506	-.006391	.0044094	-.003837	.0053723	.4303565
Stddev	.0035142	.001685	.0009189	.002700	.0012947	.0071044
%RSD	1002.265	26.36399	20.84052	70.37823	24.09892	1.650824
#1	-.000624	-.007986	.0042368	-.005104	.0059085	.4223955
#2	-.002573	-.004629	.0035890	-.005671	.0038957	.4326222
#3	.004249	-.006556	.0054024	-.000736	.0063128	.4360517

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1608491	.0000029	.0001169	536.8134	.0166561	.0025247
Stddev	.0006818	.0000786	.0000872	2.7115	.0002710	.0001503
%RSD	.4238931	2702.018	74.53332	.5051148	1.627206	5.954390
#1	.1616361	.0000742	.0001413	537.3027	.0169254	.0023525
#2	.1604364	.0000158	.0000202	533.8905	.0166596	.0026301
#3	.1604748	-.000081	.0001893	539.2469	.0163834	.0025914

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036593	3.193696	.0772362	20.01481	.0050114	-.000309
Stddev	.0002181	.013591	.0009096	.10392	.0000354	.000068
%RSD	5.961016	.4255640	1.177718	.5192180	.7056721	21.95223
#1	.0036403	3.200181	.0780591	20.10958	.0049827	-.000231
#2	.0038863	3.202830	.0762594	19.90368	.0050006	-.000357
#3	.0034513	3.178077	.0773901	20.03117	.0050509	-.000338

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	98.69722	.0015512	.0394851	165.8673	.0057040	.0212791
Stddev	.71407	.0017013	.0002937	.9975	.0003990	.0002998
%RSD	.7235004	109.6735	.7438824	.6013697	6.994145	1.408731
#1	98.66349	.0023470	.0395484	165.7121	.0061090	.0209552
#2	99.42756	-.000402	.0391649	166.9334	.0056919	.0215467
#3	98.00060	.002709	.0397421	164.9566	.0053113	.0213355

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1282-01 Acquired: 2/7/2025 14:24:12 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.010935	.0003228	8.246445	.0575317	F 474.4772	.0089492
Stddev	.001188	.0007453	.037892	.0020157	.6458	.0009105
%RSD	10.86507	230.8817	.4594981	3.503619	.1361150	10.17349
#1	-.009733	-.000503	8.224534	.0579370	475.1394	.0093521
#2	-.012109	.000526	8.290199	.0593141	473.8490	.0095886
#3	-.010963	.000945	8.224602	.0553442	474.4433	.0079068

Elem	Sr4077
Units	ppm
Avg	2.811104
Stddev	.026990
%RSD	.9601050
#1	2.780174
#2	2.823266
#3	2.829873

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3029.318	65941.34	14722.73	2054.726	3564.997
Stddev	6.530	33.69	90.91	9.146	8.384
%RSD	.2155563	.0510904	.6174489	.4451100	.2351804
#1	3022.095	65972.53	14670.05	2064.704	3556.506
#2	3031.054	65905.61	14827.70	2046.741	3565.215
#3	3034.804	65945.87	14670.44	2052.734	3573.270

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1282-01DUP Acquired: 2/7/2025 14:28:44 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.004734	-.008104	.0031569	-.001550	.0048864	.4539104
Stddev	.001946	.000428	.0009927	.002581	.0003614	.0129855
%RSD	41.09757	5.282960	31.44547	166.5189	7.397010	2.860806
#1	-.003030	-.008528	.0043009	.001272	.0052705	.4665596
#2	-.004319	-.007672	.0026472	-.002132	.0048360	.4545587
#3	-.006854	-.008112	.0025226	-.003790	.0045529	.4406129

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1627400	.0000509	.0000557	535.2173	.0163065	.0026739
Stddev	.0003776	.0000167	.0000628	4.0111	.0002331	.0000589
%RSD	.2320025	32.83769	112.6531	.7494402	1.429543	2.200829
#1	.1631663	.0000661	.0000889	531.0289	.0163967	.0027395
#2	.1624477	.0000536	-.000017	535.5993	.0164810	.0026257
#3	.1626061	.0000330	.000095	539.0238	.0160417	.0026565

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031514	3.177769	.0776473	19.94744	.0051458	-.000097
Stddev	.0007831	.005716	.0000972	.13681	.0004445	.000198
%RSD	24.84883	.1798664	.1251793	.6858567	8.638657	203.5855
#1	.0023972	3.178827	.0777581	19.80718	.0055897	.000084
#2	.0039605	3.171598	.0775767	19.95463	.0047007	-.000067
#3	.0030964	3.182881	.0776071	20.08052	.0051469	-.000308

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	99.84683	.0007668	.0387976	165.2708	.0048157	.0211891
Stddev	.56214	.0018473	.0003034	.6248	.0001237	.0001524
%RSD	.5630036	240.9159	.7819942	.3780580	2.568805	.7191852
#1	100.4038	.0009256	.0386577	165.9590	.0046732	.0210518
#2	99.8571	-.001155	.0385895	165.1142	.0048952	.0213531
#3	99.2796	.002530	.0391457	164.7392	.0048788	.0211626

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1282-01DUP Acquired: 2/7/2025 14:28:44 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.010869	.0006655	8.202461	.0585574	F 477.9719	.0076800
Stddev	.000629	.0009162	.024428	.0023027	1.2894	.0018902
%RSD	5.789284	137.6731	.2978151	3.932335	.2697680	24.61202
#1	-.010187	.0017221	8.214403	.0589065	477.0445	.0084315
#2	-.010990	.0001820	8.174359	.0561001	477.4269	.0090788
#3	-.011428	.0000923	8.218621	.0606655	479.4444	.0055296

Elem	Sr4077
Units	ppm
Avg	2.818873
Stddev	.035512
%RSD	1.259787
#1	2.781612
#2	2.852329
#3	2.822679

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3029.765	66729.18	14757.28	2108.380	3557.358
Stddev	9.051	174.46	102.56	17.615	4.673
%RSD	.2987344	.2614499	.6949906	.8354592	.1313648
#1	3037.933	66860.33	14872.76	2123.847	3560.421
#2	3031.327	66796.02	14722.25	2112.086	3559.673
#3	3020.035	66531.17	14676.81	2089.208	3551.979

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1282-01LX5 Acquired: 2/7/2025 14:33:16 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0010846	.0000223	.0005367	.0002168	.0013643	.0831765
Stddev	.0023784	.0012635	.0004789	.0019039	.0004582	.0086710
%RSD	219.2812	5656.410	89.23515	878.3798	33.58770	10.42484
#1	.0038069	-.000407	.0004343	-.001864	.0008807	.0927110
#2	-.000590	.001445	.0010585	.000643	.0014201	.0757622
#3	.000037	-.000971	.0001172	.001872	.0017920	.0810564

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0275398	.0000409	.0000334	107.4980	.0027210	.0004411
Stddev	.0006691	.0000189	.0000599	.3847	.0001473	.0001726
%RSD	2.429730	46.34218	179.3506	.3578657	5.413300	39.11895
#1	.0268639	.0000355	.0000678	107.4337	.0026644	.0004027
#2	.0275534	.0000619	.0000683	107.1495	.0026104	.0002910
#3	.0282020	.0000252	-.000036	107.9108	.0028882	.0006296

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000085	.6258934	.0160431	4.002034	.0013307	.0000636
Stddev	.000392	.0046802	.0002365	.020960	.0001297	.0001235
%RSD	461.2207	.7477570	1.473886	.5237303	9.748173	194.3477
#1	.000066	.6271731	.0158945	3.994299	.0014325	.0001718
#2	.000209	.6207064	.0159192	3.986041	.0011847	.0000899
#3	-.000530	.6298005	.0163158	4.025762	.0013751	-.000071

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.72555	-.001102	.0070861	30.57778	-.000198	.0044624
Stddev	.03168	.000862	.0001073	.07995	.000503	.0002309
%RSD	.1787484	78.18430	1.514115	.2614646	254.6526	5.174210
#1	17.74687	-.001667	.0069941	30.64475	-.000614	.0042434
#2	17.68914	-.001530	.0070604	30.59933	.000362	.0047036
#3	17.74063	-.000110	.0072040	30.48927	-.000341	.0044401

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1282-01LX5 Acquired: 2/7/2025 14:33:16 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0017590	.0008002	1.588054	.0087926	F 97.32413	.0016593
Stddev	.0011164	.0005874	.013150	.0038286	.21591	.0014293
%RSD	63.46811	73.41101	.8280539	43.54380	.2218433	86.14222
#1	.0018821	.0004638	1.586407	.0097308	97.30232	.0005374
#2	.0028087	.0004583	1.601951	.0045820	97.11996	.0011718
#3	.0005861	.0014785	1.575806	.0120649	97.55012	.0032685

Elem	Sr4077
Units	ppm
Avg	.5703418
Stddev	.0030753
%RSD	.5392104
#1	.5700481
#2	.5674239
#3	.5735535

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3311.373	72253.29	15454.16	2323.250	4016.666
Stddev	2.564	199.11	66.53	7.680	1.489
%RSD	.0774241	.2755784	.4305308	.3305550	.0370734
#1	3308.544	72179.67	15468.04	2321.308	4016.645
#2	3312.034	72101.48	15512.65	2316.727	4018.165
#3	3313.543	72478.74	15381.77	2331.714	4015.187

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1282-01MS Acquired: 2/7/2025 14:37:33 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.8612612	1.888162	.9400198	2.180851	.8714364	2.480356
Stddev	.0086307	.010125	.0049260	.010210	.0053881	.009915
%RSD	1.002104	.5362351	.5240321	.4681838	.6183007	.3997472
#1	.8613245	1.884425	.9363048	2.177458	.8705265	2.491130
#2	.8525990	1.880437	.9381470	2.172769	.8665612	2.478324
#3	.8698601	1.899625	.9456075	2.192326	.8772215	2.471614

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3522450	.1832778	.1922841	536.1539	.4050852	.2004632
Stddev	.0015167	.0011147	.0006970	1.1795	.0011231	.0007746
%RSD	.4305723	.6081790	.3625084	.2199886	.2772409	.3864303
#1	.3535662	.1820535	.1918899	537.5158	.4049549	.2004016
#2	.3505889	.1835463	.1918736	535.4667	.4062677	.1997212
#3	.3525800	.1842338	.1930890	535.4791	.4040330	.2012669

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3061809	6.288178	.2617723	21.52125	.4975382	.0541915
Stddev	.0011922	.034719	.0012156	.11926	.0014750	.0022317
%RSD	.3893853	.5521267	.4643817	.5541284	.2964562	4.118227
#1	.3060047	6.295450	.2622439	21.41310	.4971002	.0530673
#2	.3050867	6.318685	.2603916	21.50151	.4963319	.0567618
#3	.3074515	6.250400	.2626815	21.64915	.4991826	.0527455

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	104.6154	.2872777	.2506290	180.0219	.2598173	.4399713
Stddev	.9475	.0007947	.0019415	1.5355	.0016651	.0012335
%RSD	.9056530	.2766156	.7746398	.8529520	.6408870	.2803517
#1	105.4767	.2868812	.2524262	181.3427	.2582692	.4401888
#2	104.7690	.2867594	.2508910	180.3860	.2596037	.4386436
#3	103.6006	.2881926	.2485699	178.3371	.2615789	.4410816

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1282-01MS Acquired: 2/7/2025 14:37:33 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.6856469	.1941642	9.322583	6.443876	F 484.5948	.2202732
Stddev	.0024240	.0003771	.068459	.019365	1.5661	.0014167
%RSD	.3535408	.1942343	.7343363	.3005229	.3231671	.6431741
#1	.6828549	.1938032	9.379964	6.429437	483.9521	.2218791
#2	.6868719	.1945556	9.340980	6.436307	483.4524	.2197399
#3	.6872140	.1941337	9.246805	6.465882	486.3800	.2192004

Elem	Sr4077
Units	ppm
Avg	3.060200
Stddev	.014922
%RSD	.4876052
#1	3.069229
#2	3.068394
#3	3.042976

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2988.456	67304.69	15131.97	2069.280	3534.773
Stddev	14.863	423.67	18.21	12.411	15.453
%RSD	.4973385	.6294795	.1203712	.5997615	.4371839
#1	2992.622	67064.23	15150.85	2055.586	3541.815
#2	3000.791	67055.97	15130.55	2072.468	3545.451
#3	2971.955	67793.88	15114.51	2079.786	3517.053

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV03 Acquired: 2/7/2025 14:41:47 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.200801	5.079180	4.922075	5.298817	5.207846	9.821233	9.761589
Stddev	.014784	.022774	.009648	.023291	.020355	.015025	.114168
%RSD	.2842662	.4483770	.1960123	.4395454	.3908438	.1529883	1.169565
#1	5.185532	5.055255	4.914676	5.285022	5.190404	9.833206	9.856735
#2	5.201825	5.100594	4.918561	5.285721	5.202924	9.804372	9.793040
#3	5.215047	5.081691	4.932987	5.325708	5.230210	9.826120	9.634992

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2341498	2.440520	23.97796	.9859554	2.459287	1.289396	4.985977
Stddev	.0017579	.004539	.01944	.0023689	.007195	.002788	.027796
%RSD	.7507579	.1859667	.0810608	.2402606	.2925698	.2162001	.5574760
#1	.2338096	2.437923	23.99255	.9843011	2.455074	1.286671	5.000463
#2	.2360529	2.437876	23.95590	.9848960	2.455191	1.289276	4.953930
#3	.2325868	2.445761	23.98544	.9886690	2.467595	1.292242	5.003537

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.369035	23.68753	2.467876	1.237417	25.21243	2.423932	2.502824
Stddev	.006784	.02998	.007246	.000259	.27578	.001052	.005318
%RSD	.2863533	.1265531	.2936316	.0209581	1.093824	.0433813	.2124767
#1	2.376179	23.67138	2.461882	1.237368	25.33057	2.425005	2.500132
#2	2.362680	23.72212	2.465816	1.237697	24.89726	2.422903	2.508949
#3	2.368247	23.66910	2.475929	1.237185	25.40947	2.423889	2.499390

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.75438	4.689436	5.053235	4.922436	4.842143	5.114584	4.931308
Stddev	.20859	.038668	.010697	.004416	.015354	.044208	.012902
%RSD	.8099085	.8245794	.2116893	.0897184	.3170811	.8643473	.2616377
#1	25.80649	4.679634	5.048430	4.922045	4.853779	5.112617	4.918437
#2	25.52468	4.732062	5.045783	4.918229	4.824741	5.071393	4.931246
#3	25.93198	4.656612	5.065492	4.927035	4.847908	5.159743	4.944241

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV03 Acquired: 2/7/2025 14:41:47 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.093887	4.886363	4.952794
Stddev	.004027	.021482	.061153
%RSD	.0790543	.4396366	1.234727
#1	5.091404	4.902193	4.938000
#2	5.091725	4.861909	5.019987
#3	5.098534	4.894987	4.900394

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3255.639	71906.75	15395.48	2230.085	3941.291
Stddev	6.163	161.83	70.71	.793	6.070
%RSD	.1893163	.2250534	.4592841	.0355630	.1539985
#1	3259.301	71890.21	15389.49	2230.692	3944.952
#2	3259.093	72076.21	15327.96	2229.188	3944.635
#3	3248.523	71753.83	15468.99	2230.374	3934.285

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB03 Acquired: 2/7/2025 14:45:58 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013308	.0006901	-.000103	.0017495	.0001126	-.000344
Stddev	.0002253	.0018954	.000134	.0006779	.0020839	.005338
%RSD	16.93241	274.6699	129.8292	38.74751	1851.414	1553.732
#1	.0011350	.0005521	-.000216	.0012722	-.001695	-.005891
#2	.0012804	-.001133	-.000140	.0025254	-.000359	.000103
#3	.0015771	.002651	.000045	.0014508	.002392	.004757

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003860	.0000672	.0004157	.0197257	-.000153	.0005729
Stddev	.000942	.0000359	.0001382	.0036396	.000092	.0001631
%RSD	24.39939	53.37817	33.23021	18.45110	59.97194	28.46293
#1	-.002972	.0000465	.0003264	.0237062	-.000054	.0007490
#2	-.004848	.0001086	.0003459	.0189031	-.000235	.0004272
#3	-.003759	.0000465	.0005748	.0165678	-.000170	.0005424

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001510	-.008700	.0002462	.0185721	.0004226	.0006027
Stddev	.000297	.002619	.0003148	.0069306	.0002120	.0000843
%RSD	19.64396	30.10108	127.8567	37.31760	50.15919	13.98831
#1	-.001811	-.010242	.0003246	.0244045	.0006463	.0005062
#2	-.001218	-.010181	-.000100	.0109102	.0002248	.0006401
#3	-.001502	-.005676	.000514	.0204015	.0003966	.0006619

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0925043	-.000497	-.000144	.1745302	.0054778	.0011547
Stddev	.0167058	.000549	.000192	.0230892	.0008246	.0003554
%RSD	18.05952	110.3469	133.2903	13.22936	15.05367	30.77822
#1	.1077712	-.000091	-.000235	.1732680	.0060580	.0007876
#2	.0746593	-.000280	.000077	.1520979	.0045339	.0011792
#3	.0950824	-.001122	-.000274	.1982246	.0058416	.0014971

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB03 Acquired: 2/7/2025 14:45:58 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0073825	.0009502	.0045805	-.001769	F .0259408	.0020816
Stddev	.0004141	.0002303	.0105280	.000351	.0051143	.0002158
%RSD	5.608716	24.23659	229.8430	19.84589	19.71545	10.36441
#1	.0071956	.0009718	.0089897	-.001488	.0252357	.0023220
#2	.0070948	.0007098	.0121871	-.002162	.0212155	.0020183
#3	.0078571	.0011689	-.007435	-.001656	.0313711	.0019046

Elem	Sr4077
Units	ppm
Avg	.0007680
Stddev	.0001115
%RSD	14.51132
#1	.0008374
#2	.0008272
#3	.0006395

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3404.564	75398.33	15681.20	2373.560	4297.175
Stddev	12.203	268.43	218.44	5.601	15.762
%RSD	.3584187	.3560174	1.392993	.2359856	.3668074
#1	3392.965	75092.13	15453.88	2369.971	4281.549
#2	3403.436	75509.76	15889.52	2380.014	4296.906
#3	3417.291	75593.09	15700.20	2370.695	4313.071

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1282-01MSD Acquired: 2/7/2025 14:50:18 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.8515189	1.885411	.9423846	2.138673	.8600603	2.484533
Stddev	.0016122	.012350	.0023526	.014054	.0067105	.022939
%RSD	.1893328	.6550506	.2496429	.6571155	.7802330	.9232632
#1	.8502688	1.873503	.9408203	2.124521	.8529341	2.494111
#2	.8509494	1.884569	.9412433	2.138873	.8609882	2.501131
#3	.8533386	1.898161	.9450901	2.152626	.8662585	2.458358

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3557790	.1856433	.1921530	540.6242	.4055321	.2007065
Stddev	.0014846	.0013750	.0004628	8.3808	.0009180	.0003892
%RSD	.4172662	.7406760	.2408715	1.550212	.2263715	.1938995
#1	.3566158	.1848885	.1918836	533.7076	.4052981	.2010620
#2	.3566561	.1872304	.1918881	549.9441	.4047537	.2002907
#3	.3540649	.1848111	.1926875	538.2207	.4065445	.2007669

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3042117	6.270898	.2673202	21.85455	.4971741	.0530477
Stddev	.0018198	.021718	.0029059	.13964	.0018981	.0004462
%RSD	.5981899	.3463254	1.087053	.6389739	.3817675	.8410874
#1	.3035431	6.288184	.2677976	21.80132	.4969146	.0526543
#2	.3028208	6.246521	.2699579	22.01298	.4954191	.0535325
#3	.3062712	6.277990	.2642052	21.74934	.4991885	.0529562

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	104.2013	.2879478	.2486303	178.5106	.2666087	.4359277
Stddev	.6019	.0005377	.0006960	.8424	.0036249	.0015079
%RSD	.5776526	.1867304	.2799178	.4718947	1.359634	.3459077
#1	104.5647	.2881255	.2478395	179.0825	.2674206	.4350421
#2	103.5065	.2883741	.2491498	177.5433	.2697588	.4350721
#3	104.5326	.2873437	.2489014	178.9060	.2626467	.4376688

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1282-01MSD Acquired: 2/7/2025 14:50:18 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.6858039	.1972098	9.295713	6.470213	F 483.5404	.2204442
Stddev	.0012651	.0008263	.045640	.035497	1.8907	.0024308
%RSD	.1844627	.4189688	.4909752	.5486174	.3910073	1.102666
#1	.6865682	.1966075	9.253496	6.445400	482.1755	.2230400
#2	.6843436	.1981517	9.289504	6.454367	482.7472	.2182217
#3	.6864998	.1968702	9.344140	6.510873	485.6984	.2200707

Elem	Sr4077
Units	ppm
Avg	3.056940
Stddev	.038417
%RSD	1.256702
#1	3.023692
#2	3.098996
#3	3.048134

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3023.013	67176.03	14905.42	2090.050	3557.884
Stddev	12.799	250.76	133.65	.406	12.323
%RSD	.4234012	.3732913	.8966495	.0194288	.3463613
#1	3034.322	67453.79	14993.47	2089.609	3568.256
#2	3025.598	67108.01	14751.63	2090.408	3561.135
#3	3009.118	66966.30	14971.16	2090.133	3544.262

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1282-01A Acquired: 2/7/2025 14:54:33 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.8561343	1.885093	.9365162	2.158591	.8655688	2.507082
Stddev	.0047456	.002500	.0014262	.011352	.0042183	.007993
%RSD	.5543025	.1326354	.1522918	.5258910	.4873492	.3188171
#1	.8534013	1.885881	.9348968	2.154066	.8620907	2.510458
#2	.8533877	1.887106	.9370661	2.150199	.8643546	2.497955
#3	.8616140	1.882294	.9375856	2.171507	.8702610	2.512833

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3561424	.1867505	.1919548	540.5763	.4050543	.2000564
Stddev	.0026129	.0009116	.0006077	3.3099	.0004104	.0004959
%RSD	.7336727	.4881351	.3166073	.6122834	.1013227	.2478647
#1	.3591543	.1872830	.1913197	542.2992	.4046328	.1995776
#2	.3547907	.1872706	.1920138	542.6693	.4054527	.2000240
#3	.3544823	.1856979	.1925308	536.7604	.4050774	.2005677

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3041211	6.276229	.2665327	21.85101	.4965078	.0528313
Stddev	.0010963	.048439	.0016827	.02878	.0009959	.0004868
%RSD	.3604713	.7717854	.6313323	.1317082	.2005879	.9214705
#1	.3040160	6.271234	.2684754	21.87286	.4959637	.0533768
#2	.3030812	6.230481	.2655308	21.81840	.4959023	.0526761
#3	.3052662	6.326972	.2655918	21.86176	.4976572	.0524409

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	104.0206	.2895130	.2483010	178.3403	.2668268	.4407765
Stddev	.7163	.0008947	.0012519	1.0752	.0009775	.0019971
%RSD	.6885932	.3090311	.5041761	.6028741	.3663551	.4530878
#1	104.4386	.2884900	.2485072	178.5185	.2676769	.4393711
#2	103.1935	.2901488	.2469588	177.1872	.2670448	.4398958
#3	104.4295	.2899004	.2494369	179.3153	.2657586	.4430625

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1282-01A Acquired: 2/7/2025 14:54:33 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.6847347	.1981854	9.333944	6.449586	F 480.6039	.2210836
Stddev	.0020346	.0011137	.088143	.008569	.8977	.0015455
%RSD	.2971292	.5619491	.9443237	.1328605	.1867784	.6990488
#1	.6831903	.1994265	9.336818	6.440138	479.6577	.2224930
#2	.6839738	.1972732	9.244399	6.456856	480.7103	.2194309
#3	.6870401	.1978564	9.420614	6.451763	481.4436	.2213268

Elem	Sr4077
Units	ppm
Avg	3.085943
Stddev	.019050
%RSD	.6173241
#1	3.089964
#2	3.102662
#3	3.065203

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3005.093	67253.35	14874.29	2086.051	3555.053
Stddev	18.700	185.06	59.52	8.588	17.818
%RSD	.6222792	.2751683	.4001826	.4116982	.5011966
#1	3019.180	67327.67	14833.49	2088.159	3570.691
#2	3012.222	67389.70	14846.78	2093.389	3558.812
#3	2983.877	67042.68	14942.59	2076.605	3535.655

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166595BL Acquired: 2/7/2025 14:58:48 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0000982	-.000371	-.000393	.0024011	.0006757	.0024923
Stddev	.0015618	.000992	.000341	.0005355	.0003586	.0009462
%RSD	1590.996	267.3982	86.65660	22.30031	53.06991	37.96562
#1	-.000041	-.000428	-.000676	.0020239	.0009237	.0031614
#2	.001725	.000649	-.000489	.0021655	.0008390	.0029057
#3	-.001389	-.001333	-.000015	.0030140	.0002645	.0014097

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006488	.0000648	.0000603	.0872587	-.000166	-.000070
Stddev	.000361	.0000614	.0000035	.0253523	.000363	.000094
%RSD	5.564182	94.71605	5.795983	29.05418	219.4962	135.3512
#1	-.006080	.0001026	.0000578	.1165326	-.000220	-.000005
#2	-.006616	.0000980	.0000643	.0724743	.000222	-.000026
#3	-.006767	-.000006	.0000588	.0727694	-.000499	-.000178

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001542	-.007279	.0000113	.0117506	.0000601	.0003498
Stddev	.000319	.003147	.0001176	.0134167	.0002252	.0004324
%RSD	20.65871	43.23757	1036.303	114.1791	374.4112	123.6044
#1	-.001909	-.008135	-.000052	.0253850	-.000168	.0007011
#2	-.001338	-.003792	-.000061	.0113040	.000282	.0004814
#3	-.001378	-.009909	.000147	-.001437	.000066	-.000133

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1058805	-.001042	-.000374	.2172188	.0002836	.0001154
Stddev	.0132293	.000836	.000186	.0238057	.0003507	.0003901
%RSD	12.49452	80.24531	49.75458	10.95930	123.6318	338.0270
#1	.1096305	-.000078	-.000363	.2271729	.0006697	.0002608
#2	.0911810	-.001482	-.000566	.2344318	.0001964	-.000327
#3	.1168299	-.001565	-.000194	.1900518	-.000015	.000412

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166595BL Acquired: 2/7/2025 14:58:48 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0071203	.0000555	.0008047	-.001779	F .0803454	.0007168
Stddev	.0002442	.0002955	.0039437	.000820	.0084985	.0008384
%RSD	3.430010	532.4790	490.0830	46.07028	10.57747	116.9721
#1	.0072165	.0002744	.0047649	-.001762	.0900784	.0016144
#2	.0068427	-.000281	-.003122	-.000968	.0743945	.0005820
#3	.0073018	.000173	.000772	-.002607	.0765633	-.000046

Elem	Sr4077
Units	ppm
Avg	.0004719
Stddev	.0001333
%RSD	28.24195
#1	.0006256
#2	.0003881
#3	.0004021

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3403.849	75224.14	15646.59	2357.752	4316.089
Stddev	2.646	211.59	155.32	6.797	5.592
%RSD	.0777479	.2812780	.9926545	.2882798	.1295713
#1	3402.322	75468.18	15685.02	2364.707	4310.412
#2	3402.321	75112.17	15475.67	2357.424	4316.261
#3	3406.905	75092.06	15779.09	2351.125	4321.593

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166595BS Acquired: 2/7/2025 15:03:08 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.8151925	2.047030	.9637806	2.088622	.8157154	1.953837
Stddev	.0027279	.005915	.0018936	.005467	.0018107	.000670
%RSD	.3346343	.2889427	.1964774	.2617480	.2219723	.0342963
#1	.8183419	2.050146	.9656965	2.094742	.8175080	1.954369
#2	.8136634	2.050736	.9619101	2.086902	.8157510	1.954057
#3	.8135720	2.040209	.9637351	2.084222	.8138872	1.953084

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1850441	.1905211	.1940121	1.029415	.4033276	.1975232
Stddev	.0014037	.0009352	.0002779	.009930	.0006420	.0003104
%RSD	.7585604	.4908584	.1432434	.9646452	.1591737	.1571453
#1	.1854162	.1901300	.1943317	1.040803	.4034837	.1971679
#2	.1834919	.1898449	.1938279	1.024879	.4038772	.1977419
#3	.1862242	.1915883	.1938766	1.022562	.4026220	.1976598

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3172504	2.992618	.1934643	1.898818	.4977572	.0751755
Stddev	.0004224	.017965	.0013727	.018834	.0007443	.0001996
%RSD	.1331319	.6003236	.7095198	.9918873	.1495315	.2654867
#1	.3177341	2.973103	.1923249	1.897838	.4986058	.0749505
#2	.3170630	3.008469	.1930797	1.880492	.4974510	.0753311
#3	.3169542	2.996283	.1949882	1.918123	.4972149	.0752450

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.933736	.2876874	.2073072	10.10573	.2814596	.4073863
Stddev	.005767	.0007080	.0012119	.03207	.0012426	.0010757
%RSD	.1965907	.2460892	.5845714	.3173427	.4414965	.2640552
#1	2.938863	.2884841	.2063116	10.07752	.2822614	.4084711
#2	2.934854	.2871303	.2069535	10.09907	.2800281	.4073677
#3	2.927492	.2874478	.2086566	10.14061	.2820891	.4063199

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166595BS Acquired: 2/7/2025 15:03:08 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.6879973	.1922765	.8017607	5.727801	F .0289533	.2008321
Stddev	.0004707	.0012954	.0050235	.011414	.0027605	.0014736
%RSD	.0684190	.6737260	.6265601	.1992776	9.534310	.7337428
#1	.6885081	.1912619	.8071946	5.740403	.0320840	.2012824
#2	.6875809	.1918321	.7972859	5.718156	.0279067	.1991859
#3	.6879028	.1937357	.8008015	5.724844	.0268691	.2020280

Elem	Sr4077
Units	ppm
Avg	.1919686
Stddev	.0008818
%RSD	.4593505
#1	.1916841
#2	.1912641
#3	.1929575

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3347.644	73118.55	15493.84	2288.700	4182.432
Stddev	1.648	174.39	31.86	5.536	1.852
%RSD	.0492222	.2385032	.2056330	.2418728	.0442694
#1	3346.003	73190.31	15478.11	2283.241	4180.734
#2	3347.631	72919.73	15530.50	2294.309	4184.406
#3	3349.298	73245.61	15472.90	2288.550	4182.157

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1304-01 Acquired: 2/7/2025 15:07:07 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0455127	-.023830	.5612637	-.025712	-.000380	128.9936	.6228981
Stddev	.0020697	.003087	.0027427	.004264	.001278	.2114	.0037162
%RSD	4.547572	12.95498	.4886572	16.58290	336.3061	.1639127	.5965933
#1	.0444208	-.020500	.5585808	-.027545	-.001468	128.8094	.6193192
#2	.0478997	-.024395	.5640624	-.028754	.001028	129.2245	.6267378
#3	.0442176	-.026596	.5611480	-.020839	-.000700	128.9470	.6226373

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0121039	.0168449	32.94964	.3297038	.1834990	.3787800	274.4257
Stddev	.0000428	.0002972	.07016	.0006506	.0002622	.0026346	1.2391
%RSD	.3538004	1.764588	.2129384	.1973274	.1428764	.6955584	.4515169
#1	.0121473	.0170660	32.88465	.3296073	.1838007	.3818062	273.0185
#2	.0120617	.0169617	33.02403	.3291068	.1833264	.3775376	275.3533
#3	.0121026	.0165070	32.94025	.3303972	.1833700	.3769963	274.9054

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.384774	42.35273	.2368037	.0062180	5.601062	.6178876	1.240765
Stddev	.018798	.05897	.0001683	.0003868	.041454	.0035854	.003594
%RSD	.3491020	.1392294	.0710616	6.219749	.7401087	.5802726	.2896797
#1	5.368173	42.28681	.2369700	.0057787	5.556929	.6173367	1.236659
#2	5.405186	42.37093	.2368075	.0063682	5.639180	.6217166	1.243346
#3	5.380963	42.40045	.2366335	.0065071	5.607077	.6146095	1.242288

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.826325	.1465358	.0026854	.0130976	5.511704	2.182756	9.199853
Stddev	.024868	.0013862	.0003721	.0009499	.016873	.003993	.011906
%RSD	.2817440	.9459725	13.85549	7.252658	.3061383	.1829257	.1294102
#1	8.798061	.1449977	.0028555	.0140712	5.500303	2.184493	9.200559
#2	8.836068	.1469212	.0029419	.0121733	5.531088	2.178189	9.211390
#3	8.844845	.1476885	.0022586	.0130484	5.503722	2.185586	9.187610

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1304-01 Acquired: 2/7/2025 15:07:07 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	2.408307	.1908803	-.125329
Stddev	.008302	.0011573	.000638
%RSD	.3447228	.6062689	.5087704
#1	2.412602	.1898877	-.124648
#2	2.413581	.1921514	-.125425
#3	2.398737	.1906017	-.125912

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3975.552	87820.88	19707.68	2763.642	3876.788
Stddev	8.070	297.14	63.31	9.632	9.133
%RSD	.2029785	.3383490	.3212369	.3485295	.2355911
#1	3975.424	87864.14	19664.60	2771.337	3876.806
#2	3967.547	88094.02	19780.37	2766.750	3867.646
#3	3983.684	87504.48	19678.08	2752.840	3885.913

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1300-02 Acquired: 2/7/2025 15:11:12 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.000719	.0038160	.0607121	.0021752	.0339138	2.940613
Stddev	.001695	.0015706	.0016310	.0005213	.0007597	.019285
%RSD	235.6801	41.15799	2.686495	23.96857	2.240160	.6558218
#1	-.001906	.0036256	.0592583	.0016484	.0347235	2.959697
#2	.001222	.0023492	.0604022	.0021862	.0332166	2.921133
#3	-.001474	.0054730	.0624759	.0026909	.0338012	2.941008

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1327567	.0004288	.0023121	18.58072	.0491996	.0046348
Stddev	.0006645	.0000552	.0000408	.05001	.0005136	.0001687
%RSD	.5005098	12.87227	1.765087	.2691616	1.043825	3.640413
#1	.1334545	.0003792	.0022656	18.57600	.0497191	.0046434
#2	.1321315	.0004883	.0023420	18.53324	.0491874	.0044620
#3	.1326842	.0004191	.0023287	18.63293	.0486922	.0047991

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2996651	20.63609	.2117465	4.199086	.0468803	.0021528
Stddev	.0012906	.07466	.0014924	.008872	.0002028	.0003062
%RSD	.4306720	.3618050	.7047985	.2112823	.4324990	14.22238
#1	.2994806	20.69823	.2133837	4.188897	.0466466	.0019380
#2	.2984767	20.65678	.2104622	4.203262	.0469851	.0020169
#3	.3010380	20.55327	.2113936	4.205099	.0470093	.0025034

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	639.3872	.0043519	1.068985	30.58579	.1457605	.0165131
Stddev	1.7442	.0003956	.005678	.09750	.0007971	.0003075
%RSD	.2727850	9.090721	.5311675	.3187904	.5468536	1.862363
#1	639.6941	.0038961	1.073954	30.66520	.1465485	.0167213
#2	637.5100	.0046061	1.070206	30.61521	.1457783	.0161598
#3	640.9575	.0045536	1.062796	30.47697	.1449546	.0166581

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1300-02 Acquired: 2/7/2025 15:11:12 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0108201	.0407067	F 22.16913	F 10.44599	F 96.15578	.0231780
Stddev	.0010439	.0010366	.04905	.03509	.34382	.0001656
%RSD	9.648051	2.546412	.2212460	.3359347	.3575692	.7145463
#1	.0109261	.0418330	22.11340	10.44645	95.98220	.0230114
#2	.0118069	.0404945	22.18828	10.41067	95.93335	.0233427
#3	.0097272	.0397927	22.20572	10.48085	96.55179	.0231798

Elem	Sr4077
Units	ppm
Avg	.1402488
Stddev	.0004427
%RSD	.3156634
#1	.1407423
#2	.1398864
#3	.1401178

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3147.377	68528.57	15486.14	2193.504	3660.061
Stddev	7.921	239.41	23.08	10.292	10.922
%RSD	.2516752	.3493561	.1490383	.4692250	.2984225
#1	3154.096	68499.98	15462.18	2181.820	3666.527
#2	3149.392	68304.74	15488.03	2197.464	3666.207
#3	3138.643	68780.99	15508.22	2201.228	3647.451

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1316-01 Acquired: 2/7/2025 15:15:30 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0056502	-.003125	.0151033	-.002390	.0019873	.9265349
Stddev	.0026707	.003345	.0007772	.000651	.0020596	.0033563
%RSD	47.26722	107.0164	5.145759	27.21432	103.6369	.3622410
#1	.0048665	.000473	.0142211	-.003033	.0013254	.9246229
#2	.0086250	-.006140	.0154020	-.001732	.0042964	.9304103
#3	.0034590	-.003709	.0156869	-.002406	.0003400	.9245714

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0745925	.0001350	.0001931	139.5207	.0048655	.0017401
Stddev	.0012948	.0000310	.0000298	.6668	.0002529	.0000986
%RSD	1.735853	22.94847	15.45129	.4779299	5.197193	5.664860
#1	.0749855	.0001419	.0001806	139.9576	.0045810	.0016358
#2	.0756453	.0001619	.0001716	139.8515	.0049511	.0018318
#3	.0731467	.0001011	.0002272	138.7532	.0050645	.0017528

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0152488	7.930005	.5338868	9.448510	.0068712	.0002104
Stddev	.0003824	.013906	.0032524	.055540	.0001923	.0000514
%RSD	2.507846	.1753626	.6091829	.5878184	2.798315	24.41558
#1	.0153181	7.945240	.5365905	9.506583	.0069930	.0001544
#2	.0148364	7.926779	.5347921	9.443040	.0069710	.0002553
#3	.0155918	7.917995	.5302777	9.395907	.0066495	.0002216

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	560.5243	.0049483	.2916456	15.24781	.0855426	.0015343
Stddev	5.2460	.0003187	.0008809	.08564	.0005872	.0002000
%RSD	.9359160	6.440356	.3020436	.5616760	.6864608	13.03713
#1	563.6699	.0051765	.2924866	15.15905	.0860578	.0016221
#2	554.4682	.0050842	.2917205	15.25442	.0856669	.0013054
#3	563.4348	.0045842	.2907296	15.32996	.0849032	.0016754

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1316-01 Acquired: 2/7/2025 15:15:30 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.009212	.0449697	F 10.58597	1.690867	9.708553	-.000834
Stddev	.000280	.0005309	.01951	.002361	.039882	.000351
%RSD	3.043063	1.180460	.1842771	.1396080	.4107910	42.07866
#1	-.009365	.0449592	10.58107	1.693437	9.707208	-.000918
#2	-.009383	.0444442	10.56938	1.690367	9.669360	-.000449
#3	-.008889	.0455057	10.60746	1.688796	9.749090	-.001136

Elem	Sr4077
Units	ppm
Avg	.4631078
Stddev	.0007124
%RSD	.1538288
#1	.4631847
#2	.4637786
#3	.4623600

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3049.642	67751.43	15073.02	2148.485	3525.670
Stddev	7.712	62.74	88.58	4.306	7.953
%RSD	.2528740	.0926002	.5876666	.2004005	.2255818
#1	3055.360	67687.54	15006.44	2153.456	3533.614
#2	3052.694	67753.80	15039.07	2145.931	3525.688
#3	3040.871	67812.94	15173.55	2146.068	3517.707

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1316-02 Acquired: 2/7/2025 15:19:52 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0148918	.0004639	.0252754	-.000349	.0026591	1.389656
Stddev	.0029421	.0005997	.0012365	.000702	.0007794	.005013
%RSD	19.75629	129.2700	4.892200	201.3555	29.30943	.3607220
#1	.0115463	.0010767	.0238977	.000123	.0031214	1.394144
#2	.0170759	.0004368	.0256397	-.000013	.0017593	1.390578
#3	.0160533	-.000122	.0262889	-.001156	.0030967	1.384247

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0941932	.0002051	.0005238	157.9279	.0063024	.0027838
Stddev	.0004280	.0000247	.0000402	.4860	.0001536	.0003167
%RSD	.4543645	12.05618	7.681394	.3077619	2.437476	11.37760
#1	.0937926	.0002199	.0004847	157.4486	.0063299	.0031431
#2	.0946441	.0001765	.0005216	158.4204	.0064404	.0025453
#3	.0941429	.0002188	.0005650	157.9146	.0061369	.0026628

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0176409	10.26507	.6245129	12.33494	.0088301	.0002957
Stddev	.0002280	.02369	.0034883	.08327	.0002724	.0003609
%RSD	1.292410	.2308181	.5585661	.6750990	3.084978	122.0693
#1	.0173781	10.29157	.6210515	12.31435	.0091301	.0002531
#2	.0177588	10.25768	.6280275	12.42657	.0087618	-.000042
#3	.0177857	10.24594	.6244597	12.26389	.0085983	.000676

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	917.4470	.0048782	.3549681	18.13157	.1393346	.0023172
Stddev	5.5566	.0003282	.0013881	.05231	.0007660	.0000746
%RSD	.6056574	6.728976	.3910612	.2884962	.5497349	3.221307
#1	913.7342	.0046949	.3552211	18.17925	.1385812	.0023732
#2	923.8352	.0052572	.3562124	18.13983	.1393100	.0023460
#3	914.7717	.0046825	.3534709	18.07562	.1401125	.0022325

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1316-02 Acquired: 2/7/2025 15:19:52 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.009141	.0671160	F 13.34844	1.710340	F 15.28117	.0204257
Stddev	.000422	.0012415	.04562	.001986	.06100	.0001356
%RSD	4.618346	1.849805	.3417347	.1160984	.3992151	.6640324
#1	-.008811	.0668801	13.35458	1.710119	15.29364	.0205452
#2	-.008997	.0660094	13.39068	1.712427	15.21489	.0202783
#3	-.009617	.0684586	13.30007	1.708474	15.33497	.0204537

Elem	Sr4077
Units	ppm
Avg	.5000656
Stddev	.0017516
%RSD	.3502747
#1	.4986288
#2	.5020168
#3	.4995513

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2923.455	64930.50	14577.41	2036.168	3337.121
Stddev	12.128	50.70	58.10	11.447	15.886
%RSD	.4148406	.0780854	.3985642	.5621789	.4760517
#1	2930.439	64961.60	14644.50	2032.543	3335.462
#2	2930.475	64957.90	14543.35	2026.972	3353.771
#3	2909.451	64871.99	14544.39	2048.988	3322.129

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1316-02DUP Acquired: 2/7/2025 15:24:12 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0147471	-.001088	.0254581	-.001532	.0026284	1.518273
Stddev	.0032858	.002222	.0008521	.002227	.0012796	.062348
%RSD	22.28082	204.2018	3.347147	145.4130	48.68450	4.106496
#1	.0136487	-.002790	.0247742	.000061	.0015558	1.503917
#2	.0184413	-.001898	.0264127	-.000580	.0022845	1.464356
#3	.0121511	.001425	.0251873	-.004076	.0040448	1.586547

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1006547	.0001998	.0003154	162.0460	.0066088	.0023325
Stddev	.0036539	.0000400	.0000568	4.3868	.0001941	.0003501
%RSD	3.630112	20.02593	18.00307	2.707106	2.936334	15.01089
#1	.0985326	.0001809	.0003810	159.7241	.0067491	.0027174
#2	.0985577	.0001728	.0002820	159.3081	.0063873	.0020328
#3	.1048738	.0002458	.0002832	167.1056	.0066899	.0022473

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0162822	10.95203	.6425335	12.64949	.0089644	.0001401
Stddev	.0001746	.04017	.0153089	.36013	.0002917	.0001226
%RSD	1.072346	.3668052	2.382589	2.846986	3.254337	87.47759
#1	.0164249	10.93148	.6323634	12.45077	.0088910	.0000325
#2	.0160875	10.92630	.6350969	12.43250	.0092858	.0002736
#3	.0163343	10.99833	.6601401	13.06520	.0087164	.0001143

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1013.319	.0065599	.3575648	19.59347	.1351698	.0023165
Stddev	14.215	.0009836	.0014710	.10849	.0031258	.0002309
%RSD	1.402845	14.99475	.4114043	.5536833	2.312477	9.968032
#1	1025.828	.0071770	.3559186	19.63965	.1336370	.0020812
#2	1016.269	.0070772	.3587504	19.67123	.1331062	.0023256
#3	997.860	.0054256	.3580255	19.46954	.1387661	.0025427

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1316-02DUP Acquired: 2/7/2025 15:24:12 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.009301	.0780944	F 14.58620	1.694254	F 15.17410	.0211098
Stddev	.000454	.0034080	.07006	.004004	.02255	.0006013
%RSD	4.883087	4.363969	.4802910	.2363377	.1486067	2.848696
#1	-.009114	.0784586	14.60649	1.698262	15.17927	.0206988
#2	-.009819	.0745189	14.50824	1.694246	15.19362	.0208306
#3	-.008970	.0813057	14.64387	1.690254	15.14942	.0218000

Elem	Sr4077
Units	ppm
Avg	.5161630
Stddev	.0091220
%RSD	1.767277
#1	.5107278
#2	.5110668
#3	.5266944

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2938.141	64098.76	15034.92	2013.724	3353.715
Stddev	2.968	274.45	452.58	8.057	3.707
%RSD	.1010028	.4281627	3.010218	.4000980	.1105401
#1	2938.306	64322.37	15290.18	2022.952	3356.668
#2	2941.023	64181.45	15302.21	2008.089	3354.923
#3	2935.095	63792.48	14512.37	2010.130	3349.554

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1316-02LX5 Acquired: 2/7/2025 15:28:32 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0031648	-.000536	.0031118	.0018151	.0004643	.3235508	.0176876
Stddev	.0004550	.000952	.0008556	.0011617	.0015208	.0088863	.0003361
%RSD	14.37604	177.7286	27.49540	64.00509	327.5322	2.746508	1.900087
#1	.0027051	-.001369	.0039671	.0011987	.0013184	.3198645	.0174490
#2	.0031745	.000503	.0022559	.0010914	-.001292	.3336870	.0175418
#3	.0036149	-.000742	.0031123	.0031551	.001366	.3171008	.0180720

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000804	.0000658	32.95977	.0009434	.0006399	.0023841	2.090508
Stddev	.0000269	.0000101	.06253	.0000714	.0002180	.0001383	.011326
%RSD	33.42970	15.41762	.1897078	7.569722	34.07308	5.799260	.5417836
#1	.0001114	.0000563	33.03059	.0009288	.0008011	.0023279	2.098437
#2	.0000666	.0000765	32.91219	.0008804	.0003918	.0025416	2.095551
#3	.0000632	.0000646	32.93652	.0010210	.0007267	.0022828	2.077537

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1324996	2.619593	.0018949	.0001589	188.3782	.0009035	.0677306
Stddev	.0002486	.029040	.0004289	.0000975	1.8735	.0005964	.0004283
%RSD	.1876367	1.108573	22.63252	61.34245	.9945281	66.00262	.6323874
#1	.1324646	2.626325	.0022893	.0001662	187.6157	.0015740	.0677851
#2	.1327639	2.587778	.0014383	.0002526	190.5127	.0004322	.0681290
#3	.1322704	2.644676	.0019573	.0000580	187.0063	.0007044	.0672776

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.600800	.0282835	.0006607	.0030252	.0179511	2.748205	.3140298
Stddev	.022097	.0008659	.0002111	.0013948	.0009815	.021954	.0014543
%RSD	.6136609	3.061661	31.95375	46.10546	5.467568	.7988348	.4631177
#1	3.580289	.0291799	.0008355	.0016465	.0190713	2.733889	.3153033
#2	3.624198	.0274516	.0004261	.0044355	.0175400	2.773481	.3143412
#3	3.597913	.0282190	.0007206	.0029936	.0172421	2.737246	.3124450

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1316-02LX5 Acquired: 2/7/2025 15:28:32 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	2.707032	.0085067	.1013635
Stddev	.012451	.0004365	.0004533
%RSD	.4599380	5.131218	.4471838
#1	2.694727	.0081308	.1018505
#2	2.719624	.0089854	.1012860
#3	2.706744	.0084039	.1009539

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3286.742	70194.31	15121.62	2243.004	3910.545
Stddev	7.195	282.70	34.52	15.569	9.471
%RSD	.2189043	.4027430	.2282650	.6941355	.2421844
#1	3294.842	70036.04	15084.92	2227.160	3916.666
#2	3281.094	70026.19	15153.43	2243.569	3899.636
#3	3284.289	70520.69	15126.51	2258.283	3915.332

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV04 Acquired: 2/7/2025 15:32:59 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.956612	5.015004	4.893752	4.983896	4.977173	9.665128	9.609401
Stddev	.020560	.023250	.018679	.027360	.021483	.018908	.049090
%RSD	.4148046	.4636153	.3816912	.5489667	.4316236	.1956317	.5108535
#1	4.956190	5.026581	4.873385	4.987699	4.976161	9.681072	9.608443
#2	4.936266	4.988238	4.897787	4.954834	4.956213	9.670072	9.658963
#3	4.977380	5.030194	4.910083	5.009156	4.999143	9.644238	9.560797

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2446413	2.431516	24.02362	.9900511	2.441279	1.245601	4.761194
Stddev	.0012713	.009767	.04022	.0032000	.008995	.005967	.036676
%RSD	.5196423	.4016669	.1674115	.3232123	.3684736	.4790492	.7703121
#1	.2454127	2.420742	24.05853	.9865550	2.432137	1.242862	4.735777
#2	.2431740	2.434020	23.97964	.9928349	2.441579	1.241495	4.803239
#3	.2453371	2.439788	24.03270	.9907634	2.450121	1.252445	4.744567

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.374151	24.11047	2.445173	1.219716	22.86758	2.404168	2.448653
Stddev	.002869	.10916	.009430	.003352	.23980	.003192	.011840
%RSD	.1208318	.4527475	.3856692	.2748406	1.048644	.1327519	.4835218
#1	2.377128	24.15839	2.434920	1.216304	22.79558	2.407337	2.435908
#2	2.373921	23.98555	2.447125	1.223005	23.13514	2.400954	2.459310
#3	2.371405	24.18747	2.453475	1.219838	22.67204	2.404215	2.450743

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.78689	4.848925	4.984835	4.897358	4.774043	4.772300	4.836842
Stddev	.18356	.021945	.021056	.017352	.006622	.036002	.026061
%RSD	.7716994	.4525794	.4223943	.3543056	.1387170	.7543891	.5388093
#1	23.76628	4.856205	4.980050	4.881515	4.781337	4.745621	4.812688
#2	23.97989	4.824265	4.966584	4.894658	4.772386	4.813249	4.833375
#3	23.61450	4.866306	5.007871	4.915901	4.768407	4.758029	4.864464

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV04 Acquired: 2/7/2025 15:32:59 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.814220	4.729066	4.844557
Stddev	.009795	.014867	.028399
%RSD	.2034588	.3143709	.5862042
#1	4.809408	4.737021	4.824697
#2	4.807762	4.738263	4.877086
#3	4.825490	4.711914	4.831889

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3418.984	73767.47	14854.91	2341.377	4090.231
Stddev	13.988	137.13	93.96	9.233	14.573
%RSD	.4091209	.1858979	.6325509	.3943353	.3562990
#1	3423.697	73925.73	14811.85	2352.036	4101.766
#2	3430.008	73683.73	14962.69	2335.894	4095.074
#3	3403.249	73692.96	14790.19	2336.199	4073.853

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB04 Acquired: 2/7/2025 15:37:10 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003249	.0018263	-.000394	.0008027	.0001431	.0010398
Stddev	.0027108	.0010696	.001049	.0011786	.0003795	.0007220
%RSD	834.4292	58.56688	266.6040	146.8300	265.2285	69.43576
#1	.0011198	.0028149	-.000070	-.000472	.0004264	.0016193
#2	-.002695	.0019732	.000456	.001026	.0002909	.0002310
#3	.002549	.0006908	-.001566	.001854	-.000288	.0012692

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001129	.0000672	.0002610	.0118354	-.000239	.0002458
Stddev	.000593	.0000480	.0000721	.0043104	.000121	.0002473
%RSD	52.51618	71.46792	27.62400	36.41934	50.77290	100.6207
#1	-.000445	.0000178	.0002709	.0112387	-.000344	.0004453
#2	-.001481	.0000701	.0003276	.0164130	-.000268	.0003228
#3	-.001463	.0001137	.0001844	.0078544	-.000106	-.000031

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001535	-.007055	.0007128	.0186909	-.000016	.0004503
Stddev	.000329	.003755	.0002024	.0088032	.000472	.0000324
%RSD	21.43511	53.22297	28.39235	47.09899	2956.373	7.205555
#1	-.001314	-.004467	.0006847	.0174150	.000478	.0004256
#2	-.001914	-.011361	.0009278	.0105952	-.000062	.0004870
#3	-.001378	-.005335	.0005259	.0280624	-.000464	.0004382

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2449733	.0007023	.0000451	.2306077	.0053107	.0007969
Stddev	.0124780	.0005578	.0002267	.0119390	.0004553	.0002246
%RSD	5.093622	79.43312	502.3043	5.177186	8.573069	28.18301
#1	.2365183	.0002838	.0002509	.2170792	.0047974	.0007945
#2	.2390971	.0004874	.0000825	.2396684	.0054690	.0010226
#3	.2593045	.0013356	-.000198	.2350756	.0056658	.0005735

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB04 Acquired: 2/7/2025 15:37:10 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082892	.0012393	.0018568	-.000627	F .0100967	.0040198
Stddev	.0004243	.0003717	.0083233	.001141	.0022949	.0002938
%RSD	5.118732	29.98829	448.2569	182.0881	22.72881	7.309618
#1	.0087503	.0009307	.0002697	.000274	.0095243	.0043112
#2	.0079152	.0011353	.0108594	-.001910	.0126235	.0037236
#3	.0082021	.0016519	-.005559	-.000244	.0081422	.0040245

Elem	Sr4077
Units	ppm
Avg	.0011923
Stddev	.0002268
%RSD	19.02193
#1	.0014320
#2	.0011638
#3	.0009811

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3441.205	74645.01	15575.46	2381.936	4326.116
Stddev	17.937	308.17	46.94	8.732	16.705
%RSD	.5212322	.4128430	.3013551	.3665986	.3861533
#1	3451.993	74978.42	15588.61	2391.089	4336.306
#2	3451.122	74585.98	15614.42	2381.021	4335.206
#3	3420.499	74370.62	15523.35	2373.697	4306.837

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1316-02MS Acquired: 2/7/2025 15:41:30 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.8701721	1.850113	.9825105	2.002054	.8419325	3.241854
Stddev	.0014238	.011724	.0033113	.008896	.0039727	.005730
%RSD	.1636214	.6337017	.3370222	.4443483	.4718595	.1767499
#1	.8686857	1.863409	.9862450	1.994370	.8394008	3.237914
#2	.8715237	1.845674	.9799328	1.999992	.8398854	3.239220
#3	.8703069	1.841257	.9813538	2.011800	.8465113	3.248427

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2758722	.1844486	.1979357	152.7738	.3965759	.2023368
Stddev	.0003344	.0009203	.0007056	.2955	.0011956	.0006676
%RSD	.1212045	.4989267	.3564842	.1934154	.3014714	.3299705
#1	.2761928	.1854691	.1987439	153.0039	.3953950	.2030142
#2	.2758982	.1836818	.1976207	152.4406	.3965472	.2016794
#3	.2755256	.1841948	.1974424	152.8769	.3977856	.2023168

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3098801	13.37084	.7792668	13.69462	.5063868	.0795010
Stddev	.0003468	.07483	.0013531	.05306	.0008898	.0008483
%RSD	.1119143	.5596151	.1736376	.3874467	.1757064	1.067036
#1	.3095916	13.28837	.7782573	13.73480	.5073562	.0788448
#2	.3097839	13.43438	.7787390	13.63447	.5061965	.0804589
#3	.3102649	13.38977	.7808043	13.71457	.5056075	.0791993

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	965.0314	.2842619	.5455267	29.76625	.3836175	.4054852
Stddev	12.5649	.0004679	.0023738	.25128	.0031002	.0010183
%RSD	1.302021	.1645953	.4351457	.8441905	.8081477	.2511288
#1	950.6130	.2837716	.5429931	29.48424	.3864459	.4043250
#2	970.8401	.2843105	.5476995	29.96640	.3803030	.4062308
#3	973.6409	.2847036	.5458873	29.84810	.3841038	.4058997

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1316-02MS Acquired: 2/7/2025 15:41:30 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.6866591	.2339601	F 14.07123	8.119566	F 14.13698	.2262855
Stddev	.0033523	.0002009	.09091	.053747	.03183	.0007677
%RSD	.4882045	.0858767	.6460436	.6619483	.2251784	.3392824
#1	.6904537	.2337395	13.96824	8.178615	14.16690	.2254272
#2	.6854244	.2341325	14.10519	8.106585	14.10353	.2265226
#3	.6840993	.2340083	14.14027	8.073497	14.14051	.2269067

Elem	Sr4077
Units	ppm
Avg	.6669860
Stddev	.0017639
%RSD	.2644596
#1	.6650204
#2	.6684311
#3	.6675064

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2952.107	64286.72	15064.79	2014.223	3361.059
Stddev	10.110	297.13	54.16	15.435	6.424
%RSD	.3424667	.4621908	.3595115	.7663163	.1911407
#1	2960.989	64603.09	15017.65	2032.035	3361.636
#2	2954.227	64243.49	15123.95	2005.846	3367.176
#3	2941.105	64013.57	15052.77	2004.786	3354.366

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1316-02MSD Acquired: 2/7/2025 15:45:38 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.8708400	1.878747	.9836171	2.000934	.8437990	3.232175
Stddev	.0026931	.010985	.0024514	.004798	.0023899	.009591
%RSD	.3092531	.5846728	.2492219	.2398037	.2832267	.2967275
#1	.8717886	1.866139	.9839357	1.999500	.8464126	3.239173
#2	.8729304	1.886253	.9810220	1.997016	.8417253	3.221242
#3	.8678009	1.883847	.9858936	2.006286	.8432589	3.236108

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2637660	.1928851	.1980685	151.2120	.3970657	.2024353
Stddev	.0008082	.0001446	.0002279	.1825	.0008699	.0006572
%RSD	.3064066	.0749471	.1150625	.1206594	.2190710	.3246335
#1	.2640618	.1930048	.1978623	151.2259	.3961190	.2018365
#2	.2628516	.1929259	.1980300	151.0229	.3978297	.2023309
#3	.2643847	.1927245	.1983132	151.3870	.3972483	.2031384

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3108930	12.81693	.7663821	13.58726	.5057429	.0805194
Stddev	.0003885	.01487	.0003624	.01787	.0013051	.0002528
%RSD	.1249540	.1160153	.0472912	.1315090	.2580573	.3139328
#1	.3105947	12.80002	.7667787	13.59027	.5053124	.0807049
#2	.3107520	12.82797	.7660680	13.56807	.5047074	.0802314
#3	.3113323	12.82279	.7662997	13.60342	.5072089	.0806217

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	877.4517	.2805584	.5502681	28.07373	.3994315	.4052881
Stddev	6.9398	.0019752	.0024735	.06049	.0012645	.0008241
%RSD	.7909086	.7040102	.4495042	.2154513	.3165618	.2033400
#1	885.1953	.2793614	.5474513	28.04249	.3984077	.4043450
#2	875.3656	.2794757	.5512676	28.03526	.3990418	.4056492
#3	871.7942	.2828382	.5520854	28.14345	.4008449	.4058699

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1316-02MSD Acquired: 2/7/2025 15:45:38 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.6879892	.2372554	F 13.68770	8.134522	F 14.15696	.2168112
Stddev	.0008271	.0013054	.01505	.029894	.01034	.0010084
%RSD	.1202234	.5502044	.1099525	.3674976	.0730611	.4651210
#1	.6874879	.2387046	13.68651	8.106487	14.14785	.2172593
#2	.6889439	.2368898	13.67328	8.131100	14.15481	.2156564
#3	.6875358	.2361718	13.70331	8.165980	14.16820	.2175180

Elem	Sr4077
Units	ppm
Avg	.6518465
Stddev	.0009334
%RSD	.1431966
#1	.6513599
#2	.6512569
#3	.6529227

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2951.150	63803.58	14467.18	2004.497	3358.851
Stddev	3.252	106.84	11.35	7.193	5.607
%RSD	.1101844	.1674568	.0784513	.3588584	.1669307
#1	2953.388	63926.93	14479.08	2012.023	3361.864
#2	2952.642	63743.90	14456.48	1997.690	3362.307
#3	2947.420	63739.92	14465.97	2003.779	3352.382

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1316-02A Acquired: 2/7/2025 15:49:45 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.8603308	1.850547	.9804447	1.981652	.8345798	3.530340
Stddev	.0057506	.002243	.0025652	.004617	.0012992	.020747
%RSD	.6684172	.1212035	.2616319	.2329825	.1556682	.5876784
#1	.8647435	1.848507	.9823350	1.986469	.8333572	3.548193
#2	.8538273	1.850185	.9814744	1.977265	.8359440	3.535248
#3	.8624215	1.852949	.9775247	1.981224	.8344381	3.507579

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2762830	.1877372	.1973001	153.0167	.3912198	.2012461
Stddev	.0009746	.0013053	.0001202	.5087	.0033793	.0003760
%RSD	.3527640	.6952805	.0609356	.3324160	.8637794	.1868202
#1	.2772183	.1866026	.1971789	152.6276	.3945609	.2013139
#2	.2752733	.1891638	.1974194	153.5923	.3878036	.2015836
#3	.2763573	.1874452	.1973021	152.8302	.3912951	.2008408

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3089567	13.38589	.7845422	13.71685	.5039345	.0797012
Stddev	.0007544	.14384	.0030575	.07764	.0011560	.0001776
%RSD	.2441781	1.074587	.3897206	.5660080	.2293992	.2227980
#1	.3087052	13.53123	.7810119	13.67949	.5046369	.0798756
#2	.3098047	13.24359	.7863449	13.80610	.5045662	.0797075
#3	.3083602	13.38284	.7862697	13.66495	.5026002	.0795206

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	939.1867	.2845192	.5447155	29.22486	.3898152	.4005657
Stddev	12.1057	.0004638	.0034762	.42177	.0022947	.0006628
%RSD	1.288958	.1630080	.6381619	1.443196	.5886634	.1654684
#1	951.1046	.2839852	.5486500	29.66989	.3879029	.4002459
#2	939.5542	.2848213	.5420600	28.83102	.3923597	.4013278
#3	926.9015	.2847510	.5434366	29.17367	.3891830	.4001235

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1316-02A Acquired: 2/7/2025 15:49:45 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.6878113	.2731280	F 14.98093	8.223835	F 14.25046	.2229215
Stddev	.0010072	.0077920	.26871	.014464	.01101	.0008565
%RSD	.1464307	2.852879	1.793657	.1758757	.0772729	.3842281
#1	.6889506	.2821157	15.27343	8.233547	14.24374	.2235451
#2	.6874438	.2689964	14.74503	8.230747	14.24448	.2219449
#3	.6870395	.2682719	14.92434	8.207212	14.26317	.2232745

Elem	Sr4077
Units	ppm
Avg	.6662811
Stddev	.0004380
%RSD	.0657334
#1	.6662976
#2	.6658351
#3	.6667106

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2981.271	64664.55	14922.21	2047.242	3376.772
Stddev	9.420	504.03	96.06	18.904	11.088
%RSD	.3159874	.7794476	.6437626	.9233886	.3283466
#1	2981.922	64084.24	14996.71	2025.420	3374.835
#2	2971.541	64993.10	14813.78	2057.700	3366.781
#3	2990.349	64916.31	14956.12	2058.606	3388.700

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166597BL Acquired: 2/7/2025 15:53:53 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.001032	.0013697	-.000588	.0031848	.0016031	.0003909
Stddev	.001355	.0013679	.000470	.0021839	.0009894	.0042644
%RSD	131.3134	99.86493	79.83627	68.57449	61.71965	1090.885
#1	.000463	.0017873	-.000317	.0008299	.0023674	.0039393
#2	-.001379	-.000158	-.000317	.0051436	.0004855	-.004340
#3	-.002180	.002480	-.001130	.0035807	.0019564	.001573

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004408	.0001536	.0000597	.0292913	-.000364	.0003393
Stddev	.000743	.0000363	.0000845	.0109836	.000162	.0000739
%RSD	16.85311	23.65914	141.5179	37.49782	44.49711	21.78480
#1	-.003918	.0001244	.0001112	.0185993	-.000427	.0004129
#2	-.004044	.0001943	-.000038	.0405450	-.000485	.0003398
#3	-.005263	.0001421	.000106	.0287297	-.000180	.0002651

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001491	-.008266	.0002624	.0057063	.0000576	.0002435
Stddev	.000121	.003259	.0002113	.0167377	.0003356	.0002040
%RSD	8.123893	39.43042	80.52188	293.3177	582.3998	83.74906
#1	-.001549	-.011483	.0000292	.0090388	.0004429	.0004312
#2	-.001572	-.004966	.0003167	.0205270	-.000171	.0002729
#3	-.001352	-.008347	.0004412	-.012447	-.000099	.0000265

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5155373	-.000377	-.000316	.2939873	.0009760	.0004262
Stddev	.0215779	.002385	.000192	.0235001	.0004046	.0002223
%RSD	4.185523	632.7912	60.86922	7.993580	41.45487	52.14466
#1	.4986852	.001310	-.000527	.2690622	.0006415	.0006633
#2	.5080696	-.003106	-.000268	.2971594	.0008608	.0003928
#3	.5398571	.000665	-.000152	.3157402	.0014257	.0002226

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166597BL Acquired: 2/7/2025 15:53:53 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0082039	-.000216	.0051440	-.001355	F .0105965	.0054768
Stddev	.0006756	.000279	.0089008	.001438	.0068985	.0007735
%RSD	8.234874	129.3976	173.0326	106.1777	65.10189	14.12328
#1	.0089570	.000063	.0054767	-.000705	.0185336	.0046240
#2	.0076511	-.000215	-.003918	-.000356	.0060444	.0061330
#3	.0080035	-.000495	.013874	-.003004	.0072113	.0056735

Elem	Sr4077
Units	ppm
Avg	.0000416
Stddev	.0000267
%RSD	64.11379
#1	.0000608
#2	.0000112
#3	.0000528

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3424.699	74563.56	15129.81	2400.722	4285.207
Stddev	20.856	66.56	91.92	6.712	18.864
%RSD	.6089745	.0892664	.6075480	.2795925	.4402191
#1	3438.430	74562.32	15023.75	2398.699	4292.670
#2	3400.700	74497.63	15179.43	2395.254	4263.753
#3	3434.967	74630.74	15186.26	2408.213	4299.198

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166597BS Acquired: 2/7/2025 15:58:12 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.7731833	1.963644	.9375544	1.956942	.7825079	1.878395
Stddev	.0020544	.020618	.0036092	.007295	.0024338	.005055
%RSD	.2657052	1.049965	.3849554	.3727709	.3110194	.2691344
#1	.7708460	1.948609	.9383663	1.951068	.7800545	1.878227
#2	.7740006	1.955176	.9336085	1.954650	.7825477	1.873426
#3	.7747032	1.987148	.9406886	1.965108	.7849216	1.883532

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1750432	.1940657	.1886567	.9701260	.4002195	.1924256
Stddev	.0001531	.0017161	.0003694	.0038276	.0013030	.0004325
%RSD	.0874344	.8842600	.1958254	.3945480	.3255667	.2247666
#1	.1748665	.1948388	.1886497	.9698627	.4005396	.1926965
#2	.1751272	.1920991	.1882908	.9740785	.4013326	.1919268
#3	.1751357	.1952591	.1890295	.9664369	.3987863	.1926536

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3045530	2.783016	.1907258	1.876968	.4836799	.0728322
Stddev	.0006238	.024541	.0008227	.026926	.0006161	.0003657
%RSD	.2048311	.8818010	.4313492	1.434568	.1273738	.5021218
#1	.3039560	2.780121	.1907226	1.879725	.4834031	.0726487
#2	.3045023	2.808875	.1899047	1.848769	.4832508	.0732534
#3	.3052006	2.760051	.1915500	1.902410	.4843859	.0725946

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.720956	.2789150	.2012006	9.111436	.2860056	.4003826
Stddev	.048124	.0003092	.0013022	.157459	.0026269	.0016184
%RSD	1.768639	.1108662	.6472035	1.728144	.9184964	.4042082
#1	2.734727	.2788020	.2026119	9.061071	.2877084	.3999082
#2	2.760693	.2792648	.2000456	9.287916	.2829802	.3990545
#3	2.667448	.2786782	.2009443	8.985322	.2873281	.4021852

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166597BS Acquired: 2/7/2025 15:58:12 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.6700658	.1831576	F .7340735	5.506137	F .0910711	.1908754
Stddev	.0012782	.0005913	.0095005	.011953	.0029227	.0005209
%RSD	.1907620	.3228481	1.294211	.2170921	3.209234	.2729092
#1	.6712984	.1838378	.7437429	5.495088	.0882643	.1903637
#2	.6687464	.1827663	.7337262	5.504499	.0940973	.1908572
#3	.6701527	.1828686	.7247515	5.518826	.0908518	.1914051

Elem	Sr4077
Units	ppm
Avg	.1820363
Stddev	.0003652
%RSD	.2006023
#1	.1821236
#2	.1823498
#3	.1816353

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3477.130	75243.52	15060.98	2352.833	4365.978
Stddev	1.903	529.57	104.79	12.442	5.088
%RSD	.0547338	.7038075	.6957597	.5288110	.1165403
#1	3475.448	75128.44	15033.12	2341.755	4360.334
#2	3479.196	74780.96	15176.89	2350.449	4370.215
#3	3476.747	75821.17	14972.94	2366.294	4367.384

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1277-03 Acquired: 2/7/2025 16:02:13 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.003929	-.008476	.0029283	.0032201	.0012420	-.027350	.2941256
Stddev	.001602	.001327	.0004978	.0027530	.0017308	.007296	.0007105
%RSD	40.77888	15.66025	17.00039	85.49468	139.3568	26.67584	.2415556
#1	-.004295	-.009870	.0023879	.0046360	.0011452	-.029338	.2935928
#2	-.005317	-.007227	.0033683	.0049769	.0030192	-.033447	.2949322
#3	-.002176	-.008330	.0030288	.0000473	-.000438	-.019267	.2938517

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000125	.0015313	116.1790	.0009626	.0022511	-.000020	.1607299
Stddev	.000043	.0000682	.2125	.0002799	.0001149	.000302	.0014888
%RSD	34.44942	4.456107	.1828862	29.07739	5.102937	1502.742	.9262445
#1	-.000075	.0015464	115.9351	.0011215	.0022689	.000244	.1591040
#2	-.000145	.0014568	116.2775	.0006394	.0021284	-.000349	.1620264
#3	-.000154	.0015907	116.3243	.0011269	.0023561	.000044	.1610592

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6266658	3.669817	.0084181	.0003100	257.5817	-.000157	.2315664
Stddev	.0007679	.007365	.0004605	.0001057	2.0477	.001059	.0020305
%RSD	.1225418	.2006885	5.470605	34.08208	.7949892	672.4748	.8768692
#1	.6258956	3.662069	.0080237	.0002028	258.0780	.001065	.2301420
#2	.6266704	3.670654	.0083064	.0003132	255.3314	-.000739	.2338915
#3	.6274315	3.676727	.0089242	.0004141	259.3356	-.000799	.2306658

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.031021	.1254075	.0011102	-.009430	-.002193	4.881323	.0033098
Stddev	.019565	.0004969	.0003591	.000593	.000506	.020198	.0019260
%RSD	.9633315	.3962636	32.34637	6.291511	23.09028	.4137744	58.18937
#1	2.041790	.1249986	.0015248	-.010055	-.001617	4.904528	.0031816
#2	2.008437	.1259606	.0009057	-.009360	-.002568	4.867700	.0052967
#3	2.042836	.1252635	.0009000	-.008874	-.002393	4.871741	.0014512

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1277-03 Acquired: 2/7/2025 16:02:13 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	2.975308	-.018507	.3840753
Stddev	.011826	.001217	.0004137
%RSD	.3974745	6.575513	.1077135
#1	2.978418	-.017970	.3843954
#2	2.962238	-.017652	.3836081
#3	2.985269	-.019901	.3842223

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3113.426	68313.99	15267.93	2088.374	3772.430
Stddev	1.737	243.31	85.98	3.365	2.675
%RSD	.0557990	.3561712	.5631643	.1611082	.0709136
#1	3112.959	68055.40	15366.90	2089.959	3769.406
#2	3111.970	68538.42	15211.67	2084.510	3774.490
#3	3115.349	68348.14	15225.21	2090.653	3773.393

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1279-01 Acquired: 2/7/2025 16:06:36 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.006932	-.007660	.0107900	.0072276	.0045588	.0890876	.3019403
Stddev	.000833	.001651	.0011174	.0009045	.0007198	.0057316	.0004988
%RSD	12.01952	21.55692	10.35603	12.51511	15.78948	6.433637	.1652117
#1	-.006202	-.008485	.0102519	.0082598	.0047280	.0873850	.3018606
#2	-.007840	-.005759	.0100434	.0068500	.0051790	.0954776	.3014862
#3	-.006754	-.008737	.0120746	.0065730	.0037695	.0844002	.3024742

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000079	.0015144	11.34417	.0023195	.0034067	.1236523	2.893473
Stddev	.000008	.0000557	.06009	.0002159	.0001520	.0006140	.016528
%RSD	10.50974	3.679432	.5297111	9.309348	4.462397	.4965120	.5712311
#1	-.000086	.0014505	11.40055	.0020736	.0035706	.1239232	2.882000
#2	-.000082	.0015532	11.35102	.0024784	.0032704	.1229495	2.912418
#3	-.000070	.0015393	11.28095	.0024063	.0033789	.1240842	2.886001

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1085954	.8163375	.0087323	.0000455	316.1383	.0001190	2.022015
Stddev	.0002540	.0125567	.0004793	.0001462	1.9980	.0009418	.000928
%RSD	.2338759	1.538170	5.489123	321.2356	.6320171	791.7526	.0459094
#1	.1088762	.8306912	.0090060	-.000085	313.9001	-.000364	2.021992
#2	.1085285	.8109351	.0090121	.000019	316.7725	-.000484	2.021099
#3	.1083816	.8073863	.0081788	.000203	317.7422	.001204	2.022955

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.114456	.1100307	.0005831	-.007303	-.000132	.4859327	.0580215
Stddev	.013824	.0010531	.0002272	.000375	.000622	.0044859	.0014861
%RSD	.6537929	.9570781	38.96424	5.139136	470.2663	.9231597	2.561356
#1	2.102899	.1110897	.0006012	-.007733	.000029	.4808204	.0569204
#2	2.129771	.1100189	.0008007	-.007037	-.000819	.4877664	.0597120
#3	2.110699	.1089836	.0003474	-.007141	.000393	.4892113	.0574323

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1279-01 Acquired: 2/7/2025 16:06:36 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.8949909	-.000882	.0631728
Stddev	.0070061	.000766	.0000677
%RSD	.7828140	86.80569	.1071637
#1	.8933036	-.001671	.0632503
#2	.9026865	-.000141	.0631430
#3	.8889824	-.000835	.0631251

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3156.750	68869.02	15351.64	2138.994	3826.887
Stddev	3.578	150.48	120.55	5.227	8.709
%RSD	.1133352	.2185049	.7852414	.2443814	.2275692
#1	3160.801	68954.06	15213.14	2133.138	3836.014
#2	3155.429	68695.27	15408.82	2140.654	3818.667
#3	3154.021	68957.73	15432.96	2143.189	3825.981

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1279-02 Acquired: 2/7/2025 16:11:01 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.003833	.0022871	-.001081	.0047906	.0025399	.0371555	.2071819
Stddev	.000629	.0004846	.000755	.0010968	.0010937	.0016749	.0009159
%RSD	16.40840	21.19098	69.84958	22.89436	43.06186	4.507958	.4420574
#1	-.003297	.0027717	-.001932	.0054297	.0016149	.0365098	.2061822
#2	-.004525	.0022871	-.000824	.0035242	.0022576	.0390572	.2079805
#3	-.003676	.0018024	-.000488	.0054179	.0037470	.0358995	.2073830

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000335	.0001003	1.325153	.0011851	-.000655	.0073516	.0429617
Stddev	.000016	.0000186	.001768	.0002424	.000090	.0003279	.0051724
%RSD	4.863277	18.55463	.1334067	20.45544	13.80816	4.460220	12.03948
#1	-.000327	.0000870	1.327153	.0009349	-.000614	.0070806	.0449820
#2	-.000324	.0001215	1.324503	.0014190	-.000758	.0077161	.0468191
#3	-.000353	.0000922	1.323802	.0012016	-.000592	.0072581	.0370841

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105142	.0878341	.0010655	.0003673	291.5895	-.004027	.8141460
Stddev	.0002518	.0042052	.0001289	.0002330	5.0742	.000378	.0069537
%RSD	2.395010	4.787694	12.09568	63.44277	1.740194	9.386121	.8541051
#1	.0107400	.0830690	.0009184	.0002903	288.7172	-.004292	.8075315
#2	.0105599	.0910255	.0011192	.0006291	297.4483	-.003594	.8213953
#3	.0102427	.0894078	.0011588	.0001825	288.6029	-.004194	.8135112

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.888658	.1031557	1.065762	-.006461	.0001179	.1035279	.3182031
Stddev	.013726	.0010584	.002993	.000743	.0003116	.0034180	.0034266
%RSD	.2807705	1.025981	.2808594	11.49382	264.1903	3.301554	1.076844
#1	4.875638	.1021232	1.064999	-.005604	.0000470	.1018182	.3143043
#2	4.902995	.1042381	1.063223	-.006903	-.000152	.1013021	.3195692
#3	4.887341	.1031058	1.069062	-.006877	.000459	.1074635	.3207360

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1279-02 Acquired: 2/7/2025 16:11:01 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.6252707	-.001421	.0050157
Stddev	.0048010	.001130	.0000526
%RSD	.7678325	79.56222	1.049168
#1	.6305068	-.002195	.0050517
#2	.6210756	-.000124	.0050401
#3	.6242298	-.001943	.0049553

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3172.167	69452.67	15213.51	2188.625	3817.528
Stddev	6.798	176.04	60.14	13.400	1.297
%RSD	.2142902	.2534682	.3953356	.6122703	.0339730
#1	3173.076	69631.85	15282.81	2201.929	3818.091
#2	3178.464	69279.95	15182.83	2175.131	3818.448
#3	3164.960	69446.21	15174.90	2188.815	3816.045

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1285-02 Acquired: 2/7/2025 16:15:25 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.003064	-.008070	.0131760	.0041390	.0029452	.2274810	.1235345
Stddev	.001215	.002375	.0009881	.0013143	.0007417	.0027001	.0006962
%RSD	39.66733	29.42984	7.499467	31.75482	25.18286	1.186964	.5635992
#1	-.004371	-.005729	.0121217	.0054127	.0024006	.2244839	.1235973
#2	-.001968	-.008003	.0133252	.0027875	.0026452	.2297236	.1228090
#3	-.002853	-.010478	.0140810	.0042169	.0037899	.2282356	.1241973

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000098	.0000580	48.70251	.0048897	.0053390	.0072266	1.244574
Stddev	.000049	.0000624	.05133	.0002335	.0001019	.0001118	.008573
%RSD	49.85564	107.4560	.1053946	4.775402	1.908157	1.547136	.6888270
#1	-.000141	.0000797	48.76168	.0047691	.0052912	.0072924	1.250781
#2	-.000045	-.000012	48.66991	.0047412	.0052697	.0072899	1.248150
#3	-.000108	.000107	48.67595	.0051589	.0054559	.0070975	1.234793

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4107630	6.442487	.0135125	.0001813	329.4487	.0009484	.1349201
Stddev	.0015410	.023539	.0003989	.0001414	1.9339	.0006675	.0007404
%RSD	.3751466	.3653751	2.952059	77.98553	.5870051	70.38093	.5487809
#1	.4109320	6.418328	.0130627	.0000234	331.6499	.0006645	.1346044
#2	.4091444	6.443781	.0136516	.0002961	328.0227	.0017108	.1357660
#3	.4122124	6.465353	.0138233	.0002244	328.6735	.0004698	.1343898

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.880833	.0745669	.0016818	-.008258	.0015105	5.887356	.0532424
Stddev	.006012	.0005897	.0002798	.000212	.0000389	.005403	.0002139
%RSD	.1549193	.7908207	16.63574	2.563379	2.576706	.0917797	.4017751
#1	3.877496	.0751146	.0016908	-.008066	.0015355	5.882173	.0530858
#2	3.887774	.0739427	.0013976	-.008223	.0014656	5.886939	.0531552
#3	3.877229	.0746435	.0019569	-.008485	.0015302	5.892956	.0534862

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1285-02 Acquired: 2/7/2025 16:15:25 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	5.144324	-.003815	.3489785
Stddev	.021204	.000851	.0005518
%RSD	.4121841	22.30829	.1581262
#1	5.122447	-.004423	.3496030
#2	5.145741	-.002842	.3485567
#3	5.164784	-.004180	.3487757

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3132.489	68728.40	15178.50	2162.737	3767.859
Stddev	3.637	36.09	37.43	1.653	4.947
%RSD	.1160910	.0525092	.2465897	.0764127	.1312969
#1	3130.364	68698.68	15136.26	2162.709	3764.471
#2	3136.688	68717.96	15191.70	2161.099	3773.536
#3	3130.414	68768.55	15207.54	2164.403	3765.571

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1287-02 Acquired: 2/7/2025 16:19:48 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.004692	-.009532	-.001581	.0033328	.0021571	-.051367	.8065839
Stddev	.000772	.001392	.000493	.0019397	.0005822	.002903	.0035070
%RSD	16.44390	14.59933	31.16255	58.19996	26.98988	5.652422	.4347987
#1	-.005227	-.008471	-.002116	.0025218	.0026095	-.048059	.8045747
#2	-.005043	-.009018	-.001147	.0055464	.0023616	-.052547	.8045436
#3	-.003808	-.011108	-.001479	.0019303	.0015002	-.053494	.8106334

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000275	.0002572	128.5887	.0033859	.0005415	-.000554	.3906922
Stddev	.000039	.0000602	.4282	.0003702	.0000478	.000361	.0008245
%RSD	14.30133	23.41824	.3329962	10.93405	8.822941	65.08616	.2110420
#1	-.000239	.0002593	128.4801	.0037966	.0005770	-.000765	.3909731
#2	-.000268	.0001959	128.2252	.0032834	.0004872	-.000138	.3913396
#3	-.000317	.0003163	129.0607	.0030777	.0005604	-.000760	.3897640

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.059801	1.806052	.0073114	-.000027	261.8199	-.000542	.0966567
Stddev	.015174	.010325	.0002258	.000152	1.3792	.000869	.0002669
%RSD	.7366740	.5717152	3.088103	567.6597	.5267647	160.4680	.2761162
#1	2.052699	1.806134	.0074268	-.000030	263.2400	-.001139	.0967017
#2	2.049480	1.816336	.0074562	.000127	260.4857	.000456	.0963702
#3	2.077224	1.795686	.0070513	-.000177	261.7339	-.000942	.0968982

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.373796	.0447009	.0011580	-.009607	-.003271	.4547125	.0020047
Stddev	.009894	.0000440	.0001510	.000834	.000188	.0043834	.0019494
%RSD	.7201951	.0983855	13.03827	8.677438	5.749937	.9639952	97.23976
#1	1.362378	.0446570	.0012133	-.009590	-.003417	.4541746	-.000207
#2	1.379835	.0447450	.0009871	-.010448	-.003058	.4506229	.003473
#3	1.379176	.0447006	.0012735	-.008781	-.003337	.4593401	.002748

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1287-02 Acquired: 2/7/2025 16:19:48 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.5621208	-.021564	.2209694
Stddev	.0024650	.000374	.0010955
%RSD	.4385173	1.734560	.4957843
#1	.5600897	-.021483	.2203244
#2	.5614096	-.021237	.2203494
#3	.5648633	-.021972	.2222343

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3098.034	69090.62	15117.26	2119.949	3681.906
Stddev	7.645	120.67	40.52	2.801	8.074
%RSD	.2467845	.1746513	.2680525	.1321340	.2192786
#1	3094.472	69222.26	15093.47	2117.345	3673.011
#2	3106.811	69064.33	15164.05	2119.590	3688.772
#3	3092.820	68985.26	15094.27	2122.912	3683.934

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV05 Acquired: 2/7/2025 16:24:14 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.088124	5.025415	4.988737	5.126187	5.089905	9.960722	9.800460
Stddev	.006062	.026482	.010976	.003912	.009594	.021028	.024768
%RSD	.1191339	.5269526	.2200200	.0763236	.1884905	.2111064	.2527189
#1	5.081846	5.020323	4.976971	5.126153	5.092801	9.984744	9.787667
#2	5.088582	5.054073	4.990538	5.122292	5.079197	9.951767	9.784704
#3	5.093943	5.001849	4.998701	5.130117	5.097717	9.945653	9.829008

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2492782	2.478668	24.89030	1.019313	2.491406	1.274693	5.011361
Stddev	.0019981	.005306	.08181	.003156	.003469	.003718	.017940
%RSD	.8015568	.2140660	.3286889	.3095743	.1392577	.2916704	.3579811
#1	.2507338	2.474945	24.93941	1.016984	2.489342	1.274363	4.997073
#2	.2470002	2.476315	24.79586	1.018051	2.489465	1.271151	5.005516
#3	.2501007	2.484744	24.93564	1.022904	2.495412	1.278564	5.031495

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.449763	24.95587	2.497318	1.256263	24.73278	2.486481	2.523018
Stddev	.004754	.10497	.007332	.000740	.24194	.005454	.017114
%RSD	.1940600	.4206333	.2935765	.0588889	.9781971	.2193488	.6782960
#1	2.444972	25.02179	2.492599	1.257042	24.53162	2.487588	2.526046
#2	2.449838	24.83481	2.493592	1.256177	25.00124	2.480559	2.504593
#3	2.454479	25.01100	2.505765	1.255570	24.66548	2.491297	2.538416

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.16760	4.909919	5.043864	4.975692	4.938531	5.074448	5.063265
Stddev	.18715	.043070	.010087	.011027	.002269	.019848	.006459
%RSD	.7435990	.8771965	.1999864	.2216115	.0459381	.3911269	.1275635
#1	25.00753	4.936419	5.041352	4.965143	4.940576	5.051696	5.056331
#2	25.37336	4.860223	5.035270	4.974791	4.938926	5.088207	5.064355
#3	25.12192	4.933115	5.054969	4.987141	4.936091	5.083440	5.069110

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV05 Acquired: 2/7/2025 16:24:14 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.964563	4.908325	4.967678
Stddev	.010794	.009899	.069652
%RSD	.2174144	.2016733	1.402112
#1	4.954763	4.904513	4.963522
#2	4.962795	4.919562	4.900196
#3	4.976132	4.900898	5.039315

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3345.528	71610.90	14780.78	2273.860	4008.192
Stddev	3.602	41.45	111.21	15.724	.825
%RSD	.1076685	.0578871	.7523894	.6914991	.0205913
#1	3342.234	71655.32	14704.17	2264.311	4009.078
#2	3349.374	71604.13	14908.34	2292.008	4007.445
#3	3344.977	71573.25	14729.84	2265.262	4008.054

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB05 Acquired: 2/7/2025 16:28:25 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.000616	.0012573	.0002948	.0018679	-.000589	.0000769	-.001085
Stddev	.000599	.0008090	.0008749	.0015756	.002017	.0033650	.001084
%RSD	97.23189	64.34148	296.8169	84.35062	342.6010	4377.818	99.93640
#1	-.000186	.0021500	.0009049	.0014044	.001504	-.002317	.000159
#2	-.000362	.0005726	-.000708	.0036233	-.002519	-.001377	-.001832
#3	-.001301	.0010494	.000687	.0005761	-.000751	.003924	-.001581

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000462	.0001812	.0011389	-.000287	.0002231	-.001214	-.007751
Stddev	.0000186	.0000090	.0093027	.000271	.0001024	.000154	.004991
%RSD	40.23392	4.944119	816.8262	94.54949	45.90153	12.68918	64.38704
#1	.0000535	.0001910	-.008828	-.000594	.0003398	-.001167	-.005875
#2	.0000601	.0001789	.009592	-.000187	.0001484	-.001088	-.003971
#3	.0000251	.0001736	.002653	-.000080	.0001810	-.001385	-.013408

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002526	.0109617	.0002115	.0004968	.2528674	.0002011	-.000297
Stddev	.0004190	.0068906	.0002984	.0000608	.0171700	.0011705	.000112
%RSD	165.8342	62.86088	141.0850	12.23168	6.790113	581.9816	37.68520
#1	.0007294	.0189016	.0005539	.0005331	.2382591	-.000037	-.000361
#2	-.000057	.0065457	.0000069	.0005308	.2717801	.001472	-.000362
#3	.000085	.0074377	.0000737	.0004267	.2485631	-.000832	-.000168

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2062082	.0054355	.0004128	.0070048	.0010380	.0031222	-.003241
Stddev	.0117887	.0006641	.0001061	.0005210	.0006891	.0022350	.001264
%RSD	5.716883	12.21863	25.70625	7.438409	66.38702	71.58354	39.00588
#1	.2163109	.0047315	.0002951	.0065982	.0009113	.0021596	-.001941
#2	.1932559	.0055242	.0005012	.0068240	.0017816	.0015298	-.004466
#3	.2090579	.0060509	.0004421	.0075921	.0004210	.0056771	-.003316

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB05 Acquired: 2/7/2025 16:28:25 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0035176	.0045545	.0009845
Stddev	.0014395	.0007581	.0003094
%RSD	40.92425	16.64458	31.42420
#1	.0050578	.0044585	.0013221
#2	.0022062	.0053561	.0009168
#3	.0032886	.0038491	.0007146

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3522.744	74301.48	15156.34	2405.203	4444.020
Stddev	7.454	212.49	70.45	13.670	3.529
%RSD	.2115940	.2859836	.4648227	.5683368	.0794149
#1	3516.537	74448.30	15211.72	2419.167	4440.800
#2	3531.011	74057.82	15180.25	2391.848	4443.468
#3	3520.684	74398.32	15077.05	2404.595	4447.793

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1287-04 Acquired: 2/7/2025 16:32:46 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.005786	-.007715	-.000467	.0037839	.0033487	-.062197	1.097245
Stddev	.002693	.002478	.000294	.0014586	.0013816	.003758	.004195
%RSD	46.55092	32.12225	62.99316	38.54760	41.25879	6.042932	.3822976
#1	-.008252	-.007777	-.000129	.0026317	.0042287	-.066393	1.093837
#2	-.002912	-.010162	-.000665	.0054238	.0040612	-.061058	1.101930
#3	-.006193	-.005206	-.000608	.0032961	.0017563	-.059139	1.095968

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000345	.0003151	156.0721	.0013109	.0004153	-.000394	.0684363
Stddev	.000058	.0000137	.1482	.0001134	.0002937	.000232	.0037586
%RSD	16.92537	4.335247	.0949760	8.648058	70.72526	58.87739	5.492104
#1	-.000369	.0003279	156.0891	.0012348	.0004696	-.000661	.0658445
#2	-.000387	.0003166	156.2111	.0014412	.0006781	-.000270	.0727469
#3	-.000278	.0003007	155.9161	.0012568	.0000982	-.000250	.0667173

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.570964	2.391937	.0213036	.0000552	286.3582	-.001009	.1220904
Stddev	.005572	.006703	.0002538	.0002360	4.2177	.000091	.0008093
%RSD	.2167249	.2802228	1.191534	427.5362	1.472876	8.996274	.6628603
#1	2.566046	2.394714	.0214767	.0000294	281.4888	-.001110	.1227337
#2	2.577016	2.396805	.0214219	.0003031	288.8684	-.000982	.1223558
#3	2.569829	2.384292	.0210122	-.000167	288.7174	-.000935	.1211818

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.224675	.1171042	.0037474	-.009441	-.002648	.6831846	.0054170
Stddev	.026741	.0002670	.0000724	.000878	.000212	.0048624	.0011803
%RSD	1.202029	.2280290	1.931128	9.303104	8.005474	.7117309	21.78955
#1	2.200553	.1173941	.0037315	-.010154	-.002612	.6810711	.0067632
#2	2.253430	.1168684	.0036844	-.008460	-.002457	.6797366	.0049286
#3	2.220043	.1170501	.0038264	-.009709	-.002876	.6887461	.0045593

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1287-04 Acquired: 2/7/2025 16:32:46 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.7235679	-.024479	.2971672
Stddev	.0038124	.000211	.0008846
%RSD	.5268894	.8611490	.2976821
#1	.7191803	-.024712	.2966704
#2	.7254515	-.024425	.2981886
#3	.7260718	-.024301	.2966427

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3179.418	69468.55	14882.77	2186.992	3758.617
Stddev	9.215	79.89	77.14	10.087	7.276
%RSD	.2898461	.1149953	.5183498	.4612418	.1935692
#1	3186.278	69424.47	14798.16	2177.776	3760.434
#2	3183.033	69560.76	14900.96	2197.769	3764.812
#3	3168.943	69420.41	14949.20	2185.431	3750.605

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1287-06 Acquired: 2/7/2025 16:37:11 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.005281	-.007419	.0025980	.0071507	.0016170	.5569395	.4158257
Stddev	.000313	.000431	.0004568	.0007833	.0002269	.0054148	.0009186
%RSD	5.928475	5.810014	17.58196	10.95436	14.03534	.9722456	.2209169
#1	-.005298	-.007129	.0020871	.0068455	.0015594	.5539760	.4167788
#2	-.005585	-.007915	.0029670	.0080406	.0014244	.5536533	.4157524
#3	-.004960	-.007215	.0027399	.0065659	.0018672	.5631892	.4149459

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000353	.0003501	21.90795	.0042222	.0179161	.0073897	.6592927
Stddev	.0000489	.0000635	.02704	.0000211	.0002289	.0001914	.0014457
%RSD	138.5083	18.14443	.1234256	.5005454	1.277751	2.589786	.2192756
#1	.0000901	.0002861	21.87795	.0042289	.0181667	.0074686	.6591923
#2	-.000004	.0003509	21.91546	.0041985	.0178634	.0075290	.6578999
#3	.000019	.0004131	21.93044	.0042392	.0177181	.0071715	.6607860

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2855225	1.406183	.0102595	.0002993	288.7407	.0009422	.2297719
Stddev	.0003551	.017459	.0003972	.0002340	3.8499	.0012926	.0007039
%RSD	.1243613	1.241569	3.871793	78.16159	1.333337	137.1956	.3063566
#1	.2853944	1.386718	.0100698	.0002610	291.4112	-.000228	.2298697
#2	.2859238	1.411372	.0107160	.0000869	290.4833	.000725	.2304219
#3	.2852492	1.420458	.0099927	.0005501	284.3277	.002330	.2290242

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.961178	.0929965	.0008132	-.007661	.0119463	2.195499	.0133279
Stddev	.013984	.0007403	.0000544	.001168	.0006100	.011138	.0013931
%RSD	.7130526	.7960096	6.689955	15.24578	5.106039	.5073218	10.45246
#1	1.962470	.0925397	.0008522	-.006391	.0113293	2.192746	.0121295
#2	1.974471	.0925992	.0007510	-.008689	.0125490	2.207756	.0148563
#3	1.946593	.0938506	.0008363	-.007902	.0119605	2.185996	.0129977

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1287-06 Acquired: 2/7/2025 16:37:11 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	1.006465	-.003672	.1675486
Stddev	.001815	.000827	.0001811
%RSD	.1802955	22.53082	.1080832
#1	1.005479	-.002720	.1675092
#2	1.008559	-.004223	.1677461
#3	1.005357	-.004071	.1673904

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3218.060	69622.09	15403.36	2182.121	3903.589
Stddev	9.126	217.90	37.81	14.340	.877
%RSD	.2835902	.3129780	.2454380	.6571593	.0224711
#1	3219.248	69530.74	15442.11	2172.000	3904.243
#2	3226.533	69464.73	15366.58	2175.832	3902.592
#3	3208.397	69870.80	15401.38	2198.531	3903.932

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1287-08 Acquired: 2/7/2025 16:41:35 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.003869	-.007847	.0018040	.0059403	.0022836	.0848699	.4506264
Stddev	.003920	.001739	.0011831	.0022327	.0021435	.0046502	.0032993
%RSD	101.3162	22.15551	65.58002	37.58529	93.86487	5.479165	.7321613
#1	-.002223	-.009073	.0004389	.0083574	-.000185	.0831510	.4483328
#2	-.008344	-.005857	.0025322	.0039552	.003360	.0901348	.4544075
#3	-.001041	-.008611	.0024409	.0055083	.003676	.0813239	.4491387

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000108	.0000602	31.50562	.0016773	.0029397	.0002505	3.329586
Stddev	.000038	.0000916	.15645	.0003052	.0000974	.0003586	.026009
%RSD	35.13648	152.1328	.4965696	18.19805	3.312996	143.1521	.7811400
#1	-.000073	.0001612	31.38871	.0014865	.0029379	.0003499	3.306866
#2	-.000148	.0000369	31.68335	.0015161	.0030380	.0005490	3.357955
#3	-.000101	-.000018	31.44481	.0020294	.0028432	-.000147	3.323938

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5431831	3.072008	.0100290	.0003174	275.8877	.0000880	.1901699
Stddev	.0044033	.017340	.0002925	.0001656	3.1088	.0010577	.0010396
%RSD	.8106535	.5644481	2.916956	52.18557	1.126820	1202.031	.5466427
#1	.5405864	3.064033	.0099284	.0001269	278.9505	.0011833	.1903634
#2	.5482672	3.091901	.0098000	.0003978	272.7350	-.000928	.1910991
#3	.5406957	3.060091	.0103586	.0004275	275.9777	.000008	.1890472

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.025387	.1797858	.0009137	-.007993	-.000636	2.066808	.0040030
Stddev	.038801	.0006924	.0000898	.000195	.000439	.015700	.0014342
%RSD	.7720979	.3851300	9.824624	2.437986	68.99746	.7596361	35.82921
#1	5.021258	.1790756	.0010161	-.007794	-.000129	2.055548	.0024806
#2	5.066087	.1798229	.0008762	-.008001	-.000895	2.084743	.0041995
#3	4.988815	.1804589	.0008487	-.008184	-.000884	2.060134	.0053288

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1287-08 Acquired: 2/7/2025 16:41:35 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.6905601	.0010455	.1114590
Stddev	.0059481	.0012783	.0007633
%RSD	.8613378	122.2723	.6848647
#1	.6963666	.0008024	.1109601
#2	.6844799	.0024278	.1123377
#3	.6908338	-.000094	.1110791

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3175.063	69535.26	15313.97	2168.530	3844.492
Stddev	11.036	361.93	39.79	9.283	11.412
%RSD	.3475863	.5205056	.2597985	.4280840	.2968522
#1	3180.294	69527.09	15330.24	2178.845	3848.979
#2	3182.510	69177.48	15268.63	2160.849	3852.979
#3	3162.384	69901.21	15343.05	2165.894	3831.518

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1287-10 Acquired: 2/7/2025 16:46:00 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.002657	-.007587	.0095738	.0048023	.0043834	.0768581	.4383881
Stddev	.001976	.000914	.0012646	.0018569	.0012860	.0043719	.0004641
%RSD	74.35367	12.05208	13.20904	38.66724	29.33904	5.688256	.1058612
#1	-.004881	-.007743	.0110315	.0066083	.0029255	.0777093	.4380025
#2	-.001987	-.008414	.0089186	.0049003	.0048678	.0807418	.4389032
#3	-.001104	-.006605	.0087713	.0028983	.0053568	.0721232	.4382585

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000074	.0005098	29.49130	.0041955	.0042731	.0003210	1.438575
Stddev	.0000239	.0001002	.06886	.0001179	.0000280	.0002516	.013000
%RSD	321.7146	19.64866	.2334946	2.810026	.6550666	78.37932	.9036549
#1	-.000018	.0006207	29.41218	.0043022	.0043004	.0000494	1.453529
#2	.000029	.0004828	29.52402	.0040689	.0042445	.0005460	1.432234
#3	.000012	.0004259	29.53769	.0042153	.0042744	.0003675	1.429963

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6872309	3.964170	.0131161	.0004491	308.9657	.0010107	.2327064
Stddev	.0007393	.033246	.0001913	.0003520	3.3466	.0008759	.0009393
%RSD	.1075838	.8386618	1.458665	78.36679	1.083166	86.65874	.4036467
#1	.6873417	3.936062	.0130996	.0008451	312.7081	.0000231	.2337907
#2	.6879085	4.000868	.0133151	.0001718	306.2604	.0016932	.2321834
#3	.6864424	3.955580	.0129336	.0003305	307.9287	.0013159	.2321449

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.678203	.1814648	.0007607	-.007502	-.001039	1.449847	.0028413
Stddev	.026293	.0014539	.0001036	.000381	.000656	.012313	.0021240
%RSD	.5620295	.8011966	13.61682	5.081506	63.13376	.8492361	74.75581
#1	4.708469	.1797862	.0008510	-.007849	-.001234	1.463720	.0005972
#2	4.660997	.1822810	.0006476	-.007563	-.000308	1.445604	.0048204
#3	4.665144	.1823273	.0007836	-.007094	-.001575	1.440217	.0031061

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1287-10 Acquired: 2/7/2025 16:46:00 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.6393197	-.000413	.1432844
Stddev	.0070721	.000492	.0002067
%RSD	1.106196	119.1256	.1442580
#1	.6379514	.000153	.1434686
#2	.6469760	-.000659	.1433237
#3	.6330317	-.000733	.1430609

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3175.157	70286.25	15327.72	2222.883	3816.972
Stddev	1.304	386.48	64.01	9.971	2.639
%RSD	.0410701	.5498611	.4175888	.4485560	.0691492
#1	3173.676	69842.23	15393.03	2212.647	3815.129
#2	3175.664	70546.96	15265.10	2223.437	3819.996
#3	3176.132	70469.56	15325.01	2232.565	3815.793

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1289-03 Acquired: 2/7/2025 16:50:24 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.004123	-.006954	.0000054	.0050968	.0006292	-.005583	.5101691
Stddev	.000583	.000351	.0006361	.0014786	.0014420	.007896	.0017479
%RSD	14.14781	5.044290	11796.21	29.00958	229.1910	141.4372	.3426101
#1	-.003786	-.006895	.0006310	.0064532	.0008073	-.011245	.5109122
#2	-.003787	-.007330	.0000259	.0053166	.0019738	-.008940	.5081725
#3	-.004797	-.006636	-.000641	.0035207	-.000894	.003437	.5114227

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000179	.0000634	54.13227	.0025274	.0013899	.0019051	.0171506
Stddev	.000045	.0000471	.07956	.0002213	.0001821	.0003635	.0027496
%RSD	25.35952	74.31434	.1469821	8.754954	13.09897	19.08268	16.03190
#1	-.000127	.0000754	54.10769	.0026924	.0015994	.0019364	.0202570
#2	-.000197	.0000115	54.06790	.0026139	.0012696	.0015270	.0161653
#3	-.000213	.0001034	54.22123	.0022760	.0013008	.0022521	.0150294

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7776683	1.494213	.0053077	.0001893	243.6233	-.001953	.1637930
Stddev	.0029690	.016850	.0003558	.0000867	2.1642	.000199	.0009658
%RSD	.3817808	1.127712	6.703539	45.80290	.8883243	10.21179	.5896743
#1	.7788916	1.487312	.0055378	.0001170	242.9899	-.002170	.1632390
#2	.7742832	1.481908	.0048979	.0002854	241.8466	-.001777	.1649082
#3	.7798302	1.513418	.0054873	.0001656	246.0335	-.001913	.1632317

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7595128	.0769377	.0007609	-.008842	-.001053	.3331406	.0009713
Stddev	.0107282	.0012205	.0000966	.000666	.000750	.0019872	.0029138
%RSD	1.412507	1.586374	12.69549	7.538154	71.27332	.5965040	300.0053
#1	.7587970	.0757787	.0006905	-.008451	-.000577	.3309875	.0040488
#2	.7491604	.0768227	.0008710	-.008463	-.000664	.3335301	-.001745
#3	.7705809	.0782116	.0007211	-.009611	-.001918	.3349042	.000610

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1289-03 Acquired: 2/7/2025 16:50:24 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.4874915	-.011047	.0337445
Stddev	.0061884	.000799	.0001036
%RSD	1.269441	7.228840	.3069179
#1	.4810184	-.010405	.0337151
#2	.4881066	-.010795	.0336589
#3	.4933493	-.011941	.0338596

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3207.218	70073.91	14705.01	2223.554	3827.613
Stddev	5.221	94.39	36.60	5.885	8.677
%RSD	.1627845	.1346961	.2488711	.2646451	.2266935
#1	3213.229	70177.42	14727.48	2226.059	3832.353
#2	3204.605	69992.60	14724.78	2216.831	3832.887
#3	3203.819	70051.70	14662.78	2227.771	3817.598

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1289-05 Acquired: 2/7/2025 16:54:50 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.005181	-.008334	-.001759	.0064855	.0017941	.0342692	.5183087
Stddev	.000852	.001895	.001082	.0023572	.0002510	.0027635	.0015729
%RSD	16.45037	22.73941	61.50277	36.34577	13.99103	8.064120	.3034655
#1	-.004265	-.006151	-.002445	.0066099	.0018180	.0366180	.5187176
#2	-.005328	-.009561	-.000512	.0087781	.0020322	.0312241	.5196367
#3	-.005951	-.009289	-.002321	.0040686	.0015319	.0349655	.5165717

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000100	.0001606	26.14891	.0007528	-.000096	.0016966	.0011667
Stddev	.000039	.0000392	.09484	.0002379	.000243	.0003022	.0022059
%RSD	38.54276	24.41062	.3626816	31.60755	251.9684	17.81351	189.0679
#1	-.000107	.0001865	26.15119	.0008268	.000090	.0014118	.0002773
#2	-.000059	.0001155	26.24258	.0004866	-.000008	.0016644	.0036784
#3	-.000135	.0001798	26.05295	.0009449	-.000371	.0020137	-.000456

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4936502	1.171323	.0058208	.0000038	286.2147	-.000709	.1951638
Stddev	.0032596	.018368	.0003025	.0002806	1.2806	.000582	.0011759
%RSD	.6603021	1.568128	5.197124	7358.181	.4474280	82.16024	.6025154
#1	.4933775	1.150785	.0055630	.0002957	284.8515	-.001292	.1964882
#2	.4970376	1.186177	.0061538	-.000264	287.3925	-.000706	.1947610
#3	.4905356	1.177006	.0057456	-.000020	286.4002	-.000128	.1942423

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9236723	.0872456	.0007521	-.008305	-.000459	.3771909	.0040776
Stddev	.0130756	.0007249	.0001344	.000294	.000032	.0061340	.0030738
%RSD	1.415611	.8308603	17.87038	3.538470	7.065419	1.626231	75.38256
#1	.9351871	.0867839	.0007551	-.007971	-.000458	.3784055	.0005522
#2	.9094574	.0880811	.0008850	-.008420	-.000427	.3705404	.0061963
#3	.9263722	.0868719	.0006162	-.008523	-.000492	.3826266	.0054843

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1289-05 Acquired: 2/7/2025 16:54:50 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.5100985	-.006822	.0274516
Stddev	.0016882	.001164	.0000999
%RSD	.3309552	17.06428	.3639865
#1	.5081633	-.005550	.0274666
#2	.5108634	-.007835	.0275432
#3	.5112689	-.007081	.0273451

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3166.101	70134.63	15369.31	2221.798	3799.858
Stddev	8.416	229.55	126.08	5.113	9.627
%RSD	.2658139	.3273013	.8203080	.2301162	.2533560
#1	3171.207	69876.95	15359.16	2218.632	3807.308
#2	3170.709	70209.63	15248.61	2219.064	3803.279
#3	3156.388	70317.29	15500.15	2227.696	3788.988

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1289-05DUP Acquired: 2/7/2025 16:59:15 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.006705	-.006946	-.000689	.0054041	.0020599	.0317482	.5069144
Stddev	.001648	.001286	.000897	.0016537	.0006141	.0022647	.0009639
%RSD	24.58500	18.52244	130.2699	30.60014	29.81230	7.133405	.1901556
#1	-.007292	-.006077	-.001262	.0071997	.0017000	.0308538	.5067298
#2	-.004844	-.006336	-.001149	.0050692	.0027690	.0343236	.5079573
#3	-.007980	-.008424	.000345	.0039436	.0017107	.0300673	.5060561

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000116	.0000789	25.96941	.0006149	-.000025	.0019183	.0005731
Stddev	.000035	.0000261	.01285	.0002468	.000181	.0001792	.0053951
%RSD	30.11016	33.08017	.0494625	40.13954	708.7957	9.342292	941.3455
#1	-.000083	.0000830	25.98092	.0008501	-.000162	.0019956	-.000248
#2	-.000152	.0001028	25.95556	.0006365	-.000094	.0020459	.006332
#3	-.000113	.0000510	25.97175	.0003579	.000179	.0017134	-.004365

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4863856	1.192638	.0056539	.0002173	277.2492	-.000361	.1957609
Stddev	.0027841	.003513	.0002465	.0001083	1.4496	.000865	.0004949
%RSD	.5724098	.2945575	4.359445	49.84589	.5228330	239.6179	.2528109
#1	.4842875	1.192487	.0059384	.0002991	277.4538	.000269	.1954580
#2	.4853251	1.189204	.0055050	.0000945	275.7082	-.001348	.1954927
#3	.4895441	1.196225	.0055182	.0002583	278.5855	-.000005	.1963320

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9156591	.0886207	.0006386	-.008150	-.000178	.3787668	.0047977
Stddev	.0298716	.0006254	.0002922	.000920	.000333	.0076728	.0015154
%RSD	3.262305	.7057157	45.75929	11.28272	187.2149	2.025725	31.58497
#1	.8967746	.0893114	.0006201	-.007970	-.000246	.3703637	.0051938
#2	.9500982	.0880927	.0009396	-.007335	.000184	.3805369	.0031237
#3	.9001045	.0884582	.0003561	-.009147	-.000471	.3853998	.0060757

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1289-05DUP Acquired: 2/7/2025 16:59:15 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.4945508	-.005237	.0270465
Stddev	.0010291	.000546	.0000963
%RSD	.2080935	10.41627	.3562214
#1	.4956983	-.004912	.0270314
#2	.4937095	-.004933	.0271495
#3	.4942446	-.005867	.0269586

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3196.561	69586.38	15204.69	2169.931	3862.319
Stddev	6.815	140.03	37.97	5.836	7.079
%RSD	.2132104	.2012390	.2497022	.2689278	.1832903
#1	3201.880	69425.55	15195.18	2166.889	3864.725
#2	3198.925	69652.32	15246.51	2176.659	3867.881
#3	3188.878	69681.28	15172.38	2166.245	3854.350

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1289-05LX5 Acquired: 2/7/2025 17:03:41 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.001236	-.000988	-.001307	.0025586	.0013314	.0094088	.1024591
Stddev	.001422	.002002	.000734	.0020175	.0009445	.0071701	.0005865
%RSD	115.0299	202.6923	56.16406	78.85346	70.94003	76.20634	.5724422
#1	-.000545	-.003115	-.002152	.0021639	.0009562	.0170867	.1030018
#2	-.000292	.000861	-.000835	.0007676	.0006322	.0082530	.1018369
#3	-.002872	-.000710	-.000933	.0047443	.0024059	.0028868	.1025385

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000125	.0000251	5.461229	-.000343	.0000066	-.001015	-.006885
Stddev	.0000338	.0000587	.009013	.000057	.0000410	.000447	.002016
%RSD	269.9656	233.9167	.1650303	16.63653	621.9597	44.00293	29.27724
#1	.0000508	-.000013	5.458101	-.000344	.0000524	-.001531	-.008072
#2	-.000013	.000093	5.454198	-.000399	-.000006	-.000772	-.004557
#3	-.000000	-.000004	5.471389	-.000285	-.000027	-.000743	-.008025

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1015031	.2562218	.0010246	.0001283	56.46871	.0000508	.0396720
Stddev	.0006481	.0085892	.0001536	.0003639	.22430	.0018910	.0003947
%RSD	.6385150	3.352238	14.99625	283.5154	.3972124	3722.714	.9949887
#1	.1011485	.2483613	.0008946	.0004957	56.71690	-.000187	.0392734
#2	.1011097	.2549144	.0011941	-.000232	56.28049	-.001710	.0396798
#3	.1022512	.2653897	.0009850	.000121	56.40875	.002050	.0400627

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3317694	.0184317	.0001500	.0045742	.0001615	.0769901	-.002008
Stddev	.0175634	.0002000	.0000675	.0009554	.0001441	.0046584	.001785
%RSD	5.293856	1.085014	45.00388	20.88717	89.23715	6.050679	88.87947
#1	.3298526	.0186571	.0001784	.0042967	.0000457	.0774958	-.000876
#2	.3502126	.0183628	.0000729	.0037883	.0001159	.0720994	-.004066
#3	.3152430	.0182753	.0001987	.0056377	.0003229	.0813750	-.001083

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1289-05LX5 Acquired: 2/7/2025 17:03:41 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.1139711	.0014908	.0055316
Stddev	.0063604	.0008005	.0000717
%RSD	5.580674	53.69678	1.295616
#1	.1153581	.0012097	.0056096
#2	.1070317	.0008687	.0055166
#3	.1195235	.0023939	.0054687

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3319.213	72180.61	15421.35	2290.711	4063.213
Stddev	5.541	156.89	28.56	9.438	9.850
%RSD	.1669436	.2173544	.1851999	.4119974	.2424154
#1	3320.039	72265.61	15430.24	2295.781	4067.856
#2	3324.296	72276.66	15444.40	2296.529	4069.884
#3	3313.306	71999.57	15389.40	2279.822	4051.900

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1289-05MS Acquired: 2/7/2025 17:07:59 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.7808089	1.813984	.8967391	1.937529	.7941789	1.895815	.7483091
Stddev	.0016888	.012315	.0023831	.006672	.0011435	.003277	.0035484
%RSD	.2162841	.6788981	.2657526	.3443804	.1439805	.1728767	.4741846
#1	.7796750	1.799809	.8966509	1.930472	.7937968	1.899593	.7472937
#2	.7800021	1.822053	.8991650	1.938380	.7954645	1.893735	.7522544
#3	.7827498	1.820091	.8944013	1.943736	.7932754	1.894116	.7453791

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1804849	.1868911	28.97445	.3949470	.1921496	.2890175	2.968581
Stddev	.0010865	.0003914	.14171	.0022506	.0004205	.0012010	.029090
%RSD	.6019965	.2094087	.4890774	.5698453	.2188195	.4155604	.9799382
#1	.1817208	.1864447	29.10788	.3939079	.1916641	.2883214	2.941577
#2	.1800534	.1871751	28.98976	.3975294	.1923954	.2883267	2.999384
#3	.1796803	.1870536	28.82571	.3934038	.1923892	.2904043	2.964782

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7015521	3.065996	.4850395	.0722239	309.5668	.2832628	.4003976
Stddev	.0042614	.030640	.0013089	.0004926	1.0931	.0021602	.0011583
%RSD	.6074268	.9993502	.2698617	.6820669	.3530939	.7626101	.2892911
#1	.7055126	3.097113	.4838055	.0720106	309.6733	.2847016	.3995532
#2	.7021008	3.035856	.4849006	.0727872	308.4244	.2843081	.3999215
#3	.6970430	3.065019	.4864123	.0718738	310.6027	.2807788	.4017181

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.20518	.3387071	.4116788	.6592543	.1888579	1.204938	6.055294
Stddev	.12378	.0009159	.0018016	.0009908	.0014309	.011569	.035986
%RSD	1.104695	.2704130	.4376310	.1502870	.7576432	.9601029	.5942940
#1	11.08534	.3397599	.4103982	.6585592	.1891689	1.193700	6.014568
#2	11.33256	.3380936	.4108992	.6588149	.1901077	1.216811	6.068511
#3	11.19763	.3382677	.4137389	.6603888	.1872971	1.204303	6.082803

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1289-05MS Acquired: 2/7/2025 17:07:59 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.5185401	.1899165	.2139616
Stddev	.0028467	.0010890	.0011766
%RSD	.5489879	.5733850	.5499149
#1	.5182784	.1889076	.2140112
#2	.5158333	.1910709	.2151127
#3	.5215087	.1897712	.2127610

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3169.397	70043.16	15132.68	2216.443	3803.815
Stddev	3.804	165.66	125.81	9.476	1.510
%RSD	.1200317	.2365180	.8314007	.4275403	.0396911
#1	3167.315	70113.11	14987.68	2206.473	3802.145
#2	3173.788	69853.99	15197.47	2225.333	3805.084
#3	3167.087	70162.37	15212.89	2217.524	3804.215

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1289-05MSD Acquired: 2/7/2025 17:12:10 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.7833397	1.789750	.8932787	1.941564	.7910900	1.879285	.7477211
Stddev	.0009129	.007325	.0018422	.007066	.0033166	.009113	.0016375
%RSD	.1165345	.4092770	.2062275	.3639385	.4192475	.4849122	.2189974
#1	.7823071	1.797758	.8912366	1.933673	.7872615	1.870361	.7465984
#2	.7840392	1.783389	.8937842	1.943711	.7929217	1.878920	.7469647
#3	.7836728	1.788103	.8948154	1.947307	.7930869	1.888576	.7496000

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1798254	.1867428	28.83168	.3938549	.1916633	.2870602	2.958904
Stddev	.0004711	.0006669	.03705	.0009323	.0004528	.0005302	.013306
%RSD	.2619968	.3571192	.1284905	.2367096	.2362675	.1846915	.4496825
#1	.1793742	.1866035	28.80744	.3940280	.1918082	.2867771	2.958064
#2	.1797878	.1861566	28.81328	.3946885	.1911558	.2867316	2.972609
#3	.1803142	.1874684	28.87433	.3928482	.1920260	.2876718	2.946038

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6984705	3.047017	.4840627	.0713174	311.1788	.2838769	.3977431
Stddev	.0017075	.002984	.0016494	.0002361	1.3812	.0043295	.0015696
%RSD	.2444567	.0979235	.3407343	.3310716	.4438464	1.525129	.3946239
#1	.6976243	3.045740	.4848516	.0710499	309.7433	.2792329	.3959919
#2	.6973513	3.044885	.4821670	.0714967	311.2949	.2878018	.3982142
#3	.7004358	3.050427	.4851695	.0714058	312.4983	.2845961	.3990232

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.09801	.3389863	.4101490	.6562316	.1874656	1.191235	6.031697
Stddev	.00720	.0010755	.0013062	.0006264	.0008303	.001788	.026435
%RSD	.0648529	.3172730	.3184618	.0954618	.4428963	.1500773	.4382619
#1	11.09940	.3378388	.4088070	.6568483	.1871789	1.191970	6.028650
#2	11.09022	.3391486	.4102239	.6555958	.1868167	1.192538	6.006918
#3	11.10441	.3399714	.4114161	.6562505	.1884013	1.189197	6.059523

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1289-05MSD Acquired: 2/7/2025 17:12:10 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.5105983	.1873980	.2131890
Stddev	.0005845	.0011512	.0004563
%RSD	.1144788	.6142988	.2140152
#1	.5099405	.1862936	.2129027
#2	.5107961	.1873094	.2129493
#3	.5110582	.1885909	.2137152

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3184.320	70311.33	15176.28	2230.991	3817.549
Stddev	9.114	44.43	33.66	12.123	8.352
%RSD	.2862302	.0631869	.2218060	.5433805	.2187863
#1	3194.368	70362.56	15182.21	2231.612	3823.333
#2	3182.006	70283.41	15206.59	2242.791	3821.341
#3	3176.585	70288.02	15140.05	2218.570	3807.974

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV06 Acquired: 2/7/2025 17:16:21 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.035302	4.985819	4.910440	5.084728	5.065066	9.703801	9.534094
Stddev	.024105	.005665	.018773	.021032	.022681	.016075	.081424
%RSD	.4787156	.1136252	.3823044	.4136373	.4477989	.1656612	.8540319
#1	5.018558	4.979381	4.900282	5.075862	5.055194	9.699107	9.444915
#2	5.024418	4.990043	4.898936	5.069580	5.048993	9.690595	9.552892
#3	5.062929	4.988032	4.932103	5.108742	5.091010	9.721701	9.604475

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2490902	2.435394	24.32963	1.009349	2.460082	1.261903	4.865093
Stddev	.0002606	.006384	.06878	.002978	.007085	.005012	.006779
%RSD	.1046051	.2621140	.2826911	.2950886	.2879917	.3972032	.1393302
#1	.2493568	2.432198	24.39659	1.012295	2.457103	1.259281	4.871806
#2	.2488361	2.431241	24.25916	1.009412	2.454972	1.258745	4.865221
#3	.2490776	2.442745	24.33313	1.006339	2.468169	1.267682	4.858251

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.400226	24.37027	2.462354	1.247223	23.29329	2.426728	2.511678
Stddev	.005943	.01777	.007585	.001749	.08832	.005213	.002266
%RSD	.2476046	.0729000	.3080504	.1401991	.3791721	.2148034	.0902076
#1	2.406794	24.37891	2.457933	1.246593	23.33783	2.428426	2.513452
#2	2.395220	24.34984	2.458016	1.249200	23.35047	2.430881	2.512456
#3	2.398664	24.38206	2.471112	1.245877	23.19156	2.420878	2.509126

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.22788	4.908291	5.017923	4.892990	4.814243	4.909078	4.985377
Stddev	.06915	.010285	.018323	.014883	.008684	.032007	.007481
%RSD	.2854027	.2095405	.3651492	.3041722	.1803859	.6519906	.1500656
#1	24.19317	4.916064	5.007106	4.886723	4.823873	4.875881	4.993993
#2	24.30751	4.896629	5.007584	4.882266	4.807007	4.911609	4.981615
#3	24.18297	4.912181	5.039078	4.909982	4.811850	4.939744	4.980524

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV06 Acquired: 2/7/2025 17:16:21 Type: Unk
Method: NON EPA-6010-200.7(v2666) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.863271	4.761015	4.875847
Stddev	.017043	.010026	.038088
%RSD	.3504362	.2105754	.7811617
#1	4.876081	4.772340	4.910933
#2	4.843929	4.753274	4.881269
#3	4.869805	4.757431	4.835338

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3381.734	72091.32	14768.22	2284.424	4080.406
Stddev	11.016	18.49	49.67	5.211	10.723
%RSD	.3257474	.0256491	.3363339	.2281047	.2627969
#1	3385.946	72076.01	14727.35	2279.207	4081.259
#2	3390.023	72086.09	14823.50	2289.629	4090.677
#3	3369.234	72111.87	14753.80	2284.436	4069.282

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB06 Acquired: 2/7/2025 17:20:32 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.000090	.0007542	-.000632	.0010302	.0001711	.0045394	-.001673
Stddev	.001250	.0025313	.001096	.0005426	.0006005	.0014110	.000650
%RSD	1385.157	335.6305	173.3231	52.66494	351.0554	31.08298	38.86749
#1	-.001533	.0034857	-.001264	.0006426	.0004071	.0030766	-.000977
#2	.000680	.0002896	-.001267	.0007978	.0006176	.0058921	-.002265
#3	.000582	-.001513	.000633	.0016502	-.000512	.0046496	-.001778

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000505	.0002828	.0034264	-.000264	.0003049	-.001269	-.006310
Stddev	.0000215	.0000628	.0044951	.000065	.0001172	.000256	.002912
%RSD	42.50815	22.22894	131.1878	24.59261	38.42123	20.17969	46.15237
#1	.0000528	.0003552	.0037595	-.000263	.0004296	-.001325	-.003051
#2	.0000279	.0002492	-.001226	-.000330	.0002881	-.001492	-.007222
#3	.0000707	.0002438	.007746	-.000200	.0001971	-.000989	-.008657

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003673	.0141851	.0003016	.0004152	.2540220	.0006724	-.000103
Stddev	.0001322	.0141840	.0001029	.0002557	.0091365	.0002504	.000375
%RSD	35.98113	99.99255	34.11182	61.58365	3.596723	37.24605	364.3894
#1	.0004196	.0305483	.0002796	.0001325	.2561809	.0003980	.000329
#2	.0004654	.0066104	.0004136	.0006303	.2618857	.0008887	-.000336
#3	.0002170	.0053965	.0002114	.0004829	.2439995	.0007303	-.000302

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2151695	.0043614	.0008768	.0081274	.0012348	.0094701	-.004040
Stddev	.0203118	.0008530	.0002947	.0008415	.0003618	.0059431	.000684
%RSD	9.439885	19.55848	33.60723	10.35369	29.29684	62.75673	16.94233
#1	.2042650	.0044430	.0011542	.0090979	.0014234	.0163285	-.003528
#2	.2386047	.0051707	.0005674	.0076849	.0008177	.0058368	-.003773
#3	.2026389	.0034705	.0009088	.0075996	.0014632	.0062449	-.004817

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB06 Acquired: 2/7/2025 17:20:32 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0033706	.0059626	.0008546
Stddev	.0032084	.0007150	.0001451
%RSD	95.18627	11.99177	16.97636
#1	-.000269	.0051563	.0009963
#2	.005790	.0065197	.0008613
#3	.004590	.0062118	.0007063

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3407.843	74816.04	15581.06	2379.914	4288.994
Stddev	8.719	102.40	72.63	5.718	10.167
%RSD	.2558599	.1368683	.4661598	.2402686	.2370401
#1	3411.578	74920.79	15511.89	2383.080	4296.219
#2	3414.073	74716.17	15656.72	2373.313	4293.396
#3	3397.878	74811.17	15574.58	2383.349	4277.369

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1289-05A Acquired: 2/7/2025 17:24:52 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.7852114	1.818461	.8996870	1.950360	.7953241	1.904343	.7485574
Stddev	.0036362	.009496	.0067997	.011859	.0014970	.006953	.0015506
%RSD	.4630833	.5221928	.7557863	.6080316	.1882210	.3650878	.2071392
#1	.7852534	1.809675	.8953301	1.949238	.7936702	1.905533	.7491395
#2	.7815544	1.817173	.8962087	1.939103	.7965862	1.910623	.7468001
#3	.7888264	1.828535	.9075222	1.962740	.7957159	1.896872	.7497327

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1805732	.1875382	29.06362	.3992739	.1930754	.2890258	2.976822
Stddev	.0006308	.0006250	.10720	.0006480	.0004472	.0006769	.011041
%RSD	.3493130	.3332655	.3688599	.1622899	.2316161	.2342049	.3708852
#1	.1809954	.1871154	29.14933	.3986950	.1929975	.2883360	2.970154
#2	.1808761	.1872431	29.09812	.3999739	.1926723	.2890526	2.970746
#3	.1798481	.1882561	28.94342	.3991528	.1935564	.2896890	2.989566

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6997314	3.056248	.4863320	.0725317	312.1319	.2854542	.4039210
Stddev	.0028706	.008214	.0024047	.0003395	.8382	.0002281	.0013794
%RSD	.4102410	.2687554	.4944596	.4680389	.2685506	.0799204	.3415098
#1	.7030425	3.065366	.4855243	.0729225	312.9595	.2854030	.4035532
#2	.6982096	3.053953	.4844351	.0723089	311.2834	.2857036	.4054471
#3	.6979421	3.049426	.4890365	.0723638	312.1527	.2852561	.4027628

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.28509	.3432096	.4154951	.6591489	.1921563	1.216229	6.002094
Stddev	.08412	.0026554	.0016311	.0033229	.0032361	.004252	.035873
%RSD	.7454328	.7736903	.3925597	.5041158	1.684084	.3496242	.5976776
#1	11.28202	.3462735	.4147530	.6574703	.1904369	1.218185	5.968699
#2	11.20254	.3417785	.4143671	.6570002	.1901428	1.219151	5.997567
#3	11.37071	.3415767	.4173653	.6629762	.1958891	1.211350	6.040015

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1289-05A Acquired: 2/7/2025 17:24:52 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.5100746	.1904131	.2149353
Stddev	.0067568	.0009891	.0002548
%RSD	1.324674	.5194392	.1185319
#1	.5067634	.1893897	.2152002
#2	.5056121	.1904859	.2146921
#3	.5178484	.1913638	.2149134

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3173.446	69651.73	15099.42	2186.085	3821.302
Stddev	7.394	101.40	100.14	13.316	11.092
%RSD	.2329959	.1455855	.6632189	.6091256	.2902631
#1	3175.945	69580.64	15029.59	2191.511	3827.448
#2	3179.266	69606.70	15054.51	2170.912	3827.960
#3	3165.126	69767.85	15214.15	2195.831	3808.498

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166528TB Acquired: 2/7/2025 17:29:02 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.003377	-.007698	-.000968	.0068520	.0009480	.0020557
Stddev	.001011	.000211	.000685	.0006032	.0008229	.0059580
%RSD	29.94268	2.736965	70.72382	8.802743	86.80635	289.8248
#1	-.004215	-.007513	-.000225	.0062444	.0013550	.0003825
#2	-.003660	-.007653	-.001106	.0068609	.0014882	-.002887
#3	-.002254	-.007927	-.001574	.0074506	.0000009	.008671

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004419	-.000147	-.000005	.0043603	.0002490	-.000165
Stddev	.000638	.000042	.000018	.0077255	.0000322	.000140
%RSD	14.42473	28.40622	381.6621	177.1768	12.91460	84.91397
#1	-.004898	-.000145	-.000025	.0061292	.0002860	-.000269
#2	-.003696	-.000190	.000005	-.004096	.0002277	-.000222
#3	-.004665	-.000106	.000007	.011048	.0002333	-.000006

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005416	.0007515	.0005988	.0080304	.0005043	.0003288
Stddev	.0001306	.0036714	.0002058	.0112902	.0000625	.0002042
%RSD	24.11174	488.5306	34.36833	140.5932	12.38974	62.12320
#1	.0006832	.0044069	.0003928	.0060015	.0005329	.0005580
#2	.0005159	-.002936	.0008045	-.002108	.0004327	.0002621
#3	.0004258	.000783	.0005992	.020198	.0005474	.0001662

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 356.3244	-.000044	.0011364	.1338978	.0002455	.0006032
Stddev	5.8950	.000911	.0001925	.0235488	.0001394	.0001039
%RSD	1.654381	2095.358	16.94419	17.58711	56.76271	17.22438
#1	362.5735	.000142	.0013526	.1587556	.0003065	.0005219
#2	350.8627	.000761	.0009836	.1310142	.0003440	.0007202
#3	355.5368	-.001033	.0010729	.1119237	.0000861	.0005674

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166528TB Acquired: 2/7/2025 17:29:02 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.006641	-.000181	.0170517	.0010137	F .0160318	-.003199
Stddev	.000323	.000132	.0017894	.0003611	.0003660	.000527
%RSD	4.868067	72.51268	10.49370	35.62549	2.282793	16.48124
#1	-.006624	-.000257	.0189479	.0014288	.0156093	-.003687
#2	-.006327	-.000257	.0168144	.0007717	.0162523	-.002640
#3	-.006973	-.000030	.0153928	.0008405	.0162337	-.003269

Elem	Sr4077
Units	ppm
Avg	-.000007
Stddev	.000037
%RSD	515.4841
#1	.000028
#2	-.000004
#3	-.000046

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3168.970	69559.75	15071.88	2218.322	3813.089
Stddev	4.264	256.19	69.20	9.216	6.662
%RSD	.1345512	.3682976	.4591200	.4154383	.1747116
#1	3164.126	69338.44	15146.81	2210.247	3807.135
#2	3172.159	69500.40	15010.38	2216.357	3820.284
#3	3170.624	69840.40	15058.47	2228.361	3811.849

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166579BL Acquired: 2/7/2025 17:33:31 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0011354	.0013530	-.001250	.0012893	-.000299	-.001763	-.002640
Stddev	.0010003	.0014133	.000334	.0020304	.001337	.002874	.000617
%RSD	88.10399	104.4539	26.69292	157.4825	447.9765	163.0040	23.38240
#1	.0008152	.0024010	-.001566	.0020866	-.001338	-.004936	-.002040
#2	.0022566	-.000254	-.000901	.0027999	.001210	-.001021	-.002606
#3	.0003343	.001912	-.001285	-.001019	-.000768	.000667	-.003273

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000256	-.000056	-.006317	-.000067	-.000154	-.001425	-.010570
Stddev	.0000142	.000029	.003722	.000271	.000129	.000231	.003966
%RSD	55.60139	51.90801	58.91651	401.9364	83.73474	16.19075	37.51836
#1	.0000419	-.000029	-.004375	-.000154	-.000010	-.001347	-.007844
#2	.0000191	-.000087	-.010607	.000236	-.000192	-.001244	-.015119
#3	.0000158	-.000053	-.003967	-.000284	-.000259	-.001685	-.008747

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000354	.0096077	-.000163	.0003885	.3552275	-.000730	-.000413
Stddev	.0001594	.0069936	.000237	.0003122	.0144082	.001568	.000296
%RSD	450.5843	72.79157	145.0134	80.36818	4.056058	214.8371	71.59065
#1	.0002131	.0172827	.000091	.0004740	.3637929	-.002379	-.000216
#2	-.000012	.0079454	-.000204	.0006490	.3632968	.000741	-.000270
#3	-.000095	.0035950	-.000377	.0000424	.3385927	-.000551	-.000753

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1726381	.0002159	-.000141	.0071585	.0001906	.0078938	-.005268
Stddev	.0099185	.0002669	.000224	.0005006	.0004679	.0062337	.000739
%RSD	5.745253	123.6059	159.5128	6.993338	245.5056	78.96920	14.03698
#1	.1769878	.0004320	-.000305	.0076524	.0006367	.0068009	-.006103
#2	.1612880	.0002983	-.000232	.0066514	-.000296	.0146016	-.005007
#3	.1796387	-.000082	.000115	.0071719	.000231	.0022788	-.004695

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166579BL Acquired: 2/7/2025 17:33:31 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0025006	.0040755	-.000047
Stddev	.0020275	.0001768	.000031
%RSD	81.07991	4.337505	66.18933
#1	.0035018	.0039196	-.000077
#2	.0038328	.0040395	-.000051
#3	.0001673	.0042676	-.000014

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3467.506	74753.86	15240.10	2406.945	4382.498
Stddev	11.957	252.47	84.32	9.695	11.711
%RSD	.3448339	.3377373	.5532785	.4028057	.2672242
#1	3480.249	75044.52	15168.23	2416.711	4395.042
#2	3465.735	74589.04	15219.13	2397.322	4380.599
#3	3456.533	74628.02	15332.92	2406.802	4371.852

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166579BS Acquired: 2/7/2025 17:37:51 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.8063143	2.011252	.9635238	2.054929	.7967235	1.916760
Stddev	.0036006	.016118	.0044883	.007902	.0019477	.003899
%RSD	.4465519	.8013833	.4658198	.3845527	.2444625	.2034131
#1	.8103781	2.011246	.9604641	2.059274	.7985429	1.918245
#2	.8050431	1.995137	.9614312	2.045807	.7946689	1.912337
#3	.8035218	2.027372	.9686763	2.059705	.7969587	1.919699

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1820672	.1963735	.1937440	.9965116	.4074516	.1979565
Stddev	.0007128	.0006179	.0006719	.0116570	.0018595	.0007892
%RSD	.3914991	.3146611	.3467908	1.169784	.4563711	.3986939
#1	.1817430	.1958606	.1935412	1.004862	.4062322	.1980918
#2	.1828845	.1970595	.1931969	.983194	.4095918	.1971084
#3	.1815741	.1962003	.1944939	1.001479	.4065308	.1986694

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3146008	2.968375	.1933720	1.930424	.4975292	.0754370
Stddev	.0001620	.022522	.0006996	.008563	.0019500	.0004964
%RSD	.0514856	.7587302	.3617803	.4436039	.3919424	.6580315
#1	.3147781	2.951978	.1931986	1.920745	.4964590	.0757897
#2	.3144606	2.994055	.1941420	1.937016	.4963486	.0756520
#3	.3145637	2.959092	.1927755	1.933511	.4997800	.0748694

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.903311	.2863812	.2070890	9.725498	.2869915	.3991254
Stddev	.014444	.0007162	.0006011	.064485	.0002611	.0011882
%RSD	.4975073	.2500935	.2902749	.6630515	.0909901	.2977012
#1	2.901709	.2859091	.2077574	9.741682	.2872101	.3988293
#2	2.918489	.2872053	.2069168	9.780349	.2870621	.3981133
#3	2.889734	.2860292	.2065928	9.654462	.2867023	.4004337

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166579BS Acquired: 2/7/2025 17:37:51 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.6761527	.1861969	.7708938	5.858773	F -.008599	.1992254
Stddev	.0033008	.0008563	.0028652	.018774	.001876	.0006710
%RSD	.4881748	.4598602	.3716764	.3204496	21.81755	.3368289
#1	.6740647	.1855035	.7731353	5.849944	-.006514	.1997412
#2	.6744353	.1859333	.7676656	5.846040	-.009131	.1984667
#3	.6799581	.1871540	.7718805	5.880334	-.010151	.1994683

Elem	Sr4077
Units	ppm
Avg	.1893550
Stddev	.0004206
%RSD	.2221100
#1	.1897181
#2	.1888942
#3	.1894526

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3387.487	73034.40	15209.66	2333.659	4234.670
Stddev	5.392	340.51	60.51	14.052	8.482
%RSD	.1591866	.4662362	.3978713	.6021498	.2002906
#1	3390.786	73251.51	15275.72	2346.075	4236.463
#2	3390.411	72641.95	15156.90	2318.404	4242.112
#3	3381.264	73209.75	15196.35	2336.499	4225.435

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1307-01 Acquired: 2/7/2025 17:41:50 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	-.000717	-.013713	81.03732	.0011232	.0083633	.0005492	.3288067
Stddev	.000718	.001932	.14177	.0010183	.0018426	.0039746	.0002697
%RSD	100.2316	14.08675	.1749412	90.65960	22.03193	723.6529	.0820162
#1	-.000130	-.014968	81.09591	.0009554	.0090881	.0000599	.3290108
#2	-.001518	-.011489	80.87565	.0022149	.0097332	.0047458	.3289084
#3	-.000502	-.014683	81.14040	.0001992	.0062685	-.003158	.3285010

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009555	.0077171	38.57058	.0033571	.0544272	10.18479	3.613467
Stddev	.0000287	.0000364	.02876	.0001857	.0002591	.00918	.020527
%RSD	3.003057	.4719664	.0745551	5.530320	.4760019	.0901382	.5680736
#1	.0009388	.0076866	38.53971	.0034309	.0547132	10.19398	3.636974
#2	.0009390	.0077574	38.59660	.0031459	.0543601	10.17562	3.599085
#3	.0009886	.0077072	38.57543	.0034946	.0542083	10.18477	3.604341

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.645938	10.51925	.0508940	.0006695	628.7378	.0002832	14.35535
Stddev	.001107	.02511	.0002907	.0003096	3.6219	.0005552	.01099
%RSD	.0672850	.2386595	.5712797	46.23977	.5760559	196.0612	.0765671
#1	1.644834	10.49564	.0511912	.0007158	630.9723	.0005310	14.35632
#2	1.645931	10.54562	.0506102	.0009534	630.6821	-.000353	14.36583
#3	1.647049	10.51649	.0508806	.0003394	624.5589	.000671	14.34391

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.06502	.1537360	-.001677	-.008968	-.001326	6.261229	.0031825
Stddev	.05121	.0004314	.000443	.000133	.000042	.032282	.0002621
%RSD	.5088391	.2806278	26.43865	1.484701	3.189271	.5155836	8.235496
#1	10.11127	.1542116	-.001650	-.008966	-.001288	6.279611	.0032027
#2	10.07381	.1533698	-.001247	-.009102	-.001319	6.280122	.0034338
#3	10.00998	.1536267	-.002133	-.008836	-.001372	6.223954	.0029108

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1307-01 Acquired: 2/7/2025 17:41:50 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	5.089354	.0051278	.2773767
Stddev	.012044	.0001942	.0003801
%RSD	.2366417	3.786160	.1370346
#1	5.100229	.0053492	.2771225
#2	5.076410	.0049868	.2778136
#3	5.091424	.0050473	.2771939

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3023.979	66446.07	15040.71	2070.483	3580.322
Stddev	4.793	138.11	42.62	5.854	8.693
%RSD	.1584844	.2078483	.2833420	.2827443	.2428047
#1	3018.857	66288.19	15084.72	2075.584	3571.673
#2	3028.354	66544.49	15037.78	2064.091	3589.059
#3	3024.726	66505.52	14999.64	2071.775	3580.234

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166530BL Acquired: 2/7/2025 17:46:10 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0004840	.0000082	.0024009	.0008906	.0004689	.0013511	-.003390
Stddev	.0019700	.0008413	.0014040	.0004348	.0009785	.0063411	.000106
%RSD	407.0152	10297.25	58.47618	48.81537	208.6527	469.3257	3.133821
#1	.0000340	-.000170	.0038813	.0013390	.0015635	-.005628	-.003272
#2	.0026401	-.000730	.0022331	.0004709	-.000321	.002924	-.003478
#3	-.001222	.000924	.0010884	.0008619	.000164	.006758	-.003419

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000035	.0000718	.0044556	-.000305	.0000797	-.001306	-.006550
Stddev	.0000391	.0000150	.0094465	.000437	.0001226	.000200	.002396
%RSD	1100.558	20.87639	212.0154	143.3398	153.8820	15.32486	36.57736
#1	.0000159	.0000852	.0153536	.000200	-.000012	-.001530	-.008719
#2	-.000040	.0000746	-.001397	-.000558	.000033	-.001243	-.006953
#3	.000035	.0000556	-.000590	-.000555	.000219	-.001145	-.003979

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000008	-.005566	-.000147	.0006750	.3258834	-.001658	.0003112
Stddev	.000187	.002539	.000353	.0001074	.0154214	.000692	.0001137
%RSD	2253.517	45.61919	240.6052	15.90521	4.732180	41.74066	36.54320
#1	-.000085	-.007356	.000064	.0006013	.3089724	-.001120	.0001906
#2	.000205	-.002660	-.000554	.0006256	.3295085	-.001416	.0003265
#3	-.000145	-.006681	.000050	.0007982	.3391693	-.002439	.0004164

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2290377	-.000615	-.000034	.0069755	.0001036	.0026022	-.005976
Stddev	.0089630	.000530	.000160	.0005268	.0004185	.0040279	.001727
%RSD	3.913340	86.10767	472.4215	7.551718	403.9446	154.7906	28.90608
#1	.2277379	-.001132	.000043	.0070980	-.000019	-.000234	-.004934
#2	.2207955	-.000639	.000074	.0063983	.000570	.000828	-.005024
#3	.2385796	-.000074	-.000218	.0074303	-.000240	.007213	-.007970

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: PB166530BL Acquired: 2/7/2025 17:46:10 Type: Unk
Method: NON EPA-6010-200.7(v2666) 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	.0001206	.0030685	-.000053
Stddev	.0033254	.0013230	.000010
%RSD	2758.136	43.11511	18.98038
#1	-.001622	.0029791	-.000059
#2	.003955	.0017925	-.000058
#3	-.001972	.0044339	-.000041

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3461.201	74696.88	15395.16	2388.073	4365.714
Stddev	11.556	22.55	71.35	3.413	15.826
%RSD	.3338729	.0301875	.4634277	.1429119	.3624971
#1	3460.753	74685.00	15395.68	2391.913	4371.130
#2	3472.975	74682.75	15466.25	2386.921	4378.120
#3	3449.876	74722.88	15323.56	2385.386	4347.891

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: LR1 Acquired: 2/7/2025 17:51:14 Type: Unk
Method: NON EPA-6010-200.7(v2669) 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	.0365019	.0915839	.0491575	-.056695	-.003864	2068.027	.0209479
Stddev	.0090080	.0041268	.0026278	.011603	.006227	27.452	.0015199
%RSD	24.67813	4.505980	5.345631	20.46599	161.1542	1.327454	7.255542
#1	.0396354	.0962908	.0470627	-.043562	.001385	2094.205	.0225962
#2	.0435246	.0898743	.0521060	-.060961	-.010744	2039.457	.0196019
#3	.0263456	.0885867	.0483039	-.065561	-.002232	2070.419	.0206455

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0090784	.0230532	1932.531	.0053669	.0271278	-.263145	1060.339
Stddev	.0001660	.0007667	3.135	.0008547	.0003189	.003663	2.206
%RSD	1.827949	3.325593	.1622300	15.92467	1.175492	1.391880	.2080738
#1	.0091260	.0221843	1935.878	.0052199	.0271919	-.266937	1062.647
#2	.0088939	.0236344	1929.663	.0045953	.0267817	-.259627	1058.251
#3	.0092154	.0233408	1932.052	.0062856	.0274098	-.262870	1060.120

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.084036	1744.270	.0253692	.0337053	1968.947	.0134914	.1391572
Stddev	.000206	12.156	.0008007	.0010275	4.210	.0006327	.0019977
%RSD	.2446403	.6969016	3.156041	3.048523	.2138200	4.689968	1.435596
#1	-.083806	1758.255	.0261690	.0326008	1966.948	.0138510	.1374020
#2	-.084201	1736.237	.0253709	.0338822	1973.784	.0127608	.1413311
#3	-.084101	1738.318	.0245677	.0346329	1966.108	.0138624	.1387384

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1265.562	.5628016	.0085327	-.000426	-.040892	.1422714	.0707470
Stddev	6.835	.0043218	.0017394	.002317	.001365	.0054497	.0033685
%RSD	.5400749	.7679108	20.38549	544.1927	3.338690	3.830504	4.761286
#1	1257.681	.5677725	.0104798	.001986	-.042035	.1474183	.0669806
#2	1269.136	.5606983	.0079861	-.002636	-.041260	.1428336	.0717893
#3	1269.870	.5599341	.0071323	-.000628	-.039380	.1365624	.0734711

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: LR1 Acquired: 2/7/2025 17:51:14 Type: Unk
Method: NON EPA-6010-200.7(v2669) 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	-.239415	.1177087	-1.04853
Stddev	.016451	.0008653	.00224
%RSD	6.871299	.7350982	.2132019
#1	-.222025	.1187068	-1.05089
#2	-.254730	.1171694	-1.04645
#3	-.241490	.1172500	-1.04826

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2343.280	52042.83	12867.24	1631.170	2504.867
Stddev	10.898	164.26	70.74	3.670	8.168
%RSD	.4650805	.3156248	.5497861	.2249968	.3260706
#1	2353.589	51895.14	12799.93	1633.880	2512.879
#2	2344.373	52219.74	12940.98	1626.994	2505.170
#3	2331.876	52013.62	12860.80	1632.638	2496.552

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: LR2 Acquired: 2/7/2025 17:56:10 Type: Unk
Method: NON EPA-6010-200.7(v2669) 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	.0119559	-.019371	247.8148	.0073459	.0014745	.7231289	98.76350
Stddev	.0022840	.002458	.1991	.0004555	.0011612	.1091226	.72354
%RSD	19.10373	12.68722	.0803475	6.200286	78.74894	15.09034	.7326026
#1	.0093205	-.022086	247.9579	.0078685	.0001556	.8356945	97.94157
#2	.0131847	-.017299	247.5874	.0070336	.0023430	.7158815	99.30421
#3	.0133624	-.018728	247.8992	.0071355	.0019249	.6178107	99.04474

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002740	-.004738	.7955501	.0121209	-.017534	252.4551	.3741864
Stddev	.000032	.000104	.1191250	.0002091	.000156	2.0928	.0553287
%RSD	1.149882	2.199922	14.97391	1.724706	.8910538	.8289934	14.78639
#1	-.002723	-.004620	.9158515	.0123477	-.017551	250.3368	.4343967
#2	-.002777	-.004818	.7931613	.0120790	-.017370	252.5070	.3625825
#3	-.002721	-.004776	.6776375	.0119360	-.017681	254.5215	.3255799

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.59266	.4234477	45.16978	.0023612	.8511945	-.010176	32.69410
Stddev	.17797	.0988292	.02833	.0002952	.0991710	.001777	.23347
%RSD	.4278900	23.33917	.0627264	12.50244	11.65081	17.45932	.7141193
#1	41.68289	.5227645	45.16829	.0024348	.9527465	-.012153	32.96324
#2	41.38764	.4224652	45.14223	.0020361	.8462474	-.009663	32.57317
#3	41.70743	.3251135	45.19883	.0026126	.7545896	-.008712	32.54591

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6838774	-.001049	-.005465	-.004339	-.039246	-.002954	-.086737
Stddev	.0747029	.000104	.000022	.000773	.000742	.008514	.004862
%RSD	10.92344	9.920848	.3955175	17.81483	1.891681	288.2388	5.605312
#1	.7570681	-.000977	-.005472	-.004552	-.039926	.006780	-.082821
#2	.6868152	-.001168	-.005441	-.003482	-.038454	-.006630	-.085211
#3	.6077489	-.001001	-.005483	-.004983	-.039359	-.009012	-.092179

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: LR2 Acquired: 2/7/2025 17:56:10 Type: Unk
Method: NON EPA-6010-200.7(v2669) 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	-.013089	.0002130	.0009120
Stddev	.007414	.0012449	.0000401
%RSD	56.64482	584.4295	4.401529
#1	-.021204	-.000523	.0008657
#2	-.006669	-.000488	.0009343
#3	-.011394	.001650	.0009360

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3070.520	73478.05	15224.83	2239.329	4110.920
Stddev	23.124	238.04	101.86	5.520	21.102
%RSD	.7530833	.3239617	.6690638	.2464868	.5133047
#1	3092.003	73450.76	15140.77	2245.702	4132.828
#2	3073.509	73254.83	15195.61	2236.200	4109.202
#3	3046.047	73728.56	15338.11	2236.085	4090.730

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV07 Acquired: 2/7/2025 18:00:45 Type: Unk
Method: NON EPA-6010-200.7(v2670) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.213407	5.048080	4.979692	5.299305	5.202372	9.692109	9.532351
Stddev	.009473	.023567	.015754	.006831	.002311	.014803	.007828
%RSD	.1817052	.4668455	.3163583	.1289040	.0444133	.1527289	.0821202
#1	5.213104	5.043055	4.962381	5.306774	5.204923	9.708721	9.540520
#2	5.223028	5.073754	4.983507	5.297767	5.200419	9.687286	9.524915
#3	5.204089	5.027431	4.993188	5.293374	5.201774	9.680319	9.531617

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2492625	2.445458	24.14025	1.005771	2.475817	1.323256	4.770605
Stddev	.0008451	.004679	.02762	.003707	.004358	.001108	.036002
%RSD	.3390473	.1913220	.1143942	.3685499	.1760124	.0836949	.7546639
#1	.2483073	2.440108	24.11111	1.007530	2.470803	1.324428	4.778060
#2	.2499131	2.448786	24.14362	1.001513	2.478694	1.323112	4.731459
#3	.2495671	2.447478	24.16603	1.008272	2.477953	1.322227	4.802296

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.374120	24.11604	2.488751	1.242318	22.79375	2.412572	2.473587
Stddev	.005231	.04895	.004831	.003681	.14033	.004049	.001712
%RSD	.2203418	.2029747	.1940987	.2962928	.6156401	.1678268	.0691937
#1	2.368163	24.07947	2.483227	1.243930	22.88520	2.409730	2.474867
#2	2.377967	24.17165	2.492181	1.238106	22.63218	2.410778	2.474251
#3	2.376230	24.09701	2.490847	1.244918	22.86386	2.417208	2.471643

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.17746	4.925611	5.057804	4.934183	4.789577	4.885531	4.972006
Stddev	.10487	.009334	.003835	.006248	.005189	.014383	.011660
%RSD	.4337531	.1894990	.0758203	.1266317	.1083392	.2944008	.2345212
#1	24.20608	4.915059	5.058351	4.928731	4.788288	4.883170	4.962183
#2	24.06125	4.932790	5.061336	4.941002	4.785154	4.872475	4.984892
#3	24.26504	4.928984	5.053725	4.932818	4.795289	4.900949	4.968942

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV07 Acquired: 2/7/2025 18:00:45 Type: Unk
Method: NON EPA-6010-200.7(v2670) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.000013	4.782807	4.872881
Stddev	.009664	.009157	.034560
%RSD	.1932870	.1914571	.7092303
#1	5.003498	4.792925	4.911794
#2	5.007452	4.775089	4.845759
#3	4.989090	4.780407	4.861091

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3280.378	72210.65	14740.91	2257.479	3985.122
Stddev	7.682	253.94	53.95	4.252	13.171
%RSD	.2341954	.3516712	.3660084	.1883577	.3305140
#1	3288.691	72320.64	14803.19	2260.949	4000.130
#2	3278.903	72391.06	14708.33	2258.752	3979.751
#3	3273.539	71920.25	14711.22	2252.735	3975.484

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB07 Acquired: 2/7/2025 18:10:12 Type: Unk
Method: NON EPA-6010-200.7(v2670) 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	-.000199	.0015691	.0039194	.0013454	.0001610	.0021584	-.001764
Stddev	.001171	.0008573	.0006551	.0016963	.0008563	.0032522	.000563
%RSD	588.9337	54.63760	16.71330	126.0799	531.9246	150.6802	31.88702
#1	.000500	.0011329	.0045798	.0013194	.0001334	.0052482	-.001776
#2	.000454	.0025568	.0039087	-.000338	.0010307	-.001235	-.002321
#3	-.001551	.0010176	.0032698	.003055	-.000681	.002462	-.001196

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000657	.0000109	-.005960	-.000225	-.000098	.0041096	-.004468
Stddev	.0000443	.0000428	.004542	.000252	.000131	.0001549	.002493
%RSD	67.43158	393.7483	76.20567	111.8289	134.0235	3.768283	55.79117
#1	.0001150	.0000425	-.007665	.000018	.000046	.0039475	-.002731
#2	.0000292	-.000038	-.009404	-.000209	-.000128	.0042561	-.007324
#3	.0000529	.000028	-.000813	-.000485	-.000212	.0041252	-.003349

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013785	.0190884	.0009842	.0001352	.2624448	-.000681	.0004077
Stddev	.0004927	.0042189	.0001566	.0001387	.0179447	.000537	.0001677
%RSD	35.74431	22.10186	15.90974	102.5452	6.837527	78.76973	41.13843
#1	.0016958	.0143805	.0010985	.0002828	.2422107	-.000992	.0005900
#2	.0016288	.0225268	.0010484	.0000076	.2764283	-.000062	.0002599
#3	.0008108	.0203578	.0008057	.0001153	.2686954	-.000990	.0003732

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2227943	.0006316	.0002852	.0059359	-.000562	.0016771	-.003321
Stddev	.0171062	.0004495	.0001129	.0005999	.000281	.0067189	.000722
%RSD	7.678006	71.17027	39.59923	10.10689	50.06519	400.6182	21.72799
#1	.2307248	.0004470	.0004156	.0064397	-.000887	-.005914	-.002542
#2	.2031622	.0003037	.0002204	.0060959	-.000400	.004084	-.003966
#3	.2344960	.0011440	.0002196	.0052722	-.000399	.006861	-.003454

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB07 Acquired: 2/7/2025 18:10:12 Type: Unk
Method: NON EPA-6010-200.7(v2670) 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	.0012105	.0020889	.0000189
Stddev	.0033130	.0005362	.0000080
%RSD	273.6749	25.66806	42.18820
#1	.0042723	.0023131	.0000101
#2	.0016659	.0014770	.0000211
#3	-.002307	.0024766	.0000255

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3469.883	75659.18	15353.65	2444.342	4364.567
Stddev	9.627	124.84	56.04	7.070	11.190
%RSD	.2774383	.1649965	.3649850	.2892355	.2563942
#1	3462.115	75795.13	15362.16	2449.898	4355.218
#2	3480.653	75549.71	15404.94	2436.384	4376.966
#3	3466.881	75632.71	15293.84	2446.743	4361.517

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1278-01 Acquired: 2/7/2025 18:14:32 Type: Unk
Method: NON EPA-6010-200.7(v2670) 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	-.011810	-.013237	-.039423	.0602844	.0103668	-.096294
Stddev	.001827	.009462	.003384	.0076730	.0025955	.010415
%RSD	15.46834	71.48360	8.583298	12.72801	25.03657	10.81546
#1	-.013370	-.007728	-.041927	.0590285	.0123786	-.094627
#2	-.012260	-.007820	-.040769	.0685079	.0074371	-.086814
#3	-.009801	-.024164	-.035573	.0533168	.0112849	-.107442

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0154133	.0000358	-.006611	350.5833	.0687673	.9933562
Stddev	.0008157	.0000714	.000146	2.3039	.0001986	.0034248
%RSD	5.291950	199.5588	2.206549	.6571742	.2887838	.3447716
#1	.0162504	.0000881	-.006661	352.4833	.0685498	.9971560
#2	.0146209	-.000046	-.006725	348.0207	.0688131	.9905073
#3	.0153685	.000065	-.006447	351.2460	.0689389	.9924054

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.075889	.0194731	.0023824	12.86582	1.317990	.0072303
Stddev	.000850	.0186491	.0001504	.14965	.001302	.0010894
%RSD	1.119933	95.76850	6.312491	1.163142	.0987938	15.06722
#1	-.075651	.0154674	.0025106	12.94006	1.319490	.0084786
#2	-.076832	.0397995	.0022168	12.69356	1.317151	.0067406
#3	-.075183	.0031523	.0024198	12.96382	1.317329	.0064716

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	^ *****	-.006859	.2846927	523.6281	.2005228	4.952814
Stddev	-----	.003559	.0009285	34.4863	.0007517	.010718
%RSD	-----	51.88669	.3261434	6.586035	.3748652	.2164100
#1	^ -----	-.005265	.2850580	488.5051	.2012749	4.960121
#2	^ -----	-.004375	.2853831	524.9387	.2005218	4.957811
#3	^ -----	-.010936	.2836372	557.4404	.1997715	4.940509

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: Q1278-01 Acquired: 2/7/2025 18:14:32 Type: Unk
Method: NON EPA-6010-200.7(v2670) 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	-.032894	-.010303	2.067668	.0451689	F 5692.137	.0025688
Stddev	.003347	.000781	.038359	.0052984	6.032	.0043618
%RSD	10.17638	7.577698	1.855163	11.73016	.1059784	169.8021
#1	-.032905	-.010325	2.025367	.0482206	5691.488	-.001587
#2	-.029540	-.009511	2.077447	.0390508	5698.469	.002182
#3	-.036235	-.011072	2.100191	.0482353	5686.456	.007111

Elem	Sr4077
Units	ppm
Avg	.5300801
Stddev	.0013139
%RSD	.2478642
#1	.5315819
#2	.5295154
#3	.5291429

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	978.2847	22103.15	7430.685	650.4262	856.8810
Stddev	5.5752	126.65	39.622	6.2216	5.0770
%RSD	.5698954	.5729907	.5332160	.9565407	.5925008
#1	972.8864	22183.55	7385.028	656.4114	851.2428
#2	977.9463	22168.74	7450.975	650.8747	858.3096
#3	984.0214	21957.16	7456.052	643.9925	861.0907

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV08 Acquired: 2/7/2025 18:23:28 Type: Unk
Method: NON EPA-6010-200.7(v2671) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.263649	5.002888	5.022991	5.331020	5.222555	9.742178	9.467592
Stddev	.019916	.008890	.017782	.020849	.015241	.019495	.083103
%RSD	.3783732	.1777055	.3540100	.3910894	.2918381	.2001123	.8777592
#1	5.249769	5.006605	5.023327	5.327250	5.209664	9.726525	9.410058
#2	5.254709	4.992743	5.005044	5.312313	5.218624	9.735994	9.429851
#3	5.286469	5.009318	5.040603	5.353497	5.239377	9.764015	9.562868

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2491695	2.480424	24.38001	1.022233	2.504950	1.302995	4.870460
Stddev	.0013414	.006310	.09662	.001628	.007359	.001921	.040072
%RSD	.5383664	.2544105	.3962903	.1592744	.2937657	.1474583	.8227484
#1	.2476225	2.478636	24.31969	1.022864	2.502019	1.301024	4.857165
#2	.2498754	2.475200	24.32889	1.020383	2.499509	1.303098	4.838726
#3	.2500106	2.487435	24.49144	1.023451	2.513323	1.304862	4.915490

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.380008	24.57804	2.514042	1.249488	26.66429	2.433885	2.528383
Stddev	.011906	.11970	.008459	.002610	.21937	.004293	.005334
%RSD	.5002511	.4870333	.3364739	.2088738	.8226923	.1763927	.2109479
#1	2.369683	24.43983	2.509211	1.248553	26.86488	2.430406	2.533246
#2	2.377308	24.64569	2.509104	1.247474	26.43004	2.432565	2.529224
#3	2.393032	24.64861	2.523809	1.252436	26.69794	2.438682	2.522679

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.08791	4.888642	5.063874	4.997584	4.803927	5.053680	5.059895
Stddev	.19635	.028933	.015159	.015278	.020371	.033478	.016691
%RSD	.7826345	.5918467	.2993629	.3057138	.4240518	.6624459	.3298603
#1	25.13676	4.856574	5.056092	4.991769	4.794600	5.057589	5.054037
#2	24.87175	4.896559	5.054186	4.986067	4.789890	5.018419	5.046923
#3	25.25522	4.912792	5.081344	5.014916	4.827292	5.085032	5.078725

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCV08 Acquired: 2/7/2025 18:23:28 Type: Unk
Method: NON EPA-6010-200.7(v2671) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.342859	4.670986	4.842462
Stddev	.024745	.026758	.075593
%RSD	.4631397	.5728473	1.561048
#1	5.327063	4.667310	4.756444
#2	5.330139	4.646256	4.872630
#3	5.371377	4.699391	4.898313

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3239.352	71141.25	14700.10	2223.332	3917.873
Stddev	9.416	235.06	56.58	5.258	11.764
%RSD	.2906631	.3304178	.3848703	.2364764	.3002554
#1	3247.631	71056.23	14760.12	2217.270	3927.091
#2	3241.316	71407.00	14692.43	2226.648	3921.905
#3	3229.109	70960.53	14647.75	2226.078	3904.624

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB08 Acquired: 2/7/2025 18:27:38 Type: Unk
Method: NON EPA-6010-200.7(v2671) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019906	.0032284	-.000208	.0026485	.0008450	.0025227
Stddev	.0010278	.0015297	.000393	.0021473	.0002025	.0026280
%RSD	51.63432	47.38152	188.7241	81.07468	23.97069	104.1775
#1	.0023197	.0034771	.000207	.0048907	.0008237	.0052272
#2	.0008385	.0015896	-.000575	.0006108	.0010573	.0023623
#3	.0028135	.0046185	-.000257	.0024440	.0006539	-.000022

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002729	.0001120	.0002667	.0117862	-.000016	.0002192
Stddev	.000650	.0000658	.0000922	.0036194	.000243	.0001321
%RSD	23.81455	58.72643	34.57467	30.70869	1486.076	60.26206
#1	-.002159	.0001252	.0003660	.0099052	.000256	.0003711
#2	-.002590	.0001702	.0002501	.0159588	-.000092	.0001558
#3	-.003436	.0000406	.0001838	.0094947	-.000212	.0001308

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000728	-.004797	.0005414	.0069219	.0000426	.0007656
Stddev	.000171	.003141	.0002095	.0158726	.0001700	.0001933
%RSD	23.53713	65.47055	38.69468	229.3093	399.0150	25.24939
#1	-.000537	-.001605	.0005981	-.010776	.0002389	.0006068
#2	-.000781	-.004903	.0007168	.019898	-.000057	.0009808
#3	-.000867	-.007884	.0003094	.011643	-.000054	.0007091

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 3.148353	-.000528	.0000407	1.657054	.0040859	.0007725
Stddev	.036352	.001603	.0001466	.054209	.0004599	.0001614
%RSD	1.154651	303.2876	359.9342	3.271438	11.25541	20.88959
#1	3.107607	-.001076	.0000699	1.600816	.0044334	.0009586
#2	3.177462	.001276	.0001706	1.661367	.0035644	.0006710
#3	3.159990	-.001786	-.000118	1.708977	.0042598	.0006879

Reviewed By:Mohan
On:2/10/2025 5:28:30 PM
Inst Id :P4
LB :LB134636

Sample Name: CCB08 Acquired: 2/7/2025 18:27:38 Type: Unk
Method: NON EPA-6010-200.7(v2671) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067420	.0017483	.0131252	-.002451	F .0648844	.0043323
Stddev	.0002014	.0002373	.0043446	.001297	.0028846	.0009497
%RSD	2.987535	13.57440	33.10078	52.92297	4.445685	21.92212
#1	.0069491	.0019822	.0181145	-.002990	.0676532	.0044185
#2	.0067301	.0017552	.0101773	-.000972	.0618966	.0052359
#3	.0065468	.0015077	.0110839	-.003393	.0651034	.0033424

Elem	Sr4077
Units	ppm
Avg	.0010555
Stddev	.0001487
%RSD	14.08429
#1	.0012151
#2	.0010306
#3	.0009209

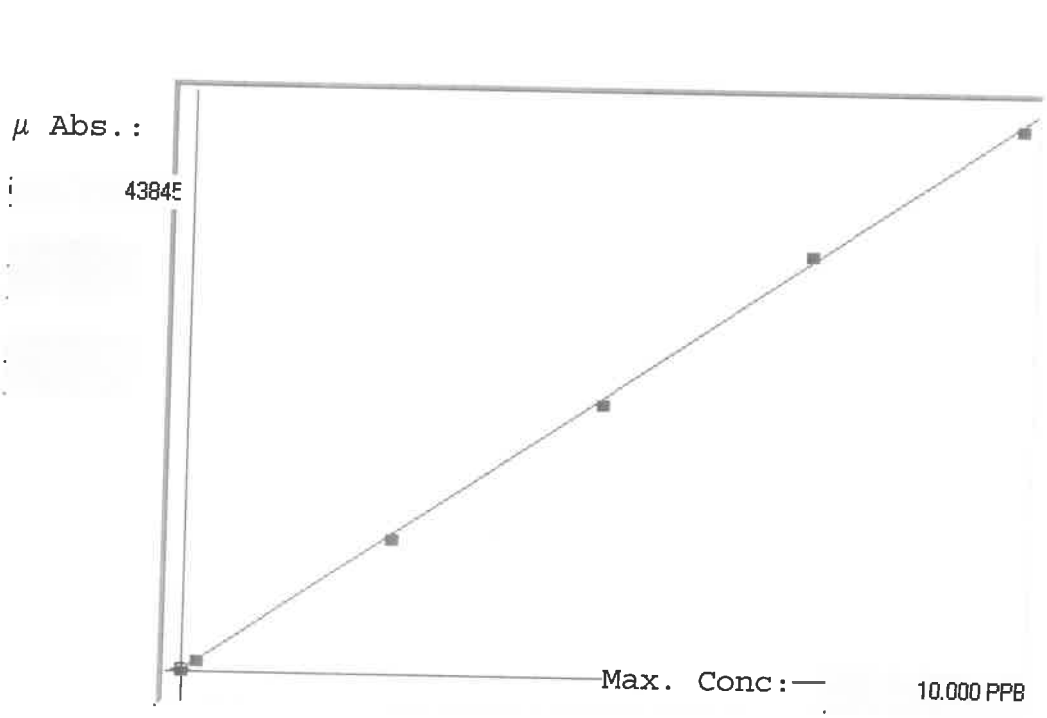
Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3388.741	74175.10	15219.75	2336.206	4305.366
Stddev	8.743	154.42	97.18	9.506	8.871
%RSD	.2580118	.2081815	.6384965	.4069078	.2060467
#1	3398.432	74229.24	15118.32	2339.270	4314.490
#2	3386.345	74000.90	15228.92	2325.545	4304.836
#3	3381.445	74295.16	15312.02	2343.802	4296.772

Reviewed By:Mohan
On:2/10/2025 9:48:26 AM
Inst Id :CV1
LB :LB134599

LB134599

7470A

INSTRUMENT ID: CV1



A= 0.0000e+000

B= 2.2698e-004

C= -1.4852e-002

Rho= 0.9997696

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	%D
0.0	0.000	0.042	0.042	252	0.000	252	0				
0.2	0.200	0.208	0.008	982	0.0 %	982					4
2.5	2.500	2.439	-0.061	10810	0.0 %	10810					-2
5.0	5.000	4.924	-0.076	21759	0.0 %	21759					-2
7.5	7.500	7.649	0.149	33766	0.0 %	33766					2
10.0	10.000	9.937	-0.063	43845	0.0 %	43845					-1

Reviewed By:Mohan
On:2/10/2025 9:48:26 AM
Inst Id :CV1
LB :LB134599

LB134599 INSTRUMENT ID : CV1

Method: 7470A Operator: Admin Date of Analysis: 06 Feb 2025 10:54:39

Sample ID	Extended ID	µ Abs	Conc	Stnd Conc	Method	Units	Date	Type	Type
0.0 - 1	50	252	-	0.00000	7470A	PPB	06 Feb 2025 11:22:55	S	Std
0.2 - 1	50.2	982	-	0.20000	7470A	PPB	06 Feb 2025 11:25:13	S	Std
2.5 - 1	52.5	10810	-	2.50000	7470A	PPB	06 Feb 2025 11:30:08	S	Std
5.0 - 1	55	21759	-	5.00000	7470A	PPB	06 Feb 2025 11:34:59	S	Std
7.5 - 1	57.5	33768	-	7.50000	7470A	PPB	06 Feb 2025 11:39:52	S	Std
10.0 - 1	510	43845	-	10.00000	7470A	PPB	06 Feb 2025 11:47:28	S	Std
ICV88 - 1	ICV88	16813	3.8014		7470A	PPB	06 Feb 2025 11:52:45	U	SMPL
ICB88 - 1	ICB88	-203	-0.0609		7470A	PPB	06 Feb 2025 11:55:01	U	SMPL
CCV30 - 1	CCV30	21670	4.9038		7470A	PPB	06 Feb 2025 11:57:18	U	SMPL
CCB30 - 1	CCB30	-156	-0.0503		7470A	PPB	06 Feb 2025 11:59:33	U	SMPL
CRA - 1	CRA	938	0.1981		7470A	PPB	06 Feb 2025 12:01:51	U	SMPL
HighStd - 1	HighStd	44211	10.0203		7470A	PPB	06 Feb 2025 12:04:05	U	SMPL
ChkStd - 1	ChkStd	31997	7.2479		7470A	PPB	06 Feb 2025 12:08:42	U	SMPL
Q1201-01 - 1	TAPHHA-MW12-012725-00-T2	294	0.0519		7470A	PPB	06 Feb 2025 12:10:58	U	SMPL
Q1211-01 - 1	TAPHHA-MW01-012825-00-T4	402	0.0764		7470A	PPB	06 Feb 2025 12:13:15	U	SMPL
Q1211-02 - 1	TAPIAL2-MW03-012825-00-T3	460	0.0896		7470A	PPB	06 Feb 2025 12:15:32	U	SMPL
Q1266-01 - 1	TRE-25-0004	127	0.0140		7470A	PPB	06 Feb 2025 12:17:48	U	SMPL
Q1266-02 - 1	TRE-25-0010	453	0.0880		7470A	PPB	06 Feb 2025 12:20:05	U	SMPL
Q1266-03 - 1	TRE-25-0012	3	-0.0142		7470A	PPB	06 Feb 2025 12:22:22	U	SMPL
Q1271-04 - 1	3190	423	0.0812		7470A	PPB	06 Feb 2025 12:26:06	U	SMPL
CCV31 - 1	CCV31	20694	4.6823		7470A	PPB	06 Feb 2025 12:28:21	U	SMPL
CCB31 - 1	CCB31	-143	-0.0473		7470A	PPB	06 Feb 2025 12:30:36	U	SMPL
Q1282-01 - 1	SW-WTS-02	99	0.0076		7470A	PPB	06 Feb 2025 12:32:53	U	SMPL
Q1201-01DUP - 1	TAPHHA-MW12-012725-00-T2DUP	135	0.0158		7470A	PPB	06 Feb 2025 12:35:09	U	SMPL
Q1201-01MS - 1	TAPHHA-MW12-012725-00-T2MS	14508	3.2782		7470A	PPB	06 Feb 2025 12:37:24	U	SMPL
Q1201-01MSD - 1	TAPHHA-MW12-012725-00-T2MSD	13839	3.1264		7470A	PPB	06 Feb 2025 12:39:40	U	SMPL
Q1201-01LX5 - 1		-46	-0.0253		7470A	PPB	06 Feb 2025 12:41:57	U	SMPL
Q1201-01A - 1		15951	3.6058		7470A	PPB	06 Feb 2025 12:44:15	U	SMPL
PB166596BL - 1	PBW	87	0.0049		7470A	PPB	06 Feb 2025 12:49:04	U	SMPL
PB166596BS - 1	LCSW	16840	3.8075		7470A	PPB	06 Feb 2025 12:56:43	U	SMPL
CCV32 - 1	CCV32	22628	5.1213		7470A	PPB	06 Feb 2025 12:59:01	U	SMPL
CCB32 - 1	CCB32	-46	-0.0253		7470A	PPB	06 Feb 2025 13:01:18	U	SMPL

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB166595

SOP ID : M3010A-Digestion-17

SDG No : N/A

Matrix : WATER

Pippete ID: ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

Block ID: 1. HOT BLOCK #1 2. N/A

Start Digest Date: 02/06/2025 **Time :** 10:25 **Temp :** 96 °C

End Digest Date: 02/06/2025 **Time :** 13:30 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. # 1

Dig Technician Signature: SJ2.

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	0.25	M6002
LFS-2	0.25	M6011
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
Conc. HNO3	3.00	M6126
1:1 HCL	5.00	MP84297
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#1CELL #55 Temp: 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
02/06/25 14:30	5100 . met.dig.	50 (metals lab)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB166595

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB166595BL	PBW595	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	20
PB166595BS	LCS595	<2	50	25	Colorless	Colorless	Clear	Clear	M6002,M6011	21
Q1282-01MS	SW-WTS-02MS	<2	50	25	Colorless	Colorless	Clear	Clear	M6002,M6011	24
Q1282-01MSD	SW-WTS-02MSD	<2	50	25	Colorless	Colorless	Clear	Clear	M6002,M6011	25
Q1282-01DUP	SW-WTS-02DUP	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	23
Q1282-01	SW-WTS-02	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	22

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB166595 **WorkList ID :** 187526 **Department :** Digestion **Date :** 02-06-2025 09:34:48

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1282-01	SW-WTS-02	Water	Metals Group4	1:1 HNO3 to pH < 2	ENTA05	D11	01/31/2025	6010D

Date/Time 02/06/25 9:55
Raw Sample Received by: Sla. met dio
Raw Sample Relinquished by: IT (SM)

Date/Time 02/06/25 10:55
Raw Sample Received by: IT (SM)
Raw Sample Relinquished by: Sla. met. dio.

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB166596

SOP ID : M7470A-Mercury-19

SDG No : NA

Matrix : WATER

Pippete ID: HG A

Balance ID : N/A

Filter paper ID : NA

pH Strip ID : M6069

Hood ID : #1

Block ID: 1. HG HOT BLOCK#3 2. N/A

Start Digest Date: 02/06/2025 **Time :** 08:55 **Temp :** 93 °C

End Digest Date: 02/06/2025 **Time :** 10:55 **Temp :** 94 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: MB

Supervisor Signature: MB

Temp : 1. 93°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP84371
CCV	30mL	MP84373
CRA	30mL	MP84375
Blank Spike	0.48mL	MP84364
Matrix Spike	0.48mL	MP84364

Chemical Used	ML/SAMPLE USED	Lot Number
HNO3/H2SO4(1:2)	2.5mL	MP83691
KMnO4 (5%)	4.5mL	MP83692
K2S2O8 (5%)	2.5mL	MP83693
Hydroxylamine HCL (12%)	2.0mL	MP83694
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	MP84365
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP84366
2.5 ppb	S2.5	30mL	MP84367
5.0 ppb	S5.0	30mL	MP84368
7.5 ppb	S7.5	30mL	MP84369
10.0 ppb	S10.0	30mL	MP84370
ICV	ICV	30mL	MP84371
ICB	ICB	30mL	MP84372
CCV	CCV	30mL	MP84373
CCB	CCB	30mL	MP84374
CRI	CRI	30mL	MP84375
CHK STD	CHK STD	30mL	MP84376

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
2/6/25 @ 11:05	MB - Dig. Lab	MB - Metal Lab
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB166596

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
PB166596BL	PBW596	30	30	<2	N/A	3-1
PB166596BS	LCS596	30	30	<2	MP84364	2
Q1201-01DUP	TAPHHA-MW12-012725-00-T2DUP	30	30	<2	N/A	4
Q1201-01MS	TAPHHA-MW12-012725-00-T2MS	30	30	<2	MP84364	5
Q1201-01MSD	TAPHHA-MW12-012725-00-T2MSD	30	30	<2	MP84364	6
Q1201-01	TAPHHA-MW12-012725-00-T2	30	30	<2	N/A	3
Q1211-01	TAPHHA-MW01-012825-00-T4	30	30	<2	N/A	7
Q1211-02	TAPIAL2-MW03-012825-00-T3	30	30	<2	N/A	8
Q1266-01	TRE-25-0004	30	30	<2	N/A	9
Q1266-02	TRE-25-0010	30	30	<2	N/A	10
Q1266-03	TRE-25-0012	30	30	<2	N/A	11
Q1271-04	3190	30	30	<2	N/A	12
Q1282-01	SW-WTS-02	30	30	<2	N/A	13

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 020525_7470 **WorkList ID :** 187500 **Department :** Digestion **Date :** 02-05-2025 13:39:35

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1201-01	TAPHHA-MW12-012725-00-T2	Water	Mercury	1:1 HNO3 to pH < 2	WEST04	N31	01/27/2025	7470A
Q1211-01	TAPHHA-MW01-012825-00-T4	Water	Mercury	1:1 HNO3 to pH < 2	WEST04	N31	01/28/2025	7470A
Q1211-02	TAPIAL2-MW03-012825-00-T3	Water	Mercury	1:1 HNO3 to pH < 2	WEST04	N31	01/28/2025	7470A
Q1266-01	TRE-25-0004	Water	Mercury	1:1 HNO3 to pH < 2	PSEG03	N41	01/31/2025	7470A
Q1266-02	TRE-25-0010	Water	Mercury	1:1 HNO3 to pH < 2	PSEG03	N41	01/31/2025	7470A
Q1266-03	TRE-25-0012	Water	Mercury	1:1 HNO3 to pH < 2	PSEG03	N41	01/31/2025	7470A
Q1271-04	3190	Water	Mercury	1:1 HNO3 to pH < 2	PSEG03	D21	01/31/2025	7470A
Q1282-01	SW-WTS-02	Water	Mercury	1:1 HNO3 to pH < 2	ENTA05	D11	01/31/2025	7470A

Date/Time 2/6/25 @ 8:35

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

Date/Time 2/6/25 @ 9:00

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

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 # LB134599

Review By	jaswal	Review On	2/7/2025 8:51:31 PM
Supervise By	Mohan	Supervise On	2/10/2025 9:48:26 AM

STD. NAME	STD REF.#
ICAL Standard	MP84365,MP84366,MP84367,MP84368,MP84369,MP84370
ICV Standard	MP84371
CCV Standard	MP84373
ICSA Standard	
CRI Standard	MP84375
LCS Standard	
Chk Standard	MP84372,MP84374,MP84376,MP84363

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	02/06/25 11:22		Mohan	OK
2	S0.2	S0.2	CAL2	02/06/25 11:25		Mohan	OK
3	S2.5	S2.5	CAL3	02/06/25 11:30		Mohan	OK
4	S5	S5	CAL4	02/06/25 11:34		Mohan	OK
5	S7.5	S7.5	CAL5	02/06/25 11:39		Mohan	OK
6	S10	S10	CAL6	02/06/25 11:47		Mohan	OK
7	ICV88	ICV88	ICV	02/06/25 11:52		Mohan	OK
8	ICB88	ICB88	ICB	02/06/25 11:55		Mohan	OK
9	CCV30	CCV30	CCV	02/06/25 11:57		Mohan	OK
10	CCB30	CCB30	CCB	02/06/25 11:59		Mohan	OK
11	CRA	CRA	CRDL	02/06/25 12:01		Mohan	OK
12	HighStd	HighStd	HIGH STD	02/06/25 12:04		Mohan	OK
13	ChkStd	ChkStd	SAM	02/06/25 12:08		Mohan	OK
14	Q1201-01	TAPHHA-MW12-0127	SAM	02/06/25 12:10		Mohan	OK
15	Q1211-01	TAPHHA-MW01-0128	SAM	02/06/25 12:13		Mohan	OK
16	Q1211-02	TAPIAL2-MW03-0128	SAM	02/06/25 12:15		Mohan	OK
17	Q1266-01	TRE-25-0004	SAM	02/06/25 12:17		Mohan	OK
18	Q1266-02	TRE-25-0010	SAM	02/06/25 12:20		Mohan	OK

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB134599

Review By	jaswal	Review On	2/7/2025 8:51:31 PM
Supervise By	Mohan	Supervise On	2/10/2025 9:48:26 AM

STD. NAME	STD REF.#
ICAL Standard	MP84365,MP84366,MP84367,MP84368,MP84369,MP84370
ICV Standard	MP84371
CCV Standard	MP84373
ICSA Standard	
CRI Standard	MP84375
LCS Standard	
Chk Standard	MP84372,MP84374,MP84376,MP84363

19	Q1266-03	TRE-25-0012	SAM	02/06/25 12:22		Mohan	OK
20	Q1271-04	3190	SAM	02/06/25 12:26		Mohan	OK
21	CCV31	CCV31	CCV	02/06/25 12:28		Mohan	OK
22	CCB31	CCB31	CCB	02/06/25 12:30		Mohan	OK
23	Q1282-01	SW-WTS-02	SAM	02/06/25 12:32		Mohan	OK
24	Q1201-01DUP	TAPHHA-MW12-0127	DUP	02/06/25 12:35		Mohan	OK
25	Q1201-01MS	TAPHHA-MW12-0127	MS	02/06/25 12:37		Mohan	OK
26	Q1201-01MSD	TAPHHA-MW12-0127	MSD	02/06/25 12:39		Mohan	OK
27	Q1201-01L	TAPHHA-MW12-0127	SD	02/06/25 12:41		Mohan	OK
28	Q1201-01A	TAPHHA-MW12-0127	PS	02/06/25 12:44		Mohan	OK
29	PB166596BL	PB166596BL	MB	02/06/25 12:49		Mohan	OK
30	PB166596BS	PB166596BS	LCS	02/06/25 12:56		Mohan	OK
31	CCV32	CCV32	CCV	02/06/25 12:59		Mohan	OK
32	CCB32	CCB32	CCB	02/06/25 13:01		Mohan	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134636

Review By	kareem	Review On	2/10/2025 3:40:29 PM
Supervise By	Mohan	Supervise On	2/10/2025 5:28:30 PM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84223,MP84224,MP84225,MP84226,MP84228
ICV Standard	MP84362
CCV Standard	MP84232
ICSA Standard	MP84230,MP84231
CRI Standard	MP84228
LCS Standard	
Chk Standard	MP84218,MP84219

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	02/07/25 11:40		Kareem	OK
2	S1	S1	CAL2	02/07/25 11:44		Kareem	OK
3	S2	S2	CAL3	02/07/25 11:48		Kareem	OK
4	S3	S3	CAL4	02/07/25 11:52		Kareem	OK
5	S4	S4	CAL5	02/07/25 11:57		Kareem	OK
6	S5	S5	CAL6	02/07/25 12:01		Kareem	OK
7	ICV01	ICV01	ICV	02/07/25 12:11	ICV fail for Tl (200.7)	Kareem	OK
8	LLICV01	LLICV01	LLICV	02/07/25 12:27		Kareem	OK
9	ICB01	ICB01	ICB	02/07/25 12:31		Kareem	OK
10	CRI01	CRI01	CRDL	02/07/25 12:35		Kareem	OK
11	ICSA01	ICSA01	ICSA	02/07/25 12:40		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	02/07/25 12:44		Kareem	OK
13	ICSADL	ICSADL	ICSA	02/07/25 12:48		Kareem	OK
14	ICSABDL	ICSABDL	ICSAB	02/07/25 12:52		Kareem	OK
15	CCV01	CCV01	CCV	02/07/25 12:57		Kareem	OK
16	CCB01	CCB01	CCB	02/07/25 13:01		Kareem	OK
17	Q1277-02	RT 3249	SAM	02/07/25 13:05		Kareem	OK
18	Q1284-01	SU-03-2-4-2025	SAM	02/07/25 13:09		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134636

Review By	kareem	Review On	2/10/2025 3:40:29 PM
Supervise By	Mohan	Supervise On	2/10/2025 5:28:30 PM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84223,MP84224,MP84225,MP84226,MP84228
ICV Standard	MP84362
CCV Standard	MP84232
ICSA Standard	MP84230,MP84231
CRI Standard	MP84228
LCS Standard	
Chk Standard	MP84218,MP84219

19	PB166530BS	PB166530BS	LCS	02/07/25 13:18	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
20	PB166423TB	PB166423TB	MB	02/07/25 13:22	Sodium is high	Kareem	OK
21	Q1238-01	ABATEMENT-WASTE	SAM	02/07/25 13:26		Kareem	OK
22	Q1238-02	PERSONAL-PROTEC	SAM	02/07/25 13:31		Kareem	OK
23	Q1238-03	PLASTIC-FROM-ARE	SAM	02/07/25 13:35		Kareem	OK
24	Q1241-04	JPP-3.5-013025	SAM	02/07/25 13:40		Kareem	OK
25	Q1241-08	JPP-5.3-013025	SAM	02/07/25 13:44		Kareem	OK
26	CCV02	CCV02	CCV	02/07/25 13:49		Kareem	OK
27	CCB02	CCB02	CCB	02/07/25 13:53		Kareem	OK
28	Q1241-12	JPP-5.2-013025	SAM	02/07/25 13:58		Kareem	OK
29	Q1241-16	JPP-5.4-013025	SAM	02/07/25 14:02		Kareem	OK
30	Q1241-20	JPP-51.4-013025	SAM	02/07/25 14:07		Kareem	OK
31	Q1242-04	JPP-6.2-013025	SAM	02/07/25 14:11		Kareem	OK
32	PB166488BL	PB166488BL	MB	02/07/25 14:15		Kareem	OK
33	PB166488BS	PB166488BS	LCS	02/07/25 14:20	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
34	Q1282-01	SW-WTS-02	SAM	02/07/25 14:24		Kareem	OK
35	Q1282-01DUP	SW-WTS-02DUP	DUP	02/07/25 14:28		Kareem	OK
36	Q1282-01L	SW-WTS-02L	SD	02/07/25 14:33		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134636

Review By	kareem	Review On	2/10/2025 3:40:29 PM
Supervise By	Mohan	Supervise On	2/10/2025 5:28:30 PM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84223,MP84224,MP84225,MP84226,MP84228
ICV Standard	MP84362
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ICSA Standard	MP84230,MP84231
CRI Standard	MP84228
LCS Standard	
Chk Standard	MP84218,MP84219

37	Q1282-01MS	SW-WTS-02MS	MS	02/07/25 14:37	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
38	CCV03	CCV03	CCV	02/07/25 14:41		Kareem	OK
39	CCB03	CCB03	CCB	02/07/25 14:45		Kareem	OK
40	Q1282-01MSD	SW-WTS-02MSD	MSD	02/07/25 14:50	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
41	Q1282-01A	SW-WTS-02A	PS	02/07/25 14:54	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
42	PB166595BL	PB166595BL	MB	02/07/25 14:58		Kareem	OK
43	PB166595BS	PB166595BS	LCS	02/07/25 15:03	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
44	Q1304-01	RB21140	SAM	02/07/25 15:07		Kareem	OK
45	Q1300-02	COMP	SAM	02/07/25 15:11		Kareem	OK
46	Q1316-01	001-WILLETS-PT-BL	SAM	02/07/25 15:15		Kareem	OK
47	Q1316-02	002-35TH-AVE(FEB)	SAM	02/07/25 15:19		Kareem	OK
48	Q1316-02DUP	002-35TH-AVE(FEB)D	DUP	02/07/25 15:24		Kareem	OK
49	Q1316-02L	002-35TH-AVE(FEB)L	SD	02/07/25 15:28		Kareem	OK
50	CCV04	CCV04	CCV	02/07/25 15:32		Kareem	OK
51	CCB04	CCB04	CCB	02/07/25 15:37		Kareem	OK
52	Q1316-02MS	002-35TH-AVE(FEB)M	MS	02/07/25 15:41	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK

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ICAL Standard	MP84204,MP84223,MP84224,MP84225,MP84226,MP84228
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ICSA Standard	MP84230,MP84231
CRI Standard	MP84228
LCS Standard	
Chk Standard	MP84218,MP84219

53	Q1316-02MSD	002-35TH-AVE(FEB)M	MSD	02/07/25 15:45	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
54	Q1316-02A	002-35TH-AVE(FEB)A	PS	02/07/25 15:49	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
55	PB166597BL	PB166597BL	MB	02/07/25 15:53		Kareem	OK
56	PB166597BS	PB166597BS	LCS	02/07/25 15:58		Kareem	OK
57	Q1277-03	RT 3249	SAM	02/07/25 16:02	Not in Login Page	Kareem	Not Ok
58	Q1279-01	COMP-1	SAM	02/07/25 16:06		Kareem	OK
59	Q1279-02	COMP-2	SAM	02/07/25 16:11		Kareem	OK
60	Q1285-02	72-11977	SAM	02/07/25 16:15		Kareem	OK
61	Q1287-02	BAY-DRUMS-A	SAM	02/07/25 16:19		Kareem	OK
62	CCV05	CCV05	CCV	02/07/25 16:24		Kareem	OK
63	CCB05	CCB05	CCB	02/07/25 16:28		Kareem	OK
64	Q1287-04	BAY-DRUMS-B	SAM	02/07/25 16:32		Kareem	OK
65	Q1287-06	BAY-DRUMS-C	SAM	02/07/25 16:37		Kareem	OK
66	Q1287-08	BAY-DRUMS-D	SAM	02/07/25 16:41		Kareem	OK
67	Q1287-10	BAY-DRUMS-E	SAM	02/07/25 16:46		Kareem	OK
68	Q1289-03	FL-DRUMS-A	SAM	02/07/25 16:50		Kareem	OK
69	Q1289-05	FL-DRUMS-B	SAM	02/07/25 16:54		Kareem	OK
70	Q1289-05DUP	FL-DRUMS-BDUP	DUP	02/07/25 16:59		Kareem	OK

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ICV Standard	MP84362
CCV Standard	MP84232
ICSA Standard	MP84230,MP84231
CRI Standard	MP84228
LCS Standard	
Chk Standard	MP84218,MP84219

71	Q1289-05L	FL-DRUMS-BL	SD	02/07/25 17:03		Kareem	OK
72	Q1289-05MS	FL-DRUMS-BMS	MS	02/07/25 17:07	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
73	Q1289-05MSD	FL-DRUMS-BMSD	MSD	02/07/25 17:12	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
74	CCV06	CCV06	CCV	02/07/25 17:16		Kareem	OK
75	CCB06	CCB06	CCB	02/07/25 17:20		Kareem	OK
76	Q1289-05A	FL-DRUMS-BA	PS	02/07/25 17:24	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
77	PB166528TB	PB166528TB	MB	02/07/25 17:29	Sodium is high	Kareem	OK
78	PB166579BL	PB166579BL	MB	02/07/25 17:33		Kareem	OK
79	PB166579BS	PB166579BS	LCS	02/07/25 17:37	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
80	Q1307-01	434	SAM	02/07/25 17:41		Kareem	OK
81	PB166530BL	PB166530BL	MB	02/07/25 17:46		Kareem	OK
82	LR1	LR1	HIGH STD	02/07/25 17:51		Kareem	OK
83	LR2	LR2	HIGH STD	02/07/25 17:56		Kareem	OK
84	CCV07	CCV07	CCV	02/07/25 18:00		Kareem	OK
85	CCB07	CCB07	CCB	02/07/25 18:10		Kareem	OK
86	Q1278-01	Q1 WASTEWATER	SAM	02/07/25 18:14		Kareem	OK

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Supervise By	Mohan	Supervise On	2/10/2025 5:28:30 PM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84223,MP84224,MP84225,MP84226,MP84228
ICV Standard	MP84362
CCV Standard	MP84232
ICSA Standard	MP84230,MP84231
CRI Standard	MP84228
LCS Standard	
Chk Standard	MP84218,MP84219

87	CCV08	CCV08	CCV	02/07/25 18:23		Kareem	OK
88	CCB08	CCB08	CCB	02/07/25 18:27		Kareem	OK

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Prep Standard - Chemical Standard Summary

Order ID : Q1282

Test : Mercury,Metals Group4

Prepbatch ID : PB166595,PB166596,

Sequence ID/Qc Batch ID: LB134599,LB134636,

Standard ID :

MP83691,MP83692,MP83693,MP83694,MP84204,MP84218,MP84219,MP84223,MP84224,MP84225,MP84226,MP84227,MP84228,MP84230,MP84231,MP84232,MP84297,MP84362,MP84363,MP84364,MP84365,MP84366,MP84367,MP84368,MP84369,MP84370,MP84371,MP84372,MP84373,MP84374,MP84375,MP84376,

Chemical ID :

M4371,M4465,M4884,M4916,M5062,M5130,M5192,M5218,M5223,M5288,M5298,M5393,M5429,M5467,M5472,M5496,M5497,M5532,M5658,M5697,M5747,M5748,M5789,M5792,M5798,M5799,M5800,M5801,M5802,M5814,M5815,M5816,M5817,M5819,M5820,M5875,M5882,M5884,M5959,M5962,M5970,M5978,M5985,M6002,M6011,M6021,M6023,M6028,M6030,M6032,M6041,M6077,M6121,M6126,M6127,M6128,M6144,M6147,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3965	2:1 H2SO4 : HNO3	MP83691	12/18/2024	06/03/2025	Mohan Bera	None	None	Sarabjit Jaswal 12/18/2024

FROM 1600.00000ml of M6041 + 800.00000ml of M6126 = Final Quantity: 3200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP83692	12/18/2024	06/18/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 12/18/2024

FROM 100.00000gram of M4916 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
66	POTASSIUM PERSULFATE SOLUTION 5 %	MP83693	12/18/2024	06/18/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 12/18/2024

FROM 100.00000ml of M4465 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
67	SODIUM CHLORIDE - HYDROXYL- CHLORIDE SOLUTION	MP83694	12/18/2024	06/18/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 12/18/2024

FROM 2000.00000ml of W3112 + 240.00000gram of M4371 + 240.00000gram of M5884 = 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
902	ICP AES CAL BLK (SO/ICB/CCB)	MP84204	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 125.00000ml of M6121 + 2350.00000ml of W3112 + 25.00000ml of M6126 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP84218	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 1.00000ml of M5959 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6126 = 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
903	ICP AES RINSE SOLN	MP84219	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 200.00000ml of M6126 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP84223	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/28/2025

FROM 5.00000ml of M5393 + 5.00000ml of M5467 + 5.00000ml of M5472 + 5.00000ml of M5802 + 5.00000ml of M5816 + 5.00000ml of M5820 + 5.00000ml of M5875 + 5.00000ml of M5970 + 5.00000ml of M6077 + 455.00000ml of MP84204 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP84224	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/28/2025

FROM 50.00000ml of MP84204 + 50.00000ml of MP84223 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP84225	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/28/2025

FROM 25.00000ml of MP84223 + 75.00000ml of MP84204 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP84226	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/28/2025

FROM 16.00000ml of MP84223 + 184.00000ml of MP84204 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP84227	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/28/2025

FROM 0.00200ml of M5816 + 0.00400ml of M5978 + 0.03000ml of M5798 + 0.03000ml of M6028 + 0.05000ml of M5298 + 0.05000ml of M5496 + 0.05000ml of M5658 + 0.05000ml of M6030 + 0.06000ml of M5747 + 0.10000ml of M5472 + 0.10000ml of M5697 + 0.10000ml of M5801 + 0.10000ml of M5962 + 0.10000ml of M5970 + 0.10000ml of M6128 + 0.15000ml of M5800 + 0.20000ml of M5748 + 0.20000ml of M5799 + 0.20000ml of M5819 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.25000ml of M5467 + 0.25000ml of M5802 + 0.50000ml of M5814 + 0.50000ml of M6032 + 1.00000ml of M5192 + 1.00000ml of M5288 + 1.00000ml of M5497 + 1.00000ml of M6127 + 1.00000ml of M6144 + 2.00000ml of M4884 + 77.68000ml of MP84204 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2951	ICP AES S1/CRI WORK STD	MP84228	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/28/2025

FROM 2.00000ml of MP84227 + 98.00000ml of MP84204 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP84230	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/28/2025

FROM 25.00000ml of M5130 + 225.00000ml of MP84204 = 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	MP84231	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/28/2025

FROM 0.01000ml of M5815 + 0.01000ml of M5817 + 0.10000ml of M5472 + 0.10000ml of M5970 + 0.10000ml of M6077 + 10.00000ml of M5130 + 10.00000ml of M5223 + 79.50000ml of MP84204 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP84232	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/28/2025

FROM 50.00000ml of MP84204 + 50.00000ml of MP84223 = 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
170	1:1HCL	MP84297	01/31/2025	02/28/2025	Eman Mughal	None	None	Sarabjit Jaswal 01/31/2025

FROM 1250.00000ml of M6121 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
912	ICP AES ICV SOLN	MP84362	01/25/2025	02/08/2025	Kareem Khairalla	None	None	Mohan Bera 02/07/2025

FROM 0.02500ml of M5429 + 0.02500ml of M5815 + 0.02500ml of M5817 + 0.10000ml of M5467 + 0.25000ml of M5218 + 0.25000ml of M5472 + 10.00000ml of M6147 + 89.77500ml of MP84204 = 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
68	STANNOUS CHLORIDE SOLUTION	MP84363	02/06/2025	02/07/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 02/10/2025

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M5792 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP84364	02/06/2025	02/07/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 02/10/2025

FROM 1.00000ml of M6126 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP84365	02/06/2025	02/07/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/10/2025

FROM 2.50000ml of M6126 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1341	Hg 0.2 PPB STD	MP84366	02/06/2025	02/07/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/10/2025

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP84364 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP84367	02/06/2025	02/07/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/10/2025

FROM 2.50000ml of M6126 + 245.00000ml of W3112 + 2.50000ml of MP84364 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP84368	02/06/2025	02/07/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/10/2025

FROM 2.50000ml of M6126 + 242.50000ml of W3112 + 5.00000ml of MP84364 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP84369	02/06/2025	02/07/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/10/2025

FROM 2.50000ml of M6126 + 240.00000ml of W3112 + 7.50000ml of MP84364 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP84370	02/06/2025	02/07/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/10/2025

FROM 2.50000ml of M6126 + 237.50000ml of W3112 + 10.00000ml of MP84364 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP84371	02/06/2025	02/07/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/10/2025

FROM 2.50000ml of M5532 + 2.50000ml of M6126 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP84372	02/06/2025	02/07/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/10/2025

FROM 2.50000ml of M5789 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP84373	02/06/2025	02/07/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/10/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6126 + 10.00000ml of MP84364 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP84374	02/06/2025	02/07/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/10/2025

FROM 495.00000ml of W3112 + 5.00000ml of M5789 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP84375	02/06/2025	02/07/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/10/2025

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP84364 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP84376	02/06/2025	02/07/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/10/2025

FROM 2.50000ml of M6126 + 240.50000ml of W3112 + 7.00000ml of MP84364 = Final Quantity: 250.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-2196-01 / Hydroxylamine Hydrochloride, Crystal (cs/4x500g)	0000215387	06/25/2025	07/01/2019 / RICHARD	06/07/2019 / RICHARD	M4371

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3238-05 / Potassium Persulfate (2.5kg)	0000234156	08/06/2025	07/23/2019 /	07/25/2019 / manojkumar	M4465

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57014 / Si, 1000 PPM, 125 ml	030921	03/09/2025	08/06/2021 / jaswal	08/05/2021 / jaswal	M4884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3227-05 / Potassium Permanganate (2.5kg)	210800	03/31/2026	11/30/2022 / mohan	07/28/2021 / mohan	M4916

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCl 125mL 10ug/mL	S2-HG709270	09/22/2026	05/28/2022 / mohan	01/27/2022 / mohan	M5062

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	01/31/2025	05/20/2024 /	04/20/2021 / bin	M5130

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57042 / Mo, 1000 PPM, 125 ml	051722	05/17/2025	07/01/2022 / bin	06/17/2022 / jaswal	M5192

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	S2-MEB711674	11/02/2026	07/01/2022 / bin	09/10/2021 / bin	M5218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSAB (ICP) STOCK SOLN	ICSB-0710	01/31/2025	05/20/2024 /	04/20/2021 / bin	M5223

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.	58126 / Fe, 10000 PPM, 500 ml	020422	02/04/2025	05/02/2023 / jaswal	06/15/2022 / jaswal	M5298

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	10/12/2022 / bin	09/19/2022 / bin	M5393

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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.	57103 / Li, 10000 PPM, 125 ml	070622	07/06/2025	01/30/2023 / bin	01/26/2023 / bin	M5429

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57058 / Cerium, 1000PPM, 100ML	020623	02/06/2026	03/06/2023 / bin	03/01/2023 / bin	M5467

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	082922	08/29/2025	01/14/2025 / Jaswal	03/16/2023 / jaswal	M5472

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5496

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	03/18/2023 / bin	03/17/2023 / bin	M5497

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV5-0415	02/28/2025	01/02/2025 /	03/30/2023 / mohan	M5532

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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.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

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 #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	23G1262003	07/30/2025	02/08/2024 / Al-Terek	06/26/2023 / Al-Terek	M5789

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22D1462006	08/05/2025	02/05/2024 / Al-Terek	02/24/2022 / Al-Terek	M5792

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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.	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.	57051 / Sb, 1000 PPM, 125 ml	120523	12/05/2026	08/07/2024 / jaswal	01/03/2024 / jaswal	M5802

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.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

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.	58030 / Zinc, Zn, 500 ml, 1000 PPM	111623	11/16/2026	03/20/2024 / jaswal	02/09/2024 / jaswal	M5819

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	232820	08/31/2028	04/30/2024 / mohan	04/25/2024 / mohan	M5882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	04/30/2024 / mohan	04/25/2024 / mohan	M5884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	07/01/2024 / Jaswal	06/14/2024 / Jaswal	M5959

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	07/01/2024 / Jaswal	07/01/2024 / Jaswal	M5970

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5978

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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	07/14/2025	01/14/2025 / Eman	05/14/2024 / Jaswal	M6002

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-2 / Laboratory Fortified Stock Solution 2, 125 ml	U2-MEB731108	07/14/2025	01/14/2025 / Eman	05/14/2024 / Jaswal	M6011

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	010924	01/09/2027	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6032

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	08/16/2024 / mohan	08/16/2024 / mohan	M6041

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	09/06/2029	01/23/2025 / kareem	09/19/2024 / kareem	M6077

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	06/03/2025	12/03/2024 / Janvi	11/12/2024 / Janvi	M6126

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	112124	11/21/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6127

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	072424	07/24/2027	01/23/2025 / kareem	01/13/2025 / Jaswal	M6144

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	02/08/2025	02/06/2025 / kareem	02/20/2020 / kareem	M6147

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

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Fair Lawn, NJ 07410
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201.796.1329 fax

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Catalog Number	T142	Quality Test / Release Date	08/17/2023
Lot Number	232820		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Aug/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	100.65
CALCIUM	%	<= 0.005	0.0017
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	0.0011
LEAD (Pb)	%	<= 0.01	0.0006
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	0.0001
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)

Harout Sahagian - Quality Control Supervisor - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6032

R: 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**010924**	**Solvent:**	24002546	Nitric Acid	
Description:	**Barium (Ba)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	010927				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

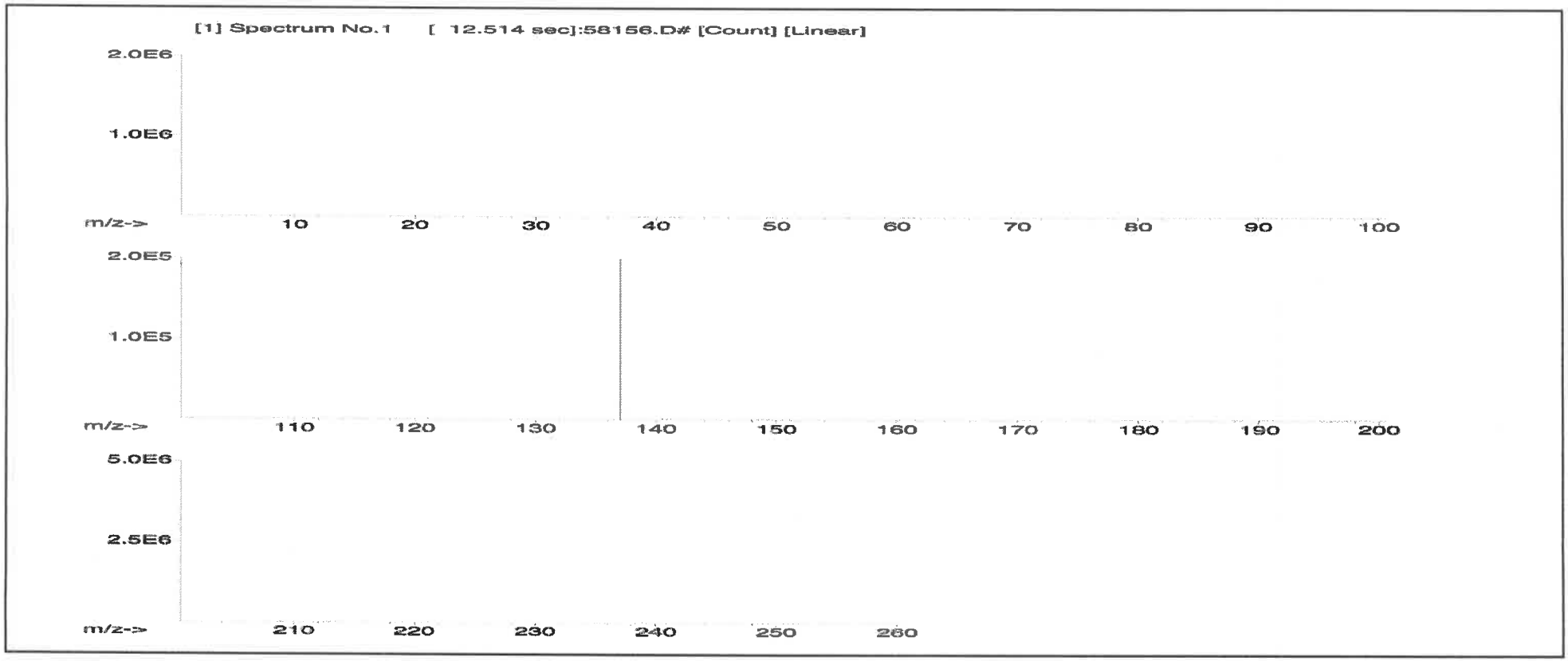
Giovanni Esposito

Formulated By:	Giovanni Esposito	010924

Pedro Rentas

Reviewed By:	Pedro L. Rentas	010924

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	**1000.1**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
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Certified Reference Material CRM

M6028

R 8/5/24

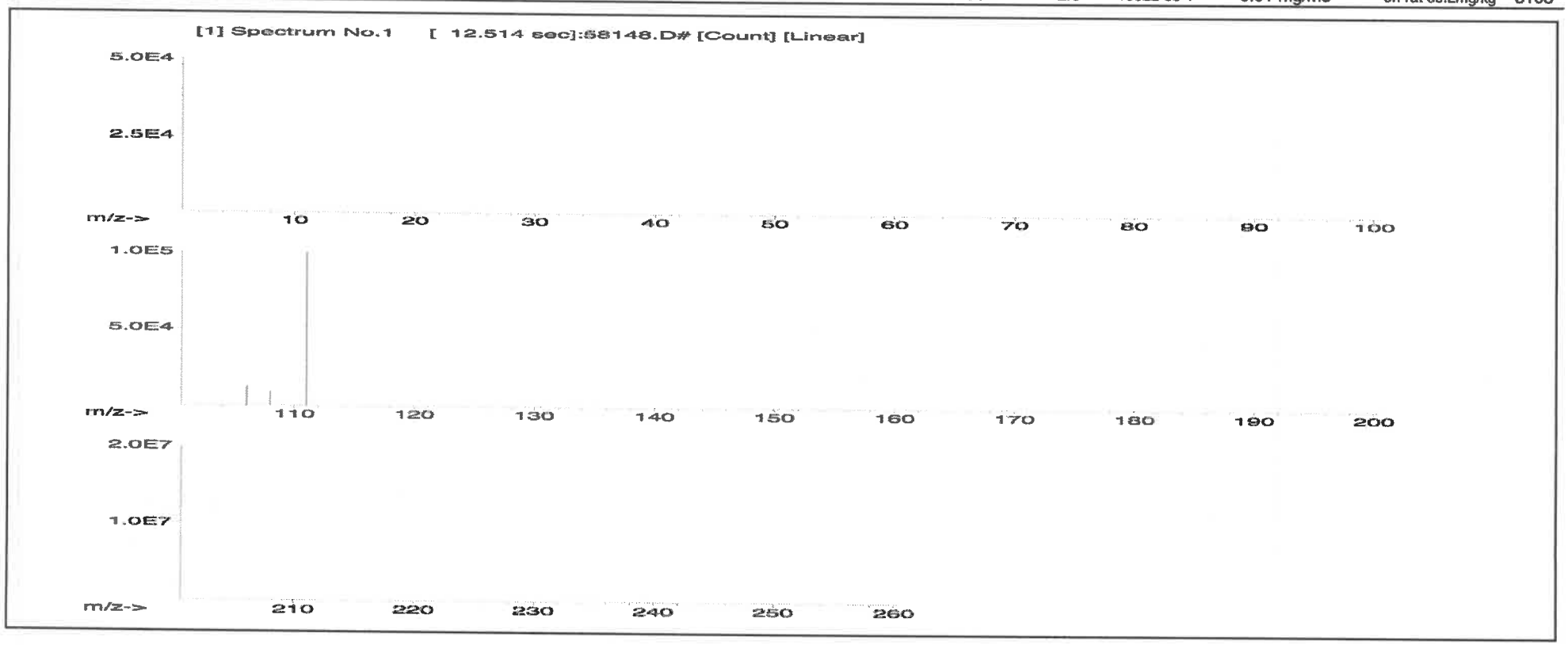
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
Lot Number:	**070124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Cadmium (Cd)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Aleah O'Brady		
Formulated By:	Aleah O'Brady	070124
Pedro Rentas		
Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 250 µg/mL ea: Silver, Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**2 000 ± 7 µg/mL**	**Barium, Ba**	**2 000 ± 9 µg/mL**
Beryllium, Be	**50.00 ± 0.26 µg/mL**	**Calcium, Ca**	**5 000 ± 22 µg/mL**
Chromium, Cr	**200.0 ± 1.0 µg/mL**	**Cobalt, Co**	**500.0 ± 2.4 µg/mL**
Copper, Cu	**250.0 ± 1.0 µg/mL**	**Iron, Fe**	**1 000 ± 4 µg/mL**
Magnesium, Mg	**5 000 ± 20 µg/mL**	**Manganese, Mn**	**500.0 ± 2.0 µg/mL**
Nickel, Ni	**500.0 ± 2.2 µg/mL**	**Potassium, K**	**5 000 ± 19 µg/mL**
Silver, Ag	**250.0 ± 1.1 µg/mL**	**Sodium, Na**	**5 000 ± 18 µg/mL**
Vanadium, V	**499.7 ± 2.2 µg/mL**	**Zinc, Zn**	**500.0 ± 2.2 µg/mL**

Density: 1.118 g/mL (measured at 20 ± 4 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

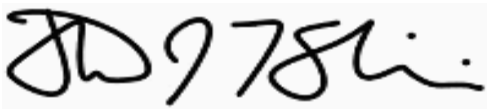
- Sealed TCT Bag Open Date: _____

- 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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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB714159
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**1 000 ± 8 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.1 µg/mL**
Lead, Pb	**1 000 ± 5 µg/mL**	**Selenium, Se**	**1 000 ± 8 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.043 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

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

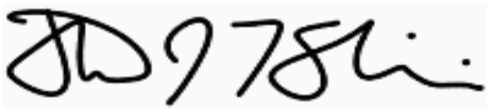
- Sealed TCT Bag Open Date: _____

- 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

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 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	T2-MEB723367
Matrix:	5% (v/v) HNO3

Value / Analyte(s):	1 000 µg/mL ea: Potassium,	
	600 µg/mL ea: Phosphorus,	
	300 µg/mL ea: Sodium,	Iron,
	200 µg/mL ea: Magnesium, Cerium, Thallium,	Aluminum, Selenium,
	100 µg/mL ea: Lead,	Calcium,
	80 µg/mL ea: Arsenic,	
	70 µg/mL ea: Mercury,	
	50 µg/mL ea: Nickel,	
	40 µg/mL ea: Chromium,	
	30 µg/mL ea: Copper, Vanadium,	Boron,
	20 µg/mL ea: Zinc, Barium, Cadmium, Manganese,	Strontium, Beryllium, Cobalt, Lithium,
	7.5 µg/mL ea: Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	80.0 ± 0.7 µg/mL
Barium, Ba	20.00 ± 0.09 µg/mL	Beryllium, Be	20.00 ± 0.13 µg/mL
Boron, B	30.00 ± 0.18 µg/mL	Cadmium, Cd	20.00 ± 0.09 µg/mL
Calcium, Ca	100.0 ± 0.4 µg/mL	Cerium, Ce	200.0 ± 0.8 µg/mL
Chromium, Cr	40.00 ± 0.30 µg/mL	Cobalt, Co	20.00 ± 0.10 µg/mL
Copper, Cu	30.00 ± 0.13 µg/mL	Iron, Fe	300.0 ± 1.3 µg/mL
Lead, Pb	100.0 ± 0.4 µg/mL	Lithium, Li	20.00 ± 0.08 µg/mL
Magnesium, Mg	200.0 ± 0.8 µg/mL	Manganese, Mn	20.00 ± 0.08 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.00 ± 0.22 µg/mL
Phosphorus, P	600.0 ± 2.7 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	200.0 ± 1.3 µg/mL	Silver, Ag	7.50 ± 0.03 µg/mL
Sodium, Na	300.0 ± 1.4 µg/mL	Strontium, Sr	20.01 ± 0.08 µg/mL
Thallium, Tl	200.0 ± 1.4 µg/mL	Vanadium, V	30.00 ± 0.13 µg/mL
Zinc, Zn	20.00 ± 0.09 µg/mL		

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Ce	ICP Assay	3110	090504
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 30, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES

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Certificate of Analysis

RD:05/14/2024

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-2
Lot Number:	U2-MEB731108
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	200 µg/mL ea: Silica, 80 µg/mL ea: Antimony, 70 µg/mL ea: Tin, 40 µg/mL ea: Molybdenum, 20 µg/mL ea: Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.6 µg/mL	Molybdenum, Mo	40.03 ± 0.18 µg/mL
Silica, SiO2	200.2 ± 1.3 µg/mL	Tin, Sn	70.0 ± 0.4 µg/mL
Titanium, Ti	20.01 ± 0.13 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO2	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 17, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

M4371

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(hydroxylammonium chloride)

Rec – 06.07.19

J.T.Baker® | avantor™

Material No.: 2196-01
Batch No.: 0000215387
Manufactured Date: 2018/06/27
Retest Date: 2025/06/25
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($NH_2OH \cdot HCl$) (by $KMnO_4$ titrn)	>= 96.0 %	99.1
Clarity of Alcohol Solution	Passes Test	PT
Residue after Ignition	<= 0.050 %	0.017
Titrable Free Acid (meq/g)	<= 0.25	0.19
Ammonium (NH_4)	Passes Test	PT
Sulfur Compounds (as SO_4)	<= 0.005 %	< 0.003
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	4
Trace Impurities - Iron (Fe)	<= 5 ppm	< 3
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	< 0.005

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2015, FSSC22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Gliwice, Poland 9001:2015, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2015, 17025:2005
Panoli, India 9001:2015

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

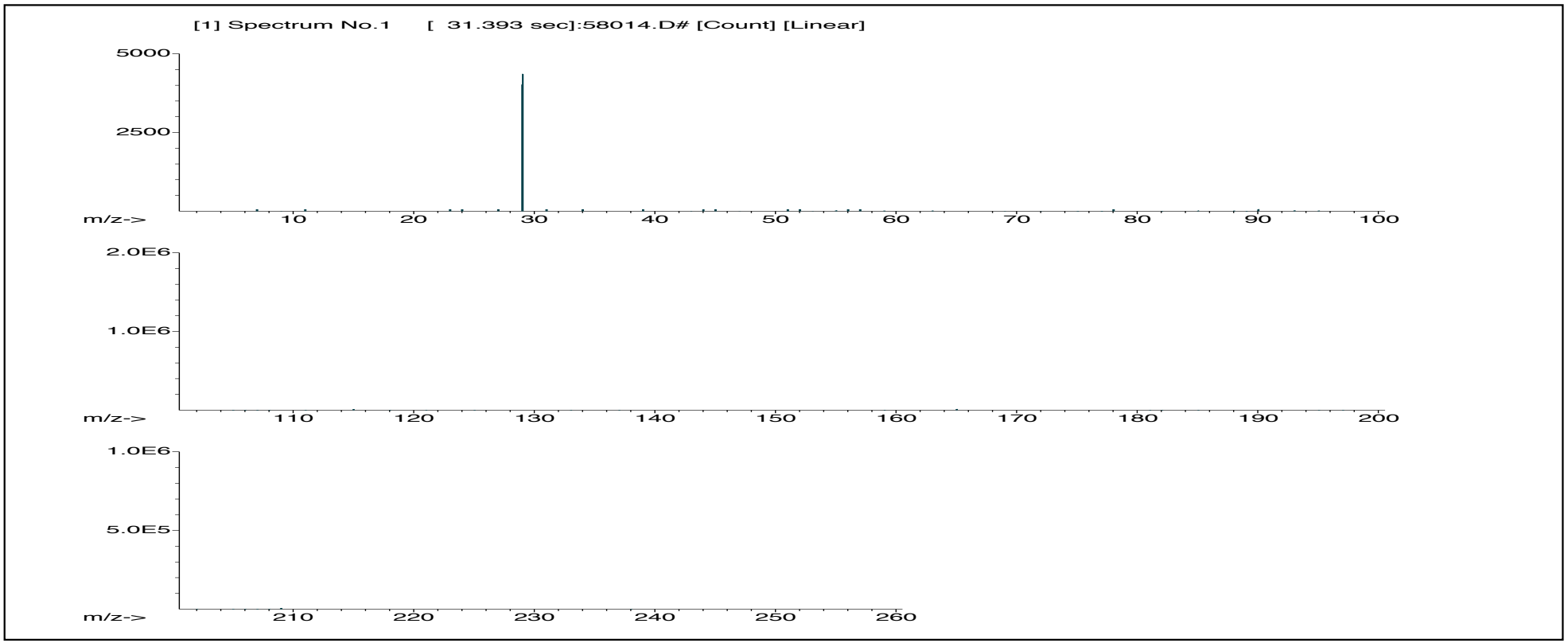
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57014**	19410105	Nitric Acid	
Lot Number:	**030921**			
Description:	**Silicon (Si)**			
		2.0%	60.0	Nitric Acid
Expiration Date:	030924		(mL)	
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry 030921
Reviewed By:	Pedro L. Rentas 030921

	Part	Lot	Dilution	Initial	Uncertainty	Nominal	Initial	**Final**	Expanded Uncertainty	SDS Information (Solvent Safety Info. On Attached pg.)			NIST
Compound	Number	Number	Factor	Vol. (mL)	Pipette (mL)	Conc. (µg/mL)	Conc. (µg/mL)	**Conc. (µg/mL)**	+/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	SRM
1. Ammonium hexafluorosilicate (Si)	58114	070120	0.1000	300.0	0.084	1000	10000.0	**1000.0**	**2.1**	16919-19-0	2.50 mg/m3	orl-rat 70 mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	T	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

ThermoFisher SCIENTIFIC

M4913-16

MB

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	P279	Quality Test / Release Date	01/12/2021
Lot Number	210306		
Description	POTASSIUM PERMANGANATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Jan/2026

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Dark purple to purple green crystals
ASSAY	%	>= 99	99.3
CHLORIDE & CHLORATE	%	<= 0.005	<0.005
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
INSOLUBLE MATTER	%	<= 0.2	<0.2
MERCURY (Hg)	ppm	<= 0.05	<0.004
SULFATE (SO4)	%	<= 0.02	<0.02

Julian Burton

Julian Burton - Quality Control Manager – Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

M5062
M5063
M3

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	S2-HG709270
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO_3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO_3 / LDPE container, stable in 10% HNO_3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO_3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO_3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxide (Soluble in HNO_3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 22, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

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.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5192 R: 06/17/22

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

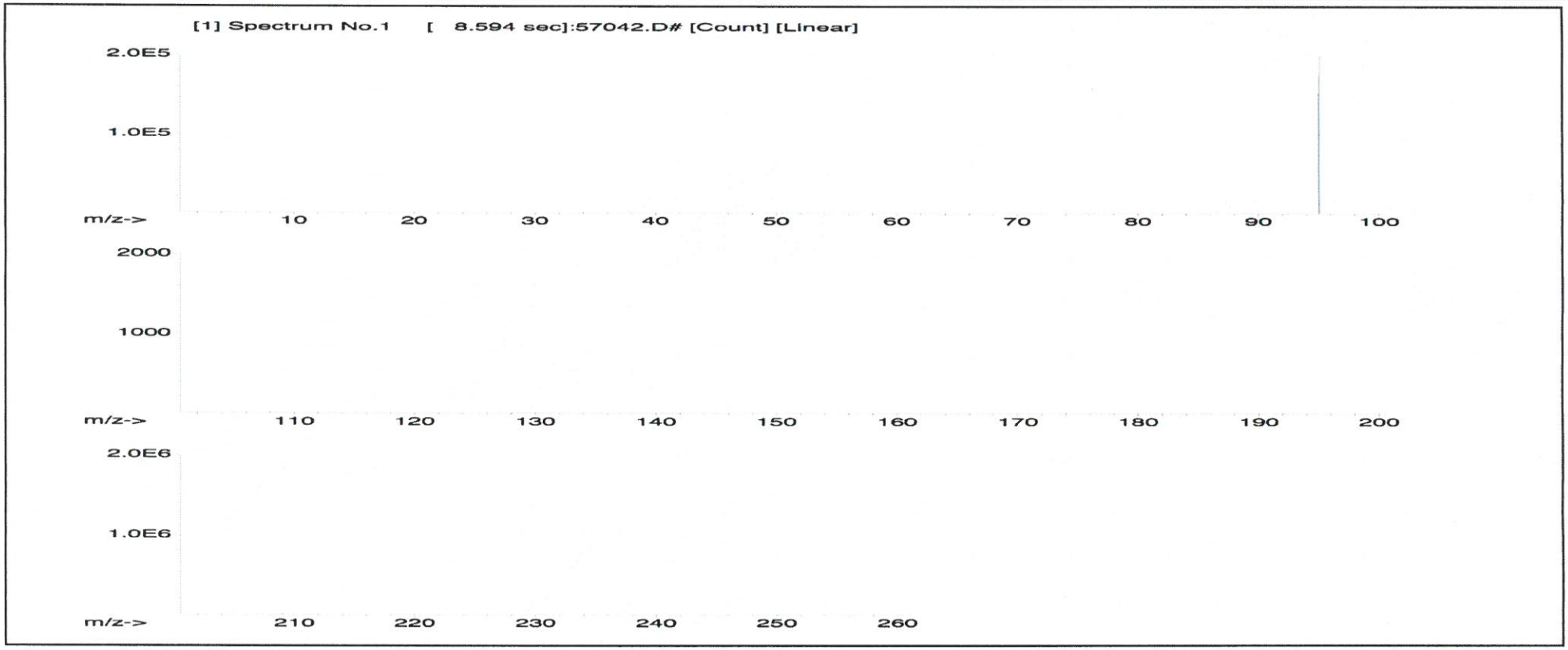
Part Number: 57042
Lot Number: 051722
Description: Molybdenum (Mo)
Expiration Date: 051725
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 3000.41

Lot #	Solvent:		
MKBQ8597V	Ammonium hydroxide		
0.5%	15.0 (mL)	Ammonium hydroxide	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By: Lawrence Barry 051722

Reviewed By: Pedro L. Rentas 051722

	Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1.	Ammonium molybdate (Mo)	58142	022222	0.1000	300.0	0.084	1000	10001.0	**1000.0**	**2.1**	13106-76-8	5 mg(Mo)/m3	orl-rat 333 mg/kg	3134



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	T	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-QC-4
Lot Number:	S2-MEB711674
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 7 µg/mL**	**Molybdenum, Mo**	**1 000 ± 5 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 5 µg/mL**
Titanium, Ti	**1 001 ± 6 µg/mL**		

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

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Certified Reference Material CRM

M5288 R: 07/21/2022

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

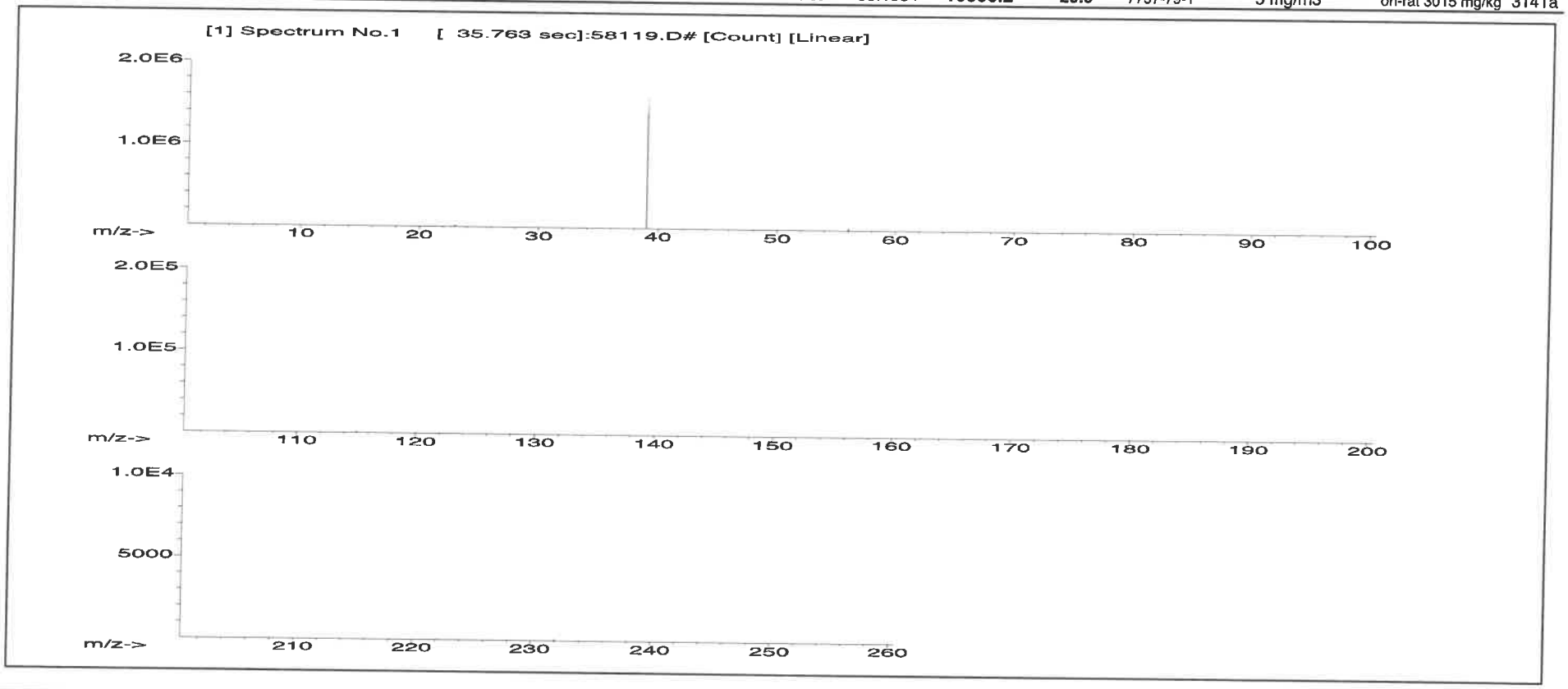
Part Number: 58119
Lot Number: 071122
Description: Potassium (K)

Expiration Date: 071125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	071122
Reviewed By:	Pedro L. Rentas	071122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD022021A1	10000	99.999	0.10	37.6	53.1925	53.1934	**10000.2**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 mg/kg	3141a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

SJ 6/15/22

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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 020422
Description: Iron (Fe)

M5298

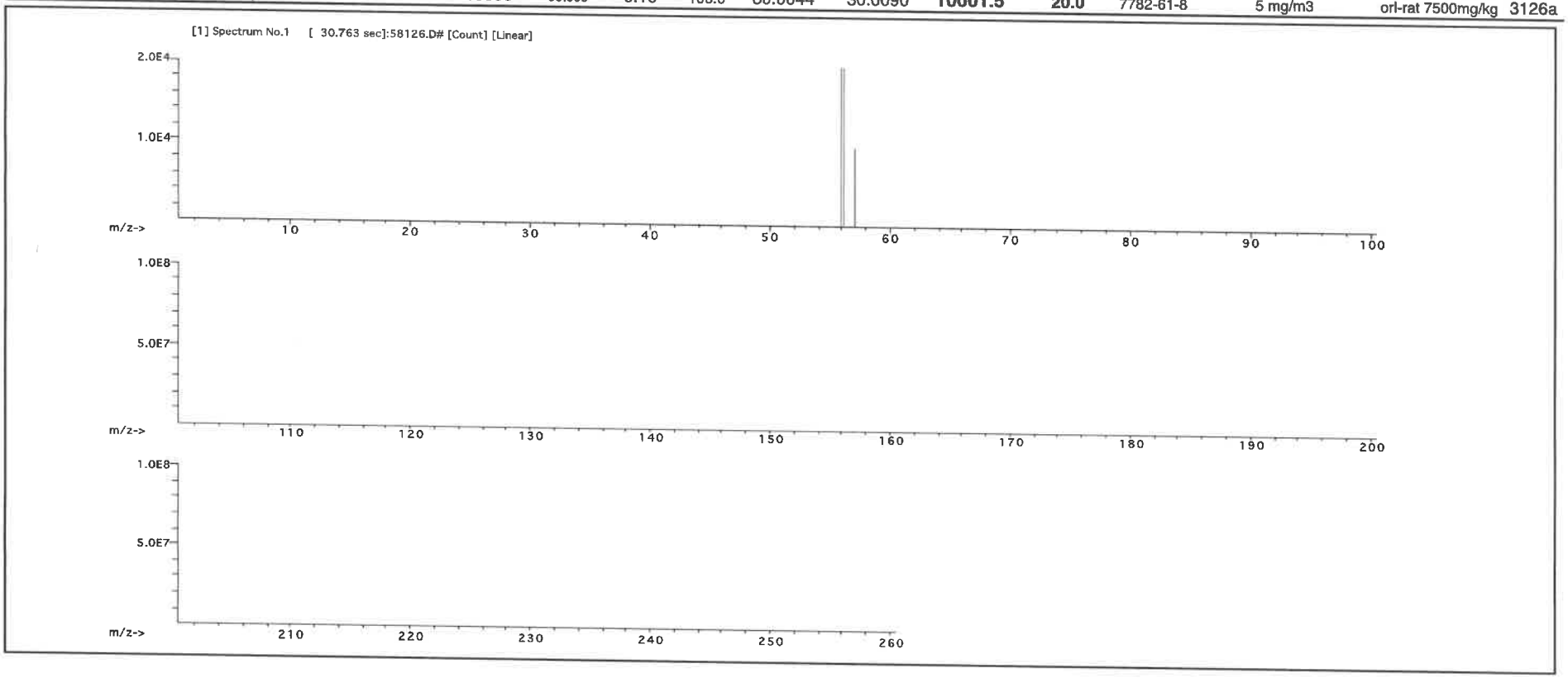
Expiration Date: 020425
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	20370011	Nitric Acid	
5.0%	150.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.058	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	020422
Reviewed By:	Pedro L. Rentas	020422

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron(III) nitrate nonahydrate (Fe)	IN346	221035107	10000	99.999	0.10	100.0	30.0044	30.0090	**10001.5**	**20.0**	7782-61-8	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	<0.5	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	<0.02
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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Certified Reference Material CRM

M5429 R1 01/26/23 BH

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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 | 0.058 Flask Uncertainty

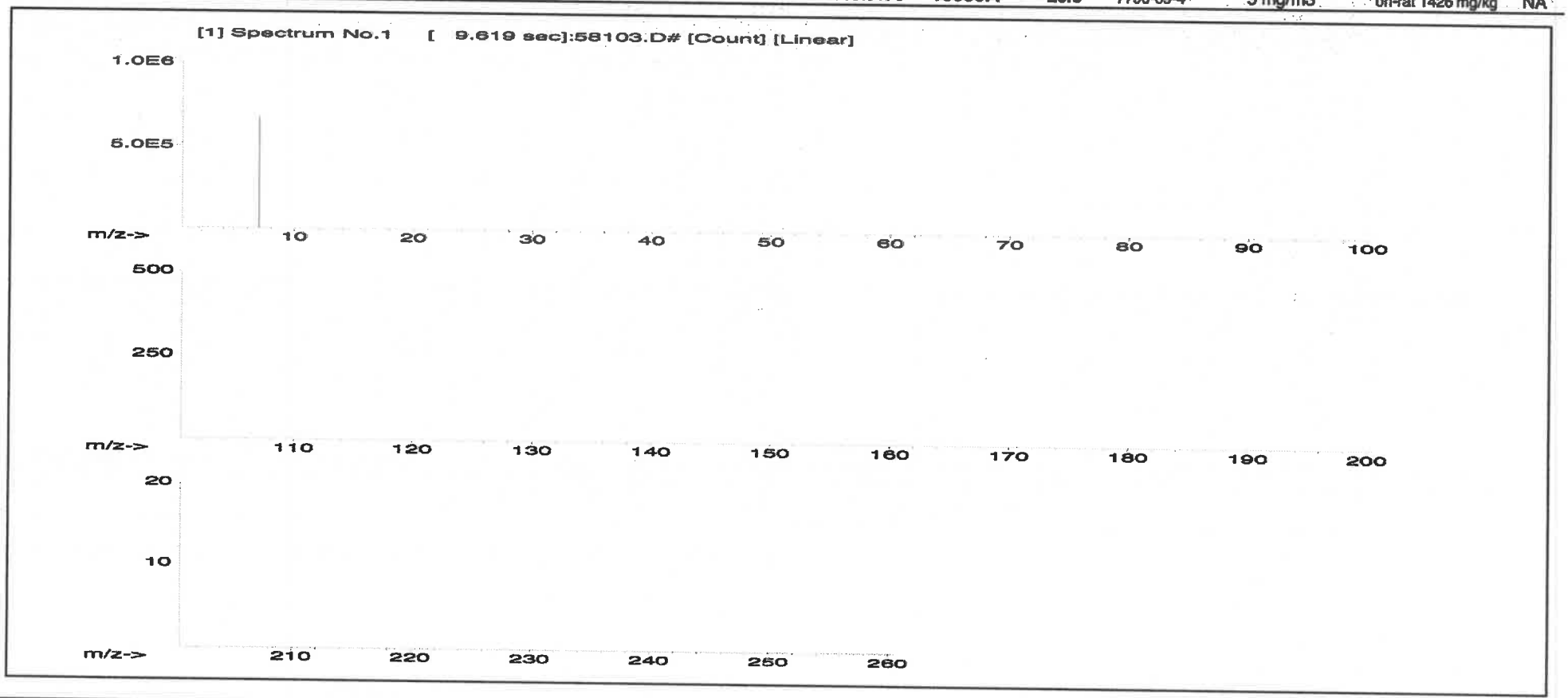
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By: Lawrence Barry 070622

Reviewed By: Pedro L. Rentas 070622

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	IN019	LIZ042018A1	10000	99.999	0.10	10.0	100.0134	100.0173	**10000.4**	**20.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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Certified Reference Material CRM

M5467 R: 03/01/23 (LA)

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CERTIFIED WEIGHT REPORT:

Part Number: 57058
Lot Number: 020623
Description: Cerium (Ce)

Expiration Date: 020626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

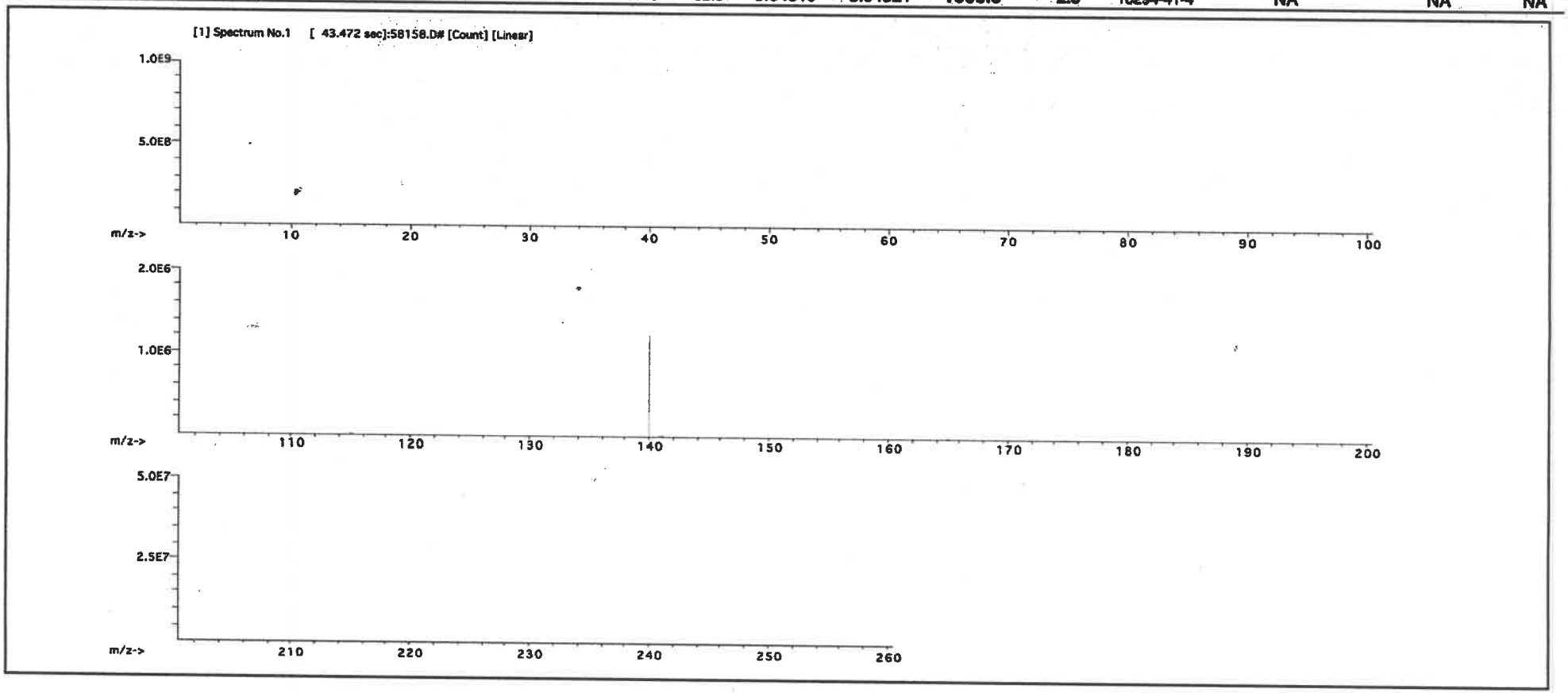
Weight shown below was diluted to (mL): 1000.12 0.058 Flask Uncertainty

		Lot #	
Solvent:	21110221	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	020623
Reviewed By:	Pedro L. Rentas	020623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04921	**1000.0**	**2.0**	10294-41-4	NA	NA	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5496 R 7/20/23

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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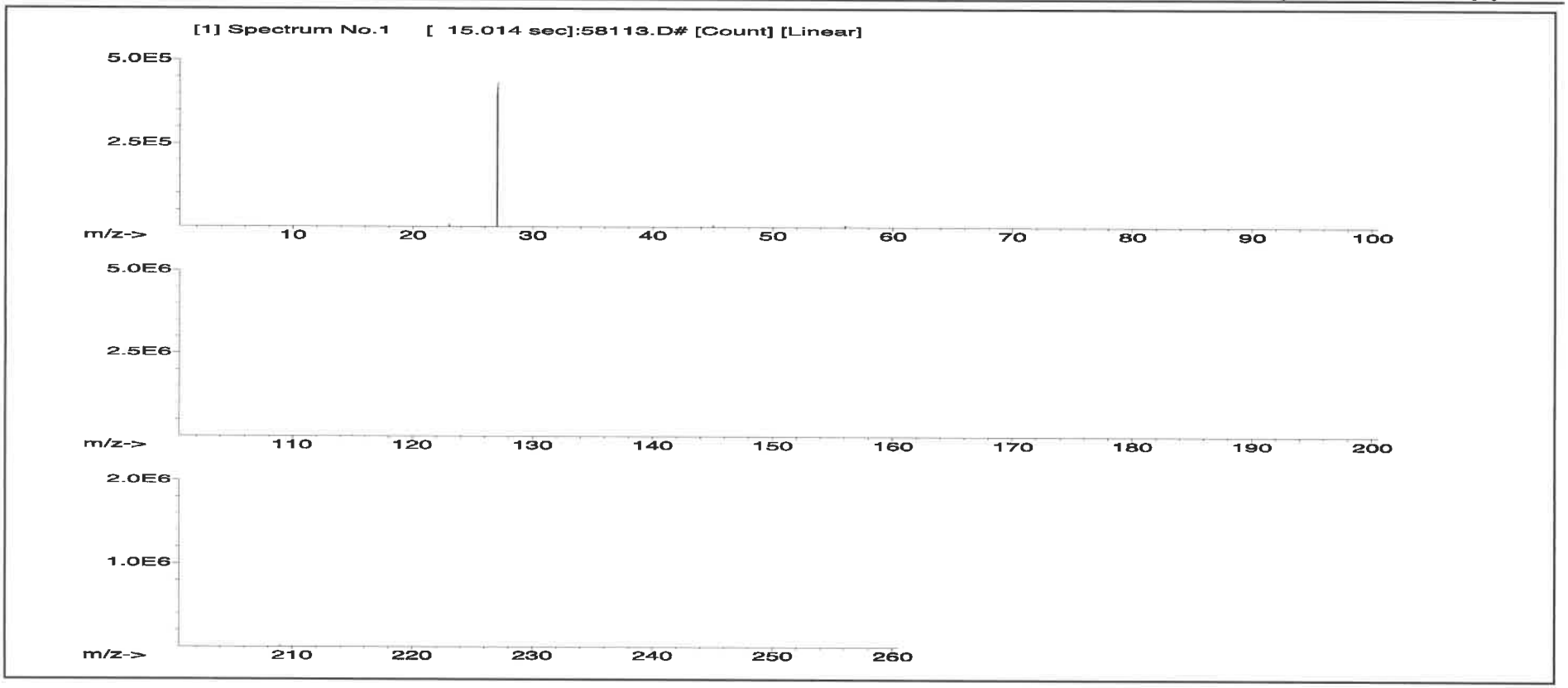
CERTIFIED WEIGHT REPORT:

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

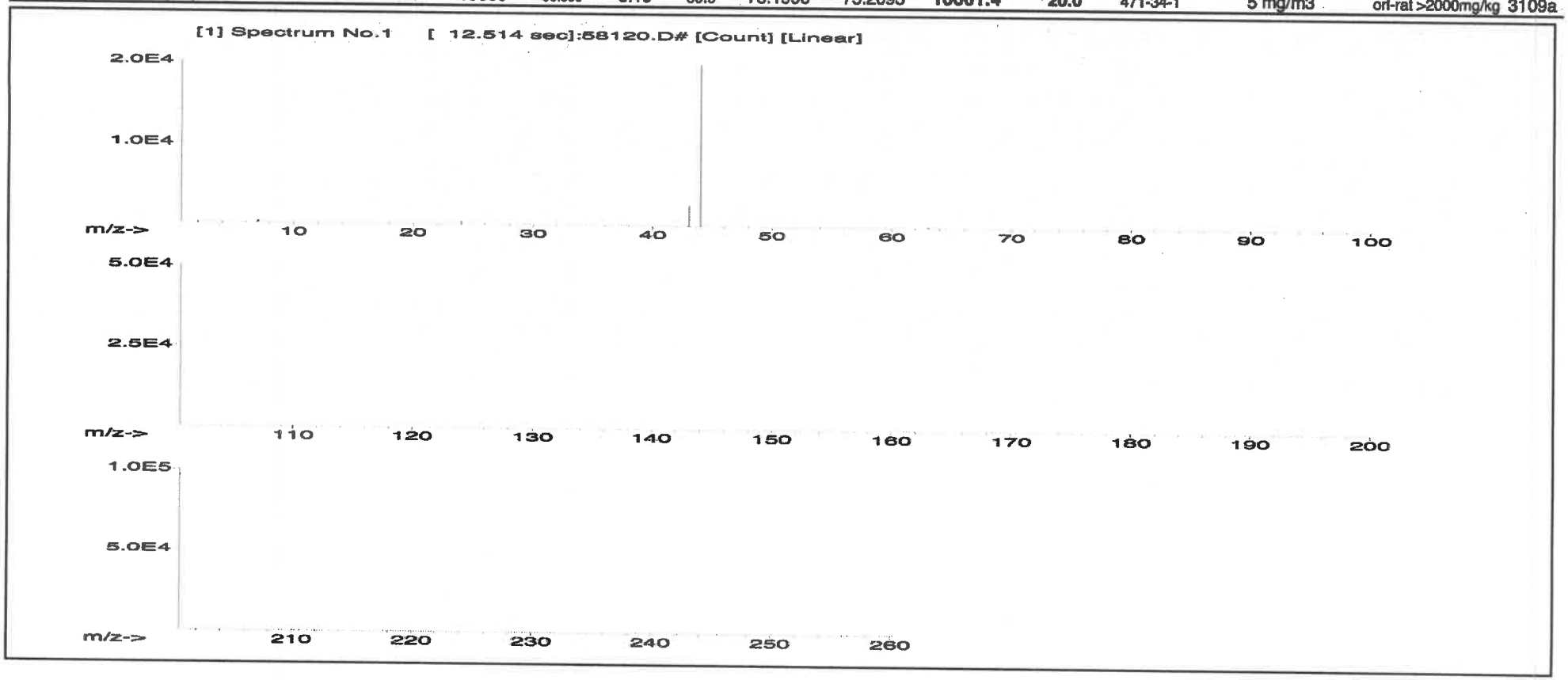
		Lot #	
Solvent:	21110221		Nitric Acid
	2%	60.0 (mL)	Nitric Acid

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.

* 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).

QATS LABORATORY INORGANIC REFERENCE MATERIAL INITIAL CALIBRATION VERIFICATION SOLUTIONS (ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

MSS28-37
MB

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) ***CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS***

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

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M5658 R! 8/25/23

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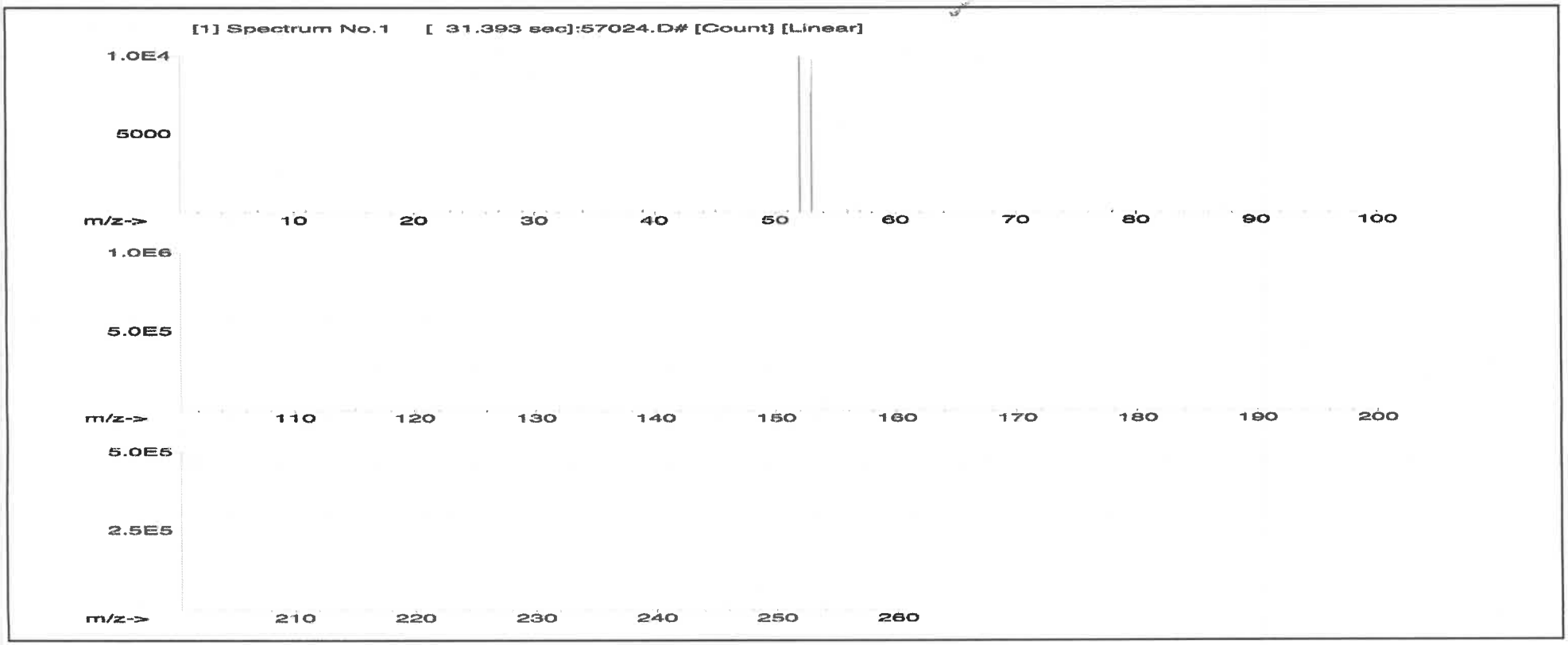
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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M5697 R: 10/27/23

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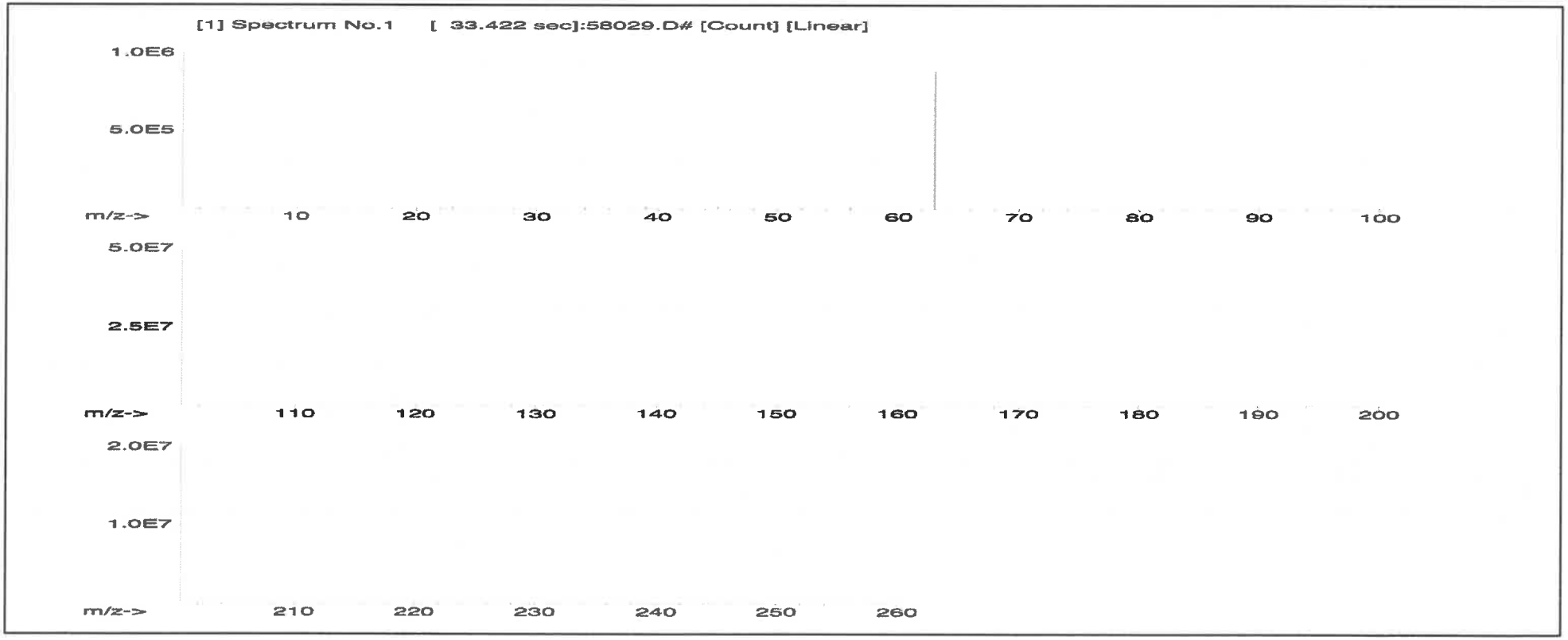
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Copper (Cu)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	100223	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 12/20/23 M5747

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CERTIFIED WEIGHT REPORT:

Part Number: 57082
Lot Number: 100923
Description: Lead (Pb)

Expiration Date: 100926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

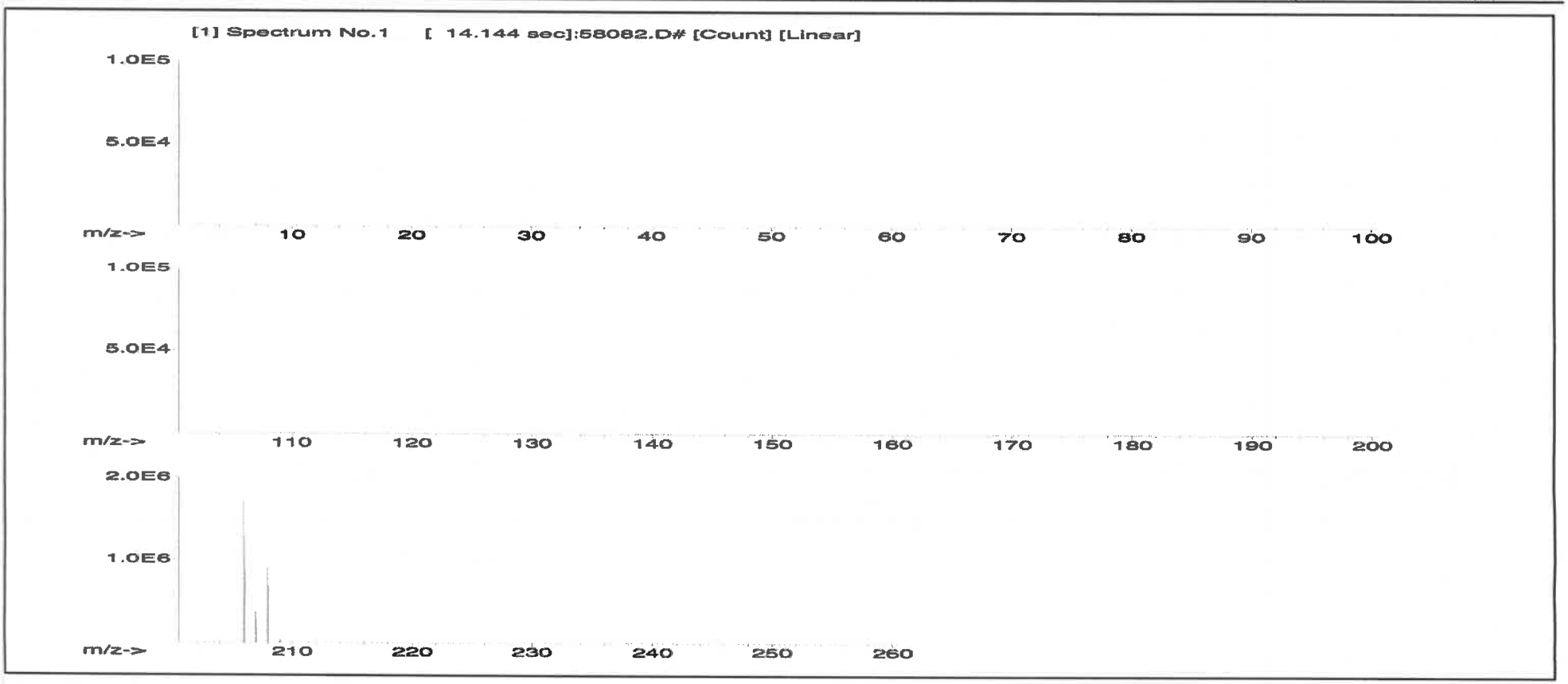
Weight shown below was diluted to (mL): 3000.41 ± 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	100923
Reviewed By:	Pedro L. Rentas	100923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	1000	99.999	0.10	62.5	4.80071	4.80077	**1000.0**	**2.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 12/20/23 M5748

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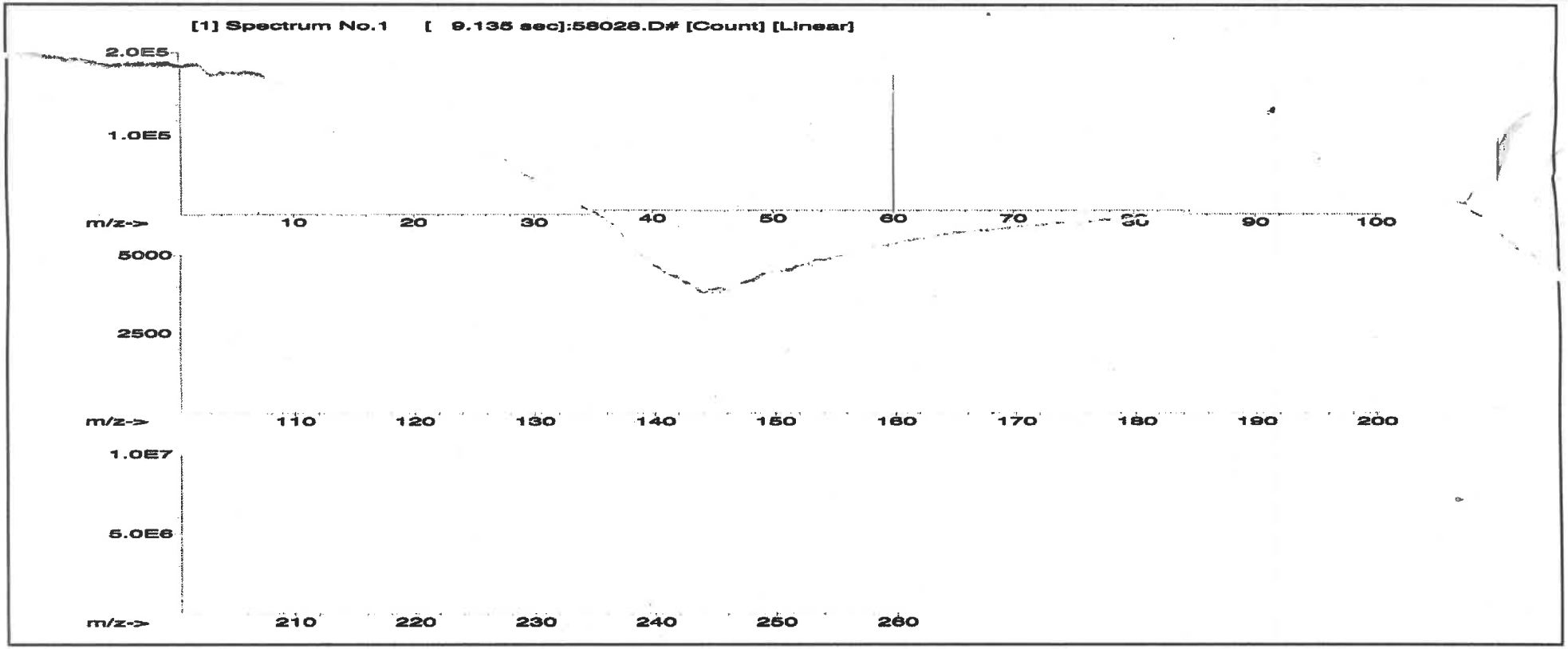
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**091223**			
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	091226			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	091223
Reviewed By:	Pedro L. Rentas	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	2.2	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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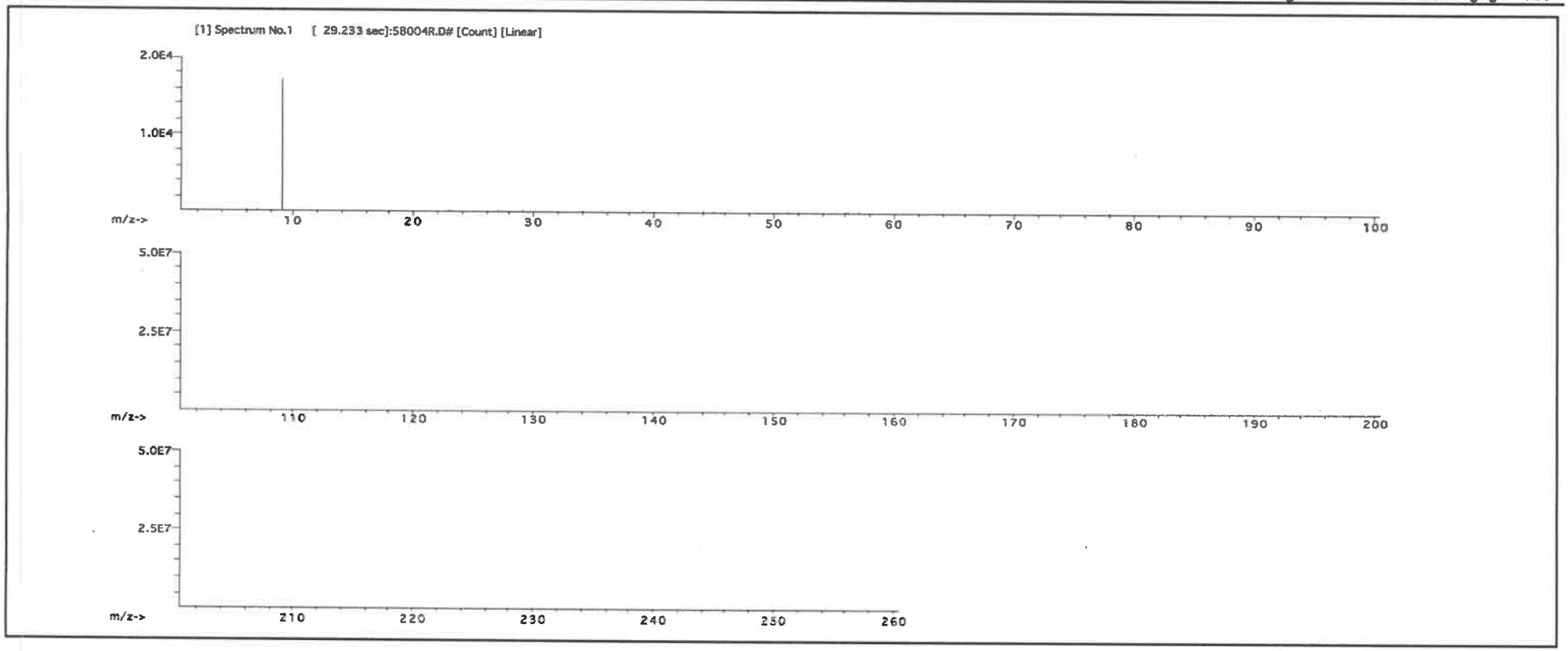
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

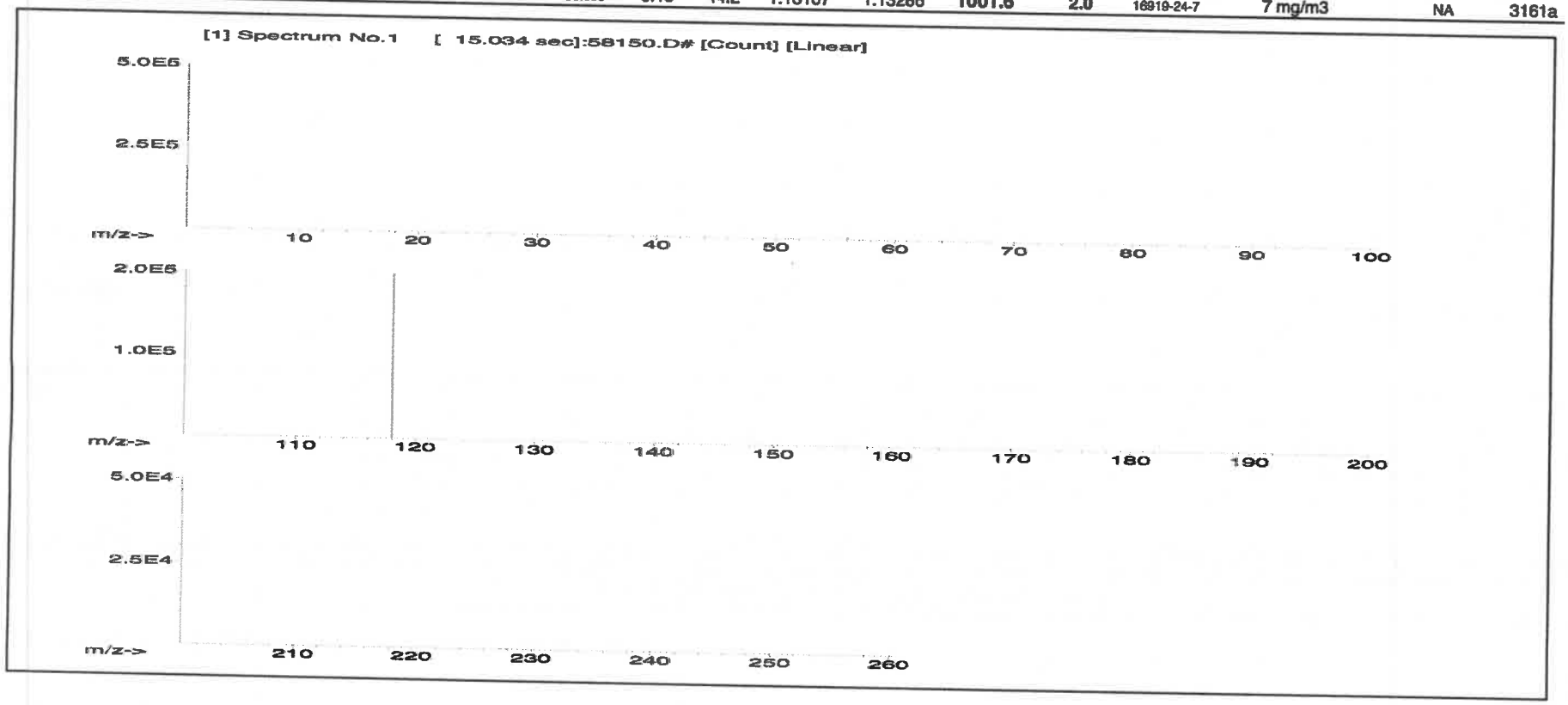
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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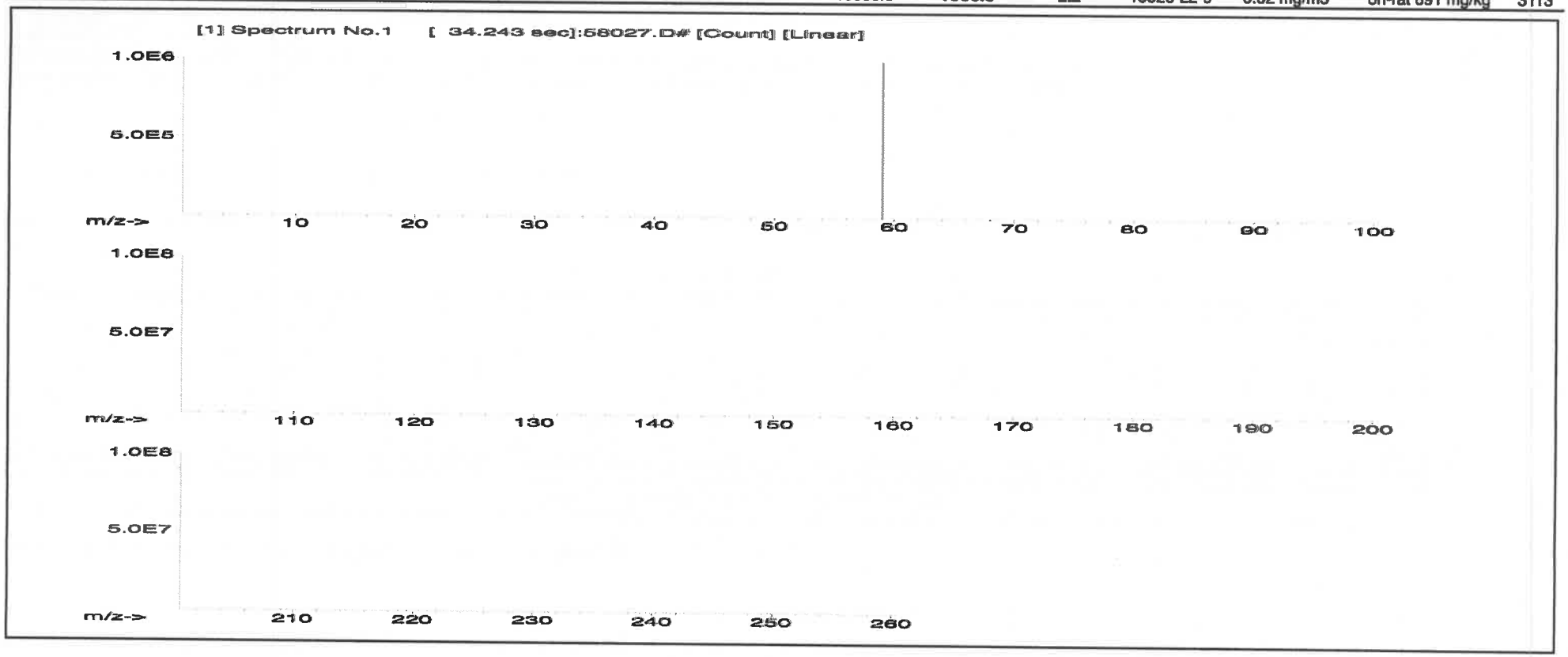
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**				
		2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091923
Reviewed By:	Pedro L. Rentas	091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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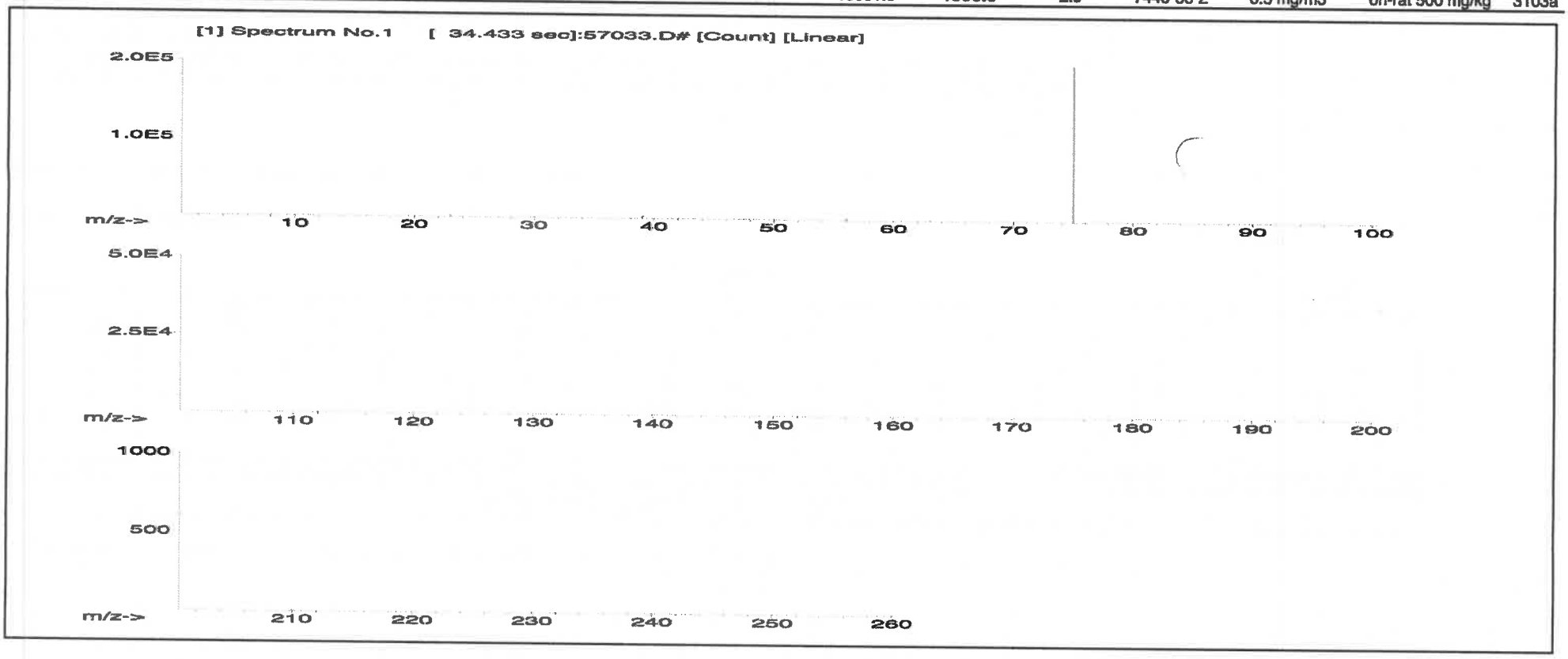
CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	24002546	Nitric Acid		
Lot Number:	**111323**				
Description:	**Arsenic (As)**	2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	**2.0**	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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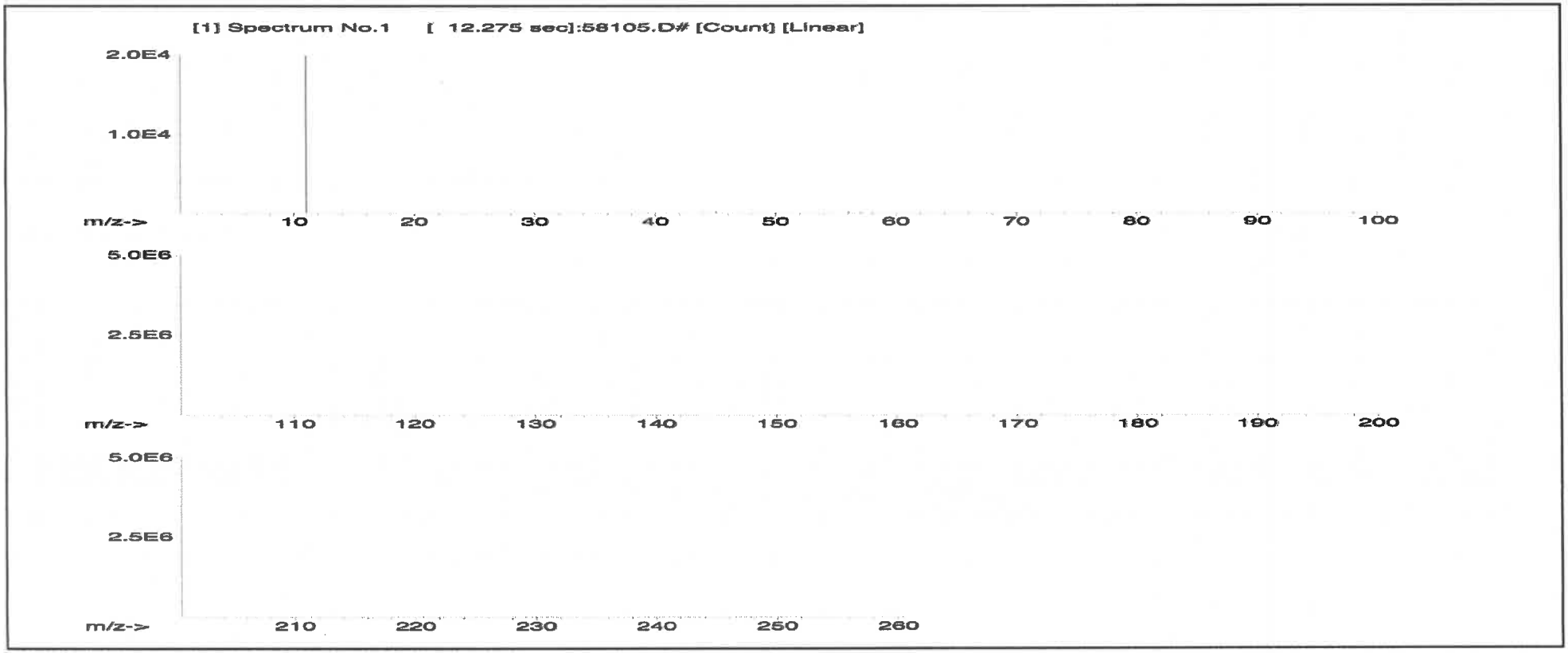
CERTIFIED WEIGHT REPORT:

Part Number:	**57005**		**Solvent:**	MKBQ8597V	Ammonium hydroxide
Lot Number:	**071123**				
Description:	**Boron (B)**		2.0%	40.0 (mL)	Ammonium hydroxide
Expiration Date:	071126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	1999.48	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Boric acid (B)	IN018	BV092016A1	1000	99.9999	0.10	17.3	11.55772	11.56201	**1000.4**	**2.0**	10043-35-3	2 mg/m3	orl-rat 2660 mg/kg	3107



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	T	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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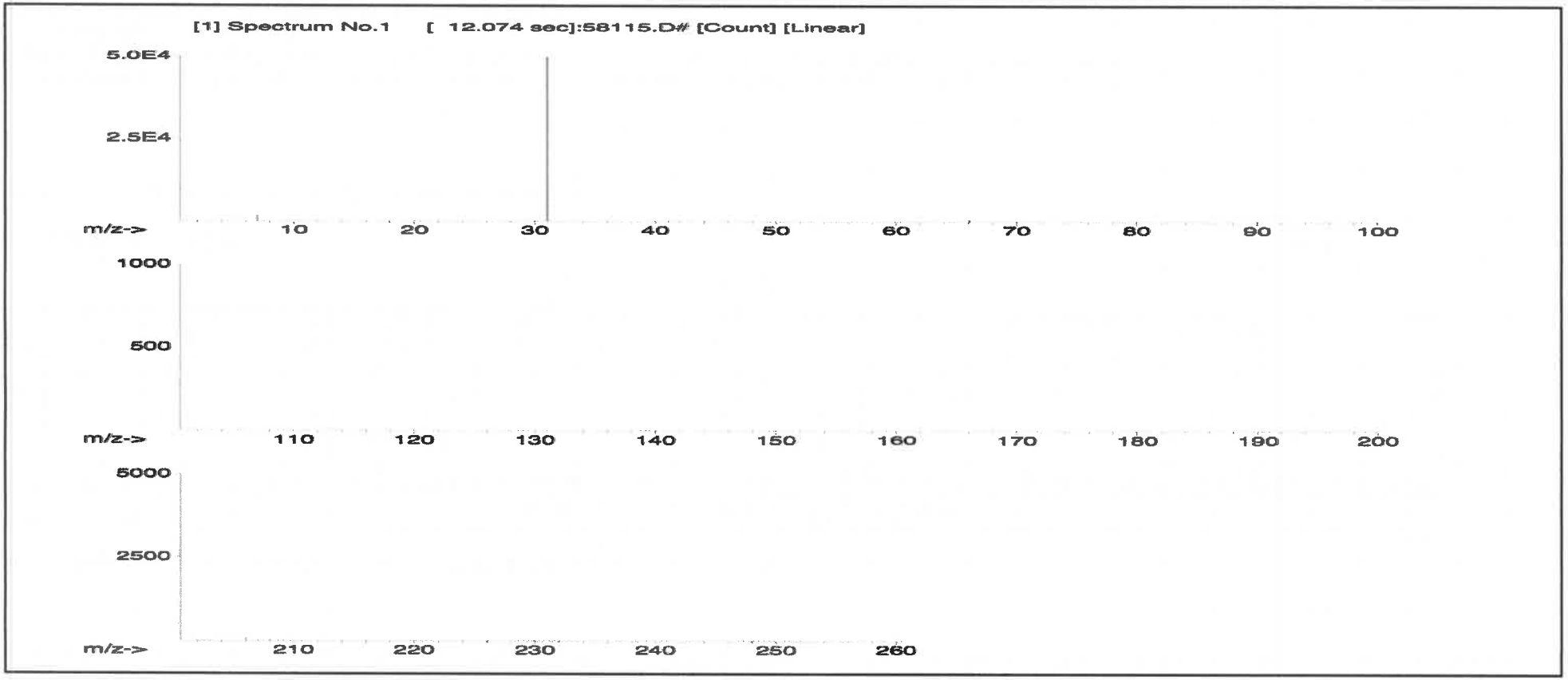
CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**57115**	**Solvent:**	21110221	Nitric Acid
Lot Number:	**041723**			
Description:	**Phosphorous (P)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	041726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	041723
Reviewed By:	Pedro L. Rentas	041723

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	10000	99.999	0.10	27.5	72.7287	72.7289	**10000.0**	**20.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/kg	3186



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* 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

R: 02/09/24 M5816

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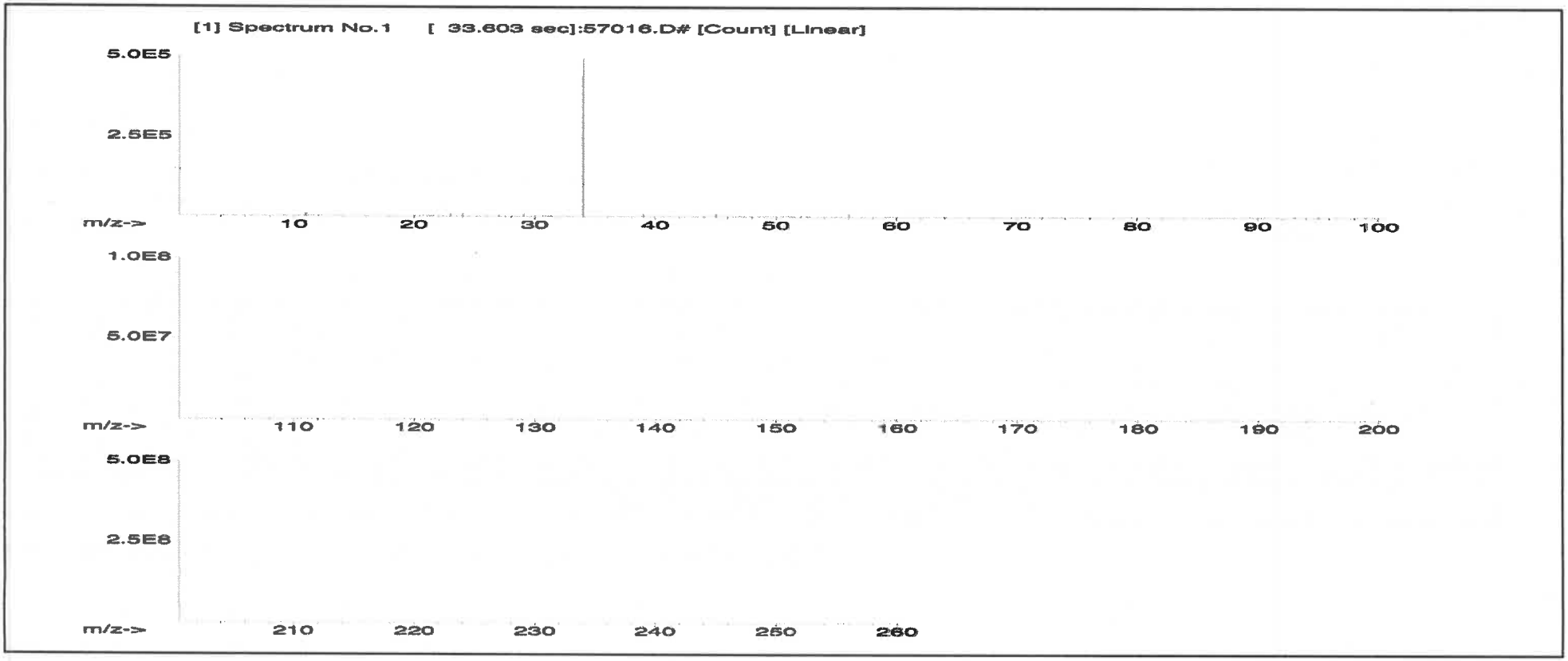
CERTIFIED WEIGHT REPORT:

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:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M5817

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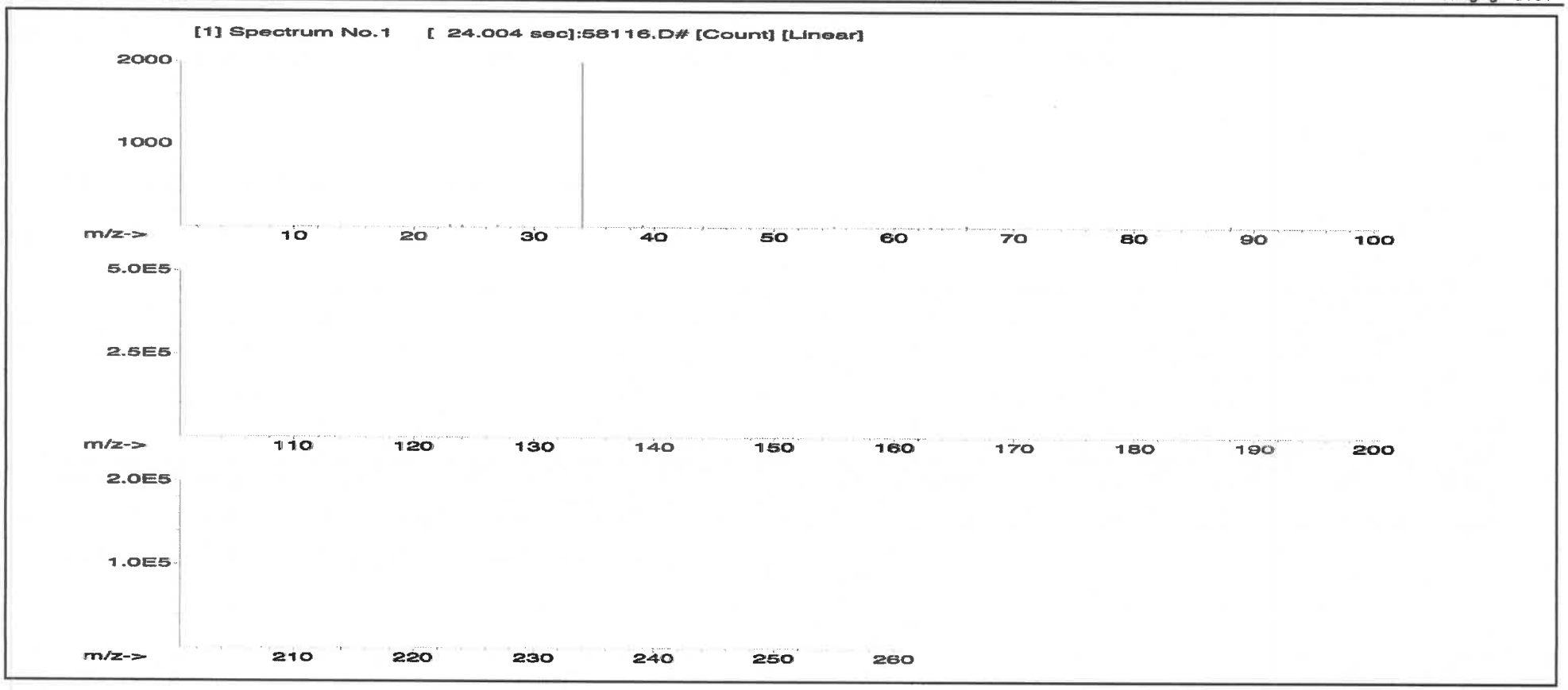
CERTIFIED WEIGHT REPORT:

Part Number:	**57116**			
Lot Number:	**071123**	**Solvent:**	071123	ASTM Type 1 Water
Description:	**Sulfur (S)**			
Expiration Date:	071126			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	1999.48	0.058	Flask Uncertainty	

Lot #

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M5819

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CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

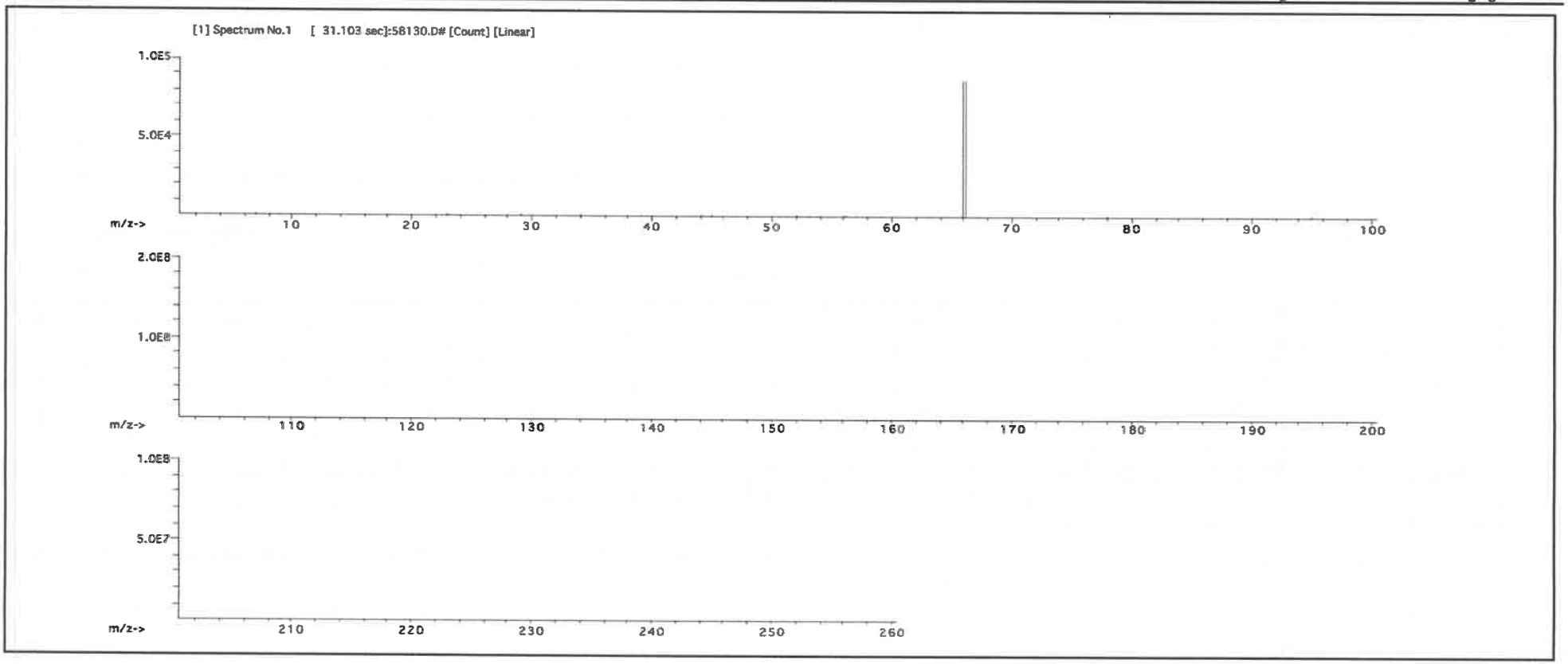
Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

		Lot #		
Solvent:	24002546	Nitric Acid		
2%	60.0 (mL)	Nitric Acid		
			5E-05	Balance Uncertainty

Formulated By:	Benson Chan	111623
Reviewed By:	Pedro L. Rentas	111623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	12.3475	12.3502	**1000.2**	**2.0**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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Certified by:

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R: 02/09/24 M5820

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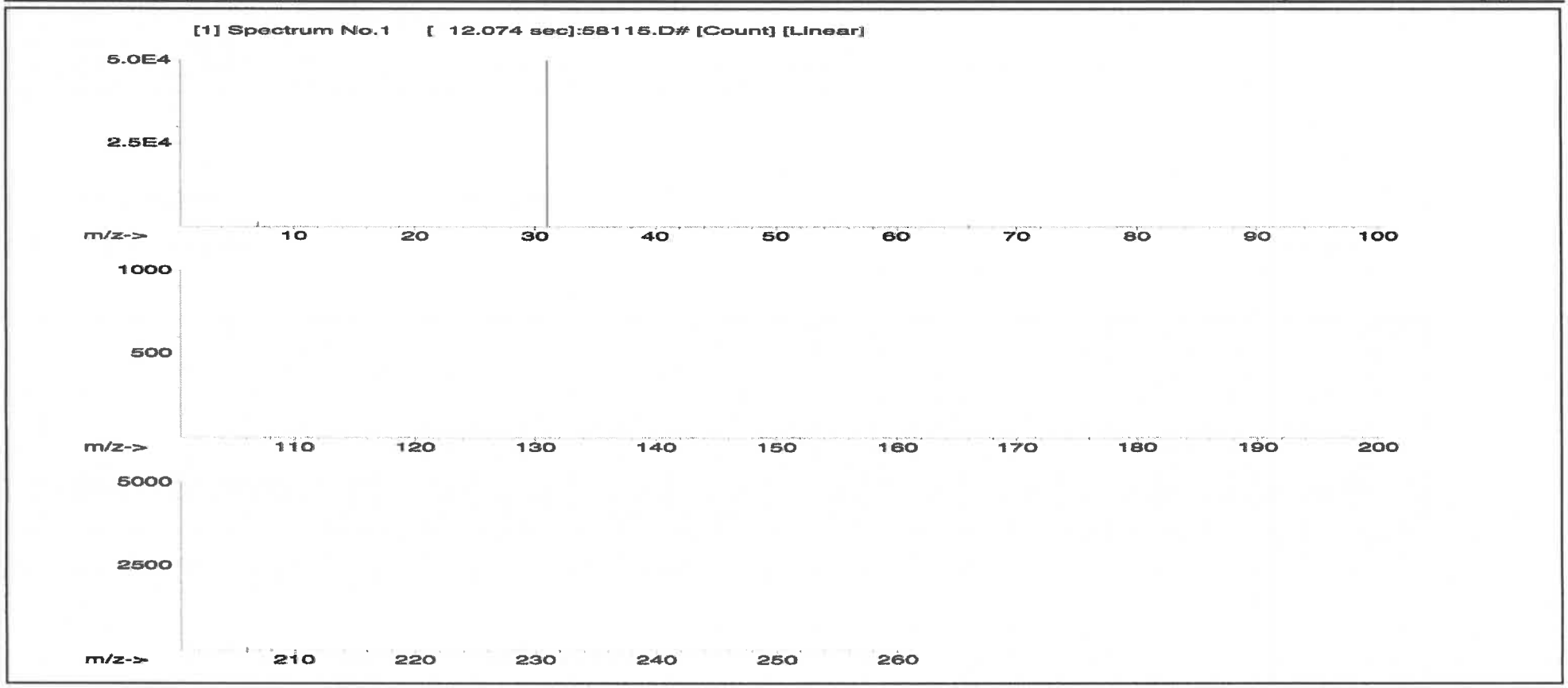
CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

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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
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M5959 R: 6/14/24.

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

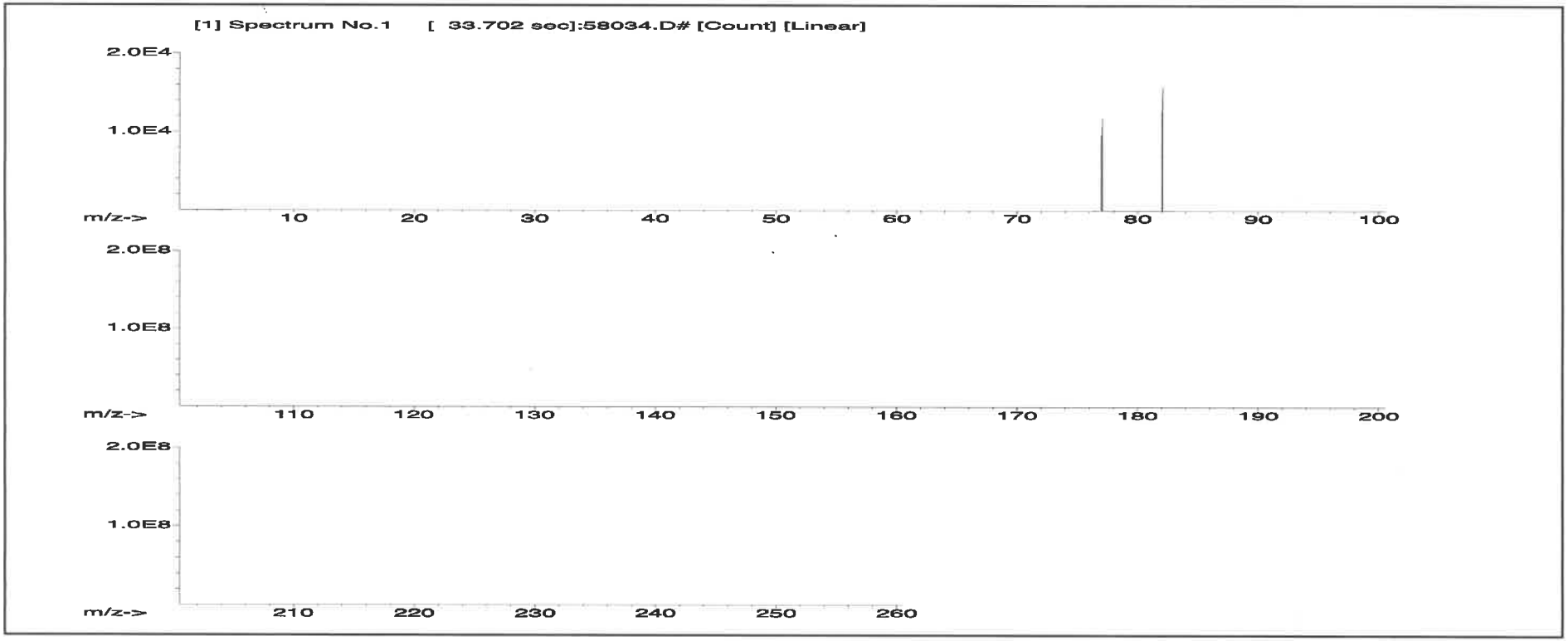
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5970, M5971 R: 7/01/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

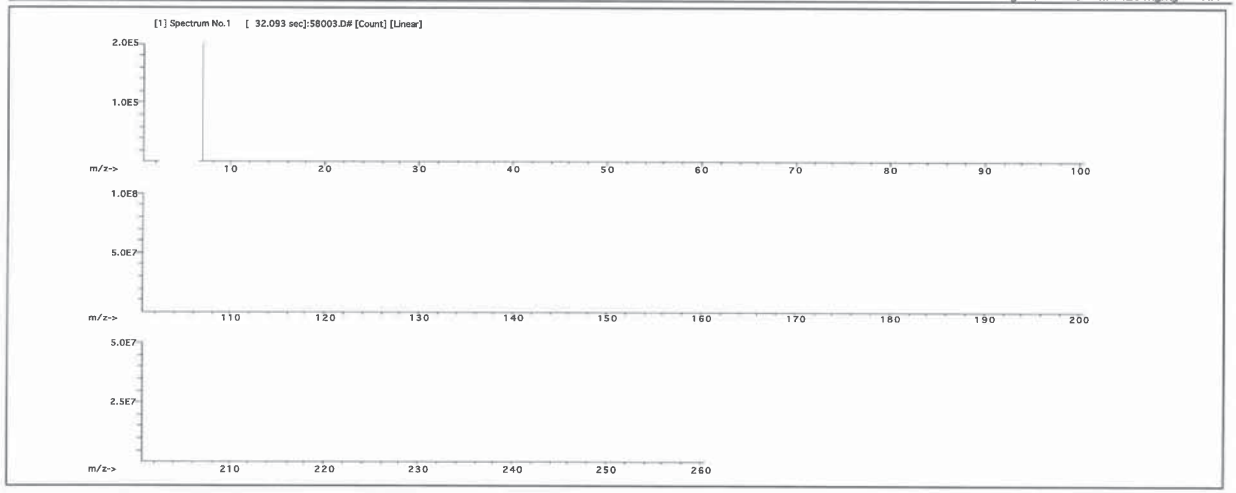
		Lot #	Solvent:
Part Number:	**57003**	24002546	Nitric Acid
Lot Number:	**062124**		
Description:	**Lithium (Li)**		
		2.0%	5.0 (mL) Nitric Acid
Expiration Date:	062127		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05 Balance Uncertainty	
Volume shown below was diluted to (mL):	250.11	0.016 Flask Uncertainty	

Giovanni Esposito

Formulated By: Giovanni Esposito 062124

Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

M5978, M5979

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

R: 2/22/24

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO_3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(\bar{x}_i)$

$\bar{x}_i$ = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = (\Sigma(w_i)^2\,(u_{char\ i})^2)^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (\bar{x}_a)\ (u_{char\ a})$

$\bar{x}_a$ = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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MS985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M 6041-46
MS

avantor™ | J.T.Baker®

Material No.: 9673-33
Batch No.: 23D2462010
Manufactured Date: 2023-03-22
Retest Date: 2028-03-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H_2SO_4)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Substances Reducing Permanganate (as SO2)	≤ 2 ppm	< 2 ppm
Ammonium (NH_4)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO_3)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO_4)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

avantor™ | J.T.Baker®

Material No.: 9673-33
Batch No.: 23D2462010

Test	Specification	Result
Trace Impurities - Sodium (Na)	≤ 500.0 ppb	5.4 ppb
Trace Impurities - Strontium (Sr)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.4 ppb

For Laboratory,Research,or Manufacturing Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

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EXP.: 9/6/2029

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746762
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 5 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 6 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 06, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

R → 10/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.190
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	1
ACS - Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.3
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

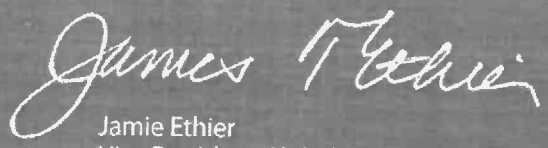
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Material No.: 9530-33
Batch No.: 0000275677

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	<1
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R -> 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

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CERTIFIED WEIGHT REPORT:

R → 1/13/25

M 6127

			Lot #	
Part Number:	**58112**	**Solvent:**	24012496	Nitric Acid
Lot Number:	**112124**			
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	112127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

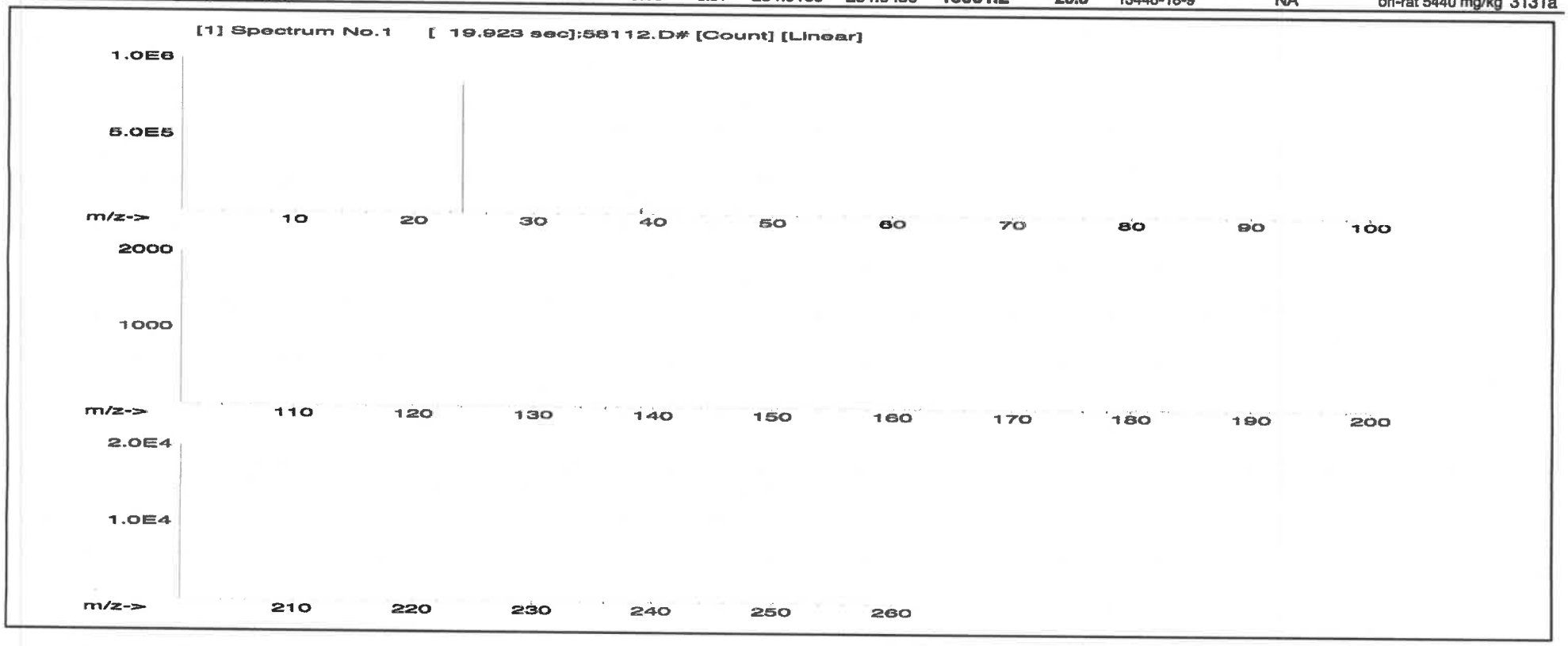
Giovanni Esposito

Formulated By:	Giovanni Esposito	112124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	112124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9183	234.9459	**10001.2**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

R->1/13/28

M6128

Part Number:	**58025**	**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**101124**			
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	101127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

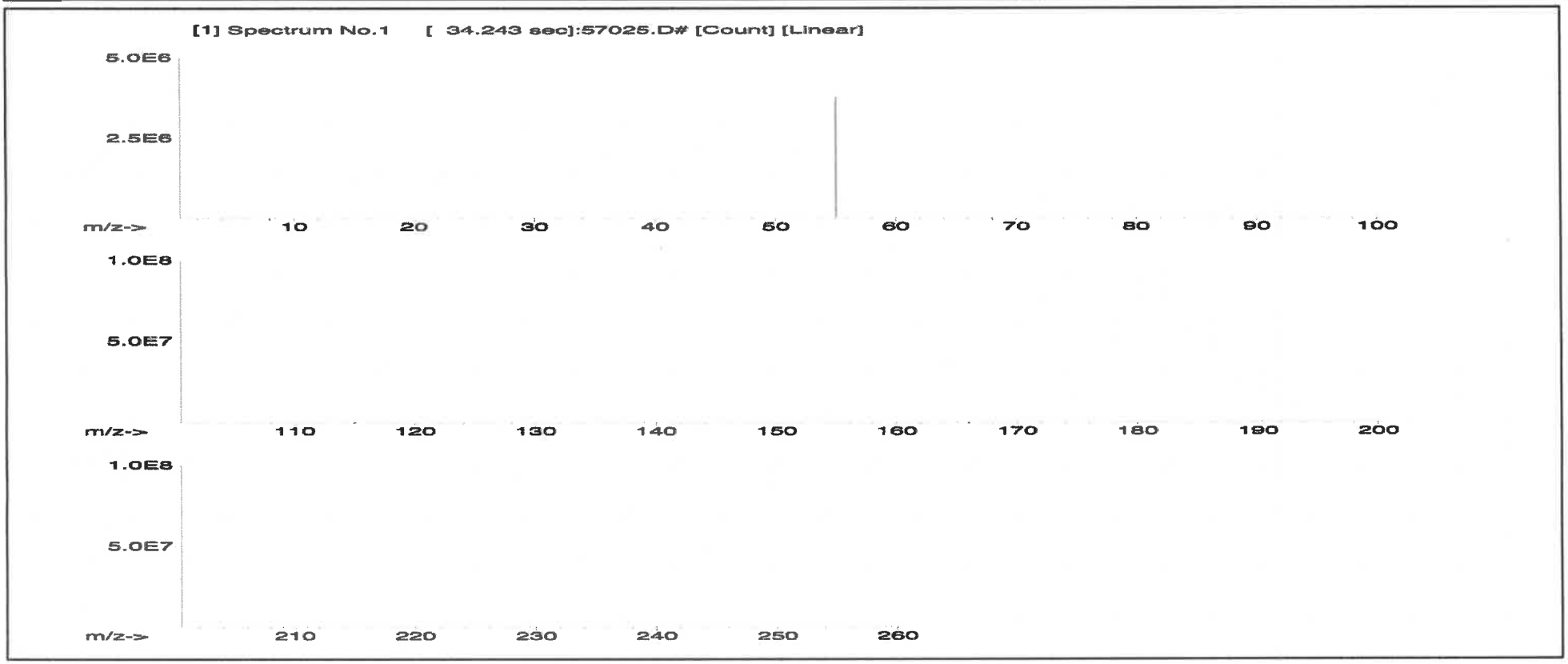
Giovanni Esposito

Formulated By:	Giovanni Esposito	101124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	101124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	**SDS Information** (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate hydrate (Mn)	IN031	MNM092020A1	1000	99.999	0.10	20.8	19.2322	19.2344	**1000.1**	**2.0**	15710-66-4	5 mg/m3	orl-rat >300mg/kg	3132



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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CERTIFIED WEIGHT REPORT:

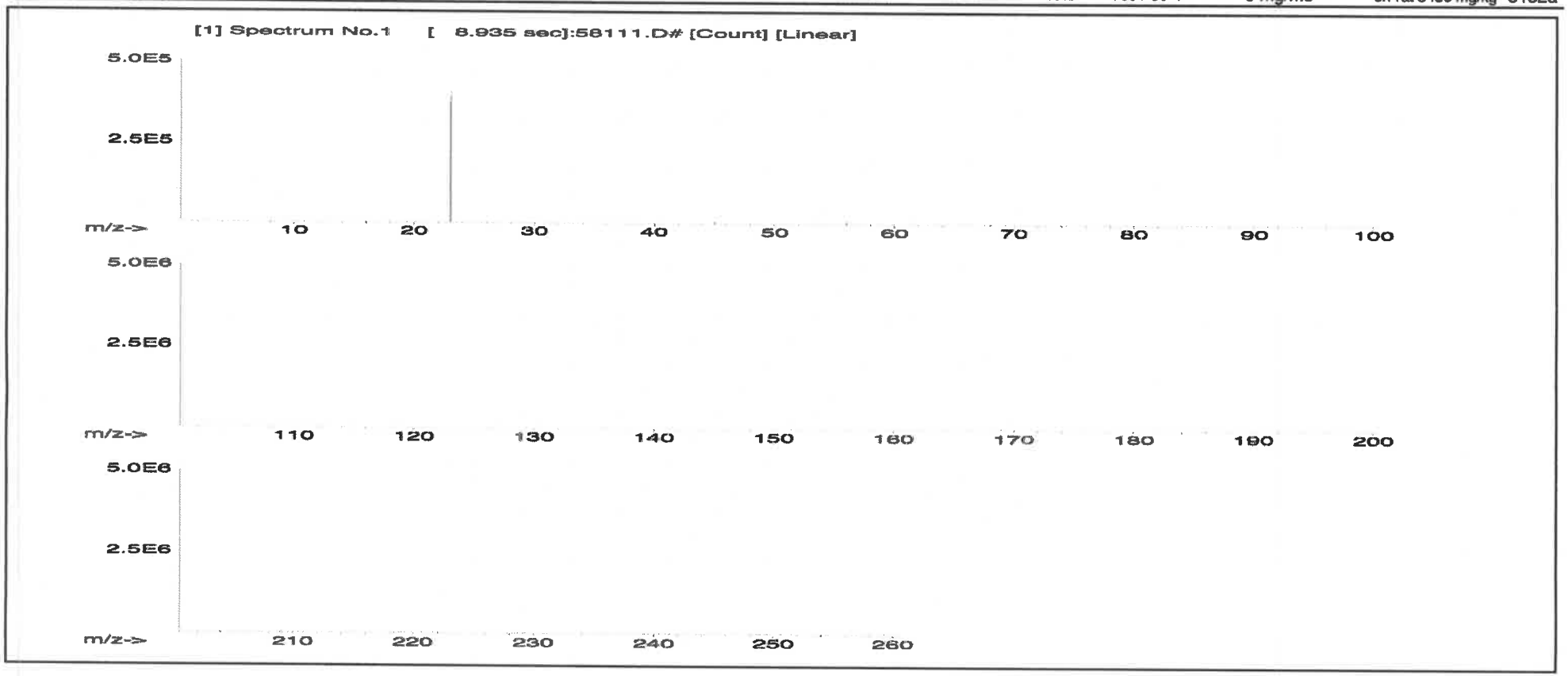
R->1/13/25

M6144

			Lot #	
Part Number:	**58111**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**072424**			
Description:	**Sodium (Na)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	072427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

Formulated By:	Benson Chan	072424
Reviewed By:	Pedro L. Rentas	072424

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	148.7096	######	**10000.0**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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Certified Reference Material CRM

R: 01/03/24 M5802, M5803

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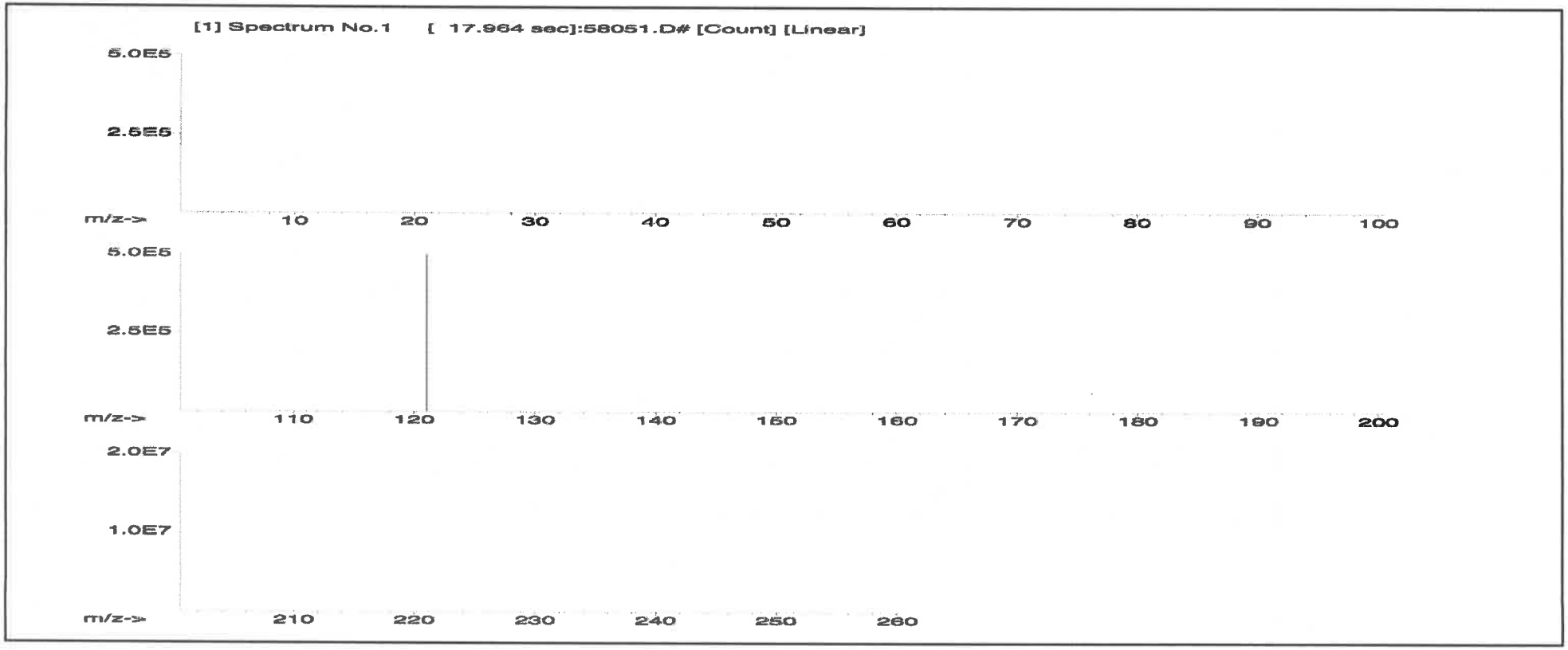
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57051**	24002546	Nitric Acid	
Lot Number:	**120523**			
Description:	**Antimony (Sb)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	120526			
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	120523
Reviewed By:	Pedro L. Rentas	120523

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	100923	0.1000	300.0	0.084	1000	10001.4	**1000.0**	2.1	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).

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Certified Reference Material CRM

M6030

R: 8/5/24

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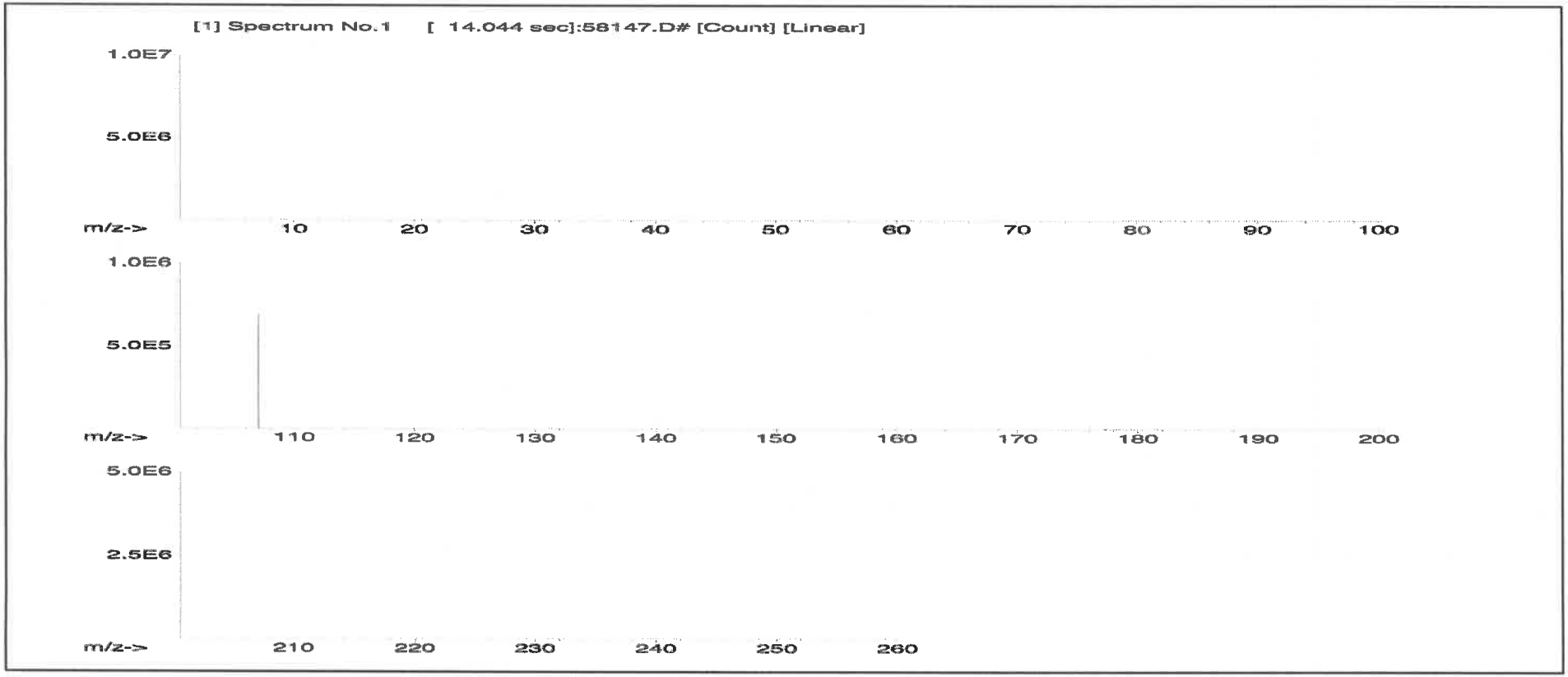
CERTIFIED WEIGHT REPORT:

Part Number:	**57047**			**Lot #**	
Lot Number:	**122823**	**Solvent:**	24002546	Nitric Acid	
Description:	**Silver (Ag)**				
		2%	80.0 (mL)	Nitric Acid	
Expiration Date:	122826				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.30	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

QATS LABORATORY INORGANIC REFERENCE MATERIAL INITIAL CALIBRATION VERIFICATION SOLUTIONS (ICV1, ICV5, AND ICV6)

M6147

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

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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 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

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CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

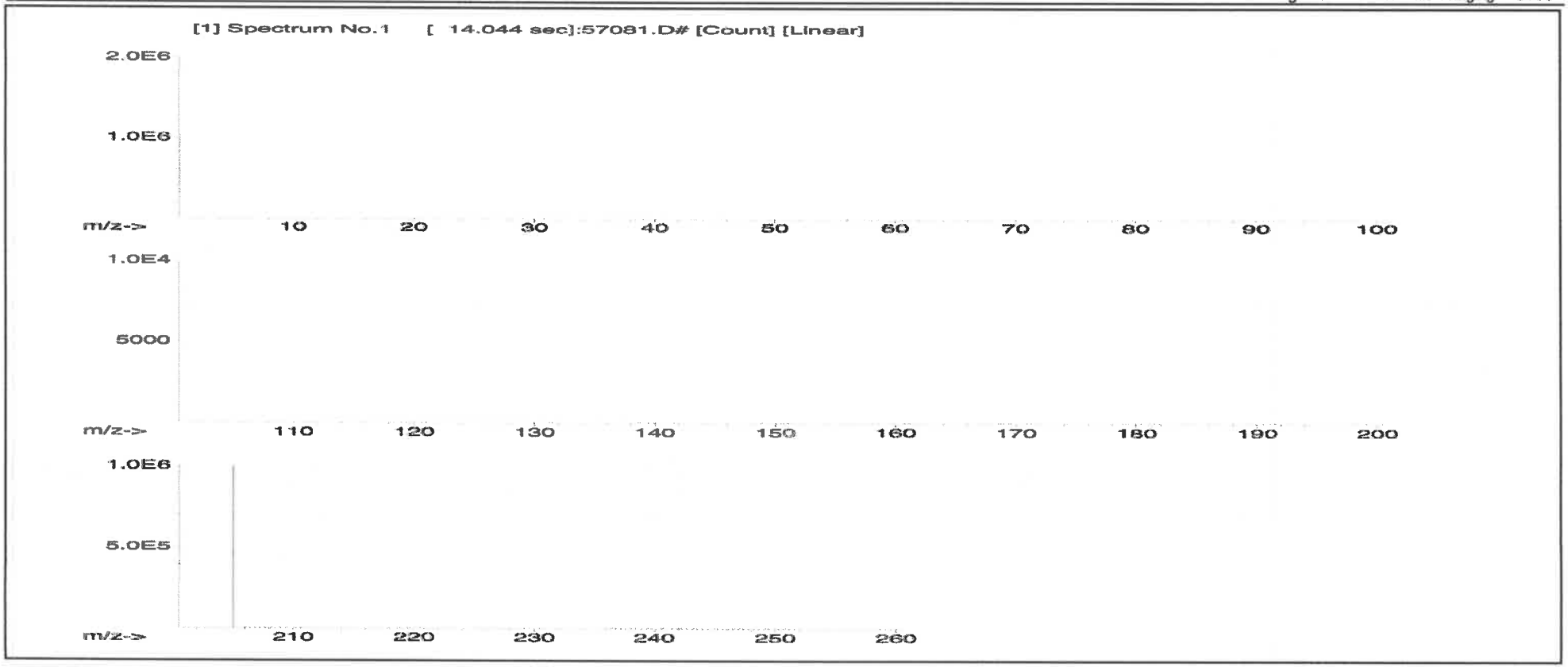
Aleah O'Brady

Formulated By:	Aleah O'Brady	062724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Rc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**			
Description:	**Vanadium (V)**	24002546	Nitric Acid	
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

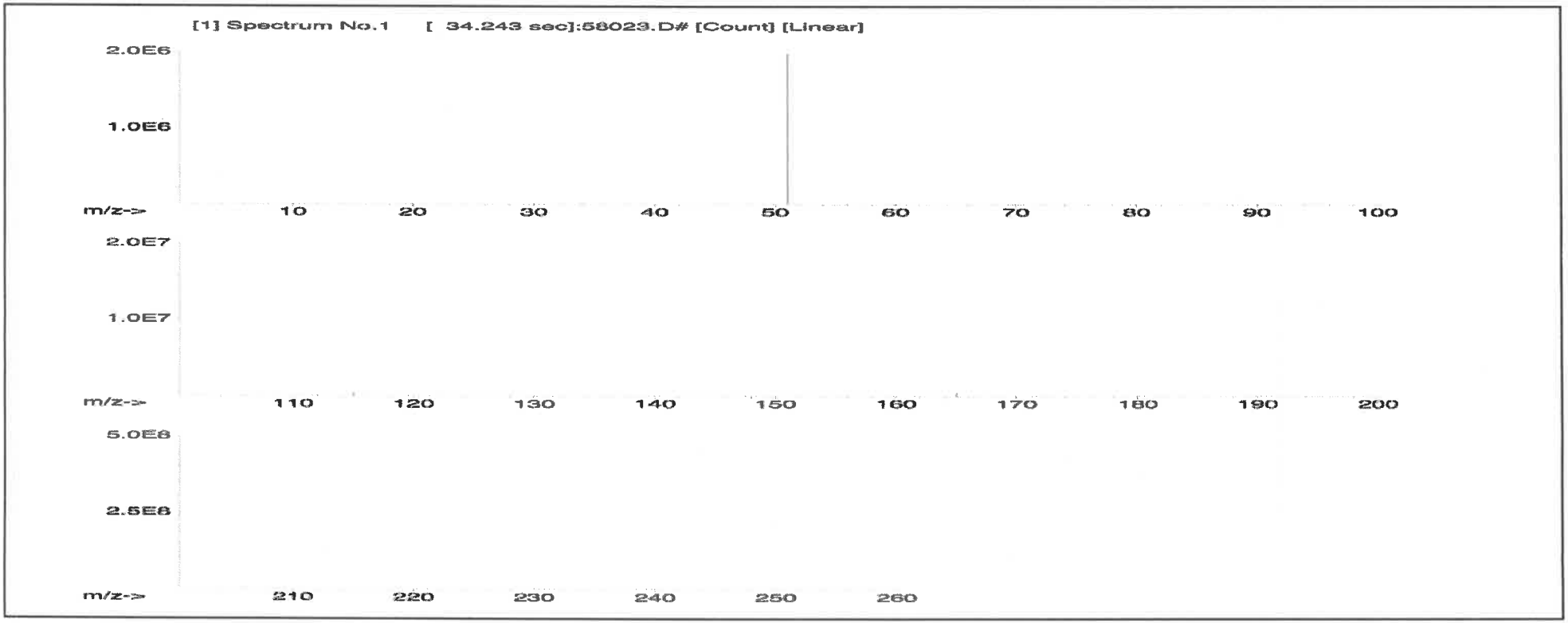
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 788-9222
www.chemtech.net

CHAIN OF CUSTODY RECORD

Alliance Project Number: Q1282

COC Number: 2042108

CLIENT INFORMATION

COMPANY: ENTACT, LLC
ADDRESS: 150 Bay Street, Suite 806
CITY: Jersey City STATE: NJ ZIP: 07302
ATTENTION: Jarod Stanfield
PHONE: 570-886-0442 FAX:

PROJECT INFORMATION

PROJECT NAME: 540 Degraw St Brooklyn, NY
PROJECT #: E9309 LOCATION: Brooklyn, NY
PROJECT MANAGER: Jarod Stanfield
E-MAIL: jstanfield@entact.com
PHONE: 570-886-0442 FAX:

BILLING INFORMATION

BILL TO: ENTACT, LLC PO# E9309
ADDRESS: 999 Oakmont Plaza Drive, Suite 300
CITY: Westmont STATE: IL ZIP: 60559
ATTENTION: Wendy Murray PHONE: 800-936-8228

DATA TURNAROUND INFORMATION

FAX: 5 DAYS*
HARD COPY: DAYS*
EDD 5 DAYS*
* TO BE APPROVED BY ALLIANCE
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ RESEULTS ONLY
- ☐ RESULTS + QC
- ☐ New Jersey REDUCED
- ☐ New Jersey CLP
- ☐ EDD Format
- ☐ USEPA CLP
- ☐ New York State ASP "B"
- ☐ New York State ASP "A"
- ☐ Other

ANALYSIS

	Metals	Flashpoint + PCB	VOC	SVOC + Chloride (Anions)	BOD+TSS				
	1	2	3	4	5	6	7	8	9
PRESERVATIVES	B	E	E	E	E				
	1	2	3	4	5	6	7	8	9

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# of Bottles	1	2	3	4	5	6	7	8	9	COMMENTS
1.	SW-WTS-02	Surface Water		X	1/31	16:00	4	X	X	X	X	X					
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. Jarod Stanfield	01/31/25 14:30	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.	2-3-25 16:10	2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3.		3.

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 3.2 °C ☐ Ice in Cooler?: Yes

Comments: IR Gun #1

Page ____ of ____

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
ALLIANCE: ☐ Picked Up ☐ Overnight

Shipment Complete ☐ YES ☐ NO

WHITE - ALLIANCE COPYFOR RETURN TO CLIENT **YELLOW** - ALLIANCE COPY **PINK** - SAMPLER COPY

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1282 ENTA05
Client Name : ENTACT
Client Contact : Jarod Stanfield
Invoice Name : ENTACT
Invoice Contact : Jarod Stanfield

Order Date : 2/3/2025 4:26:00 PM
Project Name : 540 Degraw St, Brooklyn, N
Receive DateTime : 2/3/2025 4:10:00 PM
Purchase Order :

Project Mgr :
Report Type : Level 1
EDD Type : NYSDEC EDD V-3
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1282-01	SW-WTS-02	Water	01/31/2025	16:00					
					VOCMS Group4		8260-Low		5 Bus. Days

Relinguished By : [signature]
Date / Time : 2-4-25 1005

Received By : [signature]
Date / Time : 2/4/25 10:05 Agt # 4

Storage Area : VOA Refridgerator Room